

South Dublin Street & Backlands Regeneration Project

Environmental Impact Assessment Report (EIAR)

rpsgroup.com

South Dublin Street & Backlands Regeneration Project

EIAR Volume I Main Report

**Contents:
EIAR Volume I –
Main Report**

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Abbreviations

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

ABBREVIATIONS

| | |
|-----------------------|--|
| AADT | Annual Average Daily Traffic |
| ABP | An Bord Pleanála |
| ACA | Architectural Conservation Area |
| ACMs | Asbestos Containing Materials |
| AEP | Annual Exceedance Probability |
| AHIA | Architectural Heritage Impact Assessment |
| ANPR | Automatic Number Plate Recognition |
| AONB | Areas of Outstanding Natural Beauty |
| AQS | Air Quality Standard |
| ASI | Archaeological Survey of Ireland |
| ASSI | Area of special scientific interest |
| ATC | Automatic Traffic Count |
| BAP | Biodiversity Action Plan |
| BGL | Below Ground Level |
| CAFE | Clean Air for Europe |
| C, D & E | Construction, Demolition and Excavation |
| CDP | County Development Plan |
| CDW | Construction and Demolition Waste |
| CDWMP | Construction and Demolition Waste Management Plan |
| CEMP | Construction Environmental Management Plan |
| CFRAM | Catchment-based Flood Risk Assessment and Management |
| CIE | Coras Iompair Eireann |
| CIEEM | Chartered Institute of Ecology and Environmental Management |
| CIHT | Chartered Institute of Highways and Transportation |
| CO | Carbon Monoxide |
| CO₂ | Carbon Dioxide |
| CoR | Certificate of Registration |
| COSHH | Control of Substances Hazardous to Health |
| CPO | Compulsory Purchase Order |

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|---------------|---|
| CRTN | Calculation of Road Traffic Noise |
| cSACs | Candidate Special Areas of Conservation |
| CTVIA | Cumulative Townscape and Visual Impact Assessment |
| CUR | Connaught -Ulster Region |
| CWMP | Construction Waste Management Plan |
| DAERA | Department of Agriculture, Environment and Rural Affairs |
| DAU | Department of Culture, Heritage & the Gaeltacht |
| dB | Decibel |
| DCPs | Dynamic Cone Penetrometer tests |
| DECC | Geological Survey of Ireland |
| DHPLG | Department of Housing, Local Government and Heritage |
| DMP | Dust Management Plan |
| DMRB | Design Manual for Roads and Bridges |
| DMURS | Design Manual for Urban Roads and Streets |
| DoCCAE | Department of Communications, Climate Action and Environment |
| DoECLG | Department of Environment, Community and Local Government |
| EA | Environment Agency |
| EC | European Commission |
| EcIA | Ecological Impact Assessment |
| ECJ | European Court of Justice |
| ECoW | Ecological Clerk of Works |
| EIA | Environmental Impact Assessment |
| EIAR | Environmental Impact Assessment Report |
| EIS | Environmental Impact Statement |
| EM | Environmental Manager |
| EPA | Environmental Protection Agency |
| EQS | Environmental Quality Standards |
| ESB | Electricity Supply Board |
| ESR | Environmental Screening Report |
| ETS | Emissions Trading Scheme |
| EU | European Union |
| EV | Electric Vehicle |
| EWC | European Waste Catalogue |

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|-------------------------------|--|
| FCS | Favourable Conservation Status |
| FOSD | Full Overtaking Sight Distance |
| FRA | Flood Risk Assessment |
| GDP | Gavan Duffy Place |
| GHG | Greenhouse Gas |
| GI | Ground investigation |
| GPP | Guidance for Pollution Prevention |
| GSI | Geological Survey of Ireland |
| HIA | Health Impact Assessment |
| HGV's | Heavy Goods Vehicles |
| HAS | Health and Safety Authority |
| HSE | Health Service Executive |
| HV | Heavy Vehicles |
| Hz | Hertz |
| IAQM | Institute of Air Quality Management |
| IEMA | Institute of Environmental Management and Assessment |
| ICOMOS | International Council on Monuments and Sites |
| IFI | Inland Fisheries Ireland |
| IGI | Institute for Geologists Ireland |
| IPCC | Intergovernmental Panel on Climate Change |
| ISMP | Invasive Species Management Plan |
| IUCN | International Union for the Conservation of Nature |
| JC&A | John Cronin & Associates |
| JTC | Junction Turning Count |
| L | Locally Important |
| LA | Local Authorities |
| LA₁₀ period | This is the A-weighted sound level that is exceeded for noise for 10% of the sample period |
| LA₉₀ | This is the A-weighted sound level that is exceeded for 90% of the sample period |
| LA_{eq} | The continuous equivalent A-weighted sound pressure level. This is an 'average' of the sound pressure level |
| LA_{max} | This is the maximum A-weighted sound level measured during the sample period |
| LA_{min} | This is the minimum A-weighted sound level measured during the sample period |
| LCA | Landscape Character Areas |

| | |
|-----------------------|--|
| LCRM | Land Contamination Risk Management |
| LCT | Landscape Character Types |
| LECP | Local Economic & Community Plan |
| LUTS | Land Use and Transport Planning Strategy |
| LVIA | Landscape and Visual Impact Assessment |
| MCC | Monaghan County Council |
| MIAI | Institute of Archaeologists of Ireland |
| MLCA | Monaghan Landscape Character Assessment |
| MMQ | Mean Maximum Queue |
| MNR | Marine Nature Reserve |
| NBDC | National Biodiversity Data Centre |
| NHA | Natural Heritage Areas |
| NIAH | National Inventory of Architectural Heritage |
| NIEA | Northern Ireland Environment Agency |
| NIS | Natura Impact Statement |
| NMLs | Noise Monitoring Locations |
| NMS | National Monuments Service |
| NNG | Night Noise Guideline |
| NNR | National Nature Reserves |
| NO_x | Oxides of Nitrogen |
| NO₂ | Nitrogen Dioxide |
| NO₃ | Nitrate |
| NPWS | National Parks & Wildlife Service |
| NPWSGIS | National Parks & Wildlife Service Geographic Information System |
| NRA | National Roads Authority |
| NSR | Noise Sensitive Receptor |
| NSS | National Spatial Strategy |
| NTS | Non-Technical Summary |
| NWCPO | National Waste Collection Permit Office |
| NWNB | North Western Neagh Bann |
| NVIA | Noise and Vibration Impact Assessment |
| O₃ | Ozone |
| OEE | Office of Environmental Enforcement |

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| | |
|-------------------------|---|
| OHL | Over Headline |
| oISMP | Outline Invasive Species Management Plan |
| OPW | Office of Public Works |
| OS | Ordnance Survey |
| P | Poor |
| pCEMP | Preliminary Construction Environmental Management Plan |
| PCUs | Passenger Car Units |
| PIP | Pollutant Impact Potential |
| PM₁₀ | Particulate Matter |
| PM_{2.5} | Particulate Matter |
| POMs | Programme of Measures |
| PPGs | Pollution prevention guidelines |
| PPN | Monaghan Public Participation Network |
| PPV | Peak Particle Velocity |
| PRA | Preliminary Risk Assessment |
| PRC | Practical Reserve Capacity |
| Q-value | Quality Rating System |
| R | Regionally Important |
| RBMP | River Basin Management Plan |
| RHM | Register of Historic Monuments |
| RMP | Record of Monuments and Places |
| RPS | Record of Protected Structures |
| RSA | Road Safety Audit |
| SAC | Special Area of Conservation |
| SEPA | Scottish Environmental Agency |
| SMR | Sites and Monuments Record |
| SO₂ | Sulphur Dioxide |
| SPA | Special Protected Areas |
| SSD | Stopping Sight Distance |
| SSSI | Site of Special Scientific Interest |
| SuDS | Sustainable drainage systems |
| SWMP | Site Waste Management Plan |
| TCA | Townscape Character Areas |

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|-------------|---|
| TfL | Transport for London |
| TII | Transport Infrastructure Ireland |
| TRL | Transport Research Laboratory |
| TTA | Traffic and Transportation Assessment |
| TVIA | Townscape and Visual Impact Assessment |
| µg | Microns |
| URDF | Urban Regeneration Development Fund |
| VOCs | Volatile Organic Compounds |
| WFD | Water Framework Directive |
| WFP | Waste Facility Permit |
| WMP | Waste Management Plan |
| WHO | World Health Organisation |
| WWTP | Waste Water Treatment Plant |
| ZoI | Zone of Influence |

Chapter

01

Introduction

CHAPTER 1 - INTRODUCTION

1.1 The Proposed Development

This Environmental Impact Assessment Report (EIAR) has been prepared by RPS on behalf of Monaghan County Council (MCC) in respect of regeneration proposals for Dublin Street and its backland areas, in Monaghan Town Centre, Co. Monaghan.

The proposed development focuses on a major regeneration scheme within Monaghan town Centre, which includes the following elements:

- **The demolition of buildings and structures, including street frontage buildings No's 8-11 Dublin Street and associated outbuildings and structures; the building to the rear of No. 24 Dublin Street; partial removal of the rear section of the Northern Standard building fronting the Lower Courthouse car park; storage sheds, walls, and fencing.**
- **Construction of structural masonry walls and new facades/side elevations to No's 7 and 12-13 Dublin Street.**
- **Creation of new urban civic spaces, streets, junctions, pedestrian pavements, steps, and cycle routes.**
- **Construction of new public realm comprising new surfaces, kerbing, street furniture, public street and feature lighting, soft landscape planting, cycle parking and signage.**
- **Clearance, regrading and creation of two potential development areas with supporting embankments, hardcore surfacing and boundary fencing.**
- **New boundary treatments comprising walls, railings and fencing.**
- **Alterations to the existing car parking layouts within the Courthouse car park and Lower Courthouse car park, and a reduction in long stay parking spaces.**
- **Upgrading and installation of new utility services, CCTV, and a new ESB sub-station.**
- **All associated site development works**

The proposed development incorporates properties at 7- 13 Dublin Street, lands to the rear of 1-9 The Diamond and 1-26 Dublin Street, incorporating sections of the Northern Standard property, the Courthouse car park, Lower Courthouse car park, Castle Road, and N54 Macartan (Broad) Road, in the townlands of Roosky and Tirkeenan, Monaghan Town Centre, Monaghan, and covers approximately 2.72ha of the town centre.

The Council has developed these regeneration proposals as part of their commitment to delivering the **Dublin Street Regeneration Plan 2017**. This Plan sets out a strategic regeneration vision and strategy

for this part of the town centre, which focuses on consolidation of the urban structure, to create new streets and public spaces which integrate seamlessly with the existing town centre and introduce a new backland quarter.

The principal regeneration objective for Dublin Street is to enhance permeability of the area, create a legible network of connections and spaces for pedestrians and traffic, and provide an attractive place where people wish to live, work and visit. These proposals represent the short term vision for the lands south of Dublin Street, which aims to create a strong urban framework for developing new urban quarter or neighbourhood in the town centre, and focuses on:

- Upgrading existing public spaces, streets, spaces, and footpaths.
- Creating new connections, with new streets and urban spaces to enhance the urban structure and encourage people into the area.
- Provision of new high quality public realm incorporating footpaths, street furniture, signage, landscaping etc.

The intention is that this new high quality public realm will set the standard for and attract future new developments into the area and will also encourage the reuse and adaption of existing buildings and structures. It is anticipated that proposals for any new development and/or the reuse/adaption of existing buildings within this area, will come forward as separate planning applications in the future.

Funding has been secured under Project Ireland 2040 through the Urban Regeneration Development Fund (URDF) to progress these works.

This Environmental Impact Assessment Report supports a planning application to An Bord Pleanála under Section 175 of the Planning and Development Act 2000 (as amended) which seeks full planning permission for the proposed development. This Report also includes a Nature Impact Statement

RPS prepared an EIA Screening Report on the basis that the proposal is identified as a class of development specified in Part 2, Schedule 5 Planning and Development Regulations. The project was screened under Category 10(b)(vi) Infrastructure Projects, and due to its size (Boundary of application site/red line is 2.72ha) at the early planning stages, it exceeded the size thresholds under this category for a proposal within a business district. As such the proposed development is considered an EIA development and this Environmental Impact Assessment Report (EIAR) has been prepared in support of the planning application, which will be submitted under Section 175 Planning and Development Act 2000 (as amended).

In tandem, RPS carried out a Screening for Appropriate Assessment (AA) to assess whether the proposed development, individually or in combination with any other plans or projects, was likely to have a significant effect on any European site. The report concluded that a Stage 2 Appropriate Assessment was required, and a Natura Impact Statement is included within the planning submission. The planning application also seeks permission under Section 177AE of the Planning and Development Act 2000 (as amended).

1.2 Site Location

The site of the proposed development is located in the central core of Monaghan Town Centre, Co. Monaghan. The site location is shown in Figure 1.1.

The site is located south / south west of The Diamond and the main arterial route, Dublin Street, which flows through the town centre, and due north of Macartan (Broad) Road. It adjoins community, ecclesiastical, retail and commercial buildings to the north east and west along The Diamond and Dublin Street. The Shambles River defines part of the southern boundary, with existing car parking to the south/east, and a large shopping complex (Monaghan Shopping Centre) and car parking to the south/west.

The site currently comprises several retail /commercial buildings (both vacant and in-use) and back land areas comprising vacant / derelict land and properties, storage areas, and rear access points. It also contains extensive areas of existing car parking, roads/road infrastructure, pedestrian alleyways, and incidental green space.

The red line boundary of the proposed development works extends to approximately 2.72ha.

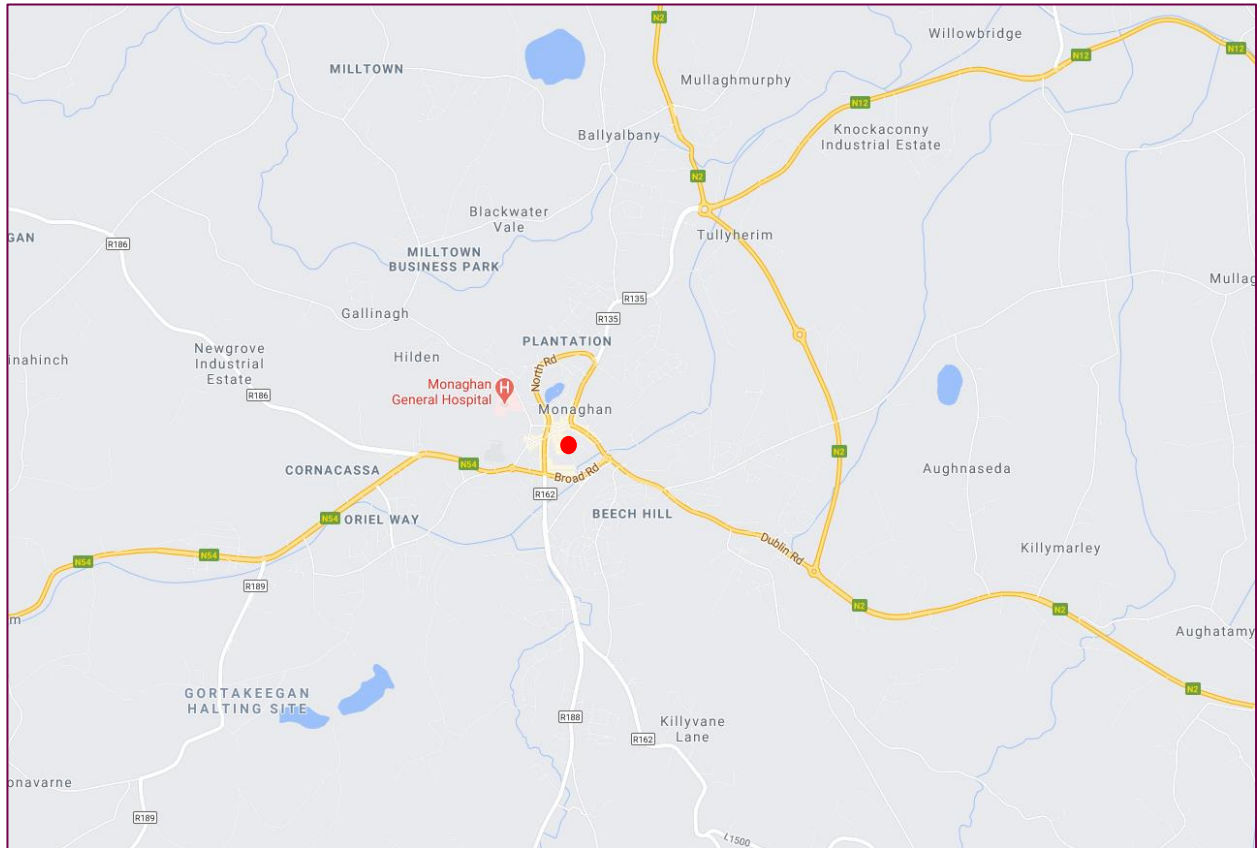


Figure 1.1 Site Location (Source: Google Maps 2021)

1.3 Environmental Impact Assessment Report (EIAR)

1.3.1 Proposed Structure

The proposed structure of the EIAR and the various environmental topics to be considered are set out in this section. The EIAR comprises:

- **Non-Technical Summary (NTS);**
- **Volume I Main Report;**
- **Volume II Technical Appendices; and,**
- **Volume III Technical Drawings & Figures.**

1.3.2 Schedule 6 Planning and Development Regulations Required Information

The EIAR will include all information identified in Schedule 6, Planning and Development Regulations 2001 (as amended), including:

- A description of the proposed development comprising information on the site, design, size, and other relevant features of the proposed development.
- A description of the likely significant effects on the environment of the proposed development.

- A description of the features if any, of the proposed development and the measures, if any, envisaged to avoid, prevent or reduce and if possible, offset likely significant adverse effects on the environment of the development.
- A description of the location of the development.
- A description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land–use requirements during the construction and operational phases.
- A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.
- A description of the main characteristics of the operational phase of the development (in particular any production processes), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used.
- An estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases.

The EIAR will also include a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

1.3.3 EIA Amendment Directive (2014/52/EU)

On the April 2014, the EIA Directive (2014/52/EU) (the EIA Amendment Directive) was adopted by the Council of the European Union (EU) and amended Directive 2011/92/ELJ on the assessment of the effects of certain public and private projects on the environment. Article 2 of the EIA Amendment Directive required all Member States to bring the Directive into force by 16th May 2017.

The EIA Amendment Directive clarified aspects of the preceding Directive 2011/92/ELJ to bring it into line with intervening European Court of Justice (ECJ) judgements and introduced additional provisions and procedural options. Therefore, compliance with the EIA Amendment Directive (2014/52/EU) will automatically ensure compliance with Directive 2011/92/EU. In Ireland: the EU (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI 296 of 2018), came into effect on the 1st September 2018 and gave effect to Directive 2011/92/EU as amended by the EIA Amendment Directive.

An EIAR document is produced as the key component of the environmental impact assessment (EIA) process. It provides a description of:

- a) The baseline environment.
- b) Identification of the potential effects (if any - both positive and negative) that are predicted to be incurred as a result of the proposed development; and,
- c) A description of any control and mitigation measures required to avoid, reduce or eliminate such potential effects.

The EIA Directive and its implementing Regulations requires that an environmental impact assessment must identify, describe, and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of a project on the following factors and the interaction between those factors:

- population and human health.
- biodiversity, and in particular species and habitats protected under Council Directives 92/43/EEC (the Habitats Directive) and 2009/147/EC (the Wild Birds Directive);
- land, soil, water, air and climate.

- material assets, cultural heritage and the landscape.

1.3.4 Reference Documents

This EIAR has been prepared in accordance with the requirements of the following legislation:

- Planning and Development Act, 2000 (as amended);
- Part 11 of the first Schedule of the European Communities (Environmental Impact Assessment (EIA)) (Amendment) Regulations, 1999 S.I. No. 93 of 1999);
- The Local Government Planning and Development Regulations 2001 — 2018 (S.I. No. 600 of 2001, and subsequent amending legislation); and,
- European Union (EU) (Planning and Development) (Environmental Impact Assessment) Regulations, 2018.

The following guidance was also considered in preparing this EIAR:

- EPA Advice notes on current practice in the preparation of Environmental Impact Statements (EPA, 2003).
- EPA Guidelines on the information to be contained in Environmental Impact Statements (EPA, 2002).
- European Commission Interpretation of definitions of project categories of Annex I and II of the EIA Directive (European Commission, 2015).
- European Commission Guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2017) (European Commission, 2001a).
- EPA Guidelines on the Information to be contained in Environmental Impact Assessment Reports (Draft) (EPA, 2022).
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2017) (Department of Housing, Planning and Local Government, 2014 and
- EPA Guidance on Soil & Stone By-Products in the context of Article 27 of the European Communities (Waste Directive) Regulations 2011 (Environmental protection Agency (EPA), 2011).

1.3.5 Methodology

The methodology employed in the EIAR provides for a staged approach, which can be summarised as follows:

- **Scoping/ consultation exercise:** to be undertaken to compile relevant background data and identify issues and constraints.
- **Baseline surveys:** including walk-over visits, detailed specialist surveys and discussions with relevant statutory and other consultees to determine the nature and extent of the existing environment.
- **Identification of potential significant effects:** predicting the likely significant environmental effects of the development during construction and operation of the facility for the range of predicted uses as well as setting the scene for the identifying appropriate mitigation for the development.
- **Mitigation:** on-going development and description of mitigation proposals which will be incorporated into the project design as it evolves, including regular review and evaluation, to mitigate the potential environmental effects.
- **Monitoring:** if considered necessary, monitoring requirements may be identified for both the construction and operational phase of the development.
- **Residual and cumulative effects:** consideration of the residual effects remaining after mitigation.

- **Reporting:** preparation of the EIA Report, including Non-Technical Summary.

The assessment of whether the proposed development is likely to have significant effects on the environment will be undertaken through a variety of methods:

- Professional judgement and experience based on published guidance criteria
- Assessment of both temporary and permanent effects
- Assessment of cumulative effects
- Assessment of duration, frequency and reversibility of effects
- Assessment against local, regional and national planning policy
- Consultation with statutory and non-statutory consultees

Significance criteria will be based on the type of potential consequences, the probability of the consequence occurring and the magnitude of the consequence. Individual chapters set out the scale that will be used to evaluate significance of effect, thus providing a consistent approach throughout the EIAR. Each topic chapter will identify significant effects relevant to each topic having regard to this scale.

Table 1.1 sets out the chapters contained within Volume I of the EIAR.

Table 1.1: EIAR Structure

| Document | Heading/Description |
|--|---|
| Non-Technical Summary | |
| Non-Technical Summary (NTS) | The NTS contains an overview of the proposed development and summarises the most salient points and findings of the EIAR in a non-technical language. |
| EIAR Volume I – Main Report | |
| Chapter 1 | Introduction |
| Chapter 2 | Project Description |
| Chapter 3 | Scoping and Consultations |
| Chapter 4 | Noise and Vibration |
| Chapter 5 | Flood Risk and Drainage |
| Chapter 6 | Water Quality |
| Chapter 7 | Soils, Geology and Contaminated Land |
| Chapter 8 | Terrestrial Biodiversity |
| Chapter 9 | Traffic and Transportation |
| Chapter 10 | Air Quality & Climate |
| Chapter 11 | Waste |
| Chapter 12 | Population and Human Health |
| Chapter 13 | Land Use & Material Asset |
| Chapter 14 | Townscape and Visual |
| Chapter 15 | Cultural Heritage & Architectural Heritage |
| Chapter 16 | Interactions |
| EIAR Volume II – Technical Appendices | |
| Technical Appendices | Appendix 2A Preliminary CEMP (pCEMP) |
| | Appendix 2B Preliminary DCWMP |
| | Appendix 2C Conditions Survey Report |
| | Appendix 2D Dublin Street Asbestos Survey Report |
| | Appendix 2E Northern Standard Asbestos Survey Report |
| | Appendix 2F Outdoor Lighting Report |
| | Appendix 3A An Bord Pleanála Scoping Opinion |
| | Appendix 4A Baseline Noise Monitoring Survey |
| | Appendix 4B Construction Noise Assessment |

| Document | Heading/Description |
|--|---|
| | Appendix 7A Monaghan Public Realm Preliminary Risk Assessment Final March 2021 |
| | Appendix 7B IGSL Ground Investigation Factual Report |
| | Appendix 8A Data Gathered from National Biodiversity Data Centre (NBDC) |
| | Appendix 8B Invasive Species Survey Report |
| | Appendix 8C Ecological Survey for Bats |
| | Appendix 9A Scoping Study |
| | Appendix 9B RSA Stage 1 |
| | Appendix 9C Existing Traffic Flows |
| | Appendix 9D Committed & Base Traffic Flows |
| | Appendix 9E Generated & Proposed Traffic Flows |
| | Appendix 9F Threshold Analysis Percentage Impact |
| | Appendix 15A Photographic Record |
| | Appendix 15B Cultural Heritage Figures |
| | Appendix 15C Cultural Heritage Site Inventories |
| | Appendix 15D Previous Licenced Archaeological Excavations |
| | Appendix 15E Placenames Review |
| EIAR Volume III –Technical Drawings & Figures | |
| | CDG-DR-A-20-001 - Existing and Proposed Dublin Street Elevations (A2) |
| | CDG-DR-A-20-002 - Proposed Elevations No.7 and No.12 Dublin Street (A2) |
| | Figure 5.1 CFRAM Flood Extents |
| | Figure 5.2 Flood Zone Map |
| | Figure 6.1 Site location in the Context of the WFD Sub Basins |
| | Figure 6.2 Water Framework Directive Water Body Status |
| | Figure 6.3 Natura 2000 Designated Sites |
| | Figure 8.1 Study Area |
| | Figure 8.2 Designated Sites |
| | Figure 8.3 Extended Phase 1 Survey |
| | Figure 14.2 Townscape Character Area |
| | Figure 14.4a: Viewpoint 01 Dublin Street Looking East Existing View; |
| | Figure 14.4b: Viewpoint 01 Dublin Street Looking East Proposed View; |
| | Figure 14.5a: Viewpoint 02 Dublin Street Looking West Existing View; |
| | Figure 14.5b: Viewpoint 02 Dublin Street Looking West Proposed View; |
| | Figure 14.6a: Viewpoint 03 Farney Road Towards Gavan Duffy Place Existing View; |
| | Figure 14.6b: Viewpoint 03 Farney Road Towards Gavan Duffy Place Proposed View; |
| | Figure 14.7a: Viewpoint 04 Towards Courthouse Car Park Existing View; |
| | Figure 14.7b: Viewpoint 04 Towards Courthouse Car Park Proposed View; |
| | Figure 14.8a: Viewpoint 05 Castle Road Existing View; and |
| | Figure 14.8b: Viewpoint 05 Castle Road Proposed View. |
| | MGT0528-RPS-00-XX-DR-C-BU1001_Demolitions and Removals_P02.01 (Planning Issue) |
| | MGT0528-RPS-00-XX-DR-C-CS1014 - Long Sections (Planning Issue) |
| | MGT0528-RPS-00-XX-DR-C-DR1001 - Drainage (Planning Issue) |
| | MGT0528-RPS-00-XX-DR-C-LA0001-01_Site Location_P02.02 (Planning Issue) |
| Drawings, graphics and figures | |

| Document | Heading/Description |
|----------|--|
| | MGT0528-RPS-00-XX-DR-C-LA0002-01_Topographical Survey_(Planning Issue) |
| | MGT0528-RPS-00-XX-DR-C-RM1001 - Road Markings (Planning Issue) |
| | MGT0528-RPS-00-XX-DR-C-SC1001 - Site Clearance (Planning Issue) |
| | MGT0528-RPS-00-XX-DR-C-SK0013 - ESB SUBSTATION (Planning Issue) |
| | MGT0528-RPS-00-XX-EW-C-EW0001 - Earthworks (Planning Issue) |
| | MGT0528-RPS-00-XX-M2-C-GA1001_General Arrangement (Planning Issue) |
| | MGT0528-RPS-00-XX-M2-C-KP1003_Construction Details (Planning Issue) |
| | MGT0528-RPS-00-XX-M2-C-KP1004_Northern Standard Elevation (Planning Issue) |

This structure facilitates incorporation into the EIAR of those environmental topics both highlighted by and scoped in by Scoping Opinion and as specified in the EIA Regulations and allows those topics to be comprehensively assessed.

1.3.5.1 Accidents & Major Disasters

In ABPs Inspectors Report (ABP-309071-21), dated 23rd April 2021, a request was made to assess major accidents and disasters. The specific text is as follows:

The EIAR should also provide an assessment of the expected effects arising from the vulnerability of the project to major accidents and disasters that are relevant to the project. These risks should be considered in the context of the factors of the environment.

In accordance with the recommendation from ABP and with reference to the EPA guidance (May 2022)¹, the risk of accidents and unplanned events which may be caused or have an impact on the proposed development have been assessed. A risk-based approach has been employed and is referenced in the following chapters and appendices:

- Chapter 6 Water Quality
- Chapter 7 Soils, Geology & Contaminated Land
- Chapter 8 Biodiversity
- Chapter 10 Air Quality & Climate
- Chapter 11 Waste
- Appendix 2A Preliminary CEMP (pCEMP)

1.4 Cumulative Effects

1.4.1 Definition of Cumulative Effects

This EIAR considers and assesses the potential for cumulative effects arising from the proposed development in association with other developments as detailed below in Table 1.2.

¹ Guidelines on the information to be contained in Environmental Impact Assessment Reports, EPA May 2022

The cumulative effects of a development refer to the way in which an environmental resource may be subject to a particular type of impact from more than one proposed development. The impacts from multiple projects may overlap or act in combination at a particular location or upon a particular resource, thereby leading to more significant environmental impacts than if the impacts were considered in isolation.

The EIA Directive 2014/52/EU specifies at Annex III that:

"the likely significant effects of projects on the environment must be considered [...] taking into account [inter alia] the cumulation of the impact with the impact of other existing and/or approved projects"; and at Annex IV that "a description of the likely significant effects of the project on the environment resulting from, inter alia [...] the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources" is required.

1.4.2 Cumulative and In-Combination Impacts

Cumulative effects are assessed in each chapter in respect of impacts resulting from the accumulation of impacts generated by the proposed development on the same receptors and the impacts potentially arising from adjacent or nearby developments together with those predicted for the proposed development.

The following guidelines and publications were considered when determining the other projects to be considered for their potential to generate cumulative effects with the proposed development:

- European Commission (EC) Guidelines for the Assessment of Indirect and Cumulative Impacts (1999).

The first step in determining cumulative effects comprised the identification of a list of:

- Projects which may have the potential to overlap with the proposed development based on available information.
- Projects for which a development consent application has been submitted or consent granted were included.
- Projects whose impacts could foreseeably overlap with the construction or operation of the proposed development or where construction impacts may be consecutive but cumulative, were considered

Cumulative effects are changes to the environment that are caused by an action in combination with other actions. They can arise from a number of sources, where relevant, including:

- the interaction between all of the different projects in the same area; and
- the interaction between the various impacts within a single project.

The cumulative effects of the proposed development, in conjunction with other proposed projects, are considered within each topic chapter. Relevant developments considered within the cumulative assessments include those which are:

- under construction;
- permitted, but not yet implemented;
- submitted, but not yet determined; and
- identified in the Development Plan (recognising that much information on any relevant proposals is limited).

Each topic chapter further considers whether there are significant cumulative effects which are likely to arise as a result of interaction between effects as part of the same project, so as to identify potential secondary, cumulative or synergistic effects.

1.4.2.1 Planning History

A planning history search was carried out to establish the most recent planning applications within and immediately adjacent to the site boundary, for the purposes of cumulative assessment. Several applications were identified as small scale new development, change of town centre uses, and refurbishments to existing buildings within the immediate area. It is unlikely that any of these will result in any significant cumulative effects on the environment.

One notable application is an extant permission granted in 2019 at No 24 Dublin Street, for a change of use from residential use to retail commercial uses, including alterations and extensions.

Table 1.2 identifies all those projects which have been assessment with regards to cumulative impacts. As part of this review, several other larger planning applications were considered, however discounted due to the distance from the scheme and were highly unlikely to have significant cumulative impacts.

Table 1.2: Projects to be assessed for Cumulative Impacts

| Planning Reference | Address | Applicant | Proposal | Current Status |
|--------------------|---|------------------------|---|----------------------------------|
| 17453 | Land at the junction of Macartan Road (N54) and the R162 Glen Road, Monaghan Town | Aldi Stores | Discount Foodstore (single storey), gross floor area 1814 sqm & associated works | Approved |
| 2015 | Existing Go Filling Station, Mall Road, Monaghan Town (opposite Farney Rd) | Lissan Coal Co Ltd | Redevelopment of existing Filling Station Forecourt, for an unattended 24hr filling station (retain signage, new pumps, kerbing, boundaries, drainage etc) | April 2018 |
| 9830001 | New Road Tirkeenan Monaghan | Frank Kierans | Proposed modifications to site layout including proposed public entrance at existing works entrance position also proposed pedestrian access walkways at development | Refused May 1998 |
| 9630020 | Tirkeenan Monaghan | Frank Kierans | Mixed Development comprising of commercial/retail units/apartments/associated car parking and associated development works | Sept. 1996 |
| 19474 | Rear of 6/7 The Diamond, Roosky Td., Monaghan | JCEP Developments Ltd. | Permission to develop a mixed-use residential/commercial infill development. The proposed development is to contain 25 no. apartments arranged in two blocks over 4/5 floors, linked via landscaped courtyard garden with lower level office/storage space beneath. | Refused December 2019 |
| ABP-306360-20 | Site to the rear of No & 7 The Diamond, Rooskey TD, Monaghan, Co Monaghan | JCEP Developments | Mixed Use residential and commercial development | Dismissed (on Appeal) Sept. 2020 |
| 9530014 | Diamond Monaghan | Northern Standard | Increase height of existing boundary wall | Unknown |
| 1230003 | Rooskey, Monaghan | DPT Mixed Use Dev. Ltd | Reinstate original ground levels to provide car park for 239 car, lighting, trolley bays, parking meters, bring-bank facility & reinstatement of boundary wall, fences & gates to Monaghan First Presbyterian Church (Protected Structure) | April 2012 |
| 0430079 | Nos. 8 & 9 The Diamond & No. 1 Dublin Street | Kieran McGuigan | Demolish all buildings to the rear of the offices of Monaghan Town Council whilst protecting & retaining intact the protected facade of the above mentioned building & construct New 5 storey over ground Hotel complex with two storey underground car park | February 2005 |
| PL72.214598 | Nos 8 & 9 The Diamond & 1 Dublin Street Monaghan | Kieran McGuigan | Demolish existing structures & construct a hotel with two-storey ug car parking. Refused on impacts on character, protected structure, nuisance, amenity and substandard form | Dismissed (on Appeal) April 2006 |

| | | | | |
|-------------|--|-------------------------------------|--|---------------|
| 9930095 | 8 The Diamond, Monaghan | Kieran McGuigan | Change of use of first floor living accommodation to offices, second floor living accommodation to 2 No. Apartments, Construct new extension incorporating new offices on first floor, 6 No. Apartments on second floor on top of premises already granted Planning Permission on foot of M.U. 74/97 - 8 The Diamond, Monaghan and M.U. 75/97 - 9 The Diamond, Monaghan with accommodation stairs, roof garden and ancillary works at premises currently known as Aladins Cave and Top Lady. | January 2000 |
| 0130018 | The Diamond, Monaghan | Kieran McGuigan | Change of use of first floor living accommodation to Offices, second floor living Accommodation to 2 no. Apartments, construct new extension incorporating new offices on first floor, 6 no Apartments on second floor on top of premises already granted | Sept. 2001 |
| 0430054 | No.8 The Diamond Monaghan | Kieran McGuigan | Alterations & material change of use premises. The development will consist of the following (a) Extension of coffee shop known as Greedy B into premises known as Fe.Mail.Com (b) change of use of premises known as Fe.mail.com from commercial unit to a licensed coffee shop/restaurant (c) change of elevation including new shop-front, new entrance & erection of new signage. This application relates to a protected structure in an area of Architectural Conservation. | April 2005 |
| 0330023 | Nos 2 & 3 Dublin Street Monaghan | Terry Connolly | Full planning permission to demolish single and two storey rear extensions and replace with 3 storey extension consisting of ground floor shop and extension of 2 no. existing shop units, erection of 2 no. shop fronts, first and second floor offices and extension of existing residential accommodation and associated site works at no.'s 2 & 3 Dublin Street, Monaghan. | July 2003 |
| 178011 | Monaghan Town Hall Building, Dublin Street, Monaghan | Monaghan CC | Permission to renovate and restore the former Town Hall which is a Protected Structure, to demolish the 1929 rear extensions to the original structure and to erect a new single and 2 storey extension of office accommodation measuring 328m ² | February 2018 |
| 9630036 | 24 Dublin Street Monaghan | Thomas Sherry | Convert & renovate existing flat and store to dwellinghouse at rear of existing premises | October 1996 |
| 19465 | 24 Dublin Street Monaghan | Tony Sherry | Permission for development consisting of change of use of existing 2 storey stone buildings from residential use to commercial retail use, to include associated internal alterations, to construct an extension to the south west facing elevation (facing the town carpark) and all associated site works | March 2020 |
| PL18.300998 | 24 Dublin Street, Monaghan Town | Tony Sherry | CoU from residential to retail/commercial use including extensions and alterations | Approved |
| 0430080 | No's 16-22 Dublin St., Rooskey Td, Monaghan Town | George Wright & Bellevue Tavern Ltd | (a) Demolish all buildings to the rear of the building known as "The Bellevue Tavern" whilst protecting and retaining intact the protected facade of the above mentioned building and construct a new building comprising of 3 no. ground floor shop units, one facing Dublin St. and the others facing the public right of way to public car park with 3 no. first floor and 3 no. second floor self contained apartments over together with connection to all existing services and all ancillary site works, shop fronts and signage. (b) construct new ground floor licensed premises to rear of No's 15,16,17,18,19,20,21 & 22 Dublin street which will front onto public access to the car park and the public car park with first floor office space over and 4 no. self contained apartments on second floor, provide on site car park space for 11 no. vehicles and ancillary bin storage and | February 2005 |

| | | | | |
|---------|---|----------------------|--|------------------|
| | | | access to car parking spaces. (c) connect to all existing town services and all ancillary site works | |
| 1130022 | Nos 22 & 23 Dublin Street, Monaghan | Gerard Trainor | (a) Alterations and extension of existing Butcher Shop (No. 22 Dublin Street) to extend into adjacent building (No. 23. Dublin Street). (b) Provision of new shop front and signage. (c) Alterations and rear extension at first floor level above Flower Shop (No. 23 Dublin Street) to provide independent access to the existing apartment above existing Butcher Shop (No. 22 Dublin Street), the further information/ revised plans consist of the following; Omission of the alterations and rear extension at first floor level above Flower Shop (No. 23 Dublin Street) to provide independent access to the existing apartment above existing Butcher Shop (No. 22 Dublin Street) | April 2012 |
| 030073 | Nos. 16 & 17 Dublin Street Monaghan | Noel McConnell | Part Demolition, addition of two storey extension and refurbishment of existing public house | March 2001 |
| 9630043 | The Shamrock Bar, 16 Dublin Street, Monaghan | Noel McConnon | New shop front and single storey extension to kitchen and stories to the rear | October 1996 |
| 0130072 | No.13 Dublin Street, Monaghan | Helen Drum | Construct, alter rear elevations, demolish rear section of No.12 and change of use from retail to restaurant and takeaway at No.13 Dublin St. Construct one bedroom apartment to first floor and alter entrance to apartment to No.12 Dublin St. at this level. Construct two -bedroom apartment at second floor level | January 2001 |
| 0230024 | No.12 & 13 Dublin St., Monaghan | Helen & Vincent Drum | Change of use of retail shop to Takeaway Restaurant. Extension to rear of premises & alterations to front elevations premises | July 2002 |
| 0630070 | 12 & 13 Dublin Street, Rooskey, Monaghan Town | Helen Drum | changes made to structure under previously granted planning reference M.T. 24/02. Retention planning permission is required for - Demolition of extensions to the rear of the property. Extension to existing apartments and construction of a new apartment to the rear of the property. | January 2007 |
| 0230030 | No.11 Dublin Street, Monaghan | Leslie Crawford | Demolition of existing cold storage facility and storage areas, provision of one no. one bedroom apartment over existing retail unit including new concrete flat roof over existing food preparation room, to form access relocation of existing connection to town sewerage and water mains and all associated works | August 2002 |
| 0430085 | No.11 Dublin Street, Monaghan | Leslie Crawford | Two N. Two storey townhouses, connection to town sewer and town mains and all associated site development works, all at the rear of premises | Refused Feb 2005 |
| 0030031 | No.14 Dublin Street, Monaghan | Robert Scott | Pedestrian pathway, boundary walls and works to car park at rear of No.14 Dublin St | October 2000 |
| 0030084 | Nos 9 &10 Dublin Street, Monaghan | Housten Scott | Demolish existing building & erect a funeral home to rear of Aileens & access onto public car park at 9 & 10 Dublin St | Refused Feb 2001 |
| 1330021 | No. 2 Dublin Street, Monaghan | Thomas Hughes | Retention permission for COU of 3 shops to casino at ground floor of a 3-storey building, signage and all associated site works | May 2014 |
| 0230068 | No. 2 Dublin Street, Monaghan | Thomas Hughes | To demolish existing single storey snooker hall and construct 3 storey building consisting of 3No. ground floor shop unit, first floor and second floor snooker halls and second floor offices and associated site works. | Aug 2005 |

There are several wider regeneration initiatives being progressed within the town at present. These have also been considered within the cumulative and in combination assessments. These are outlined in the subsequent sections.

1.4.2.2 Dublin Street Regeneration Plan 2017

The Dublin Street Regeneration Plan 2017 sets out a vision and framework for the overall regeneration of the wider Dublin Street area over the coming years. This has been incorporated in the County Development Plan 2019-2025, which provides a statutory basis to guide all redevelopment within the area.

The proposed development is the initial stage of the Dublin Street Regeneration Plan, which focuses on Dublin Street South and its backlands and focuses on creating a new urban structure with a new streetscape, pedestrian, and cycle network, within this area to attract in new town centre development. Later stages of this Plan envisage a mix of new development accommodating new office, retail, commercial and community spaces, within new urban blocks opening onto the new streetscape and civic spaces.

As part of the Dublin Street Regeneration Plan, design principles and objectives are provided to guide the development of these plots in the future, in the form of potential building envelopes, heights, access and siting. High level guidance on potential town centre land uses at these locations is also provided. The proposed development creates two new large development plots to facilitate future new development in this location, and the design concept within the Plan suggests two potential, high level development options for these areas. For the purposes of the cumulative assessment, option 2 has been considered which comprises the following elements (as shown in Figure 1.2):

- Central development plot developed as a full urban block solution, with semi-basement car parking supporting major retail, or office, or hotel / mixed use commercial, or residential use, over 4-4.5 storeys in height;
- Eastern development plot developed for residential / commercial uses, over 3-storeys in height;

The proposed development does not include detailed proposals for these future development plots. It is anticipated that proposals for these plots will be brought forward by either the Council or third parties as separate planning applications for development at some point in the future and assessed under the relevant planning and environmental considerations at that time.



Figure 1.2: Option 2 – South Dublin Street

1.4.2.3 Dublin Street North Regeneration Plan 2022

The North Dublin Street and Backlands Scheme has also evolved from the overall Dublin Street Regeneration Plan, and funding has been secured to develop the conceptual detail for regeneration proposals throughout this area. This area is the subject of a Local Area Action Plan and is supported by the objectives of the Monaghan County Development Plan 2019 - 2025. The North East lands encompasses the lands outlined in Figure 1.4 overleaf.

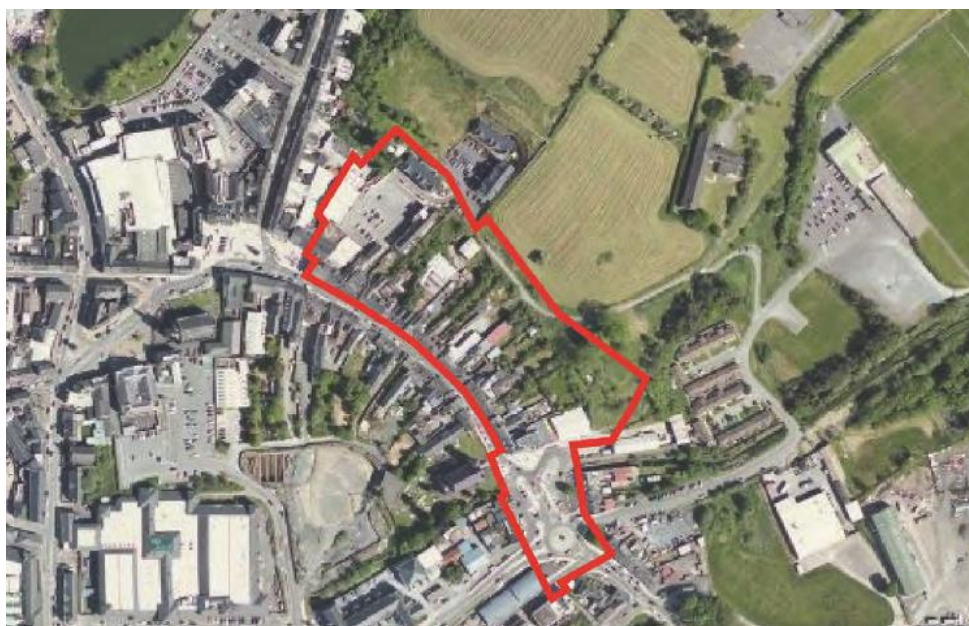


Figure 1.3: Boundary of Dublin Street North lands

The Vision for these lands focuses on adopting a placemaking approach that makes sustainable use of the assets and potential of this town centre area, to create a desirable and convenient place to live, work and recreate through the reuse and adaption of existing structures, with new development areas to create new homes, with businesses and services that will create new employment opportunities. This will be achieved within a high quality public realm that is connected to the existing street network, to achieve a sustainable urban quarter, providing increased footfall and population critical mass in Dublin Street, and the wider Monaghan Town Centre, that will underpin quality urban spaces, amenities, vibrancy and a diverse and vibrant town centre living environment that promotes people’s health, happiness and well-being. The vision translates into a concept Regeneration Plan Strategy.

The Strategy proposes a consolidated development form to create an identifiable urban quarter with a strong sense of place and identity, to include the reuse adaption and infill of existing structures and new perimeter urban blocks, new streets and spaces that integrate and connect with the existing street network.

An architectural and urban planning consultancy team Sheridan Woods Architects & Urban Planners produced draft regeneration proposals for this area, which were placed on public consultation early 2022. Following public consultation and agreement with Elected Members, the final proposals were incorporated into the County Development Plan by way of variation in April 2022, giving statutory weight to the regeneration framework for this area.

The Dublin Street North Regeneration Plan provides a conceptual level of design detail for the future development parcels, within its design concept which is shown in Figures 1.4 and 1.5.

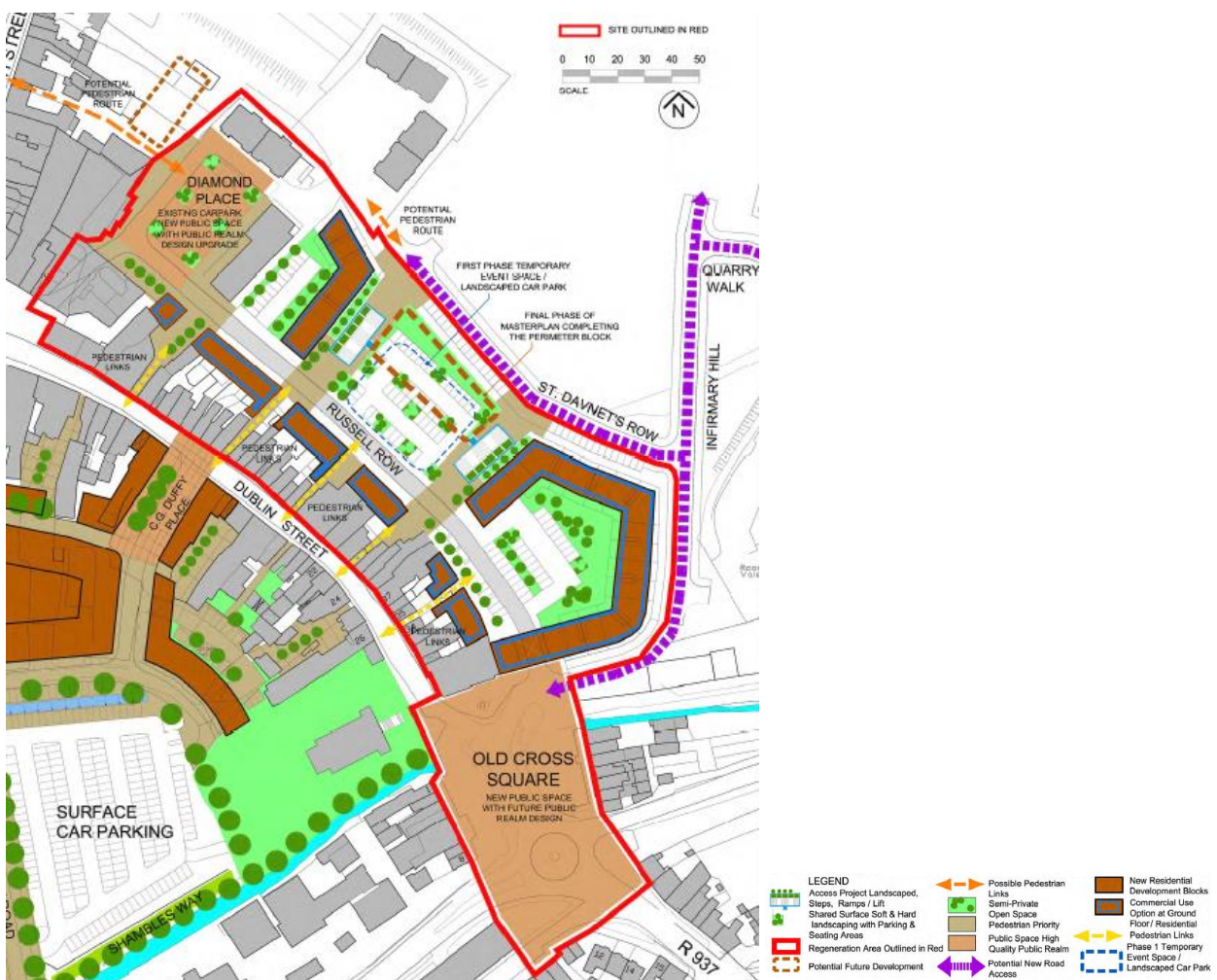


Figure 1.4: The Vision for the Dublin Street North area

A series of regeneration principles and objectives underpin the Regeneration Plan including the following:

- To adopt a placemaking approach that strengthens the role of Dublin Street and the Regeneration Plan Area as a place to live, shop, work, and do business.
- To create an attractive desirable place for people to live, shop, work and do business.
- To become an exemplar for sustainable town centre development.
- To create a sustainable residential and mixed use neighbourhood to compliment and strengthen the mix of uses in the town centre.
- To create an accessible and permeable neighbourhood and an enhanced pedestrian experience.
- To create an appropriate entrance to Monaghan Town from the east and to the proposed Roosky Masterplan area.
- To provide a high quality public realm and attractive public spaces adopting a people first priority.
- To enhance the setting of historic buildings and consolidate the character of the area.
- Architectural design standards

The proposals and layout presented in Figure 1.4 is a concept strategy and indicative only. The regeneration of Dublin Street North will be subject to detailed design at a later date. It is anticipated that this development will be brought forward by the Council and/or third parties in the future and will be subject to separate planning application(s). Any relevant environmental assessments required would be requested as part of the planning process when a full level of design detail would be available.

1.4.2.4 The Roosky Lands Masterplan

Monaghan County Council recently acquired a land holding from the Health Services Executive Saint Davnets Campus in Monaghan Town Centre, with a view to redeveloping the lands for a range of town centre uses including residential and offices. This land (referred to as the Roosky Lands) lies directly north and northwest of Dublin Street, and directly adjacent to the Dublin Street North lands as shown in Figure 1.5 below:



Figure 1.5: Boundary of the Roosky Lands Masterplan

The Roosky Master Plan area offers a unique opportunity to make sustainable use of a significant portion of land within Monaghan town Centre. The vision for the Master Plan is to adopt a placemaking approach that makes sustainable use of this town centre area to create a desirable and convenient place to live, work and thrive through the provision of attractive, affordable urban housing, with businesses and services that

will create new employment opportunities. This will be achieved with a high quality and accessible public realm with its own identity and sense of place, that promotes pedestrian and cycle movement, that integrates with the historic street network and built form to complement and enrich the architectural character of the area, creating a connected sustainable community in Monaghan Town Centre and place where people choose to live, work and invest.

The Vision translates into a concept Master Plan which comprises new streets and spaces that connect new urban spaces defined by a mix of uses and building forms and heights that create a strong sense of place and identity. The plan area integrates with the site topography, existing street network the distinctive character areas of Dublin Street, Old Cross Square, Roosky Vale and St. Davnet's and the Dublin Street North and Dublin Street South Regeneration Plans. The plan incorporates the Monaghan Civic Offices as a central part of the plan to act as a catalyst for the development of the overall Master Plan area.

Master Plan—Proposed Mix of Use

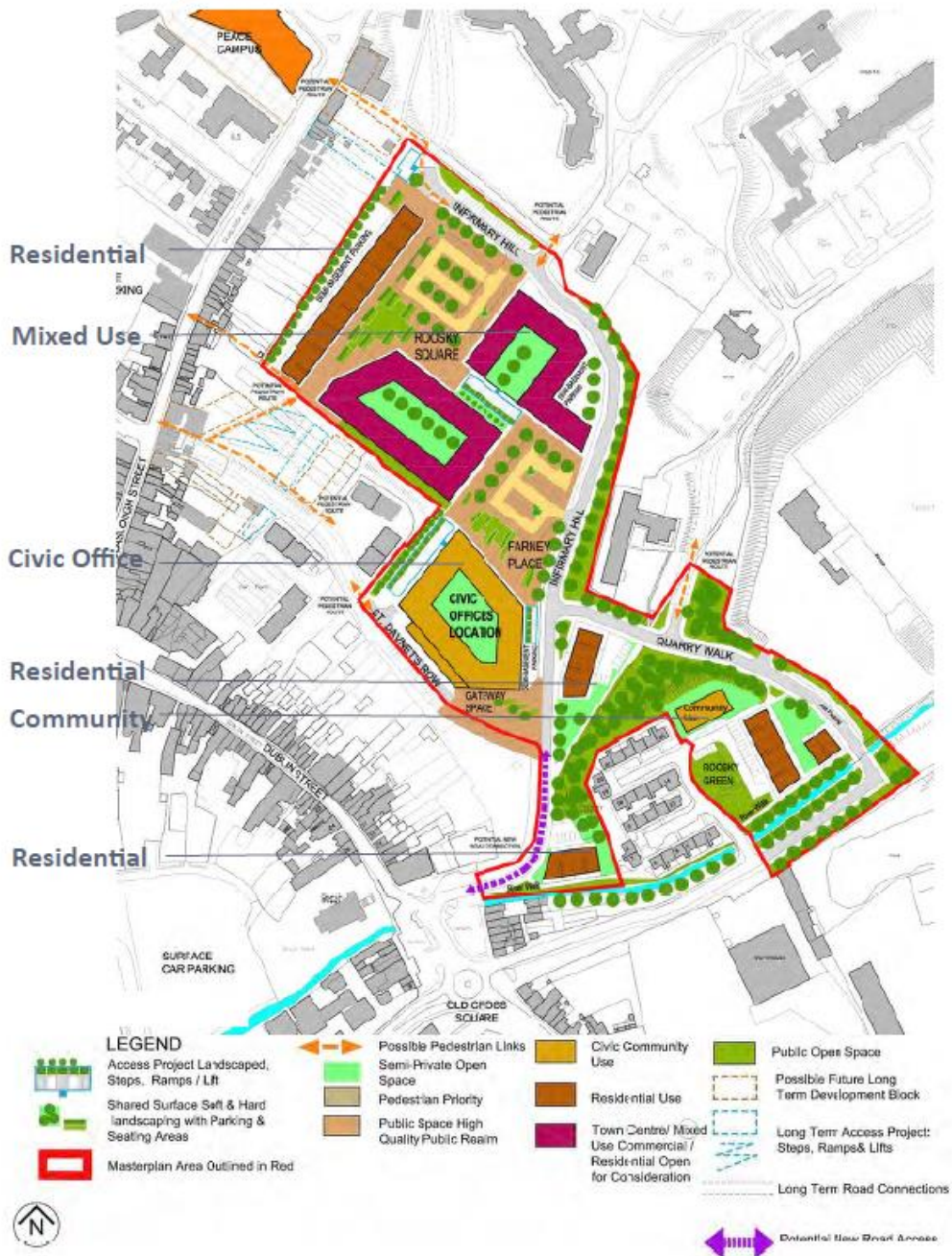


Figure 1.6: The Vision for the Roosky Lands

An architectural and urban planning consultancy team (Sheridan Woods Architects & Urban Planners Ltd) produced a draft masterplan for this area, which was placed on public consultation early 2022. The Master Plan Strategy creates plateau and terraces to address the sloping topography. The terraces/plateaus form new urban spaces of varying hierarchy and use. The urban spaces are connected with pedestrian, cycle and vehicular access routes. The urban spaces and access routes define the potential development areas.

The development areas are linked with access projects and routes from the Dublin Street North Regeneration Plan area, with potential future links to Glaslough Street, Old Cross Square and St. Davnet's Campus. Following public consultation and agreement with Elected Members, the final proposals were incorporated into the County Development Plan in April 2022 by way of variation, giving statutory weight to the masterplan for this area. The Dublin Street Regeneration Plan provides a conceptual level of design detail for the future development parcels, within its design concept (as shown in Figure 1.2 above). The design concept has been developed further by the architectural consultant team, for the purposes of the public consultation, and the most recent proposals are identified in Figure 1.5 below.

The Roosky Master Plan layout outlined in Figure 1.6 is a concept strategy and indicative only. The regeneration proposals within the Roosky Master Plan will be subject to detailed design at a later date. It is anticipated that this development will be brought forward by the Council or third parties, in the future, and will be subject to separate planning applications. Any relevant environmental assessments required, will be requested as part of the planning process, when a full level of design detail would be available.

1.5 Transboundary Effects

Article 5(1) sets out what must be included as a minimum in the EIA Report. Annex IV to the Directive, expands on these requirements. In short, this includes the following:

Effects on the environment: a description of the likely significant effects of the project on the environment.

Such significant effects include direct and indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, and positive and negative, as appropriate.

Effects are also considered, and categorised, in terms of being direct and indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, and positive and negative, and are discussed in relevant Chapters of the EIAR as appropriate.

1.6 EIAR Scoping

This section sets out an overview of the consultation undertaken as part of the EIA process and the related scope of the assessment undertaken. Full details of stakeholder and public consultation are set out in Chapter 3 of the EIAR.

1.6.1 Formal Scoping Request

RPS issued an EIA Scoping request to An Bord Pleanála (ABP) under Article 95 Planning & Development Regulations 2001, as amended (for proposed development under S. 175 Planning & Development Act 2000, as amended) on behalf of Monaghan County Council on 23rd December 2020.

ABP replied to this request on the 3rd February 2021 confirming that it had circulated a request for a response from the following bodies (in accordance with article 95 of the Planning and Development Regulations, 2001):

1. Department of Communications, Climate Action and Environment
2. An Chomhairle Ealaíon
3. An Taisce
4. Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media
5. Department of Culture, Heritage and the Gaeltacht (Development Applications Unit)

6. Eastern and Midlands Regional Assembly
7. Environmental Protection Agency
8. Fáilte Ireland
9. The Heritage Council

Please refer to Volume II Technical Appendices, Appendix 1A for details on a copy of the ABP scoping correspondence.

1.7 Project Team

The production of the EIAR has been co-ordinated by RPS. The EIAR structure, responsibility and qualified input for each chapter are detailed in Table 1.4.

Table 1.4: EIAR Project Team

| Chapter of EIAR | Lead Author (s) | Company | Subject | Qualifications |
|-----------------------|------------------|---------|------------------------------------|---|
| EIAR Project Director | Raymond Holbeach | RPS | Project Director | Director BSc (Hons) Env Sc CMLI |
| Chapter 1 | Stephen McAfee | RPS | Introduction | Senior Associate BSc (Hons) MSc CSci MIAQM AIEMA |
| Chapter 2 | Aideen McFerran | RPS | Project Description | Senior Associate BSc (Hons) MSc MRTPI |
| Chapter 3 | Aideen McFerran | RPS | Scoping and Consultations | Senior Associate BSc (Hons) MSc MRTPI |
| Chapter 4 | Catriona Cooper | RPS | Noise and Vibration | BSc (Hons) PG Dip MCIEH MIOA |
| Chapter 5 | Diane McGinnis | RPS | Flood Risk and Drainage | Associate BEng, MSc, CMIEI, CMICE |
| Chapter 6 | Mark Magee | RPS | Water Quality | Senior Associate BA (Mod) MSc CSci CEnv CWEM MCIWEM |
| Chapter 7 | Joseph McGrath | RPS | Soils, Geology & Contaminated Land | Associate BSc (Hons) MSc CSci C.WEM MCIWEM |
| Chapter 8 | Samuel O'Hara | RPS | Terrestrial Biodiversity | Senior Ecologist BSc (Hons) ACIEEM |
| Chapter 9 | Stephen Houlihan | RPS | Traffic & Transportation | Associate BSc (Hons) CMLT MTPS |
| Chapter 10 | Stephen McAfee | RPS | Air Quality & Climate | Associate BSc (Hons) MSc CSci MIAQM AIEMA |
| Chapter 11 | Ciara Devine | RPS | Waste | Senior Scientist BSc MSc MCIWM |
| Chapter 12 | Stephen McAfee | RPS | Population & Human Health | Senior Associate BSc (Hons) MSc CSci MIAQM AIEMA |
| Chapter 13 | Stephen McAfee | RPS | Material Assets & Land Use | Senior Associate BSc (Hons) MSc CSci MIAQM AIEMA |
| Chapter 14 | Raymond Holbeach | RPS | Townscape & Visual Impact | Director BSc (Hons) Env Sc CMLI |

| | | | | |
|------------|--|--|--|--|
| Chapter 15 | Martin McGonigle (Cultural Heritage) Camilla Brännström (Cultural Heritage) Megan Nelson-Nilehn (Architectural Heritage) | John Cronin Associates Consarc Design Group | Cultural Heritage & Architectural Heritage | Martin McGonigle (BSc, MSc) Camilla Brännström (MA) Megan Nelson-Nilehn (BSc, MSc) |
| Chapter 16 | Multiple | RPS | Interactions | All above |

Chapter
02

Project
Description

CHAPTER 2 PROJECT DESCRIPTION

2.1 Introduction

This chapter of the EIAR describes the site and its relationship with the surrounding area and provides a description of the proposed development.

2.2 Location of the Proposed Development

The application site is located in the central core of Monaghan town centre, Co. Monaghan. The site boundary is shown below in **Figure 2.1**.

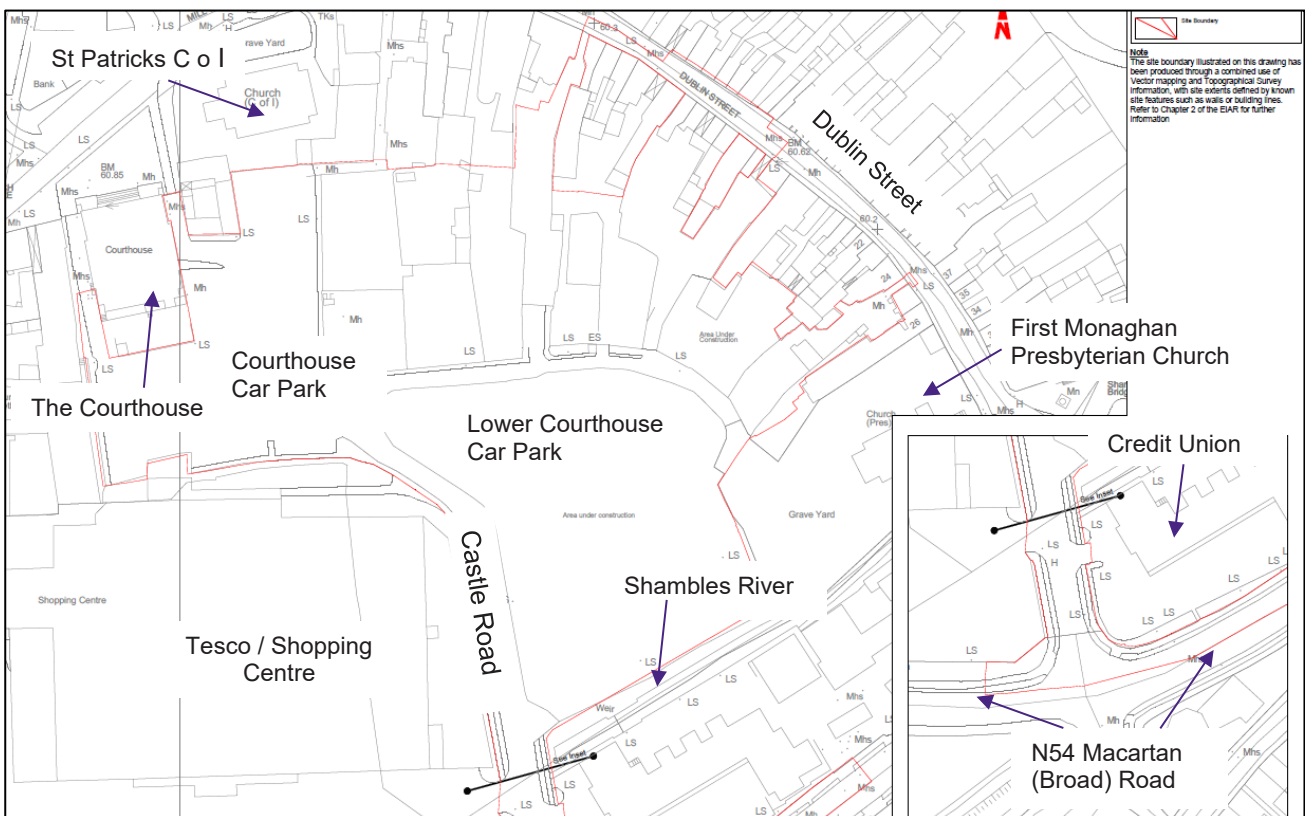


Figure 2.1: Location of the Proposed Development

Monaghan town is strategically located at the juncture of the N2 Dublin – Derry/Letterkenny and the N54 Belfast to Galway National Routes and is on a key east west corridor linking Dundalk and Newry to Sligo. In the context of National Planning Framework (NPF) Monaghan is located in the Northern and Western Region, with important cross-border linkages with Northern Ireland. As the Tier 1 Principal Town in the County, it performs important economic, employment, retailing and administrative functions, and supports a wider rural hinterland and network of towns and villages.

The site is located within the town centre boundary as defined in the Monaghan County Development Plan 2019-2025. The wider context is dominated by town centre uses, including retail, business and commercial, residential, and community / ecclesiastical uses.

The site is located to the southeast of the town core, extending from The Diamond to the northwest, south eastwards along Dublin Street, and is defined to the southeast by the First Monaghan Presbyterian Church to the south at Old Cross Square. The Shambles River and the development of European Union House/Credit Union building defines part of the southern boundary along with Castle Road. Monaghan Shopping Centre, built in the 1990's defines the southwest and western boundaries, with the rear of several properties fronting Dawson Street, such as McElvaney's Pub and Monaghan Courthouse defining the north-west boundaries. St Patricks Church and Church Square define the northern boundaries of the project area.

2.3 The Site

The site location includes the terraces of buildings fronting onto Dublin Street, between No 7 and No 12/13 Dublin Street (Figure 2.2). These incorporate several buildings between 2 and 3 storeys in height, with a variety of architectural styles, generally of two and three bays in width. These are interspersed with lane ways through archways (Figure 2.3) and gaps, which lead through to courtyards, smaller rear outbuildings, backlands, gardens and service areas for various commercial properties. These are a mix of retail / commercial properties, residential properties, and vacant properties.



Figure 2.2: 7-9 Dublin Street

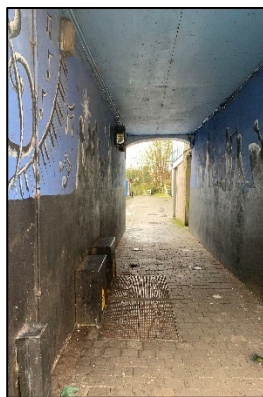


Figure 2.3: Alleyway between 14-15 Dublin St



Figure 2.4: Courthouse Car Park

Some of these properties fronting Dublin Street have long rear annexes, which extend down to the service road bounding the Lower Courthouse public car park, and there is a vehicular access from this service road into the property of No. 7 Dublin Street.

The site also incorporates the linear backland areas of other properties, fronting 1-9 The Diamond, 1-6 Dublin Street, and 14-26 Dublin Street. Much of this land is vacant, underutilised, or service areas, except for the Northern Standard newspaper which currently operates out of premises adjacent to the Courthouse public car park (Figure 2.4), St Patricks Church of Ireland, Church Square / The Diamond. There is sporadic, mature tree cover located within these areas, along with various types of boundary fencing, walls and gates.

The lower Courthouse public car park is accessed via Castle Road and accommodates 240 car parking spaces (primarily long stay). It also accommodates recycling facilities, amenity landscape and street lighting. The Shambles River provides the southern boundary to the site and this car park.

Castle Road provides the main vehicular and pedestrian access into the site, and provides connections into Monaghan Shopping Centre, Lower Courthouse car park, Courthouse car park, and service areas to the rear of properties fronting onto The Diamond, Dublin Street, and Church Square. It is regularly used as a short cut, to avoid the traffic lights at the junction of Macartan Road and Dawson Street, during peak times, exiting at Church Square. Castle Road is bounded by pedestrian footpaths and amenity planting/grass on either side of the carriageway, with close boarded fencing delineating its boundary with the Shopping Centre. The pedestrian footpaths connect into the front entrance of the Shopping Centre, the Courthouse car park, and lead into Church Square.

The front entrance to Monaghan Shopping Centre defines the southwest boundary of the site and sits at a lower ground level than the application site. The Courthouse car park (Figure 2.4) accommodates 153 short stay car parking spaces. The wall of the Courthouse identifies the boundary of the site to the north, with a one way in/out system on either side of it. There are existing vehicular access points along the wall of the Courthouse to be maintained, as well as a pedestrian access into St Patricks Church. There are public toilets and a bicycle storage area adjacent to the Courthouse.

There are considerable gradient differences throughout the site, with numerous changes in levels in several directions. The lands generally slope down from The Diamond in the north, eastwards to Old Cross Square to the southeast, and also down from Dublin Street southwards toward the car park to the rear. There is approximately 2-3m differences in levels between the Courthouse Car park and the adjacent Northern Standard building and the Lower Courthouse Car Park.

The area within the red line boundary defining the application site extends to approximately 2.72ha.

2.4 The Overall Design Concept

The proposed development is the first step in delivering the regeneration proposals for the Dublin Street area and its backlands set out in the **Dublin Street Regeneration Plan 2017**. This Plan sets out a strategic regeneration vision for Dublin Street and its environs, which focuses on consolidating the urban structure, to create new streets and public spaces which will integrate seamlessly with the existing town centre and introduce a new backland quarter. The Plan was adopted by Monaghan County Council and incorporated into the statutory Monaghan County Development Plan 2019-2025 (Monaghan Town Centre Objective MPO2 and Appendix 20).

The regeneration objective for Dublin Street is to enhance permeability of the area, facilitate new and more compact development, create a legible network of connections and spaces for pedestrians and traffic, and provide an attractive place where people wish to live, work and visit. A well-defined and clear urban structure is fundamental in delivering a successful new neighbourhood. The Plan provides an overall design concept to guide the detailed design and delivery of this regeneration vision, which is summarised below.

Dublin Street together with its Backlands offers a unique opportunity to create a new and viable town centre quarter, with the potential to accommodate additional shopping, office, cultural, residential and new employment zone. It offers the opportunity to address the weaknesses of the area and to maximise its strengths; to enhance pedestrian and vehicular movement, to enhance the existing built heritage; to integrate with the historic streetscape in a manner that is both contemporary and forward looking while complimenting the built heritage; to create an integrated and commercially robust, viable proposal, and a vibrant and sustainable new urban quarter in Monaghan.

The regeneration vision above highlights the Councils key aspirations for a new vibrant and sustainable urban quarter to the south of Dublin Street. Successful development in this area depends on good access and connections, to encourage a range of activities and uses for a diverse range of people. The design concept at the heart of the Dublin Street Regeneration Plan 2017 (shown in Figure 2.5) aspires to revitalise the urban structure and create a coherent framework for future development, by setting out the arrangement of streets, buildings, development areas, open space, and landscape areas, as the foundation to reinvigorating this part of the town centre.

Short Term Vision

The initial phase of development focuses on the short term vision, as set out in the Regeneration Plan – in the context of the design concept, this focuses on the upgrading of existing public spaces, streets and footpaths, and the creation of new connections, with new streets and spaces, which enhance the urban structure, and provide high quality public realm, as a new setting for future development. The spaces between and surrounding new and future buildings are as important as the buildings themselves, and it is essential that they aspire to create a permeable, accessible, and connected environment which integrates into the existing fabric of the town centre.

In summary, the design concept provides for the provision of a new primary urban space and street, connecting Dublin Street through the underutilised backland areas, through to the Shopping Centre, Castle Street and the N54. The focus is on creating a thriving street space designed to accommodate town centre uses within a safe and attractive environment, which has a sense of ownership and community. It prioritises pedestrians, cyclists and public transport, but also accommodates necessary vehicular movements.

In addition, new and improved secondary movement routes are proposed to provide key linkages and connections with the existing urban fabric, generally comprising new streets, improved entries and footpaths where pedestrian and cycle priorities are maximised. These highly connected spaces are clearly defined and convenient for all users, ensuring access to employment, retail and local community facilities. A key design focus is creating safe and secure links within these spaces and ensure high levels of natural surveillance.

A core component of the new spaces is the provision of high-quality public realm, which plays a central role in creating a well-connected, safe and enjoyable environment within this new and improved part of Dublin Street. Within these new and improved spaces, there is a key emphasis on ensuring that the demands of vehicles for

movement, access and deliveries does not compromise the creation of an urban quarter which encourages people to walk and cycle.

This planning application and EIAR focuses on the design and delivery of these new spaces, as the foundation for a new and improved urban structure, providing an enhanced setting for new buildings and uses anticipated in the future (i.e., the longer term vision). These new spaces are outlined in further detail in Section 2.5.

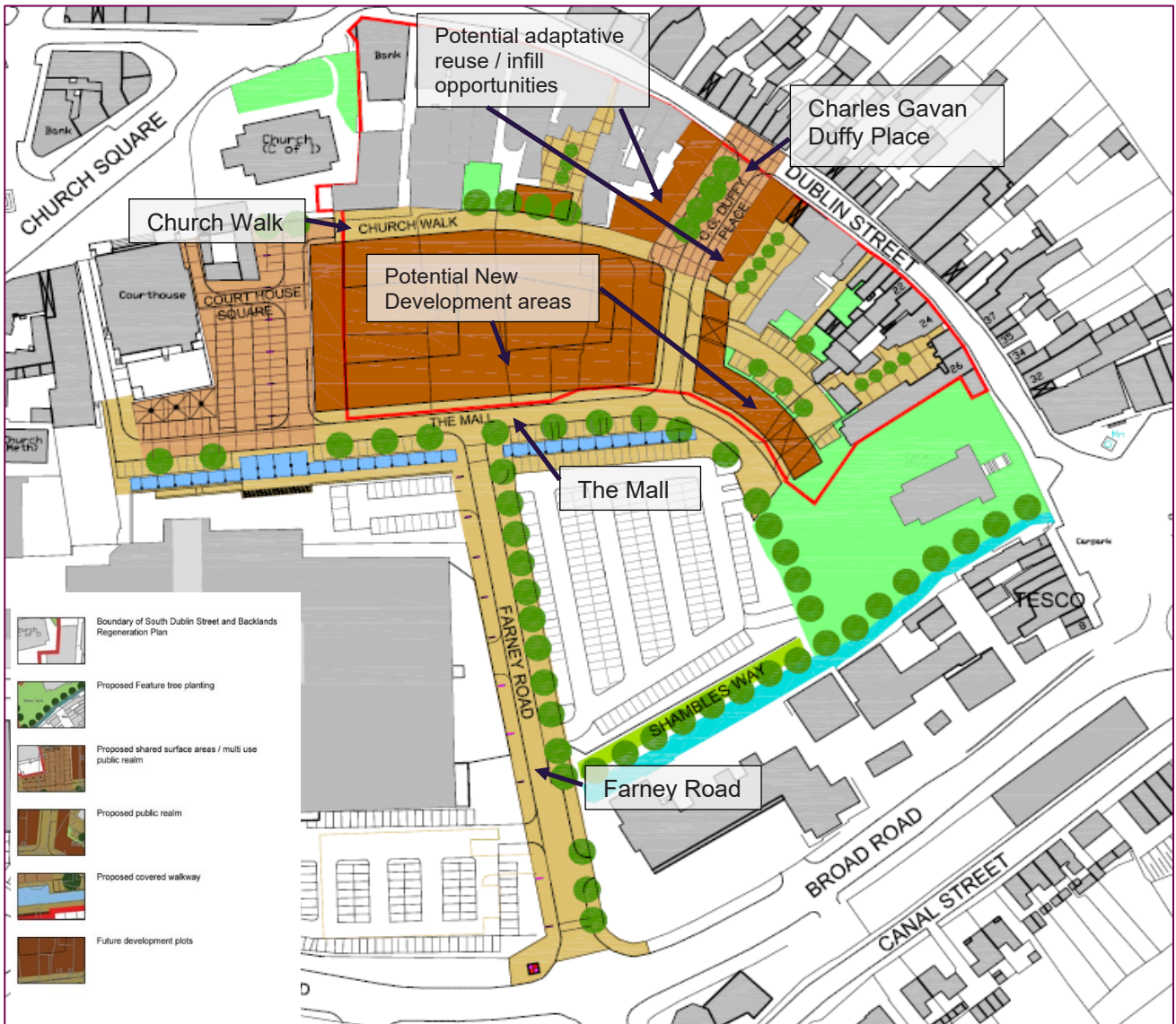


Figure 2.5: Dublin Street Regeneration Plan - Design Concept

(Source: Excerpt from Dublin Street Regeneration Plan 2017, Sheridan Woods, 2017)

The Council has secured funding from Project Ireland 2040 through the Urban Regeneration Development Fund (URDF) to progress the project (short term vision) through Design and Planning phases.

Longer Term Vision

The longer term vision foresees the regeneration of the existing urban fabric through a combination of redevelopment of existing buildings and spaces, as well as new development and urban blocks within the framework of new and improved spaces and movement routes (short term vision). These new developments would aspire to improve upon and enhance the Dublin Street area and provide a new ‘façade’ to the backland area, creating a new identity for the newly regenerated Dublin Street Quarter.

The design concept encourages new development by:

- Adaptive reuse and conversion of existing buildings and underutilised property, and infill development

- The development of new urban blocks, either large scale or through incremental growth

The design concept highlights those areas where adaptive reuse, conversion and infill development, and where large scale new development blocks will be encouraged (areas highlighted in brown, on the Design Concept, Figure 2.5). This concept encourages new buildings and uses in strong building blocks along the edges of and fronting onto the new spaces and movement routes, to provide a high level of activity throughout the day, provide visual interest, animate the spaces, and create a natural surveillance within the area.

This new development will encourage opportunities for new town centre uses and activities to locate in the area, which will reinvigorate the town centre and foster a renewed vibrancy. High quality urban spaces, which are safe, attractive, and well-connected will encourage footfall and dwell time, and will optimise opportunities for social interaction. The design concept aspires to create a sustainable, flexible environment, which generates an inclusive and cohesive community where people will want to live, work, and socialise.

The proposed development (and this planning application and EIAR) does not include development proposals for adaptation, conversion and infill of existing urban fabric/structures, or proposals for new development blocks / uses. Rather it seeks to deliver a new high quality public realm and new network of spaces and streets that will act as a catalyst for future redevelopment and new development in the surrounding urban areas. It is envisaged that proposals for new development / redevelopment will be brought forward by either the Council or third parties as separate planning applications at some point in the future, and assessed under the relevant planning and environmental considerations at that time

2.5 Description of the Design Proposals

2.5.1 Proposed Development Design Drawings

The proposed development works that are the subject of the EIA process are outlined in the planning drawings included in EIAR Volume III Technical Drawings & Figures, and are summarised below:

- Drawing LA0001-01 Site Location
- Drawing LA0002-01 Topographic Survey (Existing Levels)
- Drawing BU1001 Demolitions & Removals
- Drawing SC1001 Site Clearance
- Drawing GA1001 Proposed General Arrangement
- Drawing A-20-001 Existing & Proposed Elevations
- Drawing A-20-002 Proposed Gable Return Elevations
- Drawing CS1014 Long Sections
- Drawing DR1001 Drainage
- Drawing KP1003 Construction Details
- Drawing EW0001 Earthworks
- Drawing RM1001 Road Markings
- Drawing SK0013 Proposed ESB Sub-Station
- Drawing KP1004 Northern Standard Elevation

A summary of the proposals is included in the subsequent sections.

The proposed development works that will be the subject of the EIA process are also supported by the following Volume II Technical Appendices:

- Appendix 2A Preliminary Construction Environmental Management Plan (pCEMP)
- Appendix 2B Preliminary Demolition & Construction Waste Management Plan
- Appendix 2C Conditions Survey Report
- Appendix 2D Dublin Street Asbestos Survey Report

- Appendix 2E Northern Standard Asbestos Survey Report
- Appendix 2F Outdoor Lighting Report

The development proposals outlined in the planning drawings referenced above (and provided in EIAR Volume III –Technical Drawings & Figures) have been designed within the extents of the project area, as defined by the topographical survey undertaken in 2020. It is considered that this survey provides the most up to date and accurate representation of the proposed development area, in terms of building boundaries and existing site features on the ground. In overlaying the topographical data onto the vector mapping, for the purposes of the planning application, it has become apparent that there are clear inconsistencies in the location of known site features and / or building lines and boundaries.

In this context, the red line boundary of proposed development as shown on Planning Drawing LA0001-01 has been derived through a combination of the vector mapping and the topographical survey data of the area. As a result, the detailed proposals outlined on the General Arrangement Drawing GA1001 do not extend fully up to the red line boundary, in a number of locations due to the inconsistencies in site feature boundaries.

In addition, there are a number of locations where the red line boundary (shown on Planning Drawing LA001-01) extends somewhat further than the extent of development proposed on Planning Drawing GA1001 – primarily along the existing road network i.e., along the N54 Macartan (Broad) Road, Dublin Street, and the Courthouse car parks. This relates to the proposed below-ground connections required to tie into existing utilities and services.

2.5.2 New urban spaces, streets, and linkages

A hierarchy of spaces and streets form the foundation of the new urban structure proposed south of Dublin Street, and alterations to the adjoining streets to provide new connections to and from Dublin Street. These will enhance the permeability and accessibility of the area and will provide a legible network of connections and spaces for pedestrian and traffic movements, which will seamlessly integrate into the existing urban fabric and streetscape. The long term aspiration is that this new high quality setting will be a catalyst to encourage new development into the town centre, to enrich the quality of the urban area. Several new streets and spaces are proposed, as follows:

- Creation of a new urban space, comprising a street, junction and extended footpaths to connect Dublin Street through to its backland areas, opening up new areas for development and enhancing the pedestrian linkages throughout this area. This area is formed by the demolition of existing structures fronting Dublin Street and their associated backland areas. The proposals focus on shared surfaces, extended footpath widths and high quality public realm, to encourage pedestrian activity, social interaction and provide a connection to a new reimagined urban place. New building frontages along No's 7 and 12/13 Dublin Street provide a strong urban form, animated edges to the new space, and an element of natural surveillance at this gateway location. The new space will benefit from a southerly orientation and will increase light onto Dublin Street.

This area is intended as a multi-use space and is capable of being temporarily cordoned off for use as an event space, for a market, pop-up commercial/retail uses, or occasional festival events. The creation of this new space creates a new setting and enables new opportunities for future infill development and reuse/ adaptation of existing underutilised buildings on either side of the new space, creating opportunities for new commercial and residential activity.

The Dublin Street Regeneration Plan 2017 suggested that this area might be known as '**Charles Gavan Duffy Place**'. It is proposed that this space will be dedicated to Charles Gavan Duffy, in recognition of his historical connections to this area, with aspirations to provide an appropriate statue or plaque, and accompanying information stands at a later date.

- A new 'mews' street connecting the proposed Charles Gavan Duffy Place to the Courthouse, to provide a pedestrian and vehicular connection along the east/west axis of the regeneration area. This would separate the rear of the long narrow backland properties fronting Dublin Street and will form a boundary for a large potential development plot. This movement route is particularly important in that it facilitates a connection from the proposed Charles Gavan Duffy space, and it provides a service / delivery access route for future development within the adjacent large potential development plot. The Dublin Street Regeneration Plan 2017 suggested that this linkage might be known as '**Church Walk**', in recognition of the views towards the spires of the Church of St Patrick.

- A formal street is proposed along the northern boundary of the Lower Courthouse car park. This will realign the existing road, to create a promenade along the rear of the site and a strong boundary to the south of the new potential development areas. The Dublin Street Regeneration Plan 2017 suggests that this street might be called **The Mall**, and it will extend to the entrance area of the Monaghan Shopping Centre. This movement route will enhance pedestrian access between the existing shopping centre and Dublin Street. A glass covered walkway is suggested along the southern side of The Mall, to allow sheltered access to part of the car park and define the street.
- The proposed realignment of Castle Road, which connects the Courthouse car parks and The Mall, and provides a direct route onto the N54 Macartan (Broad) Road. The realignment allows the development of enhanced pedestrian, cycle and vehicular facilities along Castle Road, to improve flows, enhance connectivity, and provide better crossing points. This also incorporates minor improvements to the junction of Castle Road and N54 Macartan (Broad) Road. The Dublin Street Regeneration Plan 2017 suggested that this realigned route might be known as '**Farney Road**'.
- The proposed upgrade of both Courthouse car parks to improve existing levels, provide new surfaces, greater accessibility in terms of space provision, and improve internal traffic movements, to ensure safe and accessible pedestrian movement routes throughout. The realignment of the car parking area within the Lower Courthouse car park is also enabled by the realignment of Farney Road.
- High quality public realm is proposed throughout the proposed development area, to provide a clearly defined linkages and legible movement routes. Within the existing alleyways and pedestrian links from Dublin Street into the backland areas the aim is to provide an integrated network of linked spaces to accommodate and encourage greater pedestrian movement through the area. The proposals provide a safe and attractive pedestrian network of connected routes to move through, with high quality natural stone surfacing, new street lighting, proper ground levels and soft landscape where appropriate. The aspiration is to encourage pedestrians to spend time in the area.
- The development of new spaces, movement routes, and improved connections provides the opportunity to create two large potential development areas. The aspiration is that these would be the focus of new urban development in the future, creating new building forms, strong blocks of modern design along the new movement routes, with active frontage. This may be as a large footprint building or incremental block development, which would accommodate new town centre uses and activities. This will form a core part of the new façade of the Dublin Street Quarter and would be designed to integrate seamlessly into the existing urban fabric/streetscape and new network of movement routes.

The new roads, streets and spaces have been designed in accordance with the Design Manual for Urban Roads and Streets (DMURS), as directed by TII Publication DN-GEO-03031, using a design speed of 30km/h to encourage great pedestrian usage and accessibility.

The street names identified above and in the proposed development designs were proposed within the Dublin Street Regeneration Plan 2017. It is acknowledged that the naming of streets is an important part of any development process and following a grant of approval, engagement with Elected Members will take place regarding the final street names. For the purposes of the EIAR and the project description, the street names proposed in the Regeneration Plan (and noted above) are retained within the proposed development design drawings and documents for ease of cross-reference.

2.5.3 Creation of Charles Gavan Duffy Place (CGDP)

A new urban space, comprising a street, junction and extended footpaths to connect Dublin Street through to its backland areas, opening up new areas for development and enhancing the pedestrian linkages throughout this area. This space will act as a key entrance into the new, regenerated urban place to be known as the Dublin Street Quarter.

The proposals focus on creating a shared urban space which will become a core focal point for social interaction, pedestrian activity, greater footfall, as well as an opening into the new urban neighbourhood. Its extended footpath widths and high quality public realm, create strong accessible connections between the existing historic urban fabric within Dublin Street and the new/improved network of streets and movement routes. This new streetscape will benefit from a southerly orientation, create new vistas in and out of Dublin Street, and will enhance vehicular and pedestrian connections to the backlands and new development areas.

The Dublin Street Regeneration Plan 2017 suggests that the new street created might be called Charles Gavan Duffy Place, in celebration of the famous Irish journalist who once resided on Dublin Street. Further information on Charles Gavan Duffy is provided in Chapter 15 and its associated appendices.

This new space will be formed through the demolition of several buildings fronting onto Dublin Street, namely No's 8, 9, 10 and 11 and their associated backland areas. The extent of demolition in this location is identified on Figure 2.6, which is an excerpt from Planning Drawing BU1001 (EIAR Volume III Technical Drawings and Figures) and Figure 2.7.

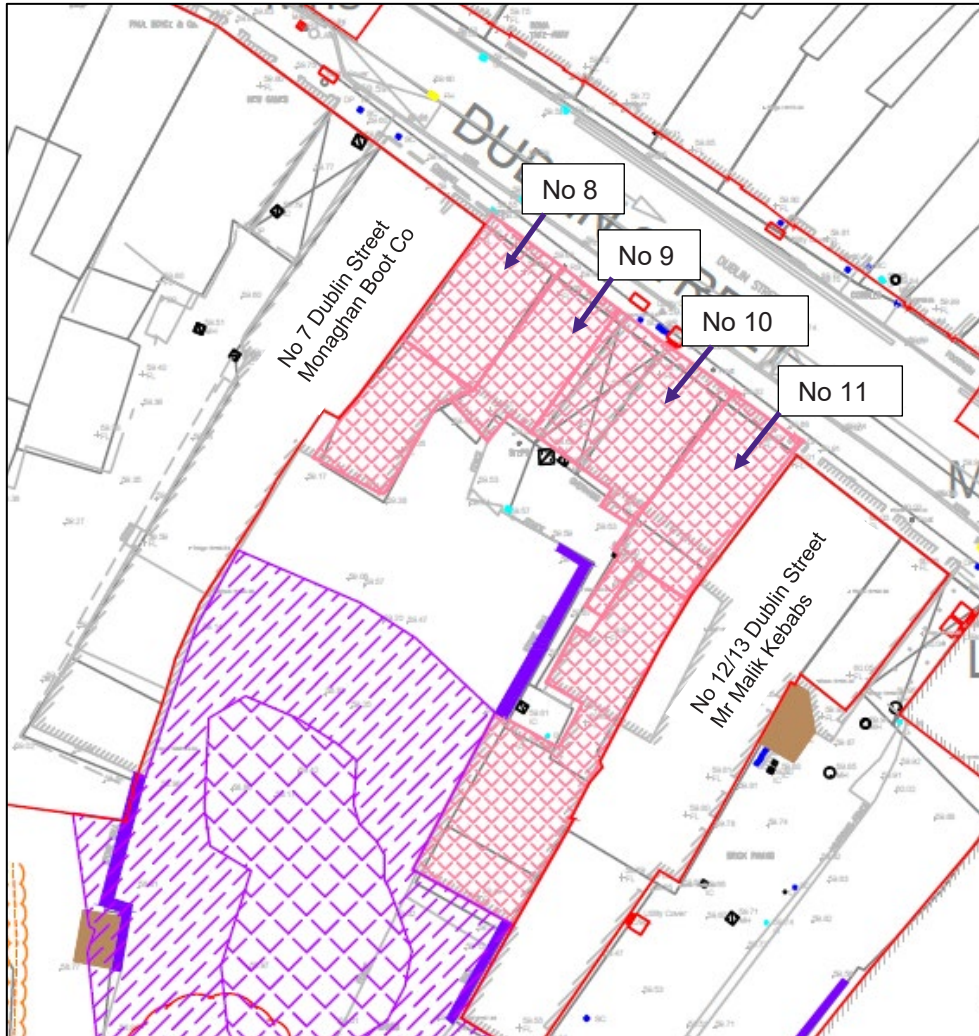


Figure 2.6: Demolition of properties along Dublin Street



Figure 2.7: Buildings Proposed for Demolition along Dublin Street

New building frontages are proposed along the exposed elevations at No's 7 and 12/13 Dublin Street to provide a strong urban form, animated edges to the new space, and an element of natural surveillance at this gateway location. The new space will benefit from a southerly orientation and will increase light onto Dublin Street.



Figure 2.8: Proposed General Arrangement of Charles Gavan Duffy Place / Dublin Street

New Streetscape Environment

Figure 2.8 provides an excerpt from Planning Drawing GA1001 (EIAR Volume III –Technical Drawings & Figures) outlining the various elements of the proposed development within this location. A new streetscape area is created with a priority junction, vehicle carriageway, and pedestrian footpaths, characterised by a shared surface in high quality natural stone paving (various unit sizes). A level change and the presence of new stone paving on approach along Dublin Street creates a new sense of arrival into this gateway along Charles Gavan Duffy Place. The natural stone paving in the carriageway provides a contrast of materials from the asphalt used elsewhere and will alert drivers to a change in circumstance. There are extended width footpaths on either side of the proposed junction and carriageway, accommodating more than adequate pedestrian space for movement and dwell time, as well as street furniture, planting and street lighting.

This shared surface is flush across the carriageway and extended footpaths, right up to the existing elevations of the buildings at No 7 and N 12/13 Dublin Street. Another level change is proposed at the ‘red table’ junction at Church Walk. Throughout this space there is a variety of tactile paving units - buff coloured blister tactiles are proposed at uncontrolled crossings. Contrasting coloured guidance tactile paving, (dark grey) will be provided along the vehicular carriageway edge of Charles Gavin Duffy Place to deter conflicts, provide a strong

visual contrast and highlight changes to pedestrians with sight impairments. These design measures seek to improve the pedestrian environment for those with visual and mobility impairments, providing a warning alert to a 'danger' on the road.

The new streetscape will feature a range of street furniture within the extended width footpaths. This includes:

- Soft landscape planting along both footpaths to prevent unauthorised parking on the footpath.
- On the western footpath, planting will be in moveable raised planters with integrated seating.
- On the eastern footpath, semi-mature soft landscape planting will be located in purpose-built tree pits, within the footpaths.
- New street lighting is proposed at various intervals to ensure a safe and well-lit environment for all people moving through the space. A lighting design has been prepared for the scheme, and comprises a variety of single headed lighting columns, with pendant lantern head (up to 10m in height).
- New inground illumination bars (strip lighting) are positioned at the back of the pavement, to provide additional lighting within the public space. This will assist in illuminating the adjacent walls / elevations, and will also improve safety within the space, and deter anti-social behaviour.

It is hoped that the Council may also be able to utilise the Charles Gavan Duffy Place for events or civic activities on an ad hoc basis. The proposed street design enables temporary traffic management to close off the street on occasions, where required to facilitate such events. This can include closing off the entrance into CGDP by repositioning the moveable planters – this allows minimal impacts on the traffic flows. The shared surface area provides a flush surface for the gathering of people at an event, and there are opportunities to enable temporary staging areas, event spaces, or markets with several pop-up power points located along the length of the new streetscape

The creation of the new streetscape with key level changes and a shared surface seeks to traffic calm the area, slow speeds, and elevate the priority of pedestrians moving throughout the space.

The existing pedestrian entry adjacent to No. 14 Dublin Street is retained within the proposal and identified as an important and well-used pedestrian link. This area will connect into Dublin Street and proposed CGDP, and it is proposed to create a seamless connection for pedestrians throughout the area. There are a number of residential apartments to the rear of No 12 and 12 Dublin Street. No 15 is a former public house (Bellevue Tavern) which is currently derelict and enclosed with a blue hoarding. No 16-17 Dublin Street has recently changed from Peaky Blinders gastro pub to a new restaurant. New public realm within this area comprises a continuation of the high quality natural stone paving, new tree planting and new streetlights to improve the pedestrian connection, the residential amenity, and provide a safe and pleasant space to dwell in. It is the Council's aspiration that the new and improved public realm area may encourage the new restaurant to utilise this area for outdoor seating and dining in the future (subject to the relevant statutory requirements), which will further encourage people into the area.

Although vehicular traffic can move through this space it is considered that all reasonable design measures have been taken to ensure that the space minimises the impacts of vehicular movements within and optimises the opportunities to prioritise pedestrian activity.

Proposed Movement Route

In line with the design concept set out in the Dublin Street Regeneration Plan 2017, Charles Gavan Duffy Place (CGDP) will also accommodate two-way vehicular access. Dublin Street will continue to operate as a single lane, one-way eastbound carriageway, and the proposed development creates a new priority junction into Charles Gavan Duffy Place (CGDP), designed in accordance with the Design Manual for Urban Roads and Streets (DMURS).

This priority junction facilitates right-in / right-out vehicular movements only, allowing vehicles to turn from Dublin Street southbound and from CGDP eastbound only. Priority is given to Dublin Street traffic with vehicles on CGDP having to stop before entering Dublin Street. A raised table is proposed at this junction with two uncontrolled pedestrian crossings constructed in the north to south/south to north direction and one in the east to west/west to east direction. This raised table will be surfaced with natural stone paving and becomes part of the shared surface along CGDP new streetscape. This level change will encourage vehicles to slow down, thereby fostering greater pedestrian safety.

During the design phase, consideration was given to reducing the two-way vehicular carriageway within CGDP to one-way traffic flow. However, DMURS advises caution in relation to vehicle permeability when creating one-way streets, where it notes that they can promote faster speeds, as drivers perceive no risk from oncoming

traffic and their attention towards pedestrians is lower. An increase in vehicle speeds and higher risks to pedestrians are aspects which do not conform with the aspirations for CGDP, which seek to elevate the priority for pedestrians and cyclist, and create a safe, attractive and vibrant environment.

Proposed Masonry Walls, Gable Returns, and New Facades

A new streetscape will be created following the demolition of the buildings at No’s 8-11 Dublin Street. Careful consideration was given to the detail of the new urban space to be created, including the urban form, building line, frontage / elevations, and as well as the definition and enclosure of the space.

Following demolition of the buildings, a temporary support system will be put in place to ensure the existing gable walls of No.7 and No 12/13 are protected and supported against outward movement. This is likely to take the form of a temporary raking system or support scaffolding, which will be in place until new permanent masonry walls are constructed and connected into the existing buildings (as shown in Figure 2.9). Although more detailed structural surveys will be required to examine and confirm stability, loading and existing foundations, it is proposed to construct these masonry walls with piers pinned into the existing properties, to stabilise and support these existing buildings. The shape and height of the new gable will be designed to replicate the existing property shape, where the demolished building has left exposed wall. The new gable will be finished in a smooth render.

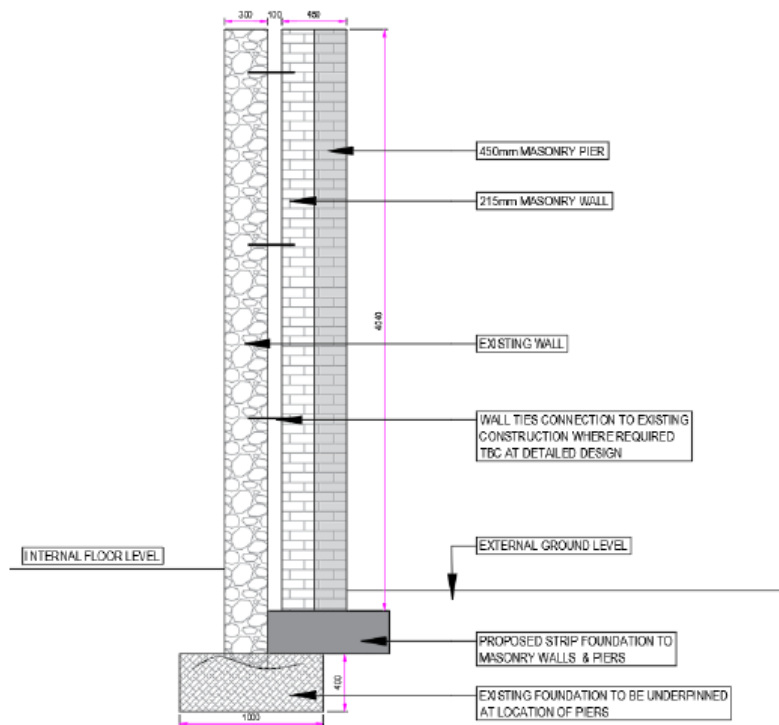


Figure 2.10: Section of the proposed masonry wall creating a new façade onto CGDP

Planning drawing A-20-001 indicates the masonry wall construction providing the new elevation onto CGDP (an excerpt is shown below on Figure 2.10). It notes that the masonry wall will be designed to provide structural stability for the retained properties at No. 7 and No 12/13 Dublin Street, and with the rainwater goods and roof connected and made good. These new masonry walls will create a strong and defined building line at the gateway to CGDP.

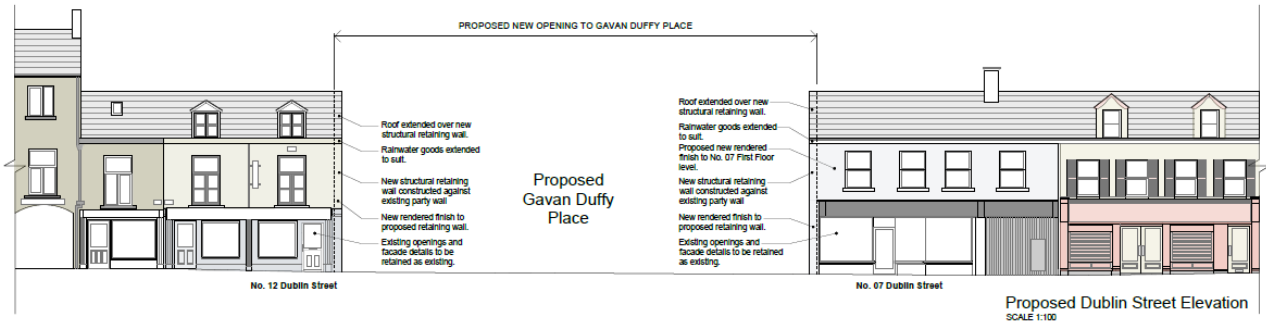


Figure 2.10: Excerpt from Planning Drawing A-20-001 showing the new opening on Dublin Street

The elevations of No 7 and No 12/13 fronting Dublin Street will be unaffected by these works, and their existing openings and façade details will remain as existing.

The construction of new gable elevations on both these properties provided opportunities to create a new aspect out onto CGDP, with new active frontage and an animated edge to the new urban space. In this context, Monaghan County Council and RPS have engaged with both affected property owners, and the proposed elevations (as set out on Planning Drawing A-20-002) have been agreed. Careful consideration was given to creating active frontage on both gable elevations where possible, to promote people activity, encourage social interaction, ensure a natural surveillance. The openings both at ground floor and first floor aim to provide a distinctive edge to these prominent corner spaces, with the aim of introducing visual quality and interest into the streetscape, complimenting the new public realm and attracting in new footfall.

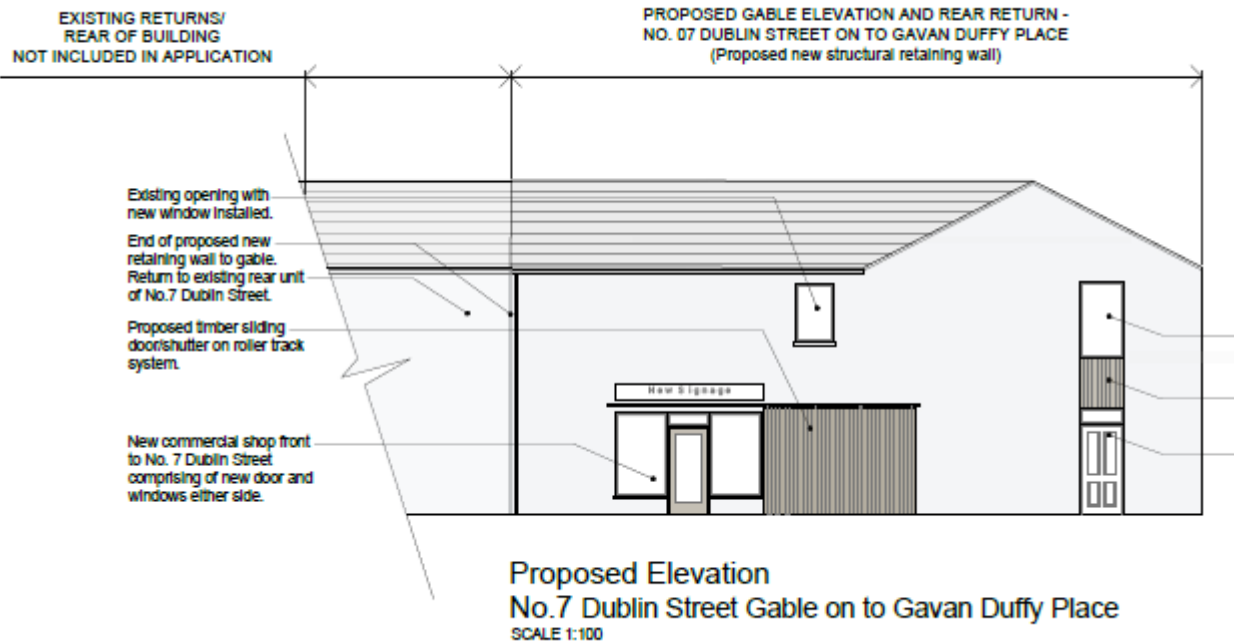


Figure 2.11: Excerpt from Planning Drawing A-20-002 showing the proposed elevation on the new gable of No 7 Dublin Street (Monaghan Boot Co)

Figure 2.11 outlines the proposals for the new gable elevation onto Charles Gavan Duffy Place (CGDP). A single door at ground floor provides own door access to the residential apartment on the first floor, complimented by a first floor window. A new opening into the ground floor commercial unit is created, with a shop window on either side to provide a new shop frontage. A timber sliding door/shutter on a roller track system is provided to add visual interest, and a new window is provided at first floor (to the residential apartment) to add variety and create an element of natural surveillance. The rear elevations of No 7 Dublin Street are retained as existing,

On the other side of Charles Gavan Duffy Place, a similar masonry wall construction and finish is proposed, incorporating the exposed gable of No 12/13 Dublin Street. Figure 2.12 provides an outline of the proposals

for the new gable elevation. A new commercial window is provided at ground floor (synced with the location of the internal commercial unit) and two new window openings are provided at first floor, into the existing residential unit.

The rear elevations of those retained buildings at No. 7 and No 12/13 Dublin Street will be exposed following the demolition of the main frontage buildings and creation of the new gable elevations. To the rear of No 7 Dublin Street, a boundary wall and the side elevations of the rear commercial buildings will form the new elevation onto Dublin Street and will be rendered to create a new facade. It is the Councils aspiration to introduce street art along these elevations, as an interim measure, to provide visual interest within the streetscape. Similarly, the proposals will expose the side elevations of the residential apartment blocks to the rear of 12/13 Dublin Street, and it is understood that a first floor pedestrian concourse will become visible (walkway to the upper floor apartments). Similarly, these elevations will be rendered where required.

The Dublin Street Regeneration Plan 2017 has identified both these rear areas as locations where adaptive reuse and / infill development will be encouraged – the aim is to create new / improved building blocks along the new streetscape, with new retail, commercial and / or residential uses to build on, and develop the new urban space further. Proposals for adaptive reuse and infill development are expected to be brought forward separately and will be subject to current statutory planning policy requirements.

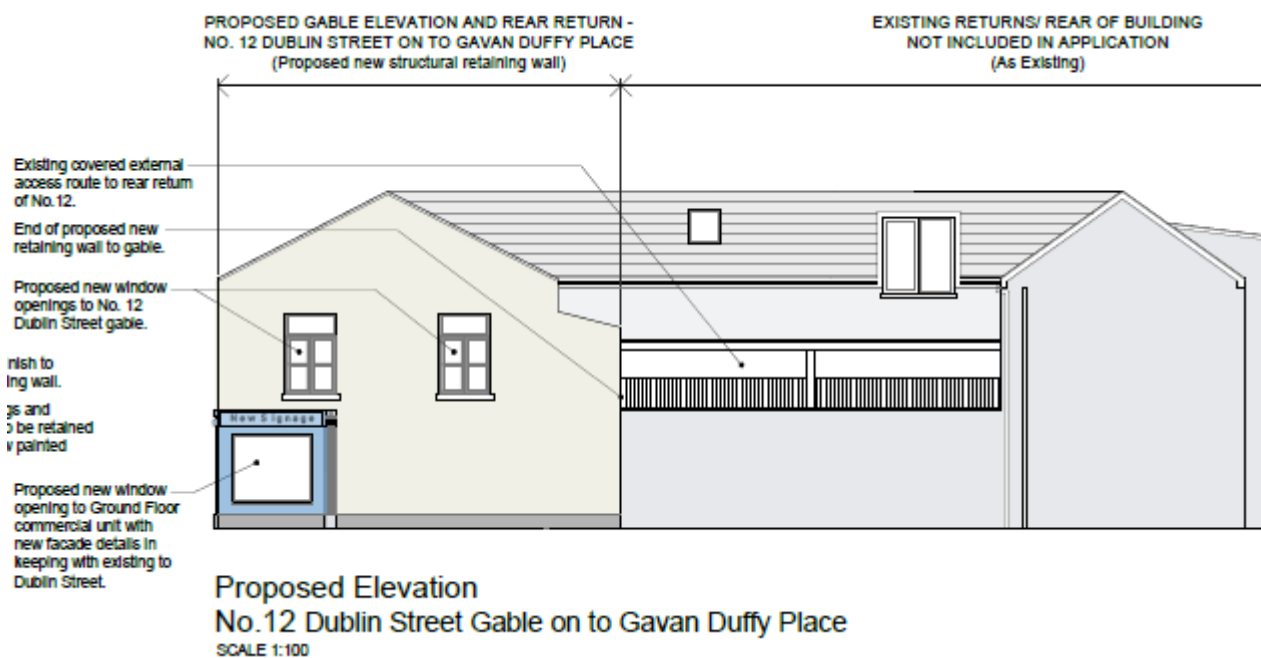


Figure 2.12: Excerpt from Planning Drawing A-20-002 showing the proposed elevation on the new gable of No 12/13 Dublin Street (Mr Malik Kebab)

2.5.4 Proposed linkage - Church Walk

A new pedestrian and vehicle linkage is proposed to connect Charles Gavan Duffy Place to the Courthouse car park. The Dublin Street Regeneration Plan 2017 suggests that this might be called Church Walk, in recognition of the views of the spires from St Patricks Church of Ireland and the First Monaghan Presbyterian Church.

This linkage is formed through the clearance of backland areas, and the demolition of a section of the Northern Standard premises which currently fronts onto the Lower Courthouse car park. Figure 2.13 outlines the proposed demolition which includes part of the building and the associated car park. The removal of this part of the split level building will expose a previous external elevation, which is represented (as best practically possible) on Planning Drawing KP1005, which includes a small pedestrian door and large window, set within a traditional brick elevation. This door would open onto a newly created pedestrian pavement, as outlined on the proposed general arrangement drawings (excerpt shown in Figure 2.13). Several walls, trees, and structures are also removed, and the land is reprofiled to create the new linkage.

The current Northern Standard premises comprises several buildings, of different ages and construction types covering a site with considerable changes in the ground levels. Figure 2.13 provides an overview of this wider

site. The buildings highlighted in yellow appear to be the original building, accommodating the main commercial office activity. The buildings in cyan and red have been subsequently added on over the years. It is proposed to remove all buildings identified in red, to construct the proposed Church Walk. The connecting walkway indicated in cyan will be retained – this covered walkway has an external masonry wall along its southern boundary, which will be retained as the main elevation onto Church Walk.

Figure 2.13 outlines the proposals in this area. A new single lane, one-way carriageway (3.5m width) is created connecting the Courthouse car park with Charles Gavan Duffy Place – this will be one way from the corner of the car park right through to CGDP. This link is demarcated at this point by a raised table in coloured asphalt. A vehicle layby area is provided along this carriageway, close to the potential central development area, to accommodate large vehicles servicing the large central development area adjacent. It has been designed to accommodate one-way traffic only, and its use as a through-road will be discouraged.



Figure 2.13: Proposed demolition of part of the Northern Standard premises to facilitate Church Walk (aerial image)

Consideration was given to creating a fully shared surface along Church Walk (similar to CGDP) however, given its likely use by larger vehicles and the presence of the loading bay, it was considered that a more formal separation between vehicles and pedestrians would ensure the safety of pedestrians was paramount.

Pedestrian footpaths are provided to connect the CGDP space through to the Courthouse car park, with a continuous surfacing of natural stone paving to enhance legibility and ease of movement for those on foot. Smaller paving unit sizes and dropped kerbs demarcate vehicular access points into private property within the wider area.

New street trees, street lighting and bicycle stands are proposed at the top of the Courthouse car park at the entrance to Church Walk, and adjacent to the Church of Ireland and current alleyway connecting through to The Diamond. The current pedestrian access, gates and walls of the Church of Ireland are not impacted by this development. The existing elevation of the Northern Standard will be retained, and this provides openings onto the new streetscape.

The existing linkage through from the Lower Courthouse car park through to Dublin Street at the rear of Monaghan County Council Planning Office is retained, and the proposals include for a resurfacing of this link in the same natural stone paving provided throughout the scheme to optimise legibility and ease of movement. Contrasting paving is provided on those areas where accessible parking spaces take priority.

It should be noted that agreement has been reached with ESB Networks to relocate a nearby substation within the new public realm area. Its design has been provided by ESB, and this is included in Planning Drawing SK0013 – two new 2.4m high wing walls are also proposed to provide enclosure to this essential utility. Similarly, a Council owned/operated oil tank associated with the Council offices is proposed for relocation within a secure enclosure adjacent to this linkage, screen with a 2.4m boundary wall. The detailing for all boundary walls, railings and fencing to private property is provided on Planning Drawing KP1003.

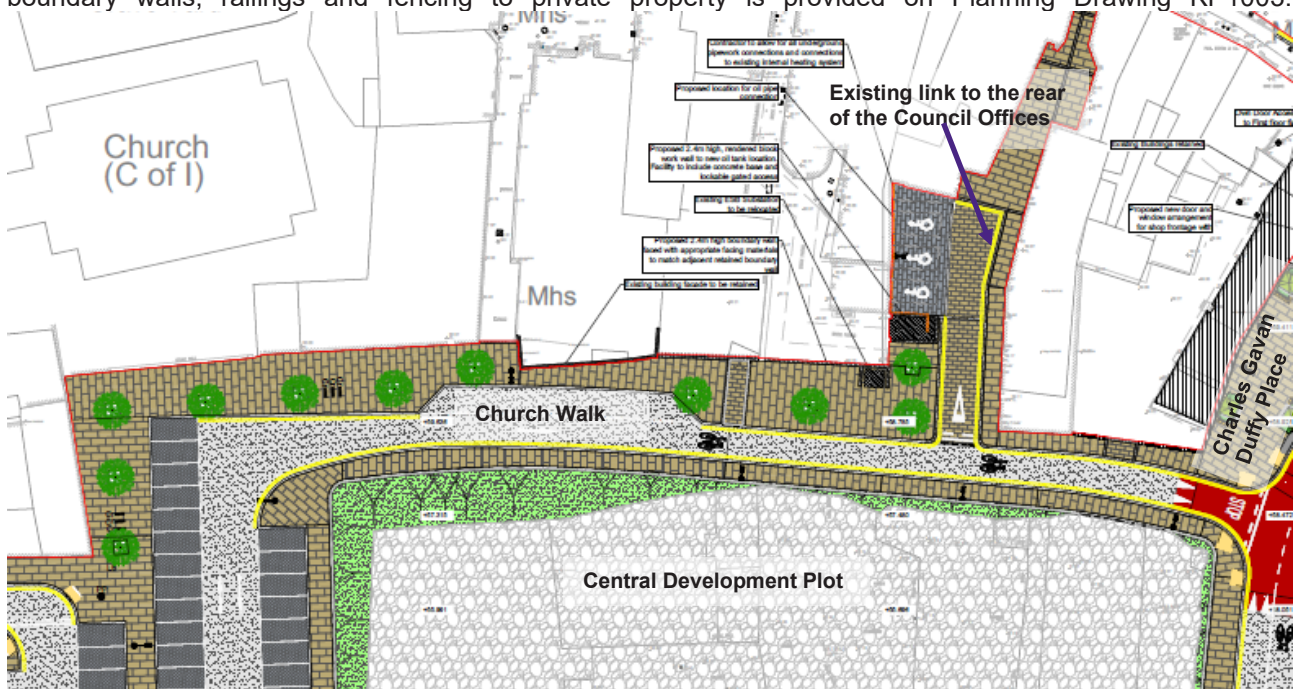


Figure 2.14: Excerpt from Planning Drawing GA 1001 showing the proposed Church Walk

The new junction of proposed Charles Gavan Duffy Place and Church Walk will be a priority junction, with CGDP being the priority movement route. Church Walk will be exit only to Charles Gavan Duffy Place with no left turn permitted for Heavy Goods Vehicles (HGV's) to exit on to Dublin Street. Corner radii at the southern corner of Church Walk and Charles Gavan Duffy Place has been set at 6m to allow for the swept path of an articulated lorry and the northern corner has been set at 4.5m to make it less attractive for HGVs to use this route.

Church Walk also forms the northern boundary of the proposed central development plot, which it is hoped will accommodate new building blocks and town centre uses at some point in the future. The southern boundary of the pedestrian footpath adjacent to the development area will be demarcated by 3m high security fencing, as an interim measure until future development is brought forward.

2.5.5 The Mall, Farney Road and the junction with N54 Macartan (Broad) Road

The proposed development includes both the realignment Castle Road from the N54 Macartan (Broad) Road into the application site, and the current service road connecting the two existing car parks with Castle Road.

The Dublin Street Regeneration Plan 2017 suggests that the realigned service road may be renamed as The Mall. This formal street will traverse the site in an east/west direction connecting the Courthouse car parks,

the Monaghan Shopping Centre, and Charles Gavan Duffy Place. Formal footpaths are created along both roads, connecting into and extending the legible new pedestrian network into the Courthouse car park, Church Walk and CGDP. Crossing points are indicated at regular intervals along these linear streets. The proposed development in this area is shown as an excerpt in Figure 2.15.

The main spine road connecting the N54 Macartan (Broad) Road to the application site, known as Castle Road, will be realigned and potentially renamed as Farney Road. The realigned junction of the Farney Road and The Mall will form part of a staggered junction with CGDP and proposed considerable improvements to pedestrian facilities significant pedestrian upgrades, with numerous crossing points and tactile paving areas.



Figure 2.15: Excerpt from Planning Drawing GA 1001 showing the proposed Mall and connection to Farney Road

Farney Road will terminate at a T-junction with The Mall - this new junction arrangement will compel traffic heading north on Farney Road to stop before proceeding further, thereby reducing the speed of vehicles entering those areas of high pedestrian activity. This proposed design takes cognisance of the guidance given in Section 3.4.1 of DMURS where it states, “Drivers are more likely to maintain lower speeds over shorter distances than over longer ones. As drivers can access individual properties more directly from access/link streets (where speeds are more moderate) they are more likely to comply with lower speed limits on Local streets (see Figure 3.21)”. DMURS also advises that permeable street layouts provide more frequent junctions, which have a traffic-calming effect as drivers slow and show greater levels of caution. In this context, a raised table (of a contrasting colour) and a courtesy crossing are proposed at this T-junction, to reduce speeds, and prioritise pedestrian and cycle activity in this area.

There are several public realm improvements along this access route – new cycle lanes (asphalt) and pedestrian footpaths (high quality concrete paving) will be provided on both sides of the realigned 6.5m carriageway, to encourage pedestrian and cycle movements into the areas. These are complemented by new cycle stands in various locations throughout the site, to promote safe bicycle storage.

N54 Macartan Road / Farney Road priority junction

The N54 Macartan Road (Broad Road) forms part of the Monaghan to Cavan National Secondary. It is proposed to upgrade the pedestrian facilities at the junction of the N54 Macartan Road (Broad Road) and Farney Road as illustrated on Figure 2.16 with a reduction in the carriageway width on Farney Road to facilitate pedestrian movements. The existing vehicular traffic arrangement at this junction will be maintained and no realignment of the N54 is proposed

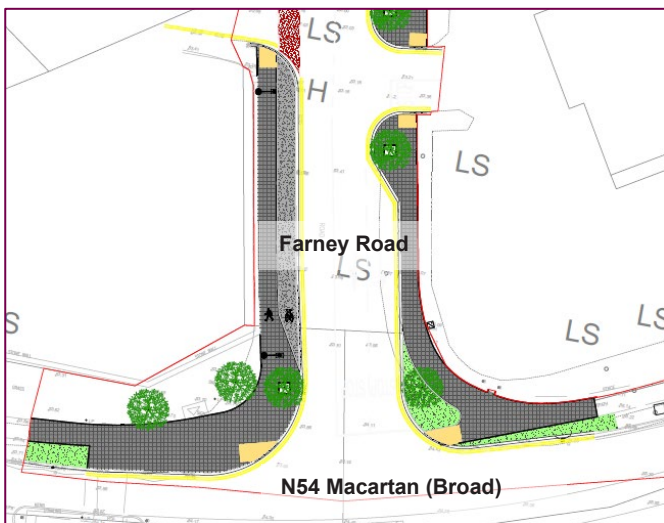


Figure 2.16: Excerpt from Planning Drawing GA 1001 showing the junction with the N54

2.5.6 Reconfiguration of the existing Car Parks

There are 393 car parking spaces currently provided within the application site. These include 240 no. spaces associated with the Lower Courthouse and 153 no. spaces located at the Courthouse. The car parks consist of a mixture of long and short stay parking with a split of approximately 53% (209) long stay and 47% (184) short stay spaces available.

This proposal includes a reconfiguration of both car parks (Figures 2.17 and 2.18) to accommodate the enhanced alignment of The Mall and Farney Road, and to maximise the area available for walking, cycling and shopping activities. New Parent & Baby Spaces have been identified on the northern boundary of the Lower Courthouse car park. The reconfiguration of spaces has also facilitated a consolidation of the existing disabled bay parking spaces.

As part of their wider car parking strategy, it is understood that MCC is currently progressing proposals under Part 8 Planning and Development Regulations 2001 (as amended) for a Council-operated car park on the former Eircom site, between the Margaret Skinner Roundabout N54 Macartan Road / Glen Road / Dawson Street signalised junction. The aspiration is to deliver this car park on site by Q1 / Q2 of 2023. The potential for a new MCC operated car park at this location will be a suitable replacement for the reduction of parking provision within the site, if required. Further information is provided in Chapter 9 of the EIAR.

Both car parks will be resurfaced with asphalt, bounded by newly paved pedestrian footpaths / kerbing in natural stone finish. These pedestrian areas will become part of the wider enhanced pedestrian network, with the natural stone finish providing continuity and legibility throughout the pedestrian network. A wide pedestrian plaza area is retained and enhanced at the front of the Shopping Centre, with the same natural stone finish. These areas are complemented by a mix of corduroy and tactile paving areas to denote key crossing points

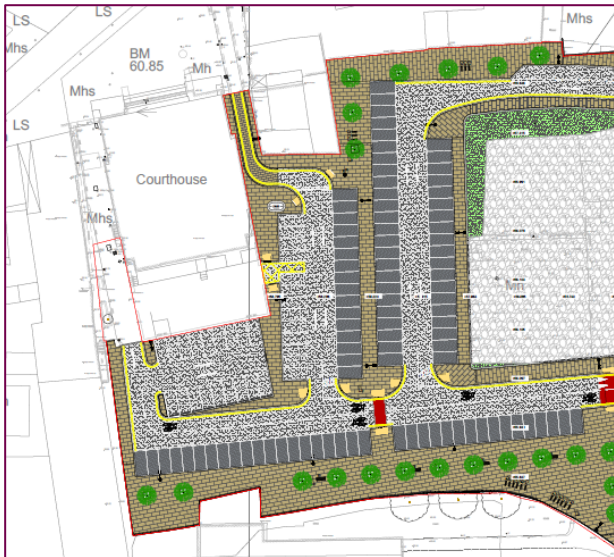


Figure 2.17: Courthouse Car Park

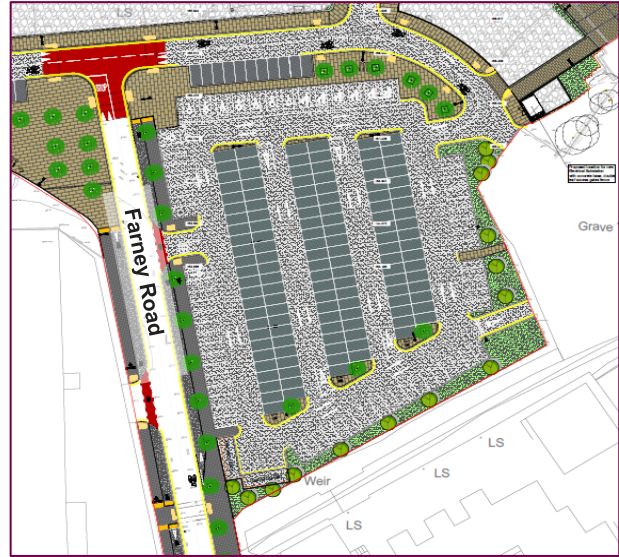


Figure 2.18: Lower Courthouse Car Park

The Dublin Street Regeneration Plan 2017 identifies part of the existing Courthouse car park as a new major public space, with high quality landscaping, potential covered areas that will accommodate car parking, a farmers’ market and an event space. The aspiration is for a flexible space, which can provide for an outdoor gathering space whilst allowing for day to day parking and will be defined by the rear /side façade of the Courthouse, boundary of the Church of Ireland, and defined by new building on the central development plot.

The proposed development creates an upgraded space throughout the Courthouse car park, with realigned spaces, kerbing, natural stone paving delineating key pedestrian linkages, tactile paving, soft landscape and new street lighting to generally improve the public realm. The proposed development provides for the realignment of the carriageways and parking spaces in line with current design standards, the requirements for parking in support of town centre uses, as well as access to the Courthouse, however it also creates a multi-functional space, which can be utilised for a range of uses at different times. The alignment as proposed allows the key access routes (on either side of the Courthouse) to be temporarily blocked off, with diversion of traffic along Church Way, to create a space for a market or special event when required. A pop-up power supply is also provided to accommodate events and markets which may require access to services to operate. The new and improved pedestrian network supports the movement of pedestrians in/out of this space (particularly along Church Walk), facilitating access on foot from other locations within the town centre. Whilst its design may not conform exactly with the physical aspirations of a ‘square’, the aspirations for a multi-functional space have been realised within the proposed development, and they can be accommodated adequately within the current proposals.

2.5.7 Sherrys Lane

The proposed development includes for improvements to the existing movement route from Dublin Street to the rear of No 24 Dublin Street (Sherry’s Pub). The existing narrow entry into this location is restricted by the buildings on either side, but it opens into a pleasant, intimate courtyard space to the rear of the frontage buildings. It is proposed to create a movement route for pedestrians from Dublin Street through this space, alongside the potential easterly development area, out into the Lower Courthouse car park and connecting into The Mall pedestrian network. Currently access is restricted through the site.

Figure 2.19 shows new natural stone paving is proposed throughout this area, consistent with the pedestrian priority surfaces throughout the scheme, supported with new kerbing, and tactiles at crossing points. New street lighting and inground strip lighting is provided throughout this area, to ensure a safe and attractive movement route could be provided. Similarly, minimal street furniture is provided in this particular location, to ensure that anti-social behaviour is discouraged. A private gated access is provided to the rear of No 23 and No 24 Dublin Street to facilitate access and servicing.

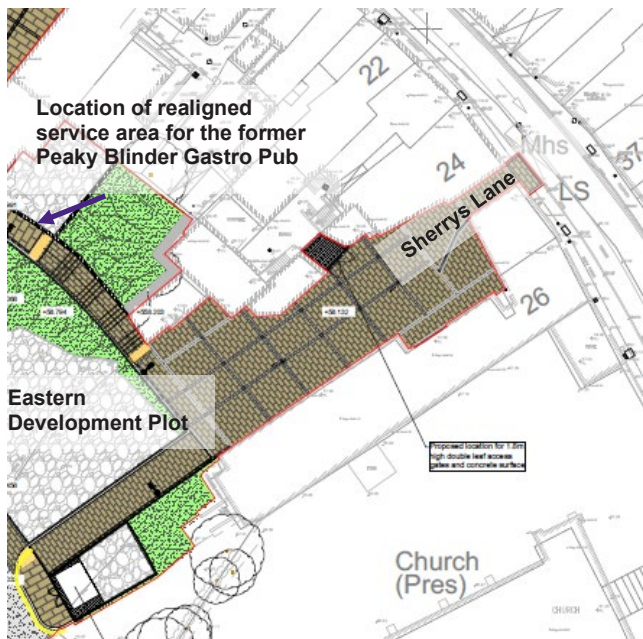


Figure 2.19: Excerpt of the proposals for Sherrys Lane

In accordance with the Dublin Street Regeneration Plan 2017, the aspiration is for the adaptation, infill and reuse of those buildings which currently define the eastern and western boundary of this space. This would encourage uses into the space, attracting people and footfall to enjoy spending time in this reinvigorated space

The new pedestrian movement route from Dublin Street through Sherrys Lane will connect into the proposed pedestrian movement network, and there is a direct pedestrian footpath link into the area to the rear of the former Bellview Tavern and the entry to the rear of No. 14 Dublin Street. Due to the nature of the existing and proposed ground levels, providing pedestrian access in this location was challenging with up to a 3m level difference in certain parts of the site. The maximum gradients identified in DMURS could not be achieved, therefore steps represented the best design solution to gradually allow the pedestrian to adapt to the changing gradient.

Adjacent to the steps, an alternative servicing area for the former Peaky Blinders pub has been provided, enclosed in a new stone wall. This facilitates the storage of the beverages and kegs associated with the Pub/Restaurant, which are transported through the pub from Dublin Street.

2.5.8 New / Upgraded Pedestrian Linkages

The scheme proposed a strong network of pedestrian linkages connecting the new development with the town centre, Dublin Street, and the historic core. The new footpath widths vary from a minimum width of 2m to widths greater than 5m. A pedestrian plaza area has been provided to the west of Farney Road, adjacent to the Shopping Centre to support greater pedestrian activity in this area. There are clear and legible linkages to the backland areas to the northeast of the scheme, through to Dublin Street. The plaza area and footpaths (where width is sufficient) will feature street furniture to encourage people to stay within these pedestrian areas.

Pedestrian crossing points have been provided throughout the scheme at pedestrian desire lines identified by the design team and the independent Road Safety Audit (RSA) team. All pedestrian crossings points will be uncontrolled, supported by the traffic management proposals to reduce speeds, including the raised tables and courtesy crossing points. The aspiration is that the area will encourage greater pedestrian activity to, from and throughout the area, with free-flowing pedestrian movements.

A shared surface is proposed throughout the northern section of Charles Gavan Duffy Place, to encourage greater and safer pedestrian footfall through the area. The aspiration is that this area may also facilitate ad hoc fairs, events or community gatherings, as part of the numerous festivals hosted by the town (including Harvest Time Blues, Country Music Festival, and the Taste of Monaghan). It is anticipated that this event space will accommodate the multifunctional space within the Courthouse car park. Corduroy tactile paving is provided at the edge of the carriageway to warn those with visual impairments to the potential hazard of the vehicles. It also provides a colour contrast for partially sighted users to define pedestrian and vehicle areas.

More specifically, a variety of tactile paving is proposed throughout the scheme:

- Use of guidance paving as mentioned above
- Use of buff coloured (blister) tactile paving at all uncontrolled crossing associated with raised tables
- Use of buff coloured (blister) tactile paving at all uncontrolled crossings elsewhere within the scheme area
- Use of buff coloured corduroy (hazard warning) paving to top and bottom of steps
- Use of buff coloured tactile paving on cycle lanes – cycle track / footway surface (ladder and tramline)

Throughout the scheme, soft landscape planting is proposed along the edge of carriageway to visually differentiate pedestrian footpaths from both shared surface areas and the carriageway. It is proposed to use a mix of moveable tree planter boxes and fixed tree planting in purpose-built pits. Movable planters can be moved to create unobstructed space during civic events if road closures are in place along Charles Gavan Duffy Place. Formal uncontrolled pedestrian crossing points will be provided at either end of the shared surface to encourage formalised crossing.

2.5.9 New Cycle Linkages

Segregated cycle tracks are proposed along Farney Road as shown in Figure 2.20. In the northbound direction, the cycle track will terminate at the plaza area on the western side of Farney Road (corner of the shopping centre) where cycle parking facilities will be provided.

In the southbound direction, cyclists will be required to walk their bicycles across Farney Road at the pedestrian crossing provided adjacent to the cycle parking facility, before mounting and using the segregated cycle track in the southbound direction. This cycle track will terminate at the location of the courtesy crossing on Farney Road, due to land take boundary constraints and a lack of connecting cycle facilities on the N54 Macartan Road (Broad Road). Cyclists will be able to utilise the existing Zebra crossing on the N54 Macartan Road (Broad Road) to access the Ulster Canal Greenway located off Castle Road from the site.

Spatial limitations and concerns of greater risk of conflicts with pedestrian activity within the Courthouse car park have restricted the ability to deliver further cycle lane provision to connect into the proposed cycle network infrastructure to the north of the town, as shown in the Monaghan Land Use & Transportation Study (LUTS) Existing and Proposed Cycling Routes Map Rev D. Similarly, at the junction of Farney Road and the N54 Macartan (Broad) Road, these cycle facilities can easily be integrated into the future cycle network infrastructure identified in the LUTS study and the existing Greenway. The proposed cycle facilities have been designed, and will be constructed, in accordance with the National Cycle Manual.

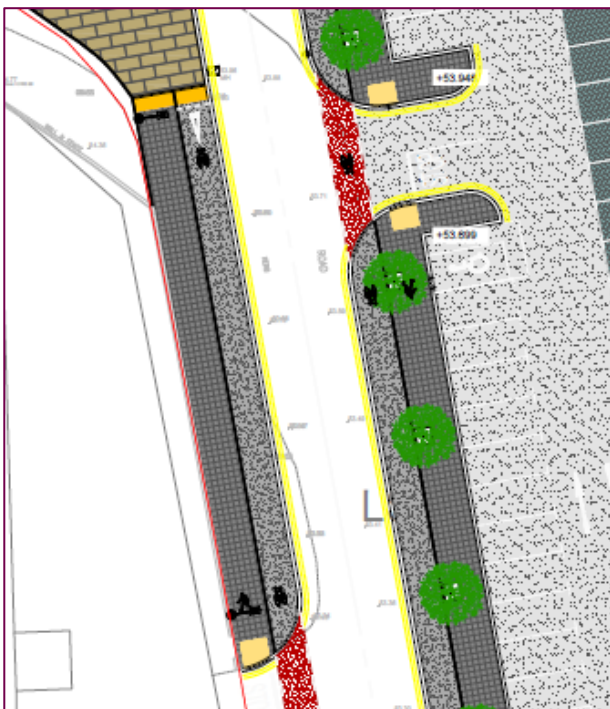


Figure 2.20: Lower Courthouse Car Park

2.5.10 Public Realm Improvements

A range of public realm improvements include a range of proposed streetscape features, including:

- New lighting columns throughout the entirety of the scheme, and removal of all existing lighting infrastructure.
- New inground illumination bars (strip lighting) along the footpaths on either side of the proposed Charles Gavan Duffy Place.
- Street furniture, to include bins, bollards, benches, cycle stands.
- New trees and vegetation within a mix of moveable planters and tree pits.
- Services and charging points to facilitate events in the area, including a pop up power supply in Charles Gavan Duffy Place.

2.5.10.1 Street Lighting

The detailed proposals for Public Lighting, CCTV and 5G are included on the Planning Drawings EIAR Volume III – Technical Drawings & Figures KP1003 and a Report on Public Lighting in EIAR Volume II – Technical Appendices, Appendix 2D. The proposals for lighting have been designed to achieve a C2 class of illuminance throughout the scheme extents, in accordance with TII and Council requirements, utilising a variety of columns heights, ranging from 6m to 10m overall height. Proposed lighting column locations, as illustrated on the Planning Drawing GA1001 are required in order to provide the C2 class illumination across the scheme which has been designed by a separate lighting consultant. All of the existing lighting columns within the site boundary will be removed.

The proposed CCTV and 5G ducts and infrastructure will be placed adjacent to public lighting ducts. The inclusion of 5G ducting is for future use (futureproofing) and it is not envisaged that 5G will be included in the area until after this scheme is complete. 5G ducting has been placed at locations where it is envisaged that antennas can be included within lighting columns structures to avoid the need for additional columns.

2.5.10.2 Footpaths

Natural stone paving is proposed throughout the scheme. The natural stone paving will be laid on a mortar bed with a foundation depth of 150mm in areas where pedestrian activity only is envisaged and a foundation depth of 225mm in areas where there is or likely to be vehicle usage (based on assumed ground conditions, to be reviewed following site investigations). An 80mm depth paver will be used in areas where pedestrian activity only is envisaged and a 150mm paver where there is likely to be vehicle usage. The additional paver and foundation depth in vehicle areas will ensure robustness. All pedestrian crossing points will be enhanced to the required DMURS standards using appropriate tactile crossing paving, dropped kerbs and raised crossing points to increase safety for pedestrians.

The benefit of using a natural stone product over other products relates to the overall visual quality / aesthetics of the improved streetscape, which are perceived as better with a natural stone paving unit. Natural stone paving is generally more robust in terms of general wear and tear and therefore likely to last longer when compare with a concrete product.

2.5.10.3 Soft Landscape

The soft landscaping elements will comprise tree planting, raised planters and grass. The following species are proposed for use in hard landscape areas:

- Pin Oak (*Quercus palustris*)
- Cypress Oak (*Quercus robur* 'Fastigiata')
- Lime (*Tilia cordata* 'Greenspire')
- Hornbeam (*Carpinus betulus* 'Frans Fontaine') and
- Cherry (*Prunus* 'Sunset Boulevard')

The following trees are proposed for use in soft landscape areas are:

- Rowan (*Sorbus Spp*)
- Lime (*Tilia x euchlora*)
- Cherry (*Prunus Spp.*) or Maple (*Acer campestre 'Streetwise'*)

The trees currently being considered for use in planters as multi-stemmed trees are - Birch (*Betula utilis 'Jacquemontii'*). A range of low growing shrubs/ perennials are proposed for the raised planters, and the final species will be determined in conjunction with the Councils maintenance department.

2.5.10.4 Street Furniture

There are new stainless steel bicycle racks, bollards and new seating benches provided at various locations throughout the scheme, with a design consistent with the furniture already in The Diamond. Within the proposed Charles Gavan Duffy Place, there are new trees proposed in both raised planters and tree pits.

2.5.11 Future Development Plots

The proposed development includes two new potential development plots (shown in Figure 2.21), created as a result of the site clearance of backland areas. The largest development plot is in the central area to the rear of those properties fronting onto The Diamond and 1-7 Dublin Street. It will be created by the demolition of properties and structures in the backlands, and construction of the newly created streets and spaces within the proposed Charles Gavan Duffy Place, Church Walk and The Mall.

The finished ground levels within this plot will be located approximately 2-3m below proposed ground level of the carriageway and footpath proposed along Church Walk. This movement route will be supported at this higher level by an earth embankment with slope of 1:2 within the plot, formed by the regrading of soil throughout the site where possible. This structure will be somewhat temporary, as it is expected that any development proposed in the future is likely to be replaced with appropriate supporting structures as an integral part of the design of the area. The proposed development includes for the creation of this future development area, construction of the supporting embankment with clean soil/fill material with grass seed, placing of hardcore, and boundary treatment, which is a 2.4m high green mesh paladin security fence.



Figure 2.21: Two potential development areas

The proposed future development area towards the eastern section of the site, will be created by the site clearance. The finished ground levels in this area will vary, with c.3-4m level difference in places between its boundary with The Mall Road and the east-west pedestrian linkage proposed between Charles Gavan Duffy

Place and the existing pedestrian link between Dublin Street, to the rear of Sherry's Pub. This level difference will also be supported by an earth embankment structure within the site, with a proposed slope of 1:2, which it is anticipated, will be replaced with an appropriate supporting structure integral to the end development proposal. The embankments will comprise clean soil/fill and grassed, with hardcore on the ground. The site will be bounded by a 2.4m high green mesh security fence.

The proposed development does not include proposals for the future development plots identified within the wider regeneration concept. These future development plots are likely to comprise town centre land uses, when developed. Proposals will be brought forward by either the Council or third parties as separate planning applications and assessed under the relevant planning and environmental considerations at that time.

2.5.12 Material Assets

2.5.12.1 Surface Water

The majority of existing surface water is collected in pipes and discharged to the Shambles River. Some of this water is collected is discharged to the Shambles River via a stone attenuation area under the main Car Park area.

Please refer to EIAR Volume III Technical Drawings & Figures, Planning Drawing DR1001 – Drainage for details of the new surface water networks proposed, which will include for future development within the area. The main surface water network will collect the majority of surface runoff within the project site and discharge to a proprietary attenuation crate system and pass through a petrol interceptor chamber before discharging to the Shambles River. Discharge into the river from this network will be limited to a maximum discharge rate of between 5 l/sec during the 1 in 100 year critical duration storm event using a hydrobrake chamber prior to the outfall. The attenuation system will be constructed underneath the main car park area.

A smaller surface water network will be provided to collect runoff from sections of the Farney Road and the car park where lower surface elevations prevent this runoff from being connected into the proprietary attenuation crate system. Therefore, a section of the Farney Road and car park will continue to drain unattenuated into the Shambles River. To reduce the environmental impact of this, a petrol interceptor will be installed at the outlet of this network to prevent pollutants entering the river.

SuDS drainage systems are provided throughout the project site. All chambers and gullies shall have catchpits to reduce the volume of sediment that outfalls to the river, porous paving shall be provided over a substantial area of the car park with runoff infiltrating into the attenuation system and an infiltration trench has been provided on the grass verge on the south side of the car park to provide some long-term storage in the network. Due to the high risk of flooding indicated on the CFRAMS mapping for the area, non-return flow valves shall be fitted to all network outfall pipes to prevent river flood flows from inundating the networks and resuspending sediments stored in the petrol interceptor chambers through back washing. Manual penstocks shall also be fitted to network outfalls to enable networks to be closed in the event of an accidental spillage

2.5.12.2 Foul Water

A new foul water sewer network to service the new development sites is proposed. Foul water will be separated from storm water and discharged into an existing foul sewer network at Macartan (Broad) Road. This foul sewer crosses an existing culvert on Farney Road at the Shambles River. It is proposed that this sewer will pass underneath the culvert. The construction method used to carry this out will likely be directional drilling but will be an individual Contractors decision based on safety and environmental impact which will be required to be agreed with the applicant before being carried out.

2.5.12.3 Earthworks

Ground investigation's (GI) were carried out during June to October 2021, consisting of the following:

- Slit Trenches
- Boreholes
- Rotary Core Drilling
- BRE365 Testing

- Environmental Testing
- CBR Testing
- Reinstatement Works

The results of this GI are contained in the '*Monaghan Town – South Dublin Street and Backlands Regeneration Project - Ground Investigation*' report, which is summarised in Chapter 7 of this EIAR.

Most of the area comprises made ground approximately 1.0m thick. The GI identified this as a combination of scrap metal, timber, concrete, pottery brick, macadam, plastic, PVC pipes and lead pipes, glass, slate roof tiles, timber and coal. The made ground is followed by slightly sandy gravelly clay which is underlain by slightly sandy clayey gravel.

For slightly sandy gravelly clay, the undrained strength is between 6kPa to 70kPa and the drained strength in terms of friction angle is between 32° to 40°.

The bedrock is encountered as 5.5m below the ground level. The bedrock is very strong to strong Limestone. Groundwater is encountered at around 3.0m below the ground level. The permeability test reports a value of 2.2E-04 m/s indicating medium permeability. The soil provides a slightly aggressive chemical environment for concrete.

2.5.12.4 Utilities

Consultation was carried out with individual utility providers and the proposals take cognisance of their requirements

2.5.12.4.1 ESB

There are 2 no. ESB substations which will be affected by the works - one is located in lands adjacent to rear of the Monaghan County Council offices on Dublin Street, and one located on the edge of the lower Courthouse Car Park close to the eastern development area.

The proposed development includes for the relocation of an existing substation currently located within an area to be cleared close to the Monaghan County Council Planning Offices, and its proposed siting to the rear of the footpath proposed along Church Walk. ESB Networks has provided a proposed design, as shown on Planning Drawing SK0013

It also proposes the new substation on lands adjacent to the First Monaghan Presbyterian Church adjacent to the Courthouse car park.

There are a number of small ESB and electrical pillars and cabinets that will be removed and replaced to facilitate the new electrical equipment layout. It will be a contractual requirement for the Works Contractor to maintain power and service connections throughout the works unless with prior agreement from individual utility providers. Where buildings are to be demolished their connections to ESB plant and equipment will be removed as agreed with ESB.

A significant network of new MV and LV 125mm ducting will be installed throughout the scheme to facilitate potential future developments, without the need to carry out further excavations in the new footpaths or roads in the future. Electric car charging points are also identified on the proposed General Arrangement drawing, the aesthetics and installation method of which will only become known following procurement as individual providers have different equipment.



Figure 2.22: Existing ESB sub station

2.5.12.4.2 EIR

There is minimal amount of existing EIR ducting and cabling recorded in the works area. Where buildings are to be demolished their connections to EIR plant and equipment will be removed as agreed with EIR. New EIR 110mm ducting has been provided throughout the scheme to facilitate new EIR and fibre optic cabling for future developments.

2.5.12.4.3 Watermains

There is a minimal amount of existing watermains which will be required to be diverted to facilitate this development and potential future developments. A significant network of new 250mmPE watermains, complete with sluice valves, scour vales, hydrants and meters will be installed throughout the scheme with individual connection points to the proposed development sites included to facilitate potential future developments. All watermains works proposed will be constructed in strict accordance with Irish Water Standards.

2.5.12.4.4 5G

As part of the proposed development, it is planned to lay a significant amount of 110mm spare ducting with the intention to use for future 5G connection. This ducting will follow the route of the Public Lighting ducting with the intention that should 5G equipment be required to be installed at a future date that it could be mounted to public lighting columns if considered feasible at such a time.

2.5.12.4.5 CCTV

Ducting will be put in place to provide power and communication network connection for the future instalment of CCTV cameras by An Garda Síochána. The infrastructure provided in this scheme aims to minimise the potential disruption that may be caused to the new surface treatment when the installation of CCTV cameras is carried out by An Garda Síochána. The locations of ducting and advanced infrastructure for these cameras have been agreed between RPS, An Garda Síochána and MCC.

2.5.12.4.6 Parking Meters

It is proposed to retain the existing parking meters, however these will be relocated to more appropriate locations, as shown on the layout drawings. New 125mm ducting will be provided to these meters and a new electrical supply also fitted through these ducts.

2.5.12.5 Demolition and Site Clearance

Several properties and structures are to be demolished as part of the proposed development. Please refer to EIAR Volume III Technical Drawings & Figures, Drawings BU1001 Demolitions and Removals and SC1001 for details.

A considerable amount of Japanese Knotweed has been identified within the site, because of early ecological surveys. Due to the nature of the urban location and the works involved in the proposal, it is proposed to excavate the relevant areas and remove the infected material (including material within a surrounding buffer area) off site to landfill. This is discussed further in Chapter 8 and its associated appendices.

Planning Drawing BU1001 Demolitions and Removals provides a good overall summary of the extent of the Japanese Knotweed within the lands, and to be removed as part of this project.

2.5.13 Construction

2.5.13.1 Construction Programme

It is estimated that the proposed work will take between approximately 24 months to complete on site. Subject to the allocation of funding, land acquisition and the grant of planning approval, it is hoped that construction can commence in early 2024. The following steps are anticipated:

- Pre-Construction Surveys, Japanese Knotweed Treatment
- Demolition & Site Clearance (including remediation of Japanese Knotweed, tree removal, archaeological monitoring, removal of hazardous material, temporary prop works)
- Supporting / Prop structures
- Façade reinstatement & new openings
- Slab / asphalt removal
- Drainage and services installation
- Road/street construction
- Traffic management
- Hard landscaping
- Soft Landscaping, street furniture, ECV
- White lining, signage
- Finishes

2.5.13.2 Construction Management

Details of the predicted impacts and mitigation measures associated with the construction of the proposed development are included within the relevant chapters of this EIAR. In general, disturbance from construction works will include various activities comprising:

- Site clearance and preparatory works
- Diversion of services
- Demolition of buildings and structures
- Noise and vibration from plant
- Excavation and fill operations
- Stockpiling and handling
- Construction Traffic
- Duration and timing of the construction phase

During the construction phase, the methods of working will comply with all relevant legislation and best practice in reducing the environmental impacts of the proposed works. By their nature, construction phase impacts will be short-term and localised. These impacts will be reduced as far as practicable through compliance with the mitigation measures identified within this EIAR and the relevant industry standards and guidelines.

A preliminary Construction Environmental Management Plan (pCEMP) has been prepared, which consolidates all the environmental mitigation measures identified within this EIAR. It also includes procedures for monitoring the effectiveness of the environmental protection measures. This will be updated by the Contractor following their appointment, and in advance of the commencement of construction. Please refer to Volume II Technical Appendices, Appendix 2A Preliminary Construction Environmental Management Plan (pCEMP) for details.

2.5.13.3 Construction Access

It is proposed that the main vehicular access / egress will be via Castle Road at the southern access with N54 Macartan (Broad) Road.

2.5.13.4 Construction Operating Hours

The operating hours will be agreed with the Local Authority prior to the commencement of the proposed works and will be specified in the CEMP. Hours will generally be limited to 7am to 7pm Monday to Friday and 9-4pm on a Saturday. Construction works outside these hours will be limited to works necessary for health and safety reasons or to protect the environment.

2.5.13.5 Temporary Facilities

The construction phase will require the provision of a temporary Contractors Compound and welfare facilities. A temporary connection to water supply and foul sewer will be provided to accommodate these welfare facilities. Temporary car parking for contractors' vehicles will be provided within the temporary compound.

2.6 Alternatives

This section of the Project Description identifies and outlines the alternatives considered for the proposed development. The EIA Regulations indicate that the Report must provide a description of the reasonable alternatives studied by the applicant, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the chosen options, taking into account the effects of the project on the environment.

2.6.1 The Do Nothing Alternative

In this scenario, the application site would remain as an existing part of the established urban fabric within the town centre, with underutilised land, unconnected streets, with little and limited potential or stimulus for regeneration within the town centre. The lack of a comprehensive vision or framework for forward planning will result in a missed opportunity for the delivery of compact urban development which would reduce the demand for the development of greenfield sites and facilitate the greater adoption of sustainable modes of transport such as walking and cycling. The absence of the planned regeneration and renewal of the site will also result in a missed opportunity to deliver wider positive impacts on the sustainability of town centre, as increased residential development, businesses, and ancillary uses and activities through the development of the site will assist in maintaining and enhancing the vitality and viability of the surrounding town centre.

Future development is likely to evolve in a limited and piecemeal manner, outside of a comprehensive vision or framework for forward planning. In this context, the area would not realise the significant benefits of planned and co-ordinated urban renewal, provision of upgraded / new pedestrian linkages and cycle lanes within the urban environment, with little or no potential for a future civic space. Significant opportunities would be lost for land consolidation and creation of larger development plots to attract new town centre uses into the area to regenerate and rejuvenate the town centre. This proposal provides a co-ordinated opportunity to benefit from future regeneration development potential, and to reintegrate the area back into the urban fabric.

Although the site contains a sizeable amount of established vegetation that offers biodiversity potential for habitats for species such as bats, birds and bees, and in a '*do nothing*' scenario these habitats will endure and flourish, it is considered that the sustainable and coordinated comprehensive redevelopment of the site

provides the opportunity to integrate, re-establish and enhance these existing habitats through the introduction of replacement vegetation and habitat features. Furthermore, without the proposal it is possible that the existing Japanese knotweed areas would remain untreated and become the dominant vegetation, thereby limiting the diversity of vegetation within the site and its attractiveness to other species.

2.6.2 Alternative Locations

A Collaborative Town Centre Health Check (CTCHC) carried out in Monaghan Town, the Town Centre Land Use Survey 2016, identified a high level of vacancy on Dublin Street. Given that the primary objective is the proposed regeneration of Dublin Street and its environs, the consideration of alternative locations is limited to the Dublin Street area and environs. Consequently, the alternative locations comprise:

- the area to the north of Dublin Street
- the area to the south of Dublin Street (the application site area)

The area to the north of Dublin Street was the subject of a local area action plan in 2011. The Lands to North-East of Dublin Street LAAP sets out a long-term framework for the comprehensive redevelopment of the backlands to the north of Dublin Street. Although this LAAP has been in place for a period of time, the multitude of plots, the complexity of the land ownership involved and restricted accessibility means that the progression of this local area action requires further work. In addition, it was decided that a new LAAP for this area north of Dublin Street should be produced to reflect up to date concepts and practices that have emerged in the last decade. In the absence of a new updated LAAP for this area, proposals for development in this area are not included in the proposed development at this stage.

The area to the south of Dublin Street was the subject of a LAAP in 2017. As there are a limited number of plots within the area and the area has good accessibility via Castle Road and the Courthouse car park entrances, the ability to progress the redevelopment of this area can be realised at a quicker pace than the area to the north of Dublin Street. The proposed development presents an opportunity to improve connectivity between Monaghan Shopping Centre and Dublin Street (existing town core) and it is considered that area would be relatively easier to develop than the Dublin Street North area, as there is already existing access in place, and availability of existing car parking spaces. Given that the Dublin Street Regeneration Plan 2017 had been adopted in the last 3-4 years, it is considered that this plan takes account of up to date concepts and practices that have emerged in the last few years. Although the Regeneration Plan has a specific site area, it is outward looking and seeks to integrate the existing activities outside the plan area into the framework proposals, incorporating the Court House car park, Castle Road (referred to as Farney Road) and the Lower Courthouse car park within the concept plans.

2.6.3 Alternative Designs and Layouts

Alternative Design Concepts & Layouts

The design concept of the proposed development was evolved through a master planning process as part of the Dublin Street Regeneration Plan 2017. The purpose of the plan was to provide guidance on the regeneration options for the future development of the Dublin Street Regeneration Plan 2017 study area. The plan seeks to create a new urban space and guidance is provided in the form of a framework plan, conceptual visualisations of building heights and massing, or other appropriate format, addressing land uses, pedestrian and vehicular movement, car parking and amenity. As referenced above, the Regeneration Plan seeks to integrate the existing activities outside the plan area into the framework proposals and concept plans. To enable this broader concept to be progressed the proposed development incorporates the Courthouse car park, Castle Road (referred to as Farney Road) and the Lower Courthouse car park within the site area.

One of the key aspects of the Dublin Street Regeneration Plan 2017 is to improve accessibility and a sense of place. Although the area is linked to Dublin Street by alleyways and pedestrian links, these are limited in scope and function and do not act as a focal point or visual attraction for pedestrians into the plan area. Therefore, the Plan proposed a new street and public space to connect Dublin Street to the backland area (Charles Gavan Duffy Place). The new street is to be formed by the demolition of existing structures to form a new opening in Dublin Street. The Plan recommended that the space is sufficiently wide to accommodate two way vehicular traffic and a pedestrian space. The edges of the street are to be created by new gables to existing structures, and adaptive reuse/ infill development.

During the master-planning process, Sheridan Woods Architects and Urban Planners (who prepared the Regeneration Plan) identified two alternative locations along Dublin Street for the location of this opening (refer

to Figures 2.23 and 2.24). These locations were selected due to their central location along Dublin Street and the relatively flat topography at this point along Dublin Street which would facilitate a useable public space.

The proposal to locate the opening at 12-15 Dublin Street involves the demolition of four street frontage properties and ancillary rear buildings as indicated in Figure 2.25 below. In terms of contribution to streetscape the buildings are a mixture of styles and storeys and with the exception of No. 15, which is a protected structure and a four-storey building of traditional architectural merit. While the demolition of buildings Nos. 12-14 would not adversely impact upon or result in the loss of distinguishing features along the streetscape, No.15 Dublin Street is the only example of four storey building along Dublin Street and its demolition would be a loss of a notable feature along Dublin Street.

Although the recent rear return development attached to No.16 and to No.12/13 with appropriate façade treatment would present an opportunity to frame the newly created public space at this location, there is limited separation distance between these rear returns to provide a public space of sufficient and useable size. The demolition of the recent rear return development attached to No.12/13 would facilitate a larger public space, but this would result in no enclosing structures to one side of the space. Although two of the buildings on the opposite side of Dublin Street at this proposed opening (No. 49, 50, 51 and 52) are within the Dublin Street Architectural Conservation Area this façade would present a poor northern elevation to the new public space.



Figure 2.23: Opening at 12-15 Dublin Street



Figure 2.24: Opening at 8-11 Dublin Street



Figure 2.25: Frontage Buildings at 12-15 Dublin Street

The proposal to locate the opening at 8-11 Dublin Street also involves the demolition of four street frontage properties and ancillary rear buildings as indicated in Figure 2.26 below. In terms of contribution to streetscape, the buildings are a mixture of styles and storeys and with little architectural merit. Although No 10 Dublin Street was previously on the Record of Protected Structures for County Monaghan, this was primarily for historical reasons as it was the birthplace of Charles Gavan Duffy who was a notable writer, Irish nationalist and Australian politician.

The National Inventory of Architectural Heritage describes the building at No 10 Dublin Street as a modest building with the typical characteristics of buildings in Irish provincial towns, such as the shopfront and the archway allowing access to a yard to the rear. The demolition of these buildings would not adversely impact upon or result in the loss of distinguishing features along the streetscape. Due to the historic and social significance of this location as the birthplace of Charles Gavan Duffy, it was concluded that the creation of a public space at this location and the naming of the space to commemorate Charles Gavan Duffy would be an appropriate dedication and highlight the fact in a more prominent way than currently exists.

The rear return development attached to No.7 and to No.12/13 with appropriate façade treatment would presents an opportunity to frame the newly created public space at this location, and there is sufficient distance between these rear returns to provide a public space of sufficient and useable size. Although the buildings on the opposite side of Dublin Street at this proposed opening (No. 54, 55, 56 and 57) are not within the Dublin Street Architectural Conservation Area, they are all on the Record of Protected Structures and the attractive stone façade and relative intact shop front stone archways of these buildings would present an appropriate northern elevation to frame the new public space.



Figure 2.26: Frontage Buildings at 12-15 Dublin Street

Having regard to the above it was considered that the proposed opening and public space should be located at 8-11 Dublin Street.

The guiding principle of the Dublin Street Regeneration Plan 2017 is to identify ways to reuse, adapt and where appropriate extend the existing historic fabric, where new development will integrate with the historic streetscape, and where new development will complement the existing built heritage. Furthermore, it was considered that an opportunity should be facilitated to enable Dublin Street properties to present a new façade to the redevelopment area by the creation of a new street along the immediate rear of the structures.

In addition, given that an existing road and car parking exists immediately adjacent to the Plan area, it was considered that this existing infrastructure could be utilised, as opposed to its removal and replacement at alternative locations. It was considered important that sizeable plots for redevelopment were established within the Plan area, and that the layout of streets and public spaces should be arranged to facilitate this requirement. Therefore, in addition to the new street to the immediate rear of the Dublin Street properties, the Plan proposed the realignment of the existing road to the south of the plan area (The Mall) to better facilitate the consolidation of the redevelopment area.

Consequently, the Dublin Street Regeneration Plan 2017 focuses on two areas where there is existing development, a block to the east extending from The Diamond to the proposed Charles Gavan Duffy Place, which is defined by Dublin Street to the north and the proposed new street (Church Walk) to the rear, and a block to the south west extending from the proposed Charles Gavan Duffy Place to the grounds of the Presbyterian Church at Old Cross Square, which is defined by Dublin Street to the north east, and the existing road to the south west (The Mall). The Regeneration Plan also identifies two areas for new development, a large block to the east extending from the Court House car park to the proposed Charles Gavan Duffy Place, which is defined by the proposed new street (Church Walk) to the north and the proposed realigned existing road to the south, and a smaller block to the south west extending from the proposed Charles Gavan Duffy Place to the grounds of the First Monaghan Presbyterian Church at Old Cross Square, which is defined by the rear of the properties along Dublin Street to the north east, and the proposed realigned existing road to the south west (The Mall).

Further alternatives were considered in respect of the layout of Sherry's Lane to the rear of No.24 Dublin Road (Sherry's Pub). In that instance, although the 2017 Plan includes the existing small single storey building to the rear of the Pub, it is now proposed to remove this building as part of the scheme. The building is a traditional urban form, provides an interesting architectural space, and adds visual interest to the Courtyard. However, in terms of the movement route this building prevents views for pedestrians coming into the alley onwards to the car park, restricts the footpath widths, and creates areas that are hidden from general view and could be unsafe in providing opportunities for crime and anti-social behaviour.

During discussions with the landowner in respect of 2019 planning approval for the building, it was confirmed that the internal floorspace was very limited. The requirements to meet current building standards (provision

of toilets, stairs etc) restricted the internal area available for commercial use, thereby restricting its usefulness and marketability. Building regulations required external improvements (toilets) to bring the building up to standard, which if implemented, would restrict the external space available around the building for people movement. On balance, and in the context of the development objectives for the Dublin Street Regeneration Plan 2017, where the aspirations are to enhance safe pedestrian movements and permeability, and create opportunities for sustainable and commercially viable proposals, the decision was taken to remove the building and open up the area to create an open, spacious courtyard area which remains enclosed and intimate, and suitable for outdoor dining uses and activities. In addition, it was considered that there were numerous opportunities for new development through adaptive reuse, infill and conversion of those underutilised and vacant buildings fronting Sherry's Lane, which could provide viable opportunities for new uses, active frontages, and natural surveillance.

The vision for the area set out in the Dublin Street Regeneration Plan 2017 in the short term is to plan for the upgrading of existing public spaces, streets, spaces and footpaths and to create new connections with new streets and spaces which enhance the urban structure, and quality of the public realm of the Dublin Street quarter as development sites come on-stream. This new high quality public realm (footpaths, street furniture, wayfinding, signage, landscaping etc) will set the standard for new developments and where existing structures are reused and adapted.

Alternative Detailed Design Elements

A detailed design process was undertaken to provide a greater level of detail to the various elements outlined in the Dublin Street Regeneration Plan 2017, and through this process, various alternative designs or iterations of the design elements were considered. These are summarised below.

- Consideration was given to a fully shared surface to the length of Church Walk, however following discussions regarding potential servicing requirements to the central development site, which included allowance for delivery lorries, provision of lay-by for delivery lorries and emergency vehicle access and accommodation, the area of shared surfacing was reduced due to concerns regarding longevity of the paved surface treatment and loading categories required. This has resulted in a reduction to the area of paved carriageway, and the provision of separate footpaths to the north and south of Church Walk rather than a full shared surfaced area.
- Several iterations for the realignment of the car parking spaces within the Courthouse car parks were undertaken to explore car parking space provision and the following considerations were uppermost in the design process:
 - Spatial requirement for provision of additional cycle lanes and appropriate footpath widths, to encourage movement on foot and bicycle and provide greater choice for people entering the town centre
 - Provide an increase in suitably designed accessible and family spaces throughout the layout. Mother and toddler spaces and disabled bay locations were amended and re-located to northern section of the Lower Courthouse parking area to provide direct access onto the pedestrian circulation along the southern edge of The Mall, with easy access to raised table crossing points.
 - Minimising the loss of spaces, which was highlighted as a major concern through stakeholder consultation, to ensure space were optimised to support the surrounding town centre retail uses and local economy.
 - The spatial requirements for future electrical car charging points as well as recycling facilities, future proofing parking provision was also considered, and numerous iterations were undertaken to ensure current and future provision was accommodated.
- The use of high quality (natural stone), medium quality (concrete paving) and lower quality (asphalt) surfacing materials to pedestrian circulation, cycle lanes and new vehicle circulation routes was considered throughout the design process. The overarching aspiration was to create a high quality, aesthetically pleasing environment that also created an attractive setting for future development, whilst creating a safe and attractive setting for pedestrian usage and circulation. The use of medium quality paving materials on the main access, ties in with surrounding areas identifying this section as the main 'through route' and access into central / core area of the proposal. It was considered that natural stone is a durable material, which would create a high quality finish, easily maintained, and would weather well

The use of high-quality natural stone paving within much of the scheme (central and new pedestrian linkages through to Dublin Road) identifies a different aesthetic feel that ties in with the town centre core,

whilst providing an attractive setting for both the future development area, along Gavin Duffy Place and other pedestrian linkages to Dublin Road.

- A variety of street lighting column and lantern head styles were considered as part of the overall streetscape aesthetics. The proposed street lighting columns and lantern heads provided within the scheme are considered to provide a good aesthetic fit within the scheme, whilst providing light levels in accordance with current TII requirements for public realm / circulation routes.
- Consideration was given to the provision of a covered walkway along The Mall, which would extend from the front of the Shopping Centre to the end of the Parent and Baby car parking Space along The Mall. This was originally intended to encourage connectivity and pedestrian activity, however following detailed consideration of the potential visual impacts coupled with the land gradients in this area, it was agreed that this element should not be included in the final design as it would block the view of the existing shopping centre entrance, and could result in a negative economic effect on the businesses within it.
- Changes to the junction with the N54 Macartan (Broad) Road were considered which included the reduction of the two lane exit from Farney Road to N54 Macartan (Broad) Road to one lane. In order to future proof the area for likely traffic volumes as a result of new developments within the development plots. It was not considered to be favourable to new development to make the existing road network more restrictive to traffic growth at this stage. An assessment of pedestrian desire lines was undertaken to compare the increased pedestrian crossing distance at this junction as opposed to a single exit lane arrangement and it was concluded that the proposed design is not deemed to be critical to pedestrian movements within the area. This junction consideration was presented to the TII in the form of a memo response to a Departure Request review of the scheme and subsequently approved by on 15th March 2022.
- Road gradients have been designed in accordance with DMURS. Footpath gradients throughout the scheme have been designed in accordance with DMURS. Where the desirable footpath gradients could not be achieved in certain areas, it is not considered to be restrictive to the scheme in accordance with DMURS Section 4.4.6 where it states: *“The inclusion of streets that exceed these gradients may not be significant within a network where there are alternative routes that can be taken between destinations and where steeper gradients may in fact have placemaking benefits”*.
- The detailed design process to the northern boundary of the eastern development area to provide suitable footpath gradients and level areas for accommodation works within the context of existing and proposed levels was challenging, and numerous iterations were progressed. A detailed longitudinal section outlined the proposed gradients in this location to be up to 18%, which is considered too steep to be comfortable for pedestrians to move through and particularly for those with mobility issues. This was considered an impediment to general movement in / out of the area. A stepped solution was agreed at this location to address the issue – whilst not ideal for those with mobility impairments, it is considered that there are ample alternative linkages through the scheme which will address this need.
- Similarly, in addressing the gradient issues in this area, it became apparent that retaining structures would be required to support the network of paths and in particular the creation of the central and eastern development plots. Consideration was given to the visual and structural elements of various stabilising techniques, including gabion walls and reinforced concrete structures. However grassed embankments are proposed as a softer and more aesthetically pleasing approach to establishing the development sites, rather than levelling these sites and providing retaining walls.
- Consideration was given to the junction of Dublin Street and proposed GDP, which included:
 - a change to the Masterplan developed by Sheridan Woods to reduce the two-way traffic flow along Charles Gavan Duffy Place to a one-way flow. This was considered to add little benefit to the scheme. Considering the proposed development sites are likely to attract people to the area, and in order to prevent any future adverse effect on congestion in the area which could lead to a negative experience for all users, including pedestrians, it was not considered to be an appropriate change. The use of a shared surface treatment at this area will contribute to creating a pedestrian dominated atmosphere. This shared surface will also be easily adapted to a solely pedestrianised street due to its carriageway and footpaths being of flush level in the future should traffic trends change to reduce private motorised vehicle ownership.
 - Several iterations of the junction realignments between Dublin Street and the proposed Charles Gavan Duffy Place were considered, including an arrangement similar to the Glaslough Street layout. However, this arrangement could not be designed within the acceptable limits identified in DMURS, given that its role is greater than solely access.

Chapter
03

**Scoping and
Consultations**

CHAPTER 3 SCOPING AND CONSULTATION

3.1 Introduction

The proposed development has been informed by a comprehensive scoping and consultation process, to draw on local knowledge and experience and to assist with design iteration. The purpose of the scoping process is to establish aspects of the environment to be considered in the EIAR and those sensitive aspects which require more in-depth study and assessment.

This chapter addresses the scoping and consultation process undertaken and provides a summary of the issues raised and considered within the EIA process. The Chapter has been prepared by Aideen McFerran. Aideen is a Senior Associate in within the RPS Planning and Environmental Team, with particular expertise in stakeholder consultation. Aideen is a chartered town planner, a member of the Royal Town Planning Institute, and has almost 20 years' experience in stakeholder consultation for major development projects.

3.2 EIAR Scoping

On behalf of the Council, RPS prepared an EIA Scoping Report and submitted it to An Bord Pleanála (ABP) under Article 95 Planning & Development Regulations 2001, as amended (for proposed development under S.175 Planning & Development Act 2000, as amended) on behalf of Monaghan County Council on 23rd December 2020.

ABP replied to this request on the 3rd February 2021 confirming that it had circulated a request for a response from the following bodies (in accordance with article 95 of the Planning and Development Regulations, 2001):

1. Department of Communications, Climate Action and Environment
2. An Chomhairle Ealaíon
3. An Taisce
4. Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media
5. Department of Culture, Heritage and the Gaeltacht (Development Applications Unit)
6. Eastern and Midlands Regional Assembly
7. Environmental Protection Agency
8. Fáilte Ireland
9. The Heritage Council

The Bord provided a written opinion on 8th June in respect of the draft proposals, and the information to be contained in the EIAR. Please refer to EIAR Volume II Technical Appendices, Appendix 3A An Bord Pleanála Scoping Opinion for details on a copy of the ABP scoping response, which includes a response from An Taisce.

3.3 Non-Statutory Consultation

In accordance with best practice guidelines, the EIAR was informed by non-statutory stakeholder and public consultation. The Council and their consultant team RPS prepared a stakeholder matrix, which formed a basis for a comprehensive engagement and discussion in relation to various aspects of the project. The stakeholders included:

- Landowners / Businesses within the study area
- Elected Representatives
- Internal Council Departments
- Government Departments / Prescribed Authorities

- Public bodies likely to have an interest in the proposals
- Umbrella organisations, such as the Monaghan Town Team, Chamber of Commerce & Industry
- Other interested parties, such as utility and service providers, public transport operators
- Local Groups / organisations, such as Monaghan Tidy Towns, and Monaghan Disability Network, Monaghan Public Participation Network (PPN).

Information on the relevant landowners and business owners within the study area was identified from the previous consultation exercise in 2017 and made available for inclusion in the stakeholder matrix. This was treated as a fluid document which was kept under constant review for the duration of engagement to ensure that other stakeholders who emerged through the process could be added to the database.

3.3.1 The Approach to Consultation

Monaghan County Council, in conjunction with RPS, has undertaken a comprehensive consultation exercise to inform stakeholders and the local community about the proposed development, and to obtain their views to assist in the development of the design proposals. The consultation strategy was developed on the basis of the following principles:

- Recognition that engaging communities is an essential part of an effective and inclusive planning system.
- The importance of gaining an understanding of the local communities who may be affected by the project.
- Providing local communities with the information required to enable them to understand and respond to the development proposals.
- Developing a strategy that utilises a variety of methods to ensure that all sections of the community can engage effectively in the planning process.
- Proposals are sufficiently developed to allow for meaningful comment but not so detailed that flexibility to amend the proposal has diminished; and
- The level, extent and methods of pre-application engagement should be proportionate to the scale and the complexity of the proposed development.

3.3.2 The Consultation Process

3.3.2.1 Core Consultation Elements

The consultation process focused on the following core elements:

- An online consultation exhibiting the draft design proposals during April – May 2021, inviting feedback / submissions. There were options for providing submissions by email, telephone, hard copy and in-person.
- A consultation event (by appointment only) in May 2021 with the design team to discuss the proposals.
- Ongoing engagement and meetings with several key stakeholders, including public bodies and landowners.

Due to the Government restrictions in place for the COVID-19 pandemic at that time, the public consultation was held primarily online, with one *appointment only* in-person event to ensure those with no digital access could engage with the Design Team Consultants.

3.3.2.2 Public Notices

At the outset of the project, a public notice was placed in the Northern Standard on the 12th March 2020 highlighting that work had commenced on the South Dublin Street & Backlands Regeneration Project. The advert invited all land and property owners within the study area and encouraged land/property owners to get in touch with RPS to establish contact / land ownership details, and to discuss the project in general. The advert was also published on the Monaghan County Council website on 12th March 2020.

Prior to the commencement of the consultation process, a public notice was published in the Northern Standard on Thursday 15th April 2021 announcing the intention to carry out a public consultation on the South Dublin Street and Backlands scheme. It noted that the draft design proposals would be available online between 19th April and 14th of May 2021, and views were sought from members of the public on these proposals.

The notice also included the following information:

- Brief summary of the proposed development and location.
- Website link to view the proposals online
<https://monaghan.ie/south-dublin-street-and-backlands-regeneration-scheme/>
- Details of a consultation event with RPS on Wednesday 5th May and how to book an appointment.
- Details of how to book a telephone appointment with RPS to discuss the proposals.
- Details of how to make a submission or provide feedback via email and post/hard copy.
- The deadline for receipt of submissions or feedback was the 21st May 2021.

3.3.2.3 Door-to-Door Information Leaflet Distribution

As a means of encouraging maximum participation in the public consultation process, and to guarantee all those directly affected by the proposals were given sufficient opportunity to provide feedback, a door to door information leaflet distribution was undertaken during the week commencing 12th April 2021.

A letter and feedback form were distributed to all individual businesses and residents located within the streets and buildings adjoining the study area boundary alerting them to the forthcoming public consultation. The letter invited them to view the draft design proposals online (website provided) and engage with the process by submitting feedback or comments via the contact details provided. It comprised the same information, as outlined in Section 2.2.1.

3.3.2.4 Social Media Announcements

In addition, the Council posted a number of infographics on their various social media channels at intervals before and during the public consultation, highlighting the details of the public consultation. The infographic was published on both Facebook and Twitter and it directed the viewer to the online consultation website.

3.3.2.5 Website and Dedicated Email

The public consultation website went live on Monday 19th of April 2021 at the link below:

<https://monaghan.ie/south-dublin-street-and-backlands-regeneration-scheme/>

The website comprised:

- The main page providing an overview of the scheme proposals, consultation details, timeframes, and contact details.
- A link to download and view the presentation boards detailing the draft design proposals.
- Details of the consultation event on 5th May 2021 and how to book an appointment
- A feedback form available to download in MS Word format, and options on how to submit the feedback.

In addition to this, a specific email address was set up specifically for this consultation process: pacc@rpsgroup.com, to ensure the public/stakeholders could forward their completed feedback forms or submit general queries and comments in relation to the scheme proposals. This email address was advertised in the public notice and all other consultation materials.

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3.3.2.6 The Consultation Event

A consultation event (by appointment only) was proposed to encourage greater engagement by different groups of people, and to ensure those (especially vulnerable groups) who did not have internet access or were unable to communicate by digital means, were given an opportunity to liaise with members of the design team.

This event was originally scheduled for Wednesday 5th May, however due to the Government COVID-19 restrictions in place at that time, it became necessary to postpone the event by 7 days. The event was rescheduled for Wednesday 12th May in the Garage Theatre, Monaghan Education Campus, Armagh Road, Monaghan Town. All attendees with appointments booked were contacted and offered an appointment on the rescheduled date. All attendees were facilitated, and eight groups of people attended this event to discuss the proposals and provide comments.

All issues raised were noted by RPS and circulated within the design team for further consideration

3.3.2.7 Survey feedback forms

Feedback forms were prepared as a way of obtaining feedback from members of the public. The forms were available to download from the public consultation website and were provided in hard copy with the letter drop. Details on how to submit the feedback by post or email were provided on the form. It sought information on the proposal, namely views on:

- The principle of the scheme.
- The regeneration potential.
- Suggestions for improvements on the scheme
- Other idea or view of the proposals.
- The format of the consultation.
- High level information on the person providing comments (optional)

3.3.2.8 Stakeholder Engagement

RPS presented the draft design proposals to the Elected Members of Monaghan Municipal District and held an online consultation with Members on Tuesday 13th April 2021.

RPS contacted a range of stakeholders during the public consultation process (shown in Table 3.1 below), highlighting the public consultation on the draft proposals, the website link, and sought views / feedback on the information. The Council and RPS offered the opportunity of a one-to-one targeted meetings, to any group or individual, to discuss the draft design proposals. Due to the Government COVID-19 restrictions, virtual meetings were encouraged.

The following stakeholders were also contacted seeking feedback on the draft proposals:

| Stakeholders Consulted | | | |
|--|--|---|---|
| Monaghan Municipal District – Elected Members | The Heritage Council | Monaghan CoCo Planning | Bus Eireann |
| An Bord Pleanala | Geological Survey of Ireland (DECC) | Monaghan CoCo Regeneration | Aircoach |
| Department of Culture, Heritage & the Gaeltacht (DAU) | Department of Housing, Local Government and Heritage | Monaghan CoCo Tourism | Irish Day Tours |
| Department of Tourism, Culture, Arts, Gaeltacht, Sport & Media | Birdwatch Ireland | Monaghan CoCo Environment (Waste / Water) | Ulsterbus |
| Transport Infrastructure Ireland | Monaghan County Museum | Monaghan CoCo Roads | Monaghan Public Participation Network (PPN) |
| Faillte Ireland | Irish Cycling Advocacy Network | Monaghan CoCo Community & Development Officer | Monaghan Tidy Towns |
| Chomhairle Ealaion | Monaghan Fire Station | Monaghan CoCo Heritage Office | National Council for the Blind of Ireland |
| An Taisce - The National Trust for Ireland | Monaghan Courthouse (Courts Service) | Irish Water | Transition Monaghan |
| Coras Iompair Eireann (CIE) | Garda Siochana Monaghan | ESB | National Disability Authority |
| Environmental Protection Agency (EPA) | St Patricks Church of Ireland, Church Square | EIR | Monaghan Disability Network |
| National Monuments Service | Monaghan Credit Union | Flogas | Monaghan Integrated Development CLG |

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| | | | |
|---|--------------------------------|-----------|----------------------------------|
| Office of Public Works (Head Office) | Monaghan Shopping Centre | Three | Disability Federation of Ireland |
| Department of the Environment, Climate & Communications | Chamber of Commerce & Industry | Vodaphone | Monaghan Town Team |
| National Parks & Wildlife Service (NPWS) | Siro | | |
| National Inventory of Architectural Heritage (NIAH) | Electric Ireland | | |
| Eastern and Midlands Regional Assembly | | | |

A virtual meeting was requested by Monaghan Fire and Civil Protection to discuss the proposals, and this was held on 28th of April 2021. A virtual meeting was also requested by An Garda Siochana in relation to the proposals, which was held on 19th of May 2021, and followed by a site meeting on 24th of May 2021.

3.3.2.9 Landowner Engagement

Engagement and informal consultation with property owners and landowners directly affected by the scheme proposals has been ongoing throughout the project from summer 2020. Monaghan County Council and RPS Design Consultants met formally with several landowners on Monday 24th of May 2021 to discuss the detail of the draft scheme proposals in respect of their specific land/property holding, during the public consultation period. Consultation with various land and property owners has continued following the public consultation. A Valuation Office has been engaged by the Council for the project and negotiations have commenced and are ongoing with affected property owners within the scheme area

3.3.3 The Community & Stakeholder Response

Overall, there was a moderately high number of responses received during the public consultation process with a total of 48 submissions (46 written submissions and 2 submissions via telephone) received. These submissions provided feedback on a range of issues, including the proposals for demolition, the historic nature of the streetscape, the importance of protecting the towns heritage, the active travel design measures, and the wider regeneration objectives/details.

All submissions made to the Council during the public consultation process were thoroughly reviewed and considered by Monaghan County Council and the Design Team Consultants. The following table contains a summary of the issues raised, consideration of these, and recommendations for amendments, where appropriate to the draft design proposals.

| Issues / Potential Design Changes Raised through Stakeholder Discussions | Monaghan County Council and RPS Response |
|--|--|
| Review all existing connections (water, waste, electrical) to St Patricks Church of Ireland to ensure they are not interrupted by the project. | The proposed design has been reviewed to ensure that all existing service connections to retained buildings and adjoining properties are not compromised. All existing connections will be maintained and protected in place. |
| Relocate the proposed tree outside the fire exit from the Church Hall adjacent to St Patricks Church of Ireland, to ensure people can congregate safely in the event of an emergency. | The proposal is amended to realign the proposed tree planting along the northern boundary of the Courthouse area, to ensure the existing access and egress points from the Church Hall are maintained. |
| Review all proposed pedestrian links, particularly those through the alley ways and to the rear of Sherry’s Pub, in terms of features to deter anti-social behaviour | <p>The proposal has been reviewed and amendments include:</p> <ul style="list-style-type: none"> • New LED lighting provided to all linkages proposed to provide a well-lit and welcoming environment (with additional imagery to ensure optimal lighting in pedestrian priority environments). • No seating proposed within the linkages to reduce potential for linkages to become a ‘gathering’ area / anti-social behaviour. • Linkages are free from other street furniture (as far as reasonably possible) to provide clear forward visibility for pedestrians – to create a welcoming and safe through route. • Council to continue engaging with the Gardai to consider if further CCTV coverage is required (in addition to current proposals for greater CCTV throughout the town centre). |
| Review of the pedestrian link proposed between 18 – 19 Dublin Street, in terms of proximity of dwelling, space created, agglomeration of rear/service accesses, anti-social behaviour, pedestrian circulation and path widths. | <p>Proposed improvements to existing pedestrian link to be removed from scheme proposals:</p> <ul style="list-style-type: none"> • Narrow width restricted by existing building locations. • Potential negative amenity issues close to existing residential receptor. • Indirect route obscures visual link which could potentially be unsafe / unwelcoming. • Multiple rear access points / emergency exits to properties fronting Dublin St. • Multitude of boundary treatments within small area likely to require reconfiguration. • Potential issues raised by Gardai regarding safety (visual/lighting/width) • Area to remain as existing. |
| Scheme should provide as many ECV charging points as possible | Proposal design incorporates several ECV charging stations. Design has been reviewed and amended to maximise ducting to accommodate future connections and more ECV stations. The Council and Design Team are continuing to liaise with ESB Networks in relation to design details and supply capacity. |
| Further car parking should be removed throughout the car parks to ‘green’ the area further. | The South Dublin Street & Backlands Regeneration Project will deliver considerable regeneration benefits throughout the town centre, supporting new development opportunities, renewing the urban fabric, and encouraging people to spend more time in the urban area. The planned investment in the public realm and streetscape will deliver considerable environmental quality and physical amenity improvements, with a mix of new high quality natural stone surfacing, new street trees, high quality street furniture and street signage, to enhance and compliment the town centre experience, both functionally and aesthetically. |

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| | <p>The delivery of the Plan will reduce parking provision within the existing car parks within the study boundary. This will be offset by new parking provision on the former Eircom site, and therefore no overall net loss of car parking within the town. However, the enhancements proposed to the public realm, cycle infrastructure, and pedestrian links will also encourage a modal shift away from the car and provide greater travel choices, in line with Government policies on sustainable travel. The Council is working towards improving active travel measures throughout the town and is in discussions with the National Transport Authority on further measures to facilitate and promote walking, cycling and public transport throughout the town and wider County.</p> <p>The Council consider that the current proposals achieve the careful balance of adequate parking provision to support economic activity and investment in the town centre, whilst maximising the potential for a more vibrant and higher quality streetscape experience for people visiting and using the town centre.</p> |
| <p>Careful consideration to be given to tree species. Trees that shed a lot of leaves on a regular basis can interfere with services & require more regular cleaning/maintenance</p> | <p>The proposed tree species have been reviewed and discussed with the Council, including their maintenance department. They are considered suitable street trees, do not shed leaves, and are consistent with tree species existing in the town centre.</p> |
| <p>Consideration should be given to a new door/access and c.2 windows on the new boundary of No.7 Monaghan Boot Company, facing onto Charles Gavan Duffy Place (GDP) providing a new aspect</p> | <p>The Council and Design Team have engaged with the landowner for No. 7 Dublin Street, and new voids (windows & doors) with the new gable structure have been provisionally agreed. This is viewed as a positive intervention and will provide active frontage and natural surveillance onto the proposed new Charles Gavan Duffy Place (GDP). It will encourage vibrancy and activity within the new urban space created.</p> <p>In addition, the new natural stone paving proposed along GDP will be extended to the rear elevation of No. 7 Dublin Street, and the building elevation will be rendered to provide a new aesthetically pleasing frontage onto GDP. The proposals for the new gable structure forming part of the new elevation onto GDP will be designed to the highest architectural standards and will serve to complement and enhance the surrounding townscape.</p> |
| <p>The new pedestrian linkage alongside Peaky Blinders pub:</p> <ul style="list-style-type: none"> • Consideration to be given to improving the exposed elevation along Peaky Blinders, following removal of the existing blue hoarding. This is current part rendered / concrete blockwork. • The pub may consider future openings onto the adjacent pedestrian area (doors / windows) and would welcome pre-application discussions with the MCC Planning Department. | <p>The Council consider all improvements to existing elevations as a positive intervention in support of the regeneration proposals, providing a more aesthetically pleasing outlook onto the proposed GDP. New openings would provide active frontage and natural surveillance onto proposed new pedestrian linkages, which would encourage vibrancy and activity within the new space created.</p> <p>The Council will facilitate discussions between the landowners and its Planning Department regarding improvements on aesthetics on the elevation, if required.</p> |
| <p>There are no definitive project timelines identified, which make it difficult for landowners with tenants to consider tenancy agreements and future proposals.</p> | <p>The Council recognise the uncertainties for landowners, landlords and tenants regarding the timelines for delivery of the project and acknowledge the challenges they face in relation ongoing tenancies and establishing legal title. The Council and Design Team will continue to liaise with the landowners keeping them informed of project progress. A Valuation Office has been engaged by the Council for the project and negotiations have commenced and are ongoing with affected property owners within the scheme area.</p> |

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| <p>The appointed contractor must ensure that the access to existing properties adjacent to the proposal is always maintained during the construction works.</p> | <p>The Council and the Design Team appreciate that access must be maintained for those landowners, business owners, users, tenants, and visitors during the construction process. A clause will be included in the project specification and contract documents requiring this, and the appointed Contractor will be required to liaise with all affected landowners/property owners.</p> |
| <p>Consideration should be given to designing the entrance to GDP similar to the current entrance off Glaslough Street into the lake / rear of the Shopping Centre/Flemings.</p> | <p>The Council and the Design Team have reviewed the detailed design proposals for the vehicular access arrangements in the vicinity of the proposed Charles Gavan Duffy Place (GDP). Several aspects were explored:</p> <ul style="list-style-type: none"> • The South Dublin Street Regeneration Plan identifies the overarching objective of the proposed GDP to be the creation of a new connection through from Dublin Street into the backlands area, which will host the new urban quarter. This connection will enable greater permeability throughout the new quarter for both pedestrians and vehicles, creating a strong base for new development, and providing new linkages into the existing N54 Macartan (Broad) Road network. • The proposed GDP will be a multi-use space – it will be an attractive space for pedestrians to spend time in, with soft landscaping, high quality natural stone paving, and new street lighting. The urban space will be represented by a new shared surface (natural stone) which will prioritise pedestrians and allow them to move freely and safely throughout the space. • This area will also accommodate a carriageway to facilitate traffic turning right off Dublin Street to connect into the backlands and beyond. However, raised tables are proposed on the carriageway, along with a change of surface material to signify entry into the proposed GDP and to slow vehicle speeds highlighting pedestrian primacy. Road markings have also been minimised to reduce the potential dominance of vehicle activity in the area. • A similar junction arrangement to that existing on Glaslough Street was explored – this arrangement is solely to provide access to the car parking area to the rear (i.e., an access only arrangement in the context of DMURS^{*1} standards). The objective with the proposed GDP has a wider focus than access only as identified above, hence the junction arrangement has been designed differently, in accordance with the appropriate DMURS standards. |
| <p>The proposals should be considered within the context of the wider Cycling to School strategy, which promotes safe and attractive cycleways for children cycling to/from school.</p> | <p>The Council is committed to promoting cycling as an alternative mode of transport within the town, both as a sustainable transport solution, and as an encouragement toward a healthier lifestyle for families.</p> <p>The Council has recently adopted the County Walking and Cycling Strategy 2021-2026. This strategy aspires to create more cycle networks within the urban area as part of a wider network, which creates links between key urban locations including school, shops, businesses, and residential communities. The section proposed along Castle Street (Farney Road) is one such section linking N54 Macartan (Broad) Road with the Shopping Centre, the car parks, the Monaghan Town Greenway route, the future development plots, and the wider town centre.</p> |

¹ Design Manual for Urban Roads and Streets

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| | <p>The Council is also working towards providing a range of active travel measures throughout the town and is in discussions with the National Transport Authority on further measures to facilitate and promote walking, cycling and public transport throughout the town and wider County.</p> |
| <p>Future development of the land / development plots needs to be informed by market demand, and the range of acceptable uses should be widened to include uses such as education/student accommodation.</p> | <p>The Council acknowledge and accept that market forces will play an integral part in determining the future development plots, shape land uses and end users within this area, and will be an important element in its future success. They are committed to ensuring that the appropriate skills are employed to advise Council accordingly. New development proposals in later phases of the project will be subject to individual planning applications, and members of the public will have the opportunity review and comment on the proposals.</p> |
| <p>Consideration of the nature and extent of ESB substations is required to establish existing and proposed capacity, in the context of the emerging regeneration proposals.</p> | <p>The Council and the Design Team have been actively engaging with ESB Networks in relation to the capacity of its current substations within and adjacent to the regeneration proposals. These discussions are ongoing, and additional capacity may be required to serve future development proposals.</p> |
| <p>Issues Raised through All Other Feedback</p> | <p>Monaghan County Council and RPS Response</p> |
| <p>Traffic, Road Design & Car Parking</p> | |
| <p>Potential contraflow should be considered at the junction between Dublin Street and the proposed Charles Gavan Duffy Place (GDP)</p> | <p>The Council and the Design Team have reviewed the detailed design proposals for the vehicular access arrangements in the vicinity of the proposed Charles Gavan Duffy Place (GDP). Several aspects were explored:</p> <ul style="list-style-type: none"> • The South Dublin Street Regeneration Plan identifies the overarching objective of the proposed GDP to be the creation of a new connection through from Dublin Street into the backlands area, which will host the new urban quarter. This connection will enable greater permeability throughout the new quarter for both pedestrians and vehicles, creating a strong base for new development, and providing new linkages into the existing N54 Macartan (Broad) Road network. • The proposed GDP will be a multi-use space – it will be an attractive space for pedestrians to spend time in, with soft landscaping, high quality natural stone paving, and new street lighting. The urban space will be represented by a new shared surface (natural stone) which will prioritise pedestrians and allow them to move freely and safely throughout the space. • This area will also accommodate a carriageway to facilitate traffic turning right off Dublin Street to connect into the backlands and beyond. However, raised tables are proposed on the carriageway, along with a change of surface material to signify entry into the proposed GDP and to slow vehicle speeds highlighting pedestrian primacy. Road markings have also been minimised to reduce the potential dominance of vehicle activity in the area. <p>A similar junction arrangement to that existing on Glaslough Street was explored – this arrangement is solely to provide access to the car parking area to the rear (i.e., an access only arrangement in the context of DMURS² standards). The</p> |

² Design Manual for Urban Roads and Streets

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| | <p>objective with the proposed GDP has a wider focus than access only as identified above, hence the junction arrangement has been designed differently, in accordance with the appropriate DMURS standards.</p> |
| <p>Car parking:</p> <ul style="list-style-type: none"> • The potential loss of spaces should be considered further. • The need for car parking does not override the needs of people to live, work and play in an attractive location. • The retention of the car parks reduces the potential for the area to be viewed as an attraction and new urban quarter | <p>The South Dublin Street & Backlands Regeneration Project will deliver considerable regeneration benefits throughout the town centre, supporting new development opportunities, renewing the urban fabric, and encouraging people to spend more time in the urban area. The planned investment in the public realm and streetscape will deliver considerable environmental quality and physical amenity improvements, with a mix of new high quality natural stone surfacing, new street trees, high quality street furniture and street signage, to enhance and compliment the town centre experience, both functionally and aesthetically.</p> <p>The delivery of the Plan will reduce parking provision within the Courthouse car parks, which currently provides a mix of short and long stay parking, managed by the Council. There is community, business and political support for adequate car parking facilities in this location, to support the wide range of town centre uses. The proposed reduction in spaces at this location (c. 57 spaces) will be offset by new parking provision on the former Eircom site³, therefore no overall loss of car parking is anticipated within the town as a result of this proposal.</p> <p>It should be noted that the enhancements proposed to the public realm, cycle infrastructure, and pedestrian links will also encourage a modal shift away from the car and provide greater travel choices for those travelling to, from and within the town, in line with Government policies on sustainable travel. The Council is working towards improving active travel measures and is in discussions with the National Transport Authority on further measures to facilitate and promote walking, cycling and public transport throughout the town and wider County.</p> <p>The Council believe that the current proposals achieve a careful balance of adequate parking provision to support economic activity and investment in the town centre, whilst maximising the potential for a more vibrant and higher quality streetscape experience for people visiting and using the town centre.</p> |
| <p>The town centre should be closed off to traffic (Dublin Street to be pedestrianised), similar to many European towns and cities, to promote better business and decrease carbon emissions.</p> | <p>This aspect was not part of the original design concept for the Dublin Street and Backlands Regeneration Plan 2018 and has therefore not brought forward as part of this project. It is noted that Dublin Street is a strategically important N54 National Secondary Route, and its closure to vehicular access is not within the remit of the South Dublin Street & Backlands Regeneration Project.</p> <p>It is noted that whilst the concept of pedestrianisation within a town centre location can realise positive benefits, it requires a comprehensive and wide-ranging feasibility study to examine all aspects of how the town centre works and the potential impacts such a measure might have. This type of feasibility study is not part of the South Dublin Street & Backlands Regeneration Project.</p> |

³ This proposal will be the subject of a Part 8 planning application by Monaghan County Council.

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| | <p>Dublin Street is a national secondary road (N54) under the remit of Transport Infrastructure Ireland (TII) and is an important part of the traffic circulation network within the town centre – any feasibility study would need to understand and assess the implications of such a scheme on the traffic network, the impact on other roads with increased traffic, traffic and junction modelling, and the impact on future development areas in North Dublin Street and beyond. This would also require detailed junction and road repositioning to facilitate this change, if consented – the nature and extent of this study would require investment and time and is outside the remit of the current scheme.</p> |
| <p>The proposals will result in increased vehicular traffic and:</p> <ul style="list-style-type: none"> • Negatively affect the residents of Dublin St. • Create a more hostile environment. • Not lead to or facilitate a modal shift / create more vehicle use. • Conflict with the Monaghan LUTS Study • Will not enhance cycle safety • Result in additional vehicle movements around Old Cross Square • Increase vehicle movements throughout the town. • A Traffic Impact Assessment has not been prepared • Does not create additional footfall on Dublin Street, and therefore does not offset the loss of business in the historic streets. | <p>The South Dublin Street & Backlands Regeneration Project is part of the wider Dublin Street Regeneration Plan 2018, which was incorporated into the Monaghan County Development Plan 2019-2025 giving it a statutory basis. These regeneration proposals were developed in the context of prevailing national, regional and county planning and transportation policy, as well as the Monaghan Land Use and Transport (LUTS) Study, and are considered compliant with Government policy on promoting alternative modes of transport.</p> <p>These draft proposals are the initial phase of the South Dublin Street & Backlands Regeneration Project, which focus on the delivery of the core infrastructure, public realm and services/utilities to support the wider scheme. As such, there are no new buildings and floorspace proposed as part of this scheme, and therefore no increase in traffic vehicle movements predicted along Dublin Street or Old Cross Square. New development proposals in later phases of the project will be subject to planning applications, and the potential impacts on the traffic network from these proposals will be assessed at that time.</p> <p>To inform the detailed design of the draft proposals, the design team undertook an extensive traffic modelling analysis to consider the impacts of these draft proposals on the surrounding road network and adjacent junctions in the area. It concluded that the redistribution of traffic is localised and will not significantly impact on the junctions. The proposals will result in a relocation of parking and along with the redistribution of trips, there will be a noticeable reduction in congestion along Dublin Street. There are no new buildings or floorspace proposed as part of this scheme, and therefore no increase in vehicle movements in Dublin Street. A traffic impact assessment has been prepared as part of the Environmental Impact Assessment Report (EIAR) which will accompany the planning application submission to An Bord Pleanála (ABP).</p> <p>The draft proposals outline a clear separation between vehicular, cyclist and pedestrian circulation on N54 Macartan (Broad) Road, which links to the Shopping Centre, car parks, the Monaghan Town Greenway route, future development plots, and the wider town centre, and will become part of a wider cycling network in the future. The Council has recently adopted the County Monaghan Walking and Cycling Strategy 2021-2026. This strategy aspires to create more cycle networks within the urban area as part of a wider network, which creates links between key urban locations including school, shops, businesses, and residential communities.</p> |

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| | <p>The enhancements proposed to the public realm, cycle infrastructure, and pedestrian links will also encourage a modal shift away from the car and provide greater travel choices, in line with Government policies on sustainable travel. The Council is working towards improving active travel measures throughout the town and is in discussions with the National Transport Authority on further measures to facilitate and promote walking, cycling and public transport throughout the town and wider County.</p> |
| <p>Clarification on the design standards for emergency vehicles</p> | <p>All proposed roads, streets and junctions are designed to the standards outlined in the Design Manual for Urban Roads and Streets (DMURS) which allows for the passage of fire engines and ambulances.</p> |
| <p>The proposed cycleway results in the removal of green infrastructure – it should come from a carriageway or traffic calmed area.</p> | <p>The draft proposals outline a carriageway width of 6.5m which is required to allow for the comfortable passage of larger vehicles, to service the existing shopping centre and the proposed new development. This design accords with current design standards in the Design Manual for Urban Roads and Streets (DMURS).</p> |
| <p>No proper priority is given to pedestrians and cyclists in this development, and does not accord with mandatory requirements of DMURS:</p> <ol style="list-style-type: none"> 1. All side road entrances / junctions have no priority pedestrian or cycle crossings 2. Cycle tracks are too short, not continuous, do not continue across side exits, and do not link with major desire points | <p>The detailed design of the proposal for South Dublin Street seeks to ensure that the space for pedestrians and cyclists are optimised, connectivity and integration with the existing network is maximised, and the green infrastructure design is high quality and to standard.</p> <p>In relation to the technical design specification, the proposed cycle tracks could be considered short however they will become part of a wider cycling network within the town. Cyclists can avail of the cycle track along Castle Road but will be encouraged to park their bikes at the cycle parking to the north of Castle Road and walk around the area. Providing additional cycle tracks and lanes throughout the Plan area will result in a wider crossing width for pedestrians to cross, which could deter pedestrian movements and detract from the target modal shifts attractiveness.</p> <p>The continuation of cycle tracks through the Charles Gavan Duffy Place is also not considered to be beneficial due to the narrow carriageway and footpath along Dublin Street, which cannot accommodate a cycle track linkage.</p> <p>There is also a challenging gradient throughout the Plan area - the gradient from north to south on the proposed Charles Gavan Duffy Place could encourage cyclists to travel at speed through this section. As the area is envisaged to be highly trafficked by pedestrians, there is a heightened risk of conflict should a pedestrian stray on to a cycle track. A shared area for vehicles and cyclists has therefore been considered most appropriate and has the added benefit of a heightened awareness between drivers and cyclists that can help to self-regulate speeds.</p> <p>The Council has recently adopted the County Walking and Cycling Strategy 2021-2026. This strategy aspires to create more cycle networks within the urban area as part of a wider network, which creates links between key urban locations including school, shops, businesses, and residential communities. The section proposed along Castle Street (Farney Road) is one such section linking N54 Macartan (Broad) Road with the Shopping Centre, the car parks, the Monaghan Town Greenway route, the future development plots, and the wider town centre.</p> |

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| | <p>The Council is also working towards providing a range of active travel measures throughout the town and is in discussions with the National Transport Authority on further measures to facilitate and promote walking, cycling and public transport throughout the town and wider County.</p> |
| <p>Alleyways, Pedestrian Linkages, and Public Spaces</p> | |
| <p>The proposed street (to be called Charles Gavan Duffy Place):</p> <ul style="list-style-type: none"> • Should not be built, there is no demonstration of need, it is not needed. • Creates a more hostile pedestrian environment along Dublin St, • Severs movement from The Diamond to Old Cross Square • Equal priority given to car / pedestrian • Severs pedestrian circulation on Dublin St • Has no active frontage • Is not a 'space' or 'place' • The addition of a footpath does not make it a high quality public realm. | <p>The South Dublin Street & Backlands Regeneration Project is part of the wider Dublin Street Regeneration Plan 2018, which was incorporated into the Monaghan County Development Plan 2019-2025 giving it a statutory basis. The Dublin Street Regeneration Plan 2018 draft design concept was published in 2017 and the local community were invited to engage with the design team (Sheridan Woods – Architects & Urban Planning Consultants) to provide feedback and comment on the core regeneration aspects of the concept and strategy. All the issues raised at that stage were taken on board and addressed in the final report.</p> <p>These draft proposals are the initial phase of the South Dublin Street & Backlands Regeneration Project, which focus on the delivery of the core infrastructure, public realm and services/utilities to support the wider scheme. It is considered that these draft proposals are in conformity with the original design concept and the objectives of the Monaghan County Development Plan 2019-2025</p> <p>This original design concept proposed the creation of a new street and space (proposed as Gavan Dufy Place - GDP) linking Dublin Street through to its backland areas, creating opportunities for new development, with the aspiration of reinvigorating the town centre. It aims to open up Dublin Street, removing considerable overshadowing, encouraging natural light into the area to create a natural draw into the wider area, to encourage pedestrians to move throughout the area with ease.</p> <p>The design of the proposed Charles Gavan Duffy Place has evolved as a shared space, with the aim of enhancing / encouraging prioritising pedestrian movement within the area, encouraging greater footfall – the design includes a clear definition between pedestrian and vehicular areas through careful location of street furniture, new planting, and use of paving materials, which will create a distinct and separate space within the streetscape. The detailed design of this concept now proposes a flush, shared surface with high quality natural stone paving giving priority to pedestrians within the area, which connects into the new and improved alley ways, encouraging connectivity and activity in the surrounding areas. It is also notable that this area is a flexible space, in that it can be closed off to the public and utilised as a civic space for festivals or markets.</p> <p>The draft proposals are now incorporating new voids (windows and doors) into the new gable elevations to ensure that the adjacent commercial activities can spill out onto Charles Gavan Duffy Place, creating activity and vibrancy, and adding an element of natural surveillance to the new space. The creation of the new space provides many opportunities</p> |

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| | <p>for new development / redevelopment in adjoining plots in the future, to enhance the active frontage and architectural quality of the area.</p> <p>The original design identified the removal of several buildings (some derelict) along Dublin Street to enable delivery of this new urban space and the creation of two new development plots. These future development plots are core components of the regeneration plan and are integral to realising the regeneration benefits throughout the town centre. They provide an opportunity to redevelop underutilised land, create new urban fabric and streetscape, and reinvigorate this section of the town centre. The creation of the proposed Charles Gavan Duffy Place compliments this, and creates an opportunity bring people into the heart of this new Quarter, creating an attractive light space to spend time in.</p> <p>The detailed design of the proposal seeks to improve pedestrian linkages and circulation around the town centre and through Dublin Street (South) in particular. The improvements to and opening up of pedestrian linkages from Dublin Street provides the opportunities for various retail, commercial and retail services to open out onto the new high quality public area, inviting footfall, within a safe attractive area with high quality lighting. The improvements to these linkages along Dublin Street, in addition to new signage throughout the scheme will ensure that footfall is encouraged and promoted throughout the wider area.</p> |
| <p>The proposed Courthouse Square is not a square, it is a car park</p> | <p>The original design concept proposed within the Dublin Street Regeneration Plan 2018 proposed to redefine the area to the rear and side of the courthouse as a new major public space. It was envisaged that the space would be multi-functional, providing a flexible space for outdoor gatherings / events (such as farmers markets), whilst allowing for day to day parking. It would be designed with high quality materials and appropriate soft landscaping.</p> <p>The draft design proposals have achieved the objective of a flexible multi-functional space, through the reconfiguration of the existing parking layout, and improvements to the new public realm.</p> |
| <p>Concerns were raised that the alleyways will attract anti-social behaviour. It is critical that good lighting is provided to create a safe and secure place for walking. At moment, the town centre is not safe for women walking on their own.</p> | <p>A core element of the original design concept was development of new and improvement of existing pedestrian linkages between the town centre, Dublin Street, and the backlands area to improve pedestrian circulation, increase footfall, and make the area more attractive to the public.</p> <p>A key design aim was to ensure that all new links were safe, attractive, well-lit, and deterred anti-social behaviour. To this end, the proposals include:</p> <ul style="list-style-type: none"> • New LED lighting to be provided to all linkages proposed for inclusion within the scheme to provide a well-lit and welcoming environment. • No seating to be provided in the linkages to reduce potential for linkages to become a 'gathering' area / anti-social behaviour • Linkages to be free from other street furniture (as far as reasonably possible) to provide clear forward visibility for pedestrians – to create a welcoming and safe through route. |
| <p>Clarification on whether the alleyway between NS / Ulster Bank is to get a facelift.</p> | <p>This location was not included in the original Dublin Street Regeneration Plan 2018, and therefore does not form part of the current scheme.</p> |

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| <p>The proposed connections can be improved without the demolition of historic buildings</p> | <p>The South Dublin Street & Backlands Regeneration Project is part of the wider Dublin Street Regeneration Plan 2018, which was incorporated into the Monaghan County Development Plan 2019-2025 giving it a statutory basis. The Dublin Street Regeneration Plan 2018 draft design concept was published in 2017, and the local community were invited to engage with the Council and their design team (Sheridan Woods – Architects & Urban Planning Consultants) to provide feedback and comment on the core regeneration aspects of the concept and strategy.</p> <p>This original design concept proposed the creation of a new urban space to be called Gavan Dufy Place (GDP) linking Dublin Street through to its backland areas, creating opportunities for new development, with the aspiration of reinvigorating the town centre. The aim is to open up Dublin Street, removing considerable overshadowing, encouraging natural light into the area to create a natural draw into the wider area, to encourage pedestrians to move throughout the area with ease.</p> <p>The original design identified the removal of several buildings (some derelict) along Dublin Street to enable delivery of this new street and the creation of two new development plots. These future development plots are core components of the regeneration plan and are integral to realising the regeneration benefits throughout the town centre.</p> <p>They provide an opportunity to redevelop underutilised land, create new urban fabric and streetscape, and reinvigorate this section of the town centre. The creation of Charles Gavan Duffy Place compliments this, and creates an opportunity bring people into the heart of this new Quarter, creating an attractive, light space for the community and visitors to spend time in.</p> |
| <p>The proposals focus on creating vehicle links not pedestrian links</p> | <p>The South Dublin Street & Backlands Regeneration Project is part of the wider Dublin Street Regeneration Plan 2018, which was incorporated into the Monaghan County Development Plan 2019-2025 giving it a statutory basis. The Dublin Street Regeneration Plan 2018 draft design concept was published in 2017 and the local community were invited to engage with the design team (Sheridan Woods – Architects & Urban Planning Consultants) to provide feedback and comment on the core regeneration aspects of the concept and strategy.</p> <p>The proposed Charles Gavan Duffy Place- has been designed as a shared space which prioritises pedestrian movement within the area – the design includes a clear definition between pedestrian and vehicular areas through careful location of street furniture, new planting, and use of paving materials, which will create a distinct and separate streetscape</p> <p>The detailed design of the proposal seeks to improve pedestrian linkages and circulation around the town centre and through Dublin Street (South) in particular. The improvements to and opening up of pedestrian linkages from Dublin Street provides the opportunities for various retail, commercial and retail services to open out onto the new high quality public area, inviting footfall, within a safe attractive area with high quality lighting. The improvements to these linkages along Dublin Street will create a more permeable and attractive pedestrian network, complimented with new signage to encourage footfall throughout the town centre.</p> |

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| | These draft proposals are the initial phase of the South Dublin Street & Backlands Regeneration Project, which focus on the delivery of the core infrastructure, public realm and services/utilities to support the wider scheme. |
| Along Castle Road, there is no active kerbside frontage, only car park, blank façade and a service yard, which does not create an inviting and desirable entrance to the town. | <p>The proposals for Castle Road include a realignment of the area to provide pedestrian and cycle facilities. The service yard and boundary fencing are a core part of the circulation and servicing operations for the Tesco and the Shopping Centre, which must remain for operational reasons.</p> <p>The Council and the Design Team have engaged with both Tesco and the Shopping Centre, during the public consultation, and communicated that this area would benefit from design improvements to improve the aesthetics and animation along the service yard.</p> |
| Demolition / Building Removal | |
| Concerns raised regarding the demolition of No.10 Dublin St and the loss of important heritage for Monaghan – this should be resisted. | <p>The South Dublin Street & Backlands Regeneration Project is part of the wider Dublin Street Regeneration Plan 2018, which was incorporated into the Monaghan County Development Plan 2019-2025 giving it a statutory basis. The Dublin Street Regeneration Plan 2018 draft design concept was published in 2017, and the local community were invited to engage with the Council and their design team (Sheridan Woods – Architects & Urban Planning Consultants) to provide feedback and comment on the core regeneration aspects of the concept and strategy.</p> <p>This original design concept proposed the creation of a new street (to be called Gavan Dufy Place - GDP) linking Dublin Street through to its backland areas, creating opportunities for new development, with the aspiration of reinvigorating the town centre. The original design identified the removal of several buildings (some derelict) along Dublin Street to enable delivery of this new street and the creation of two new development plots. These future development plots are core components of the regeneration plan and are integral to realising the regeneration benefits throughout the town centre.</p> <p>It is understood that the original design concept considered a number of options to create an opening along Dublin Street, to facilitate pedestrian permeability and vehicular movements through to the backlands. This concluded that the current location was preferable on the basis there were opportunities to form an attractive space context with the stone fronted façade on Dublin Street (North), loss of a reduced level of recently constructed backland development, increased potential for the reuse and adaptation of existing historic gables and facilitates an appropriate space width.</p> <p>As part of a separate legislative process, the Monaghan County Council Elected Members voted to remove No.10 Dublin Street from the Record of Protected Structures. The Members considered several aspects within their decision making process. This included comments and submissions from the public made following a statutory consultation process. A detailed report was prepared which included an assessment of the conservation and heritage value of the existing building, which was the birth place of Charles Gavan Duffy. This report concluded that whilst the social significance of the location remains, the building itself has limited architectural significance, and its overall significance has been compromised by the internal and external alterations over the past number of years. In addition, they considered the</p> |
| No 10 is a building of historical significance and should not be demolished. | |
| Dublin St should remain as existing; it is a beautiful traditional street with buildings that have stood the test of time. It should be preserved for future generations. | |
| All for buildings on Dublin St should be retained and restored within the historic street | |
| Dublin St should be regenerated to make the most of its wonderful character and historic streets (to make it buzzing with | |
| No 10 should be restored and used as a visitors centre. | |
| Demolition rather than construction is short term planning | |
| No 10 should become a National Heritage | |
| The removal of buildings to create a road is not integration, is not contemporary with current planning and urban design, and does not compliment built heritage. | |
| A mural will not improve the historical significance of the site / person. | |
| The removal of the buildings of heritage value will destroy our heritage. | |

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| | <p>benefits which could be gained over a longer term, through the South Dublin Street & Backlands Regeneration Project, as well as the new opportunities it presents to celebrate the birthplace and life of Charles Gavan Duffy further as part of the wider project.</p> <p>The Design Team are considering further options to embrace the heritage value of the area within the draft design proposals to celebrate Charles Gavan Duffy.</p> |
| Consultation | |
| <p>Queries over the extent of landowner engagement to date, and a request that engagement with the relevant landowners continues.</p> | <p>The Council and the Design Team have made considerable efforts to identify all landowners involved in the study area. All known landowners and key stakeholders have been contacted as part of the consultation process and the Council and Design Team are committed to continuing this engagement as the project progresses. A Valuation Office has been engaged by the Council for the project and negotiations have commenced and are ongoing with affected property owners within the scheme area.</p> |
| <p>The Consultation Event should be a drop in event – the appointment system could deter elderly people from attending.</p> | <p>As a public body, the Council is committed to carrying out consultation exercises in a safe and accessible manner. In the context of COVID restrictions at the time of consultation, Government guidance precluded the holding of a ‘drop – in’ event.</p> <p>It should be noted that the events were advertised in the local newspaper, on social media and on the Council website. In addition, there was a letter drop within and adjacent to the study area alerting the public to the project and its consultation exercise, and the landowners and key stakeholders were contacted directly.</p> <p>There was an option for attendance at the appointment only event, a telephone consultation, submission of a feedback letter via post or an email submission to ensure as many people as possible had optimum options to provide representations to the process.</p> |
| <p>The legend in the drawings does not cover all aspects proposed. Some elements are not consistent over all drawings e.g. proposed walkway.</p> | <p>All drawings and design information have been reviewed for consistency and accuracy.</p> |
| Land Ownership | |
| <p>Query over whether landowners had been contacted.</p> | <p>The Council and RPS Design Team have made considerable efforts to identify all landowners involved in the study area. All known landowners and key stakeholders have been contacted as part of the consultation process and the Council and Design Team are committed to continuing this engagement as the project progresses. A Valuation Office has been engaged by the Council for the project and negotiations have commenced and are ongoing with affected property owners within the scheme area.</p> |
| Other Issues Raised | |

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| <p>The proposed street names require further discussion / consideration:</p> <ul style="list-style-type: none"> • There is a road off Old Cross Square which is currently named and referred to as the Mall; therefore the new road should be amended in this context; • Farney Road is not acceptable name for the realigned road, due to: <ul style="list-style-type: none"> ○ It is not inclusive for all religions. Any new name should reflect all the communities within the town. ○ Future street names should not be named after deceased people. ○ It relates to South Monaghan not the County. ○ Oriel Way / Oriel Road is a suggested alternative. | <p>The street names identified in the draft design proposals were proposed within the Dublin Street and Backlands Regeneration Plan 2018 and carried through to the South Dublin Street & Backlands Regeneration Project. The draft design proposals for public consultation continued to utilise the proposed street names for ease of reference.</p> <p>However, the Council acknowledge and appreciate that the naming of streets is an important part of any development process and endeavour to consider this aspect further with the Elected Members subject to grant of planning approval.</p> |
| <p>This project should not be progressed / project direction should be changed:</p> <ul style="list-style-type: none"> • There are alternative options to increase footfall • There are alternative options to increase visitors to businesses in Dublin Street, • Consideration should be given to increasing development funding for existing businesses and increasing grant start up for new businesses. • The backlands can be developed without damaging Dublin Street, if done correctly • Businesses are currently struggling, and livelihoods will be further compromised | <p>The Council is committed to delivering the comprehensive regeneration proposals set out in the Dublin Street Regeneration Plan 2018, to improve and reinvigorate the centre of Monaghan Town. This commitment is endorsed by the incorporation of the Plan in the County Development Plan 2019-2025, and the design proposals should be developed in accordance with its objectives.</p> <p>The Council is committed to the regeneration of Monaghan town centre, and this project represents a significant investment in Dublin Street and its backlands, with the aim of reinvigorating the urban structure, providing new infrastructure and services, and creating attractive new development areas for new uses. It directs funding to the heart of the town centre, to improve aspects such as public facilities and services, for the people of Monaghan – the residents, users, visitors and tourists alike</p> <p>In addition, these proposals formed the basis for a successful bid for funding from the Urban Regeneration and Development Fund (established through the National Development Plan 2018-2027) to deliver the wider regeneration project, and bring considerable benefits to the people who work, visit and spend time in Monaghan town centre.</p> |
| <p>Query on location of proposed water hydrants</p> | <p>The Council and the Design Team have been engaging with Irish Water, the Council Water Services Team, and the Fire & Civil Protection Team regarding the detail of various water infrastructure. The draft design proposals show the hydrants at locations near existing buildings.</p> |
| <p>The study should consider additional land close to the study area, which is available for redevelopment. Consideration should also be given to constructing a footbridge from the lower Courthouse Car Park to this site (Cormeen Cabinets Ltd, on N54 Macartan (Broad) Road near the roundabout).</p> | <p>This location was not included in the original Dublin Street Regeneration Plan 2018, and therefore does not form part of the current scheme.</p> |
| <p>The proposal is a car park development, not regeneration (similar to entrance to the car park on Glaslough St to Swan Lake)</p> | <p>The boundary of the South Dublin Street & Backlands Regeneration Project incorporates the two existing Courthouse car parks. These draft proposals are the initial phase of this Regeneration Plan, and focus on the delivery of the core infrastructure, public realm and services/utilities to support the wider regeneration scheme.</p> |

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| | <p>The scheme will deliver considerable regeneration benefits throughout the town centre, supporting new development opportunities, renewing the urban fabric, and encouraging people to spend more time in the urban area. The planned investment in the public realm and streetscape will deliver considerable environmental quality and physical amenity improvements, with a mix of new high quality natural stone surfacing, new street trees, high quality street furniture and street signage, to enhance and compliment the town centre experience, both functionally and aesthetically.</p> <p>Car parking is one element in the overall regeneration scheme, and these draft proposals will reduce parking provision within the Courthouse car parks, which currently provides a mix of short and long stay parking, managed by the Council. There is community, business and political support for adequate car parking facilities in this location, to support the wide range of town centre uses. The proposed reduction in spaces at this location (c.57 spaces) will be offset by new parking provision on the former Eircom site, therefore no overall loss of car parking is anticipated within the town as a result of this scheme proposal.</p> <p>It should be noted that the enhancements proposed to the public realm, cycle infrastructure, and pedestrian links will also encourage a modal shift away from the car and provide greater travel choices for those travelling to, from and within the town, in line with Government policies on sustainable travel.</p> |
| <p>All legal requirements need to be followed before demolition can take place, particularly protected structures (including newspaper adverts, Council meetings, laws of compliance etc)</p> | <p>Monaghan County Council and Design Team are committed to ensuring that the draft proposals are designed and delivered in accordance with the relevant statutory and legislative obligations set out in the Planning and Development Act 2000, as amended and the Planning and Development Regulations 2001, as amended.</p> |
| <p>Query on location of CCTV throughout the scheme in respect of existing proposals.</p> | <p>The Council can confirm that the existing CCTV proposals will be maintained, and discussions are ongoing between the design team, the Council and the Gardai regarding potential additional locations.</p> |
| <p>The car park area will remove retail activity from traditional streets leading to dereliction and decay in those streets. A retail impact assessment should be prepared and submitted as part of the planning application.</p> | <p>The boundary of the South Dublin Street & Backlands Regeneration Project incorporates the two existing Courthouse car parks. These draft proposals are the initial phase of this Plan, which focus on the delivery of the core infrastructure, public realm and services/utilities to support the wider scheme and later phases of development. There is no new floorspace being generated by this proposal, therefore a retail impact assessment is not required. This scheme will be a catalyst for increasing footfall and retail activity within the traditional streets and will bring benefits to the area.</p> <p>Future development proposals for the newly created development plots will be subject to a detailed design process and a planning application. Should these proposals include retail use, such proposals will be assessed in terms of the prevailing planning policy and may include the requirement for a retail impact assessment.</p> <p>The proposals include the demolition of six existing buildings, four of these from the main Dublin Street. At this stage, three small units provide retail / retail services.</p> |

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| <p>Proposed land uses within the Plan area:</p> <ul style="list-style-type: none"> • People who live in existing apartments/houses or proposed apartments require high quality open space. • Residential development should not be proposed as part of the scheme, due to the lack of public open space, green infrastructure, and the views overlooking a car park and service yard. • Do not provide any detail of the uses provided on the two development plots – multi-national retail or residential uses should not be encouraged. • Do not include the regeneration of former shops and buildings, which could be used to help alleviate housing shortages | <p>The draft proposals are the initial phase of the South Dublin Street & Backlands Regeneration Project, which focus on the delivery of the core infrastructure, public realm and services/utilities to support the wider regeneration scheme to create an attractive investment location and a robust framework for future urban development. The draft proposals in this phase do not propose any new floorspace.</p> <p>Future development proposals for the newly created development plots will be subject to a detailed design process and a planning application. Should these proposals include residential use such proposals will be assessed in terms of the prevailing planning policy which includes a requirement for public and private amenity and communal open space.</p> <p>In respect of the future development plots created in this phase of the works, it is possible that residential uses will be considered, along with other town centre uses. Residential uses and living over the shop are encouraged within Monaghan Town Centre, and the Council welcome any proposals to increase residential properties within the study area. Residential is likely to be one of the uses to be considered within the future development plots to be created which should assist in addressing future housing shortages within the town and wider County.</p> |
| <p>The approach and application are contrary to:</p> <ul style="list-style-type: none"> • The County Development Plan 2019-2025 • National Planning Guidelines • International best practice for Market Towns. • Programme for Government • Town Centres First concept | <p>The Council and Design Team are of the opinion that the proposals are compliant with national regional and local planning policy.</p> <p>The South Dublin Street & Backlands Regeneration Project is part of the wider Dublin Street Regeneration Plan 2018, which was incorporated into the Monaghan County Development Plan 2019-2025 giving it a statutory basis. These Plans were developed in the context of prevailing national, regional and county planning and transportation policy, and their compliance was confirmed with their incorporation into the County Development Plan. The detailed design of the proposals has continued to evolve in the context of prevailing planning policy and complies with all current design and best practice standards.</p> |
| <p>The proposals contravene the National Biodiversity Action Plan:</p> <ul style="list-style-type: none"> • Public & private sector relevant policies will use best practice in SEA, AA and other assessment tools to ensure proper consideration of biodiversity in policies and plans • All public authorities move towards no net loss of biodiversity through strategies, planning, mitigation measures, appropriate off-setting and/or investment in blue-green infrastructure. | <p>A Natura Impact Statement is being prepared to support and inform the proposals, and an ecological impact assessment is being prepared as part of the Environmental Impact Assessment (EIA) process.</p> |
| <p>The proposals are at odds with:</p> <ul style="list-style-type: none"> • The MCC Climate Change Adaptation Strategy 2019-2024 (G2, G4, G5) | <p>In relation to Policy TP 2 in the current County Development Plan, the draft proposals are considered compliant in that they support the creation of cycling and walking facilities within this section of the town centre. In addition, RPS undertook a traffic modelling analysis to consider the impacts on the surrounding road network and adjacent junctions in the area. It concluded that redistribution of traffic is localised and will not significantly impact on the junctions. In addition, there is no floorspace proposed as part of this scheme, and therefore no new traffic generation to increase congestion.</p> |
| <p>The proposals are contrary to the Monaghan County Development Plan 201-2025:</p> <ol style="list-style-type: none"> 1. Policy TP2, in that they encourage traffic into The Diamond, Dublin St and Old Cross Square, which will increase congestion. 2. MP04 in that it directly contradicts this policy by demolishing 4 properties | <p>In relation to Policy MPO 4, it is noted that the Council will encourage new developments which refurbish existing buildings and backlands to eliminate dereliction and reinforce the town centre. It is considered that the overall South</p> |

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| | <p>Dublin Street and Backlands project is aimed at regenerating the town centre and eliminating dereliction. The policy does not discourage proposals which do not include refurbishment of existing buildings.</p> <p>This project promotes a significant investment in the regeneration of this part of the town, with the aim of reinvigorating the urban structure, providing new infrastructure and services, and creating attractive new development areas for new uses. This project directs funding to the heart of the town centre, to improve facilities, services and health of the people of Monaghan – the residents, users, visitors and tourists alike.</p> |
| <p>Many former shops & buildings have been vacant and or derelict for a long time, they are too small to be viable as standalone retail spaces. If the units were able to incorporate part of the footpath or street into their retail space, this would become more attractive to retailers and would likely make retail units more economically viable and attractive.</p> | <p>The draft proposals are the initial phase of the South Dublin Street & Backlands Regeneration Project, which focus on the delivery of the core infrastructure, public realm and services/utilities to support the wider regeneration scheme to create an attractive investment location and a robust framework for future urban development.</p> <p>The plot size and urban grain within the current spaces along Dublin Street are traditional in many market towns and are a characteristic / feature of Monaghan town. There are similar plot widths/grain throughout Glaslough Street, which has become a vibrant and lively shopping street. The aspiration is that these comprehensive proposals in South Dublin Street will help instil a new and improved streetscape and setting for all properties along Dublin Street, which will reinvigorate this area of the town. The reinvigoration of the pedestrian linkages will increase footfall and activity within the new spaces and will provide for many opportunities for new development or redevelopment in adjoining plots in the future.</p> |
| <p>Entrance / exit to Church Square should be pedestrianised</p> | <p>This location was not included in the original Dublin Street Regeneration Plan 2018 and does not form part of the current scheme design. The current operational movements around Church Square remain unchanged in the current design proposals (i.e. the existing ingress and egress routes on either side of the Courthouse and Church Square).</p> |
| <p>The proposals:</p> <ul style="list-style-type: none"> • Lack greenery and are unimaginative • Do not develop a high quality connection to the Shambles Water Body | <p>The draft proposals are the initial phase of the South Dublin Street & Backlands Regeneration Project, which focus on the delivery of the core infrastructure, public realm and services/utilities to support the wider regeneration scheme to create an attractive investment location and a robust framework for future urban development.</p> <p>The soft landscape proposals maximise the space available within new urban structure, providing new street trees - and reflect the existing species in the Diamond. The proposed tree species have been reviewed and discussed with the Council, including the maintenance department, and are considered suitable street trees. The future development of the new plots will include new, high quality built development which will include new amenity areas and hard landscape.</p> <p>The existing green space along the Shambles River is retained within the scheme, and consideration has been given to reinvigorating the street furniture and tree planting within this area, to ensure the design reflects the optimal use of the open space in this location.</p> |

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| <p>The pedestrian crossing on Farney Road / Castle St does not link to clear pedestrian desire lines and is an uncontrolled crossing – this should be a zebra crossing. Other crossing points and desire lines are not connected.</p> | <p>The Council and RPS Design Team can confirm that this is a courtesy crossing which has been designed in accordance with the relevant standards in Design Manual for Urban Roads and Streets (DMURS). In addition, desire lines have been considered throughout the scheme area and pedestrian crossings have been strategically placed to guide and connect pedestrians between the car park areas, various buildings, and town centre locations. All crossings within the design proposals are uncontrolled and support pedestrian priority.</p> |

3.4 Conclusion

Monaghan County Council and RPS Design Team Consultants have undertaken meaningful and effective public consultation with the public, local community and various stakeholders in relation to the proposed development of South Dublin Street & Backlands Regeneration Project, in line with best practice consultation guidance.

In the context of the ongoing COVID-19 pandemic during the relevant consultation period, the public consultation strategy utilised a range of methods to engage with citizens, local communities and stakeholders to gather views, comments and feedback on the draft design proposals. These methods were considered appropriate in terms of the nature, scope and complexity of the project, and has enabled active engagement and feedback on the project during the public consultation phase.

A total of 48 submissions were received during the consultation period, providing feedback on a range of issues, including the proposals for demolition, the historic nature of the streetscape, the importance of protecting the towns heritage, the active travel design measures, and the wider regeneration objectives/details.

All submissions made to the Council during the public consultation process were thoroughly reviewed and considered by Monaghan County Council and the Design Team Consultants. The previous table contains a summary of the issues raised, consideration of those issues and recommendations for amendments, where appropriate to the draft design proposals.

Monaghan County Council and RPS Design Consultants would like to acknowledge and thank all members of the public, affected property owners, Elected Members, local community groups, local businesses and other relevant stakeholders who made a submission and participated in the public consultation process.

Chapter
04

**Noise and
Vibration**

CHAPTER 4 - NOISE AND VIBRATION

4.1 Introduction

This Chapter outlines the Noise and Vibration Impact Assessment (NVIA) undertaken in respect of the proposed development outlined in Chapter 2 of this EIAR, for lands within Monaghan town. The assessment examines the potential impacts from the construction activities of the proposed development on the nearest noise sensitive receptors.

The author, Catriona Cooper, is an Associate with RPS and holds BSc (Hons) Environmental Health and Postgraduate Diploma in Acoustics and Noise Control and is full member of the Institute of Acoustics. Catriona has over 16 years' experience working specialising in the field of acoustics and vibration.

During the construction phase, there is potential for noise and vibration impacts at the nearest noise sensitive properties from the use of noisy plant and equipment, from construction traffic, and vibration impacts from the use a certain construction phase activity including demolition of buildings. The effect of construction noise has been assessed in full within this noise and vibration chapter. The construction noise targets are set out along with the assessment methodology and results of the construction noise predictions. Construction noise mitigation measures are detailed such that noise targets are met throughout the construction phases.

The assessment of operational noise includes an assessment of the noise impact from road traffic noise.

The specific objectives of the noise and vibration assessment are to:

- describe the existing noise baseline;
- define the assessment methodology and significance criteria used in completing the noise and vibration impact assessment;
- describe the potential effects, including direct, indirect and cumulative effects;
- describe the mitigation measures proposed to address the likely significant effects; and
- assess the residual effects remaining following the implementation of mitigation.

This Chapter should be read in conjunction with:

- Chapter 1: Introduction
- Chapter 2: Project Description (which provides details of the proposed development)
- Chapter 9: Traffic and Transportation; and

This Chapter is supported by EIAR Volume II – Technical Appendices by;

- Appendix 2A Preliminary CEMP (pCEMP)
- Appendix 4A Baseline Noise Monitoring Survey;
- Appendix 4B Construction Noise Assessment;
- Appendix 9C Existing Traffic Flows;
- Appendix 9D Committed & Base Traffic Flows; and
- Appendix 9E Generated & Proposed Traffic Flows.

4.1.1 Potential Effects Scoped Out

Having regard to the desk top study of the site and the proposed works, it was the professional judgement of the author that several factors could be scoped out of the detailed assessment including:

- Construction vibration. This has been scoped out as the proposed construction activities do not include piling; and
- Operational vibration. This has been scoped out as there shall be no new significant vibration sources likely to generate perceptible levels of vibration when the proposed development is operational.

Reference to the relevant vibration legislation is still included for completeness.

4.2 Methodology

The noise and vibration assessment has been undertaken having regard to the development plans and design drawings contained within EIAR Volume III – Technical Drawings & Figures with the full list provided in Chapter 1: Introduction, to assess the potential noise impact effects on the surrounding area during both the construction and operational stages.

4.2.1 Relevant Guidance

Detailed guidance in relation to the prediction and assessment of noise and vibration is contained in the guidance documents listed below:

- Good Practice Guidance for the Treatment of Noise during the planning of National Road Schemes (2014);
- World Health Organisation (WHO) – Guidelines for Community Noise (1999);
- British Standard BS4142:2014+A1:2019 Methods for Rating and Assessing Industrial and Commercial Sound;
- British Standard BS 7385 (1993) Evaluation and Measurement for Vibration in Buildings Part 2: Guide to Damage Levels from Ground borne Vibration;
- Calculation of Road Traffic Noise (CRTN) - Department of Transport Welsh Office 1988;
- Design Manual for Roads and Bridges Volume 11, Section 3, Part 7, LA 111 Noise and Vibration;
- British Standard BS 8233:2014 Sound Insulation and Noise Reduction for Buildings – Code of Practice;
- British Standard BS5228: 2009+A1:2014, Code of Practice of Noise and Vibration Control on Construction and Open Sites; and
- Environmental Protection Agency (EPA) Office of Environmental Enforcement (OEE) - Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) (2016);
- British Standards BS 7445-1:2003 Description and Measurement of Environmental Noise – Part 1: Guide to Quantities and Procedures (BS, 7445-1).

Good Practice Guidance for the Treatment of Noise during the planning of National Road Schemes (2014)

This guidance document is primarily concerned with setting out the design criteria in relation to noise from new road schemes in Ireland, however, it also provides reference material in terms of suitable noise and vibration threshold limits for construction activities.

The National Roads Authority (NRA) Guidelines for the Treatment of Noise and Vibration in National Road Schemes, as revised by the National Roads Authority in October 2004, are based on the Authority's phased

approach to road scheme planning and development. The Good Practice Guidance for the Treatment of Noise during the planning of National Road Schemes (2014) is intended to expand and supplement the advice already provided in the Guidelines on these matters. The advice amplifies and supplements the original noise guidelines, and it should be read in conjunction with that document.

The NRA Guidelines indicate noise levels typically deemed to be acceptable for the construction phase of road schemes (See Table 4. 1). These values are indicative only and more stringent limits may be applied where pre-existing noise levels are low.

Table 4. 1: Maximum Permissible Noise Levels at the Façade of Dwellings during Construction

| Days & Times | L _{Aeq} (1 hr) (dB) | L _{pA(max)slow} (dB) |
|---|------------------------------|-------------------------------|
| Monday to Friday (07:00 – 19:00hrs) | 70 | 80 |
| Monday to Friday (19:00 – 22:00hrs) | 60* | 65* |
| Saturday (08:00 – 16:30hrs) | 65 | 75 |
| Sunday Bank Holidays (08:00 – 16:30hrs) | 60* | 65* |

* Construction activity at these times. Other than that required in respect of emergency works, will normally require explicit permission of the relevant local authority.

The NRA Guidelines for the Treatment of Noise & Vibration in National Road Schemes recommends that vibration is limited to the values set out in Table 4. 2 in order to ensure that there is little or no risk of even cosmetic damage to buildings.

Table 4. 2: Recommended Vibration Level Thresholds for NRA Schemes

| Allowable Vibration Velocity (Peak Particle Velocity) at the Closest Part of any Sensitive Property to the Source of Vibration, at a Frequency of: | | |
|---|-------------|--------------------------|
| Less than 10Hz | 10 to 50 Hz | 50 to 100 Hz (and above) |
| 8mm/s | 12.5mm/s | 20mm/s |

This guidance has been used for the assessment for construction phase noise from the proposed development.

Design Manual for Roads and Bridges Volume 11, Section 3, Part 7, LA 111 Noise and Vibration

This assessment is based on the guidance given in the Design Manual for Roads and Bridges (DMRB), Volume 11, Section 3, Part 7, LA 111. This document sets out the requirements for noise and vibration assessments from road projects, applying a proportionate and consistent approach using best practice and ensuring compliance with relevant legislation.

British Standard BS5228:2009+A1:2014 Noise and Vibration Control on Construction and Open Sites

This British standard consists of two parts and covers the need for protection against noise and vibration of persons living and working in the vicinity of construction and open sites. The standard recommends procedures for noise and vibration control during construction operations and aims to assist architects, contractors and site operatives, designers, developers, engineers, local authority environmental health officers and planners.

British Standard BS5228: 2009+A1:2014, Code of Practice of Noise and Vibration Control on Construction and Open Sites Part 1: Noise

Part 1 of the standard provides a method of calculating noise from construction plant, including:

- Tables of source noise levels;
- Methods for summing up contributions from intermittently operating plant;
- A procedure for calculating noise propagation;
- A method for calculating noise screening effects; and
- A way of predicting noise from mobile plant, such as haul roads.

The standard also provides guidance on legislative background, community relations, training, nuisance, project supervision and control of noise and vibration.

The ABC method outlined in Section E3.2 has been used for the purposes of determining whether the predicted noise levels from the construction activities will result in any significant noise impact at the nearest noise sensitive properties.

Table 4. 3 outlines the applicable noise threshold limits that apply at the nearest noise sensitive receptors. The determination of what category to apply is dependent on the existing baseline ambient (L_{Aeq}) noise level (rounded to the nearest 5dB) at the nearest noise sensitive property. For weekday daytime, if the ambient noise level is less than the Category A threshold limit, the Category A threshold limit (i.e. 65dB) applies. If the ambient noise level is the same as the Category A threshold limit, the Category B threshold limit (i.e., 70dB) applies. If the ambient noise level is more than the Category A threshold limit, the Category C threshold limit (i.e., 75dB) applies. The applicable limits that apply at each of the sensitive receptors included in the construction phase noise model are presented and discussed in Section 4.4.

Table 4. 3: Noise Threshold Limits at Nearest Sensitive Receptors

| | Threshold Limits [dB(A)] | | |
|--|--------------------------|------------|------------|
| | Category A | Category B | Category C |
| Night-time (23:00 - 07:00) | 45 | 50 | 55 |
| Evening and Weekends (19:00 - 23:00) Weekdays, 13:00-23:00 Saturdays, 07:00-23:00 Sundays) | 55 | 60 | 65 |
| Weekday daytime (07:00-19:00) and Saturdays (07:00-13:00) | 65 | 70 | 75 |

British Standard BS5228: 2009+A1:2014, Code of Practice of Noise and Vibration Control on Construction and Open Sites Part 2: Vibration

Part 2 of the standard gives recommendations for basic methods of vibration control relating to construction and open sites where work activities/operations generate significant vibration levels, including industry-specific guidance.

Human beings are known to be very sensitive to vibration, the threshold of perception being typically in the Peak Particle Velocity (PPV) range of 0.14 mm·s⁻¹ to 0.3 mm·s⁻¹. Vibrations above these values can disturb, startle, cause annoyance or interfere with work activities. At higher levels they can be described as unpleasant or even painful. In residential accommodation, vibrations can promote anxiety lest some structural mishap might occur. Guidance of effects of vibration levels are illustrated in Table 4.4 below.

Table 4.4: Guidance on Effects of Vibration Levels

| Vibration Level | Effect |
|-------------------------|---|
| 0.14 mm·s ⁻¹ | Vibration might be just perceptible in the most sensitive situations for most vibration frequencies associated with construction. At lower frequencies, people are less sensitive to vibration. |
| 0.3 mm·s ⁻¹ | Vibration might be just perceptible in residential environments. |
| 1.0 mm·s ⁻¹ | It is likely that vibration of this level in residential environments will cause complaint, but can be tolerated if prior warning and explanation has been given to residents. |
| 10 mm·s ⁻¹ | Vibration is likely to be intolerable for any more than a very brief exposure to this level. |

Limits of transient vibration, above which cosmetic damage could occur, are given numerically in Table 4.5 (Ref: BS5228-2:2009+A1:2014). Minor damage is possible at vibration magnitudes which are greater than twice those given in Table 4.5, and major damage to a building structure can occur at values greater than four times the tabulated values.

Table 4.5: Transient Vibration Guide Values for Cosmetic Damage

| Type of Building | Peak Particle Velocity (PPV) (mm/s) in Frequency Range of Predominant Pulse | |
|--|---|--|
| | 4 Hz to 15 Hz | 15 Hz and above |
| Reinforced or framed structures. | 50 mm/s at 4 Hz and above | 50 mm/s at 4 Hz and above |
| Industrial and heavy commercial buildings. | | |
| Unreinforced or light framed structures. | 15 mm/s at 4 Hz increasing to 20 mm/S at 15 Hz | 20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above. |
| Residential or light commercial buildings. | | |

This guidance document has been used for the assessment of construction noise from the proposed development.

British Standard BS 7385 (1993) Evaluation and Measurement for Vibration in Buildings Part 2: Guide to Damage Levels from Ground borne Vibration

British Standard BS 7385 (1993) Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration indicates that cosmetic damage should not occur to property if transient vibration does not exceed 15mm/s at low frequencies rising to 20mm/s at 15Hz and 50mm/s at 40Hz. These guidelines refer to relatively modern buildings and therefore, these values should be reduced to 50% or less for more sensitive buildings.

British Standard 8233:2014 Sound Insulation and Noise Reduction for Buildings – Code of Practice

BS8233:2014 provides guidance values for a range of ambient noise levels within residential and commercial/industrial properties as shown in Table 4.6.

Table 4.6: Internal Ambient Noise Levels for Living Spaces

| Activity | Location | 07:00 – 23:00 | 23:00 – 07:00 |
|----------------------------|------------------|----------------------|---------------------|
| Resting | Living Room | 35 dB $L_{Aeq,16hr}$ | - |
| Dining | Dining Room/Area | 40 dB $L_{Aeq,16hr}$ | - |
| Sleeping (daytime resting) | Bedroom | 35 dB $L_{Aeq,16hr}$ | 30 dB $L_{Aeq,8hr}$ |

The standard allows for a further relaxation in standards of up to 5dB where "development is considered necessary or desirable". In relation to external amenity areas such as gardens and patios, the standard states that it is desirable that external noise does not exceed 50 dB $L_{Aeq,T}$ with an upper guideline value of 55 dB $L_{Aeq,T}$.

This guidance document has been used as reference for the internal standard ambient noise levels to be achieved inside residential properties.

World Health Organisation (WHO) – Guidelines for Community Noise

In 1999, the World Health Organisation (WHO) proposed guidelines for community noise. In this guidance, a L_{Aeq} threshold daytime noise limit of 55 dB is suggested for outdoor living areas in order to protect the majority of people from being adversely impacted. A second daytime limit of 50 dB is also given as a threshold limit for moderate annoyance.

The guidelines suggest that an internal L_{Aeq} not greater than 30 dB for continuous noise is needed to prevent negative effects on sleep. This is equivalent to a façade level of 45 dB L_{Aeq} , assuming open windows or a free- field level of about 42 dB L_{Aeq} . If the noise is not continuous, then the internal level required to prevent negative effects on sleep is a $L_{Amax,fast}$ of 45 dB. Therefore, for sleep disturbance, the continuous level as well as the number of noisy events should be considered.

The Night Noise Guidelines for Europe was published in 2009 on the back of extensive research completed by a WHO working group. Considering the scientific evidence on the threshold of night noise exposure indicated by $L_{night,outside}$ as defined in the Environmental Noise Directive (2002/49/EC), an $L_{night,outside}$ of 40dB should be the target of the night noise guideline (NNG) to protect the public, including the most vulnerable groups such as children, the chronically ill and the elderly. An interim target of 55dB is recommended where the NNG cannot be achieved. These guidelines are applicable to member states of the European region and may be considered as an extension to the previous WHO Guidelines for Community Noise (1999).

In 2012, the WHO published the Methodological Guidance for Estimating the Burden of Disease from Environmental Noise. This document outlines the principles of quantitative assessment of the burden of disease from environmental noise, describes the status in terms of the implementation of the European

Noise Directive and reviews evidence on exposure-response relationships between noise and cardiovascular diseases.

This guidance document has been used as reference for the standard internal/external ambient noise levels to be achieved for residential properties.

UK Department of Transport (Welsh Office) – Calculation of Road Traffic Noise (CRTN)

This Calculation of Road Traffic Noise (CRTN) guidance document outlines the procedures to be applied for calculating noise from road traffic. The document consists of three different sections, covering a general method for predicting noise levels at a distance from a highway, additional procedures for more specific situations and a measurement method for situations where the prediction method is not suitable. The prediction method constitutes the preferred calculation technique but in a small number of cases, traffic conditions may fall outside the scope of the prediction method, and it will then be necessary to resort to measurement. The prediction method has been used in this instance to determine the likely noise impact from traffic flow increases as a result of the proposed development.

This guidance document has been referenced as it provides the prediction methods for determining road traffic noise.

British Standards BS 7445-1:2003 Description and Measurement of Environmental Noise – Part 1: Guide to Quantities and Procedures (BS, 7445-1)

British Standard BS7445 provides the framework within which environmental noise should be quantified. BS 7445: Part 1 provides guidance to quantities and procedures in relation to environmental noise monitoring. BS7445-1 states that sound level meters that are used should conform to specifications of Class or Type 1 (or Class or Type 2 as a minimum) as given in BESN 61672.

The Class of a noise level meter describes its accuracy as defined by the relevant international standards. Sound level meters are defined by International Standards such as IEC 61672-1:2013 (or BS EN61672-1:2003). These standards define a wide range of complex accuracy, performance and calibration criteria that instruments must meet to be fit for purpose. Within the Standard, there are two allowable levels of tolerance and these are known as Class 1 and Class 2. Class 1 is more accurate than Class 2.

These Class 1 and Class 2 tolerances are necessary as a way of dealing with variations in the instruments. The variations are caused by the different electronic components used inside the sound level meters and because of the way different meters have been designed and verified. Even the test equipment used to check the sound level meters during manufacture will introduce some variation.

All equipment shall be calibrated and the configuration for calibration shall be in accordance with the manufacturer's instructions. A comprehensive recalibration at certain time intervals (for example annually) may be prescribed by authorities responsible for the use of the measurement results. A field check shall be made by the user at least before and after each series of measurements, preferably including an acoustic check of the microphone

Meteorological conditions are not prescribed but it is recommended that wind speed should not exceed 5 m/s at height of 3-11m above ground, any temperature inversions near ground, or heavy precipitation.

4.3 Assessment Methodology for Determining Noise Impacts

In keeping with the typical scope of an EIA, the emphasis of this noise and vibration chapter is on the assessment of the potential effects of the proposed development upon the surrounding environment (nearest NSRs) during the construction and operational phases.

As detailed in IEMA Guidelines for Environmental Noise Impact Assessment (2014) the following terminology and definitions are detailed as:

- **Noise impact** -The difference in the acoustic environment before and after the implementation of the proposals (also known as the magnitude of change). This includes any change in noise level and in other characteristics/features, and the relationship of the resulting noise level to any standard benchmarks.
- **Noise effect** -The consequence of the noise impact. This may be in the form of a change in the nuisance caused, a change in the degree of intrusion or disturbance caused by the acoustic environment, or the potential for the change to alter the character of an area such that there is a perceived change in quality of life. This effect will be dependent on the receptor and its sensitivity.
- **Significance of effect** -The evaluation of the noise effect and, particularly if the noise impact assessment is part of a formal EIA, deciding whether or not that impact is significant.

4.3.1 General Significance Criteria

Table 4.7 contains the general significance criteria that have been used for determining the level of impact associated with the proposed development. Different aspects of noise from the proposed development (e.g. construction, plant/equipment, traffic etc.) are assessed using the different methodologies as described in the relevant guidance document. Where feasible, the significance criteria have been used in the various assessments included in this chapter having regard to the sensitivity of receptors.

4.3.2 Criteria to Define Receptor Sensitivity

There is currently no statutory guidance document on the sensitivity of receptors in Ireland. Sensitive receptors, in the context of noise and vibration, are typically residential premises but can also include schools, places of worship and noise sensitive commercial premises.

The sensitivity of receptors to noise and vibration commonly used for noise impact assessments in Ireland is defined in Table 4.7.

Table 4.7: Criteria to Define the Sensitivity of Receptors

| Sensitivity | Description | Examples of Receptors |
|-------------|---|--|
| High | Receptors where occupants or activities are particularly susceptible to noise | Residential Quiet areas for outdoor recreation Religious institutions (e.g. churches and cemeteries) Schools during the daytime |
| Medium | Receptors moderately sensitive to noise, where it may cause some distraction or disturbance | Offices Restaurants Sports grounds where noise is not a normal part of the event(e.g. golf courses and tennis courts) |

| Sensitivity | Description | Examples of Receptors |
|-------------|--|--|
| Low | Receptors where distraction or disturbance from noise will have minimal effect | Commercial buildings not occupied during operational hours Factories and working environments with existing high noise levels Sports grounds and facilities where noise levels are a normal part of activity |

The main receptors which have the potential to be affected by noise and vibration impacts from the proposed development are the residents of dwellings in the vicinity of the site. These properties are deemed to be highly sensitive, and particularly susceptible to disturbance from noise and vibration. Receptors with lower sensitivity to noise include offices in the non-residential buildings.

4.3.3 Construction noise

There are no published statutory guidelines on noise levels from construction sites in Ireland. The NRA Guidelines for the *Treatment of Noise & Vibration on National Road Schemes* (2004) sets out maximum permissible noise levels at dwellings during the construction of road projects and British Standard BS 5228:2009+A1:2014 *Noise and Vibration Control on Construction and Open Sites* provides a method to determine the significance of construction noise levels based on the change in the ambient noise level with construction noise.

Construction noise comprises both plant noise and site traffic noise. The construction noise impact for this assessment is based on the Good Practice Guidance for the Treatment of Noise during the planning of National Road Schemes (2014) and the ‘ABC’ method in BS5228 which are summarised in Table 4.1 and Table 4.2. As both methods refer to residential settings Table 4.8 presents an overall scale of significance for construction noise.

The temporary nature of construction activities allows higher noise threshold limits to apply to construction phase activities compared to operational and maintenance phase activities.

The magnitude of effect for NSRs from construction activities is set out in Table 4.8.

Table 4.8 Noise Magnitude Based on BS 5228 and TII thresholds.

| Receptor sensitivity | Magnitude of Impact | | | |
|----------------------|---------------------|-------------------|---------------|-----------------|
| | < BS 5228 threshold | BS 5228 threshold | TII threshold | > TII threshold |
| High | Low/Medium | High | High | High |
| Medium | Low | Medium | High | High |
| Low | Low | Low | Medium | High |

The significance of the effect is determined as a function of the sensitivity of the receptor and the magnitude of impact it is exposed to. This is set out in Table 4. 9.

Table 4. 9: Matrix for Determining Significance of Effect for Receptors of High Sensitivity

| Magnitude of Impact (beneficial or adverse) | Significance of effect for receptors of high sensitivity |
|---|--|
| Major | Large or very large |
| Moderate | Moderate or large |
| Minor | Slight |
| Negligible | Slight |
| No impact | Neutral |

Effects are significant when identified as likely to have moderate, large or very large effect.

4.3.4 Traffic noise

Calculation of Road Traffic Noise (CRTN) is the standard noise guidance document for predicting traffic noise levels in Ireland from traffic flow information and other relevant road topographical information. While the CRTN provides a methodology for predicting traffic noise levels, it does not provide significance criteria for assessing changes in traffic noise levels.

Good Practice Guidance for the Treatment of Noise during the planning of National Road Schemes (2014) does not provide guidelines for classifying the magnitude of noise impacts from road traffic.

Table 4.10 and Table 4.11 are taken from the UK DMRB and present the magnitude of noise impacts for both short-term and long-term changes in traffic noise levels. The short-term criteria are used for the purposes of assessing the construction phase noise levels and the commencement of operational and maintenance phase in the year of opening, while the long-term criteria have been used for the purposes of assessing long term operational and maintenance phase traffic noise levels 15 years after the year of opening. The magnitude of the impact is indicated in the right-hand column.

Table 4. 10: Classification of Magnitude of Noise Impacts in the Short Term

| Noise Change $L_{A10,18hr}$ | Scale of Change | Magnitude of Impact |
|--------------------------------|-----------------|---------------------|
| 0 | No Change | - |
| 0.1 - 0.9 | Negligible | Negligible |
| 1.0 - 2.9 | Minor | Low |
| 3.0 - 4.9 | Moderate | Medium |
| 5.0 + | Major | High |

Table 4. 11: Classification of Magnitude of Noise Impacts in the Long Term

| Noise Change $L_{A10,18hr}$ | Scale of Change | Magnitude of Impact |
|--------------------------------|-----------------|---------------------|
| 0 | No Change | - |
| 0.1 - 2.9 | Negligible | Negligible |
| 3.0 - 4.9 | Minor | Low |
| 5.0 - 9.9 | Moderate | Medium |
| 10.0 + | Major | High |

4.3.5 Vibration

The thresholds for building damage are higher than threshold for human perception so the significance of vibration levels will be set based on human perception thresholds. In terms of significance criteria, British Standard BS 5228:2009+A1:2014 Part 2 provides guidance on the perception of vibration levels on residents. Table B1 of Annex B provides an outline of vibration levels and associated effects; this is reproduced in Table 4.12 below. An additional column has been added to the Table to link these vibration levels to the equivalent significance criteria.

Table 4.12: Human Perception of Vibration.

| Vibration Level | Effect | Magnitude of Effect |
|-----------------|---|---------------------|
| 0.14 - 0.3 mm/s | Vibration might be just perceptible in the most sensitive situations for most vibration frequencies associated with construction. At lower frequencies, people are less sensitive to vibration. | Negligible |
| 0.3 - 1.0 mm/s | Vibration might be just perceptible in residential environments | Low |
| 1.0 - 10.0 mm/s | It is likely that vibration of this level in residential environments will cause complaint but can be tolerated if prior warning and explanation has been given to residents. | Medium |
| >10 mm/s | Vibration is likely to be intolerable for any more than a very brief exposure to this level. | High |

4.3.6 Determining Significance

The significance of effect is dependent on both the magnitude of impact and the sensitivity of the receptor in question. The magnitude of the impact is outlined in Table 4.9, Table 4.10 and Table 4.11. The sensitivity of receptors is outlined in Table 4.8. Following the identification of receptor importance and magnitude of the effect, it is possible to determine the significance of the impact. The significance of the effect is determined as a function of the sensitivity of the receptor and the magnitude of impact the receptor is exposed to using the matrix presented in Table 4.13.

Table 4. 13: Matrix Used for the Assessment of the Significance of the Effect

| | | Magnitude of impact | | | |
|-------------------------|-------------------------------|-------------------------|-------------------------|-------------------------|--------------------|
| | | Negligible | Low | Medium | High |
| Sensitivity of receptor | Negligible | Imperceptible | Imperceptible or slight | Imperceptible or slight | Slight |
| | Low | Imperceptible or slight | Imperceptible or slight | Slight | Slight or moderate |
| | Medium | Imperceptible or slight | Slight | Moderate | Moderate or major |
| | High / Particularly Sensitive | Slight | Slight or moderate | Moderate or major | Major or Profound |
| | | | | | |

4.4 Baseline Environment

4.4.1 Study Area

The proposed development is located in the central core of Monaghan Town, Co. Monaghan. The site boundary along with a 500m buffer highlighting the noise study area is shown below in Figure 4.1.



Figure 4.1: Location of the Proposed Development

The site is located within the town centre boundary as defined in the Monaghan County Development Plan 2019-2025. The wider context is dominated by town centre uses, including retail, business/commercial, residential, and community/ecclesiastical uses.

The site is located to the southeast of the town core, extending from The Diamond to the northwest, south eastwards along Dublin Street, and is defined to the southeast by the First Presbyterian Church to the south at Old Cross Square. The Shambles River and the European Union House/Credit Union building defines part of the southern boundary along with Castle Road. Monaghan Shopping Centre, built in the 1980's defines the southwest and western boundaries, with the rear of several properties fronting Dawson Street, McElvaney's Pub and Monaghan Courthouse defining the northwest boundaries. St Patrick's Church and Church Square define the northern boundaries.

4.4.2 Baseline Noise Monitoring Survey

The background noise assessment provides quantification and an understanding of the acoustic environment adjacent to and in proximity to the proposed development. A baseline noise monitoring survey consisting of attended noise measurements was conducted within and close to the proposed development site. The noise monitoring locations (NMLs) were chosen to be representative of the nearest noise sensitive receptors within and near the proposed development site. The purpose of the noise monitoring survey was to determine the baseline noise levels at the nearest noise sensitive receptors and assess these levels in accordance with the relevant guidance to determine the following.

- The applicable BS 5228 construction noise threshold limit in accordance with British Standard BS5228, Code of Practice of Noise Control on Construction and Open sites; and
- Evaluate the noise climate in the Noise and Vibration Study Area.

The Noise Monitoring Locations (NML's) and their respective dates of monitoring and equipment used are summarised below in Table 4. 14.

Table 4. 14: Summary of Baseline Noise Monitoring Survey

| Noise Monitoring Location | Description of Noise Monitoring Location | Date | Time | Sound Level Meter |
|---------------------------|--|------------|---------------|-------------------|
| NML 1 | To the northern boundary of the proposed redevelopment site along Dublin Street | 19/05/2021 | 06:00 – 07:00 | Norsonic 140 |
| | | 19/05/2021 | 07:45 – 10:45 | |
| NML 2 | To the east of the proposed redevelopment site at Old Cross Square and Rooskey Vale. | 19/05/2021 | 05:40 – 06:55 | Rion NL-52 |
| | | 19/05/2021 | 11:10 – 14:10 | |
| NML 3 | To the south of the proposed redevelopment site at Castle Road | 26/05/2021 | 05:40 – 06:55 | Rion NL-52 |
| | | 26/05/2021 | 07:10 – 10:10 | |
| NML 4 | To the west of the proposed redevelopment site at Dawson Street. | 26/05/2021 | 06:00 – 07:00 | Norsonic 140 |
| | | 26/05/2021 | 07:00 – 10:00 | |

Measurements were made at a height of 1.2 – 1.5 m above ground level. The weather conditions were in accordance with the requirements of ISO 1996: *Acoustics - Description, Measurement and Assessment of Environmental Noise*.

The following parameters were recorded during each monitoring period:

L_{Aeq} The continuous equivalent A-weighted sound pressure level. This is an ‘average’ of the sound pressure level

L_{Amax} This is the maximum A-weighted sound level measured during the sample period

L_{Amin} This is the minimum A-weighted sound level measured during the sample period

LA10 This is the A-weighted sound level that is exceeded for noise for 10% of the sample period

LA90 This is the A-weighted sound level that is exceeded for 90% of the sample period

The 'A' suffix for the noise parameters denotes the fact that the sound levels have been 'A-weighted' in order to account for the non-linear nature of human hearing. All sound levels in this report are expressed in terms of decibels (dB) relative to 2×10^{-5} Pa.

Results of the baseline noise monitoring survey, as well as a summary of the NMLs and the equipment used, are detailed in EIAR Volume II Appendix 4A Baseline Noise Monitoring Survey.

Photographs showing the noise monitoring equipment in situ at all these locations are attached in EIAR Volume II, Appendix 4A Baseline Noise Monitoring Survey.

The typical measured ambient (L_{Aeq}) noise level has been used as the baseline for the construction noise assessment.

4.4.3 Consultation

A summary of the issues raised during consultation activities undertaken to date specific to noise and vibration are summarised below in Table 4.15, together with how these issues have been considered within this chapter.

Table 4. 15: Consultation Responses

| Date | Consultee and Issue Raised | How and Where Addressed in the EIAR |
|------------|---|---|
| 08/06/2021 | An Bord Pleanála Issue 1 “the environmental impact of the aforementioned phases, including in particular noise and vibration impacts from the demolition works and construction phase impacts in terms of materials storage and containment | Issue 1 is the likely significant effects of noise and vibration on sensitive receptors are detailed in section 4.4: Assessment of significant effects and construction noise mitigations are proposed in section 4.5: Mitigation measures. |
| May 2021 | Liaison with Environmental Health Officer, Monaghan County Council agreeing noise monitoring locations and durations | Summary of noise monitoring completed is detailed in EIAR Volume II – Technical Appendices Appendix 4A Baseline Noise Monitoring Survey. |

4.4.4 Baseline Vibration Monitoring Survey

Baseline vibration monitoring was not undertaken as there are currently no existing vibration sources on proposed development site.

4.5 Impact Assessment

4.5.1 Assessment of Construction Effects

The construction noise assessment has been undertaken primarily as a desk-based assessment. Based on the information presented in Chapter 2 Project Description, the likely significant noise impacts are considered for the construction activities.

During the construction phase, the methods of working will comply with all relevant legislation and best practice in reducing the environmental impacts of the proposed works. By their nature, construction phase impacts will be short-term and localised. These impacts will be reduced as far as practicable through compliance with the mitigation measures identified within this EIAR and the relevant industry standards and guidelines.

A preliminary Construction Environmental Management Plan (pCEMP) has been prepared, which consolidates all the environmental mitigation measures identified within this EIAR. It also includes procedures for monitoring the effectiveness of the environmental protection measures. This will be updated by the Contractor following their appointment, and in advance of the commencement of construction. The preliminary CEMP is provided in EIAR Volume II Appendix 2A Preliminary CEMP (pCEMP).

Construction Programme

It is estimated that the proposed work will take between approximately 24 months to complete on site. Subject to the allocation of funding, land acquisition and the grant of planning approval, it is hoped that construction can commence in early 2024. The following steps are anticipated:

- Pre-Construction Surveys, Japanese Knotweed Treatment
- Demolition & Site Clearance (including remediation of Japanese Knotweed, tree removal, archaeological monitoring, removal of hazardous material, temporary prop works)
- Supporting / Prop structures
- Façade reinstatement & new openings
- Slab / asphalt removal
- Drainage and services installation
- Road/street construction
- Traffic management
- Hard landscaping
- Soft Landscaping, street furniture, ECV
- White lining, signage
- Finishes

Proposed Demolition Areas

Several properties and structures are to be demolished as part of the proposed development as detailed in EIAR Volume III Technical Drawings & Figures, Drawings BU1001 - Demolitions and Removals and SC1001 - Site Clearance for details.

The demolition of buildings and structures, includes:

- street frontage buildings No's 8-11 Dublin Street and associated outbuildings and structures;
- the building to the rear of No. 24 Dublin Street;
- partial removal of the rear section of the Northern Standard building fronting the Lower Courthouse car park;

- storage sheds, walls, and fencing.

Creation of Charles Gavan Duffy Place (GDP) – Demolition of Buildings

A new urban space, comprising a street, junction and extended footpaths to connect Dublin Street through to its backland areas, opening up new areas for development and enhancing the pedestrian linkages throughout this area. This space will act as a key entrance into the new, regenerated urban place to be known as the Dublin Street Quarter.

The new street created might be called Charles Gavan Duffy Place, in celebration of the famous Irish journalist who once resided on Dublin Street. Further information on Charles Gavan Duffy is provided in Chapter 15 and its associated appendices.

This new space will be formed through the demolition of several buildings fronting onto Dublin Street, namely No's 8, 9, 10 and 11 and their associated backland areas. The extent of demolition in this location is identified on Figure 4.2 which is an excerpt from Planning Drawing BU1001 - Demolitions and Removals (EIAR Volume III Technical Drawings and Figures) and Figure 4.3

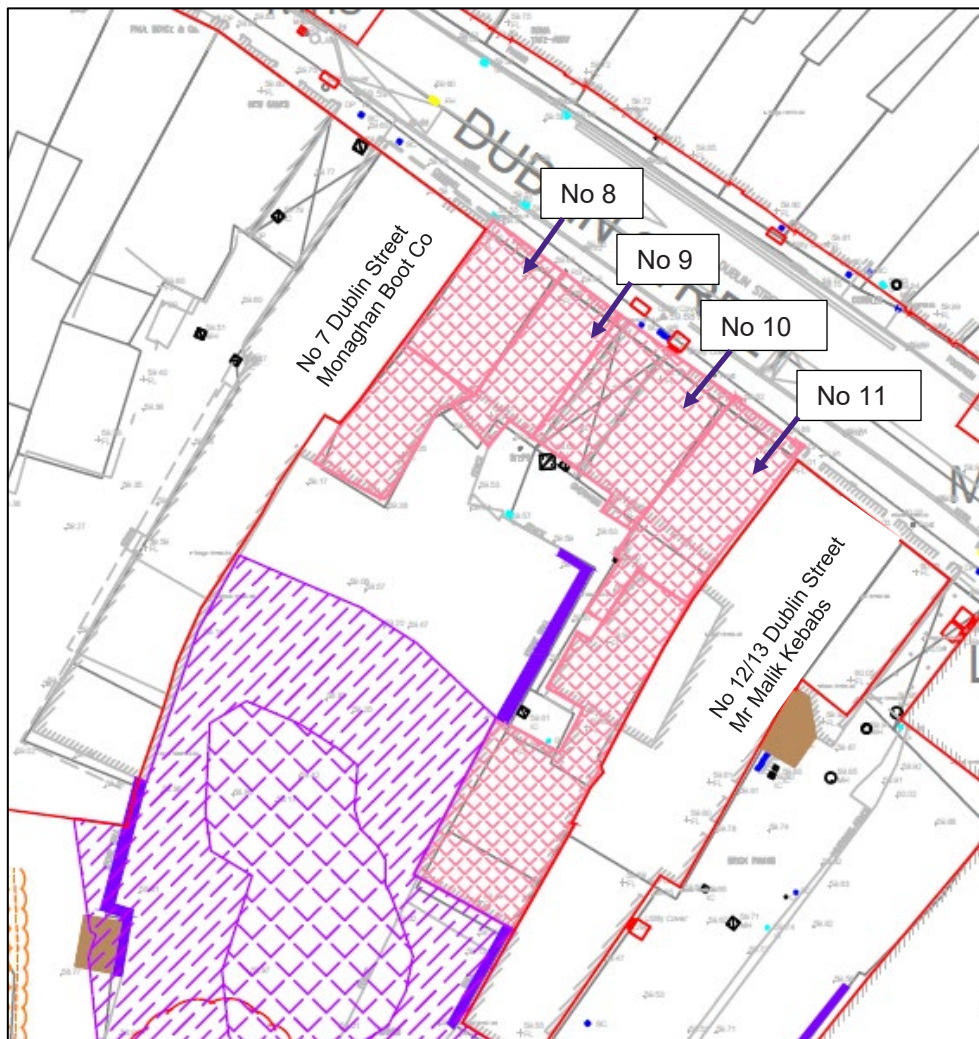


Figure 4.2:: Demolition of properties along Dublin Street



Figure 4.3:: Buildings Proposed for Demolition along Dublin Street

Proposed linkage - Church Walk

A new pedestrian and vehicle linkage is proposed to connect Charles Gavan Duffy Place to the Courthouse car park. The Dublin Street Regeneration Plan 2017 suggests that this might be called Church Walk, in recognition of the views of the spires from St Patricks Church of Ireland and the First Monaghan Presbyterian Church.

This linkage is formed through the clearance of backland areas, and the demolition of a section of the Northern Standard premises which currently fronts onto the Lower Courthouse car park. Figure 4.4 outlines the proposed demolition which includes part of the building and the associated car park.

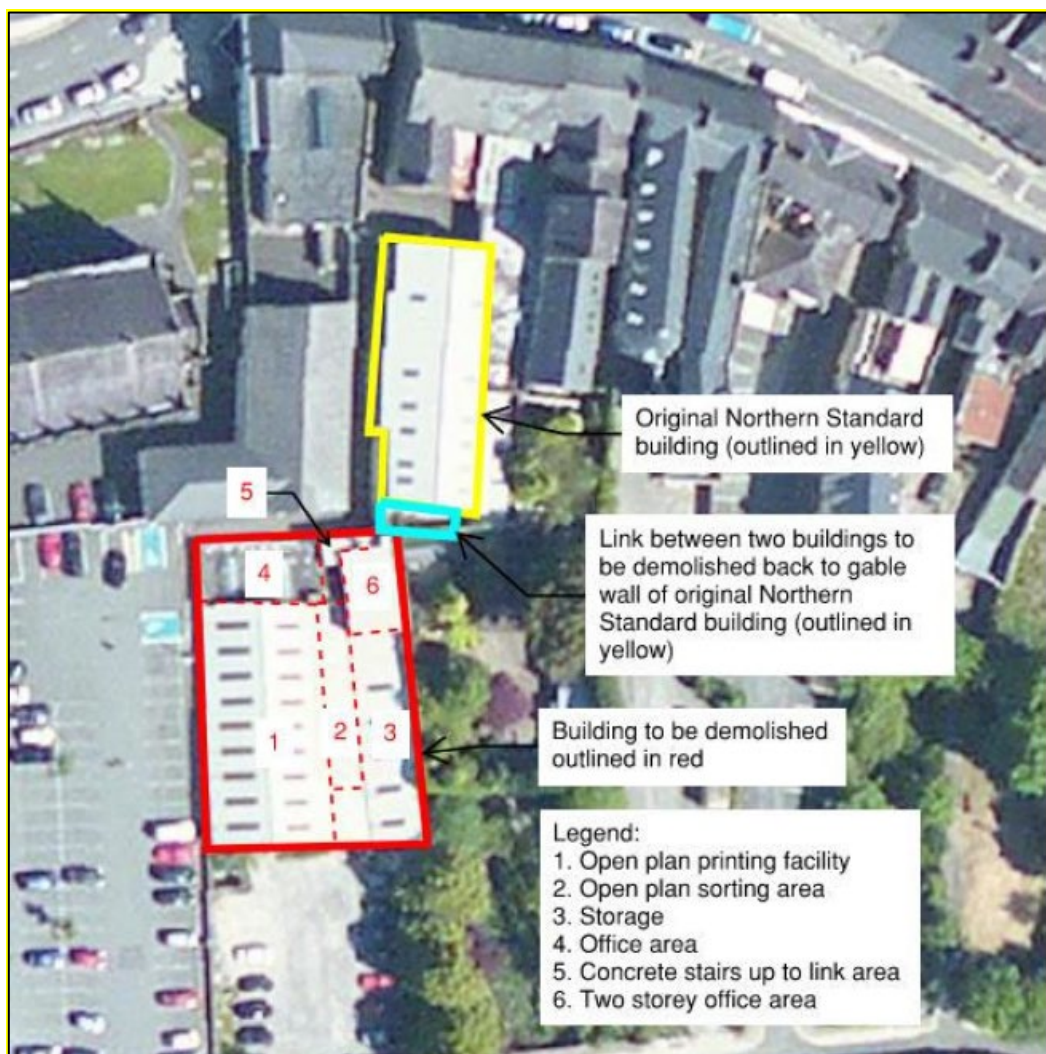


Figure 4.4: Proposed demolition of part of the Northern Standard premises to facilitate Church Walk (aerial image)

Consideration was given to creating a fully shared surface along Church Walk (similar to CGDP) however, given its likely use by larger vehicles and the presence of the loading bay, it was considered that a more formal separation between vehicles and pedestrians would ensure the safety of pedestrians was paramount.

Pedestrian footpaths are provided to connect the CGDP space through to the Courthouse car park, with a continuous surfacing of natural stone paving to enhance legibility and ease of movement for those on foot. Smaller paving unit sizes and dropped kerbs demarcate vehicular access points into private property within the wider area.

The predicted construction noise impacts are assessed in accordance with Table 4.1 BS 5228: Noise and Vibration Control on Construction and Open Sites Noise threshold limits.

The proposed demolition and construction works will consist of construction activities such as ground excavation or clearing of site using heavy machinery such as dozer, excavator or backhoe loader. The area where demolition will occur is to include various existing buildings currently within the proposed development.

It is anticipated that there will be heavy construction plant associated with this proposed development, therefore all construction activities will be subject to the BS5228 noise limits as detailed in Table 4.1. There are residential properties adjacent to and in close proximity to the proposed development site. Most of the closest residential properties are located on first floor level.

Typical noise levels from various construction plant are summarised in Table 4. 16. The plant shown in Table 4. 16 is generally representative of the type of plant that will be in use for the construction phase of the proposed development.

Table 4. 16: Noise Levels for Construction Plant (Ref: BS5228:2009+A1:2014)

| Activity/ Plant | Activity Equivalent Continuous Sound Pressure Level L_{Aeq} at 10m (dB) | Reference from Tables C1 & C2, Annex C, BS5228:2009+A1:2014 |
|---|---|---|
| Site Clearance: Dozer | 79 | (C2, Ref 11) |
| Site Clearance: Tracked excavator | 77 | (C2, Ref 2) |
| Site Clearance: Wheeled backhoe loader | 76 | (C2, Ref 28) |
| Site Clearance: Dump Truck | 79 | (C2, Ref 30) |
| Ground Excavation: Dozer (C2, Ref 12) | 79 | (C2, Ref 14) |
| Ground Excavation: Tracked excavator | 76 | (C2, Ref 15) |
| Ground Excavation: Wheeled loader () | 80 | C2, Ref 27 |
| Demolition: Dump truck | 87 | (C2, Ref 31) |
| Demolition: Breaker mounted on wheeled backhoe | 92 | (C1, Ref 1) |
| Demolition: Tracked excavator (loading dump truck) | 85 | (C1, Ref 10) |
| Road /Street Construction: Vibratory Roller | 75 | (C5, Ref 20) |
| Road /Street Construction: Asphalt Paver (A+ Tipping Lorry) | 75 | (C5, Ref 30) |
| Road Surfacing: Lorry | 80 | (C2, Ref 34) |
| Paving and Public Realm: Ready-mix concrete lorries | 80 | (C4, Ref 20) |
| Paving and Public Realm: Concrete pump (mobile) | 78 | (C3, Ref 25) |
| Paving and Public Realm: Cutters, drills and small tools | 73 | (C4, Ref 95) |

Predicted Impact of Demolition and Construction Noise

The precise construction strategy to be adopted will be a matter for the contractor, but it is likely that demolition and construction noise levels experienced during the demolition and construction phase will be similar to the typical construction noise levels indicated in Table 4. 16 for the various plant.

In order to assess the worst-case construction noise level from the proposed development, the noise level for each of the demolition areas and construction activities detailed in Table 4. 16, at a distance of 10m will be used for the purpose of the demolition and construction noise assessment. This noise level is a combination of all of the activity noise levels specified in Table 4. 16.

The attenuation calculation assumes a direct line of sight from the noise source to the receiver and without a barrier being considered, which is a worst-case scenario.

Table 4. 17 below details predicted worst-case noise levels at varying distances from construction noise source, reflective of existing residential properties adjacent to the proposed development site. Typical noise levels from the various construction plant are obtained from BS 5228:2009+A1:2014 Part 1.

Table 4. 17: Predicted Construction Noise Levels (dB) From Demolition and Construction Activities Due to Increased Distance

| Construction Activity | Distance (m) | | | | |
|-------------------------|--------------|----|----|----|-----|
| | 10 | 20 | 40 | 80 | 160 |
| Clearing Site | 84 | 78 | 72 | 66 | 60 |
| Demolition | 94 | 88 | 82 | 76 | 70 |
| Ground Excavation | 83 | 77 | 71 | 65 | 59 |
| Road Construction | 78 | 72 | 66 | 60 | 54 |
| Road Surfacing | 80 | 74 | 68 | 62 | 56 |
| Paving and Public Realm | 83 | 77 | 71 | 65 | 59 |

Table 4. 17 serves as typical examples of the noise levels predicted at varying distances from the location of the demolition and construction activities throughout the demolition and construction phases.

Distances from the construction phase boundaries for each of the construction activities were measured to each of the construction noise receptors as detailed within EIAR Volume II – Technical Appendices Appendix 4B Construction Noise Assessment (Table 4B.2: Distance from Construction Noise Receptors to Construction Phase Boundaries)

Construction noise predictions were calculated for each construction activity detailed in Table 4. 17 for each construction phase at every construction noise receptor as detailed in EIAR Volume II – Technical Appendices Appendix 4B Construction Noise Assessment (Table 4B.3)

The construction activities of site clearance, ground excavation and paving and public realm were taken from the area of the site boundary, for the calculation of the distance from the construction noise receptors.

The demolition and construction noise predictions detailed within EIAR Volume II – Technical Appendices Appendix 4B Construction Noise Assessment are deemed to be worst case based on the following:

- Full power operation of each demolition and construction activity throughout the daytime period;
- Free field conditions are assumed, and ground effects are ignored;
- Equipment is assumed to be operational at closest point at each construction phase boundary to construction noise receptors (resulting in over-estimation);
- Predictions are based on the noisiest pieces of equipment simultaneously operational; and
- No barrier effects have been applied.

The worst-case predicted construction noise levels have been compared to the guideline construction noise levels included in the NRA Guidelines and the derived threshold noise limits using the ABC Method from British Standard BS5228 as set out in Table 4.3.

EIAR Volume II – Technical Appendices Appendix 4B Construction Noise Assessment. Table 4B.3 illustrates the worst-case predicted noise from construction activities associated with construction of the proposed development. These worst-case predicted noise levels assume a level of simultaneous activity of plant/equipment for each activity close to the NSR. This will not occur in practice but is used to present

potential worst-case noise levels that may occur during the construction phase. The average noise levels from construction activities at the nearest receptor throughout the proposed development construction phase are likely to be significantly lower than the worst-case predicted noise levels.

The impacts are predicted to be moderate or major for brief durations but can be mitigated. The moderate/major impacts arise during clearing site, demolition and ground excavation. The noise level predictions are based on close proximity to receptors which will be a temporary duration with brief impacts.

Noise mitigation measures for construction activities are outlined in Section 4.6.

Increase in Construction Traffic Noise

During the construction phase, there will be an increase in traffic flows for delivery of material and equipment to the site. The changes to traffic flow levels on the local road network, construction phase traffic movements, will be less than 25% on the existing roads at all stages of the construction phase and considerably less than this on all other routes.

The TII guidelines state that it takes a 25% increase or a 20% decrease in traffic flows in order to get a 1 dBA change in traffic noise levels. On this basis, the change in traffic noise levels associated with the construction phase of the proposed development will be significantly less than 1dB(A).

It is generally accepted that it takes an approximate 3 dB(A) increase in noise levels to be perceptible to the average person, the likely effect of traffic noise increases on the local road network will be imperceptible.

Increase in Vibration During Construction Phase

Some construction phase activities associated with the proposed development have the potential to result in vibration impacts at sensitive receptors. Activities included in the proposed construction phase that have the potential to result in vibration impacts include demolition activities.

BS 5228 indicates that construction activities generally only generate vibration impacts when they are located less than 20m from sensitive locations.

The most significant source of vibration will be the hydraulic breakers deployed for the removal of areas of hardstanding and the foundations of the existing structures. The next most significant source will be the excavators used during the excavation, ground works, where the vibration doesn't so much come from the use of the bucket, but from the weight of the excavator itself as it is manoeuvred.

It is not possible to estimate the levels of vibration with any certainty. Instead, it is proposed that limits are placed on the vibration at sensitive buildings (receptors) and therefore vibration levels will need to be monitored during construction. BS 5228-2 states that vibration PPV levels are tolerable within residential properties when they do not exceed 1.0mm/s and prior warning is given.

BS 5228-2:2009 states that, *"It is likely that vibration of this level in residential environments will cause complaint, but can be tolerated if prior warning and explanation has been given to residents."*

The properties that are within 20m of the demolition areas 8-11 Dublin Street site perimeter are namely, residential properties on the opposite side of Dublin Street, and the properties adjacent to the demolition area to the rear of 24 Dublin Street which may experience vibration levels in the region of 1mm/s - 3mm/s. The effects at these receptors have been assessed as Minor Adverse (not significant), local, temporary (short-term), direct and reversible.

Ground vibrations shall be monitored at adjacent buildings during demolition and construction works to ensure that vibration levels do not adversely impact any building or structure located in the vicinity of the demolition areas. It is proposed that vibration monitoring will be conducted at adjacent properties as required using calibrated vibration monitors and geophones and that audible and visual alarm units may be installed to ensure that if vibration levels approach or exceed specified warning and limit values, site personnel will be alerted to cease at the earliest instance and appropriate mitigation measures may then be implemented to minimise the vibrational impacts of protected structures.

4.5.2 Assessment of Operational Effects

Operational Phase of the proposed development includes the potential impacts associated with noise include traffic noise.

There are no operational vibration impacts associated with the proposed development therefore vibration operational impact assessment has not been considered any further.

New Streets, Roads and Public Spaces

A hierarchy of spaces and streets are proposed within the South Dublin Street and Backlands plan area, and minor modifications to the street layout of the adjoining area are proposed to provide new connections to Dublin Street. These will enhance the permeability and accessibility of the area and will provide a legible network of connections and spaces for pedestrian and traffic movements, which will seamlessly integrate into the existing urban fabric and streetscape. Several new streets and spaces are proposed as summarised below:

- Creation of a new urban space, comprising a street, junction and pedestrian space, to connect Dublin Street through to its backland areas. This area might be known as **'Charles Gavan Duffy Place'**.
- A new 'mews' street connecting the proposed Charles Gavan Duffy Place to the Courthouse, to provide a pedestrian and vehicular connection along the east/west axis of the regeneration area. This area might be known as **'Church Walk'**, in recognition of the views towards the spire of the Church of St Patrick.
- The development of new spaces and improved network of routes provides the opportunity to create two large areas of previously developed land, identified for future development.
- Realignment of Castle Road, which connects the upper and lower Courthouse car parks, and provides a direct route onto N54 Macartan (Broad) Road. These realigned routes might be known as **'The Mall'** and **'Farney Road'**.
- Upgrading both Courthouse car parks to improve existing levels, provide new surfaces, improve internal traffic movements and to ensure safe and accessible pedestrian movement routes throughout.
- The provision of high-quality public realm and enhanced connectivity, from Dublin Street into the backlands, to provide network of linked spaces to accommodate and encourage greater pedestrian movement through the area.
- High quality public realm:
 - New pavements, high quality surfaces and kerbing
 - Resurfacing of existing pavements
 - New railings, bollards and pop-up power supply
 - Bicycle parking
 - Street furniture including bins and seats
 - Traffic calming ramps, pedestrian crossings
 - New trees and vegetation
 - Signage

The new roads, streets and spaces have been designed in accordance with the Design Manual for Urban Roads and Streets (DMURS), as directed by TII Publication DN-GEO-03031, using a design speed of 50km/h.

Reconfiguration of the Existing Car Parks

There are 393 car parking spaces currently provided within the application site. These include 240 no. spaces associated with the Lower Courthouse and 153 no. spaces located at the Courthouse. The car parks

consist of a mixture of long and short stay parking with a split of approximately 53% (209) long stay and 47% (184) short stay spaces available.

This proposal includes a reconfiguration of both car parks to accommodate the enhanced alignment of The Mall and Farney Road, and to maximise the area available for walking, cycling and shopping activities. New Parent & Baby Spaces have been identified on the northern boundary of the Lower Courthouse car park. The reconfiguration of spaces has also facilitated a consolidation of the existing disabled bay parking spaces.

There will be a reduction of approximately 57 long stay spaces under the regeneration scheme and it is proposed to develop a new carpark at the Eir site which will provide approximately 90 spaces. Therefore there will be no overall net loss of spaces in Monaghan Town.

As part of their wider car parking strategy, the Council are aiming to provide a new car park to the south of the N54, between Margaret Skinnader Roundabout and the N54 Macartan (Broad) Road / Glen Road / Dawson Street signalised junction. The potential for a new MCC operated car park at this location could be a suitable replacement for the reduction of parking provision within the site, if required.

Changes in Traffic Noise at Existing Receptors

Traffic data was provided in the form of Annual Average Daily Traffic (AADT) for the existing scenario and a series of future scenario years accounting for growth, as found in EIAR Volume II Technical Appendices Appendix 9D Committed & Base Traffic Flows and Appendix 9E Generated & Proposed Traffic Flows.¹

The scenarios considered within the traffic impact assessment, as detailed in Chapter 9 Traffic and Transportation, for the weekday morning and evening peak periods were:

- 2021 Existing Scenario
- 2025 Existing Scenario (Opening Year)
- 2025 Base Scenario (Existing + Committed (Cumulative) Development)
- 2025 Proposed Scenario (Base + Generated)
- 2030 Proposed Scenario (Dublin Street / Charles Gavan Duffy Place junction only); and
- 2040 Proposed Scenario (Dublin Street / Charles Gavan Duffy Pace junction only).

The changes to traffic flow levels on the local road network, construction phase traffic movements, will be less than 25% on the existing roads at all stages of the construction phase and considerably less than this on all other routes.

There is a predicted 12% increase of AADT 18hr on Dublin Street (North of Charles Gavan Duffy Place Access) for year of opening 2025 on comparison of cumulative developments, which are approved developments, with cumulative and proposed development.

The TII guidelines state that it takes a 25% increase or a 20% decrease in traffic flows in order to get a 1 dBA change in traffic noise levels. On this basis, the change in traffic noise levels associated with the operation phase of the proposed development will be significantly less than 1dB(A).

¹ A review of the Monaghan County Council Planning portal was undertaken to determine if there are any other significant generators of traffic within the vicinity of the proposed development site which have received planning approval but are yet to be constructed. It was noted that planning permission was granted for a potential foodstore located at McNally's Car Park site. The traffic flows for this development were extracted from the traffic impact assessment undertaken by TPS Ltd. and added to the network to form the Base (cumulative assessment) scenario.

There is no change on AADT 18 hr at N54 Macartan (Broad) Road (west of Farney Road) for year of opening 2025 on comparison of cumulative developments, which are approved developments, with cumulative and proposed development.

There is reduction of AADT 18 hr at Farney Road (north of Tesco car park) for year of opening 2025 on comparison of cumulative developments, which are approved developments, with cumulative and proposed development.

It is generally accepted that it takes an approximate 3 dB(A) increase in noise levels to be perceptible to the average person, the likely effect of traffic noise increases on the local road network will be imperceptible.

4.5.3 Assessment of Cumulative Effects

This chapter has considered the cumulative effects from the construction and operation noise and vibration from the projects detailed in EIAR Chapter 1 Introduction.

There are no cumulative construction or operational noise and vibration impacts due to the distance to the proposed development. These cumulative projects will have their own sensitive receptors which are not in close proximity to the sensitive receptors, existing and proposed, detailed within this chapter. There are no cumulative construction or operation noise impacts predicted.

4.5.4 Inter-relationships

Noise has the potential to interact with Landscape and Visual Impact Assessment as noise attenuation measures could be visually obtrusive, however, this assessment requires no specific noise attenuation measures that would result in landscape or visual effects.

There is an interaction between noise and traffic through generation of construction and operational stage traffic. The noise assessment takes consideration of the daily trips proposed at both construction and operation stages of the proposed development as detailed within Chapter 9 Traffic and Transportation. Construction noise impacts have been considered on the nearest receptors adjacent to the proposed development as detailed in Chapter 12 Population and Human Health. Overall predictions are that there will be no significant noise impact generated during the construction or operational stages due to traffic generation with appropriate mitigation.

4.6 Mitigation

4.6.1 Demolition and Construction Phase Mitigation

The worst-case predicted noise levels for the various stages of the construction and demolition phase are included in Table 4. 17 and detailed construction noise predictions are detailed within EIAR Volume II – Technical Appendices Appendix 4B Construction Noise Assessment.

These predicted construction noise levels will indicate whether the nearest construction receptors to the proposed development will experience noise levels that are below or above the applicable noise threshold limit as designated by the ABC Method in BS 5228:2009+A1:2014.

BS 5228-1 states that:

“if the site noise level exceeds the appropriate category value, then a potential significant effect is indicated. The assessor then needs to consider other project specific factors, such as the number of receptors affected and the duration and character of the impact, to determine if there is a significant effect.”

While predicted noise levels from the demolition and construction activities are predicted best practice measures will be employed to ensure that construction and demolition phase noise levels are reduced to the lowest possible levels.

As a summary of proposed construction works:

- Construction works will be temporary and limited in duration;
- Construction plant and machinery has been assessed as operating for the full working period of the day, i.e. 100% duty cycle. Due to natural pauses in activity and rest breaks equipment will not be fully operational during the working day;
- Construction works are not proposed to occur during night-time or on Sundays, unless for emergency works. Therefore, there will be no associated construction noise impact during these times at construction noise receptors.

A range of measures should be taken to ensure that the quietest machinery is utilised such as to be sensitive to the residents at the nearest properties.

British Standard BS5228:2009+A1:2014 – Noise and vibration control on construction and open sites outlines a range of measures that can be used to reduce the impact of construction phase noise on the nearest noise sensitive receptors. These measures should be applied by the contractor where appropriate during the construction phase of the proposed development.

BS5228:2009+A1:2014 – Noise and Vibration Control on Construction and Open Sites outlines a range of measures that can be used to reduce the impact of construction phase noise on the nearest noise sensitive receptors. These measures will be required to be utilised by the appointed contractor where appropriate during the construction phase of the proposed development.

Examples of some of the construction best practice measures included in BS5228 are listed below:

- ensuring that mechanical plant and equipment used for the purpose of the works are fitted with effective exhaust silencers and are maintained in good working order;
- careful selection of quiet plant and machinery to undertake the required work where available;
- all major compressors will be ‘sound reduced’ models fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use;
- any ancillary pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers;
- machines in intermittent use will be shut down in the intervening periods between work;
- ancillary plant such as generators, compressors and pumps will be placed behind existing physical barriers, and the direction of noise emissions from plant including exhausts or engines will be placed away from sensitive locations, in order to cause minimum noise disturbance. Where possible, in potentially sensitive areas, temporary construction barriers or enclosures will be utilised around noisy plant and equipment;
- Handling of all materials will take place in a manner which minimises noise emissions;
- Audible warning systems will be switched to the minimum setting required by the Health and Safety Authority (HSA).

Controls to be implemented during demolition activity include:

- Programming of works to make use of existing barriers to noise;
- Retaining outer walls for as long as possible before demolition;
- Switching off plant when not in use;
- Use of temporary acoustic barriers to minimise noise breakout; and
- Using low noise impact methods of bursting and splitting rather percussive breaking during demolition.

In order to minimise the likelihood of complaints, Monaghan County Council and potentially affected residents will be required to be kept informed by the appointed contractor of the works to be carried out and of any proposals for work outside normal hours.

Further controls will be implemented during this demolition activity including:

- Programming of works to avoid simultaneous noisy activities,
- Retaining outer walls as barriers for as long as possible before demolition;
- Switching off plant when not in use;
- Temporary acoustic barriers will be used where warranted for specific activities close to sensitive receptors to minimise noise breakout;
- Using low noise impact methods where possible.

4.6.2 PROPOSED VIBRATION MONITORING PROGRAMME DURING SITE ACTIVITIES

In order to ensure that site demolition / construction activities are conducted to minimise the vibration impacts on the receiving environment, it is proposed that a programme of structural vibration monitoring is implemented during the course of the project works.

It is proposed that vibration monitoring will be conducted at adjacent properties opposite the site boundaries as required using calibrated vibration monitors and geophones and that audible and visual alarm units may be installed to ensure that if vibration levels approach or exceed specified warning and limit values, site personnel will be alerted to cease at the earliest instance and appropriate mitigation measures may then be implemented to minimise the vibrational impacts of protected structures.

Vibration Monitoring Locations

It is proposed that vibration monitoring will be conducted on the closest properties to any particular phase of groundworks which may involve rockbreaking or demolition activities that have the potential to generate high levels of ground vibrations.

The monitoring points chosen for locating the geophone of the vibration measuring instrument will be chosen according to the guidelines in British Standard BS 7385: Evaluation and measurement for vibration in buildings, Part 1 1990 Guide for measurement of vibrations and evaluation of their effects on buildings and Part 2 1993 Guide to damage levels arising from groundborne vibration.

Vibration Monitoring Frequency

Vibration monitoring equipment capable of monitoring on a continuous basis will be installed at locations as described above, throughout the course of the works where particular site activities may cause ground borne vibrations.

4.6.3 Construction Operating Hours

The operating hours will be agreed with the Local Authority prior to the commencement of the proposed works and will be specified in the Construction Environmental Management Plans (CEMP).

It is proposed that the construction hours will be:

- 08:00 to 18:00 Monday to Friday,
- From 08:00 to 13:00 on Saturdays,
- No construction works on Sundays and Bank Holidays.

Construction works outside these hours will be limited to works necessary for health and safety reasons or to protect the environment.

4.6.4 Consultation and Communication

Mitigation in the form of timely and effective stakeholder consultation is outlined within the CEMP. This will ensure that residents are kept informed of on-going and future operations. For example, local residents would be informed by letter drop of proposed works by the appointed contractor, particularly where these are due to occur outside standard working hours. The contractor would be required to communicate a letter which would include details of proposed cause, start dates and duration of works to be carried out.

4.6.5 Operational Traffic Noise

No operational traffic mitigation is proposed.

4.7 Summary of Effects & Conclusion

4.7.1 Construction Phase

Pre-mitigation, the predicted construction noise impacts are anticipated to result in effects ranging from negligible to major at construction noise receptors.

The CEMP will include specific control measures and Section 4.6 sets out the monitoring to be undertaken. Mitigation by careful scheduling of the works, timing of activities and using best practicable methods will be implemented such that no significant effects arise, and levels are as low as possible. Residents will be required to be informed by the appointed contractor of the timing and duration of activities that may produce high noise or vibration. Elevated levels can be tolerated if prior notification and explanation is given.

Temporary slight adverse impacts due to construction noise have been identified at the closest receptors to proposed construction works. No permanent residual noise and vibration impacts are predicted during construction of the proposed development.

No significant residual impacts will arise.

4.7.2 Operational Phase

No residual significant effects are predicted for the operational phase of the proposed development at residential receptors.

Table 4. 18: Summary of Likely Environmental Effects on Noise and Vibration

| Receptor | Sensitivity of receptor | Description of Effect | Duration | Magnitude | Significance | Significant Not significant |
|---------------------------|-------------------------|--------------------------------------|------------|------------------|--------------------------------|--|
| Construction phase | | | | | | |
| Demolition Noise | High | Demolition of buildings | Short Term | Very high / High | Very significant / significant | Not significant BS5228 good practice measures Consultation and communication Construction hours CEMP |
| Construction Noise | High | Construction of proposed development | Short Term | Very high / High | Very significant / significant | Not significant BS5228 good practice measures Consultation and communication Construction hours CEMP |
| Construction Vibration | High | Demolition of buildings | Short term | Low | Not significant | Not significant |
| Operational phase | | | | | | |
| Road realignment | High | Operational road traffic noise | Long term | Low | Not significant | Not significant |

4.8 References

British Standards Institute (2014), BS 5228-1:2009+A1:2014 Code of practice for noise control on construction and open sites. Part 1: Noise

British Standards Institute (2014), BS 5228-2:2009+A1:2014 Code of practice for noise control on construction and open sites. Part 2: Vibration

Department of Transport and Welsh Office (1988), Calculation of Road Traffic Noise

The Highways Agency, Scottish Government, Welsh Assembly Government and the Department for Regional Development Northern Ireland (2011), Design Manual for Roads and Bridges, Volume 11, Section 3, Part 7, HD 213/11 revision 1. Noise

British Standards Institute (2014), BS 4142: Methods for Rating and Assessing Industrial and Commercial Sound

British Standards Institute (2014), BS 8233: Guidance on Sound Insulation and Noise Reduction for Buildings

British Standard Institute British Standard 7445: Description and Measurement of Environmental Noise

World Health Organisation (2000), Guidelines for Community

World Health Organisation (2009), Night Noise Guidelines for Europe

Chapter
05

**Flood Risk and
Drainage**

CHAPTER 5 - FLOOD RISK & DRAINAGE

5.1 Introduction

This Chapter addresses the potential impact of the proposed development on flooding and drainage. It sets out the methodology employed in the assessment, summarises the baseline flood risk as defined through desk-based assessments, and then assesses the potential impact of the development and the residual impact following mitigation.

The Chapter has been prepared by Diane McGinnis. Diane is an Associate Director of RPS' office based in Belfast. Diane has over 20 years' experience of flood risk consultancy in both the public and private sectors. Diane is a Chartered Engineer with both the Institution of Civil Engineers and Engineers Ireland.

This Chapter is supported by EIAR Volume III –Technical Drawings & Figures:

- Figure 5:1: CFRAM Flood Extents;
- Figure 5:2: Flood Zone Map;
- MGT0528-RPS-00-XX-DR-C-DR1001 - Drainage

5.2 Methodology

5.2.1 Stages of Assessment

The assessment will comprise the following stages:

- Consideration of the flood maps available on the floodinfo.ie website to determine the existing flood risk to the site (North Western Neagh Bann CFRAM Study);
- Consideration of the potential interactions between the proposals and the current site conditions, and identification of possible impacts;
- Identification of design solutions to avoid or minimise the potential impacts. Mitigation measures may be proposed during the construction and/ or operational phases of the proposed development;
- Assessment of residual impacts, taking into account of mitigation measures; and
- Evidence of compliance with 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (2009).

5.2.2 Relevant Guidance

The assessment has been prepared in accordance with 'The Planning System and Flood Risk Management Guidelines for Planning Authorities'. These Guidelines introduce comprehensive mechanisms for the incorporation of flood risk identification, assessment and management into the planning process.

5.2.3 Study Area

The study area for this assessment is the full extent of the development site. The site is located to the southeast of the town core, extending from The Diamond to the northwest, south eastwards along Dublin Street, and is defined to the southeast by the First Church Presbyterian Church to the south at Old Cross Square. The Shambles River and the recent development of European Union House/ Credit Union building defines part of the southern boundary along with Castle Road. Monaghan Shopping Centre defines the south west and western boundaries, with the rear of several properties fronting Dawson Street, McElvanneys Pub and Monaghan Courthouse defining the north west boundaries. St Patricks Church and Church Square define the northern boundaries.

5.2.4 Baseline

The Shambles River flows to the south of the site, and a tributary of this flows through the site in a 900mm diameter culvert. Baseline flood conditions will be established based on published flood mapping published by OPW (Floodinfo.ie).

5.2.5 Consultation

No consultation from any statutory body was received which is of relevance to flood risk and drainage.

5.2.6 Assessment Criteria and Assignment of Significance

The descriptions for value (sensitivity) of receptors are shown in Table 5.1. The descriptions for magnitude of impact are shown in Table 5.2.

Table 5.1: Environmental Sensitivity and Descriptions

| Sensitivity Receptor | of Typical Description |
|----------------------|---|
| Very High | Very high importance and rarity, international scale and very limited potential for substitution. |
| High | High importance and rarity, national scale, and limited potential for substitution. |
| Medium | High or medium importance and rarity, regional scale, limited potential for substitution. |
| Low | Low or medium importance and rarity, local scale. |
| Negligible | Very low importance and rarity, local scale. |

Table 5.2: Magnitude of Impact and Typical Descriptions

| Magnitude | Example Descriptor |
|------------|--|
| High | Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse). Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial). |
| Medium | Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (Adverse). Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial). |
| Low | Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (Adverse). Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial). |
| Negligible | Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse). Very minor benefit to or positive addition of one or more characteristics, features or elements (Beneficial). |
| No change | No loss or alteration of characteristics, features or elements; no observable impact in either direction. |

5.2.7 Significance of Effects

The approach to deriving effects significance from receptor value and magnitude of impacts shall be based on Table 5.3.

Table 5.3: Assessment of Significance Matrix

| Sensitivity | Magnitude of Impact | | | |
|-------------|---------------------|---------------------|---------------------|-------------------|
| | Negligible | Low | Medium | High |
| Negligible | Negligible | Negligible or minor | Negligible or minor | Minor |
| Low | Negligible or minor | Negligible or minor | Minor | Minor or moderate |
| Medium | Negligible or minor | Minor | Moderate | Moderate or major |
| High | Minor | Minor or moderate | Moderate or major | Major |

5.3 Baseline Environment

A review of the river flood maps from floodinfo.ie shows that areas of the site are presently estimated to be at risk of flooding from fluvial events with a frequency of 0.1% Annual Exceedance Probability (AEP) and greater, as identified during the North Western Neagh Bann (NWNB) Catchment-based Flood Risk Assessment and Management (CFRAM) Study. The CFRAM flood extents are shown in Figure 5.1 in EIAR Volume III –Technical Drawings & Figures. The areas affected are Castle Road and the adjacent car park.

Historically there have been several flood events recorded in the area, the worst being on 24th October 2011 and the most recent being on 20th February 2022.

Based on the flood maps, the site can be considered to be affected by areas of Flood Zone A (high probability of flooding) and Flood Zone B (moderate probability of flooding) as described in the Planning System and Flood Risk Management Guidelines for Planning Authorities. The flood zone map is shown Figure 5.2 in EIAR Volume III –Technical Drawings & Figures.

The majority of the existing surface water is collected in pipes and discharged to the Shambles River. Some of this water collected is discharged to the river via a stone attenuation area under the main Car Park area.

5.4 Impact Assessment

5.4.1 Assessment of Construction Effects

There are no construction works proposed to the Shambles River or its tributary that runs through the site. During construction it is important that existing culvert through the site is protected from damage. The storm runoff from the development area under construction will be the same as at present, so there will be no change in the volumes of surface runoff at the construction stage. During the construction phase, any runoff from the construction site will be collected and controlled by the Contractor as described in the Construction Environmental Management Plan (CEMP).

5.4.2 Assessment of Operational Effects

5.4.2.1 River flooding

Small areas of the proposed development will be located in identified floodplains and will therefore be at risk of flooding. These areas are currently at risk of flooding. It must be demonstrated whether the existing flood risk will impact on the proposed development, and also whether flood risk elsewhere will increase as

a result of the proposed development. There will be no significant change in ground levels to the areas of the proposed development in the floodplain and therefore these areas will still be available to receive flooding. The new roads, streets and spaces have been designed so that there will be no negative impacts if the area floods. The proposed development will therefore have no increase in fluvial flood risk.

The 'Planning System and Flood Risk Management Guidelines' classify different types of development in terms of their vulnerability class (Table 3.1 of the Guidelines). Amenity open space is classed as a Water-compatible development. Table 3.2 of the Guidelines identifies the type of development that would be appropriate to each flood zone and those that would need a Justification Test. Water-compatible development is appropriate in all flood zones and therefore a Justification Test is not required.

Due to its nature, no flood emergency procedures are proposed specifically for this development. Met Éireann operate a weather warning system. Should an event of the magnitude required to flood the site be forecast, there is sufficient warning time to ensure people and traffic are kept away from the vulnerable town centre areas. Higher ground outside of the floodplain is available to the north, within easy pedestrian access.

RPS are aware that Monaghan County Council may be in the process of developing flood risk management options in relation to the flooding which has occurred a number of times in this area in recent years. Monaghan County Council have instructed RPS to prepare this assessment in the absence of these proposals as the timeline for their completion is unknown.

5.4.2.2 Drainage

It must be demonstrated that adequate measures will be in put in place to effectively mitigate the surface water flood risk to the proposed development, and from the development elsewhere.

The new surface water networks proposed are as illustrated in Volume III Drawing no. DR0001 – Drainage, which will include for future development within the area. The main surface water network will collect the majority of surface runoff within the project site, and discharge to a proprietary attenuation crate system underneath the main car park area before discharging to the Shambles River. Discharge into the river from this network will be limited to a maximum discharge rate of 5l/sec during the 1 in 100 year critical duration storm event using a hydrobrake chamber prior to the outfall.

A smaller surface water network will be provided to collect runoff from sections of the Farney Road and the car park where lower surface elevations prevent this runoff from being connected into the proprietary attenuation crate system. Therefore, a section of the Farney Road and car park will continue to drain unattenuated into the Shambles River.

SuDS drainage systems are provided throughout the project site. Porous paving shall be provided over a substantial area of the car park with runoff infiltrating into the attenuation system and an infiltration trench has been provided on the grass verge on the south side of the car park to provide some long-term storage in the network.

Due to the risk of flooding in the area, non-return flow valves shall be fitted to all network outfall pipes to prevent river flood flows from inundating the networks.

The proposed development will therefore have no increase in surface water flood risk, and in fact it may be possible to decrease the current runoff rate to the river using the proposed attenuation.

5.4.3 Assessment of Cumulative Effects

For flood risk, any cumulative effects would come from developments that impact the floodplains that affect the site. This is likely to be a development that takes place within the floodplain in the vicinity of the proposed works. In order to gain planning permission, all new developments must show that they do not increase flood risk elsewhere to comply with The Planning System and Flood Risk Management Guidelines. RPS have reviewed the applications in Chapter 1 Table 1.2. In all cases either the development is not within a floodplain, or mitigation measures have been included to ensure that the flood risk from the

proposed development is adequately managed so that it does not increase flood risk elsewhere, in compliance with the Guidelines. There will therefore be no cumulative impacts on flood risk as a result of neighbouring developments.

5.4.4 Inter-relationships

This assessment overlaps with Water Quality, which is covered in Chapter 6.

5.5 Mitigation

As no significant effects have been predicted, no mitigation measures are proposed for flood risk.

5.6 Summary of Effects & Conclusion

The significance of the effects of the project on flood risk has been assessed, and a summary of the potential flooding impacts and their significance is shown in Table 5.4.

This assessment has identified all sources of flood risk to and from the proposed development. While there are areas of the site that are affected by river flooding, there will be no change in ground levels to the areas of the proposed development in the floodplain and therefore these areas will still be available to receive flooding. The new roads, streets and spaces have been designed so that there will be no negative impacts if the area floods. The proposed development will therefore have no increase in fluvial flood risk. Due to its nature, no flood emergency procedures are proposed specifically for this development. Higher ground outside of the floodplain is available to the north, within easy pedestrian access. No mitigation measures have been proposed.

All surface water from the proposed development will collect in a new surface water network, which will include for future development within the area. The main surface water network will collect the majority of surface runoff within the project site and discharge to a proprietary attenuation crate system underneath the main car park area before discharging to the Shambles River. Discharge into the river from this network will be limited to a maximum discharge rate of 5l/sec during the 1 in 100 year critical duration storm event using a hydrobrake chamber prior to the outfall. A smaller surface water network will be provided to collect runoff from sections of the Farney Road and the car park where lower surface elevations prevent this runoff from being connected into the proprietary attenuation crate system. Therefore, a section of the Farney Road and car park will continue to drain unattenuated into the Shambles River. SuDS drainage systems are provided throughout the project site. Porous paving shall be provided over a substantial area of the car park with runoff infiltrating into the attenuation system and an infiltration trench has been provided on the grass verge on the south side of the car park to provide some long-term storage in the network. Non-return flow valves shall be fitted to all network outfall pipes to prevent river flood flows from inundating the networks. The proposed development will therefore have no increase in surface water flood risk, and in fact it may be possible to decrease the current runoff rate to the river using the proposed attenuation. No further mitigation measures have been proposed.

The 'Planning System and Flood Risk Management Guidelines' classify different types of development in terms of their vulnerability class. Amenity open space is classed as a Water-compatible development. The Guidelines identifies the type of development that would be appropriate to each flood zone and those that would need a Justification Test. Water-compatible development is appropriate in all flood zones and therefore a Justification Test is not required. The proposed development has therefore been shown to be compliant with the 'Planning System and Flood Risk Management Guidelines'.

Table 5.4: Summary of Likely Environmental Effects on Flood Risk and Drainage

| Receptor | Sensitivity of receptor | Description of Effect | Duration | Magnitude | Significance | Significant / Not significant |
|--------------------------|-------------------------|-----------------------|-----------|-----------|--------------|-------------------------------|
| Operational phase | | | | | | |
| Floodplain | High | Loss of floodplain | Long term | No change | Minor | Not significant |
| Surface runoff | High | Increased runoff | Long term | No change | Minor | Not significant |

5.7 Limitations of the Assessment

There were no limitations that would affect the robustness of the assessment for EIA purposes.

5.8 References

The Planning System and Flood Risk Management Guidelines, DEHLG (2009)

OPW Flood Maps available at <http://www.floodinfo.ie/map/floodmaps/>

Chapter

06

Water Quality

CHAPTER 6 - WATER QUALITY

6.1 Introduction

This Chapter of the EIAR will consider the potential impact of the proposed development on water quality within the study area and the risk to water quality dependent designations in the surrounding environs.

The water quality assessment will be initiated through a desktop study of the existing baseline environment and through consultation with the relevant statutory bodies.

Results will be used to determine the impact of the proposed development on the water environment and any residual impact which may result from the development following the implementation of relevant mitigation.

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This Chapter is supported by EIAR Volume III Technical Drawings & Figures;

- Figure 6.1 Site location in the Context of the WFD Sub Basins;
- Figure 6.2 Water Framework Directive Water Body Status;
- Figure 6.3 Natura 2000 Designated Sites;
- MGT0528-RPS-00-XX-DR-C-DR1001 - Drainage; and
- MGT0528-RPS-00-XX-EW-C-EW0001 – Earthworks.

6.2 Methodology

6.2.1 Relevant Guidance

The Environmental Protection Agency (EPA) consider any development that compromises the achievement of the environmental objectives for a water body, established under the Water Framework Directive (WFD), to represent a significant environmental impact that would require derogation under Article 4(7) of the WFD.

The following relevant legislation and guidance relating to water quality will be considered during the preparation of the water quality chapter of the EIAR;

- the Water Framework Directive (WFD); the WFD is the European legislation which was developed to establish systems to manage Europe's water environment - rivers, lakes, estuaries, coastal waters and groundwater;
- the European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (SI No.272 of 2009), as amended; this transposes the requirement of the WFD into Irish law and provides Environmental Quality Standards (EQSs) for classifying surface water status are established for Ireland for biological quality elements, physico-chemical conditions supporting biological elements including general conditions and specific pollutants, priority substances and priority hazardous substances;
- European Communities (Quality of Shellfish Waters) Regulations 2006 (SI No 268 of 2006).; these regulations classify the standards that are set by the Water Framework Directive for priority substances within the water environment and shellfish waters for Ireland;

Other important pieces of EU and national legislation pertaining to the hydrological environment include:

- S.I. 722 of 2003, European Communities (Water Policy) Regulations, as amended;
- S.I. 350 of 2014, European Union (Water Policy) Regulations 2014;

- The EU Floods Directive 2007/60/EC;
- S.I. 122 of 2010 European Communities (Assessment and Management of Flood Risks) Regulations; and
- S.I. 81 of 1988, European Community Environmental (Quality of Surface Water Intended for Human Consumption) Regulations 1984 as amended.

A fundamental requirement of the WFD and the environmental objectives for a water body is to attain good ecological and chemical water quality status and ensure that any deterioration in the status of waters is prevented. Any new development must ensure that these two fundamental objectives of the Directive are not compromised, nor are there any detrimental impacts to nearby EU designated Natura 200 sites.

6.2.2 Study Area

The proposed development takes place within the *Shambles River 010* and the *Blackwater (Monaghan) 040* is downstream of this. Monaghan Town Groundwater Body underlies the Development area. The water bodies are within the *Blackwater (Monaghan) SC 010* sub catchment and the part of the overall Lough Neagh and Lower Bann catchment. Please refer to EIAR Volume III Technical Drawings & Figures, Figure 6.1 for details on Site location in the context of the Water Framework Directive River Sub Basins.

6.2.3 Baseline

The baseline conditions at the proposed development site will be thoroughly reviewed to identify all potential impacts relating to water quality.

Baseline data will be gathered from existing sources such as water quality monitoring stations included in the Environmental Protection Agency (EPA) WFD monitoring programme, as part of their River Basin Management Plan (RBMP) reporting.

A relevant data request may be submitted to the EPA and the relevant Local Authority if the available data is insufficient.

The current WFD environmental objectives for the water bodies that could potentially be impacted by the proposed development will be collated from the EPA's WFD App to ensure the potential impact from the development does not compromise the achievement of the WFD objectives.

6.2.4 Consultation

To determine the impact of the development upon water quality, a consultation process was undertaken involving existing resources from the relevant competent authorities. Consultation on the surface water impact assessment was undertaken with the following organisations:

- Environmental Protection Agency (EPA) - water quality information available from EPA WFD APP, Water quality reports ;
- The National Parks and Wildlife Service (NPWS) – online resources including mapping and site specific conservation objectives;
- The Office of Public Works (OPW);
- Inland Fisheries Ireland (IFI); and

6.2.5 Assessment Criteria and Assignment of Significance

Baseline water quality within the receiving environment has been established through review of national monitoring data used to establish water quality status in the context of the EU Water Framework Directive (WFD) and supporting environmental standards.

An assessment has then been made of the components of the development that have the potential to have a significant impact on water quality using criteria for rating significance and magnitude adapted from the NRA

(now TII) guidance document “*Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes*”.

The significance of impact on surface water quality likely to occur during the construction and operation phases of the development are determined using a predominantly qualitative methodology. The assessment is a consideration of a combination of receptor sensitivity (Table 6.2) and the potential magnitude of the impact on the water environment (Table 6.3), in order to determine significance (Table 6.4).

The approach to assessing the significance of impacts comprises assigning each impact to one of the four categories of magnitude as outlined in Table 6.3 enables different components to be assessed based upon the same scale.

The significance determination and assessment of the potential likely environmental effects of each component of the project has been made based on the matrix presented in Table 6.4.

The approach to assigning significance of impact relies on reasoned argument, professional judgment and taking on board the advice and views of appropriate organisations. Assigning each impact to one of the five categories of magnitude as list in Table 6.3 enables different topic issues to be placed upon the same scale. Applying the formula, the greater the environmental sensitivity or value of the receptor or resource, and the greater the magnitude of impact, the more significant the impact. The consequences of a highly valued environmental resource suffering a major detrimental impact would be a “Substantial” affect. The typical impact significance categories used in this assessment are presented in Table 6.4.

To conclude the assessment, mitigation measures are proposed to reduce, avoid and prevent these likely significant effects, where appropriate. This enables a “with mitigation” assessment to be made of any residual impact as a result of the construction and operational phases of the project and/or in combination with other existing or approved projects in the vicinity of the development.

Table 6.1: Definitions of Sensitivity or Value

| Sensitivity | Example Descriptor |
|-------------|---|
| Very High | Very high importance and rarity, international scale and very limited potential for substitution. Examples: Water body protected area interests are of international importance and have been designated under the Habitats, Birds, Shellfish, Bathing Water or Freshwater Fish, Drinking Water or Nitrate Directives. High Status Water bodies. |
| High | High importance and rarity, national scale, and limited potential for substitution. Examples: Water body where the current status is good or better and no deterioration is permitted. National designation e.g. Natural Heritage Area (NHA) |
| Medium | High or medium importance and rarity, regional scale, limited potential for substitution. Examples: Moderate Status with an objective of good status by 2015, regionally important resource in terms of aquatic ecology or fisheries interest. |
| Low | Low or medium importance and rarity, local scale. |
| Negligible | Very low importance and rarity, local scale. |

Table 6.2: Definitions of Magnitude

| Magnitude | Descriptor |
|------------|--|
| High | Major alteration to water body status causing deterioration in either the ecological status including supporting elements, i.e., physico-chemical, specific pollutants and hydromorphology, chemical status or protected area status. Severe damage to key water body characteristics, features or elements (Adverse). Large scale or major improvement to water body status, extensive restoration or enhancement of Water body (Beneficial). |
| Medium | Water quality impact but not adversely affecting the integrity or status of the water body, partial loss or damage of certain characteristics or water body attributes (Adverse). Benefit to or addition of key characteristics or features of the water body, improvement in water status (Beneficial). |
| Low | Some measurable change in water quality attributes, minor loss or alteration to one (maybe more) key characteristics (Adverse). Minor benefit to one or more key characteristics, features or elements of the water body (Beneficial). |
| Negligible | Very minor loss to water body characteristics, features or elements (Adverse). Very minor benefit to or positive addition of one or more water body characteristics, features or elements (Beneficial). |
| No change | No loss or alteration to water quality or water body status. |

Table 6.3: Assessment of Significance Matrix

| Sensitivity | Magnitude of Impact | | | | |
|-------------|---------------------|---------------------|---------------------|----------------------|----------------------|
| | No Change | Negligible | Low | Medium | High |
| Negligible | No change | Negligible | Negligible or Minor | Negligible or Minor | Minor |
| Low | No change | Negligible or Minor | Negligible or Minor | Minor | Minor or Moderate |
| Medium | No change | Negligible or Minor | Minor | Moderate | Moderate or Major |
| High | No change | Minor | Minor or Moderate | Moderate or Major | Major or Substantial |
| Very high | No change | Minor | Moderate or Major | Major or Substantial | Substantial |

An assessment of the potential impact on the WFD objectives will be undertaken. The completion of this assessment gathers data from the WFD monitoring programme on the water bodies that could be impacted by the proposed development. The components of the proposed development are assessed with respect to the requirements of the WFD to ascertain if the proposals will have a detrimental impact on the status of water bodies associated with that site. If the proposal could increase the risk of deterioration in status of the water bodies or prevent them from achieving their environmental objectives, then the project is in contravention of

the WFD and would only proceed if a derogation under Article 4(7) of the WFD is justified. The four objectives of the WFD Assessment are:

- Objective 1: To prevent deterioration in the ecological status of the water body.
- Objective 2: To prevent the introduction of impediment to the attainment of Good WFD status for the water body.
- Objective 3: To ensure the attainment of the WFD objectives for the water body are not compromised.
- Objective 4: To ensure the achievement of WFD objectives in other water bodies within the same catchment are not permanently excluded or compromised.

6.3 Baseline Environment

6.3.1 Waterbodies

The baseline conditions at the proposed development site have been thoroughly reviewed to identify all potential impacts relating to water quality.

Baseline data has been gathered from existing sources such as water quality monitoring stations included in the Environmental Protection Agency (EPA) WFD monitoring programme, as part of their River Basin Management Plan (RBMP) reporting.

The current WFD environmental objectives for the water bodies that could potentially be impacted by the proposed development have been collated from the EPA’s WFD App to ensure the potential impact from the development does not compromise the achievement of the WFD objectives.

The most recent available WFD reporting data (2013-2018 iteration) sourced from the EPA WFD Portal is outlined below in Table 6.5.

Table 6.4: Current WFD status for water bodies hydrologically connected to development

| Waterbody Name | Waterbody Code | Waterbody Type | WFD Status | WFD Risk (3 rd Cycle) | Status Driver | High Status Objective (Y/N) |
|---------------------------|--------------------|------------------|------------|----------------------------------|------------------------|-----------------------------|
| Shambles_010 | IE_NB_03S010500 | River Water Body | Poor | At Risk | Invertebrates | N |
| Blackwater (Monaghan)_040 | IE_NB_03B010800 | River Water Body | Moderate | At Risk | Invertebrates and fish | N |
| Cor River | UKGBNI1NB030308245 | River Water Body | Unassigned | At Risk | - | N |

A Programme of Measures (POMs) outlines the steps that will be taken to meet WFD objectives as applicable to each water body. This Programme is contained within an overarching RBMP. These measures will require implementation at strategic level but also at regional and local level through the establishment of Regional Integrated Catchment Management Programmes. Whilst none of the water bodies within the project area have been included amongst those 190 prioritised areas for action in the current RBMP for Ireland 2018 - 2021 (DHPLG, 2018), it is noted that measures required to ensure compliance with existing legislation will be implemented during this river basin management cycle.

Environmental Quality Standards (EQSs) for classifying surface water status are established in the European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (SI No. 272 of 2009), as amended. These regulations set standards for biological quality elements, physico-chemical conditions supporting biological elements (including general conditions and specific pollutants), priority substances and priority hazardous substances.

As shown in Figure 6.4 the ‘ecological status’ of a water body is established according to compliance with the EQSs for biological quality elements, physico-chemical conditions supporting biological elements and relevant pollutants and hydromorphological quality elements. The ‘chemical status’ of a water body is established according to compliance with the EQSs for priority substances and priority hazardous substances.

In addition to achieving good ecological and chemical status, a water body must achieve compliance with standards and objectives specified for protected areas, which include areas designated by the Bathing Water Directive; the Urban Waste Water Treatment Directive; the Shellfish Waters Directive; the Habitats Directive and the Birds Directive. Waters bodies that are compliant with WFD standards, but that contain protected areas that are non-compliant with protected area standards are downgraded to ‘less than good’ status.

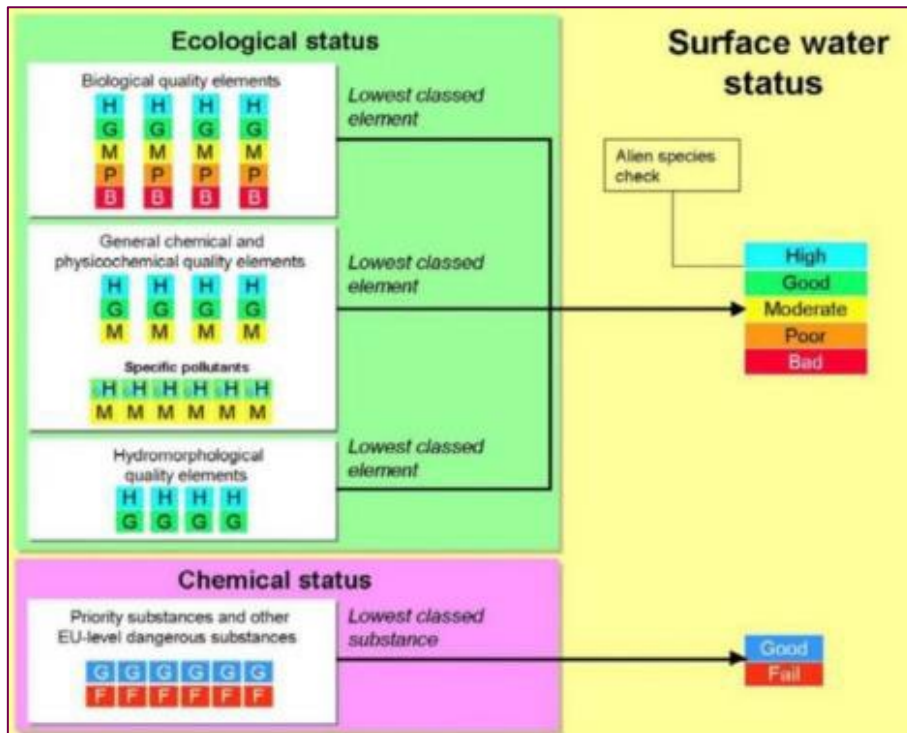


Figure 6.4: Elements of the Water Framework Directive Status

Please refer to EIAR Volume III –Technical Drawings & Figures, Figure 6.2 for details of the current WFD status classification of river water bodies potentially affected by the development, based on monitoring information and data from 2013 to 2018.

The WFD status classification between 2007 and 2018 is shown in Table 6.6 for each of these water bodies. In summary, the Shambles_010 was classified as “Poor” Status, Blackwater (Monaghan)_040 as “Moderate” Status, while the Cor River has not been assigned a status.

Table 6.5: WFD Status (2007-2018)

| WFD Status 2007-2018 | Shambles_010 | Blackwater (Monaghan)_040 | Cor River |
|--|--------------|---------------------------|-------------------|
| | NB_03S01500 | NB_03B010800 | UKGBN1NB030308245 |
| Overall WFD Water Quality Status (2007-2009) | Poor | Poor | Unassigned |
| Overall WFD Water Quality Status (2010-2012 - Interim) | Poor | Poor | Unassigned |
| Overall WFD Water Quality Status (2010-2015) | Poor | Moderate | Unassigned |
| Overall WFD Water Quality Status (2013-2018) | Poor | Moderate | Unassigned |

A further breakdown of the ecological and chemical elements for the 2013-2018 WFD cycles is shown in Table 6.7. The Blackwater (Monaghan)_040 water body is currently at “moderate” Ecological Status but was at “poor” status in the 2010-2012 monitoring cycle. There has therefore been an improvement in biological quality elements from “poor” to “moderate” due to an improvement in invertebrate status. The Cor River has yet been unassigned a status. The Shambles_010 has remained at “poor” status throughout all monitoring cycles, due to unacceptable conditions for invertebrates.

This assessment of likely significant effects on water quality has been undertaken having regard to the necessity to comply with the WFD and in doing so ensuring that the project does not prevent the achievement of the WFD objectives for these water bodies in subsequent RBMP cycles. The water quality assessment therefore demonstrates that the proposed South Dublin Street & Backlands Regeneration Project will not cause deterioration in the status of these affected water bodies or prevent the improvement in status, where necessary, under the environmental objectives of the WFD.

Table 6.6: WFD Status Breakdown (2013-2018)

| WFD Status 2013-2018 | | Shambles_010 | Blackwater (Monaghan)_040 | Cor River | |
|----------------------|---------------------------------|--------------------------|---------------------------|-------------------|---------------|
| | | NB_03S01500 | NB_03B010800 | UKGBN1NB030308245 | |
| Ecological Status | Biological Status | Phytoplankton Status | Not Available | Not Available | Not Available |
| | | Angiosperm Status | Not Available | Not Available | Not Available |
| | | Invertebrate Status | Poor | Moderate | Not Available |
| | | Fish Status | Not Available | Moderate | Not Available |
| | Supporting Chemistry Conditions | General Conditions | Moderate | Pass | Not Available |
| | | Oxygenation Conditions | Pass | Pass | Not Available |
| | | Acidification Conditions | Pass | Pass | Not Available |
| | | Nutrients Condition | Fail | Pass | Not Available |

| <i>WFD Status 2013-2018</i> | | Shambles_010 | Blackwater (Monaghan)_040 | Cor River | |
|---|---|-----------------------------------|---------------------------|-------------------|----------------------|
| | | NB_03S01500 | NB_03B010800 | UKGBN1NB030308245 | |
| Chemical Status | Phosphorus conditions | Moderate | Moderate | Not Available | |
| | Nitrogen Conditions | Moderate | Good | Not Available | |
| | Specific Pollutants | Not Available | Pass | Not Available | |
| | Hydromorphological Quality Element | Hydrology, Morphology, Continuity | Not Available | Not Available | Not Available |
| | Ecological Status (2013 – 2018) | | Poor | Moderate | Not Available |
| | Priority substances and other EU-level dangerous substances | | Not Available | Not Available | Not Available |
| | Chemical Status (2013 – 2018) | | Not Available | Good | Not Available |
| Overall WFD Quality Status 2013 - 2018 | | Poor | Moderate | Unassigned | |

6.3.2 Protected Areas

A significant proportion of the area of the Lough Neagh and Lower Bann catchment is protected under existing EU legislation requiring special protection due to the sensitivity to pollution or particular environmental importance. All of the areas requiring special protection in the Irish River Basin District have been identified by EPA, mapped and listed in a national register of protected areas (required under Article 6 of the WFD Directive). The register of protected areas includes:

- areas designated for the abstraction of water for human consumption (Drinking Water Protected Areas);
- areas designated for the protection of economically significant aquatic species, i.e. Freshwater Fish and Shellfish;
- bodies of water designated as recreational waters, including areas designated as bathing waters;
- nutrient-sensitive areas, including areas identified as Nitrate Vulnerable Zones under the Nitrates Directive or areas designated as sensitive under Urban Waste Water Treatment Directive; as well as
- areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection including relevant Natura 2000 sites (Special Protection Areas (SPAs); and candidate Special Areas of Conservation (cSACs).

These protected areas have their own monitoring and assessment requirements to determine their condition. They are often assessed for additional pollutants or requirements relevant to their designation. Protected areas within the project area include Nutrient Sensitive Waters.

6.3.2.1 Nutrient Sensitive Waters

The Urban Waste Water Treatment Regulations 2001, as amended (which transpose the Urban Wastewater Treatment Directive (91/271/EEC) into Irish law and update the Environmental Protection Agency Act, 1992 (Urban Waste Water Treatment) Regulations 1994, as amended) list nutrient sensitive waters in the Third Schedule. There are no nutrient sensitive areas in the catchment.

6.3.2.2 Natura 2000 Protected Areas

Natura 2000 is a European network of important ecological sites. The EU Habitats Directive (92/43/EEC) places an obligation on Member States of the EU to establish the Natura 2000 network. The network is made

up of Special Protection Areas (SPAs), established under the EU Birds Directive (79/409/EEC), and cSACs, established under the Habitats Directive itself.

Referring to EIAR Volume III –Technical Drawings & Figures, Figure 6.3 the project activities within the development area will not be within a SPA or cSAC. The proposed development will therefore not have a direct impact on any European sites. However, there is the potential for water dependent protected areas downstream of the proposed development to be indirectly affected in the event of water pollution, in the absence of mitigation. It should also be noted that, separately and distinctly, potential effects on “European” sites have been considered extensively in the Appropriate Screening Report submitted with the application for development consent in respect of the project. A Natura Impact Assessment was conducted in correlation with the planning application for this EIAR.

One of the main purposes of the water quality assessment is to ascertain whether the proposed development will cause significant effects on the ecological status of the water bodies affected having regard to the environmental objectives for the water bodies, including conservation objectives for any hydrologically connected SACs or SPAs.

6.3.2.3 Bathing Waters

The Bathing Water Directive (2006/7/EC) came into force in March 2006, and was transposed into Irish law by the Bathing Water Quality Regulations, 2008, as amended. The previous 1976 Directive was repealed with effect from 31 December 2014. Since 2014, the annual water quality classification (rating) of a beach or lake has been based on water quality results covering a four-year period rather than a single previous season’s data. Water quality at beaches and lakes is classified as Excellent; Good, Sufficient or Poor (Table 6.8). Bathing waters are to be classified as “poor” if the microbiological enumerations are worse than the “sufficient quality” values set out in Table 6.8 below.

This approach is common across all EU Member States and there is a requirement to ensure that bathing waters are of ‘Sufficient’ standard or better. Any ‘Poor’ bathing water requires a programme of adequate management measures to be implemented. A minimum of 16 samples are required for formal annual assessment.

Table 6.7: Annual Assessment Criteria for Bathing Waters

| Parameter | Excellent | Good | Sufficient |
|--|-----------|-------|------------|
| E. coli (Freshwater) cfu/100 ml | 500* | 1000* | 900** |
| E. coli (Coastal) cfu/100 ml | 250* | 500* | 500** |
| Intestinal enterococci (freshwater) cfu/100 ml | 200* | 400* | 330** |
| Intestinal enterococci (Coastal) cfu/100 ml | 100* | 200* | 185** |

*based on 95-percentile value

**based on 90-percentile value

There are no designated bathing waters in the catchment.

6.3.3 EPA Water Quality in 2019: An indicators Report

In 2020 the EPA published the Water Quality in 2019, An Indicators Report. The intention of the report is to keep decision makers and the public informed by providing timely, scientifically sound information on water quality using a series of water quality indicators. Of the sixteen indicators three relate to River Water bodies located in close proximity to the project;

- Indicator 1 – River Biological Quality,

- Indicator 2 – Nitrate in Rivers,
- Indicator 3 – Phosphate in Rivers.

In this water quality assessment consideration has been given to potential effects of the development on these environmental indicators.

6.3.3.1 Indicator 1 – River Biological Quality

The assessment of macroinvertebrates is used to assess the general health of rivers and general water quality. The health of macroinvertebrate communities is assessed using the Quality Rating System (Q-value). Rivers can then be classed (high/good/moderate/poor/bad ecological status based on these biological elements and supporting physico chemical and hydromorphological conditions) in respect to macroinvertebrate abundance and diversity. The quality is defined by the lowest class recorded. Table 6.7 above details the class recorded for the Shambles_010 and downstream water bodies.

6.3.3.2 Indicator 2 – Nitrate in Rivers

Nitrate concentration in rivers is a potential human health concern for drinking water and an indication of nutrient enrichment when present in rivers.

The assessment uses the three year average of the concentrations from each site and subsequently classes these amongst six different categories in respect to the outcome. Although there are no environmental quality standards set, average concentrations of less than 4mg/l NO₃ (0.9mg/l N) and 8mg/l NO₃ (1.8mg/l N) are indicative of high and good quality by the EPA respectively. Table 6.9 below displays the levels recorded within the river waterbody sections during 2018-2020.

The Indicator 2 evaluated by the Indicator’s Report shows that 47% of surveyed river sites, nationally, have unsatisfactory concentrations from 2017-2019. It was stated that the 44% of sites recorded increasing trends and only 4% recorded decreasing trends during 2013-2019.

Table 6.8: Summary of Total Oxidised Nitrogen (as N) mg/l concentrations at the river sections during 2018-2020 (Monitoring stations Culvert u/s of N2 Roundabout, Armagh Road and Newmills Br).

| Ortho-Phosphate (as P) mg/l | Shambles_010 | Blackwater (Monaghan)_040 |
|-----------------------------|--------------|---------------------------|
| Min | 0.013 | 0.005 |
| Max | 0.51 | 0.35 |
| Mean | 0.076 | 0.072 |
| 5%ile | 0.017 | 0.015 |
| 95%ile | 0.162 | 0.22 |

6.3.3.3 Indicator 3 – Phosphate in Rivers

Phosphate is essential for plant growth but excessive levels can be detrimental to river ecological health and lead to eutrophication. The primary sources of phosphate in freshwater systems are sewage/industrial discharges and both diffuse or point sources from agricultural land.

The assessment is undertaken by categorising each site into six different quality classes in respect to concentrations recorded over a three year average. Environmental quality standards for phosphate levels in Ireland in accordance with the objectives of the WFD have been established. Average concentrations less than 0.025mg/l P and 0.035mg/l P are considered of high and good quality respectively. Mean concentrations above a concentration of 0.035mg/l, which is required to meet good ecological status, are likely to result in nutrient enrichment in the water bodies. Both water bodies are not achieving the EQS for phosphate based on the mean annual concentrations (Table 6.10). These water bodies would therefore be at risk of failing the WFD

Objectives. Long-term trends nationally from the 2013-2019 average concentrations suggest 26% of sites had increasing concentrations, while only 10% had decreasing concentrations.

Table 6.9: Summary of Ortho-Phosphate (as P) mg/l concentrations*

| Ortho-Phosphate (as P) mg/l | Shambles_010 | Blackwater (Monaghan)_040 |
|-----------------------------|--------------|---------------------------|
| Min | 0.013 | 0.005 |
| Max | 0.51 | 0.35 |
| Mean | 0.076 | 0.072 |
| 5%ile | 0.017 | 0.015 |
| 95%ile | 0.162 | 0.22 |

* at the river water body sections during 2018-2020 (Monitoring stations Culvert u/s of N2 Roundabout, Armagh Road, SHAMBLES - Br at entrance to GAA Grounds, SHAMBLES - Br at Tullyherim, Newmills Br, Upstream of TPEFF2400D0463SW001 and Downstream of TPEFF2400D0463SW001).

6.3.4 Site Characterisation

The Pollutant Impact Potential (PIP) mapping produced by the EPA ranks areas within water bodies from 1 (highest) to 7 (lowest) in respect to the potential impact from pollutants. In terms of PIP, the site was rated a PIP category of 4 for nitrate pollution to groundwater and surface waters. However, the PIP for phosphate to surface waters the site is ranked 2 (second highest).

6.3.5 Summary of Existing Water Quality

A review of available national monitoring information for the water bodies in the immediate vicinity of the application boundary has concluded. The overall WFD Surface Water Quality status between 2013 - 2018 is:

- Shambles_010 – Poor Status
- Blackwater (Monaghan)_040 – Moderate Status
- River Cor – Unassigned Status
- Monaghan Town groundwater body – Good Status

Downstream of the proposed development, there are a number of protected areas under Article 6 of the WFD Directive, although the nearest is over 30 km (Peatlands Pack SAC UK0030236) from the site in Northern Ireland and is not hydrologically linked. The closest protected area hydrologically linked to the proposed site is Lough Neagh and Lough Beg SPA (UK9020091) which is part of the National Site Network of SACs and SPAs in Northern Ireland.

6.4 Impact Assessment

The likelihood of environmental impacts arising due to the proposed development is assessed in relation to the construction and operational phases. The elements of construction and operation and the potential impacts on water quality have been identified for assessment.

The proposed development has the potential to directly impact upon the Shambles_010 water body given the location of the proposed project works. The potential to indirectly impact upon the downstream Blackwater (Monaghan)_040 water body and sensitive areas further downstream has also been considered. The proposed development also overlies the Monaghan Town (IEGBNI_NB_G_012) groundwater body.

The significance of any environmental effect is rated based on the magnitude of the impact and the importance of the attribute as detailed in Section 6.2.5. Based on this criteria the receiving environment is considered to be of medium importance due to the fact that the water bodies are currently not achieving “good” status and it

does not provide a hydrological link to the important downstream protected areas, particularly the Natura 2000 sites.

In summary and for the purposes of this impact assessment the following components of proposed project works have been considered:

- Excavation and demolition works
- Surface Water Drainage and outfalls
- Foul Water

6.4.1 Assessment of Construction Effects

Based on the nature of the components of works proposed for the development temporary impacts on water quality have the potential to occur during the construction phase of the works. The following have been considered in this assessment:

- Increased suspended sediment levels due to the accidental release of sediment to the water column during construction and demolition works.
- Accidental release of highly alkaline contaminants from concrete and cement during the construction of hardstand areas.
- General water quality impacts associated with works machinery, infrastructure and on-land operations including the temporary storage of construction materials, oils, fuels and chemicals; and,

The impacts in relation to the construction of each component of works are assessed in below in sequence.

6.4.1.1 Sediment Loading

The general area for footway, cycleway, vehicle crossover and parking are predominantly to be excavated to a depth of 550mm and 570mm (vehicle cross over and parking). Similarly, in depth, areas to be used for landscaping are to be excavated to approximately 400 mm. Areas to be used as tree pits are to be excavated to a depth of 1.2m approximately. More extensive excavation is planned for an area for future development of approximately 3,757m³ is to be excavated also, the area has a slope profile ranging from 0 – 2.5m in depth. The area for the proposed attenuation and soakway requires excavation to a depth of 2.0m. Please refer to EIAR Volume III –Technical Drawings & Figures, Drawing EW0001 for details on all earthworks.

Suspended sediment, including all soils, sands and rubble is the single main pollutant to the aquatic environment generated at construction sites and largely arises from the erosion of exposed soils and sediments by surface water runoff. Both temporary and permanent impacts on surface waters may occur during construction. Pollution from mobilised suspended solids (silt) is the prime concern. Suspended sediment due to run off from stripped construction areas (including swales), stockpiled earth and the dewatering of swale excavations can have a severe negative impact on water quality. This is particularly true in sloping areas with underlying clay following topsoil stripping. In areas of moderate to high rainfall, the potential problems are clearly exacerbated. If allowed to enter surface watercourses this run off can give rise to high suspended solids and detrimental impacts, in particular to fisheries and aquatic invertebrates which can impact the ecological status of a water body. Suspended solids may have an effect on:

- Sediment movement through rivers and its settlement onto the riverbed causing formerly clean gravels to become clogged with fine sediment.
- The survival of fish eggs in gravel beds or spawning grounds as a result of deoxygenation caused by silt deposition;
- The survival of plants and algae by smothering;
- The survival of young fish and aquatic invertebrates such as mayfly larvae (*Calopteryz* sp.) through gill damage from sediment particles and;
- Amenity value through impaired visual appearance.

Once suspended sediment load enters a river it can result in long-term changes that cause chronic harm. Sediment can cause river hydromorphological changes, which in turn change the dynamics of the river in the future and can negatively impact on the supporting hydromorphological conditions of the water bodies ecological status resulting in an increased risk of deterioration in status.

Both bed and suspended materials, and subsequent changes in channel form associated with changes in sediment supply, may affect benthic invertebrates in many ways at various stages in their life cycle. The direct kill is only the first stage in the damage that silt causes to a benthic invertebrate population. Sediment that infiltrates the river bed decreases oxygen supply in interstitial areas, and destroys habitat for juvenile stages of the many benthic invertebrate life cycles. This can impact on the ecological status of a water body by changing the nature of the invertebrate community to more tolerant species that would not be indicative of the reference conditions expected for an Irish water body typology.

The sediment subsequently provides a medium for macrophyte growth. Macrophytes can smother the river substrate and habitat further, and can trap more sediment which exacerbates the problem in the long term. Silt infiltration of riverbed gravels can also have a negative effect on fish species which can further impact on the biological elements of the WFD ecological status classification and could prevent the achievement of the environmental objectives for the water body.

Given the scale and nature of the works, the magnitude of the impact associated with sediment loading is considered to be *high adverse*. The significance of the environmental effect is therefore *moderate / major* in the absence of mitigation based on the medium sensitivity of the receiving environment.

6.4.1.2 Concrete and Cement Pollution

The construction works associated with the proposed development will involve the use of cement. During the construction phases, there is the potential for accidental spillage of cement materials. This could have a significant adverse impact on water quality and a toxic effect on the biological elements of the water body resulting in a possible further deterioration in the ecological status or compromise the improvement of its ecological status as required by the River Basin Management Plan.

Given the scale and nature of the works, the magnitude of the impact associated with concrete and cement pollution is considered to be *high adverse*. The significance of the environmental effect is therefore *moderate / major* in the absence of mitigation based on the medium sensitivity of the receiving environment.

6.4.1.3 General Construction Works

The proposed demolition and construction works will involve the use of plant and machinery, as well as the associated temporary storage of construction materials, oils, fuels and chemicals. During the demolition and construction phase, there is the potential for accidental spillage or release of construction materials (e.g. diesel, oil, chemicals) which could have a significant adverse impact on water quality and a toxic effect on the biological elements resulting in a possible further deterioration in the ecological status or compromise the improvement in ecological status through the implementation of the programme of measures included in the River Basin Management Plan.

Given the scale and nature of the works, the magnitude of the impact associated with general construction is considered to be *high adverse*. The significance of the environmental effect is therefore *moderate / major* in the absence of mitigation based on the medium sensitivity of the receiving environment.

6.4.2 Assessment of Operational Effects

The operational phase impacts associated with the proposed project represent general water quality issues associated with surface and foul water drainage. General water quality impacts associated with runoff from parking areas and other hard standing areas that will be directed towards storm water network via gullies and channels.

It is therefore imperative to ensure that mitigation proposed during the operational phase of the proposed developments in relation to drainage and flood relief are adhered to. There should be limited direct impact to

Shambles_010 water body itself that would result in significant changes to the hydromorphological regime of the river and there will be a beneficial impact associated with the operational phase through the drainage improvements and therefore water quality.

6.4.2.1 Storm water Run-off Contamination

The operational phase will involve the use of vehicles moving within and around the site. During the operational phase, there is potential for fuel or oil spillages and contaminants from vehicle engines. Run-off from these parking areas and roadways may be impacted with residual hydrocarbon contaminants from fuel emission and tyres, sediment and trace contaminants like metals and organics and therefore represent a potential source of contamination that could have a pathway to surface waters through the storm water drainage system. The nature of these contaminants could have a toxic effect on the biology of the receiving waters affecting the ecological status and chemical status of the water body and thereby potentially impacting on the ability of the water body to achieve its environmental objectives and downstream management objectives for the National Site Network sites in Northern Ireland, i.e. Lough Neagh and Lough Beg SPA (UK9020091).

Given the scale and nature of the proposed works, the magnitude of the impact associated with surface run-off contamination is considered to be *high adverse*. The significance of the environmental effect is therefore *moderate / major* in the absence of mitigation based on the medium sensitivity of the receiving environment.

6.4.2.2 Foul Sewerage

Inadequate or inappropriate urban wastewater infrastructure can result in significant pressures to surface water bodies particularly where misconnections (piping of sewerage directly to a storm water network or surface water body), can result in significant impacts to the biology and chemistry of the aquatic environment. It is also important to ensure the existing sewer network has the capacity to accept the additional hydraulic and pollutant loading from the proposed development and that adequate treatment is provided at the wastewater treatment system to minimise impacts on the receiving environment and downstream sensitive areas, particularly given nutrient pressures in the receiving water bodies is the cause of the less than good ecological status.

Given the scale and nature of the work, the magnitude of the impact associated with inadequate or inappropriate foul water collection and treatment is considered to be *high adverse*. The significance of the environmental effect is therefore *moderate / major* in the absence of mitigation based on the moderate sensitivity of the receiving environment.

6.4.3 Assessment of Cumulative Effects

The proposed development focuses on enhancing and improving the town structure and urban realm. The mitigation provided in this chapter will ensure that any negative impact to water quality is not significant, alone or in-combination with cumulative projects listed in Chapter 1, Section 1.4.2 Projects to be Assessed for Cumulative Impacts. Therefore, the proposed development will not contribute, directly or cumulatively to a significant deterioration in water quality.

6.4.4 Interactions

The water environment and impact on water quality has the potential to impact on water dependent habitats and species in the water bodies affected and therefore there is a strong interaction with biodiversity (Chapter 8). The protection of the water environment will help to ensure that biodiversity is not significantly impacted by the implementation of the proposed development.

Geology and soils also have a strong interaction with water quality. The interaction of surface and sub surface water means it is important in the generation of run-off and the mitigation of same. Chapter 7 Soils, Geology and Contaminated Land notes that no significant pollutant linkages are considered to be present within the study area and that impact to groundwater is considered to be Neutral.

Furthermore, in Chapter 5 Flood Risk and Drainage has the potential to impact on water quality. The chapter concluded that the proposed development would have no increase in surface water flood risk with minor significant environmental effects anticipated.

6.5 Mitigation

6.5.1 General

In the absence of mitigation, the construction of some elements of the project has the potential to have moderate / major adverse impacts on the aquatic environment.

Similarly, with no mitigation the proposed project has the potential to have *moderate / major adverse* impacts on the aquatic environment during the operational stage should a significant flood event occur.

With these considerations in mind, detailed mitigation has been incorporated to minimise its potential impact on the water environment. The risk to water quality posed by this proposed project during construction and operation will be dependent on the quality of drainage and treatment of site run-off before discharge to the river. Therefore, it is pertinent to ensure that procedures are put in place for the control and minimisation of surface water and suspended solids movement. It is also important that measures are taken to ensure existing drainage pathways are kept free from construction sediment and pollutants through the use of effective barriers to pollutant export and best practice techniques to control these pressures at source.

Section 6.5.2 and Section 6.5.3 details the mitigation measures that will be employed on site during the proposed developments construction and operational phases.

6.5.2 Construction Phase Mitigation Measures

6.5.2.1 Construction Phase Best Practice Measures

Mitigation measures will be implemented by the relevant contractors who will construct the proposed regeneration project and proposed future developments within the designated development sites in accordance with the requirements listed within a Construction Management Plan and Construction Environmental Management Plan which will be submitted as part of the individual planning applications for the future developments. Furthermore, once appointed, the contractors will submit a detailed construction management plan based on the requirements of these submitted planning documents for approval by the Planning Authority. The mitigation measures implemented by the contractor will refer to the construction management procedures for best practice regarding the following recognised international guidelines:

- Good practice guidelines on the control of water pollution from construction sites developed by the Construction Industry Research and Information Association (CIRIA, 2001);
- Good practice guidelines from CIRIA's guidance document (C768 – Guidance on the Construction of SuDS) (2017).

6.5.2.2 Suspended Sediment and Sedimentation

Preventing run-off is an effective method of preventing sediment pollution in the water environment. Therefore, adoption of appropriate erosion and sediment controls to manage run-off during construction is essential to prevent sediment pollution.

Mitigation measures to address the potential impact from suspended solids will be carried out in accordance with a site-specific CEMP. The measures will be employed prior to the commencement and during construction of the proposed development and will include such measures as:

- Drainage and measures to control run-off will be employed to manage sediments prior to any works to be undertaken at the site, i.e., arrangements for the treatment of dirty groundwater ingress from any excavations will be in place in advance of the dewatering to ensure it can be adequately managed on site.

- Throughout the proposed works, all surface water (water from excavations etc.) will be pumped or directed to suitably size tanks or settlement lagoons/basins which will provide primary and secondary settlement. Discharge of treated water will be to a location agreed with the Monaghan County Council. Visual checks of the pumping and settlement system will be carried out on a routine basis.
- Stockpiling and storage areas to be located away from open drains, waterbodies and any other critical flow pathways to the river.
- Excavation works will be carried out during dry periods, where possible, to limit sediment run-off.
- Installation of silt trenches adjacent to water courses on site to provide a barrier to surface run-off and to prevent sediment entering the aquatic environment.
- Minimising exposed surfaces and employing silt fencing in areas of temporary topsoil stockpiling will limit the potential for excess sediment movement within the site at source.

The incorporation of these mitigation measures during the construction phase of the proposed development means the potential magnitude of the impact to receiving water environment will be reduced to *low adverse* thus reducing the significance of the environmental effect to *negligible*, based on the moderate sensitivity of the receiving environment.

6.5.2.3 Concrete and Cement Pollution

The impacts in relation to cement and concrete for the development are, for the most part (but not limited to) the installation of the concrete areas (to be poured in-situ), construction works of buildings and demolition works.

The principal risks are:

- The use of concrete in close proximity to water bodies requires a great deal of care. Fresh concrete and cement are very alkaline and corrosive and can cause serious pollution in water bodies. It is essential to ensure that the use of wet concrete and cement in or close to any water course is carefully controlled so as to minimise the risk of any material entering the water, particularly from shuttered structures or the washing of equipment.
- There will be no onsite batching of concrete and concrete works will involve concrete deliveries to site with adequate road sweeping facilities provided as required to manage road debris and prevent run-off.
- A concrete washdown area will be provided on site for trucks to use after delivery of concrete. This area will be adequately bunded to mitigate the risk of contaminated runoff discharge to the Shambles_010 water body. Concrete trucks are to be washed down within the concrete truck washdown area after delivery of concrete, prior to exiting the site. Washdown runoff will be appropriately treated prior to discharge.

In circumstances where the mitigation measures are employed during construction operations of the proposed development, the potential impact to receiving water environment will be reduced to *low adverse* thus reducing the significance of environmental effect will be reduced to *negligible*.

6.5.2.4 General Construction Works

The risk of water quality impacts associated with works machinery, infrastructure and on-land operations (for example leakages/spillages of fuels, oils, other chemicals and wastewater) will be controlled through good site management and the adherence to codes and practices which limit the risk to within acceptable levels. The following measures will be implemented during construction of the proposed development:

- A works specific Construction Environmental Management Plan (CEMP) has been prepared as part of the planning submission and will be developed and implemented by the contractor and will include detail in respect of every aspect of the works in order to minimise potential impacts and maximise potential benefits associated with the works;
- Management and auditing procedures, including tool box talks to personnel, will be put in place to ensure that any works associated with the proposed development which have the potential to impact on the aquatic

environment are being carried out in accordance with the contactors environmental controls, which will be consistent with an approved CEMP and any relevant planning conditions;

- Existing and proposed surface water drainage and discharge points will be mapped on the Drainage layout. These will be noted on construction site plans and protected accordingly to ensure water bodies are not impacted from sediment and other pollutants using measures to intercept the pathway for such pollutants;
- The use of oils and chemicals on-site requires significant care and attention. The following procedures will be followed to reduce the potential risk from oils and chemicals:
 - Fuel, oil and chemical storage will be sited on an impervious base within a bund and secured. The base and bund walls must be impermeable to the material stored and of adequate capacity.
 - In order to provide fuel to the relevant items of plant on site, a certified double skinned metal fuel tank with integrated pump, delivery hose, meter, filter and locking mechanism will be situated in this secure bunded area on the construction site. This tank will be certified for lifting when full.
 - Sand piles and emergency clean up spill kits will be readily available in the event of a fuel spill. A hazardous bin will also be available to contain any spent sand or soak pads.
 - New metal jerry cans with proper pouring nozzles will be used to move fuel around the site for the purposes of refuelling items of small plant on site. Metal jerry cans and any other items of fuel containers will be stored in certified metal bunded cabinets.
 - Drip trays will be used under items of small plant at all times. Any waste oils etc. contained in the drip trays or the bunded area will be emptied into a waste oil drum, which will be stored within the bund.
 - Any gas bottles will be stored in a caged area at a secure location on the site. All will be properly secured at point of work.
 - Contingency Planning: A project specific Pollution Incident Response Plan will be prepared by the contractor and will refer to PPG 21 Pollution Incident Response Planning. The contractor's Environmental Manager will be notified in a timely manner of all incidents where there has been a breach in agreed environmental management procedures. Suitable training will be provided by the contractor to relevant personnel detailed within the Pollution Incident Response Plan to ensure that appropriate and timely actions is taken.

Where the mitigation measures listed above are employed, the potential impact to receiving water environment will be reduced to *low adverse* thus reducing the significance of environmental effect to *negligible*.

6.5.3 Operational Phase Mitigation Measures

6.5.3.1 Storm Water Run-off

During the operational phase of the proposed development, there is potential for storm water run-off to be impacted by pollutants arising within the car parking areas and roadways. This runoff has the potential to provide pathways for a wide range of contaminants arising from general operations to the aquatic environment. The main potential pollutants from surface water drainage or direct run-off are sediment, hydrocarbons, and trace contaminants including metals and organics.

A new surface water storm sewer system will discharge to Wavin AquaCell attenuation units before entering a petrol interceptor chamber and a hydrobrake chamber which will discharge to the Shambles River at a rate of between 5-10 l/sec depending on the depth of cover determined once detailed drainage design has been carried out. These attenuation units will be constructed underneath the main car park area and coupled with the petrol interceptor and hydrobrake will ensure the discharge from this storm sewer network will not impact on water quality or result in scour or erosion of the Shambles River.

The majority of the Farney Road will continue to drain into the existing storm sewer network which discharges into the Shambles_010 river water body. Attenuation capacity and cover levels, whilst maintaining adequate

gradients in the existing storm sewer, prevents this area from draining to the attenuation units before being discharged to the water body. To reduce the environmental impact of this, a petrol interceptor will be installed at the outlet of this network to reduce pollutants entering the Shambles_010.

The main Car Park area will drain to a mixture of attenuation units and soakaway areas via filter drains to minimise environmental impact. New gullies will be installed to reduce the risk of water ponding during heavy rainfall events. These will be positioned based on gradients of the proposed roads and footpaths as part of the detailed design stage of this project.

Where the mitigation measures listed above are employed, the potential impact to the receiving water environment will be reduced to *low adverse* thus reducing the significance of environmental effect will be reduced to *negligible*.

6.5.3.2 Foul Sewerage

Both the surface water and foul system are to be entirely separate systems. Please refer to EIAR Volume III Technical Drawings & Figures, Drawing DR1001 for details of a new proposed foul water sewer network to service the proposed new future development sites. Foul water will be separated from storm water and discharged into an existing foul sewer network at N54 Macartan (Broad) Road. The foul water will then be treated at Monaghan WWTP prior to discharge to the Shambles River. Consultation with Irish Water will be undertaken to ensure the sewer and WWTP have capacity to accept any additional hydraulic and organic loading.

Where the mitigation measures listed above are employed, the potential impact to the receiving water environment will be reduced to *low adverse* thus reducing the significance of environmental effect will be reduced to *negligible*.

6.6 Summary of Effects & Conclusion

Provided the appropriate mitigation measures are fully implemented during the construction and operational phases of the proposed development as outlined in the previous section, the impact of the project on the water quality in the area will be negligible as indicated in Table 6.11.

Accordingly, the proposed development will not have a significant effect on the water quality of the receiving waters.

It can therefore be concluded that the proposed works are compliant with the requirements and environmental objectives of the EU Water Framework Directive and the other relevant water quality objectives for these water bodies.

Baseline water quality within the receiving environment was established through review of national monitoring data used to establish water quality status in the context of the EU Water Framework Directive (WFD) and supporting environmental standards.

Using baseline water quality data, an assessment of the proposed development the South Dublin Street & Backlands Regeneration Project was conducted to determine the likelihood of significant impacts on water quality using the criteria for rating significance and magnitude as set out in the National Roads Authority (NRA) publication “*Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes*” (NRA, 2008) and appropriate mitigation measures to reduce impacts is proposed, where necessary.

Where the appropriate mitigations measures are fully implemented during the construction and operational phases of the proposed development, the impact on the water quality in the area will be *negligible*. The proposed development of this site is therefore not expected to have a significant effect on the water quality of the receiving waters either directly, indirectly or cumulatively.

It can therefore be concluded that the proposed project works are compliant with the requirements and environmental objectives of the EU Water Framework Directive and the other relevant water quality objectives for these water bodies.

Table 6.10: Summary of Likely Environmental Effects on Water Quality

| Receptor | Sensitivity of receptor | Description of Effect | Duration | Magnitude | Significance | Significant / Not significant |
|--|-------------------------|---|------------|-------------|-------------------|-------------------------------|
| Construction phase | | | | | | |
| Suspended sediments / sedimentation | Medium | Pressure on water quality and aquatic species | Short term | Low adverse | Negligible /minor | Not significant |
| Concrete and cement pollution | Medium | Pressure on water quality and aquatic species | Short term | Low adverse | Negligible /minor | Not significant |
| Impacts associated with general construction works | Medium | Pressure on water quality and aquatic species | Short term | Low adverse | Negligible /minor | Not significant |
| Operational phase | | | | | | |
| Storm Water Run-off | Medium | Pressure on water quality and aquatic species | Short term | Low adverse | Negligible /minor | Not significant |
| Foul Sewage | Medium | Pressure on water quality and aquatic species | Short term | Low adverse | Negligible /minor | Not significant |

Chapter
07

**Soils,
Geology and
Contaminated
Land**

CHAPTER 7 - SOILS, GEOLOGY AND CONTAMINATED LAND

7.1 Introduction

The Chapter provides an assessment of the effects of the existing ground conditions on the proposed development and addresses the potential effects of the proposed development on the soils, geology and hydrogeology of the site and surrounding areas. Where potential adverse impacts are identified, the assessment identifies mitigation measures that will be implemented to prevent, reduce or offset potential adverse effects, or enhance potential beneficial effects where possible.

This Chapter is supported EIAR Volume II Technical Appendices by;

- Appendix 7A Monaghan Public Realm Preliminary Risk Assessment Final March 2021; and
- Appendix 7B IGSL Ground Investigation Factual Report.

7.1.1 Relevant Guidance

The Preliminary Risk Assessment (PRA) has been undertaken with reference to a number of guidance documents, which deal with the investigation and management of risk associated with contaminated land. The Preliminary Risk Assessment was prepared utilising guidance provided by the UK Environment Agency (EA). The UK technical guidance for assessing and managing risks from contaminated land is detailed in 'Land Contamination Risk Management' (LCRM) - How to assess and manage the risks from land contamination, October 2020'. This guidance is accepted by the Environmental Protection Agency (EPA) (in the absence of Republic of Ireland Government guidance).

The PRA has been prepared in accordance with the following:

- Land contamination risk management (LCRM) - How to assess and manage the risks from land contamination. Environment Agency, October 2020.
- Redeveloping Land Affected by Contamination – A developers Guide to Planning Considerations and Environmental Responsibilities. DAERA, April 2019.
- Underpinning the guidance within LCRM 2020 is a source-pathway-receptor methodology, which is used to identify Significant Pollutant Linkages (SPLs).

The following definitions apply:-

Source: a contaminant or pollutant that is in, on or under the land and that has the potential to cause harm or pollution;

Pathway: a route by which a receptor is or could be affected by a contaminant

Receptor: something that could be adversely affected by a contaminant, for example a person, controlled waters, an organism, an ecosystem, or Part 2A receptors such as buildings, crops or animals

An important thread throughout the overall process of risk assessment is the need to formulate and develop a conceptual model for the site, which supports the identification and assessment of pollutant linkages. Development of the conceptual model forms the main part of the preliminary risk assessment, and the model is subsequently refined or revised as more information and understanding is obtained through the risk assessment process. A risk is present only when a source-pathway-receptor linkage is present and active. Without a pollutant linkage, there is not a risk, even if a contaminant is present.

The Environmental Impact Assessment (EIA) will be undertaken in accordance with the requirements of the following documents:

- Directive 2011/92/EU and its amendment in 2014 by Directive 2014/52/EU;

- EPA Publication, ‘Guidelines on the Information to be Contained in Environmental Impact Assessment Reports’, Environmental Protection Agency, Draft, May 2022;
- ‘The Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment’, Planning and Local Government, August 2018;
- Institute for Geologists Ireland (IGI) Guidance for the preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements, April 2013;
- ‘Geology in Environmental Impact Statements’, published by The Institute of Geologists of Ireland in September 2002, has been consulted. This document outlines the main geological issues that should be considered when undertaking an EIA;
- The National Roads Authority, Ireland guidelines; ‘Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes’, published in 2008. These guidelines aim to provide guidance on the assessment of geological, hydrological and hydrogeological impacts through the EIA process.

7.1.2 Study Area

The proposed development is located to the southeast of the Monaghan town core, extending from The Diamond to the northwest, south eastwards along Dublin Street, and is defined to the southeast by the Presbyterian Church to the south at Old Cross Square. The proposed development area is defined by the terraces of dwellings to Dublin Street to the north east, and the long rear gardens to the south.

7.1.3 Significance of Effects

Effects of the proposed development on soils, geology and hydrogeology receptors have been assessed taking into account sensitivity of the receptor and magnitude of the effect. The sensitivity of the receptors is determined according to the methodology shown in Table 7.1

Table 7.1: Sensitivity of Receptor

| Sensitivity | Criteria | Typical Examples |
|-------------|---|--|
| Very high | High importance and rarity on regional or national scale and very limited potential for substitution. | Geology: World Heritage Sites or site protected under EU wildlife legislation (SAC, SPA, SSSI, Ramsar site) or geological features that are rare on a regional or national scale. |
| High | High importance and rarity on local scale. | Geology: Regionally Important Geological Sites. Soils: Well drained and/or high fertility soils. Groundwater: Regionally important potable water source supplying >2,500 homes, groundwater vulnerability is classified as high; principal aquifer providing a regionally or locally important resource or supporting site protected under wildlife legislation. Future site users: Sensitive land uses proposed such as residential housing with gardens, allotments, schools. Built Environment: Sites of international Importance, World Heritage Sites, Listed Buildings, Scheduled Monuments. |
| Medium | Attribute has a medium quality and rarity on local scale. | Geology: Regionally Important Geological Sites. Soils: Moderately drained and/or moderate fertility soils. |

| Sensitivity | Criteria | Typical Examples |
|-------------|--|--|
| | | <p>Groundwater: Local potable water source supplying >50 homes, moderate classification of groundwater vulnerability; secondary aquifer providing water for agricultural or industrial use with limited connection to surface water.</p> <p>Future site users: Moderately sensitive land uses such as residential housing without gardens, commercial developments and open spaces.</p> <p>Built Environment: Sites with local interest for education or cultural appreciation.</p> |
| Low | Attribute has a low quality and rarity on local scale. | <p>Geology: Rock exposures.</p> <p>Soils: Poorly drained and/or low fertility soils.</p> <p>Groundwater: Local potable water source supplying <50homes, deep secondary aquifer with poor water quality not providing base flow to rivers.</p> <p>Future Site Users: Low sensitivity land use such as Industrial Sites, highways and rail.</p> <p>Built Environment: Infrastructure (e.g. Roads, railways, tramways).</p> |
| Neutral | Very low importance and rarity on local scale. | <p>Geology: No rock exposures.</p> <p>Soils: Urban classified soils.</p> <p>Groundwater: Non-aquifer/Unproductive Strata.</p> <p>Future Site Users: No sensitive land use proposed.</p> |

For the purposes of the assessment, it is considered that Regionally Important (R) Aquifers are Principal Aquifers; Locally Important (L) Aquifers are Secondary Aquifers and Poor (P) Aquifers are Unproductive Strata.

The magnitude of a potential effect is independent of the sensitivity of the feature. The magnitude considers the scale of the predicted change to the baseline condition taking into account its duration (i.e. the magnitude may be moderated by the effects being temporary rather than permanent, short term rather than long term) and whether the effect is direct or indirect. Definitions for impact magnitude are described in Table 7.2.

Table 7.2: Criteria to Determine the Magnitude of Effect

| Magnitude | Criteria | Typical Examples |
|------------------|---|---|
| Major adverse | Total loss or major alteration to key features of the baseline conditions such that post development character/composition of baseline condition will be fundamentally changed. | <p>Irreversible loss of high proportion of local high fertility soils.</p> <p>Pollution of potable sources of water abstraction.</p> <p>Loss of, or extensive change, to an aquifer, groundwater supported designated wetlands.</p> <p>Loss of, or extensive change, to nationally important geological features.</p> |
| Moderate adverse | Loss or alteration to one or more key features of the baseline conditions such that post development character/composition of baseline condition will be materially changed. | <p>Irreversible loss of moderate proportion of local high fertility soils</p> <p>Partial loss or change to an aquifer.</p> <p>Partial loss of the integrity of groundwater supported designated wetlands.</p> |

| Magnitude | Criteria | Typical Examples |
|---------------|---|---|
| | | Permanent loss of, regionally important geological features, or substantial changes to nationally important geological features. |
| Minor adverse | Results in some measurable change in attributes quality or vulnerability compared to baseline conditions. Changes arising from the alteration will be detectable but not material; the underlying character/composition of baseline condition will be similar to the pre-development situation. | Irreversible loss of small proportion of local high fertility soils and/or high proportion of local low fertility soils. Measurable impact on aquifer but of limited size or proportion, which does not lead to a reduction in the aquifer status. Minor effects on groundwater supported wetlands. Loss of, or extensive change, to locally important geological features |
| Neutral | Very little change from baseline conditions. Change is barely distinguishable approximately to a “no change” situation. | No measurable impact on soils. No measurable impact upon groundwater. No measurable impact on geological features. |
| Beneficial | Benefit to, or addition of, key characteristics, features or elements compared to baseline conditions. | Treatment or removal of contaminated soils from site Improvement to geological features |

The significance of a specific potential effect is derived from both the sensitivity of the feature and the magnitude of the effect, and can be then determined using the matrix presented in Table 7.3. Effects can be beneficial, adverse or neutral and their significance Very Large, Large, Moderate, Slight or Neutral or an intermediary designation as cases dictate based on professional judgement. The significance of an impact should also be qualified based on the likelihood of an effect occurring (using a scale of certain, likely or unlikely) and the confidence in the accuracy of the assessment. Professional judgement can be used to vary the category where specific circumstances dictate, for example due to the vulnerability or condition of the receptor.

Table 7.3 Assessment of Significance Matrix

| | | Magnitude of Effect | | | |
|--------------------------|---------|---------------------|----------------|-----------------|---------|
| | | Major | Moderate | Minor | Neutral |
| Sensitivity of Attribute | High | Large/very large | Moderate/large | Slight/moderate | Neutral |
| | Medium | Large | Moderate | Slight | Neutral |
| | Low | Slight/moderate | Slight | Neutral | Neutral |
| | Neutral | Neutral | Neutral | Neutral | Neutral |

The potential significance of these effects will be assessed using Table 7.4. The rationale for the assessment of significance is based on the risk assessment process and therefore, takes account of the different sensitivities (importance) of the potential human health and environmental receptors.

Table 7.4 Significance Criteria

| Significance Category | Description and Examples | | Significance |
|------------------------------|---------------------------------|--|---------------------|
| Neutral | - | Minimal impact on geological condition, minor loss of urban soils/low fertility soils; and No discernible negative impact with regards to contaminated land. | Not Significant |
| Minor | Adverse | Changes to Made Ground (soil subject to anthropogenic intervention) deposits only, moderate/ major loss/ degradation of low fertility soils, minor or moderate loss/ degradation of moderate fertility soils; Loss of, or extensive change, to locally important geological features; Minor effects on groundwater supported wetlands; Easily preventable, non-permanent health impacts on humans; Minor low-level and localised contamination of on-site soils; Pollution of non-sensitive water resource or low long term risk of pollution to sensitive water resource; and Easily repairable damage to buildings / infrastructure. | Not Significant |
| | Beneficial | Remediation of localised low levels of contamination; Remediation of non-sensitive water resource contamination; and Minimal improvements to overall soil and water quality. | |
| Moderate | Adverse | Superficial disturbance to near surface deposits, Changes in geomorphology, large loss/ degradation of moderate fertility soils, minor loss/ degradation of high fertility soils; Partial loss of the integrity of groundwater supported designated wetlands; Sterilisation of low quality mineral resources; Easily preventable, permanent health impacts on humans or medium-term (chronic) risk to human health; Medium long-term risk of pollution of sensitive water resources; damage to buildings / infrastructure (on or off site); and Localised damage to buildings/ infrastructure (on or off site). | Not Significant |
| | Beneficial | Remediation of localised moderate levels of contamination; Remediation of moderate to high, localised sensitive water resource contamination; and Re-use of excavated soils on-site to avoid disposal to landfill. | |
| Major | Adverse | Substantial changes due to cuttings, moderate/ large loss/ degradation of high fertility soils; Loss of exposed designated geological features; Loss of, or extensive change, to an aquifer, groundwater supported designated wetlands; Sterilisation of high-quality mineral resource Long-term (chronic) risk to human health or short-term (acute) risk to human health; | Significant |
| | | Short- term risk of pollution of sensitive water resources; | Significant |

| Significance Category | Description and Examples | Significance |
|-----------------------|--|--------------|
| | Extensive damage to buildings / infrastructure (on or off site); Generation of significant quantities of waste sediment or soils for landfill; and Contamination of offsite soils. | |
| Beneficial | Remediation of widespread high levels of contamination/ widespread contamination; Remediation of significant, widespread sensitive water resource contamination; and Re-use of significant quantities of excavated soils on-site to avoid disposal to landfill. | |

7.2 Baseline Environment

7.2.1 Geology and Hydrogeology

A review of the Geological Survey of Ireland (GSI) web viewer indicates that the site is underlain by bedrock geology consisting of carboniferous limestone. This is observed from the Geological Survey of Ireland (GSI), 1:100,000 mapping (Figure 7.1) and from the descriptions available from the boreholes for the site. Review of the quaternary sediments map for the area shows that the scheme is mainly consists of made ground and partly made up from till derived from limestone on the north eastern part of the site.



Figure 7.1 Solid Geology (taken from GSI)



Figure 7.2 Drift Geology (taken from GSI)

According to the GSI map for groundwater vulnerability, the site has “high” vulnerability indicating that the natural groundwater may be prone to being contaminated by human activities.

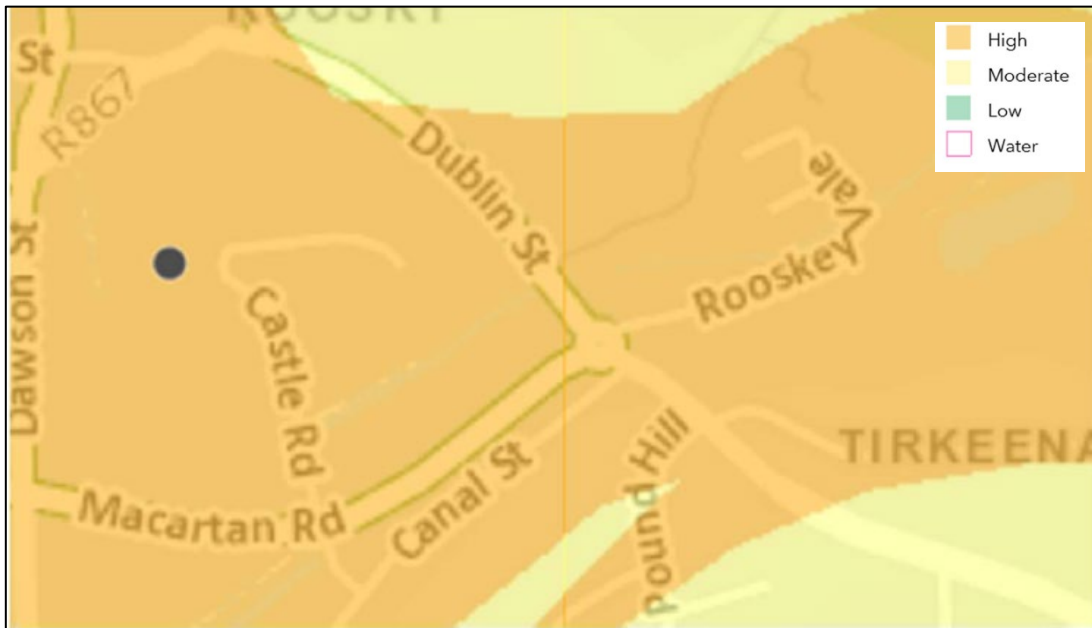
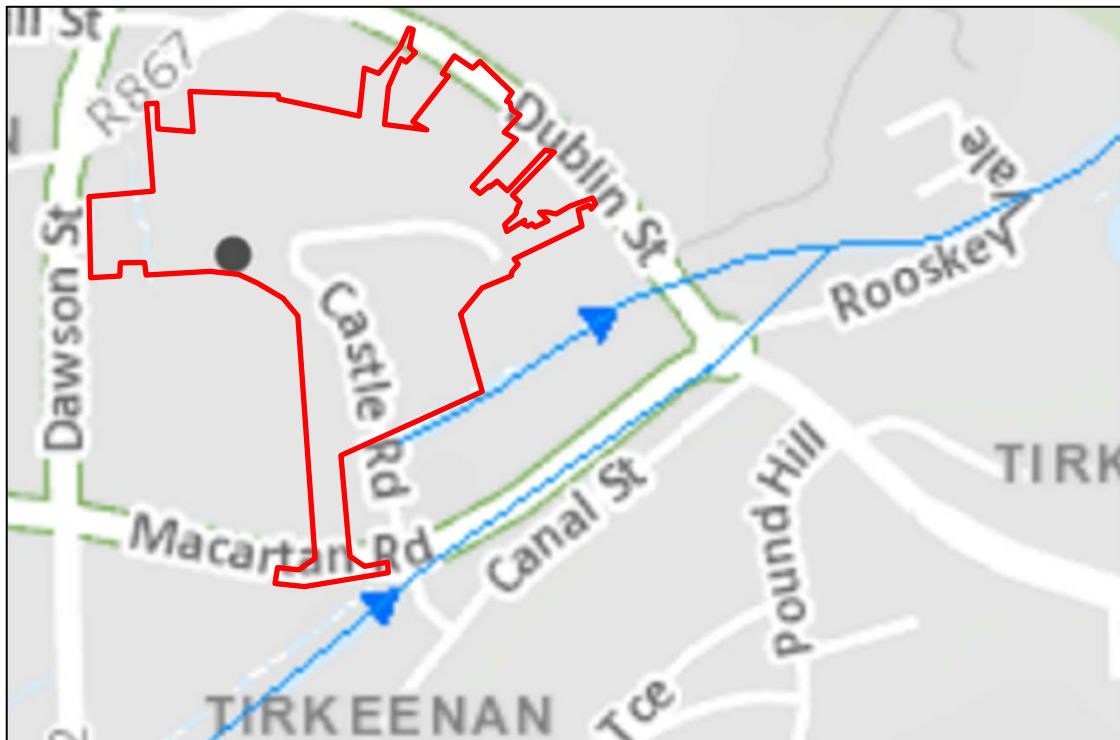


Figure 7.3 Groundwater Vulnerability (taken from GSI)



— = Proposed regeneration scheme area

Figure 7.4 Surface Water Features (mapping by GSI)

To the south of the proposed development site flows the culverted Shambles River in an easterly direction is located as seen in Figure 7.4. The Ulster Canal is located just north of this to the south of the large Tesco carpark.

7.3 Previous assessments and historic ground investigations

7.3.1 Actual ground conditions

As seen within the Preliminary Risk Assessment (PRA) report (Please refer to EIAR Volume II Technical Appendices, Appendix 7A for details) a number of previous studies and ground investigation have been consulted in the immediate vicinity of the site to gain an understanding of the ground and groundwater conditions at the site.

Glovers Site Investigation Ltd (Report No. 05-021), a bedrock probe survey was conducted which consisted of 16 nos. dynamic cone tests in the southern carpark in January 2005 for Malone O'Regan Consulting Engineers.

Priority Geotechnical Ltd in October 2009 (Report No. PC7089) consisting of a significant number of ground investigation points covering a large area Only 1 no. of rotary open hole (BH10), 2 nos. cable percussion borehole (BH1032 and BH1033), 4 nos. rotary cored boreholes (BHR13, BHR14, BHR21 and BHR22), 7 nos. trial pits (TP24, TP25, TP25A, TP26, TP41, TP43 and TP44) are relevant to this study area. However all of these ground investigation points are located on the periphery of the site.

Webber Associates (Doc. No. 1200, Job No. 705) in July 2007, consisting of 6 nos. rotary drilled boreholes (B1, C, D, E, F and G) whose exact locations are unknown. This was a reassessment carried out following the assessment by Glovers Site Investigation Ltd for Malone O'Regan Consulting Engineers.

Section 5.1.1 of the PRA details the ground conditions at the large carpark area to the west of the site from the Glovers Ground Investigation in 2005. The ground conditions encountered are as summarised below.

The following descriptions are based on ground investigations in the southern car park. 17 no. Dynamic Cone Penetrometer tests (DCPs) were carried out in the southern car park region. Blow count¹ of < 5/100 mm were found to occur between 0 to 3.5m BGL to a depth of 0.7 to 10m BGL. This indicates that made ground is between 0 to 3.5m thick followed by Peat and/or organic Silt and Clay.

1. Made ground - From the available borehole logs of the southern car park, along the Dublin road and Castle road, the Made ground is described as a combination of Bitmac, Hardcore and Spalls, and Stiff, very gravelly fine sandy Clay or Medium dense Gravel with cobbles and boulders. The thickness of Made ground is between 1.0m to 2.35m, according to the borehole logs.

2. Topsoil - Topsoil is described in the ground investigation logs as peaty of approximately 0.5m thick.

3. Peat - Peat is noted in the southern car park. It is described as very soft dark brown silty and fibrous. It is overlain by Made ground and underlain by Marl. The thickness as per the available borehole logs is between 2.0m to 3.5m. The SPT N value is between 1 and 2.

4. Marl - Very soft to soft marl is described in the borehole logs as fine sandy Clay and whiteish grey Silt with shell fragments. The thickness of this layers varies between 1.0m to 3.6m. It is found between 1.0m to 3.5m BGL. The SPT N value is 2 to 7.

5. Glacial Till - Described as stiff gravelly sandy Clay with thickness varying between 0.6m to 5.9m. The SPT N value ranges from 19 to refusal.

6. Gravel - Described as loose to medium dense silty sandy Gravel with thickness varying between 2.5m to 4.0m. The SPT N value ranges between 6 to 34.

7. Bedrock - Bedrock is defined in the borehole logs as moderately strong fine grained carboniferous Limestone. The depth of rockhead ranges from 2.5m BGL to 14.5m BGL. Greater depths to rockhead are observed towards the south.

A second ground investigation was undertaken for the Monaghan Town Collection Network, by Priority Geotechnical Drilling in 2007 and 2008. From the ground investigation The ground conditions at the site were generally characterised by slightly sandy, slightly gravelly CLAY/SILT, very clayey/silty very gravelly SAND, very clayey/silty SAND and GRAVEL, very sandy very silty GRAVEL and PEAT to depths up to 20.0m below existing ground level (bgl). Topsoil was on average 350mm thick.

The ground investigation locations most relevant to the Monaghan public realm scheme are as follows;

- BH10, BH13, BH14, BHR21, BHR22, BH1032 and BH1033.

The general stratigraphic sequence of ground conditions encountered at these exploratory borehole is as follows;

- TP024, TP025, TP025A, TP026, TP041, TP042, TP043 and TP044.

¹ Consistency of the soil is easily determined by a "blow count" reading, which provides a measure of the soil density as generally measured by a standard penetrometer test (SPT).

Table 7.5 Borehole stratigraphy summary

| Borehole | Range of thickness | Stratum encountered |
|-----------------|---------------------------|---|
| BH10 | 0.1m to 9.0m | PEAT |
| BH13 | 0.1m to 20m | Slightly sandy slightly gravelly CLAY |
| BH14 | 0.1m to 2.5m | Made ground: Clause-804, tarmacadam, concrete and block paving. |
| BHR21 | 0.1m to 20m | Slightly sandy slightly gravelly CLAY |
| BHR22 | 0.1m to 2.5m | Made ground: Clause-804, tarmacadam, concrete and block paving. |
| BH1032 | 0.1m to 2.5m | Made ground: Clause-804, tarmacadam, concrete and block paving. |
| BH1033 | 0.1m to 2.5m | Made ground: Clause-804, tarmacadam, concrete and block paving. |

The general stratigraphic sequence of ground conditions encountered at these locations is set out in Table 7.6.

Table 7.6 Trial pit stratigraphy summary

| Borehole | Range of thickness | Stratum encountered |
|-----------------|---------------------------|--|
| TP024 | 0.1 to 2.5m | Made ground: Clause-804, tarmacadam, concrete and block paving. |
| TP025 | 0.3m to 3.358m | Made ground (Fill): Slightly sandy slightly gravelly CLAY/SILT, silty very gravelly SAND and very silty very sandy GRAVEL with plastic, concrete, brick and tarmacadam |
| TP025A | 0.3m to 3.358m | Made ground (Fill): Slightly sandy slightly gravelly CLAY/SILT, silty very gravelly SAND and very silty very sandy GRAVEL with plastic, concrete, brick and tarmacadam |
| TP026 | 0.3m to 3.358m | Made ground (Fill): Slightly sandy slightly gravelly CLAY/SILT, silty very gravelly SAND and very silty very sandy GRAVEL |

| Borehole | Range of thickness | Stratum encountered |
|----------|--------------------|--|
| | | with plastic, concrete, brick and tarmacadam |
| TP041 | 0.3m to 3.358m | Made ground (Fill): Slightly sandy slightly gravelly CLAY/SILT, silty very gravelly SAND and very silty very sandy GRAVEL with plastic, concrete, brick and tarmacadam |
| TP042 | 0.1m to 9.0m | PEAT |
| TP043 | 0.3m to 3.358m | Made ground (Fill): Slightly sandy slightly gravelly CLAY/SILT, silty very gravelly SAND and very silty very sandy GRAVEL with plastic, concrete, brick and tarmacadam |
| TP044 | 0.3m to 3.358m | Made ground (Fill): Slightly sandy slightly gravelly CLAY/SILT, silty very gravelly SAND and very silty very sandy GRAVEL with plastic, concrete, brick and tarmacadam |

7.3.2 Groundwater conditions

Within the Glover Site Investigation Ltd - Dynamic cone tests in the southern car park in January 2005 assessment, groundwater was encountered in all the boreholes in the southern car park. The depth varied between 1.0m to 3.5m BGL, with greater groundwater depths in the north.

Groundwater was encountered during both trial pit excavation and cable tool boring at a number of locations in the Priority Geotechnical Drilling Report, 2009. Groundwater was typically encountered between 1.5m bgl and 5.0m bgl in boreholes and between 2.0m bgl to 3.0m bgl in trial pit excavations. Forty two (42) number 50mm diameter standpipe installations were constructed and are identified in section 5.1 of the Monaghan Town Collection Network, Priority Geotechnical Drilling Report, 2009.

The groundwater strikes detail the level at which groundwater was encountered and that level to which it rose after a 20minute period. This may not reflect the static groundwater level. The standpipe installations should be monitored to determine static groundwater level. It should also be appreciated that seasonal fluctuations in groundwater level may occur.

Under the ground investigation for the proposed mixed use development at Rooskey, Monaghan Town, Co. Monaghan and the Hydrogeology Assessment, by Webber Associates 2007, groundwater was encountered in all exploratory boreholes. Water strikes were typically encountered between 1.7m and 4.2m below ground level. Stand pipe piezometers were installed in six boreholes. A summary of levels are tabulated below in Table 7.9. The ground conditions from this assessment do however not reflect the current underlying conditions at the site due to infilling that took place in the lower courthouse carpark sometime after 2011. As such there may be variations in groundwater levels from this 2007 report, groundwater behaviour may be altered due to the fill material.

Table 7.7 Summary of piezometer levels from the 2007 assessment by Webber Associates

| Borehole | Surface Levels (MoD) | Depth to water (m bgl) |
|----------|----------------------|------------------------|
| B1 | 55.2 | 2.5 |
| C | 55.6 | 2.8 |
| D | 55.5 | 2.6 |
| E | 55.6 | 2.8 |
| F | 53.2 | 1.2* |
| G | 53.2 | 0.6* |

Note: *Results not available at time of writing report, highest recorded strike instead

7.4 Summary of Preliminary Risk Assessment

In order to consider potential risks at the site, a conceptual site model was developed, to examine the potential source - pathway - receptor linkages that may exist on the proposed development site.

7.4.1 On site contamination sources - current

Made ground underlying the proposed development site would have the potential to contain contamination. However, the previous ground investigations did not identify any obvious ground contamination. In addition, pathways for exposure to ground contamination will be minimal as the majority of the site will be covered in hardstanding with landscaping comprising tree pits, raised planters and grass.

7.4.2 On site contamination sources – historical

Review of historical mapping shows the proposed development site has experienced development over time. The street network around Monaghan such as Dublin Street and The Diamond to the northwest have been occupied by infrastructural developments such as commercial properties. Such activities once occupying the site footprint are not associated with an overly contaminative nature, any contamination if present in the past is/has likely degraded and diluted overtime and the chance of this impacting the proposed development site today is minimal.

7.4.3 Off-site contamination sources – current

The surrounding land use comprises predominantly commercial retail properties along the proposed regeneration scheme area. Current offsite contamination sources are limited but may be associated with any fuel tanks in the site vicinity and the waste water treatment works to the east of the site at c.330m.

An *Applegreen* petrol filling station is located approximately 450m west of the site boundary, this has the potential to be a source of contamination however given the substantial distance from the proposed development site the risk here is relatively low. A second petrol filling station (“Go”) is present approximately 20m south west of the site, this is however downgradient from the site and will not impact the study site.

7.4.4 Off-site contamination sources – historical

Potentially contaminating activities have historically been present in the area surrounding the site. It is evident from consultation with available Ordnance Survey Ireland historical maps, in the period of 1829-41 a quarry can be seen to the east of the site at c.130m and an Infirmary on mapping at c.100m. Monaghan Lake (Peter’s Lake) is annotated to the north of the site. A large jail (Gaol) is present to the west of Monaghan Town at c.280m. A brewery is annotated to the south west of the site at c.300m. From 1897-1913 A gas works is present to the east at approximately 250m of the site and a Saw Mill to the west at a distance of approximately 150m. The jail is now annotated as Monaghan County Infirmary in historical maps from 1913. A grave yard is present on historical mapping approximately 50m west of Old Cross Square to

the south of Dublin Street. It is noted that none of the above off site potential contamination sources have survived to the current day. Any contamination associated with these former industries if present in the past will have likely degraded and diluted overtime and the chance of this impacting the-proposed development site in the present period is minimal.

7.4.5 Conclusion

The desk study has highlighted that no significant pollutant linkages are considered to be present within the study area. Upon completion of the regeneration scheme proposals paving and or hardstanding will cover the majority of the proposed development negating any potential risk to human health.

7.5 IGSL Ground Investigation July 2021

7.5.1 Summary of ground conditions encountered

A geotechnical ground investigation was undertaken in July 2021 by IGSL to aid understanding of the underlying ground conditions at the site. Please refer to EIAR Volume II Technical Appendices, Appendix 7B for details on the full IGSL factual ground investigation report.

The intrusive ground investigation completed by IGSL in July 2021 comprised two cable percussion, two rotary boreholes, four machine excavated trial pits and eighteen slit trenches. Infiltration tests, soakaway tests and associated geotechnical laboratory surveying and testing was also conducted.

Cable percussion boreholes were drilled by means of a Dando Terrier 2000 rig. The ground conditions encountered within BH001 Made Ground/Fill from 0.00m bgl to 0.90m bgl, comprising gravels and clays with sand. Made Ground from 0.25m bgl to 0.90m bgl contained brick, slate roof, mortar, pottery, scrap metal and coal/ash. Beneath the layer of made ground firm slightly sandy clay was encountered from 0.90m bgl to 1.10m bgl. From 1.10m bgl to 1.40m bgl a layer of medium dense yellow/brown silty fine to coarse sand with occasional gravel was encountered. Gravel here was predominantly of limestone. From 1.40m bgl to 2.00m bgl a layer of very soft dark brown sandy clay was encountered and from 2.00m bgl to 3.60m bgl there was firm to stiff dark brown slightly gravelly sandy silty clay. This can be seen in table 7.10 below.

Table 7.10 BH001

| Depth m | Description |
|-----------|---|
| 0.0-0.25 | MADE GROUND: Loose grey sandy fine to medium angular GRAVEL sand is fine to coarse |
| 0.25-0.90 | MADE GROUND: Firm brown slightly gravelly sandy CLAY with low cobble content. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded of various lithologies. Cobbles are subangular of various lithologies. Contains brick, slate roof tiles, mortar, pottery, scrap metal, coal and ash. |
| 0.90-1.10 | Firm lightish orangish brown slightly silty sandy CLAY with occasional gravel. Sand is fine to coarse. Gravel is subangular fine to medium predominantly of limestone. |
| 1.10-1.40 | Medium dense light yellowish brown to light greyish brown silty fine to coarse SAND with occasional gravel. Gravel is fine to medium predominantly of limestone. |
| 1.40-2.00 | Very soft dark brown sandy CLAY |
| 2.00-3.60 | Firm/stiff dark brown slightly gravelly sandy silty CLAY |

The ground conditions encountered in BH003 comprised Made Ground to 3.40m bgl where an obstruction was met. Made Ground was generally made up of clayey sandy gravel with medium cobble content from 0.50m bgl to 2.20m bgl. From 2.20m bgl to 2.30m bgl Made Ground comprised brown clayey sandy gravel with medium cobble content. This was the same scenario from 2.30m bgl to 3.40m bgl but there was a change of colour from brown to grey. This can be seen in table 7.11 below.

Table 7.11 BH003

| Depth m | Description |
|-----------|---|
| 0.0-0.50 | MADE GROUND: Tarmacadam |
| 0.50-2.20 | MADE GROUND: Grey clayey sandy GRAVEL with medium cobble content |
| 2.20-2.30 | MADE GROUND: brown clayey sandy GRAVEL with medium cobble content |
| 2.30-3.40 | MADE GROUND: Grey clayey sandy GRAVEL with medium cobble content |

Two rotary core drilled boreholes were also excavated during the ground investigation (RC01 and RC02). RC01 was drilled to 11.00m bgl and RC02 to 10.80m bgl, by means of a tracked Commachio Geo 205 rig. Ground conditions encountered in RC01 comprised Made Ground/Fill, into clay and sand. Limestone bedrock was encountered at approximately 5.10-6.10m bgl. A similar stratigraphic profile was observed for RC02 with Made Ground/Fill, into clay and gravel with Limestone bedrock being encountered at 4.80-4.90m bgl. RC001 and RC002 are detailed in Table 7.12 and 7.13.

Table 7.12 RC001

| Depth m | Description |
|------------|--|
| 0.0-0.90 | SYMMETRIX DRILLING: No recovery, observed by driller as return of MADE GROUND grey sandy fine to medium angular gravel. |
| 0.90-1.10 | SYMMETRIX DRILLING: No recovery, observed by driller as return of light orangish brown slightly silty sandy CLAY with occasional gravel. Sand is fine to coarse. Gravel is subangular fine to medium predominantly of limestone. |
| 1.10-1.40 | SYMMETRIX DRILLING: No recovery, observed by driller as return of light yellowish brown to light greyish brown silty fine to coarse SAND with occasional gravel. Gravel is fine to medium predominantly of limestone. |
| 1.40-2.00 | SYMMETRIX DRILLING: No recovery, observed by driller as returns of dark brown sandy CLAY. |
| 2.00-3.60 | SYMMETRIX DRILLING: No recovery, observed by driller as returns of dark brown slightly gravelly sandy silty CLAY. |
| 3.60-5.60 | SYMMETRIX DRILLING: No recovery, observed by driller as returns of clayey sandy gravel with occasional cobbles. |
| 5.60-6.10 | SYMMETRIX DRILLING: No recovery, observed by driller as returns of probable ROCK. |
| 6.10-11.00 | Very strong to locally medium strong, thickly to thinly bedded, pale blueish grey to dark grey, fine-grained, LIMESTONE (local muddy layers, local stylolites, locally fossiliferous, common chert layers), fresh to locally slightly weathered. Very local shale layer at 9.71-9.79m. Discontinuities are widely to closely spaced, smooth to local rough, planar. Apertures are tight to locally open, locally clay/gravel filled (at 6.79-7.21m, 7.86-7.89m, 9.17-9.21m, 9.49-9.55m, 9.71-9.79m and 10.12-10.15m), locally slightly iron-oxide stained, locally quartz-veined (1-2mm thick). Dips are sub horizontal and locally 80°. |

Table 7.13 RC002

| Depth m | Description |
|------------|--|
| 0.0-1.40 | SYMMETRIX DRILLING: No recovery, observed by driller as return of MADE GROUND comprised of clayey gravel. |
| 1.40-2.70 | SYMMETRIX DRILLING: No recovery, observed by driller as return of grey/brown clayey sandy GRAVEL. |
| 2.70-4.80 | SYMMETRIX DRILLING: No recovery, observed by driller as return of grey/light brown clayey sandy GRAVEL. |
| 4.80-4.90 | SYMMETRIX DRILLING: No recovery, observed by driller as returns of probable ROCK. |
| 4.90-5.50 | Returns of stiff dark brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of limestone. |
| 5.50-10.80 | Very strong to locally medium strong, thickly to thinly bedded, pale blueish grey to dark grey, fine-grained, LIMESTONE (local muddy layers, local stylolites, locally fossiliferous, common chert layers), fresh to locally slightly weathered. Discontinuities are widely to closely spaced, smooth to locally rough, planar. Apertures are tight to locally open, locally clay/gravel filled (at 6.16.6.20m), locally slightly iron-oxide stained, locally quartz-veined (1-4mm thick). Dips are sub horizontal and locally 80°. |

Across TP01, TP02 and TP03 Made Ground material was encountered from 0.25m bgl to 0.90m bgl in TP01 comprising slightly gravelly very sandy clay with a range of material including glass pottery, scrap metal, brick, slate roof tiles, lime mortar and ash. Gravelly sandy clay with limestone was found below this from 0.90m bgl to 1.40m bgl. From 1.40m bgl to completion depth of 1.90m bgl sandy very clayey gravel was encountered. TP01 comprised 0.70m of Made Ground with similar material to TP02. A layer of clay was encountered from 0.70m bgl to 0.90m bgl with clayey gravel with sands beyond this from 0.90m bgl to 1.70m bgl. TP03 comprised Made Ground with again similar material as above from 0.12m bgl to 1.05m bgl. From 1.05m bgl to 1.20m bgl gravelly clay with sand was found. Trial pits are summarised in Tables 7.14, 7.15 and 7.16.

Table 7.14 TP01

| Depth m | Description |
|-----------|--|
| 0.0-0.25 | Topsoil |
| 0.25-0.90 | MADE GROUND: Firm brown locally light brownish grey slightly gravelly very sandy CLAY with low cobble and boulder content. Contains fragments of glass pottery, scrap metal, brick, slate roof tiles, lime mortar and ash. Sand is fine to coarse. Gravel is fine to coarse subangular to subrounded of various lithologies. |
| 0.90-1.40 | Firm light orangish brown slightly silty slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is fine to medium subangular predominantly of limestone. |
| 1.40-1.90 | Medium dense light brown slightly sandy very clayey fine to coarse angular to subrounded GRAVEL with medium cobble and boulder content. Sand is fine to coarse. Gravel is of limestone. Cobbles and boulders are angular and subangular of limestone. |

Table 7.15 TP02

| Depth m | Description |
|----------|-------------|
| 0.0-0.10 | Concrete |

EIAR

| | |
|-----------|---|
| 0.10-0.30 | MADE GROUND: Loose grey fine to coarse angular to subrounded GRAVEL with medium cobble and boulder content. Contains brick, fragments of cast iron and lead. Sand is fine to coarse. Cobbles and boulders are angular to subrounded of various lithologies. |
| 0.30-0.70 | MADE GROUND: Loose brown slightly clayey sandy fine to coarse angular GRAVEL with low cobble content and boulder content. Contains brick, slate roof tiles, glass, scrap metal, lime mortar, ash, timber and coal. Sand is fine to coarse. Cobbles are subangular to subrounded predominately of sandstone and limestone. |
| 0.70-0.90 | Firm light orangish brown slightly silty slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is of limestone. Cobbles are boulders are angular and subangular of limestone. |
| 0.90-1.70 | Medium dense light brown slightly sandy very clayey fine to coarse angular to subrounded GRAVEL with medium cobble and boulder content. Sand is fine to coarse. Gravel is of limestone. Cobbles and boulders are angular and subangular of limestone. |

Table 7.16 TP03

| Depth m | Description |
|-----------|---|
| 0.0-0.12 | Concrete |
| 0.12-1.05 | MADE GROUND: Firm brown locally light brownish grey slightly gravelly very sandy CLAY with low cobble and boulder content. Contains fragments of lead pipes, glass, pottery, brick, slate roof tiles and lime mortar. Sand is fine to coarse. Gravel is fine to coarse subangular of various lithologies. |
| 1.05-1.20 | Firm light orangish brown slightly silty slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is fine to medium subangular predominantly of limestone. |

Groundwater strikes were encountered in BH001 at 3.60m bgl and RC001 at 5.60m bgl. Eighteen slit trenches were also incorporated into the ground investigation at Monaghan. These were performed using a rubber tracked excavator to a maximum depth of 1.50m bgl.

7.6 Impact Assessment

7.6.1 Assessment of Construction Effects

The impact of the development on soils and geology is considered to be Neutral as there will be minimal impact on geological conditions with a minor loss of urban soils due to the presence of Japanese Knotweed at six locations within the site and one location close to the western site boundary at Monaghan Shopping Centre. This invasive species issue is addressed fully in a separate Chapter 11 Waste and EIAR Volume II Appendix 8B Invasive Species Survey Report.

Minor earthworks will be undertaken at the site. Please refer to EIAR Volume III Technical Drawings & Figures, Drawing EW0001 for details on the range of earthwork excavations to be undertaken across the proposed development site to meet the needs of the proposed development site Varying excavation levels will be carried out ranging from 400mm bgl for landscaping, 1.2m bgl for the plantation of various trees, 570mm bgl for parking areas and up to 2.00m bgl excavations for attenuation and soakaways.

Earthworks may also be carried out for a range of utility and service runs across the proposed development site.

The impact of the proposed development site on groundwater is considered to be Neutral as there will be no significant earthworks which would impact groundwater.

Construction impacts may also include noise, dust, odour and site traffic generation problems as well as potential contamination issues arising with the use of fuel storage tanks, vehicles and the use of paints and oils.

7.6.2 Assessment of Operational Effects

The operational impacts are considered to be Neutral as the Preliminary Risk Assessment (PRA) has not identified a risk to human health through an active pollutant linkage.

No new sources of contamination will be introduced for the operation of the proposed regeneration scheme.

The operational impacts on groundwater are considered to be Neutral as the proposed regeneration scheme end use will not impact upon groundwater quality.

7.6.3 Assessment of Cumulative Effects

A planning history search was carried out of the most recent planning applications within and immediately adjacent to the proposed development boundary. A number of applications were identified as small scale new development, change of town centre uses, and refurbishments to existing buildings within the immediate area. It is unlikely that any of these will result in any significant cumulative effects on the environment.

One notable application (Planning Application Reference 19465) is an extant permission granted in 2019 at No 24 Dublin Street, permission for development consisting of change of use of existing 2 storey stone buildings from residential use to commercial retail use, to include associated internal alterations, to construct an extension to the south west facing elevation (facing the town carpark) and all associated site works.

Chapter 1 Introduction, Section 1.4.2 identifies all those projects which have been considered and assessed with regards to cumulative impacts. As part of this review, several other planning applications were considered, however discounted due to the distance from the scheme and were deemed highly unlikely to have significant cumulative impacts.

7.6.4 Inter-relationships

The proposed development may interact with other environmental considerations such as the creation of dust, construction noise, traffic issues, impacts on ecology and the generation of hazardous waste (contaminated soil) as a result of Japanese Knotweed soil removal. This chapter has inter-relationships with other chapters and interacts closely to that of Chapter 6 Water Quality, Chapter 8 Biodiversity and Chapter 11 Waste.

7.7 Mitigation

No mitigation measures are proposed for the proposed project due to the Neutral nature impact of the proposed regeneration scheme on the environment.

7.8 Summary of Effects & Conclusion

The summary of environmental effects are contained within Table 7.17.

Table 7.17: Summary of Likely Environmental Effects on Soils and Geology

| Receptor | Sensitivity of receptor | Description of Effect | Duration | Magnitude | Significance | Significant Not significant | Notes |
|---------------------------|-------------------------|---|------------|-----------|--------------|-----------------------------|-------|
| Construction phase | | | | | | | |
| Soils and Geology | Low | Minor loss of urban soils from Japanese Knotweed removal mitigation | Long term | Neutral | Neutral | Not significant | |
| Construction workers | Medium | Exposure to sub-soil contamination | Short term | Slight | Neutral | Not significant | |
| Operational phase | | | | | | | |
| Public Realm end users | High | Exposure to sub-soil contamination | Short Term | Slight | Neutral | Not significant | |

7.9 Limitations of the Assessment

No limitations were noted in the assessment.

7.10 References

Internet based aerial photography

Ordnance Survey Ireland mapviewer

(<http://maps.osi.ie/publicviewer/#V2,719558,734710,9,7>)

Geological Survey Ireland Spatial Resources Map Viewer – Department of Communications, Climate Action and Environment

(<http://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aaac3c228>)

<http://www.epa.ie/radiation/radonmap/>

Environmental Protection Agency Radon Map (<http://www.epa.ie/radiation/radonmap/>)

Geological Survey of Ireland Geotechnical Data Viewer

(<http://spatial.dcenr.gov.ie/GeologicalSurvey/GeoTechnicalViewer/index.html>)

Environmental Protection Agency map viewer (<https://gis.epa.ie/EPAMaps/>)

Reports from previous studies and ground investigations as mentioned in Section 1.3

Land and Soil EPA maps (Geohive maps)

Glovers Site Investigation Ltd (Report No. 05-021), January 2005

Priority Geotechnical Ltd in October 2009 (Report No. PC7089)

Webber Associates (Doc. No. 1200, Job No. 705) in July 2007

IGSL Ltd Ground Investigation Report (Project No. 22412), October 2021

Chapter
08

**Terrestrial
Biodiversity**

CHAPTER 8 - BIODIVERSITY

8.1 Introduction

An Ecological Impact Assessment (EclA) has been undertaken on lands within Monaghan town centre in respect of the proposals for redevelopment of this site, as described within Chapter 2 Project Description of this Environmental Impact Assessment Report (EIAR). The scope of this Ecological Impact Assessment (EclA) is to identify ecological constraints within the study area at Monaghan town centre, by means of the following:

- Identifying the Zone of Influence (Zol) of the proposed development on the natural environment;
- Establishing the baseline regarding terrestrial and aquatic habitats, ecotopes, flora and fauna (volant and non-volant mammals, invertebrates, avifauna etc.) within the zone of influence of the proposed regeneration scheme;
- Ascertaining the potential impacts upon all ecological receptors within the development footprint and zone of influence to include, but not be limited to, species protected under the European and National Legislation, including the EU Habitats and Birds Directives and Irish Wildlife Acts (1976 to 2012, as amended); and,
- Presenting measures to avoid or minimise potential damage to any sensitive ecological receptors supported within the receiving environment.

The author, Samuel O'Hara, is a Senior Ecologist with RPS and holds a BSc (Hons) in Ecology and has over six years of experience in the field of ecology. Samuel has experience of ecological field survey including; habitat, mammal and bird survey and is a protected species license holder. Samuel is an Associate member of the CIEEM.

The professional judgement expressed herein is the true and bona fide opinion of the professional ecologist. The information prepared and provided is accurate at the time of issue of this report and has been prepared and provided in accordance with the CIEEM Code of Professional Conduct (CIEEM 2019).

This Chapter is supported by EIAR Volume II Technical Appendices:

- Appendix 2D Dublin Street Asbestos Survey Report
- Appendix 2E Northern Standard Asbestos Survey Report
- Appendix 8A Data gathered from National Biodiversity Data Centre (NBDC);
- Appendix 8B Invasive Species Survey Report; and
- Appendix 8C Ecological Survey for Bats.

This Chapter is supported by EIAR Volume III –Technical Drawings & Figures:

- Figure 8.1: Study Area;
- Figure 8.2: Designated Sites; and
- Figure 8.3: Extended Phase 1 Survey

8.2 Methodology

8.2.1 Ecological Impact Assessment

EclA is the process of identifying, quantifying and evaluating the potential effects of a proposed development on ecological features based on objective assessment of the best information available (CIEEM 2018). An ecological feature is defined as a species, habitat or ecosystem that has the potential to be affected by a project.

The aim of the EclA, detailed within this chapter of the EIAR, is therefore to describe the existing ecological features; to identify the potential impacts associated with the proposed development during construction, operation and decommissioning; to evaluate the likely significance of effects on the ecological features; to apply the mitigation hierarchy to avoid, mitigate and compensate for ecological impacts; and to highlight potential opportunities for ecological enhancement (CIEEM 2018).

The EclA has been written in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Ecological Impact Assessment in the UK and Ireland* (CIEEM 2018).

8.2.2 Relevant Guidance and Legislation

The EclA has been undertaken in accordance with the British Standard (BS) 42020:2013; guidelines produce by the CIEEM (CIEEM 2018); experience of 'best practice' in ecological assessment; and criteria set out within this sub-section.

8.2.2.1 International Directives

Council Directive on the Conservation of Natural Habitats of Wild Fauna and Flora (92/43/EEC) (The Habitats Directive)

The main aim of the Directive is to promote the maintenance of biodiversity through the conservation of natural habitats and wild species listed on the Annexes of the Directive. Member States are required to take measures to maintain or restore, at favourable conservation status, biodiversity whilst taking account of economic, social, cultural requirements and regional and local characteristics.

It gives effect to site and species protection measures through establishment of the Natura 2000 network and designation of European Sites including Special Areas of Conservation (SAC) and Special Protected Areas (SPA). It also establishes a list of species (other than birds) whose habitats must be protected to secure their survival. These priority species and habitats are subject to a higher level of protection.

The Directive also requires appropriate assessment of any plan or project not directly connected with or necessary to the management of a European Site, but likely to have significant effects upon a European site, either individually or in combination with other plans or projects.

Council Directive on the Conservation of Wild Birds (2009/147/EC) (The Birds Directive)

The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. It makes provisions for the maintenance of the wild bird populations across their natural range; conserves the habitats for rare or vulnerable species listed in Annex I and of migratory species through the classification of SPAs and provides protection for all wild birds.

8.2.2.2 Irish Legislation

S.I. No. 355 of 2015 provides that the following shall be construed together as one:

- Wildlife Act 1976;
- Wildlife (Amendment) Acts of 2000, 2010 and 2012;
- European Communities (Birds and Natural Habitats) (Restrictions of the Use of Poison Bait) Regulations 2010;
- European Communities (Birds and Natural Habitats) Regulations 2011;
- European Communities (Birds and Natural Habitats) (Amendment) Regulations of 2013, 2015; and
- Wildlife Amendment Bill 2016.

European Communities (Birds and Natural Habitats) Regulations 2011 to 2015

The Regulations give effect to requirements relating to the designation of protected sites under the Birds Directive and Habitats Directive. The Regulations provide for the protection and management of European Sites and place obligations on all public authorities to have regard to the requirements of the Habitats Directive beyond the realms of planning related consents issued under the Planning and Development Act 2000, as amended. The Regulations also provide for the protection of species of European importance.

Wildlife Acts 1976 to 2012

The Acts provide for *inter alia* the protection of wildlife. The Acts prohibit the intentional killing, taking or injuring of certain wild birds or wild animals; or the intentional destruction, uprooting or picking of certain wild plants.

Wildlife Amendment Bill 2016

The purpose of the Bill is to provide for the implementation of a reconfiguration of the Raised Bog Natural Heritage Area Network arising from (i) the proposals from the Review of Raised Bog Natural Heritage Area Network published in January 2014; (ii) an assessment of the effects on the environment of the proposals arising from the Review and, if required, any other screening for an assessment or as the case may be, assessment, including public consultation undertaken and (iii) observations or submissions received during the course of public consultation.

The Wildlife Amendment Bill is currently at Committee Stage.

Taken as a whole, nature conservation legislation is of key importance in undertaking EclA for proposed development as it shapes planning policy.

8.2.2.3 Planning Policy

Monaghan County Development Plan 2019-2025

An overarching theme of the Monaghan County Development Plan 2019-2025 (CDP) in relation to natural heritage and biodiversity is to promote and encourage the conservation of the natural environment, cultural heritage and amenities of the county in accordance with legislation, plans and policies to ensure a rich landscape and range of ecosystems.

Policies set out in Chapter 6 in respect of natural heritage and biodiversity and heritage, conservation and landscape, include a range of provisions to protect and conserve Natura 2000 sites, Natural Heritage Areas (NHAs) and proposed NHAs. In addition, the CDP contains policies to provide for the implementation of other plans including the Biodiversity Action Plan (BAP), the National Biodiversity Plan, the National Pollination Plan and the National Peatlands Strategy. Chapter 6 of the CDP also sets out policies to control the spread of invasive species.

8.2.3 Study Area

The study area, which encompasses the site boundary, is an urbanised area comprising a proportion of Monaghan town centre, County Monaghan. The ecological study area and extent is illustrated in EIAR Volume III –Technical Drawings & Figures Figure 8.1. Site Location. The boundary of application site/red line comprises an area of approximately 2.72ha.

The proposed development site is largely comprised of hardstanding, buildings in addition to marginal areas of scrub, tall ruderal, recolonising bare ground amenity grassland and scattered trees. Stands of Japanese knotweed are also supported.

The proposed development, being located within an urban area, is largely isolated from semi-natural habitats in the wider area. On a precautionary basis the assessed Zone of Influence (ZoI) extends beyond the study area (application site) to include European and Nationally designated sites within 15km of the

study area and ecological receptors which could be potentially affected by the biophysical changes caused by the proposed regeneration project. In addition, sites which are hydrologically linked to the proposals are also considered. The designated sites and ecological receptors within the ZoI of the proposed works are presented and discussed below.

8.2.4 Baseline

8.2.4.1 Desk Study

The National Biodiversity Data Centre (NBDC) is a national organisation that collates, manages, analyses and disseminates data on Ireland's biodiversity. It is funded by the Heritage Council. The NBDC provides access to all validated biodiversity data through Biodiversity Maps, the on-line biodiversity data portal.

Biodiversity records and full species accounts can be viewed and scrutinised through an interactive biodiversity maps portal (<http://maps.biodiversityireland.ie/#/Home>). This is a tool that can be used to help make a preliminary assessment of biodiversity issues when considering the site-specific proposed development.

The chosen search area using the NBDC search tool was customised in order to capture all records within a minimum 1km distance of the proposed development site and is illustrated at EIAR Volume II – Technical Appendices Appendix 8A. The principal purpose of this task is to capture any records of protected species or species of natural heritage importance in close proximity to the site boundary. The zone of influence of the proposed development for protected species, does not extend further than this.

NPWS habitat data files were used to determine the presence of features of ecological significance within and in proximity to, the site boundary.

8.2.4.2 Habitat Survey

An extended Phase 1 Habitat Survey was conducted of the site on 14th February 2020 and 23rd June 2020 and covered the entirety of the study area. The survey was undertaken in line with the Heritage Council's *Best Practice Guidance for Habitat Survey and Mapping* (Heritage Council, 2011). Ecological value is based upon CIEEM and NRA guidelines (CIEEM, 2018; NRA, 2009).

The survey was extended to include further information on the potential of the habitats identified to support species protected by law or of natural heritage importance. All habitats were mapped and categorised in accordance with the Heritage Council *Guide to Habitats in Ireland* (Fossitt, 2000). A search was undertaken for protected and invasive flora species. Aerial photographs were used to assist the mapping of habitats. The results of this survey are presented below.

It should be noted that whilst every effort has been made to provide a comprehensive description of the site of the proposed development, no survey can consist of a complete characterisation and prediction of the ecological environment.

The extended phase 1 habitat survey also incorporated a detailed survey for invasive non-native species.

8.2.4.3 Ecological Survey for Bats

Ecological surveys for bats have been undertaken of the study area. This included a preliminary ecological appraisal for bats, in addition to an assessment of trees and buildings with potential for roosting bats and emergence/re-entry surveys of structures.

The full methodology utilised in surveys for bats is detailed within the appended report entitled *Ecological Survey for Bats* (EIAR Volume II – Technical Appendices, Appendix 8C).

8.2.5 Consultation

No consultation responses on the biodiversity impacts associated with the proposed development have been received from the various consultees or stakeholders contacted in respect of this EIAR.

8.2.6 Assessment Criteria and Assignment of Significance

The information gathered from the desk study and the suite of ecological surveys conducted was used to prepare an EclA for the proposed development. The EclA has been undertaken in accordance with the guidelines set out below, which were used to derive valuation and assessment criteria as set out in Tables 8.1 and 8.2.

The EclA has been undertaken following the methodology set out in *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018); and with reference to the National Roads Authority 'Guidelines for Assessment of Ecological Impacts of National Road Schemes' (NRA, 2009); Section 4.3 'Biodiversity' of the draft EPA Advice Notes for Preparing Environmental Impact Statements (EPA, 2015); and BS 42020:2013 *Biodiversity: Code of practice for planning and development* (BSI, 2013).

Section 3.5 of the draft EPA 'Revised Guidelines on the Information to be contained in Environmental Impact Statements' (EPA, 2015) note that "where more specific definitions of degrees of impact exist within a specialised topic e.g. ecology, these should be used in preference to these generalised definitions".

EclA is based upon a source-pathway-receptor model, where the source is defined as the individual elements of the proposed development that have the potential to affect identified ecological features. The pathway is defined as the means or route by which a source can affect the ecological features. An ecological receptor is the feature of interest, being a species, habitat or ecologically functioning unit of natural heritage importance. Each element can exist independently however an effect is created where there is a linkage between the source, pathway and feature. A significant effect is defined in CIEEM (2018) as:

"an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' [...] or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local".

and

"an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project. A significant effect is a positive or negative ecological effect that should be given weight in judging whether to authorise a project: it can influence whether permission is given or refused and, if given, whether the effect is important enough to warrant conditions, restrictions or further requirements such as monitoring".

BS 42020:2013 states that if an effect is sufficiently important to be given weight in the planning balance or to warrant the imposition of a planning condition, e.g. to provide or guarantee necessary mitigation measures, it is likely to be "significant" in that context at the level under consideration. The converse is also true: insignificant effects would not warrant a refusal of permission or the imposition of conditions.

Likely significant effects are predicted for the proposed development as described in Chapter 2 of the EIAR. Table 8.1 includes a geographic frame of reference and criteria for valuing ecological features. Table 8.2 sets out criteria for predicting magnitudes of effect. These tables have been prepared with due regard to CIEEM, EPA and NRA guidelines.

Significant impacts are moderate or major effects which require counterbalancing mitigation measures to offset their adverse effects. Beneficial effects do not require mitigation measures as their effects are welcomed.

Table 8.1: Ecological Valuation Criteria for Ecological Features

| Value | Criteria |
|-----------------------------|---|
| <p>International</p> | <ul style="list-style-type: none"> • ‘European Sites’ including Special Areas of Conservation (SAC) & Special Protection Areas (SPA) • Sites that satisfy the criteria for designation as a ‘European Site’ (see Annex III of the Habitats Directive) • Features essential to maintaining the coherence of the Natura 2000 Network • Sites containing ‘best examples’ of the habitat types listed in Annex I of the Habitats Directive • Resident or regularly occurring populations (assessed to be important at the international level) of the following: • Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; and/or <ul style="list-style-type: none"> • Species of animal and plants listed in Annex II and/or IV of the Habitats Directive <ul style="list-style-type: none"> • Ramsar Sites • World Heritage Sites • Sites hosting significant populations of species under the Bonn Convention • Sites hosting significant populations of species under the Berne Convention |
| <p>National</p> | <ul style="list-style-type: none"> • Wildlife Refuge for species protected under the Wildlife Acts • Resident or regularly occurring populations (assessed to be important at the national level) of the following: • Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; and/or • Species of animal and plants listed in Annex II and/or IV of the Habitats Directive <ul style="list-style-type: none"> • Natural Heritage Areas (NHA) or proposed NHA <ul style="list-style-type: none"> • National Nature Reserves (NNR) • Marine Nature Reserve (MNR) |
| <p>County</p> | <ul style="list-style-type: none"> • Sites listed as part of the Ecological Network in the County Development Plan (CDP) <ul style="list-style-type: none"> • Areas subject to a Tree Preservation Order in a CDP |

| Value | Criteria |
|---|---|
| | <ul style="list-style-type: none"> • Resident or regularly occurring populations (assessed to be important at the County level) of the following • Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive • Species of animal and plants listed in Annex II and/or IV of the Habitats Directive <ul style="list-style-type: none"> • Species protected under the Wildlife Acts (1976-2018) and/or <ul style="list-style-type: none"> • Species listed on the relevant Red Data list • Sites containing areas of the habitat types listed in Annex I of the Habitats Directive that occur outside of designated International (SAC/SPA/Ramsar) or National (NHA/pNHA) sites • Regionally important populations of species or viable areas of semi-natural habitats or natural heritage features identified in a Biodiversity Action Plan (BAP) prepared for an administrative area, if this have been prepared • Sites containing natural habitat types with high biodiversity in a regional context and a high degree of naturalness, or populations of species that are uncommon within the County |
| <p style="text-align: center;">Local</p> | <ul style="list-style-type: none"> • Locally important populations of a priority or protected species; or habitats or features of natural heritage importance identified in a BAP, if this has been prepared • Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality • Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value |
| <p style="text-align: center;">Site</p> | <ul style="list-style-type: none"> • Sites containing small areas of semi-natural habitat that are of limited local importance for wildlife |

Table 8.2: Magnitudes of Effect upon Ecological Features

| Impact Significance | Magnitude of Effect | Criteria |
|-----------------------------|---------------------|--|
| Significant negative effect | Major adverse | <ul style="list-style-type: none"> Loss of, permanent damage to or adverse impact on any part of a site of international or national importance; Loss of a substantial part or key feature of a site of regional importance; Loss of favourable conservation status (FCS) of a legally protected species; Loss of or moderate damage to a population of nationally rare or scarce species. |
| | Moderate adverse | <ul style="list-style-type: none"> Temporary disturbance to a site of international or national importance, but no permanent damage; Loss of or permanent damage to any part of a site of regional importance; Loss of a key feature of local importance; A substantial reduction in the numbers of legally protected species such that there is no loss of FCS but the population is significantly more vulnerable; Reduction in the amount of habitat available for a nationally rare or scarce species, or species that are notable at a regional or county level. |
| | Minor adverse | <ul style="list-style-type: none"> Temporary disturbance to a site of regional value, but no permanent damage; Loss of, or permanent damage to, a feature with some ecological value in a local context but that has no nature conservation designation; A minor impact on legally protected species but no significant habitat loss or reduction in FCS; A minor impact on populations of nationally rare or scarce species or species that are notable at a regional or county level. |
| No Significant Effect | Negligible | <ul style="list-style-type: none"> No impacts on sites of international, national or county importance; |

| Impact Significance | Magnitude of Effect | Criteria |
|-----------------------------|---------------------|--|
| | | <ul style="list-style-type: none"> • Temporary disturbance or damage to a small part of a feature of local importance; • Loss of or damage to land of negligible nature conservation value; • No reduction in the population of legally protected, nationally rare, nationally scarce or notable (regional level) species on the site or its immediate vicinity. • Beneficial and adverse impacts balance such that resulting impact has no overall affect upon feature. |
| Significant positive effect | Minor beneficial | <ul style="list-style-type: none"> • A small but clear and measurable gain in general wildlife interest, e.g. small-scale new habitats of wildlife value created where none existed before or where the new habitats exceeds in area that habitats lost. |
| | Moderate beneficial | <ul style="list-style-type: none"> • Larger new scale habitats (e.g. net gains over 1 ha in area) created leading to significant measurable gains in relation to the objectives of biodiversity action plans. |
| | Major beneficial | <ul style="list-style-type: none"> • Major gains in new habitats (net gains of at least 10 ha) of high significance for biodiversity being those habitats, or habitats supporting viable species populations, of national or international importance cited in Annexes I and II of the habitats Directive or Annex I of the Birds Directive. |

8.2.7 Habitats Directive Appraisals

A Screening for Appropriate Assessment and a Natura Impact Statement (NIS) have been prepared by RPS on behalf of Monaghan County Council (MCC) to assist the competent authority in fulfilling its duties in accordance with Part XAB of the Planning and Development Acts 2000 to 2015 (the PDA) which transposes certain aspects of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC. These documents accompany the EIAR.

8.3 Baseline Environment

8.3.1 Designated Sites and Features of Natural Heritage Importance

The proposed development is not located within any designated site of international, national or local importance, furthermore the proposed development does not lie within proximity to any designated sites of natural heritage importance.

A number of designated sites do however lie within the wider area or are linked to the proposed development by an identifiable impact pathway.

Designated sites within 15km of the proposed development are illustrated on the accompanying EIAR Volume III –Technical Drawings & Figures, Figure 8.2 Designated Sites and Features of Natural Heritage Importance.

The closest designated site to the proposed development is the Wright’s Wood pNHA, which lies 1.6km to the west of the site at its closest point. A number of further pNHAs are located within 5km of the site, however all other designated sites are spatially separated from the proposals by distances greater than 10km.

The proposals are also hydrologically linked, via the Ulster Canal, River Cor and River Blackwater, to the Lough Neagh and Lough Beg SPA which forms a part of the UK National Site Network.

8.3.2 Biological Records

8.3.2.1 National Biodiversity Data Centre (NBDC)

A search of the existing records held by NBDC was undertaken. The search area was customised i.e. a ‘user-defined’ polygon was drawn capturing all records within circa (but no less than) 1km of each site. The output data (species list) was refined to include those afforded protection under national and international legislation. Also presented are species which have been assessed following International Union for the Conservation of Nature (IUCN) categories and criteria, and guidelines for their application. The customised search area in this instance measured 14km².

This user-defined polygon and refined output species list are presented in EIAR Volume II – Technical Appendices Appendix 8A of the EIAR.

Records include that of a large range of bird species, three records of common frog *Rana temporaria*, two records of smooth newt *Lissotriton vulgaris*, 22 records of white-clawed crayfish *Austropotamobius pallipes*, butterflies including the small heath *Coenonympha pamphilus* and wall *Lasiommata megera*, daubenton’s bat *Myotis daubentonii*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and leislers bat *Nyctalus leisleri*, 30 records of badger *Meles meles*, 12 records of red squirrel *Sciurus vulgaris*, four records of otter *Lutra lutra* and six records of hedgehog *Erinaceus europaeus*. A range of records of mosses, liverworts, insects, molluscs and other invertebrates were also returned.

8.3.2.2 Habitats

The proposed development site was subject to extended phase 1 habitat survey in February and June 2020.

A map illustrating the proposed development and the recorded habitats within the site can be found at EIAR Volume III –Technical Drawings & Figures, Figure 8.3.

Descriptions of the recorded habitats are set out below along with an evaluation of the relative value of these habitats, as per Table 8.1 of this EIAR Chapter.

Scrub

Areas of scrub are present throughout unmanaged areas of the proposed development site. This scrub comprises typically dense areas of unmanaged vegetation in addition to areas of scattered vegetation within tall ruderal and recolonising habitats.

Species comprising this habitat include bramble *Rubus fruticosus*, buddleia *Buddleja davidii*, grey willow *Salix cinerea*, elder *Sambucus nigra*, cotoneaster *Cotoneaster horizontalis*, honeysuckle *Lonicera periclymenum*, cherry laurel *Prunus laurocerasus*, garden privet *Ligustrum ovalifolium*, hawthorn *Crataegus monogyna*, immature sycamore *Acer pseudoplatanus* and immature ash *Fraxinus excelsior*.

This habitat is considered to be of ecological value at the **site level**.

Scattered trees

A range of scattered trees, both coniferous and broadleaved, are present within the proposed development site. These are of varying ages with only a few large and mature trees present.

Coniferous trees are limited to a number of large, mature lawson cypress *Chamaecyparis lawsoniana*.

Broadleaved scattered trees include a number of mature sycamore, in addition to a single mature hybrid black poplar *Populus nigra* and a number of immature species including cherry laurel, sycamore, ash, sweet gum *Liquidambar styraciflua*, beech *Fagus sylvatica*, small-leaved lime *Tilia cordata*, alder *Alnus glutinosa*, and horse chestnut *Aesculus hippocastanum*.

These features are considered to be of ecological value at the **site level**.

Hedgerows

A number of hedgerows are present within the proposed development site including a number which support ornamental plant species. These features are largely unmanaged and include the following species, sycamore, honeysuckle, ivy, bramble, garden rose species *Rosa sp.*, flowering currant *Ribes sanguineum*, garden privet, barberry *Berberis darwinii*, cherry laurel, ash, hawthorn and elder.

These features are largely comprised of a range of non-native species, with limited presence of native woody species and as such they are considered to be of ecological value at the **site level**.

Tall Ruderal

Areas of tall ruderal habitat are present within unmanaged former gardens to the south of buildings along Dublin Street. These areas typically support a very limited range of species and grade into adjacent areas of scrub and recolonising vegetation.

Species present include butterbur *Petasites hybridus*, rosebay willowherb *Chamerion angustifolium*, common nettle *Urtica dioica*, broad-leaved dock *Rumex obtusifolius* and nipplewort *Lapsana communis*.

These areas are considered to be of ecological value at the **site level**.

Amenity planting

Small areas of amenity planting are present in several areas within the proposed development site, including areas of landscaped public space in addition to former gardens.

These areas support a limited range of species including variegated holly *Ilex aquifolium*, silver birch *Betula pendula*, hebe *Hebe rakaiensis*, snowdrops *Galanthus sp.*, daffodil *Narcissus pseudonarcissus*, bluebell *Hyacinthoides non-scripta*, montbretia *Crococsmia x crocosmiiflora* and tutsan *Hypericum androsaemum*.

These areas are of ecological value at the **site level**.

Amenity grassland

A few small areas of amenity grassland are present within the proposed development site. These are subject to regular mowing and support a limited range of common and widespread species.

Species present include perennial rye-grass *Lolium perenne*, Yorkshire fog *Holcus lanatus*, cock's-foot *Dactylis glomerata*, annual meadow-grass *Poa annua*, creeping bent *Agrostis stolonifera*, red fescue *Festuca rubra*, broad-leaved dock, dandelion *Taraxacum officinale agg.*, white clover *Trifolium repens*, creeping buttercup *Ranunculus repens*, ragwort *Senecio jacobaea*, groundsel *Senecio vulgaris*, common mouse-ear *Cerastium fontanum*, hairy bittercress *Cardamine hirsutum*, spear thistle *Cirsium vulgare*, herb Robert *Geranium robertianum* and cow parsley *Anthriscus sylvestris*.

This habitat is of ecological value at the **site level**.

Recolonising bare ground

Areas of recolonising bare ground are present throughout the backlands of Dublin Street, which likely represent historical gardens and yards which have fallen into disuse. These areas of habitat transition into adjacent areas of scrub, tall ruderal and hardstanding habitats.

These areas support a variable sward height largely dominated by short ephemeral perennial vegetation in addition to areas of pioneer grassland and sparse tall ruderal vegetation with occasional scattered scrub.

Species present within this habitat include annual meadow-grass, Yorkshire fog, reed canary grass *Phalaris arundinacea*, perennial rye-grass, red fescue, cock's-foot, creeping bent, broad-leaved willowherb *Epilobium montanum*, nipplewort, lesser celandine *Ficaria verna*, colts-foot *Tussilago farfara*, ragwort, groundsel, tutsan, montbretia, dandelion, bramble, common nettle, hedge woundwort *Stachys sylvatica*, broad-leaved dock, rosebay willowherb, herb Robert, white clover, red clover *Trifolium pratense*, cotoneaster, Himalayan honeysuckle *Leycesteria formosa*, ivy *Hedera helix*, hairy bittercress, cow parsley, spear thistle, smooth sow-thistle *Sonchus oleraceus*, daisy *Bellis perennis*, hogweed *Heracleum sphondylium*, goat willow *Salix caprea* and buddleia.

This habitat is considered to be of ecological importance at the **site level**.

Hardstanding

Most of the proposed development site is comprised of bare hardstanding, comprised of tarmac, gravel and concrete. These areas include public walkways, car parks and private yards and unvegetated, however in places areas are subject to colonisation by a range of short ephemeral perennial vegetation.

This habitat which makes up the majority of the site, is of **negligible** ecological value.

Buildings

The proposed development site includes a number of buildings, along Dublin Street and the backlands, comprising residential, commercial and mixed use structures.

These buildings are in variable condition and are generally of negligible intrinsic ecological value. It was noted that several species of birds were nesting or potentially nesting within or on these structures.

Several structures were assessed as having low potential for roosting bats, as discussed within the Bat Survey Report (please refer to EIAR Volume II – Technical Appendices, Appendix 8C for details).

Buildings within the proposed development site are of generally of limited intrinsic interest and are considered to be of **site level** ecological value.

Japanese knotweed

The proposed development site supports six stands of Japanese knotweed. These are of variable age and size and are detailed individually within the accompanying Invasive Species Management Plan (ISMP) (EIAR Volume II – Technical Appendices, Appendix 8B).

These areas support minimal other species including a number of those detailed within the recolonising, tall ruderal and scrub descriptions.

This species will be managed to ensure compliance with relevant legislation. Please refer to EIAR Volume II – Technical Appendices, Appendix 8B for details on the management strategies which shall be utilised to ensure legal compliance and control of the species. These measures will include the application of herbicide treatment and subsequent removal of stands of the species using either an on-site cell formation and burial or excavation and removal of the material off-site.

8.3.2.3 Protected Species: Bats

The proposed development site has been subject to survey for bats, as detailed within the appended Ecological Survey for Bats (EIAR Volume II – Technical Appendices, Appendix 8C).

In summary the proposed development site was not recorded to support roosting bats. The site does however provide limited opportunities for foraging and commuting bats including common pipistrelle, soprano pipistrelle and Leisler's bat.

It is therefore considered that the proposed development site is of ecological importance for bats at the **local level**.

8.3.2.4 Protected Species: Birds

The proposed development site was recorded to support a limited range of bird species during the extended phase 1 habitat survey of the site. Species recorded include jackdaw *Corvus monedula*, magpie *Pica pica*, hooded crow *Corvus cornix*, wood pigeon *Columba palumbus*, blackbird *Turdus merula*, robin *Erithacus rubecula*, wren *Troglodytes troglodytes*, dunnoek *Prunella modularis*, great tit *Parus major*, blue tit *Cyanistes caeruleus*, house sparrow *Passer domesticus*, starling *Sturnus vulgaris*, black-headed gull *Chroicocephalus ridibundus* and herring gull *Larus argentatus*. It is also noted that buildings within the site, including a number of buildings which are to be retained within the proposed development, support nesting swift *Apus apus*.

The range of habitats supported within the site are considered to be of limited significance for birds, with buildings within the site supporting nesting gulls, corvid species, swift and starling.

8.4 Impact Assessment

8.4.2 Assessment of Construction Effects

8.4.2.1 Designated Sites and Features of Natural Heritage Importance

The proposed development at the construction stage will involve no works within any site designated on account of its natural heritage interest.

The proposed development site is sufficiently distant from designated sites in the locality to ensure that no indirect effects upon these sites will arise as a result of the proposals. It is noted however that the proposed development site is hydrologically connected to the Lough Neagh and Lough Beg SPA, via a number of intervening watercourses.

Construction phase impacts upon the Lough Neagh and Lough Beg SPA are only associated with the hydrological link supported between this SPA and the proposed development site, via the Ulster Canal and the River Blackwater, and relate to the accidental release of chemicals, pollutants or sediments into the freshwater environment, in addition there is potential for spread of the invasive species Japanese knotweed into the terrestrial elements of the SPA via this hydrological connection.

The potential operational phase impacts upon the Lough Neagh and Lough Beg SPA relate to the potential release of petrochemical fuels and other contaminants into the freshwater environment.

Such potential impacts at construction stage are considered to be **moderate adverse** and **significant**, in the absence of mitigation.

Potential impacts upon the Lough Neagh and Lough Beg SPA, in addition to further European sites have been subject to assessment in line with the requirements of the Habitats Directive within the accompanying Natura Impact Statement (NIS).

8.4.2.2 Habitats

The proposed development, at construction stage, will give rise to the loss of the majority of semi-natural habitats within the site including all areas of scrub, tall ruderal, amenity planting, amenity grassland, recolonising bare ground and a number of scattered coniferous and broadleaved scattered trees and hedgerows.

The proposals will largely retain areas of unnatural habitat within the site including buildings and hardstanding, however some losses to these habitats will occur.

All habitats within the proposed development site were considered to be of ecological importance at the **site level** only. As such the loss of these features which will occur as a result of the proposals will be **negligible** and **not significant**.

8.4.2.3 Bats

A terrace of buildings along Dublin Street (No. 8-11), are proposed to be demolished at construction phase of the proposed development, to facilitate the creation of a new civic space and a link from Dublin Street to the backland area and proposed church walk. No. 8-11 were considered to have potential to support roosting bats and were subject to emergence/re-entry survey for these species. No roosting bats were recorded in these buildings.

No other buildings, structures or trees with potential to support roosting bats will be lost as a result of the proposed development.

The proposed development will give rise to the loss of small areas of habitat which are likely to be of some limited value for foraging and commuting bats, however similar habitats for these species are available in the wider locality. The potential impacts on bats arising at construction stage are considered to be **negligible** and **not significant**.

8.4.2.4 Birds

The proposed development will give rise to the loss of a range of habitats including scrub, scattered trees, hedgerows and amenity planting with potential to support nesting birds, including a range of common and widespread species. Furthermore buildings within the proposed development site were noted to support nesting starling and swift.

It is not considered that the loss of habitats required in order to facilitate the proposed development would have potential to give rise to significant effects upon the local populations of bird species of conservation concern.

In the absence of mitigation, the construction stage of the proposed development has potential to impact upon nesting bird species, through the destruction of nests or disturbance caused during the proposed demolition of buildings and clearance of scrub and other vegetation.

Such impacts are considered to be **moderate adverse** and **significant** in the absence of mitigation.

8.4.3 Assessment of Operational Effects

8.4.3.1 Designated Sites and Features of Natural Heritage Importance

The proposed development, at the operational stage, will be spatially separated from all local designated sites of natural heritage importance.

Potential impacts upon the Lough Neagh and Lough Beg SPA, are predicted to be limited to the potential for inputs of petrochemical fuels and other chemical contaminants into the freshwater environment during the operational phase of the project. This will involve the functioning of the site in a manner broadly consistent with the current use of the proposed development site.

Operational effects of the proposed development upon designated sites, in the absence of mitigation, are therefore considered to be **moderate adverse** and **significant**.

8.4.3.2 Habitats

The proposed development, which will not involve the loss of habitat or other potential impacts to habitats during operation, has no potential to give rise to any operational impacts upon habitats within the site.

Impacts are therefore considered to be **negligible and not significant**.

8.4.3.3 Bats

The prevailing character of the area as an urban settlement will remain in the event that the plan is implemented. Additional public lighting shall be required on the site, however this will not be out of character with the existing nature and pattern of development.

The site is considered to be of relatively low importance for bats. It is therefore concluded that the proposed development will not give rise to any operational phase impacts upon bats.

Impacts are therefore considered to be **negligible and not significant**.

8.4.3.4 Birds

The proposed development will not involve the loss or impacts to any habitats during the operational stage and as such has no potential to give rise to any operational impacts upon birds within the site.

Impacts are therefore considered to be **negligible and not significant**.

8.4.4 Assessment of Cumulative Effects

The proposed development has been assessed in regard to the potential for cumulative biodiversity impacts to arise in-combination with other local planning applications, as set out at Table 1.2, within Chapter 1 of the EIAR.

Given the limited nature of the impacts upon biodiversity which are predicted to arise in association with the proposed development, in addition to the mitigation measures which are set out in Section 8.5 below, it is not envisaged that the proposed development would have potential to give rise to any further potential significant effects when considered cumulatively with the nearby assessed projects.

8.4.5 Inter-relationships

The assessment in this chapter of the potential of the proposed development to give rise to impacts upon hydrologically linked designated sites is linked to the assessments set out in Chapters 5: Flood Risk and Drainage and 6: Water Quality of the EIAR. Mitigation measures in respect of such potential impacts are largely drawn from the recommendations set out in these chapters.

The proposed landscape planting proposals, as referenced below in respect of mitigation, are drawn from Chapter 14 Townscape and Visual of the EIAR.

8.5 Mitigation

8.5.1 Designated Sites and Features of Natural Heritage Importance

The proposed development has limited potential to give rise to significant effects upon the Lough Neagh and Lough Beg SPA, via the supported hydrological links to the application site. Potential impacts are limited to the input of chemicals, pollutants and sediments into the freshwater environment, in addition to the potential for spread of a single invasive species, Japanese knotweed.

In respect of the potential for the proposals to give rise to the accidental release of chemical contaminants, pollutants and sediments into the freshwater environment, a range of mitigation measures are proposed to mitigate the identified potential effects upon designated sites.

Mitigation measures will include the requirements for best practice and adherence to the following relevant Irish guidelines and recognised international guidelines:

- Good practice guidelines on the control of water pollution from construction sites developed by the Construction Industry Research and Information Association (CIRIA, 2001);

- Netregs Guidance for Pollution Prevention series (GPP), Pollution prevention guidelines (PPGs) in relation to a variety of activities developed by the Environment Agency (EA), the Scottish Environmental Agency (SEPA) and the Northern Ireland Environment Agency (NIEA);
 - GPP2: Above Ground oil storage tanks
 - PPG3: use and design of oil separators in surface water drainage
 - GPP5: Works and maintenance in or near water
 - PPG6: Working at construction and demolition sites
 - GPP8: Safe Storage and disposal of used oils
 - GPP13: Vehicle washing and cleaning
 - PPG20: Dewatering underground ducts and chambers
 - GPP21: Pollution incident response planning
 - GPP22: Dealing with spills
- Fisheries Guidelines for Local Authority Works. Department of Communications, Marine & Natural Resources, Dublin, (Anonymous, 1998);
- Guidelines on protection of fisheries habitats during construction projects (Eastern Regional Fisheries Board, 2006); and
- Control of Substances Hazardous to Health (COSHH) Handling of Hazardous Materials.

The use of oils and chemicals on-site will receive significant care and attention. The following procedures will be followed to reduce the potential risk from oils and chemicals:

- Fuel, oil and chemical storage will be sited on an impervious base within a bund and secured. The base and bund walls must be impermeable to the material stored and of adequate capacity. The control measures in GPP2: Above Ground Oil Storage Tanks and PPG 26 “Safe storage – drums and intermediate bulk containers” (Environment Agency, 2011) shall be implemented to ensure safe storage of oils and chemicals;
- The safe operation of refuelling activities shall be in accordance with PPG 7 “Safe Storage – The safe operation of refuelling facilities” (Environment Agency, 2011).

Subject to implementation of the above mitigation measures it is considered that any potential effects associated with water quality, including pollutants and sediments, can be fully mitigated.

In respect of the potential of the proposed development to give rise to the inadvertent spread of invasive species into the Lough Neagh and Lough Beg SPA, via the supported hydrological pathway, it is noted that the proposed development will be undertaken in line with the appended Outline Invasive Species Management Plan (oISMP) (Please refer to EIAR Volume II – Technical Appendices, Appendix 8B for details). This document sets out the various approaches which may be utilised in order to control or eradicate Japanese knotweed recorded within the site, depending upon the context of these stands.

Subject to the appropriate implementation of this oISMP it is envisaged that any potential effects associated with the inadvertent spread of invasive species, will be fully mitigated.

8.5.2 Habitats

No significant effects upon habitats are predicated as a result of the proposed development. It is noted that landscape planting will involve the provision of scattered trees which will provide some opportunities for native birds and invertebrates.

8.5.3 Bats

No significant impacts upon bats are predicted as a result of the proposed development. As such no mitigation measures are proposed.

It is recommended that the scheme provide ecological enhancement for this group through the provision of bat boxes within the scheme design. This would provide additional roosting opportunities for bats post development.

8.5.4 Birds

The proposed development has potential to give rise to significant effects upon nesting bird's species which are likely to utilise habitats including scrub, scattered trees, hedgerows, amenity planting and buildings within the application site.

In order to avoid any significant impacts upon birds all site clearance, in addition to demolition of buildings, will take place during the period 1st September to 28th February which is outside the breeding season for those bird species that are likely to breed on the site. Should clearance works be required within this period these works will be preceded by an inspection by a suitably qualified ecologist to ascertain the potential for impacts upon nesting birds. This will avoid any direct impacts of the proposed development on breeding birds.

It is recommended that the scheme provide ecological enhancement for this group through the provision of nest boxes within the scheme design which will provide nesting opportunities for birds post development.

8.6 Summary of Effects & Conclusion

The proposed development has extremely limited potential to give rise to significant impacts upon natural heritage and biodiversity receptors. Predicted potentially significant impacts are limited to potential water quality and habitat deterioration effects through the accidental release of sediments or pollutants into the freshwater environment, in addition to the potential spread of invasive species upon the hydrologically linked Lough Neagh and Lough Beg SPA; and the potential for disturbance of nesting birds during the construction phase.

A summary of the predicted effects and proposed mitigation is set out below at Table 8.3.

No residual effects on natural heritage and biodiversity are predicted as a result of the proposed development.

Table 8.3: Summary Table of Likely Environmental Effects on Natural Heritage and Biodiversity Pre and Post Mitigation

| Receptor | Sensitivity of receptor | Description of Effect | Duration | Magnitude | Magnitude of Effect | Significant Not significant | Significant or Not significant Post Mitigation |
|---|-------------------------|--|------------|-----------|---------------------|-----------------------------|--|
| Construction phase | | | | | | | |
| Designated Sites of Natural Heritage Importance | High | Water quality and habitat deterioration: release of sediments or pollutants into the freshwater environment. | Short term | Medium | Moderate adverse | Significant | Not significant |
| Designated Sites of Natural Heritage Importance | High | Invasive species: inadvertent spread of Japanese knotweed to hydrologically linked sites. | Short term | Medium | Moderate adverse | Significant | Not significant |
| Birds | Medium | Destruction of bird nests or disturbance to nesting birds. | Short term | Medium | Moderate adverse | Significant | Not significant |
| Operational phase | | | | | | | |
| Designated Sites of Natural Heritage Importance | High | Water quality and habitat deterioration: release of sediments or pollutants into the freshwater environment. | Short term | Medium | Moderate adverse | Significant | Not significant |

8.7 Limitations of the Assessment

The above EclA has been undertaken on the basis of findings reached through a range of surveys undertaken in line with relevant industry guidelines. It is not considered that there were any particular limitations to the assessment which took account of the findings of these surveys, which are likely to have significantly affected the outcome of the assessment.

8.8 References

BSI (2013) *BS 42020:2013 Biodiversity: Code of practice for planning and development*.

CIEEM (2015) *Guidelines for Ecological Report Writing*, Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland, Terrestrial, Freshwater and Coastal and Marine*, Technical Guidance Series, Version 1.1, Chartered Institute of Ecology and Environmental Management, Winchester

CIEEM (2019) *Code of Professional Conduct*, Chartered Institute of Ecology and Environmental Management, Winchester.

EPS (2022) *Guidelines on the information to be contained in Environmental Impact Assessment Reports*

Fossitt, J. (2000) *A Guide to Habitats in Ireland*. Heritage Council, Kilkenny.

Heritage Council (2011) *Best Practice for Habitat Survey and Mapping*, The Heritage Council.
[best_practice_guidance_habitat_survey_mapping_onscreen_version_2011_8mb.pdf \(heritagecouncil.ie\)](https://www.heritagecouncil.ie/sites/default/files/2011-08/best_practice_guidance_habitat_survey_mapping_onscreen_version_2011_8mb.pdf)

NRA (2009) *Guidelines for Assessment of Ecological Impacts of National Road Schemes*, revision 2, National Roads Authority, Dublin.

NRA (2009) *Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes*, National Roads Authority, Dublin.

Chapter
09

**Traffic and
Transportation**

CHAPTER 9 - TRAFFIC AND TRANSPORTATION

9.1 Introduction

This Chapter of the EIAR considers the potential impacts on traffic and transportation. It outlines the key issues and provides an overview of the likely significant effects of the proposed development on transportation.

The scoping report and subsequent scoping study was used as a basis of initial consultation with the transportation related statutory authorities including Monaghan County Council (MCC) as the statutory road authority and Transport Infrastructure Ireland (TII) as the relevant authority for the strategic road network, including the N54 national secondary route, the closest strategic road to the site.

This Chapter is supported in EIAR Volume II Technical Appendices by:

- Appendix 9A Scoping Study;
- Appendix 9B RSA Stage 1;
- Appendix 9C Existing Traffic Flows;
- Appendix 9D Committed & Base Traffic Flows;
- Appendix 9E Generated & Proposed Traffic Flows;
- Appendix 9F Threshold Analysis Percentage Impact.

9.2 Methodology

A Traffic and Transportation Assessment (TTA) chapter was prepared to assess the traffic impact assessment as a result of the scheme. The key aim of the EIAR TTA chapter is to determine the potential impacts of the improved street works and the introduction of a new access on Dublin Street for all relevant modes of transport.

This section outlines the methodology and parameters undertaken as part of the EIAR TTA to support the development application, which was prepared in accordance with the relevant guidance as set out in Section 9.2.4. MCC have defined a set of objectives for the scheme. Specifically, for traffic and sustainable travel, these are summarised as:

- Provide for a fine urban grain to optimise permeability and access for pedestrian, cyclist and vehicular circulation and ensure that the public realm is characterised by high quality materials such as paving, street furniture, lighting, and planting.
- Create an urban structure which facilitates convenient pedestrian access to amenities and services by facilitating new routes for pedestrians, cyclists, and vehicular movement, which contribute to ease of movement and connect existing and new spaces, Charles Gavan Duffy Place, Church Walk, The Mall, and Courthouse Square.
- Reinforce identity and sense of place by promoting the development of character areas related to uses, focal points and heritage buildings. Courthouse Square has the potential to act as a multi-functional space, including car parking (as per its existing use), a temporary event space, farmers market etc. Charles Gavan Duffy Place can provide a space for outdoor seating, benefiting from a southerly orientation. Farney Road and The Mall can integrate with pedestrians and a cycleway through the town centre. The new public spaces should add to the sense of place and cultural identity of the Town.
- Enhance the existing public realm on Dublin Street, with design for improved pedestrian use and appropriate accommodation for cyclists, vehicular access, services, and on-street parking.

9.2.1 Study Area

9.2.1.1 Existing Site Layout

The site location in the context of Monaghan Town and the surrounding road network is presented in **Figure 9.1**.

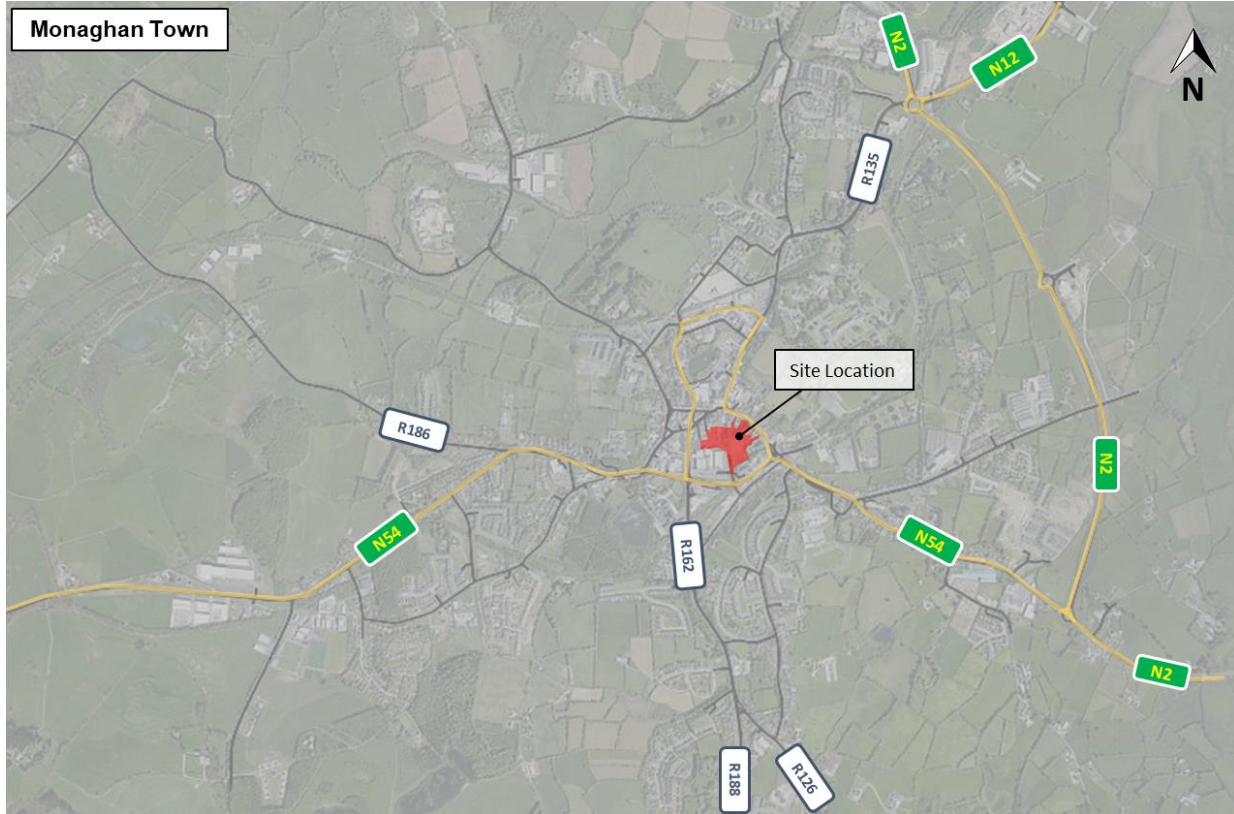


Figure 9.1 – Site Location in the context of Monaghan Town and surrounding road network

9.2.2 Baseline

To determine the baseline (existing) traffic conditions within the study area, new classified Junction Turning Count (JTC), queue, and Automatic Number Plate Recognition (ANPR) surveys were undertaken by MHC Traffic Ltd. on Thursday 14th October 2021, for the JTC, queue and ANPR surveys; and between 11th-18th October 2021 for Automatic Traffic Count (ATC) surveys.

The parameters of the traffic surveys, including junctions considered within the study area and peak network hours identified to be carried forward within the traffic impact assessment are discussed in Section 9.5.

9.2.3 Consultation

As part of the overall EIAR, a scoping report was issued to An Board Pleanála (ABP) in Dec 2020. Following the EIAR scoping report response from ABP, a scoping study was prepared and issued to MCC Roads Department and TII. The scoping report set out the methodology and parameters of the EIAR TTA chapter. A copy of the scoping report and response is presented in EIAR Volume II – Technical Appendices Appendix 9A.

ABP set out within their response that the EIAR TTA (under Material Assets) chapter should consider the following:

- An assessment of the cumulative impact of existing and permitted developments in the vicinity.

- Impacts during construction and operational phases of the development should also be described and assessed by reference to baseline information which should be collected and presented.
- Provide details regarding proposed routes to and from the site, in particular during the construction phase.
- An accessibility assessment should be undertaken describing the permeability of the site with surrounding areas and the traffic arrangements which will facilitate such permeability, including pedestrian and cycle traffic.

A further scoping report was issued to MCC as summarised in EIAR Volume II – Technical Appendices Appendix 9A.

9.2.4 Assessment Criteria and Assignment of Significance

In order to assess the impact of the development proposals in relation to all relevant modes of travel, reference to the following guidelines was undertaken.

- Transport Infrastructure Ireland TTA guidelines, May 2014
- Spatial Planning and National Roads, January 2021
- Monaghan County Development Plan 2019-2025
- Monaghan Land Use and Transportation Study, March 2018
- Monaghan County Council Traffic & Transport Assessment Guidelines; and
- Monaghan Walking & Cycling Strategy, October 2021

9.3 Baseline Environment

9.3.1 Existing Site Accesses

The site is located within Monaghan town centre, with the main vehicular access points provided via a four-arm priority junction on the N54 Macartan (Broad) Road to the south of the site and a segregated entry / exit priority junction at Church Square located to the north. The access points are linked via an internal road which provides access to the short term and long-term car parks. Additional pedestrian / cycle only access points are provided via Dublin Street as shown in **Figure 9.2**.

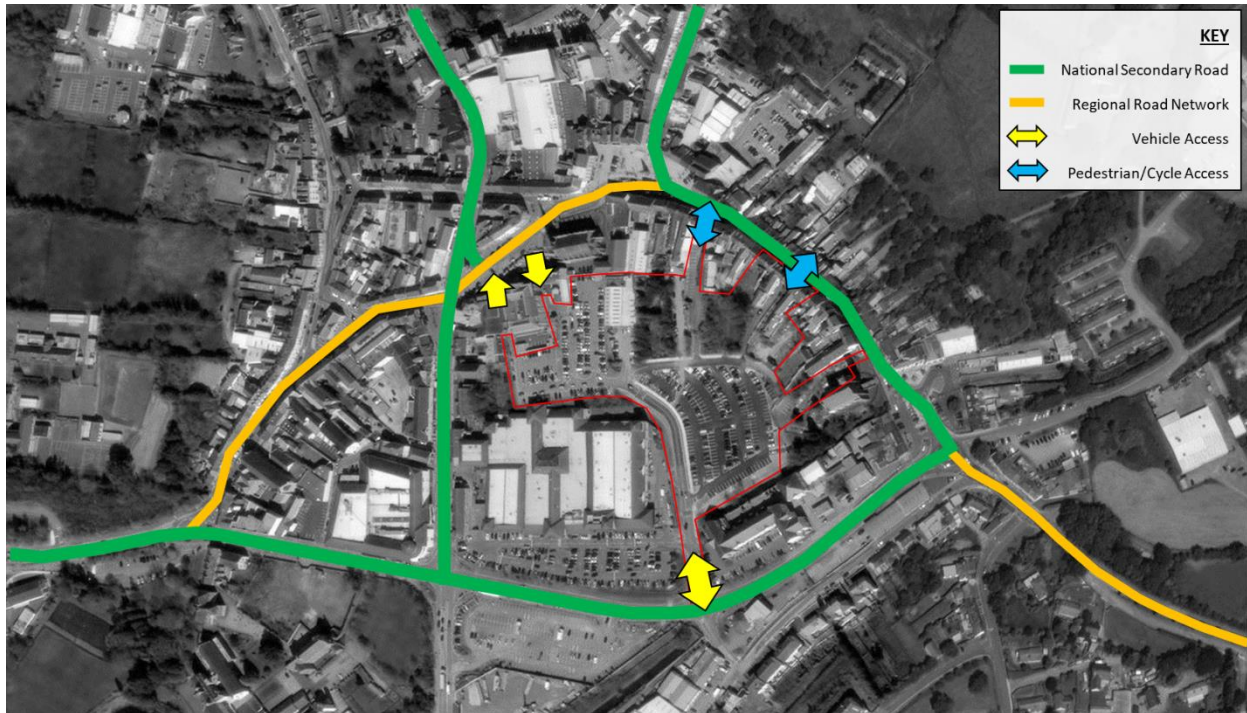


Figure 9.2 – Existing Site Access Points

9.3.2 Accessibility Assessment

A baseline accessibility assessment was undertaken to establish the existing transport provision serving the site and its surrounds. The assessment considered travel by sustainable modes of transport including walking, cycling and public transport; and provides an assessment of available infrastructure and service provision. It also recognises that walking and cycling are main modes of transport but are also secondary modes of travel for public transport users. The accessibility assessment was also informed via site visits throughout January 2020 to October 2021.

9.3.2.1 Pedestrian Facilities

As the site is located within an existing urban centre, pedestrian facilities are well established. **Figure 9.3 & 9.4** illustrate a 400m, 800m and 1600m walking catchment from the site, which equates to an approximate walking journey time of 5, 10 and 20 minutes respectively, and is considered as a reasonable walking journey time to local amenities. A 5-10minute walking catchment is also considered as a reasonable distance to the nearest bus stop provision.

It can be seen from **Figure 9.3** that the core town centre and all its amenities, together with a number of existing residential areas and public transport facilities can be accessed within a 10-minute walking distance from the centre of the site.

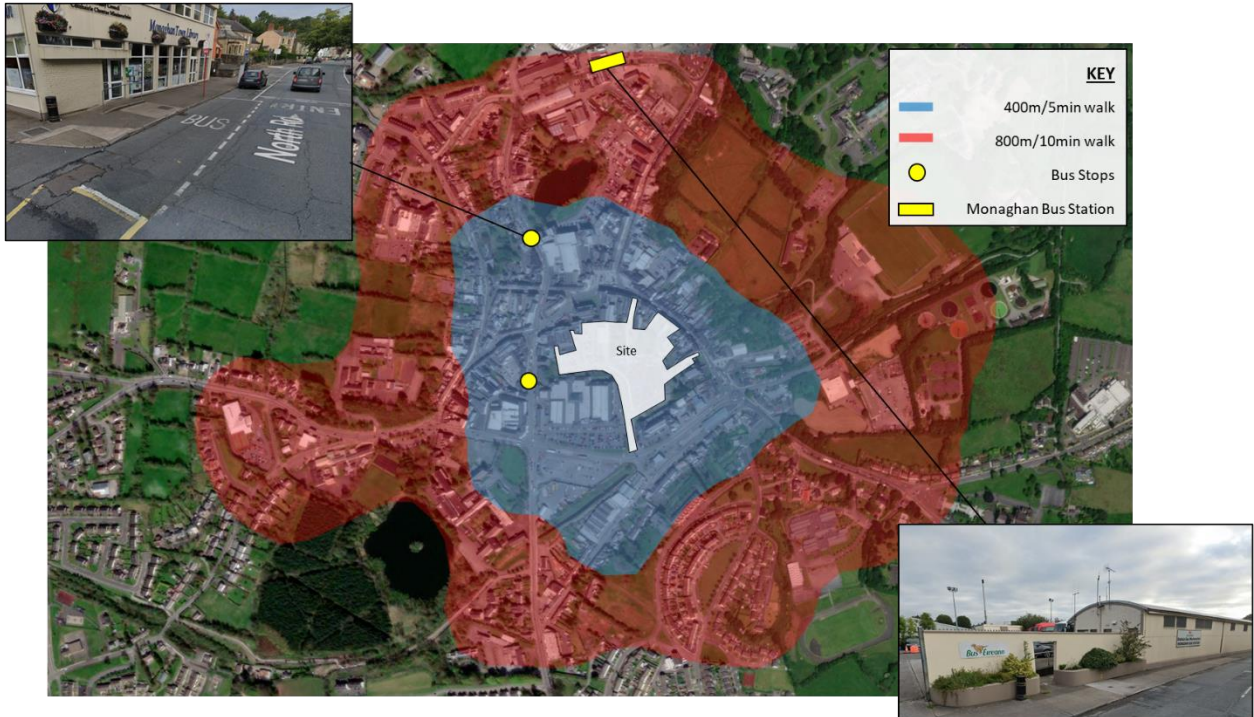


Figure 9.3 - Walking catchment and public transport facilities within a 5 to 10-minute walk

Figure 9.4 illustrates that the majority of Monaghan Town and surrounding residential areas can access the site within a 20-minute walk based on existing available waling routes.



Figure 9.4 – Walking catchment with 20-minute walk

As the site is located within an established urban centre, there are a number of available walking routes from all directions to the site access points identified in **Figure 9.2**. There are several designated pedestrian-controlled and uncontrolled crossing facilities surrounding the site as illustrated in **Figure 9.5**.

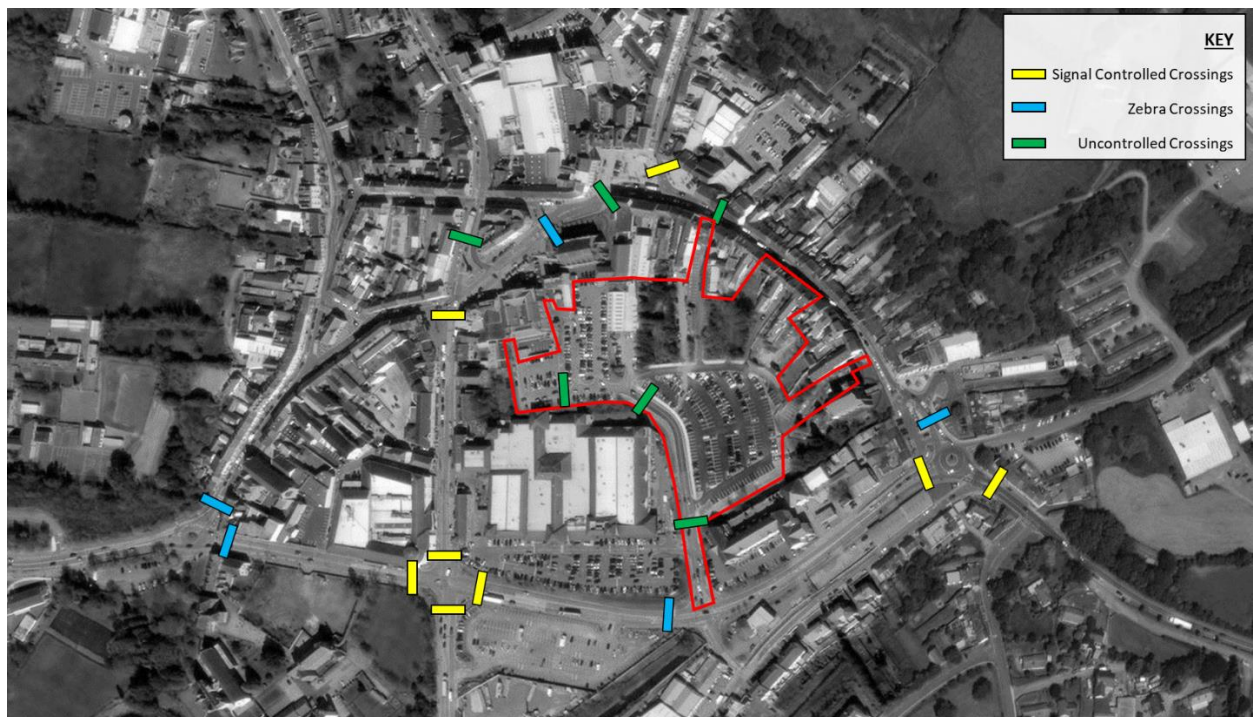


Figure 9.5 – Pedestrian crossing locations within Monaghan Town Centre

Pedestrian controlled crossings take the form of signalised push-button and Zebra crossings, whereas uncontrolled crossings generally take the form of dropped kerb and refuge island pedestrian crossings located at key pedestrian desire lines. Most of the pedestrian crossing points surrounding the site take the

form of pedestrian-controlled crossings. There are four pedestrian access points serving the site: two via the main vehicular access points off the N54 Macartan (Broad) Road and Church Square, and two pedestrian access points off Dublin Street as shown in **Figure 9.6**.



Figure 9.6 – Pedestrian facilities at existing site access points

The Monaghan Walking & Cycling Strategy states that currently 22% of commuters within Monaghan Town do so by foot, compared with 27% in Ballybay and 34% in Clones. The provision of dedicated pedestrian facilities within the site and improvements to the pedestrian access on Dublin Street will enhance pedestrian accessibility to and within the site, as shown in **Figure 9.7** and **9.8**.

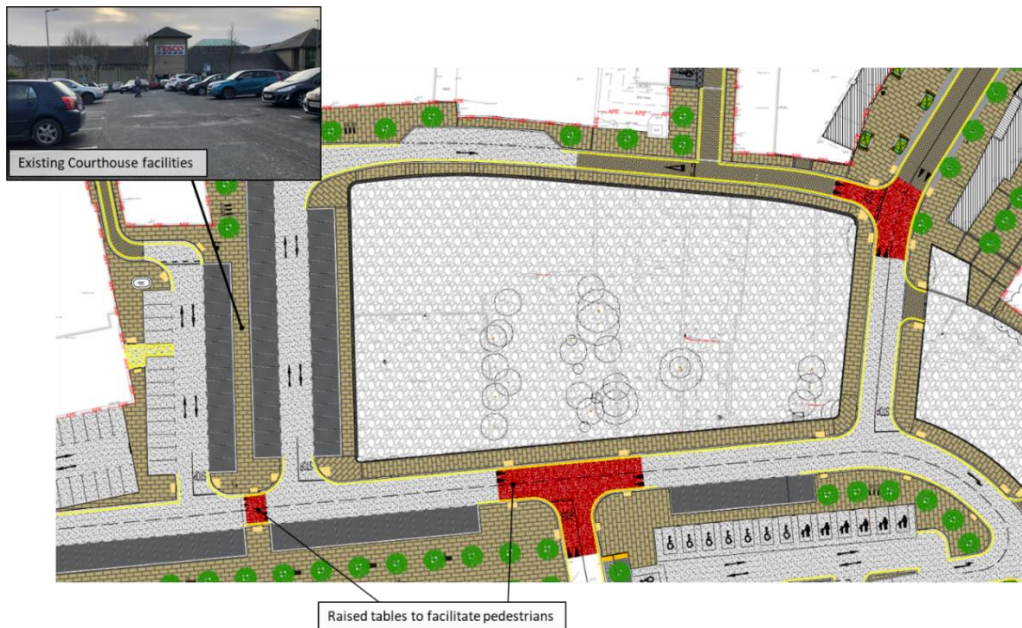


Figure 9.7 – Example of enhanced pedestrian facilities within the site

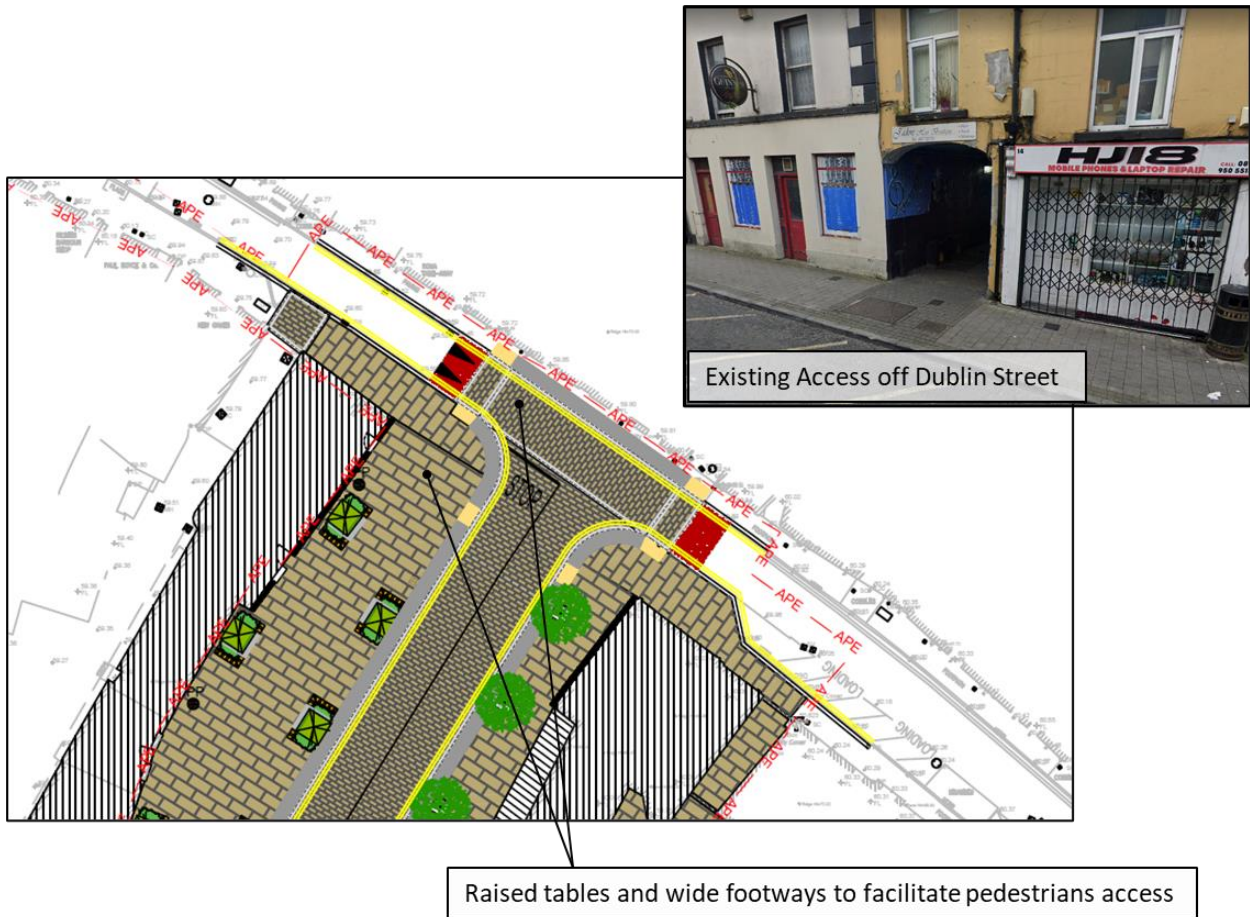


Figure 9.8 – Example of enhanced pedestrian facilities off Dublin Street via Charles Gavan Duffy Place

The site is well served by pedestrian facilities, and it is anticipated that the existing and proposed facilities will cater for pedestrians associated with the development proposals.

9.3.2.2 Cycling Facilities

A 10-minute cycling catchment generally translates to a distance of 2.5 kilometres, which is considered as a reasonable cycle journey time for local trip, therefore it is considered that all of Monaghan Town can easily be accessed within a 10-minute cycle journey of the site. Furthermore, the Ulster Canal Greenway is located in close proximity to the site, off Castle Road as shown in **Figure 9.9**.

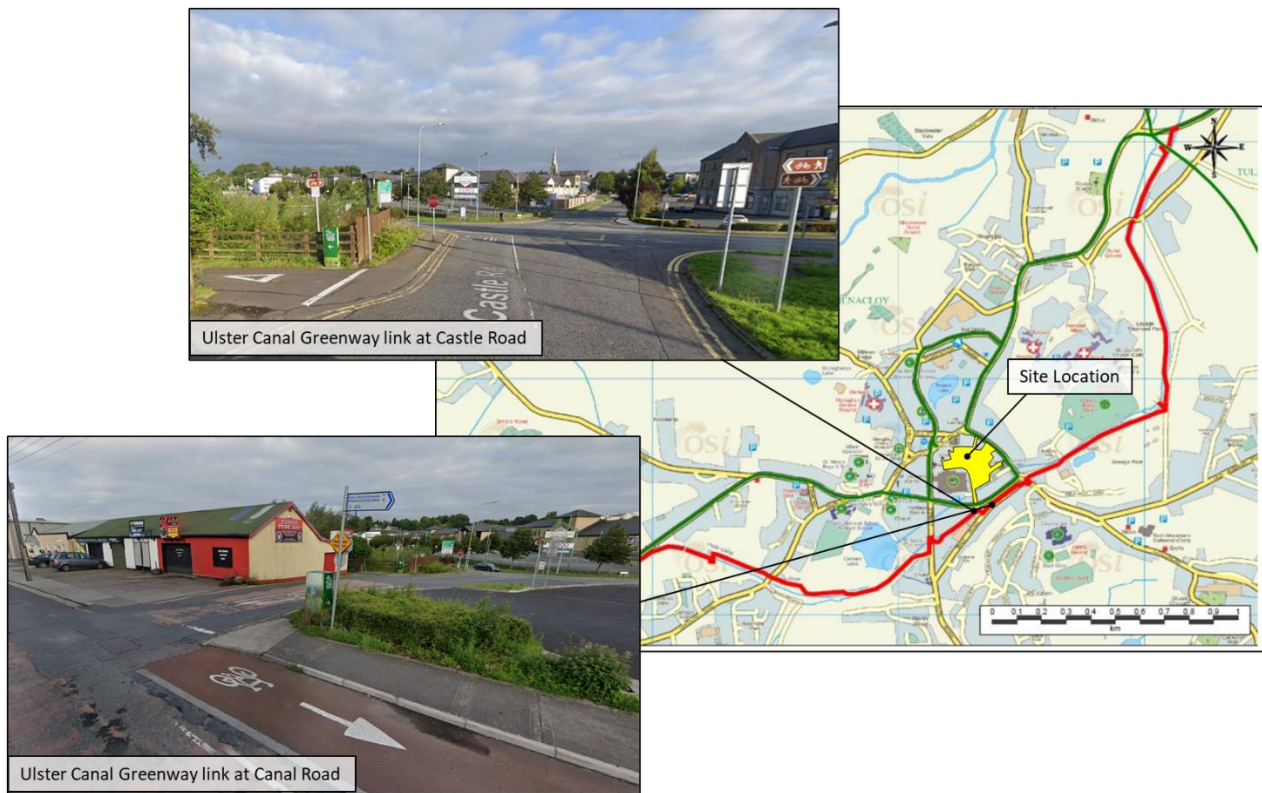


Figure 9.9 – Location of Ulster Canal Greenway in relation to the site

The proximity of the site to the Ulster Canal will further encourage access to the site by bike, which will be enhanced by the development proposals. New cycleways are proposed along Farney Road as shown in **Figure 9.10**. These will help facilitate cycling movements to and through the site in line with Monaghan Council’s cycling strategy.



Figure 9.10 – Proposed Cycle facilities along Farney Road

As part of the development proposals, sufficient cycle parking facilities will also be provided and will be located close to building entrance points.

9.3.2.3 Public Transport Facilities

There are no changes to public transport facilities as part of the development proposals, with the site proposed to be catered for using existing provision. A review of public transport infrastructure surrounding the site was undertaken and is presented below.

The nearest bus stops to the site are located on the Dawson Street and North Road, within a 5-minute walk of the site as shown in **Figure 9.3**. The main bus operator serving the site is Bus Éireann, within the bus stops near the site providing direct services between the site and settlements of Cavan, Clones, Ballyhaise Scotstown, Knockatallon and Castleblayney, with a number of services arriving in Monaghan before 9am, making it a viable alternative to private car travel for commuters.

The bus stops adjacent to the site provide good opportunities for customers / staff within a wider catchment to access the site. Furthermore, Monaghan Bus Station is located within a 10-minute walk from the site, providing access to a number of wider and cross boarder settlements, including Drogheda, Ardee, Carrickmacross, Omagh, Letterkenny and Dublin (including links to Dublin Airport).

Based on the information presented above it can be concluded that the site is well served by existing public transport facilities and is a viable alternative to private car travel to the site.

9.3.2.4 Private vehicle access

Vehicular access to the site will continue to be provided via a modification of the existing priority junction on the N54 Macartan (Broad) Road and via a new priority junction off Dublin Street as discussed earlier. It is proposed that improvements will be made to pedestrian facilities in the form of dropped kerbs with tactile paving facilities along the site frontage. The site access proposals are set out in Section 9.4.

9.4 Access Proposals

9.4.1 Proposed Site Accesses

This section considers the measures which will be implemented as part of the overall development to influence the use of sustainable modes of transport and help minimise the need for private vehicle trips. The design and layout of the development will facilitate ease of access to public transport, support walking and cycling and meet the needs of people with disabilities and others whose mobility is impaired through adherence to current design guidelines. The development proposals recognise opportunities to encourage use of sustainable modes of travel by:

- Promoting cycling and walking as viable sustainable transport modes for all members of the community; and
- Providing, where possible, traffic free pedestrian and cycle routes, especially where they would facilitate more direct, safer and pleasant alternatives to those used by the private car.

The street names identified in the text and Figures below, and in the proposed development designs, were proposed within the Dublin Street Regeneration Plan 2017 and carried through to the South Dublin Street & Backlands Regeneration Project. The applicant acknowledges that the naming of streets is an important part of any development process and following a grant of approval, is committed to engaging with Elected Members regarding the final street names. For the purposes of the EIAR and the project description, the street names proposed in the Regeneration Plans are retained within the proposed development design drawings and documents for ease of cross-reference and reference.

The proposed development urban realm and street network improvements comprise the creation of a new street to be called **Charles Gavan Duffy Place**, connecting the backlands area to Dublin St. It will require the demolition of buildings/properties and the design of associated retaining structures and boundary treatments, to facilitate the creation of the new street and its new 3-arm priority junction with Dublin Street.

The creation of new street to be called **Church Walk**. This will connect the east/west axis of the regeneration area and provide potential access to the future central development site. The realignment of

Castle Road from the south towards the site from the N54 Macartan (Broad) Road and renaming this road **Farney Road**. The upgrade of the **Courthouse** car park to provide improved pedestrian facilities. The realignment of the **Lower Courthouse** car park to the east of the site will also make provision for the realigned Farney Road and include provision of electric vehicle charging points. The creation of a high-quality pedestrian and cycle network through the scheme and the creation of future development plots in the centre and west of the site. The proposed internal street alignment and network is illustrated in **Figure 9.11**.

Throughout the scheme, footpath widths will vary from a minimum width of 2m, to widths greater than 5m. Pedestrian plaza areas have been provided to the west of Farney Road and within backland areas to the north east of the scheme. Plaza areas and footpaths (where width is sufficient) will feature street furniture to encourage people to stay within these pedestrian areas. Pedestrian crossing points have been provided throughout the scheme at pedestrian desire lines identified by the design team and the independent Road Safety Audit team. All pedestrian crossings points will be uncontrolled and are based on creating a heightened sense of awareness for drivers to the presence of pedestrians. It is envisaged that the area will become pedestrian dominated and allow for free-flowing pedestrian movement through raised table and courtesy crossing points.

The staggered junction of The Mall/Farney Road and The Mall/Charles Gavan Duffy Place will require vehicles to stop or travel slowly at these locations when moving through the site. This will be assisted using 4.5m corner radii at these junctions which will also slow vehicles down. A shared surface is proposed at the northern section of Charles Gavan Duffy Place which will allow for civic events to be held in this location and create a comfortable shopping environment when the area is fully developed. Corduroy tactile paving will be provided at the edge of the carriageway to warn those with visual impairments to the potential hazard of the vehicles. This tactile paving will also provide a colour contrast for partially sighted users to define pedestrian and vehicle areas.



Figure 9.11 – Proposed Internal Street Network and Alignment

Planting will be used at the edge of carriageway to visually differentiate pedestrian footpaths from the shared surface area in the carriageway and encourage pedestrians to stay within the footpath areas. This will be achieved using moveable tree planter boxes on the western side and fixed tree planting on the eastern side. The movable planters can be moved to create unobstructed space during civic events when road closures are in place along Charles Gavan Duffy Place. Formal pedestrian crossing points will be provided at either end of the shared surface to encourage formalised crossing.

9.4.1.1 Dublin Street / Charles Gavan Duffy Place priority junction

As Dublin Street will continue to operate as a one-way road, the new priority junction will take the form of a right-in / right-out vehicular movements only. The junction of Dublin Street and Charles Gavan Duffy Place will be a new junction designed in accordance with DMURS. Dublin Street is a single lane one-way eastbound carriageway which will remain as existing. Where the new Charles Gavan Duffy Place road meets Dublin Street, it will be two-way allowing vehicles turn from Dublin Street southbound and from Charles Gavan Duffy Place eastbound only. This junction will be a priority junction with priority given to Dublin Street traffic with traffic on Charles Gavan Duffy Place having to stop before entering Dublin Street. A raised table is proposed to be constructed at this junction with two uncontrolled pedestrian crossings constructed in the north to south/south to north direction and one in the east to west/west to east direction.



Figure 9.12 – Dublin Street / Charles Gavan Duffy Place proposed layout

9.4.1.2 N54 Macartan Road / Farney Road priority junction

The N54 Macartan (Broad) Road forms part of the Monaghan to Cavan National Road. The existing junction of the N54 Macartan (Broad) Road and Farney Road will receive upgrades to pedestrian and cycle facilities as illustrated on the **Figure 9.13**, with a reduction in the carriageway width on Farney Road to facilitate pedestrian movements. The existing vehicular traffic arrangement at this junction will be maintained and no realignment of the N54 is proposed.



Figure 9.13 – N54 Macartan Road / Farney Road proposed layout

Segregated cycle tracks are proposed along Farney Road as shown in **Figure 9.13**. In the northbound direction, the cycle track will terminate at the plaza area on the western side of Farney Road where cycle parking facilities will be provided. In the southbound direction, cyclists will be required to walk their bicycles across Farney Road at the pedestrian crossing provided adjacent to the cycle parking facility, before mounting and using the segregated cycle track in the southbound direction. This cycle track will terminate at the location of the courtesy crossing on Farney Road, due to land take boundary constraints and a lack of connecting cycle facilities on the N54 Macartan (Broad) Road. Cyclists will be able to utilise the existing Zebra crossing on the N54 Macartan (Broad) Road to access the Ulster Canal Greenway located off Castle Road from the site.

9.4.1.3 The Mall & Church Walk

The realigned junction of the Farney Road and The Mall will form part of a staggered junction with Charles Gavan Duffy Place and The Mall. This junction will see significant pedestrian upgrades, with an east to west/west to east and two north to south/south to north pedestrian crossings along a raised table. The junction of Charles Gavan Duffy Place and The Mall will be a new junction designed in accordance with DMURS. Corner radii at these junctions are 4.5m to help reduce vehicle speeds. The priority at this junction will be given to the east to west/west to east traffic along The Mall and will require the traffic along Farney Road and Charles Gavan Duffy Place to stop before tuning on to The Mall.

The new junction of Charles Gavan Duffy Place and Church Walk will be a priority junction with Charles Gavan Duffy Place having main priority. Church Walk will be exit only to Charles Gavan Duffy Place with no left turn permitted for HGVs to exit on to Dublin Street. Corner radii at the southern corner of Church Walk and Charles Gavan Duffy Place has been set at 6m to allow for the swept path of service vehicles and the northern corner has been set at 4.5m to make it less attractive for HGVs to use this route.



Figure 9.14 – The Mall & Church Walk proposed layout

Footways are provided on both sides of the carriageway within the internal access road, with raised tables provided to facilitate pedestrian crossings between the car parks and adjacent footways leading to the main shopping centre. There is an additional pedestrian only access provided via Dublin Street, located adjacent to the Monaghan County Council office building.

9.4.2 Parking Provision

As there is no quantum of new floorspace proposed as part of the development, there will be no additional parking provided as part of the development. The development proposals do, however, propose to reduce the level of car parking within the site, with the spaces reallocated for urban realm and to facilitate walking and cycling to/from and within the site. As part of the development proposals, a total of 57 car parking spaces will be removed from the area. These spaces have been removed to maximise permeability of the site for walking and cycling.

There are 393 car parking spaces currently provided within the application site. These include 240 spaces associated with the Lower Courthouse and 153 spaces located at the Courthouse. The car parks consist of a mixture of long and short stay parking with a split of approximately 53% (209) long stay and 47% (184) short stay spaces available.

New Parent & Baby Spaces have been identified on the northern boundary of the Lower Courthouse car park. The reconfiguration of spaces has also facilitated a consolidation of the existing disabled bay parking spaces and allowed for the provision of Electric Vehicle (EV) charging points.

As part of their wider car parking strategy, it is understood that MCC intends to bring forward proposals under Part 8 Planning and Development Regulations 2001-2021 for a Council-operated car park on the former Eircom site, between the Margaret Skinner Roundabout N54 Macartan Road / Glen Road / Dawson Street signalised junction. The aspiration is to deliver this car park on site by Q1 or Q2 of 2023. The potential for a new MCC operated car park at this location could be a suitable replacement for the reduction of parking provision within the site, if required.

9.4.3 Servicing

All existing accesses to properties not subject to CPO will be retained at their existing locations. Access roads within car parks will be realigned and have two-way traffic flow along a 6m width carriageway. Deliveries to the central development site will be provided via Church Walk only and a loading bay has been

provided here to assist this. It is envisaged that Church Walk will be predominantly an access road only and through traffic will not be encouraged to use the route.

9.4.4 Collision Data

Collision data within the scheme extents and immediate surrounds was examined from data available on the RSA website (<https://www.rsa.ie/>) between 2005 and 2016. There were two minor injury collisions within the scheme extents. One minor injury collision involving a pedestrian occurred on Dublin Street in 2011, and another occurred on the N54 Macartan (Broad) Road in 2014 near the existing pedestrian crossing. It is considered, therefore, that there are no major existing safety issues that are required to be addressed.

9.4.5 Road Safety Audits

A Road Safety Audit (RSA) was undertaken against the proposed development layout to assess the pedestrian and vehicle user safety and is presented in EIAR Volume II – Technical Appendices Appendix 9B, with a number of potential issues identified for consideration. The RSA was undertaken by two TII approved auditors and all potential issues and recommendations were addressed by the designer and subsequently carried forward within the finalised design layout.

9.5 Traffic Impact Assessment

9.5.1 Assessment of Construction Effects

It is estimated that the proposed construction work will take approximately 24 months to complete on site. Subject to the allocation of funding, land acquisition and the grant of planning approval, it is hoped that construction can commence in 2023.

Although there is no contractor appointed at this stage of the scheme, a review of the anticipated volumes of construction traffic and likely routes to access the site is set out below. It is anticipated that construction traffic would utilise the strategic road network to access the site via the N2 to the north and east, and N54 to the west. The construction traffic will then access the site via the existing priority junction access with Farney Road. This follows existing HGV movements observed via the new traffic counts undertaken to inform the study. The construction traffic HGV access routes are presented in **Figure 9.15**.

Once appointed, the contractor will prepare a Construction Traffic Management Plan, to be agreed with the local authority; however, it is predicted that the following construction traffic will temporarily access the site during the construction period (up to 2025).

It is envisaged that the earthworks stage will produce the greatest volume of HGV traffic as material is taken off site. To calculate the potential temporary construction traffic generated during the peak construction phase, it is assumed that HGV vehicles will be used to remove the material. These are estimated to leave the site in 13-minute intervals to allow time to manoeuvre in and out of the construction site and travel through traffic on the surrounding road network to the associated licenced waste site.



Figure 9.15 – Construction Traffic HGV routes

This results in approximately 27 HGVs entering and leaving the site over a 6-hour period as a worst case, and which is considered to be robust considering the operation of construction site over an 8-hour period including breaks. This worst case would not be consistent throughout the entire construction period and is to signify a peak construction activity scenario. Furthermore, it is anticipated that this temporary HGV traffic will only access the site during off-peak commuter times, i.e., after 9am and before 5pm.

The construction traffic operation times will be agreed with the local authority during the appointment of a contractor and through the preparation of the Construction Traffic Management Plan.

9.5.2 Assessment of Cumulative (Committed) Development

A review of the Monaghan County Council Planning portal was undertaken to determine if there are any other significant generators of traffic within the vicinity of the proposed development site which have received planning approval but are yet to be constructed. It was noted that planning permission was granted for a potential foodstore located at McNally's Car Park site. The traffic flows for this development were extracted from the traffic impact assessment undertaken by TPS Ltd. and added to the network to form the Base (cumulative assessment) scenario. The traffic flows associated with the foodstore development are presented in EIAR Volume II – Technical Appendices Appendix 9D.

The resulting Base traffic flows (as PCUs) within the study area to be carried forward within the traffic impact assessment are presented in EIAR Volume II – Technical Appendices Appendix 9D.

9.5.3 Assessment of Operational Effects

Although there are currently good pedestrian and public transport facilities which will serve the site and within an acceptable walking distance, private car trips will still provide a portion of trips to / from the site and therefore a traffic impact assessment is required within this EIAR TTA.

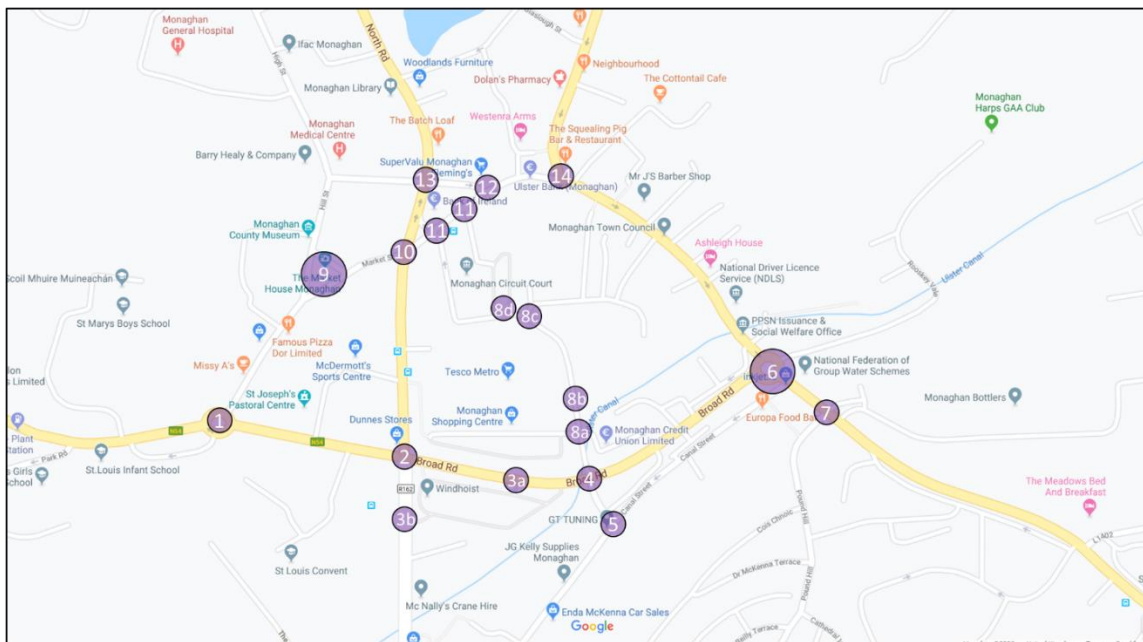
This section describes the methodology used to assess the impact of the traffic redistributed by the proposed development on the local road network. Based upon the guidance set out within the TII's TTA guidelines and CIHT traffic impact assessment guidelines, for the purposes of assessing the traffic impact

of the development, the expected opening year plus future design years were used. For the purpose of the traffic impact assessment, an opening year of 2025 was assumed. As there will be no uplift in development floorspace as part of the proposals, there is no new vehicular traffic proposed to be generated by the development. The introduction of the new access on Dublin Street, will however, result in some localised redistribution as set out below and which forms the basis of the traffic impact assessment.

9.5.3.1 Existing Traffic Flows

In order to determine existing traffic flows in the vicinity of the site, new classified traffic turning count and queue surveys were undertaken by MHC Traffic Ltd between 0700 to 1000 and 1400 to 1900 on Thursday 14th October 2021 at the locations shown in **Figure 9.16**. From these surveys it was determined that the morning and evening peak hours were as follows:

- Morning peak: 0815-0915; and
- Evening peak: 1715-1815.



| J. No. | Junction Name |
|--------|---|
| 1 | N54 Clones Road / Market Road / Park Street roundabout |
| 2 | N54 Market Road / Broad Road / Glen Road signalised junction |
| 3a/b | a) N54 Broad Road / McNally's Car Park priority junction b) Glen Road / McNally's Car Park priority junction |
| 4 | N54 Broad Road / Castle Road / Castle Street priority junction |
| 5 | Canal Street / Mall Road / Go Petrol Station priority junction |
| 6 | N54 Broad Road / Dublin Street / Old Cross Square / Canal Street Rbt |
| 7 | Old Cross Square / Pound Hill priority junction |
| 8a-d | a) Castle Road / Retail Park / Credit Union access b) Castle Street / Lower Courthouse Car Park (s) access c) Castle Street / Lower Courthouse Car Park (n) access d) Castle Street / Upper Courthouse Car Park access |
| 9 | Market Street / Park Street gyratory priority junction |
| 10 | Dawson Street / Church Square / Market Street signals / priority |
| 11 | Church Square / Car Park Exit & Car Park entrance |
| 12 | Church Square / Mill Street priority junction |
| 13 | North Road / Mill Street signals / priority junction |
| 14 | Dublin Street / The Diamond / Glaslough Street / Car Park priority junction |

Figure 9.16 - Location of Junction Turning Counts and Queue Surveys

The surveyed junctions presented in **Figure 9.16**, to be taken forward within the traffic impact assessment, were then converted to Passenger Car Units (PCUs) using the conversion factors from the Transport for London (TfL) Traffic Modelling Guidelines as shown in **Table 9.2**.

Table 9.1: Vehicle to PCU Conversion Factors

| TfL Vehicle to PCU Conversion Factors | | | | | | |
|---------------------------------------|-----|-----|-----|------|------|-----------|
| P/C | M/C | Car | LGV | OGV1 | OGV2 | Bus/Coach |
| 0.2 | 0.4 | 1 | 1 | 1.5 | 2.3 | 2 |

The Existing traffic flows (as PCUs) within the study area to be carried forward within the traffic impact assessment are presented in EIAR Volume II – Technical Appendices Appendix 9C.

9.5.3.1.1 Assessment Years

For the purposes of assessing the traffic impact, it is assumed that the proposed development will be constructed and operational by 2025. Future assessment years of 2030 (opening year + 5 years) and 2040 (opening year + 15 years) are therefore considered at the new Dublin Street / Charles Gavan Duffy Place priority junction, in line with relevant guidelines.

9.5.3.1.2 Traffic Growth

The Chartered Institute of Highways and Transportation (CIHT) Guidelines for traffic impact assessments makes the following comments to the application of traffic growth:

- Paragraph 3.7.12 of the CIHT guidelines indicates that:

‘local data should be used where possible, whether it be based on trip-end model predictions or a trends-based projection of historic traffic counts’. The paragraph also indicates that ‘trend data on its own cannot provide a realistic forecasting model. Hence the procedure often adopted is to compare trend data with National Road Traffic Forecasts and use this comparison to predict into the future’.
- Paragraph 3.1.17 of the CIHT guidelines properly highlights that applying growth onto the surrounding network and then adding development traffic could result in some double counting and therefore an over estimation of traffic flows.
- *National Road Traffic Forecasts* are also based on ‘annual average traffic flows’ and paragraph 3.7.14, bullet point 5, of the CIHT guidelines indicates that evidence suggests that peak hour activity is not increasing at a similar rate to off peak traffic levels.

Therefore, the application of any traffic growth during the peak hour periods could result in a significant overestimation of future year traffic volumes. However, for the purposes of this assessment, it is proposed to use the Transport Infrastructure Ireland (TII) Central Growth rates as indicated in **Table 9.3**. The surveyed traffic flows were converted to Passenger Car Units (PCU) using the conversion factors from the Transport for London Traffic Modelling Guidelines as shown in **Table 9.2**.

As TII guidelines do not provide growth factors for PCUs, the factors in **Table 9.3** were established by using the percentage Heavy Vehicles (HV) observed from the new traffic count surveys in EIAR Volume II – Technical Appendices Appendix 9C. PCUs are the standard format of assessing traffic within approved modelling software packages LinSig V.3 (for signalised junctions) and Junctions 9 (for priority and roundabout junctions).

Table 9.2: Traffic Grow Rates

| Central Growth Rate Factors | | | |
|-----------------------------|-------|-------|-------|
| | LV | HV | PCU |
| 2021-2025 | 1.035 | 1.078 | 1.037 |
| 2021-2030 | 1.096 | 1.220 | 1.101 |
| 2030-2040 | 1.048 | 1.118 | 1.051 |

The Existing traffic flows (as PCUs) within the study area with the growth factors applied and up to the assessment years to be carried forward within the traffic impact assessment are presented in EIAR Volume II – Technical Appendices Appendix 9C.

9.5.3.1.3 Trip Distribution

As well as having new traffic turning count and queue to inform the study, Automatic Number Plate Recognition (ANPR) surveys were also undertaken in October 2021 to establish existing traffic route patterns to access the site via Farney Road and Church Square. These included traffic route observations from Glaslough Street and Mill Street/Church Square, that are likely to be redistributed via the new access on Charles Gavan Duffy Place. A number of vehicles were also observed travelling through the site and these have also been considered within the redistribution assessment.

Traffic flow diagrams illustrating the existing traffic on the network and the level of traffic likely to be diverted via the new Dublin Street / Charles Gavan Duffy Place (GDP) access during the morning and evening peak hours are presented in EIAR Volume II – Technical Appendices Appendix 9E, with an example of the predicted redistribution of traffic from Glaslough Street to the site via Charles Gavan Duffy Place during the evening peak hour, observed from the ANPR survey is illustrated in **Figure 9.17**.

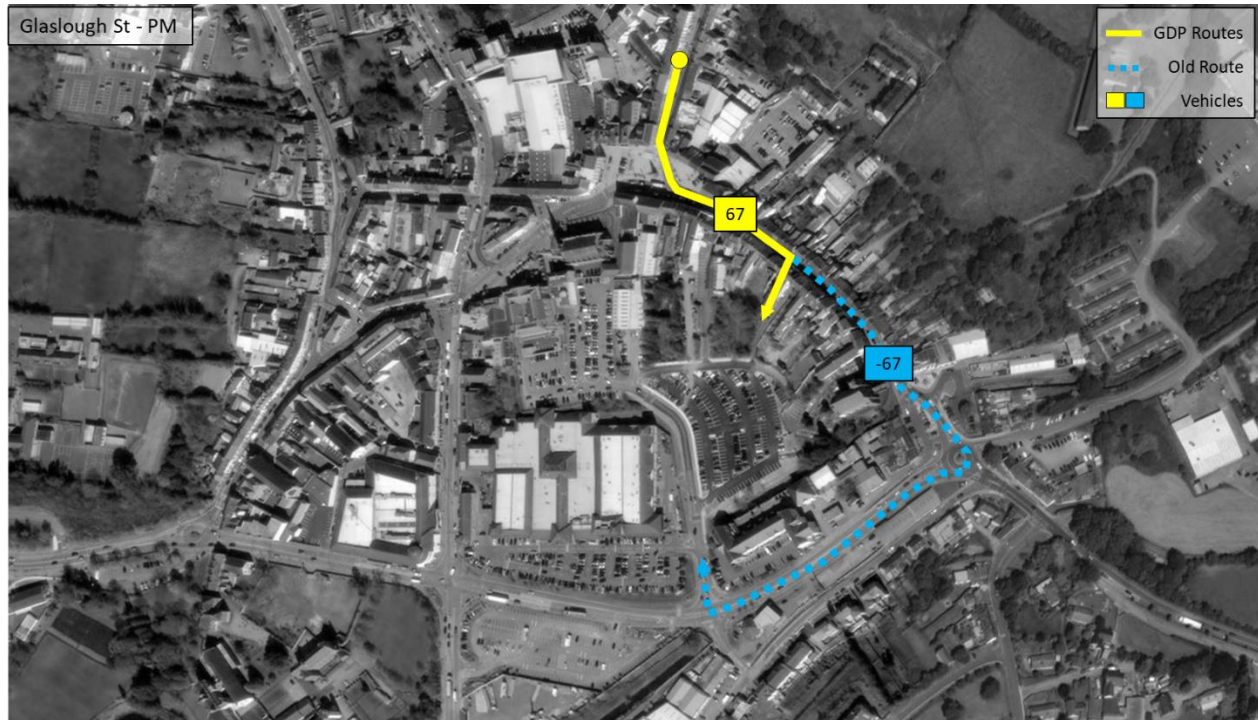


Figure 9.17 – Example of evening peak diverted traffic on Dublin Street

The Generated (existing traffic redistributed as a result of the new access) and resulting Proposed traffic flows (Base + Generated scenarios) to be carried forward within the traffic impact assessment are presented in EIAR Volume II – Technical Appendices Appendix 9E.

9.5.3.1.4 Threshold Analysis

In order to determine which junctions are to be carried forward for detailed analysis within the traffic impact assessment, a 10% threshold level was considered in line with TII guidelines. However, following the scoping discussions with MCC Roads it was determined that a traffic impact threshold of 5% should be considered due to the proximity to the national secondary road network and to in order to provide a robust assessment. Any junctions that were found to have an impact of more than 5% were carried forward for detailed junction analysis, using the relevant junction capacity assessment tools, LinSig v.3 for signalised junctions (and priority junctions in close proximity) and Junctions 9 for priority junctions.

The threshold analysis within EIAR Volume II – Technical Appendices Appendix 9F demonstrates that only new Dublin Road / Charles Gavan Duffy Place priority junction demonstrate an impact of greater than 5%, with the Old Square Roundabout and N54 Macartan (Broad) Road demonstrating an overall reduction in traffic flows as a result of the new access at Charles Gavan Duffy Place, as traffic is diverted into the site at this location. The change in traffic flows at the junctions surrounding the site are shown in **Figure 9.18**.

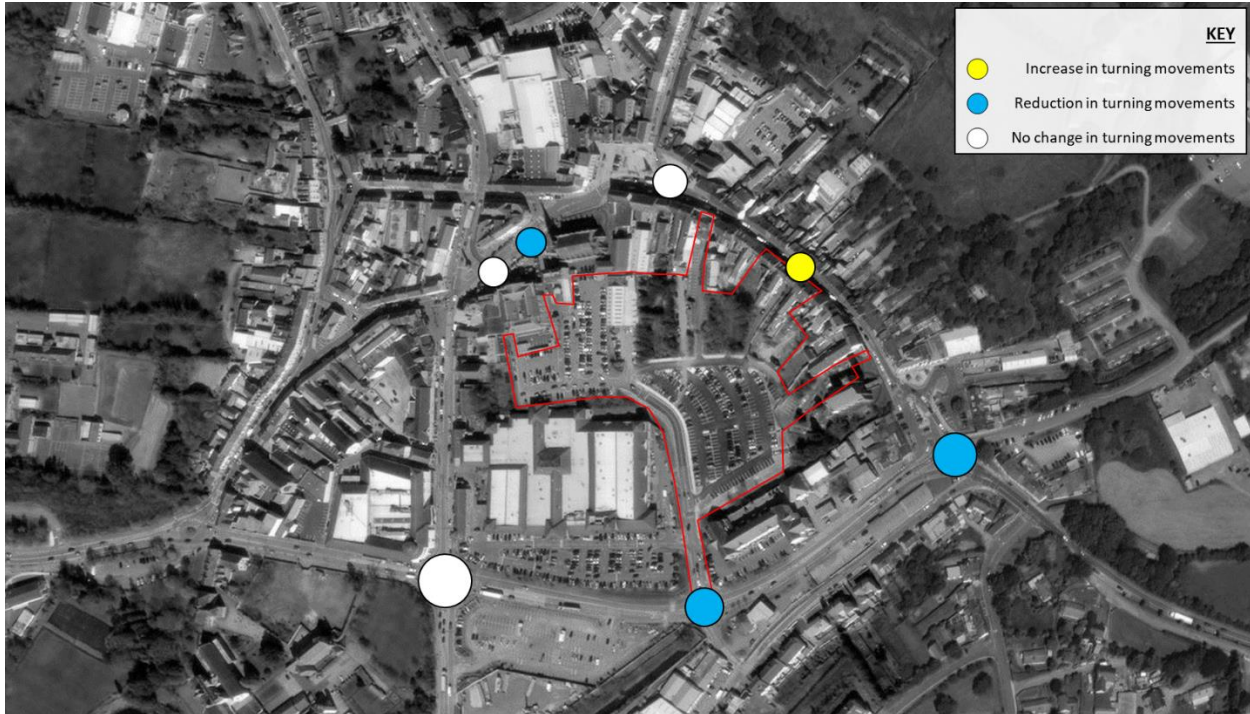


Figure 9.18 – Traffic impact resulting from the introduction of the Charles Gavan Duffy Place access

It is recognised, however, that the N54 Macartan Road / Dawson Street / Glen Road signalised junction suffers from localised congestion during peak periods. Given the proximity of this junction to the existing site access at Farney Road, reference to its operational capacity was also considered within the assessment. It is noted that there are no mitigation measures proposed to improve this junction as part of the development proposals; however, at the time of this application the junction is currently being upgraded by MCC to improve its operation, with works currently scheduled to be complete at the end of 2022.

9.5.3.1.5 Assessment Scenarios

In order to assess the operation of the road network in relation to the proposals, the scenarios considered within the traffic impact assessment for the weekday morning and evening peak periods were:

- 2021 Existing Scenario
- 2025 Existing Scenario (Opening Year)
- 2025 Base Scenario (Existing + Committed (Cumulative) Development)
- 2025 Proposed Scenario (Base + Generated)
- 2030 Proposed Scenario (Dublin Street / Charles Gavan Duffy Place junction only); and
- 2040 Proposed Scenario (Dublin Street / Charles Gavan Duffy Pace junction only).

9.5.3.1.6 Detailed Assessment Methodology

Analysis of the performance of the signalised and priority junctions was undertaken using the JCT and Transport Research Laboratory's (TRL) industry standard software LinSig v.3 and JUNCTIONS 9 respectively, which are the standard software packages for predicting capacity and queuing at signal and

priority-controlled junctions. The results of the analysis are presented in terms of percentage Degree of Saturation (DoS% - signals) maximum Ratio of Flow to Capacity (RFC - priority) with the corresponding vehicle queues reported as Mean Maximum Queue (MMQ).

A signalised junction is considered to be operating within capacity when all approach arms record a DoS% below 90%. A priority junction is considered to be operating within capacity when all approach arms record an RFC of 0.85 (85%) and below.

9.5.3.1.6.1 Dublin Street / Charles Gavan Duffy Place

This junction takes the form of a three-arm priority junction. The results of the capacity analysis for this junction are presented in **Table 9.4**, with the approach arms defined as follows:

Arm A: Dublin Street (south - north)

Arm B: Charles Gavan Duffy Place; and

Arm C: Dublin Street (north - south).

Table 9.3: Dublin Street / Charles Gavan Duffy Place priority junction modelling results

| Junctions 9 Modelling Results | | | | | | |
|-------------------------------|----------|---------------------------|-------------|-----|-------------|-----|
| | Link Ref | Link Description | AM Proposed | | PM Proposed | |
| | | | RFC | MMQ | RFC | MMQ |
| 2025 Proposed | B-AC | Charles Gavan Duffy Place | 0.05 | 0 | 0.19 | 0 |
| | C-AB | Dublin Street (n-s) | 0.21 | 1 | 0.38 | 1 |
| 2030 Proposed | B-AC | Charles Gavan Duffy Place | 0.05 | 0 | 0.19 | 0 |
| | C-AB | Dublin Street (n-s) | 0.22 | 1 | 0.39 | 1 |
| 2040 Proposed | B-AC | Charles Gavan Duffy Place | 0.05 | 0 | 0.19 | 0 |
| | C-AB | Dublin Street (n-s) | 0.22 | 1 | 0.40 | 1 |

The modelling results presented in **Table 9.4** demonstrate that the new site access junction is predicted to operate well within capacity with minimal/no queueing predicted for all assessment year scenarios considered.

9.5.3.1.6.2 N54 Macartan Road / Glen Road Signals / Farney Road Junction Linked LinSig

Due to the proximity of the N54 Macartan Road / Glen Road / Market Street / Dawson Street signalised junction to the site access at Farney Road, these junctions were also considered within the traffic impact assessment. The existing scenario models were calibrated using observed queueing (Obs. Q) data from the new traffic surveys and all feasible geometric parameters measured. The modelling results for all scenarios are shown in **Table 9.5**.

Table 9.4: N54 Macartan Road / Glen Road / Farney Road Linked LinSig – 2021 Existing Scenario

| LinSig Modelling Results – 190 second cycle time (observed) | | | | | | | | |
|---|------------|-------------------------|------------------|-----|-------------|------------------|-----|--------------|
| Junction | Link Ref | Link Description | 2021 AM Existing | | | 2021 PM Existing | | |
| | | | DOS% | MMQ | Obs. Q | DOS% | MMQ | Obs. Q |
| N54 Macartan Road / Glen Road / Dawson Street signals | 1/1+1/2 | N54 Macartan Road | 57.4% 57.4% | 14 | 18 | 49.0% 49.0% | 11 | 15 |
| | 2/2+2/1 | Glen Road | 76.8% 76.8% | 21 | 23 | 68.7% 68.7% | 18 | 18 |
| | 3/1+3/2 | N54 Market Road | 82.1% 82.2% | 14 | 12 | 71.8% 71.8% | 17 | 18 |
| | 4/2+4/1 | Dawson Street | 51.8% 51.8% | 7 | 5 | 73.1% 73.1% | 14 | 9 |
| | PRC | | | | 9.5% | | | 23.2% |
| | 1/1 | N54 Macartan Road (w-e) | 19.9 | 0 | 0 | 23.5% | 0 | 0 |

| LinSig Modelling Results – 190 second cycle time (observed) | | | | | | | | |
|---|---------|--------------------------------|----------------|---|---|----------------|---|---|
| N54 Macartan Road / Farney Road priority | 2/1+2/2 | N54 Macartan Road (e-w) | 32.2% 32.7% | 0 | 0 | 29.5% 29.5% | 0 | 0 |
| | 3/2+3/1 | Farney Road | 5.5% 5.5% | 0 | 0 | 24.1% 24.1% | 0 | 0 |
| | 4/1 | Castle Road | 3.9% | 0 | 0 | 12.0% | 0 | 1 |
| N54 Macartan Road / McNally Car Park / Foodstore | 1/1 | N54 Macartan Road (w-e) | 19.4% | 0 | 0 | 22.5 | 0 | 0 |
| | 5/1 | McNally's Car Park / Foodstore | 0.0% | 0 | 0 | 0.0 | 0 | 0 |

The modelling results presented in **Table 9.5** demonstrate that the N54 Macartan Road / Farney Road site access junction operates well within capacity at present. Although the N54 Macartan Road / Glen Road signalised junction operates within capacity during the morning and evening peak, it is observed from the model that some approach arms are operating near capacity with the max DoS% recorded as 82.2% on the N54 Market Street in the morning peak.

It was observed during the site visits and new traffic surveys undertaken in October 2021 that the signalised junction is currently operating with long cycle times, with an average of 190 seconds in the morning peak and 196 seconds in the evening peak. These are generally considered as long cycle times, particularly for urban signalised junctions.

Although it is considered outside the scope of this assessment, as the junction is below the threshold traffic impact resulting from the development, there is an opportunity to improve the signal junction operation through optimising the cycle time, or through the introduction of a dynamic cycle time signal operation (MOVA or similar). At present, MCC are in the process of upgrading these signals to a dynamic cycle time system, which is due to be complete by 2022.

Table 9.6 demonstrates the predicted operational impact if the junction cycle time was reduced to 90 seconds.

Table 9.5: N54 Macartan Road / Glen Road / Farney Road Linked LinSig – 2021 Existing (Optimised)

| LinSig Modelling Results – 90 second cycle time (LinSig Optimised) | | | | | | | | |
|--|----------|--------------------------------|------------------|-------------|----------------------|------------------|-------------|----------------------|
| Junction | Link Ref | Link Description | 2019 AM Existing | | | 2019 PM Existing | | |
| | | | DOS% | MMQ | Previous Q at 190sec | DOS% | MMQ | Previous Q at 196sec |
| N54 Macartan Road / Glen Road / Dawson Street signals | 1/1+1/2 | N54 Macartan Road | 71.5% 71.5% | 8 | 14 | 58.4% 58.4% | 6 | 11 |
| | 2/2+2/1 | Glen Road | 77.9% 77.9% | 11 | 21 | 80.2% 72.8% | 10 | 18 |
| | 3/1+3/2 | N54 Market Road | 67.4% 77.9% | 8 | 14 | 76.7% 76.9% | 9 | 17 |
| | 4/2+4/1 | Dawson Street | 65.4% 70.1% | 4 | 7 | 78.6% 78.6% | 7 | 14 |
| PRC | | | | 15.6 | | | 12.3 | |
| N54 Macartan Road / Farney Road priority | 1/1 | N54 Macartan Road (w-e) | 19.9% | 0 | 0 | 23.5% | 0 | 0 |
| | 2/1+2/2 | N54 Macartan Road (e-w) | 32.2% | 0 | 0 | 27.0% 29.5% | 0 | 0 |
| | 3/2+3/1 | Farney Road | 5.5% 5.0% | 0 | 0 | 24.1% 24.1% | 0 | 0 |
| N54 Macartan Road / McNally Car Park | 4/1 | Castle Road | 3.9 | 0 | 0 | 12.0% | 0 | 0 |
| | 1/1 | N54 Macartan Road (w-e) | 19.4 | 0 | 0 | 22.5% | 0 | 0 |
| | 5/1 | McNally's Car Park / Foodstore | 0.0 | 0 | 0 | 0.0% | 0 | 0 |

LinSig Modelling Results – 90 second cycle time (LinSig Optimised)

The modelling results in **Table 9.6** demonstrate that, with the cycle time reduced to 90 seconds, there is an opportunity to improve junction operation and reduce overall queuing during the peak hours. As well as improving general operational conditions for traffic at this junction, this will also be seen as a benefit for any traffic exiting right from Farney Road.

The modelling results with the background growth traffic to the year of opening 2025 is shown in **Table 9.7**.

Table 9.6: N54 Macartan Road / Glen Road / Farney Road Linked LinSig – 2025 Existing Scenario

| LinSig Modelling Results – Opening Year 2025 Scenario, 90 second cycle time | | | | | | |
|--|------------|--------------------------------|------------------|--------------|------------------|-------------|
| Junction | Link Ref | Link Description | 2025 AM Existing | | 2025 PM Existing | |
| | | | DOS% | MMQ | DOS% | MMQ |
| N54 Macartan Road / Glen Road / Dawson Street signals | 1/1+1/2 | N54 Macartan Road | 78.4% 78.4% | 9 | 60.6% 60.6% | 6 |
| | 2/2+2/1 | Glen Road | 77.3% 77.3% | 11 | 83.1% 75.5% | 11 |
| | 3/1+3/2 | N54 Market Road | 73.7% 80.8% | 8 | 79.4% 79.8% | 10 |
| | 4/2+4/1 | Dawson Street | 67.8% 72.7% | 5 | 81.5% 81.5% | 8 |
| | PRC | | | 11.4% | | 8.3% |
| N54 Macartan Road / Farney Road priority | 1/1 | N54 Macartan Road (w-e) | 20.6% | 0 | 24.3% | 0 |
| | 2/1+2/2 | N54 Macartan Road (e-w) | 33.4% 34.2% | 0 | 28.7% 30.9% | 0 |
| | 3/2+3/1 | Farney Road | 5.6% 4.9% | 0 | 25.1% 25.1% | 0 |
| | 4/1 | Castle Road | 4.0% | 0 | 12.7% | 0 |
| N54 Macartan Road / McNally's Car Park / Foodstore | 1/1 | N54 Macartan Road (w-e) | 20.1% | 0 | 23.2% | 0 |
| | 5/1 | McNally's Car Park / Foodstore | 0.0% | 0 | 0.0% | 0 |

Again, the results demonstrate that the junctions are still predicted to operate within capacity, with a max DoS% of 83.1% recorded on Glen Road in the evening peak.

In order to determine the impact of committed developments in the vicinity of the site, a cumulative assessment was undertaken to demonstrate the impact at the junctions with the foodstore traffic added to the network at the former McNally's Car Park site.

Table 9.7: N54 Macartan Road / Glen Road / Farney Road Linked LinSig – 2025 Cumulative Scenario

| LinSig Modelling Results – 2025 Cumulative Scenario, 90 second cycle time | | | | | | |
|--|------------|-------------------|-------------------|--------------|-------------------|-------------|
| Junction | Link Ref | Link Description | 2025 AM Committed | | 2025 PM Committed | |
| | | | DOS% | MMQ | DOS% | MMQ |
| N54 Macartan Road / Glen Road / Dawson Street signals | 1/1+1/2 | N54 Macartan Road | 78.4% 78.4% | 9 | 67.9% 67.9% | 7 |
| | 2/2+2/1 | Glen Road | 77.3% 77.3% | 11 | 84.9% 82.1% | 11 |
| | 3/1+3/2 | N54 Market Road | 73.7% 80.8% | 8 | 83.7% 79.8% | 10 |
| | 4/2+4/1 | Dawson Street | 67.8% 72.7% | 5 | 81.5% 81.5% | 8 |
| | PRC | | | 11.4% | | 6.0% |

| LinSig Modelling Results – 2025 Cumulative Scenario, 90 second cycle time | | | | | | |
|---|---------|--------------------------------|----------------|---|----------------|---|
| N54 Macartan Road / Farney Road priority | 1/1 | N54 Macartan Road (w-e) | 20.6% | 0 | 25.9% | 0 |
| | 2/1+2/2 | N54 Macartan Road (e-w) | 33.4% 34.2% | 0 | 28.5% 31.4% | 0 |
| | 3/2+3/1 | Farney Road | 5.6% 4.9% | 0 | 25.4% 25.4% | 0 |
| | 4/1 | Castle Road | 4.0% | 0 | 13.2% | 0 |
| N54 Macartan Road / McNally Car Park / Foodstore | 1/1 | N54 Macartan Road (w-e) | 20.1% | 0 | 27.1% | 0 |
| | 5/1 | McNally's Car Park / Foodstore | 0.0% | 0 | 14.1% | 0 |

It can be seen from **Table 9.8** that there is a slight reduction in operational capacity in the evening peak as a result of the foodstore development, with the max DoS% now recorded as 84.9% on Glen Road in the evening peak, with a Practical Reserve Capacity (PRC) value of 6%. **Table 9.9** demonstrates the impact at the junctions as a result of the proposed development.

Table 9.8: N54 Macartan Road / Glen Road / Farney Road Linked LinSig – 2025 Proposed Scenario

| LinSig Modelling Results – 2025 Proposed Scenario, 90 second cycle time | | | | | | |
|---|----------|--------------------------------|------------------|-----|------------------|-----|
| Junction | Link Ref | Link Description | 2025 AM Proposed | | 2025 PM Proposed | |
| | | | DOS% | MMQ | DOS% | MMQ |
| N54 Macartan Road / Glen Road / Dawson Street signals | 1/1+1/2 | N54 Macartan Road | 78.4% 78.4% | 9 | 67.9% 67.9% | 7 |
| | 2/2+2/1 | Glen Road | 77.3% 77.3% | 11 | 84.9% 82.1% | 11 |
| | 3/1+3/2 | N54 Market Road | 73.7% 80.8% | 8 | 83.7% 79.8% | 10 |
| | 4/2+4/1 | Dawson Street | 67.8% 72.7% | 5 | 81.5% 81.5% | 8 |
| PRC | | | 11.4% | | 6.0% | |
| N54 Macartan Road / Farney Road priority | 1/1 | N54 Macartan Road (w-e) | 20.6% | 0 | 25.9% | 0 |
| | 2/1+2/2 | N54 Macartan Road (e-w) | 31.8% 31.8% | 0 | 24.9% 24.9% | 0 |
| | 3/2+3/1 | Farney Road | 5.5% 5.5% | 0 | 16.6% 15.1% | 0 |
| | 4/1 | Castle Road | 3.9% | 0 | 12.4% | 0 |
| N54 Macartan Road / McNally Car Park / Foodstore | 1/1 | N54 Macartan Road (w-e) | 20.1% | 0 | 27.1% | 0 |
| | 5/1 | McNally's Car Park / Foodstore | 0.0% | 0 | 14.1% | 0 |

It can be seen from **Table 9.8** that there is no change in operational capacity at the signalised junction a result of the proposed development, with the max DoS% still recorded as 84.9% on Glen Road in the evening peak, with a Practical Reserve Capacity (PRC) value of 6%. The modelling results do show a slight improvement at the N54 Macartan Road / Farney Road, on the N54 Macartan Road east-west direction, as traffic is directed away from the junction and utilises the next access on Dublin Street.

9.6 Summary of Effects & Conclusion

An accessibility review was undertaken to assess the opportunities for travel to the site by all relevant modes of transport and review walking, cycling and public transport provision, as well as access by private car. The site is located within an existing and established urban centre and therefore benefits from good pedestrian and cycle links. The proposed development will significantly improve pedestrian and cycle facilities within the scheme area.

A detailed junction capacity analysis was undertaken using approved traffic modelling software to ensure that the existing road network could accommodate the traffic impacts resulting from the proposed development. The modelling results demonstrate that the site access points associated with the proposed development are predicted to operate within capacity for all assessment years and scenarios considered and with the cumulative development traffic added to the surrounding road network. Therefore, it is concluded that the proposed development can be accommodated within the surrounding road network.

Table 9.9: Summary of Likely Environmental Effects on Traffic and Transportation

| Receptor | Sensitivity of receptor | Description of Effect | Duration | Magnitude | Significance | Significant Not significant |
|---|-------------------------|---------------------------------|------------|------------|------------------|-----------------------------|
| Construction phase | | | | | | |
| Surrounding receptors (residential, amenity & commercial) | Medium | Increase in HGV activity | Short term | Medium | Moderate adverse | Not significant |
| Operational phase | | | | | | |
| Surrounding receptors (residential, amenity & commercial) | Low | Redistribution of local traffic | Long term | Negligible | Negligible | Not significant |

9.7 Limitations of the Assessment

There were no limitations observed within the assessment.

Chapter
10

**Air Quality &
Climate**

CHAPTER 10 - AIR QUALITY AND CLIMATE

10.1 Introduction

This chapter provides a description and assessment of the likely impact of the proposed development on air quality in the locality and climate change. Due to the nature of the proposed development which involves ground level works or low structures only, no significant impacts on microclimate, such as shading or wind tunnelling, are expected and therefore were scoped out of this assessment. This chapter should be read in conjunction with the site layout plans (EIAR Volume III Technical Drawings & Figures) and Chapter 2 Project Description.

Potential effects to air quality may arise during the construction phase, such as from the generation of construction dusts and construction traffic. The construction activities have been examined to identify those that have the potential for air emissions. The operational development will give rise to potential emissions from road traffic. Each of these potential sources have been identified and emissions have been evaluated using standard procedures. The measures to reduce, avoid and prevent these likely significant effects are proposed, where they are necessary. Thereafter, the likely significant residual effects of the project on air quality are predicted.

This chapter has also considered the requirements of the EIA Directive in relation to climate change and has provided:

- A description of the factors in relation to climate (for example greenhouse gas emissions, impacts relevant to adaptation) likely to be significantly affected by the proposed development;
- A description of the likely significant effects of the proposed development on the environment resulting from, inter alia, the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change.

Annex IV to the 2014 EIA Directive includes direct reference to climate and climate change in two provisions. The emphasis is placed on two distinct aspects of the climate change issue:

- Climate change mitigation: this considers the impact the proposed development will have on climate change, through greenhouse gas emissions primarily; and,
- Climate change adaptation: this considers the vulnerability of the proposed development to future changes in the climate, and its capacity to adapt to the impacts of climate change, which may be uncertain.

This chapter has been prepared in accordance with the following guidance documents:

- Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.
- The European Commission Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report (2017).
- The European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).
- The EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports (EIAR) (2022).
- The DHPLG published the revised Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018).

10.2 Methodology

10.2.1 Construction Stage

There are four potential impacts to atmosphere from the construction stage of the proposed development:

- Generation and dispersion of construction dusts during the proposed works (demolition and general construction);
- Emissions associated with construction traffic;
- Potential odours (associated with emission from vehicles or fuels); and,
- Greenhouse gas emissions from the construction phase of the proposed development.

The methodologies employed for each of these impacts is summarised as follows:

10.2.1.1 Dust Dispersion

Construction dust has the potential to cause local impacts through dust nuisance at the nearest sensitive receptors and also to sensitive ecosystems. The potential for dust generation from the construction activities associated with the proposed development will be assessed on the basis of a review of the proposed methodologies and the proximity of these activities to sensitive receptors.

Construction activities such as stone importation, excavation, earth moving and backfilling may generate quantities of dust, particularly in dry weather conditions. The extent of any dust generation depends on the nature of the dust (soils, peat, sands, gravels, silts etc.) and the nature of the construction activity. In addition, the potential for dust dispersion and deposition depends on local meteorological factors such as rainfall, wind speed and wind direction.

A risk assessment of dust emissions arising from construction activities was completed in accordance with the Institute of Air Quality Management – Guidance on the Assessment of Dust from Demolition and Construction 2016 (IAQM, 2016).

An assessment for the potential impact of dust associated with the construction phase is required when there is:

- A receptor within 350m of the boundary of the Site; and/or 50m of the route(s) used by construction vehicles on the public highway, up to 500m from the Site entrance(s); and,
- An ecological receptor is within 50m of the boundary of the Site and/or 50m of the route(s) used by construction vehicles on the public highway, up to 500m from the Site entrance(s).

10.2.1.3 Odour

Despite the low risk of encountering odours, a series of odour mitigation measures (related only with emissions from construction plant, vehicles & machinery) have been presented to minimise the impact and to prevent any nuisance in the unlikely event that they are encountered. An odour assessment is not required as sources of odour are not significant in a type of development like this and it can be scoped out of the assessment.

10.2.1.4 Greenhouse Gas Emissions

The qualitative construction phase climate assessment was carried out to identify sources and quantify total Greenhouse Gas (GHG) emissions generated from the construction activities associated with the proposed development.

10.2.2 Operational Stage

10.2.2.1 Road Traffic Emissions

A qualitative assessment of the local impact of traffic-derived pollution during the operation phase was carried out using the Local Assessment model in the Design Manual for Road and Bridges (DMRB), Sustainability & Environment Appraisal LA 105 Air quality in accordance with the NRA¹ guidelines for assessment of impacts to air from road transport. Traffic data was provided in the form of Annual Average Daily Traffic (AADT) for the existing scenario and a series of future scenario years accounting for growth.

10.2.2.2. Operational Emissions

As there will be no significant point sources at the proposed development, air dispersion modelling was not considered necessary for the proposed development. Point sources of emissions are chimney stacks, incinerators, thermal oxidisers or furnaces – none of these are included in the proposed development.

10.2.2.3 Climate Change Adaption

In addition to emissions generation described above, the adaptability of the proposed development to climate change has also been assessed. In particular, the impacts of flooding in the area has been addressed through consultation with the CFRAM mapping for the area and these are presented in Chapter 5 Flood Risk and Drainage and not repeated in this Chapter.

10.2.3 Assessment Criteria

10.2.3.1 Construction Dust

During the construction phase, dust is considered the principal risk of pollution to the atmosphere. However, there is no legislative limit for total suspended particles, so the guidelines presented by the German Government TA Luft guidance are employed. Under this guidance it is a requirement to maintain monthly dust levels below the guideline of 350mg/m²/day as an annual average at sensitive receptors. The standard method of measurement of dust deposition is referred to as the 'Bergerhoff Method'.

10.2.3.2 Combustion Gases/Particulates (such as from road traffic)

In May 2008, all previous European Directives on air quality were replaced with a revised Directive on ambient air quality and cleaner air for Europe (2008/50/EC) which has been transposed into Irish legislation as the Air Quality Standards Regulations 2011 (S.I. 180 of 2011), as amended.

These limits as specified in these Regulations are presented in Table 10.1 and represent the main assessment criteria for the operation phase of the proposed development. The 2011 Regulations specify limit values in ambient air for sulphur dioxide (SO₂), lead, benzene, particulate matter (PM₁₀ and PM_{2.5}), carbon monoxide (CO), nitrogen dioxide (NO₂) and oxides of nitrogen (NO_x). These limits are mainly for the protection of human health and are largely based on review of epidemiological studies on the health impacts of these pollutants. In addition, there are limits that apply to the protection of the wider environment (ecosystems and vegetation). All predicted concentrations from the operation of the proposed development are compared to the air quality limits to determine the extent of any impact on human or ecological receptors.

¹ Latest version at the time of writing is: Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes, May 2011.

The NRA Guidelines specifies the significance criteria for determining air quality impacts. The predicted increases or decreases from road traffic pollution may be utilised to determine the significance of any impact in relation to the NRA criteria as presented in Table 10.2, Table 10.3 and Table 10.4.

Table 10.1: Limits as Specified in Air Quality Standards Regulations 2011 (S.I. 180 of 2011)

| Pollutant | Criteria | Value |
|--------------------------------------|--|-----------------------|
| Nitrogen Dioxide | Hourly limit for protection of human health – not to be exceeded more than 18 times/year | 200 µg/m ³ |
| | Annual protection of human health | 40 µg/m ³ |
| | Annual limit for protection of vegetation | 30 µg/m ³ |
| Benzene | Annual limit for protection of human health | 5 µg/m ³ |
| Carbon Monoxide | Minimum daily 8-hour running system | 10 µg/m ³ |
| Lead | Annual limit for protection of human health | 0.5 µg/m ³ |
| Sulphur Dioxide | Hourly limit for protection of human health – not to be exceeded more than 24 times/year | 350 µg/m ³ |
| | Daily limit for protection – not to be exceeded more than 3 times/year | 125 µg/m ³ |
| | Annual limit for protection of vegetation | 20 µg/m ³ |
| Particulate Matter PM ₁₀ | Hourly limit for protection of human health – not to be exceeded more than 35 times/year | 50 µg/m ³ |
| | Annual limit for protection of human health | 40 µg/m ³ |
| Particulate Matter PM _{2.5} | Annual target value for the protection of human health | 20 µg/m ³ |

Table 10.2: Definition of Impact Magnitude for Changes in Ambient Air Pollutant Concentrations (Source: NRA, 2011)

| Pollutant | Annual Mean NO ₂ / PM ₁₀ | No of Days with PM ₁₀ Conc. greater than 50 | Annual Mean PM |
|---------------|--|--|--|
| Large | Increase/decrease >4µg/m ³ | Increase/decrease >4µg/m ³ | Increase/decrease >2.5µg/m ³ |
| Medium | Increase/decrease >4µg/m ³ | 2- Increase/decrease 3 of 4 days | Increase/decrease 1.25- <2.5µg/m ³ |
| Small | Increase/decrease 0.4- <2µg/m ³ | Increase/decrease 1 or 2 days | Increase/decrease 0.25- <1.25µg/m ³ |
| Imperceptible | Increase/decrease >0.4µg/m ³ | Increase/decrease <1 day | Increase/decrease >0.25µg/m ³ |

Table 10.3: Air Quality Impact Descriptors for Changes in Annual Mean Nitrogen Dioxide Concentrations at a Receptor (Source: NRA, 2011)

| Absolute Concentration in Relation to Objective/Limit | Changes in Concentration | | |
|---|--------------------------|---------------------|------------------------|
| | Small | Medium | Large |
| Increase with Proposed Project | | | |
| Above Objective/Limit Value with development (>40µg/m ³ of NO ₂ or PM ₁₀) (>25µg/m ³ of PM _{2.5}) | Slight Adverse | Moderate Adverse | Substantial Adverse |
| Just Below Objective/Limit Value with development (36->40µg/m ³ of NO ₂ or PM ₁₀) (22.5-<25µg/m ³ of PM _{2.5}) | Slight Adverse | Moderate Adverse | Moderate Adverse |
| Below Objective/Limit Value with development (30-<36µg/m ³ of NO ₂ or PM ₁₀) (18.75-<22.5µg/m ³ of PM _{2.5}) | Negligible | Slight Adverse | Slight Adverse |
| Well Below Objective/Limit Value with development (>30µg/m ³ of NO ₂ or PM ₁₀) (18.75µg/m ³ of PM _{2.5}) | Negligible | Negligible | Slight Adverse |
| Decrease with Proposed Project | | | |
| Above Objective/Limit Value with development (>40µg/m ³ of NO ₂ or PM ₁₀) (>25µg/m ³ of PM _{2.5}) | Slight Beneficial | Moderate Beneficial | Substantial Beneficial |
| Just Below Objective/Limit Value with development (36->40µg/m ³ of NO ₂ or PM ₁₀) (22.5-<25µg/m ³ of PM _{2.5}) | Slight Beneficial | Moderate Beneficial | Moderate Beneficial |
| Below Objective/Limit Value with development (30-<36µg/m ³ of NO ₂ or PM ₁₀) (18.75-<22.5µg/m ³ of PM _{2.5}) | Negligible | Slight Beneficial | Slight Beneficial |

| Absolute Concentration in Relation to Objective/Limit | Changes in Concentration | | |
|---|--------------------------|------------|-------------------|
| | Small | Medium | Large |
| Well Below Objective/Limit Value with development (>30µg/m ³ of NO ₂ or PM ₁₀) (18.75µg/m ³ of PM _{2.5}) | Negligible | Negligible | Slight Beneficial |

Table 10.4: Air Quality Impact Descriptors for Changes in Number of Days with PM10 Concentrations Greater than 50µg/m³ at a Receptor (Source: NRA, 2011)

| Absolute Concentration in Relation to Objective/Limit | Changes in Concentration | | |
|--|--------------------------|---------------------|------------------------|
| | Small | Medium | Large |
| Increase with Proposed Project | | | |
| Above Objective/Limit Value with development (35days) | Slight Adverse | Moderate Adverse | Substantial Adverse |
| Just Below Objective/Limit Value with development (32->35days) | Slight Adverse | Moderate Adverse | Moderate Adverse |
| Below Objective/Limit Value with development (26->32days) | Negligible | Slight Adverse | Slight Adverse |
| Well Below Objective/Limit Value with development (>26days) | Negligible | Negligible | Slight Adverse |
| Decrease with Proposed Project | | | |
| Above Objective/Limit Value with development (35days) | Slight Beneficial | Moderate Beneficial | Substantial Beneficial |
| Just Below Objective/Limit Value with development (32->35days) | Slight Beneficial | Moderate Beneficial | Moderate Beneficial |
| Below Objective/Limit Value with development (26->32days) | Negligible | Slight Beneficial | Slight Beneficial |
| Well Below Objective/Limit Value with development (>26days) | Negligible | Negligible | Slight Beneficial |

In addition to the statutory limits for the protection of human health listed in Air Quality Standards Regulations (S.I. 180 of 2011), the World Health Organisation (WHO) has published a set of air quality guidelines for the protection of human health.

The key publication is the “WHO Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulphur dioxide, Global update 2005 Summary of risk assessment”. The WHO guidelines are based on reducing the risk to human health and in some cases the levels differ from the EU statutory limits as these

limits are based on balancing health risks with technological feasibility, economic considerations and various other political and social factors in the EU.

The 2005 WHO guidelines are presented in Table 10.5 and illustrate that while the NO₂ levels are analogous to those in S.I. 180 of 2011 (excluding the tolerance levels for the 1-hour averages), the annual average PM₁₀ and PM_{2.5} levels specified by the WHO are half those specified in the legislation. The WHO note that these are the lowest levels at which total, cardiopulmonary and lung cancer mortality have been shown to increase with more than 95% confidence in response to long-term exposure to PM_{2.5}. The EPA has called for movement towards the adoption of these stricter WHO guidelines as the legal standards across Europe and in Ireland.

Table 10.5: WHO 2005 Air Quality Guidelines

| Pollutant | Criteria | Value |
|---|--|-----------------------|
| Nitrogen Dioxide (NO ₂) | Hourly limit for protection of human health | 200 µg/m ³ |
| | Annual protection of human health | 40 µg/m ³ |
| Sulphur Dioxide (SO ₂) | 10 minute level for protection of human health | 500 µg/m ³ |
| | Daily level for protection of human health | 20 µg/m ³ |
| Particulate Matter (PM ₁₀) | 24-hour level for protection of human health | 50 µg/m ³ |
| | Annual level for protection of human health | 20 µg/m ³ |
| Particulate Matter (PM _{2.5}) | 24-hour level for protection of human health | 25 µg/m ³ |
| | Annual level for protection of human health | 10 µg/m ³ |

10.2.3.3 National Climate Change Policy and Targets

Carbon dioxide emissions have a climate warming effect which is global, this is regardless of their rate of release, location or the weather when they are released into the atmosphere. This is unlike pollutants that affect local air quality where the rate of release, location and prevailing weather, as well as the amount of pollutant, determines the local concentrations and the impact. Local ambient concentrations of CO₂ are not relevant and there are no limits or thresholds that can be applied to particular sources of carbon emissions – any amount of CO₂ released into the atmosphere will contribute to climate warming, the extent of which is determined by the magnitude of the release. Although CO₂ emissions are typically expressed as kilogrammes or tonnes per year, there is a cumulative effect of these emissions because CO₂ emissions have a warming effect which lasts for 100 years or more.

The National Policy Position on Climate Action and Low Carbon Development was published on 23 April 2014. The policy sets a fundamental national objective to achieve transition to a competitive, low-carbon,

climate- resilient and environmentally sustainable economy by 2050. The policy states that Greenhouse Gas (GHG) mitigation and adaptation to the impacts of climate change are to be addressed in parallel national strategies – respectively through a series of National Mitigation Plans and a series of National Climate Change Adaptation Frameworks. The National Policy Position envisages that development of National Mitigation Plans will be guided by a long-term vision of low carbon transition based on the following:

- An aggregate reduction in carbon dioxide (CO₂) emissions of at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors; and,
- In parallel, an approach to carbon neutrality in the agriculture and land-use sector, including forestry, which does not compromise capacity for sustainable food production.

Further to the National Policy Position, the Climate Action and Low Carbon Development Act 2015 was enacted on 10 December 2015. The Climate Action Act sets out the proposed national objective to transition to a low carbon, climate resilient and environmentally sustainable economy by the end of 2050.

On 14 May 2018, the European Council adopted a regulation on greenhouse gas emission reductions - EU effort Sharing Regulation sets out 2030 targets for member states. The starting point is an average of 2016-2018 emissions with binding emission reduction targets of 30% compared to 2005 levels.

Transport (which predominately consists of road transport) is currently the second largest contributor of GHG emissions in Ireland (after agriculture) at 19.5%. Greenhouse gas emissions are projected to increase from most sectors.

10.2.4 Study Area

The study area consisted of the immediate location of the proposed development, Monaghan County Council area and Ireland at a national level for setting the context to climate and associated emissions.

10.2.5 Baseline

To establish baseline conditions, the following key sources of information were referred to as part of the assessment on climate:

- Department of Communications, Climate Action and Environment – National Adaptation Framework; Planning for a Climate Resilient Ireland (DoCCAIE, 2018);
- The Monaghan County Development Plan 2019-2025 (MCC, 2019);
- National Adaptation Framework; Planning for a Climate Resilient Ireland (DoCCAIE, 2018);
- Climate Action Plan 2019 (Department of Communications, Climate Action and Environment, 2019); and,
- Monaghan County Council Climate Change Adaptation Strategy 2019 – 2024 (MCC, 2019).

To establish baseline conditions, the following key sources of information were referred to as part of the assessment on air quality:

- Air Quality Standards Regulations 2011 (S.I No. 180/2011);
- World Health Organisation Air Quality Guidelines 2005 (WHO, 2005);
- Environmental Protection Agency - Air Quality in Ireland 2019 (EPA, 2020); and,
- The Monaghan County Development Plan 2019-2025 (MCC, 2019).

10.2.6 Consultation

No relevant consultation responses were received in relation to this aspect at the time of writing of this chapter.

10.2.7 Competent Person

This assessment was completed by RPS air quality specialist Stephen McAfee. Stephen is a chartered scientist with over 18 years' experience in environmental assessment, environmental management plans, appraisal of port and harbour developments, computer modelling and air quality, climate, dust and odour assessment. He has a BSc (Hons) in Geography from Queens University Belfast and a Masters in Environmental Engineering from Queens University Belfast. He also has acted as an Expert Witness and environmental expert at various public inquiries/oral hearings. Stephen has a wealth of experience working on major infrastructure, port, energy, waste and brownfield/greenfield development projects in the UK and Ireland. He has undertaken surveying and assessment of both large and small scale development proposals. This experience has provided him with an ability to manage and coordinate interdisciplinary and multi-jurisdictional issues which may arise as a professional EIA practitioner.

10.3 Baseline Environment

10.3.1 Climate

Climate is described as the average weather prevailing in an area over a period of time. The weather in Ireland is influenced by the Atlantic Ocean, resulting in mild, moist weather dominated by maritime air masses. The prevailing wind direction is from a quadrant centred on west-southwest. These are relatively warm winds from the Atlantic and frequently bring rain.

Climate Change is recognised as one of the most serious global environmental problems. The Paris Agreement 2015 (United Nations, 2016), an international effort to limit the global increase in temperature to below 2°C above pre-industrial levels, recognises the necessity to mitigate against climate change.

The EU Climate Change and Energy Framework (European Commission, 2014) has set ambitious targets for 2030, which include;

- At least a 40% reduction in domestic greenhouse gas (GHG) emissions compared to 1990; and,
- A reduction in the Emissions Trading Scheme (ETS) and non-ETS sectors amounting to 43% and 30% by 2030, compared to 2005, respectively.

Ireland's emission reduction target is to reduce non-ETS emissions by 20% below the 2005 levels by 2020; however, the EPA projections indicate that emissions will be at 4 - 6% below the 2005 levels by 2020 (EPA, 2017). The Department of Communications, Climate Action and Environment (DoCCA) has published its Climate Action Plan, 2019 which sets an objective of meeting a 30% reduction in non-ETS emissions relative to 2005 levels (Department of Communications, Climate Action and Environment, 2019).

To counteract the effects of climate change, climate adaptation has been identified as a vital strategy. The Intergovernmental Panel on Climate Change (IPCC) defined climate adaptation as "the process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects."

To address the forthcoming challenges associated with climate change, Ireland's first National Adaptation Framework (NAF) was published in January 2018 (DoCCA, 2018). The NAF sets out the national strategy to reduce the vulnerability of the country to the potential negative effects of climate change and to avail of positive impacts. Under the NAF, all local authorities were required to prepare and adopt a five-year Climate Adaptation Strategy.

Monaghan County Council completed and adopted their Climate Change Adaptation Strategy in 2019. Climate change has diverse and wide-ranging impacts on Ireland's economic and natural resources including:

- More intense storms and rainfall events giving rise to disruption to society;
- Increased flooding;
- Water shortages in summer;
- Increased risk of new pests and diseases;
- Adverse impacts on water quality; and,
- Changes in the distribution and phenology of plant and animal species on land and in aquatic environments.

The occurrence of climactic events considered to be unique in intensity and/or abnormal weather patterns were recorded to define baseline climate change conditions in Monaghan. This timeline is outlined in Figure 10.1 below. It can be surmised from the timeline of events and from other historical data that although severe weather events have always impacted Monaghan, the County has experienced an increase in major climatic or severe weather events in more recent times.

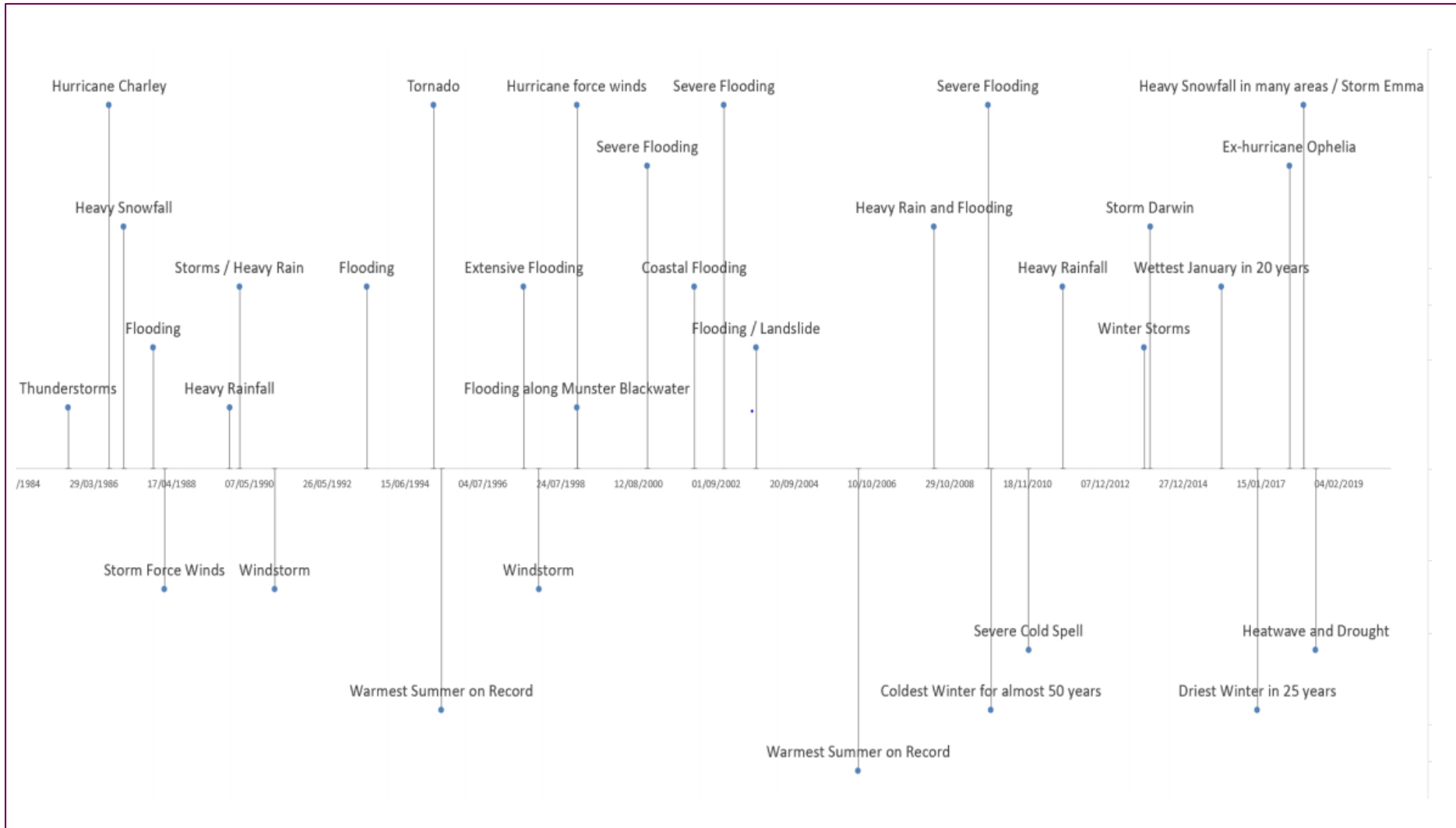


Figure 0.1: Severe Weather Event Timeline for County Monaghan (MCC, 2019)

The following key objectives of the MCC adaptation strategy have been identified as being relevant to the proposed development:

- Flood risk mitigation;
- Amenity enhancement;
- Biodiversity opportunity; and
- Plus: reduction/sequestration, waste reuse, potential for regeneration and recreational enhancement.
- Promoting and maximising resource management initiatives; and
- Integrating climate action considerations into waste management policies.
- Identifying and supporting opportunities that may arise from pursuing modal shift.

10.3.2 Air Quality

10.3.2.1 Relevant Directives

Assessment of the significance of emissions to air is made with reference to limit values established in the latest EU legislation, the Clean Air for Europe (CAFE) Directive (2008/50/EC) (European Parliament, 2008) which was transposed into Irish law in 2011 (S.I. No. 180 of 2011). The Air Quality Standards (AQS) set out in Air Quality Directive (2008/50/EC) and S.I. No. 180 of 2011 are shown in Table 10.2. The AQS are based on the effects of pollutants on human health, although other factors such as effects on vegetation and ecosystems are also considered.

10.3.2.2 Primary Atmospheric Pollutants

The proposed development is located within Monaghan Town, residential heating and traffic are the main sources of air pollutants. Therefore, the primary contaminants of concern identified were Nitrogen Oxides (NO_x) and Particulate Matter (PM₁₀ and PM_{2.5}). NO_x is primarily produced during combustion at high temperatures with contributions from traffic, residential heating and industry. PM₁₀ are particles in air with diameters of 10µm (microns) or less. These particles can consist of direct emission from combustion engines and burning solid fuels, while natural sources can be windblown salt, plant spores, and pollens. PM_{2.5} or fine particulate matter is composed of varying components depending on its source but can include nitrates, sulphates, volatile organic compounds (VOCs), metals and soil or dust particles.

Nitrogen Dioxide (NO₂)

Nitrogen Dioxide (NO₂) is classed as both a primary and a secondary pollutant. As a primary pollutant NO₂ is emitted from all combustion processes (such as a gas/oil fired boiler or a car engine). As a secondary pollutant NO₂ is derived from atmospheric reactions of pollutants that are themselves, derived mainly from traffic sources.

Particulate Matter (PM₁₀ & PM_{2.5})

Particulate Matter (PM₁₀ and PM_{2.5}) may be emitted as a primary pollutant from road vehicle exhausts, which is the main source in urban areas. In rural areas, sources will include traffic, agricultural activities and natural processes such as sea salt aerosol. Also point sources such as combustion, i.e. domestic fires, industrial boilers etc. are primary sources of PM₁₀. PM₁₀ may also be formed as secondary pollutants from the condensation or reaction of chemical vapours in the atmosphere. Particulate Matter (PM_{2.5}) has similar effects on health as PM₁₀, however, PM_{2.5} is a better indicator of anthropogenic (man-made) emissions.

Carbon Monoxide (CO)

Carbon monoxide is produced from the partial oxidation of carbon-containing compounds (i.e. organic fuels such as coal, oil, petrol, diesel, wood, etc.) during the combustion process. CO forms when there is not

enough oxygen to produce carbon dioxide (CO₂). As such, CO is a primary pollutant from all combustion process including vehicle exhausts, domestic heating, etc. The extent of CO emissions depends on the fuel type and the combustion conditions. Once inhaled, CO is quickly absorbed into the bloodstream from the lungs. Then it combines with haemoglobin in the blood to form carboxyhaemoglobin. This reduces the ability of the blood to carry oxygen around the body and it robs the heart, brain and other vital organs of oxygen.

Volatile Organic Compounds (VOCs)

VOCs such as benzene (a known human carcinogen) are emitted directly from petrol fuelled vehicles. Other VOCs are also emitted from petrol exhausts (toluene, ethylbenzene, xylenes). VOCs have varying sources and properties and only benzene has a limit for the protection of human health in the legislation (Please refer to Table 10.1 if required).

10.3.2.3 EPA Air Quality Zone

EU legislation on air quality requires that all Member States divide their territory into zones for the assessment and management of air quality. The current trends in air quality in Ireland are reported in the EPA publication Air Quality in Ireland – 2019 (EPA, 2020) which is the most up to date report on air quality in Ireland. For ambient air quality management and monitoring in Ireland, four zones, A, B, C and D are defined in the Air Quality Standards (AQS) Regulations (S.I. No. 180 of 2011) and are defined as follows:

- Zone A: Dublin Conurbation;
- Zone B: Cork Conurbation;
- Zone C: 24 cities and large towns. Includes Galway, Limerick, Waterford, Clonmel, Kilkenny, Sligo, Drogheda, Wexford, Athlone, Ennis, Bray, Naas, Carlow, Tralee, Dundalk, Navan, Newbridge, Mullingar, Letterkenny, Celbridge and Balbriggan, Portlaoise, Greystones and Leixlip; and,
- Zone D: Rural Ireland, i.e. the remainder of the State excluding Zones A, B & C.

According to the above classification, the proposed development is in Zone D.

10.3.2.4 EPA Air Quality Monitoring

There are two monitoring location relevant to the proposed development site:

- Local Air Monitoring Site - Monaghan Tirkeenan
- National Air Monitoring Site - Kilkitt

The locations of these monitoring sites are shown in Figure 10.2. Monitoring results are shown in Figures 10.3 and 10.4.

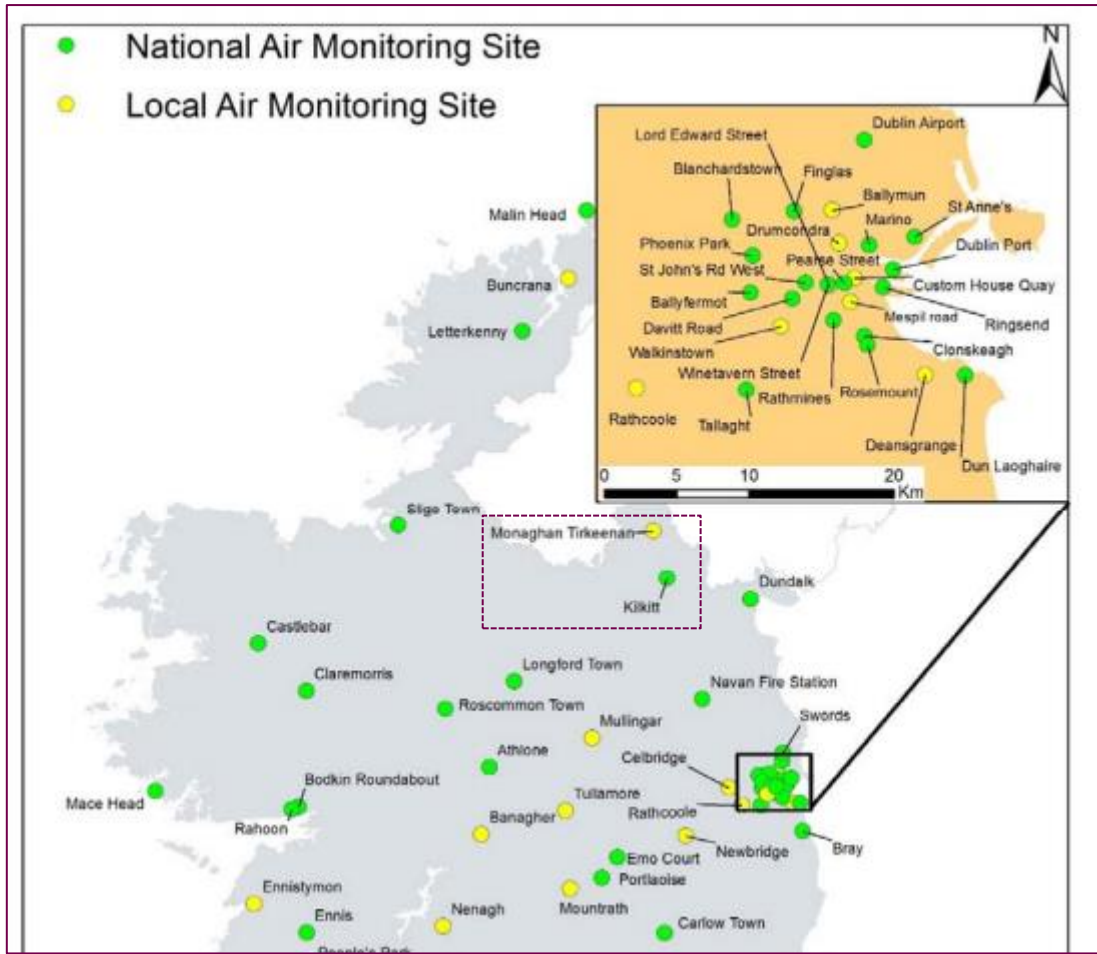


Figure 0.2 EPA Monitoring Sites (EPA, 2020)

The EPA reports real-time results of localised monitoring (NO₂, O₃ and SO₂), providing the public with indicative data on current ambient air quality throughout the country. Figures 10.3 outlines the ambient nitrogen dioxide (NO₂) and ozone (O₃) and NO₂ concentrations recorded between the 1st February 2022 – 1st August 2022 recorded at the Kilkitt monitoring station located south of the proposed development. It should be noted that O₃ has not been identified as a contaminant of concern for this development, however, the EPA presents this data alongside NO₂, and therefore it is included in the graph below (Figure 10.3). All levels recorded are below threshold levels, in addition, the concentrations of all contaminants of concern were below the WHO limit values. The data in Figure 10.3 is published on the EPA website.

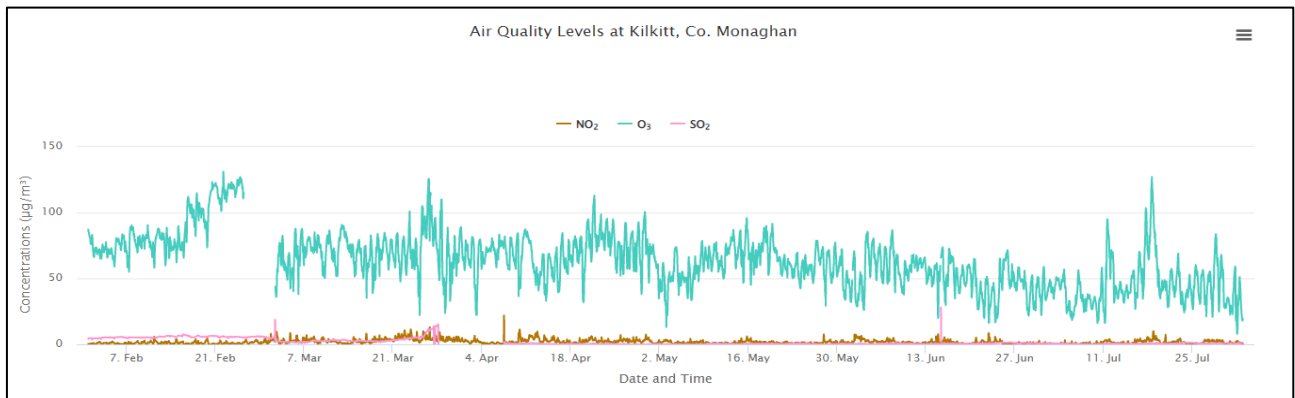


Figure 0.3 Air Quality Levels at Kilkitt, February – August 2022.

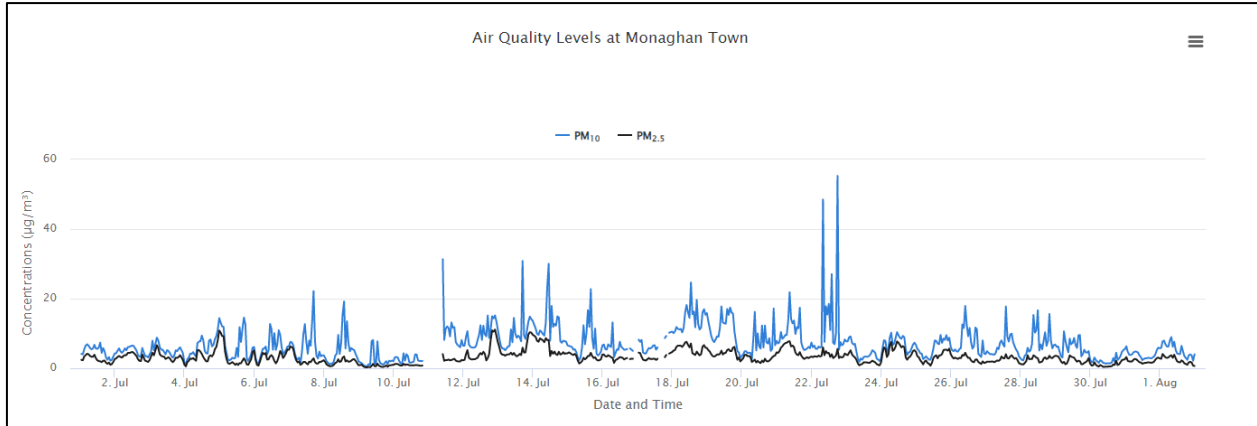


Figure 0.4 Air Quality Levels at Monaghan Town, July 2022.

The results from Monaghan Town site indicate that the recordings of particulate matter were considerably lower than their respective AQS limit values, indicating good air quality. In addition, the concentrations of all contaminants of concern were below the WHO limit values. The data in Figure 10.4 is published on the EPA website.

10.3.2.5 Receptors

Receptor refers to any location where a person or property may experience the adverse effects of airborne dust or dust soiling. Ecological receptors refer to any sensitive habitat affected by dust soiling (IAQM, 2016).

A wind-rose was completed to determine the potential influence of wind direction on airborne dust particles. The closest met Eireann weather station which records hourly data is at Clones, Co. Monaghan located c. 18km south west of the proposed development site. A wind rose utilising five decades of data (from Clones, Co. Monaghan) indicated that the prevailing wind blows from a south/southwesterly direction (Figure 10.5 below).

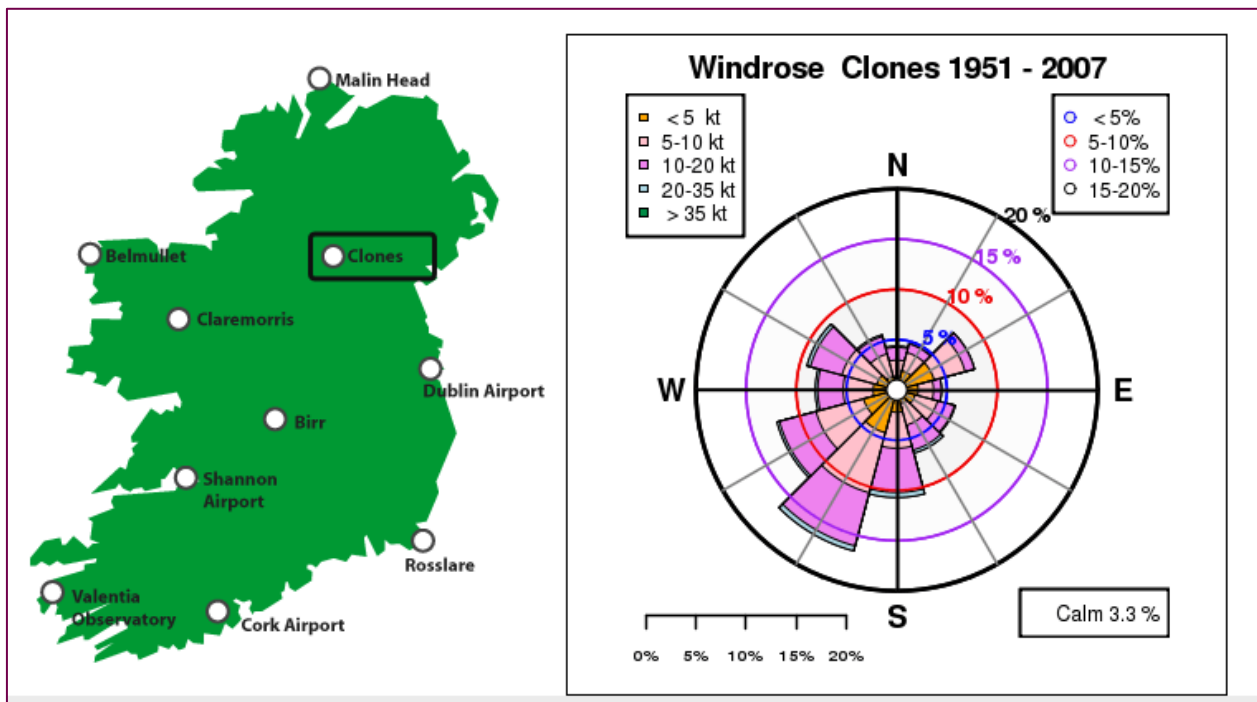


Figure 0.5: Wind-rose Clones, Co. Monaghan (Met Eireann, 2021)

Due to the prevailing wind direction, receptors to the north and north-east were deemed to be the most sensitive to potential dust emissions.

Figure 10.6 below identifies the location of receptors in proximity to the proposed development. Table 10.6 describes the receptors and outlines their distance to the Site boundary.

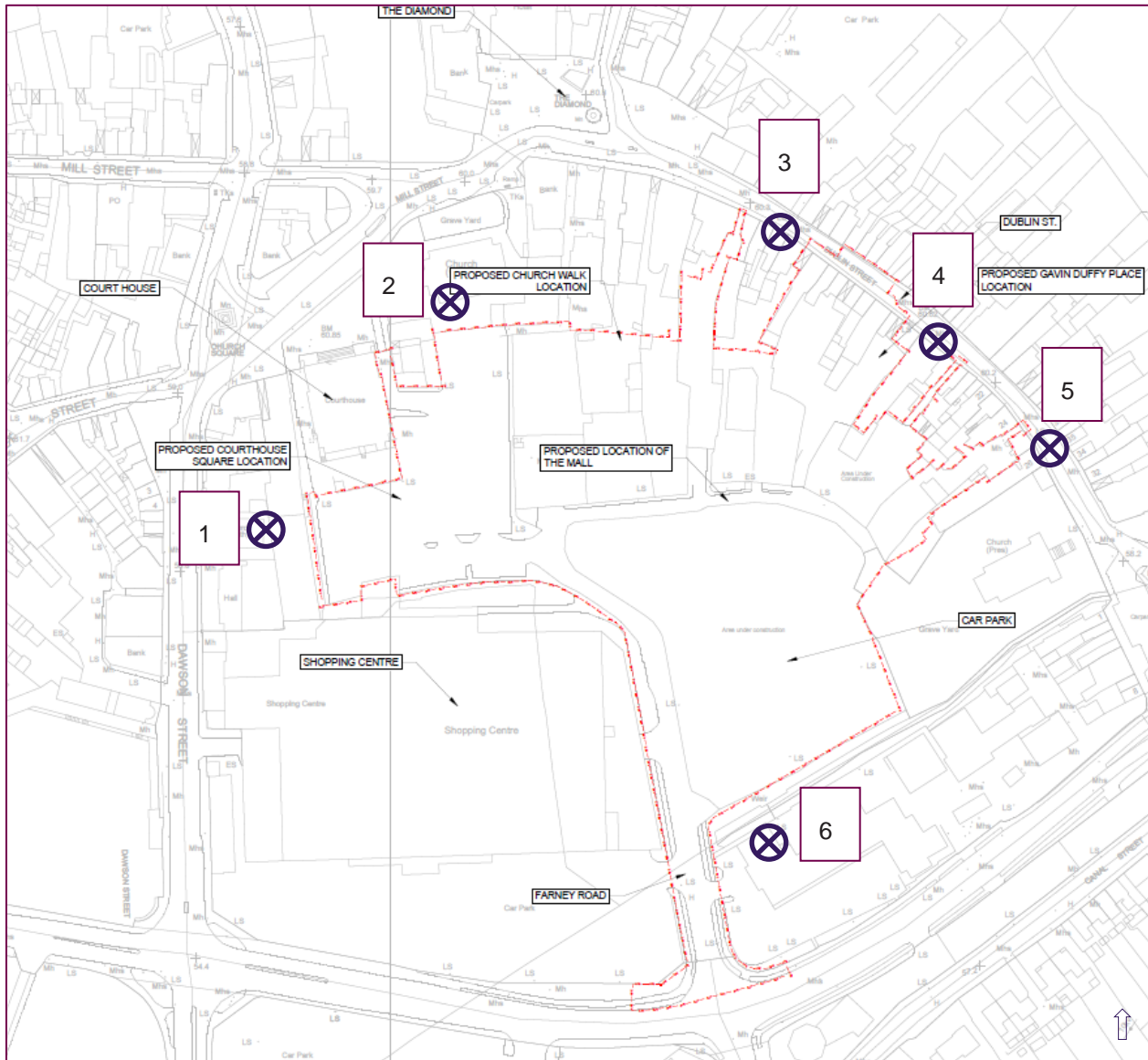


Figure 0.6: Receptor Location Plan

Due to the nature of the urban environment, to ensure this assessment is clearly presented, only proxy locations on each boundary are given. Proxies are presented as they are the most notable and/or closest receptors to the proposed development. Receptors that are located further away than the proxy from the proposed development will experience either a similar or a reduced impact due to distance attenuation of dust emissions.

When numerating the receptors at each proxy, exact counting is not required (IAQM, 2016). As an alternative, it is recommended that professional judgement is utilised by the competent person and determine the approximate number of receptors (i.e. residential dwelling: 1 receptor, school: >100 receptors).

Table 0.1: Identification of Receptors

| ID | Description of receptors | Number of Receptors | Distance to Site Boundary (m)- Orientation |
|-----------|---|----------------------------|---|
| 1 | Dawson Street - Church, residential, retail units. | 10-100 | 50 - West |
| 2 | Church Square - Church, Court House, open amenity space, retail units. | 1-10 | 40 – North |
| 3 | Dublin Street - Residential, retail units. | 1-10 | 20 – North |
| 4 | Dublin Street - Residential, retail units. | 1-10 | 20 – North-east |
| 5 | Dublin Street – Church, residential, retail units. | 1-10 | 40 - North-east |
| 6 | Off Castle Road/N54 Macartan (Broad) Road – residential apartments, retail units. | 10-100 | 20 - South |

10.4 Impact Assessment

The potential impacts from the proposed development were assessed under the following stages:

- Construction Phase; and,
- Operational Phase.

10.4.1 Construction Phase

The construction works will require groundworks for the installation of road infrastructure, such as drainage and utilities pipework. Furthermore, Site works will require removal, regrading, and re-establishment of surfaces, to develop the desired elevation changes on the finished design. Such construction related activities have the potential to impact receptors through:

- Dust deposition, resulting in soiling of surfaces and impacting ecological receptors from exposed soils due to surface run-off.
- Elevated particulate matter concentrations in ambient air because of dust generating activities on Site potentially impacting local human health.
- Nitrogen dioxide and particulate matter emissions due to vehicle movements to, from and within the Site.

The characteristics of the proposed development during the construction phase which have the potential to impact on climate include:

- Use of fossil fuels by on-site plant; and
- Carbon embedded in the materials used for construction of the proposed development.

The on-site plant, which will be powered by diesel engines or potential generators (if required) and proposed works, will emit nitrogen oxides and particulate matter. However, due to the low numbers of on-site plant for a limited amount of time during the construction phase and coupled with the low background concentrations of pollutants outlined in Table 10.1 potential impact of on-site plant on air quality is not quantitatively assessed further.

However, given the proximity of a number of receptors and the potential dust generating activities associated with the construction of the proposed development, a dust risk assessment was completed and is outlined in Section 10.4.2 below.

10.4.2 Construction Dust Risk Assessment

10.4.2.1 Construction activities

Construction activities can be divided into four types (demolition, earthworks, construction and track-out) to reflect their potential impacts. These activities are rated by their potential dust emission magnitude (small, medium and large) (IAQM, 2016).

Table 10.7 below presents the construction activities proposed as part of this development and their respective dust emission magnitude in accordance with the IAQM methodology.

Table 0.2: Potential Dust Emission Magnitude Classification

| Activity | Proposed Development – Construction Activities | Dust Emission Magnitude Category |
|--------------|--|----------------------------------|
| Demolition | Proposed development demolition activities will primarily include: <ul style="list-style-type: none"> • Cutting and lifting concrete & hardstand. • Building demolition • Crushing and screening of concrete may also occur at the Site. | Large |
| Earthworks | Proposed development earthwork activities will primarily include: <ul style="list-style-type: none"> • Landscaping area • Unlikely to be >10 earth moving vehicles active at any one time; • Earth bunds will be <8m in height | Medium |
| Construction | Proposed development construction activities will primarily include: <ul style="list-style-type: none"> • Majority of works to be completed at ground level; • Installation of granite paving, concrete surfacing with aggregate, • Development of paths, urban fabric and roads. | Medium |
| Track-out | Proposed development track-out activities will primarily include <ul style="list-style-type: none"> • Estimated that between 10-50 Heavy Duty Vehicles (HDV) outward movements in any one day; and, • Estimated that unpaved road length will not exceed 100m at any one time. | Medium |

10.4.2.2 Define Sensitivity of the Area

The sensitivity (high, medium and low sensitivity) of receptors was assessed based on the following effects:

- Sensitivity of people to dust soiling effects;
- Sensitivity of people to the human health effects of PM₁₀; and
- Sensitivity of receptors to ecological effects.

Table 0.3: Sensitivity of Receptors to Dust Soiling

| ID | Number of Receptors | Distance to Site Boundary (m) | Receptor Sensitivity | Reason for Sensitivity Rating |
|----|---------------------|-------------------------------|----------------------|---|
| 1 | 10-100 | 50 - West | High | Dawson Street - Church, residential, retail units. |
| 2 | 1-10 | 40 – North | Low | Church Square - Church, Court House, open amenity space, retail units. |
| 3 | 1-10 | 20 – North | High | Dublin Street - Residential, retail units. |
| 4 | 1-10 | 20 – North-east | High | Dublin Street - Residential, retail units. |
| 5 | 1-10 | 40 - North-east | High | Dublin Street – Church, residential, retail units. |
| 6 | 10-100 | 20 - South | High | Off Castle Road/N54 Macartan (Broad) Road – residential apartments, retail units. |

The receptor sensitivity of dust soiling for ID2 (proxy for open amenity space) were classified as low due to the distance of proxy location from the Site boundary. ID1, ID3, ID4 and ID5 are high due to receptor type and close proximity to the boundary. ID6 is a high due to the number of residential units and location to boundary and N54 Macartan (Broad) Road.

The criteria is based on whether a receptor is likely to be exposed to elevated concentrations of PM₁₀ over a 24 hour period and utilises background concentrations of PM₁₀ as part of the assessment. The sensitivity of the receptors has been defined with due recognition to the criteria outlined by the IAQM. The results are outlined in Table 10.9 below.

Table 0.4: Sensitivity of Receptors to the Effects of PM₁₀

| ID | Annual Mean PM ₁₀ Concentration | Number of Receptors | Distance to Site Boundary (m) | Receptor Sensitivity |
|----|--|---------------------|-------------------------------|----------------------|
| 1 | 12.5 µg/m ³ | 10-100 | 50 | High |
| 2 | 12.5 µg/m ³ | 1-10 | 40 | Low |
| 3 | 12.5 µg/m ³ | 1-10 | 20 | High |
| 4 | 12.5 µg/m ³ | 1-10 | 20 | High |
| 5 | 12.5 µg/m ³ | 1-10 | 40 | High |
| 6 | 12.5 µg/m ³ | 10-100 | 20 | High |

The sensitivity of receptors to the effects of PM₁₀ have been classified as “High” in all but one of the proxy locations. This is primarily due to the existing low-level background concentrations of PM₁₀ across Zone D.

The IAQM give indicative examples of high, medium and low sensitive receptors. According to the IAQM, dust can have two types of effects on vegetation (chemical and physical). Direct physical effects are from smothering, which reduces the plants capacity to photosynthesise, complete respiration and transpiration. Direct chemical effects can include the altering of pH in soil and watercourses through the deposition of alkali rich particles. Indirect effects can include increased susceptibility to pathogens and air quality (IAQM, 2016).

In terms of ecological receptors, there have been one (ID6) proxies identified (Ulster Canal). The sensitivity of these receptors has been defined taking cognizance of the criteria outlined by the IAQM. The results are outlined in Table 10.10 below.

Table 0.5: Sensitivity of Receptors to Ecological Impacts

| ID | Distance to Site Boundary (m) | Receptor Sensitivity | Reason for Sensitivity Rating |
|----|-------------------------------|----------------------|---|
| 6 | 3 | Low | Aquatic habitat with no known dust sensitive species present. |

The receptor sensitivity is considered to be low. Although, ID6 is a proxy for the Shambles River/Ulster Canal, the habitat does not contain any known dust sensitive species or habitats (i.e. acid heathland).

The Shambles River is not designated as a European site, however it provides a hydrological link, via the Ulster Canal, the Cor River and the River Blackwater, to the Lough Neagh and Lough Beg SPA, which lies 58.6km downstream of the proposed development.

An EPA monitoring station located approximately 1.9km downstream of the proposed development, indicates a water quality status of ‘poor’ in 2017 (the most recent data). The river waterbody status (2013-2018) of the Shambles River (Shambles_010) is also considered ‘poor’.

10.4.2.3 Defining the Risk of Impacts

To identify the risk of impact from dust emissions with no mitigation measures applied, the dust emission magnitude determined was combined with the sensitivity of the receptors defined for each construction activity (Demolition, Earthworks, Construction and Track-out). Following this method the risk of impact on the following receptors was defined as follows:

- Sensitivity of people to dust soiling effects;
- Sensitivity of people to the human health effects of PM₁₀; and,
- Sensitivity of receptors to ecological effects.

As the potential risks to all receptors were consistent across all construction activity stages during the risk assessment, they are summarised in Table 10.11 below.

Table 0.6: Risk of Impact from Dust Soiling, Human Health (PM₁₀) and Ecological Receptors

| Potential Impact | Risk | | | |
|---------------------------------|-------------|------------|--------------|----------|
| | Demolition | Earthworks | Construction | Trackout |
| Dust Soiling | Medium Risk | Low risk | Low risk | Low risk |
| Human health - PM ₁₀ | Medium risk | Low risk | Low risk | Low risk |
| Ecological | Medium risk | Low risk | Low risk | Low risk |

It should be noted that the risks associated with impacts are short-term in nature. The level of risk identified for each activity outlined determines the level of mitigation required (IAQM, 2016). The mitigation measures are outlined section 10.5.

10.4.3 Operational Phase

There is not predicted to be any significant change in traffic volumes (Please refer to Chapter 9 Traffic for further information on traffic movements from the proposed development) when the proposed development is operational compared to the existing baseline scenario. An assessment of the construction phase is undertaken due to the reasons set out in this Chapter and an operational phase assessment can be screened. There is no requirement to carry out an air quality assessment for the impact of the development on the local area, and the impacts can be considered as having an insignificant effect.

Following construction, the area will be utilised as a public space, car parking, with occasional limited access for service vehicles and delivery vehicles. Therefore, emissions to air from traffic within the proposed development will be negligible once operational, and these will not be assessed any further. Due to the type of the proposed development, i.e. a public social space with a park, it will have likely positive impact on air quality and climate due to the following characteristics:

- Planting of trees and shrubbery in an urban environment will reduce dust levels and absorb carbon.

10.5 Proposed Mitigation Measures

10.5.1 Construction Phase

Mitigation measures are divided into general measures applicable to the entire site and measures applicable specifically to the defined construction activities (i.e. demolition, earthworks, construction and track-out). As the risk of dust impact on receptors from soiling has been identified to range from medium to high during the demolition stage specifically, the highest risk category should be applied when considering general mitigation measures (IAQM, 2016).

A Dust Management Plan (DMP) will be prepared by the appointed contractor for the Site and submitted to the Monaghan County Council for approval prior to commencement of construction. The DMP will at a minimum include the following mitigation measures listed below to minimise and manage potential dust emissions:

10.5.1.1 Communications

With respect to communications, the following will be implemented:

- Develop and implement a stakeholder communications plan that includes community engagement;
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary;
- Appropriate training will be provided to relevant construction operatives to ensure that they are aware of and understand the dust control; and,
- Display the head or regional office contact information.

To be implemented before works commence on site and training given as appropriate by the appointed contractor.

10.5.1.2 Site Management

With respect to site management, the following will be implemented:

- Daily visual inspections of the site and site boundary for evidence of dust depositions will be made. A dust inspection of the site will be undertaken by a suitable person, trained and nominated by the appointed contractor site manager. Increased frequency of site inspections will be undertaken when activities with a high potential to produce dust are being carried out, such as earthworks activities, power tool use and during prolonged windy or dry conditions;
- Record all dust and air quality complaints, identify cause(s), take appropriate control measures to reduce emissions in a timely manner, and record the measures taken;
- Make the complaints record available to the relevant regulatory authorities when asked;
- Record any exceptional incidents that cause dust and/or air emissions, either on or offsite, and the action taken to resolve the situation in an environmental log book;
- Avoid site runoff of water or mud;
- Use covered skips;
- No bonfires and burning of waste materials on site;
- It is recommended that passive monitoring at three - site boundary locations should be completed for the duration of the demolition & earthworks (Bergerhoff method);
- Keep surfaces such as Site fencing and barriers clean using wet methods.

To be implemented during works as required by the appointed contractor.

10.5.1.3 Demolition

Demolition is planned as part of the development including the demolition of buildings and the breaking up of ground floor slabs (rock breaking excavators) and the breaking up of external concrete (rock breaking excavators). With respect to demolition, the following should be implemented:

- Soft strip inside buildings before demolition of the buildings;
- ²The appropriate handling of asbestos is not outlined in this EIAR rather it is detailed in the associated Asbestos Demolition Survey Report for the Proposed Development.
- Ensure effective water suppression is used during demolition operations (especially breakup of concrete/floor slabs/buildings). Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.

To be implemented during demolition by the appointed contractor.

10.5.1.4 Earthworks

Earthworks are planned as part of the proposed development including foundations (and associated excavation of soils and materials), creation of stockpiling and cut and fill areas. With respect to earthworks, the following will be implemented:

- Disturbance of the ground will be kept to a minimum wherever possible;
- Soil handling should be restricted during adverse weather conditions such as high winds or exceptionally dry spells – depending on outcome of walk over survey identifying any potential issues ;
- Minimise drop heights from loading or handling equipment/materials and use fine water sprays on such equipment wherever appropriate;
- Dampening methods will be used where necessary; and,
- Methods and equipment will be in place for immediate clean-up of spillages of dusty or potentially dusty materials.

To be implemented during earthworks by the appointed contractor.

10.5.1.5 Construction

With respect to construction, the following will be implemented:

- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place;
- Ensure bulk cement and other fine powder materials are delivered in enclosed trailers;
- For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust;

² Asbestos, including asbestos fibres, is treated as a special material under all types of regulation and as such has its own exposure limits. It is subject to high levels of regulation and control. The asbestos demolition survey (required for this project) is not presented in this EIAR rather the asbestos works are a matter principally for Health and Safety Authority (HSA) and will be dealt with through appropriate survey, reporting, removal and disposal as required.

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems; and,
- Cleaning of hard stand areas by personnel only or if required mechanical road sweepers (with water suppressant fitted) to clean any site hard stand area.

To be implemented during construction period by the appointed contractor.

10.5.1.6 Vehicle Movement and Vehicle Emissions

As with any construction site, there are associated vehicle movement, emissions and plant use. With respect to vehicle movement and vehicle emissions, the following will be implemented:

- Implement a wheel washing system until earthworks are completed. Wheel wash system should have an adequate amount of hard surface between it and the site exit;
- Transportation of dusty/fine materials will be conducted in enclosed or sheeted vehicles;
- An onsite speed limit (to be displayed) will be implemented by the main contractor that will be appropriate to the types of construction plant utilised;
- Regular cleaning and maintenance of site roads as appropriate. Hard surface roads should be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic only;
- Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary;
- Ensure all vehicles switch off engines when stationary and not in immediate use - no idling vehicles (emissions to air controlled);
- All plant utilised should be regularly inspected (emissions to air controlled);
- Visual monitoring of plant will include: Ensuring no black smoke is emitted other than during ignition (emissions to air controlled);
- Ensuring exhaust emissions are maintained to comply with the appropriate manufacturers limits (emissions to air controlled); and,
- Avoid the use of diesel or petrol powered generators where possible, using mains electricity or battery powered items where practicable;
- Impose and signpost a speed limit of 20 km/hr on sealed surfaces and 15 km/hr on unsealed surfaces.

To be implemented throughout by the appointed contractor.

10.5.2 Operational Phase

As the emissions to air of both pollutants and greenhouse gases during the operational phase are not significant and there is no requirement for mitigation measures. Nonetheless, the development of such a brownfield site reduces the need for further land-use change, which impacts climate. Other design mitigation measures include:

- Reuse/recycling of crushed concrete and concrete slabs from on-site where possible reducing emissions related to production of virgin materials;
- LED public street lighting, which is proven to use 75% less energy when compared to traditional incandescent bulbs will contribute to further reduce already minimal indirect emissions due to electricity use; and,
- Planting of trees contribute to carbon sequestration and improved air quality.

10.6 Interactions

The air quality and climate change have the potential to interact with the following environmental issues:

Chapter 6 Water Quality, Chapter 8 Biodiversity, Chapter 9 Traffic & Transportation and Chapter 12 Population and Human Health.

10.7 Residual Impacts

Construction stage impacts will be short duration, and upon completion, will have no further impact on the local environment. Mitigation measures have been outlined to control dust during the construction stage, to minimise the potential for impact.

10.8 Cumulative and In-combination Impacts

This chapter further considers whether there are significant cumulative effects which are likely to arise as a result of interaction between effects as part of the same project, so as to identify potential secondary, cumulative or synergistic effects. Chapter 1 details the cumulative projects considered in the EIAR.

10.9 Monitoring

The guidance document titled 'Guidance on Monitoring in the Vicinity of Demolition and Construction Sites' dated October 2018 and authored by IAQM outlines considerations when devising an air quality monitoring plan (IAQM, 2018).

To provide a body of evidence to support the likely contribution of the Site works in the event of complaints, it is recommended that passive monitoring at three (3No.) Site boundary locations should be completed for the duration of the construction works (Bergerhoff method). The prevailing wind direction should be considered when devising the proposed sample locations.

10.10 Summary of Effects

This chapter considers the air quality impacts from the construction phase and once the proposed development is fully operational. In undertaking this assessment, RPS experts have exercised professional skills and judgement to the best of their abilities and have given professional opinions that are objective, reliable and backed with scientific rigour. These professional responsibilities are in accordance with the code of professional conduct set by the Institution of Environmental Sciences for members of the Institute of Air Quality Management (IAQM).

For the construction phase, an important consideration is dust. Without appropriate mitigation, dust could cause temporary soiling of surfaces, particularly windows and cars. The mitigation measures provided within this report should ensure that the risk of adverse dust effects is reduced to a level categorised as "not significant". Another important issue during the construction phase is control of emissions from construction plant and machinery. Mitigation measures are detailed to help control air quality pollutants.

Pollutant concentrations are predicted to be within the relevant health-based air quality objectives. Therefore, air quality is acceptable at the receptors surrounding the development site, making it suitable for its proposed uses. The operational impact of the proposed development on existing receptors is predicted to be 'negligible' taking into account the changes in pollutant concentrations and absolute levels. Using the significance criteria adopted for this assessment together with professional judgement, the operational air quality effects are considered to be 'not significant' overall.

Table 0.12: Summary of Likely Environmental Effects on Air Quality & Climate

| Receptor | Sensitivity of receptor | Description of Effect | Duration | Magnitude | Significance | Significant / Not significant | Notes |
|---|-------------------------|---|------------|------------|------------------|-------------------------------|-------|
| Construction phase | | | | | | | |
| Surrounding receptors (residential, amenity & commercial) | High | Fugitive dust & Emissions (Nitrogen Dioxide & Particulates) from plant and construction machinery | Short term | Medium | Moderate adverse | Not Significant | |
| Surrounding receptors (ecological) | Low | Fugitive dust & Emissions (Nitrogen Dioxide & Particulates) from plant and construction machinery | Short term | Low | Slight Adverse | Not Significant | |
| Operational phase | | | | | | | |
| Surrounding receptors (residential, commercial & amenity) | High | Emissions (Nitrogen Dioxide & Particulates) from traffic and combustion systems (heating systems) | Long Term | Negligible | Negligible | Not Significant | |
| Surrounding receptors (ecological) | Low | Emissions (Nitrogen Dioxide & Particulates) from traffic and combustion systems (heating systems) | Long Term | Negligible | Negligible | Not Significant | |

10.11 Limitations of the Assessment

There are no known limitations to the assessment in terms of air quality & climate.

Chapter

11

Waste

CHAPTER 11 - WASTE

11.1 Introduction

This Chapter assesses the waste management aspect of the proposed development. It discusses the potential waste streams that will be generated during the construction of the proposed development. The potential effects from the forecast waste generation are assessed in the context of the effects on waste management infrastructure and legislation, policy and strategy targets. Mitigation measures are proposed where the potential for significant effects have been identified. This chapter should be read in conjunction with the following EIAR Volume II Technical Appendices:

- Appendix 2A Preliminary CEMP (pCEMP);
- Appendix 2B Preliminary DCWMP;
- Appendix 2D Dublin Street Asbestos Survey Report; and
- Appendix 2E Northern Standard Asbestos Survey Report.

11.1.1 Scope of Assessment

Effects from the forecast waste generation have been assessed in the context of the effects on regional waste management landfill infrastructure capacity, legislation, policy and strategy targets. Mitigation measures are proposed to reduce the impact of waste generated by the proposed development.

11.1.2 Proposed Development

Construction and Demolition Waste (CDW) will arise from the demolition works to be undertaken as part of the proposed regeneration scheme. Waste will be generated as a result of general site clearance that will be required to accommodate construction works. The demolition of existing structures between No 8 and No 11 (inclusive) Dublin Street are required to form a new junction onto Dublin Street that accommodates two-way vehicular traffic and a new high quality pedestrian quarter. Four building are proposed for demolition to accommodate the new Charles Gavan Duffy Place, with a section of the Northern Standard building proposed for demolition to accommodate a new proposed roadway currently reference as Church Walk. New building facades to No's 7 and 13 Dublin Street and associated retaining structures are required, to facilitate the creation of a junction onto Dublin Street. The proposed urban regeneration scheme involves the creation of new streets and civic spaces, and other construction work to improve the public realm, including:

- New pavements, high quality surfaces and kerbing
- Resurfacing of existing pavements
- New railings, bollards and pop-up power supply
- Bicycle parking
- Street furniture including bins and seats
- Traffic calming ramp, pedestrian crossings
- New trees and vegetation
- New / replacement street lighting and CCTV
- New utilities and services, including watermains, foul, storm and water drainage ESB services Wi-Fi and Broadband;
- Future development plots (including embankments, boundary treatments, stone surfaces)

Chapter 2 Project Description gives further details and associated mapping of the proposed South Dublin Street & Backlands Regeneration Project.

11.1.3 Methodology

A quantitative assessment of potential effects in relation to waste have been undertaken. The assessment comprised the following stages:

- A review of applicable legislation and policy;
- A review of the proposed development design to estimate the waste generation during the various phases of construction;
- Determining waste arisings during construction and from the regeneration scheme-once operational;
- Consideration of potential interactions between proposals and the current site conditions;
- Identification of possible impacts;
- Assessment of impacts;
- Identification of measures and solutions to avoid, reduce or remedy potential impacts; and,
- Assessment of residual impacts, taking account of mitigation measures.

11.1.4 Definition of Waste

Waste is legally defined in EU and Irish law as “any substance or object which the holder discards or intends or is required to discard” under the Waste Framework Directive (European Directive 2006/12/EC as amended by Directive 2008/98/EC). Once a substance has become waste it will remain waste until it has been fully recovered and no longer poses a potential risk to the environment or human health.

From that moment onwards, the material ceases to be waste and it is no longer subject to the controls of the Waste Framework Directive. The principal objective of sustainable resource and waste management is to use material resources more efficiently, where the value of products, materials and resources are maintained in the economy for as long as possible and the generation of waste is minimised. To achieve resource efficiency there is a need to move from a traditional linear economy to a circular economy, Figure 11.1.

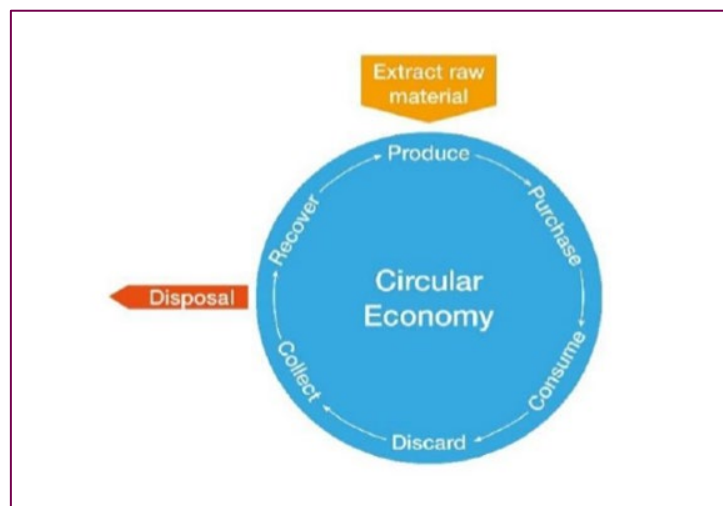


Figure 11.1 Circular Economy Approach

Most of the waste generated from the proposed development works will be classified CDW. CDW is not clearly defined in Irish legislation, however a number of official documents provide a definition for CDW as follows:

The Department of the Environment, Community and Local Government in 2006 defined CDW as waste which arises from construction, renovation and demolition activities, together with all waste categories mentioned in Chapter 17 of the European Waste Catalogue (EWC). Also included within the definition are surplus and damaged products and materials arising in the course of construction work or used temporarily during the course of on-site activities.

The Environmental Protection Agency (EPA) adopted a broad definition of CDW (in line with the opening part of the definition of CDW as set out in Article 1(4) of Commission Decision 2011/753/EU12) as all waste that arises from construction and demolition activities (including excavated soil from contaminated sites). These wastes are listed in Chapter 17 of the European Waste Catalogue (EWC).

The definitions in Ireland for CDW do not provide any clear distinction between waste originating from construction or demolition.

The EU and Irish definitions of re-use, recycling and recovery may be stated as follows:

- Reuse is defined as *“any operation by which products or components that are not waste are used again for the same purpose for which they were conceived.”*
- Recycling is defined *“as any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.”*
- Recovery is defined as

“(a) any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy, and

(b) without prejudice to the generality of paragraph (a), includes the recovery operations listed in the Fourth Schedule,”

Ireland follows the definition provided in the European Commission Decision of 18 November 2011 and Eurostat guidance on backfilling. Backfilling was defined by the European Commission Decision of 18 November 2011 as:

“...a recovery operation where suitable waste is used for reclamation purposes in excavated areas or for engineering purposes in landscaping and where the waste is a substitute for non-waste materials”.

This definition applies in Ireland but there has been no official translation into Irish law.

11.2 Relevant Guidance and Legislation

11.2.1 Waste Management Policy

An extensive document review was completed to assist in identifying current and future requirements for waste management which included:

National and Regional Policies and Strategies such as:

- Waste Management Act 1996 (as amended);
- Changing Our Ways; A Policy Statement on Waste Management, Department of Environment, Heritage and Local Government, 1998;
- Preventing and Recycling Waste – Delivering Change, Department of Environment, Heritage and Local Government, 2002;
- Taking Stock and Moving Forward, Department of Environment, Heritage and Local Government, 2004;

- National Strategy on Biodegradable Waste, Department of Environment, Heritage and Local Government, 2006;
- A Resource Opportunity – Waste Management Policy in Ireland, Department of the Environment, Community and Local Government (DoECLG), 2012;
- National Hazardous Waste Management Plan 2014 – 2020, EPA, 2014;
- National Hazardous Waste Management Plans published by the EPA;
- Planning guidelines for future developments published by the DECLG;
- Connacht-Ulster Region Waste Management Plan 2015-2021; and,
- A Waste Action Plan for a Circular Economy – Ireland’s National Waste Policy 2020 - 2025

11.2.2 Irish legislation that impacts CDW management

CDW waste is subject to a number of legislative requirements including the movement of waste, and management via authorised waste facilities.

Movement of Waste: Subject to minor exceptions, Section 34 of the Waste Management Act requires all bodies involved in the collection of waste to have this activity authorised by a waste collection permit. Besides the legal obligation to be in possession of a permit, the holder has to abide by its conditions. For example, these may limit collection activities to certain types of waste or require the permit holders to use specified tiers of the Waste Hierarchy. The details of the waste collection permit system are set down in the Waste Management (Collection Permit) Regulations S.I. No. 820 of 2007 27, S.I. No. 87 of 2008 28 and S.I. No. 197 of 201529. Offaly County Council has been appointed as the National Waste Collection Permit Office (NWCPO).

Authorisation of Waste Facilities: The Waste Management Act contains a hierarchy of control systems, with the most stringent of these being licensed by the EPA. Local authorities are generally required for the regulation of non-disposal waste sites below specified thresholds (small scale and with a low degree of environmental significance). Because local authorities operate their own infrastructure, the EPA is mandated to oversee such activities. The following type of authorisations apply to waste management facilities in Ireland:

- Industrial emissions licences:** Directive 2010/75/EC of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) was transposed in Ireland by the European Union (Industrial Emissions) Regulations 2013, S.I. 138 of 2013 and Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations 2013, S.I. 137 of 2013. These regulations place a number of additional waste activities under the EPA licensing regime for the first time such as biological or thermal treatment facilities above a certain threshold. These regulations have limited impact on CDW treatment.
- Waste licences:** The waste licensing system is operated by the EPA and is the main waste authorisation issued for major facilities in Ireland. This system provides for high environmental standards to apply for the development, operation, closure and aftercare of such sites. The Waste Management Act and the Waste Management (Licensing) Regulations 2004 govern the process under which the licences are applied for and maintained. CDW facilities that are managed by this regime include: landfills and materials reclamation facilities that handle more than 50,000 tonnes of non-hazardous waste.
- Waste facility permits and certificates of registration** are issued by local authorities under the under the Waste Management (Facility Permit and Registration) Regulations, S.I. No. 821 of 2007 (as amended) 3132. CDW facilities falling under the permit regime include places where concrete and brick crushers are being operated to recover up-to 50,000 tonnes per year of inert CDW and materials reclamation facilities (e.g. processing pre-treatment activity or backfilling activity) that handle less than 50,000 tonnes of non-hazardous waste. Certificates of registration are used for small scale CDW recovery

activities processing less than 10,000 tonnes and generating less than 15% of residual waste. The revised facility permit and certificate of registration regulations introduced clear classes of activity, for the pre-treatment and backfilling of CDW, enabling operators to apply for an appropriate waste authorisation with more certainty. The previous regulations did not specify the type of and scale of recovery activities requiring a permit and were open to interpretation, particularly for CDW recovery activities. This uncertainty has been addressed with more CDW activities receiving a facility permit or certificate of registration, rather than a waste licence. In this regard, Article 11 of S.I. No. 821 of 2007 introduced a process whereby the Environmental Protection Agency is designated as the responsible body for determining whether a particular activity requires a waste licence, a waste facility permit, a Certificate of Registration or none of these. Such determinations may be made by the Environmental Protection Agency (EPA) having regard to the following:

- Following a request made by a prospective applicant for a waste authorisation for a decision on the type of waste authorisation that applies to the proposed facility/ activity;
- Following a request made by a local authority to whom an application for a waste facility permit or a Certificate of Registration has been made; and
- On its own initiative in relation to an existing facility.

11.2.3 National Waste Policy in Ireland

The statutory basis for waste management policy in Ireland comes from the Waste Management Act 1996. This Act provided the framework for the then Government's 1998 Policy Statement entitled "Waste Management: Changing Our Ways". This document outlined national targets and plans to modernise waste management practice over a 15-year period. A key concept of the Policy Statement was the Hierarchy of Waste Management, whereby waste prevention and re-use is preferable to non-sustainable practices such as disposal to landfill.

In Ireland, the Department of the Environment, Climate and Communications has divided the responsibility for waste regulation between the EPA and the local authorities. With respect to waste management planning, the EPA manages hazardous waste nationally while the responsibility for non-hazardous waste facilities lies with the local authorities.

Since the 1996 Waste Management Act, waste management planning of non-hazardous waste has been the responsibility of the local authorities. Section 22 of the Act allowed local authorities to amalgamate their waste management planning duties at their discretion. As a result, prior to 2013, there were 10 groupings of local authorities nationally. Subsequent reform of local Government structures in 2014 reduced the number of groupings further from ten to three, which are as follows; Eastern & Midlands, Southern and Connacht & Ulster.

The Waste Action Plan for a Circular Economy 2020 – 2025 presents a roadmap to embrace the circular economy for the next decade. It promotes the focus on the following objectives: avoiding waste disposal; producer responsibility; sustainable economic models; a collaborative approach with other sectors & regulatory bodies and a strengthened role for Local Authorities (LA's).

The Circular Economy legislative package came into force from July 2018. This legislation provided amendments to The Waste Framework Directive (2008/98/EC) - Directive (EU) 2018/851; to improve the efficiency of Member States waste management systems, with focus on ensuring the efficiency of resource use and the value of waste as a resource. The Landfilling Directive (1993/31/EC) amendment Directive (EU) 2018/850 requires Member States to reduce waste disposal by landfilling; waste suitable for recycling or other recovery will not be permitted for landfill disposal.

11.2.4 Regional Waste Policy

Monaghan Town is located within the Connaught-Ulster region and is therefore subject to the requirements of the Connacht Ulster Waste Management Plan 2015-2021. The Connaught-Ulster Region WMP 2015-2021 set long term targets to:

- Achieve a recycling rate of 50% of managed municipal waste by 2020;
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices; and,
- The Connacht Ulster Waste Management Plan 2015-2021 Waste Management Plan provided an update to the EC (Waste Directive) regulations 2011 target of 70% for the reuse, recycling and recovery of man-made C&D waste in Ireland by December 2020. Ireland has surpassed that target, with a recovery rate of 97% (National Waste Report 2012, EPA (2014)).

11.3 Consultation

All detailed with regard to scoping and consultation are provided in Chapter 3 of this EIAR.

11.4 Assessment Criteria

11.4.1 Assignment of Significance

The Institute of Environmental Management and Assessment (IEMA) published guidance in March 2020 which sets out criteria for determining the value (sensitivity) of material resources and waste (including waste infrastructure).

The determination of significance, in most cases, will be the product of professional judgement of the Waste Topic Lead, with specific regard to: the sensitivity or importance (value) of receptors and the magnitude of impact on these receptors; and the extent to which primary, secondary and tertiary measures are expected to minimise impacts and effects¹.

Table 11.1 Importance or Sensitivity Matrix Definitions¹

Importance / Sensitivity of Resource or Receptor

Across construction and or/operation phases, the baseline/future baseline (i.e. without development) or regional inert and non-hazardous landfill void capacity is expected to...

| Negligible | Low | Medium | High | Very High |
|---|--|--|---|--|
| Remain unchanged or is expected to increase through a committed change in capacity. | Reduce minimally: by <1% as a result of wastes forecast. | Reduce noticeable: by 1-5% as a result of wastes forecast. | Reduce considerably: by 6-10% as a result of wastes forecast. | Reduce very considerably (by >10%); end during construction or operations; is already known to be unavailable; or would require new capacity or infrastructure to be put in place to meet forecast demand. |

¹ Assessing sensitivity of waste (Section 10.2.2) IEMA guide to Materials and Waste Environmental Impact Assessment, March 2020.

11.4.2 Assignment of Magnitude

Where the construction phase is being assessed, the magnitude of impact is considered from the point at which site access is gained, through demolition, site remediation, enabling works, and construction, to development commissioning.

Where the operational phase is being assessed, the magnitude of impact is assessed over the course of any one full and justifiably representative year within the first three years of commissioning.

Table 11.2 Magnitude of Impacts Definitions

| Assessment of Magnitude | | | | |
|---|--|--|--|---|
| <i>Inert and Non-Hazardous Void Capacity</i> | | | | |
| No change | Negligible | Minor | Moderate | Major |
| Zero waste generation and disposal from the development | Waste generated by the development will reduce regional landfill void capacity baseline by <1% | Waste generated by development will reduce regional landfill void capacity baseline by 1-5% | Waste generated by the development will reduce regional landfill void capacity baseline by 6-10%. | Waste generated by the development will reduce landfill void capacity baseline by >10%. |
| <i>Hazardous Void Capacity</i> | | | | |
| No change | Negligible | Minor | Moderate | Major |
| Zero waste generation and disposal from the development | Waste generated by the development will reduce national landfill void capacity baseline by <0.1% | Waste generated by development will reduce national landfill void capacity baseline by <0.1-0.5% | Waste generated by the development will reduce national landfill void capacity baseline by >0.5-1% | Waste generated by the development will reduce national landfill void capacity baseline by >1%. |

11.4.3 Significance of Effects

The assessment of significance will be based on the matrix outlined in Table 11.3 below.

Table 11.3: Assessment of Significance Matrix²

| | | Magnitude of Impacts | | | | |
|------------------------------------|------------|----------------------|-------------------|--------------------|---------------------|---------------------|
| | | No Change | Negligible | Minor | Moderate | Major |
| Sensitivity (or value) of receptor | Very high | Neutral | Slight | Moderate or large | Large or very large | Very large |
| | High | Neutral | Slight | Slight or moderate | Moderate or large | Large or very large |
| | Medium | Neutral | Neutral or slight | Slight | Moderate | Moderate or large |
| | Low | Neutral | Neutral or slight | Neutral or slight | Slight | Slight or moderate |
| | Negligible | Neutral | Neutral | Neutral or slight | Neutral or slight | Slight |

11.4.4 Determining whether an effect is significant, or not

Once the effect threshold has been determined, Table 11.4 provides how the Waste Topic Leads may determine whether environmental effects are potentially significant, or not.

² IEMA guide to Materials and Waste Environmental Impact Assessment, March 2020.

Where a threshold is 'slight or moderate' i.e. transcends the significant – or not – effect boundary, professional judgement is used in combination with documented justification, to determine a final outcome. The cautious significance boundary applied responds to the need for developers and EIA practitioners to – in unison – continue to take an increasing responsibility for managing materials and wastes sustainably, with a view to incentivising sustainable resource management and (ultimately) a circular economy.

Table 11.4 Overall Significance of Effect³

| Effect | Waste |
|------------|-----------------|
| Neutral | Not significant |
| Slight | |
| Moderate | Significant |
| Large | |
| Very Large | |

11.5 Baseline Environment

11.5.1 Current Operational Overview

The current overview of the proposed development at the South Dublin Street and Backlands area encompasses a section of retail district and car parking areas marked for redevelopment. The proposed development is located in the core of Monaghan town centre, within the town centre boundary as defined in the Monaghan County Development Plan 2019-2025. The wider area is dominated by town centre uses, including retail, business and commercial, residential, and community / ecclesiastical uses.

11.5.2 Characteristics of Current Wastes

Current wastes arising at the site is a typical mix of recyclable and residual material generated from the commercial properties and urban spaces. As a public urban space, local authority bins are provided, resulting in municipal wastes, accompanied by mixed litter, consistent with urban footfall.

11.5.3 Current Method of Management / Receiving Environment

11.5.3.1 Pre-treatment and Recovery Infrastructure

Pre-treatment infrastructure covers a wide variety of facilities in the region, but is mainly mechanical sorting, separation and processing plants which can vary in scale and sophistication. Recovery infrastructure covers a wide range of activities which fall within the treatment tiers of preparing for reuse, recycling and other recovery. Pre-treatment and recovery facilities can be authorised either by the EPA, under a waste licence, or by the local authorities, under a waste facility permit (WFP) or Certificate of Registration (CoR). The National Waste Collection Permit Office (NWCPO) database lists 27 authorised waste facilities in Co. Monaghan. Of these facilities, 8 are soil and stone recovery facilities. There are 4 recovery facilities which are licenced to accept both soil & stone and inert C&D waste. A full list of these waste facilities are shown in Table 11.5.

³ IEMA guide to Materials and Waste Environmental Impact Assessment, March 2020.

Table 11.5 Waste Facility Permit (WFP) and Certificate of Registration (CoR) licensed facilities in County Monaghan

| WFP No. | Facility Name | Facility Address | Activity | Date Issued | Expiry Date | Duration |
|-------------------|---|--|-------------------|--------------------|--------------------|-----------------|
| WFP-MN-12-0001-05 | ADN Materials Limited | Lossets, Kingscourt Road, Carrickmacross Co. Monaghan | Plastic Recycling | 30/03/2017 | 29/03/2022 | 5 years |
| WFP-MN-11-0009-06 | Blue Dolphin Environmental Ltd | Kincorragh, Smithborough Co. Monaghan | Transfer Station | 11/09/2019 | 10/09/2024 | 5 years |
| WFP-MN-10-0004-05 | Charlie Byrne | Knocknacran East, Magheraclone, Carrickmacross Co. Monaghan | ELV / Scrap Metal | 07/10/2020 | 06/10/2025 | 5 years |
| COR-MN-11-0001-02 | Eamon Mc Cabe | Cloughvalley Upper, Carrickmacross Co. Monaghan | Soil and Stone | 01/07/2016 | 30/06/2021 | 5 years |
| WFP-MN-11-0011-03 | Eamon Mc Kenna / Scanbitz Ltd | Lisnalee, Scotshouse Co. Monaghan | Waste Vehicles | 19/12/2016 | 18/12/2021 | 5 years |
| WFP-MN-15-0002-03 | Eugene Conlon / Sragh Car Dismantlers | Sragh, Ballybay Co. Monaghan | ELV / Scrap Metal | 26/06/2020 | 25/06/2025 | 5 years |
| WFP-MN-10-0002-04 | Ken Atkinson & Son Ltd | Carrigans, Emyvale Co. Monaghan | ELV / Scrap Metal | 04/05/2016 | 03/05/2021 | 5 years |
| WFP-MN-10-0001-03 | McElvaney Motors Ltd Truck Dismantlers Ireland | Killymarley, Dublin Road, Monaghan Co. Monaghan | ELV / Scrap Metal | 15/04/2020 | 15/04/2025 | 5 years |
| WFP-MN-18-0001-01 | Niall Kelly / Greenleaf Tyre Recycling | Dundonagh, Emyvale Co. Monaghan | Waste Tyres | 29/01/2018 | 28/01/2023 | 5 years |
| COR-MN-15-0003-01 | Patrick Kearney | Kilmurry, Inniskeen Co. Monaghan | Soil and Stone | 26/08/2015 | 25/08/2020 | 5 years |
| COR-MN-15-0005-04 | Patrick J McCabe | Drumgurra, Corduff, Carrickmacross Co. Monaghan | Soil and Stone | 23/07/2020 | 22/07/2025 | 5 years |
| WFP-MN-11-0008-03 | Patrick McQuaid | Annaghbrack, Threemilehouse Co. Monaghan | ELV / Scrap Metal | 18/11/2016 | 17/11/2021 | 5 years |
| WFP-MN-15-0001-01 | Rory Mc Eleavey / Border Breakers | Lisaquill and Cornahawla, Broomfield, Castleblayney Co. Monaghan | ELV / Scrap Metal | 10/06/2020 | 10/06/2025 | 5 years |
| WFP-MN-08-0022-08 | Shabra Recycling Limited | Killycard, Industrial Estate, Bree, Castleblayney Co. Monaghan | Plastic Recycling | 18/09/2018 | 17/09/2023 | 5 years |

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| WFP No. | Facility Name | Facility Address | Activity | Date Issued | Expiry Date | Duration |
|-------------------|------------------------------|--|-------------------|-------------|-------------|----------|
| WFP-MN-11-0003-04 | Ted Brennan Motors Limited | Corintra, Castleblayney Co. Monaghan | ELV / Scrap Metal | 15/07/2016 | 14/07/2021 | 5 years |
| WFP-MN-11-0004-02 | Terralift Ireland Limited | Tullynahatina, Castleblayney Co. Monaghan | Compost | 25/08/2016 | 24/08/2021 | 5 years |
| WFP-MN-16-0001-01 | Tray Parts Ltd | Tray, Culloville, Castleblayney, Co. Monaghan | ELV's | 12/10/2016 | 11/10/2021 | 5 years |
| WFP-MN-16-0002-01 | John Treanor | Glenbeg, Carrickroe, Emyvale, Co. Monaghan | Scrap Metal | 25/10/2016 | 24/10/2021 | 5 years |
| COR-MN-16-0004-01 | GPS Recovery Ltd. | Knocknagarnaman, Inniskeen, Carrickmacross, Co. Monaghan | Towing Company | 18/11/2016 | 17/11/2021 | 5 years |
| WFP-MN-17-0001-01 | Global Textile Shipping Ltd | Clonagore, Clones, Co Monaghan | Textiles | 26/06/2017 | 25/06/2022 | 5 years |
| WFP MN 19-0001 | Finnegan Waste Recycling Ltd | Monalia, Donaghmoynne, Carrickmacross, Co. Monaghan. | Class 10 | 04/04/2019 | 04/04/2024 | 5 years |
| COR-MN-19-0002-02 | D&N Plant Ltd. | Kilmurray, Culloville, Castleblayney, Co. Monaghan | Soil & Stone, C&D | 25/10/2019 | 24/10/2024 | 5 years |
| WFP-MN-19-0003-01 | DSCCS Limited | Tonnagh, Rockcorry, Co. Monaghan | Soil & Stone, C&D | 24/01/2020 | 23/01/2025 | 5 years |
| COR-MN-19-0001-03 | Brickworks | Oriel Road, Magheross, Carrickmacross, Co. Monaghan | Soil & Stone, C&D | 19/06/2019 | 18/06/2024 | 5 years |
| COR-MN-20-0003-01 | Gallinagh Poultry farms Ltd | Crover, Monaghan, Co. Monaghan | Soil & Stone, C&D | 01/12/2020 | 30/11/2020 | 5 years |
| COR-MN-20-0001-01 | Lowry Construction Ltd | Crossmoyle, Clones, Co. Monaghan | Crushing | 16/03/2020 | 15/03/2020 | 5 years |
| COR-MN-20-0002-01 | Newrath Transport Ltd | Drummanreagh, Broomfield, Castleblayney, Co. Monaghan | Soil & Stone | 25/08/2020 | 24/08/2025 | 5 years |

11.5.3.2 Disposal Infrastructure

The EPA authorise non-hazardous landfill facilities, which can accept municipal waste as well as C&D wastes, where permitted. These facilities can accept material for recovery or disposal if it is unsuitable for recovery. A national list of non-hazardous sites accepting C&D wastes and associated fines (generated from processing of mixed C&D wastes, LoW code 19 12 12) between 2016 – 2018 is shown in Table 11.6.

Table 11.6 Construction and Demolition Fines Intake at Non-Hazardous Sites

| Construction and Demolition Fines | | | | | | |
|-----------------------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|
| | 2016 | | 2017 | | 2018 | |
| | Disposed Tonnes | Recovered Tonnes | Disposed Tonnes | Recovered Tonnes | Disposed Tonnes | Recovered Tonnes |
| Drehid | - | 120,547 | 2,336 | 111,383 | 3,231 | 101,079 |
| Knockharley | 704 | 37,123 | 13,175 | 25,000 | 33,673 | 10,138 |
| Ballynagran | - | 41,598 | - | 42,632 | - | 41,267 |
| East Galway | - | 3,883 | - | 21,338 | - | 19,770 |
| Total | 704 | 203,151 | 15,511 | 200,353 | 36,904 | 172,254 |

11.5.4 Proposed Development Design

Construction and Demolition waste (CDW) will arise from the demolition works to be undertaken under the proposed development. The demolition of existing structures between No 8 and No 11 (inclusive) Dublin Street is required to form a new junction onto Dublin Street that accommodates two-way vehicular traffic and a new high quality pedestrian quarter. This new space will be formed through the demolition of several buildings fronting onto Dublin Street, namely No's 8, 9, 10 and 11 and their associated backland areas. The extent of demolition in this location is identified on Figure 11.2 which is an excerpt from Planning Drawing BU1001 (EIAR Volume III Technical Drawings and Figures) and Figure 11.3.

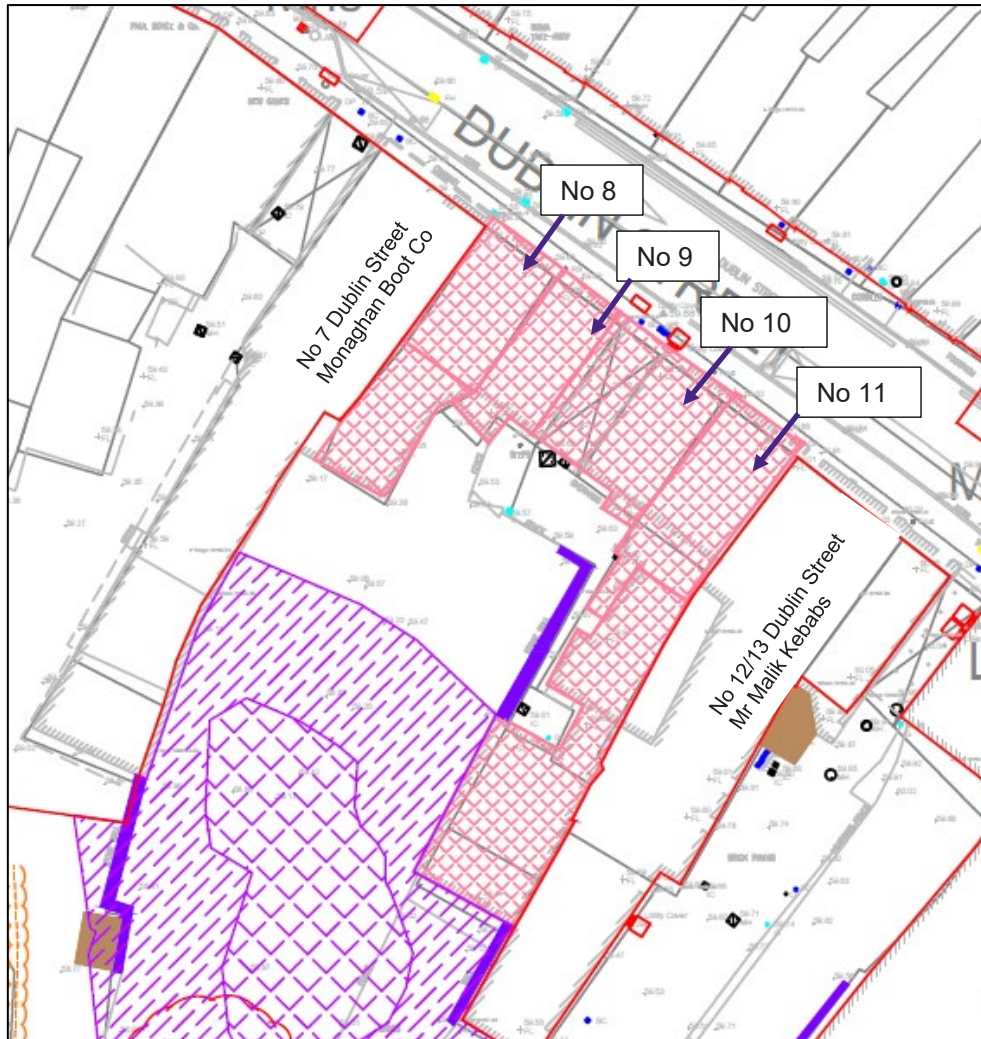


Figure 11.2: Demolition of properties along Dublin Street



Figure 11.3 Buildings annotated 8, 9, 10 and 11 Proposed for Demolition

Waste will be generated as a result of general site clearance that will be required to accommodate construction works. Construction related waste will be generated during construction works which includes excavation works, supporting/retaining structures, drainages/services installation, road construction, hard and soft landscaping, signage, ECV and street furniture.

11.5.4.1 Cut Fill Requirements

The current design for the proposed regeneration project works will require the removal of material in cuttings and areas of known poor ground and the placement of material to construct the new design profiles and features. This will create a cut-fill imbalance for the construction of the proposed works. Three

attenuation and soakaway units designed to manage surface water will require excavation from the southern car park area of the proposed development to a depth of 2m.

Public realm landscaping will be required, including excavations for cycle ways, trees and paving areas. Associated earthworks will also be required to facilitate ramps and slope profiles. Backfilling of clean soil and stone will be carried out wherever possible. The preliminary estimate of the earthworks cut/fill volumes are set out in Table 11.7-

Table 11.7 Cut Fill Requirements

| Cut and Fill Area (m2) | Cut (m3) | Fill (m3) | Net (m3) |
|------------------------|----------|-----------|----------------|
| 19,176.09 | 1,394.39 | 2,320.56 | 926.169 (Fill) |

This includes the total gross volume of cut material i.e. material to be excavated is approximately 1,394 m3 with net fill material of 926.169m3 required. It should be noted that this figure also includes the estimated volume of excavated Japanese Knotweed material to be removed from site for deep fill licensed landfill disposal. This is an initial estimate that may be revised pending an intrusive site Ground Investigation (GI) and waste classification which will also inform decisions on material suitability for re-use on site.

11.5.4.2 Japanese knotweed

Japanese Knotweed has been discovered in a number of locations at the proposed development area. The management of Japanese Knotweed must comply with the requirements set out by the National Parks and Wildlife Service (NPWS). To remove Japanese Knotweed material and associated contaminated soils, a licence must be applied for to the National Parks and Wildlife Service. Any material to be removed for disposal to landfill must be legally transported by a licenced waste carrier, and the destination landfill must be a deep fill licensed landfill site.

RPS produced an Outline Invasive Species Management Plan (Please refer to EIAR Volume II Technical Appendices, Appendix 8B for details) which provided an overview of the baseline status of the Japanese Knotweed at the site. An extended Phase 1 Habitat Survey recorded its presence at seven relevant locations – six stands are located at various locations within the site area and the seventh is outside the site but in close proximity to the boundary.

In terms of the extent of areas containing Japanese Knotweed, there are six identified stands within the site and a seventh stand just outside the boundary. Stands 01 – 06 within the site boundary have a total approximate area of 244.7m². Stand no. 07 outside the boundary has an area of 140m².

Approximate calculations of area containing Japanese knotweed to be removed is estimated, as a worst-case scenario to be 8000m³ or 14,400 tonnes of Japanese Knotweed contaminated soils. However this is based on calculations of a 7m buffer zone and excavations to 3m below ground level (BGL). It is likely that a buffer zone of 2-4m and excavations to 2m BGL would suffice in removal of the Japanese knotweed so there is a potential for the volume of Japanese knotweed impacted soils requiring treatment or removal to be reduced by up to 50%.

11.6 Impact Assessment

11.6.1 Assessment of Construction Effects

The predicted waste management impacts are assessed in accordance with Tables 11.1 – 11.3.

11.6.1.1 Demolition and Site Clearance Phase Potential Impacts

Waste materials will be generated as a result of the proposed demolition of existing buildings.

Waste arising from the proposed demolition phase is typically made up of several sub-waste streams, which are often mixed, depending on the amount of selective demolition and separate collection that has taken place.

Site clearance is required to facilitate the proposed development. The Outline Invasive Species Management Plan has noted the presence of Japanese Knotweed on the lands to be cleared. Clearance of this land without the proper measures in place has the potential to cause the spread of this invasive species of plant.

Under Section 52(7) and (8) of the Wildlife Act 1976 as inserted by amendment 56(d) of the Wildlife (Amendment) Act 2000, it is an offence to cause exotic species “to grow in a wild state in any place in the State any species of flora, or the flowers, roots, seeds or spores of flora”. It is also an offence to plant or otherwise cause to grow in the wild any plant listed in Part 1 of the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477/2011). The National Parks and Wildlife Service (NPWS) is the department responsible for the enforcement of both the Wildlife Act and the European Communities legislation.

Demolition waste can also contain hazardous substances such as Asbestos Containing Materials (ACMs) that are present in buildings when demolished or renovated. The Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006 as amended (S.I. No. 386 of 2006) and The Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013) provides the legislative backdrop to all aspects of asbestos control in construction. Any actions related to ACMs must be in accordance with these regulations.⁴ The Asbestos Survey Report with a location map and details provided of relevant buildings that are proposed for demolition can be found in EIAR Volume II Technical Appendices Appendix 2D and Appendix 2E.

Material comprising concrete, masonry and bricks / blocks and steel from above ground demolition works, with a quantity of soil and stone material from the attenuation tank and soakaway units along with cut and fill works across the site. A summary of the anticipated demolition and site clearance phase impacts is contained in Table 11.8.⁵

Table 11.8 Demolition Phase Impact Assessment Summary

| Activities | Description | Potential significance of effect prior to mitigation |
|-------------------------------------|--|---|
| Demolition of buildings/ structures | Likely to be inert/non-hazardous waste arisings: <ul style="list-style-type: none"> • Buildings • Concrete & inert • Made ground/soil & stone • Masonry • Concrete | Potential to require disposal to landfill if reuse options onsite cannot be utilised. |

⁴ Asbestos, including asbestos fibres, is treated as a special material under all types of regulation and as such has its own exposure limits. It is subject to high levels of regulation and control. The asbestos demolition survey (required for this project) is not presented in this EIAR rather the asbestos works are a matter principally for Health and Safety Authority (HSA) and will be dealt with through appropriate survey, reporting, removal and disposal as required.

⁵ There is very limited measurable information in relation to the existing buildings that are to be demolished, it is difficult to estimate volumes of materials to be removed etc. The project involves extensive works & excavations to roads, removal of property boundary walls etc. The definition of actual waste arising will be detailed at appointed contractor stage and will follow all required waste protocols.

| Activities | Description | Potential significance of effect prior to mitigation |
|--|----------------------|--|
| Excavation and removal of Japanese Knotweed material | Vegetation and soils | Potential to generate green materials and soils that require disposal to licenced deep fill landfill. Potential to spread IAS if not correctly managed |

11.6.1.2 Construction Phase Potential Impacts

There is the potential for excess volumes of materials to be managed off-site. Poor management of demolished or excavated waste could lead to the required disposal to landfill of waste deemed unsuitable for reuse or recycling.

CDW will arise from the construction phase. Typical waste materials arise from site management practices during the construction phase, for example; excess materials and packaging, over-ordering materials, off-cuts, damaged materials and poor storage during the construction phase.

Construction waste can also include waste materials generated as a result of excavations, typically consisting of materials, for example, soil, made ground and existing foundations removed as a function of design or from excavations for new construction. Depending upon the previous use of the site, this may, or may not be contaminated. The European Waste Codes (EWC) for typical waste materials that may possibly be generated during the construction phase are outlined in Table 11.9.

Table 11.9 Applicable List of Waste (LoW) Summary

| Waste Material | LoW |
|--|-------|
| Packaging | 15 01 |
| Concrete, bricks, tiles and ceramics | 17 01 |
| Wood, glass, plastic | 17 02 |
| Bituminous mixtures, coal tar and tarred products | 17 03 |
| Metals | 17 04 |
| Soil, stone and dredge spoil | 17 05 |
| Insulation materials and asbestos-containing materials | 17 06 |
| Gypsum-based construction materials | 17 06 |
| Separately collected fractions | 20 01 |
| Waste hydraulic oils * | 13 01 |
| Wastes of liquid fuels * | 13 07 |

* Denotes hazardous materials

Correct segregation, storage, handling and transport of all waste will be required to ensure there are no adverse effects on human health and that litter is not generated. The use of non-permitted waste contractors or unlicensed facilities could give rise to inappropriate management of waste and result in environmental impacts/pollution. It is essential that all waste materials are dealt with in accordance with regional policies and national legislation and that time and resources are dedicated to ensuring efficient waste management practices.

Fuels and hydraulic oils/lubricants that will be used during the construction phase are classed as hazardous. There will be fuels stored on site for machinery and construction vehicles along with oils and lubricants.

Should any spillages, waste or surplus liquids be disposed of incorrectly it could cause serious harm to the surrounding environment. There is the potential for significant quantities of materials to be deposited in landfill sites unless proper management plans are implemented.

If asbestos materials are not correctly identified, segregated and appropriately managed, there may be incorrect handling of the material which could have negative impacts on workers as well as environments both onsite and offsite. Further breakdown of potential waste streams that may arise during the construction phases of the development and the proposed management routes are set out in Table 11.10.

Table 11.10 Potential Materials Management during Construction Phase

| Material Type | LoW | Management Option | Management Destination |
|---|----------|--|--|
| Concrete | 17 01 01 | Crushed and reused on site | Onsite reuse |
| Bricks | 17 01 02 | Crushed and reused on site | Onsite reuse |
| Tiles and ceramics | 17 01 03 | Recycled or reused off site | Off site to specialist contractor |
| Wood | 17 02 01 | Recycled or reused off site | Off site to specialist contractor |
| Glass | 17 02 02 | Recycled or reused off site | Off site to specialist contractor |
| Plastics | 17 02 03 | Recycled or reused off site | Off site to specialist contractor |
| Bitumen macadam | 17 03 02 | Recycled or reused off site | Off site to specialist contractor |
| Metals | 17 04 07 | Recycled or reused off site | Off site to specialist contractor |
| Stone and soil | 17 05 04 | Materials deemed unsuitable or not required for reuse on site and require management offsite | Off site to specialist contractor |
| Insulation materials containing asbestos | 17 06 01 | Asbestos containing materials require careful removal and segregation and will be disposed of at a specialist hazardous waste landfill | Disposal at a licensed specialist hazardous waste landfill |
| Construction materials containing asbestos | 17 06 05 | Asbestos containing materials require careful removal and segregation and will be disposed of at a specialist hazardous waste landfill | Disposal at licensed specialist hazardous waste landfill |
| Gypsum based construction materials | 17 08 02 | Materials deemed unsuitable for reuse or recycling and require disposal to suitably licensed landfill | Disposal at licensed landfill |
| Deleterious demolition materials | 17 09 04 | Materials deemed unsuitable for reuse or recycling and require disposal to suitably licensed landfill | Disposal at licensed landfill |
| Plastic packaging | 15 01 02 | Recycled or reused offsite | Offsite to specialist contractor |
| Discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35 | 20 01 36 | Recycled or reused offsite | Offsite to specialist contractor |
| Iron and steel | 17 04 05 | Recycled or reused off site | Offsite to specialist contractor |

11.6.2 Assessment of Operational Effects

Waste materials are expected to arise from the operational phase of the proposed regeneration project; these will typically be similar to the current arisings of recyclable and residual litter generated from usage of the public amenity areas, particularly with an increase in volume due to expected increase in pedestrian footfall and usage of the new regeneration quarter.

This waste, classed as municipal waste, is anticipated to be of a similar composition to household waste and will include, but not be limited to food wastes, paper, packaging, cardboard and plastics. An increased quantity of dog fouling is also to be factored in and provided for.

A summary of the anticipated operation and maintenance phase impacts is provided in Table 11.11.

Table 11.11 Operation and Maintenance Impact Assessment Summary

| Activities | Description and quantities | Potential significant of effect prior to mitigation |
|---|---|---|
| Potential increase in waste quantities currently produced during routine operation and increased public footfall capacity. Mainly general waste, non-hazardous | Moderate increase in quantities of general waste which are managed for disposal using recycling methods for recyclable materials followed by methods lower down the waste hierarchy for non-recyclable materials such as landfill and incineration with energy recovery | Potential for inadequate waste management of waste arisings |

11.6.3 Assessment of Cumulative Effects

Chapter 1 Introduction (Section 1.4.2) identifies all those projects which have been considered and assessed with regards to cumulative impacts. As part of this review, several other larger planning applications were considered, however discounted due to distance from the scheme and deemed unlikely to have significant cumulative impacts. There will therefore be no cumulative impacts on waste as a result of neighbouring developments.

11.6.4 Inter-relationships

There are several anticipated interactions between waste and other topic EIAR chapters, namely: Chapter 4 Noise and Vibration, Chapter 6 Water Quality, Chapter 7 Soils, Geology and Contaminated, Chapter 10 Air Quality, Chapter 13 Land Use & Material Assets.

11.7 Mitigation

In order to mitigate against the potential impacts that the proposed development could have on the production of waste during each phase, mitigation measures will be put in place to ensure that all waste is dealt with in a sustainable and legislatively compliant manner. These measures are set out below for the various phases of the development.

11.7.1 Demolition and Site Clearance Phase Mitigation

The clearance of the proposed redevelopment site will generate mostly construction and demolition waste, with a small number of green wastes, such as plants, trees and vegetation. These wastes will be segregated and stored appropriately in skips in a designated area on-site. This waste stream will be collected by appropriately licensed or permitted private waste contractors that have been appointed by the contractor for disposal or composting and taken to suitably licensed facilities.

RPS have provided two options for management of the knotweed:

Option 1: Excavation, Cell Formation and Burial On Site In-situ - recorded glyphosate herbicide treatment by a 'Suitable Qualified and Fully Trained Operative' for a period of two weeks. This phase will be followed by preparation of a Cell Formation Area, designed and excavated to size in order to encapsulate

the total volume of knotweed material. The cell shall be sealed by a root barrier membrane, with a 100mm layer of sand on either side of the membrane acting as a protective buffer to avoid breaching of the membrane. The cell formation area will be capped to at least 2m deep. Each knotweed stand should be excavated to a depth of 3m below ground level and to a perimeter of 7m where conditions allow. This volume of material may be reduced depending upon Ecological Clerk of Works (ECoW) determination of the size of the rhizome involved. This option leaves the remaining risk of limitations to future works at the cell formation area; limitations to construction of new services or maintenance of existing services; risk of re-establishment of the IAS if the root barrier membrane is incorrectly sealed or if the integrity of the membrane is breached.

Option 2: Excavation & Removal off Site to Landfill - an in-situ, recorded glyphosate herbicide treatment by a 'Suitable Qualified and Fully Trained Operative' for a period of two weeks should be completed. This phase will be followed by establishing a haulage route, transfer site and decontamination area, protected with a root barrier membrane. The root barrier membrane will be protected by a 100mm layer of sand on either side of the membrane to act as a protective buffer, topped with a suitable layer of hardcore material. All of this material will be removed along with the last load of contaminated soil. Each knotweed stand should be excavated to a depth of 3m below ground level and to a perimeter of 7m where conditions allow. This volume of material may be reduced depending upon Ecological Clerk of Works determination of the size of the rhizome involved.

All excavated soil will be removed in a securely covered tipper truck, passing through the decontamination area and with waste transfer documentation verified by the Environmental Manager (EM). As a controlled waste, the Japanese Knotweed material will be taken by a licensed waste carrier to a deep fill licensed landfill site.

The appointed contractor should appoint an Environmental Manager (EM) and an Ecological Clerk of Works who will work collaboratively to ensure the implementation of the Invasive Species Management Plan (ISMP) which will be considered a live document. A no access Contamination Zone should be established around each stand of the knotweed, to a radius of 7m laterally. This will demarcate the full potential extent of underground rhizome systems. Furthermore, all site personnel should be briefed on the key facts, locations and requirements to arrest any further spread of the knotweed. Please refer to Volume II Technical Appendices, Appendix 2B for details of a Demolition and Construction Waste Management Plan (DCWMP).

A Main Works Contractor will be appointed by Monaghan County Council for the proposed regeneration development, the appointed contractor will ensure that demolition wastes will be collected by an appropriately licensed waste management company-and that all proposed management routes comply with the European Union waste hierarchy of prevention, preparing for reuse, recycling, and recovery with disposal being the last and final option and with other legal requirements. All waste materials leaving the site will be transported and disposed or recovered through licenced operators and in accordance with national waste legislation.

The Demolition Survey will set out all high value waste materials, such as metals, that will be removed from buildings and segregated for possible onward reuse or recycling to maximise recovery. The Demolition Survey will also include intrusive surveying with sampling which will identify the exact extent and location of any ACMs in the area. Removal offsite of any ACMs discovered will be required prior to demolition. Demolition debris will be separated into the following streams on-site:

- Construction debris (i.e. ceramics, tiles, plasterboard)
- Masonry materials (i.e. brick, concrete blocks)
- Metals
- Timber
- Universal waste (i.e. fluorescent bulbs, ballast and mercury containing switches)
- Hazardous waste

11.7.2 Construction Phase Mitigation

On-site segregation of all hazardous waste materials into appropriate categories:

- Waste oils and fuels;
- Paints, glues, adhesives and other known hazardous substances

The storage and reuse of demolition or excavation wastes on site may be subject to a number of waste licensing requirements. If these wastes are to be stored on site, prior to potential reuse or recovery during construction, this activity will be subject to a Waste Management Licence Exemption with a limited tonnage of material permitted to be stored on site. Storage will take place in a secure area on-site and the appointed contractor will monitor the amount of waste stored to ensure that the permitted limits of the Exemption are not exceeded. The appointed contractor will consult with the EPA prior to construction to ensure that the appropriate Waste Management Licence or Exemption is in place.

In order to divert waste from landfill, possibilities for reuse of inert demolition material as fill on site will be considered, following appropriate testing to ensure materials are suitable for their proposed end purpose.

It is proposed the following areas will be infilled using engineered fill material and suitable CDW arising from demolition works within the footprint of the development:

- Suitable hard fill foundation areas

The appointed contractor (with oversight from Monaghan County Council) will consult with the EPA prior to construction to ensure that the appropriate licences, permits and exemptions are in place prior to initiation.

Contractors working on site during the works will be responsible for the collection, control and disposal of all wastes generated by the works. The appointed contractor (with oversight from Monaghan County Council) will ensure that waste it is handled only by a body authorised under the Waste Management Act to manage it. This duty implies, at the very least, checking to see that the required authorisation is in place, has not expired and is appropriate for the waste types that are to be handled. The appointed contractor (with oversight from Monaghan County Council) will ensure that all waste materials leaving the site will be transported via a licensed carrier and disposed or recovered through licenced operators and in accordance with national waste legislation. Monitoring and updating of records will be implemented.

Project design will incorporate adequate dedicated space to cater for the segregation and storage of all various waste streams during construction. Separate compounds will be used for different phases of the works. Site compounds are located in or immediately adjacent to the relevant works phase, such as to cause minimal interference to the local community.

All waste materials will be stored in skips or other suitable receptacles in designated areas of the site. The waste storage area(s) will be assigned and all construction staff provided with training regarding the waste management procedures on commencement of the project. Adequate security measures should be put in place around the site and waste storage areas.

Construction waste materials shall be segregated on-site for recycling into the following categories:

- Timber
- Metal
- Cardboard & paper
- Glass
- Rubble
- General waste

Construction waste will be managed as part of the Construction Waste Management Plan (CWMP) contained in the Construction Environmental Management Plan (CEMP), which will be implemented by the appointed contractor for the duration of the construction works. As demonstrated in the draft CEMP, the

CEMP will contain procedures for the management of waste and related pollution control measures. The CEMP will be a live document and will be subject to revision throughout the course of the construction phase but will contain all measures outlined in the draft CEMP appended to the EIAR. The appointed contractor will also be required to develop a detailed resource and waste management plan in advance of works commencing on site. This will be prepared in line with EPA 'Best Practice Guidelines for the preparation of resource & waste management plans for construction & demolition projects' published in 2021.

Specific waste management requirements include:

- Identify how the waste will be dealt with (i.e. disposal, re-use on/off site etc.).
- Building materials should be chosen with an aim to 'design out waste.'
- Identify potential end markets e.g. reuse, recycling facilities, waste treatment facilities and disposal sites.
- All waste leaving site will be recycled, recovered or reused where possible, with the exception of those waste streams for which appropriate facilities are currently not available.
- On-site segregation of non-hazardous waste materials into appropriate categories, where possible, including any excavated soils, concrete, bricks, tiles, ceramics and plasterboard, metals and timber.
- On-site segregation of all hazardous waste materials into appropriate categories including contaminated soils, waste oil and fuels and paints, glues, adhesives and other known hazardous substances.
- Control measures and attention to materials quantity requirements to avoid over-ordering and generation of waste materials.
- Agreements with materials suppliers to reduce the amount of packaging or to participate in a packaging take-back Scheme.
- Implement a 'just in time' materials delivery systems to avoid materials being stockpiled, which increases the risk of the damage and disposal as waste.
- Segregation of waste at source where practical.
- All waste materials will be stored in skips or other suitable receptacles in designated areas of the site. The waste storage area(s) will be assigned and all construction staff provided with training regarding the waste management procedures on commencement of the project.
- Measures to ensure appropriate staff training and levels of awareness in relation to waste management.
- Waste streams will be collected by an appropriately licensed and permitted private waste contractor, appointed by the contractor for recycling, recovery or disposal at suitably licensed facilities.
- Calculate the difference between expected waste quantities prior to commencement of the project and actual waste quantities after the project is complete.
- The appointed contractors for the site preparation, earthworks and construction phases of the works will be contractually obliged to follow the CEMP and all relevant legislation.

The CWMP will be implemented from the outset of the project and throughout the duration of the project taking into consideration the waste management hierarchy to encourage sustainable development, environmental protection and optimum use of resources. The appointed contractors for the site preparation, earthworks and construction phases of the works will be contractually obliged to follow the Project C&D Waste Management Plan and all relevant legislation.

Contractors will ensure all plant is inspected and serviced in accordance with its schedule. A banded disposal area will be provided. Contractors will provide staff training on the waste management strategy. Disposal/recovery under licence.

The current Connacht Ulster Waste Management Plan 2015-2021 underpins all waste related operations to be carried out on site. The appointed contractor (with oversight from Monaghan County Council) will continue to review and implement any required changes in the waste management plan for the duration of the construction phase in order to avoid and minimise the potential effects of increased footfall and traffic management throughout the new development areas.

11.7.3 Operational Phase Mitigation

Monaghan County Council will continue to provide additional litter bin options, incorporating the Connacht Ulster Waste Management Plan recycling strategy. Monaghan County Council will continue to encourage the responsible management of waste, including minimisation and recycling, at the point of generation throughout the new public realm and amenity areas. This will include the disposal of wastes responsibly in facilities provided as well as continued extensive scheduled waste collection throughout Monaghan town centre.

It is important that waste arisings throughout the town centre are managed appropriately in line with the waste management hierarchy in order to achieve good recycling performance and high landfill diversion.

Appropriate separation of waste needs to occur in public areas. In addition to recyclable items such as paper and drinks bottles, separation of food and food contaminated packaging and consumable items for composting will be considered.

Appropriate receptacles and recycling bins will be clearly labelled for the collection and segregation of each of these waste materials and will be provided throughout the proposed regeneration scheme and open space areas, as appropriate. Wastes will be stored in these receptacles in a designated, easily accessible area of the site until collection by an appropriately licensed waste management contractor.

All wastes generated will be managed in accordance with appropriate waste management legislation and policy, and will be transported and recovered / disposed of by licensed waste management contractors.

New bins will allow for waste segregation and sufficient waste storage.

11.8 Monitoring

11.8.1 Construction Phase

All waste types and amounts generated will be recorded and reviewed at regular intervals, to allow for continuous analysis and review of procedures that will be made to reduce waste to landfill, increase the percentage of recycling and reduce waste overall as much as possible.

Waste storage will take place in a secure area on-site and the appointed contractor will monitor the amount of waste stored to ensure that the permitted limits of any Exemption are not exceeded. The CEMP will set out measures and procedures to monitor waste flows on site and update records.

The appointed contractor will be required to appoint an Environmental Co-ordinator throughout the construction stage of the proposed development. The Environmental Co-ordinator will be trained in how to set up and maintain a record keeping system, how to perform, audit and how to establish targets for waste management on site. They will also be trained in the best method for segregation and storage of recyclable materials, have information on the materials that can be reused on-site and implement the Project C&D Waste Management Plan.

Training of staff on site will be coordinated by the Environmental Co-ordinator and as such, a waste training programme will be organised. A basic awareness course will be held for all contractor site personnel to outline the CWMP and to detail the segregation of waste at source. This may be incorporated with other training needs (e.g. general site induction, safety training etc.). This basic course will describe the materials to be segregated, the storage methods and the location of waste storage areas. A subsection on hazardous wastes will be incorporated if required and the particular dangers of each hazardous waste will be explained.

Records will be kept for each waste material which leaves the site, whether for reuse on another site, recovery, recycling or disposal.

A system will be put in place to record the waste arising on site during demolition and construction phases. The Environmental Co-ordinator will have responsibility to record the following:

- Waste taken off-site for reuse
- Waste taken off-site for recovery
- Waste taken off-site for recycling
- Waste taken off-site for disposal

For each movement of waste off-site a signed waste collection docket will be obtained by the Environmental Co-ordinator from the licensed waste contractor. This will be carried out for each material type. This system will also be linked with the delivery records. A signed waste acceptance docket will be issued for each movement of waste on-site.

If waste movements are not accounted for, the reasons for this should be established in order to see if and why the record keeping system has not been maintained. Each material type will be examined in order to see where the largest percentage waste generation is occurring. The waste management methods for each material type will be reviewed in order to highlight how waste can be minimized.

The appointed Environmental Co-ordinator will be responsible for conducting a waste audit at the site during the C&D phase of the development. A review of all records for waste generated and transported off-site, should be undertaken mid-way through the C&D phase.

Upon completion of the C&D phase a final report will be prepared summarising the outcomes of waste management processes adopted and the total recycling / reuse / recovery figures for the proposed development.

11.9 Summary of Effects & Conclusion

11.9.1 Construction Phase

A carefully planned approach to waste management and adherence to a Site Waste Management Plan (SWMP) during the construction and installation phase will ensure that the waste effects on the environmental and on landfill void space capacity will not be significant.

There are proposals to reuse construction, demolition and excavation waste from the proposed development works in the design of the scheme with other waste not suitable going for recycling. Minimal amounts of waste will need to be disposed of in landfill. Therefore, the residual impact of the construction phase in relation to waste management is predicted to be neutral or slight with residual effect outcome being not significant. This is summarised in Table 11.12.

11.9.2 Operational Phase

From a waste management point of view the site will return to the baseline situation. There will be no discernible change to waste management practices required once the proposed regeneration scheme is operational. The residual impact of the operational phase in relation to waste management is predicted to be neutral. This is summarised in Table 11.12.

Table 11.12 Summary of Likely Environmental Impacts on Waste

| Receptor | Sensitivity of receptor | Assessment of Magnitude | Predicted Effect | Adverse/Beneficial | Permanent/Temporary | Mitigation Measures | Significant Not significant |
|--|-------------------------|-------------------------|-------------------|--------------------|---------------------|---------------------|-----------------------------|
| Construction Phase | | | | | | | |
| Non – Hazardous and Inert Landfill Void Space Capacity | Medium | Negligible | Neutral or Slight | Adverse | Temporary | 11.7 | Not significant |
| Operational Phase | | | | | | | |
| Non – Hazardous and Inert Landfill Void Space Capacity | Medium | Negligible | Neutral or Slight | Adverse | Permanent | 11.7 | Not significant |

11.10 Limitations of the Assessment

There are no known limitations to the assessment presented in the EIAR.

11.11 References

IEMA guide to: Materials and Waste in Environmental Impact Assessment Guidance for a proportionate approach, March 2020.

Chapter
12

**Population and
Human Health**

CHAPTER 12 - POPULATION AND HUMAN HEALTH

12.1 Introduction

This chapter provides a description and assessment of the likely impacts of the proposed development on population and human health on the local/receiving population.

Human health can be influenced (both adversely and beneficially) by a number of environmental and socio-economic determinants which can vary on a project by project basis and are further modified by local community circumstance and existing health burden.

It is important to emphasise that the founding principle and purpose of EIA is to investigate potential environmental effects that may pose a risk to the environment and health at a development planning stage. Due to the multidisciplinary nature of health, planning separates health determinants (i.e. activities and hazards with the potential to influence health) into individual technical disciplines and EIAR topic chapters (e.g. air quality, noise, transport).

The purpose of the chapter is to draw from and build upon the key outputs provided within each relevant EIAR topic chapter to further test potential risk to local communities, and where appropriate, to set such risk into context.

In particular, this chapter:

- Presents the existing environmental baseline established from desk-based studies and consultation to date;
- Identifies any assumptions and limitations encountered in compiling the environmental information; and,
- Highlights any necessary monitoring and/or mitigation measures that could prevent, minimise, reduce or offset the possible health effects identified in the EIA process.

The effects of any development on the environment may impose on humans directly and indirectly, positively, and negatively. Any significant impact on the status of population and human health that may be potentially caused by a development proposal must, be addressed as in much detail as possible. Direct effects include impacts on air quality, noise, traffic and socio-economic impacts. Indirect effects may be associated with landscape, flora, fauna, heritage and archaeology. Interactions are referred to in this chapter as appropriate.

The Chapter has been prepared by Stephen McAfee. Stephen is a Senior Associate Director of RPS' office based in Belfast. Stephen has over 18 years' experience of environmental consultancy in both the public and private sectors and is a Chartered Environmentalist and Chartered Scientist.

12.2 Methodology

12.2.1 Environmental Protection Agency (EPA)

The Environmental Protection Agency's Draft Guidelines on the Information to be contained in EIAR (EPA Ireland, 2017), highlights the amendments to Article 3(1) of amended European Union (EU) Environmental Impact Assessment (EIA) Directive which states that:

"The environmental impact assessment shall identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of a project on the following factors: a) population and human health; [...]"

Moreover, Annex IV, paragraph 5(d) requires an EIAR to contain:

“A description of the likely significant effects of the project on the environment resulting from, inter alia, ‘the risks to human health’”.

When outlining the scope of environmental factors covered by the EIA Directive within the European Commission’s guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2017), “population and human health” is defined as follows:

“Human health is a very broad factor that would be highly project dependent. The notion of human health should be considered in the context of the other factors in Article 3(1) of the EIA Directive and thus environmentally related health issues (such as health effects caused by the release of toxic substances to the environment, health risks arising from major hazards associated with the Project, effects caused by changes in disease vectors caused by the project, changes in living conditions, effects on vulnerable groups, exposure to traffic noise or air pollutants) are obvious aspects to study. In addition, these would concern the commissioning, operation, and decommissioning of a Project in relation to workers on the Project and surrounding population.”

Additionally, when describing the likely significant effects of a project, the European Commission’s guidance poses the following questions to consider:

“Have the primary and secondary effects on human health and welfare described and, where appropriate, been quantified? (e.g. health effects caused by the release of toxic substances to the environment, health risks arising from major hazards associated with the Project, effects caused by changes in disease vectors caused by the Project, changes in living conditions, effects on vulnerable groups).”

It is important to ensure that methods employed in a particular population and health assessment are proportionate and tailored to meet the assessment requirements of the project in question, which can differ considerably depending on the scale and nature of a proposal and are further influenced by local context and varying community circumstance and sensitivity.

There is a large body of guidance on Health Impact Assessment (HIA) generally and in the context of development planning (WMPHO, 2007; Chadderton, et al., 2012; The NHS Centre for Equality and Human Rights, n.d.; Ross & Chang, 2012), drawing from expert evidence and government policy regarding the importance of integrating public health into the planning system (Marmot, et al., 2010; Department of Health, 2010; DCLG, 2018). Such guidance has been applied to inform the development of a bespoke population and health EIAR chapter, where the scope, focus and assessment protocols are tailored to what is proposed; to local circumstance and the specific decision-making process in which it is intended to inform.

The assessment methodology follows a source-pathway-receptor model to identify and assess population and health effects that are plausible and directly attributable to the proposed development. A hazard source itself does not constitute a health risk. It is only when there is a hazard source, a receptor and a pathway of exposure that there is any potential risk to human health. The same is true for potential health benefits where a positive influence must be present alongside a pathway of exposure and a receptor for there to be a potential health improvement.

Where a source-pathway-receptor linkage exists, it is then the nature of the specific hazard source or positive influence; the magnitude of impact via the pathway of exposure; and the sensitivity of the receptor that will determine what level of health risk or benefit is predicted, if any.

12.2.2 Policy Context

The National Planning Policy Statement (DoECLG, 2015) outlines a number of important principles that planning authorities and public bodies are expected to engage with during the planning process. The following key standards have been identified as relevant to the proposed development and its potential impact of population and human health:

- Planning must proactively drive and support sustainable development, integrating consideration of its economic, social and environmental aspects at the earliest stage to deliver the homes, business, and

employment space; infrastructure and thriving urban and rural locations in an economically viable manner that will sustain recovery and our future prosperity.

- Planning must ensure that development facilities and encourages greater use of public transport as well as making walking and cycling more attractive for people in support of active and healthy lifestyles by focusing development, whenever possible, at locations with more sustainable travel options.
- Planning will encourage the most efficient and effective use of previously developed brownfield land over the use of greenfield land to ensure the most efficient use of existing infrastructure, enhancing, and strengthening the continues vitality of existing communities through regeneration.

12.2.3 Development Plan

The Monaghan County Development Plan 2019-2025 outlines a number of policies in regard to Population (Demographics) and Human Health:

- It is an objective of this plan to prepare a Green Infrastructure Strategy for the County which will identify, connect and protect green infrastructure resources and enhance their environmental and human benefits. The achievement of this objective will require partnership and stakeholder engagement from state agencies, local communities and interest groups.
- Establishment of a viable and growing population, sufficient to support a wide variety of employment and services.
- Development of infrastructure to support the existing towns and accommodate future growth within the towns.
- Improved transport links both within the county and destinations outside it.
- Re-development of back lands and derelict sites throughout the towns where appropriate.
- Provision of sufficient parking within the town centres where necessary.

12.2.4 National Healthy Ireland Framework

The National Healthy Ireland Framework was published in 2013 as a “Health in all Policies” approach to enhancing the health of all communities (Healthy Ireland, 2013). The vision of this Framework is “A healthy Ireland, where everyone can enjoy physical and mental health and wellbeing to their full potential, where well-being is valued and supported at every level of society and is everyone’s responsibility”.

The goals of Healthy Ireland outlined in the framework are as follows;

- Goal 1. Increase the portion of people who are healthy at all stages of life;
- Goal 2. Reduce health inequalities;
- Goal 3. Protect the public from Threats & Wellbeing; and,
- Goal 4. Create an environment where every individual and sector of society can play their part in achieving a healthy Ireland.

12.2.5 Consultation

All correspondence in relation to scoping and consultation for the scheme are detailed in Chapter 3 of this EIAR.

12.3 Assessment Criteria and Assignment of Significance

12.3.1 Guidance

'Health' is commonly defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (the definition used by the World Health Organisation (WHO) since 1948) (WHO, 1948).

There is a large body of guidance on health assessment generally and in the context of development planning, drawing from expert evidence and national government policy regarding the importance of integrating public health into the planning system.

The basis of this assessment is to apply a broad socio-economic model of health that encompasses conventional health impacts such as disease, accidents and risk, along with wider health determinants vital to achieving good health and wellbeing such as employment and local amenity. It considers both physical and mental health, and also addresses equality and social impacts where possible. The assessment is therefore based on both 'social' and 'ecological' (environmental) determinants of health, illustrated in Figure 12.1, which are affected through relevant health pathways.

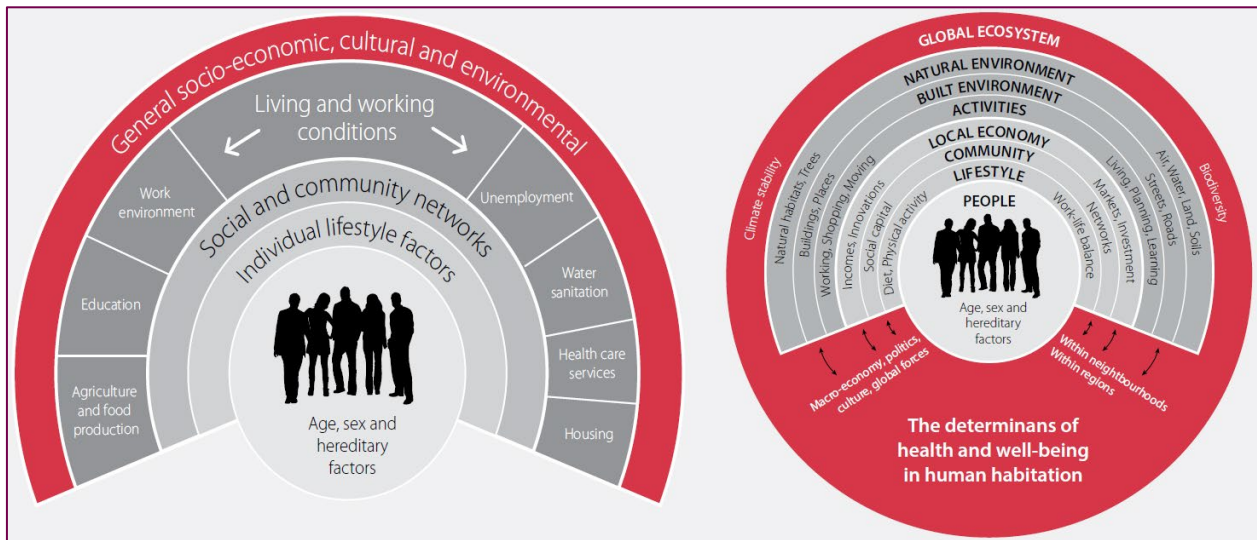


Figure 12.1: Social and ecological determinants of health

When defining potential health determinants for a development project, it is also useful to consider three broad domains of public health practice:

- Health protection (i.e. environmental pollution and standards set to protect health);
- Health promotion (i.e. healthy lifestyles, socio-economic status and inequalities); and,
- Health care (i.e. provision, effectiveness and equality of access to healthcare services).

12.3.2 Assessment Methodology

The assessment follows a source-pathway-receptor approach to identify and assess health impacts that are plausible, and directly attributable to the proposed development. A hazard source itself is not necessarily a health risk: it is only when there is a hazard source, a sensitive receptor and a pathway of exposure where there is any potential for risk to health. Where a source-pathway-receptor linkage exists, then the nature of the specific hazard source, the magnitude of impact via the pathway and the sensitivity of the receptor determine what level of health risk is predicted. The assessment presented in this chapter draws from and builds upon the key outputs provided within each relevant EIAR topic chapter.

Identification of a potentially relevant health pathway at this stage does not necessarily indicate that there would be a significant impact through that pathway. A significant impact would depend on the magnitude of

change, the sensitivity of receptors and the degree to which they are affected. Table 12.1 details the potential health determinants summary.

Table 12.1: Environmental Sensitivity and Descriptions

| Potential health determinant | Potential for Impact | Impact Type |
|--|----------------------|---|
| Construction | | |
| Exposure to air pollution (including nuisance dust, PM ₁₀ , PM _{2.5} and NO ₂) | Adverse | Temporary, direct, local |
| Changes in noise exposure | Adverse | Temporary, direct, local |
| Construction traffic (safety, amenity, severance) | Adverse | Temporary, direct, local and regional |
| Construction income and employment opportunities | Beneficial | Temporary, direct, indirect and induced, local and regional |
| Access to and use of open space for recreation and physical activity | Adverse | Temporary, direct, local |
| Operation | | |
| Exposure to air pollution (including PM ₁₀ , PM _{2.5} and NO ₂) | Adverse | Permanent, direct, local |
| Changes in noise exposure | Adverse | Permanent, direct, local |
| Operational traffic (safety, amenity, severance) | Adverse | Permanent, direct, local and regional |
| Operation income and employment opportunities | Beneficial | Permanent, direct, indirect and induced, local |
| Access to and use of open space for recreation and physical activity | Adverse | Permanent, direct, local |

12.3.3 Impact Assessment Criteria

The significance of an effect is determined based on the magnitude of an impact and the sensitivity of the receptor, affected by the impact of that magnitude. This section describes the criteria applied in this chapter to characterise the magnitude of potential impacts and sensitivity of receptors.

The criteria for defining magnitude in this chapter is informed through the assessment process, tailored to the individual health pathways, hazard characteristics and end health points to inform a professional judgement on magnitude.

The descriptions for value (sensitivity) of receptors are shown in Table 12.2. The descriptions for magnitude of impact are shown in Table 12.3.

Table 12.2: Environmental Sensitivity and Descriptions

| Sensitivity of Receptor | Typical Description |
|-------------------------|---|
| Very High | Very high importance and rarity, international scale and very limited potential for substitution. |
| High | High importance and rarity, national scale, and limited potential for substitution. |
| Medium | High or medium importance and rarity, regional scale, limited potential for substitution. |
| Low | Low or medium importance and rarity, local scale. |
| Negligible | Very low importance and rarity, local scale. |

Table 12.3: Magnitude of Impact and Typical Descriptions

| Magnitude | Example Descriptor |
|------------|--|
| High | Change in environmental and socio-economic circumstance sufficient to result in a major change in baseline population health (adverse or beneficial) |
| Moderate | Change in environmental and socio-economic circumstance sufficient to result in a moderate change in baseline population health (adverse or beneficial) |
| Minor | Change in environmental and socio-economic circumstance sufficient to result in a minor change in baseline population health (adverse or beneficial) |
| Negligible | Change in environmental and socio-economic circumstance below that for which it is possible to result in any manifest health outcome at a population level (adverse or beneficial) |
| No change | No opportunity for change in health outcome |

12.3.4 Significance of Effects

The approach to deriving effects significance from receptor value and magnitude of impacts shall be based on Table 12.4.

Table 12.4: Assessment of Significance Matrix

| Sensitivity | Magnitude of Impact | | | |
|-------------|---------------------|---------------------|---------------------|-------------------|
| | Negligible | Low | Medium | High |
| Negligible | Negligible | Negligible or minor | Negligible or minor | Minor |
| Low | Negligible or minor | Negligible or minor | Minor | Minor or moderate |
| Medium | Negligible or minor | Minor | Moderate | Moderate or major |
| High | Minor | Minor or moderate | Moderate or major | Major |

Within a defined population, existing burdens of health and sensitivity to changes in environmental and socio-economic conditions can vary significantly due to individual socio-economic circumstance, genetic predisposition and stage of life.

A precautionary approach has been applied by assuming that the entire population of Monaghan are of a uniformly high sensitivity to changes in environmental (air quality, noise, etc.) and socio-economic conditions.

The significance of the effect upon human health is determined by correlating the magnitude of the impact and the sensitivity of the receptor. The particular method employed for this assessment is presented in Table 12.3. Where a range of significance of effect is presented in Table 12.4, the final assessment for each effect is based upon expert judgement.

For the purpose of this assessment, any effects with a significance level of minor or less are considered to be not significant in EIA terms.

12.4 Baseline Environment

12.4.1 Study Area

The study area for this assessment is the full extent of the development site and considers Monaghan Town in the wider context. The site is located to the southeast of the town core, extending from The Diamond to the northwest, south eastwards along Dublin Street, and is defined to the southeast by the First Presbyterian Church to the south at Old Cross Square. The Shambles River and the Credit Union/Castlemeadow Court development defines part of the southern boundary along with Castle Road. Monaghan Shopping Centre defines the south west and western boundaries, with the rear of several properties fronting Dawson Street,

Mc Elvaney’s Pub and Monaghan Courthouse defining the northwest boundaries. St Patricks Church and Church Square define the northern boundaries.

12.4.2 Population Demographics

Census 2016 results show that County Monaghan’s population has grown modestly since Census 2011, increasing by 891 persons to 61,386 persons. This represents an increase of 1.5% over the intercensal period, an annual increase of 0.3% against a state average of 0.74%. These figures follow continuous population growth rates for Monaghan since the 1996 Census.

Given the change in economic trends nationally over the last ten years, along with a strong focus on emigration, the population growth within County Monaghan is considered reasonable. However, within the border counties Monaghan’s population growth is relatively low compared to other counties over the last ten years. Only two of the main settlements of County Monaghan experienced growth between 2011 and 2016. Having regard to national economic conditions which impacted on population change over the 2011-2016 periods, trends considered over a longer-term period demonstrate more measured and sustainable growth patterns.

County Monaghan over the period 1991 – 2016 (25 years), the population of the County has increased by almost 10,093 persons demonstrating positive growth patterns, notwithstanding cycles of economic and population decline within this period. In addition, positive population growth over the last ten years is also recorded at a rate of 1% per annum. Census figures indicate that there is a natural population increase and a decline in migration figures, and this is a trend which is likely to continue with anticipated continued economic growth.

12.4.3 Economic Context

The dependence on employment within the agriculture, forestry and fishing sectors is unsurprising when compared to the state figures. Notably Monaghan has less jobs in the professional, commerce and trade sectors than the national average, it will be important to promote additional employment in these sectors as these would enhance long-term labour force prospects and economic stability.

Figure 12.2 provides a comparison of the employment levels in the County by broad industrial sector with those of the state in 2011.

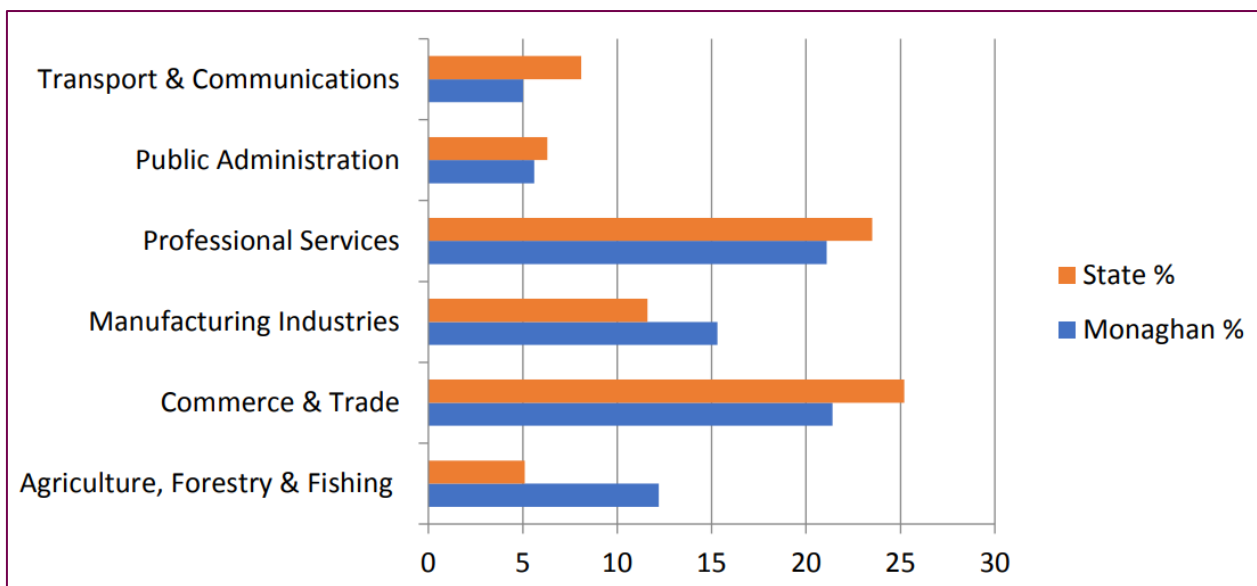


Figure 12.2: Employment Sectors (2011)

(Source: Monaghan County Development Plan 2019 – 2025)

12.4.4 Health Profile 2015 Monaghan (HSE)

12.4.4.1 Key Facts

The following key facts are presented in the Department of Public Health document, *Health Profile 2015 Monaghan*:

- Has higher than average proportion of population with no formal or primary education only of 20.8% compared to national rate of 15.2%.
- Has higher than average proportion of semi, unskilled and agricultural workers of 15.6 (national rate of 11.7).
- Has a lower than national average birth rate to females of all ages and those aged under 20 of 13.7 and 9.9 (national rates 15.8 and 12.3) respectively.
- Has the highest incidence of female malignant lung cancer nationally, and higher than average female malignant colorectal cancer, but has the lowest incidence of female and male malignant melanomas nationally.

12.4.4.2 Physical Health

The HSE 2015 Monaghan profile contains statistical analysis on physical health compared to Ireland. In death rates per 100,000 for the four principal causes of death over the period 2007-2012 it was reported Monaghan was slightly higher in heart disease and stroke, and injury and poisoning compared to the national mean rates. Deaths by cancer and respiratory disease were slightly lower than the national mean average.

More recent national health statistics are available in the Health Ireland Survey (2019). It shows that 46% of persons over the age of 15 are achieving the National Physical Activity Guidelines of 30 minutes of moderate activity 5 days a week. 60% of adults were reported to be either overweight or obese with these participants also referring to the fact they are getting less sleep/quality of sleep (HSE, 2019b).

12.4.4.3 Mental Health

Levels of depression and admissions to psychiatric hospital are higher among less affluent socioeconomic groups. Mental health problems are also related to deprivation, poverty, inequality and other social and economic determinants of health. Mental health is a growing health, social and economic issue and it is believed that depressive mental illnesses will be the leading cause of chronic disease in high income countries by 2030 (Healthy Ireland, 2013). In Ireland, the mortality rate from suicide in the 15-24 age group is the fourth highest in the EU and the third highest among men in the EU. Mental health and self-harm rates in Monaghan were reported as being at or very close to the average for the state as a whole (HSE, 2015a).

12.4.4.4 Health Inequalities

Inequalities in health are differences in health status or in the distribution of health determinants between different population groups due to the conditions in which people are born, grow, live, work, and age. There is an uneven distribution of the risk factors associated with many chronic diseases, with the burden borne disproportionately by those in the lower socio-economic groups. People with higher socio-economic position in society have a greater array of life chances, more opportunities to lead a more fulfilling life and tend to have better health. Rates of both coronary heart disease and diabetes are higher in the most deprived section of the population, with rates decreasing gradually as deprivation decreases.

12.4.5 Economic & Community

The Local Economic & Community Plan (LECP) aims to deliver specific actions in both the economic and community sectors in cooperation with the County Council in relation to local business, community

organisations, educational facilities, public and private sector agencies and the voluntary sector. Following detailed analysis of the socio-economic profile of the County, six high level goals have been adopted for the Monaghan LECP;

1. To develop and promote a positive image of County Monaghan as a place to live, invest and visit in order to maximise and sustain economic activity, entrepreneurial spirit and employment in the County.
2. To support the development of a highly skilled and educated workforce by supporting individuals and communities to participate in a wide range of educational and lifelong learning opportunities that is complimentary to economic development in the County.
3. To support the development of social and economic infrastructure to enhance and sustain economic and community development in the County.
4. To continue to support and strengthen community and voluntary activity and civic participation in the County.
5. To promote the health and well-being of all people in Monaghan by ensuring equal opportunity to access, participate and engage in the social, economic, cultural, sporting and educational opportunities available in the County.
6. To protect, enhance and maximise the potential of the natural, cultural and heritage resources of County Monaghan.

12.4.6 Monaghan Walking & Cycling Strategy 2021 - 2026

This 2021-2026 Strategy takes into account Monaghan County Council's role as an important agent of change in driving a number of key national programmes. Local authorities were first directed to prepare walking & cycling strategies as an action of the National Physical Activity Plan, as a measure to combat Ireland's growing obesity crisis. Since then, walking and cycling have come to form important parts of transportation, climate change and tourism policies and strategies. The Strategy looks at walking and cycling both as recreational activities and at the crucial role that they play in helping to address Climate Change through the promotion of Active Travel. This Strategy plans for the development of both areas of activity. During the Covid Pandemic, the Healthy Monaghan programme and Monaghan Sports Partnership rolled out a number of initiatives aimed at supporting people to stay active and mind their mental wellbeing during the lockdown. Walking and cycling came into their own, with challenges such as 'Malin to Mizen' and events such as nature walks proving to be amongst the most popular ever run by the Partnership. Monaghan City Council's vision sees the county developing as a destination for walking and cycling tourism, the provision of more local amenities to facilitate walking for health, and the creation of a network of connected walking and cycling routes to facilitate a modal shift from the car to walking or cycling for shorter journeys.

12.5 Impact Assessment

12.5.1 Assessment of Construction Effects

12.5.1.1 Human Health Effects from Changes to Air Quality

Magnitude of impact

Construction of the proposed development has the potential to influence human health from nuisance dust and from changes to local air quality associated with construction traffic. Chapter 10 Air Quality and Climate assesses the magnitude of impact on human receptors.

Following the implementation of control measures, it is anticipated that construction dust emissions would not be significant.

The increase in local particulate matter (PM₁₀ and PM_{2.5}) levels directly attributable to construction traffic associated with the proposed development is predicted to be negligible at all receptors and would remain below air quality objective thresholds set to protect the environment and health.

The increase in local NO₂ levels is predicted to remain below air quality objective thresholds set to protect of the environment and health at all of the receptors analysed. The contribution to local NO₂ concentrations directly attributable to construction traffic associated with the proposed development is minimal.

The human health effects from changes to air quality are predicted to be of local spatial extent, short term duration and intermittent. It is predicted that the impact is not of a concentration or exposure sufficient to quantify any change in baseline health. The magnitude is therefore considered to be negligible.

Sensitivity of the receptor

It is not possible to allocate a fair or accurate sensitivity classification to a population. On this basis, a precautionary approach has been taken, where the sensitivity of residential receptors to human health effects from changes to air quality is considered to be uniformly high.

Significance of effect

Overall, it is predicted that a negligible magnitude of impact on the high sensitivity receptor would result in a minor adverse effect, which is not significant in EIA terms.

Further mitigation or enhancement

No significant adverse effects have been predicted and no further mitigation is considered to be required.

Residual effect

The residual effect following no mitigation or enhancement is predicted to remain minor adverse, which is not significant in EIA terms.

12.5.1.2 Human health effects from changes in noise exposure

Magnitude of impact

As detailed within Chapter 2 Project Description, normal construction working hours will be Monday to Friday 08:00–18:00 and Saturday 08:00–13:00. However, non-noisy activities which would not cause disturbance off-site, or construction activities that cannot be interrupted (such as a continuous concrete pour) may be required outside these hours.

Based on this information, potential human health effects from changes in noise exposure would be limited to increased nuisance from a reduction in local amenity during the daytime. This would be a direct and local impact resulting from on-site construction activities and associated transport movements. Due to the nature of the construction period, the impact would be short term and intermittent.

Chapter 4 Noise and Vibration assesses the magnitude of impact at human receptors where it is predicted that noise levels from on-site construction activity associated with the proposed development will be below the lower cut-off value during the day of 65 dB L_{Aeq} and therefore not significant in noise terms. While certain construction activities have the potential to overlap, resulting in a cumulative noise impacts upon receptors, it is not anticipated that this would result in an exceedance of the daytime cut-off value for more than one month. Noise impacts associated with construction traffic will not be not significant in noise terms.

Overall, the human health effects from changes in noise exposure are predicted to be of local spatial extent, short term duration and intermittent. It is predicted that the impact will affect the receptor directly, but is not of a magnitude, exposure, duration or timing to quantify any change in baseline health. The magnitude is therefore considered to be negligible.

Sensitivity of the receptor

A precautionary approach has been taken, where the sensitivity of residential receptors to human health effects from changes in noise exposure is considered to be uniformly high.

Significance of effect

Overall, it is predicted that negligible magnitude of impact on the high sensitivity receptor would result in a minor adverse effect, which is not significant in EIA terms.

Further mitigation or enhancement

No significant adverse effects have been predicted and no further mitigation is considered to be required.

Residual effect

The residual effect following no mitigation or enhancement is predicted to remain minor adverse, which is not significant in EIA terms.

12.5.1.3 Human health effects from changes to transport nature and flow rate

An increase in HGVs and vehicle movements has the potential to change the transport nature (composition and flow rate on local roads). Depending on the magnitude of change, there is the potential for an increased risk of accident and injury; feelings of isolation from increased severance; and loss of amenity from increased severance or transport disruption. Any change to transport nature and flow rate would be a direct and local impact where due to the nature of the construction period, the impact would be short term and intermittent.

The human health effects from changes in transport nature and flow rate are predicted to be of local spatial extent, short term duration and intermittent. It is predicted that the impact will affect the receptor directly but is not of an order of magnitude sufficient to quantify any change in baseline health outcome. The magnitude is therefore considered to be negligible.

Sensitivity of the receptor

A precautionary approach has been applied, where the sensitivity of residential receptors to human health effects from changes to transport nature and flows is considered to be uniformly high.

Significance of effect

Overall, it is predicted that negligible magnitude of impact on the high sensitivity receptor would result in a minor adverse effect, which is not significant in EIA terms.

Further mitigation or enhancement

No significant adverse effects have been predicted and no further mitigation is considered to be required.

Residual effect

The residual effect following no mitigation or enhancement is predicted to remain minor adverse, which is not significant in EIA terms.

12.5.1.4 Human health effects from income and employment generation

Having a consistent income and being in long-term employment are two of the most important wider determinants of health. The construction phase of the proposed development would offer a number of job opportunities; while job opportunities would vary in type, the majority of jobs available would be for construction workers. This would be an indirect impact which, dependent on procurement, has the potential to benefit some construction workers in and around Monaghan.

However, it should be noted that due to the highly mobile nature of the construction industry and as construction companies tend to bring much of their labour force with them to undertake developments, it is

unlikely that all of the construction companies and contractors commissioned on the proposed development would be based in and around Monaghan.

The human health effects from income and employment generation are predicted to be primarily of local spatial extent and short-term duration. It is predicted that the impact will affect the receptor directly through employment and indirectly via indirect and induced income and employment opportunities important to health. However, the magnitude of direct, indirect and induced income and employment opportunities are not sufficient to quantify any change in baseline health. The magnitude is therefore considered to be negligible.

Sensitivity of the receptor

A precautionary approach has been applied, where the sensitivity of residential receptors to human health effects from income and employment generation is considered to be uniformly high.

Significance of effect

Overall, it is predicted that negligible magnitude of impact on the high sensitivity receptor would result in a minor beneficial effect, which is not significant in EIA terms.

Further mitigation or enhancement

No further mitigation or enhancement measures are recommended.

Residual effect

The residual effect following no mitigation or enhancement is predicted to remain minor beneficial, which is not significant in EIA terms.

12.5.2 Assessment of Operational Effects

12.5.2.1 Human health effects from changes to air quality

Magnitude of Impact

It can be concluded that the change in concentration and exposure directly attributable to the proposed development are not of a level to quantify any change in baseline health. The magnitude of impact on human health is therefore considered to be negligible.

Sensitivity of the receptor

A precautionary approach has been applied, where the sensitivity of residential receptors to human health effects from changes to air quality is considered to be high.

Significance of effect

Overall, it is predicted that negligible magnitude of impact on the high sensitivity receptor would result in a minor adverse effect, which is not significant in EIA terms.

Further mitigation or enhancement

No significant adverse effects have been predicted and no further mitigation is considered to be required.

Residual effect

The residual effect following no mitigation or enhancement is predicted to remain minor adverse, which is not significant in EIA terms.

12.5.2.2 Human health effects from changes in noise exposure

Magnitude of impact

The human health effects from changes in noise exposure are predicted to be of local spatial extent, short term duration and intermittent (i.e. during peak demand). It is predicted that the impact will affect the

receptor directly, and will not be of a magnitude, timing, duration or exposure sufficient to quantify any change in health baseline. The magnitude of impact on human health is therefore considered to be negligible.

Sensitivity of the receptor

A precautionary approach has been applied, where the sensitivity of residential receptors to human health effects from changes in noise exposure is considered to be uniformly high.

Significance of effect

Overall, it is predicted that negligible magnitude of impact on the high sensitivity receptor would result in a minor adverse effect, which is not significant in EIA terms.

Further mitigation or enhancement

No significant adverse effects have been predicted and no further mitigation is considered to be required.

Residual effect

The residual effect following no mitigation or enhancement is predicted to remain minor adverse, which is not significant in EIA terms.

12.5.2.3 Human health effects from income and employment generation

Magnitude of impact

The human health effects from income and employment generation are predicted to be primarily of local spatial extent and short-term duration. It is predicted that the impact will affect the receptor indirectly but will not be of level sufficient to quantify any change in health baseline. The magnitude is therefore considered to be negligible.

Sensitivity of the receptor

A precautionary approach has been applied, where the sensitivity of residential receptors to human health effects from income and employment generation is considered to be high.

Significance of effect

Overall, it is predicted that a negligible magnitude of impact on the high sensitivity receptor would result in a minor beneficial effect, which is not significant in EIA terms.

Further mitigation or enhancement

No further mitigation or enhancement measures are recommended.

Residual effect

The residual effect following no mitigation or enhancement is predicted to remain minor beneficial, which is not significant in EIA terms.

12.5.3 Assessment of Population

12.5.3.1 Construction Phase

The construction phase of the proposed development is likely to result in a positive net improvement in economic activity in the area of the proposed development site particularly in the construction sector and in associated and secondary landscaping services industries. The construction sector (including associated services) was documented as one of the most adversely impacted sectors of the Irish economy during the 2008 recession. The sector has recovered in recent years and this development will help to further enhance growth. It is difficult to estimate the number of employees that will be engaged on the development. A considerable amount of the work will be undertaken by sub-contractors who will also work elsewhere on a phased basis over an estimated time period.

The construction phase will also have secondary and indirect ‘spin-off’ impacts on ancillary support services in the area of the site, such as retail services, together with wider benefits in the aggregate extraction (quarry) sector, building supply services, professional and technical professions etc. These beneficial impacts on economic activity will be largely temporary but will contribute to the overall future viability of the construction sector and related services and professions over the phased construction period.

The proposed development could have a slight negative impact on the surrounding area during construction phase due to traffic and associated nuisance, dust and noise. These issues and appropriate mitigation measures are addressed in the EIAR. Mitigation measures for human health are detailed in Chapter 4 Noise & Vibration and Chapter 10 Air Quality & Climate and in the EIAR Volume II Technical Appendices, Appendix 2A Preliminary CEMP (pCEMP).

The construction phase of the proposed development is unlikely to have any significant impact on social patterns within the surrounding area. Some additional temporary additional local populations may arise out of construction activity. However these impacts are imperceptible, temporary in nature and therefore not considered significant.

12.5.3.2 Operational Phase

The increase in pedestrians in the area will enhance local spending power and will support a wide range of local businesses, services, transport infrastructure and open space area’s for enjoyment.

12.5.4 Assessment of Cumulative Effects

Cumulative effects are those arising from impacts of the proposed development in combination with impacts of other proposed or consented development projects that are not yet built/ or operational. RPS have reviewed the projects identified in Chapter 1, Section 1.4.2, and in all cases, there will be no significant cumulative impacts on population and human health as a result of neighbouring development proposals.

12.5.5 Inter-relationships

This chapter of the EIAR focuses primarily on the potential likely and significant impact on Population and Human Health in relation to health effects/issues and environmental hazards from the other environmental factors and interactions that potentially may occur. Inter-relationships are considered to be the impacts and associated effects of different aspects of the construction and operation of the proposed development. The following assessments have been made and a description of the likely inter-related effects on human health is provided in Chapter 16 Interactions.

12.6 Mitigation

In relation to the impact of the development on population and human health it is considered that the monitoring and mitigation measures outlined in other environmental topics/chapters such as water, air quality, climate and noise etc. sufficiently addresses monitoring requirements. Mitigation measures for human health are detailed in Chapter 4 Noise & Vibration and Chapter 10 Air Quality & Climate.

12.7 Summary of Effects & Conclusion

No significant human health effects are predicted as a result the construction or operation of the proposed development. This has been concluded on the basis that any change in health determinant would not be sufficient to quantify any change in baseline health outcomes within the surrounding community.

Positive impacts on population and human health will include health and social/wellbeing benefits associated with the provision of a new public/open space in the town centre and the provision of a highly permeable layout which encourages walking and cycling.

The implementation of the range of remedial and mitigation measures included throughout this EIAR document is likely to have the impact of limiting any adverse significant and likely environmental impacts of the operational phase of the proposed development on population and human health.

12.8 Limitations of the Assessment

Human health assessment draws from and builds upon the technical outputs from the EIAR to investigate changes in environmental and socio-economic conditions directly attributable to the proposed development. As a consequence, the limitations of the supporting assessments, and the conservative assumptions applied to address them, are inherent to the assessment of health.

Baseline data limitations are managed through the triangulation of national statistics to establish local health circumstance and relative sensitivity to the individual health pathways assessed. It is considered that the information available provides a suitable basis for a robust assessment of human health for EIA purposes.

12.9 References

HSE. (2015a). Health Profile 2015 Monaghan

HSE. (2019b, November). Healthy Ireland: Summary Report 2019.

<https://assets.gov.ie/41141/e5d6fea3a59a4720b081893e11fe299e.pdf>

Chapter
13

**Land Use &
Material Asset**

CHAPTER 13 - LAND USE AND MATERIAL ASSETS

13.1 Introduction

This chapter of the EIAR presents the findings of the assessment on existing land use and material assets which could be impacted by the proposed development.

The assessment of potential impacts on land use considers if there will be severance, loss of rights of way or amenities, conflicts, or other changes likely, which may alter the character and use of the surroundings. It has regard to the character and type of land use activities within the proposed site, and the location of any sensitive neighbouring occupied premises likely to be directly affected by the proposed development.

The assessment of potential impacts on material assets focuses on resources that are valued and are intrinsic to a place - these may be of either human or natural origin, and the value may arise for either economic or cultural reasons. In this context, this assessment focuses on buildings, built services and existing infrastructure within and directly adjoining the indicative study area.

The matters assessed within this section focus on the environmental effects on the following resources:

- Existing Land Use (e.g. Education / community / recreation);

Land with development potential and adjoining land use; and,

- Utilities and Infrastructure.

Material assets in the form of cultural heritage sites have been considered within Chapter 15 of this statement. Consideration of potential impacts upon surrounding land use in terms of visual amenity and noise and vibration, has been given within Chapters 14 and 4 respectively. Aspects relating to soil, geology, and hydrogeology are considered in Chapter 7. Consideration of impacts on water resources are considered in depth in Chapter 6. Consideration of transportation matters associated with the proposed development, are given in Chapter 9.

13.2 Methodology

13.2.1 Baseline

The baseline environment is defined as the existing environment against which future changes can be measured. This section outlines the methodology used in assessing the baseline land use environment. The scope for the assessment has been informed by desktop analysis, consultation with statutory consultees, bodies with environmental responsibility and other interested parties at scoping stage and during the pre-application community consultation.

With regards to existing land uses, consideration has been given to existing character and type of land use, and the location of any sensitive neighbouring occupied premises likely to be directly affected by the proposed development. This includes educational, community, recreational, health care and those uses related to religious groups / activities. The assessment will focus on direct land take which would occur through the implementation of the proposed development, including demolition of property. This will be undertaken following a desktop study, review of aerial photography, and review of OS base mapping.

With respect to land with development potential, future planned changes to land use following the grant of planning permission are relevant to the assessment. A planning history search was carried out to establish planning applications within and directly adjacent to the study area.

In relation to utilities and infrastructure, Ordnance Survey mapping and site survey work was used in conjunction with services data to identify the location of utilities and infrastructure that maybe affected by the proposed development. Consultation was also undertaken with utility and service providers, including

ESB Networks. Written consultation was undertaken with several government bodies and organisations as part of the pre-application consultation, and as part of the EIAR Scoping process with An Bord Pleanála.

13.2.2 Relevant Guidance

The following guidance documents are relevant to the land use and material assets assessment:

- European Union (EU) (Planning and Development) (Environmental Impact Assessment) Regulations, 2018.
- EPA Advice notes on current practice in the preparation of Environmental Impact Statements (EPA, 2003);
- EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA, 2022);

A desk-based study to identify baseline conditions has been undertaken to establish the existing provision of land use resources within the study area. This has utilised the following data sources:

- Monaghan County Council: <https://monaghan.ie/>
- National Cycling Network and Irish Cycling Advocacy Network
- The Heritage Council
- Liaison with utility companies
- Environmental Protection Agency (EPA)
- Geological Survey of Ireland (DECC)
- National Parks & Wildlife Service (NPWS)

13.2.3 Study Area

The indicative site boundary for the proposed development is outlined in Chapter 2, Figure 2.1, and described in detail within the Project Description, in Chapter 2 Indirect secondary impacts are analysed within the area which directly adjoining the study area

13.2.4 Assessment Criteria and Assignment of Significance

A qualitative assessment of impacts on land use and material assets, based on professional judgement has been undertaken to indicate the significance of effects on identified receptors, based on the value or sensitivity of the receptor and the magnitude of the predicted impact.

The significance of an effect on these assets is a function of the value or sensitivity of the resource or receptor, and the magnitude of the impact (taking into account the timescale involved - permanent or temporary). The criteria for assessing the significance of environmental effects on these assets are outlined in Tables 13.1 and 13.2.

Table 13.1: Example Definitions of Sensitivity or Value

| Sensitivity | Example Descriptor |
|-------------|---|
| Very High | Very high importance and rarity, international scale and very limited potential for substitution. |
| High | High importance and rarity, national scale, and limited potential for substitution. |
| Medium | High or medium importance and rarity, regional scale, limited potential for substitution. |
| Low | Low or medium importance and rarity, local scale. |
| Negligible | Very low importance and rarity, local scale. |

Table 13.2: Example Definitions of Magnitude

| Magnitude | Example Descriptor |
|------------|--|
| High | Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse). Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial). |
| Medium | Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (Adverse). Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial). |
| Low | Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (Adverse). Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial). |
| Negligible | Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse). Very minor benefit to or positive addition of one or more characteristics, features or elements (Beneficial). |
| No change | No loss or alteration of characteristics, features or elements; no observable impact in either direction. |

13.2.5 Significance of Effects

The sensitivity of the receptor and the magnitude of impact have been identified separately and contribute to the evaluation of the likely significance of the effect, which has been assessed in accordance with the approach outlined in Table 13.3.

Table 13.3: Assessment of Significance for land use and material assets

| Sensitivity | Magnitude of Impact | | | | |
|-------------|---------------------|---------------------|---------------------|----------------------|----------------------|
| | No Change | Negligible | Low | Medium | High |
| Negligible | No change | Negligible | Negligible or Minor | Negligible or Minor | Minor |
| Low | No change | Negligible or Minor | Negligible or Minor | Minor | Minor or Moderate |
| Medium | No change | Negligible or Minor | Minor | Moderate | Moderate or Major |
| High | No change | Minor | Minor or Moderate | Moderate or Major | Major or Substantial |
| Very high | No change | Minor | Moderate or Major | Major or Substantial | Substantial |

The levels of significance apply to both adverse and beneficial effects during the construction period and arising from the operation of the proposed development and take account of the guidance set out in the Table 13.4 below.

Table 13.4: Assessment of Significance Matrix

| Significance Category | Typical Descriptor of Effect |
|-----------------------|---|
| Very Large | Only adverse effects are normally assigned this level of significance. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category. |

| | |
|-----------------|--|
| Large | These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process. |
| Moderate | These beneficial or adverse effects may be important, but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor. |
| Slight | These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process, but are important in enhancing the subsequent design of the project |
| Neutral | No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error. |

13.3 Baseline Environment

13.3.1 Overview

This section describes the baseline environment for land use and material assets, to establish those factors which may be directly affected by the proposed development. A brief sectoral analysis of the lands directly adjoining the study area is also included.

13.3.2 Existing Land Use

The proposed development is located within the central core of Monaghan town centre and the boundary of application site/red line extends over approximately 2.72 hectares. The site includes 4nr buildings fronting onto Dublin Street which are between 2 and 3 storey's in height. Some of these are currently in use, namely a residential apartment and commercial unit in both No.10 and No.11. No 8 and part of No.10 are currently vacant. A section of the Northern Standard buildings have also been identified for demolition, and whilst still in use, it is understood the building provides ancillary storage for the primary land use (newspaper advertisement) and is underutilised at present. These buildings are interspersed with lane ways through archways and gaps, which lead through to courtyards, smaller rear out buildings, backlands, gardens and service areas for various commercial properties. EIAR Volume II – Technical Appendices Appendix 15A details site photographs of existing land uses.

The site currently comprises several retail/ commercial buildings (both vacant and in use) and backland areas comprising vacant / derelict land and properties, storage areas and rear access points. It also contains extensive areas of existing car parking, roads/roads infrastructure, pedestrian alleyways and incidental greenspace.

The development site includes the Courthouse Car Park, which is accessed via Farney Road and accommodates recycling facilities, amenity landscape and street lighting.

Castle Road provides the main vehicular and pedestrian access into the site, and provides connections into Monaghan Shopping Centre, Lower Courthouse Car Park, Courthouse Car Park, service areas to the rear of properties fronting onto The Diamond, Dublin Street, and Church Square. Castle Road is bounded by pedestrian footpaths and amenity planting/grass on either side of the carriageway, with close boarded fencing delineating its boundary with the Shopping Centre. The pedestrian footpaths connect into the front entrance of the Shopping Centre, the Courthouse car park, and lead into Church Square.

13.3.3 Adjoining Land Use

Given the site's location within the central core of the town centre, the wider context is dominated by town centre uses, including retail, business and commercial, residential, and community / ecclesiastical uses. The site is located south / south west of The Diamond and the main arterial route, Dublin Street, which flows through the town centre, and due north of N54 Macartan (Broad) Road.

A planning history search was carried out of the most recent planning applications immediately adjacent to the site boundary. A number of applications were identified as small-scale new development, change of town centre uses, and refurbishments to existing buildings within the immediate area. It is unlikely that any of these will result in any significant cumulative effects on the environment.

13.3.1.1 Residential Land Use

There is a residential land uses to the immediate south of the site known as the Canal Street and Pound Hill residential area. There are also residential units at Castlemeadow Court, properties on Dublin Street North, upper floor residential on Dublin Street south and on Church Square.

13.3.1.2 Industrial/ Commercial/ Retail

Given the sites location, the wider context is dominated by town centre uses, including retail, business and commercial. The Monaghan Shopping Centre defines the south west and western boundaries and includes a number of retail units and restaurants along with public services and facilities. McElvaneys Pub and Monaghan Courthouse defines the North West boundaries.

13.3.1.3 Community / Recreational Facilities

There are two places of worship located directly adjoining to the proposals, namely the First Monaghan Presbyterian Church and St Patricks Church of Ireland. There are extensive areas of green space located in and around the town centre surrounding the site that are mostly associated with institutions such as schools such as Scoil Mhuire Muineachan, Nai-Scoil Lan Lughaidh and healthcare facilities at St Davnet's Campus and Monaghan General Hospital.

Further open space is found at sports clubs e.g. Monaghan Harps GAA; Monaghan Leisure Centre and Peter's Lake/Swan Lake.

There are no National Cycle Network routes within or directly adjoining the proposed development site (however the Ulster Canal cycle network runs through the town – please refer to section 13.3.3.4). In addition, there are walking routes within or adjacent to the site.

13.3.1.4 Walking Routes

The Ulster Way is a 636 mile (1,024km) circular walking route taking in the six counties of Northern Ireland, although does cross into the Republic of Ireland. From this route the section of Sliabh Beagh Way follows a mixture of country lanes and forest tracks through the valleys of Co Tyrone, the drumlins of Co Monaghan and the lakeland of Co Fermanagh, and would be the closest route to Monaghan Town.

Slí na Sláinte stands for 'path to health', developed by the Irish Heart Foundation - the national heart and stroke charity - it's the outgoing way to make walking far more enjoyable. The Monaghan town Slí na Sláinte route is a 2.5km route which starts at Monaghan Leisure Complex on the Clones Road.

The Ulster Canal Greenway is a proposed network, almost 190km in length, of Greenway routes following the line of the Ulster Canal and other disused railway routes to connect many of the main towns, villages and tourist attractions through the mid-Ulster region. It started off in 2013 with the opening of a 4.2km section through Monaghan town. Funding is in place for Phase 2 and plans are being put in place for future sections.

13.3.1.5 Education/Religious Facilities

The site is defined by the First Church Presbyterian Church to the South and Saint Patrick's Church to the north. There is also a church to the North West boundary of the proposed development site.

13.3.4 Land with Development Potential

The proposed works will facilitate the creation of two large future development plots within the newly created backland areas. The main development plot is in the central area to the rear of those properties fronting onto The Diamond and 1-7 Dublin Street. It will be created by backland clearance and construction of the newly created streets of Charles Gavan Duffy Place, Church Walk and The Mall.

A second development plot is proposed to the rear of the properties fronting onto 12/13 – 26 Dublin Street, which will connect with Charles Gavan Duffy Place and the upgraded linkages /alley ways from Dublin Street

These future development plots will comprise town centre land uses, when developed – proposals will be brought forward by either the Council or third parties as separate planning applications and assessed under the relevant planning and environmental considerations relevant at that time.

13.3.5 Material Assets

A number of the main utilities' providers have provided indicative information to the applicant in relation to their existing services within or adjacent to the proposed development site. Please refer to EIAR Volume III Technical Drawings & Figures for details of utilities and services.

13.3.1.6 Surface Water

The majority of existing surface water is collected in pipes and discharged to the Shambles River. Some of this water is collected and discharged to the Shambles River via a stone attenuation area under the main Car Park area.

Please refer to EIAR Volume III Technical Drawings & Figures, Drawing no. DR1001 – Drainage for details of the new surface water networks proposed, which will include for future development within the area. The main surface water network will collect the majority of surface runoff within the project site and discharge to a proprietary attenuation crate system and pass through a petrol interceptor chamber before discharging to the Shambles River. Discharge into the river from this network will be limited to a maximum discharge rate of between 5 l/sec during the 1 in 100-year critical duration storm event using a hydrobrake chamber prior to the outfall. The attenuation system will be constructed underneath the main car park area

A smaller surface water network will be provided to collect runoff from sections of the Farney Road and the car park where lower surface elevations prevent this runoff from being connected into the proprietary attenuation crate system. Therefore, a section of the Farney Road and car park will continue to drain unattenuated into the Shambles River. To reduce the environmental impact of this, a petrol interceptor will be installed at the outlet of this network to reduce pollutants entering the river.

SuDS drainage systems are provided throughout the project site. All chambers and gullies shall have catchpits installed to reduce the volume of sediment that outfalls to the river. Porous paving shall be provided over a substantial area of the car park with runoff infiltrating into the attenuation system, in addition an infiltration trench will be provided on the grass verge on the south side of the car park to provide some long-term storage in the network.

Due to the high risk of flooding indicated on the CFRAMS mapping for the area, non-return flow valves shall be fitted to all network outfall pipes to prevent river flood flows from inundating the networks and resuspending sediments stored in the petrol interceptor chambers through back washing. Manual penstocks shall also be fitted to network outfalls to enable networks to be closed in the event of an accidental spillage.

13.3.1.7 Foul Water

A new foul water sewer network to service the new development sites is proposed. Foul water will be separated from storm water and discharged into an existing foul sewer network at the N54 Macartan (Broad)

Road. This foul sewer crosses an existing culvert on Farney Road at the Shambles River. It is proposed that this sewer will pass underneath the existing culvert. The method of construction used to carry out these works will be agreed by the local authority and the appointed Contractor prior to the commencement of development.

13.3.1.8 Earthworks

Ground investigation's (GI) were carried out during September and October 2021. This GI consisted of the following;

- Slit Trenches
- BRE 365 Test
- Boreholes
- Rotary Core tests

The results of this GI are contained in the Monaghan Town – South Dublin Street & Backlands Regeneration Project - Ground Investigation report, which is summarised in Chapter 7 of this EIAR.

Most of the area comprises made ground approximately 1.0m thick. The GI identified this as a combination of scrap metal, timber, concrete, pottery brick, macadam, plastic, PVC pipes and lead pipes, glass, slate roof tiles, timber and coal. The made ground is followed by slightly sandy gravelly Clay which is underlain by slightly sandy clayey Gravel.

For slightly sandy gravelly clay, the undrained strength is between 6kPa to 70kPa and the drained strength in terms of friction angle is between 32° to 40°.

The bedrock is encountered as 5.5m below the ground level. The bedrock is very strong to strong Limestone. Groundwater is encountered at around 3.0m below the ground level. The permeability test reports a value of 2.2E-04 m/s indicating medium permeability.

13.3.1.9 ESB Infrastructure

There are 2 no. ESB substations which will be affected by the works - one is located in lands adjacent to rear of the Monaghan County Council offices on Dublin Street, and one located on the edge of the lower Courthouse Car Park (within the proposed new central development plot).

The proposed development includes for the removal of the existing substation within the proposed new central development plot. A new substation will be provided on lands adjacent to the First Monaghan Presbyterian Church adjacent to the lower courthouse car park.

There are a number of small ESB and electrical pillars and cabinets that will be removed and replaced to facilitate the new electrical equipment layout. It will be a contractual requirement for the Works Contractor to maintain power and service connection throughout the works unless with prior agreement from individual utility providers and the Local Authority. Where buildings are to be demolished their connections to ESB plant and equipment will be removed as agreed with ESB.

A significant network of new MV (medium voltage) and LV (low voltage) 125mm ducting will be installed throughout the scheme to facilitate potential future developments, removing the need to carry out further excavations in the new footpaths or roads in the future. Electric car charging points are also identified on the proposed EIAR Volume III – Technical Drawings & Figures GA1001 - General Arrangement drawing. These electrical installations will be a combination of rapid charge and long charge points. The design, specification and installation method of this infrastructure will be agreed by the local authority and the appointed contractor prior to the commencement of development.

13.3.1.10 EIR Infrastructure

There is a minimal amount of existing EIR ducting and cabling recorded in the proposed site area. Where buildings are to be demolished their connections to EIR plant and equipment will be removed at site development stage as agreed with EIR. New EIR 110mm ducting shall be provided throughout the scheme to facilitate new EIR and fibre optic cabling for future developments.

13.3.1.11 Watermains

There is a minimal amount of existing watermains which will be required to be diverted to facilitate this development and potential future developments. A significant network of new 250mmPE watermains, complete with sluice valves, scour vales, hydrants and meters will be installed throughout the scheme with individual connection points to the proposed development sites included to facilitate potential future developments. All watermains works proposed will be constructed in strict accordance with Irish Water Standards

13.3.1.12 5G

As part of the proposed development, it is planned to install a significant amount of 110mm spare ducting with the intention to use this for future 5G connection. This ducting will follow the route of the proposed public lighting ducting, so that if there is a requirement to install 5G equipment at a future date, it can be mounted to public lighting columns if feasible.

13.3.1.13 CCTV

Ducting will be put in place to provide power and communication network connections for the future instalment of CCTV cameras by An Garda Síochána. By future proofing the proposed scheme it is hoped that disturbance to the new surface treatment can be minimised.

13.4 Impact Assessment

13.4.1 Assessment of Construction Effects

This section sets out effects that would occur during the construction phase of the proposed development, with respect to land use and material assets.

13.4.1.1 Existing Land Use

The demolition of buildings and structures, including street frontage buildings No's 8-11 Dublin Street and associated outbuildings and structures; the building to the rear of No.24 Dublin Street; partial removal of the rear section of the Northern Standard building fronting the Lower Courthouse car park; storage sheds, walls, and fencing.

- New building façades/side elevations to No's 7 and 12-13 Dublin Street, likely to be a masonry wall with piers finished in render (for structural stability) to facilitate creation of the new junction onto Dublin Street;
- Creation of a new urban space, comprising a street, junction and extended footpaths to connect Dublin Street through to its backland areas, opening up new areas for development and enhancing the pedestrian linkages throughout this area. This area is intended as a multi-use space and is capable of being temporarily cordoned off for use as an event space, for a market, pop-up commercial/retail uses, or occasional festival events. The creation of this new space creates a new setting and enables new opportunities for future infill development and reuse/ adaptation of existing underutilised buildings on either side of the new space,

creating opportunities for new commercial and residential activity. It is proposed that this area will be known as Charles Gavan Duffy Place.

- Creation of new streets:
 - New street connecting Charles Gavan Duffy Place to the Courthouse, to be known as Church Walk;
 - Realignment of an existing road to create a promenade, and to be known as The Mall;
 - Realignment of an existing road, to be known as Farney Road;
 - Creation of new urban civic spaces, streets, junctions, pedestrian pavements, steps, and cycle routes
 - Construction of new public realm comprising new surfaces, kerbing, street furniture, public street and feature lighting, soft landscape planting, cycle parking and signage
 - Clearance, regrading and creation of two potential development areas with supporting embankments, hardcore surfacing and boundary fencing
 - New boundary treatments comprising walls, railings and fencing
 - Alterations to the existing car parking layouts within the Courthouse car park and Lower Courthouse car park, and a reduction in long stay parking spaces

In conclusion, notwithstanding the demolition of existing built fabric at No 9-11 Dublin Street, on balance and considering the improved permeability between Dublin Street and Church Road and the public realm enhancements proposed. The predicted magnitude of impact (pre mitigation) is determined to be low and the significance of effects is considered minor adverse.

13.4.1.2 Adjoining Land Uses

The existing land uses directly adjoining the study area, or in close proximity will be affected by the construction of the proposed development. It is anticipated that the adjoining land uses along Dublin Street (No 7 and No 12/13) will remain operational for the duration of the construction process. Internal partitions will be utilised to ensure that demolition works to create the new openings onto the proposed Charles Gavan Duffy Place do not disrupt the operation of the commercial and residential uses. These uses are considered high sensitivity with minor impacts resulting from the proposed development during the construction process.

However as set out within Section 13.5 mitigation measures will be embedded into the construction phase such as good site management practices including the provision of high-quality hoarding / signage and proactive communications and engagement with landowners, regarding phasing, timing and duration of works to ensure minimal impact.

There will be changes to how the surrounding buildings may operate during the construction period, including additional health and safety procedures, changes to access, parking, and access to amenity space, however the use can remain operational. As such, the pre-mitigation predicted magnitude of impact will be low/medium and the significance of the effect is considered minor adverse.

13.4.1.3 Land with Development Potential

The proposed development (during its construction) does not impact on the implementation and delivery of the development potential of the site. Therefore, the magnitude of impact is predicted to be no change, and the significance of effect is no change.

13.4.1.4 Services and Utilities

Watermain & Foul Network

The proposed development incorporate considerable improvements to the existing surface water network, which is largely located beneath the lower Courthouse car park. The main network will collect surface water run-off and pass through an attenuation crate system with interceptors before discharging to the Shambles River. A smaller network will collect run off from lower surface elevations before discharging into the Shambles – however, this will be augmented by a petrol interceptor to reduce pollutants.

SuDS drainage systems and non-return flow valves are provided throughout the project site. All chambers and gullies shall have catchpits to reduce the volume of sediment that outfalls to the river, porous paving shall be provided over a substantial area of the car park with runoff infiltrating into the attenuation system and an infiltration trench has been provided on the grass verge on the south side of the car park to provide some long-term storage in the network. This will also assist during flood inundation periods in terms of accidental spillages.

The proposal also includes a new foul sewer network which will service the proposed development, and importantly the future development plots.

As the sensitivity of the existing network is medium, the predicted impacts are medium, with the significance of effect considered as moderate (pre-mitigation).

Electrical & Service Infrastructure

Although one of the existing ESB substations will be removed to facilitate the proposed development, it will be replaced by a new ESB substation with ample capacity for future development in the area. The applicant is providing new services and utilities for future development, which will encourage new development into the area.

Underground ducting will be provided (with spare capacity) which will replace and improve the existing network. This is designed along existing movement routes to ensure that it will not be compromised during future development and construction works.

Electric car charging points are also identified on the proposed general arrangement drawing (Please refer to EIAR Volume III –Technical Drawings & Figures, GA1001 - General Arrangement). These are positive interventions within the overall area, ensuring that new development can be sustainably designed and accommodated in line with forthcoming net zero carbon objectives.

There is minimal amount of existing EIR ducting and cabling recorded in the works area. Where buildings are to be demolished their connections to EIR plant and equipment will be removed as agreed with EIR. New EIR 110mm ducting shall be provided throughout the scheme to facilitate EIR and fibre optic cabling for future developments.

As part of the proposed development, it is planned to lay a significant amount of 110mm spare ducting with the intention to use for future 5G connection. This ducting will follow the route of the Public Lighting ducting with the intention that should 5G equipment be required to be installed at a future date that it could be mounted to public lighting columns, where feasible.

As the sensitivity of the existing network is medium, the predicted impacts are medium, with the significance of effect considered as moderate (pre-mitigation).

13.4.2 Assessment of Operational Effects

This section sets out effects that would occur during the operational phase of the proposed development, with respect to land use and material assets.

13.4.2.1 Existing Land Use

It is envisaged that the implementation of the proposed masterplan will stimulate the redevelopment of currently underutilised backlands to provide a range of land uses including residential, retail, commercial, hospitality etc. with improved pedestrian linkages and permeability in the vicinity of the site and wider town centre and the creation of a high quality civic space in the form of Charles Gavan Duffy Place. These works will contribute to the vitality and vibrancy of Dublin Street

The proposed development introduces a range of new streets, civic spaces, pedestrian footpaths, cycle paths, high quality landscaping and lighting. The proposal will therefore improve the quality of the public realm directly and permanently, in terms of its functionality, attractiveness and integration with its surroundings.

This proposal includes a reconfiguration of both car parks to accommodate the enhanced alignment of the Mall; Farney Road and Castle Road and to maximise the area available for walking, cycling and shopping activities. The predicted impacts are low/medium with the significance of effects considered as moderate (beneficial) due to the expected land activation benefits arising from the proposed masterplan.

13.4.2.2 Adjacent Land Uses

It is envisaged that the existing land uses directly adjoining and adjacent to the masterplan the-area, will realise considerable positive benefits during the operational phase of the proposed development. The proposed development will create an enhanced urban realm in the town centre, which will be attractive to residents and visitors. The plan provides for the creation of a new outdoor civic space/place for the public to enjoy which also has the potential to facilitate events and festivals for which the town has a strong tradition. The plan will provide for the regeneration of an underutilised area of the town close to the existing network of civic spaces at Church Square and the Diamond, thereby creating enhanced connectivity to the wider town centre environment. In this way it is predicted that the plan will have a positive impact on the wider town centre environment.

The proposed elevational treatment on the new gable returns of No.7 and No. 12/13 will provide active commercial frontage onto Charles Gavan Duffy Place. It is anticipated that the proposed development will create a new focal point within the town centre, which will provide for improved connectivity between Dublin Street and the main retail and commercial areas of the town. It is hoped that this plan will act as a catalyst for the regeneration of Dublin Street creating a vibrant streetscape.

The overall regeneration framework for Dublin Street envisages extensive town centre development/redevelopment and associated infrastructure improvements in this wider town centre. The proposed development is the initial phase of enabling works to facilitate and stimulate regeneration and redevelopment of this town centre location.

The predicted impacts are low, with the significance of effect considered as minor (beneficial) due to the overall improvements to the land use, and the catalyst it creates for future development.

13.4.2.3 Land with Development Potential

The proposed development will facilitate the creation of two large future development plots with considerable development potential it creates these through site clearance and regrades the land in readiness for future development. The plots will be serviced in terms of the essential infrastructure requirements, namely electricity, water, and foul systems, with capacity available in the resulting network. This is extremely beneficial in both construction, development and financial terms for a future developer, and aim to attract and encourage in new town centre development to the area. Therefore, the predicted magnitude of impact is predicted to be medium -high, and the significance of effect is moderate to major.

13.4.2.4 Services and Utilities

The proposed development incorporates considerable improvements to the existing services and infrastructure in the area, when complete improving an ageing network of assets, and bringing new/improved plant/systems into the area. This will be beneficial to all users and the environment in the area. The proposal also includes for new electric vehicle charging systems within the existing car parking areas, which is future proofing the scheme in respect of forthcoming legislation in respect of cleaner modes of travel.

The predicted impacts of the proposed development when operational are low, with the significance of effect considered as moderate (beneficial) due to the overall improvements to infrastructure and services in the area, and the catalyst the creates for future regeneration development.

13.4.3 Assessment of Cumulative Effects

Consideration has been given to a number of other permitted developments to assess whether there is potential for cumulative effects/impacts which are outlined in Chapter 1, Section 1.4.2. These have been considered in detail in respect of a cumulative assessment. No significant cumulative effects on land use resources or material assets are anticipated.

13.5 Mitigation

13.5.1 Land Use

During the construction phase for the proposed development, good site management practices and procedures will be carried out, including the provision of high-quality hoarding / signage. Proactive communications and engagement with adjacent landowners, regarding phasing, timing and duration of works will be an important aspect of the construction works.

Safe and appropriate access to the existing uses at No.7, No. 12/13, and the Northern Standard will be important, and the aim will be to maintain access throughout the construction process. Appropriate signage will be provided where necessary. This will ensure that no negative effects arise during the construction process

13.5.2 Adjoining Land Uses

Safe and appropriate access to adjacent buildings will be maintained throughout the construction process, and signage will be provided where necessary. This will ensure that no negative effects arise during the construction process.

13.5.3 Utilities and Services Infrastructure

In respect of the water /trunk main and sewer infrastructure, further investigations into services will be necessary during the construction design stage, to review all information within the site. Close liaison and engagement with services and utility providers will be important before, during and after the construction works to ensure continuity of service during the works and safe connections thereafter.

In relation to water installation work, this will be carried out by approved contractors using their pre-established safe systems of work and procedures. Site specific mitigation measures may be employed by the contractor following liaison with the infrastructure providers.

During the diversion works it is envisaged that there may be a temporary impact to supply, and that the public will be suitably notified of any potential disruption. There may be potential for alternative supplies to be used with sections of overhead line isolated for the limited periods for the duration of the works.

13.6 Summary of Effects & Conclusion

The summary of effects from the proposed development during both the construction and operation of the proposed development are outlined in Table 13.5 below. Most of the impacts are temporary, short-term impacts during the construction phase which can be mitigated through a range of procedures, good practices on site, and early consultation with statutory consultees and the adjacent land owners.

Table 13.5: Summary of Likely Environmental Effects on Land Use and Material Assets

| Receptor | Sensitivity of receptor | Description of Effect | Duration | Magnitude | Significance | Significant Not Significant |
|---------------------------------|-------------------------|------------------------|------------|--------------|------------------------------|-----------------------------|
| Construction phase | | | | | | |
| Existing Land Use | Low | Clearance /Disturbance | Long Term | Medium | Moderate | Not Significant |
| Adjoining Land Use | Low | Disturbance | Long Term | Low | Minor (Adverse) | Not Significant |
| Land with Development Potential | Low | Disturbance | Long Term | No Change | No change | Not Significant |
| Utilities & Infrastructure | Medium | Replacement / New | Short Term | Medium | Moderate | Not Significant |
| Operational phase | | | | | | |
| Existing Land Use | Low | Active Use | Long Term | Low | Moderate (Beneficial) | Not Significant |
| Adjoining Land Use | Low | Active Use | Long Term | Low | Minor /Moderate (Beneficial) | Not Significant |
| Land with Development Potential | High | Active Use | Long Term | Medium /High | Moderate/Major (Beneficial) | Not Significant |
| Utility & Services | Low | Active Use | Long Term | Low | Moderate (Beneficial) | Not Significant |

Chapter
14

**Townscape and
Visual**

14 TOWNSCAPE AND VISUAL IMPACT

14.1 Introduction

The purpose of this Townscape and Visual Impact Assessment (TVIA) is to identify and determine the effects on townscape character, townscape features, visual receptors and visual amenity as a result of the works associated with the construction of the proposed development. This Chapter is supported by EIAR Volume III Technical Drawings & Figures:

- Figure 14.4a: Viewpoint 01 Dublin Street Looking East Existing View;
- Figure 14.4b: Viewpoint 01 Dublin Street Looking East Proposed View;
- Figure 14.5a: Viewpoint 02 Dublin Street Looking West Existing View;
- Figure 14.5b: Viewpoint 02 Dublin Street Looking West Proposed View;
- Figure 14.6a: Viewpoint 03 Farney Road Towards Gavan Duffy Place Existing View;
- Figure 14.6b: Viewpoint 03 Farney Road Towards Gavan Duffy Place Proposed View;
- Figure 14.7a: Viewpoint 04 Towards Courthouse Car Park Existing View;
- Figure 14.7b: Viewpoint 04 Towards Courthouse Car Park Proposed View;
- Figure 14.8a: Viewpoint 05 Castle Road Existing View; and
- Figure 14.8b: Viewpoint 05 Castle Road Proposed View.

This assessment has been prepared and reviewed by Chartered Landscape Architects at RPS.

14.2 Methodology

14.2.1 General Approach

The methodology and approach to the assessment contained within this chapter has been carried out in accordance with best practice guidance described in the following documents;

- Guidelines for Landscape and Visual Impact Assessment, Third Edition (The Landscape Institute and Institute of Environmental Management & Assessment, 2013) (GLVIA3);
- Technical Guidance Note 06/19 Visual Representation of Development Proposals (The Landscape Institute, 2019).

GLVIA3 recommends that an LVIA ‘*concentrates on principles and process*’ and ‘*does not provide a detailed or formulaic ‘recipe’*’ to assess effects, it being the ‘*responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand*’ (preface to the third edition).

The effects on the landscape resources and visual receptors (people) have been assessed by considering the proposed change in the baseline conditions (the impact of the development) against the type of landscape resource or visual receptor (including the importance and sensitivity of that resource or receptor). These factors are determined through a combination of quantitative (objective) and qualitative (subjective) assessment using professional judgement. The assessment methodology is summarised in Figure 14.1 below.

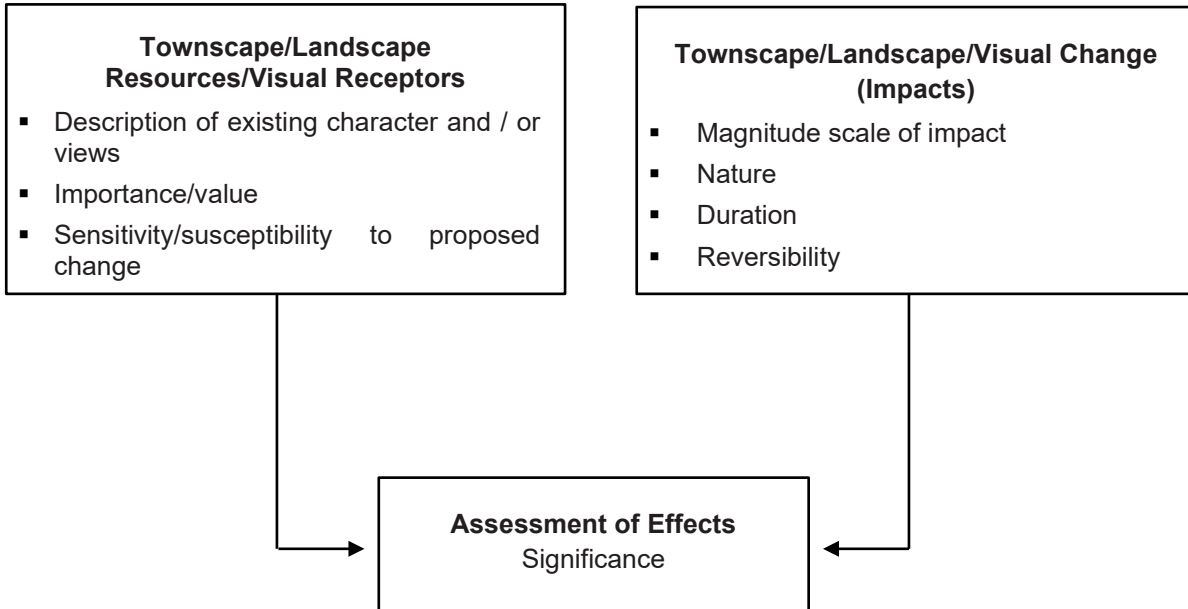


Figure 14.1: Assessment Methodology Summary

The TVIA considers the potential effects of a project upon:

- Individual landscape features and elements;
- Townscape/Landscape character; and
- Visual amenity and the people who view the townscape/landscape.

14.2.2 Identification of Baseline Conditions

Baseline conditions have been identified and assessed through analysis of;

- Up to date digital copies of OSI maps;
- Aerial photography;
- Monaghan County Landscape Character Assessment (ERM, 2008);
- Monaghan County Development Plan 2019 – 2025; and,
- Drawings of the proposed development.

Site visits were undertaken to assess the existing environment, to establish the existing visual resource and to identify sensitive receptors, i.e. residential properties, scenic viewpoints. Site visits were also used to consider the potential effects on townscape/landscape character and visual impacts arising as a result of the proposed development.

14.2.3 Identifying Effects

Assessing the significance of an effect is a key component of the TVIA and is an evidence-based process combining professional judgment on the nature of a landscape or visual receptor's sensitivity, its susceptibility or ability to accommodate change and the value attached to the receptor. It is important to note that judgments in this TVIA are impartial and based on professional experience and opinion informed by best practice guidance.

The effects of a proposed development are considered to be of variable duration and are assessed as being of either short-term, medium-term or long-term duration, and permanent or reversible. Effects are considered to be long-term during the operational phase of the development, whilst operations and infrastructure works apparent during the construction and initial operating period are considered to be temporary, short-term effects.

The reversibility of an effect is also variable. The effects on the townscape/landscape and visual resource that occurs during the construction period such as the use of construction machinery are considered to be reversible.

Where effects arise during the construction period, these are most likely to be as a result of: movement of construction machinery within the townscape/landscape; construction of new structures and construction activities within the site boundary all of which are considered to be short term in duration.

To avoid repetition, the duration and reversibility of effects are not reiterated throughout the assessment.

14.2.4 Assessment Criteria

The objective of the assessment process is to identify and evaluate the predicted significant effects arising from a proposed development. Significance is a function of the:

- Sensitivity of the affected landscape or visual receptors, determined through consideration of the susceptibility of the receptor to the type of change arising from the specific proposals and the value attached to the receptor; and
- Secondly its scale or magnitude, derived from a consideration of the size/ scale, geographical extent, duration and reversibility of the proposed development.

These definitions recognise that townscape/landscapes vary in their capacity to accommodate different forms of development according to the nature of the receiving landscape and the type of change being proposed.

As with any new development, it is acknowledged that, the introduction of a proposed development into the existing landscape or visual context could cause either a deterioration, improvement or neutral impact on the existing townscape/landscape or visual resource.

14.2.5 Townscape Impact Assessment

The TVIA firstly assesses how a proposed development would impact directly on any landscape features and resources. This category of effect relates to specific landscape elements and features (e.g. woods, trees, walls, hedgerows, watercourses) that are components of the landscape that may be physically affected by the proposed development, such as the removal or addition of trees and alteration to ground cover.

The TVIA then considers impacts on townscape/landscape character at two levels. Firstly, consideration is given to how the townscape/ landscape character is affected by the removal or alteration of existing features and the introduction of new features. This is considered to be a direct impact on townscape/landscape character.

Secondly, the indirect impacts of a proposed development on the wider townscape/landscape are considered. The assessment of impacts on the wider landscape is discussed using the surrounding character areas identified in the relevant townscape/ landscape character assessments. It is acknowledged there is an overlap between perception of change to landscape character and visual amenity, but it should be remembered that townscape/landscape character in its own right is generally derived from the combination and pattern of landscape elements within the view.

The significance of effects on townscape/landscape features and character is determined by considering both the sensitivity of the feature or townscape/landscape character and the magnitude of impact.

Consideration of the sensitivity of the townscape/landscape resource against the magnitude of impact caused by the proposed development is fundamental to landscape and visual assessment and these two criteria are defined in more detail below.

14.2.6 Townscape/Landscape Sensitivity

The determination of the sensitivity of the townscape/landscape receptor is based upon an evaluation of the elements or characteristics of the townscape/landscape likely to be affected. The evaluation reflects such factors as its quality, value, contribution to landscape character and the degree to which the particular element or characteristic can be replaced or substituted.

GLVIA 3 at paragraph 5.39 states that *'landscape receptors need to be assessed firstly in terms of their sensitivity, combining judgments of their susceptibility to the type of change or development proposed and the value attached to the landscape.'*

Susceptibility is defined by GLVIA 3 at paragraph 5.40 as *'the ability of the landscape receptor (whether it be the overall character or quality/ condition of a particular landscape type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without due consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies.'*

The value of a townscape/landscape receptor is determined with reference to the presence of relevant townscape/landscape designations, such as Areas of Outstanding Natural Beauty (AONB) and their level of importance. For the purpose of this assessment, landscape value is categorised as:

- Very High: Areas of townscape/landscape acknowledged through designation such as Areas of Outstanding Natural Beauty (AONB) or other landscape based sensitive areas. These are of townscape/landscape significance within the wider region or nationally;
- High: Areas that have a very strong positive character with valued and consistent distinctive features that gives the townscape/landscape unity, richness and harmony. These are of townscape/landscape significance within the district;
- Medium: Areas that exhibit positive character but which may have evidence of alteration/degradation or erosion of features resulting in a less distinctive townscape/landscape. These may be of some local townscape/landscape significance with some positive recognisable structure; and
- Low: Areas that are generally negative in character, degraded and in poor condition. No distinctive positive characteristics and with little or no structure. Scope for positive enhancement.

As previously discussed, townscape/landscape sensitivity is influenced by a number of factors including susceptibility to change, value and condition. In order to assist with bringing these factors together judgements regarding susceptibility and value have been used which define the townscape/landscape resource as being either, negligible, low, medium, high or very high. Table 14.1 defines the criteria that have guided the judgement as to the overall sensitivity of the landscape resource.

Assessments of susceptibility and value of a particular townscape/landscape resource may be different and professional judgement will always be used to conclude on the judgement of sensitivity. For example, value may be high and susceptibility may be low, and a professional judgement will be made to determine whether sensitivity is high, low or in between, supported by a narrative explanation.

Table 14.1: Townscape/Landscape Sensitivity

| Definition | | Sensitivity |
|--|--|-------------|
| Townscape/Landscape resource susceptibility | Townscape/Landscape resource value | |
| Exceptional landscape quality, no or limited potential for substitution. Key elements / features well known to the wider public. Little or no tolerance to change | Nationally / internationally designated/ valued landscape, or key elements or features of national/ internationally designated landscapes. Little or no tolerance to change | Very High |
| Strong/ distinctive landscape character; absence of landscape detractors. Low tolerance to change. | Regionally/ nationally designated/ valued countryside and landscape features. Low tolerance to change. | High |
| Some distinctive landscape characteristics; few landscape detractors. Medium tolerance to change. | Locally' regionally designated/ valued countryside and landscape features. Medium tolerance to change. | Medium |
| Absence of distinctive landscape characteristics; presence of landscape detractors. High tolerance to change | Undesignated countryside and landscape features. High tolerance to change | Low |
| Absence of positive landscape characteristics. Significant presence of landscape detractors. High tolerance to change | Undesignated countryside and landscape features. High tolerance to change | Negligible |

14.2.7 Magnitude of Townscape/Landscape Effect

The effect on townscape/landscape receptors and the overall judgement of the magnitude of townscape/landscape effect is based on combining judgements on '*size or scale, the geographic extent of the area influenced, and its duration and reversibility*' (GLVIA3, paragraph 5.48).

Direct resource changes on the townscape/landscape character in the study area are brought about by the introduction of the proposed development and its impact on the key landscape characteristics. Judgements regarding the magnitude of townscape/ landscape impact are indicated in Table 14.2 below.

Table 14.2: Magnitude of Townscape/Landscape Impact

| Definition | Magnitude of Impact |
|---|---------------------|
| Total loss or addition or/ very substantial loss or addition of key elements / features / patterns of the baseline, i.e., pre-development townscape/landscape and/ or introduction of dominant, uncharacteristic elements with the attributes of the receiving townscape/landscape | Large |
| Partial loss or addition of or moderate alteration to one or more key elements / features / patterns of the baseline, i.e., pre-development townscape/landscape and / or introduction of elements that may be prominent but may not necessarily be substantially uncharacteristic with the attributes of the receiving townscape/landscape. | Medium |
| Minor loss or addition of or alteration to one or more key elements / features / patterns of the baseline, i.e., pre-development townscape/landscape and or introduction of elements that may not be uncharacteristic with the surrounding townscape/landscape. | Small |
| Very minor loss or addition of or alteration to one or more key elements / features / patterns of the baseline, i.e., pre-development townscape/landscape and/or introduction of elements that are not uncharacteristic with the surrounding townscape/landscape approximating to a 'no-change' situation. | Negligible |
| No loss, alteration or addition to the receiving townscape/landscape resource | No change |

14.2.8 Visual Impact Assessment

As outlined in GLVIA 3 (Paragraph 6.1) ‘*an assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity*’. The assessment of effects on views is an assessment of how the introduction of a proposed development will affect views within the study area. The assessment of visual effects therefore needs to consider:

- Direct impacts of a proposed development upon views of the landscape through intrusion or obstruction;
- The reaction of viewers who may be affected, e. g. residents, walkers, road users; and
- The overall impact on visual amenity.

14.2.9 Sensitivity of Visual Receptors

For visual receptors, judgements of susceptibility and value are closely interlinked. For example the most valued views are likely to be those which people go and visit because of the available view. The value attributed to visual receptors also relates to the value of the view – for example a National Trail is nationally valued for its access, not necessarily for its views.

Paragraph 6.32 of the GLVIA refers to the susceptibility of different visual receptors to changes in views and states that susceptibility is mainly a function of “*the occupation or activity of different people experiencing the view at particular locations*” and “*the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations.*”

Other factors affecting visual sensitivity include:

- The location and context of the viewpoint;
- The expectations and occupation or activity of the receptor; and
- The importance of the view.

Judgements on the overall visual sensitivity/susceptibility are provided in Table 14.3 below and overall sensitivity of the visual resource is based on combining judgements on the sensitivity of the human receptor (for example resident, commuter, tourist, walker, recreationist or worker, and the numbers of viewers affected)

and judgements on the visual resource value (for example views experienced from residential properties, workplace, leisure venue, local beauty spot, scenic viewpoint, commuter route, tourist route or walkers' route).

Table 14.3: Visual Resource Sensitivity

| Definition | | Sensitivity |
|---|---|-------------|
| Visual resource Susceptibility | Visual resource value | |
| Views of remarkable scenic quality, of and within internationally designated townscape/landscapes or key features or elements of nationally designated landscapes that are well known to the wider public. Little or no tolerance to change. | Observers, drawn to a particular view, including those who have travelled to experience the views. Little or no tolerance to change | Very High |
| Views from residential property. Public rights of way, National Trails, Long distance walking routes and nationally designated countryside/ landscape features with public access. Low tolerance to change. | Observers enjoying the countryside from their homes or pursuing quiet outdoor recreation are more sensitive to visual change. Little tolerance to change | High |
| Views from local roads and routes crossing designated countryside / landscape features and 'access land' as well as promoted paths. Medium Tolerance to change. | Observers enjoying the countryside from vehicles on quiet/ promoted routes are moderately sensitive to visual change. Medium tolerance to change | Medium |
| Views from workplaces, main roads and undesignated countryside / landscape features. High tolerance to change. | Observers in vehicles or people involved in frequent or infrequent repeated activities are less sensitive to visual change. High tolerance to change | Low |
| Views from within and of undesignated landscapes with significant presence of landscape detractors. High tolerance to change. | Observers in vehicles or people involved in frequent or frequently repeated activities are less sensitive to visual change. High tolerance to change | Negligible |

14.2.10 Photomontages/Visualisations

Images representing views available from the public realm at each of the selected viewpoints have been captured using a digital SLR camera with a full frame sensor in combination with a 50mm fixed focal length lens, mounted on a tripod for horizontal alignment.

Generally, the horizontal angle of view represented within photomontages accompanying this TVIA is 56.5 degrees and has been taken with a 50mm fixed focus lens. For each of the viewpoints represented a record is taken of the light, visibility conditions, camera height above ground, time of day, viewpoint coordinates and the bearing of each view towards the proposed development site.

A highly accurate 3D computer model of the proposed development is created directly from architectural drawings. All materials and finishes are modelled as realistically as possible. Rendering is the process by which the computer generates realistic images from the 3D model. All of the information recorded at the time the site photos were taken, that is, camera co-ordinates, angle of view, and direction of view, is used to

generate matching renders for each view. Careful consideration is given to the direction of sunlight, time of day, weather conditions and distance of viewer, so that photomontages will match reality in terms of lighting, sharpness, density of colour etc.

At this stage the rendered image of the proposed development is superimposed onto its matching photograph. The mathematical accuracy is then double checked and verified by ensuring that existing prominent features which are also modelled line up exactly in the photo. Next, the photomontage specialist establishes, which existing features, such as buildings and trees are in the foreground of the proposed development and those that are in the background, i.e. which features will mask the development and which ones will appear behind the development. When it is found that the development is not visible due to foreground features, its outline is indicated with a red line.

The resulting photomontage, having gone through this extensive procedure, is an accurate and verifiable representation of the proposed development as viewed from the viewpoint positions.

The existing views, indicating the current view available from each of the viewpoint locations are suffixed with the letter 'a' (e.g. Figure 14.4a) within EIAR Volume III Technical Drawings & Figures.

The predicted view, indicating the proposed development in the context of the existing view is suffixed with the letter 'b' (e.g. Figure 14.4b) within EIAR Volume III Technical Drawings & Figures). Where the proposed development is not visible in the predicted view, a red line profile of the proposed development has been provided which indicates its position within the view.

14.2.11 Magnitude of Visual Effects

The magnitude of impact on the visual resource results from the scale of change in the view, with respect to the loss or addition of features in the view, and changes in the view composition. Important factors to be considered include: proportion of the view occupied by the proposed development, distance and duration of the view. Other vertical features in the landscape and the backdrop to the proposed development will all influence resource change. Judgements regarding the magnitude of visual impact are provided in Table 14.4 below.

Table 14.4: Magnitude of Visual Impact

| Definition | Magnitude |
|---|------------|
| Complete or very substantial change in view dominant involving complete or very substantial obstruction of existing view or complete change in character and composition of baseline, e.g., through removal of key elements | Large |
| Moderate change in view: which may involve partial obstruction of existing view or partial change in character and composition of baseline, i.e., pre-development view through the introduction of new elements or removal of existing elements. Change may be prominent, but would not substantially alter scale and character of the surroundings and the wider setting. Composition of the view would alter. View character may be partially changed through the introduction of features which, though uncharacteristic, may not necessarily be visually discordant | Medium |
| Minor change in baseline, i.e. pre-development view - change would be distinguishable from the surroundings whilst composition and character would be similar to the pre change circumstances. | Small |
| Very slight change in baseline, i.e. pre-development view - change barely distinguishable from the surroundings. Composition and character of view substantially unaltered. | Negligible |
| No alteration to the existing view | No change |

14.2.12 Significance of Effects

The purpose of this TVIA is to determine, in a transparent way, the likely significant landscape and visual effects of the proposed development. It is accepted that, due to the nature and scale of development, the proposed development could potentially give rise to some notable landscape and visual effects.

GLVIA3 identifies that ‘..... a final judgment is made about whether or not each effect is likely to be significant. There are no hard and fast rules about what effects should be deemed ‘significant’ but LVIA’s should always distinguish clearly between what are considered to be significant and non-significant effects’.

Significance can only be defined in relation to each particular development and its specific location. The relationship between receptors and effects is not typically a linear one. It is for each TVIA to determine how judgements about receptors and effects should be combined to derive significance and to explain how this conclusion has been arrived at.

The identification of significant effects would not necessarily mean that the effect is unacceptable in planning terms. What is important is that the likely effects on the landscape and visibility are transparently assessed and understood in order that the determining authority can bring a balanced, well-informed judgement to bear when making the planning decision.

The significance of effects on landscape, views and visual amenity have been judged according to a six-point scale: Substantial, Major, Moderate, Minor, Negligible or None as presented in Table 14.5 below, which contains a description of the significance of effect criteria.

Table 14.5: Significance of Effect Criteria

| Significance of Effect | Townscape/Landscape Resource | Visual Resource |
|------------------------|---|--|
| None | Where the project would not alter the townscape/landscape character of the area. | Where the project would retain existing views. |
| Negligible | Where proposed changes would have an indiscernible effect on the character of an area. | Where proposed changes would have a barely noticeable effect on views/visual amenity. |
| Minor | Where proposed changes would be at slight variance with the character of an area. | Where proposed changes to views, although discernible, would only be at slight variance with the existing view. |
| Moderate | Where proposed changes would be noticeably out of scale or at odds with the character of an area. | Where proposed changes to views would be noticeably out of scale or at odds with the existing view. |
| Major | Where proposed changes would be uncharacteristic and/or would significantly alter a valued aspect of (or a high quality) townscape/landscape. | Where proposed changes would be uncharacteristic and/or would significantly alter a valued view or a view of high scenic quality. |
| Substantial | Where proposed changes would be uncharacteristic and/or would significantly alter a townscape/landscape of exceptional townscape/landscape quality (e.g., internationally designated townscape/landscapes), or key elements known to the wider public of nationally designated landscapes (where there is no or limited potential for substitution nationally). | Where proposed changes would be uncharacteristic and/or would significantly alter a view of remarkable scenic quality, within internationally designated landscapes or key features or elements of nationally designated landscapes that are well known to the wider public. |

For the purposes of this assessment those effects indicated, in Table 14.6 below, as being Substantial or Major to Substantial are regarded as being significant. Effects of ‘Minor to Moderate’ and lesser significance have been identified within the assessment, though are not considered significant. For those effects indicated as being of ‘Moderate’ or ‘Moderate to Major’ the assessor has exercise professional judgement in determining if

the effect is considered to be significant, taking account of site specific or location specific variables which are given different weighting in each instance according to location.

Table 14.6: Significance of effects matrix

| Magnitude of Impact | Sensitivity | | | | |
|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|
| | Negligible | Low | Medium | High | Very High |
| No Change | No Change | No Change | No Change | No Change | No Change |
| Negligible | Negligible | Negligible to Minor | Negligible to Minor | Minor | Minor |
| Small | Negligible to Minor | Negligible to Minor | Minor | Minor to Moderate | Moderate to Major |
| Medium | Negligible to Minor | Minor | Moderate | Moderate to Major | Major to Substantial |
| Large | Minor | Minor to Moderate | Moderate to Major | Major to Substantial | Substantial |

A conclusion that an effect is 'significant' should not be taken to imply that the proposed development is unacceptable. Significance of effect needs to be considered with regard to the scale over which it is experienced and whether it is beneficial or adverse.

14.2.13 Cumulative Effects

The methodology for assessment of cumulative impacts has been derived from Guidelines for Landscape and Visual Impact Assessment, Third Edition (The Landscape Institute and Institute of Environmental Management & Assessment, 2013) (GLVIA3).

The purpose of the Cumulative Townscape and Visual Impact Assessment (CTVIA) is to consider the townscape and visual impacts of the proposed development when viewed in context with other similar development.

Cumulative effects consist of direct effects on the physical character of the site containing the development, and indirect, perceived effects on the character of areas from which the developments would be visible. GLVIA3 identifies effects as follows:

- Cumulative effects as *'the additional changes caused by a proposed development in conjunction with other similar developments or as the combined effect of a set of developments, taken together'* (SNH, 2012:4);
- Cumulative townscape effects as effects that *'can impact on either the physical fabric or character of the landscape, or any special value attached to it'* (SNH, 2012:10);
- Cumulative visual effects as effects that can be caused by combined visibility, which *'occurs when the observer is able to see two or more developments from one viewpoint'* and/or sequential effects which *'occur when the observer has to move to another viewpoint to see different developments'* (SNH, 2012:11).

The significance of any identified cumulative townscape and visual effect has been assessed as per the main TVIA methodology. These categories have been based on the same combination of receptor sensitivity and predicted magnitude of impact in order to identify the residual significance of effects.

14.3 Receiving Environment

14.3.1 General Overview

The site of the proposed development is located on the immediate southern side of Monaghan town centre core and is bounded by Dublin Street to the north and N54 Macartan (Broad) Road to the south.

The majority of the proposed site is currently underutilised backlands located to the rear of Dublin Street. In addition there is extensive off-street surface parking with immediate access to Monaghan Shopping Centre and the town centre.

The adjacent built environment is largely characterised by commercial buildings of mixed scale, style and quality, with dereliction/dilapidation apparent along the rear of properties on Dublin Street. Existing buildings on the frontage of Dublin Street also exhibit signs of dereliction and decay with poorly maintained upper facades apparent.

The surrounding area is dominated by vehicular traffic and is currently not perceived as a particularly welcoming part of the town for pedestrians particularly on Dublin Street. The streetscape consists of mainly two and three storey properties, a one-way carriageway running from west to east and on street parking on the southern side of the street. The streetscape is punctuated on both sides by alleyway leading to backlands to the north and south of Dublin Street. Dublin Street is connected to the main arterial routes to the north and south of the town centre.

At the ground floor level, the relationship between buildings and the existing public realm is poor. Monaghan Shopping Centre lies to the immediate south / southwest of the proposed development site, with Monaghan Courthouse located to the west, forming a notable boundary to the site.

Retailing is the main function of the town centre but it also serves as an employment and service centre for the town and the wider hinterland. While some areas of the town are vibrant with a range of town centre uses and low vacancy levels, Dublin Street, particularly to the east/northeast/southeast has a high number of vacant units at street level.

14.3.2 Monaghan Landscape Character Assessment

Monaghan County Council have completed a Monaghan Landscape Character Assessment (MLCA) that forms part of the Monaghan County Development Plan 2019-2025. The objective of the study was to complete a thorough assessment of the character of Monaghan's landscapes in order to provide the basis for policy formulation and informed decision-making regarding landscape management in the County.

The assessment provides an overview of the Monaghan County landscape and subdivides the countryside into 14 Landscape Character Types (LCTs) and 9 Landscape Character Areas (LCAs) based upon information on people and place and the combinations of nature, culture and perception which make up each part of the County.

A review of the MLCA indicates that the proposed development lies within LCT 14 – Urban and LCA 5 – Monaghan Drumlin Uplands. The MLCA does not include any description of LCT 14 so it is not possible to set out the key characteristics from this study. However, this TVIA has completed a Townscape Character Assessment for the purpose of this impact assessment and the findings are set out below in section 14.3.3.

14.3.2.1 Monaghan Drumlin Uplands LCA 5

The key characteristics identified in the MLCA are as follows;

- Elevated landscape featuring drumlin hills and small to medium sized loughs.
- These drumlins are not so steep sided and they do not follow a particular strong alignment and as such, the pattern of glaciation is not very pronounced.

- Occasional rock outcrops on the eastern side near the townland of Annyalla.
- Occasional loughs and areas of marshland located between drumlin hills.
- Land uses mostly given over to pastoral farming. Hedgerows featuring native species define the field boundaries, some of these are cut and some are not cut or managed.
- Hedge trees are fairly frequent.
- Long ranging views to the south and the north can be gained at particular points along the highest elevations of this ridgeline. The views extend for many kilometres.

With regards to condition and sensitivity the MLCA states: *“Most of this landscape is in good condition. The summit or highest point along the ridgeline is likely to be highly sensitive to development because it is visually exposed for many kilometres. In general, this landscape would not be regarded as highly scenic and hence, the capacity to accommodate development without undue compromise to the farmed landscape pattern is good.”*

14.3.3 Local Townscape Character

A feature of the townscape immediately surrounding the proposed development site is the broad range of building uses and building types. In order to reflect some of this diversity and since the urban townscape has not been described in the MLCA, an assessment of the townscape of Monaghan town has been completed and Townscape Character Areas (TCA) have been identified (Please refer to EIAR Volume III Technical Drawings & Figures, Figure 14.2 for details) within close proximity to the proposed development based on scale and function;

- Monaghan Town Centre Townscape
- Residential Townscape;
- Industrial Townscape;
- Open Space and Institutional Townscape; and
- Rural/Urban Fringe.

14.3.3.1 Monaghan Town Centre Townscape

Monaghan, as the County town, has an extensive road network that radiates from the town connecting to national and regional roads. Monaghan is a historic town with notable architectural and civic character. Monaghan Town developed many of its current characteristics during a period of prosperity in the late eighteenth century, when the county an important linen centre. The opening of the Ulster Canal in 1839 linked Monaghan with Belfast and Newry while the Ulster Railway opened in 1863, linking Monaghan to Belfast. The core of the town centres historic street pattern is defined by the four squares, connected by the main streets, radiating from the central space; the Diamond, Glaslough Street, Market Street and Dublin Street.

The town centre has a number of landmark Victorian era buildings including; the Market House; Monaghan Courthouse; St Macartan’s Cathedral; and St Patricks Church of Ireland. Broadly buildings are three storey in scale reducing to two storey away from the towns core.

The Diamond and Old Cross Square have benefitted from environmental improvements that that has enhanced the attractiveness of the area and improved access for pedestrians.

Dublin Street was also established in the 18th century when it was a centre of commercial activity in the town. The street is defined by townhouses of varying size primarily with ground floor commercial units and residence above. The archways, laneways, courtyards and outbuildings that extended from the street to the south west and the north east were important links serving as storehouses to the merchants and homes to communities who lived and worked in these backland areas of the town. In more recent times the Dublin Street area has

seen a steady decline in both commercial activity and visual appearance. With the introduction of the shopping centre in the 1980s southwest of Dublin Street there was further decline in the street and its backlands. On Dublin Street the majority of external finishes to buildings in the streetscape is rendered finish over rough textured stone, which is exposed on gables and other facades, and adds to the character of the streetscape. Pedestrian access points are interspersed along the street, some under the archways, linking the predominantly derelict back lands to the rear. The majority of the access points are now infrequently used or are not used at all.

Along Dublin Street the nature of the urban grain is long narrow building plots that fall away to the south and as a result, properties are restricted in development because of the plot shape, topography and the difficulty of providing access and services to the backlands.

This TCA is generally enclosed in character allowing only short distance views. The townscape quality of this TCA away from the town's core is considered to be of 'Low Quality' as areas exhibit negative characteristics, are degraded in areas and are in poor condition. The TCA is considered to have the scope and capacity for positive enhancement, and to have a high tolerance to change.

Susceptibility of this TCA to the type of development proposed is judged to be medium as while this townscape does distinctive urban features. Part of Dublin Street is designated as an Architectural Conservation Area. The value of the TCA is judged to be medium.

Overall, taking into account the susceptibility and value attached to the TCA, the sensitivity of this LCA is judged to be medium.

14.3.3.2 Residential Townscape

Beyond the town centre and away from the historically developed streets more modern housing has been established that extends to the town limits and its rural/urban fringes. To the immediate south of the proposed development lies the Canal Street and Pound Hill residential area. Housing densities are generally medium to high with terraced properties prevalent in older housing stock and detached dwellings frequent for more recent houses. Properties predominantly consist of two stories in rendered finishes. Housing has been established in a linear fashion along radial roads into Monaghan e.g. N54 Cavan Road; Dublin Road towards N2; and R162 Glen Road. Occasional modern housing estates also occur on the fringes of the town, these are built in a variety of styles and designs at medium to high density e.g. Mullach Gas Crescent.

This TCA is generally enclosed in character but due to location on town centre fringes housing does sometimes occupy hill tops e.g. Pound Hill offering longer distance views across the town centre. The townscape quality does exhibit some negative characteristics such as degraded in areas that are in poor condition but the views from Dr Mc Kenna Terrace (Pound Hill) toward the town and the view of the landscape backdrop of the drumlin topography beyond the town while the panoramic view across the town is a positive and these features are considered to raise the value of this area to medium.

Susceptibility of this TCA to the type of development proposed is judged to be low as this townscape has a high tolerance to change.

Overall, taking into account the susceptibility and value attached to the TCA, the sensitivity of this LCA is judged to be low.

14.3.3.3 Industrial Townscape

Large scale industrial features are not notable in Monaghan town centre but there is one extensive area to the eastern side of the town where industrial type character is found at the Monaghan Bottling factory and the sewage treatment works. The landscape at this location is low-lying resulting in a sense of enclosure due to the surrounding elevated/drumlin topography and existing built development. For this reason, the built elements are not prominent in the majority of wider views and it is only at close proximity that these industrial characteristics are notable.

Susceptibility of this TCA to the type of development proposed is judged to be low as this townscape is not valued locally and it does exhibit conspicuous urban influences. The value of the TCA is judged to be low.

Overall, taking into account the susceptibility and value attached to the TCA, the sensitivity of this LCA is judged to be low. The TCA is considered to have the scope and capacity for positive enhancement.

14.3.3.4 Open Space & Institutional Townscape

There are extensive areas of green space located in and around the town centre that are mostly associated with educational and health institutions such as schools such as Scoil Mhuire Muineachan, Nai-Scoil LSan Lughaidh, St Louis Secondary School, St Davnet's Campus and Monaghan General Hospital. Further areas of open space are found at Monaghan Harps GAA; Monaghan Greenway along the former Ulster Canal and Peter's Lake. Buildings within these areas are well screened by mature trees which provide a mature landscape context to the town. The Ulster Canal to the east of the town centre and within easy access of the town is an important asset for both biodiversity and leisure reasons.

Susceptibility of this TCA to the type of development proposed is judged to be high. The characteristics of this TCA are valued and identified in the CDP. The value of the TCA is judged to be high.

Overall, taking into account the susceptibility and value attached to the TCA, the sensitivity of this LCA is judged to be high.

14.3.3.5 Rural/Urban Fringe

Monaghan town has an immediacy and direct visual link to the surrounding countryside due to the scale of the settlement and the frequency of drumlin hills in County Monaghan. The rural character within the settlement envelope extends almost to the town centre core on the western side. Field patterns are fairly regular and provide pasture lands for livestock predominantly. Field boundaries are defined by hedgerows and trees. Urban influences are frequent in the form of scattered one-off houses and occasional commercial premises.

Susceptibility of this TCA to the type of development proposed is judged to be medium as this townscape is valued locally through the CDP as it defines the towns setting but does exhibit some urban influences and has a medium tolerance to change. The value of the TCA is judged to be medium.

Overall, taking into account the susceptibility and value attached to the TCA, the sensitivity of this LCA is judged to be medium.

14.4 Townscape/Landscape Designations

This section reviews townscape/landscape designations in Monaghan. The relevant Plan is Monaghan County Development Plan 2019-2025.

14.4.1 Monaghan County Development Plan 2019 - 2025

A review has taken place of the Monaghan County Development Plan and all zonings and designations that are relevant to this TVIA have been outlined below.

14.4.2 Areas of Primary Amenity

The CDP identifies two areas of outstanding landscape quality which require protection from insensitive and inappropriate development. As per CDP Table 6.5 the Areas of Primary Amenity are listed as; Lough Muckno & Environs; and Sliabh Beagh & Bragan Mountain. Development in these areas will only be permitted where the integrity and natural beauty of the landscape is not threatened. The proposed development will have no impact on these areas due to the separation distances between the site and these areas.

14.4.3 Areas of Secondary Amenity

In addition to the Areas of Primary Amenity above, the CDP also identifies other scenic and amenity areas that require protection from inappropriate and insensitive development known as Areas of Secondary Amenity. These areas are generally associated with river valleys, uplands, woodlands and lakes and provide an important community, recreational and tourism resource. Any development proposals in these areas must be sensitively designed and compatible with the overall landscape character of the areas. Table 6.6 (Chapter 6) of the Monaghan County Development Plan 2019-2025 lists these Areas of Secondary Amenity of which the nearest to the proposed development are Ulster Canal & environs; Rossmore Park & environs; and Castleshane Woods & environs. Due to the landscape setting, the enclosure provided by the drumlin landscape and the mature landscape context surrounding the town the proposed development will have no impact on the setting of Rossmore Park or Castleshane Forest as there is no visual linkage between the site and these areas. There may be some intermittent views available from short stretches of Monaghan Ulster Canal Greenway adjacent to the N54 Macartan (Broad) Road section, however these are seen in the wider town centre context and as such the visual impact will be low.

14.4.4 Architectural Conservation Areas

Dublin Street is designated as an Architectural Conservation Area (ACA) and includes a number of protected structures. Policies for the ACA and protected structures ensure that repair and refurbishment of the existing buildings will be favoured over demolition and new build, and that development in the vicinity of buildings of architectural heritage shall respect the character and integrity of these. Further details are provided in Chapter 15 of the EIAR.

14.4.5 Scenic Routes/Views

A number of important scenic routes have been identified by the CDP as requiring protection as listed in CDP Appendix 3 'Views from Scenic Routes' and illustrated on CDP Map 6.1. Any development that would interfere with or adversely impact on these scenic routes will not be permitted. The closest scenic view to the proposed site is SV9; View of St. Macartan's Cathedral Monaghan from R162 at Berry Brae (Appendix 3 of the Monaghan County Development Plan 2019-2025).

14.5 Proposed Development

The proposed development includes associated public realm, landscaping and all other associated site works as described in more detail in EIAR Chapter 2 and supporting planning reports and drawings accompanying the planning application. This report has appraised the development as described in those reports and illustrated on those drawings.

In summary the proposals involve the demolition of 4 properties along Dublin Street (No's 8-12), including all the associated outbuildings and structures (however, the aim is to minimise the demolitions involved through the design process). A section of the Northern Standard building is also identified for removal, to facilitate a new street.

New gable façades to No's 7 and 13 Dublin Street will be formed to facilitate the creation of a new, civic space and street linking Dublin Street to the backlands. This space will include new paving, kerbing, boundary walls, street lighting and furniture, street trees, and associated drainage infrastructure. The new street/civic space may also be closed off for special events/festivals as required by the Council.

The proposed development also creates new streets and pedestrian linkages from Dublin Street and The Diamond through to the redeveloped backlands, the car parks and Monaghan Shopping Centre. The proposals include high quality public realm improvements, namely:

- New pavements, high quality surfaces and kerbing
- Resurfacing of existing pavements with natural stone paving
- New railings, bollards and pop-up power supply
- Bicycle parking
- Street furniture including bins and seats
- Traffic calming ramps, pedestrian crossings
- New trees and vegetation
- New / replacement street lighting and CCTV
- Reduction in long stay car parking
- New utility services /upgrading of existing services ESB services, WiFi and Broadband;
- Drainage improvements, including watermains, foul, storm and water drainage;
- Construction works including excavation, cut / fill, re-grading of land, and construction of retaining structures, to accommodate level changes, throughout the study area.

The proposals have been designed following close contextual analysis with careful regard to current site conditions, fragmented historic fabric and the history. The scale of surrounding buildings historically ranged from single storey terraces to large 3 and 4 storey townhouses. The vast majority of these buildings used stone and render which created a unification of the built environment in this neighbourhood.

The design proposals seek to reintroduce a familiar building typology and respect the existing urban grain of Monaghan town into the overall design.

The extent to which the proposed development has the potential to appear intrusive and hence, detrimental to the townscape character is limited by several factors. The development form is visually contained by surrounding built form, restricting visibility to those localised areas which have an unrestricted view towards the development. Significant effects upon townscape character are expected to be contained to the immediate vicinity of the site boundaries due to the enclosing nature of the urban form surrounding the site.

It is considered that the principal sources of impact during the construction phase of the proposed development include:

- Site preparation works, excavations, regrading of land, embankments and site operations;
- Site infrastructure and vehicular access;
- Increased vehicular movements – construction / delivery vehicles;
- Dust and other emissions;
- Temporary site hoardings, site lighting and accommodation and welfare units; and
- Temporary scaffolding and associated infrastructure (catch nets / decks and cranes).

It is considered that the above are temporary in nature and duration and will be limited to areas within the site boundary and immediately adjacent areas and are common features in the context of towns.

It is considered that the principal sources of impact during the operational phase of the proposed development is the final built form as illustrated in EIAR Volume III –Technical Drawings & Figures, Figure 14.4a - 14.8b. The assessment of effects has considered that the new built form is permanent in duration, though may at some point in the future itself be further developed. It is considered that predicted effects upon TCA's will be limited to areas within the site boundary and immediately adjacent though visual effects may vary depending upon availability of views from the surrounding built form (Please refer to EIAR Volume III –Technical Drawings & Figures, Figure 14.4a - 14.8b).

14.6 Townscape/Landscape Effects

The assessment of townscape/landscape effects follows the methodology previously described in Section 14.2 and considers those effects which are predicted to occur during the construction and operational phases of the proposed development.

The construction phase of the proposed development will result in additional built elements being introduced into the landscape. The operational phase of the proposed development will result in vertical elements (buildings) being visible within the surrounding landscape.

In order to avoid repetition, an assessment of construction phase impacts and predicted operational phase impacts is included within the following landscape assessments.

14.6.1 Townscape/Landscape Character Effects

The proposed development is located within the Monaghan County Council area and the predicted landscape effect of the proposed development is set out in Table 14.7 below.

Table 14.7: Townscape/Landscape Character Effects

Urban Residential TCA

| | |
|-------------|--|
| Sensitivity | <p>This TCA is generally enclosed in character allowing only short distance views. The townscape quality of this TCA away from the town's core is considered to be of 'Low Quality' as some areas exhibit negative characteristics, are degraded/derelict in areas and are in poor condition. The TCA is considered to have the scope and capacity for positive enhancement, and to have a high tolerance to change.</p> <p>Susceptibility of this TCA to the type of development proposed is judged to be medium as it does retain key built heritage characteristics with Architectural Conservation Area designations. The value of the TCA is judged to be medium.</p> |
|-------------|--|

Urban Residential TCA

| | |
|------------------------|---|
| | <p>Overall, taking into account the susceptibility and value attached to the TCA, the sensitivity of this LCA is judged to be medium.</p> |
| Magnitude of Change | <p>The proposed development is located directly within this TCA and predicted effects are considered to be direct.</p> <p>Existing features within the site boundary will be replaced by more modern, contemporary built form and high quality surfaced public realm space and event spaces.</p> <p>Views into the rear plots of Dublin Street, some of which are currently derelict will be replaced as existing boundaries will be removed and replaced.</p> <p>The proposal has also been designed to respect the scale of built form in this townscape albeit with newer elements to reflect and respect surrounding built form. The proposed public realm improvements at street level will have a beneficial impact in an area currently lacking in visual quality. The proposal will positively contribute to the redevelopment of the southern side of the Dublin Street in this TCA and it is envisaged that the proposed development will act as a positive catalyst for future regeneration initiatives in this TCA.</p> <p>The predicted magnitude of impact during the construction phase is considered to be small, temporary and direct, limited to the immediate site boundaries and those limited portions of the TCA with unobstructed views towards the proposed development site.</p> <p>The predicted magnitude of impact during the operational phase is considered to be direct and medium, limited to the immediate boundaries and those portions of the TCA with unobstructed views towards the proposed development site.</p> <p>The wider townscape resource has the ability to absorb a development of this scale and it is considered that the magnitude of townscape impact during the construction and operational phases is negligible for remaining portions of the TCA.</p> |
| Significance of Effect | <p>There are predicted to be minor, adverse direct effects upon the development site itself during the construction phase, which are considered to be temporary in duration.</p> <p>There are predicted to be moderate, positive, direct effects upon the TCA during the operational phase. Remaining portions of the TCA are predicted to experience localised, moderate positive indirect effects during the operational phase.</p> |

Residential TCA

| | |
|-------------|---|
| Sensitivity | <p>This TCA is generally enclosed in character but due to location on town centre fringes housing does sometimes occupy hill tops e.g. Pound Hill offering longer distance views across the town centre. The townscape quality does exhibit some negative characteristics such as degraded in areas that are in poor condition but the views from Dr Mc Kenna Terrace (Pound Hill) toward the town and the view of the landscape backdrop of the drumlin topography beyond the town while the panoramic</p> |
|-------------|---|

view across the town is a positive and these features are considered to raise the value of this area to medium.

Susceptibility of this TCA to the type of development proposed is judged to be low as this townscape has a high tolerance to change.

Overall, taking into account the susceptibility and value attached to the TCA, the sensitivity of this LCA is judged to be low.

Magnitude of Change

The Residential TCA lies to the south and southwest of the proposed development site and is not directly or indirectly affected by the proposed development as a result of substantial buildings being located around the town centre. Elevated views from Pound Hill area to the south are possible but with very limited visibility of the proposed site.

The predicted magnitude of change in townscape resource during the construction and operational phases of the proposed development is negligible.

Significance of Effect

The predicted significance of townscape impact for the Residential TCA during both construction and operational stages is negligible to minor.

Industrial TCA

Sensitivity

Susceptibility of this TCA to the type of development proposed is judged to be low as the townscape has a high tolerance to change. The value of the TCA is judged to be low.

Overall, taking into account the susceptibility and value attached to the TCA, the sensitivity of this LCA is judged to be low. The TCA is considered to have the scope and capacity for positive enhancement.

Magnitude of Change

This robust townscape character area lies east of the proposed development with significant buildings located adjacent to the Ulster Canal. Due to the low-lying nature of this TCA and intervening built form at Dublin Street area, with the added severance of the strategic road network, no direct or indirect impacts on this townscape will occur. There are existing large buildings/structures peppered throughout this townscape.

The predicted magnitude of change in townscape resource during the construction and operational phases of the proposed development is no change.

Significance of Effect

The predicted significance of townscape impact for the Industrial TCA during both operational and construction stages is none and no significant effects are predicted.

Open Space & Institutional TCA

| | |
|-------------------------------|--|
| <p>Sensitivity</p> | <p>Susceptibility of this TCA to the type of development proposed is judged to be high. The characteristics of this TCA are valued and identified in the CDP. The value of the TCA is judged to be high.</p> <p>Overall, taking into account the susceptibility and value attached to the TCA, the sensitivity of this LCA is judged to be high.</p> |
| <p>Magnitude of Change</p> | <p>The Open Space & Institutional TCA lies to the northeast and southwest of the proposed development site and is not directly or indirectly affected by the proposed development as a result of substantial buildings being located around the town centre that prevents any intervisibility with the proposed site. Longer distant views across the town centre are available from parts of lands at St Davnet’s but it is difficult to discern the proposed development site. The predicted magnitude of change in townscape resource during the construction and operational phases of the proposed development is negligible.</p> |
| <p>Significance of Effect</p> | <p>The predicted significance of townscape impact for the Open Space & Institutional TCA during both operational and construction stages is minor.</p> |

Urban/Rural Fringe TCA

| | |
|-------------------------------|---|
| <p>Sensitivity</p> | <p>Susceptibility of this TCA to the type of development proposed is judged to be medium as this townscape is valued locally through the County Development Plan CDP as it defines the towns setting but does exhibit some urban influences and has a medium tolerance to change. The value of the TCA is judged to be medium.</p> <p>Overall, taking into account the susceptibility and value attached to the TCA, the sensitivity of this LCA is judged to be medium.</p> |
| <p>Magnitude of Change</p> | <p>The Urban/Rural Fringe TCA lies to the west of the proposed development site at its nearest and is not directly or indirectly affected by the proposed development as a result of substantial buildings being located around the town centre. Due to the drumlin landscape in and around Monaghan there are elevated views from hilltops towards the town centre but with very limited visibility of the proposed site.</p> <p>The predicted magnitude of change in townscape resource during the construction and operational phases of the proposed development is negligible.</p> |
| <p>Significance of Effect</p> | <p>The predicted significance of townscape impact for the Open Space & Institutional TCA during both operational and construction stages is negligible to minor.</p> |

14.6.2 Townscape/Landscape Designation Impacts

With regards to Areas of Primary Amenity identified in the CDP the proposed development is not located in proximity to this designation. No significant effects are predicted on the Areas of Primary Amenity designation due to separation distance.

In addition to the Areas of Primary Amenity the CDP also identifies Areas of Secondary Amenity. The nearest designation to the proposed development is the Ulster Canal & Environs. The Ulster Canal is located to the

immediate east of the proposed development but is low lying and separate from the proposed development site by a strategic road network and built form on the town centre. These factors result in no influence from the proposed development on this designation. No significant effects are predicted on the Areas of Secondary Amenity designation due to separation distance.

Dublin Street is an Architectural Conservation Area (ACA) and includes a number of protected structures with policies that development in the vicinity of buildings of architectural heritage shall respect the character and integrity of this area. The proposal has also been designed to respect the scale of built form in this townscape albeit with newer elements to reflect and respect surrounding built form. The proposed public realm improvements at street level will have a beneficial impact in an area lacking in visual quality. The proposal will transform an underutilised-backland sites into a more attractive public realm, providing Dublin Street with better connectivity between existing points of interest in the town. In addition, the proposed development will create opportunity sites to realise further town centre uses/development in the future. This is likely to improve the development potential of the lands and present a more attractive proposition to developers and investors in the TCA. streetscapes that will positively contribute to the redevelopment of this side of the Dublin Street in this TCA and the proposed development is viewed as a positive catalyst for future regeneration initiatives in this TCA.

There is one view in proximity to the proposed development namely a view of St. Macartan's Cathedral Monaghan from R162 at Berry Brae but due to the separation distance and intervening topography and built form it is not possible to view the proposed development from this viewpoint location.

A summary of the predicted townscape/landscape and visual effect on landscape designations is provided in the summary Table 14.8.

Table 14.8: Summary of Predicted Townscape/Landscape Effects

| Townscape/Landscape Character / Designation | Predicted Townscape & Visual Effects (Construction Stage) | Predicted Townscape & Visual Effects (Operational Stage) |
|--|--|---|
| Areas of Primary Amenity | None | None |
| Areas of Secondary Amenity | None | None |
| Architectural Conservation Areas | Minor | Moderate Positive |
| Scenic Routes/Views | None | None |
| Monaghan Town Centre TCA | Minor | Moderate Positive |
| Residential TCA | Minor | Minor |
| Industrial TCA | None | None |
| Open Space & Institutional TCA | Minor | Minor |
| Rural/Urban Fringe TCA | Negligible to minor | Negligible to minor |

14.7 Visual Effects

A series of 5 representative viewpoints have been selected to illustrate the existing visual context of the proposed development and as an aid to the visual impact assessment. All of the viewpoints have been located on publicly accessible roads, footways and verges (Please refer to EIAR Volume III Technical Drawings & Figures, Figure 14.4a - 14.8b).

Viewpoints selected as part of the visual effects assessment were selected to meet the following criteria;

- A balance of viewpoints from where the main direction of view is towards the proposed development;
- A range of views towards the proposed development from within the study area. Selected viewpoints are all located within the study area associated with the proposed development; and
- Locations of interest e.g. local access roads and settlement.

Views available from each of the selected viewpoint locations are presented in EIAR Volume III Technical Drawings & Figures Figure 14.3a/b which should be read in conjunction with the following viewpoint assessments below.

The assessment of the existing environment and the impact of the proposed development on visual receptors has established that there will be no protected views or scenic views significantly affected by the proposed development.

Further, there will be no important views from visitor amenity areas or tourist sites significantly affected by the proposed development due to intervening topography, vegetation and distance of potential views.

14.7.1 Viewpoint 1: View South-east from Dublin Street

14.7.1.1 Viewpoint Description and Sensitivity

This view is predominantly available to vehicle users and pedestrians and is heavily influenced by traffic on Dublin Street. The view is typical of Monaghan town centre and Dublin Street views and is not protected. There are some residential uses along Dublin Street on upper floors. The area is designated as an Architectural Conservation Area. Overall, taking into account the receptor susceptibility, and the value of the view, the sensitivity is judged to be medium.

14.7.1.2 Existing View

The viewpoint is located on the street looking southeast along Dublin Street. The viewpoint is located immediately north-west of the north-western boundary of the proposed development site and available views from this location are represented in EIAR Volume III –Technical Drawings & Figures Figure 14.4a.

The existing built form of Dublin Street defines the view along the vista of the street. The view is enclosed with no views out to the surrounding townscape. To the right of the view the buildings are two storeys rising to three storeys in the middle distance. To the left of the view the buildings are consistently three storeys in height. The view is dominated by parked vehicles and traffic at most times of the day and week.

14.7.1.3 Predicted Effects

Construction phase activities associated with the construction of the proposed development will be largely screened by intervening built form for the majority of the proposed development with the exception the demolition works and construction for Charles Gavan Duffy Place. Such effects are considered to be short term, temporary effects within the overall view, with distinctive buildings forming the main visual draw.

At the operational stage the aim is to facilitate an increase in pedestrian footfall and vehicular activity. A new street will be formed by the demolition of existing structures between No 8 and No 11 (inclusive) Dublin Street

to the right that will form a new junction onto Dublin Street from the backlands that accommodates two-way vehicular traffic and a pedestrian space. This would see buildings annotated 4, 5, 6, and 7 Dublin Street in centre right of the view being demolished to accommodate the new street. This new streetscape will benefit from a southerly orientation, create new vistas in and out of Dublin Street, and will enhance vehicular and pedestrian connections to the backlands and new development areas with a high-quality streetscape treatment and as such will be a positive intervention.

The proposed development will be viewed as a new addition to the view available from this location and an enhancement in the quality of the streetscape.

14.7.1.4 Magnitude of Impact:

The magnitude of visual impact during the construction phase of the proposed development is considered to be localised and small.

The magnitude of visual impact during the operational phases of the proposed development is considered to be medium.

14.7.1.5 Significance of Effect:

Minor, localised temporary effect during the construction phase of the proposed development.

Moderate positive, localised effect during the operational phase of the proposed development.

14.7.2 Viewpoint 2: View northwest from Dublin Street

14.7.2.1 Viewpoint Description and Sensitivity

This view is predominantly available to vehicle users and pedestrians and is heavily influenced by traffic on Dublin Street. The view is typical of Monaghan town centre and Dublin Street views and is not protected. There are some residential uses along Dublin Street on upper floors. The area is designated as an Architectural Conservation Area. Overall, taking into account the receptor susceptibility, and the value of the view, the sensitivity is judged to be medium.

14.7.2.2 Existing View

The viewpoint is located on the street looking northwest along Dublin Street towards the core town centre. The Diamond at the town centre core is not visible. The viewpoint is located immediately northeast of the northern boundary of the proposed development site and available views from this location are represented in EIAR Volume III –Technical Drawings & Figures, Figure 14.5a.

The existing built form of Dublin Street defines the view along the vista of the street. The view is enclosed with no views out to the surrounding townscape. To the left of the view the buildings are two storeys rising to three storeys in the middle ground. To the right of the view the buildings are consistently three storeys in height with occasional gable end visible where alleyways exist. The view is dominated by parked vehicles and traffic at most times of the day and week.

14.7.2.3 Predicted Effects

Construction phase activities associated with the construction of the proposed development will be largely screened by intervening built form for the majority of the proposed development with the exception the demolition works and construction for Charles Gavan Duffy Place. Such effects are considered to be short term, temporary effects within the overall view, with distinctive buildings along the street forming the main visual draw.

At the operational stage the aim is to facilitate an increase in pedestrian footfall and vehicular activity. A new street will be formed by the demolition of existing structures between No 8 and No 11 (inclusive) Dublin Street to the left that will form a new junction onto Dublin Street from the backlands that accommodates two-way vehicular traffic and a pedestrian space. This would see buildings annotated 4, 5, 6, and 7 Dublin Street in centre right of the view being demolished to accommodate the new street. This new streetscape will benefit from a southerly orientation, create new vistas in and out of Dublin Street, and will enhance vehicular and pedestrian connections to the backlands and new development areas with a high quality streetscape treatment and will be a positive intervention.

The proposed development will be viewed as a new addition to the view available from this location and an enhancement in the quality of the streetscape.

14.7.2.4 Magnitude of Impact:

The magnitude of visual impact during the construction phase of the proposed development is considered to be localised and small.

The magnitude of visual impact during the operational phases of the proposed development is considered to be medium.

14.7.2.5 Significance of Effect:

Minor, localised temporary effect during the construction phase of the proposed development.

Moderate positive, localised effect during the operational phase of the proposed development.

14.7.3 Viewpoint 3: View north from Castle Road (Farney Road)

14.7.3.1 Viewpoint Description and Sensitivity

This view is predominantly available to vehicle users and shopping pedestrians and is heavily influenced by traffic and parked cars using off street car parks. The view is typical of views across the backlands and is not protected. Overall, taking into account the receptor susceptibility and the value of the view the sensitivity is judged to be low.

14.7.3.2 Existing View

The viewpoint is located on Castle Road immediately adjacent to the shopping centre. The viewpoint is located within and immediately south of the central part of the proposed development site and available views from this location are represented in EIAR Volume III –Technical Drawings & Figures, Figure 14.6a

This roadside view consisted predominantly of parked cars and black top surfacing. During the day this view is in a constant state of change with shoppers coming and going frequently. The backdrop consists of trees and the rears of properties on the south side of Dublin Street. The First Presbyterian Church at the eastern limit of Dublin Street is a lone notable positive feature.

The view is enclosed and the distant horizon is obscured.

14.7.3.3 Predicted Effects

The ground level of the proposed development site is visible in views from this location. Temporary construction phase activities associated with site clearance and tree removal will be directly visible but construction activities in this urban settling are a common feature. It is considered that cranes will form a temporary addition to the view during the construction phase.

At the operational stage the proposed development will be directly visible within the view. The proposed development will see the enhancement of Castle Road (Farney Road) and the creation of new access roads including at a new Charles Gavan Duffy Place along with enabling works for future development lands.

The proposed development will be viewed as a positive contribution to the streetscape, with built form and materials reflecting the surrounding urban context and reforming the streetscape along the southern side of Dublin Street.

14.7.3.4 Magnitude of Impact

The magnitude of visual impact during the construction phase of the proposed development is considered to be medium and adverse.

The magnitude of visual impact during the operational phase is considered to be large and positive.

14.7.3.5 Significance of Effect:

Minor, adverse, temporary effect during the construction phase of the proposed development.

Minor to moderate, positive effect during the operational phase of the proposed development.

14.7.4 Viewpoint 4: View north-west across Courthouse Car Park

14.7.4.1 Viewpoint Description and Sensitivity

This view is predominantly available to vehicle users and shopping pedestrians and is heavily influenced by traffic and parked cars. The view is typical of the town centre views and while the view is not protected it does include a number of Protected Structures i.e. Court House; St Patricks Church; Monaghan Methodist Church etc. Overall, taking into account the receptor susceptibility and the value of the view the sensitivity is judged to be medium.

14.7.4.2 Existing View

The viewpoint is located immediately north of the shopping centre and looks across the Court House car park towards the town centre core that is screened by built form and available views from this location are represented in EIAR Volume III –Technical Drawings & Figures, Figure 14.7a.

The view is enclosed but taller buildings beyond are visible including the landmark spire of St Patricks Church. The rear of the stone-built Court House defines the left side of the view. To the centre is large open car park dominated by cars during the daytime but in a constant state of flux as shoppers come and go. To the right of the view is a large warehouse and backlands with trees.

14.7.4.3 Predicted Effects

Temporary construction phase activities associated with site clearance and construction will be directly visible. It is considered that construction activities will form a medium, temporary addition to the view during the construction phase.

During the operational stage the proposed development will see the car park area resurfaced with asphalt, bounded by newly paved pedestrian footpaths / kerbing in natural stone finish. These pedestrian areas will become part of the wider enhanced pedestrian network, with the natural stone finish providing continuity and legibility throughout the pedestrian network. To the right of the view new high quality public realm will be developed to enhance connectivity in the town and stimulate regeneration of the backlands this will be a positive intervention.

14.7.4.4 Magnitude of Impact

The magnitude of visual impact during the construction phase of the proposed development is considered to be medium and adverse.

The magnitude of visual impact during the operational phase is considered to be large and positive.

14.7.4.5 Significance of Effect

Moderate, adverse, temporary effect during the construction phase of the proposed development.

Moderate to major, positive effect during the operational phase of the proposed development.

14.7.5 Viewpoint 5: View N54 Macartan (Broad) Road to Castle Road (Farney Road)

14.7.5.1 Viewpoint Description and Sensitivity

This view is predominantly available to vehicle users and pedestrians and is heavily influenced by traffic and parked cars using off street car parks. The view is typical of views from the road network to the south of the town centre core and is not protected. Overall, taking into account the receptor susceptibility and the value of the view the sensitivity is judged to be low.

14.7.5.2 Existing View

The viewpoint is located at the junction of Castle Road and N54 Macartan (Broad) Road immediately south of the shopping centre. The viewpoint is located immediately south of the proposed development site and available views from this location are represented in EIAR Volume III –Technical Drawings & Figures, Figure 14.8a.

This roadside view consisted predominantly of built form of the shopping centre to the left and large commercial premises to the right that both obscure the view beyond. A middle-distance view is available along the axis of Castle Road towards the backlands at the south side of Dublin Street. The tall spire of St Patricks Church at the town centre core is a notable landmark on the skyline.

The remaining backdrop consists of trees and the rears of properties on the south side of Dublin Street.

The view is enclosed and the distant horizon view is obscured.

14.7.5.3 Predicted Effects

The ground level of the proposed development site is visible in views from this location. Temporary construction phase activities associated with site clearance will be directly visible but construction activities in this urban settling are a common feature. It is considered that cranes will form a temporary addition to the view during the construction phase.

At the operational stage the proposed development will be directly visible within the view. The proposed development will see public realm improvements along this access route – new cycle lanes (asphalt) and pedestrian footpaths (concrete paving) will be provided on both sides of the realigned 6.5m carriageway, to encourage pedestrian and cycle movements into the town centre areas. These are complemented by new cycle stands in various locations throughout the site, to promote safe bicycle storage along with tree planting.

The creation of new access roads including at a new Charles Gavan Duffy Place along with enabling works for future development lands will be partially visible in the middle distance.

The proposed development will be viewed as a positive contribution to the streetscape, with built form and materials reflecting the surrounding urban context and reforming the streetscape and enhancing pedestrian and cyclist's access to the town centre.

14.7.5.4 Magnitude of Impact

The magnitude of visual impact during the construction phase of the proposed development is considered to be medium and adverse.

The magnitude of visual impact during the operational phase is considered to be large and positive.

14.7.5.5 Significance of Effect:

Minor, adverse, temporary effect during the construction phase of the proposed development.

Minor to moderate to major, positive effect during the operational phase of the proposed development.

Table 14.9 below summarises the predicted significance of visual effect for each of the previously assessed viewpoints.

Table 14.9: Summary of Predicted Visual Effect

| Viewpoint | Predicted Visual Impacts (Construction Stage) | Predicted Visual Impacts (Operational Stage) | |
|-----------|--|--|----------------------------|
| 1 | View southeast from Dublin Street | Minor adverse | Moderate positive |
| 2 | View northwest from Dublin Street | Minor adverse | Moderate positive |
| 3 | View north from Castle Road | Minor adverse | Minor to moderate positive |
| 4 | View northwest from Court House Car Park | Moderate adverse | Moderate to major positive |
| 5 | View north from Castle Road/N54 Macartan (Broad) Road Junction | Minor adverse | Minor to moderate positive |

14.8 Mitigation Measures

Mitigation measures are those taken to help reduce or remedy townscape and visual impacts or compensate for the loss of townscape value created by the development.

14.8.1 Mitigation of Construction Impacts

The clearance of the existing site and subsequent construction works will be restricted to land within the site boundary. A site compound, including site accommodation, together with hoarding, scaffolding, cranes and other associated temporary works will be required during the construction phase. These features will be visible during the construction phase from areas immediately adjacent to the proposed development site. Cranes and scaffolding may be visible at a greater distance, though this will be dependent upon view direction and intervening built form. These temporary features will be viewed as a feature of construction in the urban setting. All construction impacts are limited to the construction period and therefore of temporary duration.

14.8.2 Mitigation of Operational Impacts

Please refer to EIAR Volume III Technical Drawings & Figures for details on the proposed hard and soft landscape plans for the proposed development, which are set on the planning application and described in Chapter 2 of the EIAR.

It is proposed to provide a hard and soft landscape scheme within the site boundary to enhance the streetscape and public realm environment immediately surrounding the proposed development in order to help the development enhance the amenity of the area and act as a catalyst for regeneration of the Dublin Street south backlands. The soft landscape scheme within the site boundary will include new tree and shrub planting with the aim of using nature-based solutions in the design and the use of low maintenance native tree species.

Only those trees which require removal to facilitate the development will be replaced. All other trees which can be maintained within the scheme shall be retained and protected from damage in accordance with BS 5837:2012 (Trees in relation to design, demolition and construction).

It is important that a landscape management plan is prepared to ensure the healthy establishment of all trees within the proposed development and the replacement of any dead or dying plants in subsequent years.

14.9 Cumulative Assessment

There are a number of approved developments in close proximity to the proposed development. It is not known at this time whether all identified approved developments will be constructed and as such cumulative effects may vary from that predicted within the following assessment.

Section 1.4.2 of the EIAR sets out the projects considered as part of the cumulative assessment. One notable application is an extant permission granted in 2019 at No 24 Dublin Street, for a change of use from residential use to retail commercial uses, including alterations and extensions. If completed this project would complement the proposed development by making a positive change to the appearance of Dublin Street with no significant effects predicted.

Section 1.4.2 and Table 1.2 identifies a range of projects in close proximity to the proposed development. Due to the built form of Monaghan town centre these projects will be read separately from Dublin Street South when viewed in the wider townscape. It is also recognised that towns evolve and change over time in a continual cycle. As such-no significant cumulative effects are predicted.

There are also several wider regeneration initiatives being progressed within the town at present including the North Dublin Street and Backlands Plan, The Peace Link, North Road. Both plans for and south Dublin Street are part of the Dublin Street Regeneration Plan and will create a new urban structure with a new civic spaces, streetscape and improved linkages within the town. The vision for these plans is re-imagine these underutilised parts of the town centre and create new places for people to live, do business and enjoy. From a townscape and visual perspective, the cumulative effects of the proposed development with the ongoing regeneration of the built form through the implementation of both of these plans in conjunction with the implementation of objectives of the Monaghan County Development Plan 2019-2025 will make a positive change to this part of the town. No significant negative cumulative effects are predicted as a result.

In terms of cumulative townscape and visual impacts, the built character of Monaghan is constantly changing. There are a number of permitted developments in the vicinity that are not directly adjacent to the proposed development. It is not known if all or any of these permitted schemes will be developed and the ultimate cumulative townscape and visual context of Monaghan town centre is therefore not certain.

However, the proposed development will be read in the context of the overall regeneration of this portion of the town centre without adding significant cumulative townscape and visual impacts. It is also considered that the townscape on this southern side of the town centre has the capacity to absorb the proposed development and the permitted developments without significant cumulative townscape and visual impacts.

14.10 Conclusion

A review of the Monaghan County Development Plan 2019-2025 has established that the proposed development is not located in proximity to any landscape or scenic designations and as such there are no predicted effects on any primary or secondary amenity area and/or scenic views. Part of Dublin Street is defined an Architectural Conservation Area due to its historic streetscape quality. The proposed development has also been designed to respect the scale of built form in this townscape albeit with newer elements incorporated to create a new civic space and provide enhanced connectivity between Dublin Street, the backlands and the wider town area. The proposed public realm improvements will have a beneficial impact on the character of the designated ACA.

Analysis of the townscape character within the immediate environs of the proposed development site displays typical urban character consisting of mixed-use buildings of small to medium scale. Vacancy and dereliction is evident on the backlands. Monaghan Town Centre TCA is generally enclosed in character allowing only short distance views. The townscape quality of this TCA away from the town's core is considered to be of 'Low Quality' as areas exhibit negative characteristics, are degraded in areas and are in poor condition. The TCA is considered to have the scope and capacity for positive enhancement, and to have a high tolerance to change.

Susceptibility of this TCA to the type of development proposed is judged to be medium as while this townscape does distinctive urban features. Part of Dublin Street is designated as an Architectural Conservation Area. The value of the TCA is judged to be medium. Overall, taking into account the susceptibility and value attached to the TCA, the sensitivity of this LCA is judged to be medium.

Built form within adjacent TCA's restricts views of the proposed development site and as such predicted effects associated with the construction and operational phases of the proposed development are limited to close environs. Predicted direct effects upon the Monaghan Town Centre TCA during the operational phase of the proposed development are considered to be direct, moderate and positive.

Of the five viewpoints assessed for impacts during the operational phase, three viewpoints are considered to experience positive visual effects as the underutilised backlands are replaced with a new public space, streetscape and public realm improvements that will regenerate this area.

Overall, the wider landscape and visual resources of the development's surroundings have the capacity to accommodate a development of this type and scale.

Chapter
15

**Cultural
Heritage &
Architectural
Heritage**

CHAPTER 15 – CULTURAL HERITAGE & ARCHITECTURAL HERITAGE

Note: This EIAR chapter encompasses 2 aspects; namely Cultural Heritage (Sections 15.1 to 15.8) and Architectural Heritage (Section 15.9 to 15.9.9). In some instances there may be occasional repetition of information, mapping and photographs.

15.1 Introduction

John Cronin & Associates was commissioned to assess the impact on the cultural heritage resource of the proposed South Dublin Street & Backlands Regeneration Project – this assessment is provided in Sections 15.1 – 15.8). The term ‘Cultural Heritage’ encompasses archaeological, architectural and cultural (folklore, placenames, traditions) heritage resources.

Consarc Design Group (Consarc Conservation RIAI Grade 1 Accredited Conservation Practice) was commissioned to prepare the Architectural Heritage Impact Assessment, which is provided in Section 15.9 onwards.

The cultural heritage and archaeological assessment has been prepared by Martin McGonigle & Camilla Brännström. Mr McGonigle graduated with a Bachelor of Arts in Humanities in Heritage Studies from G.M.I.T in 2001 and followed this up with an MSc in Maritime Archaeology at the University of Ulster, Coleraine in 2002. Mr McGonigle is a Senior Archaeologist with John Cronin & Associates (JC&A) and has been a full-time professional archaeologist since 2002, a Licensed Archaeologist in RoI since 2008 & NI since 2009 and is a full member of Institute of Archaeologists of Ireland (MIAI). Since joining JC&A in 2008 Mr McGonigle has worked as Senior Archaeologist on numerous archaeological schemes and heritage projects, including cultural heritage assessments for environmental impact assessments, archaeological works on large infrastructure projects, etc. Mr McGonigle has also published nationally and internationally on a wide range of cultural heritage and archaeological subjects. Mr McGonigle has recently completed an MSc. in Applied Landscape Archaeology, at University of Oxford, passing with Distinction.

Ms Brännström graduated with a Master of Arts with a major in Archaeology from the Dept. of Archaeology, Umeå University, Sweden (2000-2004). Ms Brännström has been a Licensed Archaeologist in NI since 2015 and in the RoI since 2019. Since joining JC&A in 2018, Ms Brännström has been involved with numerous archaeological excavations as well as the production of pre-development archaeological desktop assessments and EIARs for small- and large-scale projects throughout Ireland. Ms Brännström is a full member of Institute of Archaeologists of Ireland (MIAI).

This Chapter is supported by EIAR Volume II Technical Appendices which include ;

- Appendix 15A Photographic Record;
- Appendix 15B Cultural Heritage Figures;
- Appendix 15C Cultural Heritage Site Inventories;
- Appendix 15D: Previous Licenced Archaeological Excavations; and
- Appendix 15E Placenames Review.

15.2 Methodology

The assessment methodology was also based on a programme of desk-based research combined with a site inspection and these studies were undertaken to identify any features of cultural heritage significance likely to be affected by the proposed development.

15.2.1 Relevant Guidance

The methodology used for this assessment is based on EPA (2003) Advice Notes on Current Practice in the preparation of Environmental Impact Statements and EPA (2002) Guidelines on the Information to be contained in Environmental Impact Statements; as well as more recent (draft) guidance methods have also been utilised as per EPA (2015) Draft Advice Notes for Preparing an EIS and (2017) Draft Guidelines for Information to be Contained in EIAR, and Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (DHPLG - August 2018). The EIAR seeks to comply with the requirements of Directive 2011/92/EU as amended by Directive 2014/52/EU, and the Planning and Development Act, 2000 (as amended) and Planning and Development Regulations, 2001 (as amended). The management and protection of cultural heritage in Ireland is achieved through a framework of national laws and policies which are in accordance with the provisions of the Valetta Treaty (1995) (formally the European Convention on the Protection of the Archaeological Heritage, 1992) ratified by Ireland in 1997; the European Convention on the Protection of Architectural Heritage (Granada Convention, 1985), ratified by Ireland in 1997, and the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage, 2003, ratified by Ireland in 2015.

15.2.2 Legal & Policy Framework

The management and protection of cultural heritage in Ireland is achieved through a framework of national laws and policies which are in accordance with the provisions of the Valetta Treaty (1995) (formally the *European Convention on the Protection of the Archaeological Heritage, 1992*) ratified by Ireland in 1997; the *European Convention on the Protection of Architectural Heritage* (Granada Convention, 1985), ratified by Ireland in 1997; and the *UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage, 2003*, ratified by Ireland in 2015.

The locations of World Heritage Sites (Ireland) and the Tentative List of World Heritage Sites submitted by the Irish State to UNESCO were reviewed. There are no UNESCO World Sites or Tentative World Heritage sites within the vicinity of Monaghan Town.

The national legal statutes and guidelines relevant to this assessment include:

- National Monuments Act (1930) (and amendments in 1954, 1987, 1994 and 2004);
- Heritage Act (1995);
- National Cultural Institutions Act (1997);
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act (1999);
- Planning and Development Act (2000);
- *Architectural Heritage Protection: Guidelines for Planning Authorities*, Department of Arts, Heritage, and the Gaeltacht (2011); and
- *Framework and Principles for the Protection of the Archaeological Heritage*, Department of Arts, Heritage, Gaeltacht and the Islands, 1999.

15.2.2.1 Archaeological Heritage

The administration of national policy in relation to archaeological heritage management is the responsibility of the National Monuments Service (NMS) which is currently based in the Department of Culture, Heritage and the Gaeltacht. The National Monuments Act of 1930, and its Amendments, are the primary means of ensuring the satisfactory protection of the archaeological resource. They include a number of provisions that are applied to secure the protection of archaeological monuments. These include the designations of nationally significant sites as National Monuments, the Register of Historic Monuments (RHM), the Record of Monuments and Places (RMP), the Sites and Monuments Record (SMR), and the placing of Preservation Orders and Temporary Preservation Orders on endangered sites.

Section 2 of the National Monuments Act, 1930 defines a National Monument as ‘*a monument or the remains of a monument, the preservation of which is a matter of national importance*’. The State may

acquire or assume guardianship of examples through agreement with landowners or under compulsory orders. Archaeological sites within the ownership of local authorities are also deemed to be National Monuments. There are no National Monuments located within the study area. The nearest National Monument is Tiredigan Court Tomb (National Monument No. 367), located approximately 9km to the southwest.

The National Monuments (Amendment) Act, 1994 made provision for the establishment of the RMP, which comprises the known archaeological sites within the State. The RMP, which is based on the earlier Register of Historic Monuments (RHM) and Sites and Monuments Record (SMR), provides county-based lists of all recorded archaeological sites with accompanying maps. All RMP sites receive statutory protection under the National Monuments Act 1994 and the NMS must be given two months' notice in advance of any work proposed at their locations. There are two recorded archaeological sites within the proposed development boundary, while there are a further 10 within the surrounding study area. The proposed development boundary is located within the *Zone of Archaeological Importance* for Monaghan Town (Figure 15.4) and the *Zone of Notification* for the Historic Town of Monaghan (Figure 15.5). These recorded archaeological sites are listed in Table 15.6.

The Monaghan *County Development Plan 2019-2025* includes the following statement in relation to archaeology:

Monaghan is a fine example of a seventeenth century plantation town and much of the street pattern of this time has survived. Dublin Street, the Diamond, Glaslough Street, Mill Street, Park Street and Market Street all appear to be of seventeenth century origin. The "Zone of Archaeological Potential" within the town, which comprises the area of the seventeenth century town together with the area around the site of Mullaghmonaghan Fort, is delineated on the map MDP 3. Within this area there is a possibility of discovering archaeological deposits such as seventeenth century house foundations, refuse pits, industrial areas and workshops. Developers should also refer to the County Monaghan Urban Archaeology Survey which detail other known archaeological findings in the urban area.

15.2.2.2 Architectural Heritage

Protection of architectural heritage is provided for through a range of legal instruments that include the Heritage Act (1995), the Architectural Heritage (National Inventory) & National Monuments (Misc. Provisions) Act (1999), and the Planning and Development Act (2000).

The Heritage Act (1995) (as amended) defines architectural heritage as including: all structures, buildings, traditional and designed, and groups of buildings including streetscapes and urban vistas, which are of historical, archaeological, artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings and contents.

The National Inventory of Architectural Heritage (NIAH) was established under the Architectural Heritage Act (1999), to record architectural heritage structures within the State and to advise local authorities in relation to structures of architectural heritage significance within their administrative areas. The conservation principles of care and protection of architectural heritage and the facilitation of the listing of significant buildings of architectural merit are set out in Part IV of the Planning and Development Act (2000). This requires Local Authorities to maintain a Record of Protected Structures (RPS) of structures with special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, to be included in City/County Development Plans. In addition, Local Authorities must provide for the preservation of townscapes etc. through designation of Architectural Conservation Areas (ACAs). Any changes that materially affect the character of a protected structure require planning permission.

The Record of Protected Structures (RPS) lists 712 entries for County Monaghan. The Monaghan *County Development Plan 2019-2025* contains the following policies in relation to Protected Structures:

BHP 1 To protect and conserve all structures included in the Record of Protected Structures and to encourage the sympathetic re-use and long-term viability of such structures without detracting from their special interest and character.

BHP 2 To contribute, as appropriate, towards the protection and sympathetic enhancement of archaeological heritage, in particular by implementing the relevant provisions of the Planning and Development Act 2000 (as amended) and the National Monuments Act, 1930 (as amended).

BHP 3 To contribute towards the protection of architectural heritage by complying, as appropriate, with the legislative provisions of the Planning and Development Act 2000 (as amended) in relation to architectural heritage and the policy guidance contained in the Architectural Heritage Protection Guidelines 2011 (and any updated/superseding document).

BHP 4 To maintain and update the Record of Protected Structures in consultation with the National Inventory of Architectural Heritage and to encourage the sympathetic conservation, renewal and repair of these structures.

BHP 5 Planning permission for the demolition of any protected structure shall not be granted except in exceptional circumstances and in accordance with Section 57(10)(b) of the Planning and Development Act 2000.

BHP 6 To ensure that any new development proposed to or in the vicinity of a Protected Structure will complement and be sympathetic to the structure and its setting in Monaghan County Development Plan 2019-2025 131 Protected Structures Policy terms of its design, scale, height massing and use of materials and to resist any development which is likely to impact on the building's special interest and/ or any views of such buildings and their setting.

BHP 7 To facilitate the retention and sympathetic re-use of protected structures and their settings in circumstances where the proposal is compatible with their character and special interest. In certain instances, land use zoning restrictions and site development standards may be relaxed to secure the conservation and reuse of a protected structure and to provide a viable use for any building which is at risk by virtue of being derelict or vacant.

BHP 8 To require that proposals for works to a protected structure shall be carried out in accordance with best practice as advocated in the Architectural Heritage Protection Guidelines 2011 (and any subsequent guidelines).

BHP 9 To use the provisions of the Planning and Development Act 2000 and the Derelict Sites legislation to prevent the loss or deterioration of the County's Architectural Heritage.

BHP 10 The Council aims to conserve the built fabric of the Ulster Canal, Great Northern Railway, historic mills and other industrial heritage structures throughout the county and planning permission will be required for their removal or alteration.

The Monaghan County Development Plan 2019-2025 contains information of a total of eleven Architectural Conservation Areas (ACAs) within Monaghan Town. The following is stated in relation to Architectural Conservation Areas Policy:

ACP 1 To prepare character appraisals for each of the designated Architectural Conservation Areas in the County to guide new development proposals and environmental improvements by identifying the character of each ACA and designing objectives to ensure that their distinctiveness and special interest are preserved and enhanced.

ACP 2 To resist development that would adversely affect the character and appearance of the Architectural Conservation Area. New development or alterations to existing building(s) in an ACA shall reflect the historic architecture in terms of scale, design and materials used. Regard shall be had to any objectives contained in the character appraisals (where applicable).

The Monaghan County Development Plan 2019-2025 contains the following Objectives for the Protection of Natural & Built Heritage:

SNO 6 Protect and preserve the Protected Monuments and Structures located within the towns.

SNO 7 Protect existing Architectural Conservation Areas by ensuring that all developments within them comply with the policies set out in Monaghan County Development Plan 2019-2025 and the DEHLG

Architectural Heritage Protection Guidelines. In these areas repair and refurbishment of existing buildings will be favoured over demolition and new build.

SNO 8 To protect the architectural quality of the towns by investigating the potential of designating additional Architectural Conservation Area(s) (ACAs) in accordance with DEHLG Architectural Heritage Protection Guidelines, during the plan period.

SNO 9 Protect and conserve the streetscape character, architectural quality and heritage of the towns.

15.2.3 Study Area

The Study Area of the Cultural Heritage assessment comprises the proposed development site boundary and the surrounding *Zone of Notification* for the Historic Town of Monaghan (Figure 15.5). This is a large enough area to provide archaeological context to the study.

15.2.4 Baseline

The principal source accessed for the baseline study was the Sites and Monuments Record (SMR) and Record of Monuments and Places (RMP) as published by the Archaeological Survey of Ireland (ASI) from the online database and web viewer known as ‘Historic Environment Viewer’ at www.archaeology.ie. In addition, the following sources were consulted:

- *Cartographic Sources* - including the 1st edition of the 6-inch Ordnance Survey (OS) maps (surveyed and published in the 1830s-40s) and the second edition, 25-inch OS maps (surveyed and published 1887-1913). (Source: <http://map.geohive.ie/mapviewer.html> & www.heritagemaps.ie).
- *Aerial photography* – In parallel with the cartographic study, a review of publicly-accessible aerial photographic sources from the Ordnance Survey, Google and Bing Maps was undertaken. (Source: <http://map.geohive.ie/mapviewer.html> & Google earth).
- *Database of Irish Excavation Reports* - The Database of Irish Excavation Reports contains summary accounts of all archaeological excavations carried out in Ireland (North and South) from 1970 to 2021 (Source: www.excavations.ie).
- *Placenames Database of Ireland* - (Source: www.logainm.ie).
- *National Inventory of Architectural Heritage* – (Source: www.buildingsofireland.ie).
- *The Monaghan County Development Plan 2019-2025* (Source: www.monaghan.ie).

15.2.5 Consultation

Table 0.1: Consultation Responses (awaiting full consultee replies)

| Date | Consultee and Issue Raised | How and Where Addressed in the ES |
|------------|--|---|
| 03/03/2021 |  <p><i>There is major EIA sensitivity issue in relation to Cultural Heritage as the proposed development involves the demolition of the 1816 birthplace of Charles Gavan Duffy. With Thomas Davis, William Smith O'Brien, Thomas Francis Meagher and John Mitchell he was one of the main leaders in the Young Ireland movement of the 1840s and Co founder with Davis and first editor of the Nation newspaper He went on to be a significant figure in the history of Australia becoming premier of Victoria where he played a major role in land reform He died in France and his body was brought back for burial in Glasnevin</i></p> | This is considered in this chapter and it is acknowledged that this is a key cultural heritage feature in the area. |

*cemetery beside that of Daniel O Connell in 1903
Attached is his Wikipedia entry.*

15.2.6 Assessment Criteria and Assignment of Significance

The following criteria (based on EPA (2017) and ICOMOS (2011) guidelines) has been applied to determine the methodology applied to the assessment of significance of effects on the cultural heritage resource. Impact assessment is achieved by a consideration of the duration, quality, type, magnitude and value of effect(s) on the cultural heritage resource.

15.2.6.1 Duration of Effect

The duration of effects is assessed based on the following criteria:

- Momentary (seconds to minutes);
- Brief <1 day;
- Temporary <1 year;
- Short term 1-7 years;
- Medium term 7-15 years;
- Long term 15-60 years;
- Permanent > 60 years; and
- Reversible: Effects that can be undone, for example through remediation or restoration.

15.2.6.2 Quality of Effect

The quality of an effect on the cultural heritage resource can be positive, neutral or negative.

Positive – a change which improves the quality of the cultural heritage environment (e.g. increasing amenity value of a site in terms of managed access, signage, presentation etc. or high-quality conservation/restoration and re-use of an otherwise vulnerable derelict structure).

Neutral – no change or effects that are imperceptible, within the normal bounds of variation for the cultural heritage environment.

Negative – a change which reduces the quality of the cultural heritage resource (e.g. visual intrusion on the setting of an asset, physical intrusion on features/setting of a site etc.).

Type of Effect

The type of effect on the cultural heritage resource can be direct, indirect or no predicted effect.

Direct – where a cultural heritage site is physically located within the footprint of the proposed development, which will result in its complete or partial removal.

Indirect – where a cultural heritage site, or its setting, is located in close proximity to the footprint of the proposed development.

No predicted effect – where the proposed development will not adversely or positively affect a cultural heritage site.

15.2.6.3 Magnitude of Impact

The significance of the effect is based on an assessment largely of the magnitude of the impact (graded from high to negligible, based on a consideration of character, duration, probability and consequences) and the value (graded from high to negligible, based on a consideration of significance/sensitivity) of the heritage asset.

Magnitude of impact (degree of change, incorporating any mitigation measures) can be negative or positive, and should be ranked without regard to the value of the asset according to the following scale: High, Medium, Low and Negligible (see Table 15.2).

Table 15.2 Magnitude of Impact - Assessment Indicators of the Cultural Heritage Asset

Indicative Factors for Assessing the Magnitude of Impact on the Cultural Heritage Asset (after ICOMOS 2011, 16-17)

| | |
|------------|---|
| High | <p>Most or all key archaeological or architectural materials affected such that the resource is totally altered.</p> <p>Comprehensive changes to setting.</p> <p>Changes to most or all key historic landscape elements, parcels or components; extreme visual effects; fundamental changes to use or access; resulting in total change to historic landscape character unit.</p> <p>Major changes to area that affect Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.</p> |
| Medium | <p>Changes to many key archaeological or historic building materials/elements such that the resource is clearly/significantly modified.</p> <p>Considerable changes to setting that affect the character of the archaeological asset.</p> <p>Changes to the setting of a historic building, such that it is significantly modified.</p> <p>Change to many key historic landscape elements, parcels or components, visual change to many key aspects of the historic landscape, considerable changes to use or access, resulting in moderate changes to historic landscape character.</p> <p>Considerable changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.</p> |
| Low | <p>Changes to key archaeological materials/historic building elements, such that the resource is slightly altered/slightly different.</p> <p>Slight changes to setting of an archaeological monument.</p> <p>Change to setting of a historic building, such that it is noticeably changed.</p> <p>Change to few key historic landscape elements, parcels or components; slight visual changes to few key aspects of historic landscape; slight changes to use or access; resulting in limited change to historic landscape character.</p> <p>Changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.</p> |
| Negligible | <p>Very minor changes to key archaeological materials or setting.</p> |

Indicative Factors for Assessing the Magnitude of Impact on the Cultural Heritage Asset (after ICOMOS 2011, 16-17)

| | |
|--|---|
| | <p>Slight changes to historic building elements or setting that hardly affect it.</p> <p>Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes to use or access; resulting in very small change to historic landscape character.</p> <p>Very minor changes to area that affect the Intangible Cultural Heritage activities or associations or visual links and cultural appreciation.</p> |
|--|---|

15.2.6.4 Evaluation of Cultural Heritage Value/Sensitivity

The evaluation of the value/sensitivity of a heritage asset is largely based on its significance criteria, and should not be considered definitive, but rather an indicator which contributes to a wider judgment based on the individual circumstances of each feature. Generally, the more criteria that are evident for a given asset, the higher in scale it’s respective value shall be. Criteria to be considered in addition to any legal designations include a consideration of the condition/preservation, documentary/historical significance, group value, rarity, visibility in the landscape, fragility/vulnerability and amenity value. The Value/Sensitivity of all known or potential assets that may be affected by the proposed development can be ranked according to the following scale: High, Medium, Low and Negligible (see Table 15.3).

Table 15.3 Evaluation of Value/Sensitivity - Assessment Indicators of the Cultural Heritage Asset

Indicative Factors for Assessing Value/Sensitivity of the Cultural Heritage Asset (after ICOMOS 2011, 14-17)

| | |
|-----------|---|
| Very High | <p>World Heritage Sites (including Tentative List properties).</p> <p>Assets of acknowledged international importance, including buildings.</p> <p>Assets that can contribute significantly to acknowledged international research objectives.</p> |
| High | <p>Designated National Monuments (archaeological) (including sites with Preservation Orders).</p> <p>Assets of significant quality and importance, including designated RMP sites.</p> <p>Assets that can contribute significantly to acknowledged national research objectives.</p> <p>Protected Structures/National NIAH Grade Buildings.</p> <p>Conservation Areas containing significant buildings of importance, including group value.</p> <p>Archaeological Landscapes with significant inter-group value.</p> |
| Medium | <p>Assets of good quality and importance, including designated RMP sites.</p> <p>Assets that can contribute significantly to acknowledged regional research objectives.</p> <p>Regional Grade NIAH Buildings.</p> <p>Other undesignated buildings that can be shown to have exceptional qualities in their fabric or historical associations.</p> <p>Undesignated structures of potential national importance (archaeological, potential ‘new sites’).</p> |

Indicative Factors for Assessing Value/Sensitivity of the Cultural Heritage Asset (after ICOMOS 2011, 14-17)

| | |
|------------|---|
| | <p>Conservation Areas containing buildings that contribute significantly to its historic character.</p> <p>Historic townscape or built-up areas with important historic integrity in their buildings or built settings (e.g. including street furniture and other structures).</p> |
| Low | <p>Designated and undesignated assets of local importance, including buildings.</p> <p>Assets compromised by poor preservation and/or poor survival of contextual associations.</p> <p>Assets of limited value, but with potential to contribute to local research objectives.</p> <p>Historic Townscape or built-up areas of limited historic integrity in their buildings or built settings (e.g. including street furniture and other structures).</p> |
| Negligible | <p>Assets with very little or no surviving archaeological interest.</p> <p>Buildings of no architectural or historical note; buildings of an intrusive character.</p> |

15.2.6.5 Significance of Effect

The Significance of Effect can be described as Profound, Very Significant, Significant, Moderate, Slight, Not Significant or Imperceptible (see Table 15.4 below).

Table 15.4 Assessing Significance of Effect for the Cultural Heritage Resource

Significance of Effects (per EPA Draft Guidelines 2017)

| | |
|------------------|---|
| Imperceptible | An effect capable of measurement but without significant consequences. Does not directly affect the cultural heritage resource and is without noticeable consequences. |
| Not Significant | An effect which causes noticeable changes in the character of the environment but without significant consequences. Does not directly affect the cultural heritage resource. |
| Slight | An effect which causes noticeable changes in the character of the environment but without affecting its sensitivities. Does not directly affect the cultural heritage resource. |
| Moderate | An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends. Directly affects the cultural heritage asset but not such where the integrity of the resource is compromised. |
| Significant | An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment. Directly affects the cultural heritage asset in part, with partial loss of integrity, character and data. |
| Very Significant | An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment. Directly affects the cultural heritage asset for the most part, with loss of integrity, character and data. |
| Profound | An effect which obliterates sensitive characteristics. Directly and wholly affects the cultural heritage asset with total loss of integrity, character and data. |

Table 15.5 Assessing Significance of Effect for the Cultural Heritage Resource

Significance of Effects Matrix (per EPA Draft Guidelines 2017)

| | | | | | |
|--|------------|---------------------------------|---------------------------------|--------------------------------|--------------------------------|
| Magnitude of Impact | High | Not Significant / Slight | Moderate / Significant | Significant / Very Significant | Very Significant / Profound |
| | Medium | Not Significant | Slight | Moderate / Significant | Significant / Very Significant |
| | Low | Not Significant / Imperceptible | Slight / Not Significant | Slight | Moderate |
| | Negligible | Imperceptible | Not Significant / Imperceptible | Not Significant / Slight | Slight |
| | | Negligible | Low | Medium | High/Very High |
| Value/Sensitivity of the Cultural Heritage Asset | | | | | |

15.3 Baseline Environment

15.3.1 Historical Background

Monaghan town (from the Irish *Muineacháin* meaning ‘hilly place’) is situated on a low ridge between Peter’s Lake to the north and Convent Lake to the south in an area located within the ancient kingdom of Airgialla or Oriel. The Annals of the Four Masters contain references to a McMahan ‘*caisleán*’ or castle at Monaghan in 1492 which the Annals of Ulster later describe as a ‘house’ in 1496. This may have been located on the crannog in Convent Lake (MO009-037----) which is described on a map of c. 1590 as ‘McMahon’s house’. A Franciscan friary (MO009-060002-) founded nearby by Phelim McMahon in 1462 would also have contributed to the growth of a settlement. Excavations at the site of the Westenra Arms Hotel have uncovered the remains of a mid-16th century house (MO009-06010-) constructed from posts and wattle (Excavation Licence No. 02E1147) which belong to this early phase of the town’s development. Monaghan was incorporated as a county with five baronies in 1587, marking the end of the kingdom of Oriel, but remained a stronghold of the McMahon’s.

In 1590 the Lord Deputy, Sir William FitzWilliam, launched an expedition to Monaghan to hang Hugh Roe MacMahon, the then principal Gaelic chieftain in County Monaghan, accused of raiding cattle belonging to the Earl of Essex and burning the crops of his enemy Heber MacCooley MacMahon. After his death the MacMahon lands were divided between the remaining members of the clan and other prominent families of the area which reduced the power of the MacMahons and allowed the English crown more control over the territory. The annals record how the Franciscan Abbey (MO009-060002-) was sacked by the Crown in 1589. FitzWilliam later established a garrison at the site but it was later probably abandoned in the wake of the battle of Clontibret in 1595 when the army of Hugh O’Neill the 2nd Earl of Tyrone won a decisive victory over the crown forces led by Sir Henry Bagenal. The garrison was subsequently re-established by John Berkley in 1602. In 1604 Sir Edward Blayney was appointed governor of the county and the garrison and shortly after was granted a large amount of land around the town of Monaghan and in the area of present-day Castleblaney which he founded.

In 1606 Sir John Davies, the attorney general, described the town of Monaghan as ‘...consisting of divers scattered cabins or cottages, whereof the most part was possessed by the cast soldiers of that garrison. In the northmost part thereof there is a little fort, which is kept by the foot company of Sir Edward Blayney,

who is seneschal or governor of the county by patent. Blaney began to build a castle (MO009-060003-) using material taken from the former Franciscan friary (MO009-060002-) in Monaghan, however by 1606 John Davies, the attorney general, described *‘the foundation of a new castle, which being raised ten or twelve feet from the ground, and so left and neglected for the space of two years, is now ready to fall into ruin again.’* Five years later, in 1611 the castle is described as *‘a fayre castle buylte at Monaghan on the king’s charge wherein Sr. Edward Blayne nowe dwells, who for making of it more convenient for himself for his owne tyme hath layde out good somes of money of his owne.’*

Blaney’s castle is not depicted on Richard Bartlett’s map of c. 1602-03 which presents an idealised version of the town as a cluster of houses set within a star-shaped fort which did not exist. Bartlett’s map does however contain the ruins of the friary (MO009-060002-) and the fort mentioned by Davies in the background. A slightly later map made for Sir Edward Blaney, believed to date to c.1611-1613, depicts the town as a fortified rectangular area defended by walls or ramparts and outer ditches with a fortified house or castle at its centre. The straight boundary lines to the rear of the plots on the northeast side of Dublin Street and the western side of Park Street are believed to mark the line of these fortifications. The precise location of the castle has not been found and archaeological excavations (96E0025; 96E0293) in the area has failed to identify any remains relating to it. In the Ordnance Survey Letters of 1835, John O’Donovan noted: *‘The large house in the Diamond opposite Glasslough Street is said to occupy the site of a Castle ... in the rear of this, some old walls are to be seen, said to be the remains of an old Abbey’*. Excavations (02E1147; 03E0027) on the north side of the Diamond revealed the presence of a large ditch with a width of c.14-20m and a depth of c.3m. It is likely that similar traces of the 17th century fortifications have survived in other locations in the town centre.

The estate of Sir Edward Blaney, including Monaghan Town, was sold by his descendants in 1680, and through a series of marriages it became part of the Rossmore Estate in the late 18th century. A map of Monaghan Town drawn by Arthur Richard Neville c.1787 show buildings lining Glaslough Street, Dublin Street, Mill Street, Hill Street and Park Street which radiated out from the open spaces of the Diamond, Church Square and Market Street. The town prospered during the first half of the nineteenth century through linen and agricultural products and it was during this period that the town got its character of a market town through the construction of several public buildings, monuments and private residences of good quality. An infirmary marked on a map from 1790 on the eastern outskirts of the town was built near Old Cross Square (formerly the site of the Shambles) in 1768 while a fine classical market-house made of granite was erected at Market Street in 1792. A Courthouse was built in 1829 at Church Square near St Patrick’s Parish Church (Col) dating to 1836. Several ecclesiastical buildings, banks and a Model school were also added to the town’s architecture during the mid to late nineteenth century. The completion of the Ulster Canal in 1839 led to the creation of a canal bridge of stone on Dublin Street but the canal was shortly after made obsolete by the arrival of the Great Northern Railway in 1863 which prompted the building of a railway station c.1860 and other necessary infrastructure. Other examples of the industrial heritage of the town can be seen at the site of the Monaghan Lighting Company’s old Gasworks site near the Old Cross Square while a Saw Mill is recorded in the location of the Monaghan Shopping Centre and a Brewery on the eastern shore of Convent Lake.

15.3.2 Archaeological Background

The Monaghan Town *Area of Archaeological Importance* as defined in the Monaghan County Development Plan 2019-2025 extends across the historic town centre from Peter’s Lake in the north to the Ulster Canal in the south, Monaghan Hospital to the west and a short distance east of Old Cross Square (Figure 15.4).

There are 12 recorded Archaeological Sites and Monuments within the study area (Table 15.6 & Figure 15.5). The majority of these belong to the development of Monaghan during the early post-medieval period (late 16th and 17th centuries). The historic settlement of Monaghan (MO009-060----) has its origins in the late medieval period under the Gaelic lordship of the MacMahons who, it is believed, resided at a crannog on Convent Lake (MO009-037----) located immediately outside the study area. Recent research however suggests that they may in fact have been associated with Roosky Lough which contains several crannogs.

An excavation (Licence No. 02E1147) at the Westenra Arms Hotel produced evidence of a mid-16th century wattle and post built structure (MO009-06010-) thought to represent an early stage of settlement in Monaghan. A Franciscan friary (MO009-060002), founded in 1462 by Phelim McMahon is marked on a map dating to c.1591 in an area between the Diamond and Convent Lake, probably in the vicinity of the Court house and the parish church (Figure 15.3).

In 1835 the ordnance survey recorded that in the rear of a large house on the Diamond opposite Glaslough St., which was thought to be Blayney's castle (MO009-060003-), were *'some old walls, said to be the remains of an old Abbey, whose burying ground in common with that of the church (MO009-060012-) would seem to have extended beyond its present bounds, as in levelling that open space before the old Gaol a quantity of human bones were dug up.'* Archaeological testing (Licence nos. 96E0025; 96E0293) in this area did not uncover any traces of this monument.

The layout of the fortified town in the first decade of the seventeenth century has been recorded on a contemporary map prepared for Sir Edward Blayney (Figure 15.8) as a large rectangular area defended by walls or ramparts and outer ditches enclose a castle and rows of houses. Remains of these town defences (MO009-060004-) have been identified through excavations (Licence nos. 02E1147; 03E0027) at the site of the Westenra Arms Hotel on the north side of the Diamond where a large ditch with a width of 14-20m and a maximum depth of 3m was found. The ditch was lined with marl so as to retain water. Similar trenches can be expected to survive on the other sides of the original fortification. The castle (MO009-060003-), set within a bawn (MO009-060013-) was constructed by Sir Edward Blaney using materials from the Franciscan Friary. A bastioned fort (MO009-060007-) is also documented from this period and is believed to have been located on relatively high ground to the northwest of Monaghan town in the grounds of the County Hospital. Samuel Lewis Topographical Dictionary of Ireland (1837) states that silver coins had been found at this location including one of Henry VIII and another of James I.

A Market or Hiring Cross (MO009-060006), first recorded in 1714, was moved to its present location in the Shambles or Old Cross Square in 1875 from the Diamond at the time of the erection of the Rossmore Memorial, a neo-gothic memorial fountain. It is believed to be a seventeenth century sundial.

A church at Monaghan town is not known before the seventeenth century, and no church is depicted on the available early seventeenth century maps made by Bartlett in 1602-03, or the Blaney map of c. 1611-13. A parish church had however been established in the town by the time of the Rebellion in 1641. The Blaney family are recorded to have been buried there since 1629. A grave slab (MO009-060011-) for Oliver Ancketill dating to 1666 was uncovered during the excavation of foundations for the present parish church of St Patrick which was built in 1830-1835. Oliver Ancketill was the first of the Ancketill family to come to Ireland from Dorsetshire and the inscription reads: HERE LYETH THE BO / DY OF OLIVER ANCKE / TILL OF ANCKETILLS G / ROVE ESQVIRE DESCEND / ED OF THE ANIENT FA / MILY OF SHAWSTONE / IN DORSET SHIRE IN / ENGLAND, WHO DYE / D AT ARD MAGH A / ND WAS BURIED A / T MONAGHAN THE / 28th DAY OF / JVNE 1666.

The old church (MO009-060012-) is depicted on the 1835 ed. of the OS 6-inch map just north of the present building as a smaller structure measuring c. 20m E-W; c. 10m N-S with a projection at the western end. It is described on the map as the 'Old Church' and is set at the northern edge of a D-shaped graveyard (MO009-060009-) measuring c. 50m E-W; c. 40m N-S. Archaeological testing (licence no. 03E1672) undertaken in 2003 c. 8m west of the perimeter of the graveyard exposed disarticulated human remains and one in situ skeleton oriented in an east-west direction.

Burials of uncertain date have also been uncovered at during construction work in Church Square in the 1940s (MO009-060005-) and a note in the IFC Schools MSS (957, 157) record how *'the monks from the monastery, murdered by English soldiers in either 1540 or 1589 are thought to be buried near the holy well which was on the site of the present provincial bank'* (MO009-060001-) but the exact location is not known.

Table 15.6: Recorded Archaeological Sites and Monuments within the Study Area

| Monument no. | Townland | Co-ordinates ITM | Class |
|---------------|---|------------------|-------------------------------------|
| MO009-060---- | Kilnacloy, Tirkeenan, Mullaghmonaghan, Roosky | 667117, 833735 | Historic town |
| MO009-060001- | Mullaghmonaghan | 667023, 833893 | Burial |
| MO009-060002- | Roosky | 667029, 833568 | Religious house - Franciscan friars |
| MO009-060003- | Roosky | 667211, 833725 | House - fortified house |
| MO009-060004- | Roosky | 667162, 833871 | Town defences |
| MO009-060005- | Roosky | 667127, 833728 | Burial |
| MO009-060006- | Tirkeenan | 667409, 833642 | Cross - Market cross |
| MO009-060009- | Roosky | 667162, 833746 | Graveyard |
| MO009-060010- | Roosky | 667191, 833837 | House - 16th century |
| MO009-060011- | Roosky | 667150, 833732 | Graveslab |
| MO009-060012- | Roosky | 667162, 833752 | Church |
| MO009-060013- | Roosky | 667211, 833708 | Bawn |

15.3.2.1 Archaeological Excavations

A large number of licensed archaeological excavations have been undertaken within the study area, however only five of these have produced archaeological remains (Table 15.7) Please refer to EIAR Volume II Technical Appendices, Appendix 15D for details.

Previous archaeological works undertaken in relation to this scheme

Previous archaeological works undertaken in relation to this scheme consists of the excavation of one archaeological test trench within an available greenfield area to the rear of No. 7 Dublin Street and a programme of archaeological monitoring of thirteen geotechnical investigation slit trenches throughout the development area. The archaeological investigations were carried out in June and July 2021 under Excavation Licence no. 21E0230 by licensee Camilla Brännström of John Cronin and Associates.

Most GI trenches were located within areas previously disturbed by the insertion of modern services and road surfaces, however post medieval deposits and artefacts which may relate to Monaghan town during the 17th and 18th centuries were uncovered at two locations. One sherd from a 17th century North Devon Slipware (Sgraffito ware) dish was recovered from a modern deposit within trench TP003 at No. 10 Dublin Street. A North Devon Slipware dish with similar decoration has been found at the colonial settlement of Jamestown, Virginia where it has been dated to c.1670 (Ref. no. COLO J 7366, Outlaw 2002). A portion of the foundations of No. 10 Dublin Street (which consisted of rubble to a depth of *circa* 0.65m below the current ground level) was also uncovered in TP003. The shallow depth of the foundations could allow for earlier deposits relating to the historic settlement of Monaghan to survive below the building.

A small, cobbled area was uncovered within trench ST006 (to rear of No. 24 Dublin Street, Sherry's pub) at a lower depth than nearby outbuildings, depicted on the first edition 6-inch OS map. This would suggest that the cobbled surface belong to an earlier phase of occupation.

The archaeological test trench, TR001, did not uncover any archaeological features. The trench was excavated through deposits containing frequent nineteenth and twentieth century construction materials, ceramics, metal, and glass artefacts indicating that the rear plot of No. 7 Dublin Street was used as a rubbish dump during the late nineteenth and first half of the twentieth century.

The archaeological monitoring and testing identified topsoil deposits containing artefacts relating to the nineteenth century town of Monaghan at four locations; ST001 (rear of Nos. 8 and 9 The Diamond), ST003 (rear of Nos. 12 – 14 Dublin Street), ST006 (rear of No. 24 Dublin Street) and TR001 (rear of No. 7 Dublin Street). Two of these trenches, TR001 and ST001, are located within undeveloped ground while the remaining two, ST003 and ST006, are located within paved and tarmacked surfaces.

Table 15.7: List of Licensed Archaeological Excavations within Study Area which has Produced Archaeological Deposits (www.excavations.ie)

| Licence no. | Year | Location | Result |
|-------------|------|---------------|--|
| 02E1147 | 2002 | The Diamond | 16 th century house (MO009-06010) |
| 03E0027 | 2003 | The Diamond | Town defences (MO009-060004) |
| 03E1672 | 2003 | Church Square | Burials (near graveyard MO009-060009) |
| 04E1566 | 2004 | Park Street | Post-medieval pit (c. AD1680-1750) |
| 05E0219 | 2005 | Church Square | Disarticulated human remains |
| 21E0230 | 2021 | Dublin Street | Post-medieval cobbled surface, 17th century ceramics |

15.3.2.1 Cartographic Review

Browne and Baptiste's map (1590)

The earliest surviving map of the county of Monaghan details its baronies and place names with buildings of note also represented. The location of the modern-day town of Monaghan is marked by a schematic depiction of a building labelled 'Monaghan Abbey' surrounded by open countryside north of the river. The map, dated December 1590, was made by the mapmakers John Browne and Jean Baptiste with additional annotations by William Cecil, Lord Burghley (Figure 15.6).

Bartlett's map of Monaghan Fort (1602)

A second depiction of Monaghan made a decade later, in 1602, by Richard Bartlett show Monaghan as a fortified town defined by eight bastions enclosing a group of 14 thatched houses covered by thatch within its star shaped interior. Entrances to the fort can be seen to the south, leading up from the river and the northeast where a path leads to a moated stone fort or cashel to the north. Clusters of thatched houses can be seen between the river and the star-shaped fort. Bartlett's illustration of Monaghan was an idealised depiction however as the town was not fortified at the time of his survey (Figure 15.7).

Map of Monaghan town (c.1611-13)

The town is represented on a slightly later map prepared for Sir Edward Blayney, probably c. 1611-13 and now held in Trinity College Dublin (Ms 1209 (32)) It depicts the town as a fortified rectangular area (measuring approximately 500m east-west by 400m north-south) laid out between a lake to the north and a river to the south, defended by walls or ramparts and outer ditches. A total of five bastions mark the northwest, southwest and northeast corners, with a further two at the centre of the eastern and southern walls. The river forms a natural boundary at its southeast corner. At its centre a castle stands within a square bawn defended by two bastions while knot gardens and fishponds occupy an enclosed area to the north between the bawn and lake. Individual dwellings are depicted along two streets which extend along the eastern and southern boundaries of the fortified area forming a small square to the south, near the entrance to the castle bawn. Four entrances are depicted in the defensive walls to the north, south east and west (Figure 15.8).

Taylor and Skinner (1777)

The late eighteenth century map of Monaghan Town in Taylor and Skinner's *Maps of the Roads in Ireland* surveyed in 1777 gives a schematic description of the town as laid out in a cruciform pattern along the Dublin, Clones and Cootehill roads to the north and south of the river (Figure 15.9).

A map of Monaghan town made c.1790 by Andrew Richards Neville for Rossmore Estate show the town relatively built up with a similar street pattern to today. A central square (The Diamond) and a second square to the west (Market Street) dominate the map with a church between the two. A somewhat irregular network of roads extends from each square, fronted by houses set within long narrow plots, some of which border the lake to the north. An infirmary is depicted on the eastern outskirts of the town near the present-day Old Cross Square (Figure 15.10).

15.3.3 Architectural Heritage

The Monaghan *County Development Plan 2019-2025* includes the following statement in relation to built heritage:

Monaghan Town has a wealth of buildings of architectural interest. The present layout of Monaghan Town is striking in its unconventional triangular branching from the centre. The town centre consists of a series of four urban spaces of quite different character, Market Square, Church Square, Old Cross Square and the Diamond. The open space of the Diamond, with the Rossmore Memorial at the centre provides the main focus of the town. The prevalence of softly rounded corners on buildings is one of the most striking and unique features of the town's architecture, a feature to be repeated in the redevelopment of corner sites. Another interesting architectural feature is the arch, a typical feature of the town's buildings. Both the open arch and the arch incorporated into the wall, the arch at first floor level and segmented arches at ground level are all worthy architectural features. The streetscape is characterised by a narrow plot width with buildings of two and three storeys forming narrow wedges along a uniform building line.

There is a total of 152 structures in the Record of Protected Structures (RPS) listed in the *Monaghan County Development Plan 2019-2025* within Monaghan Town. Several of these are located within the development area around the Diamond and Dublin Street. Several of the RPS sites are also recorded in the National Inventory of Architectural Heritage (NIAH). There is a total of nine NIAH structures recorded within or directly adjacent to the development area (Table 15.8, Figure 15.13), though there are several additional NIAH structures within the wider area. Please refer to EIAR Volume II Technical Appendices, Appendix 15A (Photographic Record) for details.

Table 15.8: NIAH Sites within the Development Area and Immediate Vicinity

| NIAH No. | RPS No. | Description | Townland | Within Redline Boundary (Y/N) |
|----------|-------------------------|---|----------|-------------------------------|
| 41303123 | 41000170 | Monaghan Courthouse | Roosky | No |
| 41303124 | Local 8 | Bumble Beez Eatery/McMahon & Burke Veterinary Surgery/A New U Beauty Salon / Halligans Farm Produce | Roosky | No |
| 41303125 | 41001091 | Saint Patrick's Church | Roosky | No |
| 41303126 | 41001086 | C McNally | Roosky | No |
| 41303127 | Local 3 | Magill Jewellers | Roosky | No |
| 41303128 | 41001100 | Monaghan Town Hall | Roosky | No |
| 41303129 | 41001071 Now deleted | Birthplace of Charles Gavan Duffy | Roosky | Yes |

| NIAH No. | RPS No. | Description | Townland | Within Redline Boundary (Y/N) |
|----------|----------|------------------------------------|----------|-------------------------------|
| 41303130 | 41001056 | Sherry's | Roosky | Yes |
| 41303131 | 41001050 | Monaghan First Presbyterian Church | Roosky | No |

The *Monaghan County Development Plan 2019-2025* contains information of a total of eleven Architectural Conservation Areas (ACAs) within Monaghan Town. Figure 15.14 shows the location of Church Square ACA, The Diamond ACA and Dublin Street ACA, which are all associated with the proposed development area.

Option 1 of the development proposals (as identified in the *Review of alternative locations for proposed Charles Gavan Duffy Place Dublin Street South Regeneration Plan* by Sheridan Woods Architects) for the creation of Charles Gavan Duffy Place would involve the demolition of No. 10 Dublin Street. This was previously a Recorded Protected Structure but is also listed in the NIAH (RPS ref. 41001071, NIAH ref. 41303129). The following appraisal of No. 10 Dublin Street is based on an Architectural Heritage Impact Assessment Report compiled by CONSARC Conservation in May 2020 for application to remove No.10 Dublin Street from the RPS.

The report outlined the proposed interventions in relation to the South Dublin Street & Backlands Regeneration Project and in particular the proposed demolition of No. 10 Dublin Street. It identifies the external and internal characteristics of the fabric, assesses its significance to Dublin Street and the wider context, and provides the relevant mitigation measures necessary for its proposed demolition.

No. 10 Dublin Street has since been deleted from the Monaghan County Council list of Recorded Protected Structures (RPS).

No. 10 Dublin Street is the birthplace of Charles Gavan Duffy, a notable Young Irelander, journalist and politician who later became the Premier of Victoria. No. 10 is described as a terraced three-bay three-storey house-over-shop, built c.1810, with shopfront and integral carriageway to ground floor. The AHIA report assessed the architectural and historical/social significance of the structure against the criteria for inclusion on the RPS and found that:

‘The building structure is of some limited architectural significance. It retains the overall form, massing and scale to the street frontage. The gable chimney remains albeit without any pots and is a part of the overall street roof scape. However, the loss of original fabric and ill-considered alterations have reduced that significance’.

The building has been converted into two apartments above the shop unit and does not retain any original interior finishes such as chimneys, fireplaces and doors.

The assessment concludes that:

‘The building fabric has been substantially altered over time and this has eroded its architectural significance. The building cannot be regarded as having artistic merit due to the loss of most of the historic detail. We would therefore consider the building to have ‘neutral’ significance and no longer meets the test for special characteristics in terms of its architecture or artistic merit.’

With regard to that the buildings’ significance as the birthplace of Charles Gavan Duffy the AHIA states:

‘This element of the social history has limited regional significance only, and we feel the building does not meet the test for special characteristics in terms of historic and social significance.’

Source: *Architectural Heritage Impact Assessment, South Dublin Street & Backlands Regeneration Project, Monaghan, Charles Gavan Duffy Place Heritage Report*, CONSARC Conservation, May 2020

15.3.4 Field Survey

A field survey of the proposed development area was carried out on 18th February 2020 and 7th October 2021 by qualified and experienced archaeologists/ cultural heritage specialists. The study area was assessed in terms of historic landscape, land use, vegetation cover, presence and potential for undetected archaeological and architectural heritage sites/features. The proposed development site is defined by rows of two- and three-storey buildings with shop fronts at ground level along South Dublin Street and the Diamond. The buildings on the southern side of Dublin Street have long rear plots that extend to a surface car park which marks the southern extent of the development. Many of these rear plots are partially developed and paved over while a handful of narrow laneways allow pedestrian access from South Dublin Street and the Diamond to the car park. Most rear plots are bounded by security fencing and were not accessible at the time of the survey. Several are covered by dense vegetation with Japanese knotweed present. The field survey included the accessible portions of the proposed mews lane named 'Church Walk' and the structures being considered for removal to create 'Charles Gavan Duffy Place' (Options 1 and 2 as identified in the *Review of alternative locations for proposed Charles Gavan Duffy Place Dublin Street South Regeneration Plan* by Sheridan Woods Architects September 2021). The field visits did not identify any previously unknown archaeological or architectural heritage sites (Please refer to EIAR Volume II Technical Appendices, Plates 1 to 14 Appendix 15A for details).

15.4 Impact Assessment

15.4.1 Assessment of Construction Effects

There are two recorded archaeological sites located within the redline boundary of the proposed development. These sites comprise a castle or fortified house (MO009-060003-) and associated bawn (MO009-060013-) built in the early 17th century and depicted on later mapping. There is no above ground indication of this site and archaeological excavations (96E0025 & 96E0293) undertaken in this area previously have not been able to identify its exact location. Although the exact location of this site has not been verified its location as per previous assessment of historical cartographic sources and subsequent labelling in the Sites and Monuments Record (SMR) has located it within the redline boundary of the proposed development. More specifically this site is located near the northern portion of the proposed development site within the area labelled as 'Church Walk' proposed for public realms works and an area labelled as plots for future development on the design concept drawing (Figure 1.3 in Chapter 1). As such Development on the location of the recorded archaeological site will result in a direct impact.

A further 11 recorded archaeological monuments are located outside the redline boundary of the proposed development but within the study area. None of these sites will be directly impacted by the proposed development.

The works will take place within the Area of Archaeological Importance for Monaghan and the National Monuments Service Zone of Notification for the historic settlement of Monaghan. Much of this area has been subject to modern intervention in the form of asphalt and concrete surfacing, concrete kerbing and ducting for electrical, sewerage, water mains and other services, leaving few undisturbed or green areas. The green areas that remain have been landscaped and may have been subject to ground reduction in the past. In addition, the proposed works in some areas will require removal of existing surfacing and replacement with new material, rather than deeper excavations into previously undisturbed deposits. The potential of this area to contain significant archaeological deposits subsurface can be considered moderate to low. However, the potential exists for archaeological remains within the area proposed for development and if identified would likely be directly impacted by development. An archaeological programme will be necessary during works in order to mitigate the impact on previously unrecorded archaeology.

There are four Protected Structures located within the redline boundary of the proposed development (as highlighted in Table 15.8): Sherry's Public House, Monaghan Town Hall, Magill Jewellers, and C McNally. The proposed development does not directly impact these Protected Structures. These structures are located on Dublin Street facing North onto Dublin Street and away from the proposed developments within

the backlands. The structures are located away from the interventions on Dublin Street to form Charles Gavan Duffy Place and there are no proposals to alter these structures. Proposals do include for the redevelopment of the existing pedestrian routes from Dublin Street through to the backlands adjacent to some of these Protected Structures, namely Sherry's Public House and Monaghan Town Hall.

For the detailed Architectural Heritage Impact Assessment, refer to section 15.9 of this chapter.

15.4.2 Assessment of Operational Effects

Any potential operational effects will be of a visual nature only. Most of the archaeological monuments recorded within the study area do not have a surface expression. The potential for a visual impact on cultural heritage is likely to be on sites and features of architectural heritage significance. These are assessed in the Townscape & Visual Impact report (Chapter 14) and Architectural Heritage Impact Assessment (Please refer to section 15.9 onwards of this chapter).

15.4.3 Assessment of Cumulative Effects

This chapter has considered the cumulative effects on archaeology and cultural heritage from the projects detailed in Table 1.2 within Chapter 1 Introduction. There are no predicted cumulative effects on archaeology and cultural heritage.

15.4.4 Inter-relationships

This chapter has a potential interaction with the Townscape and Visual Impact Assessment as visual effects will include those on certain aspects of the built environment. These effects are fully assessed in the Townscape and Visual Impact Assessment (Chapter 14).

15.5 Mitigation

15.5.1 Construction Phase Mitigation

There is one designated cultural heritage site (Castle MO009-060003- and Bawn MO009-060013-) located within the proposed development area. It has not been verified if this site contains extant archaeological deposits or material and its exact location has not been firmly established. However, based on the location assigned to this archaeological monument by the National Monuments Service through the SMR/RMP process, it is situated with an area proposed for development. As such there is potential for significant impact of a direct nature on this site during the construction phase of the project. To mitigate this potential direct impact, a programme of archaeological works in the form of a watching brief (and further archaeological intervention as required) should take place at this location during ground reduction works (see further below).

The overall archaeological potential of the proposed development site is considered low, given the fact that most of the development area has been subject to ground reduction due to modern interventions. In common with any urban area, previous developments may have impacted on potential archaeological layers and in many cases removed these entirely. Much of the public realm works will involve the removal of extant modern ground surface treatments and resurfacing with new/different materials. These works are unlikely to uncover previously undisturbed archaeological deposits. Areas where deeper ground reduction is proposed have a higher potential to get down to potential undisturbed deposits below modern disturbance levels. Although the potential to encounter significant archaeological material is low, the works will take place within the Area of Archaeological potential for Monaghan town and the Zone of Notification for the historic town and associated features. As such, mitigation in the form of an archaeological watching brief during ground reduction may be necessary.

During the watching brief, the topsoil stripping (in grass areas) and the removal of overburden should be undertaken using a mechanical excavator fitted with a toothless bucket under the supervision of the attendant archaeologist. All archaeological monitoring during ground reduction works shall be undertaken

by a suitably qualified archaeologist. The material that constitutes the current ground surface should be removed down to the uppermost archaeological horizon or formation layer, whichever is encountered first. Should archaeological remains be uncovered appropriate mitigation such as, preservation *in situ* (preferred option) or further archaeological work in the form of archaeological excavation and recording shall be implemented, in agreement with National Monuments Service. Archaeological excavations in the Republic of Ireland are conducted under licences issued by the NMS. A post-works report that will detail the results of all archaeological inputs to the proposed development will be submitted to NMS and Monaghan County Council on completion of archaeological works.

Mitigation measures for architectural heritage are provided in the Architectural Heritage Impact Assessment (AHIA) in Section 15.9.8.4.

15.5.2 Operational Phase Mitigation

There are no identified likely significant operational phase impacts of an indirect nature, on the cultural heritage resource.

15.6 Summary of Effects & Conclusion

Table 0.9: Summary of Likely Environmental Effects on Cultural Heritage - Archaeology

| Receptor | Sensitivity of receptor | Description of Effect | Duration | Magnitude | Significance | Significant Not significant | Notes |
|---------------------------|-------------------------|-----------------------|-----------|------------|------------------------|-----------------------------|-------|
| Construction phase | | | | | | | |
| MO009-060---- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |
| MO009-060001- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |
| MO009-060002- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |
| MO009-060003- | Medium | Moderate | Permanent | Medium | Moderate/Significant | Significant | |
| MO009-060004- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |
| MO009-060005- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |
| MO009-060006- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |
| MO009-060009- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |
| MO009-060010- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |
| MO009-060011- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |
| MO009-060012- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |
| MO009-060013- | Medium | Moderate | Permanent | Medium | Moderate/Significant | Significant | |
| Potential archaeology | Low | Moderate | Permanent | Medium | Slight | Not Significant | |
| Operational phase | | | | | | | |
| MO009-060---- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |
| MO009-060001- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant | |

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| | | | | | | |
|-----------------------|--------|---------------|-----------|------------|-----------------------------------|-----------------|
| MO009-060002- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant |
| MO009-060003- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant |
| MO009-060004- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant |
| MO009-060005- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant |
| MO009-060006- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant |
| MO009-060009- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant |
| MO009-060010- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant |
| MO009-060011- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant |
| MO009-060012- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant |
| MO009-060013- | Medium | Imperceptible | Permanent | Negligible | Not Significant/Slight | Not Significant |
| Potential archaeology | Low | Imperceptible | Permanent | Negligible | Not Significant/ Imperceptible | Not Significant |

Table 0.10: Summary of Likely Environmental Effects on Architectural Heritage

| NIAH No. | RPS No. | Description | Townland | Sensitivity (Table 15.3) | Quality of Effect | Duration (15.2.6.1) | Magnitude (Table 15.2) | Significance (Table 15.4) | Significant / Not Significant (Table 15.5) | Notes |
|----------|----------|---|----------|--------------------------|-------------------|---------------------|------------------------|---------------------------|--|--|
| 41303123 | 41000170 | Monaghan Courthouse | Roosky | High | Positive | Permanent | Negligible | Imperceptible | Imperceptible | Does not directly affect cultural resource |
| 41303124 | Local 8 | Bumble Beez Eatery/McMahon & Burke Veterinary Surgery/A New U Beauty Salon / Halligans Farm Produce | Roosky | High | Positive | Permanent | Negligible | Imperceptible | Imperceptible | Does not directly affect cultural resource |
| 41303125 | 41001091 | Saint Patrick's Church | Roosky | High | Positive | Permanent | Negligible | Imperceptible | Imperceptible | Does not directly affect cultural resource |
| 41303126 | 41001086 | C McNally | Roosky | High | Positive | Permanent | Negligible | Imperceptible | Imperceptible | Does not directly affect cultural resource |
| 41303127 | Local 3 | Magill Jewellers | Roosky | High | Positive | Permanent | Negligible | Imperceptible | Imperceptible | Does not directly affect cultural resource |
| 41303128 | 41001100 | Monaghan Town Hall | Roosky | High | Positive | Permanent | Low | Not significant | Not significant | Changes to the character of the environment without significant consequences |

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| | | | | | | | | | | |
|----------|----------|------------------------------------|--------|--------|----------|-----------|------------|-----------------|-----------------|---|
| 41303129 | N/A | Birthplace of Charles Gavan Duffy | Roosky | Medium | Neutral | Permanent | High | Significant | Significant | Building of limited architectural significance demolished. Building removed from RPS. |
| 41303130 | 41001056 | Sherry's | Roosky | High | Positive | Permanent | Low | Not significant | Not significant | Changes to the character of the environment without significant consequences |
| 41303131 | 41001050 | Monaghan First Presbyterian Church | Roosky | High | Positive | Permanent | Negligible | Imperceptible | Not significant | Does not directly affect cultural resource |

15.7 Limitations of the Assessment

Access to greenfield rear plots of South Dublin Street was limited during field survey. This assessment deals primarily with archaeological heritage, potential impacts and mitigation for architectural heritage was undertaken by a separate report (AHIA) as presented in section 15.9 and beyond in this chapter.

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15.9 Architectural Heritage Impact Assessment

15.9.1 Introduction

This Architectural Heritage Impact Assessment has been prepared by Consarc Conservation, an RIAI Grade 1 accredited conservation practice and is to accompany the planning application for public realm works within Monaghan Town Centre. The proposals are set out in the 2018 Regeneration Plan and the details have been developed by RPS.

The Project lead for the works is RPS who are working on behalf of Monaghan County Council. Consarc Conservation are appointed as Heritage Consultants.

This report has been prepared to:

- Outline the context of the area, its buildings, and the contribution that they make,
- Comment on the Protected Structures,
- Comment on the Architectural Conservation Area,
- Comment on the appropriateness of the proposals and how any potential negative effects might be mitigated.

15.9.2 Assessment Methodology

The AHIA has been carried out by a process of:

- Study of background Information and research,
- Communications with Lead Public Realm Designers and Project Managers,
- Site visit and survey to consider the existing Protected Structures within the context and consideration of any likely impacts by the proposed scheme,
- Consideration of context of the Architectural Conservation Area (ACA),
- Consideration of the conservation principles and policies contained within The Monaghan County Development Plan 2019-2025.
- Assessment of the proposals for public realm works,
- Provision of a written report for submission in support of the Planning Application.

15.9.3 Background

The 2017 Regeneration Plan proposes the overall regeneration of the Dublin Street area as a coherent and integrated development proposal. It sets out a vision for consolidating the urban structure of the plan area; creating new streets and new public spaces which integrate seamlessly with the existing historic town centre and to introduce a new backland quarter. This vision is articulated below:

“Dublin Street together with its backlands offers a unique opportunity to create a new and viable town centre quarter, with the potential to accommodate additional shopping, office, cultural, residential and new employment zone. It offers the opportunity to address the weaknesses of the area and to maximise its strengths; to enhance pedestrian and vehicular movement, to enhance the existing built heritage; to integrate with the historic streetscape in a manner that is both contemporary and forward looking while complimenting the built heritage; to create an integrated and commercially robust, viable proposal and a vibrant and sustainable new urban quarter in Monaghan.”

Monaghan County Council has commissioned the preparation of the initial phase of the Dublin Street Regeneration Plan 2017, with a focus on bringing forward proposals for the South Dublin Street and backlands area. This Architectural Heritage Impact Assessment evaluates this initial phase of the Regeneration Plan.

15.9.4 Description of the Works

The proposed South Dublin Street and Backlands Regeneration Project area is located to the south-east of the town core, extending from The Diamond to the north-west, south eastwards along Dublin Street, and is defined to the south-east by the Presbyterian Church at Old Cross Square. Buildings along Dawson Street back onto the west of the site, with the Shopping Centre and Broad Road to the south. The site includes parts of Dublin Street ACA and The Diamond ACA and is adjacent to Church Square ACA. The setting includes a range of protected structures including Monaghan Town Hall, The Courthouse and Saint Patrick's Church.

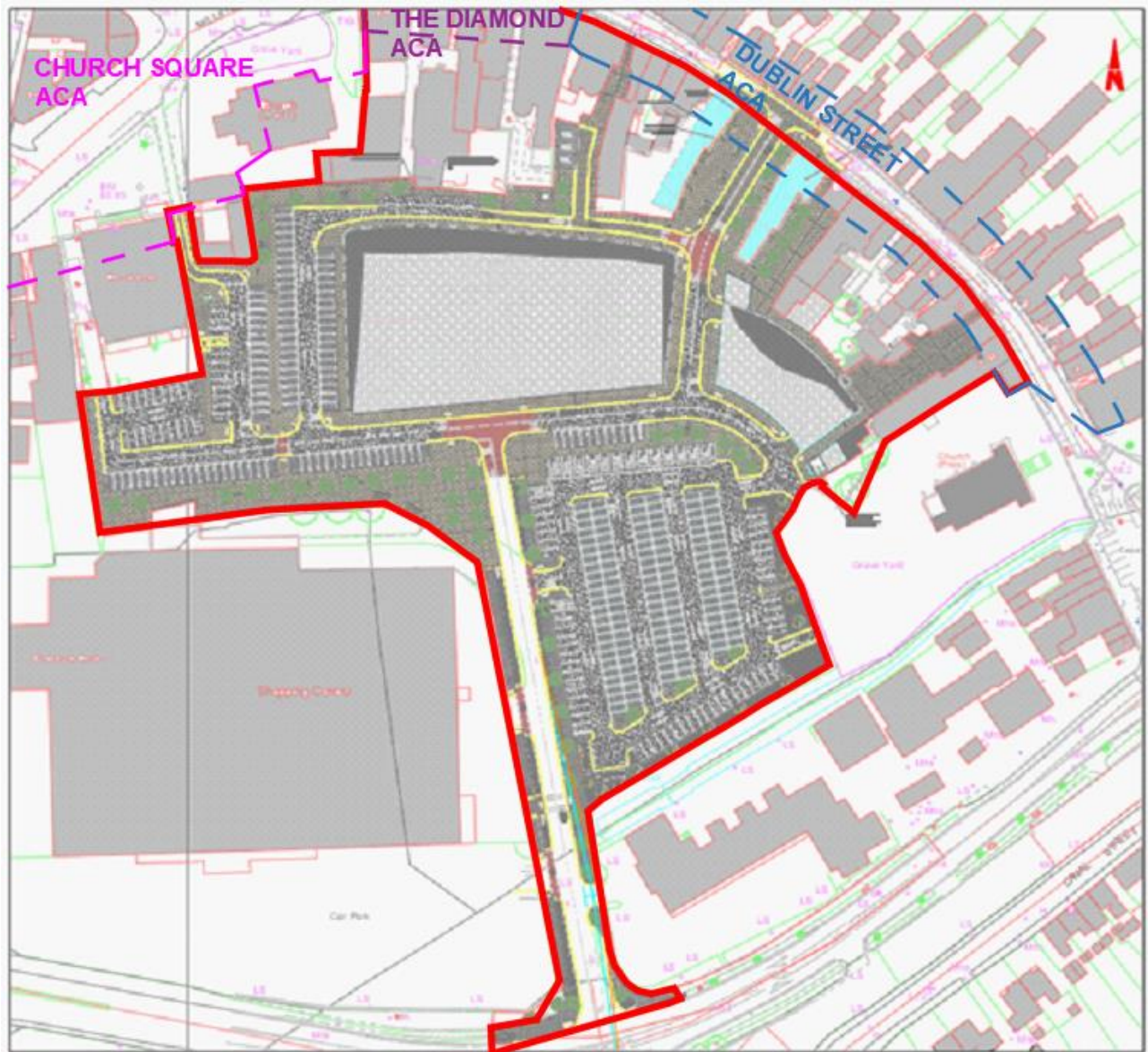


Figure 15.9.4.1: Public Realm Proposals, Wider Site Boundary and Associated ACAs (Consarc Mark-up)

The South Dublin Street and Backlands Regeneration project's overall focus is to revitalise the existing townscape in and around Dublin Street, within the core of Monaghan town centre. The aim is to regenerate the area to address dilapidated buildings, dereliction, and run-down public realm. New areas for future development and new urban spaces are envisaged, helping to create a new urban quarter.

A detailed outline of the proposed development is provided in Chapter 2 of the EIAR, however a summary of the key interventions are:

- Formation of a new urban space, Charles Gavan Duffy Place, to accommodate pedestrian areas, new commercial opportunities, retail frontage, civic/event space, and a new vehicular access and junction into the backlands area.
- A new mews lane subdividing the longer rear plots to the backlands area forming Church Walk.
- A new street within the Dublin Street backlands area to enhance pedestrian access between the existing shopping centre and Dublin Street forming The Mall.
- Realigned road between the N54 Macartan (Broad) Road and The Mall, complimented with public realm improvements
- The creation of future development plots.
- High quality public realm including soft landscaping, new street lighting, street furniture, utilities & services.

The works, as detailed in the planning application, for provision of a new high-quality public realm focus on the initial civic works and the setting out of the site as required for the future development and implementation of the overall strategy for regeneration of South Dublin Street and backlands areas.

The Regeneration Vision, as set out in the Regeneration Plan 2017, aspires to create a new hierarchy of streets and public spaces which integrate seamlessly with the historic town centre and to introduce a new backland quarter. The Dublin Street area benefits from a strong identity, with fine built heritage, and the scheme has the potential to contribute to the enhancement of the quality of the built environment to both Dublin Street and the backlands. The objective is to enhance the permeability of the area and to provide an attractive place to live, work and visit. The vision states that *“a clearly defined urban structure is fundamental to the creation of a well-designed urban neighbourhood, and legible network of connections and spaces for pedestrian and traffic movement”*.

The proposals set out in the planning application represent the short-term vision for upgrading of spaces, streets and connections, and it is envisaged that these works will create a catalyst for new developments within the area, resulting in the overall regeneration of Monaghan Town.

The following policies are considered with regards to both the short-term goals for provision of high-quality public realm, as included in the planning application, and for the long-term aspirations of the overall regeneration scheme.

15.9.5 Statutory Legislation and Policy Provisions

The Monaghan County Development Plan 2019 – 2025 sets out the requirements of the Planning and Development Act 2000 (as amended) that the following mandatory objectives must be included for all new developments to ensure proper planning and sustainable development of the County. The objectives relevant to built heritage are:

- The conservation and protection of the environment, including the archaeological and natural heritage and protection of European sites and any other sites which may be prescribed.
- The integration of the planning and sustainable development of County Monaghan with the social, community and cultural requirements of the county and its population.
- The preservation of the character of the landscape, including the preservation of views and prospects and the amenities of places and features of natural beauty or interest.
- The protection of structures, or part of structures, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.
- The preservation of the character of architectural conservation areas.
- The development and renewal of areas that are in need of regeneration, having regard to the core strategy in order to prevent;

- a. adverse effects on existing amenities in such areas, in particular as a result of the ruinous or neglected condition of any land,
- b. urban blight and decay,
- c. anti-social behaviour, or
- d. a shortage of habitable houses or of land suitable for residential use or a mixture of residential and other uses.

In accordance with Section 15(1) of the Planning and Development Act 2000 (as amended), there is a duty on the Planning Authority to take such steps within its powers as may be necessary for securing these objectives.

The Monaghan County Development Plan 2019 – 2025 also sets out Government Policy on Architecture (2009 – 2015) and seeks that all public authorities address the reuse of existing building stock, regardless of its protected status or otherwise.

The Protected Structures Policy is as follows:

| Protected Structures Policy | |
|------------------------------------|--|
| BHP 1 | To protect and conserve all structures included in the Record of Protected Structures and to encourage the sympathetic re-use and long-term viability of such structures without detracting from their special interest and character. |
| BHP 2 | To contribute, as appropriate, towards the protection and sympathetic enhancement of archaeological heritage, in particular by implementing the relevant provisions of the Planning and Development Act 2000 (as amended) and the National Monuments Act, 1930 (as amended). |
| BHP 3 | To contribute towards the protection of architectural heritage by complying, as appropriate, with the legislative provisions of the Planning and Development Act 2000 (as amended) in relation to architectural heritage and the policy guidance contained in the Architectural Heritage Protection Guidelines 2011 (and any updated/superseding document). |
| BHP 4 | To maintain and update the Record of Protected Structures in consultation with the National Inventory of Architectural Heritage and to encourage the sympathetic conservation, renewal and repair of these structures. |
| BHP 5 | Planning permission for the demolition of any protected structure shall not be granted except in exceptional circumstances and in accordance with Section 57(10)(b) of the Planning and Development Act 2000. |
| BHP 6 | To ensure that any new development proposed to or in the vicinity of a Protected Structure will complement and be sympathetic to the structure and its setting in terms of its design, scale, height massing and use of materials and to resist any development which is likely to impact on the building's special interest and/ or any views of such buildings and their setting. |
| BHP 7 | To facilitate the retention and sympathetic re-use of protected structures and their settings in circumstances where the proposal is compatible with their character and special interest. In certain instances, land use zoning restrictions and site development standards may be relaxed to secure the conservation and reuse of a protected structure and to provide a viable use for any building which is at risk by virtue of being derelict or vacant. |
| BHP 8 | To require that proposals for works to a protected structure shall be carried out in accordance with best practice as advocated in the Architectural Heritage Protection Guidelines 2011 (and any subsequent guidelines). |
| BHP 9 | To use the provisions of the Planning and Development Act 2000 and the Derelict Sites legislation to prevent the loss or deterioration of the County's Architectural Heritage. |

| | |
|--------|--|
| BHP 10 | The Council aims to conserve the built fabric of the Ulster Canal, Great Northern Railway, historic mills and other industrial heritage structures throughout the county and planning permission will be required for their removal or alteration. |
|--------|--|

The Monaghan County Development Plan 2019-2025 contains information on a total of eleven Architectural Conservation Areas (ACAs) within Monaghan Town. Architectural Conservation Areas (ACAs) are areas of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or areas that are important to the setting of a Protected Structure. An Architectural Conservation Area may or may not contain Protected Structures within it. The main purpose of an ACA designation is to control inappropriate development for the purpose of preserving and enhancing the character of the area.

The following is stated in relation to Architectural Conservation Areas Policy:

| Architectural Conservation Areas Policy | |
|--|---|
| ACP 1 | To prepare character appraisals for each of the designated Architectural Conservation Areas in the County to guide new development proposals and environmental improvements by identifying the character of each ACA and designing objectives to ensure that their distinctiveness and special interest are preserved and enhanced. |
| ACP 2 | To resist development that would adversely affect the character and appearance of the Architectural Conservation Area. New development or alterations to existing building(s) in an ACA shall reflect the historic architecture in terms of scale, design and materials used. Regard shall be had to any objectives contained in the character appraisals (where applicable). |

Monaghan Town’s ACAs - The Diamond and Church Square, are highlighted as important urban spaces and focal areas. Part of Dublin Street is also designated as an ACA as set out in the Monaghan County Development Plan 2019-2025 (Table 6.9), namely No’s 15,31-50, 58,59, 63,64.

The Monaghan County Development Plan 2019-2025 contains the following objectives for the Protection of Natural & Built Heritage:

| Objectives for the Protection of Natural & Built Heritage | |
|--|--|
| SNO 1 | Promote the value of Monaghan’s Natural and Built Heritage resources as an asset for the local economy and a key benefit to the amenity of the area and the wellbeing of the community. |
| SNO 2 | Prohibit development that would detrimentally impact on the value or designation of areas of natural amenity in the towns. |
| SNO 3 | Protect individual trees, groups of trees and woodland areas because of their nature conservation value or their contribution to amenity of the town and require the retention of existing mature trees and hedgerows in all new developments, except in exceptional circumstances. |
| SNO 4 | Prohibit development in Landscape Protection/Conservation Areas unless in exceptional circumstances, where it has been clearly proven to the Planning Authority that the works would not be contrary to the zoning objective as outlined in Chapter 9, Monaghan County Development Plan 2013-2019. |
| SNO 5 | Have regard to nature conservation issues when considering proposals for development which may detrimentally impact on habitats, species, or features worthy of protection. |
| SNO 6 | Protect and preserve the Protected Monuments and Structures located within the towns. |
| SNO 7 | Protect existing Architectural Conservation Areas by ensuring that all developments within them comply with the policies set out in Monaghan County Development Plan 2019-2025 and the DEHLG Architectural Heritage Protection Guidelines. In these areas repair and refurbishment of existing buildings will be favoured over demolition and new build. |

| | |
|--------|---|
| SNO 8 | To protect the architectural quality of the towns by investigating the potential of designating additional Architectural Conservation Area(s) (ACAs) in accordance with DEHLG Architectural Heritage Protection Guidelines, during the plan period. |
| SNO 9 | Protect and conserve the streetscape character, architectural quality and heritage of the towns. |
| SNO 10 | Encourage new developments to refurbish existing buildings and back lands to eliminate dereliction and reinforce the town centre where possible. |
| SNO 11 | Ensure that new developments enhance, respect and compliment the form and scale of the existing town streetscape and architecture. |
| SNO 12 | Preserve features which contribute to the townscape and character of the town (e.g. archways, facades, stonework, iron railings etc) |

15.9.6 Policy Context and Considerations

15.9.6.1 Architectural Conservation Areas

As can be seen from the Monaghan County Council map of the ACA's within Monaghan Town, the red line boundary of the South Dublin Street and Backlands Site extends into Dublin Street ACA and The Diamond ACA.

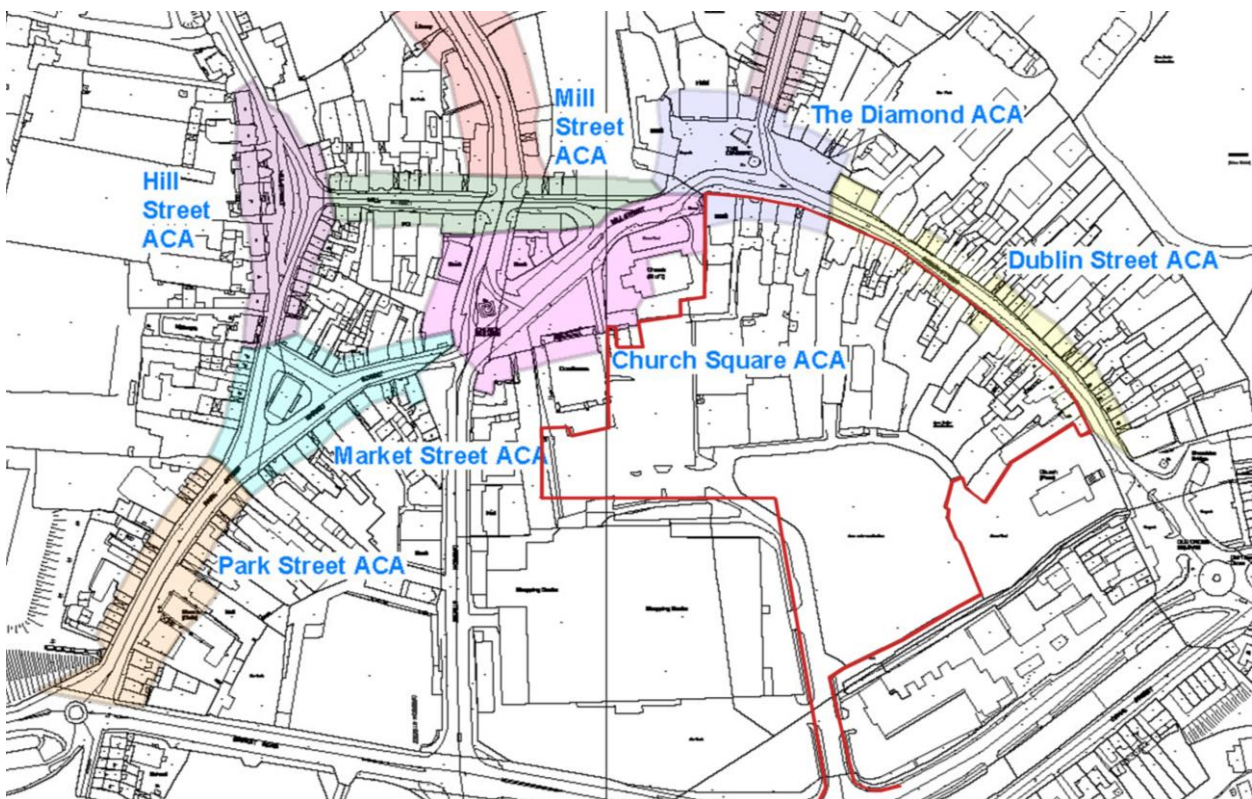


Figure 15.9.6.1: Monaghan County Council ACA – Monaghan Town Plan (Consarc Mark-up)

The red line boundary, as overlaid above, shows the terraced buildings that form the elevations to the south side of Dublin Street are within the Dublin Street and The Diamond ACA's. The backlands area is outwith any ACA within Monaghan town.

The Architectural Conservation Policy, ACP1 requires that the distinctiveness and special interest of the character of the ACA is preserved and enhanced.

ACP2 requires that development that would adversely affect the character and appearance of the ACA is resisted, and that new development or alterations shall reflect the historic architecture in terms of scale, design and materials.

Monaghan Town has a wealth of buildings of architectural interest. The present layout of the town is striking in its unconventional triangular form and is formed by a series of public spaces branching out from the centre. These spaces consist of The Diamond, Church Square, Market Square, and Old Cross Square. Each are of quite different character.

The Diamond (ACA) forms the main focus of the town and contains the Rossmore Memorial. The Diamond was the original marketplace of Monaghan and contained the market cross prior to its replacement for the Rossmore Memorial. Today it is still the key commercial and social focus. The Diamond plays host to a number of festivals including the annual Monaghan Town Country Music Festival.



Figure 15.9.6.2: The Diamond c.1870 (Francis Firth Collection) – Alma House on the corner of Glaslough Street and market cross to the centre.

The Diamond is characterised by traditional two and three storey brick and render buildings with relatively few modern interventions. Notably, alongside the Rossmore Memorial (Protected, built 1875 – 1880), the red-brick three and a half storey Victorian Westenra Arms Hotel (Protected, built 1830 – 1850) commands



much of the space with its adjoining premises, originally the town hall, and with Alma House (Protected, built 1800 – 1820) to the corner of Glaslough Street its dressed limestone walls contrast dramatically with the red brick. The rounded corner is an attractive feature that softens a particularly prominent place in the town centre. The prevalence of softly rounded corners on buildings is one of the most striking and unique features of Monaghan Town's architecture.

Figure 15.9.6.3: The Diamond, present day – Rossmore Memorial, Westenra Arms Hotel and Alma House.

Church Square (ACA) hosts another important social and historical landmark in the town, the Dawson Monument obelisk (Protected, built 1855 – 1860). The Square opens out to the amenity space in front of St. Patricks Church, former Rectory, and Monaghan Courthouse, and is characterised by a variety of other traditional two and three storey buildings. The views from Church Square curves away to the South towards Dawson Street by another softened corner of Dinkin’s Coffee Shop (1850 – 1890), and to the North Road past the Bank of Ireland (1870 – 1880).



Figure 15.9.6.4: LEFT Saint Patricks Church (Protected, built 1850 – 1890)

Figure 15.9.6.5: RIGHT Monaghan Courthouse (Protected, built 1825 – 1830)



Figure 15.9.6.6: LEFT Former Rectory (Protected, built 1830 – 1840)

Figure 15.9.6.7: RIGHT Dinkin’s Coffee Shop (Protected, built 1850 – 1890)

Under the Monaghan County Development Plan, The Diamond and Church Square are each identified as an ‘Important urban space and focal area’.

Throughout the Church Square and The Diamond ACA's there is a relatively high-quality urban realm with recent significant improvements to both footpath and civic spaces upgrading previous buff or brown block paving with new charcoal block paving and granite paving flags and setts.

Market Square (Market Street ACA) features Monaghan Market House (1790 – 1795) a detached five-bay single story limestone market house dated 1792. Its use of classical architecture, niches, pediments, rosettes, with variety of treatments of limestone and ornament make it a noteworthy feature of the town which continues to serve as an arts venue.



Figure 15.9.6.8: Monaghan Market House (1790 – 1795)

There are fewer Protected Structures within Market Square which is mainly comprised of traditional style two and three storey buildings. Monaghan County Museum (Protected, built 1820 – 1840), previously a pair of substantial townhouses built in limestone with an unusual heavy cornice and the neighbouring two-storey red-brick houses (Protected, built 1840-1860) sit to the North-West of the square.

Another interesting feature of Monaghan's architecture is the arch, both the open arch and the arch incorporated into the wall. This is present on buildings like the Market House, flanking passageways to the Courthouse, Dinkin's Coffee Shop and to many of the window heads and carriageways to the traditional two and three storey buildings around the town.

Old Cross Square is not part of an ACA. It is characterised predominantly by vehicular access to the town and leads towards Dublin Street to the North. Looking towards Dublin Street, the view is framed by First Monaghan Presbyterian Church and the relocated Market Cross that was previously sited at The Diamond.



Figure 15.9.6.9: Market Cross (First recorded 1714)

Dublin Street ACA represents the traditional established commercial and social core of the town linking onto The Diamond. The buildings within the ACA are two, three and four storey buildings of narrow fronted shopfronts providing interest at street level. The function of these buildings include a range of retail, commercial, residential, and retail services, interspersed with derelict, vacant or underutilised buildings and rear spaces. The majority of the building's external finishes are rendered over rough textured stone which can be seen to some exposed gables and other facades. There are several dwellings interspersed between shopfronts and a number of access points to the rear, some under archways creating active and interesting frontage to both sides of the street. Dublin Street has a varied roof line which heightens and releases along a narrow footpath creating an elongated, compact, and interesting streetscape. There are various architectural building styles, with different heights, façade treatments, and finishes adding a visual interest to the wider area. There is a distinctive urban grain, with building fronting Dublin Street characterised by long narrow rear buildings or spaces.

The Regeneration Plan identified the removal of Numbers 8, 9, 10 and 11 Dublin Street to make way for a new civic space, Charles Gavan Duffy Place – these buildings are not located within the Dublin Street ACA however are considered a part of its setting. As such, due consideration was given to the contribution they make to the appearance and character of the ACA, in assessing the impact of the proposal on the heritage asset. The buildings to be removed are not architecturally or traditionally distinctive, however contribute to the character of Dublin Street streetscape by way of their varied architectural interest. They have little group value and in terms of their function, the majority are characterised by long term under-use and vacancy/dereliction (both building and rear spaces). In this context, this group of buildings do not significantly contribute or positively enhance the overall character and appearance of the setting of the ACA.

The Regeneration Plan seeks to focus economic activity and redevelopment in the areas where it can be of most benefit and seeks to revitalise the area within a comprehensive and practical framework. It represents an opportunity for a positive intervention throughout the Dublin Street area, and particularly, a new opportunity to enhance the space and contribute positively to the setting of the ACA. The removal of the buildings will open up Dublin Street and allow natural light into an area characterised by overshadowing during parts of the day and will showcase the ACA from various new views within the townscape.

The opening is also directly adjacent to several Protected Structures (54-57 Dublin Street) – this scheme enables the creation of a new, well-lit space around these buildings, enabling them to become prominent elements in the townscape, and introduce Dublin Street as a new focal point within the longer range views.

The new development created by the proposed development on the corners of the proposed Charles Gavan Duffy Place, as set out in the Planning Drawings, is of a simple traditional architectural style and form, which will integrate satisfactorily in the streetscape. Along with the future adaptive reuse / infill development envisaged in later years by the Regeneration Plan, it is considered that these new building blocks have the potential to make an important and positive contribution to the appearance and character of the ACA. The new building blocks will be a catalyst to new development within Dublin Street and in the new development plots identified in the proposed development.

It is considered that any harm resulting from the demolition of this group of buildings can be considered to be outweighed by the merits of the proposed development. It is considered that this intervention will affect the setting of the ACA, however not significantly. The benefits of a high-quality, comprehensive regeneration scheme focusing on urban renewal, connectivity, and accessibility are considered to outweigh the disadvantages of this specific demolition adjacent to the ACA.

All proposals within and adjacent to the ACA should be carried out in accordance with best conservation practice, as defined by the International Council on Monuments and Sites (ICOMOS) in the Venice Charter of 1964 and subsequent charters.

15.9.6.2 Protected Structures

The Monaghan County Development Plan provides a copy of the Record of Protected Structures. The pink hatch, as shown on the plan below, denotes the location of some of the Protected Structures within Monaghan Town. There are four Protected Structures within the red line boundary and a further ten Protected Structures in close proximity to the red line boundary. Other Protected Structures surrounding The Diamond and Church Square make up the 'important urban space and focal area' as previously discussed.

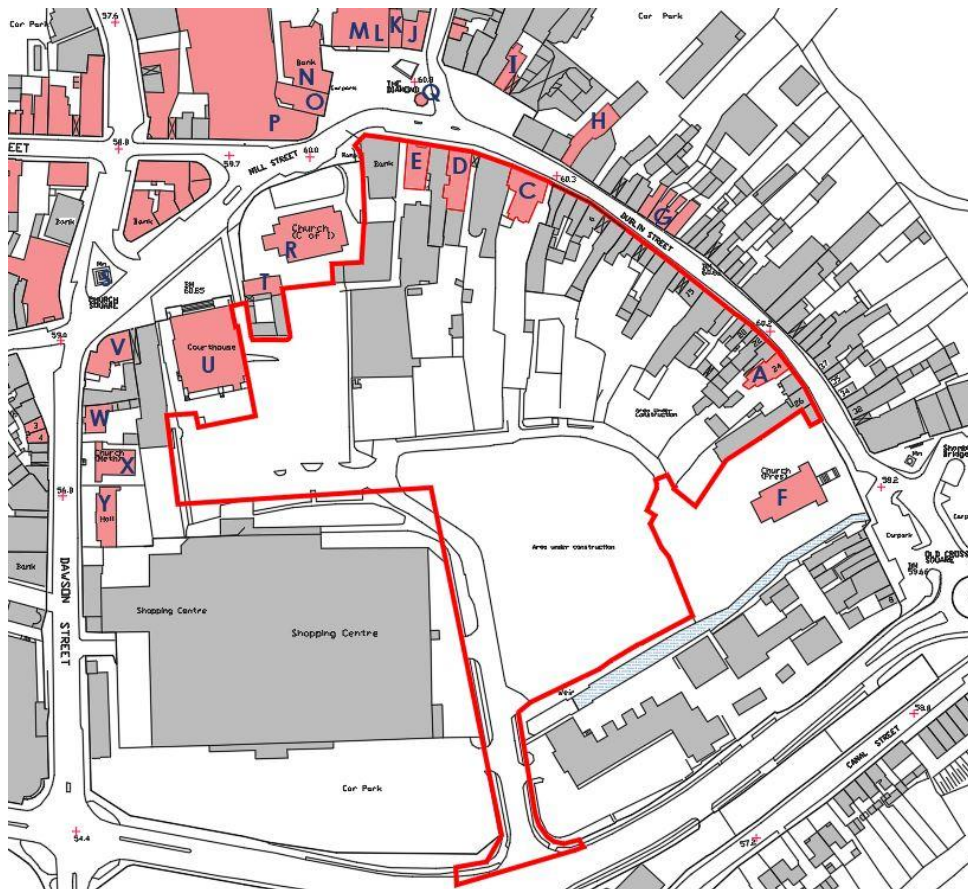


Figure 15.9.6.2.1: Locations of Recorded Protected Structures

Protected Structures within the red line boundary:

| Letter | Building | Location to Proposals | RPS Reg No. |
|--------|------------------------------|-----------------------|-------------|
| A | Sherry's No.24 Dublin Street | Within Site Boundary | 41001056 |
| C | Monaghan Town Hall | Within Site Boundary | 41001080 |
| D | Magill Jewellers | Within Site Boundary | |
| E | C. Mc Nally | Within Site Boundary | 41001086 |

Protected Structures near the red line boundary:

| Letter | Building | Location to Proposals | RPS Reg No. |
|--------|--|---------------------------------------|--|
| F | First Monaghan Presbyterian Church, Old Cross Square | Adjacent to Site Boundary | 41001050 |
| G | 54 – 57 Dublin St | Opposite Site Boundary | 41001181, 41001180, and proposed location of Charles Gavan Duffy Place |
| H | Seamie Mc Kenna's Pub | Dublin Street, Opposite Site Boundary | |
| R | St. Patricks Church, Church Square | Adjacent to Site Boundary | 41001091 |
| T | Former Rectory, Church Square | Adjacent to Site Boundary | Local 8 |
| U | Monaghan Courthouse, Church Square | Adjacent to Site Boundary | 41000170 |
| V | Dinkin's Coffee Shop & Restaurant | Church Square | Local 7 |
| W | Dawson Street (Manse) | Adjacent to Site Boundary | 41000175 |
| X | Monaghan Methodist Church | Adjacent to Site Boundary | 41000176 |
| Y | Dawson Street Assembly Rooms | Adjacent to Site Boundary | 41000177 |

Other Protected Structures surrounding The Diamond and Church Square:

| Letter | Building | Location to Proposals | RPS Reg No. |
|--------|--|-----------------------|-------------|
| I | Mc Crystal Opticians | The Diamond | |
| J | Age Action | The Diamond | |
| K | Jewellery Boutique | The Diamond | 41001103 |
| L | Westenra Hotel | The Diamond | 41001100 |
| M | Westenra Arms Hotel | The Diamond | 41001098 |
| N | AIB Bank | The Diamond | 41001096 |
| O | Boyle | The Diamond | |
| P | Flemming's Department Store / 02 / SuperValu | The Diamond | 41000300 |
| Q | Rossmore Memorial | The Diamond | 41001104 |

Outline information for the four buildings within the red line boundary has been provided below as sourced from the National Inventory of Architectural Heritage <https://www.buildingsofireland.ie/> with current photos and any updated notes on changes since the Protected Structure record.

A: Sherry's Public House No. 24 Dublin Street

NIAH Reg No. 41303130 | RPS no.41001056 | Regional | Public House, originally a house.

Date 1830 – 1850.

Outline Description: Terraced three-bay three-storey house over public house with pub front to ground floor. Pitched slate roof recently rebuilt with brick chimney stack. Random rubble walls to gables with squared quoin stones. Square-headed window openings with patent margin surrounds, red brick voussoirs, six-over-six horned timber sliding sash windows and painted sills. Timber framed pub front to the road with display window, timber panelled door with over-light.

Appraisal: The building is taller than its neighbours and adjacent to a lane/alleyway leading to rear outbuildings. It makes a strong impression in the streetscape. The use of brick provides good textural contrast to surrounding rendered buildings. The shopfront enhances the ground floor and retention of timber sash windows contributes to its heritage value.



Comments and Observations: The building is a welcome and pleasant feature to the south-east end of Dublin Street. New purposeful connectivity down past the gable wall to the backlands area will increase footfall to Sherry's and further enhance its marker/presence along Dublin Street by becoming a new corner and gateway through to the backlands. New paving and street lighting will enhance the pedestrian experience and encourage building owners to best maintain their presence on the street.

B: Birthplace of Charles Gavan Duffy No. 10 Dublin Street

Note: Deleted from Record of Protected Structures (10th May 2021)

NIAH Reg No. 41303129 | Regional | Vacant retail unit with living accommodation over, originally shop/retail unit.

Date 1800 – 1820.



Outline Description: Terraced three-bay three-storey house-over-shop, with shopfront and integral carriageway to ground floor. Pitched slate roof not visible from street, with smooth-rendered chimneystacks, and replacement rainwater goods. Smooth-rendered ruled-and-lined walls with block-and-start quoins to upper floors. Plaque to front wall inscribed 'Charles Gavan Duffy was born here 12th April 1816'. Square-headed window openings with replacement uPVC windows and painted sills. Shopfront has timber fascia board with console brackets, timber-framed display window and glazed door. Carriage-arch has depressed-arch opening and recent metal gate

Appraisal: This modest building has the typical characteristics of buildings in Irish provincial towns, such as the shopfront and the archway allowing access to a yard to the rear. The building is notable for being the birthplace of the Irish nationalist and Australian politician Charles Gavan Duffy.

Comments and Observations: The building structure is of some limited architectural significance. It retains the overall form, massing and scale to the street frontage but its substantial alteration over time has diminished this eroding its architectural significance. The building has been deleted from the RPS in accordance with Section 55 of the Planning and Development Act, as the building fabric no longer meets the test for historic and social significance. The building is vacant with a through archway, a typical feature within the town, which leads to an enclosed and gated fire escape area which does not enhance the architectural and civic values of the ACA. The archway at No 10 is an architectural feature which provides access to the rear of the property only and does not give access to a through route. There are numerous examples of these features throughout the town, both as an interesting feature in wall detailing or open arches to facilitate access along an alley way.

Commemoration of Charles Gavan Duffy will be represented through the proposals for a new civic square to be named Charles Gavan Duffy Place.

C: Monaghan Town Hall

NIAH Reg No. 4303128 | Regional | Town/County Hall, originally Bank/Financial institution.

Date 1870 – 1890.

Outline Description: End-of-terrace seven bay two-storey former bank altered c.1930 to Monaghan town hall. It has shallow pedimented breakfront framing central bays, a pitched roof concealed by a parapet with moulded corniced coping with console brackets to margins, moulded scooping and surround to pediment.

Smooth-rendered chimneystacks, and cast-iron rainwater goods. Smooth-rendered channelled walls, with smooth-rendered pilasters to breakfront, and with stepped string course at eaves level. Square-headed window openings with one-over-one pane horned timber sliding sash windows to first floor, cast-iron margined casement windows to ground floor, round-headed window opening to centre of pediment with moulded architrave and Napoleon-hat surround with multiple-pane timber casement window. Square-headed door opening with marble doorcase and double-leaf timber panelled door. Square-headed door opening to south-east bay with timber panelled door and over-light.

Appraisal: The building retains its intrinsic architectural qualities, including timber sash windows, and although the facade of this building may not be original. Its decorative, classical elements, so commonly applied to public buildings of this period, enhance the building's appearance.



Comments and Observations: The end of terrace building will form another marker and entry point to the backlands area behind via the passageway beside. New paving and street lighting will further enhance the setting of the building as an integral part of Monaghan town centre.

D: Magill Jewellers, Dublin Street

NIAH Reg No. 41303127 | Regional | Shop/ retail outlet.

Date 1810 - 1830

Outline Description: Terraced three bay three-storey house-over shop with shopfront of c.2000 to ground floor having deeply recessed entrance. It has a pitched slate roof with red brick chimneystacks and replacement rainwater goods. It has squared, coursed rubble limestone walls, with marble-effect cladding to shopfront, with projecting clock to first floor. Square-headed window openings with dressed tooled limestone voussoirs, horned timber sash windows three-over-three pane to top floor and six-over-six pane to first floor, with dressed stone sills.

Appraisal: The building retains its intrinsic architectural qualities, including timber sash windows and the evident masonry skills employed in the construction are evident. The overall composition, scale and character of the building remain despite the insertion of a modern shopfront.



Comments and Observations: The building is not directly impacted by the proposals but will benefit from the social and commercial outcomes arising from the Regeneration Scheme.

E: C Mc Nally, Dublin Street

NIAH Reg No. 41303126 | Regional | Shop/ retail outlet.

Date 1810 - 1830

Outline Description: End-of-terrace four bay three-storey house-over-shop with late twentieth-century shopfront to ground floor. It has a pitched slate roof with roughcast rendered chimneystack, and cast-iron rainwater goods. Smooth-rendered ruled-and-lined walls with channelled quoins and having orange tiled walls to shopfront. It has square-headed window openings with keystone detail, six-over-six pane horned timber sash windows, and painted sills.

Appraisal: This building is notable for the retention of timber sash windows to its upper floors, the keystone detail being eye catching. The form has been somewhat compromised by the heavy-handed late twentieth-century shopfront, but the building nevertheless adds to the quality of the streetscape.



Comments and Observations: The building is not directly impacted by the proposals but will benefit from the social and commercial outcomes arising from the Regeneration Scheme.

As per BHP1, the overall policy is to retain, restore and enhance the integrity and significance of the protected buildings within their wider context. As the works to this project are related to public realm street improvements, it is assumed that there will no significant adverse impact on the Protected Structures or indeed to the majority of the other buildings which line the streets. Generally, the regeneration plans for Monaghan Town aim to revitalise and enhance the urban environment to ensure long-term vibrancy and use of the existing buildings, environs, and Monaghan Town Centre to ensure that Protected Structures do not fall into disrepair or dereliction. It is assumed that the proposed Public Realm works will serve to enhance the buildings providing an improved setting for them using appropriate quality materials.

It can be concluded that the proposed development will have no direct impact on any building currently on the RPS.

This section concludes that there are no direct impacts on Protected Structures other than civil works in the environs of these buildings and that the works have negligible impact on the significance of the heritage overall, with only minor changes to the historic landscape character. The works will generate positive and permanent outcomes for improving the quality of the heritage environment.

The next section on street analysis includes the impacts of the proposals on the surrounding Protected Structures beyond the site boundary.

15.9.7 Street Analysis: Context, Buildings & Adjacent Environs

15.9.7.1 Dublin Street Urban Grain

As previously discussed, Monaghan Town centre typically comprises of traditional narrow fronted units of two and three storeys height, generally two and three bays width, with interspersed passageways, some under archways. This is typical of the Dublin Street Regeneration Area which has terraces fronting onto Dublin Street with long rear gardens to the south. The building line is well defined, and with a gentle rising topography and slightly curved elevation it creates an attractive and intimate feel. The gaps and archways allow glimpses southwards with potential good visual connection to the south-west and backland areas. Historically the rear gardens of these properties extended to the Shambles River, however 20th century development has resulted in the gardens being reduced to their present-day configuration. Typically, there are long rear annexes extending into the depths of the plots. The rear gardens are generally unused, disconnected and face onto the existing large public surface carparking that serves the Monaghan Shopping Centre. To the south-east, the backlands are characterised by small courtyards created by two storey outhouses positioned parallel to the principal structure.

Figure 15.9.7.1.1 below shows the proposals in context with the existing fabric of Monaghan Town.



Figure 15.9.7.1.1

- A:** Approach to proposed public realm from east / Old Cross Square.
- B:** Approach to proposed public realm from south / Broad Road.
- C:** Approach to proposed public realm from north-west / Church Square
- D:** Approach to proposed public realm from Dublin Street.

The following sub-sections review the existing approaches to the site from various locations in Monaghan Town.

15.9.7.2 Approach to Proposed Public Realm from the East / Old Cross Square

When standing at Old Cross Square looking towards Dublin Street, you can see the boundary of Dublin Street ACA which includes the building elevations to both sides of Dublin Street and comprises of another soft corner. The First Monaghan Presbyterian Church to the left-hand side of the image (not within the ACA) is a Protected Structure and sits on the outside of the red line boundary of the proposed development. Further along Dublin Street you can also see the three-storey stone gable with brick chimney to Sherry's public House, also a Protected Structure. The regeneration proposals do not directly impact the setting of either the ACA or the Protected Structures when viewed from Old Cross Square.



Figure 15.9.7.2.1:

LEFT: Dublin Street ACA and red line boundary when approached from Old Cross Square.

RIGHT: Looking towards Dublin Street from Old Cross Square.

Advancing up Dublin Street, there are two two-storey terraces on the left. There is a gap between these and the next building, which is Sherry's Public House. Adjacent to Sherry's, the proposals include new natural granite paving with a natural granite 'flush trim' to the Dublin Street pavement. This surface treatment will extend into Sherry's alley and open out to the revitalised space that will lead to the proposed new development plots. The existing pedestrian route consists of granite setts along Dublin Street; the alleyway to the side and rear of Sherry's is a concrete surface. The new paving and lighting will complement the new space to be created along this alleyway, creating a safe and attractive environment, and encourage new outdoor uses and pedestrian movements. The proposed design is consistent with other public realm schemes throughout the town, and it is considered that it will not negatively or directly impact the Protected Structure.

Although the 2017 Plan includes the existing small single storey outbuilding to the rear of the Pub, it is proposed to remove this building as part of the scheme to deliver the reinvigorated pedestrian connection and space. The outbuilding is of traditional urban form and style and is considered to have a certain level of architectural merit. It is a good representation of one of the many examples of the historic pattern of development within in the town. It is currently derelict and has not been in use for some time. It is over 20m from the main Sherry's pub, and is considered too distant to accommodate a viable commercial extension to the Pub.

Similarly, this building was not considered included as part of the heritage asset when the Pub itself was identified as a Protected Structure – although both buildings are in the same ownership, it is located greater than 20m approx. from the Protected Structure and adjoins other third party landowners. It has no previous or current functional connectivity with the heritage asset itself and has dissimilar architectural and heritage features and elements. On this basis, it is considered that the building is outwith the immediate curtilage of the Protected Structure.

During discussions with the landowner over a 2019 planning approval for reuse of the building for commercial purposes, it was confirmed that the internal floorspace was small and restricted. The

requirements of current building standards (in the provision of toilets, stairs and access) limited the internal floorspace available for commercial reuse, thereby restricting its usefulness, functionality and marketability. Building regulations required external improvements (toilets) to bring the building up to standard, which if implemented, would also restrict the external space available around the building for people movement.

Various design iterations considered both the retention and removal of this outbuilding, within the context of the proposed Regeneration Plan 2017, its overall vision, and its development objectives. The retention of the outbuilding within the proposed development allows a small building with vernacular qualities to be retained, and potentially continuing to contribute to the historic streetscape in terms of its vernacular quality and style.

However, its physical restrictions and the overall viability of creating a commercial floorspace for a town centre use is clearly limited, and as such the likelihood of it providing active frontage and an animated edge to the new space is minimal. Similarly, the external physical limitations of the building within a newly created space can give rise to challenges for those navigating the area on foot.

On approach from Dublin Street alongside the alleyway adjoining the pub, there are clear views of the outbuilding, however these are short-term and obscure longer-range views of the lands beyond. The presence of the building can create an intrigue from those visiting the space, however the lack of a legible movement route and obscure views of towards the car park could deter visitors and pedestrians from utilising the space due to the lack of a legible and visibly safe route.

Similarly, the presence of the building in the space narrows the footpath widths available for pedestrian dwell and movements through the site. This would be limited further, given the requirement to upgrade the building (to accommodate toilets) with external alterations further limiting external spaces for movement. In addition, concerns have been raised that the arrangements of buildings and spaces could give rise to greater opportunities for anti-social behaviour and crime.

Removal of the outbuilding offers the greatest potential to create a legible, safe, and connected movement route around Dublin Street. It provides for clear views in and out of the space, an improved setting for the Protected Structure, a movement route with adequate width, new paving, and street lighting to encourage more people into the area. It is considered that the rear buildings/spaces on either side of this newly created space (buildings to rear of Sherrys Pub and Laverys) provide a sufficient level of enclosure and definition to the space and create a large space to accommodate spill-out areas from new uses in the future.

On balance, in the context of the development objectives for the Dublin Street Regeneration Plan 2017, to enhance safe pedestrian movements and permeability, and create opportunities for sustainable and commercially viable proposals, it is proposed that the outbuilding is removed. This facilitates an open, spacious courtyard area which remains enclosed and intimate, and suitable for outdoor dining uses and activities. There exist a number of opportunities for new development through adaptive reuse, infill and conversion of existing underutilised and vacant buildings fronting Sherrys Lane, which could provide viable opportunities for new uses, active frontages, and natural surveillance.



Figure 15.9.7.2.2:

LEFT TO RIGHT:

- **First Monaghan Presbyterian Church (Protected, built 1825 – 1905),**
- **25 – 26 Dublin Street (not protected but part of the ACA),**
- **Sherry's Public House (Protected, built 1830 - 1850).**



Figure 15.9.7.2.3: Outbuilding to the rear of Sherry's Public House - proposed for demolition. Location of new connection to Backlands with new paving and street lighting.

15.9.7.3 Approach to Proposed Public Realm from the South / Broad Road

From Broad Street looking North towards the backlands area you see mainly car parking with Monaghan Shopping Centre on the left and modern office and commercial premises on the right. There are no features of built heritage to consider. The proposals to realign the access road for improved access to the backlands area with a mix of new pre-cast concrete paving units and natural stone paving have no significant impact on heritage.

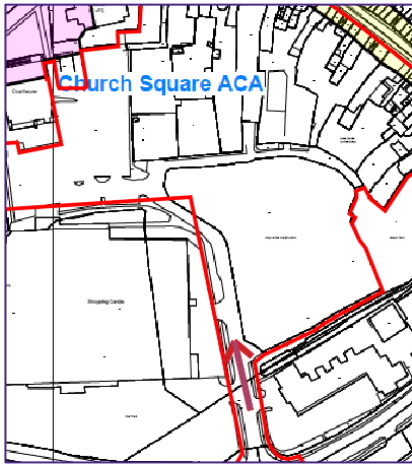


Figure 15.9.7.3.1:

LEFT: Access from Broad Road into Backlands Area

RIGHT: Access Road for proposed works to redefine access to Backlands area.



Figure 15.9.7.3.2: Car park to the south-east of the site, looking towards the rear of the First Monaghan Presbyterian Church (Source: Consarc Design Group)

The site boundary to the First Monaghan Presbyterian Church adjoins the proposed development site. This is not within an ACA. The proposed works are modest alterations to landscaping and carparking provision, mainly new surfacing and lighting. A new development site is proposed to the north-west of the Church. These new proposals will have to be appropriate to the scale and massing of the church and existing plots fronting onto Dublin Street but will be assessed as part of future planning proposals for the sites within the overall regeneration area.

15.9.7.4 Approach to Proposed Public Realm from the North West / Church Square

The area between Church Square and the proposed development site is within the Church Square ACA. The existing buildings framing this view include Protected Structures; St. Patricks Church, Monaghan Courthouse, and the former Rectory. An archway adjoining the courthouse is to be retained as existing.

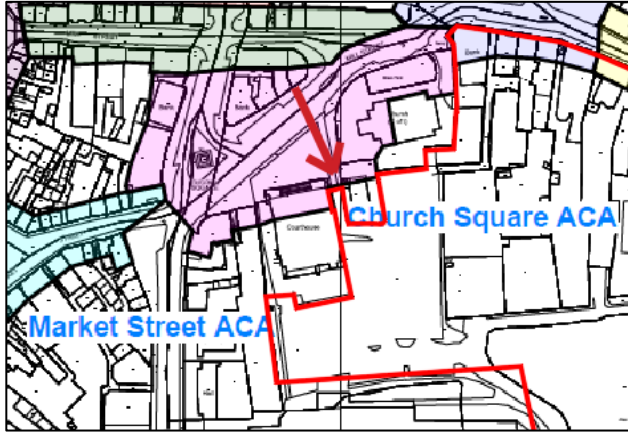


Figure 15.9.7.4.1:

LEFT: Access to the site from Church Square past St.Patrick’s Church.

RIGHT: Existing Protected Structures framing view towards the archway and site beyond.

The proposals will not directly impact the Protected Structures or ACA as they comprise of new paving and street lighting outside the threshold of the buildings. The existing view through to carparking and the Shopping Mall will be enhanced by improved finishes and planting to the public realm.



Figure 15.9.7.4.2: Carpark in front of existing shopping centre looking towards Saint Patrick’s Church and the rear of the Courthouse.

15.9.7.5 Approach to Proposed Public Realm from Dublin Street

Following in the tradition of Monaghan’s historic squares, connected by narrow streets, a new civic square and street is proposed to be located midway along Dublin Street. The new urban space and street will provide enhanced connectivity between Dublin Street and the backlands and act as a gateway to the future development area to the rear of Dublin Street.

The edges of the new civic space will be created by future redevelopment / infill development with the new structural gables of existing structures defining the space onto Dublin Street. These gables will be punctuated by new window and door openings which will provide active frontage onto Charles Gavan Duffy Place. To commemorate the life of Charles Gavan Duffy, it is envisaged that a new commissioned art piece such a statute/sculpture and an information plaque displaying details of the life and contribution of Charles Gavan Duffy to Irish History could be sited here. As previously noted, it is acknowledged that the demolition of a structure which was formerly on the Record of Protected Structures is a considerable intervention, however the overall benefits of a new civic space, improved connectivity between Dublin Street and the remainder of the town centre and regeneration of a currently underutilised area of the town will compensate for the loss of traditional fabric that has lost its architectural significance over time.

The new space will benefit from a southerly orientation and will increase light onto Dublin Street, as well as improving vehicular and pedestrian connections to the backlands. It will add to the sense of place and cultural identity of the town.

The new street will be formed by the demolition of existing structures Numbers 8, 9, 10 and 11 Dublin Street to form a new junction that accommodates a shared civic space with two-way vehicular access.

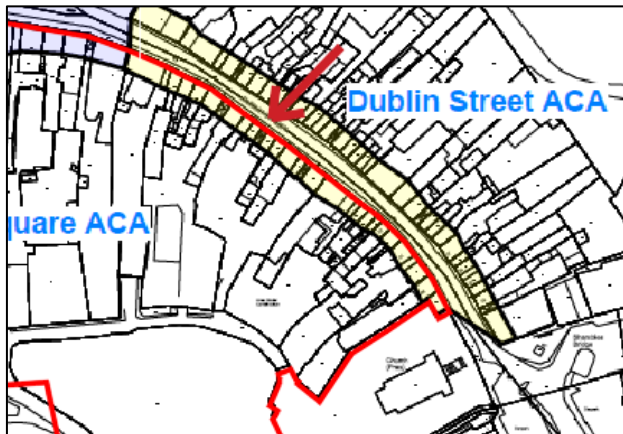


Figure 15.9.7.5.1:

LEFT: Access to the site from Dublin Street – formation of Gavan Duffy Place.

RIGHT: Existing No. 10 Dublin Street – Birthplace of Charles Gavan Duffy.



Figure 15.9.7.5.2: Dublin Street – Looking north-west.

No. 13 Dublin Street (yellow building above) has an existing archway. This building is to be retained along with its adjoining neighbour to the right-hand side. The archway will be retained and form another access to the backlands. The proposals include for new paving, lighting, and trees.

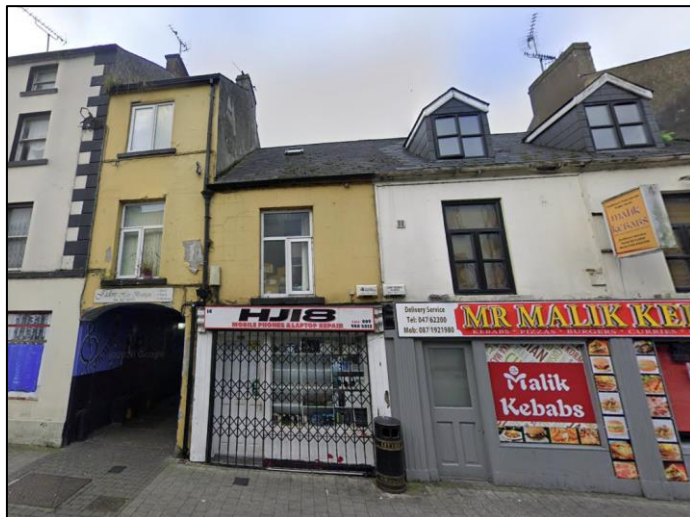


Figure 15.9.7.5.3:

LEFT: No. 13 Dublin Street with existing archway and adjacent No. 12 Dublin Street, both retained.

RIGHT: Rear space behind archway to No. 13 Dublin Street – for new public realm proposals.

The existing space is lined with dilapidated fencing and overgrown shrubbery that does not make for safe and attractive routes through to the backlands area. The proposals will upgrade the existing finishes and improve permeability with better lighting making No.13 Dublin Street and archway a new gateway for future activity. The proposals do not significantly impact the existing ACA. The proposed new development plot

behind will be viewed upon advancing down the enhanced access route and will provide new opportunities for development and activity.



Figure 15.9.7.5.4: Existing access route through archway to carparking area proposed for new development site.

Other access points from Dublin Street include the existing passageway adjoining Monaghan Town Hall and the existing passageway adjoining Sherry's Public House (as previously addressed).

The proposals include for new paving and streetlighting to these alleyways / passageways. These improvements will have a positive impact on existing heritage assets.

15.9.7.6 Approach to Proposed Public Realm from The Diamond

On approach to Dublin Street from The Diamond there will be little or no impact on the ACA or Protected Structures as all works are proposed to the rear of the building line to Dublin Street.



Figure 15.9.7.6.1: Existing approach to Dublin Street from the Diamond.

As previously noted, it is envisaged the proposals to upgrade the spaces, streets, and connections from Dublin Street through to the backlands, and vice versa, and the creation of a new high-quality public realm will act as a catalyst for vibrant development opportunities both within the existing fabric and to the redundant and underused backlands beyond.

15.9.8 Impact of Works

15.9.8.1 Summary of Works

The proposed works aim to integrate with the historic streetscape in a manner which is contemporary and forward looking while complimenting the built heritage.

New connections and spaces are to be formed to integrate both the existing Dublin Street ACA and the new backlands areas, and to better enhance other connections around the town. The main intervention for improving permeability is the proposed creation of Charles Gavan Duffy Place. Additionally, by creating new streets (Church Walk and The Mall) within the unutilised backlands area, new opportunities for commercial, leisure and residential facilities will be created. Improved access from Broad Road and a new vehicular route from Dublin Street will improve accessibility to the town centre and better utilise existing car parking. The implementation of a new high-quality public realm will form consistent and attractive routes between both Dublin Street and the backlands area, stitching both old and new together.

15.9.8.2 Observed Sensitivities

Dublin Street has suffered decline more than any other area of the town centre due to the volume, speed and one-way flow of traffic, coupled with narrow footpaths has resulted in declining footfall on the street. The

concentration of fast-food takeaways and late-night venues on the street combined with several vacant and derelict properties have also resulted in anti-social behaviour and loss of residential amenity in the area.

In general, pedestrian routes to the backlands are not well supervised, which limits a sense of security and detracts from the quality of the public realm.

Dublin Street is a narrow street with limited car parking and restricted footpath widths limit opportunities to comfortably walk, and pause, on the street. This environment creates a poor public realm contributed to the deterioration and decline of Dublin Street as a shopping destination, a place to do business and a place to live.

Vehicular movement along Dublin Street to the north-east of the study area, operates on a one-way system leading from The Diamond to Old Cross Square. As a consequence of this, Dublin Street has become an exit from the town, reversing its former role as a principal entrance to the town core.

All of these factors combined result in an inability for the street to attract a vibrant mix of uses.

15.9.8.3 Impact of Demolition of Historic Buildings over Reuse

Demolition of No. 10 Dublin Street

As previously noted, the works propose some demolitions to Dublin Street for the formation of Charles Gavan Duffy Place. Building numbers 8, 9, 10 and 11 are proposed for demolition as part of this planning application. Other demolitions proposed include a small two-storey outbuilding to the rear Sherry's Public House, as well as some industrial or commercial units within the backlands areas.

No. 10 Dublin Street was previously a Protected Structure (RPS Ref 41001071) which has since been deleted from the Record of Protected Structures, under Section 55 of the Planning and Development Act 2000 (as amended) in May 2021 following a detailed consideration of the architectural and heritage merits of the building and its history. This process was supported by a detailed heritage report prepared by Monaghan County Council, assisted by Consarc Design Group.

The Report has been included in Volume II Technical Appendices 'Architectural Heritage Impact Assessment' assessment of No. 10 Dublin Street.

As noted in Section 15.3.3, the assessment of No. 10 Dublin Street concludes that '*The building fabric has been substantially altered over time and this has eroded its architectural significance.....We would therefore consider the building to have 'neutral' significance and that it no longer meets the test for special characteristics in terms of its architecture or artistic merit*'.

It is proposed that the birthplace of Charles Gavan Duffy is celebrated through the creation of a new vibrant civic space to be named 'Charles Gavan Duffy Place',

No 10 Dublin Street is currently used for private rental purposes and is not publicly accessible. As such it is considered that the creation of a new public space honouring the contribution made by Charles Gavan Duffy to Irish and Australian history will provide for a wider appreciation and knowledge of the man and his Monaghan connection than is currently the case. There is an opportunity to provide an art piece and information plaque within the new public space to commemorate this important figure.



Figure 15.9.8.3.1: Location of No. 10 Dublin Street, Birthplace of Charles Gavan Duffy (Source: NIAH Historic Environment Viewer)

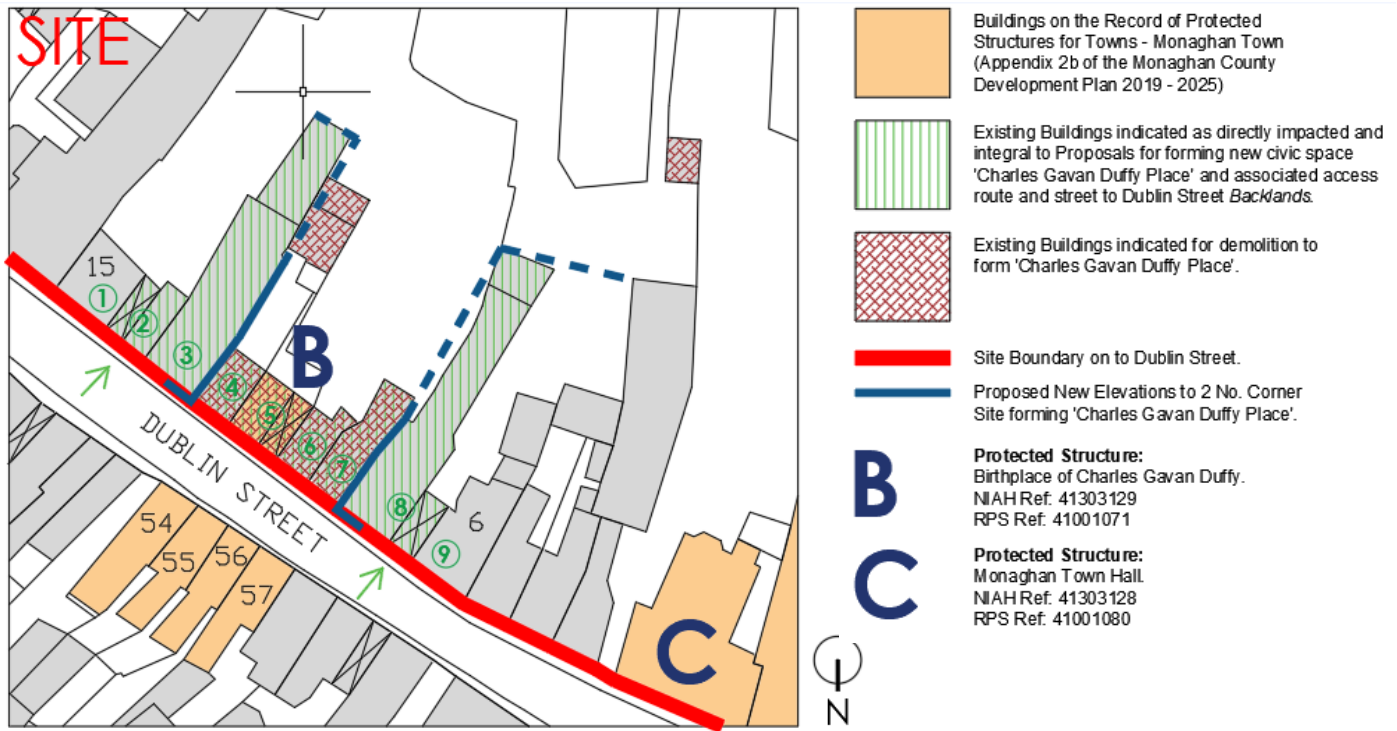


Figure 15.9.8.3.2: Existing Plan – Site Review (Consarc)

The proposals include the removal of buildings highlighted in green numbers 4, 5, 6, and 7 below, to create an entrance through from Dublin Street to the backlands area and new urban quarter.



Figure 15.9.8.3.3: Photomontage (Source: Consarc Design Group)

- 1: 15-16 Dublin Street – Retained.
- 2: 14 Dublin Street – Retained.
- 3: 12-13 Dublin Street – Retained.
- 4: 11 Dublin Street – Proposed Demolition.
- 5: 10 Dublin Street – Proposed Demolition.
- 6: 9 Dublin Street – Proposed Demolition.
- 7: 8 Dublin Street – Proposed Demolition.
- 8: 7 Dublin Street – Retained.
- 9: 6 Dublin Street – Retained.

Demolition of Outbuilding to rear of Sherry’s Public House.

An outbuilding to the rear of Sherry’s is also proposed for demolition. The building is not within the curtilage of the Protected Sherry’s building. The outbuilding is a two storey three bay stone building with slate roof. The windows are uPVC and there is an unoriginal metal barn door style ground floor access. The building has obtained planning permission in the past but, due to its size and limited development potential, has been unable to attract a long-term occupier or use and is therefore lying vacant. The property retains few historic features and this, combined with previous inappropriate alterations, have diminished its significance. The demolition of the structure will better improve connections from Dublin Street to the backlands area preventing a dog-leg and tight pedestrian routes.



Figure 15.9.8.3.4: Outbuilding for demolition to rear of Sherry’s Public House

Impact

Policies for the ACA and Protection of Built Heritage (ACP2, SNO7, SNO9, SN010) ensure that repair and refurbishment of the existing buildings will be favoured over demolition and new build, and that development in the vicinity of buildings of architectural heritage shall respect the character and integrity of these.

As discussed, the proposed development concept forming the basis of the proposed Gavan Duffy Place urban space is identified below in Figure 15.9.8.3.5. Proposed new connection past Sherry’s Public House is shown in Figure 15.9.8.3.6.

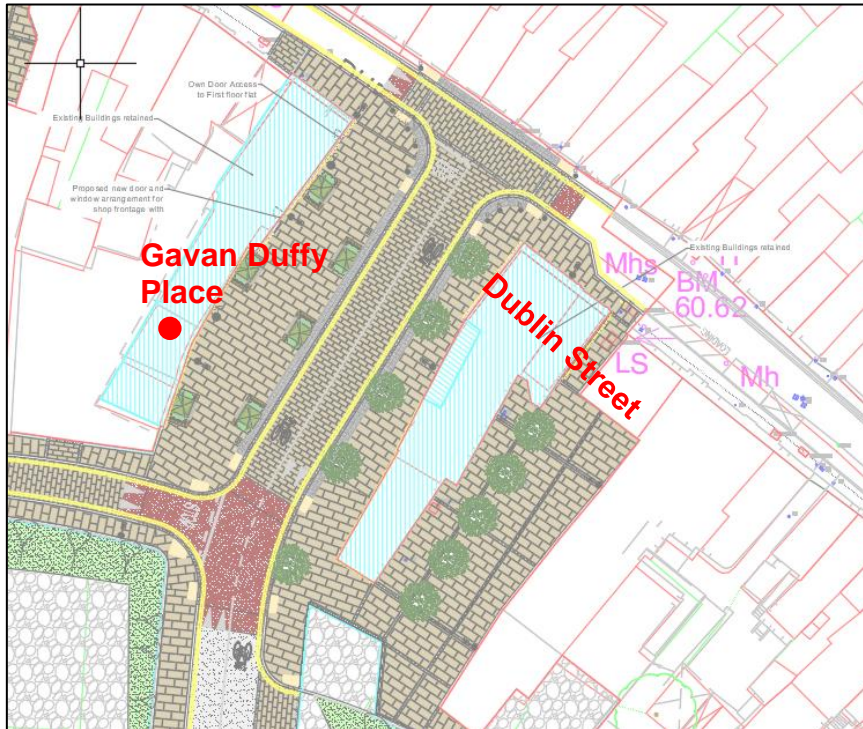


Figure 15.9.8.3.5: Proposed Gavan Duffy Place

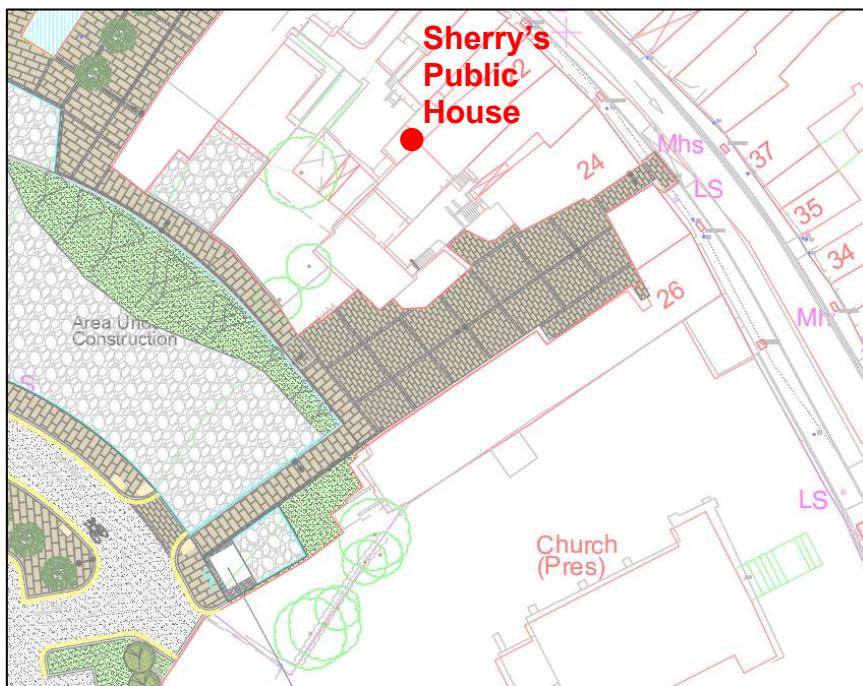


Figure 15.9.8.3.6: Proposed Urban Realm at Sherry's Public House

In the case of this project the decision to remove rather than reuse is based on analysis of the existing structures, and how these could be integrated into the proposed scheme. This led to the conclusion to demolish rather than replace for the following reasons:

- The proposal is part of a wider public benefit to the whole of the town centre,
- The combination of the erosion of character of the existing buildings through modern interventions and alterations, coupled with the predicted public benefit of the proposal can be seen to outweigh the loss of the existing buildings.

The principal tenet is that the greater public interest will be served by demolition of the existing buildings and creation of new public spaces can be argued for the following reasons:

- The proposal relates to a wider public realm and opportunity for Monaghan to drive regeneration into the town centre,
- The properties as outlined above have limited, or eroded, architectural significance,
- Although No.10 Dublin Street forms part of the streetscape, it is considered that the new proposal will create a new and enhanced streetscape,
- For Gavan Duffy Place, the social significance of the building will still be recognised in the creation of the new urban place and the social / historical significance will be more evident and legible to the public than it is currently.

The proposed public realm scheme and creation of Gavan Duffy Place is predicted to enhance the special character of the ACA through the quality of the design and the positive introduction of public artwork and social history information which will tell the story of Gavan Duffy.

The formation of new gable elevations with new openings are proposed to be reflective of the historic architecture in terms of scale, design and materials. New window and door opening positions and scale are to be consistent with those to the elevations of Dublin Street. A rendered finish is proposed and in-keeping with the existing streetscape.

15.9.8.4 Mitigation Measures

- The structures proposed for demolition shall be recorded prior to demolition and a full inventory prepared, (conservation by record) and shall be monitored by a conservation architect during demolition to record evidence of historic fabric that may be uncovered.
- Any original fabric shall be saved and stored for future reuse elsewhere in the town. This may include internal joinery items. Any original brickwork or stonework to the building shall be carefully taken down and stored for possible reuse where required within the ACA area. All information shall be submitted to Monaghan County Council and the Irish Architectural Archive.
- A full archival standard photographic record of the site will be carried out and will be submitted to the Irish Architectural Archive.
- The history of the site and its relationship to Charles Gavan Duffy could be included within the town museum.
- Public realm improvements will be undertaken to Dublin Street as part of this regeneration scheme to enhance to whole area.

15.9.8.5 Response to Policy Summary

BHP1 – The works are concerned with public realm and will enhance the Protected Structures in terms of setting. The regeneration scheme will ensure the long-term viability of Protected Structures within and adjacent to the area by increasing footfall and activity opportunities within Monaghan Town without detracting from the buildings special interest and character.

BHP2 – Proposals are in accordance with Monaghan County Development Plan 2019 – 2025.

BHP3 – Proposals are in accordance with Monaghan County Development Plan 2019 – 2025. The identified Protected Structures and Architectural Conservation Area (ACA) have been recognised as documented in this report as they contribute positively to the heritage of the County.

BHP4 – The Record of Protected Structures has been reviewed and updated with the removal of No.10 Dublin Street after completing a detailed analysis of the building's significance.

BHP5 and **SNO6** - The proposals do not include for demolition of a Protected Structure.

BHP6 and **SNO11** – Regarding the public realm proposals, these works are adjacent to rather than concerned with the Protected Structures themselves. The proposals are compatible with their special character in terms of layout and materials so that the integrity of the structure and its curtilage is preserved. New development sites proposed within the backlands area in the context of adjacent ACAs and Protected Structures will be assessed as separate planning applications to ensure that they are sympathetic in terms of design, scale, massing and materials.

BHP7 and **SNO10** – Monaghan Development Plan aims to address re-development of backlands and derelict sites within the scheme. Derelict or vacant Protected Structures are not a concern within the proposals. The improvement of the setting with public realm seeks to encourage rehabilitation, renovation and re-use of existing Protected Structures for their own economic benefit and that of the area in which they are located.

BHP8 – Works are proposed outside the threshold of Protected Structures.

BHP9 - Derelict or vacant Protected Structures are not a concern within the proposals.

BHP10 – Not applicable.

ACP1 – Appraisals of Monaghan Town ACA and Protected Structures are included in Section 15.9.6 & 15.9.7. The public realm proposals represent a contemporary design approach of sufficiently high quality, principally achieved by the use of appropriate and quality materials, which do not detract from the character of the historic fabric of the Protected Structures. The proposals respect the special character of the ACA.

ACP2 and **SNO7** – The majority of the proposed works are public realm works. The benefits of forming Charles Gavan Duffy Place can be considered to outweigh the consequential impact of demolitions within the ACA. The new gables formed to Gavan Duffy Place are formed by the existing structures remaining either side of the new opening and therefore true to the streetscape in terms of scale and materials.

15.9.9 Recommendations and Conclusions

This report has outlined the context of the proposals in relation to the built heritage, Protected Structures and ACA's of Monaghan Town.

Specific comment has been made on the proposal's relevance and impact to the Protected Structures and ACA's, with a detailed analysis of the proposal's benefits provided.

As can be seen from the information presented, the proposed works are considered appropriate for both the setting of the Protected Structures and of the Architectural Conservation Areas as they will bring about significant improvements to the public realm in the way of high-quality surface finishes, street lighting and furniture. There are no significant and direct impacts to a Protected Structure.

Mitigation provisions for the resulting demolition within an ACA have been provided and, in the opinion of the Conservation Architect and Heritage Consultant, the proposed works for improvements to the public realm will not significantly impact the Architectural Conservation Area and will in fact serve to enhance it.

The proposed works will not have an adverse effect on any of the Protected Structures and will improve their overall setting and viability. In the opinion of the Conservation Architect, the Planning Application should therefore be recommended for approval.

Chapter

16

Interactions

16 INTERACTIONS

16.1 Introduction & Methodology

The EIA Directive and its transposing Regulations requires that in addition to assessing impacts on human beings, fauna, flora, soil, water, air, climate, landscape, material assets and cultural heritage, the interrelationship between these factors in-combination must be taken into account as part of the environmental impact assessment process.

16.2 Interaction & In-combination Effects

Table 16.1 below is a matrix table indicating the significant inter-relationships that are likely to occur between the various environmental disciplines with regard to the proposed development. Where a cross exists in a box in the table, this indicates that a relationship exists between the two environmental areas.

The purpose of the table is to allow interaction between various disciplines to be recognised, although the level of interaction and in-combination effect will vary in each case. It is assumed in presenting this table that an environmental discipline has a potential inter-relationship both during the construction and operational phases of the development.

An assessment of expected interaction and in-combination effect is given in Table 16.2.

Table 16.1 Inter-relationship Matrix – Potential Interaction between Environmental Disciplines

| | Noise and Vibration | Flood Risk and Drainage | Water Quality | Soils, Geology & Contamination | Biodiversity | Traffic & Transportation | Air Quality & Climate | Waste | Population & Human Health | Material Assets & Land Use | Townscape & Visual | Archaeology |
|--------------------------------|---------------------|-------------------------|---------------|--------------------------------|--------------|--------------------------|-----------------------|-------|---------------------------|----------------------------|--------------------|-------------|
| Noise and Vibration | | | | | ✓ | ✓ | | | ✓ | | ✓ | |
| Flood Risk and Drainage | | | ✓ | | ✓ | | ✓ | | | ✓ | | |
| Water Quality | | ✓ | | ✓ | ✓ | | | | | | | |
| Soils, Geology & Contamination | | | ✓ | | ✓ | | ✓ | ✓ | | ✓ | ✓ | |
| Biodiversity | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | |
| Traffic & Transportation | ✓ | | | | | | ✓ | | ✓ | | ✓ | |
| Air Quality & Climate | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | | | |
| Waste | | | ✓ | ✓ | ✓ | | | | ✓ | ✓ | | |
| Population & Human Health | ✓ | | | | | ✓ | ✓ | ✓ | | | | |
| Material Assets & Land Use | | ✓ | | ✓ | | | | ✓ | | | | ✓ |
| Townscape & Visual | ✓ | | | ✓ | ✓ | ✓ | | | | | | ✓ |
| Archaeology | | | | | | | | | | ✓ | ✓ | |

Table Note

Table 16.2 Summary of Interaction and In-combination Effects

| Environmental Discipline | Inter-relationship With | Interaction and In-combination Effect |
|---|-------------------------------------|--|
| Townscape and Visual | Soils Geology and Contaminated Land | The quality of the cut material will dictate if it can be reused on site in landscaped areas. There is also potential for improving the quality of material to reduce the volume of unsuitable structural cut material. The material of lower quality that cannot be adopted into the proposed development and used on site as landscape fill material will need to be reused or disposed off-site. |
| | Biodiversity | <p>Small areas of amenity planting are present in several areas within the proposed development site, including areas of landscaped public space in addition to former gardens.</p> <p>These areas support a limited range of species including variegated holly <i>Ilex aquifolium</i>, silver birch <i>Betula pendula</i>, hebe <i>Hebe rakaiensis</i>, snowdrops <i>Galanthus sp.</i>, daffodil <i>Narcissus pseudonarcissus</i>, bluebell <i>Hyacinthoides non-scripta</i>, montbretia <i>Crocsmia x crocosmiiflora</i> and tutsan <i>Hypericum androsaemum</i>.</p> |
| | Noise and Vibration | There are no specific noise attenuation measures proposed that would result in landscape or visual effects. |
| | Archaeology | Developments can sometimes infringe upon the amenity use and visual setting of an archaeological or architectural heritage feature and as a result lead to unacceptable impacts. There are a range of mitigation measures to ensure these sensitive issues are addressed appropriately. |
| | Traffic and Transport | There are no significant landscape & visual impacts predicted during either construction or operation as a result of traffic generation. |
| Soils, Geology and Contaminated Land | Townscape and Visual | The quality of the cut material will dictate if it can be reused on site in landscaped areas. There is also potential for improving the quality of material to reduce the volume of unsuitable structural cut material. The material of lower quality that cannot be adopted into the proposed development and used on site as landscape fill material will need to be reused or disposed off-site. |
| | Water Quality | Both temporary and permanent impacts on surface waters may occur during construction. Pollution from mobilised suspended solids (silt) is the prime concern. Suspended sediment due to run off from stripped construction areas, stockpiled earth can have a severe negative impact on water quality. A range of mitigation measures have been outlined. |

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| | | The Water Quality chapter has concluded that through appropriate mitigation measures there will be no significant impacts. |
| | Biodiversity | Movement and management of soils and earthworks by heavy plant in proximity to surface waters carries an inherent risk of pollution of watercourses. There is a risk involved with any construction activity in proximity to surface waters that a pollution incident might arise and result in spills or leaks of polluting substances. |
| | Land Use & Material Assets | Excavation of soils and reduction of levels on site can lead to direct impact on utilities above and below ground. Subject to mitigation measures including close liaison with utility companies in advance of construction no significant effects are predicted. |
| | Air Quality & Climate | Dust and disturbance of soils has potential to impact upon air quality. The Air Quality chapter has concluded that through appropriate mitigation measures there will be low/negligible impacts during construction/ demolition. There is no significant impact predicted on local air quality concentrations at human exposure receptors or designated sites during the operational phase. |
| | Noise and Vibration | Machinery used in groundworks could increase noise levels. No significant noise effects are predicted with implementation of mitigation. |
| Water Quality | Soils Geology and Contaminated Land | Both temporary and permanent impacts on surface waters may occur during construction. Pollution from mobilised suspended solids (silt) is the prime concern. Suspended sediment due to run off from stripped construction areas, stockpiled earth can have a severe negative impact on water quality. A range of mitigation measures have been outlined. The Water Quality chapter has concluded that through appropriate mitigation measures there will be no significant impacts.. |
| | Biodiversity | Both temporary and permanent impacts on surface waters may occur during construction. Pollution from mobilised suspended solids (silt) is the prime concern. If allowed to enter surface watercourses this run off can give rise to high suspended solids and detrimental impacts, in particular to fisheries and aquatic invertebrates which can impact the ecological status of a water body. |
| | Flood Risk and Drainage | Flooding has potential to cause issues for water quality. The FRA has shown that all flood risk areas are avoided and that no significant effects are predicted. |

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| Biodiversity | Townscape and Visual | <p>Small areas of amenity planting are present in several areas within the proposed development site, including areas of landscaped public space in addition to former gardens.</p> <p>These areas support a limited range of species including variegated holly <i>Ilex aquifolium</i>, silver birch <i>Betula pendula</i>, hebe <i>Hebe rakaiensis</i>, snowdrops <i>Galanthus sp.</i>, daffodil <i>Narcissus pseudonarcissus</i>, bluebell <i>Hyacinthoides non-scripta</i>, montbretia <i>Crocsmia x crocosmiiflora</i> and tutsan <i>Hypericum androsaemum</i>.</p> |
| | Air Quality & Climate | The air quality impact assessment has concluded that there are no significant local air quality impacts at ecological receptors. |
| | Soils, Geology and Contaminated Land | Movement and management of soils and earthworks by heavy plant in proximity to surface waters carries an inherent risk of pollution of watercourses. There is a risk involved with any construction activity in proximity to surface waters that a pollution incident might arise and result in spills or leaks of polluting substances. |
| | Water Environment | Both temporary and permanent impacts on surface waters may occur during construction. Pollution from mobilised suspended solids (silt) is the prime concern. If allowed to enter surface watercourses this run off can give rise to high suspended solids and detrimental impacts, in particular to fisheries and aquatic invertebrates which can impact the ecological status of a water body. |
| | Noise and Vibration | Disturbance from noise can impact on wildlife depending on the host environment. The noise consultant has liaised with the ecology team during the EIA process to ensure they were aware of the noise impact assessment process including sources of noise during construction and operation and predicted impacts. Overall predictions are that there will be no significant noise impact generated during construction or operation when ecological features are assessed. |
| Air Quality & Climate | Soils, Geology and Contaminated Land | Disturbance of soils has potential to impact upon air quality. The air quality chapter has concluded that through appropriate mitigation measures there will be low/negligible impacts during construction/ demolition. There is no significant impact predicted on local air quality concentrations at human exposure receptors or designated sites during the operational phase. |
| | Biodiversity | The detailed air quality impact assessment has concluded that there are no significant local air quality impacts at ecological receptors. |

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|------------------------------|-------------------------------------|---|
| | Flood Risk & Drainage | The FRA has considered the potential effects of climate change. No significant effects have been identified in the Flood Risk and Drainage chapter has development avoids at risk areas on site. |
| | Traffic and Transport | Demolition, construction and operational phases of the project have the potential to releases atmospheric pollutants into the surrounding environment. Mitigation measures detailed for demolition and construction stages will aid in reducing levels of air pollution. There is no significant impact predicted on local air quality concentrations at human exposure receptors or designated sites as a result of the proposed development. |
| Noise and Vibration | Townscape and Visual | Noise has the potential to interact with LVIA due to the creation of noise attenuation measures. There are no specific noise attenuation measures proposed that would result in landscape or visual effects. |
| | Traffic & Transport | There is an interaction between noise and traffic through generation of construction and operational stage traffic. Overall predictions are that there will be no significant noise impact generated during construction or operation stages due to traffic generation with appropriate mitigation. |
| | Biodiversity | Disturbance from noise can impact on wildlife depending on the host environment. The noise consultant has liaised with the ecology team during the EIAR process to ensure they were aware of the noise impact assessment process including sources of noise during construction and operation and predicted impacts. Overall predictions are that there will be no significant noise impact generated during construction or operation when ecological features are assessed. |
| | Geology, Soils & Contaminated Lands | Machinery used in top soil stripping and groundworks could increase noise levels. No significant noise effects are predicted with implementation of mitigation. |
| Traffic and Transport | Townscape and Visual | Vehicle movements during both construction and operation were provided to the landscape architect to inform their assessment of associated landscape and visual impacts. There are no significant landscape & visual impacts predicted during either construction or operation as a result of traffic generation. |
| | Air Quality & Climate | Demolition, construction and operational phases of the project have the potential to releases atmospheric pollutants into the surrounding environment. Mitigation measures detailed for demolition and construction stages will aid in reducing levels of air pollution. There is no significant impact predicted on local air quality concentrations at human exposure receptors or designated sites as a result of the proposed development. |

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|----------------------------------|-----------------------|---|
| | Noise & Vibration | There is an interaction between noise and traffic through generation of construction and operational stage traffic. Overall predictions are that there will be no significant noise impact from traffic generated during construction or operation stages with appropriate mitigation. |
| Archaeology | Townscape and Visual | Developments can sometimes infringe upon the amenity use and visual setting of an archaeological or architectural heritage feature and as a result lead to unacceptable impacts. There are a range of mitigation measures to ensure these sensitive issues are addressed appropriately. |
| Flood Risk & Drainage | Air Quality & Climate | The FRA has considered the potential effects of climate change. No significant effects have been identified in the Flood Risk and Drainage chapter has development avoids at risk areas on site. |
| | Water Quality | Flooding has potential to cause issues for water quality. The FRA has shown that all flood risk areas are avoided and that no significant effects are predicted |