On Behalf of Monaghan County Council

Dublin Street North, Monaghan

Vol III - Appendices

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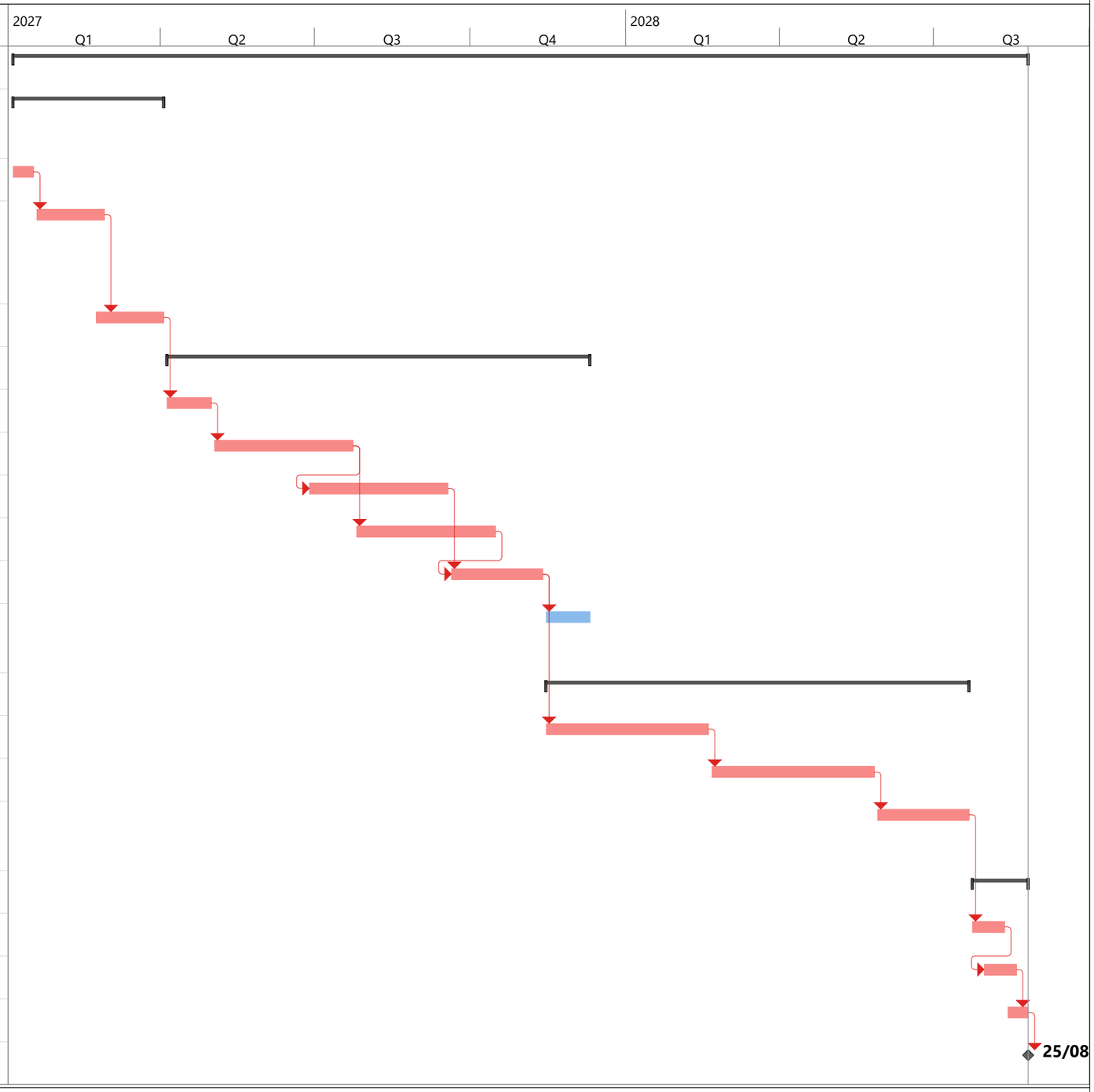
4.3 Structural Assessment Report No. 57C

DUBLIN STREET NORTH - Outline Construction Programme

ID	Task Name	Duration	Start	Finish
1	**DSN CONSTRUCTION PROGRAMME**	**430 days**	**Mon 04/01/27**	**Fri 25/08/28**
2	**Phase 1 - Site Clearance, Demolitions, Pre Construction Surveys**	**65 days**	**Mon 04/01/27**	**Fri 02/04/27**
3	Initial Site Clearance, e.g., vegetation, loose material.	2 wks	Mon 04/01/27	Fri 15/01/27
4	Demolitions and Site Clearance, including removal of demolished building material, trees, temporary works to make safe adjoining buildings.	6 wks	Mon 18/01/27	Fri 26/02/27
5	Pre-construction surveys, archaeological monitoring.	6 wks	Mon 22/02/27	Fri 02/04/27
6	**Phase 2 - Construction Diamond Car Park and Russell Row**	**180 days**	**Mon 05/04/27**	**Fri 10/12/27**
7	Construction of new façades and gables	4 wks	Mon 05/04/27	Fri 30/04/27
8	Drainage and Utilities Infrastructure	12 wks	Mon 03/05/27	Fri 23/07/27
9	Construction of tiered garden	12 wks	Mon 28/06/27	Fri 17/09/27
10	Road, footpath and car park construction	12 wks	Mon 26/07/27	Fri 15/10/27
11	Boundary Treatments	8 wks	Mon 20/09/27	Fri 12/11/27
12	Hard and Soft Landscaping, including street furniture, water features, planting, white lining, signage	4 wks	Mon 15/11/27	Fri 10/12/27
13	**Phase 3 - Construction Dublin St & Old Cross Square**	**180 days**	**Mon 15/11/27**	**Fri 21/07/28**
14	Drainage and Utilities Infrastructure	3.5 mons	Mon 15/11/27	Fri 18/02/28
15	Road, footpath and car park construction	70 days	Mon 21/02/28	Fri 26/05/28
16	Hard and Soft Landscaping, including street furniture, water features, planting, white lining, signage	2 mons	Mon 29/05/28	Fri 21/07/28
17	**Phase 4 - Community Garden**	**25 days**	**Mon 24/07/28**	**Fri 25/08/28**
18	Construction of path network	3 wks	Mon 24/07/28	Fri 11/08/28
19	Installation of play equipment	3 wks	Mon 31/07/28	Fri 18/08/28
20	Soft landscaping, planting	2 wks	Mon 14/08/28	Fri 25/08/28
21	**Completion**	**0 days**	**Fri 25/08/28**	**Fri 25/08/28**



Project: DSN - Outline Construc
Date: Fri 07/02/25

Task	Inactive Task	Manual Summary Rollup	External Milestone	Manual Progress	
Split	Inactive Milestone	Manual Summary	Deadline		
Milestone	Inactive Summary	Start-only	Critical		
Summary	Manual Task	Finish-only	Critical Split		
Project Summary	Duration-only	External Tasks	Progress		

LAYDE CONSULTING

OUTLINE CONSTRUCTION & ENVIRONMENTAL MANAGEMENT PLAN

Proposed Regeneration Scheme, Dublin Street North, Monaghan

Client: Carlin Planning Ltd

Project Reference: P676-8

Issue Date: February 2025

Specialist Environmental Consultancy Services

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1.0 INTRODUCTION

1.1 Overview

Layde Consulting was commissioned by Carlin Planning Ltd to prepare an Outline Construction Environmental Management Plan (oCEMP)for a proposed Regeneration Scheme within Monaghan town, extending to lands at the rear of Dublin Street North.

The purpose of this oCEMP is to document and describe the main activities that will be undertaken to facilitate the project and to provide a framework of environmental protection measures that will be implemented prior to commencement of, and throughout the duration of the proposed development.

1.2 Purpose of the oCEMP

The proposed construction and demolition works will be undertaken by a Contractor appointed by Monaghan County Council. This oCEMP will be provided to the appointed Contractor prior to the commencement of works and will form the basis of the Contractor's CEMP and Method Statements, which the appointed Contractor will be required to develop and prepare for approval by Monaghan County Council prior to commencement of any works. The Contractor's CEMP and Method Statements will set out the approach and methodology which they will follow in scheduling and undertaking the work. The CEMP will detail the control measures in relation to environmental protection associated with the activities associated with the construction and demolition processes, and any processes which may arise as a result of the development.

It is the responsibility of Monaghan County Council to ensure that the requirements of this oCEMP and any requirements associated with the Contractor's Method Statements and detailed CEMP are implemented in full.

This document is intended to be a working document and should be routinely updated by the appointed contractor in order to form a detailed CEMP which will contain site specific construction and environmental management and mitigation techniques. The detailed CEMP should be updated prior to any pre-construction surveys or conditions of planning, and also prior to the commencement of site works. The document will remain live for the duration of the project, inclusive of the operational phase (i.e. for maintenance works).

1.3 Roles and Responsibilities

This initial issue of the oCEMP identifies the key roles for the construction works. The appointed contractor will produce a detailed CEMP which will set out the roles and responsibilities (including named individuals) and an organogram of the team structure.

1.3.1 Primary Contractor

Unless agreed otherwise by Monaghan County Council, the primary contractor will ensure that the overall CEMP is implemented by the construction team, and any subcontractors in their employment.

1.3.2 Site Manager

The Site Manager will be responsible for the day to day running of the site and will direct and oversee the activities of contractor staff and any subcontractors under the Contractor's control throughout the works. The Site Manager will be responsible for programming of the works and will consult regularly with the Employer and will maintain site safety.

1.3.3 Contractor's Environmental Clerk of Works

The Contractor's Environmental Clerk of Works (EnCoW) will have suitable environmental qualifications and the necessary experience and knowledge appropriate to the role. The EnCoW will be delegated sufficient powers under the construction contract so that they will be able to instruct works to stop and to direct the carrying out of emergency mitigation / clean-up operations. The EnCoW will also manage consultations with environmental bodies/stakeholders. The EnCoW will be responsible for ensuring that all control measures outlined within this oCEMP and detailed CEMP are fulfilled and in adherence with applicable standards and legislation.

1.4 Legislation and Guidance Requirements

The CEMP summaries the requirements from legislation and Codes of Practice which apply to the works being undertaken. An example non-exhaustive list of such requirements is provided below

- Wildlife Act 1976 – 2021, as amended;
- Birds and Natural Habitats Regulations 2011 (S. I. No. 477 of 2011), as amended;
- Heritage Act 2018 (no. 15 of 2018), Part 3
- Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (DoEHLG, July 2006)
- Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC)
- Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (IFI, 2016)
- Safety, Health, and Welfare at Work Act, 2005
- Safety, Health, and Welfare at Work (Construction) Regulations, 2013
- Safety, Health, and Welfare at Work (General Application) Regulations 2007 – 2016, SI No. 229
- Safety, Health, and Welfare at Work (Confined Spaces) Regulations, 2001
- European Communities (Good Agricultural Practice for Protection of Waters) (Amendment) Regulations, 2014
- The European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (SI No.272 of 2009), as amended
- European Communities (Quality of Shellfish Waters) Regulations 2006 (SI No 268 of 2006)
- The EU Floods Directive 2007/60/EC;
- European Communities (Groundwater) Regulations, 2010 (as amended)
- S.I. 722 of 2003, European Communities (Water Policy) Regulations, as amended;
- S.I. 350 of 2014, European Union (Water Policy) Regulations 2014;
- Planning and Development Act 2000, as amended;
- Planning and Development Regulations 2001, as amended;
- Inland Fisheries Ireland, "Guidelines on protection of fisheries during construction works in and adjacent to waters" (2016) IFI;
- Department of Housing, Local Government and Heritage, "Nature-based solutions for the management of rainwater and surface water run-off in urban areas";
- Good practice guidelines on the control of water pollution from construction sites developed by the Construction Industry Research and Information Association (CIRIA, 2001); and

- Good practice guidelines from CIRIA's guidance document (C768 – Guidance on the Construction of SuDS) (2017).
- CIRIA C648 Control of water pollution from linear construction projects Technical Guidance (CIRIA 2006)
- British Standard BS4142:2014+A1:2019, "Methods for Rating and Assessing Industrial and Commercial Sound";
- British Standard BS8233:2014, "Sound Insulation and Noise Reduction for Buildings";
- British Standard BS5228-1:2009+A1:2014, "Code of Practice of Noise and Vibration Control on Construction and Open Sites – Noise";
- World Health Organisation (WHO), "Guidelines for Community Noise" (1999);
- NRA, "Good Practice Guidance for the Treatment of Noise during the planning of National Road Schemes" (2014);
- Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 7, LA 111, "Noise and Vibration" – Revision 2 (May 2020);
- British Standards BS7445-1:2003, "Description and Measurement of Environmental Noise – Part 1: Guide to Quantities and Procedures";
- British Standards BS6472-1:2008, "Guide to evaluation of human exposure to vibration in buildings – Part 1: Vibration sources other than blasting";
- British Standard BS7385-2:1993, "Evaluation and Measurement for Vibration in Buildings Part 2: Guide to Damage Levels from Ground borne Vibration";
- British Standard BS5228-2:2009+A1:2014, "Code of Practice of Noise and Vibration Control on Construction and Open Sites – Vibration"; and
- IAQM "Guidance on the assessment of dust from demolition and construction", v1.1 (2016).

2.0 PROJECT OVERVIEW

The proposed development area (herein termed the 'site') incorporates lands to the rear of Dublin Street North, Monaghan (see Figure 1), and comprises of a mix of urbanised areas, external residential amenity areas, commercial land, and derelict lands comprising of scrub and treelines along St. Davnet's Row and the Old Infirmary area. Under the development proposals it is intended to regenerate the site by demolishing the existing buildings within the site, and constructing a new public access road, car parking and event space, and also enabling the provision of future development plots for commercial and residential uses. As a result, the development proposals also include the removal of vegetation and ground cover, as required, and grading cut/fill works. The proposals also include all necessary infrastructure provisions such as drainage and utilities, paving, surfacing and landscaping.

Figure 1- Proposed development area, lands to the rear of Dublin Street North

2.1 Pre-Construction Surveys & Conditions

As part of the planning and EIA process, a number of conditions are likely to be imposed on the site, which may include pre-construction or commencement surveys and works, and should be carried out prior to the commencement of enabling works, demolition or construction phases. This is likely to involve the following (but not limited to):

- Pre-commencement surveys for bats, flora and fauna;
- Pre-commencement surveys for Invasive Alien Species (IAS's) and updating of the Invasive Species Management Plan (ISMP);
- Pre-construction Baseline noise monitoring for construction activities;
- Updating of plans and schedules of works, including revisions to Noise Impact Assessments, Air Quality Impact Assessment and Ecological Assessments, as required;
- Permissions and grants to commence works, and review of submissions by the Council.

2.1.1 Pre-Commencement Bat Surveys

Upon gaining planning and ownership of the land and site area, and prior to commencing the demolition or construction phases of the development, it is recommended that bat activity surveys are carried out for all buildings which are intended to be demolished as part of the development. This should include internal and external inspections, re-surveys for previously assessed buildings if more than one year has passed since the previous surveys were carried out, and bat activity surveys should be carried out for buildings which have not yet been assessed due to site access constraints. In addition, bat roost surveys and activity surveys should be carried out for any tree structures (such as the two Ash trees) prior to removal or felling.

In the event that roosting bats are identified during the pre-commencement surveys, then suitable mitigation should be developed to either retain the roost structure, or to provide a suitable alternative roost feature through appropriate design, and under licence by NPWS.

2.1.2 Breeding Birds

In order to avoid any significant impacts upon nesting birds during the demolition and construction phases, it is recommended that these works should take place during the period 1st September to 28th February which is outside the breeding season for bird species which are likely to breed on the site.

In the event that demolition or construction works is necessary during the breeding season period, then it recommended that a pre-works survey is carried out by a suitably qualified ecologist in order to identify any potential impacts on nesting birds.

2.2 Demolition, Enabling Works & Construction Phase

The development proposals intend to demolish all existing buildings inside the application area, some of which have been colonised with non-native plant species. In order to facilitate enabling and demolition works, ground clearance of vegetation will be required, which includes the felling of trees and scrub, and will also likely include the removal / disturbance of non-native and IAS's. The demolition phase will also require the haulage of materials offsite for disposal, therefore works associated with the demolition and ground clearance / enabling works phase may have the potential to disturb and spread invasive alien species (IAS) within the site area.

The demolition and enabling works will involve the demolition of buildings and removal of any foundation or floor slab structures, and the excavation of ground levels down to the required

topographical grades. Demolition works will therefore require the haulage of bulk materials offsite for disposal / reuse.

Construction works will involve the excavation of soils and subsoil surfaces as part of the cut / fill grading processes, with excess spoil materials being exported from site, and new materials being imported. The construction phase will require the installation of haul routes within the site, wheel wash and welfare facilities, and installation of a construction compound for plant equipment etc., along with any infrastructure required in order to carry out the construction phase.

2.3 Working Programme & Working Hours

The commencement date is subject to approval by Monaghan County Council, following permission of planning. Once the commencement date is confirmed, then the CEMP will be updated accordingly.

The schedule of works have not been confirmed, given that the proposals are still within the application stage. Once a contractor has been appointed for works and the schedule confirmed, then the CEMP will be updated accordingly.

Operating hours are anticipated to be restricted to normal construction working periods, however once the construction operating hours have been confirmed then the CEMP will be updated accordingly.

2.4 Construction Traffic and Haul Routes

A detailed Traffic Management Plan (TMP) will be prepared for the proposed development by the appointed contractor(s) prior to construction. Throughout the construction phase of the project access will need to be maintained to the following areas:

- Local road network
- Site access roads
- Emergency Services Construction traffic will include:
- HGVs importing construction materials including concrete, pre-cast culverts and piping
- HGVs exporting waste/spoil materials
- HGVs delivering plant and fuel
- Mobile Cranes
- Traffic associated with on-site construction personnel

Traffic flow may need to be managed for sections of The Diamond, Dublin Street and Old Cross Square may need to be closed to traffic at times to facilitate the works. Prior to commencing the works, a detailed traffic management system will be developed in order to minimise disruption caused by the works. Traffic and pedestrian diversions will be put in place, wherever necessary. Where feasible, access to all properties will be maintained.

2.5 Construction Compound

Although the specific construction details are not known at this stage, given that the proposals are still within the planning phase, it is envisaged that a construction compound will be required. This typically requires a suitably surfaced contractor's temporary construction compound and laydown area will be required for the duration of the site works on the proposed development site.

The construction compound is likely to consist of temporary site offices, equipment storage and construction staff welfare facilities, as well as car parking areas for staff and visitors. Container

storage units should be required for holding tools and materials. The compound should be fenced with chain-link fencing on wooden posts and have a lockable gate.

A potable water supply should be required for the duration of the works. Any foul sewage from the temporary facilities should be routed to appropriately designed storage tanks or mains sewerage system for receiving and storing sewage with no outlet. The tanks should be sized to suit the expected use and installed in a location remote from any water courses. Contents and residues should be regularly emptied by a competent operator for safe disposal to an approved treatment works. The temporary compound should be used as a secure storage area for construction materials, waste materials and also contain temporary site accommodation units to provide welfare facilities for site personnel. Facilities should include offices, meeting rooms, a canteen and a drying room.

If required, the temporary compound should be constructed early in the project in order to provide site offices and accommodation for staff and for the delivery of materials. Any surface water management, bunding, waste management measures etc should also be put in place at the outset. The compound is likely to be in place for the duration of the construction phase and will be removed once commissioning is complete.

2.6 Equipment & Plant Machinery

Details relating to plant machinery and site equipment are not known at this stage. Once a contractor has been appointed, and a works schedule developed, then the CEMP should be updated to include all plant specifications and equipment details.

3.0 CONTROL MEASURES

The following sections provide an overview of the control measures that will be implemented prior to commencement and throughout the duration of the proposed works.

3.1 General Control Measures

The following outlines general control measures which should be implemented throughout all phases of the development. Specific control measures are discussed in later sections of this oCEMP:

- Report any signs of pollution or environmental damage to the site foreman no matter how small;
- Report any spills, incidents or near misses that occur on site immediately to the site foreman;
- Refuel only in designated areas with spill kits available;
- All waste must be stored in the designated site waste management areas;
- Do not throw litter, all waste must be sent to site waste management contractor;
- Do not divert plant or machinery outside the authorised working boundaries of the site;
- The Contractor will ensure ongoing compliance with the recognised Environmental Management System Standard to which it is registered (e.g. EN ISO 14001 or equivalent European Standards);
- The Contractor will develop Environmental Procedures to control the potential impacts from the construction phase of the development. These procedures will be made available in the main site office and at the main Environment, Health and Safety information points on site;
- All personnel will be familiar with the Environmental Policy which will be made available in the main Contractor office;

- An emergency contact list will be prepared and made available to all construction staff employed. The contact list will be displayed prominently on site as well as at suitable locations where construction activity is being carried out around working areas. The contact list will include key environmental representatives that may need to be contacted in the event of an incident.

3.2 Vegetation Clearance & IAS's

Enabling and demolition works will require the clearance of vegetation throughout portions of the site, to include areas which are affected by IAS's. Therefore, the following control should be implemented in order to effectively manage vegetation material removed from the site, and to prevent the spread of IAS's. It should be noted that at all times throughout the enabling works, demolition and construction phases, the ISMP should be adhered to.

- Only essential areas of vegetation removal and tree clearance will be carried out, in accordance with the development proposals and permissions granted thereafter;
- Given the potential timeframe lag between the planning and design stage of the project to the site preparation, demolition and construction phase, it is possible that the areas identified with IAS's may have changed spatially from the initial Invasives Species Survey, and new IAS may be found within the project area which was not previously identified within the Invasives Species Survey. Therefore, it is recommended to undertake a pre-construction survey of invasive species prior to demolition and enabling works, and to update the ISMP accordingly;
- The details of the re-survey should provide an approximate area and density of plant species, and a record made of any changes to the findings of the initial Invasive Species Survey;
- Should any species be found that is not included within the ISMP, then the plan should be updated to include control measures and appropriate management or mitigation, as required;
- Personnel are at all times to be mindful of the threat posed by the spread of invasive species and to take all possible precautions to ensure that their actions do not result in the accidental movement of contaminated material;
- All PPE must be cleaned thoroughly before entering the works area and exclusion zones. Similarly, all individuals must thoroughly inspect their clothing and PPE before leaving the site or works area, in order to ensure that seeds, rhizomes, or other plant fragments are not stuck or attached to their clothing;
- Designated wash-down areas should be provided within each works area and lined with appropriate geo-textile materials within each exclusion zone. As a minimum, wash buckets, sole picks and bristled brushes should be provided for each wash-down area. All footwear must be thoroughly cleaned before leaving the exclusion zone or works area;
- Wash-down materials from PPE equipment or machinery should be appropriately contained and removed offsite using the relevant measures outlined within the ISMP;
- All plant machinery which is to be used within an exclusion zone should be clean on arrival to the site and should be stored within a specified site compound or storage area when not in use. The storage area / site compound must be covered by geotextile materials, and any build up of debris should be stored and contained as required within the ISMP;
- Plant equipment used within an exclusion zone should be cleaned within a designated wash-down area before moving from one area of a site to another;
- The number of machines that enter exclusion zones or come into contact with contaminated material should be kept to a minimum;
- Machinery (especially HGVs) should be kept within a designated haulage route, marked by appropriate fencing and signage;

- All plant operating within an exclusion zone should be thoroughly washed within a designated geo-textile lined wash-down area before exiting the exclusion zone, paying particular attention to any part of the machinery or equipment that may have come into contact with an invasive species or contaminated clay e.g. tracks/tyres, buckets, machine arms, wheel arches etc;
- All equipment and machinery must be certified as clean by the Ecological Clerk of Works (ECoW) before they are removed from the exclusion zone;
- Materials or debris generated within the wash-done area should be contained and managed in accordance with the techniques outlined within the ISMP;
- All plant machinery which is to be used within an exclusion zone should be clean on arrival to the site and should be stored within a specified site compound or storage area when not in use. The storage area / site compound must be covered by geotextile materials, and any build up of debris should be stored and contained as required within the ISMP;
- Plant equipment used within an exclusion zone should be cleaned within a designated wash-down area before moving from one area of a site to another;
- The number of machines that enter exclusion zones or come into contact with contaminated material should be kept to a minimum;
- Machinery (especially HGVs) should be kept within a designated haulage route, marked by appropriate fencing and signage;
- All plant operating within an exclusion zone should be thoroughly washed within a designated geo-textile lined wash-down area before exiting the exclusion zone, paying particular attention to any part of the machinery or equipment that may have come into contact with an invasive species or contaminated clay e.g. tracks/tyres, buckets, machine arms, wheel arches etc;
- All equipment and machinery must be certified as clean by the Ecological Clerk of Works (ECoW) before they are removed from the exclusion zone;
- Materials or debris generated within the wash-done area should be contained and managed in accordance with the techniques outlined within the ISMP;
- Before commencing site works, the operators or contractor should be in receipt of all necessary licenses required to transport contaminated materials offsite, and waste transfer documentation retained for future inspection. A record of all materials should be kept for offsite disposal, to include as a minimum the volumes of materials, nature and waste classifications, haulage details and which licensed facility the materials were taken to. In addition, a record should be kept for any documentation needed in accordance with waste handling, transfer and disposal licenses;
- When geotextile material is required to be excavated and removed from site, it should be treated and handled in exactly the same way as soils/subsoils contaminated with IAS's;
- If soil or geotextile materials are imported to the site for landscaping, infilling or laying of haulage routes etc, then the contractor should gain documentation from suppliers that the material is free from invasive species;
- Excavation and HGV loading areas should be defined and planned for in advance, with geo-textile materials laid throughout the loading area and haulage route, up to 2m buffer either side;
- Where contaminated material is being loaded or excavated, particular care must be taken in order to ensure that a spillage is avoided at all times;
- In the event that spillages of material occur, either through accidental release or as a result of excavation works, then spilled materials should be cleaned up immediately;
- Wherever possible, haulage and movement of materials should not occur within exclusion zones, unless absolutely necessary as part of the program of works required for the project;
- Only vehicles required for essential works, including site investigation works, will be brought on site and the number of visits minimised as much as practicable;

- Haulage routes and access tracks should be delineated and marked or fenced off, and exclusion fencing must be erected and clearly visible wherever required. All site personnel should be made aware of exclusion zones, and appropriate signage should be installed to the same effect;
- Wash-down areas with the use of power washing and suitable wheel wash facilities should be provided at all exit points from the site, and all plant should be washed thoroughly, with all mud and debris removed prior to leaving the site. Geo-textile material should be laid throughout the wash-down area, and all contaminated materials and debris should be collected and treated for disposal;
- Tracked machines have a high potential for spreading IAS's and contaminated soil materials, therefore particular attention should be paid to thoroughly washing down tracked machines before moving offsite. The cleaned machines should be inspected by a suitably qualified ECoW or trained personnel prior to leaving site;
- Where it is necessary to dispose of materials offsite, then it should be noted that the movement of invasive plant material requires a licence from the National Parks and Wildlife Service (NPWS) under Section 49 of the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended). Therefore, prior to commencing site setup, clearance or construction works, a licence must be obtained from the NPWS in advance.
- Invasive species collected within the site must be disposed of at licensed waste facilities or composting sites, appropriately buried, or incinerated having regard to relevant legislation. Where there are small amounts of IAS material (such as small volumes of Knotweed or Himalayan Balsam, including flower heads, seeds, stems, root material or leaves etc) to be removed it may be possible to double bag the material and send it to a licenced waste facility for disposal. Where the amount of material is larger in volume, it will be necessary to haul it from site to a suitably licenced waste facility;
- It should be noted that some invasive species plant material or soil containing residual herbicides may be classified as either 'hazardous waste' or 'non-hazardous waste' under the terms of the Waste Management Acts, and both categories may require special disposal procedures or permissions. Advice should be sought from a suitably qualified waste expert regarding the classification of waste and the suitability of different disposal measures;
- Soil and subsoil materials may be screened for rhizomes and root material, however all soils excavated within affected areas should be treated as contaminated. Any soil or screened materials to be removed offsite should be taken to a licensed faciality for disposal;

3.2.1 IAS's: Exclusion Zones

Exclusion zones should be set up around areas affected by IAS's as listed under Invasive Alien Species Regulation (Regulation (EU) 1143/2014) or The European Communities (Birds and Natural Habitats) Regulations 2011 (Statutory Instrument 477/2011) and Amendment 2015 (S.I. No. 355/2015), inclusive of any amendments, in order to avoid the unintentional spreading of IAS's within the site area, or offsite where excavated materials are to be removed. Where exclusion zones are required, then the following should be adhered to

- Exclusion zones must be clearly marked or fenced off, and made easily identifiable to site personnel in order to prevent accidental incursion into the affected area;
- The extent of the exclusion zone should be based on the extent of the affected area where IAS's have been recorded, but should also take into consideration the extent of rhizome or roto system associated with the species. This may be up to 7m beyond the extent of the stands, or greater depending on the species identified;
- Entry and exit points to the exclusion zones should be clearly identifiable, and all site personnel should be notified as to where these points are located;

- Exclusion zones must also be set up to in order keep machinery and personnel away from any stored contaminated clay or plant material;
- Only vehicles required for essential works will allowed within an exclusion zone, and the number of visits minimised as much as practicable;
- Any personnel or machinery accessing a designated exclusion zone must be subject to strict biosecurity protocols, as outlined within the ISMP;
- Exclusion zones should remain fenced off and implemented for the entire duration of the project, until the IAS's have been effectively treated or removed;
- Site hygiene signage, specific to the management of the invasive species identified within the site, will be erected and made clear to all site personnel; and
- All site personnel should be appropriately trained as per the ISMP.

3.2.2 Use of Herbicides or Chemical Treatment Products

- If herbicide is to be applied as a treatment option, it likely that application of the herbicide may be required for more than one year, and up to five years depending on the species being applied to, in order to ensure that plant control measures have been effective. The length of treatment may also vary depending on the type of herbicide used, i.e. highly persistent herbicides may eradicate a plant within one to two years, whereas non-persistent herbicides (such as glyphosate) may take over a period of at least three years to ensure the successful eradication of the plants;
- A range of herbicides are available for the chemical control of IAS's, and includes herbicides such as Glyphosate, 2,4-D Amine. Glyphosate is non-persistent and can be used near water but it is not selective (i.e. it is a broad spectrum chemical and will impact all plant species), whereas 2,4-D Amine can be persistent for up to one month, and can also be used near water but is more selective on certain plants;
- The selection of chemicals by the contractor and supervising ecologist will depend on seasonal factors, site conditions, proximity to water, surrounding habitats etc;
- In order to ensure that the use of herbicides does not contravene legislation, the contractor must comply with Circular Letter NPWS 2/08 Use of Herbicide Spray on Vegetated Road Verges from the National Parks and Wildlife Service dealing with the application on to non-target areas. In addition, a qualified and experienced contractor will be employed to carry out all treatment works;
- If chemical or herbicide treatment is to be carried out, then it is recommended that the appointed contractor prepares a site-specific treatment plan in accordance with the relevant guidelines before commencing works;
- Should treatment be carried out within close proximity to water, or where there is a risk of contaminating watercourses, then the choice of herbicide should be limited to formulations of Glyphosate and 2,4-D amine that are approved for use near water, or similar approved herbicides. It is recommended that chemical control via the application of herbicides is not carried out within 5m of any existing surface water feature, including local drainage infrastructures. If herbicide application is necessary within this area, then only herbicides which are approved for use near water should be used;
- Herbicides should be applied during peak growing periods (typically from May – September), however local climate conditions such as temperature and rainfall can determine the effectiveness of treatment applications. Treatment outside the peak growing season is often ineffective, as plants are dormant during winter periods and do not take in the herbicide treatment;
- In the case of Knotweed, depending on weather and temperatures in the days following the initial treatment, and to ensure optimal uptake of herbicide into the rhizome system, a second similar treatment may be required (usually within ten days), before the internal vascular system is no longer capable of translocating the herbicide to the root system;

- A systemic herbicide (e.g. Picloram) and/or a bioactive formulation such as glyphosate based Round-Up Proactive may be sprayed on foliage during dry weather or injected directly into the stems of IAS's. Strong systemic herbicides are most effective at targeting the persistent roots, however it should be noted that they may also persist in the soil and/or kill surrounding vegetation;
- Foliar treatment (spraying) is usually applied with a sprayer such as a knapsack sprayer or a larger spray system. It is important to use a treatment dye to identify clearly all areas treated. Foliar treatment is an efficient way to treat large areas of invasive plants, or to spot-treat individual plants that are difficult to remove mechanically (such as Japanese Knotweed). While the upper surface of the leaves will be easier to treat, it is also important to treat the leaf under surface as Knotweed possesses many stomata openings on the leaf under surface;
- Injecting herbicides directly into the stem of the plant is a common method for controlling and eradicating IAS's, however this method is more suitable for smaller stands given that it is labour intensive. This form of treatment typically requires a higher concentration of the active ingredient than is used in foliar applications, and involves the use of a specialist herbicide injection tool whereby the injection tool injects the herbicide directly into the plant;
- Following application of herbicide treatment during the first season, annual spot-checks should be conducted during the early growing season in order to identify any re-growth of the plant;
- Regrowth may occur in subsequent years, and if this is the case then further herbicide treatments should be undertaken each year until no regrowth occurs;
- Manufacturers guidance and current regulations on the use of chemical or herbicide treatment should be strictly adhered to at all times.

Once a contractor has been appointed for works, the ISMP should be updated to contain their contact details, schedule of works, methodologies to be used throughout all phases of the development, and the management techniques chosen with regards to IAS's found within the development area. The ISMP should be updated to include a more detailed management strategy for IAS's, and an ECoW's should be appointed to oversee the pre-construction enabling and demolition works, and also for the construction phase of the project.

Given the potential for IAS's to regrow or re-stablish themselves on the site, it is recommended to carry out a post-construction Invasive Species Survey within one year of completion, and to update the ISMP accordingly. Records for any treatment should be maintained for the duration of the project, and follow up treatment should be carried out, where applicable, until no further regrowth of the IAS has occurred.

3.3 Waste management

- A Construction and Demolition Waste Management Plan (CDWMP) should be prepared by the Appointed Project Contractor for the construction phase, and should form part of the detailed CEMP;
- The CDWMP should be developed using the EPA, "*Best Practices Guidelines for the preparation of resource & waste management plans for construction & demolition projects*" (2021), Environment Protection Agency, TII (2017) *Guidelines for the Management of Waste from National Road Construction Projects*, GEENV-01101, Transport Infrastructure Ireland, December 2017, and "*A Waste Action Plan for a Circular Economy – Ireland's National Waste Policy 2020 – 2025*";
- Contractors working on site during the works will be responsible for the collection, control and disposal of all waste generated by the works. Construction phase waste may consist of hardcore, stone, concrete, steel reinforcement, ducting, shuttering timber, food waste from the canteen and unused oil, diesel and building materials. This waste will be collected

at the end of the construction phase and taken off site to be reused, recycled and disposed of in accordance with best practice procedures at an approved facility;

- Domestic wastewater from the on-site holding tank will be collected on a regular basis by approved contractors and disposed of in an authorised facility in accordance with best practice, or disposed of within the mains or foul sewerage system as permitted;
- Plastic waste will be taken for recycling by an approved contractor(s) and disposed or recycled at an approved facility. All waste generated during construction, including surplus excavation material to be taken off-site, shall be only recovered, or disposed of at an authorised site which has a current Waste Licence or Waste Permit in accordance with the Waste Management Acts, 1996 to 2011;
- This shall not apply to the reuse of excavated material within the applicant's site boundary;
- Specific waste management of contaminated soils, handling and disposal of soil which may have been affected by IAS's, or handling of hazardous materials is considered under the relevant specific control measures;
- A Waste Manager will be nominated who will have overall responsibility for the implementation of all waste processes. In conjunction with this, a clear responsibility structure will be introduced for the construction staff/contractor to ensure issues encountered are raised at an appropriate level and acted upon. This is essential in ensuring that all waste is properly dealt with;
- Source Segregation: The contractor will be obliged to implement source separating wastes into dry mixed recyclables, biodegradable, and residual wastes. Clear labelling of waste bins, containers, skip containers and storage areas, including waste stream colour coding and photographs as appropriate;
- Waste Auditing: The contractor will be obliged to implement good record keeping, including quantities (tonnes) and type of waste and materials leaving the site. The name, address and authorisation details of all facilities and locations to which waste and materials are delivered will be recorded along with the quantity of waste in tonnes delivered to each facility. Records will show material, which is recovered, and which is disposed;
- Appropriate Storage: Waste fuels/oils will be generated from equipment used on-site during construction and will be classified as hazardous waste. Paints, sealants, and hazardous chemicals etc. will be stored in secure, bunded locations. All hazardous waste will be separately stored and labelled, in appropriate lockable containers, prior to removal from site by an appropriately permitted waste collection service provider;
- Efficient Removal: Waste generated on site will be removed as soon as practicable following generation for delivery to an authorised waste facility;
- Any waste which cannot be reused onsite and arising from the demolition or construction phase of the proposed development will be transferred to an appropriate facility in accordance with the current national waste policy. This is necessary so that all waste is disposed of to the best possible facility type to adhere to the circular economy and resource opportunity strategies;
- If unforeseen waste or hazardous material is encountered during the proposed development, then the appropriate authorities will be notified and the material will be transferred at an appropriate waste facility;
- There is a possibility that unforeseen or hazardous material is encountered during excavation works, therefore staff will be trained in how to identify contamination and how to manage it if encountered. Identification will include visual checks for unusual discolouration, oil sheens, anthropogenic materials, and checks for olfactory clues such as hydrocarbon or other odours. Suspect contaminated material will be sampled and appropriately analysed at a laboratory;
- Records will be kept on the quantity nature/type and quality of all waste leaving the site;
- By-product notifications (under Article 27 of the EC Waste Directive Regulations 2011) provide an opportunity for reuse of surplus clean soil and stone material arising from construction activity. At the time of construction, options for Article 27 by-product status

or similar will be reviewed by Monaghan County Council and the appointed contractor, subject to waste management and planning requirements being fully met. Such opportunities offer potential to further reduce indirect effects of waste management resulting from the transport of materials from site, notably traffic, noise, and air emissions from transport-related haulage;

- Exported materials, particularly soils, will be carefully managed to restrict the spread of invasive alien plant species (IAP's), as outlined in the ISMP.

3.4 Drainage & Surface Water Management

The purpose of this plan is to describe measures for the management of excavations, the management of all surface water and run-off on the site, and in particular, sediment and erosion control. As a minimum, the following should be implemented in order to effectively management surface water runoff and drainage from the site, and to prevent excessive erosion and sedimentation :

- Monitoring of the weather forecast prior to planning excavation works;
- Minimising the area of exposed ground and ensuring excavation will not proceed faster than the rate of construction;
- Stripped pavement/soil material will be temporarily stockpiled more than 10m away from any drain or watercourse or taken off-site;
- Stockpiles will be in a dry zone that is not subject to ponding;
- Providing bunds or other diversions to keep run off from entering the stockpile area where required.
- Providing impermeable mats (plastic sheeting) as covers to mounded excavated material and open excavations during periods of heavy rainfall;
- Earth movement activities will be suspended during periods of prolonged rainfall events;
- The earthworks material will be placed and compacted in layers to prevent water ingress and degradation of the material;
- Drainage and associated pollution control measures will be implemented on site before the main body of construction activity commences;
- Runoff of surface water from construction areas will be controlled;
- Silt-laden runoff should be expected from any areas of recently exposed soil or rock. There is also potential for pollution to occur from machinery used in the construction;
- Any introduced or artificial materials required (e.g. silt fencing, straw bales, sand bags, etc.) that might need to be deployed onsite, will be removed on completion of the works;
- Discharge from the silt control measures will be discharged into the existing drainage network within the proposed development site, or stored and contained until it is removed offsite for further treatment;
- Additional drainage measures will be implemented to help attenuate the increase in surface water flows, if surface water is observed discharging from the construction compound;
- Surface water management and sedimentation control measures shall routinely be monitored for effectiveness, and repairs or improvements shall be carried out promptly as required;
- In order to achieve the restricted 'Greenfield' run-off rate: permeable pavements, rain gardens, attenuation tanks and discharge flow controls limiting the storm water discharge from the development are included within the drainage design. The attenuation tanks are situated at each car park with flow controls and a final flow control immediately prior to the discharge location at the Dublin Street roundabout, and should be constructed in accordance with the drainage plan;
- In order to cater for the future foul flow generated by the Development Plots, a foul drainage sewer has been provided along Russell Row, with spur connections to the Development Plots, and should be constructed in accordance with the drainage plan.

3.5 Sediment Control

Runoff from the development area is anticipated to have high silt loading due to mobilised soils from excavated surfaces, fines from track aggregate and sludge due to traffic movements through the site. As such, the following control measures should be implemented in order to minimise excessive sedimentation, particularly as silt laden runoff from the site:

- Prior to works commencing, sedimentation control measures shall be put in place, to include the installation of silt fencing along the eastern and southern peripheral edge of the site. In addition, sediment control measures should be put in place along the bridge section prior to works commencing within Old Cross Square. Sedimentation control measures and silt fencing locations should be clearly shown within the CEMP and accompanying drawings;
- The silt fencing will consist of a geotextile filter fabric supported by vertical posts and anchored in the soil by establishing a shallow trench at the base of the fencing. The base of the geotextile fabric will line the shallow trench, i.e. turned upwards, and the excavated lose soil backfilled on the geotextile fabric;
- Materials and machinery will not be stored immediately adjacent to the silt fencing, which may cause the silt fencing not to function effectively. The silt fencing layout must allow for the movement of machinery within the site and ease of maintenance;
- Silt fencing will be monitored throughout the day in order to ensure that they are performing as required, and have not become clogged with sediment. The silt fence integrity will be inspected daily to ensure it intercepts surface water runoff within the site, captures sediment contained in surface water runoff and reduces velocity runoff. If defects in the fencing are observed, these will be repaired and/ or rectified immediately;
- Excavated materials should be removed off-site as soon as practicable, in order to prevent excessive suspended solids loading during rainfall periods and surface water runoff. In the event that stockpiled or excavated soil materials are to be kept overnight, then the materials should be covered by a tarpaulin (or equivalent covering) and surrounded by silt fencing, which should be installed according to manufacturers guidelines;
- Whenever practically possible, site clearance or ground works should not to be undertaken during wet conditions, when rainfall of more than 0.5 mm/hour is forecast within the next 24 hours;
- Gullies should be covered over where siltation or sedimentation is likely to occur, in order to prevent blockages or impediment of the existing drainage network;
- All sediment and surface water runoff should be managed in accordance with a surface water management plan, and detailed within the CEMP;
- All surface water runoff should be treated for suspended solids, oils and grease, prior to being discharged into the local drainage network. This can be in the form of swales, gullies and sediment traps;
- No surface water runoff within the site should be discharged directly into any watercourse at any time;
- As soon as practically possible, any damaged or cut ground should be reinstated to reduce suspended solids loading during rainfall runoff;
- Repeated handling of soil will be avoided and ideally all soil stockpiles will remain undisturbed until otherwise required;
- All excavation and earthworks will be carried out in accordance with BS6031:2009 Code of Practice for Earthworks. Soil handling, extraction and management will be undertaken with regard to best practice guidelines;
- If any contaminated earth is uncovered, this will be stored separately and disposed of accordingly once the contaminant has been identified;
- Efforts will be made to ensure that water does not accumulate in excavated areas;

- Surface water management and sedimentation control measures shall routinely be monitored for effectiveness, and repairs or improvements shall be carried out promptly as required.

3.6 Fuel Management

Hydrocarbon use during the demolition and construction phases may lead to potential pollution of waterways. Examples of potential threats include spillages during re-fuelling operations, leaks in poorly maintained plant and machinery and the use of oil on shuttering boards. In order to reduce or mitigated against accidental spillage of hydrocarbons or contamination, the following should be adhered to:

- Fuelling of machines will be carried out away from all watercourses, with all machines provided with spill kits. Vehicles being used to deliver fuels should be certified in accordance with relevant regulations and double bunded;
- Wherever possible, no fuels should to be stored on site;
- In the event that fuels are necessary to be stored on site, these shall be located within the allocated storage containers. All fuels, lubricants and hydraulic fluids should be kept in secure bunded areas as far away from all watercourses as practically possible. The bunded area will accommodate 110% of the total capacity of the containers within it;
- All fuel or oil storage containers will be properly secured to prevent unauthorised access and misuse;
- Fuel fill pipes will not extend beyond the bund wall and will have a lockable cap secured with a chain;
- Where it is necessary for fuel to be brough to site, for deliveries and dispensing activities, it will be ensured that site specific procedures are in place for bulk deliveries, and that delivery points and vehicle routes are clearly marked. Emergency procedures should be displayed and a suitably sized spill kit made available at all delivery points;
- An effective spillage procedure should be put in place. Site operatives should be provided emergency spill kits which should be stored on-site during the construction period at all times. Such kits should contain absorbent materials (such as absorbent granules, booms or mats). Operatives responsible for handling chemicals, fuels or oils, or for plant refuelling, should be trained in the use of this kit;
- Any waste oils or hydraulic fluids should be collected, stored in appropriate containers and disposed of off-site in an appropriate manner.
- Where appropriate, drip-trays should be used, and should conform to Best Practice Guidance such BPGCS005 Oil Storage Guidelines (Enterprise Ireland);
- Suitable precautions will be taken to prevent spillages from equipment containing small quantities of hazardous substances (i.e. consaws and jerry cans). Each container or piece of equipment will be stored in its own drip tray made of a material suitable for the substance being handled, and containers and equipment will be stored in a firm level surface;
- Vehicles should never be left unattended during re-fuelling;
- All vehicles should be regularly maintained and checked to prevent hydrocarbon leaks. An up-to-date service record will be required from the main contractor;
- Where open gullies or channels are present on site, then gully covers will be used in order to prevent surface water runoff;
- All stationary machinery such as generators should be placed on drip trays in order to collect and contain any hydrocarbon spillages. These trays should be checked regularly, and rainwater removed to maintain their effectiveness;
- Wherever possible, hydraulically operated machinery should utilize synthetic biodegradable hydraulic oil;
- Only qualified persons shall operate plant machinery;

- Plant/equipment shall be checked on a regular basis to ensure they are working properly (no oil/fuel leaks etc.);
- Control measures for preventing hydrocarbon release shall routinely be monitored for effectiveness, and repairs or improvements shall be carried out promptly as required.

3.7 Management of Concrete and Bituminous Material

Concrete and bituminous material has the potential to impact upon surface water quality if not properly managed. Therefore, the following outlines appropriate management of concrete and bituminous products during the construction stage of the development:

3.7.1 Concrete Materials Handling & Pouring

- To reduce the potential for cementitious material entering watercourses, concrete pours will be supervised by the Construction Manager, a suitably qualified Engineer and the Environmental Manager or Clerk of Works;
- Ensure that the area of the pour is completely drained of water before a pour commences.
- Prior to concrete pours of kerbing etc., the pour area will be inspected to ensure that the pour site is completely sealed (shuttering etc.);
- Pours should not take place during forecasted heavy rainfall;
- Incidental rainfall from light showers during the period of a pour is typically absorbed into the concrete matrix but heavier showers can result in some run off from the top surface of the concrete pour. If run-off is encountered the Environmental Manager will block the outflow from the drains to retain or treat the run-off until the pH is neutral before discharge to the drainage network;
- To reduce the volume of cementitious water, washout of concrete trucks will not take place on site. Concrete trucks will be washed out off site at the source quarry. Only concrete truck chutes will be washed down on site;
- The concrete trucks shall wash down their chutes at a designated chute wash down area within the temporary Construction Compound (away from the works area);
- The wash down area shall consist of a polythene lined bunded area of about 10m^3 capacity. The collected washdown water will be disposed of using a registered contractor;
- No disposal of concrete remnants will be permitted on site;
- The use of wet concrete and cement in or close to any water body will be carefully controlled so as to minimise the risk of any material entering the water;
- Where possible, a specific fast-setting mix (by having either a higher-than-normal fines content, a higher cement content or the use of ecologically-appropriate chemical admixtures, will be used to minimize risk of ecological impacts.
- Concrete will not be allowed to enter watercourses under any circumstances, and drainage from excavations in which concrete is being poured will not be discharged directly into existing watercourses;
- Delivery trucks, tools and equipment will be cleaned at the wheel wash facility located at the temporary site compound.

3.7.2 Paving/Bituminous Materials

- Stockpiles if paving or bituminous material, tar and related products (if required) will be kept to a minimum size, covered and located away from any watercourse;
- In order to prevent contaminated or silt-laden runoff from entering drains or watercourses, a range of temporary measures will be implemented (as required), including silt fences, cut-off ditches, silt traps, straw bales, entrapment matting & drainage to vegetated areas;
- Construction works will be avoided during prolonged periods of very heavy rainfall;

- Any spillage or excess material will be cleaned and disposed off site to an appropriate licensed waste facility, and using licensed waste disposal contractors.

3.8 Noise & Vibration Control Measures

The following should be adhered to in order to negate or minimise the effects of noise and vibration impact that the construction activities may have on sensitive receptors:

3.8.1 Noise Control

- The Principal Contractor will be required to liaise with the local Environmental Health department of Monaghan County Council in order to ensure that noise during the construction phases is effectively managed. All Contractors will be required to employ best practicable means to minimise noise during each phase of the development.
- The Principal Contractor will be required to manage noise and vibration in accordance with BS 5228-1:2009;
- The contractor / developer will establish and maintain good community relations and will engage local residents / commercial operators prior to commencement of operations and site works. This may include informing local residents/neighbouring properties on progress of the site by way of a leaflet drops for example and ensuring measures are put in place to minimise noise impacts. A telephone “hot line” and agreed procedure for the contractor to investigate and report on complaints will be set up for particularly noisy phases of works (such as rock hammering etc);
- All onsite operatives shall be trained to employ appropriate techniques to keep site noise to a minimum, and shall be effectively supervised in order to ensure that best working practice in respect of noise reduction is followed;
- The schedule of works and site working hours will be carried out on the basis of the noise threshold limits outlined in this report, and taking into account the principles outlined in BS5228:2009+A1:2014;
- Any static plant will be positioned as far as possible from residential properties, and utilising available screening by temporary structures, acoustic screens etc;
- For any particular job, the quietest available plant and/or machinery will be used. Where appropriate, it must be constructed to meet the requirements of EC Directives;
- Site operators will avoid unnecessary revving of engines, and all plant equipment will be maintained in good mechanical order and fitted with the appropriate silencers, mufflers or acoustic covers where applicable;
- All plant and vehicles used in the works shall have exhaust silencers in good working order and diesel plant shall be fitted with effective air intake silencers. All ancillary pneumatic percussive tools shall be fitted with mufflers or silencers as recommended by the manufacturer, and where necessary acoustic barriers can be used to shield them;
- Any machinery which is in intermittent use should be shut down in intervening periods of non-use or where this is impracticable, it should be throttled back to a minimum;
- Every effort will be adopted in order to minimise drop height of materials, ideally lowering materials wherever practicable;
- Plant should be started up sequentially, rather than simultaneously;
- All site staff will be informed about the need to minimise noise and will be supervised to ensure compliance with the noise control measures adopted;
- The use of concrete saws will be used briefly and intermittently throughout the day, rather than in a prolonged concentrated block at end of day;
- The Contractor will seek to minimise the total level (ambient plus construction) noise and strive not to exceed the limiting criteria outlined within this CNMP. However, where this is not possible then practicable mitigation measures should be developed and implemented

in order to minimise the overall noise impact on sensitive receptors, and through consultation with Environmental Health;

3.8.2 Vibration Control

- All appointed contractors will adhere to the vibration guidelines as outlined in BS5228-2:2009+A1:2014. Vibration limits will be included within tender documents for potential contractors to take into consideration when committing to a schedule of works;
- The contractor shall employ the "best practicable means" in order to minimise noise and vibration resulting from operations and shall have regard to British Standard BS 5228 Code of Practice for Noise Control on Construction and Open Sites Parts 1 and 2;
- The construction contractor will provide evidence of having liaised with all relevant receptors (residential and commercial) prior to commencement of each phase of works. This will include notification of intended noise & vibration sources and a brief schedule of works; and
- A copy of the neighbour liaison evidence should be made available to Environmental Health upon request;
- Any noise or vibration related complaints should be managed by means of the site complaints procedure, and in conjunction with the local environmental health department;

3.8.3 Noise & Vibration: Monitoring Requirements

In the event that noise related complaints are received, or that the recommended noise limits are exceeded (or likely to be exceeded) at relevant residential receptors, then noise monitoring will be carried using the following principles:

- The Contractor shall designate an Environmental Manager/Responsible Person who, amongst a range of other responsibilities, will liaise with environmental advisors, statutory bodies and the local community as required with respect to noise and vibration impacts during the demolition and construction phases;
- All monitoring will be carried out using the principles outlined in BS4142:2014 and BS5228-1:2009+A1:2014. Noise levels will be recorded using an approved Class 1 1:3 octave noise analyser, and the monitoring period agreed in advance with the Environmental Health department. The data should include 1:3 octave frequencies to determine tonality, and should present data for the following parameters: $L_{Aeq,T}$; L_{A90}; L_{A10}; L_{AFmax};
- A suitable number of noise monitoring locations shall be established around the site boundary or at the relevant residential receptor locations, as required. The microphone shall be situated in a free-field location, approximately 1.2 to 1.5 metres above local site level. Measurements shall be made in accordance with good acoustical practice, and care should be taken in order to avoid the effects of local acoustic screening and acoustic reflections;
- In the event that noise complaints are received, then monitoring shall be carried out at the complainants property, with their permission. Should permission not be granted, then a suitable alternative monitoring position should be agreed with the Environmental Health department. Monitoring should be carried out for a sufficient period that will allow a robust assessment of the effects of the construction noise sources on the receptor positions. Upon analysis of the results, and in the event of exceedances of noise limiting criteria, then suitable mitigation measures should be developed and agreed with the Council thereafter;
- All operators of noise monitoring equipment shall be trained and competent to undertake the measurements;
- In the event that complaints have been received and that noise monitoring is required, then real time measurements should be made available during the monitoring period

(typically telemetry based), as these can highlight specific sources of noise, or issues that can enable immediate remedial actions to be taken. A precise daily log of each construction activity undertaken will be kept on site and made available for inspection when requested. If a $L_{Aeq,T}$ value exceeds the noise threshold level, or should a complaint be received, then the log can be examined and the site activities which created the contravening noise will be established. The Contractor can then take further mitigation steps relating to the activity to prevent recurrence;

- The duration and location of noise monitoring will be agreed with Environmental Health, and the analyser data will be provided in text and digital (.csv) format for review; and
- Copies of all noise measurements shall be made available to Environmental Health upon request;
- In the event that complaints are received in relation to vibration, it is therefore recommended that continuous vibration monitoring of PPV and VDV should be undertaken, for x,y,z axis;
- The location of vibration monitoring should be chosen based on the closest affected receptor position to the vibration source. In most cases the receptor position is likely to represent the external façade position of a building structure, therefore permission should be sought to deploy vibration monitoring equipment within the receptor property. Should permission not be granted, then it may be necessary to choose an alternative location, either at a receptor with similar setback distances, or if this is not possible, then monitoring should be carried out at a representative boundary position within the confines of the development area;
- Vibration monitoring data should be made available in real-time (typically obtained using a telemetry system) in order to assess the ongoing effects of vibration on the receptor position. Real-time monitoring data also enables immediate action to be undertaken in the event that vibration threshold limits are exceeded;
- It is recommended that set alert thresholds for PPV at 1mm/s, 2.5mm/s and 10mm/s, which should preferably be delivered real-time via text messaging alerts or by email alerts;
- Vibration monitoring should record the PPV and VDV parameters continuously through the monitoring period, and the results should be reviewed each day for exceedances. A copy of the results should be made available to Environmental Health for review on a weekly basis by means of a collated report. In the event that vibration threshold levels have been exceeded, then the Council should be informed and appropriate mitigation measures developed before further works can be undertaken;

3.9 Dust & Air Quality Control Measures

The following control measures should be adhered to, in order to negate or minimise the effects of dust generation and air quality impacts on local sensitive receptors:

- Prior to demolition and construction phases, a site plan should be developed to ensure that machinery causing dust generating activities are located away from receptors as practically possible, or within the confines of the site centre in order to minimise off-site dust migration;
- Wherever practically possible, the contractor should erect solid screens or barriers around dust generating activities or along the site boundary to the height of any stockpiles onsite;
- The site or specific operations should be fully enclosed (where practically possible) where there is a high potential for dust generation and where site activities are likely to occur for extensive periods of time, such as rock hammering or concrete cutting;
- The site ground surfaces should be regularly cleaned and kept free of mud and debris, and site runoff should be treated accordingly in order to minimise dust generation;
- Site fencing, barriers and scaffolding should be cleaned using wet methods, in order to minimise dust migration; and

- All demolition materials should be removed off-site as soon as possible, and all temporary stock or construction materials should be covered in order to minimise dust generation as a result of wind whipping.

3.9.1 Dust Management: Vehicle & Machine Operation

- All vehicles should be switched off when not in use, i.e. no idling vehicles. This reduces the potential to impact upon local air quality in terms of NO_2 and particulate emissions;
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment wherever practicable;
- Ensure that vehicles entering the site does so at less than 10mph;
- All vehicles should be maintained and operated in accordance with the manufacturer's recommendations;
- 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. plant equipped extraction;
- Ensure an adequate on-site water supply for effective dust/particulate matter suppression/mitigation, and using non-potable water wherever possible;
- Workers should minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate, and chutes or conveyors should be enclosed. All skips and waste material storage areas should be covered;
- The contractor should ensure that equipment is readily available on-site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods; and
- The contractor should ensure that no burning of waste materials will take place on-site.

3.9.2 Dust Management: Additional Demolition Measures

- The contractor should carry out the demolition phase in accordance with prepared schedule of works;
- Soft strip should be undertaken within the building structures prior to demolition (retaining walls and windows in the rest of the building where possible, to provide a screen for dust);
- The contractor should ensure effective water suppression is used during demolition operations. Handheld 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;
- Only manual or mechanical means of demolition should be used, i.e. no explosives or blasting should take place;
- Any biological or asbestos materials should be dampened and bagged prior to removal from site, and prior to any major demolition phases taking place;
- All demolition materials should be removed from site as soon as possible, and should be covered when on-site for temporary storage;
- Wet dust suppression should be used throughout phases of superstructure demolition, in order to minimise dust generation and migration from site;
- Any significant dust generating phases (i.e. superstructure demolition etc) should be scheduled in advance, and Environmental Health and local receptors notified as necessary.

3.9.3 Dust Management: Additional Construction Measures

- The contractor should carry out the construction phase in accordance with prepared schedule of works, as available;
- The contractor should ensure that sand and other aggregate materials are stored either in bunded areas and are not allowed to dry out, unless this is required for a particular process, or under cover in order to minimise wind generated dust;
- All bulk cement and other fine powder materials should be delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. For smaller fine powder materials, the contractor should ensure that bags are sealed after use and stored appropriately to prevent dust generation;
- All waste materials produced during the construction phase should either be stored temporarily under cover, or should be removed off-site as soon as possible to an appropriate waste management facility; and
- During prolonged dry weather periods, the contractor should dampen the ground conditions, particularly along access routes etc, in order to prevent excess dust being generated by traffic.

3.9.4 Dust Management: Trackout Measures

The contractor should use water-assisted dust sweeper(s) on access and local roads to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use;

- The contractor should ensure that all HGV or material haulage vehicles entering and leaving sites are covered to prevent escape of materials during transport;
- Al haulage routes and local road access should be regularly inspected for damage, and repairs to the road surface should be carried out as soon as reasonably practicable. A record of road inspection should be maintained and a log book kept; and
- Any internal routes or traffic areas (i.e. hardstanding) should be dampened with mobile sprayers, and where necessary a wheel wash system should be installed, if practical.

3.9.5 DUST MANAGEMENT: MONITORING

- The contractor should carry out daily on-site and off-site inspections for dust deposition, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to local authorities upon request. This should include regular dust soiling checks of surfaces such as street furniture, cars and windows within 100m of site boundary, with cleaning to be provided if necessary;
- The contractor should carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked;
- During periods where activities with a high potential to produce dust are being carried out, or during prolonged dry or windy conditions, the inspection frequency should be increased in order to determine if additional mitigation measures are required;
- In the event that dust complaints are received, the contractor should develop a suitable dust monitoring program in consultation with Environmental Health, and should be developed in harmony with the principles laid out in the latest version of IAQM "*Guidance on the assessment of dust from demolition and construction*";
- Dust monitoring positions and methodology should be agreed in consultation with Environmental Health, the results should be made available thereafter. Upon review of the results it may be necessary to develop additional mitigation measures which will minimise future impact potential from nuisance dust.

3.9.6 Dust Management: Site Management

- A record should be maintained for all dust and air quality complaints made in relation to site activities and should be reported to Environmental Health for review. Appropriate mitigation or remedial measures should be agreed with Environmental and implemented as soon as possible following consultation, and the DMP updated accordingly;
- A complaints log should be maintained for off-site complaints and onsite issues relating to staff complaints. The complaints log should be made available to Environmental Health upon request;
- A record of exceptional incidents or potentially significant dust generating activities should be maintained, along with the appropriate measures taken to ensure dust impact is minimised or negated. A review of the effectiveness of mitigation measures should also be carried out and logs maintained; and
- A review should be carried out periodically in order to identify other potential dust generating sources in close proximity to the site, such as other off-site construction activities etc. Should any significant sources be identified then attempts should be made to co-ordinate activities in order to minimise the cumulative effects of dust impacts on local receptors.

3.10 Lighting

In order to minimise or negate the effects of artificial lighting on bat populations, specifically along the proposed public footpath area within the Old Infirmary Hill community garden area, it is recommended that luminaires should achieve the recommended criteria set out in the LLP & BCT Guidance Note GN08/23 document. The document outlines a series of rationale for designing lighting schemes aimed at reducing lux levels and effects on bat activity, and should include, wherever practically possible, the following:

- Prior to the design and installation of lighting, a lighting contour plan should be developed by a competent lighting professional, using an appropriate software package to model 'Day 1', extent of light spill from the proposed, retained and any existing luminaires. In some circumstances, a vertical illuminance contour plot may be necessary to demonstrate the light insensitive areas, such as entrances to roosts or the Key Habitat associated with it, should these be identified during pre-construction or pre-demolition surveys;
- The contours (and/or coloured numbers) for 0.2, 0.5, 1, 5, and 10 lux must be clearly shown, as well as appropriate contours for values above these. Each illuminance/lux contour plan should be accompanied by a table showing their minimum and maximum illuminance/lux values;
- The calculated lux levels and lighting contour maps should be reviewed by an ecologist in order to ensure the lighting scheme will be in compliance with ecological legislation, particularly with reference to bats;
- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used;
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability;
- A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component;
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats;
- Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill;
- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges ;

- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards;
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered ;
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt;
- Where appropriate, external security lighting should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate;
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand;
- Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS;
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues;
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely;
- The lighting scheme should take into consideration all the relevant guidance within the GN08/23 document and should submit the final lighting scheme and supporting rationale to the council for review.

3.11 Cultural Heritage Specific Mitigation

The Proposed Development has been informed by Cultural Heritage desktop studies, site investigations (testing), fieldwork and statutory consultation (National Buit Heritage Service – NBHS) undertaken during the design and assessment phases to avoid, reduce and/or offset predicted receptor impacts. Based on the findings of the Cultural Heritage Impact Assessment Chapter, the following specific mitigation measures have been recommended for the construction phase of the development:

- There is potential that sub-surface archaeological finds and/or features associated with the historic medieval/post medieval town of Monaghan, (including the medieval town defences and the area of Old Cross Square formerly 'The Shambles' exist within the Red Line Boundary. Ground works during the construction phase will be subject to archaeological monitoring by a licence-eligible archaeologist under licence by the National Monuments Service;
- In the event that any sub-surface archaeological features are identified during archaeological monitoring they will be securely cordoned off, cleaned and recorded in situ. The National Monuments Service will then be notified and consulted to determine further appropriate mitigation measures, which may include preservation in situ (by avoidance) or preservation by record (archaeological excavation);
- The Market Cross in Old Cross Square requires re-siting as part of a re-imagined public space that provides connectivity and linkage to the new proposed Russell Row and other planned development (Monaghan County Council Civic Offices) to the north of the Proposed Development. The Market Cross is in the guardianship of Monaghan County Council. In advance of construction stage (pre-works) the monument (with prior

consultation and Section 14 Ministerial Consent and agreement by statutory bodies) will be subject to a detailed written and photographic survey log, to be augmented as part of an updated condition report. This will be carried out together with a detailed methodological specification for dismantling, safe and appropriate storage provisions, conservation works (off-site) where required, and reinstatement at the new location in as 'as built' manner at the end of construction stage. A conservation architect will oversee and supervise the works, together with an attending on-site licence-eligible archaeologist, where required as part of any ground reduction or landscaping provisions at construction stage;

- In advance of construction stage (pre-works), the upstanding remains of the Old Infirmary (F01-F05) will be cleared (by hand) of all dense vegetation, with a built heritage written, drawn and photographic survey undertaken together with a conservation management plan to consolidate, re-point and make-safe any walling/features, and to install suitable surface treatment (such as fine gravel) as required. The latter will enable effective management of future vegetation growth and to provide visitor accessibility that can tangibly interact with the ruins. On-site bespoke and high-quality interpretative signage will be provided that documents the local history of the 'Old 12' site within the new town amenity area;
- There may be associated sub-surface built heritage remains of the Old Infirmary located within the proposed Community Park area. Any landscaping works (ground reduction measures, drainage, lighting etc) that are required in and around the Old Infirmary footprint area, and within the park generally, will be monitored by an attending licence-eligible archaeologist at construction stage. This will facilitate the evaluation of any identified features and provide for an agreed strategy with National Monuments Service for the best course of action (preservation in situ or preservation by record).

3.12 Architectural Heritage Specific Mitigation

- Prior to any demolition, it is recommended that structures identified within the Architectural Heritage Chapter of the EIAr have a Level 3 Analytical Survey carried out by the Project Conservation Architect in order to capture a permanent record of the structure which will be offered to the Irish Architectural Archive.
- The re-use of material from demolished structures will be incorporated into the proposed design where appropriate.
- A detailed survey, competent contractor & appropriate method statements will be necessary for alteration of heritage structures.
- The following mitigation methods are proposed and will be applied on a structure-by-structure basis as per Table 13.15 of the EIAr to the affected architectural heritage:
  - Record survey.
  - Protection in-situ during construction.
  - Protection off site and relocation to a new position.

3.13 Townscape & Visual Impact Specific Mitigation

The townscape and visual effects associated with the demolition and construction activities of a large development, such as the proposed, are generally difficult to mitigate.
However, a number of measures, which typically form part of good construction 'design', have been recommended and will ensure that these effects are kept as low as possible. They include

- well planned/phased construction works;
- a well organised/tidy construction site;
- a construction period, which is kept as short as is safely possible; and
- construction fencing, which will screen much of the works (although the fencing itself will cause some visual effects).

3.14 Traffic & Transport Specific Mitigation

Mitigation specific to transport and traffic will include the development of a Traffic Management Plan for the construction and demolition phases, and for all phasing of works and in particular how the scheme will be constructed i.e. keeping the traffic connection between The Diamond and Dublin Street Roundabout live during the works.

4.0 ENVIRONMENTAL PERFORMANCE INDICATORS

The Contractor will outline the key performance indicators (KPIs) for the Site in gauging successful site management in the prevention of pollution and the protection of the environment. Environmental performance indicators, which should include:

- Number of environmental accidents/incidents logged;
- Breach of procedure and corrective actions;
- Number of environmental complaints received;
- Results of monthly water quality monitoring if required;
- Results of noise and vibration monitoring, and
- The results of site audits and KPI's will be communicated to all relevant personnel and sub-contractors. The review periods for analysing site performance indicators must also be specified.

5.0 RECORD KEEPING

- The Construction Manager will ensure that fully detailed records are maintained of any 'incident /event' likely to cause non-compliance and / or harm to the environment;
- Environmental Incidents/Near Miss Reports are reported and recorded.
- Complaints and Follow up Actions on the construction site will be managed by the CMT and contractors will ensure that all complaints are recorded according to CMT requirements.
- Each contractor will be responsible for ensuring that a full record and copy of all Safety Data Sheets (SDS) pertaining to their works is kept on file and up to date in their site offices/other.
- Contractors will also retain a duplicate copy of all SDSs held by the contractors.
- The Project Manager will be responsible for monitoring the movement and treatment of all waste during the construction phase of the project.
- Records will be kept for each waste material which leaves the site, whether for reuse on another site, recovery, recycling or disposal, and will include the following:
    - Volume and type of waste exported offsite for reuse
    - Volume and type of waste exported offsite for recovery
    - Volume and type of waste exported offsite for recycling
    - Volume and type of waste exported offsite for disposal
    - All excavation and disposal locations
- A signed waste collection docket will be retained by the Waste Manager from the licensed waste contractor for waste taken off-site;
- 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 minimised, and a waste audit should be carried out by the Waste Manager at the site during the construction and demolition phases of the proposed development;

- Upon completion of the construction and demolition phases, a report will be prepared summarising the volumes and types of waste streams exported from site, and a summary review completed for the waste management processes which were adopted during the process;
- The audit should provide the total volumes of recycling / reuse / recovery figures for the proposed development.

6.0 RESPONSE PROCEDURE / CORRECTIVE ACTION

In the event of an environmental incident, or breach of procedure, or where a complaint is received, or in the event of encountering buried waste or contaminated soils/groundwater, the contributing factors are to be investigated, and remedial action taken as necessary. The Contractor will ensure that the following response actions will take place:

- The Project Manager must be informed of any incident, breach of procedure and/or complaint received and details must be recorded in the incident/complaint register;
- The Project Manager is to conduct/co-ordinate an investigation to determine the potential influence that could have led to the non-compliance;
- The Project Manager is to notify and liaise with the appropriate site personnel where required, e.g. Site Environmental Manager;
- The Project Manager shall notify the Client of any complaints or environmental incidents within 24 hours of occurrence. Where significant incidents occur requiring the involvement of statutory authorities or emergency services or where any pollution events occur, the Client shall be notified within 1 hour;
- If necessary, the Project Manager will inform the appropriate regulatory authority. The appropriate regulatory authority will depend on the nature of the incident;
- The details of the incident will be recorded on an Incident / Complaints Form which is to record information such as the cause, extent, actions and remedial measures used following the incident/complaint. The form will also include any recommendations made to avoid reoccurrence of the incident;
- The Project Manager will be responsible for any corrective actions required as a result of the incident e.g. an investigative report, formulation of alternative construction methods or environmental sampling, and will advise the Designer and Client as appropriate;
- The Project Manager is to ensure that the relevant environmental management plans/procedures are revised and updated as necessary.

6.1 Corrective & Preventative Action

Corrective Action Requests will be issued to ensure that prompt action is agreed and committed to, with a view to the effective resolution of any deviations from the CEMP requirements or any environmental issues.

7.0 TRAINING

Contractors should conduct safety meetings / toolbox talks on relevant EHS topics for all employees in their care on a regular basis. All construction personnel will be required to complete contractor induction and be certified with FÁS Safe-Pass or equivalent. The Contractor's Method Statement will detail the environmental awareness training and induction which is required to be undertaken by all staff, including sub-contractors. This will ensure that they are acutely aware of their responsibilities detailed within the CEMP and the associated sub-plans, as well as the Environmental Control Measures in place to ensure that the commitments/ requirements are met throughout construction. Training of all site staff and personnel will include as a minimum:

- Induction training including environmental requirements of all operatives and subcontractors;
- More detailed training for staff or sub-contractors with specific environmental responsibilities;
- Tool box talks will reflect the type of works being undertaken and the environmental impacts that may result from these activities e.g. training on water pollution prevention before works near watercourses. Training to be given will include the contents of this CEMP incorporating the following as appropriate:
  - Protected species/habitats
  - Invasive species
  - Environmental incidents
  - Water pollution prevention
  - Spill control and spill kits
  - Dust and air quality
  - Noise
  - Erosion and sediment control
  - Storage and use of petrol, diesel, and oils
- Any contract specific information will be briefed to all staff and displayed on notice boards. Training records regarding any environmental training will be provided on site by the Contractor;
- Any works which require a site-specific method statement will require a toolbox talk to be provided to all personnel involved. This is to ensure that the Environmental Control Measures in place are understood and practiced.

8.0 CEMP

This document provides an outline Construction Environmental Management Plan (oCEMP), and omits specific details which are not yet available, given that the project is still within the planning stage. Once specific details become available, a detailed CEMP should be developed, and will thus supersede this oCEMP document.

McAdam
ENHANCING LOCAL COMMUNITIES

NORTH DUBLIN STREET MONAGHAN
BACKLANDS REGENERATION
BUILDING 57C

Structural Inspection

PREPARED BY	CHECKED BY	APPROVED BY	ISSUE	DATE
B Owens	B Owens	N Kerr	01	13/2/2025
B Owens	B Owens	N Kerr	02	21/2/2025

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1 Introduction

As part of Dublin Street Monaghan, Backlands Regeneration, it is proposed that several structures, including the structure referenced as Building 57C, would be demolished.

The buildings 54 to 57 Dublin Street, Monaghan, are protected structures. Building 57C is separate from the buildings on Dublin Street but it is within the curtilage of the protected structure 57 Dublin Street. The building reference 57C is taken from the Cultural & Architectural Heritage Report for the scheme.

McAdam Structural Engineers have inspected 57C to assess its condition. The inspection was made by a Chartered Structural Engineer on 6th February 2025. Observations were made from ground level. An aerial drone was employed to view the structure from above. Access to the building interior was not possible due to dense vegetation and security barriers.

Figure 1 Location Plan

2 Existing Structure

Building 57C is a derelict two-storey outbuilding. It is heavily overgrown with dense vegetation including mature trees. Only the west and south-west walls are visible. The west wall is constructed of partially coursed stone rubble. The south-west gable is brick with openings for a single pedestrian door and possibly a window.

The roof appears to be largely absent. The top of the building is totally obscured by foliage. The building interior could not be inspected. Mature trees and vegetation are established within the building. It is unlikely that any internal floors remain. Mature trees are established close to the south-east side.

Figure 2 Estimated outline of original building

Figure 3 South-west gable

Figure 3 West wall

3 Conclusion

57C is beyond structural remediation. It is likely that removal of vegetation would destroy the remaining elements of the former building. The roots of the internal and external mature trees will have penetrated under the walls. Vegetation has penetrated through the coursing of the south-west wall. The roof and any internal floor structure appear to have collapsed.
Adjacent structures will be demolished. The removal of the adjacent structures will further destabilise the remaining walls of 57C.
Demolition of 57C is the most appropriate structural approach.

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5 Scoping & Consultation

5.1 Scoping Response

5.2 Inspectors Report

Our Case Number: ABP-319743-24

Your Reference: Monaghan County Council

An Bord Pleanála

Carlin Planning
Suite 1, Bamford House
91-93 Saintfield Road
Belfast
Antrim
BT8 7HL
Northern Ireland

Date: 14 August 2024

Re: Dublin Street and lands to the northeast of Dublin Street, Old Cross Square, Monaghan Town, townlands of Roosky and Tirkeenan, Co. Monaghan.
The proposed development will assist the regeneration of Dublin Street and back lands to the north, the Diamond Centre Car Park and Old Cross Square.

Dear Sir / Madam,

In response to your request please now be advised that the following constitutes the Board's written opinion on the information to be contained in the environmental impact assessment to be prepared in respect of the above-mentioned proposed development.

1. ***The Proposed Development*** – to include information on the site, design, size and other relevant features of the proposed development. The description of the project should make specific reference to demolition works that may be required as part of or to facilitate the development. In the case of the subject development, the description of development should include its context with regard to other permitted and proposed developments on the overall site and adjoining the site and the extent of any demolition works required. The proposed development should be described in scaled drawings, photographs and photomontages.

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2. The Existing Environment - The existing environment and the impacts of the development are explained by reference to its possible impact on the following environmental factors:

- Population, and Human Health,
- Biodiversity with particular attention to species and habitats protected under the Habitats and Birds Directive,
- Land, Soil, Water, Air and Climate,
- Material Assets, Cultural Heritage and the landscape,
- The interaction between the above factors

In terms of the receiving environment, the EIAR shall include all areas that would be impacted upon, directly or indirectly, during the construction and operational phases of the proposed development. The information contained in the EIAR should therefore be based on comprehensive up-to-date surveys of the area and have regard to updated data bases which may exist in terms of architectural heritage and ecology. The EIAR should accurately describe the receiving environment in terms of geology, geomorphology, hydrology and hydrogeomorphology, as well as a physical description of the site proposed for development.

3. The Likely Significant Effects of the Proposed Development - all impacts should be identified in the first instance and should address direct, indirect, secondary, cumulative, short, medium and long-term, permanent, temporary, positive and negative effects as well as impact interactions. None of the topics outlined above (Population and Human Health etc.) should be omitted, although their level of detail may differ depending on the likelihood of impacts.

In accordance with the requirements of Article 94 of the Planning and Development Regulations, 2001 (as amended), the EIAR shall contain a reference list detailing the sources used for the impact descriptions and assessments used in the EIAR.

The EIAR should also contain a list of experts and their competencies who contributed to the development of the report, identifying for each expert, the part of the EIAR for which he/she is

responsible, his/her experience or expertise and any additional information considered relevant to demonstrate the persons competence in the preparation of the EIAR.

An assessment of the impact of the proposed development is required, with an assessment of any potential cumulative impact of existing and permitted developments in the vicinity. The assessment of cumulative impacts in the EIAR should also have regard, as far as is practicable, to the likely effects arising from future phases of the Dublin Street North Regeneration Plan and the adjoining areas covered by South Dublin Street Regeneration Area and the Roosky Masterplan.

Further to the above, details of the environmental impacts of the development during the demolition, excavation, construction and operational phases of the development should also be described and assessed by reference to baseline information which should be collated and presented within the EIAR. The environmental impact of the aforementioned phases, including in particular noise and vibration impacts arising from the demolition works and construction phase impacts in terms of materials storage and containment within the site should also be described and assessed.

The EIAR will be required to provide information regarding the nature, quantities and source of materials to be used in the overall development. Information will also be required on volumes and nature of waste materials likely to be generated in the demolition phase and proposed means for disposal of same.

The EIAR should also provide an assessment of potential impacts 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.

4. The Measures to Mitigate Adverse Impacts – The EIAR shall give a description of the features of the proposed development and measures envisaged to avoid, prevent, reduce and, if possible, offset likely significant adverse effects on the environment. Where potential adverse impacts are likely to result, appropriate mitigation measures shall be identified where necessary – and shall clearly indicate where and with whom responsibility for the implementation of the

mitigation measures lies. The EIAR shall also provide information relating to the monitoring of the impacts of the development on the environment.

5. The Consideration of Alternatives - The consideration of alternatives, in terms of location and design, as well as proposed uses, should also be addressed in the EIAR and should comprise a description of the reasonable alternatives relevant to the proposed development which were studied and the reason for the option chosen having regard to the effects on the environment. In undertaking this assessment of alternatives, the following should be borne in mind:

- It is not a requirement to revisit issues considered in the formulation of policy that has been the subject of SEA.
- Alternatives should be relevant to the project and its specific characteristics.
- The assessment of alternatives should include a description of the current state of the environment without implementing the project, i.e. the Do-Nothing scenario. This assessment should be the starting point for the consideration of impacts in the EIAR.

In the assessment of alternatives, the level of detail provided should be reasonable and commensurate with the project.

6. A Non-Technical Summary - The EIAR must contain a non-technical summary of the detailed information contained within the EIAR. The language of this summary shall be non-technical in nature, devoid of jargon and should provide clear details of the environmental effects the development will have, as well as all significant effects and mitigation measures proposed. The description of the development in this summary should clearly explain and describe all aspects of the proposed development such that the EIAR is accessible in terms of public understanding of the process and to facilitate full public participation and consultation in the process.

In terms of specific environmental topics, the development is likely to impact upon, the EIAR should, in particular, address the following matters:

- Population, and Human Health
- Biodiversity (for example fauna and flora, including ornithology and bats),
- Land (for example land take), Soil (including contamination, compaction, sealing), Water (for example hydro morphological changes, quantity and quality), Air and Climate (including greenhouse gas emissions),
- Material Assets (including waste, transport, cycling and walking infrastructure and connections and existing and proposed services and infrastructure, including capacity),
- Cultural Heritage, (including architectural and archaeological aspects),
- Landscape and Visual Impact, and,
- Interactions between the above factors.

An outline of the specific issues considered relevant to the EIAR under these headings is given in the following sections:

7. *Population, and Human Health*

- As identified in the submitted Scoping Report, the scope of human health and the consideration of associated impacts extends to the assessment of those environmental factors which might lead to effects on human health (including air quality, noise, transport, contamination risks, as well as drainage and flood considerations).

- Given the nature of the existing site the EIAR should specifically address the likely effects on the health and safety of surrounding populations during all phases of the development, including demolition, excavation, construction and operational phases.

- An assessment of the impact of the proposed development on the availability of local recreational facilities and overall level of amenity and the potential impacts arising for population and human health should be addressed in the EIAR.

8. *Biodiversity*

- Given the brownfield nature of much of the site, and its location within an urban setting, the EIAR should provide a clear baseline assessment of the existing receiving environment and the impact of the development on the ecology of the receiving environment.

- The EIAR should address any potential for disturbance arising from the construction activity and particularly any works required to remove any existing structures and hard surfaces. In particular, the potential for disturbance to any species using the river channel (Shambles River) or banks to this watercourse should be assessed.

- The scope and nature of the surveys, including habitat surveys, mammal surveys, invasive species surveys, as outlined in the submitted EIA Scoping Report (Section 10) should be reviewed with the NPWS section of the Department of Housing, Local Government and Heritage, and work should comply with best practice for seasonality and scope, and the comments of the Development Applications Unit on these issues should be sought.

- The EIAR should address the potential for the enhancement of the biodiversity of the site arising from the development and the measures undertaken to maximise these impacts.

- The presence of Japanese Knotweed on the site is noted in the EIAR Scoping document and the EIAR should contain an Invasive Species Management Plan to address the removal of this species and other invasive species (if present) and the subsequent treatment of the affected areas.

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9. *Land, Soil, Water, Air and Climate*

Land and Soil

- The EIAR Scoping Report (section 9) states that it is proposed to scope out geology and soils, while it is proposed to scope in hydrogeology.

- Having regard to the invasive species on site which may impact soils and the yet unknown quantities and description of materials to be disturbed and/or excavated on the site, together with reference to potential risks associated with contamination that are stated to have been identified, it is considered that soils and geology should be scoped in for consideration in the EIAR.

- The EIAR should provide information relating to the amount and description of materials disturbed or excavated on the site and proposals for the storage, reuse and disposal of material excavated or otherwise generated during the demolition and construction phases of development. Particular attention should be paid to the identification, removal and management of any contaminated soil.

- The impact of excavations required as part of the development should describe, assess and mitigate the potential impact of the proposed development on existing sub surface services that may be present on the site.

- An assessment of the impact of such excavations or other ground disturbances on surface and subsurface waters (culvert features) should be provided.

- Provide details of the types and nature of materials imported to the site during construction together with construction methods to be employed and measures to prevent the importation of invasive species.

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- Mitigation measures to prevent or minimize emissions from the site during demolition and construction phases, should also be provided.

Water

- The impact of materials to be excavated and/or stored on the site will require to be considered in terms of the potential impact on surface and ground waters in the area of the site, in particular impacts on the adjoining Shambles River and the Ulster Canal including any sub-surface features/culverts relating to these watercourses. Changes to the existing hard surface will lead to alterations in surface water drainage patterns and the existing on-site surface and sub-surface water drainage system should be clarified as part of the EIAR and application documentation, and the impacts of the proposed development on these existing drainage networks should be clearly set out.

- In the vicinity of the site boundary there is flood risk – medium probability on the banks of the Shambles River. The EIAR should assess potential flooding impacts and risks in accordance with the document "The Planning System and Flood Risk Management – Guidelines for Planning Authorities" published by the OPW in November 2009.

- Also, with regard to flooding, the EIAR should detail how sustainable drainage methods are proposed to be incorporated into the design and the impact of the development on existing surface water discharges from the site to the local drainage network.

- With regard to hydrogeology, the EIAR Scoping Report notes that the site is within a Public Supply Source Outer Protection Area which indicates that it is within the zone of contribution to a public groundwater supply and works have the potential to cause alterations to groundwater flow. Ground investigations data is considered necessary to inform the EIAR.

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- The EIAR should provide information relating to the coordinated provision of physical infrastructure and services, in terms of the cumulative impact of any other proposals contained in the local area action plans / regeneration plans for the surrounding area.

- Assessments regarding flood risk and drainage should detail and make provision for the accommodation of climate change impacts.

Air and Climate

- Regarding impacts on ***air***, it is considered that this will be potentially relevant during the demolition and construction phases and the operational phase of the proposed development. The EIAR should therefore provide appropriate and up-to-date baseline data and describe any mitigation measures deemed necessary to minimise adverse impacts on air quality in the vicinity of the site and to mitigate dust and airborne pollution.

- Impacts on ***climate*** and greenhouse gas emissions, it is considered that this will be relevant during the construction and operational phase of development (i.e. through the creation of new vehicular route). The EIAR should therefore provide appropriate and up-to-date baseline data and describe any mitigation measures deemed necessary to minimise greenhouse gas emissions.

10. *Material Assets, Cultural Heritage and Landscape*

Material Assets

- Given the town centre location of the site, a description of the ***traffic impacts*** resulting from the proposed development shall be provided. The EIAR should address traffic generated by the development, during demolition, construction and operational phases, and should include information on the volume and type

of traffic (including details of any unusually heavy, high or wide loads) likely to be generated during these phases of the development and the impact on main junctions in the vicinity of the site, notably the junctions at Diamond junction, Old Cross Square junction with Dublin Street and Dublin Street Roundabout.

- The EIAR should clearly provide details regarding proposed traffic routes to and from the site, during the demolition, construction and operation phases of the development.

- In considering traffic-related issues, the EIAR should address any cumulative issues which may arise in the overall development of lands covered by the adjoining adopted regeneration plans (South Dublin Street & Backlands Regeneration Plan, Roosky Lands Masterplan and Dublin Street North Regeneration Plan) and should have regard to other major developments in the vicinity of the site.

- The development shall be described in terms of its permeability with surrounding areas and the traffic arrangements which will facilitate such permeability, including pedestrian and cycle traffic and having regard to the Monaghan Land Use and Transportation Study (MULTS).

- The EIAR should describe, assess and mitigate the potential impact of the proposed development on existing sub surface services that may be present on the site. Proposals for new services and infrastructure shall be similarly assessed including where Uisce Éireann infrastructure is proposed/impacted. Consultations with Uisce Éireann are considered necessary.

Cultural Heritage: Archaeology and Built Heritage

- The entire site and adjoining lands are located within the Monaghan Town Centre Zone of Archaeological Importance, there are several Recorded Sites

and Monuments in the study area including two Sites of Archaeological Importance adjoining or within the site.

- Given the nature and location of the subject site, it is likely that development on site would have potential impacts on the archaeological heritage of the area. It is recommended that this issue be specifically investigated, and the results presented in the EIAR. The EIAR should assess the impact of the proposed development and potential cumulative impacts with other developments on the archaeological heritage of the area (including the South Dublin Street & Backlands Regeneration Plan, the Roosky Lands Master Plan, the Dublin Street North Regeneration Plan and the Part 8 consented development for civic offices to the north of Dublin Street).
- Baseline archaeological data should be provided for the site including location, extent and nature of any existing archaeological finds. Proposed mitigation measures to be undertaken, where such archaeological remains will be affected, shall be described.
- It is recommended that prior to finalisation and submission of the EIAR that the National Monument Section of the Department of Housing, Local Government and Heritage would be consulted with regard to extent and methodology of archaeological investigations at the site appropriate to inform the EIAR.
- The site is partly located within and adjacent to two ***Architectural Conservation Areas*** (Dublin Street & The Diamond). The EIAR should assess the impact of the proposed development and potential cumulative impacts with other developments on the lands on the character of the ACAs (including the South Dublin Street & Backlands Regeneration Plan, the Roosky Lands Master Plan, the Dublin Street North Regeneration Plan).
- The impact of the proposed development on the character and setting of ***Protected Structures and NIAH Structures***, and other similar structures located within and adjacent to the site should be included in the EIAR. Such structures include buildings along Dublin Street (including 54, 55, 56 & 57 Dublin Street, the First Presbyterian Church & no.10 Dublin Street) and the Old Town Cross.

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- The EIAR should assess the impact of the proposed development and potential cumulative impacts with other developments on the character and setting of Protected Structures and NIAH Structures (including the South Dublin Street & Backlands Regeneration Plan, the Roosky Lands Master Plan, the Dublin Street North Regeneration Plan).
- Consideration should also be given to other structures of architectural and historical merit (which may not be included in the RPS and NIAH for Monaghan) which are on site and those at a remove from the site, but which may be affected due to works associated with the proposed development.
- It is recommended that prior to finalisation and submission of the EIAR that the Built Heritage Section of the Department of Housing, Local Government and Heritage would be consulted.

Landscape

- The EIAR should include description of the proposed planting and landscaping of the site, both hard and soft to include materials, levels and plant species. This information should be augmented by a detailed landscaping and planting plan for the development.
- An assessment of the proposed development on the receiving urban landscape will be required to be undertaken as part of the EIAR. This assessment should address existing visually prominent and functional features in the urban landscape and should provide an assessment of the visual impact of the development as it relates to the surrounding heritage areas including the ACAs, Protected Structures and NIAH Structures in the vicinity.
- The landscape section of the EIAR should include a series of photomontages or other forms of visual aid, and the views should be taken to and from the surrounding locations including the surrounding streets (including sensitive receptors such as the ACAs, Protected Structures & NIAH Structures in the vicinity and through at least one of the pedestrian connections on Dublin Street), and other locations including to the north at site of the permitted civic offices.

11. ***Interactions between the above factors***

The EIAR should include detailed consideration between the above factors were considered relevant. A separate chapter with a schedule of all mitigation measures should be included.

Attached for your information is a copy of the Inspector's report, along with a copy of the 3 submissions received on this case.

Yours faithfully,

Breda Ingle
Executive Officer
Direct Line: 01-8737291

ES14

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An Bord Pleanála

Inspector's Report
ABP 319743-24

Development	Regeneration of Dublin Street and back lands to the north, the Diamond Centre Car Park and Old Cross Square.
Location	Dublin Street and lands to the northeast of Dublin Street, Old Cross Square, Monaghan Town, townlands of Roosky and Tirkeenan, Co. Monaghan.
Planning Authority	Monaghan County Council
Applicant	Monaghan County Council
Type of Application	EIA Scoping request under Article 95 of the Planning and Development Regulations, 2001 as amended.
Date of Site Inspections	8th August 2024
Inspector	Alaine Clarke

1.0 Site Location and Description

1.1. The site is located in Monaghan Town Centre and comprises Dublin Street, east of The Diamond eastwards to the roundabout junction on Broad Road, known as Old Cross Square. The site also includes land to the rear of street frontage buildings to the north of Dublin Street. The surrounding area is characterised by a mix of retail, commercial, community, residential and ecclesiastical buildings and surface carparking.

1.2. The site is bound to the west by the open plaza and buildings at The Diamond and by the 2 and 3-storey commercial buildings along Dublin Street; south of which is Monaghan Shopping Centre and car park; to the southwest lies the First Presbyterian Church and graveyard; and to the south, the site is bound by Old Cross Square and associated buildings which frame the square. The Shambles River and the Ulster Canal are culverted below Old Cross Square and flow easterly direction. There are a number of pedestrian access points to the site off Dublin Street. Dublin Street operates as a one-way system with traffic travelling in a easterly direction.

1.3. The site falls gradually along Dublin Street toward Old Cross Square, while land to the rear of Dublin Street to the north, rises gradually, before rising steeply into an area known as the Roosky Masterplan area.

1.4. The site lies within a Zone of Archaeological Importance and includes recorded monument Market Cross (SMR MO009-060006) which is located at Old Cross Square. The site adjoins/is proximate to several protected structure and/or structures listed in the National Inventory of Architectural Heritage (NIAH). Part of the site is located within the Dublin Street Architectural Conservation Area (ACA) and it is proximate to The Diamond ACA to northwest and several others in the area.

1.5. There are a number of sensitive natural heritage sites in the wider area including Slieve Beagh SPA to the northwest along with and several NHA designated lakes, bogs and woodlands, and Lough Neagh and Lough Beg SPA to the far northeast in Northern Ireland.

2.0 Proposed Development

2.1. The site forms part of the lands covered by the Dublin Street North Regeneration Plan adopted by the Council under variation no. 3 of the Monaghan County Development Plan 2019-2025.

2.2. The proposed Public Realm Scheme would comprise:

- Creation of new shared surface, 'Russell Row' to the rear of properties fronting Dublin Street;
- Public realm improvements along Dublin Street to include resurfacing, new pedestrian pavements (including widening), relocation of some 30 no. car parking spaces along Dublin Street, Old Cross Square and the Diamond;
- Temporary car park / event space;
- Public realm improvements to include the creation of urban civic spaces; pedestrian pavements, tiered garden including DDA ramp access, steps, street furniture, landscaping;
- Creation of new public park area;
- Creation of future development plots;
- Reinforcement of existing vegetation and new soft landscaping throughout;
- New boundary treatments;
- Repositioning of existing monument at Old Cross Square (to a location adjacent to existing and within the Square);
- Lighting;
- Upgrading and installation of new utility services and CCTV;
- Demolition of properties, outbuildings as necessary to facilitate the scheme;
- All other associated site and developments work.

2.3. The EIA Scoping Report submitted with the scoping request concluded that the proposed development met the thresholds that trigger a mandatory requirement for EIA and EIAR. The project has been screened under Part 2, Schedule 5 of the Planning and Development Regulations 2001, as amended. It was considered that the proposed development falls within Category 10(b)(Vi) of Part 2, Schedule 5: "10. Infrastructure Project (iv) Urban development which would involve an area greater

than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere".

2.4. The EIAR Scoping Report states that an Appropriate Assessment (AA) Screening will be undertaken once the scheme had developed to the final stages but that a high-level AA Screening considered that the proposals are unlikely to have significant impacts on the Natura 2000 site and any potential for impacts are localised.

3.0 Article 95(2) Planning & Development Regulations, 2001 as amended by Article 24 of the 2006 Regulations

3.1. In accordance with Article 95(2) of the Planning and Development Regulations, 2001 (as amended) the Board requested submissions or observations from the following prescribed bodies:

- Department for Housing, Local Government and Heritage,
- Department for Environment, Climate and Communications,
- Environmental Protection Agency,
- Waterways Ireland,
- Inland Fisheries Ireland (IFI),
- The Heritage Council,
- An Chomhairle Ealaion,
- Failte Ireland,
- An Taisce,
- Transport Infrastructure Ireland (TII), and
- Irish Water

3.2. Responses were received from the IFI, TII and the Department of Housing, Local Government and Heritage.

3.3. **IFI**

3.3.1 IFI states that the Shambles River, a tributary of the Monaghan Blackwater River, flows under Old Cross Square. The Shambles River contains fisheries habitat and

supports stock of coarse fish and pike. The WFD Ecological status of the waterbody at this location is 'poor' and 'at risk' of not achieving 'good' status. The Monaghan Blackwater River is valuable from a fisheries perspective as it supports stocks of trout and lamprey among other species. The ecological status of the Blackwater (Monaghan) is 'poor' and 'at risk' of not achieving 'good' status. It is stated that the issues to be addressed in the EIA with regard to the fisheries environment relate largely to surface water management in the project area both during and following construction works.

3.3.2 During construction, all construction work should be in accordance with a Construction Environmental Management Plan (CEMP). Reference is made to the IFI document *Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters.*

3.3.3 Ground preparation and associated construction works have significant potential to cause the release of sediments and pollutants into surrounding watercourses and could have a significant negative impact on water quality and aquatic fauna and flora.

3.3.4 Construction works should be planned so as to prevent extensive tracts of silt being exposed at any time and recommend an undisturbed filter strip (minimum 10m) is left along the watercourse, with protective silt fencing, to safeguard the stream in advance of works.

3.3.5 The CEMP should have particular regard in relation to bio security to prevent the spread of hazardous invasive species and pathogens

3.3.6 Storm water management should be designed in accordance with the guidance document Nature-based solutions for the *Management of Rainwater and Surface Water Run-off in Urban Areas.*

3.4. **TII**

3.4.1 TII seek to uphold official policy and guidelines as outlined in the Section 28 Ministerial Guidelines 'Spatial Planning and National Roads Guidelines for Planning Authorities' (2012) and other relevant guidance available on its website.

3.4.2 Reference is made to observations previously made to Monaghan County Council in relation to the development proposals and the Roosky Lands Masterplan subject to

Variation no. 4 of the Monaghan County Development Plan and a copy of same is attached.

3.4.3 Noting that the lands the subject of the regeneration proposal adjoin the N54, national secondary road, reference is made to official policy to maintain the strategic capacity and safety of the national road network in the area, including section 28 Spatial Planning and National Roads Guidelines for Planning Authorities.

3.4.4 In respect of scoping, regard should be given to:

- Consultations with local authority/National Roads Design Office regarding locations of national road schemes;
- Potential significant impacts the development would have on the national road network and associated junctions proximate to the proposed development;
- Any EIA and conditions and/or modifications regarding road schemes in the areas and potential cumulative impacts;
- TII publications, e.g. a Design Report in accordance with DN-GEO-03030 may be required, and Environmental Assessment and Construction Guidelines;
- European Communities (Environmental Noise) Regulations, 2018 including how the development will affect future action plans; consideration of noise barriers to reduce noise impacts.
- Subject to meeting appropriate thresholds, a Traffic and Transport Assessment should be carried out. Regard should be given to section 2.2 which relates to sub-threshold TTA of the Traffic and Transport Assessment Guidelines (2014).
- Any costs of improvements to national roads to facilitate the private development proposed will be the responsibility of the developer.
- The Local Transport Plan (LTP) for Monaghan;
- Determination whether a Road Safety Audit is required;
- The EIAR should identify the methods/techniques proposed for any works traversing/in proximity to the national road network;
- Haul routes should be clearly identified and where abnormal weight loads are proposed, separate structure approvals/licences may be required.

3.4.5 The copy of the 2022 Submission, appended to the current submission, in respect of the Roosky Lands Masterplan relates to transport analysis and design standards

recognising the need to safeguard the strategic function of the adjoining road network.

3.5. Department of Housing, Local Government and Heritage

3.5.1 Following the receipt of a late submission and a subsequent invitation to submit a submission, a valid submission was received from the Department of Housing, Local Government and Heritage. The following points were raised:

- The proposed works are situated within the zone of archaeological potential established around the historic town of Monaghan, Recorded Monument *MO009-060--- Town* which is subject to statutory protection in the Record of Monuments and Places,
- If the proposed development involves works at and in proximity to a national monument or a monument in the ownership of the Local Authority, all such works will require Ministerial Consent,
- The Department has real concerns, in particular as there will be a direct impact on *MO009-06004- Town Defences* and *MO009-06006- Market Cross*, stating the Archaeological Impact Assessment (AIA) that has been attached to the scoping document does not contain sufficiently detailed information and note that a more detailed assessment will be included in the EIAR.
- The Archaeologist submit a proposed methodology for the approval to the Department and National Museum of Ireland in advance of the design phase in respect of the proposed relocation *MO009-06006- Cross.*
- Preservation in-situ must always be the first option to be considered rather than preservation by record.

4.0 Legislative Context

4.1. Planning and Development Act, 2000 (as amended) and Planning and Development Regulations, 2001 (as amended)

The formal Scoping Request from Monaghan County Council on the information to be contained within the EIAR was submitted under Article 95 of the Planning and Development Regulations, 2001(as amended) for a development proposed under Section 175 of the Planning and Development Act, 2000 (as amended).

Section 173(3) (a) of the Act states as follows:

"Where a person is required by or under this Act to submit an environmental impact statement to the Board, he or she may, before submitting the statement, request the Board to provide him or her with its opinion as to the information that should be contained in such statement, and the Board shall on receipt of such a request provide such opinion in writing."

Article 95 of the Regulations (as amended by Article 24 of the 2006 Planning & Development Regulations) deals with the procedures for Scoping Requests, and provides details of the level of information to be submitted in order for the Board to provide a written opinion pursuant to the request.

Article 117 of the Regulations relates to Local Authority Development and provides that before making an application for approval to the Board under section 175(3) of the Act, a local authority may, in accordance with article 95, request the Board to provide a written opinion on the information to be contained in the EIAR.

Schedule 6 of the *Planning and Development Regulations, 2001*, sets out the information required to be contained within an EIAR. The EIAR must contain the information specified in section 1 and the information specified in section 2 to the extent that the information is relevant to the nature of the development in question and to the environmental features likely to be affected.

In providing such a *'written opinion on the information to be contained in the EIS'*, it is considered appropriate to have regard to the following Guidelines:

4.2. **EPA Guidelines on the Information to be contained in Environmental Impact Statements, 2022**

Section 3.3 deals with scoping and provides that the scoping process identifies the issues and emphasises those that are likely to be important during EIA and eliminates those that are not. The Guidelines provide that scoping must be focused on issues and impacts which are environmentally based, are likely to occur, and are significant and adverse.

Section 3.3.4 relates to scoping and includes Key Scoping Criteria, Consideration of Other Assessments and Selection of Headings Under Which to Arrange Issues. It states that all parties should be aware of the need to keep the EIAR as tightly

focussed as possible, and that scoping is usually guided by criteria including the use of 'Likely' and 'Significant' as the principal criteria for determining what should be addressed. It provides for the consideration of Precedence and Interactions. Any issues that do not pass this test should be omitted (scoped out) from further assessment.

Section 3.3.5 considers the extent to which other assessments may address some types of effects adequately and appropriately, such as Strategic Environmental Assessment (SEA) which is a higher tier form of environmental assessment that examines plans and programmes.

Section 3.3.6 identifies the headings under which to arrange issues and states that the prescribed environmental factors must all be addressed in an EIAR. As they are a necessary simplification of the relevant components of the environment, each factor is typically explored by examining a series of headings and/or topics relevant to that factor, as indicated by the examples included in Annex IV of the Directive. These headings and topics are generally identified during the scoping process.

Section 3.3.7 relates to Ongoing Scoping throughout the preparation of an EIAR to allow for the consideration of any new information or analysis that emerges after the initial scoping stages which indicate that additional issues should be considered.

Section 3.3.8 relates to Design Review to allow for a project design to be adapted and continually reviewed in light of predicted environmental effects emerging during the preparation of an EIAR.

Annex IV(4) of amended Directive 'A description of the factors specified in Article 3(1) likely to be significantly affected by the project: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydro morphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.'

4.3. **EPA 'ADVICE NOTES ON CURRENT PRACTICE (in the preparation of Environmental Impact Statements)', 2003**

These Advice Notes are designed to accompany the *Guidelines on the Information to be contained in Environmental Impact Statements*, also published by the EPA. The Advice Notes contain greater detail on many of the topics covered by the Guidelines and offer guidance on current practice for the structure and content of Environmental Impact Statements. The Advice Notes are divided into five sections, each providing detailed guidance on specific aspects to be considered in the preparation of an EIS.

5.0 Planning History

5.1. There is an extensive planning history relating to the surrounding town centre area the most recent planning applications of note are:

ABP 314501-22: Permission sought by Monaghan County Council for South Dublin Street and Bucklands Regeneration Project. The proposed development covers an area of approximately 2.72 hectares and comprises urban regeneration and public realm proposals. No decision at this time.

ABP 309071-21: Environmental Impact Assessment Scoping Request in respect of a public realm scheme at South Dublin Street & backlands (relates to ABP 314501-22).

ABP 301542 / MCC 17/453: Under construction - a single storey discount foodstore at the junction of Macartan Road (N54) and the R162 (Glen Road).

MCC 2343: Permission granted for development consisting of i) change of use of guest house accommodation 11 no. bedrooms to 3 no. apartments, ii) provision of communal amenity area, bin store and bike store and all associated site works.

Part 8 Developments:

- Part 8 Monaghan County Council Civic Offices – construction of new civic offices and associated infrastructure to the rear of Dublin Street north, approved (May 2024), directly adjoins the site.
- Part 8 1030801: Consent sought for environmental enhancement works on Dublin Street and The Diamond.

- Part 8 1030802: Consent sought for environmental enhancement works to Old Square, Monaghan, including a roundabout and relocation of the Old Cross monument.

6.0 Policy Context

6.1. Monaghan County Development Plan, 2019-2025

Zoning objectives: located within Town Centre zone.

Specific Objectives: covered by Local Area Action Plans (N & S of Dublin Street and Indicative New Road Proposals.

Archaeological Heritage:

- Zone of Archaeological Importance
- Sites of Archaeological Importance within/adjoining the site:
    - Old Cross Square
    - SE of The Diamond
- Site of national monument:
    - Old cross

Built Heritage:

- Within Dublin Street Architectural Conservation Area (ACA) and adjacent to The Diamond ACA.
- Several Protected Structures in and adjacent to the site including:
    - Old Town Cross
    - First Presbyterian Church & graveyard, Dublin Street
    - 54, 55, 56 and 57 Dublin Street
    - 24 Dublin Street
- Several NIAH structures in vicinity, including:
    - First Presbyterian Church, Dublin Street
    - Birthplace of Gavan Duffy (10 Dublin St.)
    - Monaghan Town Hall, Dublin Street
    - Sean McKenna House, Dublin Street.

6.2. **Dublin Street North Regeneration Plan**

6.2.1 The purpose of the plan is to provide guidance on the development options for the future development of the Regeneration Plan study area, and to provide recommendations on realising the potential in retail and non-retail sectors, residential and employment sectors, creating linkages between regeneration areas amongst others.

6.2.2 Guidance is provided in relation to pedestrian and vehicular access, the reuse and adaptation of existing Dublin Street plots, the overall block layout and potential new development areas, areas of open space, parking, and potential connections with the existing street network and 'entries' from Dublin Street.

6.3. **South Dublin Street & Backland Regeneration Plan**

6.3.1 This plan seeks to provide guidance on the regeneration options for the future development of the area. It seeks to provide a range of civic spaces to support and animate the area, enhance the existing public realm on Dublin Street, with design for improved pedestrian use, and appropriate accommodation for vehicular access, services and parking, and to prioritise the design and implementation of a scheme to upgrade the public realm of the backlands are including a walkway along the River Shambles.

6.4. **Roosky Masterplan**

6.4.1 The purpose of the plan is to provide guidance on the development options for the future development of the Regeneration Plan study area and to provide guidance in relation to land uses compatible with County Council Corporate Headquarters, detail on indicative block layouts, access solutions, parking layout, amenities and pedestrian and vehicular linkages with the town centre/wider town area.

6.5. **Natural Heritage Designations**

There are several sensitive sites in the wider area including NHA designated lakes, bogs and woods. The closest European sites are listed below:

European site	Separation distance
Slieve Beagh SPA	c.10km NW

Maheraveely Marl Loughs SAC	c.12km W
Slieve Beagh-Mullaghfad-Lisnaskea SPA (NI)	c.15km NW
Slieve Beagh SAC (NI)	c.15km NW

7.0 Scoping Opinion

7.1. General Requirements

7.1.1. Schedule 6 of the *Planning and Development Regulations, 2001 (as amended)*, sets out the information required to be contained within an EIAR. The EIAR must contain the information specified in section 1 and the information specified in section 2 to the extent that the information is relevant to the nature of the development in question and to the environmental features likely to be affected.

7.1.2. In terms of the requirements of Schedule 6, and to assist assessment and increase clarity, the Environmental Impact Assessment Report (EIAR) should be systematically organised to provide sections described below.

7.2. ***The Proposed Development*** - to include information on the site, design, size and other relevant features of the proposed development. The description of the project should make specific reference to demolition works that may be required as part of or to facilitate the development. In the case of the subject development, the description of development should include its context with regard to other permitted and proposed developments on the overall site and adjoining the site and the extent of any demolition works required. The proposed development should be described in scaled drawings, photographs and photomontages.

7.3. ***The Existing Environment*** - The existing environment and the impacts of the development are explained by reference to its possible impact on the following environmental factors: -

- Population, and Human Health,
- Biodiversity with particular attention to species and habitats protected under the Habitats and Birds Directive.
- Land, Soil, Water, Air and Climate,

- Material Assets, Cultural Heritage and the Landscape,
- The interaction between the above factors

7.4. In terms of the receiving environment, the EIAR shall include all areas that would be impacted upon, directly or indirectly, during the construction and operational phases of the proposed development. The information contained in the EIAR should therefore be based on comprehensive up-to-date surveys of the area and have regard to updated data bases which may exist in terms of architectural heritage and ecology. The EIAR should accurately describe the receiving environment in terms of geology, geomorphology, hydrology and hydrogeomorphology, as well as a physical description of the site proposed for development.

7.5. ***The Likely Significant Effects of the Proposed Development*** – all impacts should be identified in the first instance and should address direct, indirect, secondary, cumulative, short, medium and long-term, permanent, temporary, positive and negative effects as well as impact interactions. None of the topics outlined above (Population and Human Health etc.) should be omitted, although their level of detail may differ depending on the likelihood of impacts.

7.6. In accordance with the requirements of Article 94 of the Planning and Development Regulations, 2001 (as amended), the EIAR shall contain a reference list detailing the sources used for the impact descriptions and assessments used in the EIAR.

7.7. The EIAR should also contain a list of experts and their competencies who contributed to the development of the report, identifying for each expert, the part of the EIAR for which he / she is responsible, his / her experience or expertise and any additional information considered relevant to demonstrate the persons competence in the preparation of the EIAR.

7.8. An assessment of the impact of the proposed development is required, with an assessment of any potential cumulative impact of existing and permitted developments in the vicinity. The assessment of cumulative impacts in the EIAR should also have regard, as far as is practicable, to the likely effects arising from future phases of the Dublin Street North Regeneration Plan and the adjoining areas covered by South Dublin Street Regeneration Area and the Roosky Masterplan.

7.9. Further to the above, details of the environmental impacts of the development during the demolition, excavation, construction and operational phases of the development should also be described and assessed by reference to baseline information which should be collated and presented within the EIAR. The environmental impact of the aforementioned phases, including in particular noise and vibration impacts arising from the demolition works and construction phase impacts in terms of materials storage and containment within the site should also be described and assessed.

7.10. The EIAR will be required to provide information regarding the nature, quantities and source of materials to be used in the overall development. Information will also be required on volumes and nature of waste materials likely to be generated in the demolition phase and proposed means for disposal of same.

7.11. The EIAR should also provide an assessment of potential impacts 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.

7.12. ***The Measures to Mitigate Adverse Impacts*** - The EIAR shall give a description of the features of the proposed development and measures envisaged to avoid, prevent, reduce and, if possible, offset likely significant adverse effects on the environment. Where potential adverse impacts are likely to result, appropriate mitigation measures shall be identified where necessary – and shall clearly indicate where and with whom responsibility for the implementation of the mitigation measures lies. The EIAR shall also provide information relating to the monitoring of the impacts of the development on the environment.

7.13. ***The Consideration of Alternatives***: The consideration of alternatives, in terms of location and design, as well as proposed uses, should also be addressed in the EIAR and should comprise a description of the reasonable alternatives relevant to the proposed development which were studied and the reason for the option chosen having regard to the effects on the environment. In undertaking this assessment of alternatives, the following should be borne in mind:

- It is not a requirement to revisit issues considered in the formulation of policy that has been the subject of SEA.
- Alternatives should be relevant to the project and its specific characteristics.

- The assessment of alternatives should include a description of the current state of the environment without implementing the project, i.e. the Do-Nothing scenario. This assessment should be the starting point for the consideration of impacts in the EIAR.
- In the assessment of alternatives, the level of detail provided should be reasonable and commensurate with the project.

7.14. ***Non-Technical Summary*** - The EIAR must contain a non-technical summary of the detailed information contained within the EIAR. The language of this summary shall be non-technical in nature, devoid of jargon and should provide clear details of the environmental effects the development will have, as well as all significant effects and mitigation measures proposed. The description of the development in this summary should clearly explain and describe all aspects of the proposed development such that the EIAR is accessible in terms of public understanding of the process and to facilitate full public participation and consultation in the process.

7.15. In terms of specific environmental topics, the development is likely to impact upon, the EIAR should, in particular, address the following matters:

- Population, and Human Health
- Biodiversity (for example fauna and flora, incl. ornithology and bats),
- Land (for example land take), Soil (incl. contamination, compaction, sealing), Water (for example hydro morphological changes, quantity and quality), Air and Climate (incl. greenhouse gas emissions),
- Material Assets (incl. waste, transport, cycling and walking infrastructure and connections and existing and proposed services and infrastructure, incl. capacity),
- Cultural Heritage, (incl. architectural and archaeological aspects) and
- Landscape and Visual Impact.
- Interactions between the above factors.

An outline of the specific issues considered relevant to the EIAR under these headings is given in the following sections:

7.16. **Population, and Human Health**

- As identified in the submitted Scoping Report, the scope of human health and the consideration of associated impacts extends to the assessment of those environmental factors which might lead to effects on human health (incl. air quality, noise, transport, contamination risks, as well as drainage and flood considerations).

- Given the nature of the existing site the EIAR should specifically address the likely effects on the health and safety of surrounding populations during all phases of the development, including demolition, excavation, construction and operational phases.

- An assessment of the impact of the proposed development on the availability of local recreational facilities and overall level of amenity and the potential impacts arising for population and human health should be addressed in the EIAR.

7.17. **Biodiversity**

- Given the brownfield nature of much of the site, and its location within an urban setting, the EIAR should provide a clear baseline assessment of the existing receiving environment and the impact of the development on the ecology of the receiving environment.
- The EIAR should address any potential for disturbance arising from the construction activity and particularly any works required to remove any existing structures and hard surfaces. In particular, the potential for disturbance to any species using the river channel (Shambles River) or banks to this watercourse should be assessed.
- The scope and nature of the surveys, including habitat surveys, mammal surveys, invasive species surveys, as outlined in the submitted EIA Scoping Report (Section 10) should be reviewed with the NPWS section of the Department of Housing, Local Government and Heritage, and work should comply with best practice for seasonality and scope, and the comments of the Development Applications Unit on these issues should be sought.

- The EIAR should address the potential for the enhancement of the biodiversity of the site arising from the development and the measures undertaken to maximise these impacts.
- The presence of Japanese Knotweed on the site is noted in the EIAR Scoping document and the EIAR should contain an Invasive Species Management Plan to address the removal of this species and other invasive species (if present) and the subsequent treatment of the affected areas.

7.18. **Land, Soil, Water, Air and Climate**

Land and Soil:

- The EIAR Scoping Report (section 9) states that it is proposed to scope out geology and soils, while it is proposed to scope in hydrogeology.
- Having regard to the invasive species on site which may impact soils and the yet unknown quantities and description of materials to be disturbed and/or excavated on the site, together with reference to potential risks associated with contamination that are stated to have been identified, it is considered that soils and geology should be scoped in for consideration in the EIAR.
- The EIAR should provide information relating to the amount and description of materials disturbed or excavated on the site and proposals for the storage, reuse and disposal of material excavated or otherwise generated during the demolition and construction phases of development. Particular attention should be paid to the identification, removal and management of any contaminated soil.
- The impact of excavations required as part of the development should describe, assess and mitigate the potential impact of the proposed development on existing sub surface services that may be present on the site.
- An assessment of the impact of such excavations or other ground disturbances on surface and subsurface waters (culvert features) should be provided.

- Provide details of the types and nature of materials imported to the site during construction together with construction methods to be employed and measures to prevent the importation of invasive species.
- Mitigation measures to prevent or minimize emissions from the site during demolition and construction phases, should also be provided.

Water:

- The impact of materials to be excavated and/or stored on the site will require to be considered in terms of the potential impact on surface and ground waters in the area of the site, in particular impacts on the adjoining Shambles River and the Ulster Canal including any sub-surface features/culverts relating to these watercourses. Changes to the existing hard surface will lead to alterations in surface water drainage patterns and the existing on-site surface and sub-surface water drainage system should be clarified as part of the EIAR and application documentation, and the impacts of the proposed development on these existing drainage networks should be clearly set out.
- In the vicinity of the site boundary there is flood risk – medium probability on the banks of the Shambles River. The EIAR should assess potential flooding impacts and risks in accordance with the document "The Planning System and Flood Risk Management – Guidelines for Planning Authorities" published by the OPW in November 2009.
- Also, with regard to flooding, the EIAR should detail how sustainable drainage methods are proposed to be incorporated into the design and the impact of the development on existing surface water discharges from the site to the local drainage network.
- With regard to hydrogeology, the EIAR Scoping Report notes that the site is within a Public Supply Source Outer Protection Area which indicates that it is within the zone of contribution to a public groundwater supply and works have the potential to cause alterations to groundwater flow. Ground investigations data is considered necessary to inform the EIAR.
- The EIAR should provide information relating to the coordinated provision of physical infrastructure and services, in terms of the cumulative impact of any

other proposals contained in the local area action plans / regeneration plans for the surrounding area.

- Assessments regarding flood risk and drainage should detail and make provision for the accommodation of climate change impacts.

Air and Climate:

- Regarding impacts on ***air***, it is considered that this will be potentially relevant during the demolition and construction phases and the operational phase of the proposed development. The EIAR should therefore provide appropriate and up-to-date baseline data and describe any mitigation measures deemed necessary to minimise adverse impacts on air quality in the vicinity of the site and to mitigate dust and airborne pollution.
- Impacts on ***climate*** and greenhouse gas emissions, it is considered that this will be relevant during the construction and operational phase of development (i.e. though the creation of new vehicular route). The EIAR should therefore provide appropriate and up-to-date baseline data and describe any mitigation measures deemed necessary to minimise greenhouse gas emissions.

7.19. **Material Assets, Cultural Heritage and Landscape**

Material Assets:

- Given the town centre location of the site, a description of the ***traffic impacts*** resulting from the proposed development shall be provided. The EIAR should address traffic generated by the development, during demolition, construction and operational phases, and should include information on the volume and type of traffic (including details of any unusually heavy, high or wide loads) likely to be generated during these phases of the development and the impact on main junctions in the vicinity of the site, notably the junctions at Diamond junction, Old Cross Square junction with Dublin Street and Dublin Street Roundabout.
- The EIAR should clearly provide details regarding proposed traffic routes to and from the site, during the demolition, construction and operation phases of the development.

- In considering traffic-related issues, the EIAR should address any cumulative issues which may arise in the overall development of lands covered by the adjoining adopted regeneration plans (South Dublin Street & Backlands Regeneration Plan, Rooskey Lands Masterplan and Dublin Street North Regeneration Plan) and should have regard to other major developments in the vicinity of the site.
- The development shall be described in terms of its permeability with surrounding areas and the traffic arrangements which will facilitate such permeability, including pedestrian and cycle traffic and having regard to the Monaghan Land Use and Transportation Study (MULTS).
- The EIAR should describe, assess and mitigate the potential impact of the proposed development on existing sub surface services that may be present on the site. Proposals for new services and infrastructure shall be similarly assessed including where Uisce Éireann infrastructure is proposed/impacted. Consultations with Uisce Éireann are considered necessary.

Cultural Heritage: Archaeology & Built Heritage

- The entire site and adjoining lands are located within the Monaghan Town Centre Zone of Archaeological Importance, there are several Recorded Sites and Monuments in the study area including two Sites of Archaeological Importance adjoining or within the site.
- Given the nature and location of the subject site, it is likely that development on site would have potential impacts on the archaeological heritage of the area. It is recommended that this issue be specifically investigated, and the results presented in the EIAR. The EIAR should assess the impact of the proposed development and potential cumulative impacts with other developments on the archaeological heritage of the area (incl. the South Dublin Street & Backlands Regeneration Plan, the Rooskey Lands Masterplan, the Dublin Street North Regeneration Plan and the Part 8 consented development for civic offices to the north of Dublin Street).
- Baseline archaeological data should be provided for the site including location, extent and nature of any existing archaeological finds. Proposed

mitigation measures to be undertaken, where such archaeological remains will be affected, shall be described.

- It is recommended that prior to finalisation and submission of the EIAR that the National Monument Section of the Department of Housing, Local Government and Heritage would be consulted with regard to extent and methodology of archaeological investigations at the site appropriate to inform the EIAR.
- The site is partly located within and adjacent to two ***Architectural Conservation Areas*** (Dublin Street & The Diamond). The EIAR should assess the impact of the proposed development and potential cumulative impacts with other developments on the lands on the character of the ACAs (incl. the South Dublin Street & Backlands Regeneration Plan, the Rooskey Lands Masterplan, the Dublin Street North Regeneration Plan).
- The impact of the proposed development on the character and setting of ***Protected Structures and NIAH Structures***, and other similar structures located within and adjacent to the site should be included in the EIAR. Such structures include buildings along Dublin Street (incl. 54, 5, 56 & 57 Dublin Street, the First Presbyterian Church & no.10 Dublin Street) and the Old Town Cross.
- The EIAR should assess the impact of the proposed development and potential cumulative impacts with other developments on the character and setting of Protected Structures and NIAH Structures (incl. the South Dublin Street & Backlands Regeneration Plan, the Rooskey Lands Masterplan, the Dublin Street North Regeneration Plan).
- Consideration should also be given to other structures of architectural and historical merit (which may not be included in the RPS and NIAH for Monaghan).which are on site and those at a remove from the site, but which may be affected due to works associated with the proposed development.
- It is recommended that prior to finalisation and submission of the EIAR that the Built Heritage Section of the Department of Housing, Local Government and Heritage would be consulted.

Landscape:

- The EIAR should include description of the proposed planting and landscaping of the site, both hard and soft to include materials, levels and plant species. This information should be augmented by a detailed landscaping and planting plan for the development.
- An assessment of the proposed development on the receiving urban landscape will be required to be undertaken as part of the EIAR. This assessment should address existing visually prominent and functional features in the urban landscape and should provide an assessment of the visual impact of the development as it relates to the surrounding heritage areas including the ACAs, Protected Structures and NIAH Structures in the vicinity.
- The landscape section of the EIAR should include a series of photomontages or other forms of visual aid, and the views should be taken to and from the surrounding locations including the surrounding streets (incl. sensitive receptors such as the ACAs, Protected Structures & NIAH Structures in the vicinity and through at least one of the pedestrian connections on Dublin Street), and other locations including to the north at site of the permitted civic offices.

7.20. **Interactions between the above factors**

The EIAR should include detailed consideration between the above factors were considered relevant. A separate chapter with a schedule of all mitigation measures should be included.

8.0 Conclusion

8.1. I consider that the above written opinion provides appropriate scoping for the EIAR to be prepared in relation to the proposed development, in accordance with the requirements of Section 173 of the Planning and Development Act, 2000 and Articles 95 and 177 of the Planning and Development Regulations, 2001.

8.2. I recommend that Monaghan County Council be furnished with a copy of this written opinion, and also copies of the submissions received under Article 95(2) of the Planning and Development Regulations, 2001, as amended.

Alaine Clarke
Senior Planning Inspector
14th August 2024

Agreed
Paul Caf
ADP.

6 Noise & Vibration

6.1 Noise Monitoring Survey

6.2 Noise Delineation Maps

Noise Monitoring Locations [see Figure 1 below]:

Figure 1. Noise monitoring positions, Dublin Street Regeneration Scheme

Table 1. Overview of monitoring period, Monaghan

Monitoring Position	Description	Start Date	End Date
M1	Dublin Street - laneway at No.53 Dublin St (short term attended survey)	31/08/2023 15:00 31/08/2023 06:00	31/08/2023 18:00 31/08/2023 07:00
M2	Old Cross Square - adjacent to 26 Old Cross Square (unattended)	31/08/2023 11:46	01/09/2023 11:00
M3	Adjacent to Building No.55b Dublin Street (rear of No.54 Dublin Street) (unattended)	21/02/2024 16:00	26/02/2024 15:00
M4	Adjacent to Building No.54F Dublin Street / Apartments at The Diamond (unattended)	29/02/2024 13:00	04/03/2024 09:00

M2 - Daytime (07:00- 23:00hrs)

Date / Time	Duration	LAeq (dB)	LAFMax (dB)	LA90 (dB)	Comments
31/08/2023 11:46	00:13:59	67.9	93.1	62.9	Road traffic noise clearly audible
31/08/2023 12:00	01:00:00	66.7	94.3	62.9	throughout monitoring period
31/08/2023 13:00	01:00:00	66.7	84.3	63.4	
31/08/2023 14:00	01:00:00	67.4	79.2	64.4	
31/08/2023 15:00	01:00:00	67.4	81.4	64.4	
31/08/2023 16:00	01:00:00	67.9	82.5	65.0	
31/08/2023 17:00	01:00:00	67.1	82.1	64.4	
31/08/2023 18:00	01:00:00	67.0	79.3	64.7	
31/08/2023 19:00	01:00:00	66.3	82.1	63.5	
31/08/2023 20:00	01:00:00	65.3	76.0	62.5	
31/08/2023 21:00	01:00:00	64.6	77.5	61.5	
31/08/2023 22:00	01:00:00	63.5	73.5	59.2	
31/08/2023 23:00	01:00:00	61.2	73.0	55.3	
01/09/2023 00:00	01:00:00	59.7	73.6	52.6	
01/09/2023 01:00	01:00:00	59.1	84.9	49.8	
01/09/2023 02:00	01:00:00	58.7	76.5	48.1	
01/09/2023 03:00	01:00:00	57.9	71.7	47.0	
01/09/2023 04:00	01:00:00	58.8	73.2	48.8	
01/09/2023 05:00	01:00:00	62.2	77.7	55.7	
01/09/2023 06:00	01:00:00	66.4	83.0	62.5	
01/09/2023 07:00	01:00:00	69.2	83.2	66.7	
01/09/2023 08:00	01:00:00	69.1	84.0	66.7	
01/09/2023 09:00	01:00:00	68.5	80.0	66.3	
01/09/2023 10:00	01:00:00	67.8	80.9	65.6	
01/09/2023 11:00	00:37:57	67.8	84.3	65.6	

M2 - Night (23:00 - 07:00hrs)

Start Time	Duration	LAeq (dB)	LAFMax (dB)	LA90 (dB)	Comments
31/08/2023 23:00	00:15:00	62.2	71.2	57.1	Road traffic noise clearly audible
31/08/2023 23:15	00:15:00	61.2	72.1	55.5	throughout monitoring period
31/08/2023 23:30	00:15:00	60.8	73.0	55.2	
31/08/2023 23:45	00:15:00	60.2	70.8	54.3	
01/09/2023 00:00	00:15:00	60.3	69.4	54.2	
01/09/2023 00:15	00:15:00	59.4	69.8	52.6	
01/09/2023 00:30	00:15:00	59.5	70.1	53.2	
01/09/2023 00:45	00:15:00	59.3	73.6	50.8	
01/09/2023 01:00	00:15:00	58.9	69.9	50.1	
01/09/2023 01:15	00:15:00	59.1	70.4	52.0	
01/09/2023 01:30	00:15:00	59.9	84.9	49.7	
01/09/2023 01:45	00:15:00	58.4	69.9	48.2	
01/09/2023 02:00	00:15:00	60.3	70.5	52.6	
01/09/2023 02:15	00:15:00	59.0	76.5	48.8	
01/09/2023 02:30	00:15:00	57.1	69.5	46.5	
01/09/2023 02:45	00:15:00	57.5	69.7	47.2	
01/09/2023 03:00	00:15:00	57.6	69.4	47.0	

01/09/2023 03:15	00:15:00	57.9	68.5	46.2
01/09/2023 03:30	00:15:00	58.2	69.4	48.0
01/09/2023 03:45	00:15:00	58.0	71.7	47.0
01/09/2023 04:00	00:15:00	57.2	70.2	47.8
01/09/2023 04:15	00:15:00	58.2	73.2	47.8
01/09/2023 04:30	00:15:00	58.4	70.6	47.8
01/09/2023 04:45	00:15:00	60.5	66.7	52.8
01/09/2023 05:00	00:15:00	60.1	71.8	53.5
01/09/2023 05:15	00:15:00	61.3	69.7	55.6
01/09/2023 05:30	00:15:00	62.3	68.4	57.0
01/09/2023 05:45	00:15:00	64.0	77.7	59.7
01/09/2023 06:00	00:15:00	65.0	76.9	61.0
01/09/2023 06:15	00:15:00	65.4	83.0	62.2
01/09/2023 06:30	00:15:00	66.4	72.5	63.7
01/09/2023 06:45	00:15:00	68.1	78.7	65.5

M3 - Daytime (07:00 - 23:00hrs)

Date / Time	Duration	LAeq (dB)	LAFMax (dB)	LA90 (dB)	Comments
21/02/2024 16:00	01:00:00	60.9	85.9	54.0	Road traffic noise clearly audible
21/02/2024 17:00	01:00:00	60.6	83.8	54.1	throughout monitoring period
21/02/2024 18:00	01:00:00	62.8	87.8	54.4	
21/02/2024 19:00	01:00:00	63.9	94.3	52.9	
21/02/2024 20:00	01:00:00	61.2	83.7	52.2	
21/02/2024 21:00	01:00:00	59.7	83.1	49.3	
21/02/2024 22:00	01:00:00	60.4	85.5	49.2	
22/02/2024 07:00	01:00:00	60.2	82.7	52.2	
22/02/2024 08:00	01:00:00	62.9	83.7	55.1	
22/02/2024 09:00	01:00:00	64.5	87.8	54.2	
22/02/2024 10:00	01:00:00	60.4	82.2	53.6	
22/02/2024 11:00	01:00:00	60.6	82.7	52.8	
22/02/2024 12:00	01:00:00	60.0	84.3	52.5	
22/02/2024 13:00	01:00:00	60.5	83.6	53.6	
22/02/2024 14:00	01:00:00	60.6	84.1	54.1	
22/02/2024 15:00	01:00:00	62.0	85.3	55.1	
22/02/2024 16:00	01:00:00	61.0	82.0	54.4	
22/02/2024 17:00	01:00:00	61.6	83.1	55.3	
22/02/2024 18:00	01:00:00	62.0	82.3	54.4	
22/02/2024 19:00	01:00:00	61.3	82.6	53.7	
22/02/2024 20:00	01:00:00	61.9	89.3	51.4	
22/02/2024 21:00	01:00:00	60.3	82.7	50.0	
22/02/2024 22:00	01:00:00	60.4	87.4	47.0	
23/02/2024 07:00	01:00:00	60.3	84.3	51.3	
23/02/2024 08:00	01:00:00	63.7	87.7	54.5	
23/02/2024 09:00	01:00:00	61.2	82.8	54.6	
23/02/2024 10:00	01:00:00	60.4	84.6	53.4	
23/02/2024 11:00	01:00:00	60.2	82.5	52.9	
23/02/2024 12:00	01:00:00	60.9	82.7	54.7	
23/02/2024 13:00	01:00:00	60.9	85.6	53.9	

23/02/2024 14:00	01:00:00	63.0	94.5	55.1
23/02/2024 15:00	01:00:00	62.9	95.7	54.9
23/02/2024 16:00	01:00:00	61.3	83.7	55.1
23/02/2024 17:00	01:00:00	61.6	89.8	54.9
23/02/2024 18:00	01:00:00	61.5	83.8	55.6
23/02/2024 19:00	01:00:00	61.7	82.5	55.7
23/02/2024 20:00	01:00:00	63.2	93.4	52.1
23/02/2024 21:00	01:00:00	61.8	92.8	51.2
23/02/2024 22:00	01:00:00	61.4	84.3	50.7
24/02/2024 07:00	01:00:00	58.9	84.1	45.5
24/02/2024 08:00	01:00:00	60.8	84.7	50.7
24/02/2024 09:00	01:00:00	60.5	83.1	51.9
24/02/2024 10:00	01:00:00	60.2	82.7	52.8
24/02/2024 11:00	01:00:00	61.3	84.9	53.6
24/02/2024 12:00	01:00:00	61.6	84.5	53.9
24/02/2024 13:00	01:00:00	63.0	85.6	53.5
24/02/2024 14:00	01:00:00	62.9	93.5	53.8
24/02/2024 15:00	01:00:00	60.7	83.9	52.9
24/02/2024 16:00	01:00:00	61.9	89.6	53.1
24/02/2024 17:00	01:00:00	62.5	93.8	53.9
24/02/2024 18:00	01:00:00	61.3	87.2	52.1
24/02/2024 19:00	01:00:00	61.0	83.3	51.1
24/02/2024 20:00	01:00:00	61.4	85.0	50.3
24/02/2024 21:00	01:00:00	63.1	96.0	48.9
24/02/2024 22:00	01:00:00	60.3	86.5	48.3
25/02/2024 07:00	01:00:00	57.4	83.0	43.8
25/02/2024 08:00	01:00:00	57.4	83.8	42.7
25/02/2024 09:00	01:00:00	58.7	83.6	44.1
25/02/2024 10:00	01:00:00	60.8	90.1	47.8
25/02/2024 11:00	01:00:00	59.7	84.1	47.5
25/02/2024 12:00	01:00:00	59.9	82.6	49.9
25/02/2024 13:00	01:00:00	60.3	85.1	50.9
25/02/2024 14:00	01:00:00	61.2	91.4	51.2
25/02/2024 15:00	01:00:00	60.3	83.9	50.6
25/02/2024 16:00	01:00:00	61.1	88.8	50.8
25/02/2024 17:00	01:00:00	60.6	95.1	50.1
25/02/2024 18:00	01:00:00	61.0	85.1	50.8
25/02/2024 19:00	01:00:00	60.5	84.1	49.1
25/02/2024 20:00	01:00:00	59.5	84.3	46.8
25/02/2024 21:00	01:00:00	58.7	83.3	43.9
25/02/2024 22:00	01:00:00	59.7	91.9	41.0
26/02/2024 07:00	01:00:00	61.1	85.5	49.0
26/02/2024 08:00	01:00:00	61.3	82.5	53.3
26/02/2024 09:00	01:00:00	61.2	83.4	53.2
26/02/2024 10:00	01:00:00	60.4	83.3	52.2
26/02/2024 11:00	01:00:00	60.6	82.3	53.2
26/02/2024 12:00	01:00:00	61.5	88.0	52.3
26/02/2024 13:00	01:00:00	60.2	83.7	52.2

26/02/2024 14:00	01:00:00	60.0	84.0	52.6
26/02/2024 15:00	01:00:00	61.0	83.3	53.3

M3 - Night (23:00 - 07:00hrs)

Date / Time	Duration	LAeq (dB)	LAFMax (dB)	LA90 (dB)	Comments
21/02/2024 23:00	00:15:00	56.8	81.8	51.2	Road traffic noise clearly audible
21/02/2024 23:15	00:15:00	56.0	82.4	52.2	throughout monitoring period
21/02/2024 23:30	00:15:00	57.4	83.1	51.6	
21/02/2024 23:45	00:15:00	58.7	81.7	50.5	
22/02/2024 00:00	00:15:00	52.3	80.6	50.5	
22/02/2024 00:15	00:15:00	55.9	82.3	50.0	
22/02/2024 00:30	00:15:00	56.1	83.3	49.0	
22/02/2024 00:45	00:15:00	57.4	83.7	50.1	
22/02/2024 01:00	00:15:00	53.2	83.2	51.6	
22/02/2024 01:15	00:15:00	56.3	81.9	50.4	
22/02/2024 01:30	00:15:00	56.5	84.5	50.0	
22/02/2024 01:45	00:15:00	57.2	83.7	50.1	
22/02/2024 02:00	00:15:00	53.1	83.0	48.7	
22/02/2024 02:15	00:15:00	54.4	82.6	50.7	
22/02/2024 02:30	00:15:00	55.2	82.9	50.9	
22/02/2024 02:45	00:15:00	56.5	81.7	50.7	
22/02/2024 03:00	00:15:00	51.3	80.4	49.5	
22/02/2024 03:15	00:15:00	54.3	81.4	50.1	
22/02/2024 03:30	00:15:00	55.7	82.0	50.0	
22/02/2024 03:45	00:15:00	57.5	83.9	50.3	
22/02/2024 04:00	00:15:00	53.9	81.8	50.6	
22/02/2024 04:15	00:15:00	54.5	82.3	51.4	
22/02/2024 04:30	00:15:00	56.6	84.2	51.9	
22/02/2024 04:45	00:15:00	57.5	84.2	50.9	
22/02/2024 05:00	00:15:00	55.3	83.4	50.5	
22/02/2024 05:15	00:15:00	55.4	82.8	49.8	
22/02/2024 05:30	00:15:00	57.5	83.1	52.8	
22/02/2024 05:45	00:15:00	58.8	81.7	54.5	
22/02/2024 06:00	00:15:00	56.2	80.9	52.4	
22/02/2024 06:15	00:15:00	58.4	82.8	54.6	
22/02/2024 06:30	00:15:00	58.5	81.9	54.2	
22/02/2024 06:45	00:15:00	59.7	81.9	55.3	
22/02/2024 23:00	00:15:00	57.2	81.5	52.4	
22/02/2024 23:15	00:15:00	56.9	82.6	51.7	
22/02/2024 23:30	00:15:00	57.9	82.1	52.7	
22/02/2024 23:45	00:15:00	57.7	82.5	51.7	
23/02/2024 00:00	00:15:00	53.8	81.2	52.7	
23/02/2024 00:15	00:15:00	54.4	80.7	50.0	
23/02/2024 00:30	00:15:00	56.6	82.4	50.7	
23/02/2024 00:45	00:15:00	57.6	82.4	49.6	
23/02/2024 01:00	00:15:00	53.3	82.2	49.2	
23/02/2024 01:15	00:15:00	58.6	88.2	49.3	
23/02/2024 01:30	00:15:00	56.4	83.1	49.1	

23/02/2024 01:45	00:15:00	57.5	82.1	49.1
23/02/2024 02:00	00:15:00	53.9	83.1	50.4
23/02/2024 02:15	00:15:00	54.6	81.6	50.7
23/02/2024 02:30	00:15:00	56.4	82.6	49.3
23/02/2024 02:45	00:15:00	56.7	81.9	49.3
23/02/2024 03:00	00:15:00	51.9	81.4	49.0
23/02/2024 03:15	00:15:00	54.4	81.2	49.8
23/02/2024 03:30	00:15:00	55.7	81.9	48.9
23/02/2024 03:45	00:15:00	57.6	82.7	49.8
23/02/2024 04:00	00:15:00	52.3	81.3	49.5
23/02/2024 04:15	00:15:00	56.5	82.3	50.5
23/02/2024 04:30	00:15:00	56.0	80.9	50.3
23/02/2024 04:45	00:15:00	58.0	82.3	50.8
23/02/2024 05:00	00:15:00	54.3	81.2	51.2
23/02/2024 05:15	00:15:00	55.7	81.2	51.9
23/02/2024 05:30	00:15:00	57.6	82.3	53.8
23/02/2024 05:45	00:15:00	58.9	82.8	54.1
23/02/2024 06:00	00:15:00	57.1	81.8	54.1
23/02/2024 06:15	00:15:00	58.1	82.7	53.4
23/02/2024 06:30	00:15:00	58.7	83.1	54.6
23/02/2024 06:45	00:15:00	60.8	81.9	57.0
23/02/2024 23:00	00:15:00	57.6	83.6	52.4
23/02/2024 23:15	00:15:00	58.5	82.8	53.8
23/02/2024 23:30	00:15:00	61.4	85.2	56.9
23/02/2024 23:45	00:15:00	59.5	82.8	51.6
24/02/2024 00:00	00:15:00	55.4	81.9	51.8
24/02/2024 00:15	00:15:00	56.9	83.4	52.3
24/02/2024 00:30	00:15:00	57.5	83.2	50.9
24/02/2024 00:45	00:15:00	58.9	83.3	50.9
24/02/2024 01:00	00:15:00	54.2	81.8	49.9
24/02/2024 01:15	00:15:00	57.3	82.2	53.3
24/02/2024 01:30	00:15:00	59.6	82.9	51.1
24/02/2024 01:45	00:15:00	60.1	82.5	50.4
24/02/2024 02:00	00:15:00	53.8	82.9	50.3
24/02/2024 02:15	00:15:00	55.6	83.2	47.7
24/02/2024 02:30	00:15:00	56.2	82.6	47.0
24/02/2024 02:45	00:15:00	57.7	83.4	46.7
24/02/2024 03:00	00:15:00	53.2	84.2	46.6
24/02/2024 03:15	00:15:00	54.9	82.8	46.6
24/02/2024 03:30	00:15:00	56.3	82.3	46.1
24/02/2024 03:45	00:15:00	57.4	82.6	46.3
24/02/2024 04:00	00:15:00	52.7	82.1	46.0
24/02/2024 04:15	00:15:00	54.5	82.1	45.9
24/02/2024 04:30	00:15:00	56.6	82.0	45.9
24/02/2024 04:45	00:15:00	58.1	83.5	46.1
24/02/2024 05:00	00:15:00	54.9	82.4	46.3
24/02/2024 05:15	00:15:00	56.5	83.2	46.2
24/02/2024 05:30	00:15:00	57.3	83.4	49.6

24/02/2024 05:45	00:15:00	58.7	82.4	51.8
24/02/2024 06:00	00:15:00	56.6	81.8	52.9
24/02/2024 06:15	00:15:00	59.6	82.9	51.5
24/02/2024 06:30	00:15:00	61.2	82.8	54.8
24/02/2024 06:45	00:15:00	59.1	85.0	54.3
24/02/2024 23:00	00:15:00	60.2	85.5	56.9
24/02/2024 23:15	00:15:00	58.5	82.2	54.6
24/02/2024 23:30	00:15:00	58.2	81.8	53.2
24/02/2024 23:45	00:15:00	59.3	83.2	52.7
25/02/2024 00:00	00:15:00	55.5	80.9	53.6
25/02/2024 00:15	00:15:00	57.5	81.4	53.4
25/02/2024 00:30	00:15:00	57.9	80.2	54.7
25/02/2024 00:45	00:15:00	58.8	81.4	52.9
25/02/2024 01:00	00:15:00	56.3	81.4	54.0
25/02/2024 01:15	00:15:00	57.9	80.4	54.7
25/02/2024 01:30	00:15:00	59.2	83.0	55.6
25/02/2024 01:45	00:15:00	59.2	82.0	58.3
25/02/2024 02:00	00:15:00	56.1	81.6	51.0
25/02/2024 02:15	00:15:00	56.1	82.3	51.4
25/02/2024 02:30	00:15:00	56.5	81.5	50.6
25/02/2024 02:45	00:15:00	61.2	88.6	50.1
25/02/2024 03:00	00:15:00	50.9	80.8	47.5
25/02/2024 03:15	00:15:00	53.2	81.1	47.0
25/02/2024 03:30	00:15:00	55.3	81.6	47.3
25/02/2024 03:45	00:15:00	56.7	81.8	47.5
25/02/2024 04:00	00:15:00	51.9	80.9	47.5
25/02/2024 04:15	00:15:00	53.9	81.3	48.0
25/02/2024 04:30	00:15:00	55.3	81.3	48.2
25/02/2024 04:45	00:15:00	58.0	82.1	48.6
25/02/2024 05:00	00:15:00	51.7	81.1	48.3
25/02/2024 05:15	00:15:00	53.9	80.7	48.8
25/02/2024 05:30	00:15:00	55.8	82.1	48.8
25/02/2024 05:45	00:15:00	57.0	81.7	51.2
25/02/2024 06:00	00:15:00	52.6	80.3	49.1
25/02/2024 06:15	00:15:00	54.3	80.9	50.7
25/02/2024 06:30	00:15:00	56.0	82.0	51.7
25/02/2024 06:45	00:15:00	58.7	82.1	54.5
25/02/2024 23:00	00:15:00	54.9	82.5	50.0
25/02/2024 23:15	00:15:00	57.0	83.6	49.6
25/02/2024 23:30	00:15:00	56.9	81.9	49.9
25/02/2024 23:45	00:15:00	57.5	81.8	50.7
26/02/2024 00:00	00:15:00	55.2	82.3	46.7
26/02/2024 00:15	00:15:00	55.7	82.7	47.5
26/02/2024 00:30	00:15:00	56.4	82.8	45.8
26/02/2024 00:45	00:15:00	56.8	82.0	46.7
26/02/2024 01:00	00:15:00	51.3	80.2	44.9
26/02/2024 01:15	00:15:00	54.3	82.9	44.6
26/02/2024 01:30	00:15:00	56.7	84.7	44.8

26/02/2024 01:45	00:15:00	57.7	83.2	45.4
26/02/2024 02:00	00:15:00	52.7	81.4	44.5
26/02/2024 02:15	00:15:00	54.1	83.2	45.0
26/02/2024 02:30	00:15:00	55.4	81.6	45.1
26/02/2024 02:45	00:15:00	57.0	82.8	45.6
26/02/2024 03:00	00:15:00	51.4	81.8	45.4
26/02/2024 03:15	00:15:00	53.8	81.8	44.9
26/02/2024 03:30	00:15:00	56.4	82.3	45.1
26/02/2024 03:45	00:15:00	57.6	83.5	45.7
26/02/2024 04:00	00:15:00	51.7	81.9	45.3
26/02/2024 04:15	00:15:00	53.9	82.1	45.8
26/02/2024 04:30	00:15:00	56.9	82.2	46.2
26/02/2024 04:45	00:15:00	57.6	82.8	46.5
26/02/2024 05:00	00:15:00	51.5	79.7	46.4
26/02/2024 05:15	00:15:00	55.6	82.2	49.3
26/02/2024 05:30	00:15:00	57.0	82.7	51.6
26/02/2024 05:45	00:15:00	58.4	84.4	53.6
26/02/2024 06:00	00:15:00	56.9	82.9	52.1
26/02/2024 06:15	00:15:00	64.8	83.1	53.5
26/02/2024 06:30	00:15:00	58.8	83.8	52.8
26/02/2024 06:45	00:15:00	60.1	83.9	56.5

M4 - Daytime (07:00-23:00hrs)

Date / Time	Duration	LAeq (dB)	LAFMax (dB)	LA90 (dB)	Comments
29/02/2024 13:00	01:00:00	60.9	75.6	54.8	
29/02/2024 14:00	01:00:00	61.0	77.4	54.5	
29/02/2024 15:00	01:00:00	61.1	75.5	54.7	
29/02/2024 16:00	01:00:00	61.4	85.3	54.8	
29/02/2024 17:00	01:00:00	62.4	86.6	56.0	
29/02/2024 18:00	01:00:00	61.5	72.8	55.1	
29/02/2024 19:00	01:00:00	61.2	73.3	54.3	
29/02/2024 20:00	01:00:00	60.2	74.4	53.0	
29/02/2024 21:00	01:00:00	58.7	71.5	51.4	
29/02/2024 22:00	01:00:00	57.9	79.8	48.7	
01/03/2024 07:00	01:00:00	60.2	75.9	52.2	
01/03/2024 08:00	01:00:00	61.1	74.4	53.9	
01/03/2024 09:00	01:00:00	61.5	81.4	54.2	
01/03/2024 10:00	01:00:00	61.0	76.1	54.4	
01/03/2024 11:00	01:00:00	61.8	77.5	55.4	
01/03/2024 12:00	01:00:00	61.1	76.2	55.4	
01/03/2024 13:00	01:00:00	61.4	89.5	55.1	
01/03/2024 14:00	01:00:00	62.0	90.4	55.0	
01/03/2024 15:00	01:00:00	60.4	73.8	54.8	
01/03/2024 16:00	01:00:00	60.6	71.3	54.8	
01/03/2024 17:00	01:00:00	61.2	72.8	55.7	
01/03/2024 18:00	01:00:00	60.4	74.3	54.3	
01/03/2024 19:00	01:00:00	60.0	82.9	53.5	
01/03/2024 20:00	01:00:00	59.3	74.9	52.5	

01/03/2024 21:00	01:00:00	58.6	74.5	51.3
01/03/2024 22:00	01:00:00	56.5	71.6	49.1
02/03/2024 07:00	01:00:00	56.1	74.1	47.0
02/03/2024 08:00	01:00:00	59.4	71.0	50.9
02/03/2024 09:00	01:00:00	60.9	72.3	53.2
02/03/2024 10:00	01:00:00	61.5	75.3	54.3
02/03/2024 11:00	01:00:00	61.4	74.8	55.1
02/03/2024 12:00	01:00:00	61.8	81.0	55.9
02/03/2024 13:00	01:00:00	61.2	77.7	55.2
02/03/2024 14:00	01:00:00	60.6	74.6	55.3
02/03/2024 15:00	01:00:00	60.7	81.1	54.8
02/03/2024 16:00	01:00:00	60.9	77.1	54.7
02/03/2024 17:00	01:00:00	60.4	72.0	53.9
02/03/2024 18:00	01:00:00	59.8	72.2	53.0
02/03/2024 19:00	01:00:00	59.2	82.2	51.3
02/03/2024 20:00	01:00:00	58.2	73.7	50.4
02/03/2024 21:00	01:00:00	58.0	72.4	49.8
02/03/2024 22:00	01:00:00	56.6	75.9	48.9
03/03/2024 07:00	01:00:00	57.2	83.9	44.1
03/03/2024 08:00	01:00:00	58.5	82.2	46.9
03/03/2024 09:00	01:00:00	65.5	85.6	49.2
03/03/2024 10:00	01:00:00	59.8	79.8	51.0
03/03/2024 11:00	01:00:00	60.2	84.0	51.4
03/03/2024 12:00	01:00:00	60.1	73.8	52.1
03/03/2024 13:00	01:00:00	61.1	80.8	53.8
03/03/2024 14:00	01:00:00	61.0	73.1	54.1
03/03/2024 15:00	01:00:00	61.9	83.8	54.4
03/03/2024 16:00	01:00:00	60.7	70.8	54.7
03/03/2024 17:00	01:00:00	60.8	73.7	53.2
03/03/2024 18:00	01:00:00	59.4	80.9	51.9
03/03/2024 19:00	01:00:00	58.5	74.5	50.6
03/03/2024 20:00	01:00:00	58.5	75.6	50.0
03/03/2024 21:00	01:00:00	56.7	74.2	47.8
03/03/2024 22:00	01:00:00	56.2	74.1	47.2
04/03/2024 07:00	01:00:00	61.5	73.0	53.6
04/03/2024 08:00	01:00:00	62.9	81.9	55.8
04/03/2024 09:00	01:00:00	63.0	85.2	56.1

M4 - Night (23:00-07:00hrs)

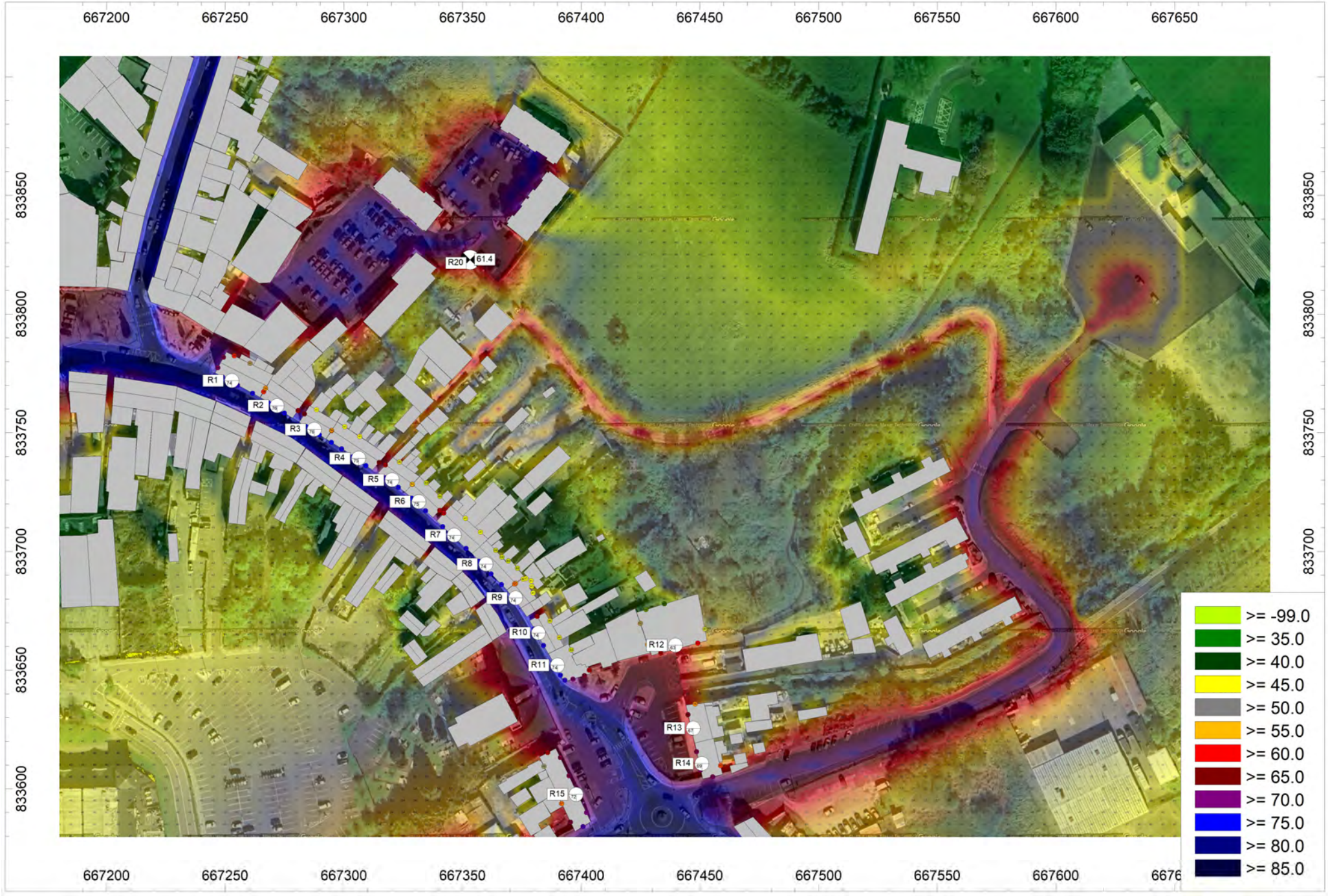
Date / Time	Duration	LAeq (dB)	LAFMax (dB)	LA90 (dB)	Comments
29/02/2024 23:00	00:15:00	55.8	69.0	51.7	
29/02/2024 23:15	00:15:00	61.6	86.0	51.8	
29/02/2024 23:30	00:15:00	54.4	65.6	48.5	
29/02/2024 23:45	00:15:00	55.1	66.9	48.9	
01/03/2024 00:00	00:15:00	54.8	71.2	49.4	
01/03/2024 00:15	00:15:00	52.2	66.0	48.2	
01/03/2024 00:30	00:15:00	55.5	69.9	49.0	
01/03/2024 00:45	00:15:00	50.9	64.8	45.3	

01/03/2024 01:00	00:15:00	50.3	66.2	44.9
01/03/2024 01:15	00:15:00	50.4	66.0	44.2
01/03/2024 01:30	00:15:00	50.8	67.7	44.3
01/03/2024 01:45	00:15:00	51.2	68.7	42.2
01/03/2024 02:00	00:15:00	53.3	71.3	44.1
01/03/2024 02:15	00:15:00	50.2	69.7	44.1
01/03/2024 02:30	00:15:00	51.1	68.9	41.6
01/03/2024 02:45	00:15:00	48.2	64.7	42.2
01/03/2024 03:00	00:15:00	49.4	72.6	40.0
01/03/2024 03:15	00:15:00	51.2	68.2	42.4
01/03/2024 03:30	00:15:00	48.0	64.5	41.0
01/03/2024 03:45	00:15:00	49.2	68.4	40.4
01/03/2024 04:00	00:15:00	50.2	66.7	42.6
01/03/2024 04:15	00:15:00	49.7	65.3	42.6
01/03/2024 04:30	00:15:00	49.2	68.2	43.4
01/03/2024 04:45	00:15:00	49.6	66.9	42.7
01/03/2024 05:00	00:15:00	48.6	66.3	43.1
01/03/2024 05:15	00:15:00	51.8	65.8	45.7
01/03/2024 05:30	00:15:00	53.7	67.8	47.6
01/03/2024 05:45	00:15:00	55.9	68.0	49.2
01/03/2024 06:00	00:15:00	56.0	72.1	49.0
01/03/2024 06:15	00:15:00	56.5	69.5	51.4
01/03/2024 06:30	00:15:00	57.3	71.2	52.7
01/03/2024 06:45	00:15:00	59.1	75.0	54.8
01/03/2024 23:00	00:15:00	56.2	71.4	54.5
01/03/2024 23:15	00:15:00	56.3	66.9	52.2
01/03/2024 23:30	00:15:00	55.3	72.3	50.1
01/03/2024 23:45	00:15:00	62.2	87.3	50.3
02/03/2024 00:00	00:15:00	55.9	80.8	50.0
02/03/2024 00:15	00:15:00	54.8	70.6	49.7
02/03/2024 00:30	00:15:00	54.0	71.1	50.2
02/03/2024 00:45	00:15:00	55.6	70.3	47.9
02/03/2024 01:00	00:15:00	52.7	73.1	45.9
02/03/2024 01:15	00:15:00	53.3	67.8	46.0
02/03/2024 01:30	00:15:00	53.6	70.6	45.6
02/03/2024 01:45	00:15:00	49.9	64.1	44.3
02/03/2024 02:00	00:15:00	49.7	65.1	44.3
02/03/2024 02:15	00:15:00	49.7	70.2	43.3
02/03/2024 02:30	00:15:00	51.3	66.9	44.4
02/03/2024 02:45	00:15:00	51.6	70.3	44.4
02/03/2024 03:00	00:15:00	51.6	67.4	44.5
02/03/2024 03:15	00:15:00	49.3	65.9	43.7
02/03/2024 03:30	00:15:00	49.6	66.4	43.0
02/03/2024 03:45	00:15:00	50.1	67.0	43.3
02/03/2024 04:00	00:15:00	51.1	68.2	42.8
02/03/2024 04:15	00:15:00	48.7	65.7	43.5
02/03/2024 04:30	00:15:00	48.9	70.8	43.6
02/03/2024 04:45	00:15:00	50.2	68.0	44.2

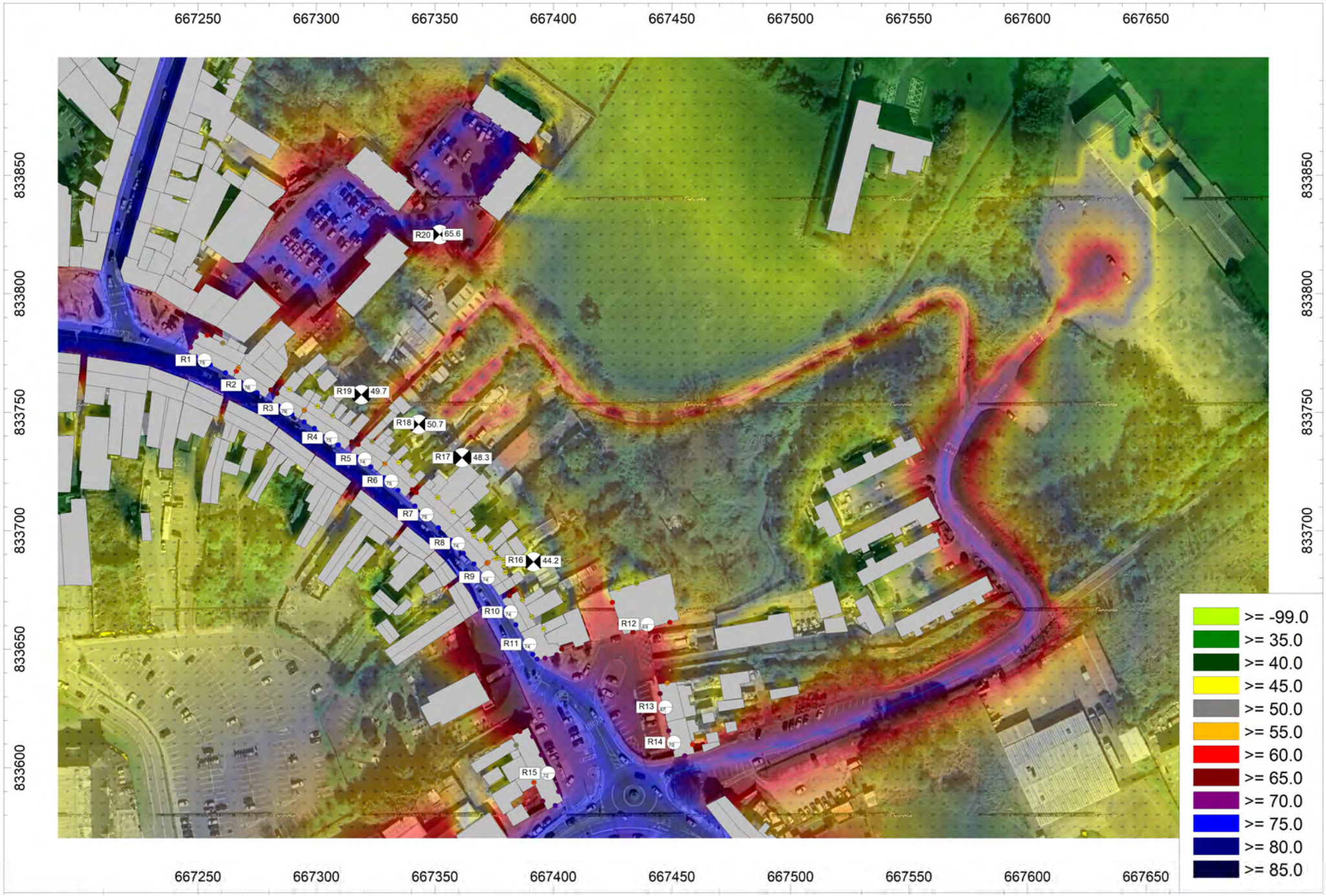
02/03/2024 05:00	00:15:00	48.4	72.5	43.9
02/03/2024 05:15	00:15:00	49.2	65.0	45.5
02/03/2024 05:30	00:15:00	50.7	66.6	46.1
02/03/2024 05:45	00:15:00	52.4	65.3	46.4
02/03/2024 06:00	00:15:00	50.8	64.3	45.6
02/03/2024 06:15	00:15:00	54.2	74.4	47.8
02/03/2024 06:30	00:15:00	53.0	64.9	49.8
02/03/2024 06:45	00:15:00	55.2	74.3	50.4
02/03/2024 23:00	00:15:00	56.5	68.6	53.6
02/03/2024 23:15	00:15:00	57.1	66.6	52.8
02/03/2024 23:30	00:15:00	57.8	74.3	52.3
02/03/2024 23:45	00:15:00	55.7	69.0	50.9
03/03/2024 00:00	00:15:00	57.7	69.8	53.0
03/03/2024 00:15	00:15:00	56.5	68.9	53.2
03/03/2024 00:30	00:15:00	56.4	68.1	52.4
03/03/2024 00:45	00:15:00	54.9	70.4	51.0
03/03/2024 01:00	00:15:00	56.9	70.7	51.5
03/03/2024 01:15	00:15:00	55.9	70.2	51.8
03/03/2024 01:30	00:15:00	56.1	68.8	51.2
03/03/2024 01:45	00:15:00	54.7	66.5	49.3
03/03/2024 02:00	00:15:00	55.3	68.9	50.5
03/03/2024 02:15	00:15:00	55.3	69.7	49.0
03/03/2024 02:30	00:15:00	52.6	65.6	48.8
03/03/2024 02:45	00:15:00	53.3	67.8	48.3
03/03/2024 03:00	00:15:00	54.2	74.0	47.6
03/03/2024 03:15	00:15:00	53.5	67.9	47.1
03/03/2024 03:30	00:15:00	51.9	68.6	46.0
03/03/2024 03:45	00:15:00	51.1	67.1	44.5
03/03/2024 04:00	00:15:00	53.2	68.2	45.0
03/03/2024 04:15	00:15:00	51.9	67.6	44.3
03/03/2024 04:30	00:15:00	51.7	67.1	44.9
03/03/2024 04:45	00:15:00	49.7	68.9	43.5
03/03/2024 05:00	00:15:00	51.9	68.6	43.6
03/03/2024 05:15	00:15:00	49.3	68.7	43.4
03/03/2024 05:30	00:15:00	49.3	65.6	44.1
03/03/2024 05:45	00:15:00	52.8	67.7	45.2
03/03/2024 06:00	00:15:00	48.1	69.7	45.4
03/03/2024 06:15	00:15:00	53.0	67.5	45.1
03/03/2024 06:30	00:15:00	55.2	72.6	45.9
03/03/2024 06:45	00:15:00	54.4	68.7	47.4
03/03/2024 23:00	00:15:00	56.0	70.1	50.0
03/03/2024 23:15	00:15:00	57.5	77.8	48.1
03/03/2024 23:30	00:15:00	54.5	69.4	48.6
03/03/2024 23:45	00:15:00	53.9	79.6	46.5
04/03/2024 00:00	00:15:00	54.0	68.1	46.4
04/03/2024 00:15	00:15:00	51.4	67.1	44.1
04/03/2024 00:30	00:15:00	50.5	67.9	43.2
04/03/2024 00:45	00:15:00	51.6	66.9	43.2

04/03/2024	01:00	00:15:00	48.3	65.7	42.8
04/03/2024	01:15	00:15:00	50.8	65.0	44.2
04/03/2024	01:30	00:15:00	52.6	79.0	46.6
04/03/2024	01:45	00:15:00	50.8	67.7	46.8
04/03/2024	02:00	00:15:00	52.4	71.0	47.8
04/03/2024	02:15	00:15:00	47.9	67.2	41.0
04/03/2024	02:30	00:15:00	46.8	63.1	41.9
04/03/2024	02:45	00:15:00	49.8	64.8	44.2
04/03/2024	03:00	00:15:00	46.6	64.5	41.8
04/03/2024	03:15	00:15:00	49.5	71.0	41.3
04/03/2024	03:30	00:15:00	50.7	70.7	42.2
04/03/2024	03:45	00:15:00	50.8	71.2	43.2
04/03/2024	04:00	00:15:00	45.7	62.2	43.7
04/03/2024	04:15	00:15:00	50.4	68.9	43.1
04/03/2024	04:30	00:15:00	52.4	69.7	46.2
04/03/2024	04:45	00:15:00	51.1	68.2	46.5
04/03/2024	05:00	00:15:00	50.1	69.0	44.8
04/03/2024	05:15	00:15:00	51.2	71.2	47.1
04/03/2024	05:30	00:15:00	54.5	66.7	50.2
04/03/2024	05:45	00:15:00	57.1	69.2	52.9
04/03/2024	06:00	00:15:00	56.3	69.7	51.1
04/03/2024	06:15	00:15:00	56.6	69.4	52.2
04/03/2024	06:30	00:15:00	57.3	68.2	54.6
04/03/2024	06:45	00:15:00	59.9	74.1	56.3

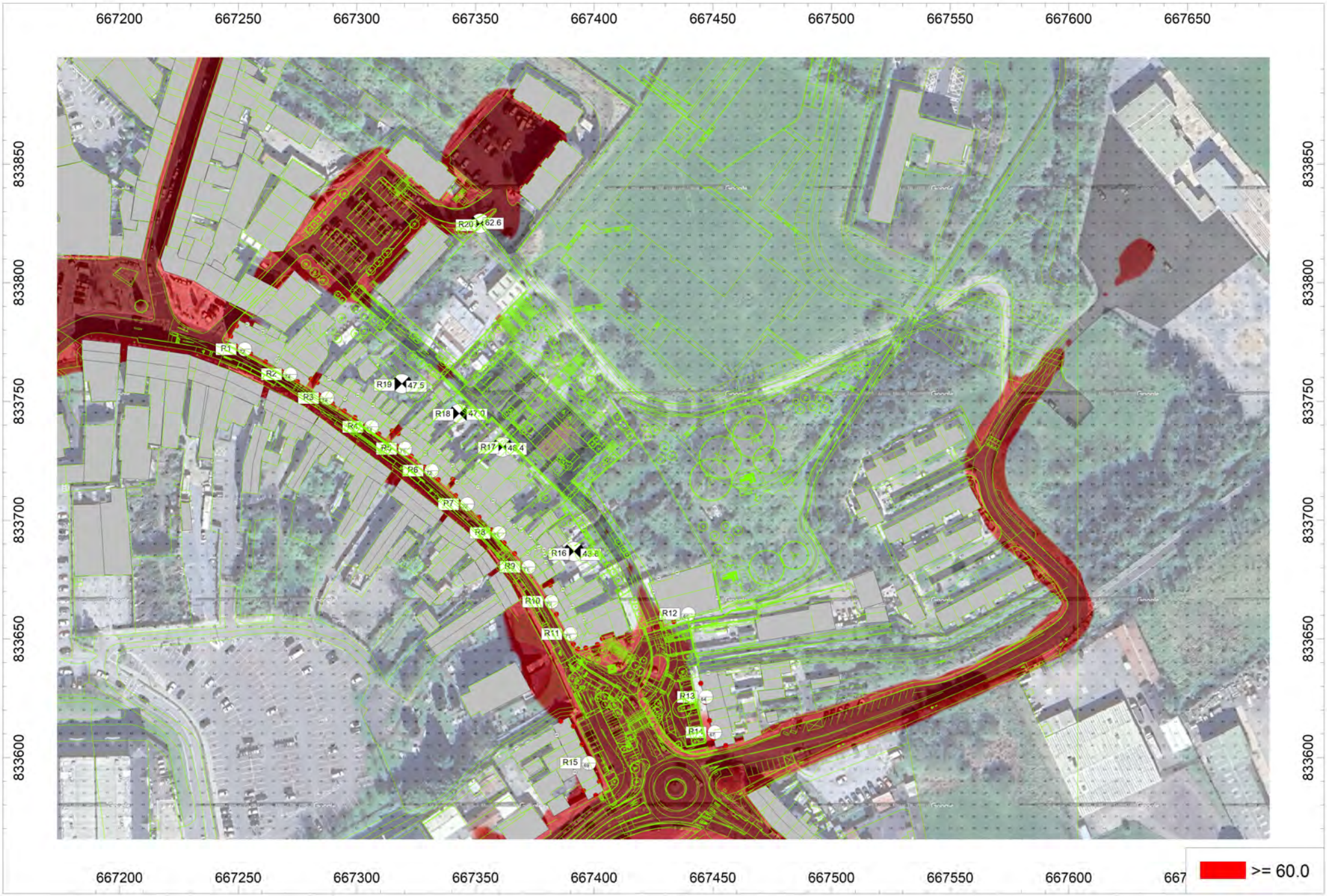
Noise Delineation Map (dBA) - Scenario No.1: Baseline Conditions



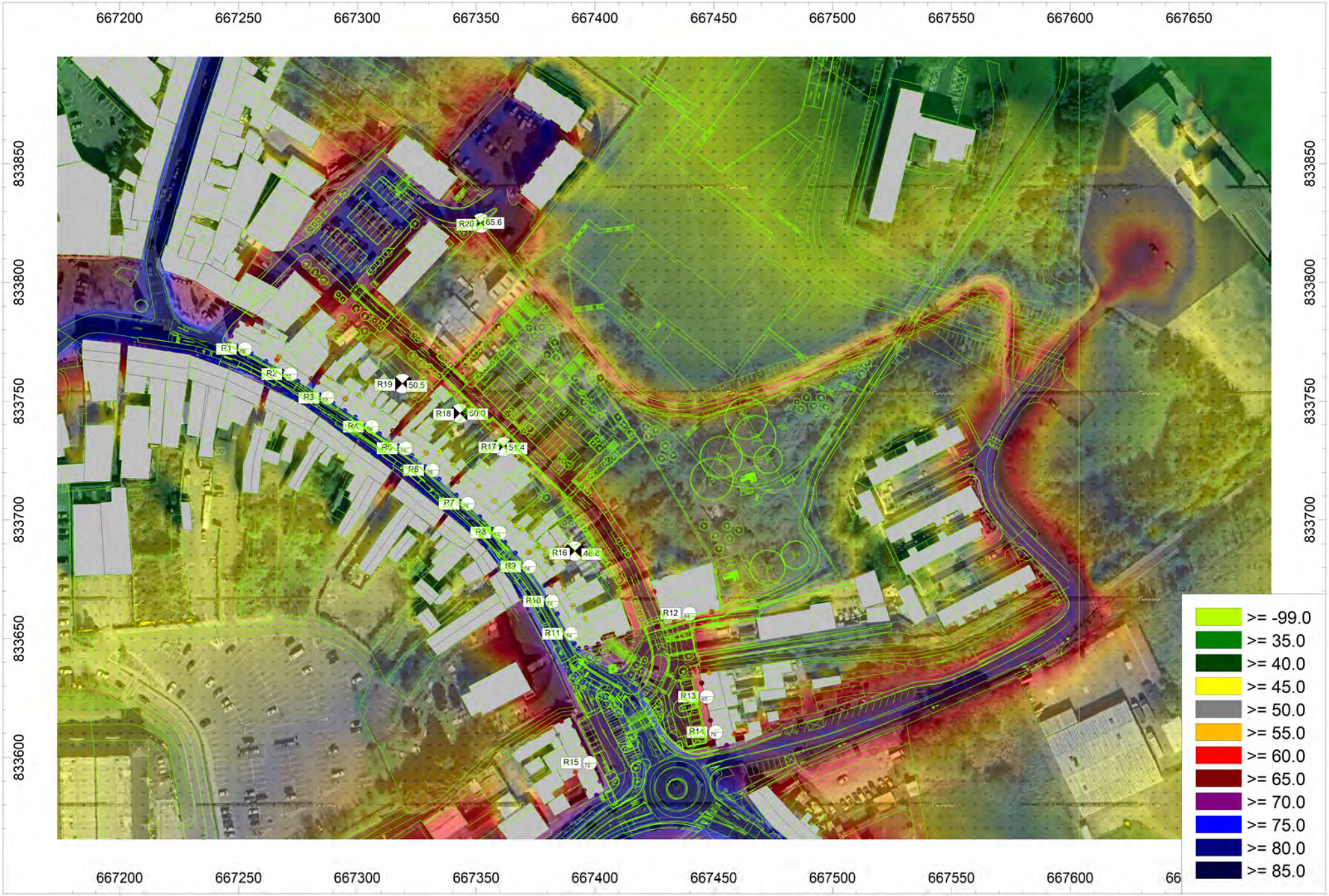
Noise Delineation Map (dBA) Scenario No.2: Factored Cumulative Road Traffic (2030)



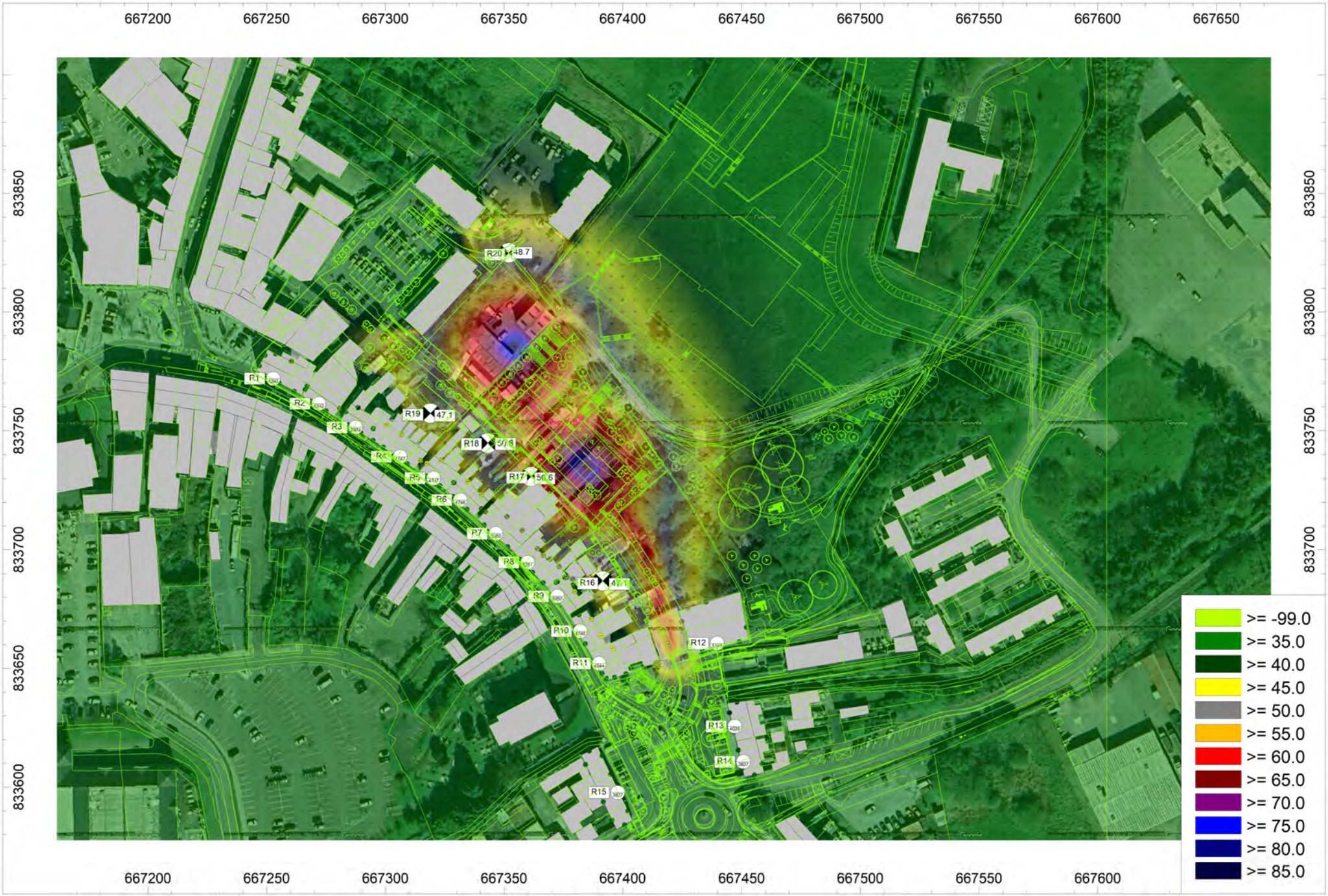
Noise Delineation Map (dBA) Scenario 3: Lden >60dB



Noise Delineation Map (dBA) Scenario No.3 with development (2030)



Noise Delineation Map (dBA) Scenario C1 - Demolition Works



Noise Delineation Map (dBA) Scenario C1 - Construction Works