2023

Construction Environmental Management Plan



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Construction Environmental Management Plan

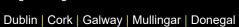
Athlone Urban Design and Regeneration Framework Plan

Document Control Sheet

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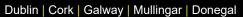




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1 Introduction

1.1 Background & Development Description

ORS were commissioned by Westmeath County Council to complete a Construction Environmental Management Plan (CEMP) for the proposed works associated with Athlone Urban Design and Regeneration Framework Plan.

PART XI OF THE PLANNING AND DEVELOPMENT ACT, 2000 (as amended)

PART 8 OF THE PLANNING AND DEVELOPMENT REGULATIONS, 2001 (as amended)

Pursuant to the requirements of the above, Westmeath County Council proposes to undertake the following works:

Public Realm Enhancement and Associated Works within an area encompassing c.0.0425ha immediately to the north of Athlone Castle (a National Monument and protected structure – reference Number RPS 070) and within an Architectural Conservation Area (Athlone Town), Athlone, Co. Westmeath.

The proposed development will consist of works at the northwest and proximate to the main entrance to Athlone Castle and include the following:

- 1. Removal of existing ramps, steps, railings, and relocation of public lighting
- 2. Public Realm enhancement to include hard and soft landscaping, footpaths, ramps, steps and public lighting;
- 3. Signage
- 4. Accommodation works (including utility provision, drainage and services);
- 5. Other associated works

The site is bounded by Athlone Castle to the South, Athlone Town bridge, also known as Shannon Road Bridge (a regional Monument and protected structure - Reference Number RPS 004) to the North, The Shannon quays to the East and Market Place to the West.

The Proposed scheme has undergone **Appropriate Assessment Screening** under the Habitats Directive (92/43/EEC) and screening for **Environmental Impact Assessment** under the EIA Directive 2014/52/EU.



1.2 Objective of Construction Environmental Management Plan

This preliminary Construction Environmental Management Plan (CEMP) is an outline document of the proposed approach to ensure that construction activities have the least impact on the surrounding environment. Below is an outline of the objectives:

- Ensure appropriate measures to prevent or mitigate nuisance emissions of noise and dust and uncontrolled discharges to water during construction.
- Ensure that all activities on site are effectively managed to minimise the generation of waste and to maximise opportunities for reuse and recycling of waste materials.
- Ensure that all wastes generated onsite are removed from site by an appropriately permitted waste contractor and that all wastes are disposed of at an appropriate licensed/permitted facility in accordance with the Waste Management Act 1996 as amended.
- Ensure that an adequate system is in place for the management, storage, segregation and recycling of waste.
- Minimise the impact on local traffic conditions resulting from construction activities.
- Outline how the measures proposed above shall be implemented.

This CEMP has been prepared for the planning phase of the development to outline the general considerations of the works, from initial enabling works to sub-structure and superstructure construction with regards to waste and the environment. A contractor is yet to be appointed to this project. This document will be revised upon appointment of an experienced and competent contractor, and the development will be constructed in accordance with the environmental management measures contained herein.

The CEMP, due to its structure and nature, will also require constant updating and revision throughout the construction period. Therefore, this is a working document and will be developed further prior to and during construction.

1.3 Responsibility

A contractor has not yet been appointed to carry out the proposed project. Once appointed it will be the responsibility of the contractor to maintain and update the construction stage CEMP throughout the work and this updated document will be issued to Westmeath City Council.



2 Site Details

2.1 Site Location

The proposed development consists of a public realm enhancement to the area immediately to the North of Athlone Castle (National Monument RPS No. 070/ NIAH No. 15000352) and is located within an Architectural Conservation area (Athlone Town ACA). Many of the surrounding structures of the site are listed on Westmeath County Council's record of Protected Structures. The proposed development will consist of works adjacent to a protected structure and National Monument, the site is bounded by the facades of Athlone Castle (National Monument RPS No. 070/ NIAH No. 15000352) and works are proposed to the base of Athlone Castle's main entrance to the Northwest corner. The site encompasses 0.0425 HA to the North of Athlone Castle (National Monument RPS No. 070/ NIAH No. 15000352), bounded by the Castle (National Monument RPS No. 070/ NIAH No. 15000352) to the South, Athlone Town bridge, also known as Shannon Road Bridge (Regional Monument RPS No. 004 /NIAH No. 15000010) to the North, The Shannon quays to the East and Market Place to the West. The site slopes upwards by approximately 5 metres from the Shannon Quays to the higher level at Market square.

An approximate outline of the subject site is provided in **Figure 2.1** below.





2.2 Environmental Site Conditions

2.2.1 Topography

The ground level along the length of the site has a gradient running from west to east. There's a ground level change from 36.87m OD at the eastern site boundary to 41.89m OD at the western extremity of the site on Castle Street/ Market Place. This accounts for a 5.02m elevation change over a *ca.* 40m distance.

2.2.2 Geology & Hydrology

The site is located adjacent to the River Shannon, a sixth order river, with a southerly flow direction. The site is situated within the Shannon (Upper)_120 sub-basin. **Table 2.1** below outlines the Water Framework Directive (WFD) and ecological status of the subbasin. The sub-basins is located within the Shannon (Upper)_SC_100 sub-catchment, which is situated in hydrometric area 26G, the Upper Shannon. Hydrometric area 26 is part of the Shannon International River Basin District (IRBD).

Table 2.1: Ecological & WFD Status of Sub-basin

Table 2 2000 g.ca. or 2 canade or can back.	Shannon (Upper)_120		
Ecological Potential/ WFD Status	Poor		
Q value	4		
WFD Risk	At Risk		
Sources of Risk	Peat extraction increasing sediment loading		

A cross reference with the EPA database states that the underlying groundwater body at the proposed site is the Athlone West (Code: IE_SH_G_014) and is classed as being of 'Good' status and is 'Not at Risk'.

A review of the GSI online map database indicates that the site is noted as overlaying made ground. These are soils are located in built up areas often containing infill material and heavily modified soil horizons. Given the sites proximity to the River Shannon it is likely that the original soil description for the area is alluvial.

According to the Geological Survey of Ireland's map viewer, the underlying lithology is characterised as being massive, unbedded limes-mudstones. They are characterised as dominantly pale-grey, crudely bedded or massive limestone with a thickness of 300-500m. The formation is called the Waulsortian Limestone and is part of the Dinantian Carboniferous series. A fault line running northwest to southeast is situated *ca.* 1.4km southwest of the proposed site.

The site is underlain by a locally important bedrock aquifers that is moderately productive in local zones. The groundwater vulnerability for the site is 'Moderate' indicating bedrock at 3-5m, with an overlying subsoil with a 'Moderate' permeability which is overlain by made ground.



Given the scale and purpose of the development it is not envisaged that the site will pose a long-term risk to the underlying groundwater.

2.2.3 Flood Risk

OPW Flood Maps were reviewed to provide a high level of information on any potential flood risk and on previous flood events on or within the vicinity of the site. According to the maps, and reports, the site has had no incidence of flooding however several flooding events have occurred nearby, the closest being on the opposite bank of the Shannon. The engineers report from 2005 for this flooding indicated that the "Shannon overflows its banks every year after heavy rainfall".

According to the CFRAM Maps of the site the proposed site is not located within any flood extents, due to the significant elevation change noted along the extent of the site. However, flood extents are situated directly to the east of the site. Given the intended use of the area as a public amenity space the development is deemed to be compatible with flooding. As mentioned though flooding is not foreseen at the site and as such the area has not been included for protection within the Athlone Flood Alleviation Scheme

2.2.4 Noise Pollution

The EPA has developed strategic noise maps under the Environmental Noise Directive (END) 2002/49/EC, which requires members to develop strategic noise maps and noise management action plans for transport noise sources every 5 years, (i.e. roads, railways and airports) and industry. The sites is covered by the mapped noise extents of the R446 situated to the north. The majority of the site is covered within the 65-69 dB extents with an area to the west covered within the 60-64 dB extents.

There will be occasions where heightened noise emission is required, this has been accounted for in **Section 5.2** which outlines the management plan for mitigating noise pollution during the construction phase of this development.

2.2.5 Designated Sites

Following a review of the National Parks and Wildlife Service website, it was noted that the is eight designated sites within a 10km radius of the site. Two of these sites is designated a Special Protection Area (SPA), Special Area of Conservation (SAC) and a Natural Heritage Area (NHA). The sites a listed below in **Table 2.2**.

Table 2.2: Designated Sites Within 10km Radius

Site	Designation	Location	
Lough Ree	SAC, SPA, NHA	1.3km N	
River Shannon Callows	SAC, NHA	0.5km S	
Middle Shannon Callows	SPA	0.5 km S	



Carrickynaghtan Bog	NHA	3.3 km S
Crosswood Bog	SAC, NHA	4.5 km E
Carn Park Bog	SAC	6.9 km E
Castlesampson Esker	SAC, NHA	8.3 km W
Ballynamona Bog & Corkip Lough	SAC	9.1 km W

The River Shannon Callow SAC and Middle Shannon Callow SPA is hydrologically connected to the site with the development site situated *ca.* 500m upstream of extents of the site. The Shannon Callows is a long and diverse site which consists of seasonally flooded, semi-natural, lowland wet grassland, along and beside the river between the towns of Athlone and Portumna. It is approximately 50 km long and averages about 0.75 km wide (reaching 1.5 km wide in places). Along much of its length the site is bordered by raised bogs (many, but not all, of which are subject to large-scale harvesting), esker ridges and limestone-bedrock hills. The soils grade from silty alluvial to peat. **Table 2.3** outlines the qualifying interests of the River Shannon Callow SAC and Middle Shannon Callow SPA.

Table 2.3: Qualifying Interests of Designated Sites

River Shannon Callow SAC	Middle Shannon Callow SPA
Molinia Meadows	Whooper Swan (Cygnus cygnus)
Lowland Hay Meadows	Wigeon (Anas penelope)
Alkaline Fens	Corncrake (Crex crex)
Limestone Pavement*	Golden Plover (Pluvialis apricaria)
Alluvial Forests*	Lapwing (Vanellus vanellus)
Otter (Lutra lutra)	Black-tailed Godwit (Limosa limosa)
	Black-headed Gull (Chroicocephalus ridibundus)
	Wetland and Waterbirds

^{*}Priority Environments/ Species

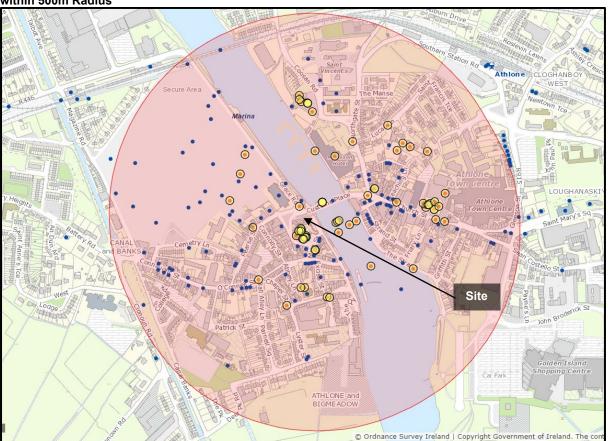
2.2.6 Archaeology

The site is located within a Zone of Archaeological Potential and an Architectural Conservation Area. Sites of archaeological importance are present adjacent to the site with the medieval Athlone Castle located to the sites south. A castle has been present at this site since the 1200 with the larger old town wall constructed later. This wall encompasses land both sides of the River Shannon. In total there are 83 no. sites of archaeological importance within a 500m radius of the site with a further 131 no. sites of architectural importance noted. **Figure 2.2** indicates the location of all archaeological (sites & monuments) and architectural heritage sites within a 500m radius of the proposed site. The national inventories don't indicate any notable



historical sites are the proposed development site. However, that's not to say that during the construction phase archaeological findings wont be uncovered.

Figure 2.2: Archaeological (Orange Dot) (sites & monuments) and Architectural Heritage (Blue Dot) sites within 500m Radius



2.2.7 Historical Maps

The publicly available OSI Archived Maps viewer was reviewed to identify the previous land use on and adjacent to the site. The first maps dating back to 1837 indicate that the current siting of the Custome Place Bridge was not constructed at this time. An older Anglo-Norman bridge was in use at this time and is located further south of the existing one. This ran from Main Street on the west bank to Bridge Street on the east bank. This meant that all traffic crossing the Shannon would originally have past further to the south of the proposed site on Quay Street. This original bridge was demolished following the completion of the current bridge in 1840. The previous bridge also contained three flour mills across its span which likewise were demolished in the 1840's.

Following the realignment of the bridge in the 1840's the current configuration of the town appears to be unchanged to the present day. The maps indicate the presence of a structure named the Grand Canal Store to the east of the proposed site. The current land-use at the site as an amenity area has been present since 1995 orthographic study was undertaken.

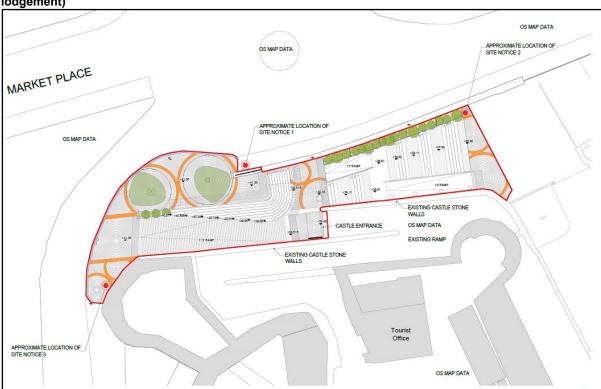
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3 Development Description

3.1 Phasing of the Development

This Construction Environmental Management Plan (CEMP) will outline the sequence of works. A construction program of 3 months is anticipated for the project, subject to contractor programming. A layout plan of the development is detailed in **Figure 3.1** below.

Figure 3.1: Site Layout Plan (A refinement of this site layout may be circulated by the architect prelodgement)



The proposed works include the enhancement of the stepped and ramped access, tree and hedge planting and lighting. These improvements will also include the upgrading of pedestrian facilities, new decorative paving to pavements, carriageways with decorative paving and soft landscaping.

The project is to be completed in one phase as detailed below:

Pre-Construction & Demolition Phase – Site clearance

- Site set-up, hoarding, temporary services.
- Ground works and landscaping
- Demolition of existing structures; ramps, steps and railings, which are not part of the original fabric of the location.
- Relocation of existing public lighting in order to priorities the flow of pedestrians



Soil and subsoil exposure is to be limited with a focus on practicing "strip and cover" construction methodology to minimise sediment erosion

Phase 1 - Construction

- Installation of street lighting, vegetation and decorative landscape architecture pieces.
- Construction of the steps leading from Market Square/ Castle Street down to Quay Street
- Decorative paving pattern with granite or similar steps
- Installation of stormwater drainage network
- Wayfinding signage

Ancillary Works – which will consist of:

- Drainage networks
- Street lighting
- Landscaping

3.2 Pre-Construction Activities

The main contractor will establish site setup, appropriate signing, hoarding, security fencing and welfare facilities.

3.3 Site Set-Up and Hoarding

Perimeter hoarding will be provided around the site to provide a barrier against unauthorised access from the public areas. Controlled access points to the site, in the form of gates or doors, will be kept locked during any time that these areas are not monitored (e.g., outside working hours).

The hoarding will be well-maintained and may be painted. Any hoardings may contain graphics portraying project information. The site hoarding may be branded using the appointed contractor's logos etc. Some marketing images or information boards may also be placed on the hoarding. Access to site will be controlled and monitored outside of site working hours. All personnel working on site must have a valid Safe Pass card and the relevant CSCS cards.

A suitably secure site compound will be set up, wherever the restricted confines of the site will allow and will facilitate the efficient delivery of materials and personnel to the site. Most likely this compound will be situated to the east of the site in what is currently a carpark, a decision on this will be made by the final contractor. This compound is to include material storage, office, meeting room and staff welfare facilities. The final location of the site compound will be highlighted in the Construction Environmental Management Plan to be issued to Westmeath County Council by the appointed main contractor.



3.4 Site Access, Deliveries and Traffic Management

The site will be accessed via The Quay, subject to the final contractor methodology. The existing car parking space to the east of the site on Quay Street will provide adequate space for the parking and unloading of delivery vehicles.

An Outline Traffic Management Plan, (TMP) has been developed by ORS and has been submitted under document number 210754-ORS-XX-XX-RP-TR-7d-001.

3.5 Construction Sequence of New Structures

3.5.1 Public Realm Enhancement

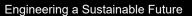
The exact construction specifications of the proposed works are yet to be finalised. This section of the CEMP will be updated once a main contractor is appointed and a definitive construction program is established, in advance of the commencement of the project.

A summary of operations for the construction phase is listed in **Table 3.2** below.

Table 3.2: Summary of operations expected for the proposed public realm enhancement External envelope will require the following Internal work will require the following operations: operations: Blockwork/Brickwork N/A Shuttering Installation of drainge networks **Above ground external operations:** Stone cladding Paving Corten steel installations Installation of landscape features Landscaping Signs & road markings Construction of footpaths & cyclelane

3.6 Site Working Hours

Working hours on site are subject to the Westmeath County Council planning permission and conditions. Typical working hours shall only be carried out between the hours of 08:00 - 18:00 Monday to Friday, and 08:00 to 14:00 on Saturdays. No works are to be undertaken on Sundays or bank holidays. However, it may be necessary for some construction operations to be undertaken outside these times, for example, service diversions and connections, concrete finishing and fit-out works, etc.





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Likewise, deliveries will be confined to these work hours also. There may be occasions where it is necessary to make certain deliveries outside these times, for example, where large loads are limited to road usage outside peak times. Extensions to the working hours for a specified period of time may be permeated upon written agreement with the Westmeath Planning Authority.

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4 Waste Management Plan

4.1 Background

The Waste Management Plan (WMP) will address the following points:

- Analysis of waste arisings / material surpluses
- Specific waste management objectives for the project including the potential to re-use existing on-site materials for further use.
- Methods proposed for prevention, reuse and recycling
- Waste handling procedures
- Waste storage procedures
- Waste disposal procedures
- Waste auditing
- Record keeping

4.2 Policy and Legislation

The principles and objectives to deliver sustainable waste management for this project have been incorporated in the preparation of this report and are based on the following strategic objectives:

- Environmental Protection Agency Act 1992
- Waste Management Acts 1996 to 2005
- Waste Management (Collection Permit) Regulations 2007 (SI No. 820 of 2007)
- Waste Management (Collection Permit) Amendment Regulations 2008 (SI No. 87 of 2008), as amended.
- The Waste Framework Directive (Directive 2008/98/EC)
- Department of the Environment, Heritage and Local Government Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects – July 2006
- National Roads Authority, guidelines for The Management of Waste From National Road
 Construction Projects 2014

In reference to the above legislation the below hierarchy has been adapted for this site:

- Reduction of the amount of waste generated by the construction process.
- Segregation of waste will be implemented during the construction phase of the development to enable easy re-use and recycling, wherever possible.
- Recycle waste material where feasible, including the use of excess excavations as fill material, recycling of various waste fractions such as metals, packaging etc.



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4.3 Waste Minimisation

The Construction Project Manager shall take primary responsibility for the minimisation and prevention of waste generation. The following initiatives should be implemented to assist in this task:

- Materials to be ordered on an "as needed" basis to prevent oversupply and material build up on site.
- Appropriate storage facilities should be provided to ensure materials are correctly handled and stored thus reducing damage to materials.
- Material ordering shall coincide with the program of works to reduce the need to store
 materials on site. However, given current industry issues with regards to labour and
 material shortages there maybe incidents of materials needing to be stored on site to
 ensure continuate of materials and to streamline labour productivity.
- Sub-contractors will be responsible for the management of their wastes.

4.4 Ongoing Review of WMP

It is proposed that a review of waste management practices will form part of regular site inspection audits to be carried out by the construction contractor. This information should be forwarded to the Construction Project Manager to assist in determining the best methods for waste minimisation, reduction, re-use, recycling and disposal as the works progress.

4.5 Management of Construction/Demolition Waste Disposal

It is proposed to establish a dedicated and secure compound on site for the setting down of bins / skips to facilitate waste storage prior to disposal.

The site manager on behalf of the construction contractor will ensure that all staff are made aware of their responsibility in relation to waste management on site. The Construction Project Manager shall inform staff by means of clear signage and verbal instruction of housekeeping and waste segregation practices.

It will be the responsibility of the Construction Project Manager to ensure that a written record of all quantities and nature of waste removed off site are maintained on site in a Waste File to be kept at the Project Office.

It is the responsibility of the Construction Project Manager or nominated person that all contracted waste hauliers employed at the site hold an appropriate Waste Collection Permit for the waste streams which will be generated and that all waste materials are disposed of at an appropriately licensed or permitted waste facility.

Typical waste materials anticipated to be generated throughout the course of the project are classified under Section 17 – Construction and Demolition Wastes – of the List of Waste (LoW) as detailed in **Table 4.1** overleaf.



Table 4.1: Description of Waste

Description of Waste	EWC Code
Concrete	17 01 01
Bricks	17 01 02
Mixture of concrete, bricks tiles & ceramics	17 01 07
Wood, Glass and Plastic	17 02
Wood	17 02 01
Glass	17 02 02
Plastic	17 02 03
Bituminous mixtures, coal tar and products	17 03
Bituminous mixtures containing other than those mentioned in 17 03 01	17 03 02
Bituminous Mixtures including Coal Tar and Tarred products	17 03
Metals (including their alloys)	17 04
Copper, Bronze, Brass	17 04 01
Aluminium	17 04 02
Lead	17 04 03
Zinc	17 04 04
Iron and Steel	17 04 05
Tin	17 04 06
Mixed Metals	17 04 07
Cables other than those mentioned in 17 04 10	17 04 11
Other Construction and Demolition Materials	17 09
Mixed Construction and Demolition Waste other than those mentioned in 17 09	17 09 04
01, 17 09 02, 17 09 03	
Wood other than that mentioned in 20 01 37	20.01 38
Soil and Stones	17 05 04
Mixed Municipal Waste	20 03 01

Materials will be collected and stored in separate, clearly labelled skips, within a predefined waste storage area in the site compound and that these materials will be collected by a permitted waste contractor and disposed of at an appropriately licensed/permitted waste facility.

Prior to the commencement of the project the Construction Project Manager will instruct an appropriately permitted waste contractor to collect the waste and ensure that the waste contractor and licensed/permitted waste facility hold relevant waste permits and licenses.

All waste soils shall be classified as inert, non-hazardous or hazardous in accordance with the EPA's Waste Classification Guidance – List of Waste & Determining if Waste is Hazardous or Non-Hazardous prior to being exported off site. This is to ensure that the waste material is transferred by an appropriately permitted waste collection permit holder and brought to an appropriately permitted or licensed waste facility.



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4.6 Onsite Waste Reuse and Recycling Management

Each waste stream will have a dedicated area for segregation to allow easy reuse or recycling of materials. Collections for these will be as usage requires. Where possible recyclable waste will be kept dry and clean to allow processing. Recyclable waste will be transferred by suitable means to a licenced/permitted facility. Material for recycling will be segregated into suitable containers which have adequate access for collection vehicles.

4.7 Record Keeping

It is the responsibility of the Construction Project Manager or his/her delegate that a written record of all quantities and natures of wastes reused / recycled during the project are maintained in a waste file at the Project office. Details to be included are as follows:

- Contractors and subcontractors on Site every day
- All main contractor employees on Site
- All plant and equipment on Site
- All visitors [including Health and Safety procedures] and any associated reports
- Weather every day
- Activity during the day
- Invoices showing standard of material installed adheres to specifications
- Results of concrete cube, slump and other testing
- Any accident and incident reports, safety audits internal or external
- Safety statement and safety file
- Site programme
- Any other items required by the Contractor to maintain on site by law, building regulations, building control or health and safety.
- Minutes of all site meetings
- Any applicable certificates

In the event of import of soil, stone for any element of the proposed development a Certificate of Registration or Waste Facility Permit as per the Waste Management Regulations 2007 is required.

4.8 Waste Collector and Waste Facility Details

Table 4.2 overleaf is a template for summarising the names and permit numbers of the waste collectors and waste facilities which will be utilised for off-site disposal of the various waste-streams arising from the development. This table will be updated as the project advances and waste streams change.



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Table 4.2: Template Suitable Qualified Waste Collectors and Waste Facilities

Table 4.2: Template Suitable Q Description of Waste	EWC Code		Collector	Waste Facility		
		Name	NWCP	Name	WFP/ WL No.	
Concrete, Bricks, Tiles and	17 01					
Ceramics						
Concrete	17 01 01					
Bricks	17 01 02					
Mixture of concrete, bricks	17 01 07					
tiles & ceramics						
Wood, Glass and Plastic	17 02					
Wood	17 02 01					
Glass	17 02 02					
Plastic	17 02 03					
Bituminous mixtures, coal	17 03					
tar and products						
Bituminous mixtures	17 03 02					
containing other than those						
mentioned in 17 03 01						
Bituminous Mixtures	17 03					
including Coal Tar and						
Tarred products						
Metals (including their	17 04					
alloys)						
Copper, Bronze, Brass	17 04 01					
Aluminium	17 04 02					
Lead	17 04 03					
Zinc	17 04 04					
Iron and Steel	17 04 05					
Tin	17 04 06					
Mixed Metals	17 04 07					
Cables other than those	17 04 11					
mentioned in 17 04 10						
Other Construction and	17 09					
Demolition Materials						
Mixed Construction and	17 09 04					
Demolition Waste other						
than those mentioned in 17						
09 01, 17 09 02, 17 09 03						
Wood other than that	20.01 38					
mentioned in 20 01 37						
Soil and Stones	17 05 04					
Mixed Municipal Waste	20 03 01					



5 Environmental Management Plan

5.1 Background

A preliminary risk assessment was carried out for the proposed site location in accordance with the Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition, produced by the London Authorities Noise Action Forum, July 2016. This assessment took into account factors relating to the proximity of the site to sensitive receptors and rated the level of nuisance anticipated with scheduled work practices.

Following the completion of this risk assessment, available in **Appendix B**, the proposed development was determined to be a low to moderate-risk site. This section outlines suitable measures to minimise nuisance noise and dust emissions in order to minimise any impact of the proposed developments on surrounding receptors.

5.2 Noise

The Contractor will be required to restrict noise levels to the following levels:

70dB:

- Monday-Friday 07:00 to 19:00 hrs
- Saturday 08:00 to 14:00 hrs

45dB

- Monday-Friday 19:00 to 07:00 hrs
- Saturday 00:00 to 08:00 and 14:00 to 00:00
- Sunday All day

To minimise noise from construction operations, no heavy construction equipment/ machinery (to include pneumatic drills, construction vehicles, generators, etc) shall be operated on or adjacent to the construction site before 08:00 or after 18:00, Monday to Friday, and before 08:00 or after 14:00 on Saturdays. No activities shall take place in site on Sundays or Bank Holidays. No activity, which would reasonably be expected to cause annoyance to residents in the vicinity, shall take place on site between the hours of 18:00 and 08:00am.

The proposed development will be obliged to comply with BS 5228 "Noise Control on Construction and open sites Part 1". WCB Construction Ltd. shall implement the following measures to eliminate or reduce noise levels where possible:

- All site staff shall be briefed on noise mitigation measures and the application of best practicable means to be employed to control noise.
- All staff should be briefed on the complaint's procedure, the mitigation requirement and their responsibilities to register and escalate complaints received.
- Good Quality site hoarding is to be erected to maximise the reduction in noise levels.
- Contact details of the contractor and site manager shall be displayed to the public, together with the permitted operating hours.
- Material and plant loading and unloading shall only take place during normal working



hours.

- Ensure that each item of plant and equipment complies with the noise limits quoted in the relevant European Commission Directive 2000/14/EC.
- Fit all plant and equipment with appropriate mufflers or silencers of the type recommended by the manufacturer.
- Use all plant and equipment only for the tasks for which it has been designed.
- Locate movable plant away from noise sensitive receptors.
- Avoid the transfer of noise and vibration from demolition activities to adjoining occupied buildings through cutting any vibration transmission path or by structural separation of buildings.
- Ensure a written notice is received from the Westmeath County Council Planning Department when applying for extensions to normal working hours.

5.3 Dust and Air Quality

Dust prevention measures will be put in place for any particulate pollution. The extent of dust generation under construction activities being carried out is dependent on environmental factors such as rainfall, wind speed and wind direction. The most likely sources of dust generation at this site include soil stripping and demolition of structures, which are not part of the original fabric of the location, for the renovation works and the sawing of concrete throughout the duration of the project. A serious of control measures listed below will be undertaken to ensure dust emission does are minimised at the site boundary.

Control Measures are outlined as follows:

- Materials will be ordered and delivered on an "as needed" basis to avoid storage of materials on site.
- The contractor will spray water on the surface of all roads in the vicinity of the site if required in order to minimise dust generation from the construction activities.
- Appropriate dust suppression will be employed to prevent fugitive emissions affecting those occupying neighbouring properties or pathways.
- Restrict vehicle speeds to 15 kmph as high vehicle speeds cause dust to rise.
- Stockpiles are to be run parallel with the prevailing wind to minimise airborne erosion.
- Covers are to be provided over soil stockpiles when high wind and dry weather are encountered if required.
- All consignments containing material with the potential to cause air pollution being transported by skips, lorries, trucks or tippers shall be covered during transit on and off site.
- Street and footpath cleaning shall be undertaken during the demolition and ground works phase to minimise dust emissions.
- No materials shall be burned on-site.
- Only wet cut concrete saws are to be used on site to minimise silica dust.
- To maximise the efficiency of the construction phase, minimise the duration of this phase and the restriction to public access to areas of open space within the town centre the construction phase will be undertaken following a sequential "strip and cover" approach



that will expose soils and sub surface only when the replacement capping layer is ready and in-situ to be placed immediately over the exposed soils and sub-surface. This will provide for the replacement of ground cover on an ongoing basis and thereby reducing areas restricted to public access as the construction phase proceeds.

5.4 Surface Water and Groundwater Protection

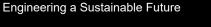
The main pollutants with the potential to impact water receptors are silt, fuel/oil, concrete and chemicals. There are steps outlined below to eliminate contamination of site surface water runoff.

- Harmful materials such as fuels, oils, greases, paints and hydraulic fluids must be stored in bunded compounds well away from storm water drains and gullies.
- Refuelling of machinery will be conducted in a designated refuelling area that will be a safe distance from watercourses. For large or immoveable machinery the use of drip trays will be used contain any spillage.
- Runoff from machine service and concrete mixing areas must not enter storm water drains and gullies leading off-site.
- Stockpiles of sands and gravel are to be avoid, where possible, and if necessary should be kept to minimum size, well away from storm water drains and gullies leading off-site.
- Open excavations to be backfilled immediately following installation of services/ foundations etc.
- Spill kits and hydrocarbon absorbent pads will be located throughout the site and beside the designated refuelling bunds.
- To maximise the efficiency of the construction phase, minimise the duration of this phase and the restriction to public access to areas of open space within the town centre the construction phase will be undertaken following a sequential "strip and cover" approach that will expose soils and sub surface only when the replacement capping layer is ready and in-situ to be placed immediately over the exposed soils and sub-surface. This will provide for the replacement of ground cover on an ongoing basis and thereby reducing areas restricted to public access as the construction phase proceed.
- Materials will be ordered and delivered on an "as needed" basis to avoid storage of materials on site.
- As a standard best practice construction measure silt fencing and geofabric may be used within the footprint of the project.

5.5 Protection of Ecological Receptors

An evaluation of the potential impacts of the proposed development with regard to the surrounding environ concluded that the site is hydrologically connected to the River Shannon Callow SAC and Middle Shannon Callow SPA which commences *ca.* 500m downstream of the site.

A screening statement in support of Appropriate Assessment has been undertaken and a finding of no likely significant effects on Natura 2000 sites has been determined. There will be





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no potential for impacts arising from the construction or operation phase of the project to give rise to impacts on water quality on the two identified Natura 2000 sites within the zone of influence of the project. Given the absence of impact pathways and the potential for interactions between the project and these Natura 2000 sites there will be no potential for the project to result in likely significant effects to these Natura 2000 sites. Environmental Screenings will go on public file so will be lodged along with all planning documents.

Before construction commences confirmation should be received from Westmeath County Council on the requirement for an Environmental/ Ecological Clerk of Works (ECoW). If it is agreed that an ECoW is necessary, then an appropriately qualified ECoW will be employed for the duration of the Construction Contract. The ECoW must be a member of the Chartered Institute of Ecology and Environmental Management (CIEEM) or equivalent body.

If necessary, the ecologist performing the ECoW role will attend the site on a weekly basis to check that all works are being completed to the appropriate standards. This will form a key element in the delivery of the environmental protection measures at project stage.

The following assessments may or may not be required and confirmation from Westmeath County Council should be obtained prior to the commencement of Works:

- Habitat Survey within project area prior to works commencing to confirm and map any invasive species are present and develop appropriate response.
- Prior to works commencing undertake an otter survey along the riverbank to confirm no otter holts are present.
- Monitoring and reporting including remedial actions for mitigation measures.

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6 Outline Traffic Management Plan

6.1 Background

An outline Traffic Management Plan (TMP) was developed by ORS and was submitted for the proposed project. Refer to document no. 210754-ORS-XX-XX-RP-TR-7d-001. This outline Construction TMP is designed to facilitate access to the site by plant, machinery, and work vehicles during collections/deliveries and to minimise traffic impacts of construction to residents in the vicinity of the site.

6.2 Outline Traffic Management Plan

The construction phase TMP has been prepared in accordance with the following best practices publications and demonstrates compliance with the requirements of the Health and Safety Authority:

- (1) Chapter 8 of the Traffic Signs Manual and the Safety, Health & Welfare at Work (Construction) Regulations Department of Transport
- (2) Temporary Traffic Management Design Guidance Department of transport, Tourism and Spot.

The main contractor will be required to implement monitoring measures to confirm the effectiveness of the mitigation measures outlined in the TMP. The TMP shall address the following issues:

- Site Access & Egress
- Traffic Management Signage
- Routing of Construction Traffic / Road Closures
- Timings of Material Deliveries to Site
- Traffic Management Speed Limits
- Road Cleaning
- Road Condition
- Road Closures
- Enforcement of Construction Traffic Management Plan
- Details of Working Hours and Days
- Details of Emergency plan
- Communication
- Construction Methodologies
- Particular Construction Impacts.

6.3 Construction Entrance and Construction Traffic Control

6.3.1 Access in

The proposed construction entrance shall be from Main Street onto Quay Street to the south of the proposed site. A site gate will be constructed to the sites south and delivery vehicles will



gain access to the site via this. All deliveries and construction staff will be directed to this entrance. Upon the arrival of deliveries, a qualified site contact/ banksman will direct traffic safely into the construction site and facilitate the safe navigation of larger construction vehicles as required.

Strong lines of communication with hauliers, strict delivery schedules and just-in-time delivery methods will be in operation to ensure no more than two trucks will visit the site at any one time. It is envisaged that strict adherence to these protocols will ensure that no queuing will occur on Main Street and Quay Street.

6.3.2 Access Out

When vehicles are due to depart from the site the qualified site contact/ banksman will ensure the roadway is safe to proceed and will communicate with the driver in the cab. The proposed construction exit from the site will be the same as the entrance on to the site.

The main contractor is required to ensure that the provision of adequate guarding and lighting appropriate to the circumstances. Traffic signs should be placed in advance of the works area on both sides to ensure adequate warning to the general public and maintained, when necessary, they should be operated as reasonably required for the safe guidance or direction of the public with regard to the needs of people with disabilities. The main contractor will comply with Regulation 97 of the Safety, Health and Welfare at Work (Construction) Regulations 2013.

Access to the construction site will only be to authorised persons. During afterhours, security will be employed by the main contractors to ensure no unauthorised access.

6.4 Deliveries to Site / Site Access

The site entrance will be gated with access only permitted for site vehicles and plant movements when necessary.

Deliveries of materials to site will be planned and programmed to ensure that the materials are only delivered when required by adopting a 'just in time', lean construction management approach. There will be periods where multiple vehicle deliveries will be required, e.g., site fill material under roads, houses and landscape areas, pre-cast concrete and large concrete pours. These will be planned well in advance and no queuing of vehicles allowed on the public road at the entrance to the site. Supply chain to be directed as not to travel in convoys greater than three at any time.

All off-loading of material will take place within the site, remote from the public road and access via the agreed access construction point only. Bulk deliveries to take place outside of peak traffic hours within a six-day week as to minimise impact on the existing road network.

Access control: The contractor will carry out a visitor induction briefing for all visitors or other persons who need access to the construction area. All visitors to the site will be required to have current 'Safe Pass' cards.

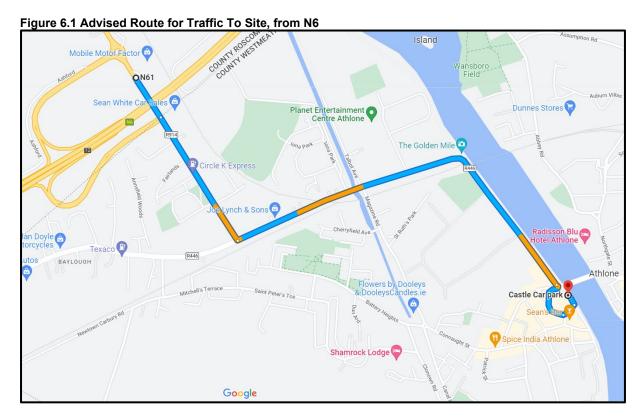


Sign Management: Signs are to comply with statutory requirements on public roads. Other construction sites may be carrying out construction activity at the same time as the subject site. It is therefore imperative that directions to each site are distinctly identifiable.

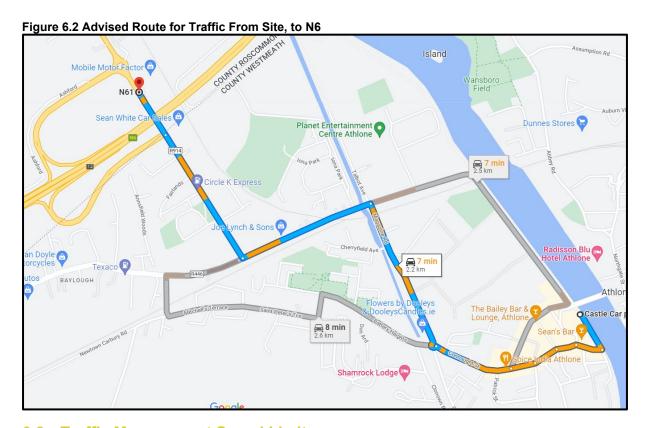
6.5 Advised Routing of Construction Traffic

The following is an advised route for construction traffic due to the one-way system in operation in Athlone town. However, construction traffic is not solely confined to utilising this route.

Construction traffic will be advised to access the site from the north via the N6, N61, R914 and R446 which will provide access to the roundabout at Custome Place Bridge. From here traffic will head south onto Castle Street and take the first left onto Main Street which will deliver vehicles to the site entrance gate on Quay street. The advised traffic route is outlined in **Figure 6.1** below.



On departure from the site traffic will head south on Quay street before taking a right onto St. Peter's Port. Traffic will continue straight onto for *ca.* 800m before reaching a roundabout. From here traffic will take the third exit onto Magazine Road which leads onto the R446. From here traffic will retrace its footsteps back to the N6. **Figure 6.2** below summarises the advised outbound journey.



6.6 Traffic Management Speed Limits

Adherence to posted/ legal speed limits will be emphasised to all contractors and subcontractors during induction training.

Drivers of construction vehicles / HGVs will be advised that vehicular movements in locations, such as local community areas, shall be restricted to 50 km/h. Special speed limits of 30 km/h shall be implemented for construction traffic in sensitive areas such as school locations. Such recommended speed limits will only apply to construction traffic and shall not apply to general traffic. The adjacent quay street is a pedestrian friendly zone with low speed limits, which will help reduce safety concerns with exiting traffic.

6.7 Road Cleaning

Road sweeping operations to remove any project related dirt and material deposited on the road network by construction / delivery vehicles will be utilised as required. All material collected will be disposed to a licensed waste facility.

The following additional measures will be taken to ensure that the site, public roads and surroundings are kept clean and tidy:

- A regular program of site tidying will be established to ensure a safe and orderly site
- Food waste will be strictly controlled on all parts of the site
- Mud spillages on roads and footpaths outside the site will be cleaned regularly and will
 not be allowed to accumulate.



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Wheels, if required, should be cleaned down before exiting site

6.8 Road Condition

The higher volume of heavy vehicle traffic movements and the nature of the payload may create problems to the local road network in terms of:

- Fugitive losses from wheels, trailers or tailgates.
- Localised areas of subgrade and wearing surface failure.

The main contractors shall ensure that:

- Loads of materials leaving each site will be evaluated and covered if considered necessary to minimise potential dust impacts during transportation.
- The transportation contractor shall take all reasonable measures while transporting waste or any other materials likely to cause fugitive loses from a vehicle during transportation to and from site, including but not limited to:
- Covering of all waste or material with suitably secured tarpaulin/ covers to prevent loss and utilisation of enclosed units to prevent loss.
- Roads forming part of the haul routes will be monitored visually throughout the construction period and a truck mounted vacuum mechanical sweeper will be assigned to roads along the haul route as required.

6.9 Enforcement of TMP

The traffic management plan will be enforced by both the Construction Project Manager and the Resident Engineer.

All project staff and material suppliers will be informed of the measures proposed by the TMP during site induction and will be required to adhere to the final TMP. As outlined above, the contractor shall agree and implement monitoring measures to confirm the effectiveness of the TMP.

6.10 Working Hours

Deliveries of materials to site will generally be between the hours of 07:00 and 18:00 Monday to Friday, and 08:00 to 14:00 on Saturdays. No deliveries will be scheduled for Sundays or Bank Holidays.

6.11 Emergency Procedures

The main contractor shall ensure that unobstructed access is provided to all emergency vehicles along all routes and site accesses. The contractor shall provide to the local authorities and emergency services, contact details of the contractor's personnel responsible for construction traffic management. In the case of an emergency the following procedure shall be followed:

Emergency Services will be contacted immediately by dialling 112.



- Exact details of the emergency / incident will be given by the caller to the emergency line operator to allow them to assess the situation and respond in an adequate manner.
- The emergency will then be reported to the Site Team Supervisors and the Safety Officer.
- All construction traffic shall be notified of the incident (where such occurs off site).
- Where required, appointed site first aiders will attend the emergency immediately.
- The Safety Officer will ensure that the emergency services are en route.

6.12 Communication

The main contractor shall ensure that close communication with the Westmeath County Council and the emergency services shall be maintained throughout the construction phase. Such communications shall include:

- Submissions of proposed traffic management measures for comment and approval.
- On-going reporting relating to the condition of the road network and updates to construction programming.
- Information relating to local and community events that could conflict with proposed traffic management measures and construction traffic in order to implement alternative measures to avoid such conflicts.

The contractor shall also ensure that the local community is informed of any proposed traffic management measures in advance of their implementation. Such information shall be disseminated by posting advertisements in local newspapers and delivering leaflets to houses in the affected areas. Such information shall contain contact information for members of the public to obtain additional information and to provide additional knowledge such as local events, sports fixtures etc. which may conflict with proposed traffic management measures.



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7 Implementation

7.1 Role and Responsibilities

Due to the nature and scale of this development, the appointment of a full-time environmental manager is deemed surplus to requirements for the duration of the project. The Construction Project Manager will be responsible for the day-to-day implementation of the measures outlined in the Project CEMP. The Construction Project Manager will be supported by an Environmental Consultant who will be involved in the project on an ad-hoc basis should unforeseen or significant environmental incidents arise.

7.1.1 Construction Project Manager

The Construction Project Manager have the overall responsibility of ensuring the measures outlined in the Project CEMP are adhered to for the duration of the construction phase. The primary responsibilities of the Construction Project Manager are as follows:

- Promotion of awareness of environmental issues associated with each project phase.
- Ensure adherence with all environmental and traffic management standards listed in the Project CEMP.
- Facilitate environmental audits and site visits.
- Monitor the impact of construction traffic on local traffic conditions.
- Awareness and implementation of relevant legislation, codes of practice, guidance notes as stated in the CEMP.
- Conduct regular site inspections to facilitate the timely identification of environmental risks or incidents.
- Ensure all construction activities are carried out with minimal risk to the environment.
- Report environmental incidents in a timely manner to the project environmental consultant and the relevant authorities.

7.1.2 Construction Project Manager Contact Details

Name: PendingTelephone: PendingEmail: Pending

7.1.3 Project Environmental Consultant

As mentioned above the Construction Project Manager will assume the role of Project Environmental Consultant. Should any issues or impacts arise throughout the project then a suitable Environmental Contractor will be contacted. The primary responsibilities of the Project Environmental Consultant are as follows:

- Quality assurance of the Project CEMP.
- Update of the Project CEMP as required paying particular attention to site-specific environmental hazards or changes in legislation.



- Ensuring compliance of Project CEMP with the conditions of the Planning Permission.
- Provide expertise to the Construction Project Manager on environmental concerns.
- Conduct the various specialist environmental monitoring tasks outlined within the Project CEMP (noise, dust, surface water monitoring etc.).
- Prompt response to environmental issues if they arise.

7.1.4 Resident Engineer

Typically, the Resident Engineer's primary role involves assurance that the construction work of a project is carried out according to the quality, time and cost requirements of the contract. A significant degree of cross-over can usually be anticipated between the roles of a Resident Engineer, a Construction Project Manager and an Environmental Consultant. With respect to the Project CEMP, the Resident Engineer is expected to play a crucial role in the Traffic Management Plan (TMP) along with the following responsibilities:

- Performing or coordinating site inductions.
- Monitoring the performance of subcontractors.
- Monitoring the performance of the traffic management plan.
- Managing and supervising less experienced site engineers and operatives.
- Ensuring that work activities have been carried out in accordance with the plans, specifications and industry standards.
- Ensuring that tests and inspections are performed.
- Liaising with construction management to remove any hazards associated with work activities.
- Ensuring that delivered materials meet specifications and established quality standards.
- Initiating and maintaining records, back-charge procedures, progress reports etc.

7.2 Awareness and Training

7.2.1 Environmental Induction

The key environmental topics outlined in the Project CEMP will be summarised and integrated into the general site induction. Site-specific concerns and best work practices will be outlined to all contractors and sub-contractors due to carry out work at the site. As a minimum this will include:

- The roles and responsibilities of the Construction Project Manager the Environmental Consultant and the Resident Engineer along with the responsibilities of contractors/subcontractors themselves.
- Incident and complaints procedure.
- Outline of the CEMP structure.
- Site specific environmental concerns.
- Best work practices



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7.2.2 Toolbox Talks

Daily toolbox talks will be conducted by the Construction Project Manager as standard practice. It is the duty of the Construction Project Manager to liaise with the Project Environmental Consultant and Resident Engineer to assess site operations for environmental concerns particularly as the project advances and new activities commence. Appropriate mitigation and best practice measures will be devised and communicated to the relevant personnel prior to the commencement of any such activities.

All staff and contractors will be informed regularly of the importance in;

- (1) Avoiding stockpiling of materials on site;
- (2) Minimising the exposure time of soil and subsoil surfaces;
- (3) Promoting "Stripe & Cover" construction methods

...in order to limit sediment erosion on site.

7.3 Environmental Incidents and Complaints Procedure

The Construction Project Manager will maintain a register of environmental incidents which will document the nature, scale and severity of any environmental incident or complaint which arises as a result of site activities. The complaints register will record any complaints regarding but not limited to noise, odour, dust, traffic or any other environmental concerns. In the event of an environmental incident the following steps must be followed:

- The Project Environmental Consultant is notified immediately.
- The Project Environmental Consultant will liaise with the competent authority if necessary.
- The details of the incident will be recorded on an Environmental Incident Form which will record the following details:
 - (1) Cause of the incident
 - (2) Extent of the Incident
 - (3) Immediate actions
 - (4) Remedial measures
 - (5) Recommendations made to avoid reoccurrence
- If the incident has impacted on an ecologically sensitive receptor (SPA, SAC, NHA) an ecological specialist will be consulted.
- The Project Environmental Consultant and Construction Project Manager will fully cooperate with any investigations conducted by the competent authority.



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8 Conclusion

This Construction Environmental Management Plan (CEMP) will form part of the construction contract and is designed to reduce possible impacts which may occur during the construction of the proposed development.

The proposed development shall be constructed and developed to minimise the generation of construction and demolition waste. During the construction phase, construction waste shall be stored and segregated in dedicated waste storage areas which shall optimise the potential for off-site reuse and recycling. All construction waste materials shall be exported off-site by an appropriately permitted waste contractor.

Extensive measures shall be taken to prevent uncontrolled emissions to drains and gullies leading off the site. Noise mitigation measures will be utilised as required. Several measures have been outlined to ensure adequate dust suppression throughout the project. Noise and dust monitoring shall be carried out at various stages throughout the project to ensure compliance with the relevant standards.

Suitably qualified personnel including a Construction Project Manager, Project Environmental Consultant and Resident Engineer will be appointed to implement the procedures and protocols relevant to their profession as outlined in this CEMP.

The Client shall be responsible for ensuring that the contractor manages the construction activities in accordance with this Construction Environmental Management Plan and shall ensure that any conditions of planning are incorporated into the final CEMP prepared by the appointed works contractor.



Appendix A: Record of Suitable Qualified Waste Collectors and Waste Facilities

Appendix A.1: Description of Waste	EWC Code			Collector		Facility
OI Waste		Volume	Name	NWCP	Name	WFP/ WL No.
Concrete, Bricks, Tiles and Ceramics	17 01					
Concrete	17 01 01					
Bricks	17 01 02					
Tiles and Ceramics	17 01 03					
Mixture of concrete, bricks tiles & ceramics	17 01 07					
Wood, Glass and Plastic	17 02					
Wood	17 02 01					
Glass	17 02 02					
Plastic	17 02 03					
Bituminous mixtures, coal tar and products	17 03					
Bituminous mixtures containing other than those mentioned in 17 03 01	17 03 02					
Bituminous Mixtures including Coal Tar and Tarred products	17 03					
Metals (including their alloys)	17 04					

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		,	•		
Copper, Bronze, Brass	17 04 01				
Aluminium	17 04 02				
Lead	17 04 03				
Zinc	17 04 04				
Iron and Steel	17 04 05				
Tin	17 04 06				
Mixed Metals	17 04 07				
Cables other than those mentioned in 17 04 10	17 04 11				
Insulation and asbestos- containing Construction Materials	17 06				
Gypsum based construction Materials	17 08				
Other Construction and Demolition Materials	17 09				
Mixed Construction and Demolition Waste other than those mentioned in 17 09 01, 17 09 02, 17 09 03	17 09 04				
Sewage Screenings	19 08 01				
Paper and Cardboard	20 01 01				
Wood other than that mentioned in 20 01 37	20.01 38				



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Soil and Stones	17 05 04			
Mixed Municipal Waste	20 03 01			
Bulky waste	20 03 07			



Appendix B: Risk Assessment as per Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition

Risk Assessment A – Locality/Site Information

	Low	Medium	High
Expected duration of work			
Less than 6 months	x		
6 months to 12 months			
Over 12 months			
Proximity of nearest sensitive recep	otors		
Greater than 50 metres from site			
Between 25m and 50m			
Less than 25 metres			х
Hospital or school within 100 metres			
Day time ambient noise levels			
High ambient noise levels (>65dB(A))			
Medium ambient noise levels (55-65dB(A)		х	
Low ambient noise levels (<55dB(A)			
Working Hours			
7am – 6pm Mon-Fri; 8am-1pm Sat	x		
Some extended evening or weekend work			
Some night-time working, including likelihood of concrete power floating at night			
SUBTOTAL A	2	1	1



Risk Assessment B – Works Information

	Low	Medium	High
Location of works			
Majority within existing building			
Majority External			х
External Demolition			
Limited to two weeks	X		
Between 2 weeks and 3 months			
Over three months			
Ground Works			
Basement level planned			
Non-percussive methods only	Х		
Percussive methods for less than 3 months			
Percussive methods for more than 3 months			
Piling			
Limited to one week			
Bored Piling Only			
Impact or vibratory piling			
Vibration generating activities			
Limited to less than 1 week	х		
Between 1 week and 1 month			
Greater than 1 month			
SUBTOTAL B	3	0	1

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Total Risk Assessment

	Low	Medium	High
Risk Assessment A	2	1	1
Risk Assessment B	3	0	1
Total	5	1	2

The site is assessed as a low overall.