South Dublin Street & Backlands Regeneration Project

EIAR Volume II
Technical Appendices

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Contents: EIAR Volume II – Technical Appendices

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Preliminary CEMP (pCEMP)

SOUTH DUBLIN STREET & BACKLANDS REGENERATION PROJECT

Preliminary Construction and Environmental Management Plan (PCEMP)

South Dublin Street & Backlands Regeneration Project
Preliminary Construction and Environmental Management Plan (PCEMP)
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August 2022

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1 INTRODUCTION

1.1 Purpose of this Document

This document is a Preliminary Construction and Environmental Management Plan (PCEMP) and contains all the appropriate environmental mitigation and management techniques to help ensure no significant impacts are caused to the environment during the construction phase of the proposed development.

It is a **'live'** document and may be updated as the project progresses. This PCEMP sets out the minimum requirements which will be adhered to during the construction phase of the proposed development.

1.1.1 Background to Proposed Development

The proposed development, situated in Monaghan Town Centre, is known as the South Dublin Street and Backlands Regeneration Project, and is the initial phase of the Dublin Street and Backlands Regeneration Project. This proposed development focuses on the detailed design and delivery of a series of enabling works, which focus on enhancing and improving the layout and structure of the town centre urban realm. It is anticipated that these will also act as a stimulus for future town centre development and in particular, new built development within the future development plots, in broad conformity with the overall agreed design concept – shown below in Figure 1.1.

The proposed development provides a strategy to drive regeneration in this part of the town centre. This proposal aspires to meet the short term objectives of improving the physical and spatial quality of the streets and spaces in the area south of Dublin Street. The aim is to create new connections with new streets and spaces which enhance the urban structure, and quality of the public realm of the Dublin Street quarter. The new high quality public realm proposals for footpaths, street furniture, wayfinding, signage, landscaping, new public spaces, and new streets will set the standard for all new developments and where existing structures are reused and adapted. The Council has secured funding from the Urban Regeneration and Development Fund (URDF) to progress this work.

1.2 The Proposed Development

The application site is located in the central core of Monaghan town centre, Co. Monaghan. The site location is shown below in Figure 1.1.

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

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

A planning history search was carried out of the most recent planning applications within and immediately adjacent to the site boundary. A number of applications were identified as small scale new development, change of town centre uses, and refurbishments to existing buildings within the immediate area. It is unlikely that any of these will result in any significant cumulative effects on the environment. The red line boundary of the proposed development works extends to approximately 2.72ha.

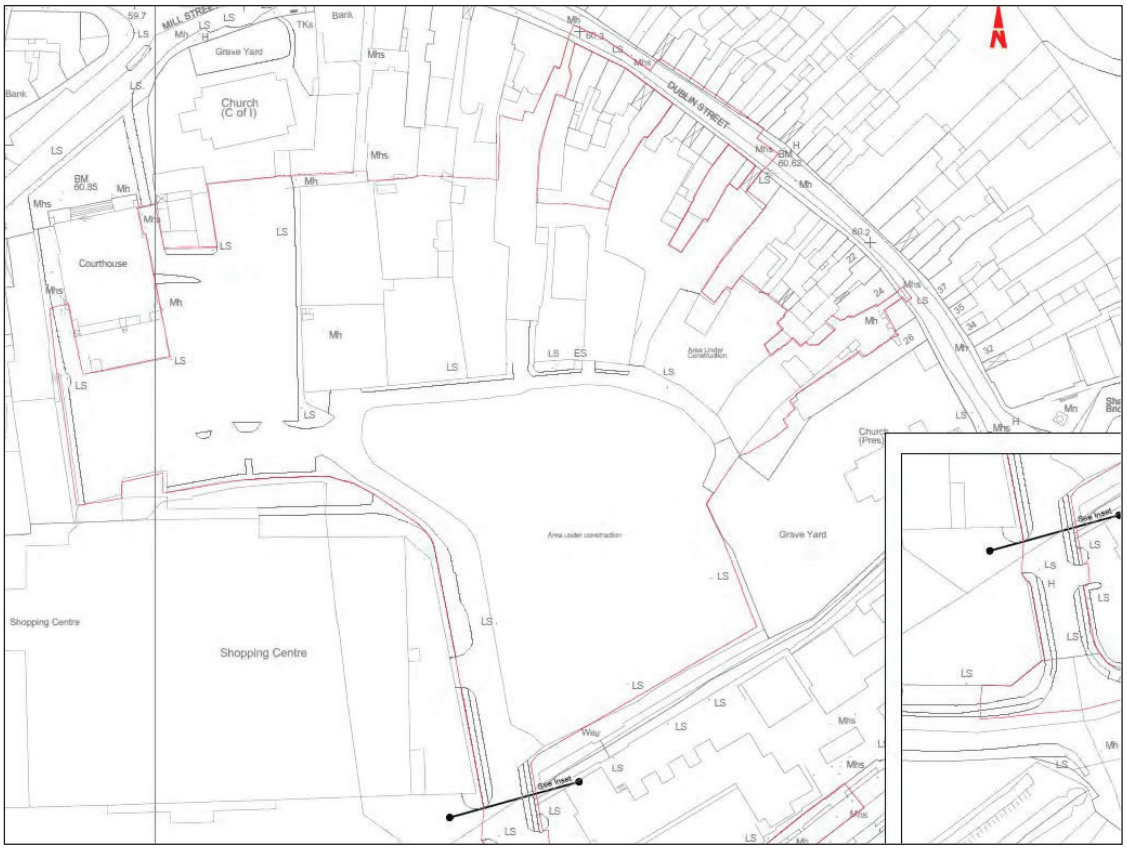


Figure 1.1: Site Location

1.3 Overview of Proposed Work Activities

A summary of the work activities involved in the proposed development is provided below. Note this list is not exhaustive and is provided to give an overview of the likely type of activities:

- The demolition of buildings and structures, including street frontage buildings No's 8-11 Dublin Street and associated outbuildings and structures; the building to the rear of No.24 Dublin Street; partial removal of the rear section of the Northern Standard building fronting the Lower Courthouse car park; storage sheds, walls, and fencing.
- New building façades/side elevations to No's 7 and 12-13 Dublin Street, likely to be a masonry wall with piers finished in render (for structural stability) to facilitate creation of the new junction onto Dublin Street;
- Creation of a new urban space, comprising a street, junction and extended footpaths to connect Dublin Street through to its backland areas, opening up new areas for development and enhancing the pedestrian linkages throughout this area. This area is intended as a multi-use space and is capable of being temporarily cordoned off for use as an event space, for a market, pop-up commercial/retail uses, or occasional festival events. The creation of this new space creates a new setting and enables new opportunities for future infill development and reuse/ adaptation of existing underutilised buildings on either side of the new space, creating opportunities for new commercial and residential activity. It is proposed that this area will be known as Charles Gavan Duffy Place.
- Creation of new streets:
  - New street connecting Charles Gavan Duffy Place to the Courthouse, to be known as Church Walk;
  - Realignment of an existing road to create a promenade, and to be known as The Mall;
  - Realignment of an existing road, to be known as Farney Road;
- Creation of new urban civic spaces, streets, junctions, pedestrian pavements, steps, and cycle routes
- Construction of new public realm comprising new surfaces, kerbing, street furniture, public street and feature lighting, soft landscape planting, cycle parking and signage
- Clearance, regrading and creation of two potential development areas with supporting embankments, hardcore surfacing and boundary fencing
- New boundary treatments comprising walls, railings and fencing
- Alterations to the existing car parking layouts within the Courthouse car park and Lower Courthouse car park, and a reduction in long stay parking spaces
- Upgrading and installation of new utility services, CCTV, and a new ESB sub-station
- All associated site development works
- Construction works including excavation, cut / fill, re-grading of land, and construction of retaining structures, to accommodate level changes, throughout the study area.

It is estimated that the proposed work will take between 12 - 24 months to complete on site.

Note that it will be a key element of all earthworks management to ensure that the risk of pollution to any watercourse (including drainage ditches) is minimised. It is also the case that the earthworks and level changes will be minimised as much as possible in keeping with the agreed site design and vehicular access points will be minimised.

Plant and machinery would be used for the construction activities involved in the development of this site. The choice of plant and machinery will be made by the appointed contractor, this is likely to include at least the following:

- Hydraulic excavators
- HGV / dumper trucks / cement lorries / skip lorries
- Tracked bulldozers
- Road rollers
- Pneumatic drills / hammers (hand held and on back of excavators)
- Cement mixers

- Generators
- Pumping equipment
- ‘Cherry Pickers’ / Mobile Platforms
- Cranes
- Works vans and 4WD vehicles

The plant / machinery to be used will be reviewed continuously by the contractor and this list may be updated as required and included in any updated versions of the PCEMP.

2 DEFINING THE PCEMP

2.1 Purpose of the PCEMP

A PCEMP is a key tool for delivering environmental management during the construction phase. It sets out the mechanisms by which the various construction activities would be managed to comply with the relevant environmental legislation and best practice to minimise the impacts and effects on human receptors and environmental receptors.

It provides the framework for recording environmental risks and also defines the measures required to mitigate and monitor construction effects, including the mitigation measures set out in the associated supporting environmental documents and assessments. It also outlines provisions for auditing and reporting and sets out action to be taken to resolve any corrective actions arising during the course of construction. The purpose of the PCEMP is to:

- **record environmental risks and identify how they would be managed during the construction period;**
- **provide a means of identifying environmental commitments, objectives and targets;**
- **provide a means of monitoring and reporting performance against the objectives and targets;**
- **provide a framework to ensure that all parties are aware of their responsibilities;**
- **establish a checklist of control procedures which can then be integrated into an overall environmental management protocol;**
- **describe how construction activities would be undertaken and managed in accordance with the obligations of environmental legislation and policy, and the requirements of environmental regulatory authorities;**
- **provide detailed environmental mitigation measures for reducing the potential for environmental impacts during pre-construction and construction;**
- **highlights that some activities may require consents or licences;**
- **act as a link and main document reference for environmental issues between the design, and construction stages; and,**
- **ensure the mitigation requirements of the associated environmental assessments (contained in supporting environmental documents for the planning application) are met.**

The Contractor is required to develop and implement a CEMP to help ensure that construction activities are planned and managed in accordance with the environmental requirements. It is a **'live'** document and may be updated as the project progresses. This PCEMP sets out the minimum requirements which will be adhered to during the construction phase of the proposed development.

The contractor will use this PCEMP as a template for the development of an agreed CEMP.

2.2 Scope of the PCEMP

The scope of the PCEMP covers all environmental effects related to the construction of the Proposed Development. The term 'construction' in the PCEMP includes all site preparation, earthworks, waste removal and related engineering and construction activities as authorised by the local authority and associated permissions.

The PCEMP will document the Contractor's plans to ensure compliance with their legal and contractual obligations as well as implement best practice in construction environmental management. The PCEMP will be applicable to all works associated with the Proposed Development including those carried out by sub-contractors.

2.3 Status of the PCEMP

The status of the PCEMP is as follows:

- **This document comprises the PCEMP and has been prepared during the preliminary design and in parallel with submission of full planning application stage of the Proposed Development.**
- **The PCEMP (and adopted version before onsite works i.e. CEMP) is a 'live' document that can be reviewed on a regular basis and updated where necessary to include the further requirements from the local authority.**
- **The PCEMP would identify any further mitigation methods and control measures to be agreed with key stakeholders and would be in place before construction begins.**
- **During construction, the PCEMP may be revised to take into account any modifications to the design, changes in external factors (for example, regulations or standards), any unforeseen circumstances, and any failings in environmental performance arising from routine inspections.**
- **The provisions of the PCEMP would be incorporated into the contracts for construction of the Proposed Development. It would be a mandatory requirement for both the Principal Contractor and all subcontractors to comply with the PCEMP to ensure that best practice is implemented during construction and to safeguard the environment.**
- **The requirements of the PCEMP do not remove or overwrite the legal duties, responsibilities or obligations of the Principal Contractor (and subcontractors) and other parties in accordance with the contract documents and legislation.**
- **The PCEMP is the mechanism for ensuring that the Proposed Development adopts relevant best practice management techniques for sustainable construction.**

2.4 Structure of the PCEMP

The following appendices are included in the PCEMP:

1. **Annex A: Site Drawings**
2. **Annex B: Environmental Inspection Schedule**
3. **Annex B1 : Complaints Form**
4. **Annex C: Incident Report Form**
5. **Annex D: Site Waste Management Plan**
6. **Annex E: Construction Method Statement**
7. **Annex F: Pollution Prevention Plan**
8. **Annex G: Environmental Emergency Plan**

3 ROLES AND RESPONSIBILITIES

3.1 Introduction

The Project Manager/Construction Manager would have overall responsibility for the construction of the Proposed Development. A full-time Environmental Manager would be responsible for developing the PCEMP and implementing the PCEMP (and its various potential iterations as it is a **'live'** document) during construction.

Other members of the project team would be assigned specific roles to assist the Project Manager in the implementation of the PCEMP and individual specialists would be appointed to provide expert advice. The key environmental roles and responsibilities are in the sections that follow.

The assigned environmental roles and responsibilities for the relevant project personnel are detailed in this section.

For a project like this development the environmental officer role maybe combined with the site manager role due to the size of the project and development area. All roles are still listed for completeness.

3.2 Construction Director

The Construction Director will have an overall responsibility for the organisation and execution of all related environmental activities as appropriate, in accordance with regulatory and project environmental requirements. The principal duties and responsibilities of this position will include:

- Overall responsibility for the Proposed Development and implementation of the PCEMP;
- Allocating resources to ensure the implementation of the PCEMP;
- Participates in the management review of the PCEMP for suitability, adequateness and effectiveness; and,
- Sets the focus of environmental policy, objectives and targets for the Contractor.

3.3 Construction Manager/Site Manager

The Construction Manager/Site Manager is directly responsible to the Construction Director for the successful execution of the project. The principal duties and responsibilities of this position will include:

- To report to the Construction Director on the on-going performance of the PCEMP;
- To discharge his/her responsibilities as outlined in the PCEMP; and,
- To support and augment the Environmental Officer through the provision of adequate resources and facilities in the implementation of the PCEMP.

3.4 Environmental Officers

The Environmental Officer will be responsible for, but not limited to, the following activities:

- Ensuring that the requirements of the PCEMP are developed and environmental system elements (including procedures, method statements and work instructions) are implemented and adhered to with respect to environmental requirements;
- Reviewing the environmental responsibilities of other managed Contractors in scoping their work and during contract execution;
- To ensure that advice, guidance and instruction on all PCEMP matters are provided to all their managers, employees, construction contractors and visitors on site;

- Report to the Construction Manager on the environmental performance of Line Management, Supervisory Staff, Employees and Contractors;
- Advise site management on environmental matters;
- maintaining environmental records;
- providing guidance for the site team in dealing with environmental matters, including legal and statutory requirements affecting the works;
- reviewing environmental management content of method statements;
- reporting environmental performance to the Site Manager;
- liaison with statutory and non-statutory bodies and third parties with an environmental interest in the Proposed Development;
- Monitoring and completing the waste register and ensuring the correct waste management procedures are implemented (An example Site Waste Management Plan (SWMP) is set out in **Annex D**);
- Implementing and maintaining environmental controls on site. (Refer to **Annex B** Environmental Inspection Schedule and details of what is included in method statements are set out in **Annex E**).
- Attending to any spills or environmental incidents that may occur on site. (Refer to **Annex F** Pollution Prevention Plan, **Annex G** Emergency Response & Environmental Plan);
- Undertake site environmental monitoring and walk overs (Refer to **Annex B** Environmental Inspection Schedule);
- Ensuring correct procedures are followed in the event of environmental incidents (Refer to **Annex C** Incident Report Form and **Annex G** Emergency Response & Environmental Plan).

3.5 Site Supervisors

Site Supervisors are required to:

- Promote a Health & Safety culture on site, to read, understand and implement the PCEMP;
- Know the broad requirements of the relevant law in environmental matters and take whatever action is necessary to achieve compliance;
- Ensure that environmental matters are taken into account when considering Contractors' construction methods and materials at all stages;
- Be aware of any potential environmental risks relating to the site, plant or materials to be used on the premises and bring these to the notice of the appropriate management;
- Ensure plant suggested is environmentally suited to the task in hand;
- Co-ordinate environmental planning of all construction activities to comply with environmental authorities' requirements and with minimum risk to the environment.
- Give Contractors precise instructions as to their responsibility to ensure correct working methods where risk of environmental damage exists;
- Where appropriate, ensure Contractors method statements include correct waste disposal methods;
- Be aware of any potential environmental risks relating to the Contractors and bring these to the notice of the appropriate management; and,
- Ensure materials/waste register is completed as appropriate.

3.6 Site Personnel

All Contractors, and other site personnel, on the project will adhere to the following principal duties and responsibilities:

- To support and promote the Health & Safety culture on site.
- To co-operate fully with the General Contractor and the Environmental Officer in the implementation and development of the PCEMP at the site;
- To conduct all their activities in a manner consistent with regulatory and best environmental practice;
- To participate fully in the environmental training program and provide management with any necessary feedback to ensure effective environmental management at the site; and,
- Adhere fully to the requirements of the site environmental rules.

3.7 Team Structure & Distribution List

All personnel working on the project will be responsible for the environmental control of their own work and will perform their duties in accordance with the requirements of the PCEMP (and CEMP as updated) and in compliance with the controls referenced therein.

A distribution list for the CEMP should be developed when all contact names and companies are known. The purpose of the distribution list is to establish communication channels that will enable more effective control of environmental-related issues. The distribution list should identify individuals and organizations that have received or will receive a copy of the construction stage CEMP for implementation.

Individuals of importance could include the developer, the environmental consultant, lead contractors, subcontractors, and any appointed environmental managers (or other identifiable titles for the persons in charge of implementing the contents of the construction stage CEMP).

The distribution list will be established prior to commencement of construction by the appointed contractor. Prior to commencement of construction, all roles and responsibilities should be confirmed in the PCEMP as updated. Table 3.1 shows a template for project roles and responsibilities and can act as a template for the distribution list for the PCEMP.

Table 3.1: Role, Company, Named Contact & Contact Details

ROLE	COMPANY	NAMED CONTACT	CONTACT DETAILS
Construction Director			
Construction Manager			
Environmental Officer			
Site Supervisors			
Site Personnel			
Health & Safety Representative (May be combined with Construction Manager role)			
Other specialists as required (e.g. geotechnical , drainage/civil engineer)			

	Notifying the EPA **1890 33 55 99** **Any spillages / pollution incidents should be reported to the EPA hotline within 30 minutes of the incident occurring unless it is not safe to do so**
Environmental Protection Agency (EPA)	**Notifying the EPA** **To notify the EPA by telephone, operators may call EPA HQ at 053 916 0600 or their Regional EPA Office.** **The EPA's business hours are 09:00 – 17:00 Monday to Friday except Public & Bank Holidays. Outside of these hours, contact the EPA on any of the above numbers or on our dedicated Low Call number 1890 33 55 99. Our Out of Hours line is open 24 hours a day, 7 days a week.** **To leave a message, please hold for a choice of the three options. Please be aware that all after-hour calls are recorded.** **Option 1 – non-emergency notification. This is for non-urgent incidents, which will be received by an EPA inspector on the next working day** **Option 2 – Emergency incident. This is an urgent notification of a significant incident at a licensed site or environmental pollution, which will be forwarded to an EPA manager for rapid response**

The Principal Contractor as appointed has ultimate responsibility for the successful environmental performance of the Proposed Development through appointment and management of subcontractors and environmental specialists, as required, as detailed in Table 3.1. Specifically, this includes:

- Principal Contractor & all sub-contractors will need to c**omply with all** relevant environmental legislation when carrying out work on the site;
- **Definition** of environmental standards and requirements for the contractors throughout the contract stages;
- **Acting as a point of contact** for consultation and feedback with landowners/occupiers, statutory and non-statutory consultees, other interested parties and the public;
- **Auditing** of the performance of sub-contractors;
- **Environmental monitoring and reporting (in conjunction with Environmental Officer)** - Environmental issues relevant to the project will be discussed during weekly Site Progress Meetings attended by the Site Manager and Environment Manager. Environmental performance will also be discussed at regular HSEQ meetings. This will include dissemination and discussion of the findings of audits, environmental reports and other inspections where appropriate. Other responsibilities are as follows:
- **Health and Safety** - The site will be managed by a full time project management team who will be responsible for the Health and Safety of all personnel on site.
- **Site Rules** - All personnel must comply with the rules and regulations laid down in the appropriate site rules.

- **Induction and signing in and out** - All visitors to the site will be required to sign in and out and all personnel working on the site will be subject to an induction by the Principal Contractor.
- **Training** - All construction staff, including sub-contractors, would receive structured training on the requirements of the PCEMP and the associated environmental control plans, as developed. They would also be required to attend a site induction which would include the key environmental issues identified for the Proposed Development. The briefing would emphasise the methods and working practices which must be employed to protect the environment, including emergency procedures for reporting and dealing with environmental incidents. Records of training and those attended will also be retained.

4 COMMUNICATIONS

Effective communication is essential to ensure the appropriate employment of environmental standards and relaying of information, reports/assessments and data. The following points are some of the key forms of communication required:

- **Statutory and Non-Statutory Bodies** - During the construction works, communication may be required with external parties such as, statutory authorities, interest groups and the public/business owners. Communication may take the form of scheduled meetings, site visits and written correspondence.
- As the project progresses, there may be a requirement by the client, his representatives and any appointed contractor to clarify potential issues with relevant statutory bodies – including those with an environmental remit.
- Detailed below is a basic list of statutory bodies with an environmental remit within Ireland and the local authority area who may require consultation – in particular during the construction phase of the project. Also provided is a link to their internet sites from which useful information and contact details of these organisations can be obtained.
- This list will be reviewed by the contractor, added to or amended if required. This list therefore should not be seen as a definitive list.
- It should also be noted that there are a wide range of non-statutory bodies within Ireland who play an active role in protecting the environment. These organisations are not listed in this PCEMP as yet but will be if required e.g. perhaps to seek further clarification.
- **Public/businesses** - The Site Manager shall ensure that the public/businesses are kept informed of operations that may have an effect upon them. This may involve letter drops and meetings to keep local commercial premises owners up to date with progress with the Proposed Development and any new operations that are to be carried out. The Site Manager will provide details of contacts within the project team for the public/businesses to contact should any issues arise;
- **Consents, Licences and Permits** - The provisions for controlling, pumping and discharging water will be agreed with the Environmental Protection Agency (EPA). The Contractor will ensure that any licences required are in place;
- **Changes in legislation or guidance** - Legislative changes or proposed improvements to manage processes on site that have a bearing on the commitments given in the supporting environmental documents or other consultations will be communicated by the Site Manager to the Client and;
- **Meetings & Records** - Environmental issues relevant to the project will be discussed during weekly Site Progress Meetings attended by the Site Manager and Environment Manager. Environmental performance will also be discussed at regular HSEQ meetings. This will include dissemination and discussion of the findings of audits, environmental reports and other inspections where appropriate.

Table 4.1: Basic list of statutory bodies with an environmental remit

Organisation	Web link
Environmental Protection Agency (EPA)	https://www.epa.ie/
Waterways Ireland	https://www.waterwaysireland.org/
Inland Fisheries Ireland	https://www.fisheriesireland.ie
Irish Water	http://www.water.ie
Monaghan County Council	https://www.monaghan.ie

5 GENERAL POLLUTION CONTROL AND CONTINGENCY PLAN

5.1 Exclusion Zone & Materials

The contractor will:

- **dedicate specific areas for oil storage and refuelling, separated by a minimum of 10m from any existing waterbodies within or adjacent to the proposed development site and comply with legislation, including providing bunds sized to contain 110% of fuel storage capacity.**
- **The contractor will use fill point drip trays, bunded pallets and secondary containment units.**
- **The site will be enclosed and secured and fuel storage areas will be secondarily secured.**
- **All fuel, oil and chemical deliveries will be supervised by a responsible person who will be trained to deal with any spillage to prevent a pollution problem occurring.**

The exclusion zone is a 10m distance banding or buffer from any existing watercourse within or adjacent to the proposed development site. **NO** material shall be stored in the exclusion zone area for the duration of the construction works. **There shall be no cement, concrete, grout, fuels/ oil/ hydrocarbons stored in the exclusion zone**.

5.2 Emergency Procedures

A Site Environmental Emergency Plan will be prepared prior to construction and communicated to all members of the project team including sub-contractors and emergency services. A Pollution Incident Emergency Response Plan would be developed in accordance with the guidance set out by the Environmental Protection Agency (EPA). **Annex E** of this PCEMP contains an example Emergency Response & Environmental Plan. The Response Plan would set out the procedures to be followed and measures to be implemented in the event of a pollution incident. These incidents may be the result of:

- **delivery and use of materials;**
- **spillages of oils or chemicals;**
- **discharge of silty water or other pollutants to watercourses;**
- **flooding event; and,**
- **fire (emissions to air) and failure to contain firewater runoff.**

Emergency procedures are developed to support the response plan. The procedures define the circumstances when the plan should be activated and include:

- the names and contact details of staff trained in incident response,
- **clearly defined roles and responsibilities,**
- **the types and location of emergency response equipment available,**
- **the location of the emergency assembly point, and,**
- **Procedures for recovering spilled product.**

Responsible staff will be trained in emergency procedures to form an Emergency Team, so that these procedures can be implemented swiftly and effectively. Periodic testing of emergency procedures will be undertaken by the Site Manager.

The Environmental Manager will observe the test and to report on results. Any corrective actions are taken forward for review and approval.

Should an emergency incident occur, the Environmental Manager will be notified immediately. The emergency response will be co-ordinated by the Site Manager.

Protective measures, mitigation, clean up and remediation actions will be identified from the evaluation and shall be put into place, having regard for the sensitivities of the environment.

A record of the emergency incident will be kept to show the nature of the corrective action undertaken. (See **Annex C** for an example template).

All relevant staff would be trained in how and when to contact the emergency services, EPA and other organisations identified in the Response Plan. **Annex E** of this PCEMP contains an example Emergency Response & Environmental Plan.

6 ENVIRONMENTAL PERFORMANCE MANAGEMENT

6.1 Environmental Risk Register

The Environmental Manager/Officer should prepare and maintain an Environmental Risk Register having regard for legal requirements, project environmental commitments the potential for aspects of works to cause significant environmental impact.

The Environmental Manager should record responsibilities assigned for actions required for mitigation and control of the environmental risks in the Environmental Risk Register.

The Environmental Risk Register will be subject to regular review by the Environmental Manager together with the Site Manager.

6.2 Consents

The Proposed Development may require consents from various regulatory bodies in advance of construction activities. Copies of legal consents, permits and licences obtained will be held in the site environmental file by the Environmental Manager.

6.3 Method Statements and Risk Assessments

Specific environmental risks will be assessed during preparation of method statements. Actions and environmental constraints associated with specific construction operations will be included in method statements, field control sheets and activity plans where appropriate. Generic environmental requirements will be included in all method statements. Details of what should be included in method statements are set out in **Annex E**.

6.4 Inspections

Routine inspections to check that pollution control measures are in place will be undertaken by the Environmental Manager, who will produce weekly inspection reports. Daily inspections will be made by the supervisors during each shift and any environmental problems or risks that are identified will be actioned as soon as is reasonably practicable. Any issues arising from the daily inspections will be notified to the Environmental Manager. **Annex B** of this PCEMP details an example environmental inspection schedule.

6.5 PCEMP Review Programme

The PCEMP is a **'live'** document that will be updated by the Contractor and reviewed by the Environmental Manager on a monthly basis as a minimum. The PCEMP will also be reviewed following any environmental incidents which require the works methods to be updated or changed.

6.6 Notices of Non-Conformance

In instances where the requirements of the PCEMP are not upheld a non-conformance and corrective action notice/procedure will be produced. The notice/procedure will be generated during the inspections conducted by the Supervisors, the Site Manager, Environmental Manager or any external third-party audits.

The Site Manager will be responsible for ensuring a corrective action plan is established and implemented to address the identified shortcoming. An incident report form is set out in **Annex C**.

6.7 Complaints Handling

The response to any complaints will be managed by the Site Manager, who will inform the Environmental Manager of any environmental complaints. A Complaints Register will be maintained to detail the name and contact details of the complainant, date and time of the complaint, nature of complaint, action taken to resolve issues, and date of complaint handover.

The Environmental Manager will ensure that all environmental complaints and concerns will be responded to in 24 hours. An example complaints form is contained with **Annex B1** of this PCEMP.

6.8 Key Performance Indicators and Objectives

The Contractor should set environmental objectives in order to continuously improve environmental performance on the site. The Contractor will set objectives based on each significant environmental impact and they will be reviewed, and revised if necessary, on a monthly basis. Procedures, monitoring requirements and key performance indicators will be measured against achievable targets.

7 WORK PROGRAMME

7.1 Proposed Programme of Works

It is estimated that the proposed work will take between 12 - 24 months to complete on site.

7.2 Construction Hours

It is proposed that the construction hours will be:

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

Precise timings and phasing of the proposed works are not known at this stage as this will be dependent upon the completion of the planning process and the subsequent appointment of a contractor.

It should be noted though, that typically the construction hours employed are dependent upon which season the work takes place in with hours in the summer months anticipated to be from 0800 to 1900 hours on weekdays, 0800 to 1300 on Saturdays with no work on Sundays, while in winter the hours would be expected to be 0800 to 1630 hours on weekdays, 0800 to 1300 on Saturdays and no work on Sundays.

Working hours outside of this regime will only occur in exceptional circumstances – of these are known in advance (i.e. not under emergency conditions), discussions will be held with representative of the Councils environment and planning team to ensure that the works can be completed with minimal impact on sensitive receptors.

7.3 General Site Set Up

The following will be considered during site mobilisation:

- Enabling Works - Liaison with regulators (if required)
  - Site Clearance/ground preparation
- Site Offices
  - Recycling will be managed within offices and office waste controlled.
- Site Security
  As vandalism is a major cause of pollution incidents at construction sites, the appointed contractor will be required to ensure that the site is secure and protected from unauthorised access. The site shall adhere to the following:
  - Site and compound boundaries i.e. fencing, gates, locks etc.
  - Any polluting materials to be well secured.

7.4 Site Construction Compound

The construction site will operate within a secure hoarded compound site in line with CDM 2015 Regulations and will be controlled by the General Contractor. All access will be monitored and recorded. All construction support activities will be controlled within the site construction compound including office facilities, toilets, canteen etc. Materials and waste handling and storage will be within the confines of the site.

The work area will be protected from the public at all times. CCTV may be installed and compliant Health & Safety information signs will be installed. The external façade of the solid hoarding panels will have a mix of Health & Safety warning signs.

The site compound will be position away from the **exclusion zone** and located in a safe and convenient area.

7.5 Traffic Management and Deliveries

Traffic management and the delivery of equipment and materials will be carefully controlled and managed at the site. Access and egress to the proposed area will be managed by the General Contractor. Delivery times will be planned in advance.

There will be occasions whereby materials are needed to be delivered to site, a banksman will be in place to ensure safe access is provided. The times of deliveries will be limited to arrive on site during off peak periods of time.

There will be periods of time during the construction programme whereby larger equipment is needed to construct the building including cranes required for installation of the steel frame and cladding for the building.

7.6 Services

Note that in relation to working near services such as electricity, gas, water etc., liaison will take place with the service provider.

All utility services discovered adjacent to the site will be treated as "live" until proven otherwise and the co-ordination of switchovers and temporary disruptions for new constructions will be undertaken in accordance with the standard procedures of the relevant statutory authorities.

7.7 Construction Site Security

Throughout the construction phase, adherence to high standards of Health and Safety for all construction workers, site visitors and members of the public will be of paramount importance. All construction activities will take place in the context of the relevant HSA Health and Safety legislation.

As such, it is important that the construction site is secured adequately to ensure that uncontrolled access e.g. by children or vandals, is restricted as much as possible. As well as the potential health and safety risk from uncontrolled access, it is recognised that one of the biggest causes of pollution events from construction sites is due to the activities of vandals.

8 ENVIRONMENTAL MITIGATION MEASURES

Supporting environmental assessments (submitted in support of the planning application) have been undertaken which have assessed the likely impacts that the Proposed Development may have on the environment. Those supporting environmental assessments also propose mitigation measures to reduce the magnitude of effect of those likely impacts. Sections 8.1 - 8.4 details mitigation measures proposed for the Development.

An environmental inspection schedule is set out in **Annex B**. An incident report form is set out in **Annex C**. A site waste management plan (SWMP) is set out in **Annex D**. An emergency response and environmental plan is located in **Annex G** of this document. Details of what should be included in method statements are set out in **Annex E**. A site waste management plan is summarised in the **Annex G** of this PCEMP.

8.1 Environmental Site Procedures

This Preliminary Construction and Environmental Management Plan (PCEMP) has been prepared in accordance with various best practice guidelines for construction and operational activities in general. It sets out recommended environmental management measures which shall be provided for in a final CEMP to be prepared following receipt of permission and to which the future development shall adhere. These management measures and those to be incorporated in the final CEMP have regard to, but not limited to the following guidelines:

- Construction Industry Guidelines (such as CIRIA C502 Environmental Good Practice on site).
- BS 5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise and BS 5228-2:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part2: Vibration (together referred to as B.S. 5228).
- Control of Dust from Construction and Demolition Activities (BRE, 2003).
- Control of Water Pollution from Construction Sites - Guide to Good Practice. SP156 (Murnane et al, 2002).
- Control of water pollution from construction sites. Guidance for Consultants and Contractors (C532). CIRIA (H. Masters-Williams et al), 2001).

The following project specific environmental management procedures will be developed and employed by the proposed contractor, while working on the project.

8.1.1 Outline of Potential Environmental Procedures

- Roles and Responsibilities
- Awareness and Training
- Environmental Emergency Response Plan
- Record Keeping, Auditing and Monitoring
- Good House-Keeping and Construction Best Practice
- Contaminated Material Plan
- Fuel Spill Management Plan
- Protection of Flora and Fauna
- Invasive Species Management
- Soil, Geology and Hydrogeology
- Water Management
- Sediment Control

- Air Quality and Climate Management
- Noise and Vibration Management
- Traffic Management Plan
- Landscape Restoration Plan

Because some management measures are set out under various specific environmental topic headings there is some overlap in recommended management measures specified.

8.2 ENVIRONMENTAL MANAGEMENT MEASURES

The following sections provide guidance on the requirements of for each of the specific environmental management procedures as set out in the EIAR. As appropriate, an outline of information to be contained within each procedure is provided.

N.B. This report should be considered as a live document which will be updated by the applicant prior to commencement of activities. It will be updated to incorporate the requirements of any relevant conditions attached to the grant of planning permission.

8.2.1 Roles and Responsibilities

This section will set out the roles and responsibilities of the principal parties involved in the construction of the proposed remediation solution once a Contractor has been appointed. The roles and responsibilities outlined below are indicative, and these will be updated upon appointment of the Contractor.

8.2.1.1 The Contractor

The contractor appointed will be responsible for all activities necessary to provide the works in accordance with the requirements stated or implied within the Contract, unless explicitly stated as being the responsibility of the Employer or others. This includes construction, testing and all associated management and supervision. It also includes implementation of mitigation measures and monitoring required.

The contractor shall resource, plan, progress and deliver the project in such a manner that all management systems are fully transparent and auditable.

The contractor's management systems shall be audited by the Project Manager as appropriate throughout the Contract.

The contractor appointed to the project shall be assigned the following responsibilities as a contractual requirement. It should be noted that this is an indicative list and does not limit the requirements of the Contract.

8.2.2 Awareness and Training

The contractor will be required to maintain procedures for identifying training needs, and for providing appropriate training, for all personnel whose work can have a significant effect upon the environment. Appropriate records of training to be maintained. Employees and site workers to be made aware of their potential impacts to the environment during an induction. The Facility Manager and deputy, and any replacement manager or deputy, shall successfully complete both the appropriate Waste Management Training Programme and associated site assessment appraisal within twelve months of appointment.

8.2.3 Environmental Emergency Response Plan

An ‘Accident Prevention and Emergency Response’ will provide for the protection of the environment. This will be implemented to ensure that a documented Accident Prevention Procedure is in place that will address the hazards on-site. The environmental emergency response will set out procedures and responsibilities to be followed in the event of emergency situation on the site. It will identify potential emergency occurrences and ensure appropriate provision is made on site to allow the specified procedure to be swiftly and safely performed. In the event of an incident the licensee shall immediately:

- Carry out an investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
- Isolate the source of any such emission;
- Evaluate the environmental pollution, if any, caused by the incident;
- Identify and execute the measures to minimise the emissions/malfunction and the effectsthereof;
- Identify the date, time and place of the incident; and
- Notify the Agency and other relevant authorities.

The contractor will provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed by the Agency to:

- Identify and put in place measures to avoid reoccurrence of the incident; and
- Identify and put in place any other appropriate remedial action.

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

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

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

- Chapter 6 Water Quality
- Chapter 7 Soils, Geology & Contaminated Land
- Chapter 8 Biodiversity
- Chapter 10 Air Quality & Climate
- Chapter 11 Waste

8.2.4 Good Site House-Keeping and Construction Management Best Practice

The purpose of the Good Site House-Keeping procedure is to ensure a good standard of 'house- keeping' across the proposed development while highlighting some standard best practice measures which will minimise environmental risk. Some of these measures are repeated as relevant and appropriate in following specialist environmental management procedures, which highlights the importance of such measures for the protection of the overall environment.

The proposed contractor, together with all staff and any subcontractor must plan, manage and monitor their work so it is carried out safely and without risks to health, including careful planning on how the site will be kept tidy and housekeeping actively managed.

The following mitigation methods shall be employed by the contractor to ensure good housekeeping on site and in the surrounding area:

- Spraying the road surface near the entrances to the subject site with water when necessary to limit dust emissions;
- Prompt removal of any material spillage at the site entrances to prevent dispersion along thepublic road due to wind/rain action and subsequent re-suspension due to passing vehicles;

- Stockpiles of loose, fine aggregate or other similar sized construction material which could beeasily re-suspended by the wind to be covered when not in use;
- Lorries importing/exporting loose materials to/from the construction areas to be covered;
- Establishing channels of communication between the contractor/developer, Planning Authorityand resident communities;
- Erection of barriers around items such as generators or high duty compressors;
- All works will be carried out under the supervision of suitably experienced and competent staff;
- Prior to any works, ensure that all plant and equipment is mechanically sound to avoid leaks ofoil, fuel, hydraulic fluids and grease;
- Car parking facilities will be available on site, as will wheel-wash facilities to minimise dust/dirtbeing transferred from the site to the public roads by vehicles; and
- Contractors shall prepare an assessment for potential noisy operation operations and outline the noise mitigation measures proposed, to protect local amenity.

8.2.5 Demolition and Construction Waste Management Plan

Please refer to Appendix 2B Preliminary Demolition & Construction Waste Management Plan.

8.2.6 Fuel Spill Management Plan

No fuels will be stored onsite, with fuel imported on an as-needs basis. Refuelling will only occur on appropriate hardstand area. The only containers of fuels permanently onsite will be those in vehicles. The proposed contactor will prepare and put in place a Fuel Spill Management Plan to contain, remove or remediate spillages before they reach a surface water receptor. In the event of a fuel spill the following procedure are followed:

- The source of the spill will be closed off immediately if possible. The Facility Manager or Deputy Manager will be notified immediately;
- Shut off valves will be closed off where appropriate;
- The liquid will be contained as far as is practicable by employing containment booms andabsorbent mats and/or suitable absorbent material to contain and absorb any spillage at the facility. Suitable booms and mats will be stored at the site office;
- A waste oil tanker (or tankers) will be contracted immediately to pump any liquid spill;
- The following authorities will be notified by telephone at the earliest opportunity: the EPA, Monaghan County Council, and the Inland Fisheries.
- All oil will be removed from the surface by either pumping or use of absorbent materials. Allwaste oils and materials will be disposed to an appropriate facility.
- Once used the absorbent material shall be disposed of at an appropriate facility.
- All staff will be informed as to the location and use of the absorbent materials and will be proficient in their use.
- All such spills will be recorded on an Incident Report Form.

8.3 Air Quality and Climate

8.3.1 Air Quality

The air quality section of this report focuses on the environmental management measures in place to minimise the impacts from the generation of dust, odour and vehicle movement and vehicle emissions.

8.3.1.1 Dust

A Dust Management Plan (DMP) will be prepared by the appointed contractor for the Site and submitted to MCC for written agreement prior to commencement of construction. The DMP will at a minimum include the following mitigation measures listed below to minimise and manage potential dust emissions:

8.3.1.1.1 Communications

With respect to communications, the following will be implemented:

- Develop and implement a stakeholder communications plan that includes community engagement;
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the Site Manager;
- Appropriate training will be provided to all staff to ensure that they are aware of and understand the dust control and other environmental control measures; and,
- Display the head or regional office contact information.

To be implemented before works commence on site and training given as appropriate by the appointed contractor.

8.3.1.1.2 Site Management

With respect to site management, the following will be implemented:

- Daily visual inspections of the site and site boundary for evidence of dust depositions will be made. A dust inspection of the site will be undertaken by a suitable person, trained and nominated by the site manager. Increase frequency of site inspections will be undertaken when activities with a high potential to produce dust are being carried out, such as earthworks activities, power tool use and during prolonged windy or dry condition;
- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken;
- Make the complaints record available to the relevant regulatory authorities when asked;
- Record any exceptional incidents that cause dust and/or air emissions, either on or offsite, and the action taken to resolve the situation in an environmental log book;
- Avoid site runoff of water or mud;
- Use covered skips;
- No bonfires and burning of waste materials on site;
- It is recommended that passive monitoring at three - site boundary locations should be completed for the duration of the demolition & earthworks (Bergerhoff method);
- Keep surfaces such as Site fencing and barriers clean using wet methods.

To be implemented during works as required by the appointed contractor.

8.3.1.1.3 Demolition

Demolition is planned as part of the development including the demolition of buildings and the breaking up of ground floor slabs (rock breaking excavators) and the breaking up of external concrete (rock breaking excavators). With respect to demolition, the following should be implemented:

- Soft strip inside buildings before demolition of the buildings;
- * The appropriate handling of asbestos is not outlined in this section rather it is detailed in the associated Asbestos Demolition Survey Report for the Proposed Devolvement.
- Ensure effective water suppression is used during demolition operations (especially breakup of concrete/floor slabs/buildings). Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.

To be implemented during demolition by the appointed contractor.

**Asbestos, including asbestos fibres, is treated as a special material under all types of regulation and as such has its own exposure limits. It is subject to high levels of regulation and control. The asbestos demolition survey (required for this project) is not presented in this section rather the asbestos works are a matter principally for Health and Safety Authority (HSA) and will be dealt with through appropriate survey, reporting, removal and disposal as required.*

8.3.1.1.4 Earthworks

Earthworks are planned as part of the Proposed Development including foundations (and associated excavation of soils and materials), creation of stockpiling and cut and fill areas. With respect to earthworks, the following will be implemented:

- Disturbance of the ground will be kept to a minimum wherever possible;
- Soil handling should be restricted during adverse weather conditions such as high winds or exceptionally dry spells – depending on outcome of walk over survey identifying any potential issues;
- Minimise drop heights from loading or handling equipment/materials and use fine water sprays on such equipment wherever appropriate; and,
- Methods and equipment will be in place for immediate clean-up of spillages of dusty or potentially dusty materials.

To be implemented during earthworks by the appointed contractor.

8.3.1.1.5 Construction

With respect to construction, the following will be implemented:

- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place;
- Ensure bulk cement and other fine powder materials are delivered in enclosed;
- For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust;
- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems; and

- Cleaning of hard stand areas by personnel only or if required mechanical road sweepers (with water suppressant fitted) to clean any site hard stand area.

To be implemented during construction period by the appointed contractor.

8.3.1.2 Odour

Despite the low risk of encountering odours, a series of odour mitigation measures (related only with emissions form construction plant, vehicles & machinery) have been presented to minimise the impact and to prevent any nuisance in the unlikely event that they are encountered.

8.3.1.3 Vehicle Movement and Vehicle Emissions

As with any construction site, there are associated vehicle movement, emissions and plant use. With respect to vehicle movement and vehicle emissions, the following will be implemented:

- Implement a wheel washing system until earthworks are completed. Wheel wash system should have an adequate amount of hard surface between it and the Site exit;
- Transportation of dusty/fine materials will be conducted in enclosed or sheeted vehicles;
- An onsite speed limit (to be displayed) will be implemented by the main contractor that will be appropriate to the types of construction plant utilised;
- Regular cleaning and maintenance of site roads as appropriate. Hard surface roads should be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic only;
- Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary;
- Ensure all vehicles switch off engines when stationary and not in immediate use - no idling vehicles (emissions to air controlled);
- All plant utilised should be regularly inspected (emissions to air controlled);
- Visual monitoring of plant will include: Ensuring no black smoke is emitted other than during ignition (emissions to air controlled);
- Ensuring exhaust emissions are maintained to comply with the appropriate manufacturers limits (emissions to air controlled);
- Vehicle exhausts will be directed away from the ground and other surfaces and preferably upwards to avoid road dust being re-suspended to the air;
- Avoid the use of diesel or petrol powered generators where possible, using mains electricity or battery powered items where practicable; and
- Impose and signpost a speed limit of 20 km/hr on sealed surfaces and 15 km/hr on unsealed surfaces.

To be implemented throughout by the appointed contractor.

8.3.2 Climate

Consideration is given in this section to specific measures associated with the proposed development. It is noted that the mitigation measures proposed for air quality and climate will also benefit in terms of reducing CO_2 emissions. Mitigation measures to be employed by the contractor to minimise CO_2 emissions from the proposed development's construction and operation include the following;

- Consultation with a wider variety of internal and external stakeholders to ensure all relevant information is included in the development of the plans;

- Implementation of a Traffic Management Plan which will be prepared in advance of operation. This will outline measures to minimise congestion and queuing, reduce distances of deliveries and eliminate unnecessary loads;
- Turning off vehicular engines (and mobile plant) when not in use for more than five minutes. This restriction will be enforced strictly unless the idle function is necessary for security or functionality reasons;
- Regular maintenance of plant and equipment. Technical inspection of vehicles to ensure theywill perform the most efficiently;
- The use of thermostatic controls on all space heating systems in site buildings to maintain optimum comfort at minimum energy use;
- The use of sensors on light fittings in all site buildings and low energy lighting systems;
- The use of adequately insulated temporary building structures fitted with suitable vents; and
- The use of low energy equipment and 'power saving' functions on all PCs and monitors in thesite offices.

8.3.3 Traffic Management Plan

The appointed contractor will prepare a full Traffic Management Plan (TMP) for the combined construction and operation stage of the development. The characteristics of the TMP will be agreed with Monaghan County Council in advance.

The TMP will include measures for emergency access in the event of a road traffic accident or similar incident that hinders the site access and egress along the interconnector road. For such an event all customers and hauliers will be immediately notified via phone or email to advise of the following:

- The nature of the emergency.
- The expected duration (if known).
- Direction on the appropriate alternative route to be taken for committed vehicles.

Direction to halt all deliveries yet to leave the source site until the safe site access is restored.

8.4 The Water Environment

This section details measures to ensure effective avoidance and mitigation methodologies employed for the protection of the water environment.

The potential impact arising from the physical disturbance includes;

- **Sedimentation,**
- **Concrete or fuel/chemicals entering waterbodies through site run-off but also the potential for the creation of preferential pathways for leachate movement vertically to the groundwater body.**

Mitigation measures for the water environment are detailed in this section.

8.4.1 Construction Phase Best Practice Measures

The mitigation measures implemented by the contractor will refer to the construction management procedures for best practice regarding the following recognised international guidelines:

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

8.4.2 Suspended Sediment / Sedimentation

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

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

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

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

8.4.3 Concrete and Cement Pollution

The impacts in relation to cement and concrete for the proposed development are, for the most part (but not limited to) the installation of concrete flooring and construction works of buildings. Mitigation measures to prevent cement contamination of water bodies will be carried out in accordance with the outlined recommendations within the PCEMP. The following measures are to be undertaken to mitigate against potential water quality issues:

- **A risk assessment will be carried out to ensure the best location for concrete washout facilities for plant required on site;**
- **If required, washout from mixing works will be undertaken in a contained impermeable area;**
- **Any stockpile storage areas will be <u>not</u> be stored in the exclusion zone;**
- **The exclusion zone may be marked out with tape and cones to prevent provide a visual reminder of the exclusion zone.**

In circumstances where the above mitigation measures are employed during construction operations, the potential magnitude of the impact to receiving water environment will be reduced to negligible thus reducing the significance of environmental effect will be reduced to minor on a temporary basis.

8.4.4 General Construction Works

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

In circumstances where mitigation measures are employed during construction operations, the potential magnitude of the impact on receiving water environment will be reduced to negligible thus reducing the significance of environmental effect will be reduced to minor on a temporary basis.

Annex F details GPP 1 in full and Table 8.1 gives a summary of mitigation measures.

Table 8.1: The Water Environment Mitigation Measures

Mitigation Measure	When?	By whom?
i. All mitigation measures detailed herein will be subject to periodic inspection and maintenance.	Before Construction Phase	Principal Contractor to deliver
ii. The contractor should adhere to standard requirements for the protection of watercourses ahering to the 10m exclusion zone.	Construction Phase	Principal Contractor to deliver
iii. The Principal Contractor will allocate a dedicated area for material deliveries separated a minimum of **10m** from adjacent waterbodies, manage the same and make sure that over-ordering and stockpiling is kept to a minimum.	Construction Phase	Principal Contractor to deliver
iv. The Principal Contractor will dedicate specific areas for oil storage and refuelling and will use fill point drip trays, bunded pallets and secondary containment units. The site will be enclosed and secured and fuel storage areas will be secondarily secured.	Construction Phase	Principal Contractor to deliver
v. Reference and adherence to all the relevant precepts contained in Standing Advice Discharges to the Water Environment.	Construction Phase	Principal Contractor to deliver
vi. The contractor will adopt a site specific Incident Response Plan (**Annex G** of this **PCEMP** provides a template than can be adopted and used) in accordance with PPG6, appoint a responsible person and train operatives in implementation and testing of the Plan periodically throughout construction of the works. An Emergency Spill Response Plan, the content of which is included in the PCEMP (Please refer to **Annex G**), will detail actions to be taken in the event of an accidental spillage of fuel, chemicals or other hazardous material.	Construction Phase	Principal Contractor to deliver

Mitigation Measure	When?	By whom?
vii. During the construction stage foul discharges will be collected and stored locally for removal off site. As such, no burden will be placed on any existing foul infrastructure and no further mitigation measures are required.	Construction Phase	Principal Contractor to deliver
viii. Suitable training will be provided to relevant personnel detailed within the Emergency Response & Environmental Plan (Please refer to **Annex G)** to ensure that appropriate and timely actions will be taken should an incident occur.	Construction Phase	Principal Contractor to deliver

The works will demonstrate adherence to good working practices as detailed in current guidance in the PPGs and GPPs below:

NEW GPP 1: Understanding your environmental responsibilities - good environmental practices.

A basic introduction to pollution prevention, with signposts to other PPGs and publications. (October 2020)

NEW GPP 2: Above ground oil storage tanks

For above ground oil storage, excluding oil refineries and distribution depots. (January 2018)

PPG 3: Use and design of oil separators in surface water drainage systems

For identifying where an oil separator is required and, if so, what size and type of separator is appropriate. (April 2006)

NEW GPP 4: Treatment and disposal of wastewater where there is no connection to the public foul sewer

NEW GPP 5: Works and maintenance in or near water

For construction or maintenance works near, in, or over water. (January 2017)

PPG 6: Working at construction and demolition sites

For the construction and demolition industry. (2012)

PPG 7: Safe storage - The safe operation of refuelling facilities

For operators of liquid fuel refuelling facilities; it applies to all types of fixed refuelling facilities. (July 2011)

NEW GPP 8: Safe storage and disposal of used oils

For storing and disposing of used oils. Applies to activities ranging from a single engine oil change to those of large industrial users. (July 2017)

PPG 18: Managing fire water and major spillages

For identifying equipment and techniques available to prevent damage to the water environment caused by fires and major spillages. (June 2000)

NEW GPP 20: Dewatering underground ducts and chambers

For dewatering underground ducts and inspection chambers. (January 2018)

NEW GPP 21: Pollution incident response planning

For producing emergency pollution incident response plans to deal with accidents, spillages and fires. (July 2017)

NEW GPP 22: Dealing with spills

For anyone who is responsible for storing and transporting materials that could cause pollution if they spill. (October 2018)

PPG 26 Safe storage - drums and intermediate bulk containers

For site operators of industrial and commercial premises storing and handling drums and intermediate bulk containers (IBCs) containing oil, chemicals or potentially polluting substances. (March 2011)

PPG 27 Installation, decommissioning and removal of underground storage tanks

For installing, removing and decommissioning all underground storage tanks (USTs), including those containing petroleum, diesel, fuel oil, aviation fuel, waste oil, domestic heating oil and other potentially polluting materials such as organic solvents. (April 2002)

EPA's Low Call Number

0800 80 70 60

It is recommended that in the event of a water pollution incident the EPA is contacted within 30 minutes unless it is not safe to do so.

8.5 Ecology

8.5.1 Designated Sites and Features of Natural Heritage Importance

The Proposed Development has limited potential to give rise to significant effects upon the Lough Neagh and Lough Beg SPA, via the supported hydrological links to the Application Site. Potential impacts are limited to the input of chemicals, pollutants and sediments into the freshwater environment, in addition to the potential for spread of a single invasive species, Japanese knotweed.

In respect of the potential for the proposals to give rise to the accidental release of chemical contaminants, pollutants and sediments into the freshwater environment, a range of mitigation measures are proposed to mitigate the identified potential effects upon designated sites.

Mitigation measures will include the requirements for best practice and adherence to the following relevant Irish guidelines and recognised international guidelines:

- Good practice guidelines on the control of water pollution from construction sites developed by the Construction Industry Research and Information Association (CIRIA, 2001);
- Netregs Guidance for Pollution Prevention series (GPP), Pollution prevention guidelines (PPGs);
  - GPP2: Above Ground oil storage tanks
  - PPG3: use and design of oil separators in surface water drainage
  - GPP5: Works and maintenance in or near water
  - PPG6: Working at construction and demolition sites
  - GPP8: Safe Storage and disposal of used oils
  - GPP13: Vehicle washing and cleaning
  - PPG20: Dewatering underground ducts and chambers
  - GPP21: Pollution incident response planning
  - GPP22: Dealing with spills
- Fisheries Guidelines for Local Authority Works. Department of Communications, Marine & Natural Resources, Dublin, (Anonymous, 1998);

- Guidelines on protection of fisheries habitats during construction projects (Eastern Regional Fisheries Board, 2006); and
- Control of Substances Hazardous to Health (COSHH) Handling of Hazardous Materials.

The use of oils and chemicals on-site will receive significant care and attention. The following procedures will be followed to reduce the potential risk from oils and chemicals:

- Fuel, oil and chemical storage will be sited on an impervious base within a bund and secured. The base and bund walls must be impermeable to the material stored and of adequate capacity. The control measures in GPP2: Above Ground Oil Storage Tanks and PPG 26 “Safe storage – drums and intermediate bulk containers” (Environment Agency, 2011) shall be implemented to ensure safe storage of oils and chemicals;
- The safe operation of refuelling activities shall be in accordance with PPG 7 “Safe Storage – The safe operation of refuelling facilities” (Environment Agency, 2011).

Subject to implementation of the above mitigation measures, in the context of the proposals which are hydrologically linked to the Lough Neagh and Lough Beg SPA at some distance, it is considered that any potential effects associated with water quality, including pollutants and sediments, will be fully mitigated.

In respect of the potential of the Proposed Development to give rise to the inadvertent spread of invasive species into the Lough Neagh and Lough Beg SPA, via the supported hydrological pathway, it is noted that the Proposed Development will be undertaken in line with the Outline Invasive Species Management Plan (oISMP). This document sets out the various approaches which may be utilised in order to affect control or eradication of the stands of the plant recorded within the site, depending upon the context of these stands within the context of the scheme, in addition to the effective biocontainment of the species.

Subject to the appropriate implementation of this oISMP it is envisaged that any potential effects associated with the inadvertent spread of invasive species, will be fully mitigated.

8.5.2 Habitats

No significant effects upon habitats are predicated as a result of the Proposed Development. It is noted that landscape planting will involve the provision of scattered trees which will provide some opportunities for native birds and invertebrates.

8.5.3 Bats

No significant impacts upon bats are predicted as a result of the Proposed Development. As such no mitigation measures are proposed.

It is recommended that the scheme provide ecological enhancement for this group through the provision of bat boxes within the scheme design. This would provide additional roosting opportunities for bats post development.

8.5.4 Birds

The Proposed Development has potential to give rise to significant effects upon nesting bird’s species which are likely to utilise habitats including scrub, scattered trees, hedgerows, amenity planting and buildings within the Application Site.

In order to avoid any significant impacts upon birds all site clearance, in addition to demolition of buildings, will take place during the period 1st September to 28th February which is outside the breeding season for those bird species that are likely to breed on the site. Should clearance works be required within this period these works will be preceded by an inspection by a suitably qualified ecologist to ascertain the potential for impacts upon nesting birds. This will avoid any direct impacts of the Proposed Development on breeding birds.

It is recommended that the scheme provide ecological enhancement for this group through the provision of nest boxes within the scheme design which will provide nesting opportunities for birds post development

8.6 Noise

8.6.1 Noise and Vibration Management

Mitigation measures may be introduced in order to ameliorate or reduce negative impacts. The site's Waste Licence may require monitoring of noise emissions

During the construction and operational phase, the following measures shall be employed by the contractor in order to reduce noise levels from plant and machinery at the site, as well as from HGV's travelling on the local roads:

- HGVs will only be allowed to import material to the site during the proposed operational hours.
- All equipment will be regularly maintained to ensure that they are operatingeffectively and not producing additional noise emissions or potential tonal sources;
- Where practicable the number of machines in simultaneous operation will beminimised;
- All vehicle engines will be switched off when not in use;
- Plant and machinery used on-site will comply with the EC (Construction Plant and Equipment) Permissible, Noise Levels Regulations, 1988 (S.I. No. 320 of 1988); and
- All contractors will employ the best practicable means to minimise noise emissions and will be obliged to comply with the general recommendations of BS 5228-1: 2009and 'Environmental Good Practice Site Guide' 2005 compiled by CIRIA and the UK Environmental Agency.

No mitigation measures are required or recommended for the post-remediation phase.

8.7 Waste Management

In order to mitigate against the potential impacts that the Proposed Development could have on the production of waste during each phase, mitigation measures will be put in place to ensure that all waste is dealt with in a sustainable and legislatively compliant manner. These measures are set out below for the various phases of the development.

8.7.1 Demolition and Site Clearance Phase Mitigation

The clearance of the proposed redevelopment site will generate mostly construction and demolition waste, with a small number of green wastes, such as plants, trees and vegetation. These wastes will be segregated and stored appropriately in skips in a designated area on-site. This waste stream will be collected by either the local council or by appropriately licensed or permitted private waste contractors that have been appointed by the contractor for disposal or composting and taken to suitably licensed facilities. RPS have provided two options for management of the knotweed:

Excavation, Cell Formation and Burial on site in-situ - recorded glyphosate herbicide treatment by a 'Suitable Qualified and Fully Trained Operative' for a period of two weeks. This phase will be followed by preparation of a Cell Formation Area, designed and excavated to size in order to encapsulate the total volume of knotweed material. The cell shall be sealed by a root barrier membrane, with a 100mm layer of sand on either side of the membrane acting as a protective buffer to avoid breeching of the membrane. The cell formation area will be capped to at least 2m deep. Each knotweed stand should be excavated to a depth of 3m below ground level and to a perimeter of 7m where conditions allow. This volume of material may be reduced depending upon ECoW determination of the size of the rhizome involved. This option leaves the remaining risk of limitations to future works at the cell formation area; limitations to construction of new services or maintenance

of existing services; risk of re-establishment of the IAS if the root barrier membrane is incorrectly sealed or if the integrity of the membrane is breeched.

Excavation & Removal off Site to Landfill - an in-situ, recorded glyphosate herbicide treatment by a 'Suitable Qualified and Fully Trained Operative' for a period of two weeks should be completed. This phase will be followed by establishing a haulage route, transfer site and decontamination area, protected with a root barrier membrane. The root barrier membrane will be protected by a 100mm layer of sand on either side of the membrane to act as a protective buffer, topped with a suitable layer of hard-core material. All of this material will be removed along with the last load of contaminated soil. Each knotweed stand should be excavated to a depth of 3m below ground level and to a perimeter of 7m where conditions allow. This volume of material may be reduced depending upon ECoW determination of the size of the rhizome involved.

All excavated soil will be removed in a securely covered tipper truck, passing through the decontamination area and with waste transfer documentation verified by the EM. As a controlled waste, the Japanese Knotweed material will be taken by a licensed waste carrier to a deep fill licensed landfill site. It is understood that option 2 will be the preferred option for the council due to the remaining risk of a buried cell of knotweed material on site.

The appointed contractor should appoint an Environmental Manager (EM) and an Ecological Clerk of Works (ECoW) who will work collaboratively to ensure the implementation of the Invasive Species Management Plan (ISMP) which will be considered a live document. A no access Contamination Zone should be established around each stand of the knotweed, to a radius of 7m laterally. This will demarcate the full potential extent of underground rhizome systems. Further, all site personnel should be briefed on the key facts, locations and requirements to arrest any further spread of the knotweed. A Construction Waste Management Plan (CWMP) forms part of the Preliminary Construction Environmental Management Plan (PCEMP) in order to minimise potential impacts associated with waste on the site.

A Main Works Contractor will be appointed, Monaghan County Council and its appointed MWC contractor will ensure that demolition wastes will be collected by an appropriately licensed waste management contractor and that all proposed management routes comply with the European Union waste hierarchy of prevention, preparing for reuse, recycling, and recovery with disposal being the last and final option and with other legal requirements. All waste materials leaving the site will be transported and disposed or recovered through licenced operators and in accordance with national waste legislation.

A Demolition Survey is required prior to any demolition work commencing. The Demolition Survey will set out all high value waste materials, such as metals, that will be removed from buildings and segregated for possible onward reuse or recycling to maximise recovery. The Demolition Survey will also include intrusive surveying with sampling which will identify the exact extent and location of any ACMs in the area. Removal offsite of any ACMs discovered will be required prior to demolition. Demolition debris will be separated into five waste streams on-site:

- Construction debris (i.e. ceramics, tiles, plasterboard)
- Masonry materials (i.e. brick, concrete blocks)
- Metals
- Timber
- Universal waste (i.e. fluorescent bulbs, ballast and mercury containing switches)

8.7.2 Construction Phase Mitigation

On-site segregation of all hazardous waste materials into appropriate categories:

- Waste oils and fuels;
- Paints, glues, adhesives and other known hazardous substances

The storage and reuse of demolition or excavation wastes on site may be subject to a number of waste licensing requirements. If these wastes are to be stored on site, prior to potential reuse or recovery during construction, this activity will be subject to a Waste Management Licence Exemption with a limited tonnage of material permitted to be stored on site. Storage will take place in a secure area on-site and the contractor will monitor the amount of waste stored to ensure that the permitted limits of the Exemption are not exceeded. Monaghan County Council and its appointed contractor will consult with the EPA prior to construction to ensure that the appropriate Waste Management Licence or Exemption is in place.

In order to divert waste from landfill, possibilities for reuse of inert demolition material as fill on site will be considered, following appropriate testing to ensure materials are suitable for their proposed end purpose.

It is proposed the following areas will be infilled using engineered fill material and suitable CDW arising from demolition works within the footprint of the development:

- Suitable hard fill foundation areas

Monaghan County Council and its appointed contractor will consult with the EPA prior to construction to ensure that the appropriate licences, permits and exemptions are in place prior to initiation.

Contractors working on site during the works will be responsible for the collection, control and disposal of all wastes generated by the works. Monaghan County Council and its appointed contractor will ensure that waste it is handled only by a body authorised under the Waste Management Act to manage it. This duty implies, at the very least, checking to see that the required authorisation is in place, has not expired and is appropriate for the waste types that are to be handled. Monaghan County Council and its appointed contractor will ensure that all waste materials leaving the site will be transported via a licensed carrier and disposed or recovered through licenced operators and in accordance with national waste legislation. Monitoring and updating of records will be implemented.

Project design will incorporate adequate dedicated space to cater for the segregation and storage of all various waste streams during construction. Separate compounds will be used for different phases of the works. Site compounds are located in or immediately adjacent to the relevant works phase, such as to cause minimal interference to the local community.

All waste materials will be stored in skips or other suitable receptacles in designated areas of the site. The waste storage area(s) will be assigned and all construction staff provided with training regarding the waste management procedures on commencement of the project.

Ensuring adequate security measures are put in place

Construction waste materials shall be segregated on-site for recycling into the following categories:

- Timber
- Metal
- Cardboard & paper
- Glass
- Rubble
- General waste

In order to divert waste from landfill, where possible, inert demolition material will be reused as fill on site, following appropriate testing to ensure materials are suitable for their proposed end purpose.

It is proposed that any appropriate areas will be infilled using engineered fill material and suitable CDW arising from demolition works within the footprint of the development:

Monaghan County Council and its appointed contractor will consult with the EPA prior to construction to ensure that the appropriate authorisations are in place.

Construction waste will be managed as part of the CWMP contained in the CEMP, which will be implemented by the appointed contractor for the duration of the construction works. As demonstrated in the draft CEMP, the CEMP will contain procedures for the management of waste and related pollution control measures. The CEMP will be a live document and will be subject to revision throughout the course of the construction phase but will contain all measures outlined in the draft CEMP appended to the EIAR. Specific waste management requirements include:

- Identify how the waste will be dealt with (i.e. disposal, re-use on/off site etc.).
- Building materials should be chosen with an aim to 'design out waste.'
- Identify potential end markets e.g. reuse, recycling facilities, waste treatment facilities and disposal sites.
- All waste leaving site will be recycled, recovered or reused where possible, with the exception of those waste streams for which appropriate facilities are currently not available.
- On-site segregation of non-hazardous waste materials into appropriate categories, where possible, including any excavated soils, concrete, bricks, tiles, ceramics and plasterboard, metals and timber.
- On-site segregation of all hazardous waste materials into appropriate categories including contaminated soils, waste oil and fuels and paints, glues, adhesives and other known hazardous substances.
- Control measures and attention to materials quantity requirements to avoid over-ordering and generation of waste materials.
- Agreements with materials suppliers to reduce the amount of packaging or to participate in a packaging take-back Scheme.
- Implement a 'just in time' materials delivery systems to avoid materials being stockpiled, which increases the risk of the damage and disposal as waste.
- Segregation of waste at source where practical.
- All waste materials will be stored in skips or other suitable receptacles in designated areas of the site. The waste storage area(s) will be assigned and all construction staff provided with training regarding the waste management procedures on commencement of the project.
- Measures to ensure appropriate staff training and levels of awareness in relation to waste management.
- Waste streams will be collected by an appropriately licensed and permitted private waste contractor, appointed by the contractor for recycling, recovery or disposal at suitably licensed facilities.
- Provide a method to calculate the difference between expected waste quantities prior to commencement of the project and actual waste quantities after the project is complete.
- The appointed contractors for the site preparation, piling, earthworks and construction phases of the works will be contractually obliged to follow the PCEMP and all relevant legislation.

The Plan will be implemented from the outset of the project and throughout the duration of the project taking into consideration the waste management hierarchy to encourage sustainable development, environmental protection and optimum use of resources. The appointed contractors for the site preparation, piling, earthworks and construction phases of the works will be contractually obliged to follow the Project C&D Waste Management Plan and all relevant legislation.

Contractors will ensure all plant is inspected and serviced in accordance with its schedule. A bunded disposal area will be provided. Contractors will provide staff training on the waste management strategy. Disposal/recovery under licence.

The current Connaught-Ulster Region (CUR) Waste Management Plan (WMP) underpins all waste related operations to be carried out on site. Monaghan County Council will continue to review and implement any required changes in the waste management plan in order to avoid and minimise the potential effects of increased footfall and traffic management throughout the new development areas.

8.7.3 Operational Phase Mitigation

Monaghan County Council will continue to provide additional litter bin options, incorporating the CUR recycling strategy. Monaghan County Council will continue to encourage the responsible management of waste, including minimisation and recycling, at the point of generation throughout the new public realm and amenity areas. This will include the disposal of wastes responsibly in facilities provided as well as continued extensive scheduled waste collection throughout Monaghan town centre.

It is important that waste arisings throughout the town centre are managed appropriately in line with the waste management hierarchy in order to achieve good recycling performance and high landfill diversion.

On-site segregation of waste materials into appropriate categories. Appropriate separation of waste needs to occur in public areas. In addition to recyclable items such as paper and drinks bottles, separation of food and food contaminated packaging and consumable items for composting will be implemented.

Appropriate receptacles and recycling bins will be clearly labelled for the collection and segregation of each of these waste materials and will be provided throughout the development and open space areas, as appropriate. Wastes will be stored in these receptacles in a designated, easily accessible area of the site until collection by an appropriately licensed waste management contractor.

All wastes generated will be managed in accordance with appropriate waste management legislation and policy, and will be transported and recovered / disposed of by licensed waste management contractors.

New bins will allow for waste segregation and sufficient waste storage

9 ENVIRONMENTAL RISK ASSESSMENTS

An example environmental inspection schedule is set out in **Annex B**. An example incident report form is set out in **Annex C**.

10 EMERGENCY RESPONSE & ENVIRONMENTAL PLAN

An emergency response & environmental plan is located in **Annex G** of this document.

11 SITE WASTE MANAGEMENT PLAN

An example site waste management plan (SWMP) is located in **Annex D** of this document.

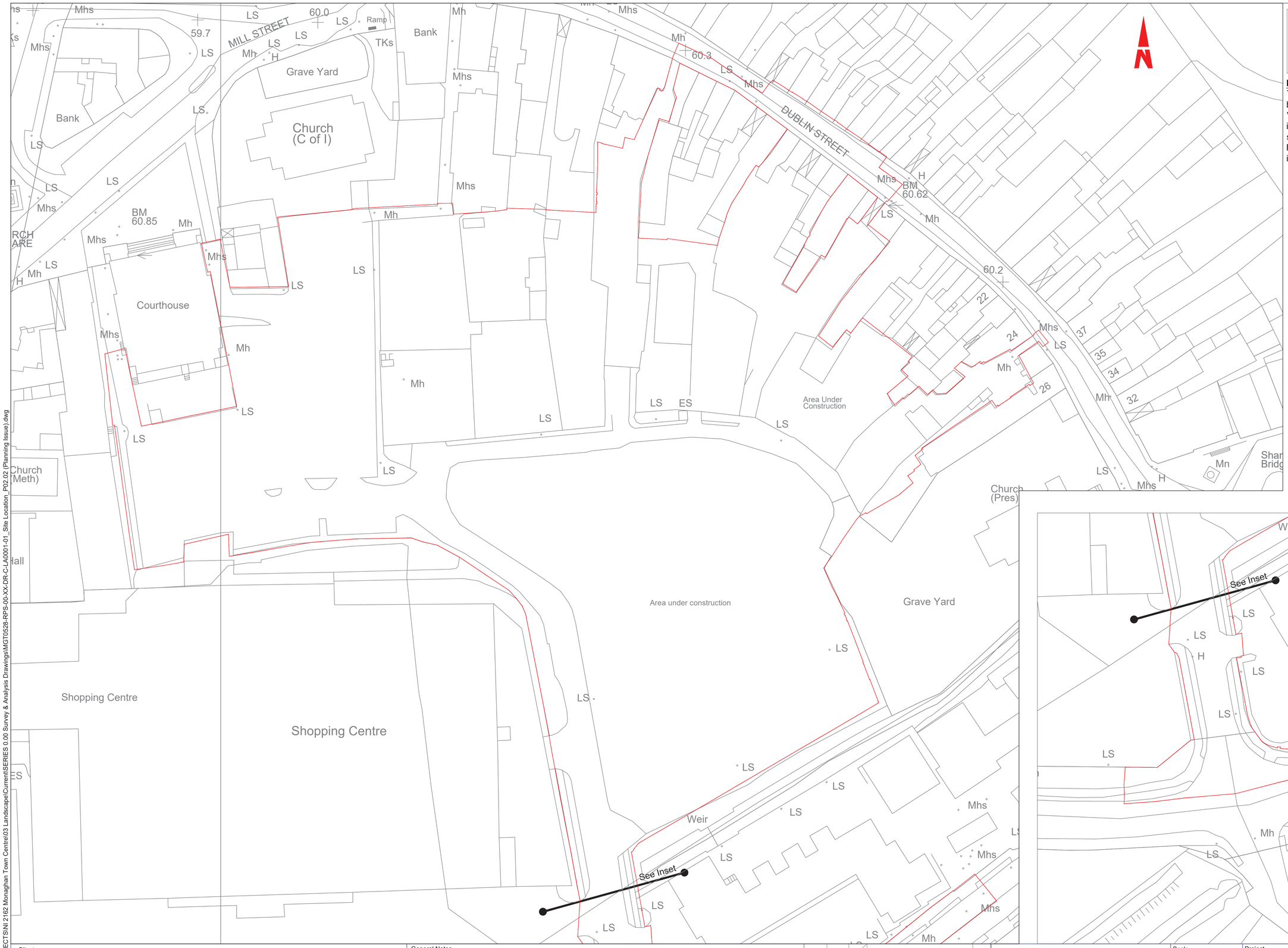
12 FINAL COMMENT

The Contractor is required to develop and implement this Preliminary Construction Environmental Management Plan (PCEMP) to help ensure that construction activities are planned and managed in accordance with the environmental requirements identified within and the relevant guidance and legislation.

This is VERSION 01 of the PCEMP.

Any updates to the PCEMP will be sequential and be saved as such (i.e. VERSION 02, 03 etc.) and shall be adopted on site in full.

Annex A
Project Drawings



LEGEND

Site Boundary

Note

The site boundary illustrated on this drawing has been produced through a combined use of Vector mapping and Topographical Survey information, with site extents defined by known site features such as walls or building lines. Refer to Chapter 2 of the EIAR for further information

Client: Monaghan County Council

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(iv) Information including topographical survey, geotechnical investigation and utility detail used in the design have been provided by others.

(v) All Levels refer to Ordnance Survey Datum, Malin Head.

Rev	Date	Drn / Chk	Amendment / Issue	App
P02.02	Aug.'22	BA / AMcF	PLANNING ISSUE	RH
P02.01	Dec.'21	BA / AMcF	Issued for Review	-

Model File Identifier: -

Scale	1:500 @ A1 1:1000 @ A3
Created on	February 2020
Sheets	01 of 01
Project	MONAGHAN TOWN - DUBLIN STREET REGENERATION PROJECT
Title	Site Location
File Identifier	MGT0528-RPS-00-XX-DR-C-LA0001 - 01
Status	S3
Rev	P02.02

Q:\Projects\ALL RPSES PROJECTS\NI 2162 Monaghan Town Centre\03 Landscape\Current\SERIES 0.00 Survey & Analysis Drawings\MGT0528-RPS-00-XX-DR-C-LA0001-01_Site Location_P02.02 (Planning Issue).dwg

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LEGEND

- Site Boundary
- Approximate extent of Northern Standard building interface with proposed scheme (to be retained)
- Existing wall sections to be retained
- Proposed Semi-mature tree planting in tree pits (Refer Detail T on Dwg MGT0528KP1003)
- Proposed Semi-mature tree planting in soft landscape areas (Refer Detail S on Dwg MGT0528KP1003)
- Proposed tree planting within raised planters
- Proposed location for raised planter. Final location to be agreed with Client. (Refer Detail Z on Dwg MGT0258KP1003)
- Proposed areas of Turf
- Natural Stone Paving (Granite) (Refer Detail A, Detail B on Dwg MGT0528KP1003)
- Natural Stone Paving Medium unit size (Granite) to trafficked areas and pedestrian crossings (Refer Detail C on Dwg MGT0528KP1003)
- Natural Stone Paving Medium unit size (Granite) to parking bays (Refer Detail G on Dwg MGT0528KP1003)
- Pre Cast Concrete 'Granite Aggregate' Paving Units to Footway. (Refer Detail E on Dwg MGT0528KP1003)
- Aquaflow Block paving to parking spaces. (Refer Detail AE on Dwg MGT0528KP1003).
- Cycle lane surfacing (Refer Detail F on Dwg MGT0528KP1003)
- Surfacing to road and parking bays
- Surfaced raised table / junction treatment
- Concrete base to ESB Substations and oil tank storage facility
- Stone surfacing to future development plots
- Stepped access with handrails (Refer Detail AF and Detail AG on Dwg MGT0528KP1003)
- Natural stone kerbs (Granite); 125mm show. (Refer Detail A and Detail J on Dwg MGT0528KP1003)
- Natural stone 'Flush Trim' (granite) units in paved areas (Refer Detail D on Dwg MGT0528KP1003)
- Natural stone 'Dropped' kerbs (granite) with 6mm show (Refer Detail K on Dwg MGT0528KP1003)
- Natural stone (Granite) Dished Drainage channel (Refer Detail H and Detail I on Dwg MGT0528KP1003)
- Natural stone (Granite) Edging (Refer Detail F and Detail T on Dwg MGT0528KP1003)
- Tactile Paving (Buff) to uncontrolled pedestrian crossings. (Refer Detail K and Detail L on DWG MGT0528KP1003)
- Tactile Paving (Buff) to cycle lanes
- Tactile Guidance Paving (Grey) to pedestrian areas. (Refer Detail M and Detail N on DWG MGT0528KP1003)
- Tactile Paving (Buff Corduroy) to top and bottom of steps. (Refer Detail AF on DWG MGT0528KP1003)
- Proposed sections of stone faced walling (Refer Detail AB on Dwg MGT0528KP1003)
- Fencing to future development plots. (Refer Detail AC on Dwg MGT0528KP1003).
- Proposed 1.2m high railings to reform boundary. (Refer Detail AJ on Dwg MGT0528KP1003).
- Proposed sections of timber post and rail fencing (Refer Detail AH on Dwg MGT0528KP1003).
- Proposed sections of 1.8m vertical timber board fencing (Refer Detail AI on Dwg MGT0528KP1003)
- PP — Location for pop-up power supply unit.
- Cr — Cycle Stands (Refer illustration Y on Dwg MGT0528KP1003).
- S — Location for bench seating (Refer Illustration X on Dwg MGT0528KP1003)
- Lb — Location for Litter Bin (Refer Illustration W on Dwg MGT0528KP1003)
- B — Location for Bollards (Refer Illustration AA on Dwg MGT0528KP1003)
- Ecp — Proposed location for EV charging point
- Proposed location for street lighting columns (Refer Detail AD on Dwg MGT0528-RPS-00-XX-M2-C-KP1003)
- Proposed location for Inground Illumination bar (Refer Detail V on Dwg MGT0528KP1003)
- +58.296 — Proposed levels

Client: Monaghan County Council

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Rev	Date	Drn	Chk	Amendment / Issue	App
P02.07	Aug.'22	SA	MMcF	PLANNING ISSUE	RH

rps

Scale	1:500 @ A1 1:1000 @ A3
Created on	FEBRUARY 2020
Sheets	01 of 05
Project	MONAGHAN TOWN - DUBLIN STREET REGENERATION PROJECT
Title	GENERAL ARRANGEMENTS (Overall Layout)
Model File Identifier	N/A
File Identifier	MGT0528-RPS-00-XX-M2-C-GA1001
Drawing No.	GA1001
Status	S3
Rev	P02.07

Q:\Projects\ALL RPSES PROJECTS\NI 2162 Monaghan Town Centre\03 Landscape\Current\SERIES 1.00 General Arrangement Plans\MGT0528-RPS-00-XX-M2-C-GA1001_General Arrangement (Planning Issue)_P02.07.dwg

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Annex B
Environmental Inspection Schedule

Environmental Inspection Schedule		**Site:**	
Inspected by:		**Date:**	
	Assessment Ratings *0 – Not in place = Non Compliance* *1 – In place but not full Compliance = Non Compliance* *2 – Full Compliance* ***Actions raised from this audit must be closed out within the agreed time scale with Monaghan County Council***	*0/1/2*	*Comment*
1.0	***Emergency preparedness and incidents response***	*0/1/2*	*Comment*
1.1	*Is environmental response equipment held on-site?*		
1.2	*Where is it located?*		
1.3	*Is it all in working order?*		
1.4	*Can site staff operate the equipment?*		
2.0	***Environmental Incidents***	*0/1/2*	*Comment*
2.1	*Have any incidents been reported?*		
2.2	*Have all such incidents been investigated?*		
2.3	*Have they all been documented?*		
2.4	*Have all relevant parties been made aware of any incident?*		
2.5	*Has the Incident Report Form* ***(Annex C)*** *been completed ?*		
3.0	***Hazardous Materials Storage***	*0/1/2*	*Comment*

3.1	*Are hazardous materials kept in secure areas?*		
3.2	*Are stores of fuels or oils bunded?*		
3.3	*Has any damage occurred to Mobile Bowsers or tanks?*		
3.4	*Are containers/drums labelled with content and capacity?*		
3.5	*Are drip trays empty of water ?*		
3.6	*Are hoses inside bunds/cabinets ?*		
3.7	*Are spill kits fully stocked and have all staff been trained to use equipment ?*		
3.8	*Has an individual been appointed for the safe handling of fuels ?*		
4.0	***Waste minimisation***	*0/1/2*	*Comment*
4.1	*Are all waste containers covered and labelled?*		
4.2	*Is waste segregated correctly ?* *Do skips need to be emptied ?*		
4.3	*Have waste skips been located on-site?*		
4.4	*Are different waste types segregated for recycling?*		
4.5	*Are staff and contractors encouraged to recycle? Is relevant signage in place*		
4.6	*Has litter been removed from site and the external boundary*		
4.7	*Is all appropriate duty of care documentation in place i.e. waste licence, Carrier's licence all kept on file ?*		

4.8	*Does the external appearance of the site present a positive image of the industry?*		
4.9	*Does the site appear well organised, clean and tidy?*		
4.10	*Does the appearance of all facilities, stored materials, vehicles and plant make a positive impression?*		
5.0	***Water Discharges & Pollution Control***	*0/1/2*	*Comment*
5.1	*Are there any de-watering activities conducted on-site?*		
5.2	*Any visible signs of spillage on site (fuel, oil, lubricants etc)? Including from machinery and plant.*		

5.3	*PPG/GPP guidance being followed as stipulated in PCEMP/CEMP ?* ***1.Annotated Sketch if appropriate of any spillage and clean up detailed***

6.0	***Site Boundary & Access***	*0/1/2*	*Comment*
6.1	*Site boundary fencing in place ?* *No visible signs of breaches*		
6.2	*Site signage and information boards in place ?*		
6.3	*Appropriate sign in followed and appropriate health and safety followed ? Hi-vis, boots, hard hat worn for site visit. Appropriate PPE and H&S recommendations for this site in particular.*		
7.0	***Land contamination***		
7.1	*Has any unforeseen historical land contamination been discovered on-site?* *IF yes, please detail.* ***Annotated Sketch if Appropriate***		

7.2	*Has this been managed?* ***Please detail***
8.0	Site Photographs – labelled, detailed and saved on file
8.1	**SITE PHOTOS TO BE TAKEN DURING CONSTRUCTION PHASE (From first commencement of works). These will include; boundary photographs, internal roadways, fuel storage areas, pollution control in place (inc. spill kits), spills, waste storage areas, recycling signs, machinery.**
8.2	*Have site photos been taken of any specific environmental incidents ? If yes please details:*
8.3	*Have site photos been stored on file, labelled and dated ? Please ensure this is completed*

Corrective Action Plan relating to this environmental inspection schedule:						
		Site :	**Actionee**	**Target date (if not immediate)**	**Close out by Actionee**	**Issue dealt with ? Y/N**
	Count	Proposed Corrective Action				
	1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
Managers use only		**Follow up Action from Incidents?**		**Closed out by Manger**		
Acknowledged		Signed:		Signed:		

PLEASE KEEP ON FILE with other completed environmental inspection schedule

Annex B1
Complaints Form

	Complaints Form
	Make the complaints log available to the local authority when asked
1.	Have any complaints been received? If so please detail
2.	The name and contact details of the complainant:
3.	Date and time of the complaint:
4.	Nature of complaint:
5.	Action taken to resolve issues:
6.	Date of complaint handover:
7.	Name of person addressing the complaint: Company: Signature:

Annex C
Incident Report Form

INCIDENT DATE	INCIDENT TIME	REPORT DATE	REPORT TIME

INCIDENT OWNERSHIP		
DIVISION	SUB-DIVISION	UNIT OR DEPT

DESCRIPTION OF WHAT HAPPENED

EXACT INCIDENT LOCATION			
On or Off Site		**Location**	**Sub-Area**

PERSON INVOLVED

CATEGORY OF PERSON [✓]											
Employee	[ ]	Contractor	[ ]	Visitor	[ ]	Environmental	[ ]	Mem of. Public	[ ]		

NATURE OF INVOLVEMENT [✓]					
Witness	[ ]	First Person on Scene	[ ]	Other	[ ]

PERSON'S NAME					
Name:	Mr/Mrs/Miss/Ms	First Name:		Last Name:	

OTHER INFORMATION

Site Manager in attendance (if applicable)						
Reported in Duty Log/Site Book?	Yes	[ ]	No	[ ]	N/A	[ ]

TYPE OF INCIDENT [✓]					
Breach of Limits/Licence Cond.	[ ]	Oil & Chemical Storage	[ ]	Spillage/Spillage Response	[ ]
Waste Storage & Disposal	[ ]	Serious Public/Other Complaint	[ ]	Water Abstraction/Disposal	[ ]
Third Parties and Supply Chain	[ ]	Smoke, Fumes & Odours	[ ]	Natural Envnment & Wildlife	[ ]

Light Pollution	[ ]	Noise Nuisance	[ ]	Other	[ ]
If "Other" please describe:					

Is this a reportable incident?	Yes [ ]	No [ ]	Unknown [ ]	
If "Yes" which agency				

What are the actual or foreseeable potential consequences known at this time? [✓]					
Prosecution	[ ]	Enforcement Notice (Imp/Proht)	[ ]	Civil Claim	[ ]
Clean-up/Restoration	[ ]	Breach of Licence Requirements	[ ]	Adverse Publicity/Reaction	[ ]
Adverse Customer Reaction	[ ]	Contamination of Water	[ ]	Habitat or Species	[ ]
Health Effects	[ ]				

Please provide any other relevant information

What immediate actions have been taken?

INCIDENT REPORTED BY		
Name	Telephone No.	Date

Annex D
Site Waste Management Plan (SWMP)

In the course of the Project, it is estimated that the following quantities of C & D Wastes/material surpluses will arise:

C & D Waste Material	Quantity (tonnes)
Clay and Stones	Appointed Contractor to Complete during Works
Concrete	Appointed Contractor to Complete during Works
Masonry	Appointed Contractor to Complete during Works
Wood	Appointed Contractor to Complete during Works
Packaging	Appointed Contractor to Complete during Works
Hazardous Materials	Appointed Contractor to Complete during Works
Other Waste Materials	Appointed Contractor to Complete during Works
TOTAL Arisings	Appointed Contractor to Complete during Works

Proposals for Minimisation, Reuse and Recycling of C & D Waste

- C & D Waste will arise on the Project mainly from excavation and unavoidable construction waste/material surpluses/damaged materials.
- The Contractors Purchasing Manager etc. shall ensure that materials are ordered so that the quantity delivered, the timing of the delivery and the storage is not conducive to the creation of unnecessary waste.
- Excavated soils will be carefully stored in segregated piles on the site for subsequent re-use/removed from site for direct beneficial use elsewhere.
- Concrete waste will be recycled where possible or source segregated/collected in receptacles with mixed C & D Waste materials, for subsequent separation and recovery at a remote facility.
- Masonry and wood will be source segregated/collected in receptacles with mixed C & D Waste materials, for subsequent separation and recovery at a remote facility.
- Packaging will be source segregated for recycling or return to suppliers.
- Hazardous wastes will be identified, removed and kept separate from other C & D Waste materials in order to avoid further contamination.
- Other C & D Waste materials will be collected in receptacles with mixed C & D Waste materials, for subsequent separation and disposal at a remote facility.

Excavation soils and C & D Waste-derived aggregates are considered suitable for certain on-site construction applications. It is proposed that the following quantities, corresponding to all C & D Waste arisings from the project, will be used within the works and beyond the site confines:

Standard form that will be completed by the contractor on-site: Proposals for Beneficial Use/Management of C & D Material Surpluses/Deficits and Waste Arisings on and off the Project

C & D Waste Type Proposed Use	Clay and Stones (t)	Concrete (t)	Masonry (t)	TOTALS
Earthworks	*Appointed Contractor to Complete during Works*			
General Fill/Hard-core				
Pipe Bedding				
Selected Trench Backfill				
Fill to Structures				
Beneath Paths Structure				
Beneath Road Structure				
Other Site Use A				
Other Site Use B				
Off-Site Use				
TOTAL				

It is anticipated that waste materials will have to be moved off site. It is the intention to engage specialist waste service Contractors (as required), who will possess the requisite authorisations, for the collection and movement of waste off-site, and to bring the material to a facility which currently holds a Waste Licence/Waste Permit. Accordingly, it will be necessary to arrange the following waste authorisations specifically for the Project:

Specific Waste Authorisations Necessary for the Scheme

Authorisation Type	Specific Need for Project (Yes/No?)	
Waste Licence	Yes	No
Waste Permit	Yes	No
Waste Collection Permit	Yes	No
Transfrontier Shipment Notification	Yes	No
Movement of Hazardous Waste Form	Yes	No

Assignment of Responsibilities

a. **The appointed contractor shall be designated as the Responsible Person and have overall responsibility for the implementation of the on-site Waste Management Plan.**

b. **The Responsible Person will be assigned the authority to instruct all site personnel to comply with the specific provisions of the Plan.**

c. **At the operational level, a site manager/foreman from the main contractor and appropriate personnel from each sub-contractor on the site shall be assigned the direct responsibility to ensure that the discrete operations stated in the Waste Management Plan are performed on an on-going basis.**

Training

a. **Copies of the Waste Management Plan will be made available to all personnel on site (as required).**

b. **All site personnel and sub-contractors will be instructed about the objectives of the Waste Management Plan and informed of the responsibilities which fall upon them as a consequence of its provisions.**

Site Waste Management Plan **Checklist**

Planning and preparation

- ☐ Have you set aside time to prepare your SWMP?
- ☐ Have you considered the construction methods and materials that you can use to reduce the amount of waste your project produces?
- ☐ Have you thought about ordering materials that have less or reusable/returnable packaging?
- ☐ Have you recorded all of your waste reduction decisions in your plan?

Allocation responsibility

- ☐ Has someone with authority been assigned overall responsibility for the SWMP?
- ☐ Have you included a declaration from the client and principal contractor in your SWMP?

Identifying your waste

- ☐ Have you assessed the waste produced at each stage of the project- the types, how much and when, including the processes involved?
- ☐ Have you identified which workers will produce waste?

Managing your waste

- ☐ Has an area of the site been set aside for storing new materials and waste, including separate containers for different types of waste? You must store new materials separately from waste, and make sure storage areas are secure against vandalism.
- ☐ Have you set targets for the different types of waste likely to be produced by the project? Include targets for the amounts of each waste type to be reused, recycled and disposed of.
- ☐ Have measures been put in place to deal with expected and unexpected hazardous waste?
- ☐ Have you considered whether you can reuse materials either on-site or off-site?
- ☐ Have you considered on-site and off-site processing and reuse of materials?

Disposing of your waste

- ☐ Have you considered how you will dispose of liquid wastes such as wash-down water and lubricants?
- ☐ Have you got agreement from your water and sewerage operator for trade effluent discharge?
- ☐ Are you complying with your duty of care, including waste transfer notes or consignment notes for all movements of waste from your site and checking the details of those removing the waste?
- ☐ Has someone been made responsible for checking that loads of waste leaving your site are accurately described, and waste transfer notes and consignment notes completed correctly?
- ☐ Have you checked that every waste carrier you use is registered with your environmental regulator?
- ☐ Have you checked that all sites receiving your waste have the appropriate permits, licences or registered exemptions?
- ☐ Have you identified your nearest waste sites?

- [ ] Have you considered how to reduce disposal costs by reusing or recycling waste materials with a commercial value?

Organising materials and waste

- [ ] Have you assessed the quantities of materials you need to order to reduce over-ordering and site waste?
- [ ] Can you return unused materials to the supplier, sell them or use them on another job?
- [ ] Have you considered using recycled materials?
- [ ] Can you return unwanted packaging to the supplier for reuse or recycling?
- [ ] Will you separate different types of waste to enable you to get best value from good waste management practices?
- [ ] Have you labelled containers and skips clearly to avoid confusion? Colour coding you containers could help.
- [ ] Are your storage areas secure and weatherproof to prevent wind and rain damaging your materials?
- [ ] Have you covered or nettled any loose materials to prevent them being spread and possibly causing pollution?
- [ ] Is everyone who will handle waste aware of the SWMP requirements?

Communicating and training

- [ ] Have you planned site inductions and toolbox talks for all site staff?
- [ ] Are contractors and subcontractors trained and aware of their responsibilities?
- [ ] Have contractors and subcontractors understood and agreed the SWMP?
- [ ] Are SWMP requirements built into contracts?
- [ ] Are you carrying out spot checks and monitoring your staff regularly to make sure they are following procedures?

Measuring and monitoring your waste

- [ ] Are you updating your plan every time waste is removed from your site?
- [ ] Are you checking the SWMP regularly and making sure targets are being reached?

- ☐ Are the agreed waste management procedures being checked and monitored regularly?
- ☐ Are you producing regular reports on waste quantities, treatment/disposal routes and costs?
- ☐ When construction is underway, are you making notes of problem and recording them for your next plan?

Annex E
Construction Method Statement

A Construction Method Statement (CMS) is a key tool for delivering environmental management during the construction phases of a project. It sets out the mechanisms by which the various construction activities would be managed to comply with the relevant environmental legislation and best practice to minimise the impacts and effects on human receptors and environmental receptors. It provides the framework for recording environmental risks and also defines the measures required to mitigate and monitor construction effects, including the mitigation measures set out in the associated supporting environmental documents and assessments. It also outlines provisions for auditing and reporting and sets out action to be taken to resolve any corrective actions arising during the course of construction. The purpose of the CMS is to:

- record environmental risks and identify how they would be managed during the construction period;
- provide a means of identifying environmental commitments, objectives and targets;
- provide a means of monitoring and reporting performance against the objectives and targets;
- provide a framework to ensure that all parties are aware of their responsibilities;
- establish a checklist of control procedures which can then be integrated into an overall environmental management protocol;
- describe how construction activities would be undertaken and managed in accordance with the obligations of environmental legislation and policy, and the requirements of environmental regulatory authorities;
- provide detailed environmental mitigation measures for reducing the potential for environmental impacts during pre-construction and construction; and,
- highlights that some activities may require consents or licences.

Common Working Methods and Pollution Control

The following mitigation will be employed as best practice construction measures:

- EPA's advice on pollution prevention guidance will be followed.
- The period of time that the stockpiles and ground are exposed will be kept to a minimum where possible and ideally the minor earthworks and disturbance shall be reinstated as soon as possible.
- Pollution spill kits will be on site and any soils contaminated with fuel or oil will be removed to a suitable landfill site. All site staff will be trained in the use of spill kits.
- Regular inspections of machinery onsite - Check construction vehicles/machinery leaks and supply spillage contingency kits and adequately maintain vehicles/machinery.
- Any temporary waste generated during construction for welfare facilities (e.g. portaloos) will be removed by a registered waste carrier to a licenced disposal site.

Ensure that all personnel involved in earthworks which could pollute the water environment are aware of their statutory responsibly not to cause water pollution or damage habitats. All such persons should be aware, and should make their employees aware, of the likely causes and consequences of environmental pollution and should be familiar with any control measures and emergency procedures to be deployed.

A suitable buffer between location of any refuelling, storage of oil/fuel, concrete mixing and washing areas and any watercourses or surface drains present on site or adjacent to site is defined. Other important aspects that will be adhered too are:

1. Regular inspections of machinery onsite.
2. Emergency spill procedures in place.

3. A suitable buffer between location for storage of excavated spoil and construction materials and onsite watercourses.

Site Specific - Overview of Proposed Work Activities

An overview of the work activities involved in the proposed development is provided below.

- Site Offices / Staff Welfare Units and Storage Compound to be established – will include security / perimeter (board) fencing.
- Site Clearance
- Topsoil/earth stripping and site levelling / earth moving
- Construction of new landscaped areas
- Foundation trenching
- Topsoil import
- Establishment of foundations for landscape features
- Electricity supply
- Importation of building materials by HGV – anticipated to be blocks / bricks, pipe work, sand, cement, concrete
- Storage of landscape materials – note some materials are likely to be used immediately, with no requirement for onsite storage
- Landscaping and Signage - Planting of site with species noted in landscape plan
- Any site compound will be located in an area well away from sensitive environmental areas.

Note that it will be a key element of all earthworks management to ensure that the risk of pollution to any watercourse is minimised.

At this stage it is not known what plant and machinery would be used for the construction activities involved in the development of this site. The choice of plant and machinery will be made by the appointed contractor, but is likely to include at least the following:

- Excavators
- HGV / dumper trucks / skip lorries
- Pneumatic drills / hammers (hand held)
- Generators
- Works vans and 4WD vehicles

Method statements are widely used in construction as a means of controlling specific health and safety risks that have been identified (usually following the preparation of a risk assessment), such as lifting operations, demolition or dismantling, working at height, installing equipment, the use of plant, and so on.

A method statement helps manage the work and ensures that the necessary precautions have been communicated to those involved. The process of preparing a written method statement provides evidence that:

1. Significant health and safety risks have been identified.
2. The co-operation of workers has been ensured.
3. Safe, co-ordinated systems of work have been put in place.
4. Workers have been involved in the process.

Method statements are not a definitive requirement, however they are identified by the Health and Safety Authority (HSA) as an effective means of assessing risks, managing risks, collecting workers' views and briefing workers.

The format in which method statements are prepared, reviewed and used should be set out at the outset of a project, perhaps within the **Project Execution Plan (PEP),** ensuring not only that the method statement is produced by a competent person, but that it is peer-reviewed as part of the **quality assurance (QA) system** prior to its use.

This method statements is written by a competent person who is familiar with the process being described and may need to be agreed between the client, principal contractor and contractor. The HSA suggests that those preparing method statements should consider:

1. Is there a safer way of doing this task?
2. Will workers actually implement the controls as planned?
3. Do controls make the job difficult or inconvenient?
4. Are there small changes that will improve the intended method?
5. How will controls work in adverse conditions?
6. Will workers require additional briefing or instructions?

The contents of a method statement will vary with the work process being described, however, it may contain:

7. Details of the organisation in control of the activity.
8. Details of the individual responsible for the activity.
9. A description of the activity.
10. A description of how the work will be managed.
11. The location of the activity, its boundaries, means of access and how it is segregated from other activities.
12. Plant and equipment required.
13. The procedure for changing the proposed method of work if necessary.
14. A step by step description of the activities to be undertaken.
15. Precautions necessary to protect workers, and other people that could be affected, including personal protective equipment and ventilation requirements.
16. Training procedures.
17. The need for specially-trained operators for certain activities.
18. Emergency procedures, including the location of emergency equipment.
19. The handling and storage of materials and pollution prevention procedures.
20. Temporary works designs.
21. The method for safeguarding existing structures.

This method statement incorporates those recommendations.

General mitigation and control measures to be employed (as appropriate)

Pollution Prevention

It is important to understand how activities could affect the environment and cause pollution. Pollution linkages and pathway are shown below:

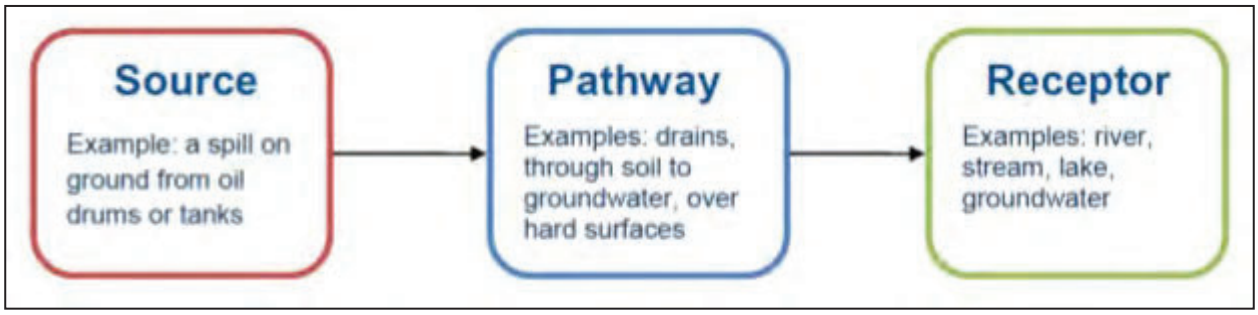


Figure E.1 - Example of a pollution linkage using the source > pathway > receptor model

The site and activities will only cause a risk to the environment or people if all three parts of the pollutant linkage present i.e. a source, a pathway and a receptor. Any surface water drains go directly to a watercourse and therefore should only carry clean uncontaminated rainwater.

A. Silt Pollution

This CMS recognises - Exposed ground and stockpiles: Planning for intense and also prolonged wet weather is considered in the project and employment of relevant pollution mitigation measures including:

1. minimising the amount of time stripped ground and soil stockpiles are exposed;
2. only removing vegetation from the area that needs to be exposed in the near future;
3. seeding or covering stockpiles;
4. Using geotextile silt fencing at the toe of the slope, to reduce the movement of silt;
5. if applicable, collect run-off in lagoons and allow suspended solids to settle before disposal;
6. divert clean water away from the area of construction work in order to minimise the volume of contaminated water.

This CMS recognises - On-site working: The movement and maintenance of plant on site can generate silt and oil contaminated water, or introduce non-native species from other sites. Sources of silt (e.g. plant and wheel washing, site roads, river crossings) carry a high risk of causing pollution. **Plant and wheel washing** - To reduce the pollution risk, make sure that you consider all relevant measures, including:

1. plant and wheel washing is carried out in a designated area of hard standing at least **10 metres** from any watercourse or surface water drain.

Silt causes lasting damage to river life such as fish, insects and plants and can also build up to cause flooding. Water containing silt should never be pumped or allowed to flow directly into a river, stream or surface water drain. Silty water can arise from dewatering excavations, exposed ground, stockpiles, plant and wheel washing. The mitigation measures set out in this document will help insure siltation episodes are highly unlikely.

B. Disposal of Contaminated Water

Where run off water is contaminated with silt or other pollutants such as oil this water must not be pumped or allowed to flow (directly or indirectly) into the water environment without treatment. It is essential to minimise the volume of clean water that becomes contaminated, by diverting clean water away from working areas. The choice of method for the treatment and disposal of contaminated water will depend on:

- the volume of water

- the area of land available for storage, treatment or discharge
- the amount and type of silt
- the presence of other substances in the water
- the conditions of any consent or authorisation.

Discharge to sewer during construction - Discharges to foul sewer will require the permission of the local water and sewerage provider.

Tanker off site during construction - If no other disposal routes are available then contaminated water can be collected by tanker for authorised disposal off-site. This may be a costly option and must be discussed with your environmental regulator at the scoping stage of your project. You must comply with your Duty of Care obligations and obtain Waste Transfer Notes for any waste leaving site.

C. Concrete, cement and grout

Concrete, cement and grouts are very alkaline and corrosive and can cause serious pollution to water. Concrete, cement and grout mixing and washing areas should:

- be sited on an impermeable designated area;
- be sited at least 10 metres from any watercourse or surface water drain to minimise the risk of run off entering the water environment;
- have settlement and re-circulation systems for water reuse, to minimise the risk of pollution and reduce water usage;
- have a contained area for washing out and cleaning of concrete batching plant or ready mix lorries;
- collect wash waters that cannot be reused and, where necessary;
- discharge to the foul sewer (you must have permission from the local water and sewerage provider for this), or contain wash water for authorised disposal off site.

D. Oils & Chemicals

Storage Fuel, oil and chemical storage - must be sited on an impervious base within a bund and secured. The base and bund walls must be impermeable to the material stored and of adequate capacity. Detailed guidelines concerning above ground oil storage tanks are available (GPP2). Leaking or empty drums must be removed from the site immediately and disposed of via a registered waste disposal contractor.

Security - All valves and trigger guns should be protected from vandalism and unauthorised interference and should be turned off and securely locked when not in use. Any tanks or drums should be stored in a secure container or compound, which should be kept locked when not in use. Bowsers should be stored within site security compounds.

Refuelling - The risk of spilling fuel is at its greatest during refuelling of plant. Where possible, refuel mobile plant in a designated area, preferably on an impermeable surface well away from any drains or watercourses. Keep a spill kit available and use a bunded bowser. Never leave a vehicle unattended during refuelling or jam open a delivery valve. Check hoses and valves regularly for signs of wear, and ensure that they are turned off and securely locked when not in use. Diesel pumps and similar equipment should be placed on drip trays to collect minor spillages or leaks. These should be checked regularly and any accumulated oil removed for appropriate disposal.

INCIDENT RESPONSE - You should immediately report any environmental incidents by calling the Incident Hotline for EPA

0800 80 70 60

Annex F
Pollution Prevention Plan

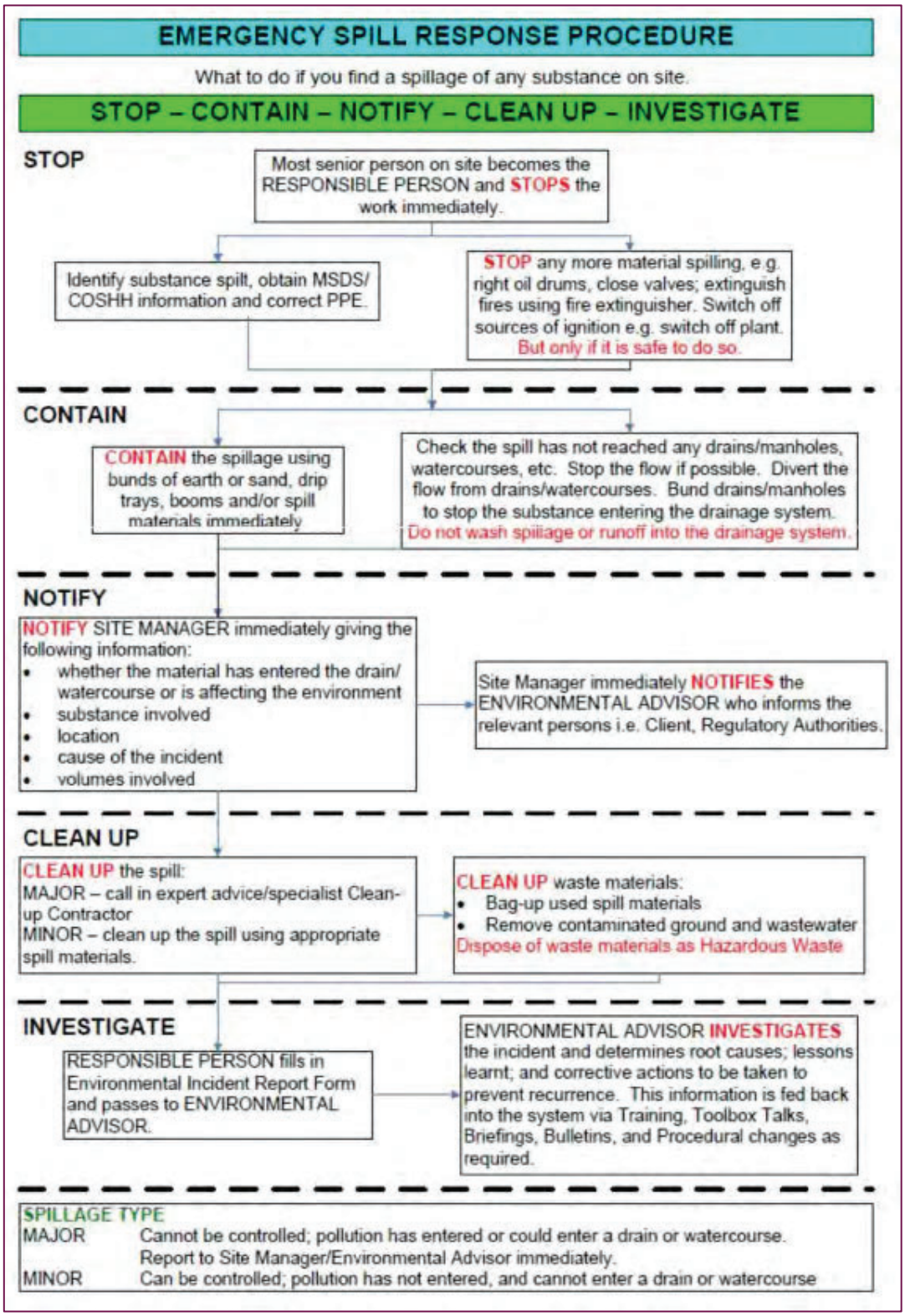


Figure F.1: Emergency Spill Response Procedure

Exclusion Zones & Materials

The contractor will:

- **dedicate specific areas for oil storage and refuelling, separated by a minimum of 10m from any existing waterbodies within or adjacent to the proposed development site and comply with legislation, including providing bunds sized to contain 110% of fuel storage capacity.**
- **The contractor will use fill point drip trays, bunded pallets and secondary containment units.**
- **The site will be enclosed and secured and fuel storage areas will be secondarily secured.**
- **All fuel, oil and chemical deliveries will be supervised by a responsible person who will be trained to deal with any spillage to prevent a pollution problem occurring.**

The exclusion zone is a 10m distance banding or buffer from any existing watercourse within or adjacent to the proposed development site. **NO** material shall be stored in the exclusion zone area for the duration of the construction works. **There shall be no cement, concrete, grout, fuels/ oil/ hydrocarbons stored in the exclusion zone**.

Ensure that control measures are adequately sized and correctly installed. Control measures will be consistent with the guidance outlined in this PCEMP:

- **adherence to the exclusion zone (exclusion zone marked out on site to prevent storage of any material)**
- **Kerb line at edge of existing footprint to prevent overland flow to the watercourse,**
- **Spill kits located on site.**

SECTION 1

1.1 Legal compliance

The basis of any good environmental performance is compliance with environmental regulations. You must be aware of your environmental responsibilities and make sure that you operate in a completely legal way.

Non-compliance brings the risk of enforcement action, possible fines and real damage to your reputation as a business.

1.2 Save money

Good environmental performance includes reducing waste, minimising energy and water use and taking steps to reduce other environmental impacts that your business might have. This creates a leaner and more efficient business with lower costs.

1.3 Manage risk

Businesses which manage the risks to their success are often better prepared to deal efficiently with problems when they happen. Managing risks gives you peace of mind and maximises your chances of running a successful business.

1.4 Enhance your reputation

Legal compliance and implementing good practice will improve your reputation with customers and your neighbours. Your environmental credentials can help you win contracts; an increasingly relevant part of the tendering process for many sectors.

1.5 Why we need to protect our environment

Pollution occurs when substances released to water, land or to air have a harmful effect on our environment. It can affect our drinking water supplies, people's health, business activities, wildlife and habitats, and our enjoyment and use of the environment. You might not see it, but you can pollute it.

Pollution can happen accidentally or deliberately, and can come from a single place (point source) or from lots of different, possibly unknown and unconnected sources (diffuse sources).

Many different substances can cause pollution – common examples include:

- fuels and oils
- chemicals
- sewage
- farm manure
- slurry
- detergents
- milk
- fire-fighting run-off.

You should understand your premises and how your activities could affect the environment and cause pollution. Think about what pollution linkages you have.

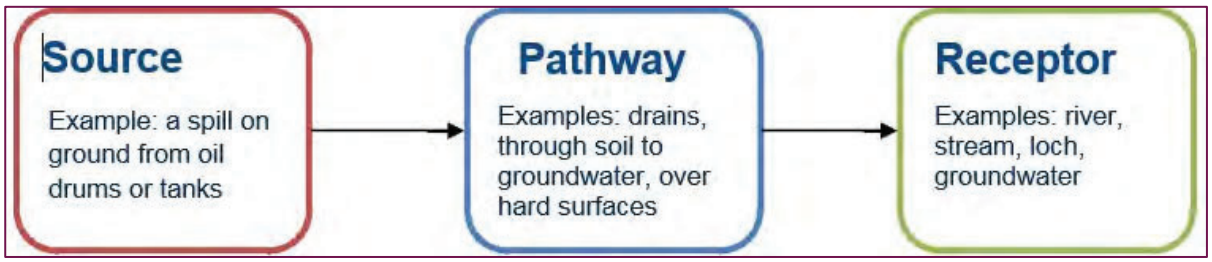


Figure F.2 Source, pathway, receptor

Your site and activities will only cause harm to the environment or people if you have all of these present: a source, a pathway and a receptor.

You should put in place measures to break the links or weaken the links between potential sources, the pathways and the final receptor.

By doing this, you can identify how to prevent or reduce the likelihood of pollution and reduce the impact of any problems which may occur.

SECTION 2

2.1 Where does “dirty water” come from?

Where does “dirty water” come from?

Almost all premises produce dirty water which could cause pollution if it enters rivers, streams, ditches or groundwater.

Dirty water comes from:

- Kitchens
- Bathrooms
- Toilet and laundry facilities
- Vehicle washing
- Rainwater run-off from dirty areas of your premises Rainwater run-off: spills from storage and delivery areas
- Liquid wastes or trade effluents from your business activities.

Many premises also store liquid materials such as chemicals, fuels and oils, milk or fertilisers which can spill, leak or release their contents if there is a fire or flood.

To protect your environment from spills, leaks and other accidents it is very important that you make sure that you know where your drains are, and where they go.

2.2 Drains - why are they important?

Drains are common pathways for dirty water to enter the environment and cause pollution. This can happen through wrong connections, spills and leaks, fires and poor or inadequate maintenance.

Your site can have two types of drain: surface water drains, and drains that connect to the sewer.

You must not allow dirty water to enter surface water drains

To reduce the risk of pollution, you should know where your drains are, where they go and correct any problems you may find, such as wrongly-connected pipes.

If you make changes to your premises, such as building an extension or changing activities, you should understand your drainage systems so you can manage these changes safely, cost-effectively and without causing pollution.

If you want to discharge anything other than clean rainwater runoff from your site onto land, or into a watercourse you must contact your environmental regulator (EPA) and get permission. You will probably have to treat any dirty runoff before you can discharge it. Contact details are at the end of this document. If you want to put dirty water into a sewer, you must contact your water and sewerage provider.

2.3 Where do your drains go?

All premises should have a drainage plan.

This will show where **surface water drains** are located and where they discharge to any nearby ditches, streams, rivers or other watercourses. This includes storm drains.

It will also show where **drains that connect to the sewer** are located. These can be sewers that remove dirty water only, or combined sewers, which take dirty water and runoff from some surface water drains to the sewage treatment plant.

This information should be available when you need it:

- when you plan activities on your site,
- when you to carry out inspection and maintenance of your drains
- when contractors or visitors need this information.

You can get help to work out where your drains are, and where they go, from:

- your sewerage provider
- your landlord
- a drainage consultant.

Produce a clear plan of your site, with all the drains identified, and include the direction of the drain, where it leaves your premises and where it goes. Include any nearby watercourses in your plan.

Colour code manhole covers and drains, **red for drains that lead to the sewer** and **blue for drains that lead to surface water.** This can prevent accidental contamination of the surface water drain.

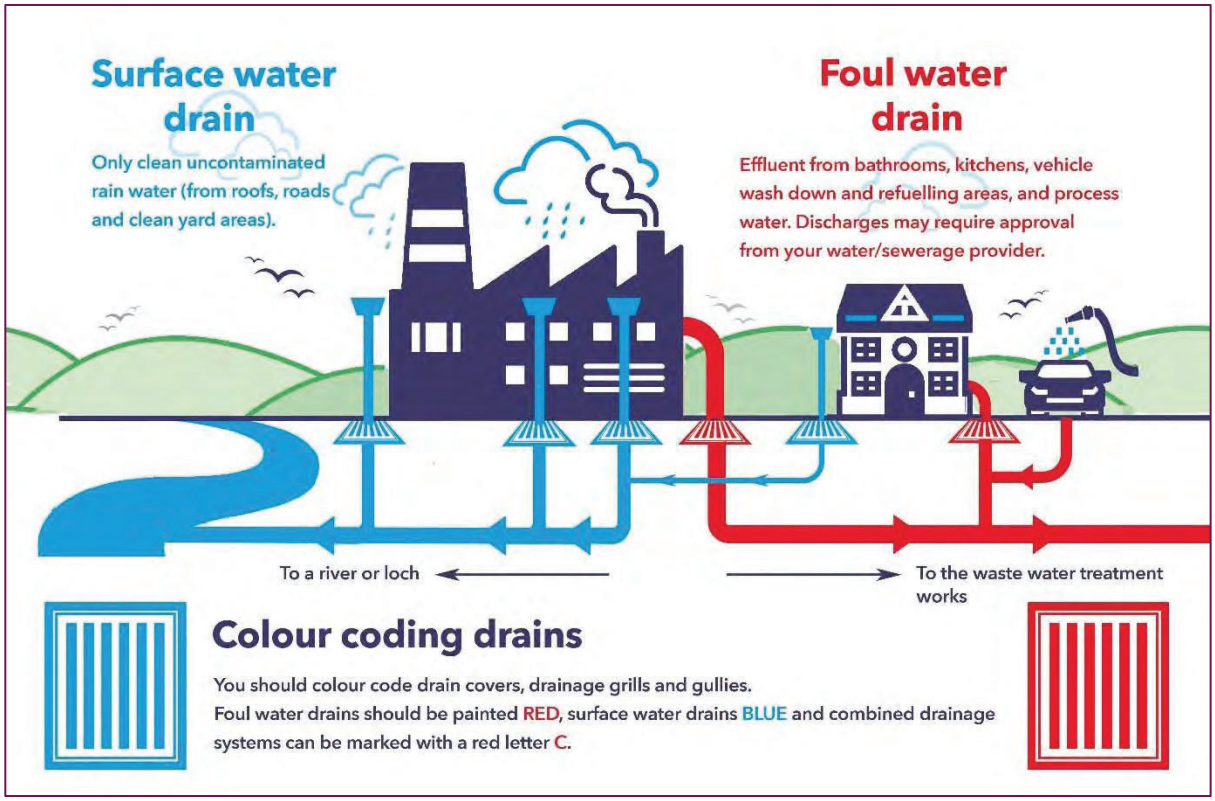


Figure F.3: Surface water and foul water drainage.

2.4 On site treatment facilities

You might have treatment facilities on your site, such as septic tanks, package treatment plants or oil separators.

Make sure that these are maintained properly as they can be a source of pollution if they are not working correctly.

Manufacturers will provide information on how to maintain these facilities, you should make sure you have this information available so you can correct any problems, or if you need to change your site layout.

2.5 SUDS

You might also use Sustainable Urban Drainage Systems (SUDs) to treat lightly contaminated water that runs off your site. Speak to your environmental regulator before installing SUDs. It is important to make sure the system is properly maintained.

SUDs can treat runoff where there is a possibility that runoff will collect light contamination, for example from car parks, and will trap and help break down these pollutants. SUDs will also reduce the risk of downstream flooding, and can add green space to built-up areas.

SUDs require a certain amount of land, and are not possible on every site. If you are designing new premises then consider SUDs from the outset. In Scotland all new developments (but not single dwellings) must include SUDs for the treatment and attenuation of surface water runoff.

If you wash or clean vehicles on site then make sure runoff from this activity does not go into surface water drains. Make sure that you have permission from your sewerage provider if you want to discharge this runoff to the foul sewer.

12.6 More information on drainage

- Technical Guidance Document H - Drainage and Waste Water Disposal - https://www.gov.ie/en/publication/16910-technical-guidance-document-h-drainage-and-waste-water-disposal/
- Irish Water

  https://www.water.ie/contact/

SECTION 3

You might store a number of different materials at your premises. Even materials that you think of as safe can cause serious damage to the environment.

Think of all the materials that arrive on your premises, including those delivered, collected, stored and handled by staff, and also by visitors or contractors.

Oils and chemicals are obvious sources of potential environmental harm, but other materials such as food and drink products and detergents can cause significant pollution. For example a spill of milk can cause more harm to a watercourse than the same volume of sewage.

Remember, you have already paid for these materials, and if you lose a quantity of them you are losing money. You will then also have clean-up costs. You also want to avoid any health and safety problems which could affect people on your premises or people nearby.

3.1 Plan your storage areas.

Make sure that you understand the risks associated with any materials you store on site. Suppliers will provide product information and highlight materials with particular risks associated with their storage or handling.

You must pay the same attention to the storage of waste, waste management companies can advise you about containers and storage areas.

Use your **drainage plan** to identify the safest places to store materials. Consider when and how you use these materials, and use this to plan your storage areas.

You should avoid storing materials:

- Near to open drains
- On bare ground; always use impermeable surfaces
- Anywhere near to watercourses, soakaways or other sensitive areas
- Anywhere there is a risk of flooding

Choose areas that are:

- Under cover – to prevent rainwater carrying pollutants away
- Bunded to prevent spills spreading
- In a safe place away from vehicles, to prevent collisions.

Leaks and spills can soak into unmade ground where there is a risk of pollution to groundwater. This can affect drinking water, and the clean-up can be a lengthy and expensive task.

Figure F.4: Safe storage, bunded and under cover

3.2 Use suitable containers

Use containers that are suitable for the materials stored. Label them clearly and store them in a dedicated area.

Make sure your containers are in good condition by doing regular inspections. Any cracks or leaks can be dealt with before causing an incident.

Some materials must have specific storage, for example all kinds of oils and fuels.

Certain materials must be kept away from other materials to prevent reactions or fire.

Keep your storage areas secure, to prevent accidental damage, theft or vandalism.

You are responsible for clean-up costs even if the damage is caused by vandalism.

3.3 Contain leaks and spills.

You can't completely avoid spills and leaks, so put in place measures to reduce their likelihood and severity. You should be able to catch minor spills, leaks or overflows from your containers or stores, and be able to clean them up easily and safely.

Consider installing and maintaining secondary containment, such as a bund wall, or using bunded pallets. It's good practice for your secondary containment to be able to hold more than your tank or container is able to hold, commonly called 110% containment. In some cases this is a legal requirement, such as when storing oils. Secondary containment gives you time to either correct or minimise the problem and to get help.

Figure F.5: Bunded storage drums and containers

You should inspect and maintain your secondary containment so it's still effective, such as sealing any cracks or holes, making sure any walls or floors are rendered impermeable, and safely removing any rainwater from the secondary containment. If you store fuels or other liquids in underground storage tanks (USTs) you must take care when installing these tanks, or when decommissioning or removing them. If not carried out properly, these activities can result in serious pollution of soil, groundwater and nearby water courses.

You and others on your premises should know where to find your spill kits, understand how to use them properly and understand how to store and use materials safely. Label your spill kits and check their contents regularly.

If you have a spill or any pollution incident, report the EPA on **1890 33 55 99** **(24 hours, 7 days a week)** – your environmental regulator can advise you on what to do, and can help to inform any other agencies that might be required.

3.4 Deliveries

Delivery and handling of materials can be risky, and delivery areas should be managed to prevent incidents.

Have procedures in place for safe deliveries, and make sure all your suppliers understand them. Supervise deliveries to make sure that procedures are followed.

Keep spill kits or appropriate clean-up equipment close to where deliveries are made, and make sure staff and suppliers understand how to use them.

Minimise the handling and movement of materials around your site by planning where deliveries take place. This reduces the risk of spills, and also saves time and money.

3.5 More information on storage of materials

More information on the storage of materials can be found in the EPA's IPC Guidance Note on *Storage and Transfer of Materials for Scheduled Activities.*

https://www.epa.ie/publications/licensing--permitting/industrial/ied/IPC_Guidance_note_Materials_storage.pdf

Section 4

4.1 Minimising your waste (Annex D details a SWMP)

Everything you buy and use on your premises might end up as waste, from food to packaging to off-cuts. Do you know what wastes are you generating at each stage of your activities?

Poorly managed wastes can pollute the environment, for example through illegal dumping or leaking into the ground or watercourses.

You have a responsibility – called **the duty of care** - to ensure you produce, store, transport and dispose of waste without harming the environment. This includes waste you produce directly and indirectly, such as waste produced by a contractor doing work on your behalf.

Wastes which are most hazardous to the environment or human health, such as solvents, asbestos and oils must be managed differently from other wastes. You have a legal duty to understand what types of waste you produce and how you need to manage them.

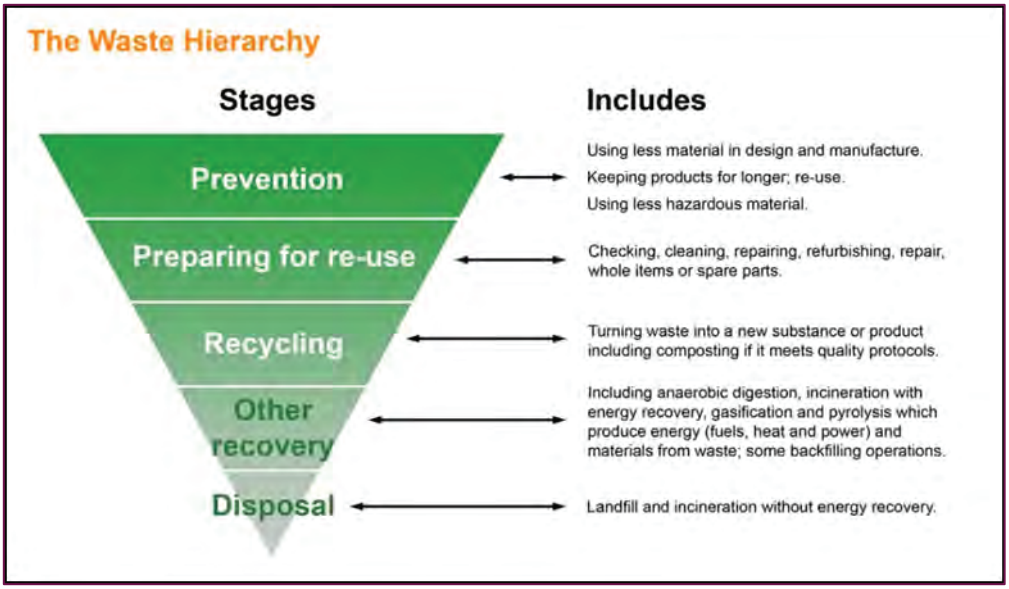


Figure F.6: The Waste Hierarchy

Reduce

There are a number of ways to reduce the amount of waste you produce. This ranges from simple measures such as purchasing goods with less packaging or buying in bulk, not in individual packs, to entirely redesigning your products and processes to eliminate waste.

Reuse

Identify goods or materials that can be reused, perhaps with minimal cleaning and preparation. Design for re-use, e.g. your packaging.

Recycle

Items that can't be re-used can often have the materials they are composed of recycled. Items made of a single material are easier, however you may be able to find a cheap way of removing recyclable parts from more complex items.

Recover

Rather than dispose of materials to landfill, it is sometimes possible to recover some value from them, even if this is just heat from burning them. Energy from waste plants convert the waste into heat and power.

Dispose of.

The least desirable destination for waste. A last resort if all other options have been tried and have not been feasible.

4.2 Storage and handling

Store waste in secure containers. If they contain liquids, make sure they don't leak. Where appropriate keep waste in containers with lids. This will prevent the wind blowing waste around your site, and will keep the waste dry. Rain water could pick up pollutants from the waste and this contaminated water would need to be managed as a waste too. Also, for example, wet cardboard weighs more than dry, and if soaked you could end up paying extra to have this material removed from your site.

4.3 Segregate your wastes

Businesses must segregate dry recyclable materials. Paper, cardboard, glass, metals and plastic must be segregated to allow for high quality recycling.

Clearly label the containers for different materials, and make your staff aware so the right materials go into the right containers.

Identify all the waste materials you produce, then identify those that can be reused or recycled.

4.4 Hazardous/special waste

Some types of waste, called 'hazardous wastes' are very harmful to human health or to the environment. You must store, handle and dispose of these differently to non-hazardous wastes.

You must not mix different types of hazardous/special wastes together. Also, if you mix hazardous wastes with non-hazardous wastes then you must consider it all as hazardous/special waste.

Consider the security of your premises too - any waste dumped on your property becomes your responsibility to remove, and it will cost you money.

4.5 Waste Disposal

You must only use a registered waste carrier to take your waste away. Check your environmental regulators website to find a list of all registered waste carriers.

Ask where they will take your waste, and check that waste site is authorised to accept your type of waste. Not all waste management sites can accept all types of waste.

You can transport your own business waste to a site for recovery or disposal, but you will need to register with your environmental regulator.

If waste is removed from your site you must complete a Waste Transfer Note, and keep your copy for 2 years. If the waste removed from your site is hazardous/special waste then you must complete a Consignment Note and keep your copy for at least 3 years.

4.6 More information on waste management

For information on waste management visit: https://repak.ie

Repak is an environmental not-for-profit organisation, with a purpose to lead the recycling and sustainability of Ireland's packaging waste; advocate for a new circular economy; and educate businesses and consumers on reducing and recycling packaging waste.

Check if a waste carrier is licensed:

Registered waste carriers/transporters

https://www.epa.ie/our-services/licensing/waste/

SECTION 5

5.1 Preparation

Take time to consider all areas of your premises or site. Think about where things could go wrong and why. Consider fire, flooding, accidents, vandalism, leaks and spills and how materials and waste are moved around your premises.

Dealing with incidents mean significant disruption to your activities. The better prepared you are the less downtime you will experience. Preparing and incident response plan can save time and effort and will reduce the cost of dealing with an incident.

Remember, you are responsible for any contractors working on your behalf, so you must make sure you give them clear work instructions and supervise them appropriately

5.2 Planning and training

The best way for you to cope when problems and emergencies arise is to plan. Well managed premises are less likely to have problems in the first place.

You should create and implement an **incident response plan**. You may even have a legal responsibility to make a plan. It should include procedures to deal with problems and emergencies and importantly include a copy of your drainage plan.

5.3 Implement plans

Make sure everyone on your premises understands what to do in case of an emergency. Include advice to visitors and contractors. Keep a copy of your plan offsite, so you can always access it. Regularly train staff, and review your plans on a regular basis to make sure they are fit for purpose. Make sure the plan is updated if there are changes to you premises, or you change the materials or processes you carry out.

5.4 Flooding

You can check whether you are at risk from flooding on the flood maps available from your environmental regulator. You will also be able to sign up for free flood warnings direct to your phone.

5.5 Fire

Contact your local Fire and Rescue Service and ask them to visit and give you advice of fire safety and fire prevention. They can help you draw up a fire response plan for your premises.

5.6 Spill kits and pollution control equipment

Keep spill kits close to areas where there is a risk of spills, for example near to oil storage areas. Make sure these are maintained and restocked after any incident.

Train staff in when and how to use them.

Have pollution control equipment that is appropriate to your site, your activities, and the risks they pose.

Figure F.7: A spill kit

5.7 If you have an incident

If you have a pollution incident:

Contact the EPA hotline

1890 33 55 99

(24 hours a day, 7 days a week)

Your environmental regulator can offer advice on what to do and can inform any other agencies that may be required.

5.8 More information on dealing with pollution incidents

More information can be found at: https://www.epa.ie/our-services/compliance--enforcement/industry-and-waste-management/incidents/

Flood maps and guidance

Office of Public Works (OPW) and Flood Relief:

https://www.floodinfo.ie/

Fire and Rescue contact information

Health and Safety Authority: Fire

https://www.hsa.ie/eng/Topics/Fire/

Annex G
Environmental Emergency Plan

The contractor will be responsible for the preparation and implementation of the spillage response procedure. The key issues to consider for the spillage response procedure include:

1. If the main contractor already has a standard spill response procedure in operation then this should be amended to reflect the local conditions on site;

2. It will be important to ensure that the Environmental Manager is notified of all incidents where there has been a breach in agreed environmental management procedures;

3. As a general rule the following principles should apply In the event of an environmental emergency:

    a. **If SAFE, stop the source of the spill and raise the alarm to alert people working in the vicinity of any potential dangers. Inform Engineer immediately**

    b. **IF SAFE (USE PPE), contain the spill using the absorbent spill material provided. Do not spread or flush away the spill. Cover or bund off any vulnerable areas where appropriate.**

    c. **If possible, clean up as much as possible using the absorbent spills materials. Do not hose the spillage down or use any detergents.**

    d. **Contain any used absorbent material so that future contamination is limited.**

    e. **Notify the Construction Project Manager and environmental officer so that used absorbent material can be disposed of using a specialist contractor.**

4. The Construction Manager, in conjunction with the contractor's environmental manager, will develop and test, through exercises, the Emergency Spillage Procedure to ensure that appropriate measures to prevent and mitigate damage due to accidents and spillages are in place.

5. Testing of the Emergency Spillage Procedure shall be recorded on the relevant environmental control form.

6. Inform all personnel about the spill response procedure through toolbox talks and/or induction training. Consider the need for refresher training on long-term construction projects.

7. Use reminder posters, identifying the key essential elements of the spill response procedure, located in appropriate areas such as fuel storage areas, mess cabins, security points or on the back of toilet doors.

8. Example control containment measures for different pollutants are given here:

Control/Containment Measure	Pollutants				
Spill on ground	**Concrete / cement**	**Paints**	**Oils**	**Silt**	**Detergents**
Sand	✓	✓	✓	×	✓
Straw bales	×	×	✓	✓	×
Absorbent granules	×	×	✓	×	×
Geotextile fence	✓	×	×	✓	×
Drip trays	×	✓	✓	×	×
Pads/rolls	×	×	✓	×	×
Drain seal	✓	✓	✓	✓	✓
Earth bunds	✓	✓	✓	✓	✓
Spill in water					
Straw bales	×	×	✓	✓	×
Pads/rolls	×	×	✓	×	×
Booms	×	×	✓	×	×
Stop further spill contain and inform appropriate personnel immediately	✓	✓	✓	✓	✓

In the event of a significant spill contact the **EPA hotline (1890 33 55 99)**

It will be important to incorporate the names and telephone numbers of others you need to inform (includes alerting people out of hours) and who should contact them within the spillage response plan.

Further issues to be considered when the main contractor is preparing an emergency spill response plan include:

- Details of a professional 24 hour call-out clean-up service e.g.: Alpha Environmental Systems Ltd. Tel: 028 7035 4435
- Ensure sufficient types and quantities of spill response equipment are available on site. Keep spill kits where spills may occur, e.g. at refuelling points or on plant working near a watercourse.
- Material safety data sheets and COSHH assessments will assist in identifying appropriate spill measures for dealing with hazardous materials.

- Dispose of used spill response material appropriately, e.g. oily granules or pads should be bagged up and placed in the designated waste skip.

IMPORTANT TELEPHONE NUMBERS

Emergency Contact Details	
Emergency Services	999 / 112
Nearest hospital – Accident & Emergency Dept.	Monaghan General Hospital Address: Monaghan General Hospital, Mullaghmonaghan, Monaghan Phone: +353 47 81811
Environmental Protection Agency Hotline	**1890 33 55 99** (Free 24 hr Emergency Hotline)

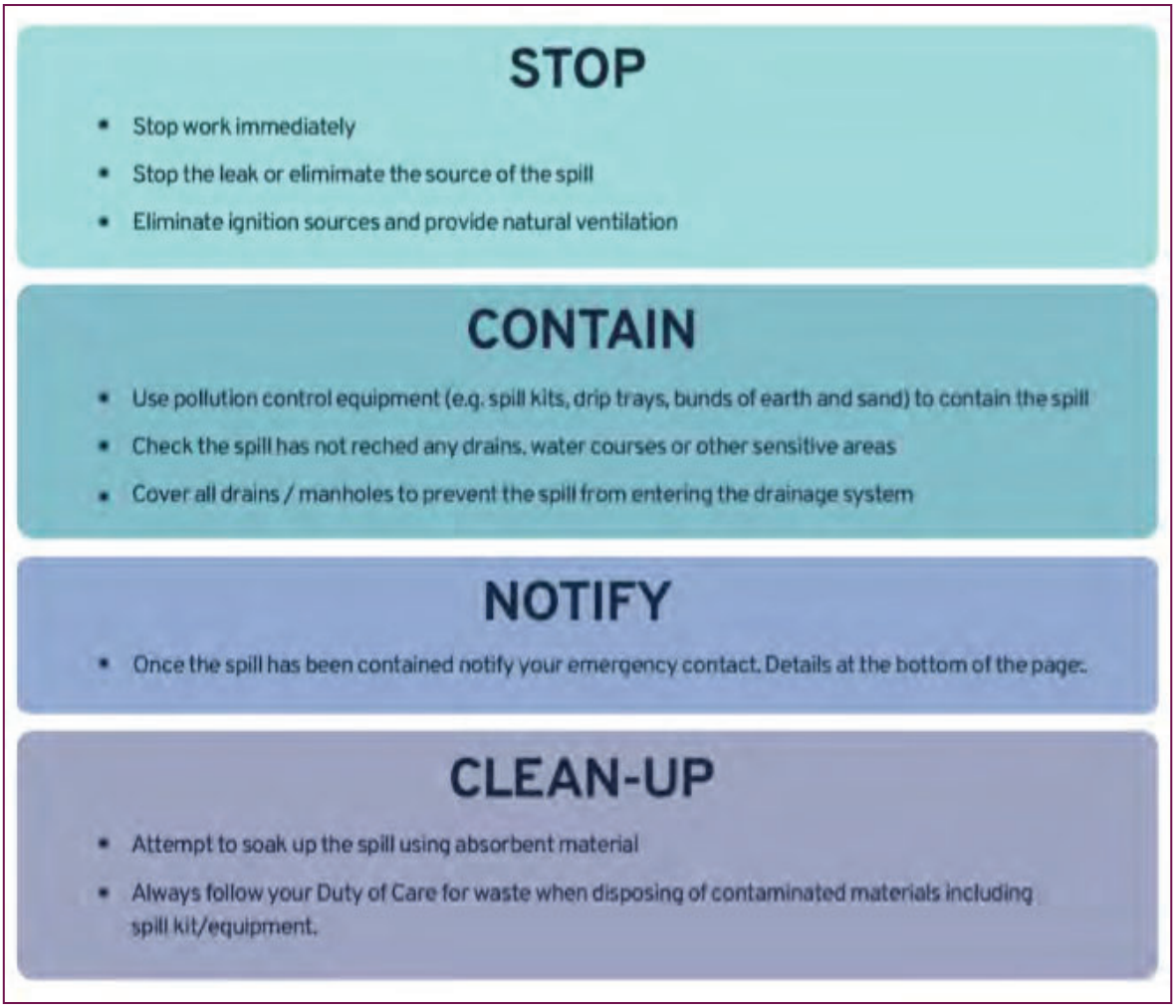
Contractor Contacts: (Out of Hours)	
Construction Director	*Contractor to complete for final version*
Construction Manager/Site Manager	*Contractor to complete for final version*
Environmental Manager	*Contractor to complete for final version*

Incident response plan KEY POINTS (From: GPP 21: Pollution Incident Response Plans)

Procedure	Included?
Clearly define **when you will activate the plan**. This will depend on the nature of your site and the type of the incident.	
Ensure all relevant staff know how and when to **contact other emergency responders**: emergency services, environmental regulator, local authority, sewage undertaker and others identified in your plan.	
Agree **contact procedures**, if possible, with nearby properties, downstream abstractors, agricultural land or environmentally sensitive sites that could be affected by an incident on your site.	
Put in place **staff evacuation procedures** – your local authority emergency planning department will help you with these.	
Identify any special methods you need to deal with **substances** posing particular health or environmental risk.	
Train your staff in **the use of spill kits**, drain blockers and other pollution control equipment and the operation of pollution control devices.	
Identify procedures for recovering spilled product and the safe handling and **legal disposal of any waste** associated with the incident.	
Have staff available who are trained to deal with **media enquiries**.	

From: Guidance for Pollution Prevention Dealing with spills: GPP 22 October 2018 (Version 1)

PRINT OUT AND DISPLAY SIGN (To be located throughout site)



EMERGENCY CONTACT DETAILS (Complete with your business details)

NAME	TELEPHONE	NEAREST SPILL KIT

END

Appendix

2b

Preliminary DCWMP

SOUTH DUBLIN STREET & BACKLANDS REGENERATION PROJECT

Preliminary Demolition, Construction and Waste Management Plan (pDCWMP)

NI2162
Preliminary Construction and Demolition Waste Management Plan

August 2022

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
F01	Draft for EIAR				Aug 2022

Approval for issue

August 2022

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Prepared by:

RPS

Prepared for:

Monaghan County Council

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Appendix A European & Irish Waste Legislation

1 INTRODUCTION

1.1 Purpose of this Plan

RPS have been commissioned by Monaghan County Council (MCC, the Client) to prepare a Preliminary Construction and Demolition Waste Management Plan (CDWMP) for the proposed development as part of the South Dublin Street and Backlands Regeneration scheme.

This scheme is the first phase of a regeneration plan for South Dublin Street and its backlands, and funding has been secured to progress these works. This plan is part of a wider project being undertaken by the Council to regenerate the wider Dublin Street area and its surrounding lands, and work is currently underway to progress detailed regeneration proposals for this wider project. These proposals will be the subject of planning applications in the future.

The plan presented herein is outline/preliminary in nature as it has been prepared at a stage when exact quantities and volumes of waste material have not yet been determined.

1.2 Site Location

The application site is located in the central core of Monaghan town centre, Co. Monaghan. The site boundary is shown below in Figure 1.1 below.

Figure 1.1: Location of Proposed Development & Site Boundary

The site is located south / south west of The Diamond and the main arterial route, Dublin Street, which flows through the town centre, and due north of Broad Road. It adjoins community, ecclesiastical, retail and commercial buildings to the north east and west along The Diamond and Dublin Street.

The Shambles River defines part of the southern boundary, with existing car parking to the south/east, and a large shopping complex (Monaghan Shopping Centre) and car parking to the south/west.

The site currently comprises:

- several retail /commercial buildings (both vacant and in-use);
- backland areas comprising vacant / derelict land and properties, storage areas, and rear access points;
- extensive areas of existing car parking;
- roads/road infrastructure;
- pedestrian alleyways; and,
- amenity green space.

2 PRELIMINARY CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT PLAN IN CONTEXT

2.1 General

This plan has been prepared with a view to outlining the procedures to be adopted on site with respect to waste management for all waste streams of demolition and construction produced at the proposed construction site for the relevant phase of the project.

The Principle Contractor (when appointed) will be obliged to prepare a detailed Construction and Demolition Waste Management Plan (CDWMP) as part of the construction project, the Contractors CDWMP will be based on the principles and procedures outlined in this preliminary CDWMP.

This preliminary plan takes due consideration of the Connacht Ulster Regional Waste Management Plan 2015 – 2021 with respect to its principles of prevention and re-use. As Lead Authority for the Connacht Ulster Waste Region, Mayo County Council's responsibilities include the preparation of the Connacht Ulster Regional Waste Management Plan, which was published in May 2015, the coordination of the implementation of the plan over the plan period, 2015 – 2021, and monitoring the implementation of the new plan. The plan is adopted by Monaghan County Council.

The general principles of the waste hierarchy (as set out below in Figure 2.1) have been applied in the production of this plan.

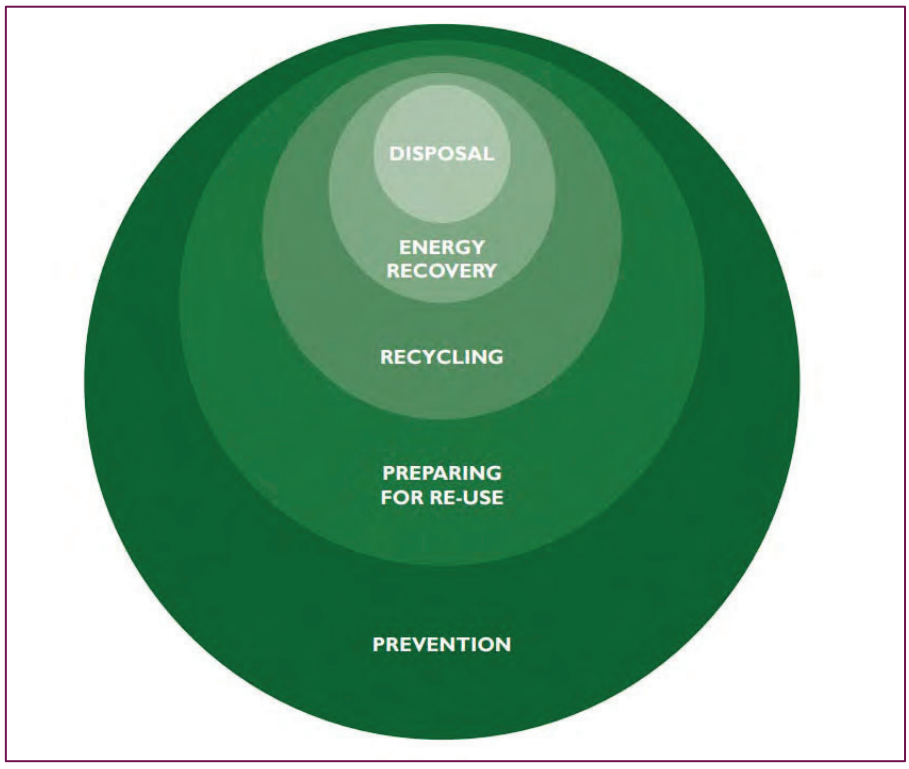


Figure 2.1: Waste Management Hierarchy

Main themes covered by this preliminary plan include waste management procedures such as; waste arisings, waste segregation, prevention of waste generation through material management, waste storage and waste actions as well as site management procedures including roles & responsibilities, waste contractors, waste traceability/disposal and record keeping.

2.2 Preliminary CDWMP Objectives

The main objectives of this preliminary CDWMP are as follows:

- to ensure that a framework exists in the project to enable and audit the implementation of Irish Waste Management legislation;

- to ensure that a framework exists in the project to enable the auditing of the Irish Waste Management legislation;
- to promote an assimilated approach to waste management throughout the project;
- to set out responsibilities in regard to waste management throughout the project; and,
- to provide a framework for the designers and the Principal Contractor that they will build upon and implement within their CDWMP.

2.3 Legislative Background

2.3.1 European

Waste framework legislation establishes the legal structure for the prevention and management of waste. Legislation also governs reporting on general waste, waste treatment and waste capacity as sets out mandatory waste targets which can be targets for diversion, collection or treatment. The European Commission has prepared waste framework legislation to govern the broad approach and principles for meeting waste across all member states. The principal European framework legislation is:

- European Directive (2008/98/EC) on Waste (Waste Framework Directive);
- Council Decision (200/532/EC) establishing a list of wastes; and,
- Regulation (1013/2006) on the shipments of waste.

2.3.2 Irish Waste Management Law

The Principal Contractor will be required to ensure that Irish Waste Management Law is adhered to in relation to the transport and disposal of wastes. This includes adherence to the Environmental Protection Agency Act 1992, the Waste Management Acts 1996 – 2011. Compliance with the Waste Management (Movement of Hazardous Waste) Regulations for transport of hazardous wastes by road will also be required for asbestos containing materials or contaminated soil waste which may arise from the site.

The Waste Management Acts provide for a general duty on everyone not to hold, transport, recover or dispose of waste in a manner that causes or is likely to cause environmental pollution. The Waste Management Act defines waste as something the holder of it discards, intends to discard or is required to discard.

Article 27 of the European Communities (Waste Directive) Regulations, 2011 allows an economic operator to decide, under certain circumstances, that a material is a by-product and not a waste. Decisions made by economic operators under article 27 must be notified to the EPA. After consultation with the economic operator and the relevant local authority, the EPA may determine whether the notified material is waste.

Appendix A details the linkages between European & Irish Waste Legislation.

2.4 Reference Documents

This document has been prepared with reference to the following guidance documents:

- Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects, Department of Environment Heritage and Local Government (DoEHLG) July 2006;
- Construction Industry Research and Information Association (CIRIA) document SP133 Waste Minimisation in Construction; and
- TII guidelines including Guidelines for the Management of Waste from National Roads Construction Projects (Revision 1, 12 November 2014).

On commencement of the project the appointed contractor will be responsible for the management of wastes during the course of the project. The waste material considered within this Outline (or Preliminary) CDWMP covers the waste generated by the proposed project.

2.5 Preliminary CDWMP Requirement

A CDWMP is required as there may be potential for the project to exceed the thresholds set out in the Department of the Environment Heritage and Local Government (DoEHLG) publication 'Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects', which are set out as follows:

1. New residential development of 10 houses or more;
2. New developments other than (1) above, including institutional, educational, health and other public facilities, with an aggregate floor area in excess of 1,250 m^2;
3. Demolition/renovation/refurbishment projects generating in excess of 100m^3 in volume, of C&D waste; and,
4. Civil Engineering projects producing in excess of 500m^3 of waste, excluding waste materials used for development works on the site.

3 PROJECT DESCRIPTION

3.1 Nature and Extent of the Proposed Development

3.1.1 Dublin Street and Backlands Regeneration Plan

In 2018, the Council commissioned a further study to evolve the regeneration vision for the Dublin Street areas, and consolidate the conceptual proposals for the two LAAP[1] areas and beyond. The vision for the wider Dublin Street area aims to consolidate the urban structure, to create new legible streets, connections and new public spaces throughout the existing historic town centre, to establish a new Backland neighbourhood. This will provide an attractive place where people will wish to live, work and visit.

The overall regeneration framework for Dublin Street envisages extensive town centre development (office, retail, commercial, community) and associated infrastructure improvements in this wider region over the next 10 years. The proposed development is the initial phase of works to facilitate and stimulate regeneration and redevelopment within this town centre location. These proposals are outlined in the County Development Plan 2019 – 2025

3.1.2 South Dublin Street and Backlands

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

The Council has secured funding from the Urban Regeneration and Development Fund (URDF) to progress the short term streets, spaces and public realm enhancement proposals within the Dublin Street South area. Work is underway on the detailed design of the regeneration concept for South Dublin Street and Backlands, and it is anticipated that a planning application will be submitted to An Bord Pleanála later this year to regularise the proposals. A detailed description of these works is outlined in Section 3.1.3.

Funding has also been secured to develop the conceptual detail for regeneration proposals throughout the North East Dublin Street area, which is the subject of a Local Area Action Plan, and supported by the objectives of the Monaghan County Development Plan 2019-2025.

Similar to the South Dublin Street & Backland Regeneration Plan, it is anticipated that the initial phase of work will comprise public realm works similar to those outlined in Section 3.1.3 The detailed design of the works proposed in the North East Dublin Street project is likely to commence in 2022, with a planning application submitted in 2022/2023 for the initial works.

3.1.3 Description of the Works

The proposed development works, to be the subject of a planning application, aspire to meet the short term objectives of improving the physical and spatial quality of the streets and spaces in the Dublin Street (South) Regeneration Plan area. The aim is to create new connections with new streets and spaces which enhance the urban structure, and quality of the public realm of the Dublin Street quarter. It is hoped that this will act as a stimulus for attracting future new development into the area, or a redevelopment of certain areas.

The new high quality public realm proposals for footpaths, street furniture, wayfinding, signage, landscaping, new public spaces, and new streets will set the standard for all new developments and where existing

[1] A Local Area Action Plan (LAAP) for the lands to the north east of Dublin Street, Roosky, is identified in the Plan as a strategic framework to promote growth and development of the town centre in a coordinated manner.
The Plan also identifies indicative New Road Proposals, as potential new links to help relieve traffic congestion, facilitate new development, and provide alternatives routes around the town. A number of these links are within and adjacent to the Dublin Street LAAP area.
The Dublin Street Regeneration Plan has been prepared as a Local Area Action Plan (LAAP) for the lands to the south of Dublin Street, to provide strategic guidance on a coordinated approach to future redevelopment in this area. It promotes and encourages the redevelopment of brownfield and derelict sites to consolidate the town centre.

structures are reused and adapted. The proposed development works that will be the subject of a planning application will comprise the following enabling works:

- The demolition of buildings and structures, including street frontage buildings No's 8-11 Dublin Street and associated outbuildings and structures; the building to the rear of No.24 Dublin Street; partial removal of the rear section of the Northern Standard building fronting the Lower Courthouse car park; storage sheds, walls, and fencing.
- No.10 Dublin Street is one of these properties, and it was previously on the Record of Protected Structures (RPS) for County Monaghan. This was primarily for historical reasons as it was the birthplace of Charles Gavan Duffy who was a notable writer, Irish nationalist and Australian politician.
- New building façades/side elevations to No's 7 and 12-13 Dublin Street, likely to be a masonry wall with piers finished in render (for structural stability) to facilitate creation of the new junction onto Dublin Street;
- Creation of a new urban space, comprising a street, junction and extended footpaths to connect Dublin Street through to its backland areas, opening up new areas for development and enhancing the pedestrian linkages throughout this area. This area is intended as a multi-use space and is capable of being temporarily cordoned off for use as an event space, for a market, pop-up commercial/retail uses, or occasional festival events. The creation of this new space creates a new setting and enables new opportunities for future infill development and reuse/ adaptation of existing underutilised buildings on either side of the new space, creating opportunities for new commercial and residential activity. It is proposed that this area will be known as Charles Gavan Duffy Place.
- Creation of new streets:
  - New street connecting Charles Gavan Duffy Place to the Courthouse, to be known as Church Walk;
  - Realignment of an existing road to create a promenade, and to be known as The Mall;
  - Realignment of an existing road, to be known as Farney Road;
- Creation of new urban civic spaces, streets, junctions, pedestrian pavements, steps, and cycle routes.
- Construction of new public realm comprising new surfaces, kerbing, street furniture, public street and feature lighting, soft landscape planting, cycle parking and signage.
- Clearance, regrading and creation of two potential development areas with supporting embankments, hardcore surfacing and boundary fencing.
- New boundary treatments comprising walls, railings and fencing.
- Alterations to the existing car parking layouts within the Courthouse car park and Lower Courthouse car park, and a reduction in long stay parking spaces.
- Upgrading and installation of new utility services, CCTV, and a new ESB sub-station.
- All associated site development works.
- Construction works including excavation, cut / fill, re-grading of land, and construction of retaining structures, to accommodate level changes, throughout the study area.
- It is estimated that the proposed work will take between 12 - 24 months to complete on site.

A concept plan of the proposed development is illustrated in Figure 3.1.

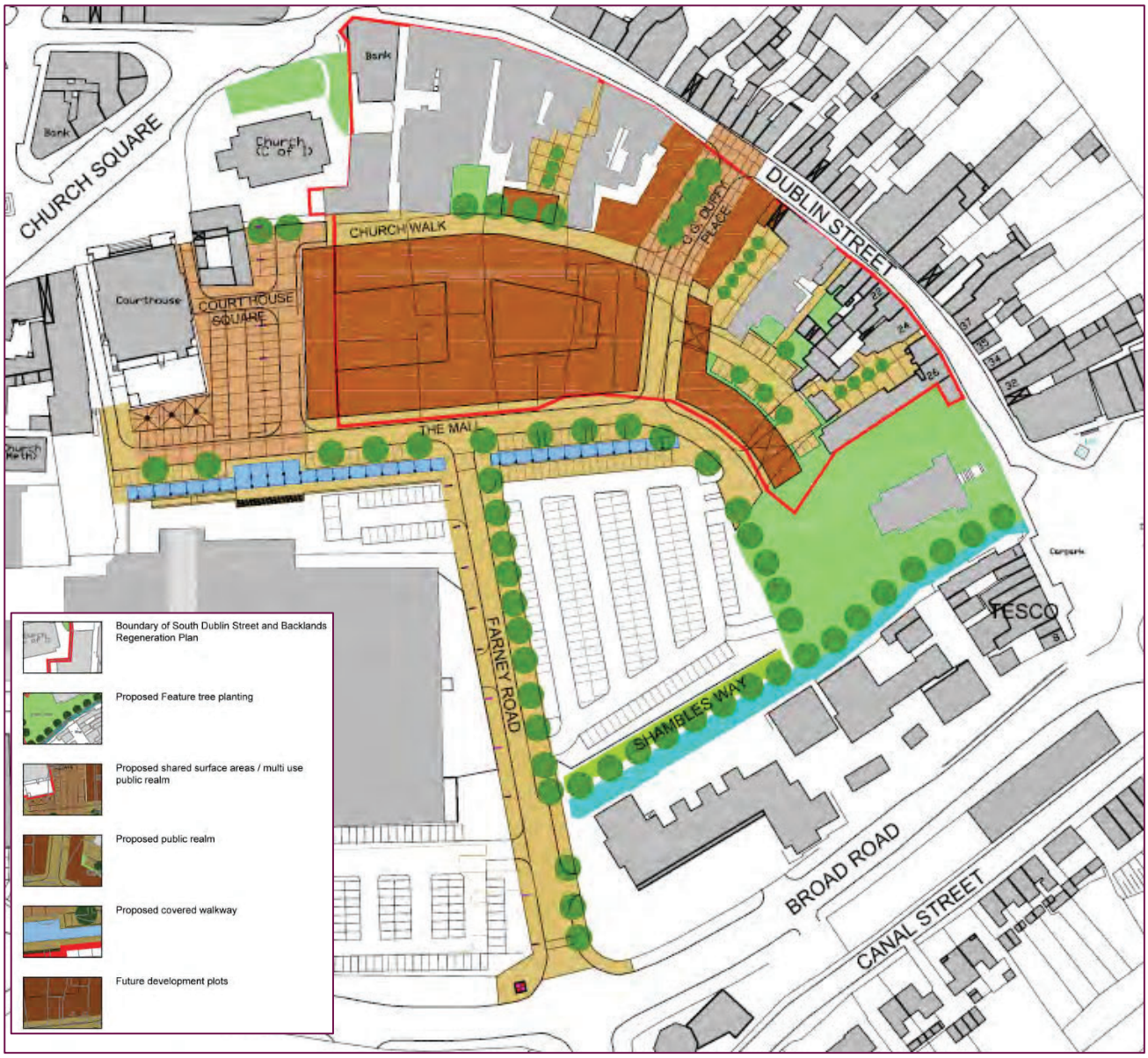


Figure 3.1: South Dublin Street & Backlands Regeneration Concept

4 ROLES AND RESPONSIBILITIES

4.1 Principal Contractor

The role of the Principal Contractor is to appoint a competent demolition contractor, competent and authorised waste management contractors and to appoint a Waste Manager. The Principal Contractor is responsible for the demolition/construction phase progression from outline and implementation of the construction and demolition site waste management plan.

The Principal Contractor is directly responsible to the Client for the successful execution of the project. The principal duties and responsibilities of this position will include:

- To report to the Client on the on-going performance of the CDWMP;
- To discharge his/her responsibilities as outlined in the CDWMP; and,
- Ensuring that the requirements of the CDWMP are developed and are implemented and adhered to with respect to waste requirements;
- To ensure that advice, guidance and instruction on all CDWMP matters are provided to all their managers, employees, construction contractors and visitors on site;
- liaison with statutory and non-statutory bodies and third parties with a waste/recycling interest in the development;
- Monitoring and completing the waste register (in conjunction with the waste manager) and ensuring the correct waste management procedures are implemented;
- Ensuring correct procedures are followed in the event of environmental incidents (in conjunction with appropriate environmental specialist);
- To support and augment the Waste Manger & Design Team through the provision of adequate resources and facilities in the implementation of the CDWMP.

4.2 Waste Manager

The Waste Manager will be responsible for, but not limited to, the following activities:

- Ensure the objectives of the outline construction and demolition waste management plan and the site waste management plan area implemented;
- Responsible for waste characterisation of waste streams;
- Responsible for document control;
- Responsible for ensuring duty of care is implemented;
- Responsible for site operative waste management training;
- Responsible for audits, and;
- Responsible for corrective action execution.

4.3 Site Supervisors

Site Supervisors are required to:

- Promote a Health & Safety culture on site, to read, understand and implement the CDWMP;
- Know the broad requirements of the relevant law in waste matters and take whatever action is necessary to achieve compliance;
- Ensure that waste management are taken into account when considering Contractors' construction methods and materials at all stages;
- Be aware of any potential waste risks relating to the site, plant or materials to be used on the premises and bring these to the notice of the appropriate management;

- Co-ordinate environmental planning of all construction activities to comply with environmental authorities' requirements and with minimum risk to the environment. Give Contractors precise instructions as to their responsibility to ensure correct working methods where risk of environmental damage exists;
- Where appropriate, ensure Contractors method statements include correct waste disposal methods;
- Be aware of any potential environmental risks relating to the Contractors and bring these to the notice of the appropriate management; and,
- Ensure materials/waste register is completed as appropriate.

4.4 Sub-Contractors

All Contractors, and other site personnel, on the project will adhere to the following principal duties and responsibilities:

- Comply with the CDWMP and with the Principal Contractor's Site Waste Management Plan.
- To co-operate fully with the Principal Contractor and the Waste Manager in the implementation and development of the CDWMP at the site;
- To conduct all their activities in a manner consistent with regulatory and best environmental/waste management practice; and,
- Adhere fully to the requirements of the site waste rules.

4.5 Team Structure & Distribution List

All personnel working on the project will be responsible for the waste control of their own work and will perform their duties in accordance with the requirements of the CDWMP (as updated) and in compliance with the controls referenced therein.

A distribution list for the CDWMP should be developed when all contact names and companies are known. The purpose of the distribution list is to establish communication channels that will enable more effective control of environmental-related issues. The distribution list should identify individuals and organizations that have received or will receive a copy of the construction stage CDWMP for implementation.

The distribution list will be established prior to commencement of construction by the appointed/principal contractor. Prior to commencement of construction (including demolition), all roles and responsibilities should be confirmed in the CDWMP as updated. Table 4.1 below shows a template for project roles and responsibilities and can act as a template for the distribution list for the CDWMP.

Table 4.1: Role, Company, Named Contact & Contact Details[2]

ROLE	COMPANY	NAMED CONTACT	CONTACT DETAILS
Monaghan County Council contact	Monaghan County Council	TBC	TBC
Principal Contractor	TBC	TBC	TBC
Waste Manager	TBC	TBC	TBC
Site Supervisors	TBC	TBC	TBC
Sub-Contractors	TBC	TBC	TBC
Health & Safety Representative	TBC	TBC	TBC
Other specialists as required (e.g. geotechnical, drainage/civil engineer)	TBC	TBC	TBC

The Principal Contractor as appointed has ultimate responsibility for the successful waste performance of the proposed development through appointment and management of subcontractors and specialists.

[2] *The Appointed Contractor will complete this table for the Final version for the CDWMP.*

5 PROPOSED APPROACH

5.1 Site Set-Up & Management

5.1.1 General Approach

The works associated with the proposed development will involve the following main elements (please refer to section 3.1.3 for further details):

- Demolition of 4 properties along Dublin Street (No's 8-12) & all associated outbuildings and structures.
- New building façades to No's 7 and 13 Dublin Street and associated retaining structures (likely masonry piers), to facilitate creation the new junction onto Dublin Street;
- Creation of new streets and civic spaces:
- Creation of new junction and street (Gavan Duffy Place) including paving, kerbing, boundary walls, street lighting, and furniture, street trees and associated drainage.
- High quality public realm:
  - New pavements, high quality surfaces and kerbing
  - Resurfacing of existing pavements
  - New railings, bollards and pop-up power supply
  - Bicycle parking
  - Street furniture including bins and seats
  - Traffic calming ramps, pedestrian crossings
  - New trees and vegetation
  - Signage
  - New / replacement street lighting and CCTV
  - New utility services /upgrading of existing services;
  - Drainage improvements, including watermains, foul, storm and water drainage;
- General construction works including excavation, cut / fill, re-grading of land to accommodate level changes.

5.1.2 Construction Compound

A construction compound will be created for the storage of plant, materials and equipment and the establishment of site offices and welfare facilities. Segregated storage facilities for waste will be located within the secured compound area.

5.1.3 Bunded Fuel Storage

Bunded fuel containers will also be sited within the secured compound area. On completion of the works all construction materials will be removed from the compounds and landscaping completed.

5.1.4 Designated Waste Storage area

The construction site will be provided with a designated waste storage area to be identified by the Principal Contractor. This area will securely house designated skips and bins and other necessary facilities for the storage and separation of site sourced waste material. Steps will be taken to ensure the area will be secure from vandalism, vermin and pests and that it will be environmentally hygienic.

5.2 Waste Minimisation

The following waste minimisation measures will be implemented during the course of the construction works;

1. Facilitate recycling and appropriate disposal by on site segregation of all waste materials generated during construction into appropriate categories, including:
    - Top soil, subsoil, gravel hard-core;
    - Concrete, bricks, tile, ceramics, plasterboard;
    - Asphalt, tar and tar products;
    - Metals; and,
    - Dry Recyclables e.g. cardboard, plastic, timber
2. All waste assessed by the Waste Manager as 'not suitable for reuse' will be stored in skips or other suitable receptacles in a designated area of the site, to prevent cross contamination between waste streams;
3. Wherever possible, leftover materials (e.g. timer off cuts) and any suitable demolition materials will be reused on-site.
4. Uncontaminated excavation material (top-soil, sub soil, etc) will be segregated, stockpile and re-used on site in preference to importation of clean fill, where possible; and
5. Where possible, the Waste Manager will ensure that all waste leaving site will be covered.

5.2.1 Re-Use, Recycle, Recovery and Management of Waste

It is required that a duty of care in relation to the disposal of waste is executed. Facilities that accept wastes for recovery and disposal require a waste management licence from the Environmental Protection Agency (EPA). The local authorities operate a permit system for certain waste disposal and recovery activities which do not require a licence from the EPA.

The collection of waste on a commercial basis requires a waste collection permit from the National Waste Collection Permit Office. The National Waste Collection Permit Office (NWCPO) maintains a register for waste facility permits and certificates of registration issued by local authorities. It will be the responsibility of the Waste Co-ordinator to obtain a copy of the waste collectors NWCPO permit and a copy of the waste management licence for the final disposal destination.

This NWCPO permit states which wastes the waste carrier has permission to carry. Various conditions may also be attached to the waste collection permit, e.g. the lighting at night of skips in public places or only allowing the collector to work in certain geographic areas. All relevant records shall be maintained and licences checked for validity and applicability to dates of operation and wastes.

The EU Waste Code System is used for the consistent identification, classification and reporting of all wastes generated in the EU and forms the basis of both national and international waste reporting obligations. Accordingly, it is reflected in EPA licences and in permits, in waste movement/tracking systems and in official documents such as the EPA's annual National Waste Reports.

Waste generated on this construction site will be identified as hazardous, non-hazardous or inert and segregated according to its category as described in the European Waste Catalogue (EWC Codes).

Table 5.1 below lists some typical construction and demolition waste codes. This will require designated storage areas for waste to be established for eventual reuse / recycling / disposal at appropriate licensed facilities.

Table 5.1: EWC Waste Codes

Waste	EWC Code
Concrete, bricks, tiles, ceramics	17 01 01-03 & 07
Wood, glass and plastic	17 02 01-03
Bituminous mixtures, coal tar and tarred products	17 03 02
Metals (including their alloys)	17 04 01-07

Soil and stones	17 05 04
Gypsum-based construction material	17 08 02
Insulation Material and asbestos containing construction materials	17 06 01 & 03-05
Paper and cardboard	20 01 01
Mixed C&D waste	17 09 04
Green waste	20 02 01
Electrical and electronic components	20 01 35 & 36
Batteries and accumulators	20 01 33 & 34
Liquid fuels	13 07 01-03
Chemicals (solvents, pesticides, paints, adhesives, detergents etc.)	20 01 13, 19, 27-30

Suitably sized and secure containers for each waste stream will be provided by the Principal Contractor and monitored by the Waste Co-ordinator/Manager. These will be clearly identifiable by colour and signage.

The number and size of the containers required for segregation will be agreed with waste collectors prior to commencement and reviewed during the course of the project. The principle of segregation of wastes at source is fundamental and results in managed waste streams which in turn lead to cost savings and environmental benefits. In addition the diversion of waste from landfill will create savings in the avoidance of landfill tax levy.

Waste may only be treated or disposed of at appropriately licensed facilities. The appointed contractor will be required to keep records of all waste movements. Every waste movement off site will require a waste transfer triplicate docket form with one copy to be retained on site, a copy for the transporter and a copy for the receiving facility.

The contractor will also be required to carry out spot checks on waste collectors and disposal sites. These records will be forwarded to the client on completion of the works for inclusion within the Safety File. The Waste Co-ordinator is obliged to ensure that all vehicles transferring waste for a particular haulier are listed on the NWCPO licence. For this reason it is good practice that a daily list of lorries entering and leaving the site and their registrations are recorded.

In order to prevent and minimise the generation of wastes, the contractor will be required to ensure that materials are ordered so that the timing of deliveries and storage of same is not conducive to the creation of unnecessary waste.

The contractor will be required to in conjunction with the Works Programme, show estimated delivery dates and quantities for each specific material associated with each element of the works. The contractor will review the C&D Waste Management Plan at regular site meetings at which the Waste Co-ordinator will report.

6 WASTE MANAGEMENT PROCEDURES

6.1 Waste Hierarchy

Besides the requirements that the off-site handling of waste generated by this project are subject to the required statutory authorisations under the Waste Management Act, there is also a necessity that it conforms to the Waste Hierarchy.

This is a requirement of Article 4 of the Directive on Waste, being transposed as Section 21A of the Waste Management Act. The Waste Hierarchy only applies to material that is defined as “waste”. This means that it does not apply to the proportion of the spoil that is handled on-site in conformity with the statutory exclusions.

The Waste Management Hierarchy will become activated for any material which does not satisfy the exclusions; in this regard the contract documents for the detailed design/construction project will clearly set out the staged approach which the contractor will be required to adhere to through the use of the Waste Hierarchy.

In order of priority, the hierarchy sets out the most desirable approaches to Waste management as comprising:

- (a) Prevention;
- (b) Preparing for re-use;
- (c) Recycling;
- (d) Other recovery (including energy recovery); and,
- (e) Disposal.

6.2 Waste Arisings

Given the nature of the project it is envisaged that the main waste types will be demolition wastes and general construction wastes arising from building, public realm, urban fabric and road construction. There will be non-hazardous and inert wastes such as concrete, wood, steel, blocks, bricks, plasterboard, plastics, packaging etc. and some hazardous wastes e.g. asbestos containing materials, oils, paints and adhesives.

Subject to waste acceptance classification analysis the topsoil /subsoils at the site may be classed as inert, hazardous or non-hazardous. There will be small amounts of green waste.

The volume of waste generated from demolition will be more difficult to segregate than waste generated from the construction phase, as many of the building materials will be bonded together or integrated i.e. plasterboard on timber ceiling joists, steel embedded in concrete etc.

Table 6.1 below shows the typical breakdown of C&D waste types produced on a typical site based on data from the EPA National Waste Reports 15 and the Galway Mayo Institute of Technology 16 research Paper.

Table 6.1: Typical Breakdown of Wastes Derived from C & D Sites in Ireland

Waste Types	Percentage
Mixed Construction and Demolition	33%
Timber	28%
Plasterboard	10%
Metals	8%
Concrete	6%
Other	15%
Total	*100%*

Source: Environmental Protection Agency (EPA), National Waste Database Reports 1998 – 2012. EPA and Galway-Mayo Institute of Technology (GMIT), EPA Research Report 146 – A Review of Design and Construction Waste Management Practices in Selected Case Studies – Lessons Learned (2015).

The appointed demolition contractor will be required to prepare a detailed demolition management plan and prepare estimates of all demolition wastes. The Principal Contractor will prepare the Construction Waste Management Plan including estimates of waste streams on completion of the construction drawings.

Table 6.2: Estimated Quantities of Bulk Wastes from Demolition[3]

Waste Types	Assumptions	Volume (m3)	Conversion Factor	Metric Tonnes	%age of Total Waste Volume %	Disposal Route
Timber						Recovery
Building Stone						Recovery
Slates						Recovery
Soils			**TBC**			Recovery for inert, landfill for non-hazardous hazardous
Concrete, brick ceramic and tiles						Recovery/ Recycle
Glass						Recycle
Total						

The above table does not calculate waste volumes of metal, plasterboard or green wastes. It is thought that the quantities of these arising will be much lower than the bulk waste streams above, with the exception of glass. This table will be completed for the detailed DCWMP estimates are not know at this early stage of the project.

6.3 Waste Handling

During the construction phase of the proposed project the appointed contractor will have responsibility for the development and management of appropriate waste handling procedures in accordance with the relevant legislation. This will involve the identification and segregation of waste arisings encountered into their appropriate categories and designating waste storage areas[4] within the proposed project for the storage of waste prior to transport for recovery/disposal at suitably licensed/permitted facilities.

[3] *This will be detailed in the final CDWMP.*

[4] *This preliminary report refers to a potential waste compound/waste storage areas for the project – as the potential waste compound/waste storage areas may not be on the site of waste production this may require authorisation from MCC Environmental Department for storage of waste. This should be detailed in the final CDWMP.*

An overview of the methods envisaged to handle the expected waste arisings are outlined in the following sections.

6.4 Hazardous Waste Management

There are currently no known hotspots where hazardous waste arisings have been identified within the site. However localised areas of contamination may be identified during the excavation process. Hazardous waste may also be encountered in the following site clearance/ demolition works. Other hazardous waste arisings that are likely to arise during the construction phase include:

- Vehicle batteries;
- Containers with residues of resins, latex, plasticizers, glues, adhesives, wood preservatives;
- Mineral oils or oily substances; and
- Wastewater from site facilities.

All hazardous waste encountered will be removed from site by a specialist waste contractor with a waste collection permit.

Hazardous waste facilities are licenced by the EPA. The WMC will ensure that the hazardous waste contractor provides a copy of the licence for the facility to which the hazardous waste is being brought.

Consignment notes (C1 Forms) track and monitor the movement of hazardous waste within the State. C1 Forms will be completed for every consignment of hazardous waste other than the movement of waste within the premises where it is produced, stored, treated or deposited.

The export of hazardous waste requires completion of a TFS Form or "transfrontier shipment". The local authority issues and monitors Transfrontier Movement of Waste Forms which are used to control and track movements and disposal/recovery of certain categories of waste outside the State. The specialist waste disposal company, employed by the contractor, will arrange for the correct completion of these forms. The WMC will ensure that copies of these forms are completed in conjunction with the waste contractor and are kept for the duration of the project.

6.4.1 Asbestos[5]

It should be noted that prior to demolition the Principal Contractor is obliged by the Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006 (S.I. No. 386 of 2006) and (Amendment) Regulation 2010 (S.I. No. 589/2010) and Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013), to identify all asbestos containing materials within the buildings.

This asbestos survey report provides an assessment of the likely volume of asbestos waste which will need to be disposed of separately. This should be removed by a specialist contractor and disposed of as hazardous waste. All waste consignment paperwork associated with this needs to be retained on file.

6.5 Waste Segregation

Within the site, facilities will be available for waste segregation; these will include labelled bins and skips for the various waste streams identified for the site. Putrescible food waste from the site canteen/site office will be placed in specially designated brown wheelie bins for composting. Light packaging, non-biodegradable waste from canteens and offices on site as well as litter will be stored on site in wheelie bins for onward disposal by a licensed contractor.

Recyclable waste will be stored on site in skips for collection by a licensed contractor approved by Monaghan County Council.

[5] *Asbestos surveys will form part of the detailed design stage requirements and therefore relevant asbestos reports will be provided in the information package to tendering contractors for the construction stage.*

6.6 Storage of Waste

The site will be provided with a dedicated bin and waste sorting and storage area to be identified by the appointed contractor. This area will provide for the storage of recyclable waste and waste for disposal in appropriate receptacles.

The waste storage area will generally be used to store the recyclable material for collection by the waste contractors.

Any hazardous waste arising should be stored in a secure area to minimise the likelihood of interference by vandals. All hazardous waste should be covered and clearly marked as hazardous waste. They should be away from working areas and areas where vehicles could accidently strike them. The standing time on site from generation of the hazardous waste to removal off site should be kept to a minimum.

Liquid wastes should be kept in clearly marked bunded containers.

Waste storage areas shall be selected so that they are set back from watercourses, ecological sensitive areas, areas of extreme vulnerability, and away from potential floodplain areas and areas containing invasive species. They shall also be selected to ensure that it is accessible from roads that can cater for predicted volumes of site traffic and has connectivity to a main sewer for treatment of wastewater.

Storage of any waste will be located greater than 100m from a watercourse. Stockpiles within 200m of a watercourse will be covered.

6.7 Waste Action

The principal wastes to be generated at the site are identified in Table 6.3 below along with the proposed waste management actions. It may be found following the initial construction period that there are additional waste sources and waste streams. This table will therefore be reviewed as the project proceeds. Specific methods of managing particular waste streams are outlined below:

Table 6.3: Waste Type & Appropriate Action

Waste Type	Action
Excavated Soil (Clay, Sands, Gravels)	Excavated soils will be dug and loaded onto dumper trucks and stored for re-use elsewhere on the site where possible and free from contaminants e.g. trench / foundation excavation material will be reused as fill in landscape areas.
Concrete	Waste fresh concrete may result from the pouring of foundations, concrete surround to pipes, kerbs and arising from concrete pours etc. Where possible this surplus material will be returned to supplier for re-use. There will be no washing out of concrete lorries permitted on site. Concrete from the demolition of excavation of foundations will be removed off site for disposal.
Metals	Residual metal waste will be source segregated for collection and recycling by licenced contractors. It is not thought that quantities of this will be great given the nature of the buildings to be demolished.
Timber	Timber waste will be segregated and stored in weather protective containers for collection and reuse / recycling by licenced contractors. It is important that all nails in waste timber are removed or hammered down.
Blocks and Bricks	Designated storage and stockpile locations will be set up on site to minimise breakages. Broken bricks and blocks will be re-used where possible on site in

	appropriate locations. Residual masonry wastes will be source segregated and stored in designated containers for subsequent collection and crushing / recycling by licenced contractors.
Glass	Glass breakages are inevitable on a construction site however, it is intended to minimise such breakages by ordering materials just in time and creating safe designated storage areas for same.
Packaging	Packaging is a source of major waste and can if uncontrolled lead to contamination of other waste streams. It is therefore proposed to segregate packaging waste immediately after unwrapping. Where possible materials with minimum or recycled packaging will be purchased or returned to supplier. Otherwise packaging waste will be segregated and stored in containers for eventual recycling / disposal by licenced contractors.
Plasterboard, Gypsum etc.	Such material will be segregated at source for eventual disposal by licenced contractors.
Food Waste	Food waste arising from site staff can create hygiene problems if not properly disposed of and therefore in accordance with Safety, Health and Welfare (Construction) Regulations designated areas for consumption of food will be set up within the site compound. Separate bins e.g. brown for foodstuffs, green for recyclables and black for remainder, will be provided at these locations. These bins will be collected by licenced waste contractors.
Paints, Oils, Adhesives etc. (Hazardous)	Oils, paints, adhesives and chemicals will be kept in separate contained storage areas which will be bunded. Waste oils, oil filters, paints, adhesives and chemicals will be sent to appropriately licensed facilities for disposal. Fuel and oils for machinery will be stored in double skinned containers or within bunds with sufficient capacity to contain spillage. All of the above containers will be clearly labelled and secured against unauthorised access.
Asbestos Containing Materials (Hazardous)	Due to the requirement for demolition of the existing buildings on the site, it is likely that some hazardous waste in the form of asbestos containing material (ACM) or contaminated soils will be present on site. A pre-construction and demolition asbestos survey will be carried out in advance of demolition works on site to identify the presence or likely presence of any ACM. All ACM will be treated as hazardous waste and removed by a licenced contractor for disposal at licenced facilities. **Please also see section 6.4.1 Asbestos.**
Contaminated Soils (Hazardous)	If contaminated soils are present then appropriate handling, storage, transportation and disposal will be required. Prior to removal of such waste, the contractor will prepare a plan for the management of this waste stream. Specific method statements detailing the necessary mitigation measures required during excavation, handling, transportation and disposal of the encountered hazardous wastes will be prepared. Every attempt to minimise contamination of surrounding material will be made to reduce the volume of waste involved.
Electrical	Electrical waste including fluorescent tubes, electronic equipment, batteries etc. will be stored in segregated areas for Recycling / Recovery by licensed WEEE contractors. Office Waste Office waste from the contractor's on site facilities such as paper and light packaging will be stored for Reuse / Recycle by licensed contractors.

Office Waste	Office waste from the contractor's on site facilities such as paper and light packaging will be stored for Reuse / Recycle by licensed contractors

The management of the site will ensure that all staff and visitors are aware that waste should be managed in such a way as to have minimal impact on the environment and on the health and safety of all associated with the proposed development and the waste actions outlined above will be communicated as part of site inductions.

6.8 Waste Removal

6.8.1 General Approach

Any removal of waste material from the site shall be done so in accordance with the relevant legislation. It shall undergo a comprehensive waste assessment and classification by a suitably qualified person, in accordance with the relevant legislation and shall be disposed of/treated in a suitably licensed facility.

Waste arisings generated will only be treated at facilities that are authorised to carry out the appropriate waste treatment activity for the specific waste stream. Records of all waste movements and associated documentation shall be maintained on-site such as waste facility authorisation number, expiry date, class of waste accepted, treatment methods for each waste stream accepted i.e., backfilling, crushing, screening, etc.

Where waste generated is not reusable on-site, samples will be taken and waste acceptance criteria (WAC) laboratory testing will be undertaken on the excavated material. The results of the laboratory testing will be used to determine whether a waste as inert, non-hazardous or hazardous. Authorised waste facilities will be contacted to establish what their waste acceptance criteria requirements are. The excavated waste from the proposed project will be compared with the facility waste acceptance criteria, and sent to the waste facilities which are authorised to accept the material in line with the waste acceptance criteria. Where practical, the closest suitable facilities to the proposed project will be selected to reduce impacts associated with vehicle movement such as air emissions.

6.8.1.1 Implications of Brexit and use of Waste Facilities in Northern Ireland

All environmental protections that are currently in place in Northern Ireland (NI), will continue to exist at the end of the transition period and therefore current waste permits and licences will apply and continue to operate. The UK will remain party to the Basel Convention and will be a member of the Organisation for Economic Co-operation and Development (OECD). The regulatory agencies across the UK, including the Northern Ireland Environment Agency (NIEA) will continue to implement the international rules contained in these agreements.

The current waste shipment regulations and procedures still apply. As a result of EU Exit and the implementation of the Northern Ireland Protocol, there may be changes to border controls which could have future impacts on the waste supply chain. Protection of the environment and human health will though remain foremost.

Waste Controls between NI and EU: *Movements of waste between NI and EU Countries will continue without interruption as NI will continue to comply with EC Regulation 1013/2006 on Shipments of Waste under the Northern Ireland Protocol so operators can continue to move waste under their present processes without any changes being required.*

6.8.2 Exclusion from the legislation for excavated material refused at a construction site

The Waste Framework Directive contains a number of exclusions which make clear that certain materials are not subject to its requirements. A key exclusion affecting construction projects such as this development is set down in Article 2(1)(c).

This states that the requirements of the EU legislation do not apply to: uncontaminated soil and other naturally occurring material excavated in the course of construction activities where it is certain that the material will be used for the purposes of construction in its natural state on the site from which it was excavated.

This provision is repeated in the Waste Management Act, as Section 3(1)(c).

Should materials generated by construction activities fall within this provision, they are not then subject to the other requirements of the EU or national waste legislation. This means that, for example, such materials are not defined as “waste”, do not need to be handled by duly authorised waste collectors and do not need to pass to disposal or recovery facilities that are subject to waste licences or other equivalent form of statutory authorisation.

By-product notifications (under Article 27 of the EC Waste Directive Regulations 2011) provide an opportunity for reuse of surplus clean soil & stone material arising from construction activity. This applies to locations other than authorised recovery facilities e.g. quarries operating under planning permission, GAA clubs or other developments such as road schemes requiring earthworks and importation of clean soil & stone. By-product status means that the material is approved for use at a location that falls outside of the reach of waste legislation.

As outlined in Article 27, Part 3 of EC Waste Directive Regulations 2011, a substance or object, resulting from a production process, the primary aim of which is not the production of that item, may be regarded as not being waste but as being a by-product only if the following conditions are met:

a) Further use of the substance or object is certain;
b) The substance or object can be used directly without any further processing other than normal industrial practice;
c) The substance or object is produced as an integral part of a production process; and
d) Further use is lawful in that the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts.

If the appointed contractor proposes to crush or reuse waste material on site during the construction phase – the appointed contractor would require waste authorisation from MCC Environmental Department. Similarly if the appointed contractor where to reuse crushed material on site (for example filling/capping layer of a road), the appointed contractor would also require authorisation. The reuse option, where appropriate, can bring significant economic benefits.

7 SITE MANAGEMENT PROCEDURES

7.1 General

In order to emphasise to staff and visitors the importance of waste management within the proposed site it is intended that this outline C&D Waste Management Plan will be finalised by the appointed contractor and circulated to all sub-contractors employed on the works. A register of those contractors that have signed up to this for the works will be maintained. Signing up to this register will be mandatory.

7.2 Training

Copies of the Construction & Demolition Waste Management Plan[6] will be made available to all personnel on site. All site personnel and sub-contractors will be instructed about the objectives of the CDWMP and the measures to achieve same. They will be trained in how to implement the above measures and their responsibilities during site induction and reminders during tool box talks. Topics to be covered will include;

- Distinguish re-usable materials from materials suitable for recycling;
- Ensure maximum segregation at source;
- Co-operate with site manager on best locations for stockpiling;
- Separate materials for recovery;
- Appropriate protection/coverage of waste areas e.g. covered skips, double wrapped asbestos containing materials (by appropriately trained staff).

Site notices will be erected throughout the site identifying waste storage areas and reinforcing waste hierarchy message.

7.3 Waste Contractors

It will be required that all waste contractors involved in the site will be in adherence with the legislation referred to in this preliminary plan.

To this end the Principal Contractor will ensure that all contractors engaged to collect and dispose of waste will be licensed contractors approved by Monaghan County Council.

This will include those who collect recyclable material, general waste, hazardous waste and miscellaneous waste. It will be the policy to verify that all contractors are licensed and are approved by Monaghan County Council.

7.4 Record Keeping Procedures

The contractor shall develop a record keeping system that will ensure that details of all arising's including movement and treatment of C&D waste are recorded. All materials being transferred from the site, whether for recycling or disposal, shall be subject to a documented tracking system which can be verified and validated.

7.5 Waste Auditing Protocols

Waste auditing protocols shall be the responsibility of the WMC who shall carry out auditing in accordance with an Audit Plan for the project to be included in the developed Construction and Demolition Waste Management Plan.

The audit will cover the following elements:

- A systematic study of all waste management practices which have been adopted on-site;
- Special attention will be dedicated to obvious opportunities for waste reduction, but all areas and stages within the project will be reviewed;

[6] *Training should be incorporated into the CDWMP and cover the bullet points listed. Training helps to ensure that all workers are aware of their responsibilities in relation to waste, waste segregation and recycling.*

- Details of raw material inputs and the quantity, type and composition of all waste from the site will be identified;
- The audit findings will highlight corrective actions that may be taken in relation to management policies or site practices in order to bring about further waste reductions; and
- A tracking system shall be stipulated to determine the success or failure of corrective actions.

Regular summary audit reports outlining types, quantities of waste arisings and their final treatment method shall be sent to the Principal Contractor.

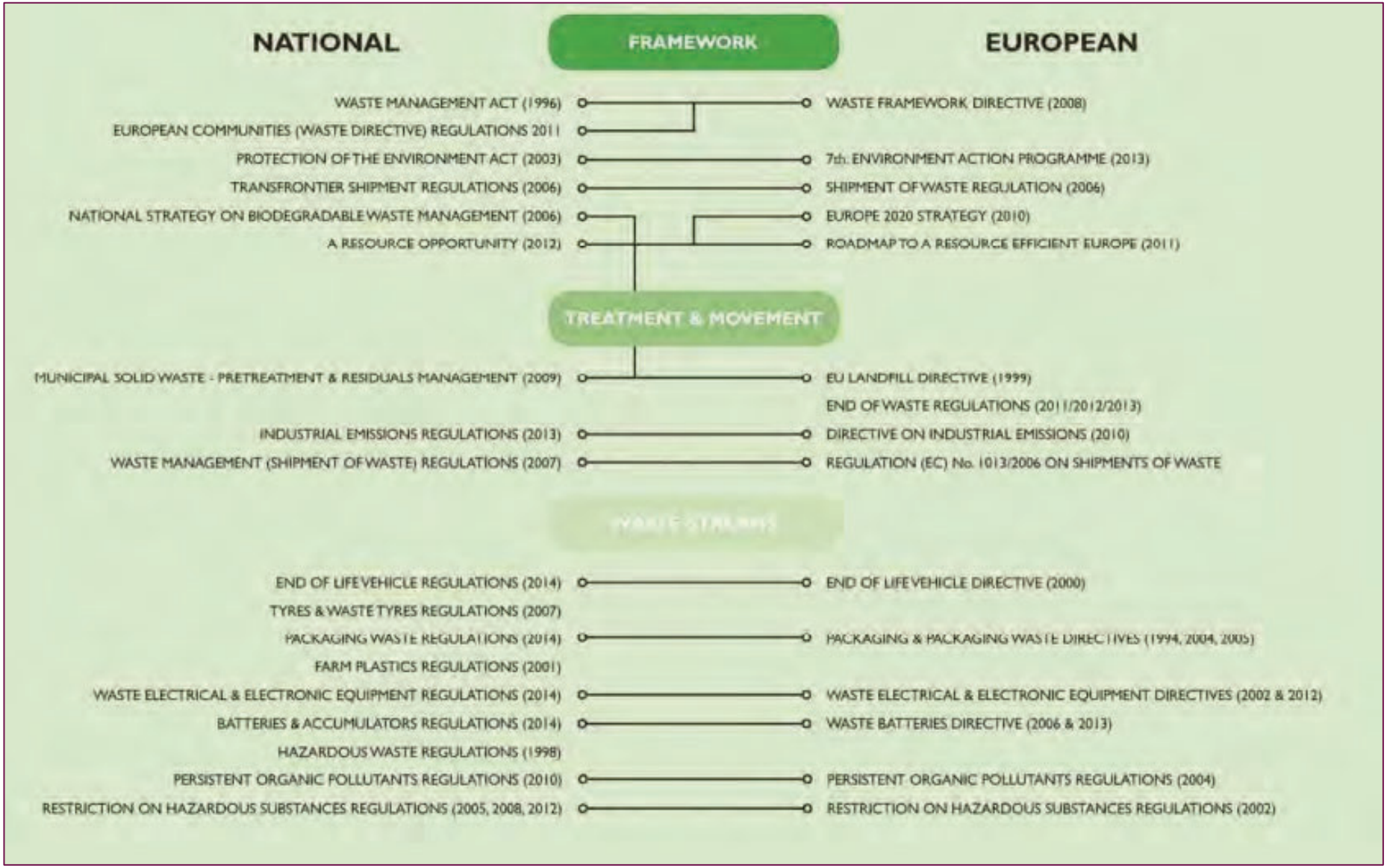
8 REFERENCES

S.I. No. 126 of 2011; European Communities (Waste Directive) Regulations: Statutory Office (2011).

Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects, Department of Environment Heritage and Local Government (DoEHLG) July 2006.

Construction Industry Research and Information Association (CIRIA) document SP133 Waste Minimisation in Construction.

Appendix A
European & Irish Waste Legislation


NATIONAL
FRAMEWORK
EUROPEAN
WASTE MANAGEMENT ACT (1996)
EUROPEAN COMMUNITIES (WASTE DIRECTIVE) REGULATIONS 2011
WASTE FRAMEWORK DIRECTIVE (2008)
PROTECTION OF THE ENVIRONMENT ACT (2003)
7th. ENVIRONMENT ACTION PROGRAMME (2013)
TRANSFRONTIER SHIPMENT REGULATIONS (2006)
SHIPMENT OF WASTE REGULATION (2006)
NATIONAL STRATEGY ON BIODEGRADABLE WASTE MANAGEMENT (2006)
EUROPE 2020 STRATEGY (2010)
A RESOURCE OPPORTUNITY (2012)
ROADMAP TO A RESOURCE EFFICIENT EUROPE (2011)
TREATMENT & MOVEMENT
MUNICIPAL SOLID WASTE - PRETREATMENT & RESIDUALS MANAGEMENT (2009)
EU LANDFILL DIRECTIVE (1999)
END OF WASTE REGULATIONS (2011/2012/2013)
INDUSTRIAL EMISSIONS REGULATIONS (2013)
DIRECTIVE ON INDUSTRIAL EMISSIONS (2010)
WASTE MANAGEMENT (SHIPMENT OF WASTE) REGULATIONS (2007)
REGULATION (EC) No. 1013/2006 ON SHIPMENTS OF WASTE
END OF LIFE VEHICLE REGULATIONS (2014)
END OF LIFE VEHICLE DIRECTIVE (2000)
TYRES & WASTE TYRES REGULATIONS (2007)
PACKAGING WASTE REGULATIONS (2014)
PACKAGING & PACKAGING WASTE DIRECTIVES (1994, 2004, 2005)
FARM PLASTICS REGULATIONS (2001)
WASTE ELECTRICAL & ELECTRONIC EQUIPMENT REGULATIONS (2014)
WASTE ELECTRICAL & ELECTRONIC EQUIPMENT DIRECTIVES (2002 & 2012)
BATTERIES & ACCUMULATORS REGULATIONS (2014)
WASTE BATTERIES DIRECTIVE (2006 & 2013)
HAZARDOUS WASTE REGULATIONS (1998)
PERSISTENT ORGANIC POLLUTANTS REGULATIONS (2010)
PERSISTENT ORGANIC POLLUTANTS REGULATIONS (2004)
RESTRICTION ON HAZARDOUS SUBSTANCES REGULATIONS (2005, 2008, 2012)
RESTRICTION ON HAZARDOUS SUBSTANCES REGULATIONS (2002)

Appendix

2c

Conditions Survey Report

CONDITIONS SURVEY REPORT

South Dublin Street and Backlands Regeneration Scheme

MGT0528 South Dublin Street
Regeneration Project
P02
27 August 2020

rpsgroup.com

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
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Des Keane		28 August 2020

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1 INTRODUCTION

1.1 Background

RPS Consulting Engineers have been engaged by Monaghan County Council to provide design and construction management services for the “South Dublin Street and Backlands Regeneration Scheme” Public Realm Improvement Project. This project is progressed through the Urban Regeneration and Development Fund under Project Ireland 2040.

The proposed Dublin Street regeneration scheme area is located to the southeast of the town core, extending from The Diamond to the northwest, south eastwards along Dublin Street, and is defined to the southeast by the Presbyterian Church to the south at Old Cross Square. The regeneration scheme area is defined by the terraces of dwellings to Dublin Street to the north east, and the long rear gardens to the south. Monaghan County Council have the following long term vision to enhance the physical and special quality of Dublin street:

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

The terraces facing Dublin Street are interspersed with laneways through archways and gaps between terraces to the courtyards, backlands and gardens to the rear. The existing structures facing Dublin Street comprise two and three storey structures, generally of two and three bays in width. Typically, there are long rear annexes extending into the depths of the plots. To the south east the backlands are characterised by small courtyards created by two storey outhouses positioned parallel to the principal structure. The lands slope down from The Diamond to the north, eastwards to Old Cross Square to the south east, and also down from Dublin Street southwards toward the public surface car park to the rear.

Based on the project parameters as set out above, several interventions are required within the proposed works area. To assess the adequacy of the existing structures and the possible implications of the of proposed alterations on the structures, RPS were engaged to carry out a visual assessment and survey of all properties within and on the boundary of the areas where work is proposed.

1.2 Structural Assessment Survey

Pádraic Mac Giolla Bhríde of RPS Consulting Engineers visited Monaghan on 23rd June 2020 to carry out a visual structural assessment survey.

1.2.1 Scope of survey

The primary objectives of the assessment were to carry out a structural assessment survey, including a visual and photographic survey and to prepare a written Structural Assessment Survey Report setting out, at a minimum in accordance with the Project Brief:

• *Having regard to the proposed new junction (Gavin Duffy Place) onto Dublin Street, the appointed Consultants shall carry out a preliminary structural assessment of all the buildings/properties proposed for demolition to create the new junction and in particular the adjoining properties remaining in-situ each side of the proposed junction. The Consultants shall carry out preliminary design proposals for stabilisation of the adjoining proper-ties each side of the new junction with adequate retaining structures having regard to the overall urban design associated with the Regeneration Project;*

• *The Consultants shall inspect all the structures (bridges/ culverts/ retaining walls/ cellars/manholes etc. or any other relevant structures) located within/on the proposed new streets and spaces, and following such inspection, shall identify those structures requiring a structural assessment to ensure that they can safely accommodate the proposed project infrastructure;*

To achieve the above the survey consisted of the following;

- Photographs of external structural elevations affected by the proposed works in sufficient detail to identify structural integrity and to provide proposals of structural requirements,
- Identification of structural requirements, propping or specialist works required during the construction phase or prior to the commencement of construction work,
- Provide commentary and recommendations from a structural engineering perspective on the impacts of the proposed works on existing structure and provide proposals of structural requirements for bracing following construction works.

1.2.2 Limitations

Limitations of the report are as follows:

- The survey comprised visual assessment and photographic documentation of accessible elevations of structures within the proposed works area. Any structures, or parts of structures which were covered or inaccessible were not inspected and therefore their condition is not documented in this report. These buildings are not deemed to be critical to completing this survey as they are primarily storage buildings, which appear to be constructed after the primary structures at these lands and are therefore considered to have no structural bearing on buildings to be retained following demolition works. Whilst this assumption is deemed to be suitable for this assessment, these buildings should be inspected, and their structural requirements surveyed as this project progresses and prior to the construction of the scheme.
- The scope of works did not encompass mechanical testing or operation specifics of the existing systems.
- The survey was limited to a visual structural assessment only. No levels assessment of the floor was undertaken.

2 SURVEY

The survey was carried out on 23rd June 2020. The survey encompassed the area enclosed in the red line as shown in **Figure 1** below.

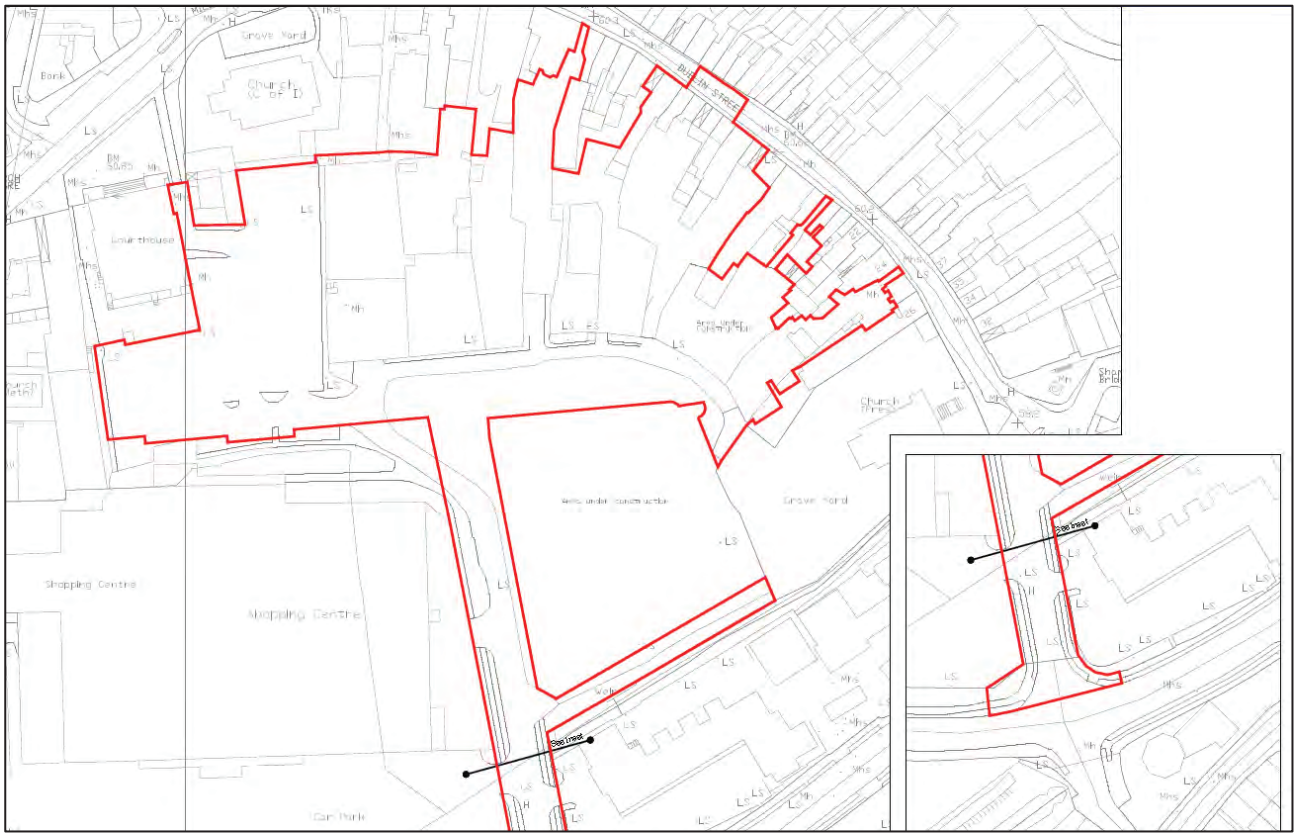


Figure 1 Proposed Works area / Survey area

The survey findings are presented in the report as follows:

- In **Section 3**, interventions required to accommodate the works are listed, emphasis is placed on interventions requiring demolition works.
- In **Section 4**, structural and cosmetic cracking and other defects identified during the survey are presented, these are to be read in line with the photographs and descriptions presented in **Appendix A.**
- In **Section 5**, the conclusions of the report are presented with recommendations of any further investigations presented.

Three maps were used to outline the survey area, as can be seen in **Appendix A**. The main areas focussed within the survey are as follows:

- Appendix A Image 1 – Dublin Street and associated backlands
- Appendix A Image 2 – Plots to rear of Dublin Street
- Appendix A Image 3 – Walk to red line boundary

The noticeable defects identified to structures facing proposed areas for urban realm improvement on Dublin Street, Monaghan Town can be grouped as follows:

a. Cracking around windows and doorways,

b. Cracking and damage to boundary walls,

c. Cracking and deterioration to render and stone / block work,

d. Deterioration of windowsills.

From the initial external survey, it is not clear what structural condition the current structures are in. Further investigation is required to establish the structural integrity of the existing properties to allow informed design assumptions to be made, i.e. internal survey and detailed opening up works within the subject properties. Therefore, recommendations for methods of retention following demolitions would be premature. Recommendations on requirements for additional investigations and intrusive works are listed in **Section 6** below.

2.1 Description of Assessment areas

The works area is located in the Monaghan town centre, in particular Dublin Street and backlands. Dublin Street is lined with historic buildings with several recent extensions and new builds to the rear of the main street. Dublin Street was well established by the early 19th Century with the majority of buildings constructed in this time. As described in **Section 1** above, the existing structures comprise of two and three storey buildings, typically merchant's townhouses of varying size and prominence with ground floor commercial units and residences above. **Figures 2** and **3** below highlight little change in the way of development on Dublin Street in the past 100 years.

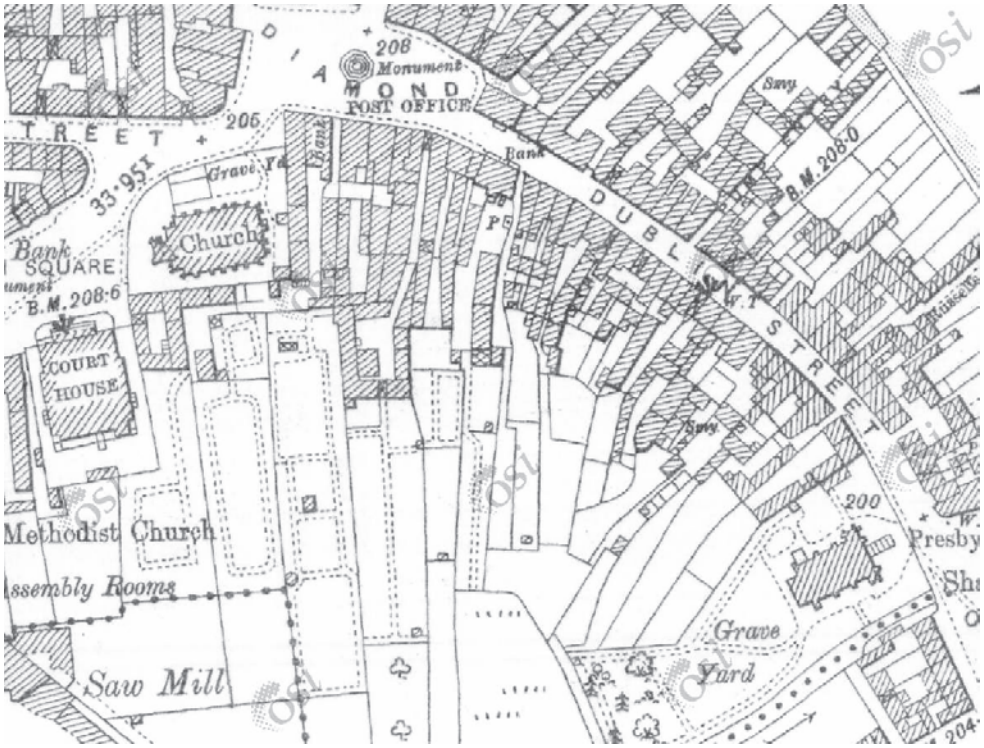


Figure 2 Historic Map – 25 inch (1888 – 1913)

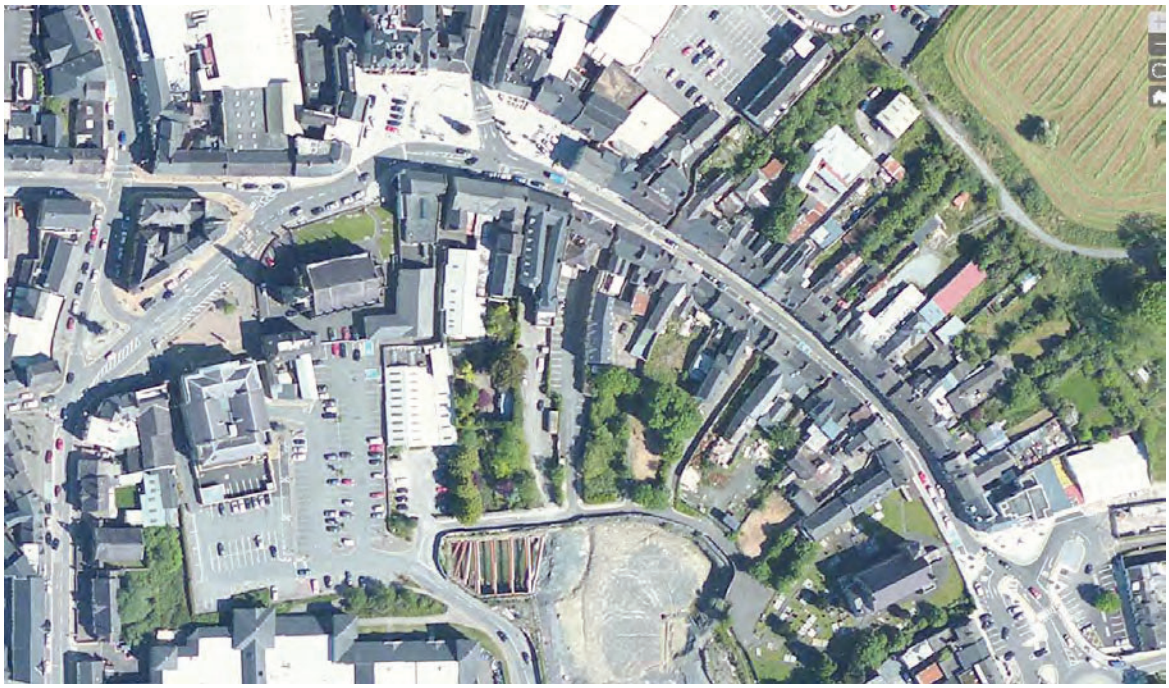


Figure 3 Digital Globe 2011 – 2013

3 INTERVENTIONS

To accommodate the proposed works, there are a number of interventions which require an initial visual survey and structural assessment. The proposed works/interventions are shown in **Figures 4** and **5** below. See underneath a summary of interventions:

- New street and public space to connect Dublin Street to the backland area – forming Gavan Duffy Place. This intervention requires the removal of several buildings on Dublin Street.
- A mews lane subdividing the longer rear plots to the backlands area – forming Church Walk.
- A new street to the rear to enhance pedestrian access between the existing shopping centre and Dublin Street – forming The Mall.
- Realigned road proposed from Broad Road to The Mall with public realm improvements and urban landmarks.
- New major public space to the side of the courthouse (existing carpark redefined) – forming Court House Square.
- A new linear building within the backlands area between The Mall and Church Walk.

3.1.1 Interventions requiring demolitions

To develop the new street and public space to connect Dublin Street to the backland area, several buildings on Dublin Street will need to be removed. The buildings in black text below neighbour proposed demolitions (No. 7 & 12). The buildings to be demolished are listed below in red (No.8-12):

- No.7: Monaghan Boot Co.
- No.8: The Vacant Building
- No.9: Best 4 You Building
- No.10: Existing GD Building & entry
- No.11: Instanbul Kebab House Building
- No.12: Mr. Malik Kebabs

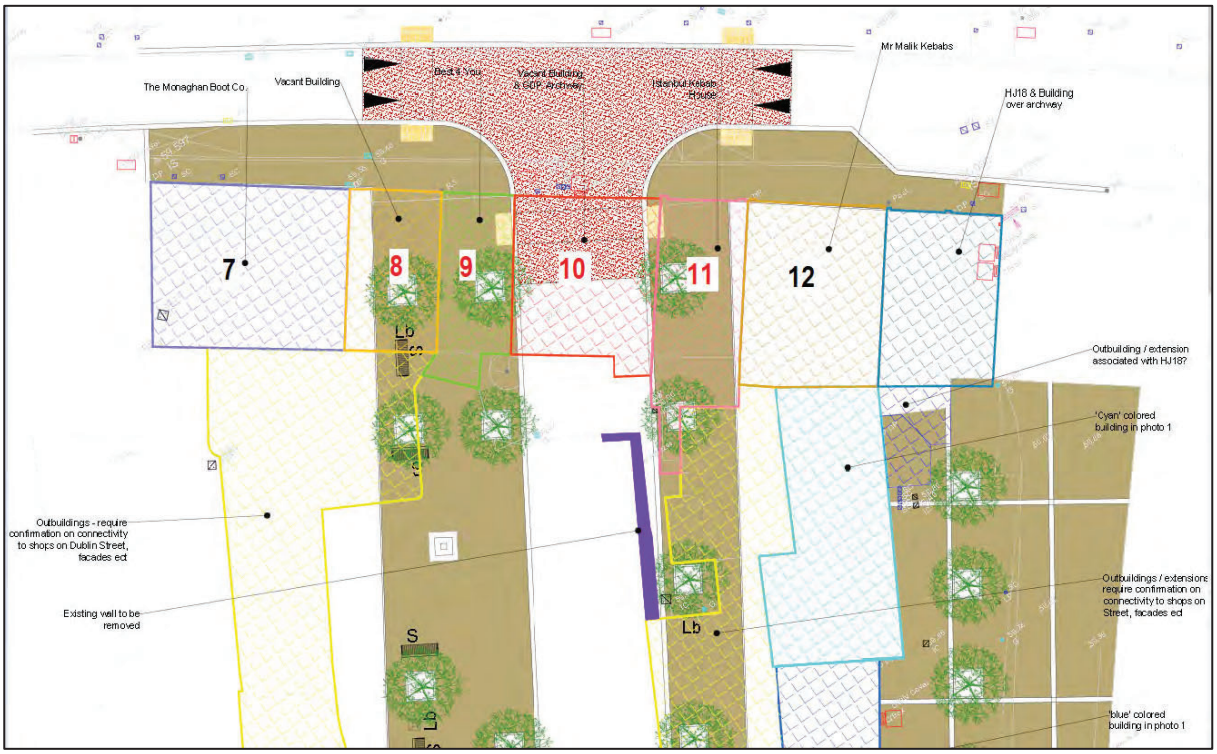
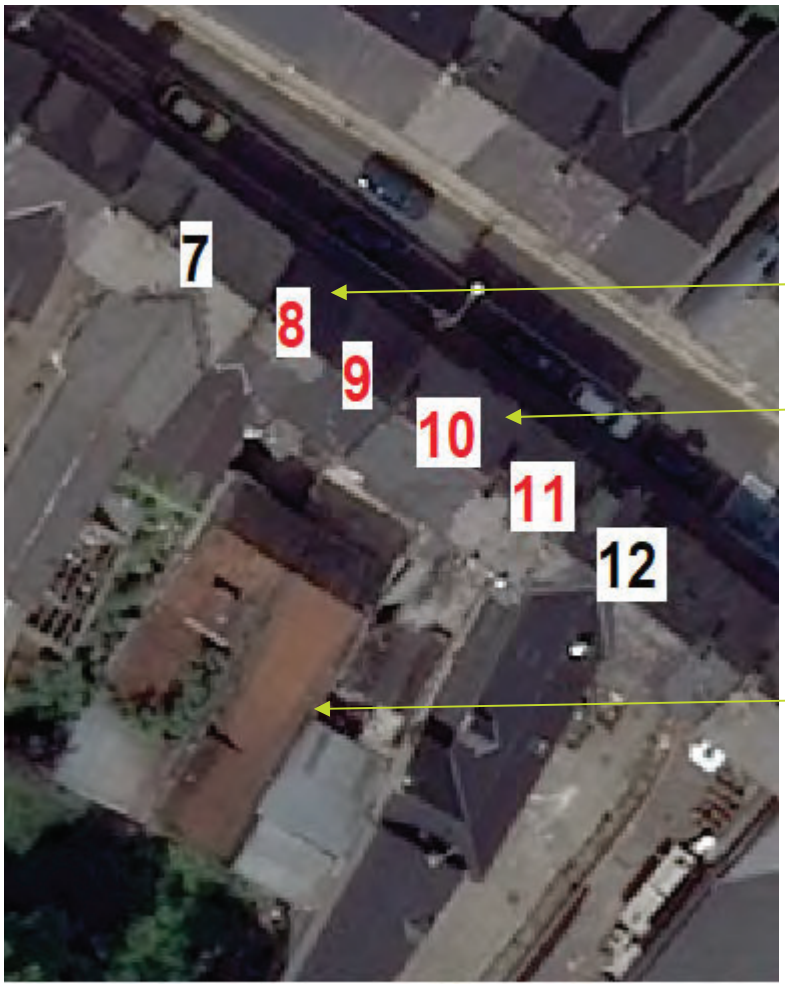


Figure 4 Building Removals

RPS carried out a non-invasive photographic inspection of the buildings. The aerial view below shows the extent of the buildings sharing party walls.



From aerial view, building 7 and 8 outbuildings/extensions.

Extension to rear of vacant building to be removed. Need to confirm makeup of party wall through further investigation.

Image from 2008

Buildings to rear of 8 / 9 /10 have since been demolished.

Now a brown field site. Overgrown.

Figure 5 Aerial View of Dublin Street

3.1.1.1 Building No. 8 – Vacant Building

Figure 6 - Area to be removed outlined in red

The vacant building is a two storey terraced building facing onto Dublin Street, the property is estimated to have been constructed in the early 19th century. The property has frontage of approximately 4m and an overall depth of approximately 10m.

The vacant building is to be demolished as part of the proposed work, leaving the Monaghan Boot Co building as the prominent façade facing the proposed works area.

Front Elevation:

- The Vacant Building (No.8) is a two storey building which shares a party wall with Monaghan Boot Co. (No.7) to the north west and Best 4 You (No.9) to the south east.
- The front elevations show the buildings share party walls.
- No evidence available as to the makeup of the building's foundations.
- Upon visual inspection, there is no evidence of the thickness and makeup of the party wall
- There is a chimney at the apex of the adjoining roof of the vacant building and Monaghan Boot Co. It is expected that this chimney is associated with the vacant building. The chimney is of brick construction with flashings well dressed. Within the roof space, the brick work of the chimney will be inspected.
- The roof construction is believed to be of traditional cut timber

Rear Elevation

- To the rear, vacant building (No.8) is has a two storey extension. Monaghan Boot Co. (No.7) has a two storey modern extension which extends to an old stone wall which is to be removed as a part of the proposed works.
- Both building extensions appear to be sharing a party wall.
- No evidence available as to the makeup of the building's foundations.
- Upon visual inspection, there is no evidence of the thickness and makeup of the party wall.
- There is a chimney at the apex of the adjoining roof. The roof construction is believed to be of traditional cut timber.

3.1.1.2 Building No. 12. Istanbul Kebab

Figure 7 - Area to be removed outlined in red

The property is a three storey terraced building facing onto Dublin Street, the property is estimated to have been constructed in the early 19th century. The property has frontage of approximately 4m and an overall depth of approximately 12m with several single storey outbuildings adding 8m in length.

Istanbul Kebabs is to be demolished as part of the proposed work, leaving the Mr. Malik Kebab building as the prominent façade facing the proposed works area.

Front elevation:

- Istanbul Kebab (No.11) is a 3 storey building which shares a party wall with Mr. Malik Kebab (No12) to the south east and Gavin Duffy place (No.10) to the north west.
- The front elevations of the building show the buildings share a party wall.
- No evidence available as to the makeup of the building's foundations.
- Upon visual inspection, there is no evidence of the thickness and makeup of the party wall.
- There is a chimney within the Istanbul kebabs building.
- The roof construction is believed to be of traditional cut timber.

Rear Elevation.

- To the rear, Istanbul Kebab (No.11) has a stairway to access the first floor accommodation. There are several single storey outbuildings which are used for storage purposes.
- The outbuildings back onto buildings constructed to the rear of Mr. Malik Kebabs (See **Figure 4** showing blue and cyan building). It appears that removal will not impact on existing construction (to be confirmed)
- No evidence available as to the makeup of the building's foundations.

3.1.2 Interventions elsewhere with red line boundary:

3.1.2.1 Sherry Bar and Carn Hackneys

Several other areas required visual structural assessment due to the interventions at the interface of the proposed works and the existing buildings. Several laneways penetrating Dublin Road to backlands associated with the proposed works have been photographed.

Figure 8 & Figure 9 Alley Between Sherry's Bar and Carn Hackneys

3.1.2.1.1 Sherry's Bar

- Sherry's Bar is a 3 storey building
- Interventions within the alleyway will be shallow in nature, pavement and associated subsurface build-up should not impact the buildings structural integrity. Photographic evidence was captured to ascertain the existing condition of the gable wall which is of a mixture of stone and brick construction. The wall is in good condition.

3.1.2.1.2 Carns Hackneys

- Carns Hackneys is a 2 storey building
- Interventions within the alleyway will be shallow in nature, pavement and associated subsurface build-up should not impact the buildings structural integrity. Photographic evidence was captured to ascertain the existing condition of the gable wall which is of stone construction. The wall is in good condition.

3.1.2.2 Dublin Street in the rare oul times and dwelling.

Figure 10 & Figure 11 Alley Between Dublin in the rare oul times and vacant building

Dublin Street in the rare oul times

- Dublin street in the rare oul times is a 3 storey building
- Interventions within the alleyway will be shallow in nature, pavement and associated subsurface build-up should not impact the buildings structural integrity. Photographic evidence was captured to ascertain the existing condition of the gable wall, construction type is unknown as the wall has been plastered. The main gable wall appears to be in good condition.
- The property extends to the rear. The rear of the building is in poor condition with vegetation growing from the windows and rainwater goods damaged leading to discolouring on the walls.

3.1.2.2.1 Dwelling

- The dwelling to the south of the alleyway is 3 storey building with a single storey extension to the rear.
- Interventions within the alleyway will be shallow in nature, pavement and associated subsurface build-up should not impact the buildings structural integrity. Photographic evidence was captured to ascertain the existing condition of the gable wall which is of a mixture of stone and brick construction. The main gable wall appears to be in good condition.

3.1.2.3 HJ18 and vacant building

Figure 12 & Figure 13 Alley under archway HJ18

3.1.2.3.1 Vacant building

- The vacant building to the south of the alley is a 4 storey building.
- Interventions within the alleyway will be shallow in nature, pavement and associated subsurface build-up should not impact the buildings structural integrity. Photographic evidence was captured to ascertain the existing condition of the ground floor section of the gable wall within the alley and at third floor level where the building rises over the neighbouring property to the north. The construction type at ground level is unknown as the wall has been plastered. The higher section is also plastered, however, the chimney is of brickwork construction. The main gable wall condition cannot be determined due to plasterwork
- The rear of the property is in poor condition, showing signs of dereliction.

3.1.2.3.2 HJ18 building

- The HJ18 building above the alley is a 3 storey building, two floors over an archway and two-storey section of the building to the north. The buildings are connected at first floor level.

- Interventions within the alleyway will be shallow in nature, pavement and associated subsurface build-up should not impact the buildings structural integrity. Photographic evidence was captured to ascertain the existing condition of the ground floor section of the gable wall within the alley and at second floor level where the building staggers in height. The construction type at ground level is unknown as the wall has been plastered. The higher section is also plastered, however, the chimney is of brickwork construction.
- The building backs onto an open alleyway and two residential buildings (cyan and blue buildings).

3.1.2.4 Council building and Cheveux Salon

Figure 14 & Figure 15 Alley between Council Offices and Cheveux hair studio

3.1.2.4.1 Cheveux Salon

- The Cheveux Salon to the south of the alley is a 2 storey building.
- Interventions within the alleyway will be shallow in nature, pavement and associated subsurface build-up should not impact the buildings structural integrity. Photographic evidence was captured to ascertain the existing condition gable wall which is a mix of stone and brick construction. The wall is in good condition.
- To the rear of the property, there is a single storey extension and a standalone casino.

3.1.2.4.2 Council building

- The council building to the north of the alley is a 2 storey building with a converted attic space accommodating a third floor.
- Interventions within the alleyway will be shallow in nature, pavement and associated subsurface build-up should not impact the buildings structural integrity. Photographic evidence was captured to ascertain the existing condition gable wall which is currently plastered. The wall appears in good condition.
- To the rear of the building is a modern extension.

3.1.2.5 Stone wall to rear of casino

Figure 16 & Figure 17 Old stone wall to the rear of casino

- The old stone wall to the rear of the casino is to be removed to accommodate the proposed works. The wall is not connected to the casino and can be removed.

4 CRACKING AND DEFECTS TO BUILDINGS

The survey of structural elevations facing the proposed works identified cracking and defects as presented in the following table and photos. Additional photographs are provided in **Appendix A**.

Table 4-1 Cracking and Defects to Buildings

Location	Details of Defects	Monitoring / propping required	Full internal survey required
Vacant building.	Horizontal cracks around door. Vertical crack over window at first floor	No.	Internal survey required to determine connection to Monaghan Boot Co. and connections to rear buildings
Rear of vacant building	Extension to rear of vacant building in poor condition – derelict. Roof bowing	No.	Internal survey may be required ot determine connection to buildings to the rear of Monaghan Boot Co and best4you building.
Best4you	Horizontal cracking at interface of Best4You and vacant building	No	Internal survey required to determine connection to vacant building and connections to rear buildings
Rear of Best4You	Settlement cracks over first floor window. Plaster spalling. Cracks over door	No	Internal survey required to determine connection to vacant building and connections to rear buildings
GDP archway	Horizontal and vertical cracking around windows	No	Internal survey may be required to determine connection to Istanbul kebab house and connections to rear buildings
HJ18 building	Cracks at windows	No	Internal survey may be required to determine connection to Mr Malik kebab house and connections to rear buildings
Cyan building to rear of Mr Malik Kebab	Cracks at windows Crack at vent to ground floor Paving dropping Overgrown vegetation. Plaster spalling	No	Internal survey may be required to determine connection to Mr Malik kebab house
Blue building to rear of cyan building.	Horizontal and vertical cracks around windows and doors	No	Internal survey may be required to determine connection to Cyan Building
Casino building	Horizontal and vertical cracks around windows and doors.	No	No internal survey required. Area faces proposed works
Rear of Monaghan Spice building	Vertical crack in wall	No	No internal survey required. Area faces proposed works
Rear of Rare oul times building	Cracks around windows	No	No
Buildings to rear of Sherry's Bar	Stone building – poor construction. Roof bowing	No.	Internal survey may be required to determine structural condition if remediation proposed
The Northern Standard	Portal frame building with infill blockwork Horizontal and vertical cracks throughout. Northern wall acts as retention for a car park.	No	Internal survey may be required to determine structural condition if removal / remediation proposed
Buildings to rear of Monaghan Boot Co.	Possible asbestos sheeting on roof.	No	Asbestos survey recommended.

Several structural defects are evident on external structures, walls, pavements etc, within the proposed works area. These are listed in the survey log in **Appendix A.**

5 FAÇADE RETENTION / STABILIATION

To avoid unplanned structural collapse during construction, the contractor must achieve structural stability as demolition progresses. As demolition proceeds in the vicinity of facades that are to be retained, methods of support such as temporary or if required, permanent structures should be installed to ensure that stability is maintained. Stabilisation works may also be an option following the demolition of adjoining buildings.

Detailed opening up works, and structural calculations informed by the works will establish whether the facades are the be temporarily/permanently retained by support structures or if stabilisation can be incorporated through the remaining structures.

5.1 Façade Retention Systems

The gable walls should be considered for restraint against outward movement. A facade retention system may be required on the gable ends of Monaghan Boot Co. and Mr. Malik Kebabs. Each of these gables can be supported by independent systems e.g. support scaffolding or raking shores to fully support the facade.

The façade is usually restrained by clamping to both of its faces, with connections to the temporary retention structure being made through openings. This is a simple and reliable method that minimises risk of damage to the façade fabric.

Three systems of façade retention are shown below, a support scaffold system, a timber raking shore system and variations of steel framed systems.

5.1.1 Support Scaffold System

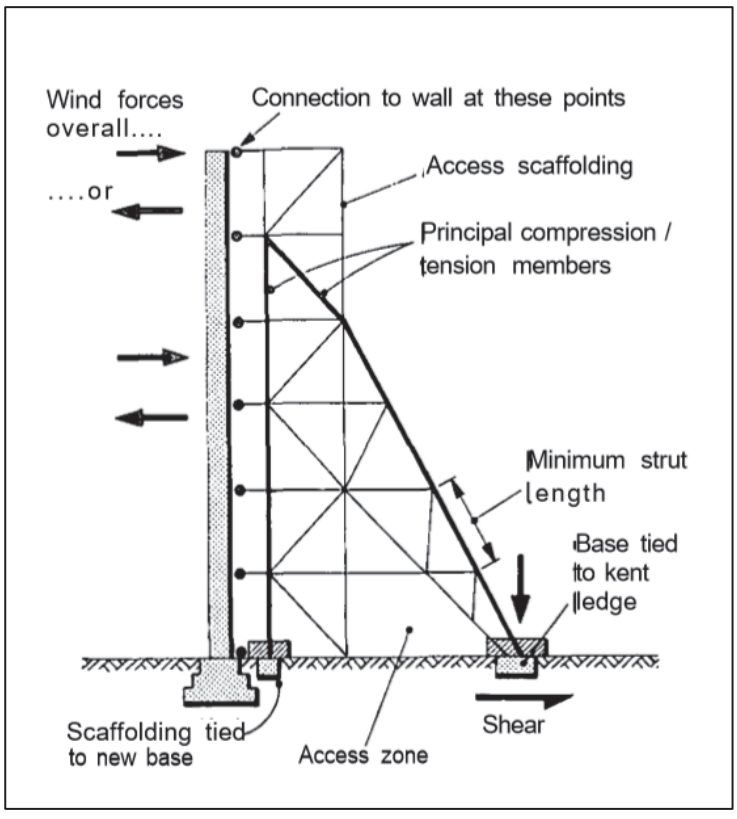


Figure 18 - Support Scaffolding System

Figure 18 shows a typical scaffolding support system used for façades of medium height.

5.1.2 Raking Shore System

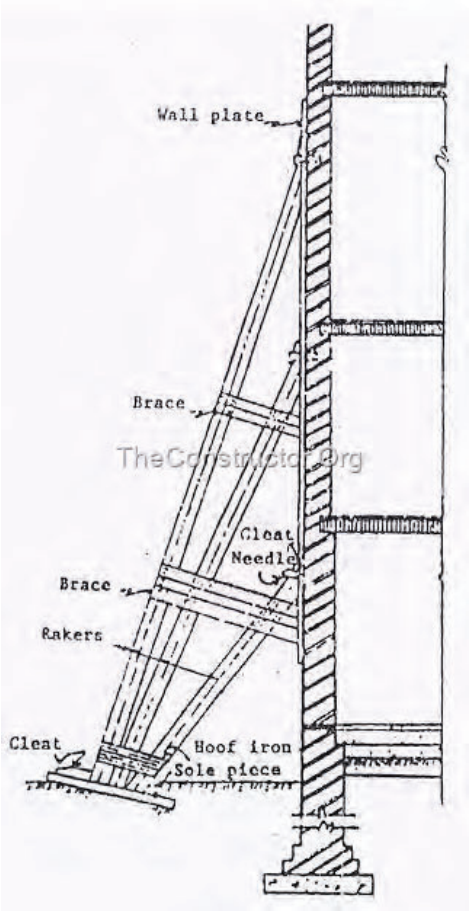


Figure 19 - Timber Raking Support Sketch

Figure 20 - Timber Raking Support Image

Figure 19 & 20 shows raking timber supports (in this instance serving as shores to a party wall exposed by demolition of the adjoining property).

Figure 21 below shows an external composite steel framed system, with portal frame that allows access at pavement level. This solution would likely require large foundations to transmit loadings to the ground and also to resist overturning due to wind loading. Figure 22 & 23 shows variations of steel framed systems with no pedestrian access.

5.1.3 Steel framed system.

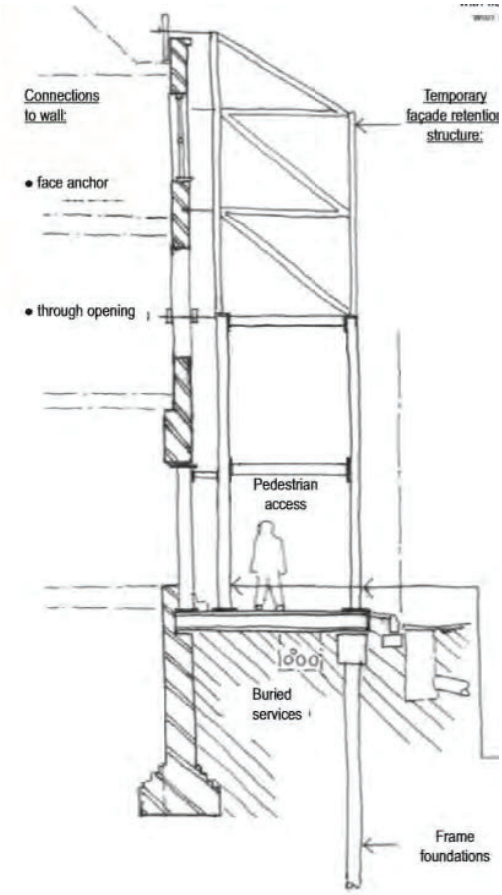


Figure 21 - External composite system, with portal frame that allows access at pavement level

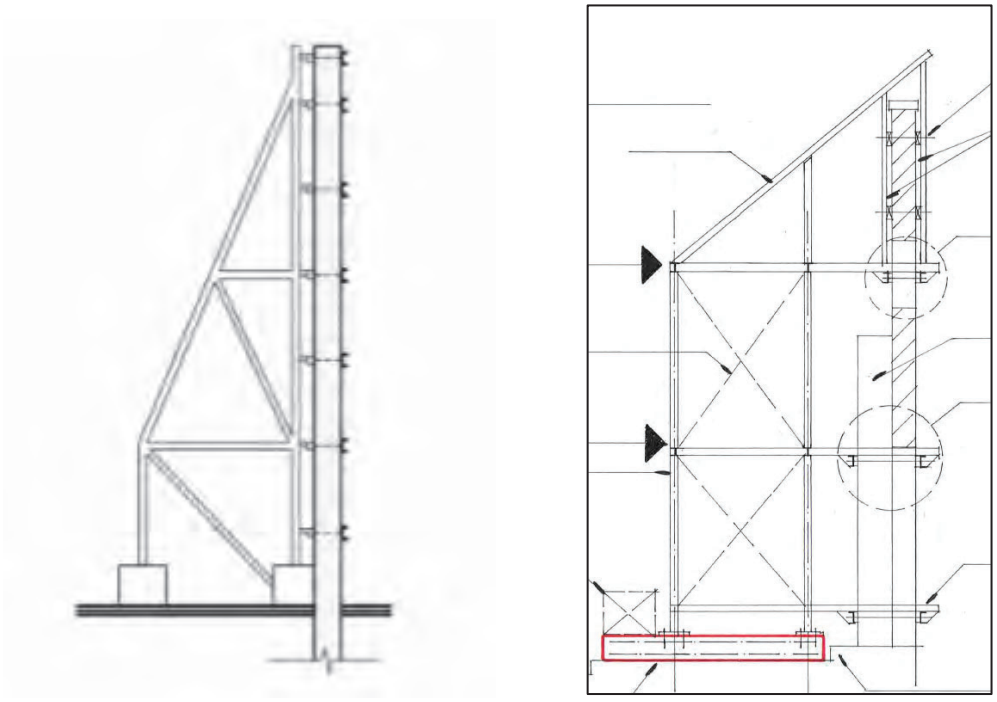


Figure 22 & Figure 23 - Variations of Steel Bracing Systems

5.2 façade Stabilisation system:

If the structure has adequate stability to support itself without the use of bracing systems following demolition, other factors should be accounted for. A reduction in lateral support of the walls due to demolitions may result in movement of the structure, in this case likely outward movement. Façade stabilisation can counter movement using proprietary systems such as the use of grouted anchors. The use of façade stabilisation systems is dependent on the internal arrangement of the existing building, ensuring adequate support members are available to resist movement.

Figure 24 - External Stone Wall

Figure 25 - Internal Stabilisation

The example above shows anchors installed through the gable wall and into the parallel joists at first floor level. Holes were drilled through the wall and the first three joists. The anchors were then inserted before being pumped full of grout, expanding them to fill all spaces in the wall and the gaps between the joists to provide a solid anchorage. Once again, and as evident above, a façade stabilisation system is dependent on the internal arrangement of the existing structure, ensuring adequate support members are available to resist movement.

5.3 Masonry Wall with piers

The existing walls may not have adequate stability to counteract lateral loading applied following the removal of existing buildings. To counteract this. an external masonry wall with masonry piers can be constructed to provide lateral support to an existing wall. The proposed single leaf wall can act independently of the existing wall to provide protection from lateral wind loads. This option can be developed further in detailed design stage. See sketched cross section of the masonry wall below:

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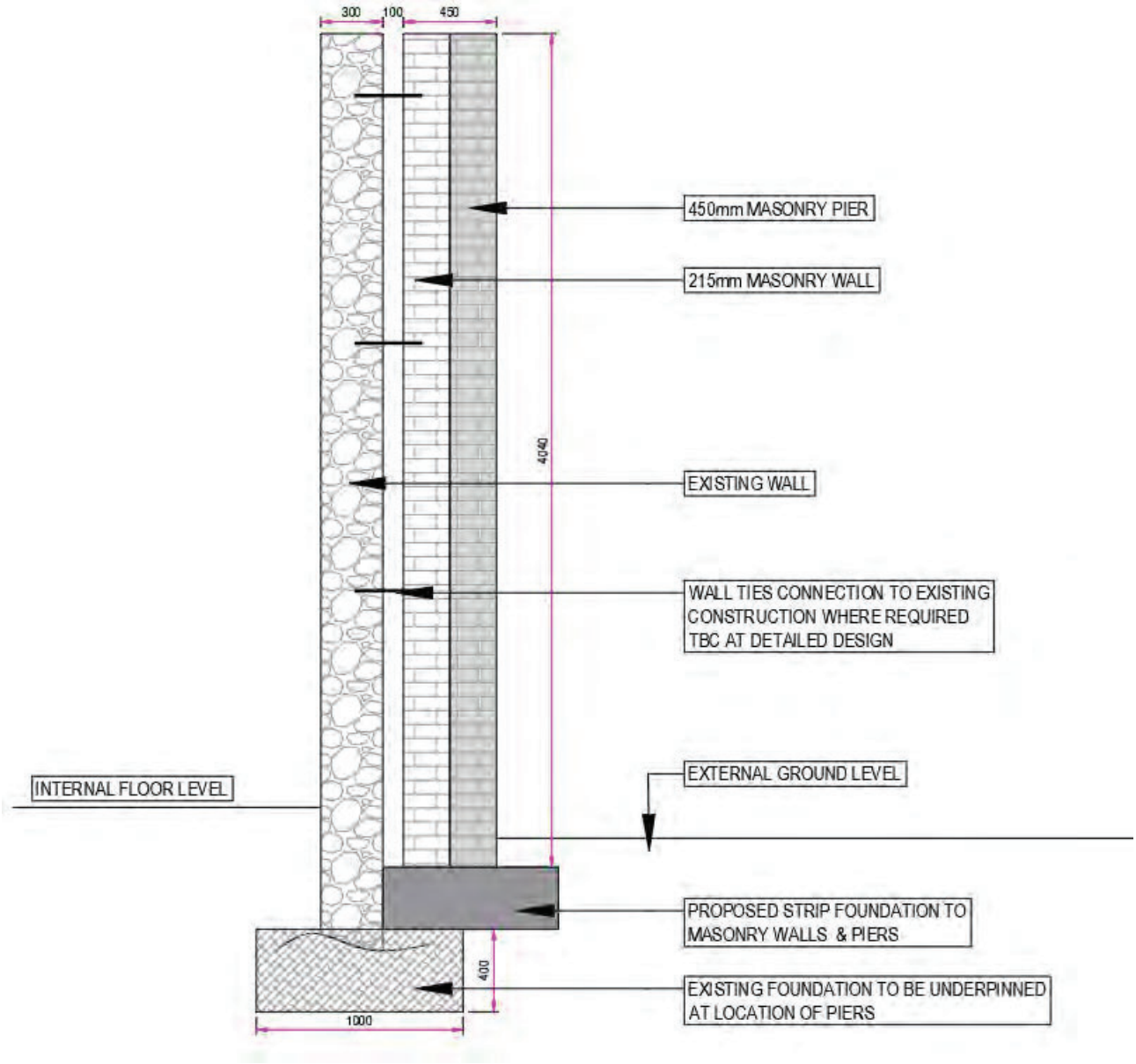


Figure 26 - Masonry Wall Gable Support

6 CONSLUSIONS AND RECOMMENDATION FOR FURTHER INVESTIGATION

Following a visual inspection and a photographic survey of the properties within the areas proposed for enhancement (within the red line boundary), the extent of the noticeable defects to buildings within these areas can be summarised as;

- Cracking around windows and doorways,
- Cracking and damage to boundary walls,
- Cracking and deterioration to render and stone / block work,
- Deterioration of windowsills.

It is recommended that should future construction works be undertaken in the vicinities of these areas that continuous monitoring of the existing defects should also be undertaken to ensure that further deterioration does not occur.

6.1 Further Investigation.

Several buildings are to be demolished as a part of the proposed works. The terraced nature of the buildings on Dublin Street requires interventions at building facades, in particular the gable ends of Mr Malik Kebabs and Monaghan Boot Co.

Prior to demolitions, it is recommended that the condition and stability of existing substructure and superstructure be ascertained, and load-bearing walls identified through further investigations. Further investigations may indicate that no propping/stabilisation is required, however this cannot be determined at this preliminary stage of the project. Therefore, detailed opening up works will be required.

Opening-up is relatively quick, informative and may not be overly disruptive, though consideration should be given to whether prior consent, such as listed building consent, need to be obtained. Care should be taken to ensure any opening up is made good following investigation. The following elements are to be considered when carrying out detailed opening up works:

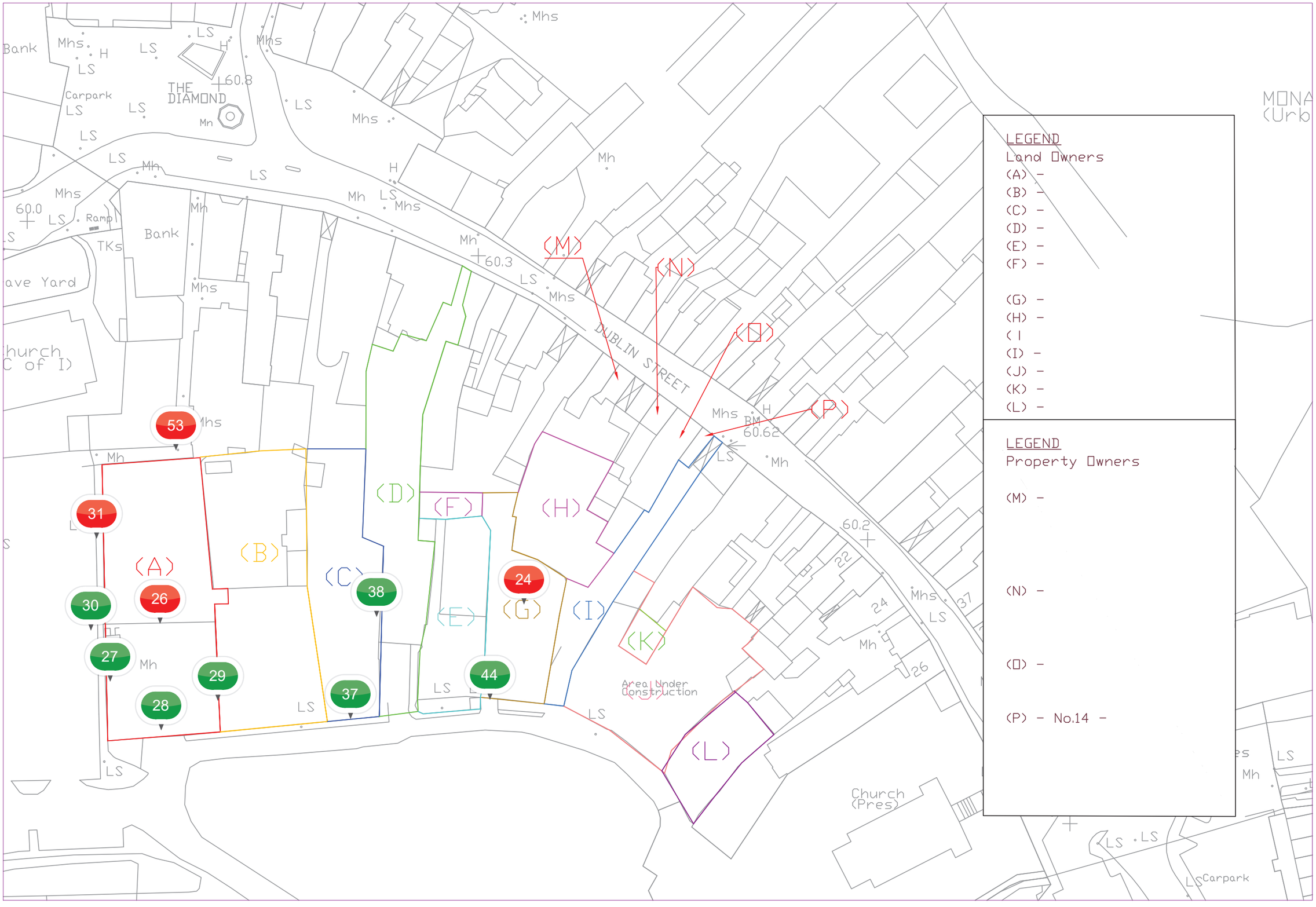
- Evidence of make-up of substructure
- Properties of internal and external superstructure
  - Internal and party walls
  - Intermediate floors
  - Roof structure
  - Chimney
- confirm construction methods - e.g. solid walls, cavity construction, or stone-filled cavities.
- The structural condition of walls which are to remain, including the walls of any adjoining property, will be established.

At design stage, the possible effect on the remaining structure following the removal of buttressing walls should be considered with particular regard to wind loading. Consideration should be given to possible local instability, including buckling failure, of the wall due to removal of parts of the structure providing bracing, such as walls, floors or roofs.

Consideration should also be given to dangerous materials such as asbestos. Asbestos may likely be encountered during the proposed works and it is recommended that a full asbestos survey be carried out on buildings that are likely to be demolished/removed

Appendix A

Dublin Street and Backlands photographic survey


Bank
Mhs
H
LS
THE DIAMOND
60.8
Carpark
Mn
Ramp
60.0
TKs
Mh
60.3
DUBLIN STREET
Mhs
RM 60.62
60.2
Area Under Construction
Church (Pres)
Carpark
(A)
(B)
(C)
(D)
(E)
(F)
(G)
(H)
(I)
(J)
(K)
(L)
(M)
(N)
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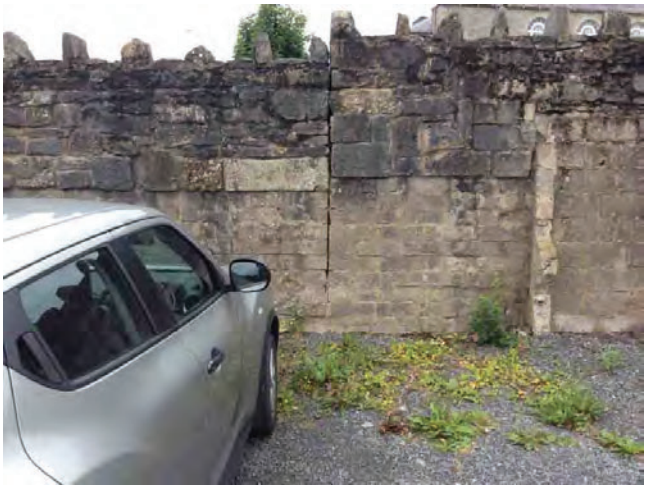
(P)
53
31
30
26
27
28
29
37
38
24
44
LEGEND
Land Owners
(A) -
(B) -
(C) -
(D) -
(E) -
(F) -
(G) -
(H) -
(I) -
(J) -
(K) -
(L) -
LEGEND
Property Owners
(M) -
(N) -
(O) -
(P) - No.14 -

General Observation

27 23/06/2020

Retaining wall between plot a and car park.

Block wall retention with stone wall over



28 23/06/2020

Wall. Plot A

29 23/06/2020

Plot A

Japanese knotweed around area

Vertical Crack in wall

30 23/06/2020

37 23/06/2020

Entrance to plot c

38 23/06/2020

Area to rear overgrown

44 23/06/2020

Gate at G

Infrastructure

53 23/06/2020

Building to rear of plot A. Horizontal cracking along face

Structural Observation

24 23/06/2020

Building to rear of Monaghan boot co.

Buildings built next to old stone wall - to be removed

26 23/06/2020

Plot A the northern standard.
Portal frame, infill blockwork.
External facade in poor condition
Several horizontal and vertical cracks at open and blockwork coursing.
Japanese knotweed around site

31 23/06/2020

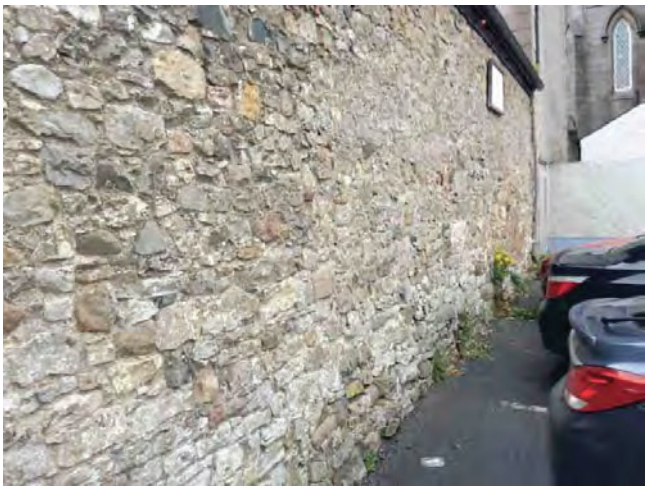
Northern standard rear wall and building to rear

Cracking at interface

General Observation

32 23/06/2020

Building to rear of church. Adjoining proposed works area



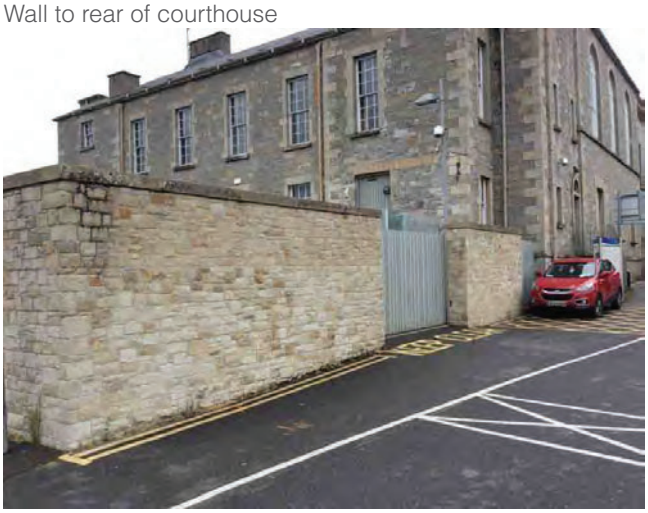
33 23/06/2020

Wall to rear of cafe

34 23/06/2020

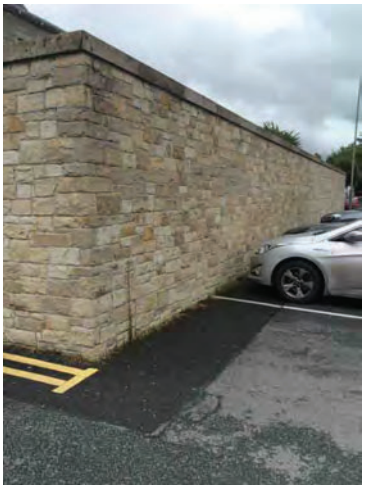
35 23/06/2020

Wall to rear of courthouse



36 23/06/2020

Wall to rear of courthouse



40 23/06/2020

Entrance to plot C

42 23/06/2020

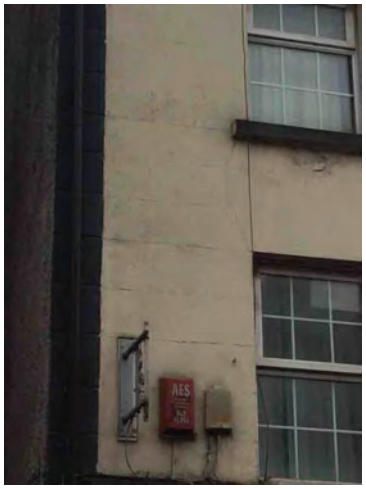
Plot J. Overgrown

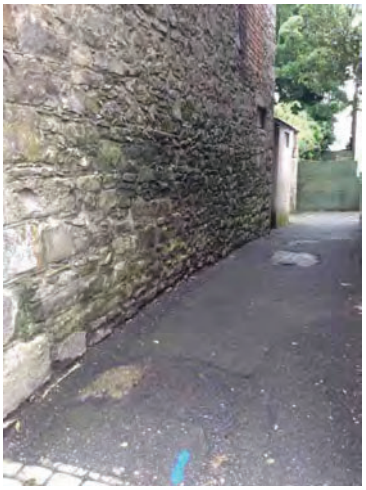
43 23/06/2020

Area overgrown to rear of peaky blinders public house

45 23/06/2020

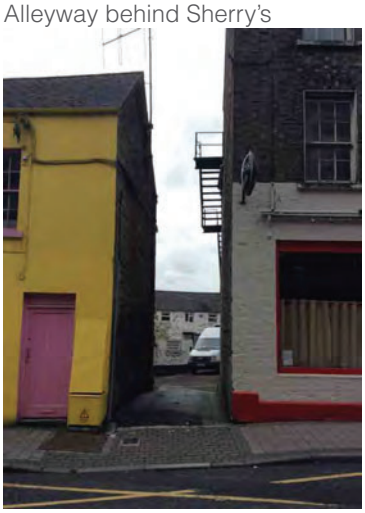
Front and rear of rare auld times building

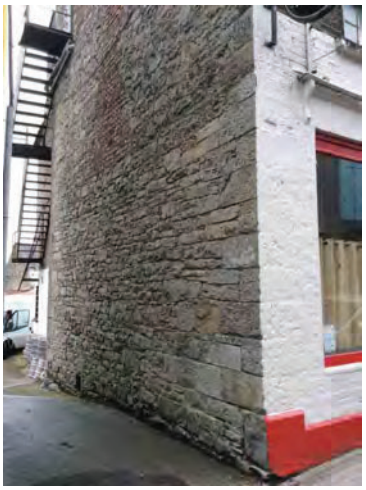


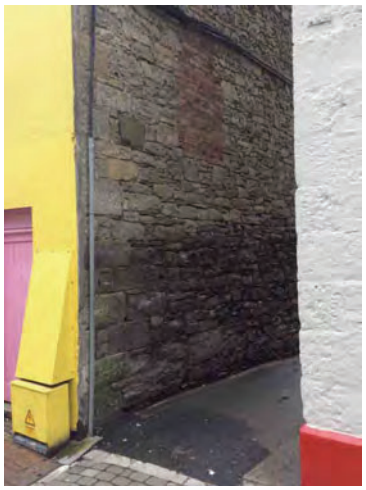


47 23/06/2020

Alleyway behind Sherry's







48 23/06/2020

Alley behind Sherry's and lavery home furnishings.

49 23/06/2020

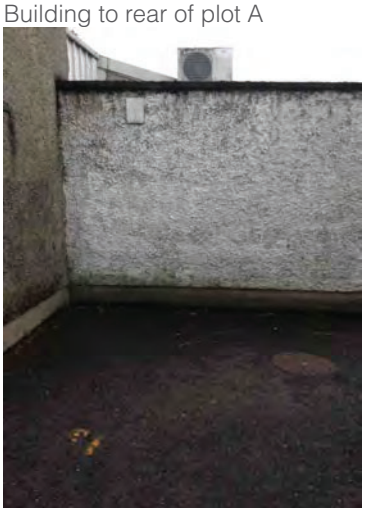
No access to rear of lavery's furniture

52 23/06/2020

Archway to rear of courthouse

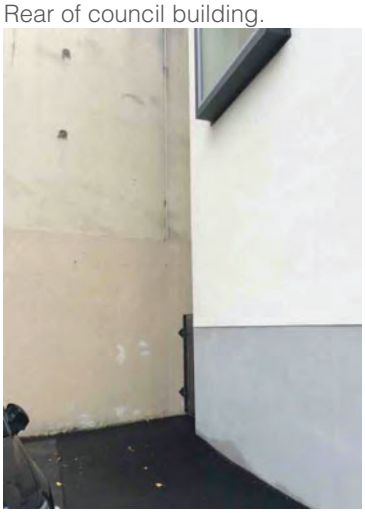
54 23/06/2020

Building to rear of plot A



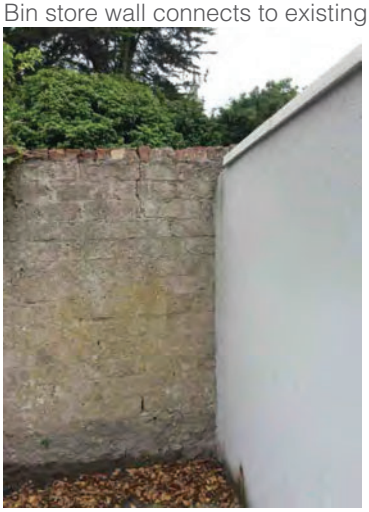
58 23/06/2020

Rear of council building.



59 23/06/2020

Bin store wall connects to existing block wall. Crack on block wall due to connection of new wall

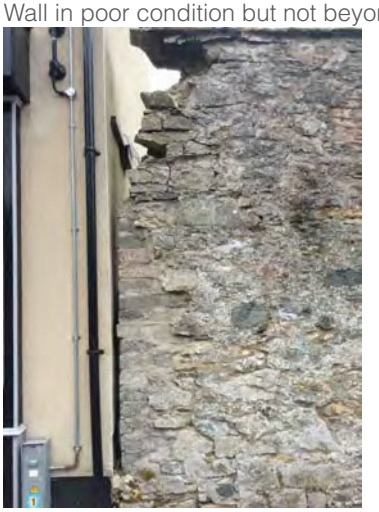


60 23/06/2020

Wall to rear of casino.

No connection to casino

Wall in poor condition but not beyond repair



61 23/06/2020

Old stone wall to rear of casino.

No connection to building

62 23/06/2020

Buildings to rear of Monaghan boot co. Building.

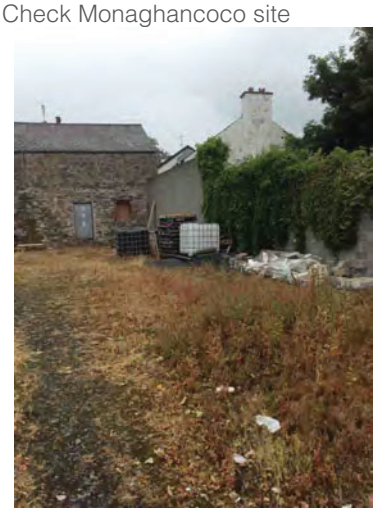
Recent extension. No info on Monaghan coco planning website. Possible asbestos sheeting on roof.

63 23/06/2020

Plot L

Rear of building. Stone building

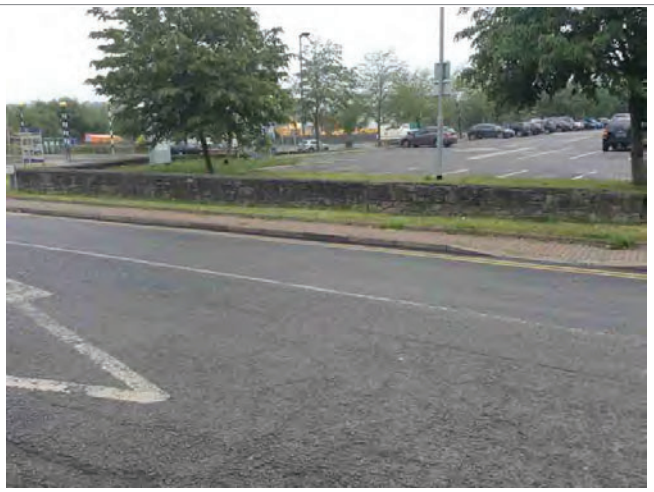
Planning permission for buildings. Check Monaghancoco site



66 23/06/2020

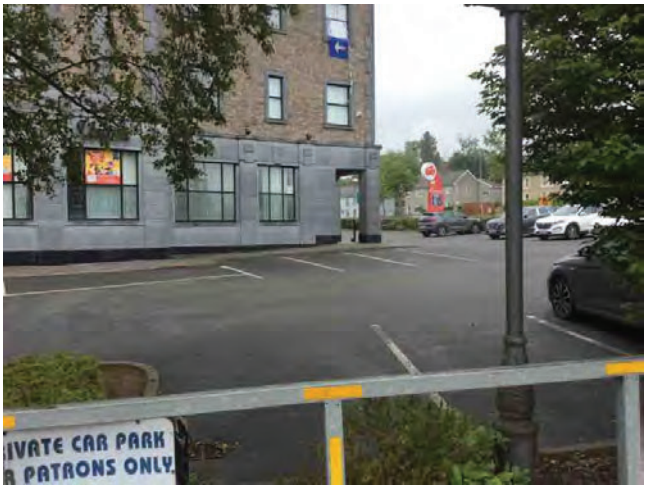
Refer to observation 13

67 23/06/2020



TESCO

PRIVATE
CARPARK
FOR PATRONS
ONLY

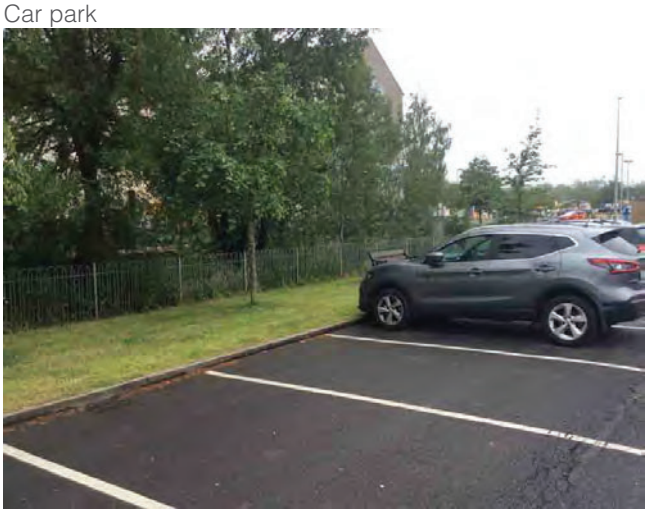

IVATE CAR PARK
R PATRONS ONLY

68 23/06/2020

Car park / rear of church.

69 23/06/2020

Car park



70 23/06/2020

Junction of plot L and church

71 23/06/2020

Car park facing fenced wall. Plot I

72 23/06/2020

Rear of shopping Centre

73 ⊕ 23/06/2020

Shopping Centre. Storage area/ loading bay fence

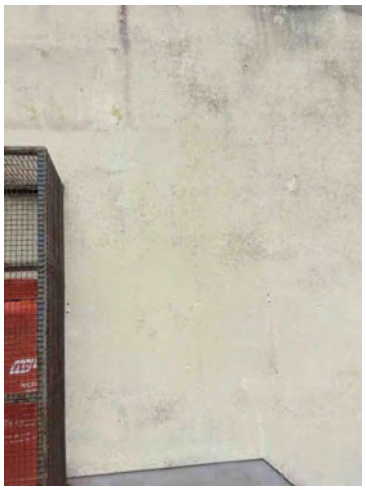
74 23/06/2020

Car park

Structural Observation

39 23/06/2020

Rear of Monaghan spice building. Vertical Crack in wall

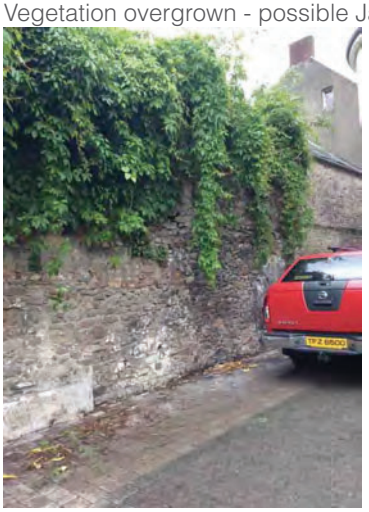


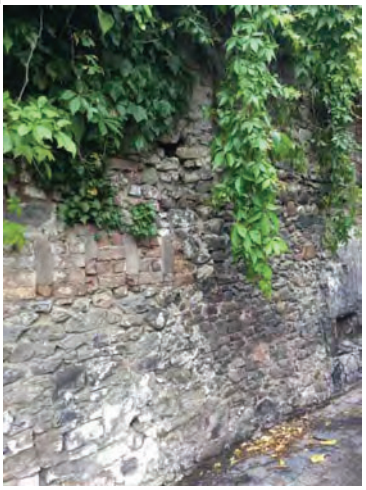
41 23/06/2020

Rear of Monaghan spice

Old stone and rubble wall, damaged but not beyond repair.

Vegetation overgrown - possible Japanese knotweed.

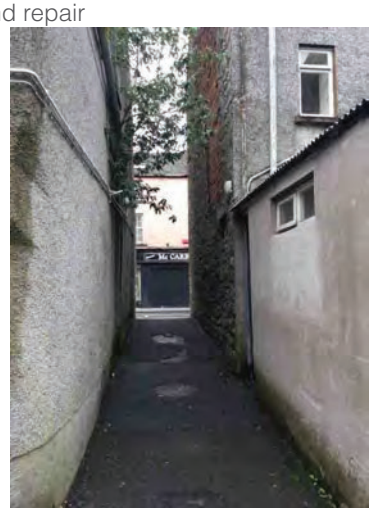


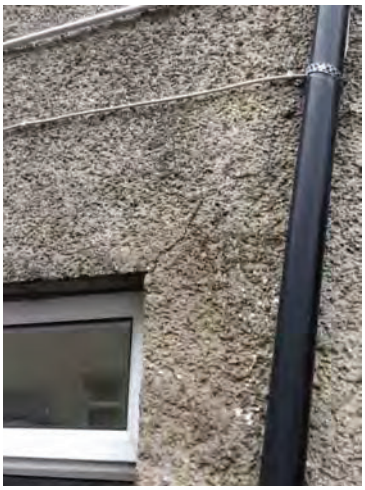


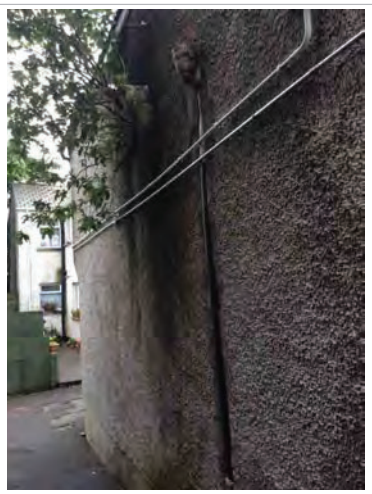
46 23/06/2020

Rear of rare old times building
Building in poor condition

Stone wall damaged but not beyond repair



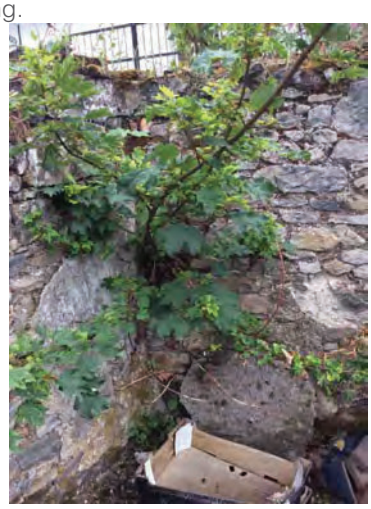




50 23/06/2020

Outbuildings to the rear of Sherry's in poor condition

Mixed construction, stone and block in places. Roof collapsing.



51 23/06/2020

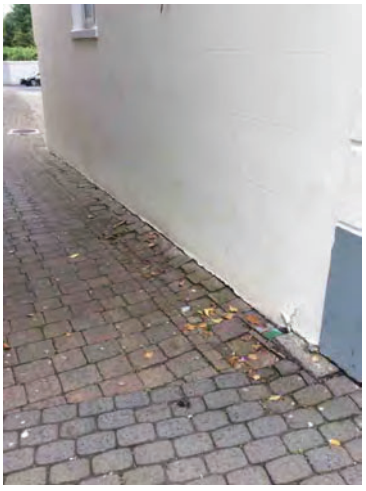
Dublin road side of plot L.

Stone building in poor condition, mixed construction.. Appears to be used for storage

55 23/06/2020

Alleyway between cheveux and council building.

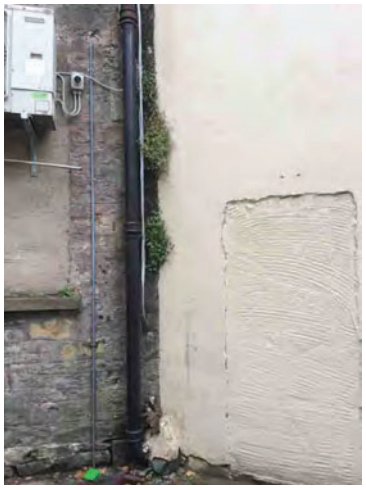
Pavement dropping in Centre.



56 23/06/2020

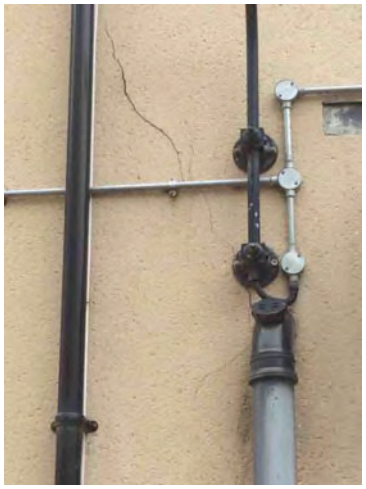
Rear of cheveux building

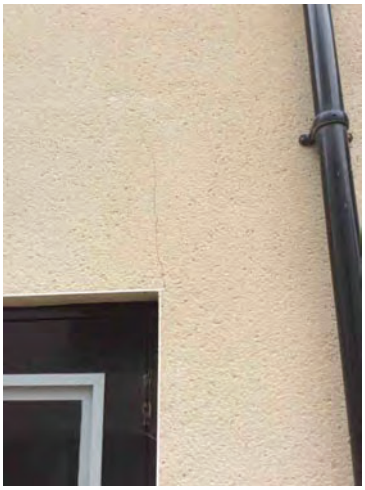
Additional height added to building following construction.



57 23/06/2020

Casino. Cracking in facade, mainly at lintel locations





CASINO
CASINO
CASINO

CASINO
CASINO

General Observation

9 23/06/2020

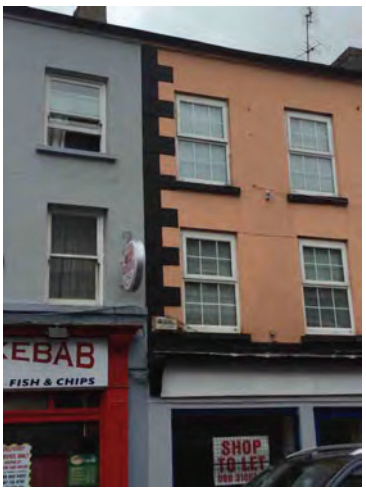
Services in alleyway

10 23/06/2020

building to rear. See planning application.
No access inside hoarding. Overgrown.
Buildings interface to proposals

19 23/06/2020

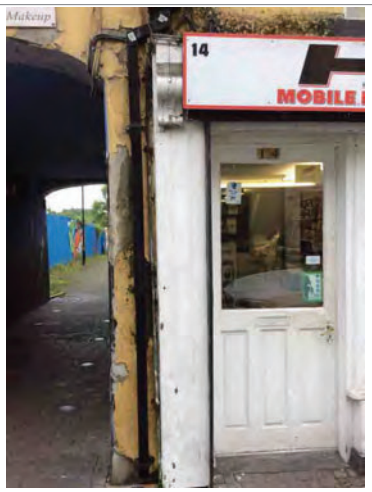
No structural observations

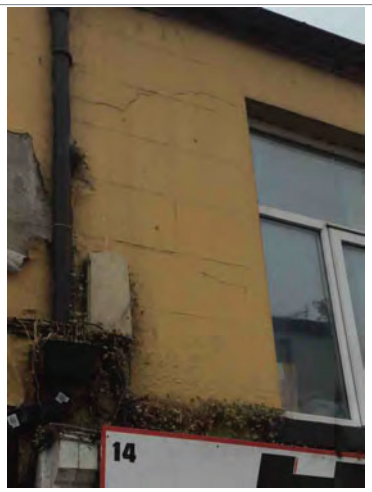


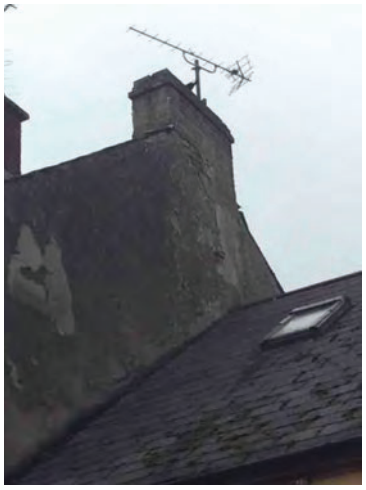
20 23/06/2020

Roof ridge drooping

21 23/06/2020







22 23/06/2020

65 23/06/2020

Structural Observation

1 23/06/2020

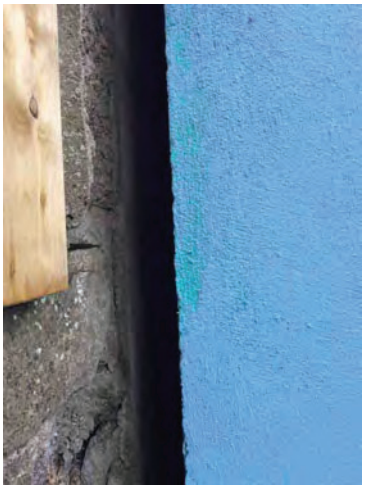
Gable wall - render damaged at corner bead

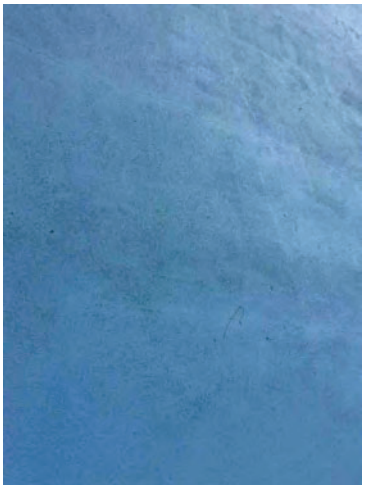
No connection to rear wall.

2 23/06/2020

Some longitudinal cracking. Plaster associated with coursing. Visual only

Building not connected to rear boundary wall



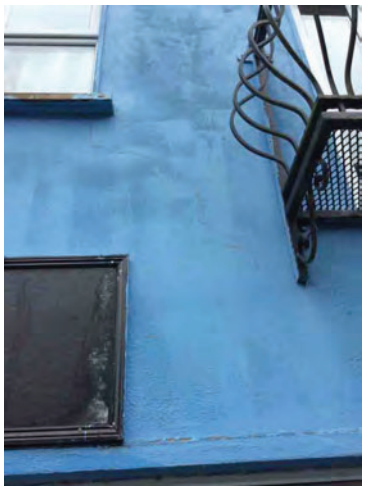


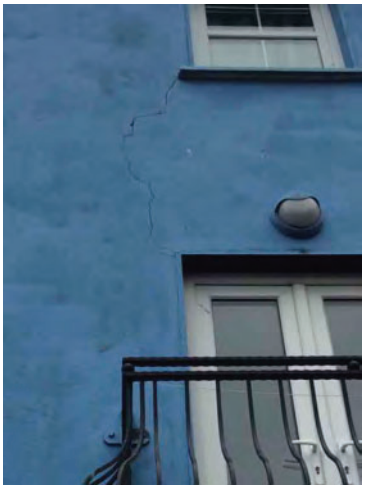
3 23/06/2020

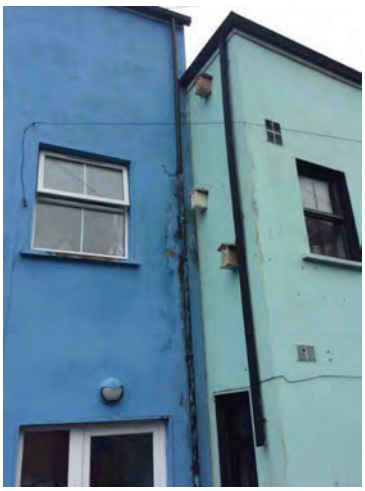
Several cracks on front elevation.

Settlement cracks. Most prominent at first and sf levels around windows. Vertical and horizontal cracking

Crack at gf at window.

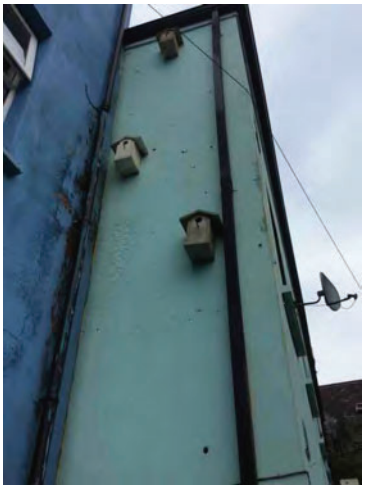


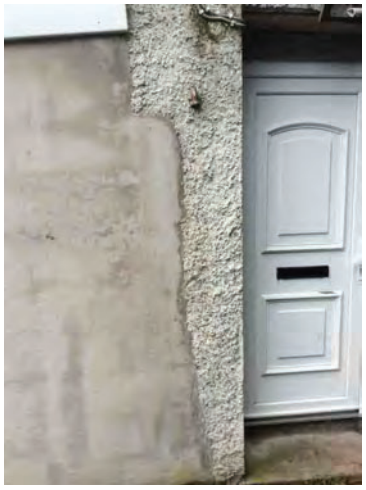


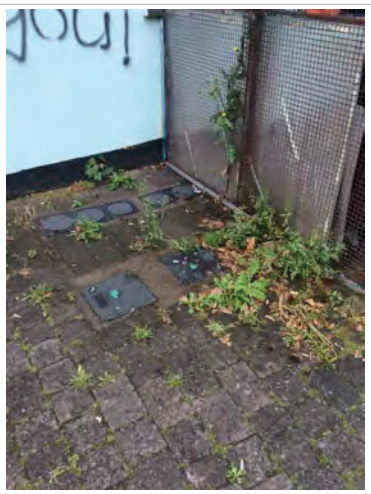


4 ⊕ 23/06/2020

Crack from vent to ground. Minor.
Render coming away at corner bead.
Paving dropping @ cyan building
Extension from cyan building, overgrown bushes
Cyan building connects to my. Malik kebabs (at rear)



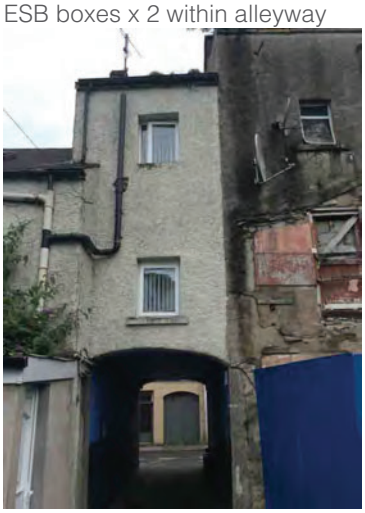


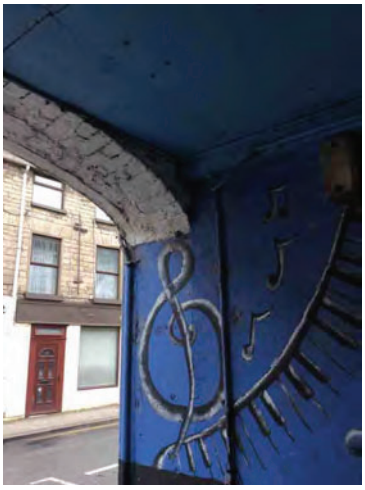


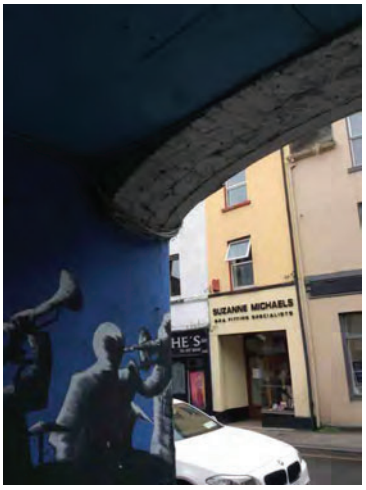
5 23/06/2020

Archway supported by buildings either side
No cracks along interface
Timber ply under arch. Could not determine make up of floor

ESB boxes x 2 within alleyway







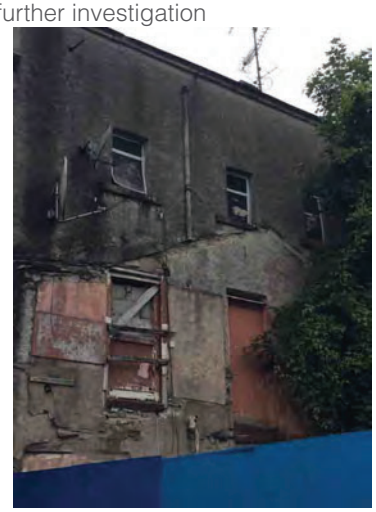
6 23/06/2020

Services within alleyway
Surface or storm (MH not opened)

ESB boxes and MH

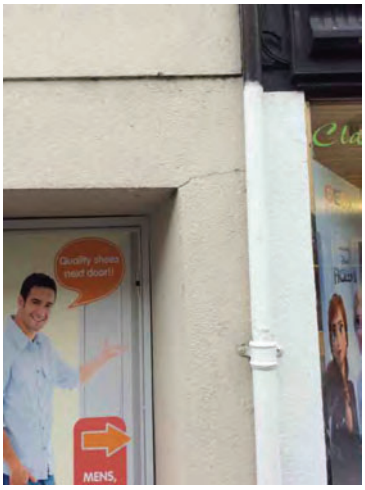
7 23/06/2020

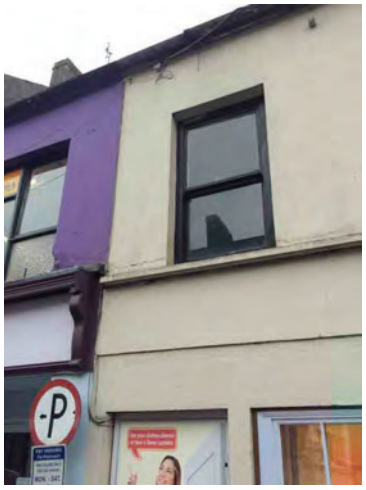
Additional floor built onto existing building.
Foundations may not be adequate
Building in poor condition. Needs further investigation



12 ⊕ 23/06/2020

Vacant building and Monaghan boot co. May share party wall
Area requires further investigation. Possible opening up works
Vacant building - horizontal crack over door.



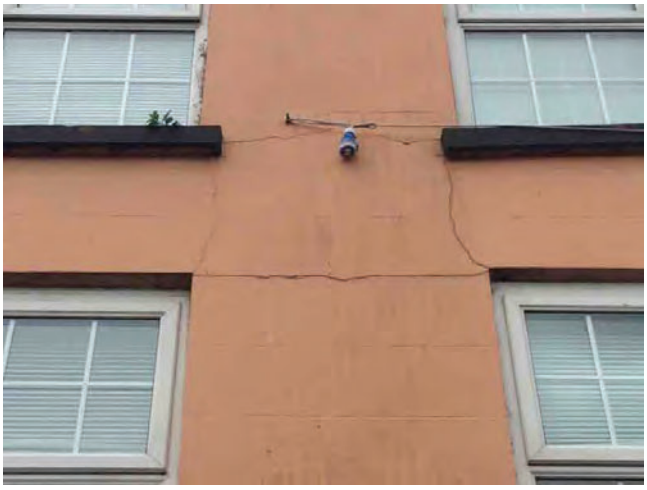


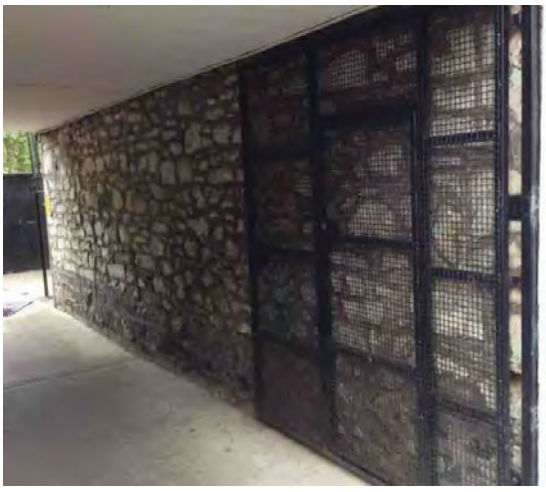
13 23/06/2020

Front elevation over arch.

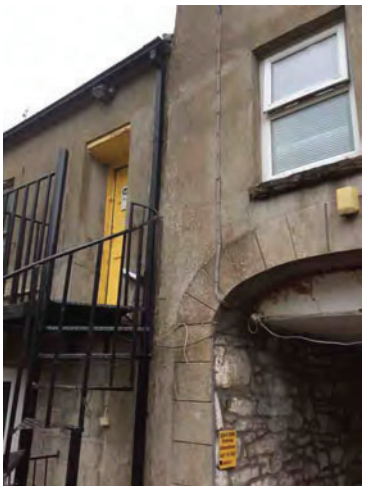
Cracking at window.

Arch in good condition. Walls in good condition. MDF sheets form roof under arch





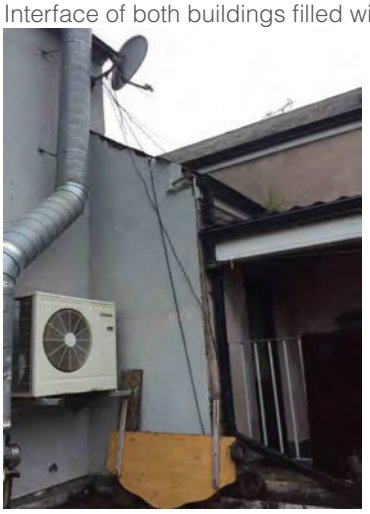
14 23/06/2020



15 23/06/2020

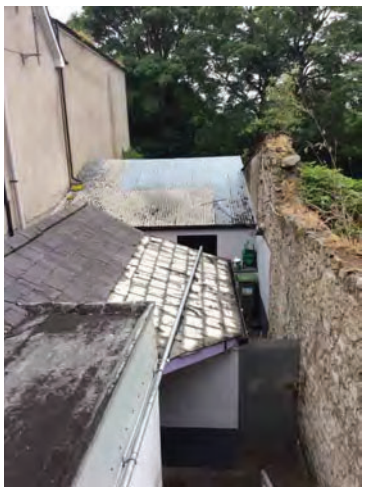
Unclear where access leads, Istanbul kebab house or vacant building

Interface of both buildings filled with mortar



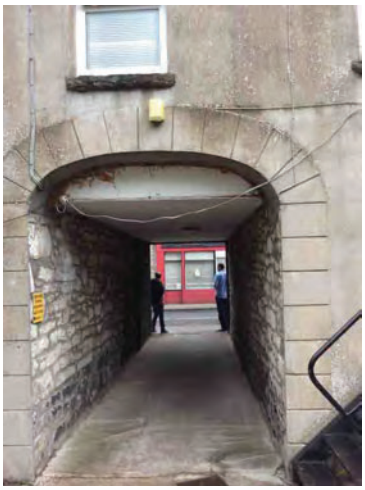
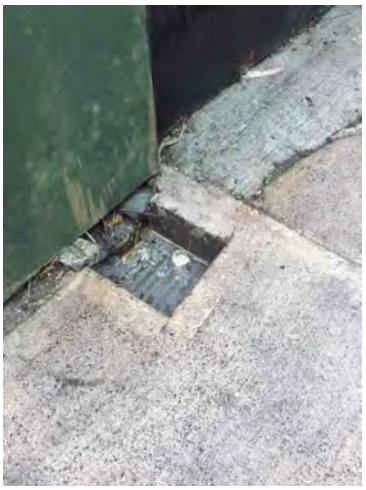
16 23/06/2020

Wall to be removed and adjoining structures demolished.



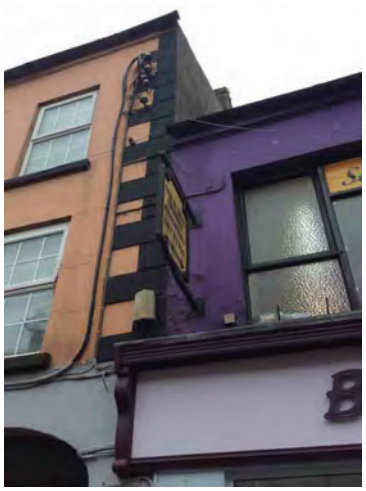
17 23/06/2020

Rear of GDP archway.
Several buildings adjoin at rear.
Further internal investigation required to determine internal arrangement. To left, rear entrance of sew n sew first floor. Rear Access to best 4 you ground floor
Vacant building and roof back onto best 4 you building

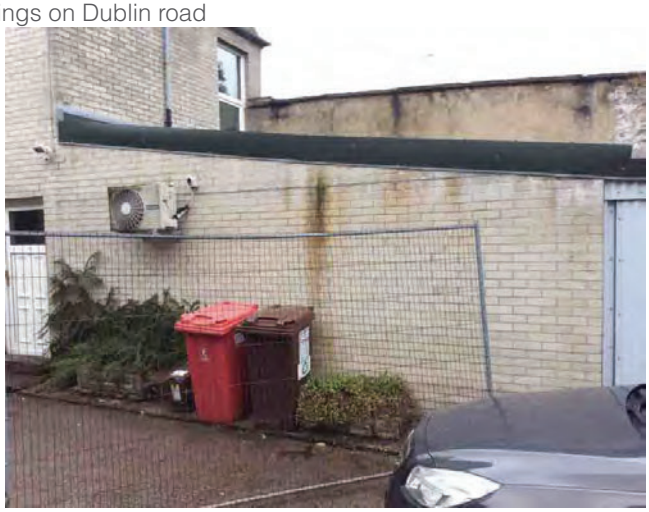
18 23/06/2020

Horizontal cracking at interface of best4you and vacant building



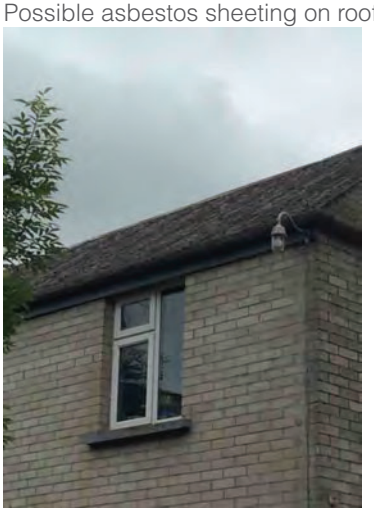
23 23/06/2020

New building. Check planning to see how it connects to buildings on Dublin road



25 23/06/2020

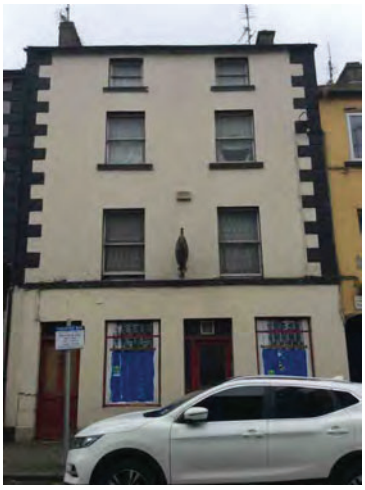
Possible asbestos sheeting on roof

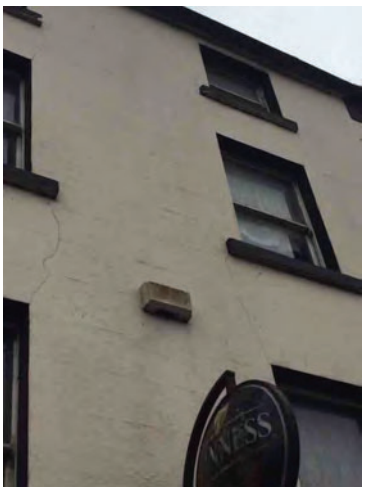


64 23/06/2020

Vertical and horizontal cracks to front elevation.

At lintel locations.





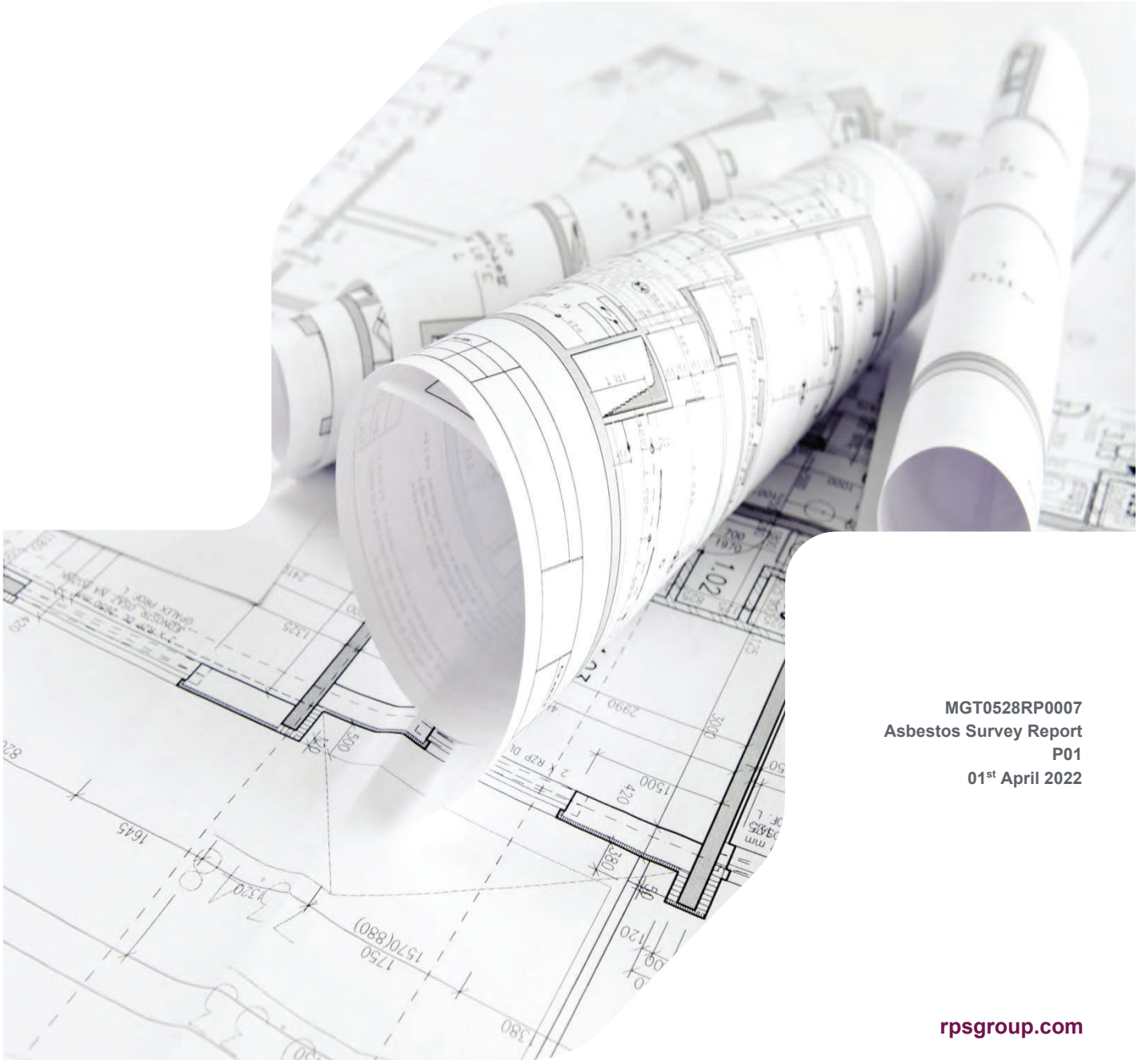
Appendix

2d

Dublin Street Asbestos Survey Report

MONAGHAN TOWN – DUBLIN STREET REGENERATION PROJECT

Demolition Asbestos Survey at No. 8 – 11 Dublin Street



MGT0528RP0007
Asbestos Survey Report
P01
01st April 2022

rpsgroup.com

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
P01	Issued for information	DK	PMGB	DK	01/04/2022

Approval for issue

Des Keane		1 April 2022

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Prepared for:

Monaghan County Council

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1 INTROUCTION

As part of the Dublin Street Regeneration Street Project, it is proposed to demolish existing unit no. 8-11 on Dublin Street. The buildings consist of thick external walls constructed with a mixture of masonry stone and brick. Timber stud partitions form internal living spaces on ground and first floor. Timber floor joists, spanning between the external masonry walls, support the first and roof space flooring. The roof spans between front and rear exterior walls and consists of natural stone slate on timber sheeting supported by timber rafters and purlins. RPS was commissioned to carry out a demolition asbestos survey of all accessible parts of the units and outbuildings.

Figure 1.1 below shows the north elevation of units from Dublin Street. Refer to the plan and various photos in **Appendix B** for the survey extent and sample locations.

Figure 1-1 Buildings to be demolished outlined red

2 METHODOLOGY

Analysis of asbestos fibres in bulk materials is carried out at SCOPUS laboratories. SCOPUS is accredited to UKAS and meets the requirements of International Standard BS EN ISO/IEC 17025 for the analysis of asbestos fibres in bulk materials.

The survey was conducted in line with the UK Health and Safety Authority HSG264 guidelines for refurbishment and demolition surveys, and involved locating and describing, as far as reasonably practicable any ACMs in the area surveyed.

The surveyor conducted a systematic inspection of the nominated areas. Where access for sampling purposes was not possible, a visual assessment has been made if possible. For similar / repetitive elements, a representative bulk sampling protocol has been adopted following visual examination and assessment.

Bulk samples are obtained using fibre suppressant techniques in order to minimise respirable fibre release. The bulk samples are returned to the laboratory for analysis using plane and polarised light microscopy and dispersion staining techniques as defined in UK HSE Guidelines.

Results from the survey are outlined in **Section 3**.

Throughout the report the following terms and abbreviations may be used:

ACM	Asbestos containing material.
NAD	No asbestos detected.
MMMF	This describes any machine made mineral fibre, fibreglass, Rockwool, ceramic fibres and other such material.
AIB	Asbestos Insulating Board.
A/C	Asbestos Cement
Chrysotile	Commonly known as white asbestos.
Amosite	Commonly known as brown asbestos.
Crocidolite	Commonly known as blue asbestos.
Amphibole	Generic name for all asbestos types, excluding Chrysotile.
BOHS	British Occupational Hygiene Society

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3 ASBESTOS SURVEY FINDINGS

The buildings surveyed and location of materials sampled are shown below in **Figure 3.1**. Photos of all areas are provided in **Appendix B**.

The Certificate of Analysis for the samples taken on site is included in **Appendix A**.

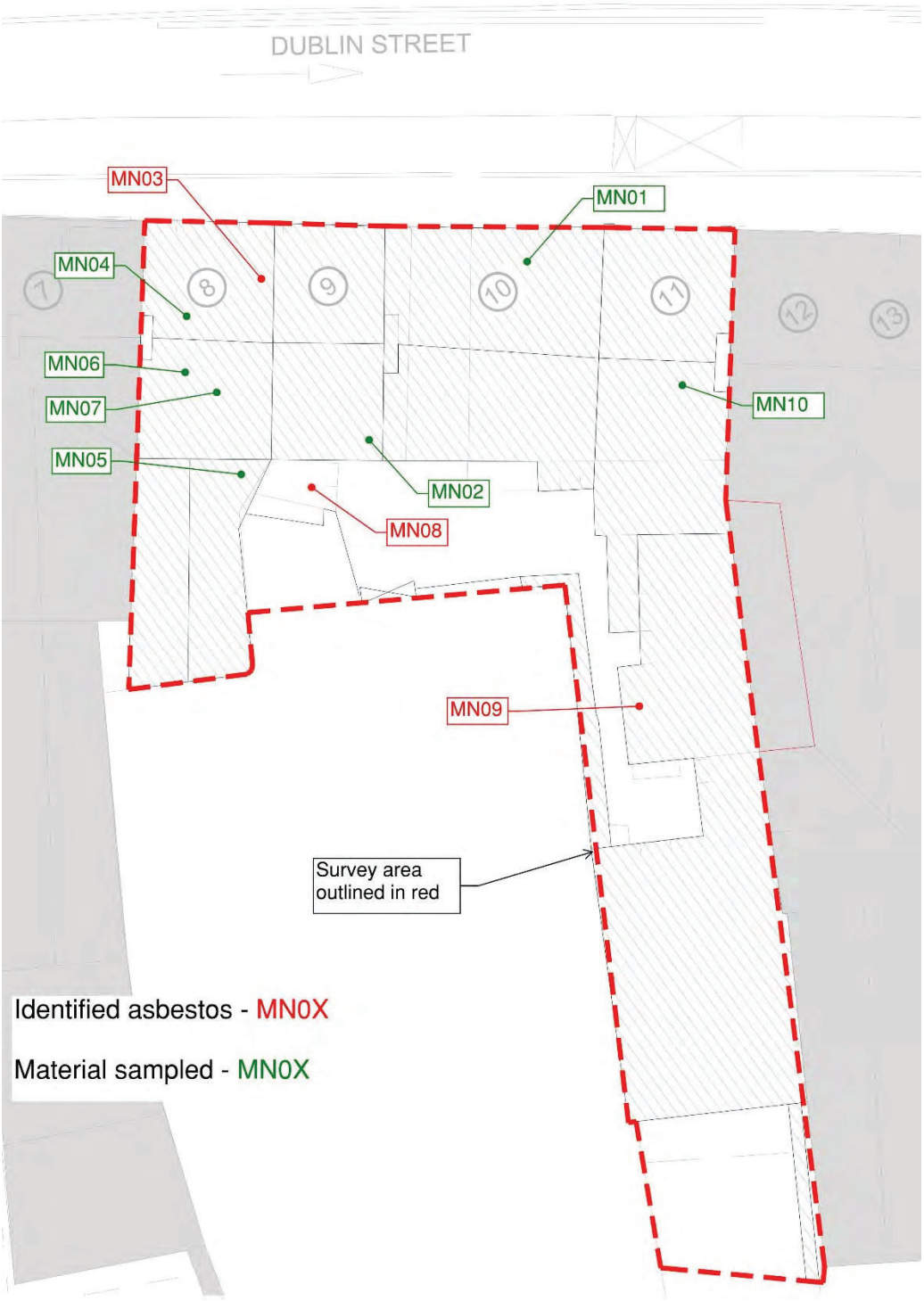


Figure 3-1 Outline of survey area and sample locations

Section 3.1 below provides information on the buildings surveyed and **Section 3.2** provides information on ACMs found on site.

3.1 Description of buildings

Below is a summary of the findings recorded on site.

3.1.1 Unit no. 8

Unit no. 8 is currently in derelict condition. Access was available to the ground, first and roof space within the unit however this access was only possible to the front half of the property. The extension to the rear was inaccessible at ground floor and unsafe to access at first floor.

The original structure consists of thick external walls constructed with a mixture of masonry stone and brick. Timber stud partitions form internal living spaces on ground and first floor. Timber floor joists, spanning between the external masonry walls, support the first and roof space flooring. The roof spans between front and rear exterior walls and consists of natural stone slate on timber sheeting supported by timber rafters and purlins.

From anecdotal evidence, it is understood the original no. 8 unit was constructed first and then no. 7 was constructed adjacent. An extension to the rear of no. 8 was constructed but it is not known if this was constructed before or after the adjacent section of no. 7. Regardless of which came first, the existing party wall must be retained.

The survey to the party wall was conducted from within no. 8. Access within no. 7 is only envisaged at roof level during the proposed works. From within the roof space of no. 8, the roof build up to no. 7 appears to be consistent with no. 8. The areas affected by the proposed works, the party wall and roof overlap, could be effectively assessed from with no. 8.

From an asbestos surveying perspective, five samples were taken on site and one was found to contain asbestos. See **Section 3.2** below for more details. The asbestos was found in the following areas:

- Thermoplastic tiles and adhesive

3.1.2 Unit no. 9

This unit is currently operating as a clothes shop on ground floor and a sewing business on first floor. Access was available to the ground, first and roof space with the unit.

The structure composition is consistent with no. 8. The structure consists of thick external walls constructed with a mixture of masonry stone and brick. Timber stud partitions form internal living spaces on ground and first floor. Timber floor joists, spanning between the external masonry walls, support the first and roof space flooring. The roof spans between front and rear exterior walls and consists of natural stone slate on timber sheeting supported by timber rafters and purlins.

From an asbestos surveying perspective, two samples were taken on site and both were found to contain asbestos. See **Section 3.2** below for more details. The asbestos was found in the following areas:

- Sink pad below the sink on the first floor.
- Roof tiles to the rear single storey and on the main roof.

3.1.3 Unit no. 10

This unit is currently vacant at ground floor level. The apartment units at first and second floor levels are currently occupied. Access was available to the ground, first, second and roof space within the building.

The structure composition is consistent with no. 8 and 9. The structure consists of thick external walls constructed with a mixture of masonry stone and brick. Timber stud partitions form internal living spaces on ground and first floor. Timber floor joists, spanning between the external masonry walls, support the first and roof space flooring. The roof spans between front and rear exterior walls and consists of natural stone slate on timber sheeting supported by timber rafters and purlins.

From an asbestos surveying perspective, one sample was taken and no ACM was found.

3.1.4 Unit no. 11

Unit No. 11 & 12 were assessed together as they share a party wall that will be retained during the demolition works.

The ground floor of unit of no. 11 is a takeaway kebab restaurant. Due to the internal finishes on the walls, it was not possible to review the structure. The first and second floor contain an apartment. From a review of this apartment and the roof space, the structure was found to be consistent with no. 8, 9 & 10. There are extensions to the rear of this property. It is important to note that these appear to have been constructed after the adjoining property to the rear of no. 12. These extensions can therefore be demolished without affecting the structural integrity of building to the rear of no. 12/13.

From an asbestos surveying perspective, two samples were taken on site and both were found to contain asbestos. See **Section 3.2** below for more details. The asbestos was found in the following areas:

- Roof tiles to the rear single storey.

3.2 Details of sampled materials

3.2.1 Sample Ref. MN01

Location of Material	Building Unit No. 10	**Laboratory Ref. / Site Ref.**	S001 MN01
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Adhesive glue on ground floor lino		
Action	No action required.		
Photo			

3.2.2 Sample Ref. MN02

Location of Material	Building Unit No. 9	**Laboratory Ref. / Site Ref.**	S002 MN02
Similar material	N/A		
Asbestos Identified	Yes - chrysotile		
Product Type	Bituminous sink pad on first floor		
Action	This material must be removed prior to works causing disturbance.		
Photo			

3.2.3 Sample Ref. MN03

Location of Material	Building Unit No. 8	**Laboratory Ref. / Site Ref.**	S003 MN03
Similar material	All areas where thermoplastic tiles and adhesive are found in the building		
Asbestos Identified	Yes – chrysotile in the tile and adhesive		
Product Type	Thermoplastic floor tiles and adhesive in hallway		
Action	These materials must be removed prior to works causing disturbance.		
Photo			

3.2.4 Sample Ref. MN04

Location of Material	Building Unit No. 8	**Laboratory Ref. / Site Ref.**	S004 MN04
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Adhesive glue on ground floor lino		
Action	No action required.		
Photo			

3.2.5 Sample Ref. MN05

Location of Material	Building Unit No. 8	**Laboratory Ref. / Site Ref.**	S005 MN05
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Roof slate and felt		
Action	No action required.		
Photo			

3.2.6 Sample Ref. MN06

Location of Material	Building Unit No. 8	**Laboratory Ref. / Site Ref.**	S006 MN06
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Roof ceiling build up		
Action	No action required.		
Photo			

3.2.7 Sample Ref. MN07

Location of Material	Building Unit No. 8	**Laboratory Ref. / Site Ref.**	S007 MN07
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	First floor ceiling – textured coating		
Action	No action required.		
Photo			

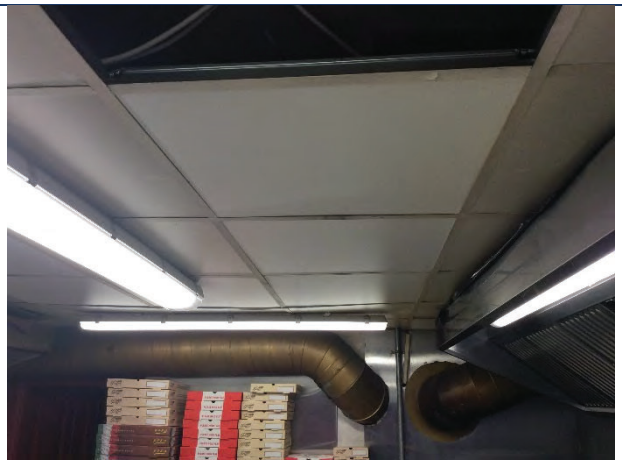
3.2.8 Sample Ref. MN08

Location of Material	Building Unit No. 9	**Laboratory Ref. / Site Ref.**	S008 MN08
Similar material	Similar tiles are visible on the main roofs of no. 8 and no. 9. Tendering asbestos removal contractors are expected to visit the site to assess the quantity of tiles on the roofs to be removed.		
Asbestos Identified	Yes – chrysotile		
Product Type	Roof tiles to rear single storey extension - cement		
Action	These materials must be removed prior to works causing disturbance.		
Photo			

3.2.9 Sample Ref. MN09

Location of Material	Building Unit No. 11	**Laboratory Ref. / Site Ref.**	S009 MN09
Similar material	N/A		
Asbestos Identified	Yes – chrysotile		
Product Type	Roof tile to rear single storey extension - cement		
Action	These materials must be removed prior to works causing disturbance.		
Photo			

3.2.10 Sample Ref. MN10

Location of Material	Building Unit No. 11	**Laboratory Ref. / Site Ref.**	S010 MN10
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Ceiling tile in ground floor shop unit – insulating board		
Action	No action required.		
Photo			

4 CONCLUSION

On Monday 24th May 2021, RPS carried out a demolition asbestos survey, on behalf of Monaghan County Council, at No. 8, 9, 10 & 11, Dublin Street, Monaghan. The objective of the survey was to locate and describe, as far as reasonably practicable, accessible asbestos containing materials (ACMs) in the buildings to be demolished.

After carrying out a demolition asbestos survey of the accessible parts of the buildings, RPS took ten samples. The samples were sent to a SCOPUS laboratory for testing and four samples were found to contain asbestos.

An outline of the buildings to be demolished is provided in **Figure 3.1** showing the survey area and the location of samples taken on site. Asbestos containing materials discovered are as follows:

- Laboratory ref. S002; Site ref. MN02 – Bituminous sink pad on first floor.
- Laboratory ref. S003; Site ref. MN03 – Thermoplastic floor tiles and adhesive in hallway.
- Laboratory ref. S008; Site ref. MN08 – Roof tile to rear single storey extension.
- Laboratory ref. S009; Site ref. MN09 – Roof tile to rear single storey extension.

The survey was conducted in line with the UK Health and Safety Authority HSG264 guidelines for refurbishment and demolition surveys, and involved locating and describing, as far as reasonably practicable any ACMs in the area surveyed. Every effort has been taken to identify asbestos containing materials within the buildings surveyed. It should be noted that additional asbestos containing materials may be concealed or buried on site. RPS do not accept responsibility for any omissions or areas of the building not addressed in the report.

If any suspect materials are observed by the contractor as part of any future works, the Contractor/ Project Manager should cease works immediately and contact the Client.

Appendix A

Certificate of Analysis

SCOPUS
Asbestos Compliance

UKAS TESTING
10483

Suite 5, Milner House, Milner Way, Ossett, West Yorkshire WF5 9JE
Company Registration No: 11250668 | VAT No: 293902284

Certificate of Bulk Analysis

Customer: RPS Group **Customer Address:** London HSED Asbestos, 20 Farringdon Street, London, EC4A 4AB **Site Address:** Dublin Street, Monaghan Town, Co. Monaghan **Client Reference:** FYAB80755	**Project Number:** P-14008 **Samples Received On:** 15/06/2021 **Samples Taken By:** Client **No of Samples:** 10 **Date of Analysis:** 18/06/2021

Sample No.	Client Sample No.	Sample Location	Sample Details	Asbestos Type(s) Present	Analysts Name
S001	MN01	Building Ref No.10	Adhesive glue below ground floor lino - Bituminous Product	NAD	Sai Annapureddy
S002	MN02	Building Ref No.9	Sink pad on first floor - Bituminous Product	Chrysotile	Sai Annapureddy
S003	MN03	Building Ref No.8	Floor in Hallway - Thermoplastic Tiles and Adhesive	Chrysotile in Tile & Adhesive	Sai Annapureddy
S004	MN04	Building Ref No.8	Adhesive glue below lino throughout ground floor - Bituminous Product	NAD	Sai Annapureddy
S005	MN05	Building Ref No.8	Roof slate and felt - Bituminous Product	NAD	Sai Annapureddy
S006	MN06	Building Ref No.8	Roof ceiling build up - Paper Product	NAD	Sai Annapureddy
S007	MN07	Building Ref No.8	First floor ceiling - Textured Coating	NAD	Sai Annapureddy
S008	MN08	Building Ref No.9	Roof tile to rear single storey section - Cement	Chrysotile	Sai Annapureddy
S009	MN09	Building Ref No.11	Roof tile to rear single storey - Cement	Chrysotile	Sai Annapureddy
S010	MN10	Building Ref No.11	Ceiling tile in ground floor shop unit - Insulating Board	NAD	Sai Annapureddy

Key: NAD = No Asbestos Detected

Authorised Signatory:	A. S. V. Krishna Reddy	Name/Position:	Sai Annapureddy/Quality Manager	Date of Issue:	18/06/2021

Suite 5, Milner House, Milner Way, Ossett, West Yorkshire WF5 9JE
Company Registration No: 11250668 | VAT No: 293902284

Statement of Certification

This is to certify that analysis has been carried out to determine the presence of asbestos fibres using Polarised Light Microscopy and Dispersion Staining Techniques. The method used is UKAS accredited and in accordance with Scopus Asbestos Compliance in house current method/procedure and the HSG 248 Asbestos: The analysts guide for sampling analysis and clearance procedures - appendix 2, 'Asbestos in bulk materials: Sampling and identification by polarised light microscopy (PLM). The samples were analysed as received.

This Certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory. Notes, opinions and interpretations expressed herein are outside the scope of UKAS Accreditation.

When the Test Certificate indicates sample(s) taken by the customer, the following disclaimers apply: Scopus Asbestos Compliance cannot accept responsibility for the accuracy of the information provided by the customer or whether samples(s) taken were representative of the material sampled. Scopus Asbestos Compliance is not responsible for sampling techniques carried out by individual(s) not directly employed within the Company.

Appendix B

Site Notes and Photos

The Monaghan Boot Co.
Vacant Building
Best 4 You
Vacant Building & GDP Archway
Istanbul Kebab House
Mr Malik Kebabs
HJ18 & Building over archway
.\Images\1. Alleyway between 14 and 15 Dublin St.1 Cropped.jpg
LOADING
LOADING
Ticket Machine
Existing wall to be removed
7
8
9
10
11
12/ 13
14
R4.00
R4.00
Top of Wall=59.54
Top of Wall=59.83

PHOTO 1
View looking towards Dublin Street from alleyway to rear of HJ18

T:\MGT0528_Monaghan CoCo_Sth Dublin Street Regen\6.x Project Directories\6.8 Structures\6.8.2 - Des K site visit 24.05.2021\Site layout drawing\MGT0528-RPS-00-XX-DR-C-LA1-0003_Building Removals_P01.03.dwg

Client

Comhairle Contae Mhuineacháin
Monaghan County Council

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(iii) This drawing is the property of RPS, it is a project confidential classified document. It must not be copied used or its contents divulged without prior written consent. The needs and expectations of client and RPS must be considered when working with this drawing.

(iv) Information including topographical survey, geotechnical investigation and utility detail used in the design have been provided by others.

(v) All Levels refer to Ordnance Survey Datum, Malin Head.

Rev	Date	Drn / Chk	Amendment / Issue	App
P01.03	Apr.'21	SA / -	Issued for Information/ Comment	-
P01.02	Jul.'20	SA / -	Issued for Information / Comment	-
P01.01	Jun.'20	SA / -	Issued for Information / Comment	-

Model File Identifier: -

Scale: 1:100 @ A1, 1:200 @ A3
Created on: June 2020
Sheets: 01 of 01

Project: MONAGHAN TOWN - DUBLIN STREET REGENERATION PROJECT
Title: Impacts on Buildings and other Infrastructure

File Identifier: MGT0528-RPS-00-XX-DR-C-LA0003 - SK01
Status: DRAFT
Rev: P01.03

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Site Survey Photographic Record

1 04/08/2021

Structures and buildings to the rear of No. 7 to be retained.

2 04/08/2021

Photos to the rear of No. 8, 9 & 10.

The first photo, to the rear of No. 8, shows where the party wall between No. 7 & 8 ends. The new gable wall facade will be constructed down to this point.

3 04/08/2021

Photos of ground floor within No. 8. Lighting was poor during the survey at ground floor level.

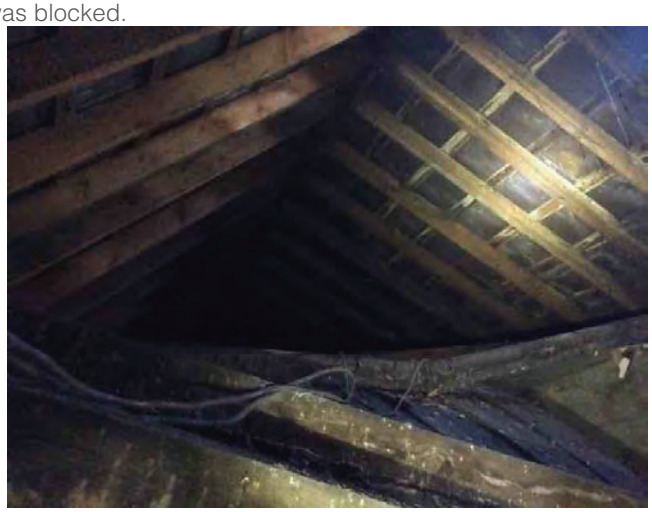
4 04/08/2021

Photos at first floor level. These show the poor condition of the internal areas.

5 04/08/2021

Internal photos of the rear extension to No. 8. It was unsafe to walk this area due to the poor condition of the first floor and the roof overhead.

This area was inaccessible at ground floor level as the door was blocked.



6 04/08/2021

Photos taken within the roof space of No. 8.

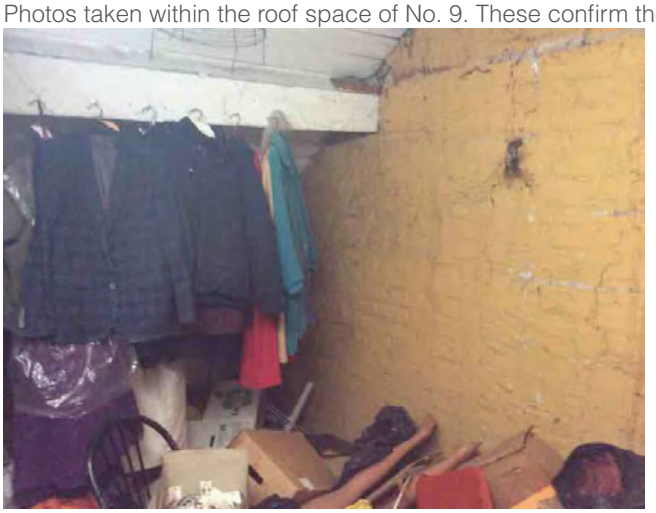
Although No. 8 is in very poor condition, the primary structural walls and the roof over the original dwelling footprint are in a stable condition.

In the photos below you can see the masonry party wall between No 7 & 8. This will be retained as an inner leaf and a new block wall, acting as an outer leaf, will be constructed outside it. This will provide structural stability and weather proofing to No. 7.

It was at this location that the connectivity between the roof of No. 7 & 8 was examined. It appears that the roof is continuous over the party wall.

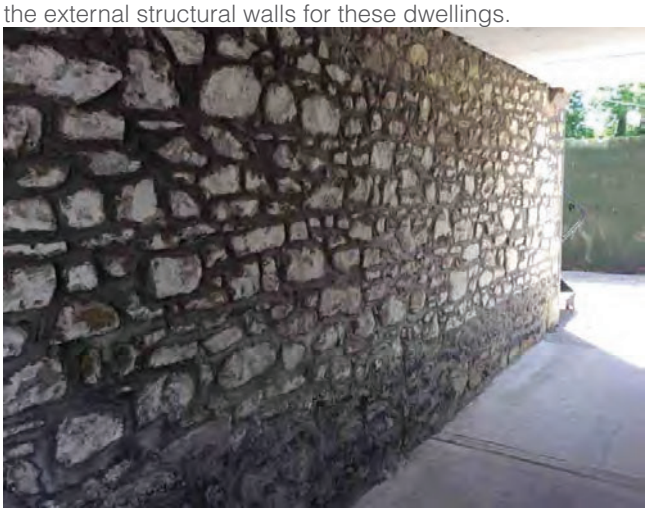
7 04/08/2021

Photos taken within the roof space of No. 9. These confirm the structural make up of No. 9 is similar to No. 8.



9 04/08/2021

The photos below show the exposed stone masonry walls in the alleyway. This is a good example of the stone masonry used in the external structural walls for these dwellings.



10 04/08/2021

Photos taken within the roof space of No. 10. These confirm the structural make up of No. 10 is similar to No. 8 & 9.

11 04/08/2021

The photos below show the condition of the party wall between No 11 & 12. The roof and primary wall construction appears to be similar to dwellings 7-10.

Similar to No. 7, this wall will be retained as an inner leaf and a new block wall, acting as an outer leaf, will be constructed outside it. This will provide structural stability and weather proofing to No. 7.

No. 11 is a taller building than No. 12 therefore the party wall and chimney above No. 12 roof level will be broken down to form a new gable wall detail at roof level for No. 12.

12 04/08/2021

Photo to the rear of No. 11 showing the height difference between No. 11 & 12.

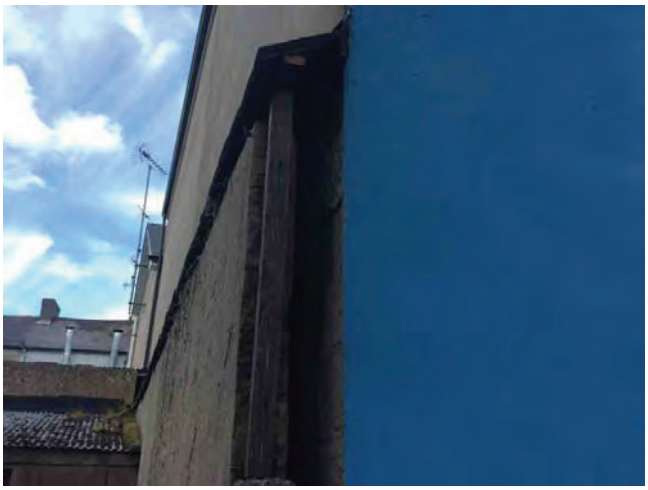
13 04/08/2021

The extensions and outbuildings to the rear of No. 11 appear to have been constructed after No. 12/13. From a review on site, demolition of these buildings should not affect the structural integrity of No. 12/13.

15 04/08/2021

Photos to the rear of No. 11.

In the photos, the separation between the property of No. 11 and No. 12/13 is evident.



16 04/08/2021

The roof of No. 7 & 8 merge over the party wall. Demolition of No. 8 will require remedial works to the roof of No. 7 as the existing roof will have to tie into a new gable wall detail.

17 04/08/2021

Photo to the front No. 11 showing the height difference between No. 11 & 12.

From a review of the internal layouts, the chimney serves No. 11 only so partial demolition of same will not be an issue.

Asbestos Containing Material Confirmed

8 04/08/2021

These roof tiles were found to contain asbestos.

14 04/08/2021

These roof tiles were found to contain asbestos.

18 04/08/2021

These floor tiles and adhesive were found to contain asbestos.

19 04/08/2021

Roof tiles on No. 8 & 9 match roof tiles that were found to contain asbestos.

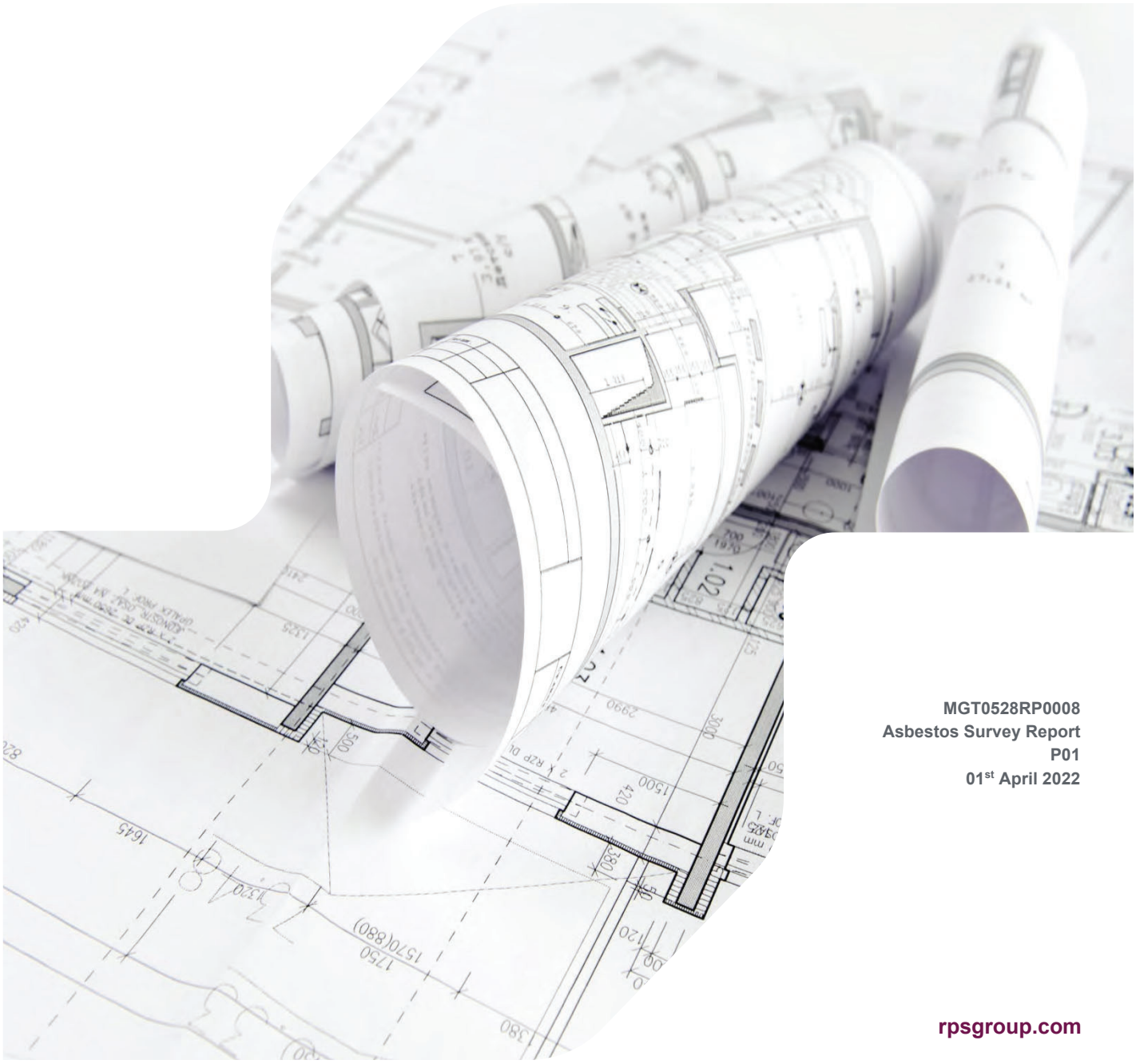
Appendix

2e

Northern Standard Asbestos Survey Report

MONAGHAN TOWN – DUBLIN STREET REGENERATION PROJECT

Demolition Asbestos Survey at Northern Standard Building



MGT0528RP0008
Asbestos Survey Report
P01
01st April 2022

rpsgroup.com

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
P01	Issued for information	DK	PMGB	DK	01.04.2022

Approval for issue

Des Keane		1 April 2022

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RPS

Prepared for:

Monaghan County Council

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1 INTROUCTION

As part of the Dublin Street Regeneration Street Project, it is proposed to demolish part of the existing Northern Standard building located off Dublin Street. RPS was commissioned to carry out a demolition asbestos survey of all accessible parts of the building to be demolished.

Figure 1-1 and **Figure 1-2** below show the south elevation and plan of the survey area respectfully.

Figure 1-1 South elevation of building to be demolished

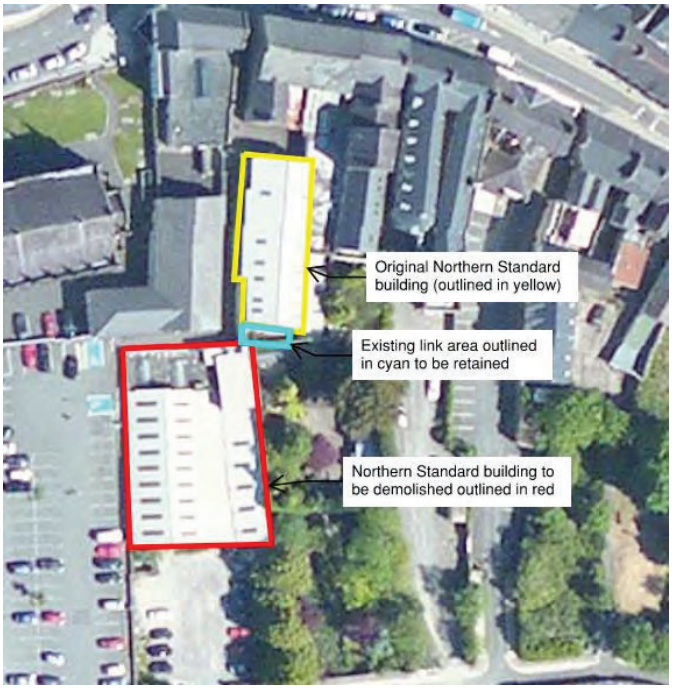

Figure 1-2 Plan of survey extent

2 METHODOLOGY

Analysis of asbestos fibres in bulk materials is carried out at an Asbestos Building Surveys laboratory. Asbestos Building Surveys is accredited to UKAS and meets the requirements of International Standard BS EN ISO/IEC 17025 for the analysis of asbestos fibres in bulk materials.

The survey was conducted in line with the UK Health and Safety Authority HSG264 guidelines for refurbishment and demolition surveys, and involved locating and describing, as far as reasonably practicable any ACMs in the area surveyed.

The surveyor conducted a systematic inspection of the nominated areas. Where access for sampling purposes was not possible, a visual assessment has been made if possible. For similar / repetitive elements, a representative bulk sampling protocol has been adopted following visual examination and assessment.

Bulk samples are obtained using fibre suppressant techniques in order to minimise respirable fibre release. The bulk samples are returned to the laboratory for analysis using plane and polarised light microscopy and dispersion staining techniques as defined in UK HSE Guidelines.

Results from the survey are outlined in **Section 3**.

Throughout the report the following terms and abbreviations may be used:

ACM	Asbestos containing material.
NAD	No asbestos detected.
MMMF	This describes any machine made mineral fibre, fibreglass, Rockwool, ceramic fibres and other such material.
AIB	Asbestos Insulating Board.
A/C	Asbestos Cement
Chrysotile	Commonly known as white asbestos.
Amosite	Commonly known as brown asbestos.
Crocidolite	Commonly known as blue asbestos.
Amphibole	Generic name for all asbestos types, excluding Chrysotile.
BOHS	British Occupational Hygiene Society

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3 ASBESTOS SURVEY FINDINGS

The layout of the building surveyed is shown below in **Figure 3.1**. Generic photos of all areas are provided in **Appendix B** while photos of the sampled materials are provided in **Section 3.2**, along with a description.

The Certificate of Analysis for the samples taken on site is included in **Appendix A**.

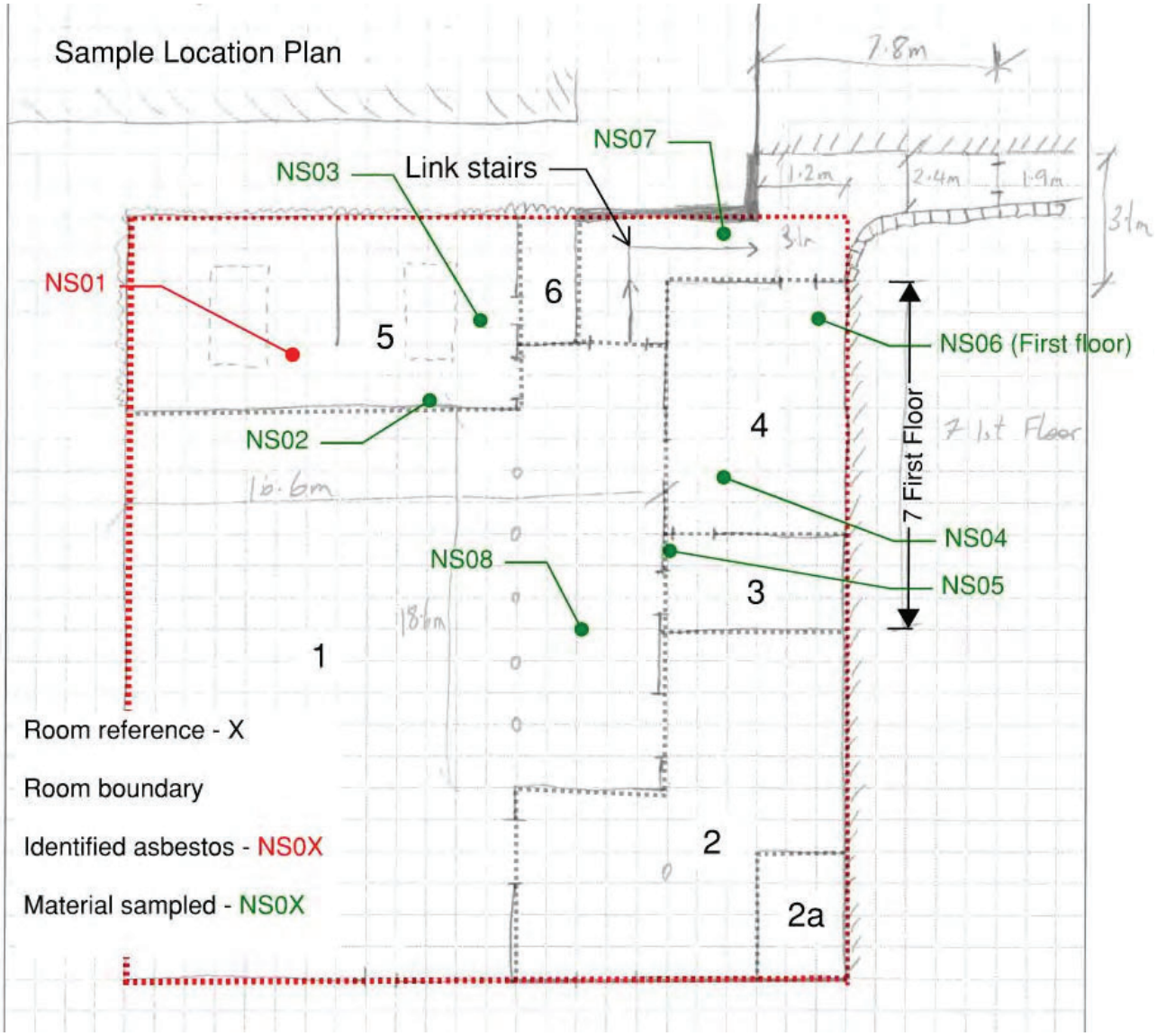


Figure 3-1 Outline of survey area and sample locations

3.1 Description of buildings

Access to all areas of the Northern Standard building was facilitated by the property owner. Below is a description of the findings which should be read in conjunction with the photos in **Appendix B**.

Area 1 is open plan and contains printing machinery throughout. The structure consists of concrete ground floor slab, a steel frame with a lightweight steel truss supporting a corrugated sheeted roof and masonry wall panels on the external elevations. The external wall along the west elevation is currently retaining as the footpath level rises to the north.

There is a lean-to extension to the east of Area 1. It is unclear if it was constructed as part of Area 1 or if it was subsequently added. The structural composition is similar to the rest of Area 1 but the roof finish is supported by steel rafters as opposed to a truss.

Area 2, 3 & 4 is another lean-to section built up to a masonry stone boundary wall. A lightweight metal deck roof is supported on steel purlins and beams which are supported on the masonry stone walls each side.

Areas 5 & 6 appears to be another addition to the original Area 1 and is an office area. Steel beams support the roof build up and there are masonry wall panels on external elevations. All walls and the roof are enclosed with plasterboard finishes. Similar to Area 1, the west and north external wall is retaining as the footpath level is approximately 3.5m above floor level.

There is a stairs link that leads up to the link area between the two Northern Standard buildings. At the top of the stairs, there is a single door access to the first-floor area in Area 7.

The link area appears to be an original external pathway that was enclosed to provide an internal link between the two Northern Standard buildings. This area will be retained with the change of an existing internal external door to an external door.

3.2 Details of sampled materials

3.2.1 Sample Ref. NS01

Location of Material	Ground floor in Area 5	**Laboratory Ref. / Site Ref.**	ID01 NS01
Similar material	N/A		
Asbestos Identified	Chrysotile		
Product Type	Adhesive glue on concrete floor below the grey floor tiles.		
Action	This material must be removed prior to works causing disturbance.		
Photo			

3.2.2 Sample Ref. NS02

Location of Material	Area 5 Coating to walls and ceilings	**Laboratory Ref. / Site Ref.**	ID02 NS02
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Coating to walls and ceilings - Cement product		
Action	No action required.		
Photo			

3.2.3 Sample Ref. NS03

Location of Material	Ground floor in Area 5	**Laboratory Ref. / Site Ref.**	ID03 NS03
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Vinyl floor finish and adhesive		
Action	No action required.		
Photo			

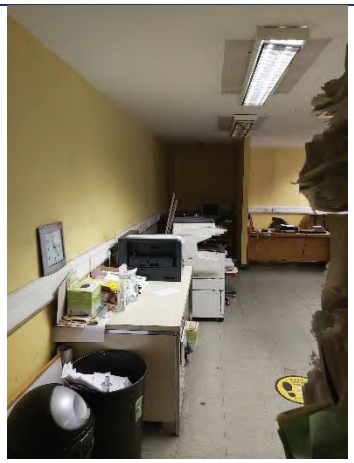
3.2.4 Sample Ref. NS04

Location of Material	Ground floor in Area 3 & 4	**Laboratory Ref. / Site Ref.**	ID04 NS04
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Vinyl floor finish and adhesive		
Action	No action required.		
Photo			

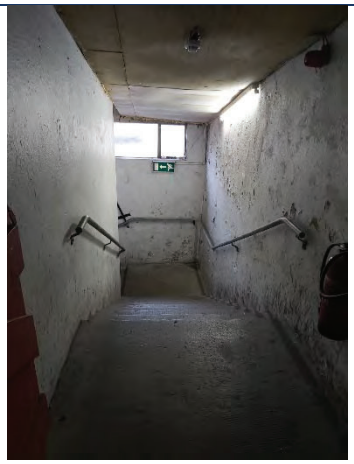
3.2.5 Sample Ref. NS05

Location of Material	Areas 1 - 4	**Laboratory Ref. / Site Ref.**	ID05 NS05
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Wall coating / finish		
Action	No action required.		
Photo			

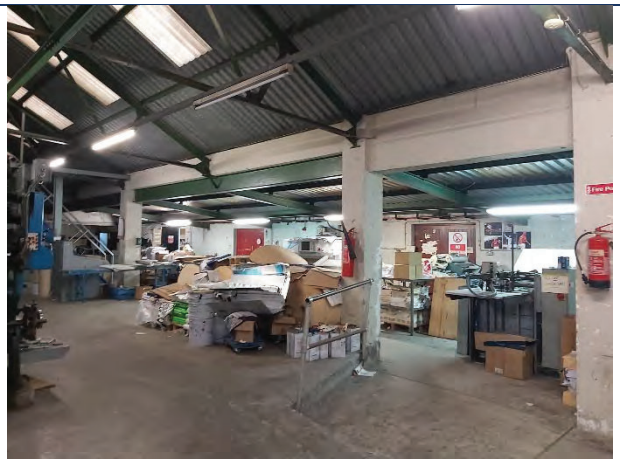
3.2.6 Sample Ref. NS06

Location of Material	Area 7 – First Floor	**Laboratory Ref. / Site Ref.**	ID06 NS06
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Thermoplastic floor tiles and adhesive		
Action	No action required.		
Photo			

3.2.7 Sample Ref. NS07

Location of Material	Link stairs	**Laboratory Ref. / Site Ref.**	ID07 NS07
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Ceiling panels – cement product		
Action	No action required.		
Photo			

3.2.8 Sample Ref. NS08

Location of Material	Area 1	**Laboratory Ref. / Site Ref.**	ID08 NS08
Similar material	N/A		
Asbestos Identified	NAD		
Product Type	Adhesive from what appears to be removed floor tiles or floor finish.		
Action	No action required.		
Photo			

4 CONCLUSION

On Monday 15th November 2021, RPS carried out a demolition asbestos survey, on behalf of Monaghan County Council, at Northern Standard, Dublin Street, Monaghan. The objective of the survey was to locate and describe, as far as reasonably practicable, accessible asbestos containing materials (ACMs) in the building to be demolished.

After carrying out a demolition asbestos survey of the accessible parts of the buildings, RPS took eight samples. The samples were sent to an Asbestos Building Surveys laboratory for testing and one sample was not found to contain asbestos.

A floor plan of building to be demolished is provided in **Figure 3.1** showing the survey area and the location of samples taken on site. One sample was found to contain asbestos as follows:

- Laboratory ref. ID01; Site ref. NS01 – Adhesive glue on concrete floor below the grey floor tiles.

The survey was conducted in line with the UK Health and Safety Authority HSG264 guidelines for refurbishment and demolition surveys, and involved locating and describing, as far as reasonably practicable any ACMs in the area surveyed. Every effort has been taken to identify asbestos containing materials within the buildings surveyed. It should be noted that additional asbestos containing materials may be concealed or buried on site. RPS do not accept responsibility for any omissions or areas of the building not addressed in the report.

If any suspect materials are observed by the contractor as part of any future works, the Contractor/ Project Manager should cease works immediately and contact the Client.

Appendix A

Certificate of Analysis

ASBESTOS BUILDING SURVEYS

UKAS TESTING 6232

Certificate of Analysis for Bulk Identification

02 February 2022

Karl Munster
RPS Consultants
20 Farringdon Street
London
EC4A 4AB

Samples Taken:	31 January 2022
Submitted By:	Client
Date Certificate Produced:	02 February 2022
Analysed By:	Fiona Stirton
Date Analysed:	02/02/2022

Re A-16604 - Suspected asbestos from Northern Standard, The Diamond, Monaghan, Ireland

Samples analysed using in-house procedure, QP14 Procedure for Analysis of Bulk Materials for Asbestos, referencing HSG 248. Where digitally signed, printed copies are uncontrolled. Certificate may not be reproduced without written approval of Asbestos Building Surveys Ltd. Asbestos Building Surveys Ltd will not accept responsibility for errors arising from sampling or transport by third party and accepts responsibility only for analysis results of samples received to laboratory. Results apply to sample as received.
Results relate only to the items tested.

Key: *Crocidolite (Blue Asbestos), Amosite (Brown Asbestos), Chrysotile (White Asbestos) NAD (No Asbestos Detected) Other Asbestos Amphiboles: Fibrous Actinolite, Fibrous Tremolite, Fibrous Anthophyllite.*
"*": Opinions and interpretations expressed herein and Analytical Results identified by "*" are outside the scope of UKAS accreditation.

Sample Number	Sample Location	Material	Result	Notes
ID01	NS01 - Ground Floor in Area 5 Floor Tiles and Adhesive in Area 5	Thermoplastic Floor Tiles/ Adhesive	Chrysotile	In Bitumen Only
ID02	NS02 - Walls and Ceiling throughout Area 5 Surface Finish / Coating	Cement Product	NAD	
ID03	NS03 - Ground Floor in Area 5 Floor Finish and Adhesive	Vinyl Flooring with Adhesive	NAD	
ID04	NS04 - Ground Floor in Area 3 & 4 Floor Finish and Adhesive	Vinyl Flooring with Adhesive	NAD	
ID05	NS05 - Walls in Areas 1 - 4, Sample taken in Area 3 Surface Finish / Coating	Cement Product	NAD	
ID06	NS06 - First Floor Area 7 Floor Tiles and Adhesive	Thermoplastic Floor Tiles/ Adhesive	NAD	
ID07	NS07 - Link Stairs Ceiling Panels	Cement Product	NAD	
ID08	NS08 - Ground Floor in Area 1 Remaining Adhesive from what appears to be removed Floor Tiles or Finish	Vinyl Flooring with Adhesive	NAD	

ASBESTOS BUILDING SURVEYS

UKAS TESTING 6232

Certificate of Analysis for Bulk Identification

02 February 2022

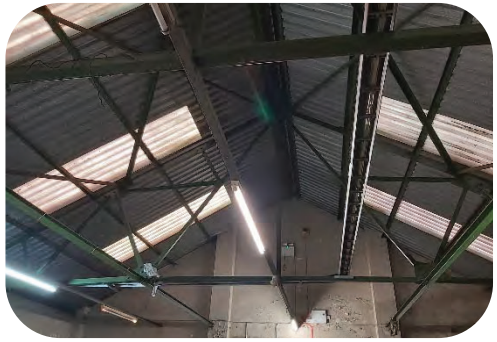
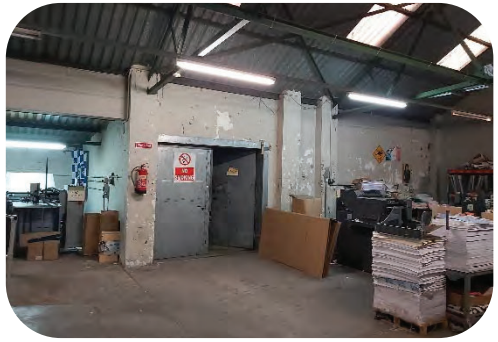
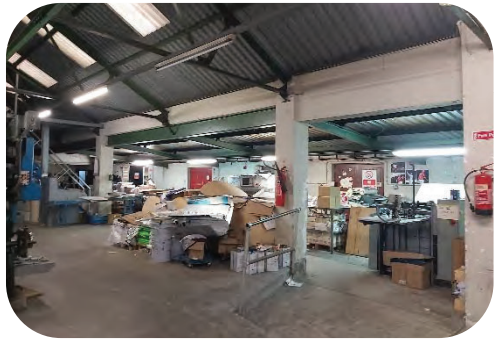
Authorised By: Fiona Stirton

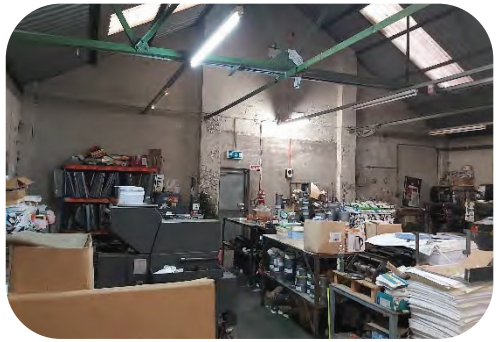
Signature:

Appendix B

Site Photos

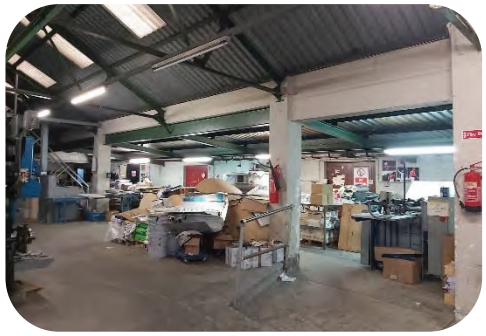
Area 1 – Main printing area

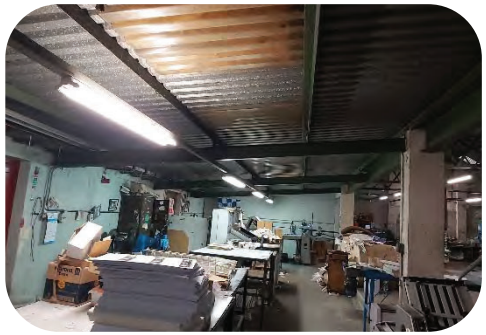






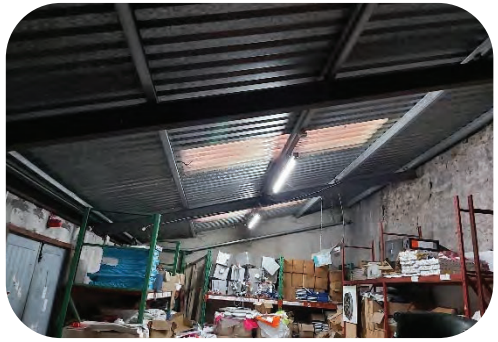
Area 1 – Print machines and boiler

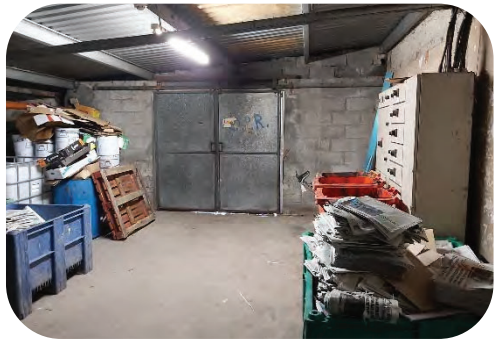
Area 1 – Lean to off main floor area





Area 2 – Lean to along boundary wall

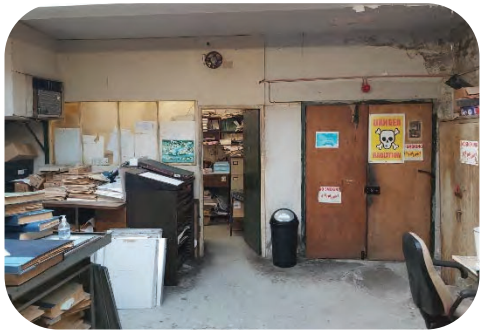




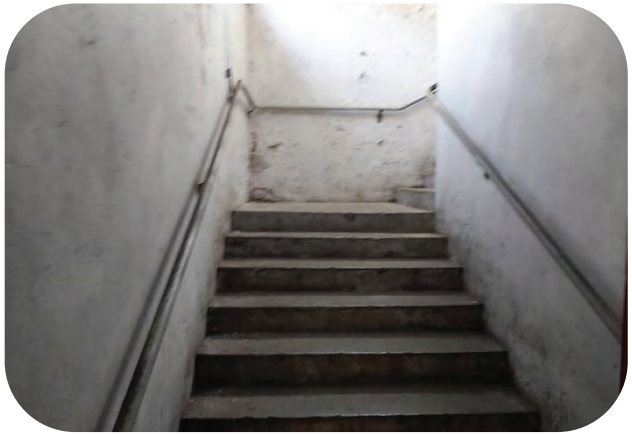
Area 2a – Store Room

Area 3 & 4 – Ground floor print room

Area 5 & 6 – Office Area



Stair Link



Link area between two Northern Standard buildings

Area 7 – First floor office

External public walkway to west and north elevation. Roof over Area 5 & 6.

South elevation

Appendix

2f

Outdoor Lighting Report

DATE: 24 June 2021

DESIGNER: Michael Walker

PROJECT No: 21-0147-1C

PROJECT NAME: Monaghan CC Dublin Street

Lighting Class C2 [20lux Eav, 40%Uo]

Outdoor Lighting Report

Please note that this proposed lighting scheme is a lighting solution that has been designed with informationprovided by the client. The solution does not include site, installation engineering or any risk assessment considerations.

PREPARED BY:

DW Windsor Lighting
Pindar Road
Hoddesdon
Hertfordshire
EN110DX

Layout Report

General Data

Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Road 01	667236.42	833468.53	24.85	167.50	1.46	1.50
2	Area 2	667206.53	833620.42	156.73	147.65	1.49	1.49
3	Parking 1	667250.19	833534.45	85.07	111.30	1.49	1.48
4	Parking 2	667091.18	833612.03	115.42	118.40	1.50	1.50

Luminaires

Luminaire A Data

Supplier	D W Windsor
Type	Sephora Pendant-16LED- 3k- A1 800mA U MSUG 42 0148 0000 100
Lamp(s)	16 x 3k LED
Lamp Flux (klm)	15.60
File Name	Sephora Pendant-16LED- 3k- A1_800mA U MSUG 42 0148 0000 100.ies
Maintenance Factor	0.92
Imax70,80,90(cd/klm)	442.4, 91.9, 0.0
No. in Project	16

Luminaire B Data

Supplier	D W Windsor
Type	Sephora Pendant-16LED- 3k- C3 800mA U MSUG 42 0148 0000 100
Lamp(s)	16 x 3k LED
Lamp Flux (klm)	15.88
File Name	Sephora Pendant-16LED- 3k- C3_800mA UMSUG 42 0148 0000 100.ies
Maintenance Factor	0.92
Imax70,80,90(cd/klm)	248.4, 8.8, 0.0
No. in Project	13

Luminaire C Data

Supplier	D W Windsor
Type	Sephora Pendant-16LED- 3k- A1 450mA U MSUG 42 0081 0000 100
Lamp(s)	16 x 3k LED
Lamp Flux (klm)	7.62
File Name	Sephora Pendant-16LED- 3k- A1_450mA U MSUG 42 0081 0000 100.ies
Maintenance Factor	0.92
Imax70,80,90(cd/klm)	442.4, 91.9, 0.0
No. in Project	15

Luminaire D Data

Supplier	D W Windsor
Type	Sephora Pendant-16LED- 3k- B1 400mA U MSUG 42 0071 0000 100
Lamp(s)	16 x 3k LED
Lamp Flux (klm)	6.67
File Name	Sephora Pendant-16LED- 3k- B1_400mA U MSUG 42 0071 0000 100.ies
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	386.5, 4.3, 0.0
No. in Project	8

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	667243.25	833487.06	10.00	11.00	0.00	0.00	1.50			
2	A	667238.28	833511.51	10.00	11.00	0.00	0.00	1.50			
3	A	667232.27	833543.05	10.00	8.00	0.00	0.00	1.50			
4	A	667226.52	833574.36	10.00	10.00	0.00	0.00	1.50			
5	A	667220.66	833605.78	10.00	9.00	0.00	0.00	1.50			
6	A	667207.62	833617.64	10.00	54.00	0.00	0.00	1.50			
7	A	667231.50	833637.85	10.00	189.00	0.00	0.00	1.50			

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Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
8	A	667208.09	833652.21	10.00	274.00	0.00	0.00	1.50			
9	A	667245.83	833655.79	10.00	274.00	0.00	0.00	1.50			
10	A	667277.56	833646.84	10.00	85.00	0.00	0.00	1.50			
11	A	667297.56	833636.42	10.00	16.00	0.00	0.00	1.50			
12	A	667273.39	833677.73	10.00	352.00	0.00	0.00	1.50			
13	B	667178.69	833634.00	10.00	94.00	0.00	0.00	1.50			
14	B	667149.92	833631.09	10.00	95.00	0.00	0.00	1.50			
15	B	667118.75	833627.87	10.00	94.00	0.00	0.00	1.50			
16	B	667160.85	833651.00	10.00	0.00	0.00	0.00	1.50			
17	A	667179.68	833678.07	10.00	184.00	0.00	0.00	1.50			
18	A	667116.80	833655.92	10.00	281.00	0.00	0.00	1.50			
19	A	667142.46	833666.20	10.00	0.00	0.00	0.00	1.50			
20	B	667174.79	833699.96	10.00	179.00	0.00	0.00	1.50			
21	C	667138.87	833697.21	8.00	189.00	0.00	0.00	1.00			
22	C	667247.75	833700.16	8.00	84.00	0.00	0.00	1.00			
23	C	667199.90	833713.73	8.00	269.00	0.00	0.00	1.00			
24	C	667224.30	833702.28	8.00	84.00	0.00	0.00	1.00			
25	C	667270.13	833697.17	8.00	75.00	0.00	0.00	1.00			
26	C	667240.60	833725.89	8.00	1.00	0.00	0.00	1.00			
27	D	667253.18	833740.83	6.00	337.00	0.00	0.00	1.00			
28	D	667260.53	833754.73	6.00	345.00	0.00	0.00	1.00			
29	D	667317.01	833678.77	6.00	322.00	0.00	0.00	1.00			
30	D	667333.59	833698.54	6.00	317.00	0.00	0.00	1.00			
31	D	667321.50	833647.69	6.00	309.00	0.00	0.00	1.00			
32	C	667277.58	833714.12	8.00	329.00	0.00	0.00	1.00			
33	C	667286.67	833728.17	8.00	329.00	0.00	0.00	1.00			
34	C	667293.06	833738.06	8.00	52.00	0.00	0.00	1.00			
35	C	667314.04	833722.51	8.00	62.00	0.00	0.00	1.00			
36	C	667316.62	833702.10	8.00	148.00	0.00	0.00	1.00			
37	C	667304.49	833686.31	8.00	148.00	0.00	0.00	1.00			
38	D	667306.70	833673.34	6.00	52.00	0.00	0.00	1.00			
39	D	667321.47	833658.73	6.00	44.00	0.00	0.00	1.00			
40	C	667340.30	833662.63	8.00	212.00	0.00	0.00	1.00			
41	C	667352.80	833671.12	8.00	220.00	0.00	0.00	1.00			
42	B	667159.86	833684.59	10.00	2.00	0.00	0.00	1.50			
43	B	667280.97	833629.36	10.00	190.00	0.00	0.00	1.50			

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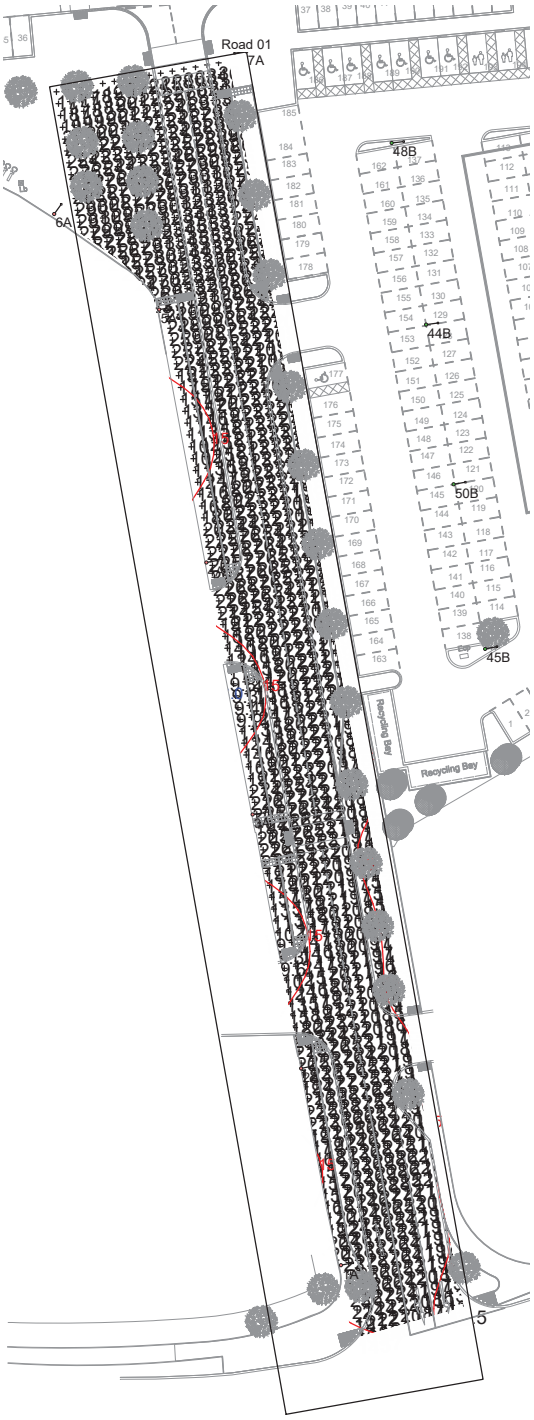
Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
44	B	667253.81	833603.90	10.00	8.00	0.00	0.00	1.50			
45	B	667261.15	833563.61	10.00	11.00	0.00	0.00	1.50			
46	B	667288.90	833581.07	10.00	104.00	0.00	0.00	1.50			
47	B	667302.50	833607.59	10.00	190.00	0.00	0.00	1.50			
48	B	667249.54	833626.46	10.00	7.00	0.00	0.00	1.50			
49	A	667304.37	833581.00	10.00	111.00	0.00	0.00	1.50			
50	B	667257.23	833584.07	10.00	10.00	0.00	0.00	1.50			
51	D	667358.56	833679.59	6.00	303.00	0.00	0.00	1.00			
52	C	667300.42	833713.60	8.00	146.00	0.00	0.00	1.00			

Horizontal Illuminance (lux)

Road 01



Results

Eav	22.03
Emin	9.31
Emax	36.13
Emin/Emax	0.26
Emin/Eav	0.42

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Horizontal Illuminance (lux)

Area 2

Results

Eav	21.76
Emin	9.13
Emax	85.12
Emin/Emax	0.11
Emin/Eav	0.42

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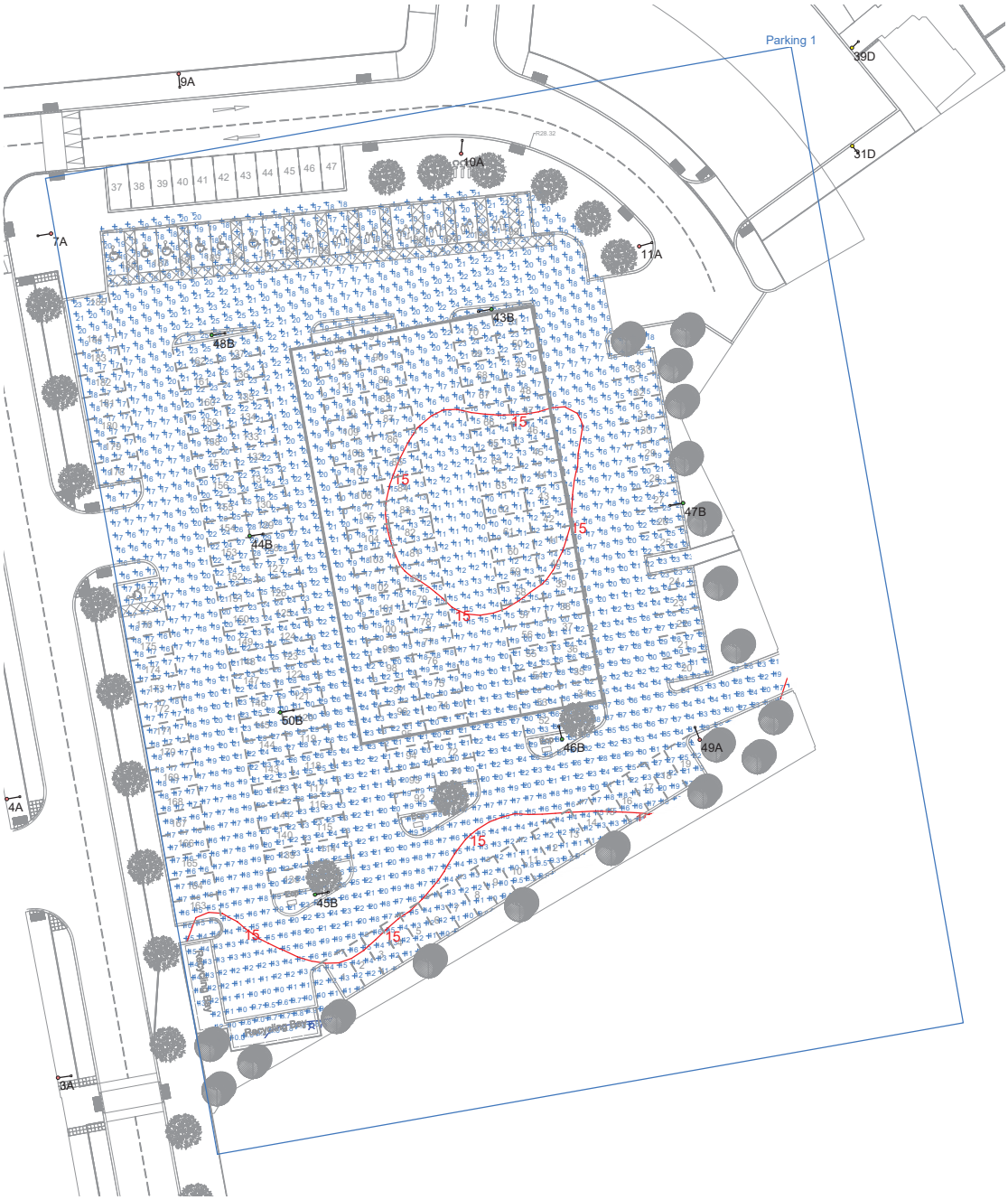
Horizontal Illuminance (lux)

Parking 1

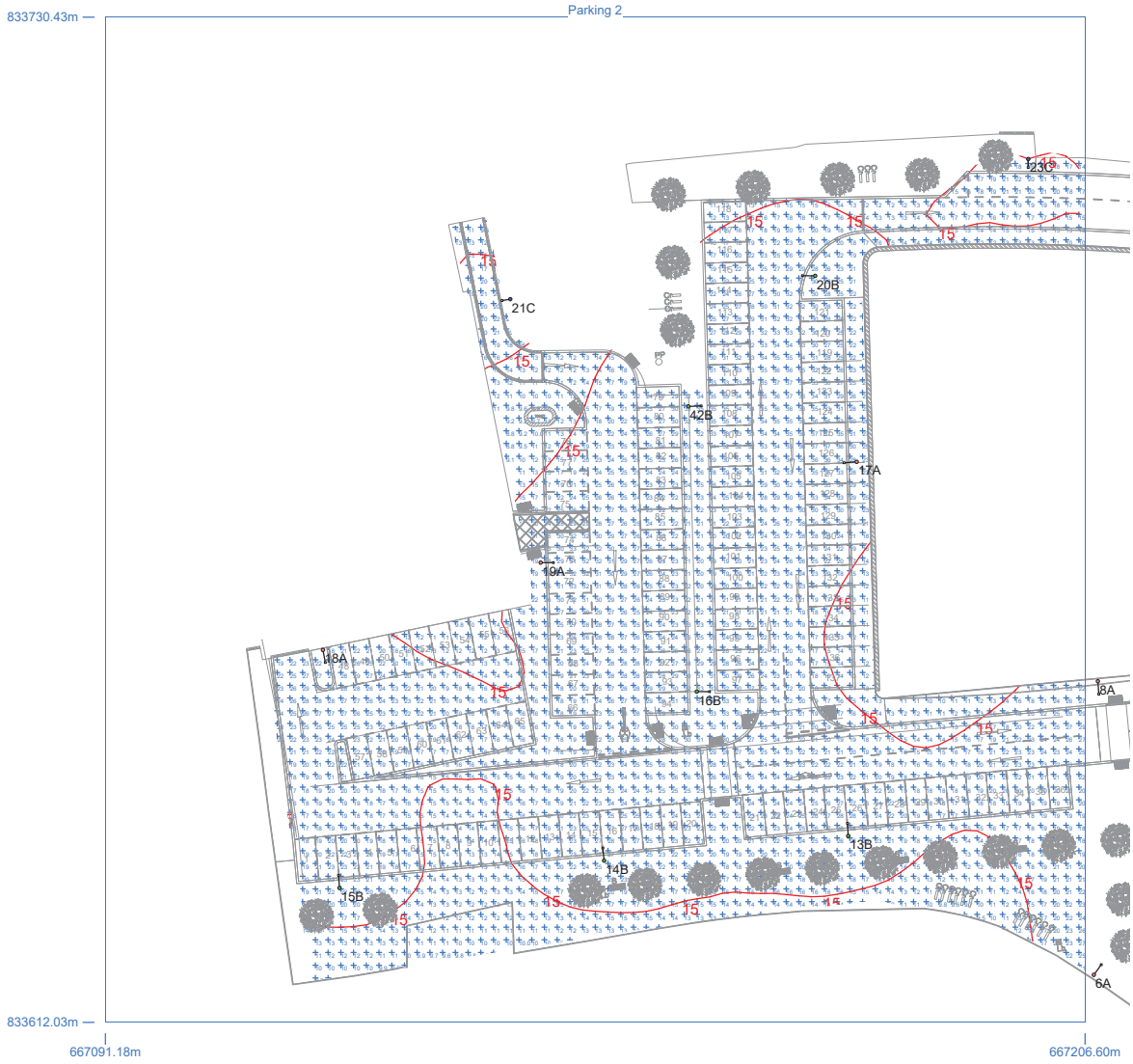


Results

Eav	19.40
Emin	7.78
Emax	38.07
Emin/Emax	0.20
Emin/Eav	0.40

Horizontal Illuminance (lux)

Parking 2



Results

Eav	20.62
Emin	8.70
Emax	37.44
Emin/Emax	0.23
Emin/Eav	0.42

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Appendix

2g

CGDP Frontage Development Proposals