



REPORT TITLE:
Outline
Construction
Environmental
Management Plan
(O-CEMP)

Client	Limerick City and County Council
Employer's Representative	
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Report Name	Outline Construction Environmental Management Plan
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Outline Construction Environmental Management Plan

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1 Introduction

1.1 Definition of Construction Environmental Management Plan (CEMP)

The CEMP is a site specific plan developed to ensure that appropriate environmental management practices are followed during the construction phase of a project.

The CEMP shall provide effective, site specific and implementable procedures and best practice preventative measures to monitor and control environmental impacts throughout the construction/site investigation phase of the project.

The CEMP applies to all works associated with the construction of the proposed civil and structural works including the pre-construction site clearance works. As a contractor has not yet been appointed, this CEMP has not been formally adopted and further development and commitment to the CEMP will be undertaken following selection of Contractors and before commencement of site works.

1.2 Objective of CEMP

The objective of the CEMP is to ensure that the environmental impacts identified during previously executed environmental studies will be competently managed and that all site activities will comply with current environmental legislation (Protection of the Environment Act 2003, Waste Water Framework Directive & Safety, Health and Welfare Regulations 2005).

The CEMP provides the environmental management framework for the appointed Contractors and Sub Contractors as they incorporate the best practice prevention principles to ensure that the work is carried out with minimal impact on the environment. The construction management staff as well as Contractors and Sub Contractors staff must comply with the requirements and constraints set forth in this CEMP in developing their CEMP

Environmental controls for the works and the suitable best practice control measures to be adopted have been identified under the following categories:

- Environmental Clerk of Works;
- Water Pollution Control Measures;
- Invasive Species Controls;
- Noise and Vibration;
- Air and Dust;
- Traffic Management;
- Access and Egress;
- Seasonal Constraints;
- Environmental Emergency Response Procedures;
- Monitoring; and
- Procedures to Review Inspections and Non-Compliance.

1.3 Implementation of CEMP

The implementation of the requirements of the CEMP will ensure that the construction phase of the Proposed Development is carried out in accordance with the commitments made by Limerick City & County Council in the planning application process for the Proposed Development, and as required under the planning approval. Once adopted, the CEMP is considered a living document that will be updated according to changing circumstances on the Proposed Development and to reflect current construction activities. The CEMP will be reviewed on an ongoing basis during the construction process by the Project Engineer and will include information on the review procedures.

1.4 Site Location

The site extends from north most points at Island View Terrace and Corbally Roundabout, east most points at Park Canal, John's Square and Colbert Station, south most points at People's Park and Steamboat Quay and west most points along the Shannon Bridge, Sarsfield Bridge and Thomond Bridge.

The specific site context of each of the 70 signs differs individually however all signs are proposed to be installed into existing pavements, hard paved areas and some small areas of amenity grassland which are all identified as being within public ownership of Limerick City and County Council

The Site Location can be seen in Figure 1.1 below.

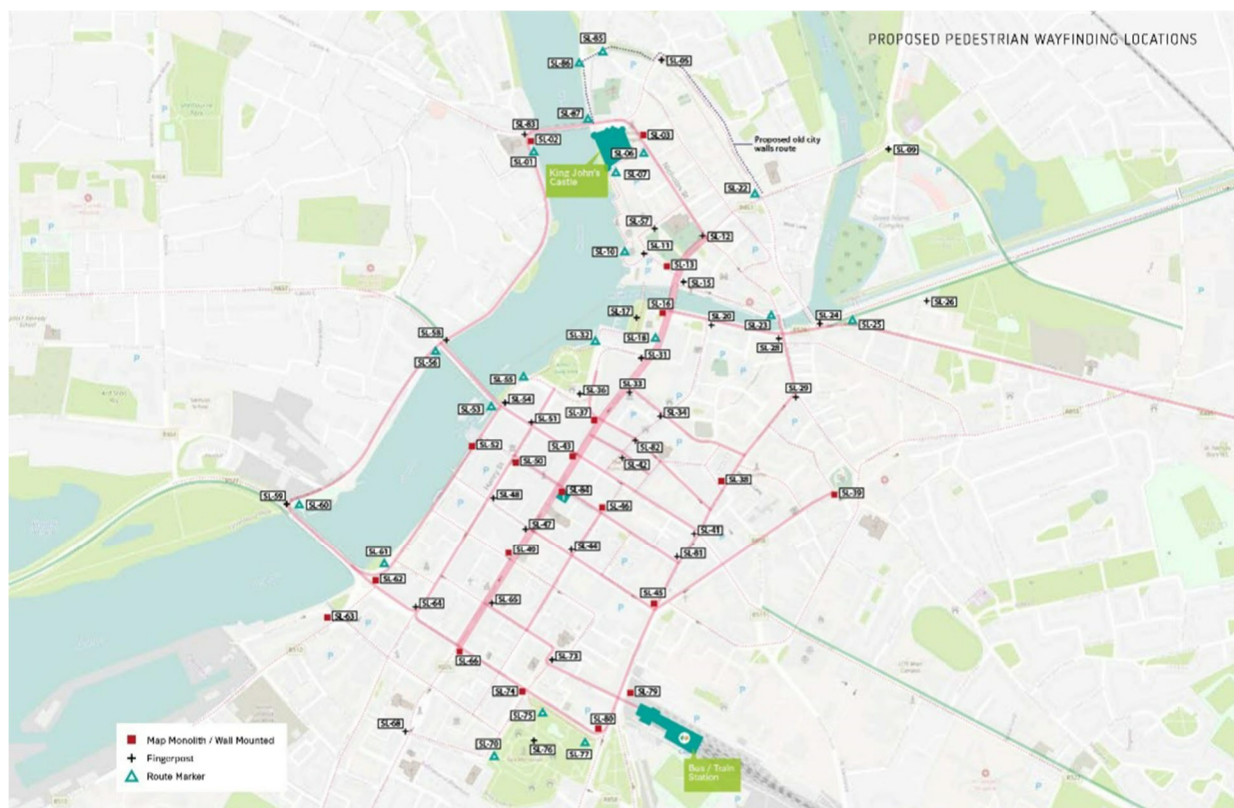


Figure 1.1: Proposed Signage Locations

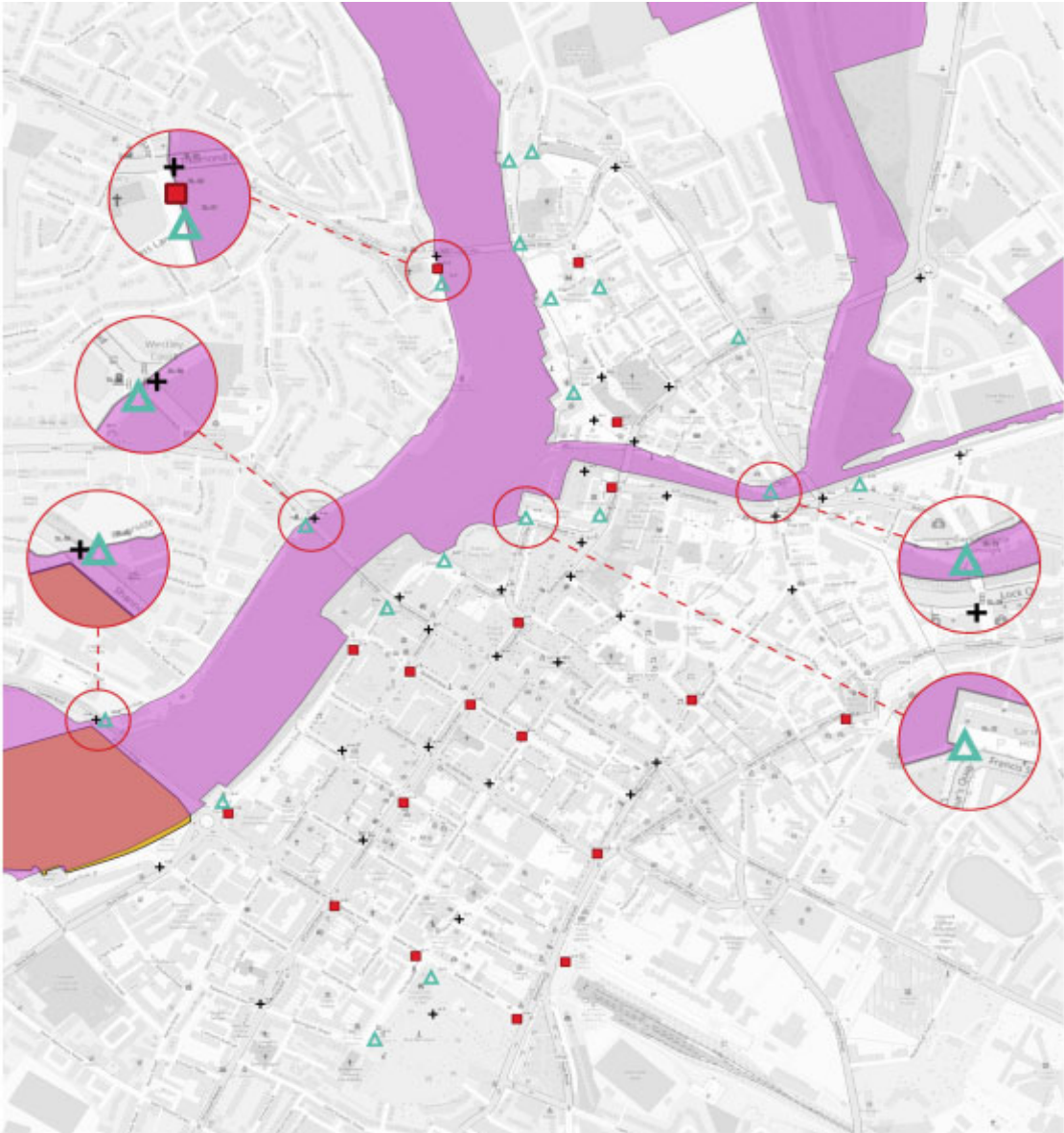
Refer to Appendix A – Proposed Sign Site Characteristics for detailed site information for each sign.

1.4.1 Natura 2000 sites

Two Natura 2000 sites are located within the overall project boundary:

- The Lower River Shannon Special Area of Conservation Site (SAC), Site Code 002165
- The River Shannon and Fergus Estuary Special Protection Area (SPA), Site Code 004165

The extents of the SAC and SPA in relation to the proposed signage locations are illustrated below:



Limerick city centre map illustrating the locations of proposed signage and designated areas (SAC/SPA)



Figure: 1.2: Natura 2000 Sites

1.4.2 The Lower River Shannon Special Area of Conservation Site (SAC)

The SAC encompasses the entirety of the sections of both the River Shannon and Abbey River which sit within the overall site boundary. The SAC is identified as an area containing habitats and species that are of European importance and are of specific ecological and environmental sensitivity.

9 of the proposed signs are located within the SAC boundary. SL-01, 02, 23, 32, 56, 58, 59, 60 & 83.

While these locations are situated within the SAC boundary it is noted that the locations are positioned on existing street pavements in heavily modified urban environments and pose limited risk to the environmental sensitivities of the SAC.

Particular care must be taken at these locations during construction to minimize risk of the following:

- Water Quality Impacts including run offs, ground water pollution, foul water, spillages, waste dust etc.
- Invasive Species Impact
- Vibration Impact affecting sediment
- Noise and Vibration impact leading to disturbance of habitats

A review of all sites has been undertaken and a Proposed Sign Site Characteristics document has been prepared and included with this CEMP (Appendix A) which outlines the environmental sensitivities of each individual sign location and highlights best practice preventative measures to ensure there is no adverse environmental impact.

The contractor shall be required to prepare an Environmental Register, see section 2.5.

1.4.3 The River Shannon and Fergus Estuary Special Protection Area (SPA)

The SPA encompasses a section of the River Shannon which is located to the south, downstream of the overall site extents. The SPA is identified as an area containing habitats and species that are of importance and are of specific ecological and environmental sensitivity.

There are no proposed signs which sit within the boundary of the SPA. The closest sign, SL-63, is located approximately 14m from the SPA boundary.

The SPAs location downstream of the River Shannon SAC present the risk of water quality impacts and invasive species impact.

1.5 Scope of Works

The works schedule includes:

- Topographical Survey of existing pedestrian wayfinding signage
 - Ground Investigation Works:
 - Ground Penetration Radar Surveys – identifying existing services within the footpaths.
 - The removal of 45 no. existing pedestrian wayfinding and information signs
 - The installation of 70 no. new pedestrian wayfinding and information signs
- Compromising of:
- 18 no. Map Totems
 - 19 no. Route Markers
 - 33 no. Fingerpost Signs
 - All associated works

1.6 Construction Methodology

Following preliminary design stage, all required sign positions are indicated on the project drawings.

The site conditions of all 70 signs is mostly consistent and as such the following construction methodology is considered applicable to all sites. The table below groups the sites into 3 categories and where the requirements of a specific category differ from the standard, this is noted.

Site Type 1	Site Type 2	Site Type 3
On Existing Pavements / Paved Areas	On Pavements beside Waterbodies / Quay Walls	On Grass
SL: 03, 06, 10, 11, 12, 13, 15, 16, 18, 20, 26, 28, 29, 31, 33, 34, 36, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 53, 54, 57, 62, 63, 65, 66, 68, 73, 74, 79, 80, 81, 84, 86, 87	SL: 01, 02, 23, 24, 25, 32, 52, 55, 56, 58, 60, 61, 83	SL: 05, 07, 09, 17, 22, 59, 70, 75, 76, 85

1.6.1 Utility Service Clearance Certificates

Each sign location is required to be cleared for services prior to a civil contractor mobilising to site.

A survey team will execute the following procedures:

- All available utility services maps are to be consulted
- Area is scanned using CAT and GPR (Ground penetration Radar)
- Area surrounding work area is to be examined for any sign of services, manholes etc.
- A clearance certificate will be issued, confirming 'no services' present in the proposed location of the sign foundation.

1.6.2 Installation of Sign Foundation

- The civil contractor will set up an exclusion zone/work area around the 'cleared' sign location, approximately 3m x 5m area.
- The work area will allow adequate space for machine & hand tools required to remove footpath/paving at Site Types 1 & 2 and grass/soil at Site Type 3.
- This area will allow enough space to accumulate some spoil material, expected from excavating the signs foundation.

- The sign location is generally dug by hand to 1.2m for safety. The size of hole to accommodate the foundation is dependent on the sign type. (Fingerpost, Map Totem or Route Marker)
- At Site types 1 & 3 material from the excavation will be cast to one side and stockpiled neatly prior to disposing into a pickup truck. At Site Type 2, spoil shall be loaded directly onto the pickups for immediate removal and not allowed accumulate on site.
- Crushed stone material will be placed at the bottom of the trench and compacted satisfactorily.
- Concrete spacer blocks will be positioned level on the floor of the trench. These spacer blocks will support steel reinforcement.
- Steel reinforcement cages will be delivered to the sign location pre-fabricated.
- The steel cages will be lifted into position within the trench.
- The reinforcement cage will be checked to ensure adequate cover is achieved to all sides of the excavation.
- Once the cage is satisfactorily in position, it must be secured using additional concrete block ties, this will secure the cage and reduce the chance of unanticipated movement during the concrete pour.
- The sign anchor system must now be installed into the reinforcement cage, this anchor system will vary depending on the sign type.
Eg: Fingerpost sign will require a retention socket anchor system, whilst the map totem and route marker will require a holding down bolt cluster assembly.
- The anchor system will be checked for level and plumb prior to pre-pour sign off by the foreman and subsequently by the engineer.
- The anchor system will be wrapped using denso tape or plastic to ensure it is kept free of debris during the concrete pour.
- Concrete truck will deliver the required mix to site, where the mix will be slump tested before discharging to the foundation.
- Concrete for the foundation will be poured by hand using wheel barrows and hand tools.
- The concrete foundation will be poured to a specific pre-agreed height, compacted using hand held poker vibrators, finished neatly and level by hand.
- The concrete will be left to cure. (Additional curing measures may be required depending on ambient temperatures and weather conditions).

1.6.3 Installation of Sign

- The sign's will arrive to site on a low-loader truck and will be unloaded close to the sign foundation locations.
- The signs will generally arrive wrapped in a protected film following from the manufacturing process, this film is only to be removed from the base of the sign to allow installation on site. The remaining film is to be left on the sign to protect the sign for the duration of the remaining works.
- The base of the sign is to be fitted level to the anchor system using the correct quantity and type of washers, nuts, and fasteners. These shall be tightened using the prescribed tools to the specified torque.

1.6.4 Reinstatement of Paving / Grass

- Once the sign has been installed to the correct seating height and fully secured to the foundation, the paving type can be reinstated at Site Types 1 & 2 and soil and grass can be reinstated at Site Type 3.
- The sign manufacturers design details will set out the required isolation distance between the sign and the paving.
- Paving and subbase aggregates shall be reinstated true to the line and level of the

existing pavement, encompassing the base of the sign.

1.6.5 Sign Unveiling

- Sign is to remain wrapped in the film protection until such time as the site has been cleaned of all debris and at
 - Site Type 1 the surrounding paving washed down
 - Site Type 2 the surrounding paving is carefully cleaned without liquids, hard surfaces to be brushed clean.
 - Site Type 3 surrounding grass is reinstated
- The film is to be removed from the sign and disposed of correctly.
- Any/all adhesives/stickers shall be removed from the sign.
- Sign to be wiped clean and left presentable.
- Any remaining barriers/barricades shall be removed by the civil contractor.

1.7 Project Programme & Working Hours

The site hours will generally be Monday to Friday 8am to 5.30 pm. Some weekend work may be required where permitted. It is envisaged the works will be completed in 12 weeks. A detailed programme will be supplied and will be continually updated as works progress.

2 Environmental Management System

The contractor shall hold an ISO 14001 : 2015 and this certification shall be valid for the complete duration of the works at a minimum.

2.1 Contractor Details

The Wayfinding & Orientation Signage Project installation will be carried out by the main contractor for the works.

Name	Position	Contact Number/s	Email
XXXX (Main Contractor)	General Manager		

2.2 Roles and Responsibilities

Name	Position	Responsibility	Contact No.
	Project Manager & Health & PSCS	Overarching responsibility that the EMS system is adhered to and carried out in a safe manner.	
	Site Manager	Responsible for management of daily operations to ensure CEMP controls adhered to.	
	H&S Co-ordinator and Quality/ Environmental & Laboratory Manager	Responsible for auditing systems in place for CEMP.	

2.3 Environment Policy

If the contractor does not already have an environmental policy, they will be required to develop an Environmental Policy with consideration for impacts on the natural and built environment. All project personnel will be accountable for the environmental performance of the Proposed Development and will be made aware of the Environmental Policy at induction. The environmental policy will consider and make commitments with regard to the protection of biodiversity, emissions to the atmosphere, maintenance of water quality, resource usage, energy consumption and waste management.

2.4 Regulations and Requirements

Legislation that the project will be compliant to is listed below, this is not an exhaustive list;

- Protection of the Environment Act 2003;
- Waste Water Framework Directive ;
- Safety, Health and Welfare Regulations 2005;
- Control of Noise at Work Regulations 1990;
- Air Quality Standards Regulations 2011

2.5 Environmental Register

2.5.1

Once appointed, the Contractor will prepare a register of all sensitive environmental features which have the potential to be affected by the construction works, together with details of commitments and agreements made during the planning process and the Contract Documentation, with regards to best practice prevention of environmental impacts.

2.5.2

The Environmental Register provides the relevant information for the preparation of construction method statements and will be regularly updated during the works.

2.5.3

The Environmental Register will consider sensitive environmental features as listed below (please note this list is not exhaustive and will be amended and expanded upon as required by the contractor).

- Identification off all waterways for the protection against ingress of suspended solids or any pollutant;
- Air emissions;
- Noise and Vibration emissions;
- Waste generation;
- Treatment of contaminated materials'(If encountered);
- Treatment of invasive species; (If encountered)
- Use of hazardous materials;
- Traffic generation;
- Archaeology, Architectural and Cultural Heritage

2.6 Project Organization and Responsibility

2.6.1

The Contractor appointed by Limerick City & County Council to undertake the construction works shall be responsible for developing, and managing, the project specific Construction Environmental Management Plan (CEMP) incorporating the methodologies described in this preliminary plan. The plan will be developed in consultation with Limerick City and County Council.

2.6.2

The Contractor shall be responsible in ensuring that all members of the Project Team, including sub-contractors comply with the procedures set out in the CEMP. The Contractor will ensure that all persons working on site are provided with sufficient training, supervision and instruction to fulfil this requirement.

2.6.3

The Contractor will ensure that all persons allocated specific environmental responsibilities are notified of their appointment and confirm that their responsibilities are clearly understood.

2.6.4

The adopted CEMP will define the roles and responsibilities of the project team. The overall responsibility lies with the Site Manager whose responsibility it will be to approve key personnel required for employment on the Proposed Development. They will liaise with the Site Environmental Manager (SEM)

2.6.5

The Project Manager:

The Project Manager will lead the works on site. They will be responsible for the management and control of the activities and will have overall responsibility for the implementation of the CEMP. They will be assisted in this by the Site Environmental Manager.

2.6.6

The Site Manager:

A site manager will be appointed by the contractor to over-see the day-to-day management of working areas within the site. The Site Manager's environmental management responsibilities include, but are not limited to:

- Close liaison with the Site Environmental Manager (SEM) to ensure adequate resources are made available for implementation of the CEMP;
- Liaising with the Project Team in assigning duties and responsibilities in relation to the CEMP to individual members of the main contractor's project staff;
- Ensure that all personnel undergo suitable and sufficient environmental induction prior to starting work;
- Undertake a programme of regular environmental inspections in liaison with the SEM and site staff;
- Ensuring that the risk assessments for control of noise and environmental risk are prepared and effectively monitored, reviewed and communicated on site;
- Managing the preparation and implementation of method statements; and
- Ensuring that the SEM reviews all method statements and that relevant environmental protocols are incorporated and appended.

2.6.7

The Site Environmental Manager:

A Site Environmental Manager will be appointed by the contractor to ensure that the CEMP is effectively implemented. The main duties and responsibilities of the SEM include and are not limited to the following:

- Liaise with the Site Manager during the finalisation of the CEMP to assign individual duties and responsibilities bearing in mind the overall organisational structure, the nature of the Environmental Commitments and Requirements and the Project specific characteristics;
- Ensuring that the CEMP is finalised, implemented and maintained;
- Liaising with Limerick City & County Council's Project Engineer on all Method Statements, any alterations to live documents and any other works;
- Being familiar with the information in the pre-construction surveys, construction requirements, the competent authority's decision, and all relevant Method Statements;
- Being familiar with the baseline data collated during the compilation of the planning documentation;
- Assisting management in liaising with the Limerick City & County Council and the provision of information on environmental management during the construction of the Proposed Development;
- Liaising with the Project Team in assigning duties and responsibilities in relation to the CEMP, to individual members of the main contractor's project staff;
- Overseeing, ensuring coordination and playing a lead role in third party consultations required statutorily, contractually and in order to fulfil best practice requirements;
- Liaising with management in agreeing site specific Method Statements with Third Parties;
- Ensuring that all relevant works are undertaken in accordance with the relevant legislation;
- Bring any legal constraints that may occur during certain tasks to the attention of management;
- Keeping up to date with changes in environmental practices and legislation and advising staff of such changes and incorporating them into the CEMP;
- Hold copies of all permits and licenses provided by waste contractors;
- Ensuring that any operations or activities that require certificates of registration, waste collection permits, waste permits, waste licences, etc have appropriate authorization;
- Gathering and holding documentation with respect to waste disposal;
- Liaising with contactors and consultants prior to works;
- Procuring the services of specialist environmental contactors when required;
- Ensuring that all specialist environmental contactors are legally accredited and proven to be competent;
- Ensuring that environmental induction training is carried out on all personnel on site and ensuring that toolbox talks include aspects of environmental awareness and training;
- Respond to all environmental incidents in accordance with legislation, the CEMP and company policy/procedures;
- The SEM is responsible for notifying the relevant statutory authority when environmental incidents occur and producing the relevant reports as required;
- Ensuring that all relevant works have (and are being carried out in accordance with) the required permits, licenses, certificates and planning

- permissions;
- Carrying out regular documented inspections of the site to ensure that work is being carried out in accordance with the CEMP and relevant site-specific Method Statements;

2.6.8

The Project Archaeologist:

The contractor shall appoint a project archeologist to monitor all ground excavation works being carried out during the construction.

2.6.9

The Project Supervisors:

The supervisors' environmental management responsibilities include, but are not limited to:

- Ensuring all personnel affected by a method statement are briefed and fully understand it's content;
- Monitoring operatives for compliance, including sub-contract operatives;
- Implementing environmental management activities required by the CEMP and works method statements;
- Ensuring that all inspections are carried out as prescribed in the CEMP;
- Ensuring that the procedures agreed during third party consultations are followed;
- Reporting immediately to the SEM any incidents where there has been a breach of agreed environmental management procedures, where there has been a spillage of a potentially environmentally harmful substance, where there has been an unauthorised discharge to ground, water or air, damage to habitat, etc.
- Attending environmental review meetings and preparing any relevant documentation as required by management.

2.6.10

All Project Personnel:

All project personnel have the following responsibilities:

- Attend environmental training as required;
- Reporting immediately to their supervisor or SEM any spillage incidents or observations regarding adverse effects to the environment.

2.7 Project Communication and Co-Ordination

2.7.1

Environmental issues and performance aspects will be communicated to the workforce on a regular basis. Weekly project meetings, which follow a set agenda incorporating the environment, will be held alongside overall management meetings.

2.7.2

All staff and sub-contractors involved in all phases of the Proposed Development will be encouraged to report environmental issues.

2.8 Environmental Awareness and Training

All site operatives will be informed of the implication of the CEMP on their daily work systems during their site induction.

In addition to this an ecological issues awareness training session in the form of a tool box talk will be given during the first week of site works.

2.9 Site Audit & Review of CEMP

During the site works the CEMP systems will be audited periodically by XXX's Safety Advisors at the same time as the health and safety audit is undertaken. Any corrective actions required will be documented and will be executed within the agreed time period.

3 Site Specific Impacts and Best Practice Preventative Measures

3.1 Groundwater and Surface Water Management Plan – Sediment Control

Potential Sources

The potential sources of sediment for the sign installation works are the spoil materials arising from the foundation excavations, which will generally be natural superficial deposits.

Significant sediment run-off is not expected as the foundations are small in size and are being excavated mostly by hand digging. Other sign installation activities are very unlikely to create a source of sediment run-off.

Potential Receptors

The potential receptor for this contaminant source is surface water bodies such as water courses. This would include drains, streams, or rivers. Sections of the River Shannon and Abbey River run within the overall site boundary including the Lower River Shannon SAC which is of particular environmental sensitivity and are considered the primary watercourses relevant to the works.

Some works albeit contained within footpaths will be adjacent to some quay walls along both the River Shannon and Abbey River (SAC) so best practice preventative measures shall be carried out.

Impacts and Associated Preventative Measures

To ensure sediment release is prevented the following methods will be followed:

- Where the location is scheduled in the vicinity of a sensitive receptor i.e. a watercourse, the excavated spoil will be directly loaded into a pick up truck and not left to accumulate on the ground. Depending on the location, additional sand bags shall be laid as a precaution to control water in the event of wet weather.

Objective	To manage the sign foundation installation activity with the potential to cause the release of sediment to the water environment		
Actions/ Preventative Measures	Requirements	Responsibility	Timing
	Immediate removal of materials from site and not allowed to accumulate.	Site Manager Detailed in method statement for foundation construction	Prior to and during site works
	Provision of sand bags to prevent any excess groundwater washing into nearby watercourse in the event of wet weather	Site Manager Detailed in method statement	On encountering substantial volumes of water in the excavation or during a substantial wet weather event
	Use of water for cleaning the installed signs or any hard / paved areas and surfaces at all signs classified as Sign Type 2 (Refer to 1.6)	Site Manager Detailed in method statement for sign unveiling	Throughout sign installation works.
Performance Indicators	No mud/dirt visible on public roads due to sign installation works	Site Manager & site Engineer	Throughout sign installation works.
Monitoring/Reporting	Daily visual inspections of all sediment control/containment systems.	Site Engineer	Throughout construction works and recorded on a daily basis.
Reporting	Reporting to site manager and site Engineer any sediment control issues	All site personnel	Throughout sign installation works.
Corrective Actions	Immediate repair of breached sand bag containment systems.	All site personnel	Throughout sign installation works.
	Immediate remediation of breached containment systems in accordance with Site's Emergency Response Procedure.	Site Manager & staff	Throughout sign installation works.

3.2 Groundwater and Surface Water Management Plan – Hazardous Substances

The main substances used by the contractor during the works include:

- Diesel fuel
- Lubricant oils

In order to prevent the potential contamination to ground and surface water from a fuel spill the following best practice working methods shall be adhered to, as detailed in the following table:

Objective	To manage sign foundation installation activities to prevent the potential to cause contamination to groundwater.		
Actions	Requirements	Responsibility	Timing
	All chemicals will be stored in a locked site container at the contractors compound. No chemicals shall be stored at the works areas. .	Site Manager	Throughout Sign Installation works
	Where re-fuelling is required at work location the use of spill kits, spill tray, funnel will be mandatory.	Site Manager Plant Operators	Throughout Sign Installation works
	All plant to be checked for leaks before mobilisation to the site and daily while on site. A weekly defects sheet will be completed for all plant.	Site Manager Plant Operators	Throughout Sign Installation works
Performance Indicators	No spills	Site Manager	Throughout Sign Installation works
	Good housekeeping.	Site Manger	Throughout Sign Installation works
Monitoring	Spill kits and drip trays will be inspected on a weekly basis.	Site Manager	Throughout Sign Installation works
	All plant visually inspected daily	Plant operators	Daily inspection
Reporting	Incidents reported to site manager and reported in incident book	All site personnel	Throughout Sign Installation works
Corrective Actions	Immediate action on spills deployment of spill kit in line with environmental emergency plan.	All site personnel	Throughout Sign Installation works

In the event of a fuel spill occurring the following steps will be taken:

- Immediately report the occurrence to the site manager
- Every effort must be made to prevent the spillage:
 - Causing pollution to drains or watercourses.
 - Leaving the site boundary and entering neighboring land.
- Any spill/leak will be contained and the material recovered (if possible) by the most appropriate means (absorbent material, inert material etc.).
- In the event where a flood or spillage cannot be contained the Fire Brigade will be called.
- Access to the immediate area will be restricted, if necessary.
- As soon as is practicable after the emergency the EPA, Local Authority and Inland Fisheries should be notified to agree any further action which may be required.
- The incident will be recorded.

3.3 Dust Emissions Minimisation and Management Plan

Potential Sources

The creation of dust is not expected to become an issue on this project.

The table below outlines procedures to deal with dust creation.

Source	Minimisation
Vehicles creating dust while driving to site and within site	Road will be kept free of dirt and debris at all times. Works vehicles will not travel over excavated material.
Use of concrete on site	Concrete will only be used in small quantities during works for pouring foundations or reinstating paving subbase layers. When used it will be pre-mixed with water to prevent dust creation.

Other emissions impacting on air quality will be exhaust fumes from plant operations. This is not expected to become an issue.

3.4 Odour Emissions Minimisation and Management Plan

The creation of odor emissions is not expected to be an issue on this project.

3.5 Noise & Vibration Minimisation Plan

The potential noise and vibration generating activities on site include all excavation activities and movement of equipment and any other transport.

Due to the sensitive nature of the River Shannon and Abbey River and specifically the location of 9 signs within the SAC boundary, any excavations within or in proximity to the SAC and SPA shall be hand dug to avoid vibration (refer to Construction Methodology 1.6.2).

Objective	To appropriately manage noise and vibration during sign installation activities to minimise impact to workers, neighbours and community members.		
Actions	Requirements	Responsibility	Timing
	Working hours on the project are expected to be 08:00 to 17:30. Any major difference to this will be agreed with employers' representative on site.	Site Manager	Throughout sign installation works
	All plant will be maintained to ensure they operate at their correct operational noise levels.	Plant Operators	Throughout sign installation works
	Appropriate PPE for site personnel.	All site personnel	Throughout sign installation works Site staff to be made aware of issue at site induction
Performance Indicators	No complaints regarding noise from workers / neighbours / community members.	Site Manager & Plant Operators	Throughout sign installation works
Monitoring	Management and record any complaints	Site Manager	Any complaints to be recorded.
Reporting	Reporting to site manager any defective plant that is generating excessive noise.	All personnel	Throughout sign installation works
	When plant is not in use switch off engine rather than allowing engine to idle.	Plant operative	Throughout sign installation works Plant operatives to be made aware of issue at site induction

3.6 *Unexpected Waste Arisings Management Plan*

General daily waste will be securely bagged for disposal in line with their Environmental Management System. All welfare and canteen facilities will be located at the contractor's compound.

Objective	To appropriately manage waste during site investigation activities.		
Actions	Requirements	Responsibility	Timing
		Waste to be segregated into appropriate waste bins	All site personnel
Performance Indicators	No waste deliberately or unintentionally released.	Site Manager	Throughout site works
Monitoring	Waste receptacles will be inspected daily and emptied weekly.	Site Manager	Throughout site works
Reporting	Reporting to site manager	All staff	Throughout site works
Corrective Actions	Daily review of site operation by site manager.	Site Manager	Throughout site works

3.7 *Invasive Species Control*

The following best practice avoidance measures shall be implemented by the Contractor which will help to contain and/or prevent the introduction of invasive species on the sites as follows:

- All plant and equipment employed for the proposed development (e.g. diggers, tracked machines, footwear etc.) shall be thoroughly cleaned down using a power washer unit, and washed into a dedicated and contained area at the contractors operational compound prior to arrival on site to prevent the spread of invasive aquatic/riparian species such as Japanese knotweed *Fallopia japonica* and Himalayan Balsam *Impatiens glandulifera*. A sign off sheet shall be maintained by the Contractor to confirm cleaning;
- For any material entering the site, the supplier shall provide an assurance that it is free of invasive species;
- Ensure all site users are aware of invasive species measures and prevention and treatment methodologies;
- Provision of toolbox talks before works begin on the site; and
- Adequate site hygiene signage shall be erected in relation to the management of non-native invasive material.

The Contractor will be required to prepare and implement an Invasive Species and Biosecurity Plan, which incorporates the above measures.

3.8 Archaeology and Heritage

Licensed archaeological monitoring (National Monuments Act Amendments 1930-2014) shall be in place for the duration of the contract. The appropriate licences (excavation & metal detecting) shall be in place before the work commences, this includes any preliminary site investigations. All ground disturbance undertaken to facilitate or progress the contract shall be monitored by the archaeologist. This includes any ground disturbance such as the setting up of site compounds. These types of arrangements will need to be assessed (desk-top) in advance by the archaeologist. The archaeologist shall be furnished with the work schedule and kept advised of any changes. A tool-box talk on the archaeological potential of the site and the mitigation measures involved should archaeological material be uncovered shall be given to all staff. In the event that archaeological material is uncovered the archaeologist shall have the power to stop the works and consult with the National Monuments Service (Department of Housing, Local Government & Heritage) and the Local Authority Archaeologist. Pending a decision on the resolution of the archaeological remains they shall be protected from damage by the contractor working under the direction of the archaeologist. In the event of the excavation of the remains the contractor shall facilitate the archaeologist by providing mechanical assistance, storage etc. as appropriate. Where works are in the vicinity of an upstanding archaeological monument or a Protected Structure, a risk assessment of the impact of the works shall be undertaken and appropriate safeguards put in place, such as temporary barriers etc.

4 Traffic Management

4.1 Traffic Management Plans

The Contractor will develop a Construction Stage Temporary Traffic Management Plan (CSTTMP) developed in consultation with Limerick City and County Council & Transportation Department prior to commencement of construction.

The CSTTMP Plan must take account of the nature of this signage installation project which will occur at 70 individual sites throughout the works area. Most of the works areas will be accessible directly from public road and the traffic management plan should outline delivering to the sites and removal of material from sites can be managed.

This CSTTMP will be prepared in accordance with the constraints which will be set out in the tender documentation to be prepared for the Signage installations. Some of the likely requirements of the plan are outline below.

4.2 Environmental Controls

- All roads and accesses will be kept clear of all dirt and dust arising from the execution and completion of the Works and suitable clearing equipment and labour will be provided by the Contractor for this purpose. It is noted that all cleaning must be executed without the use of liquids, i.e. dirt must be swept by hand and carefully loaded onto pickups for removal from site.
- Attention will also be given to the loading of vehicles carrying materials into each Site and spoil from the Sites to ensure that these will not be overloaded or are loaded in such a way that spillage is avoided. All vehicles entering and exiting the site will be covered with a tarpaulin.
- In the case of delivery to the Site, vehicles will be thoroughly cleaned before they leave the point of collection. The Contractor will be equally responsible for the vehicles of his subcontractors and suppliers and the like.

4.3 Vehicle Movement & Deliveries

- Access routes to and from the site, delivery times and off-loading proposals will be formally agreed with the Local Authority as part of the CSTTMP. In developing the construction and logistics plans, the Contractor will fully include representatives of the Limerick City and County Council Roads Department, and other interested parties, in a consultation process to ensure that intentions are properly communicated, agreed and do not unduly affect the surrounding residential and retail properties. The CSTTMP will demonstrate how pedestrians, cyclists and motorised vehicles can pass through the works areas safely and that measures are in place which ensure traffic operates in an efficient a manner as possible.

Outline Construction Environmental Management Plan

- Details of the agreed access routes to and from the sites shall be provided to suppliers and other relevant third parties prior to attending site.
- All site staff including delivery drivers are required to abide by the normal rules of the road.
- All deliveries of materials, plant and machinery to the site and removals of waste or other material, will take place within the permitted hours of work. Vehicle movements will be planned to ensure arrival and departure times are maintained inside the agreed working hours.

4.4 Road Safety

- The Contractor will organise the construction site as required at each sign location so that vehicles and pedestrians are kept separate.
- Key issues in dealing with temporary traffic management on site are:
 - Keeping pedestrians and vehicles apart
 - Minimising vehicle movements
 - People on site
 - Turning vehicles
 - Visibility
 - Signs and instructions



**Outline
Construction
Environmental
Management Plan
(O-CEMP)**

**Appendix A -
Proposed Sign Site
Characteristics**

Notes:

Archaeological & Built Heritage

For full list of all archaeological and architectural heritage sites relevant to sign locations refer to the following documents:

Part 8 Archaeological Report

Appendix 1 - Recorded Archaeological Sites Within the Overall Study Area

Appendix 3 - Recorded Architectural Heritage Sites Within the Overall Study Area

Local Ecology - Habitat Code

All habitat codes referenced in this document are as per their classification in 'A Guide to Habitats In Ireland by Julie A. Fossitt' published by The Heritage Council

BL3 – Buildings and artificial surfaces

GA2 – Amenity grassland (improved)

SL-01**Natura 2000 Sites**

SAC	Within
SPA	Distance to - 936 m

Archaeological & Built Heritage

Zone of Notification	Within
Relevant Structures	Treaty Stone Quay Wall

Local Ecology

Present Local Habitats	Location beside busy traffic intersection and presence of street lighting not conducive to suitable habitats.
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks**Preventative Measures**

Water Quality Impact due to proximity to the River Shannon	Refer to CEMP Sections 3.1 & 3.2
Vibration Impact potentially affecting sediment at quay walls and River Shannon	Refer to CEMP Sections 3.5
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8

SL-02**Natura 2000 Sites**

SAC	Within
SPA	Distance to - 958 m

Archaeological & Built Heritage

Zone of Notification	Within
Relevant Structures	Quay Wall

Local Ecology

Present Local Habitats	Location beside busy traffic intersection and presence of street lighting not conducive to habitat. Existing sign foundation indicates no impact on tree roots.
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks**Preventative Measures**

Water Quality Impact due to proximity to the River Shannon	Refer to CEMP Sections 3.1 & 3.2
Vibration Impact potentially affecting sediment at quay walls and River Shannon	Refer to CEMP Sections 3.5
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8

SL-03**Natura 2000 Sites**

SAC	Distance to - 88 m
SPA	Distance to - 1108 m

Archaeological & Built Heritage

Zone of Notification	Within
Relevant Structures	King Johns Castle

Local Ecology

Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks**Preventative Measures**

Noise Impact potentially affecting residents and wildlife

Refer to CEMP Sections 3.5

Invasive Species Impact

Refer to CEMP Sections 3.7

Potential Accidental Damage to Built Heritage

Refer to CEMP Sections 3.8

SL-05**Natura 2000 Sites**

SAC	Distance to - 182 m
SPA	Distance to - 1265 m

Archaeological & Built Heritage

Zone of Notification	Within
Relevant Structures	City Walls

Local Ecology

Present Local Habitats	Location in amenity grassland, beside buys road & roundabout and presence of street lighting not conducive to habitats.
Habitat Code GA2	
Invasive Species	None present at 2023-08-21

Site Specific Risks**Preventative Measures**

Noise Impact potentially affecting residents and wildlife

Refer to CEMP Sections 3.5

Invasive Species Impact

Refer to CEMP Sections 3.7

Potential Accidental Damage to Built Heritage

Refer to CEMP Sections 3.8

SL-06**Natura 2000 Sites**

SAC	Distance to - 72 m
SPA	Distance to - 986 m

Archaeological & Built Heritage

Zone of Notification	Within
Relevant Structures	Stone Wall, Pier & Railing Underground Burials

Local Ecology

Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks

Noise Impact potentially affecting residents and wildlife

Invasive Species Impact

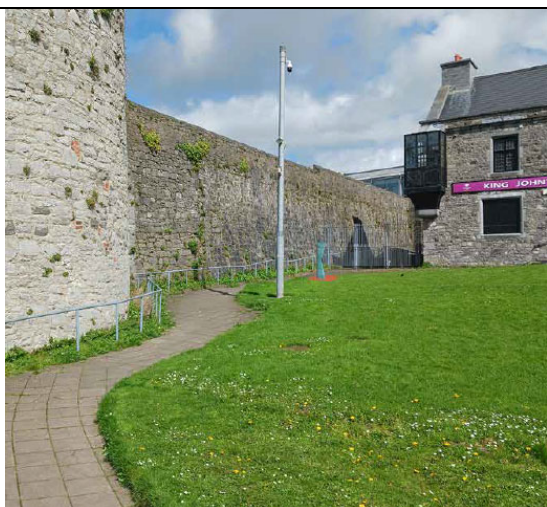
Potential Accidental Damage to Built Heritage

Preventative Measures

Refer to CEMP Sections 3.5

Refer to CEMP Sections 3.7

Refer to CEMP Sections 3.8

SL-07**Natura 2000 Sites**

SAC	Distance to - 23 m
SPA	Distance to - 1032 m

Archaeological & Built Heritage

Zone of Notification	Within
Relevant Structures	King Johns Castle

Local Ecology

Present Local Habitats	Regularly mowed amenity grassland with street lighting not conducive to habitats.
Habitat Code GA2	
Invasive Species	None present at 2023-08-21

Site Specific Risks

Noise Impact potentially affecting residents and wildlife

Invasive Species Impact

Potential Accidental Damage to Built Heritage


Preventative Measures

Refer to CEMP Sections 3.5


Refer to CEMP Sections 3.7


Refer to CEMP Sections 3.8


SL-09

	Natura 2000 Sites	
	SAC	Distance to - 54 m
	SPA	Distance to - 1480 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 176 m
	Relevant Structures	None
	Local Ecology	
Present Local Habitats	Regularly mowed amenity grassland with street lighting and location beside busy road and roundabout not conducive to habitats.	
Habitat Code GA2		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		Preventative Measures
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	


SL-10

	Natura 2000 Sites	
	SAC	Distance to - 25 m
	SPA	Distance to - 935 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	Court House & Railing
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		Preventative Measures
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	


SL-11	
	Natura 2000 Sites
	SAC Distance to - 37 m
	SPA Distance to - 925 m
	Archaeological & Built Heritage
	Zone of Notification Within
	Relevant Structures Potato Market wall & railing
Local Ecology	
Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21
Site Specific Risks	Preventative Measures
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8

SL-12	
	Natura 2000 Sites
	SAC Distance to - 113 m
	SPA Distance to - 1052 m
	Archaeological & Built Heritage
	Zone of Notification Within
	Relevant Structures Graveyard wall & railing
Local Ecology	
Present Local Habitats	Location beside busy traffic intersection and presence of street lighting not conducive to habitat.
Habitat Code BL3	
Invasive Species	None present at 2023-08-21
Site Specific Risks	Preventative Measures
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8

SL-13

	Natura 2000 Sites		
	SAC	Distance to - 35 m	
	SPA	Distance to - 950 m	
	Archaeological & Built Heritage		
	Zone of Notification	Within	
	Relevant Structures	Wall of St Mary's Graveyard	
	Local Ecology		
Present Local Habitats	Existing sign foundation indicates no impact on tree roots.		
Habitat Code BL3			
Invasive Species	None present at 2023-08-21		
Site Specific Risks		Preventative Measures	
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5	
Invasive Species Impact		Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage		Refer to CEMP Sections 3.8	

SL-15

	Natura 2000 Sites		
	SAC	Distance to - 6 m	
	SPA	Distance to - 950 m	
	Archaeological & Built Heritage		
	Zone of Notification	Within	
	Relevant Structures	Bollards	
	Local Ecology		
Present Local Habitats	None		
Habitat Code BL3			
Invasive Species	None present at 2023-08-21		
Site Specific Risks		Preventative Measures	
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5	
Invasive Species Impact		Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage		Refer to CEMP Sections 3.8	

SL-16

Natura 2000 Sites	
SAC	Distance to - 30 m
SPA	Distance to - 872 m
Archaeological & Built Heritage	
Zone of Notification	Within
Relevant Structures	Hunt Museum wall & railing
Local Ecology	
Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks**Preventative Measures**

Noise Impact potentially affecting residents and wildlife

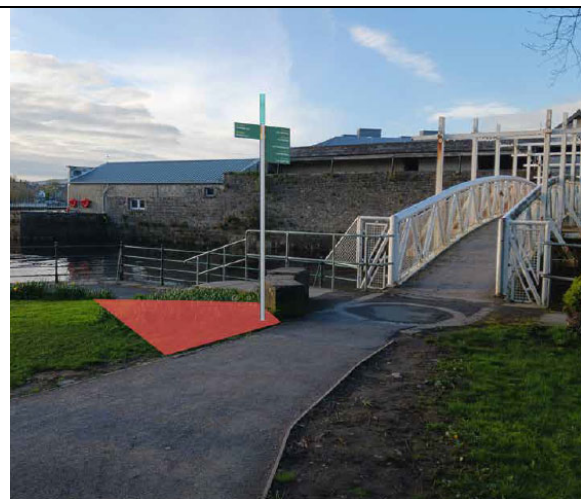
Refer to CEMP Sections 3.5

Invasive Species Impact

Refer to CEMP Sections 3.7

Potential Accidental Damage to Built Heritage

Refer to CEMP Sections 3.8

SL-17

Natura 2000 Sites	
SAC	Distance to - 15 m
SPA	Distance to - 856 m
Archaeological & Built Heritage	
Zone of Notification	Within
Relevant Structures	Sylvester O'Halloran bridge, Low stone wall
Local Ecology	
Present Local Habitats	Regularly mowed amenity grassland not conducive to habitats.
Habitat Code GA2	
Invasive Species	None present at 2023-08-21

Site Specific Risks**Preventative Measures**

Water Quality Impact due to proximity to the River Abbey

Refer to CEMP Sections 3.1 & 3.2

Vibration Impact potentially affecting sediment at quay walls and River Abbey

Refer to CEMP Sections 3.5

Noise Impact potentially affecting residents and wildlife

Refer to CEMP Sections 3.5


Invasive Species Impact

Refer to CEMP Sections 3.7


Potential Accidental Damage to Built Heritage

Refer to CEMP Sections 3.8

SL-18

	Natura 2000 Sites	
	SAC	Distance to - 71 m
	SPA	Distance to - 828 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	Hunt Museum
	Local Ecology	
	Present Local Habitats	None
	Habitat Code BL3	
	Invasive Species	None present at 2023-08-21
Site Specific Risks		
Preventative Measures		
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	

SL-20

	Natura 2000 Sites	
	SAC	Distance to - 25 m
	SPA	Distance to - 936 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	None
	Local Ecology	
	Present Local Habitats	None
	Habitat Code BL3	
	Invasive Species	None present at 2023-08-21
Site Specific Risks		
Preventative Measures		
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	


SL-22

Natura 2000 Sites	
SAC	Distance to - 140 m
SPA	Distance to - 1190 m
Archaeological & Built Heritage	
Zone of Notification	Within
Relevant Structures	None
Local Ecology	
Present Local Habitats	Regularly mowed amenity grassland with street lighting and location beside busy road and junction not conducive to habitats.
Habitat Code GA2	
Invasive Species	None present at 2023-08-21
Site Specific Risks	Preventative Measures
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7


SL-23

Natura 2000 Sites	
SAC	Within
SPA	Distance to - 1180 m
Archaeological & Built Heritage	
Zone of Notification	Within
Relevant Structures	Baal's Bridge Quay Wall
Local Ecology	
Present Local Habitats	Location beside busy traffic intersection and presence of street lighting not conducive to suitable habitats.
Habitat Code BL3	
Invasive Species	None present at 2023-08-21
Site Specific Risks	Preventative Measures
Water Quality Impact due to proximity to the River Abbey	Refer to CEMP Sections 3.1 & 3.2
Vibration Impact potentially affecting sediment at quay walls and River Abbey	Refer to CEMP Sections 3.5
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8

SL-24

	Natura 2000 Sites	
	SAC	Distance to - 18 m
	SPA	Distance to - 1146 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	Abbey Bridge Quay Wall
	Local Ecology	
Present Local Habitats	Location beside busy traffic intersection and presence of street lighting not conducive to suitable habitats.	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Water Quality Impact due to proximity to the River Abbey	Refer to CEMP Sections 3.1 & 3.2	
Vibration Impact potentially affecting sediment at quay walls and River Abbey	Refer to CEMP Sections 3.5	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	

SL-25

	Natura 2000 Sites	
	SAC	Distance to - 17 m
	SPA	Distance to - 1213 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	Quay Wall
	Local Ecology	
Present Local Habitats	Location beside busy road and presence of street lighting not conducive to suitable habitats.	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Water Quality Impact due to proximity to the River Abbey	Refer to CEMP Sections 3.1 & 3.2	
Vibration Impact potentially affecting sediment at quay walls and River Abbey	Refer to CEMP Sections 3.5	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	

SL-26

Natura 2000 Sites	
SAC	Distance to - 20 m
SPA	Distance to - 1380 m
Archaeological & Built Heritage	
Zone of Notification	Distance to - 120 m
Relevant Structures	None
Local Ecology	
Present Local Habitats	within 400m of a known Lesser Horseshoe Bat roost.
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks**Preventative Measures**

Water Quality Impact due to proximity to the Park Canal

Refer to CEMP Sections 3.1 & 3.2

Vibration Impact potentially affecting sediment at quay walls and Park Canal

Refer to CEMP Sections 3.5

Noise Impact potentially affecting residents and wildlife

Refer to CEMP Sections 3.5

Invasive Species Impact

Refer to CEMP Sections 3.7

SL-28

Natura 2000 Sites	
SAC	Distance to - 28 m
SPA	Distance to - 1070 m
Archaeological & Built Heritage	
Zone of Notification	Within
Relevant Structures	None
Local Ecology	
Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks**Preventative Measures**


Noise Impact potentially affecting residents and wildlife

Refer to CEMP Sections 3.5

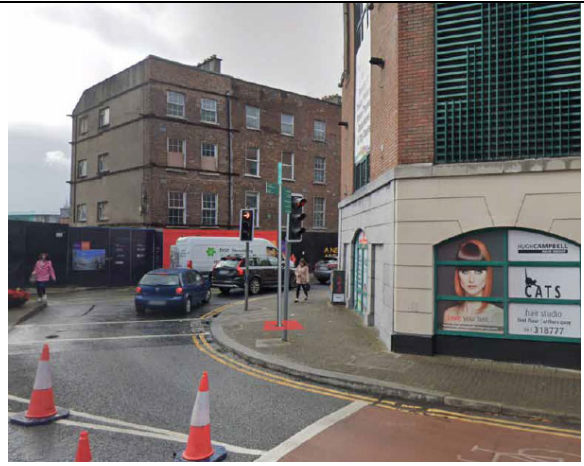
Invasive Species Impact

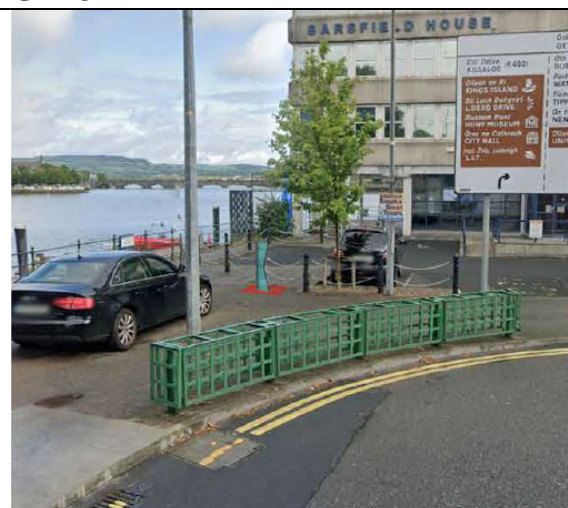
Refer to CEMP Sections 3.7

SL-29

	Natura 2000 Sites		
	SAC	Distance to - 155 m	
	SPA	Distance to - 1044 m	
	Archaeological & Built Heritage		
	Zone of Notification	Within	
	Relevant Structures	None	
	Local Ecology		
Present Local Habitats	None		
Habitat Code BL3			
Invasive Species	None present at 2023-08-21		
Site Specific Risks		Preventative Measures	
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5	
Invasive Species Impact		Refer to CEMP Sections 3.7	

SL-31

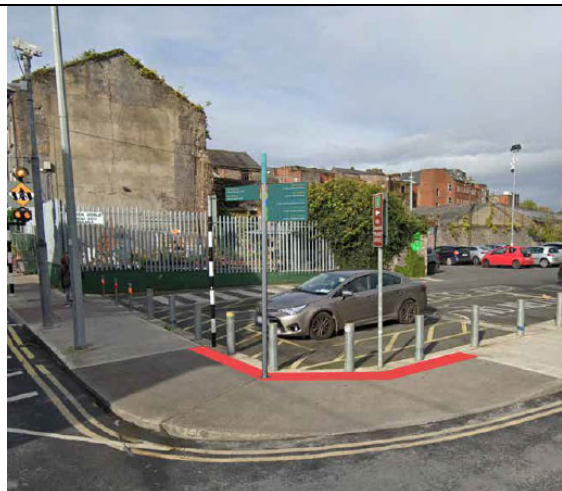
	Natura 2000 Sites		
	SAC	Distance to - 101 m	
	SPA	Distance to - 778 m	
	Archaeological & Built Heritage		
	Zone of Notification	Distance to - 8 m	
	Relevant Structures	None	
	Local Ecology		
Present Local Habitats	None		
Habitat Code BL3			
Invasive Species	None present at 2023-08-21		
Site Specific Risks		Preventative Measures	
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5	
Invasive Species Impact		Refer to CEMP Sections 3.7	

SL-32

Natura 2000 Sites	
SAC	Within
SPA	Distance to - 732 m
Archaeological & Built Heritage	
Zone of Notification	Within
Relevant Structures	Bollards
Local Ecology	
Present Local Habitats	Location beside busy road and presence of street lighting not conducive to suitable habitats.
Habitat Code BL3	
Invasive Species	None present at 2023-08-21
Site Specific Risks	
Water Quality Impact due to proximity to the River Shannon	Refer to CEMP Sections 3.1 & 3.2
Vibration Impact potentially affecting sediment at quay walls and River Shannon	Refer to CEMP Sections 3.5
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8

SL-33

Natura 2000 Sites	
SAC	Distance to - 124 m
SPA	Distance to - 732 m
Archaeological & Built Heritage	
Zone of Notification	Distance to - 2 m
Relevant Structures	Bollard
Local Ecology	
Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21
Site Specific Risks	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8

SL-34**Natura 2000 Sites**

SAC	Distance to - 220 m
SPA	Distance to - 767 m

Archaeological & Built Heritage

Zone of Notification	Within
Relevant Structures	None

Local Ecology

Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks

Noise Impact potentially affecting residents and wildlife

Invasive Species Impact

Preventative Measures

Refer to CEMP Sections 3.5

Refer to CEMP Sections 3.7

SL-36**Natura 2000 Sites**

SAC	Distance to - 105 m
SPA	Distance to - 627 m

Archaeological & Built Heritage

Zone of Notification	Distance to - 78 m
Relevant Structures	Bollards

Local Ecology

Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks

Noise Impact potentially affecting residents and wildlife

Invasive Species Impact

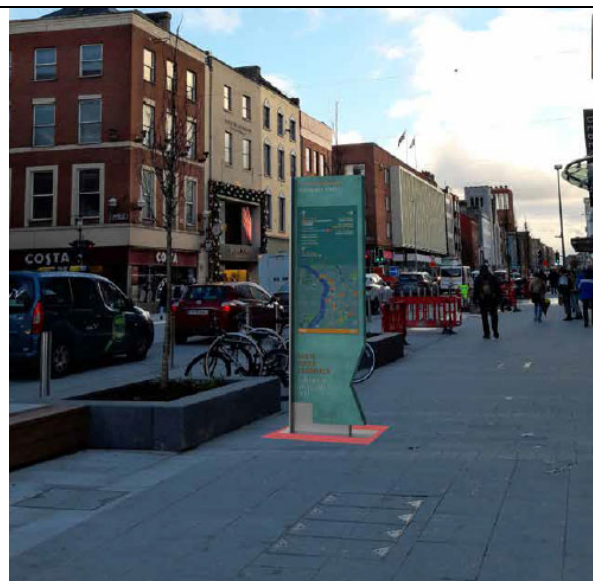
Potential Accidental Damage to Built Heritage

Preventative Measures

Refer to CEMP Sections 3.5

Refer to CEMP Sections 3.7

Refer to CEMP Sections 3.8

SL-37**Natura 2000 Sites**

SAC	Distance to - 165 m
SPA	Distance to - 618 m

Archaeological & Built Heritage

Zone of Notification	Distance to - 30 m
Relevant Structures	None – Pre installed foundation in-place.

Local Ecology

Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks

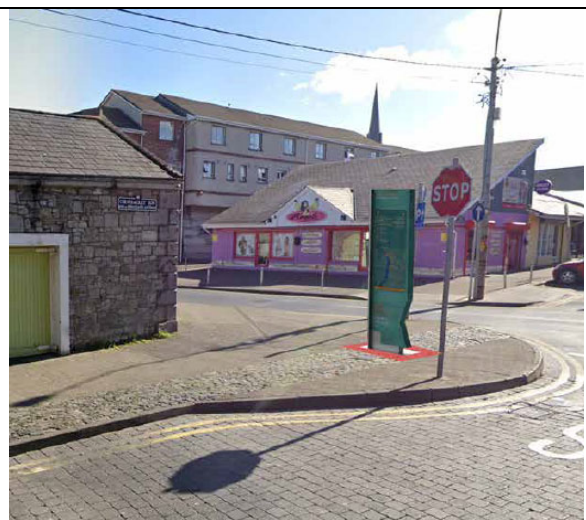
Noise Impact potentially affecting residents and wildlife

Invasive Species Impact

Preventative Measures

Refer to CEMP Sections 3.5

Refer to CEMP Sections 3.7

SL-38**Natura 2000 Sites**

SAC	Distance to - 350 m
SPA	Distance to - 826 m

Archaeological & Built Heritage

Zone of Notification	Distance to - Within
Relevant Structures	Milk Market City Wall Ground Motif

Local Ecology

Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks

Noise Impact potentially affecting residents and wildlife

Invasive Species Impact

Potential Accidental Damage to Built Heritage


Preventative Measures

Refer to CEMP Sections 3.5


Refer to CEMP Sections 3.7


Refer to CEMP Sections 3.8


SL-39


	Natura 2000 Sites	
	SAC	Distance to - 386 m
	SPA	Distance to - 1061 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	Graveyard wall and railing
	Local Ecology	
Present Local Habitats	Existing sign foundation indicates no impact on tree roots.	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	


SL-41


	Natura 2000 Sites	
	SAC	Distance to - 468 m
	SPA	Distance to - 751 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	None
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	


SL-42		
	Natura 2000 Sites	
	SAC	Distance to - 250 m
	SPA	Distance to - 643 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	None
	Local Ecology	
	Present Local Habitats	None
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	

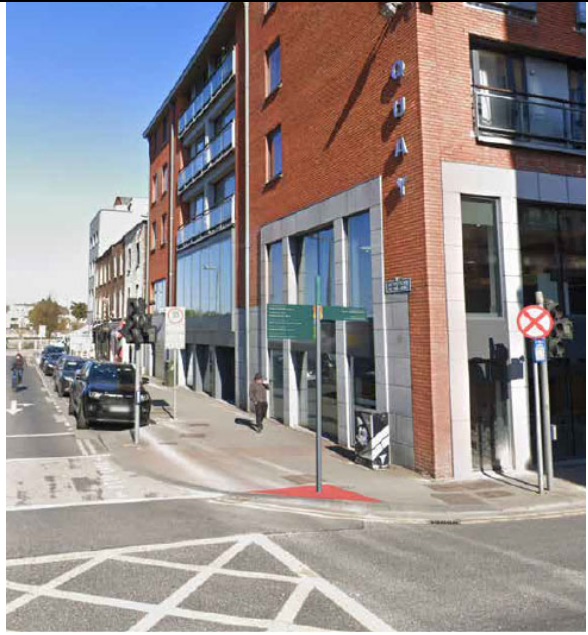
SL-43		
	Natura 2000 Sites	
	SAC	Distance to - 196 m
	SPA	Distance to - 560 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	None – Pre installed foundation in-place.
	Local Ecology	
	Present Local Habitats	None
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	


SL-44		
	Natura 2000 Sites SAC Distance to - 326 m SPA Distance to - 481 m	
	Archaeological & Built Heritage Zone of Notification Distance to - 173 m Relevant Structures None	
	Local Ecology Present Local Habitats Location beside busy road and presence of street lighting not conducive to suitable habitats. Habitat Code BL3 Invasive Species None present at 2023-08-21	
	Site Specific Risks Noise Impact potentially affecting residents and wildlife Invasive Species Impact	Preventative Measures Refer to CEMP Sections 3.5 Refer to CEMP Sections 3.7

SL-45		
	Natura 2000 Sites SAC Distance to - 536 m SPA Distance to - 653 m	
	Archaeological & Built Heritage Zone of Notification Distance to - 35 m Relevant Structures None	
	Local Ecology Present Local Habitats None Habitat Code BL3 Invasive Species None present at 2023-08-21	
	Site Specific Risks Noise Impact potentially affecting residents and wildlife Invasive Species Impact	Preventative Measures Refer to CEMP Sections 3.5 Refer to CEMP Sections 3.7


SL-46	
	Natura 2000 Sites SAC Distance to - 325 m SPA Distance to - 547 m
	Archaeological & Built Heritage Zone of Notification Distance to - 77 m Relevant Structures None
	Local Ecology Present Local Habitats None Habitat Code BL3 Invasive Species None present at 2023-08-21
	Site Specific Risks
	Preventative Measures
	Noise Impact potentially affecting residents and wildlife Refer to CEMP Sections 3.5
	Invasive Species Impact Refer to CEMP Sections 3.7

SL-47	
	Natura 2000 Sites SAC Distance to - 210 m SPA Distance to - 398 m
	Archaeological & Built Heritage Zone of Notification Distance to – 186 m Relevant Structures None – Pre installed foundation in-place.
	Local Ecology Present Local Habitats None Habitat Code BL3 Invasive Species None present at 2023-08-21
	Site Specific Risks
	Preventative Measures
	Noise Impact potentially affecting residents and wildlife Refer to CEMP Sections 3.5
	Invasive Species Impact Refer to CEMP Sections 3.7


SL-48		
	Natura 2000 Sites	
	SAC	Distance to - 101 m
	SPA	Distance to - 267 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 311 m
	Relevant Structures	None
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		
Preventative Measures		
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	


SL-49		
	Natura 2000 Sites	
	SAC	Distance to - 234 m
	SPA	Distance to - 341 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 280 m
	Relevant Structures	Existing buildings on O'Connell St
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		
Preventative Measures		
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	


SL-50

	Natura 2000 Sites		
	SAC	Distance to - 115 m	
	SPA	Distance to - 428 m	
	Archaeological & Built Heritage		
	Zone of Notification	Distance to - 182 m	
	Relevant Structures	None	
	Local Ecology		
	Present Local Habitats	None	
Habitat Code BL3			
Invasive Species	None present at 2023-08-21		
Site Specific Risks		Preventative Measures	
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5	
Invasive Species Impact		Refer to CEMP Sections 3.7	

SL-51

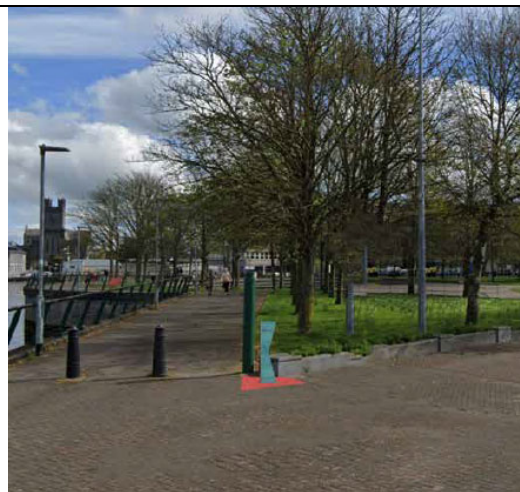
	Natura 2000 Sites		
	SAC	Distance to - 130 m	
	SPA	Distance to - 493 m	
	Archaeological & Built Heritage		
	Zone of Notification	Distance to - 175 m	
	Relevant Structures	Existing buildings on Henry St	
	Local Ecology		
	Present Local Habitats	None	
Habitat Code BL3			
Invasive Species	None present at 2023-08-21		
Site Specific Risks		Preventative Measures	
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5	
Invasive Species Impact		Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage		Refer to CEMP Sections 3.8	

SL-52		
	Natura 2000 Sites	
	SAC	Distance to - 19 m
	SPA	Distance to - 377 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to – 277 m
	Relevant Structures	Quay Wall
	Local Ecology	
Present Local Habitats	Location beside busy road and presence of street lighting not conducive to habitat. Existing sign foundation indicates no impact on tree roots.	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Water Quality Impact due to proximity to the River Shannon	Refer to CEMP Sections 3.1 & 3.2	
Vibration Impact potentially affecting sediment at quay walls and River Shannon	Refer to CEMP Sections 3.5	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	

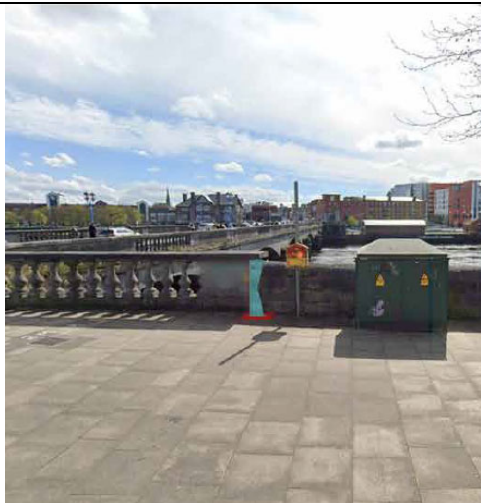
SL-53		
	Natura 2000 Sites	
	SAC	Distance to - 77 m
	SPA	Distance to - 465 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to – 242 m
	Relevant Structures	Sarsfield Bridge & Steps
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Water Quality Impact due to proximity to the River Shannon	Refer to CEMP Sections 3.1 & 3.2	
Vibration Impact potentially affecting sediment at quay walls and River Shannon	Refer to CEMP Sections 3.5	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	

SL-54

Natura 2000 Sites	
SAC	Distance to - 78 m
SPA	Distance to - 492 m
Archaeological & Built Heritage	
Zone of Notification	Distance to – 225 m
Relevant Structures	Sarsfield Bridge
Local Ecology	
Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21
Site Specific Risks	Preventative Measures
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8

SL-55

Natura 2000 Sites	
SAC	Distance to - 15 m
SPA	Distance to - 587 m
Archaeological & Built Heritage	
Zone of Notification	Distance to – 139 m
Relevant Structures	Bollards
Local Ecology	
Present Local Habitats	Location beside busy road and presence of street lighting not conducive to habitat.
Habitat Code BL3	
Invasive Species	None present at 2023-08-21
Site Specific Risks	Preventative Measures
Water Quality Impact due to proximity to the River Shannon	Refer to CEMP Sections 3.1 & 3.2
Vibration Impact potentially affecting sediment at quay walls and River Shannon	Refer to CEMP Sections 3.5
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8

SL-56

Natura 2000 Sites	
SAC	Within
SPA	Distance to - 481 m
Archaeological & Built Heritage	
Zone of Notification	Distance to – 289 m
Relevant Structures	Sarsfield Bridge & wall Quay Wall
Local Ecology	
Present Local Habitats	Location beside busy road and presence of street lighting not conducive to habitat.
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks**Preventative Measures**

Water Quality Impact due to proximity to the River Shannon

Refer to CEMP Sections 3.1 & 3.2

Vibration Impact potentially affecting sediment at quay walls and River Shannon

Refer to CEMP Sections 3.5

Noise Impact potentially affecting residents and wildlife

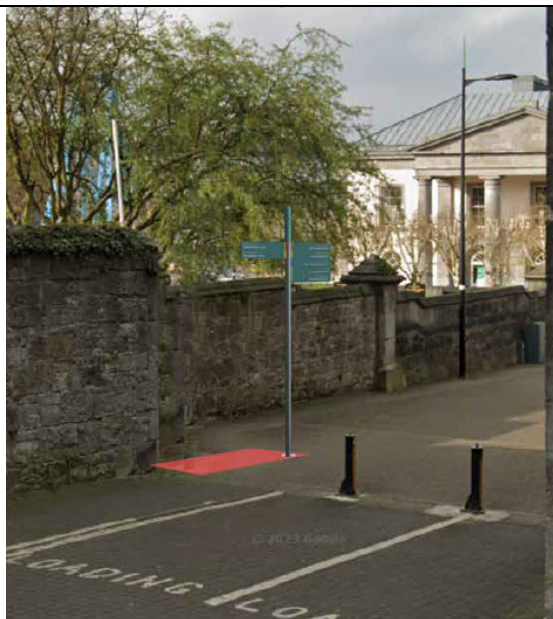
Refer to CEMP Sections 3.5

Invasive Species Impact

Refer to CEMP Sections 3.7

Potential Accidental Damage to Built Heritage

Refer to CEMP Sections 3.8

SL-57

Natura 2000 Sites	
SAC	Distance to - 72 m
SPA	Distance to - 986 m
Archaeological & Built Heritage	
Zone of Notification	Within
Relevant Structures	Wall of St Mary's Graveyard
Local Ecology	
Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21

Site Specific Risks**Preventative Measures**

Noise Impact potentially affecting residents and wildlife


Refer to CEMP Sections 3.5


Invasive Species Impact

Refer to CEMP Sections 3.7

Potential Accidental Damage to Built Heritage

Refer to CEMP Sections 3.8

SL-58		
	Natura 2000 Sites	
	SAC	Within
	SPA	Distance to - 501 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to – 277 m
	Relevant Structures	Sarsfield Bridge & wall Quay Wall
	Local Ecology	
Present Local Habitats	Location beside busy road and presence of street lighting not conducive to habitat.	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Water Quality Impact due to proximity to the River Shannon	Refer to CEMP Sections 3.1 & 3.2	
Vibration Impact potentially affecting sediment at quay walls and River Shannon	Refer to CEMP Sections 3.5	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	

SL-59		
	Natura 2000 Sites	
	SAC	Within
	SPA	Distance to - 13 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 657 m
	Relevant Structures	None
	Local Ecology	
Present Local Habitats	Location beside busy road and presence of street lighting not conducive to habitat.	
Habitat Code GA2		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	

SL-60**Natura 2000 Sites**

SAC	Within
SPA	Distance to - 22 m

Archaeological & Built Heritage

Zone of Notification	Distance to – 253 m
Relevant Structures	Sarsfield Bridge & wall Quay Wall

Local Ecology

Present Local Habitats	Location beside busy road and presence of street lighting not conducive to habitat.
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Habitat Code BL3

Invasive Species	None present at 2023-08-21
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Site Specific Risks**Preventative Measures**

Water Quality Impact due to proximity to the River Shannon

Refer to CEMP Sections 3.1 & 3.2

Vibration Impact potentially affecting sediment at quay walls and River Shannon

Refer to CEMP Sections 3.5

Noise Impact potentially affecting residents and wildlife

Refer to CEMP Sections 3.5

Invasive Species Impact

Refer to CEMP Sections 3.7

Potential Accidental Damage to Built Heritage

Refer to CEMP Sections 3.8

SL-61**Natura 2000 Sites**

SAC	Distance to - 26 m
SPA	Distance to - 56 m

Archaeological & Built Heritage

Zone of Notification	Distance to – 521 m
Relevant Structures	None

Local Ecology

Present Local Habitats	Location beside busy road and presence of street lighting not conducive to habitat.
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Habitat Code BL3

Invasive Species	None present at 2023-08-21
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Site Specific Risks**Preventative Measures**

Water Quality Impact due to proximity to the River Shannon

Refer to CEMP Sections 3.1 & 3.2

Vibration Impact potentially affecting sediment at quay walls and River Shannon

Refer to CEMP Sections 3.5


Noise Impact potentially affecting residents and wildlife

Refer to CEMP Sections 3.5

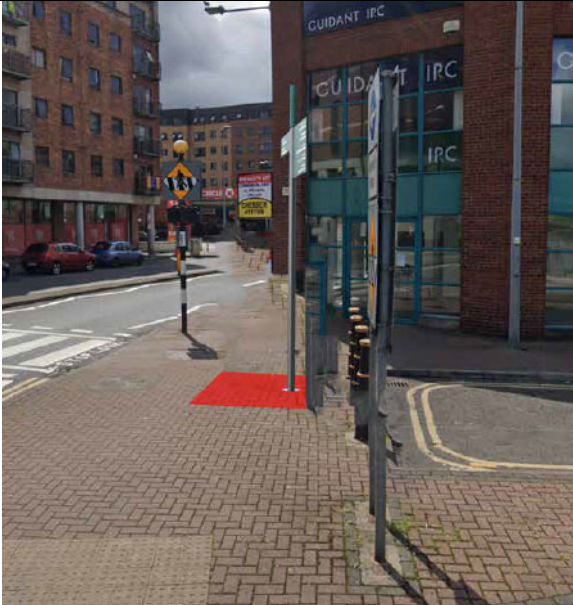
Invasive Species Impact

Refer to CEMP Sections 3.7

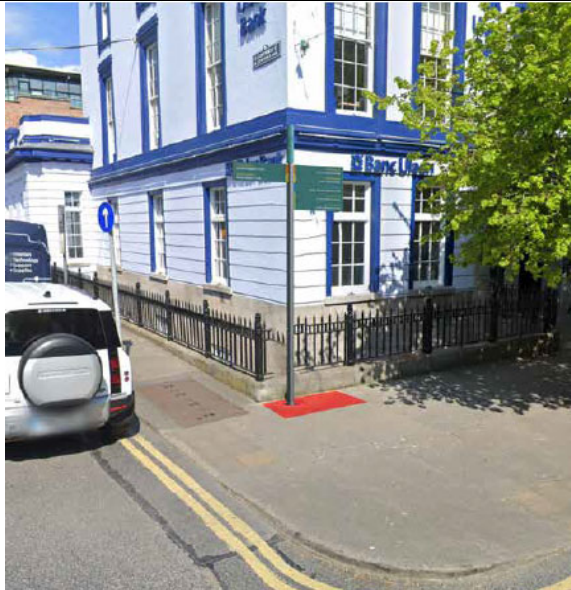
SL-62

	Natura 2000 Sites	
	SAC	Distance to - 38 m
	SPA	Distance to - 60 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 521 m
	Relevant Structures	None
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		Preventative Measures
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5
Invasive Species Impact		Refer to CEMP Sections 3.7


SL-63

	Natura 2000 Sites	
	SAC	Distance to - 51 m
	SPA	Distance to - 42 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 660 m
	Relevant Structures	None
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		Preventative Measures
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5
Invasive Species Impact		Refer to CEMP Sections 3.7


SL-65

	Natura 2000 Sites		
	SAC	Distance to - 222 m	
	SPA	Distance to - 277 m	
	Archaeological & Built Heritage		
	Zone of Notification	Distance to - 370 m	
	Relevant Structures	Ulster Bank Building Upstand wall & railing	
	Local Ecology		
Present Local Habitats	None		
Habitat Code BL3			
Invasive Species	None present at 2023-08-21		
Site Specific Risks		Preventative Measures	
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5	
Invasive Species Impact		Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage		Refer to CEMP Sections 3.8	


SL-66

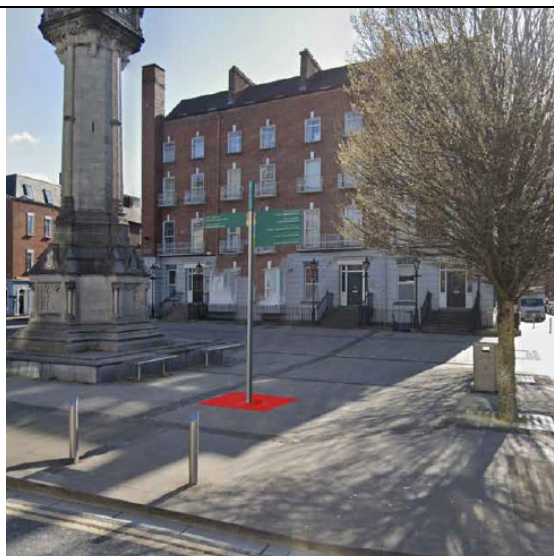
	Natura 2000 Sites		
	SAC	Distance to - 266 m	
	SPA	Distance to - 271 m	
	Archaeological & Built Heritage		
	Zone of Notification	Distance to - 464 m	
	Relevant Structures	Existing building on the corner of O'Connell St & Mallow St Potential presence of underground vaults	
	Local Ecology		
Present Local Habitats	None		
Habitat Code BL3			
Invasive Species	None present at 2023-08-21		
Site Specific Risks		Preventative Measures	
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5	
Invasive Species Impact		Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage		Refer to CEMP Sections 3.8	

SL-68

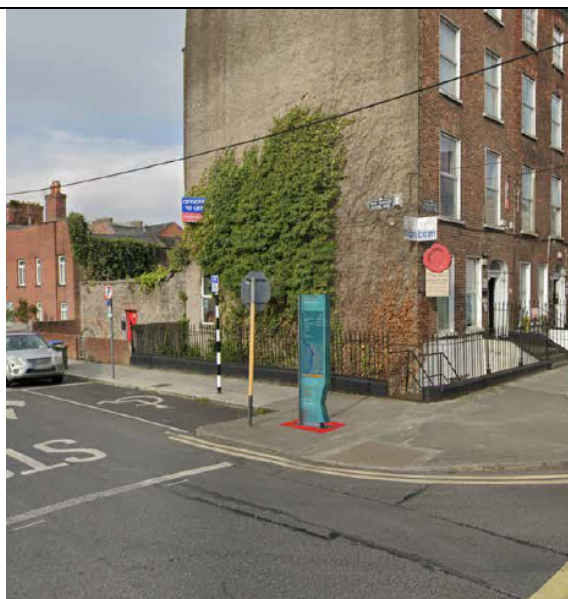
	Natura 2000 Sites	
	SAC	Distance to - 331 m
	SPA	Distance to - 322 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 630 m
	Relevant Structures	Upstand wall & railing
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	

SL-70


	Natura 2000 Sites	
	SAC	Distance to - 481 m
	SPA	Distance to - 472 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 507 m
	Relevant Structures	Upstand wall & railing of Peoples Park
	Local Ecology	
Present Local Habitats	Site situated beside busy street and presence of street lighting not conducive to habitats.	
Habitat Code GA2		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	


SL-73

Natura 2000 Sites	
SAC	Distance to - 426 m
SPA	Distance to - 460 m
Archaeological & Built Heritage	
Zone of Notification	Distance to - 282 m
Relevant Structures	Tait's Clock
Local Ecology	
Present Local Habitats	Location beside busy traffic intersection and presence of street lighting not conducive to suitable habitats.
Habitat Code BL3	
Invasive Species	None present at 2023-08-21
Site Specific Risks	
Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8


SL-74

Natura 2000 Sites	
SAC	Distance to - 417 m
SPA	Distance to - 426 m
Archaeological & Built Heritage	
Zone of Notification	Distance to - 372 m
Relevant Structures	Upstand wall & railing
Local Ecology	
Present Local Habitats	None
Habitat Code BL3	
Invasive Species	None present at 2023-08-21
Site Specific Risks	
Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5
Invasive Species Impact	Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8


SL-75		
	Natura 2000 Sites	
	SAC	Distance to - 461 m
	SPA	Distance to - 466 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 371 m
	Relevant Structures	None
	Local Ecology	
Present Local Habitats	Location in regularly mowed amenity grassland not conducive to habitats.	
Habitat Code GA2		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		
Preventative Measures		
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	

SL-76		
	Natura 2000 Sites	
	SAC	Distance to - 508 m
	SPA	Distance to - 506 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 371 m
	Relevant Structures	None
	Local Ecology	
Present Local Habitats	Location in regularly mowed amenity grassland not conducive to habitats.	
Habitat Code GA2		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		
Preventative Measures		
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	

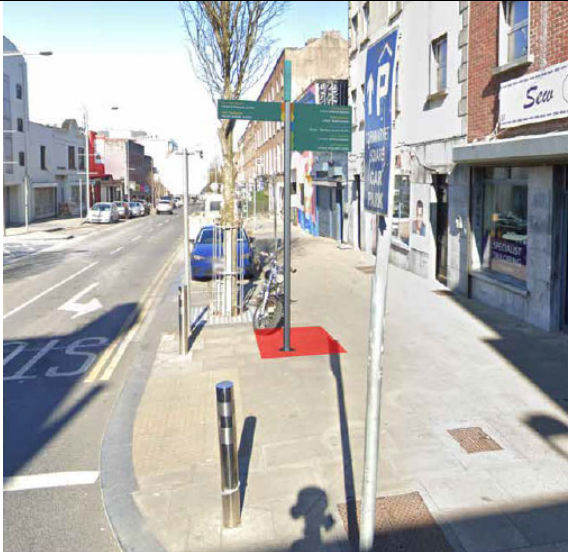
SL-79

	Natura 2000 Sites	
	SAC	Distance to - 602 m
	SPA	Distance to - 644 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 207 m
	Relevant Structures	None
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	

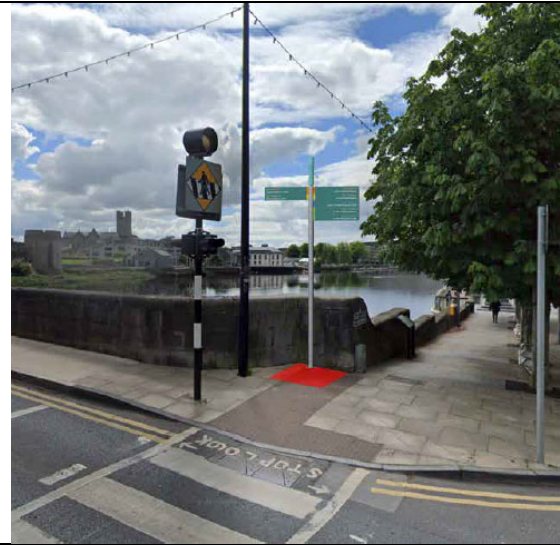
SL-80

	Natura 2000 Sites	
	SAC	Distance to - 608 m
	SPA	Distance to - 620 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to - 330 m
	Relevant Structures	Stone pier and upstand wall & railing of Peoples park
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	


SL-81

	Natura 2000 Sites	
	SAC	Distance to - 526 m
	SPA	Distance to - 705 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	None
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		Preventative Measures
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5
Invasive Species Impact		Refer to CEMP Sections 3.7


SL-83

	Natura 2000 Sites	
	SAC	Within
	SPA	Distance to - 969 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	Thomond Bridge Quay Wall
	Local Ecology	
Present Local Habitats	Location beside busy traffic intersection and presence of street lighting not conducive to suitable habitats.	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		Preventative Measures
Water Quality Impact due to proximity to the River Shannon		Refer to CEMP Sections 3.1 & 3.2
Vibration Impact potentially affecting sediment at quay walls and River Shannon		Refer to CEMP Sections 3.5
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5
Invasive Species Impact		Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage		Refer to CEMP Sections 3.8


SL-84

	Natura 2000 Sites	
	SAC	Distance to - 227 m
	SPA	Distance to - 486 m
	Archaeological & Built Heritage	
	Zone of Notification	Distance to – 92 m
	Relevant Structures	Existing buildings on O'Connell St
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	


SL-85

	Natura 2000 Sites	
	SAC	Distance to - 54 m
	SPA	Distance to - 1202 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	City Walls Street Light
	Local Ecology	
Present Local Habitats	Location in regularly mowed amenity grassland not conducive to habitats.	
Habitat Code GA2		
Invasive Species	None present at 2023-08-21	
Site Specific Risks	Preventative Measures	
Noise Impact potentially affecting residents and wildlife	Refer to CEMP Sections 3.5	
Invasive Species Impact	Refer to CEMP Sections 3.7	
Potential Accidental Damage to Built Heritage	Refer to CEMP Sections 3.8	

SL-86

	Natura 2000 Sites	
	SAC	Distance to - 14 m
	SPA	Distance to - 1168 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	None
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		Preventative Measures
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5
Invasive Species Impact		Refer to CEMP Sections 3.7

SL-87

	Natura 2000 Sites	
	SAC	Distance to - 12 m
	SPA	Distance to - 1067 m
	Archaeological & Built Heritage	
	Zone of Notification	Within
	Relevant Structures	Treaty Stone Thomond Bridge
	Local Ecology	
Present Local Habitats	None	
Habitat Code BL3		
Invasive Species	None present at 2023-08-21	
Site Specific Risks		Preventative Measures
Water Quality Impact due to proximity to the River Shannon		Refer to CEMP Sections 3.1 & 3.2
Vibration Impact potentially affecting sediment at quay walls and River Shannon		Refer to CEMP Sections 3.5
Noise Impact potentially affecting residents and wildlife		Refer to CEMP Sections 3.5
Invasive Species Impact		Refer to CEMP Sections 3.7
Potential Accidental Damage to Built Heritage		Refer to CEMP Sections 3.8