School St / Thomas Court Bawn Estate Renewal

Outline Construction Environmental Management Plan

Dublin City Council

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Quality information

Prepared by	Checked by	Verified by	Approved by
			
Nicholas Orr Graduate Civil Engineer	Marc O'Dowd Principal Civil Engineer	Laura Shaughnessy Associate Director	Laura Shaughnessy Associate Director

Revision History

Revision	Revision date	Details	Authorized	Name	Position
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Prepared for:

Dublin City Council

Prepared by:

Nicholas Orr
Graduate Civil Engineer
M: 085-833-9104
E: Nicholas.Orr@aecom.com

AECOM Ireland Limited
4th Floor
One Burling Plaza
Burlington Road
Dublin 4, D04 HH21,
Co.Dublin, Ireland

T: +353 1 696 6220
aecom.com

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1. Introduction

1.1 Background

AECOM has been commissioned by the Dublin City Council (DCC) to undertake an Outline Construction Environmental Management Plan (Outline CEMP) to accompany a Part 8 planning application to Dublin City Council (DCC) for the proposed new residential scheme at School Street, Dublin 8.

1.2 Introduction

This Outline CEMP sets out the procedures, standards, work practices and management responsibilities to address potential environmental effects that may arise from the Project.

The Outline CEMP outlines the approach that will be adopted to environmental management throughout the development works at the Project site, with the primary aim of reducing any adverse effects from construction on the environment. The Outline CEMP will be at all times a 'live' document, subject to amendment including the revision and addition of content throughout the works. In this context, the values and information presented herein is subject to change and refinement through the selection of the contractor and the delivery of the Project.

This plan shall be further refined and expanded by the appointed contractor (hereafter referred to as the Contractor) into a full CEMP as more certainty and more information becomes available in terms of the proposed layout, construction methods, programme and potential environmental impacts to be mitigated against. The elements contained within this plan will be included in the Contractor's CEMP, which will be prepared prior to construction by the appointed Contractor and approved by the Client and relevant planning authorities.

At the end of the construction phase, the Contractor shall prepare a Handover Environmental Management Plan (HEMP) that shall contain essential environmental information needed by the bodies responsible for the future maintenance and operation of the asset.

1.3 Objectives

The objectives of this Outline CEMP and any subsequent CEMP are therefore to:

- Act as a continuous link and reference document for environmental issues between the design, construction, testing and commissioning stages of the Project.
- Demonstrate how construction activities and supporting design shall properly integrate the requirements of environmental legislation, planning consent conditions, policy, good practice, and those of the environmental regulatory authorities and third parties.
- Record environmental risks and identify how they will be managed during the construction period.
- Record the objectives, commitments and mitigation measures to be implemented together with programme and date of achievement.
- Identify key staff structures and responsibilities associated with the delivery of the Project and environmental control and communication and training requirements as necessary.
- Act as a vehicle for transferring key environmental information at handover to the body responsible for operational management. This shall include details of the asset, short and long-term management requirements, and any monitoring or other environmental commitments.
- Provide a review, monitoring and audit mechanism to determine effectiveness of, and compliance with environmental control measures and how any necessary corrective action shall take place.

1.4 Scope

The scope of this Outline CEMP covers the following:

- Project site
- Environmental Management

- Roles and Responsibilities
- Any additional working areas
- Access to and egress from the Project site

This Outline CEMP considers the following subject areas:

- Air Quality
- Archaeology and Cultural Heritage Considerations
- Ecology
- Land, Soils, Geology, Hydrogeology and Hydrology
- Traffic and Transportation
- Waste
- Noise and Vibration
- Climate Factors

It is noted that the Outline CEMP provides guidance, both descriptive and prescriptive, for the information to be included in the CEMP by the Contractor. The CEMP describes how the information and conditions provided in the Outline CEMP is incorporated and adhered to respectively.

2. Project Description

2.1 Location

The existing site is located in the Liberties, Dublin 8, and is bound by School Street to the north, Taylor's Lane to the west and Marrowbone Lane to the southeast. It is a brownfield site with two existing residential apartment blocks. Refer to Figure 2-1 for the existing site location.

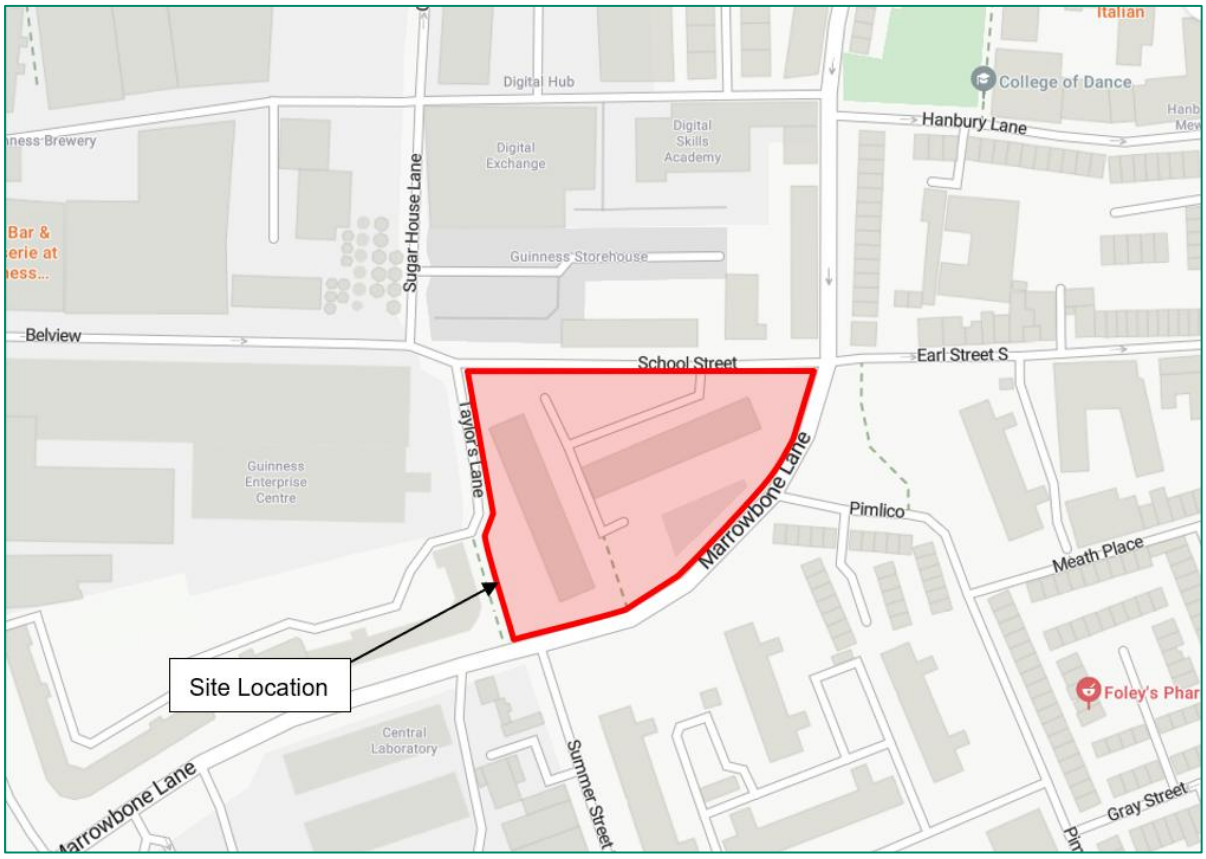

Figure 2-1: Site Location (Source: Google Maps)

2.2 Overview of Proposed Development

The proposed redevelopment is for the existing School St / Thomas Court Bawn Estate and construction of 124 apartments at School Street/Thomas Court Bawn Estate, Dublin 8. The site is bounded by School Street, Taylor's Lane, Marrowbone Lane and Thomas Court Bawn (opposite Anne Devlin Park), Dublin 8. The existing 0.653 hectare site currently comprises of 2 no. five-storey housing blocks (School Street Flats (including 38 homes and a community facility at first floor) and Thomas Court Bawn (including 40 homes).

The proposed development, which will be managed by Dublin City Council, comprises of:

- The demolition of the existing Thomas Court Bawn block, ancillary structures, boundary walls/railings and site clearance works and the renovation of the existing School Street Flats block.
- Construction of 124 apartment units in 3 no. apartment blocks (Block A, Block B and Block C) comprising 41 no. 1 bed apartments, 65 no. 2 bed apartments, 18 no. 3 bed apartments.
  – Block A1 (facing School Street and Thomas Court Bawn) is 7 storeys with 27 units (27 no. 2-bed units) o Block A2 (facing School Street and Thomas Court Bawn) is 10 storeys with 35 units (10 no. 1-bed, 16 no. 2-bed & 9 no. 3-bed)
  - Block B (facing Thomas Court Bawn/Marrowbone Lane) is 5 storeys with 18 units (3 no. 1-bed, 6 no. 2-bed, 9 no. 3-bed)

  - Block C (facing Taylor's Lane) is 6 storeys comprising Deep retrofit and extension to the existing School Street Flats block to include an additional floor and modifications to all elevations with 44 units (28 no. 1-bed, 16 no. 2-bed)

- Provision of a multi-use community facility (including childcare facility) of 151 sq.m. at ground floor of Block A2 with an outdoor play area of 111 sq.m.
- 218 long stay bicycle parking spaces, and 72 short stay bicycle parking spaces
- 9 no. residential car parking spaces on Taylor's Lane and 1 no. motorcycle space; Provision of public and private open spaces with boundary treatments, landscaping, pavements, revision to pedestrian access, public lighting, new public realm connection running north-south along Taylors Lane; upgrade of public realm and street frontage improvements on School Street and Marrowbone Lane/Thomas Court Bawn and 1044 sq.m of communal open space in the new central courtyard;
- Construction of new ESB substation and meter rooms, stores, bin and cycle storage, plant rooms, ancillary structures; and
- All ancillary roads, site services, development works and necessary enabling works above and below ground.

The proposed architectural site layout is illustrated in Figure 2-2.

Figure 2-2: Proposed Development at School Street Dublin 8

The proposed scheme involves retrofitting the existing west block and demolishing the east block to develop 124 new residential units in place of the current 79 no. unit residential site. It is also proposed to provide a multi-use childcare facility and all associated site infrastructure and landscaping.

2.3 Phasing

The proposed development will be split into two phases (refer to Figure 2-3). The first phase proposes to decant and demolish the Thomas Court Bawn block and construct new build perimeter block. The second phase proposes to retrofit the existing school street block and construct additional floor and lift access.

Figure 2-3: Proposed Development Phasing (Source: Metropolitan Workshop)

3. Environmental Management

3.1 Overview

The contractor's CEMP shall address the requirements of the Objectives listed in Section 1.3 of this outline CEMP and take account of any updated or new supplementary environmental reports made available to the contractor as necessary. The contractors CEMP shall also comply with the requirements of the relevant authorities/environmental bodies.

The contractor's CEMP shall be prepared by the contractor and submitted to DCC for approval prior to construction works. It shall be prepared in sufficient detail to describe the framework of the contractor's proposed management, control, and mitigation strategy for each environmental aspect with the consideration of relevant adjacent developments. The CEMP should include, where required, specific Method Statements for particular works (e.g., working in or near surface waters).

The CEMP shall be developed/updated as necessary during the course of the design and construction phases and will be reviewed on a regular basis with the Applicant as necessary.

3.2 Roles & Responsibilities

The contractor shall employ a suitably experienced and qualified CEMP Coordinator (CEMPC) or Environmental Site Representative (ESR) to undertake coordination and implementation of the contractor's CEMP, in respect of all environmental requirements. The CEMPC or ESR shall be present on Site whenever work is in progress.

The CEMPC/ESR shall be the point of contact for dealing with environmental issues for DCC, the contractor's employees, sub-contractors, relevant authorities/environmental bodies, and members of the public. The CEMPC/ESR will also be responsible for controlling the construction impacts arising from the activities of the contractor and their sub-contractors in accordance with the CEMP.

The CEMP/ESR should be a Chartered Member (CEnv or CEcol) of the Chartered Institute of Ecology and Environment Management (CIEEM), the Institute of Environmental Management and Assessment (IEMA), Chartered Institution of Water and Environmental Management (CIWEM), or hold an equivalent professional qualification in the ecological and environmental field. Whilst the CEMPC/ESR may have specialist experience in one particular field, they shall also be generally experienced in wider aspects of ecology and environmental management.

A CEMPC/ESR shall be 'on call', available 24 hours per day and shall be aware at all times of activities being undertaken on site. They shall maintain a daily log, recording all environmental issues, events, and dealings with third parties. The ESR(s) need not be as widely experienced as the CEMPC but shall be as equally well qualified.

The CEMPC/ESR shall prepare, implement, manage, review, and revise the versions of the CEMP with the sole purpose of ensuring that the environment is safeguarded at all times from anticipated or unexpected adverse impacts during construction.

Details of the proposed CEMPC/ESR shall be included within the contractor's CEMP. Should the contractor wish to appoint an alternative member of staff to the role of CEMPC/ESR, details shall be submitted to DCC for approval at least 28 days prior to the proposed date for the change in personnel and included within the contractor's CEMP.

In general, the duties of the CEMPC/ESR shall include the following:

- Implementation of the CEMP procedures
- Routine environmental monitoring, recording, and reporting
- Maintaining and auditing the CEMP and documents that underpin it
- Environmental training including daily toolbox talks to site staff and design staff
- Any other activities that may be necessary in order to protect wildlife and the environment during the works

Some of the indicative key contractor team roles and responsibilities are set out in Table 1.

Table 1. Key contractor Team Roles and Responsibilities (Indicative)

Role	Responsibilities
Contractor's Project Director	• Assign specific environmental duties to competent member of the contractor's team. • Identify the environmental training needs of personnel under their control and arrange appropriate training programmes and ensure records are being maintained. • Ensure that significant environmental aspects identified for the proposed development are managed. • Promote the continual improvement of environmental performance.
CEMPC	• Develop, maintain, and audit the CEMP (and supporting documents/plans) to ensure all aspects, impacts, statutory requirements, and Environmental Statement commitments, etc., are reflected. • Develop and implement a programme of regular environmental inspections, monitoring, recording, and reporting by the ESR(s) in accordance with procedures set out in the CEMP. • Ensure that the works are constructed in line with the CEMP. • Liaise with DCC. • Attend regular construction meetings to ensure environmental issues are discussed and addressed by the contractor's Team. • Comply with duties under relevant legislation and company procedures in relation to environmental incident investigation and reporting. • Provide support and training to the workforce with regard to understanding environmental aspects, impacts, regulatory requirements, best practice, constraints and methods of working. • Nominate the ESR(s). • Appoint environmental specialists as required. • Ensure identified environmental specialists are in attendance on-site as required by the CEMP. • Review non-conformance reports provided by the ESR(s) and/or DCC's Environmental Advisors to identify any underlying issues or patterns to identify suitable ameliorative measures.
ESR(s)	• Provide an on-call 24hr resource as a first point of contact for environmental issues/incidents. • Complete programme of regular environmental inspections, monitoring, recording, and reporting in accordance with the CEMP. • Provide direction on corrective action to be taken by the Site Manager in response to identified non-conformances. • Report all identified non-conformances separately to DCC and the CEMPC. • Ensure that corrective actions are completed fully by the Site Manager. • Maintain daily records of environmental issues, events, and consultations with third parties. • Ensure identified environmental specialists are in attendance on-site as required by the CEMP. • Maintain records of environmental awareness training/inductions delivered to site staff.
Contractor's Project Manager	• Ensure that the CEMP is produced, maintained, and implemented and distributed to all relevant parties. • Monitor the completion of corrective actions by the Site Manager and take action as required to expedite completion. • Ensure that all personnel for whom they are responsible are aware of the CEMP and implement the relevant requirements. • Evaluate the competence of all sub-contractors and suppliers and ensure that they are made aware of and comply with the CEMP and associated procedures. • Establish a consultation and communication system with all relevant interested parties associated with the proposed development, including employees, partners, sub-contractors, designers and third parties, etc., where relevant.
Ecological Clerk of Works	• The Ecological Clerk of Works (ECoW) shall hold a relevant degree in ecology and have appropriate relevant experience. • Provision of specialist input and supervision (licensed or otherwise), where necessary, of construction in relation to protected species including roosting bats. • Training of construction staff regarding measures to protect nesting birds and roosting bats. • Attend site as required to monitor the protection of asset in accordance with the requirements of relevant legislation, the construction contract and the CEMP. • Identify potential risks to wildlife and develop suitable control measures. • Provide status reports and updates to the ESR(s) in the completion of their activities. • Liaison with the NPWS, DCC and other nature conservation agencies on ecological matters where required.
Site Manager	• Ensure that all personnel undergo suitable and sufficient environmental induction before starting work, and periodic refresher environmental awareness training throughout the construction phase. • Ensure staff attend the appropriate environmental courses that are organised by the Environmental Manger (CEMPC). • Ensure the Environmental Manager is maintaining records of training delivered to site staff.

- Monitor the performance of personnel and activities under their control and ensure arrangements are in place so that all personnel can work in a manner which minimises risks to them and to the environment.
- Undertake a programme of regular environmental inspections in liaison with the ESR(s).
- Provide resources and support to complete corrective actions identified by the ESR(s) and provide status reports as required to DCC.
- Assist and support the Environmental Manger (CEMPC) and statutory bodies in the investigation of any incidents.
- Notify the ESR(s) of all environmental issues or incidents arising over the course of operations.

3.3 Awareness and Training

Environmental training should be provided to Site construction personnel to inform them of their responsibilities and liabilities with reference to protection of water quality. Training should include office-based workshops prior to commencement of site works, site-based Toolbox talks prior to or during the works, or the use of notice boards in site offices to display important information.

All Site personnel shall have a valid 'Safe Pass' card and follow the instructions set out in the Operational Health & Safety (OH&S) Management Plan. Training records (including toolbox talks) shall be retained and available for inspection upon request.

The Applicant is to appoint a Project Supervisor Construction Stage (PSCS) prior to any construction works taking place.

3.4 Complaints

A Complaints Register for internal communication and for receiving, documenting, and responding to environmental complaints from external parties will be established and maintained by the appointed contractor.

The following information must be taken as a minimum when a complaint is received (telephone calls and letters of complaint etc.):

- Date and time of the complaint are recorded
- Name of complainant (if provided)
- Nature of complaint

A record of and details of the remedial actions carried out will also be documented. All complaints received from external sources and incidents must be reported to the Environmental Coordinator and the appropriate site personnel (e.g., Senior Management). Complaints must be dealt with in a timely manner and reported to the Applicant.

3.5 Monitoring and Inspections

Environmental focused monitoring and inspection activities will be carried out throughout the construction stage. The frequency of these monitoring and inspection activities will be agreed in advance of construction with the Applicant and would be in line with planning conditions. Additional monitoring and inspection will take place outside of the agreed frequency where an incident occurs or where activities are taking place which could have a significant environmental impact.

Regular site inspections will be undertaken by the contractor's CEMPC/ESR to monitor compliance with the CEMP and record inspection results. It is anticipated that a daily visual check and a detailed weekly check will be carried out and these records will be available to DCC upon request.

During construction phase the following monitoring measures will be considered:

- Regular inspection of surface water run-off and sediment controls
- Soil sampling to confirm disposal and short-term storage options for excavated soils (if required)
- Regular inspection of environmental risk mitigation measures, e.g., concrete washout areas, chemical storage areas, refuelling areas

- Dust monitoring and monitoring of dust control measures
- Noise and vibration monitoring
- Surface water monitoring (if required)
- Daily monitoring of general housekeeping on Site

3.6 Environmental Auditing

Planned and documented audits (including waste and environmental audits) aimed at evaluating the conformance of the Proposed Development with the requirements of the CEMP shall be carried out throughout the construction phase. The frequency of the audits will be agreed in advance with the Applicant. As a minimum this would include:

- Weekly site walkover with results presented at the contractors' regular meetings with the Applicant
- Dedicated waste audits carried out at a frequency agreed in advance. All waste types and records shall be available for review upon request
- Review and audit of the CEMP every six months or as per any planning condition requirements and updated in line with current guidance and legislation

3.7 Interaction with Licensing and other Plans

All statutory consents and licences required to commence on-site construction activities will be obtained ahead of works commencing, allowing for the appropriate notice period. It will be the responsibility of the contractor to ensure all consents and licences required are in place prior to the start of construction.

These will include, but are not limited to:

- Site notices
- Construction commencement notices
- Licence to connect to existing utilities (including water) and mains sewers, where required
- Abstraction and/or discharge licenses, where required
- Road opening/closure licences

The CEMPC/ESR shall oversee and advise the contractor on compliance with additional requirements to the CEMP including licensing requirements, mitigation measures, and monitoring requirements specified in documents including, but not limited to:

- Construction Traffic Management Plan (CTMP)
- Dust Management Plan (DMP)
- Invasive Species Management Plan (ISMP)
- Water Quality Management Plan (WQMP)
- Emergency Response Plan (ERP)
- Contractor's RWMP

4. Outline Construction Traffic Management Plan

4.1 Overview

This section contains an Outline Construction Traffic Management Plan (CTMP) which has been developed to set out the planned logistics and traffic management requirements associated with the construction works for the proposed development.

4.2 Aims & Objectives

This outline CTMP aims to ensure that the construction traffic and movement of goods and materials are well planned to minimise the impact of demolition and construction on the strategic and local road network. These impacts include:

- **Environmental impacts:** vehicle emissions and noise levels.
- **Road risk:** safety of all road users.
- **Congestion:** vehicle trips, particularly during network peak periods.
- **Cost:** working practices and deliveries.

4.3 Legislation and Guidelines

The outline CTMP and any subsequent revisions will follow the following legal requirements and guidance for the temporary control of traffic at road works to facilitate the safety of the public during the works:

- Traffic Signs Manual, issued by the Department of Transport, Tourism and Sport (November 2021), Chapter 8 – Temporary Traffic Measures and Signs for Roadworks (August 2019).
- Guidance for the Control and Management of Traffic at Road Works 2nd edition, issued by the Department of Transport, Tourism and Sport (2019).
- Roads Act 2007 and Road Traffic Act 1961 to 2014.
- Safety Health and Welfare at Work (General Application) Regulations 2007 (Chapter 1 of Part 7: Safety Sign at Places of Work) (amended 2010).
- Specification TS4 – Guidelines, Certification Scheme, and Specification for the Construction of Traffic Signs, Department of the Environment, Community and Local Government (2001).
- Road Traffic (Construction, Equipment and Use of Vehicles) Regulations (2010).
- Dublin City Council guidelines.
- Transport Infrastructure Ireland guidelines.

Compliance with this plan, does not absolve the appointed contractor or its sub-contractors from compliance with all legislation and bylaws relating to their construction activities.

4.4 Construction Logistics

It is anticipated that construction material and deliveries will all occur on-site within on-site storage areas. Due to the constrained nature of the site, just in time deliveries operated through a delivery management system will be required to limit the number of deliveries accessing the site at any given time.

4.5 Construction Vehicle Access

As of 1st March 2022, and as per the DCC's Heavy Goods Vehicle (HGV) Management Strategy, DCC operates a HGV restricted cordon which restricts HGV with 5+ axles movement from 7am to 7pm daily, as shown in Figure 4-1. An example of a restricted vehicle would be a 16.5m articulated vehicle and some mobile cranes/trunks (i.e., HIAB vehicles).

Should HGVs with 5+ axles require site access, the routing for these vehicles throughout demolition and construction phases will need to adhere to the designated routes prescribed in Figure 4-1.

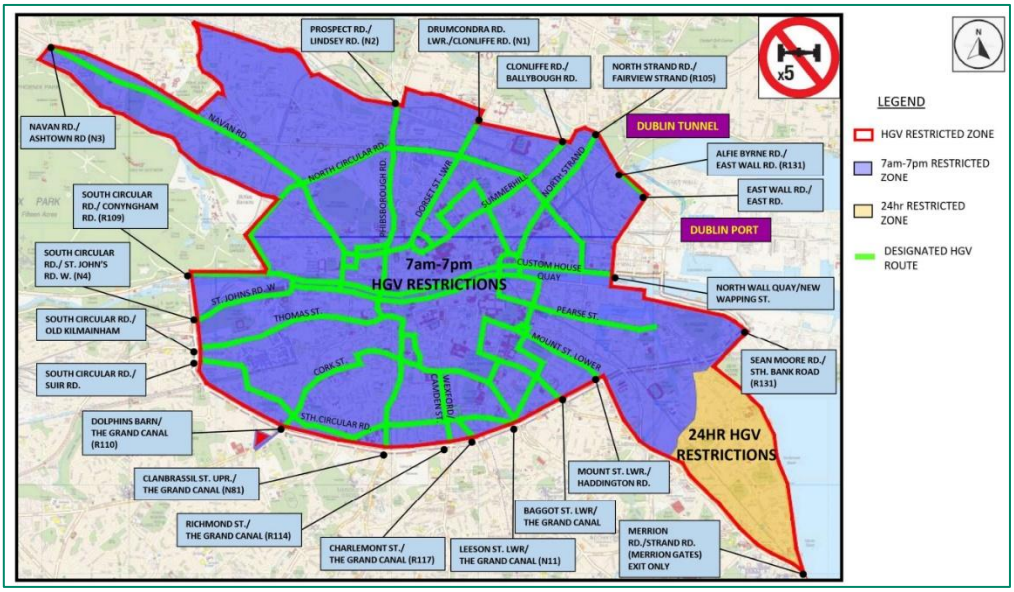

Figure 4-1 DCC's HGV Restricted Cordon Map

Source: https://www.dublincity.ie/residential/transportation/hgv-management/how-apply-heavy-goods-vehicle-permits

HGVs with 5+ axles requiring access to/from the site via the restricted area will be required to apply for a load/unload permit, which allows travel into the restricted area during restricted hours for HGVs with 5+ axles. Load/unload permits will need to be applied for by the appointed contractor. Permits only be issued against premises that have been registered with DCC.

The strategic road network is recommended to be used as far as possible to reach the site. Figure 4-2shows the anticipated access and egress routes for construction vehicles.

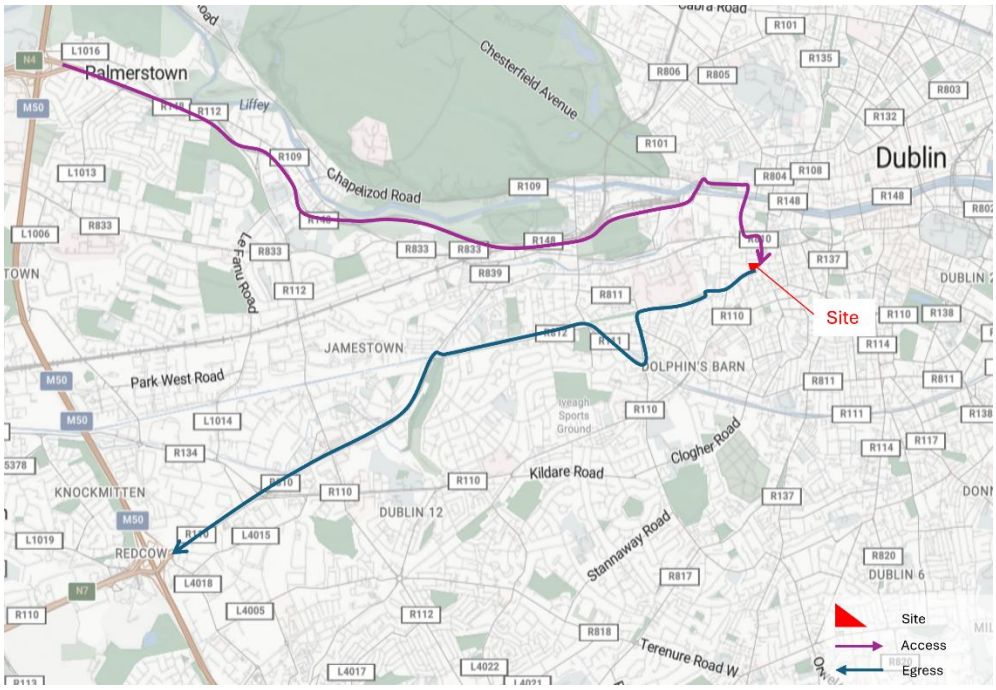

Figure 4-2 Anticipated Construction Vehicle Routes

Source: Bing Maps

A full designated construction route assessment will be undertaken by the appointed contractor and the detailed CTMP should include planned routing for demolition and construction vehicles.

4.6 Construction Traffic and Road Management Plan

The contractor shall establish the control measures necessary to manage all traffic activities and risks associated with construction works effectively and efficiently. It will be the contractor's responsibility to enact these measures in advance of any works and monitor them on a regular basis to ensure that they are being adhered to, and targets are being met. Every effort shall be made to ensure that the safety of the local road users is maintained. Additionally, the contractor shall implement and adhere to the conditions set out by DCC.

In terms of general traffic management measures, typical controls will include barriers defining footways and safety zones to prevent construction vehicles encroaching on pedestrian areas, segregated pedestrian routes (where appropriate), temporary warning signs erected to highlight hazards, and include site access(es) and temporary traffic management measures.

Proposed traffic management measures to be adopted into the contractor's detailed CTMP include, but are not limited to, measures to:

- Provide clear signage of any temporary diversions to existing motorised and non-motorised routes (including pedestrians and cyclists).
- Erect warning signs/advanced warning signs at appropriate locations in advance of the construction access locations.
- Provide safe and secure pedestrian and cyclists' facilities where construction works obscure any existing pedestrian footways and cycle track (i.e., on Marrowbone Lane). Alternative pedestrian and cyclists' facilities will be provided in these instances, supported by physical barriers to segregate traffic and pedestrian/cyclist movements, and to be identified by appropriate signage. Where diversions are required, non-motorised users should be considered and facilitated to continue their journey with minimal disruption as far as possible. Pedestrian facilities will cater for all users including vulnerable users such as mobility impaired persons.
- Plan temporary road closures and restrictions (if applicable) in agreement with the appropriate stakeholders, including DCC.
- Provide protection from traffic hazards that may arise because of the construction activities and journeys to and from the site.
- Manage potential adverse impacts on the public road network and ensure network performance is maintained at an acceptable level.
- Plan deliveries to the site including haulage routes, delivery timings, and access arrangements shall be continuously reviewed throughout the construction phase of the Proposed Development to ensure smooth operation.
- Outline measures to limit the amount of queuing required by construction vehicles outside the Site boundaries.
- Ensure that the roads and footways in the vicinity of the construction site are kept clear of debris, soil, spoil removal, dirty water, and other materials.
- Construction and delivery vehicles will be instructed to use only the approved and agreed means of access, and movement of construction vehicles will be restricted to designated routes.
- Appropriate vehicles will be used to minimise environmental impacts from transporting construction material, for example, the use of dust covers on trucks carrying dust producing material.
- Speed limits of construction vehicles to be managed by appropriate signage, to promote low vehicular speeds on approach to and when within the site.
- Parking of construction personnel site vehicles will be managed to avoid excessive disruption to public roads, and in accordance with any conditions contained in a grant of planning for the Proposed Development
- Construction staff will also be encouraged to use active travel or public transport services (to reduce car parking demand) and information on local transportation will be published on site.
- A road sweeper will be employed to clean the public roads adjacent to the site of any residual debris that may be deposited on the public roads leading away from the construction works.
- On site wheel-washing will be undertaken for construction trucks and vehicles (that require on-site access) to remove any debris prior to leaving the site and to remove any potential debris on the local roads.

- All vehicles will be suitably serviced and maintained to avoid any leaks or spillage of oil, petrol or diesel. Spill kits will be available on site. Any used spill kits will be disposed of using a hazardous waste disposal contractor and in accordance with all relevant EU and Irish waste management legislation.

4.6.1 Traffic and Road Management

Temporary Traffic Management designs (drawings and method statements) will be prepared by the appointed contractor in compliance with the former Department of Transport, Tourism and Sport (DTTAS) (now the Department of Transport) Traffic Signs Manual, Chapter 8, Temporary Traffic Measures and Signs for Roadworks (hereafter referred to as the Traffic Signs Manual) (DTTAS 2019), to facilitate the safe and efficient construction of the proposed development.

No road closures are anticipated to be required throughout construction of the proposed development. Should temporary road closures be required, further information in relation to planned temporary road or lane closures in proximity of the site to facilitate construction works or deliveries will be provided in the detailed CTMP, which will be prepared upon appointment of a contractor.

The appointed contractor will undertake consideration of the six primary issues that affect traffic and road movements, these being:

- Maintaining good neighbour policy.
- Maintaining site security.
- Vehicle - Pedestrian Segregation. Manoeuvring of vehicles.
- Delivery Co-ordination.
- Loading and Storage.
- Delivery times.

The traffic management system, when approved, is to be implemented and supervised by a competent person holding a CSCS card for Signing, Lighting and Guarding (SLG) at Roadworks and when this person is not on site there shall be at least one person who has completed the Health and Safety at Roadworks Construction Skills Certification Scheme. Regular audits of the installed traffic management are to be carried out by the designer and the SLG operative.

4.6.1.1 Delivery Management

The proposed development construction site is recommended to use a Delivery Management System (DMS) to manage deliveries to the site. Deliveries can be scheduled through booking slots, ensuring that the flow of vehicles to and from the site is controlled.

The detailed CTMP (to be prepared by the appointed contractor) should demonstrate how the DMS (if employed) will be used to avoid construction traffic during road network peak hours and how all reasonable measures to maximise overnight deliveries have been mandated. A DMS also provides assurance for the delivery of critical items, which protects the integrity of the build schedule and allows for accurate, efficient reporting of delivery activity. A DMS has the following uses and benefits as discussed in the following paragraphs.

4.6.1.1.1 Scheduling Deliveries

All deliveries to the site can be scheduled to ensure their timely arrival and avoid need for storing large quantities of materials on site. Deliveries can be scheduled outside of road network peak hours to avoid disturbance to pedestrian and vehicular traffic in the vicinity of the site.

The DMS can help plan and schedule deliveries to avoid network peak traffic hours and prevent unnecessary congestion on public roads around the construction sites. This would avoid unnecessary queueing, idling and noise from vehicles and will reduce the impact on local traffic by optimising delivery times. Deliveries can be made ‘just in time’ to minimise the amount of space required on-site for construction materials. This would:

- Eliminate waste, including time lost waiting for missed/delayed supplies.
- Eliminate unnecessary storage and the value tied up in large stocks of parts waiting for assembly.
- Eliminate overtime and ensure deliveries are within project delivery hours.

- Control the number of vehicles arriving on-site at one time and affecting the surrounding strategic road and local network.
- Reduce the carbon footprint of the site.

Specific information needed from the subcontractors would be as follows:

- Delivery Forecast
- Types of Materials
- Volume of packaging (area)
- Types of Stillage/Pallets
- Weights of Products
- Specific lifting locations
- COSHH Information
- Fragile Goods to be Identified
- Identify what is Reusable
- Returnable

All deliveries shall be planned 48 hours in advance and booked in with the site's appointed Construction/Logistics Manager. Any deliveries that arrive on-site that have not been booked in advance will be refused. All subcontractors shall be contractually obligated to adopt the same principles and systems used by the appointed contractor.

4.6.1.1.2 Route Planning

The DMS, is adopted by the appointed contractor, can identify the most efficient and least disruptive routes for construction vehicles, considering factors such as local traffic patterns, road conditions, weight restrictions and agreed routeing measures. This would minimise the impact on local communities and reduce wear and tear on roads.

4.6.1.1.3 Vehicle Tracking and Monitoring

The DMS is recommended to be employed by the contractor, once appointed, as it can incorporate real-time tracking and monitoring of construction vehicles, to enable better coordination and communication between drivers, site managers and other stakeholders. This would ensure that vehicles adhere to designated routes and schedules, reducing the risk of unauthorised or off-route travel.

4.6.1.1.4 Compliance with regulations

The DMS can help to ensure that contractors comply with measures in the CTMP and other control documents, as well as with local regulations and restrictions, such as permitted hours of operation, designated truck routes, or restrictions on vehicle size and weight.

4.6.1.1.5 Reporting

The DMS can provide data on the efficiency of the construction traffic management process, helping logistics managers and project managers plan and to identify areas for improvement, monitor progress and demonstrate compliance with relevant regulations and guidelines.

4.6.1.2 Construction Site Management

4.6.1.2.1 Separation of Pedestrians and Vehicles

Regulation 15 of the Construction (Health Safety and Welfare) Regulations requires that every construction site shall be organised in such a way that, so far as is reasonably practicable, pedestrians and vehicles can move safely and without risk or injury to all parties.

This regulation requires the provision of safe, effective and functional pedestrian and vehicle segregation. It is therefore recommended that pedestrians and vehicles should, wherever practicable, not share access / egress points or circulation routes.

Therefore, wherever vehicles and pedestrians are required to utilise adjacent access during construction around the project, suitable physical segregation with signage shall be installed to demarcate safe pedestrian routes.

The access points to site works will be isolated from site pedestrians by use of designated pedestrian routes and physical barriers. This arrangement satisfies the aforementioned requirements but will be reviewed as the project proceeds to ensure that any construction activity do not present any additional risks. Should any additional risk be subsequently identified then appropriate action will be taken to eliminate or minimise such risk.

Appropriate signage will be fixed to the gates and all areas where it is possible for vehicles to come into contact with pedestrians and to denote vehicle and pedestrian crossover areas. If they cannot reasonably be avoided Traffic Marshalls will be in attendance.

The following measures will be introduced to make both pedestrians and vehicles aware of each other around the site:

- No parking or mounting of adjacent kerbs for the purpose of waiting, loading or offloading of materials / equipment / plant.
- Signage to warn pedestrians on the public areas of site entrances.
- Signage to warn site vehicle operatives of pedestrians crossing.
- Physical demarcation barriers within working areas between site operatives and site vehicles.
- The appointed contractor will provide Traffic Marshalls in order to ensure safe egress/access. All Traffic Marshalls are to have appropriate training, and to wear hi-visibility vests/jackets.
- No uncontrolled pedestrian traffic to be allowed through site areas. Physical demarcation barriers within working areas between site operatives and site vehicles.

4.6.1.2.2 Vehicle Cleaning

Where necessary, wheel washing facilities will be provided on-site. These will be self-contained facilities using a water recycling feature. The units will be regularly cleaned and maintained. These will minimise the impact of dust and dirt on the existing road network and residents.

4.6.1.2.3 Road Cleaning

All reasonably practicable measures will be implemented to stop the deposition of mud and other debris on the road network, and to subsequently address any issues where identified.

The focus of these measures will be on ensuring that no detritus leaves the site in the first instance, and as such no remedial action should be required on the local or strategic road network. The measures delivered will include:

- Provision of a hard standing loading area for road going construction vehicles in order to control the potential for mud collection and transferal onto the roads;
- The damping down of materials to control dust;
- Maintaining and cleaning the area on a consistent basis in order to allow the site access to be kept clean and the chance of transferal onto local roads minimised;
- Wheel washing facilities at the site entrance and egress (as outlined above); and
- Ensuring all vehicles departing the site with spoil or surplus material have their loads fully covered before entering the public roadway.

As well as minimising the opportunities for detritus to be carried offsite through the practice set out above, a road sweeper will also be contracted to periodically patrol and clean (where required) the road in front of the site/compound access.

4.6.1.3 Emergency and Incident Management

The logistics resource/manager will be managed by the appointed contractor as a part of the project delivery management team. This team will be at the forefront of any incident management. All incidents must be reported in full accordance with the incident reporting process.

The detailed CTMP shall include an Emergency Incident Response Plan, which will contain emergency phone numbers of the method of notifying DCC, statutory authorities and stakeholders.

Contractors will be required to adhere to and implement these procedures and ensure that all staff and personnel on site are familiar with the emergency arrangements.

It is the responsibility of the Client Team/Project Manager or their nominee to ensure that the emergency procedure is periodically tested to ensure it is effective. The frequency of testing should be determined by the level of risk for a particular project. However, it is recommended that this be carried out at least once per year or once during the project lifetime, where the project duration is less than one year.

4.6.2 Governance, Implementing, Monitoring and Updates

4.6.2.1 Roles and Responsibilities

The appointed contractor shall request sub-contractors ensure their works are both in accordance with this CTMP, the detailed CTMP, and relevant up-to-date legislation. All site activities will be undertaken in accordance with the requirements of the Health and Safety Plan developed for the construction of the site, which will also list out all of the roles and responsibilities.

Client Team and Project Manager

The Project Owner will also act as coordinator with the contractor's and all internal and external stakeholders. It is the responsibility of the Project Owner to ensure that the emergency procedure is periodically tested to ensure it is effective.

A Client Project Manager (CPM) for the construction of the School Street site will act as the representative of DCC, ensuring the construction of the development is delivered to their respective specifications, within their agreed programme, and in compliance with construction quality and safety standards. The key responsibilities of DCC's CPM include but are not limited to:

- *Project Planning, Management and Coordination:* Overseeing the entire project lifecycle, from pre-construction through to completion, including tracking and managing timelines and milestones, identifying delays, and ensuring that the appointed contractor's team are aligned with the project goals.
- *Risk Management, Quality Control and Health and Safety Oversight:*
    - Identifying potential transport and logistics risks and ensure mitigation strategies are developed and implemented.
    - Ensuring that construction works meet relevant standards and complies with all regulations and codes. This can include undertaking site inspections and reviewing work progress.
    - Assuring that the construction site adheres to health and safety regulations, helping to minimise accidents and delays.
- *Stakeholder Communication:* Regular communication with all stakeholders (including internal local authority and external stakeholders) will be required. The DCC CPM will update the DCC Project Owner (if these roles are not combined) on progress, identified risks and subsequent mitigation measures, and ensuring all parties are informed.

Further information in relation to stakeholder and community engagement is outlined below.

Contractor Team - Project Manager

Appointed contractors will have a contractual undertaking to nominate a full-time point of contact for logistics, and for their attendance at weekly and/or monthly forums.

The appointed contractor will be responsible for the overall management of construction traffic related to the School Street site throughout construction. The Project Manager is responsible for providing the necessary resources to fully implement any traffic management requirements including those required under planning conditions.

Contractor Team - Construction and Logistics Managers

The Construction Manager/Logistics Manager will be responsible for:

- Identifying and liaising with stakeholders including the contractors with regards to the traffic management on and offsite.
- Review of contractor's Risk Assessment and Method Statements with regards to traffic management requirements, compliance and implementation of restrictions.

- Obtaining any necessary road traffic permissions & consents relating to specific construction activities.
- Preparing and submitting applications to DCC for an abnormal load permit should they be required.
- Ensuring that all their site personnel are aware of the traffic management risks, necessary controls / requirements and period restrictions, communicating any traffic management requirements to sub-contractors.

Traffic Management Co-ordinator

The appointed Traffic Management Coordinator will cover the following responsibilities:

- Review of Contractor Method Statements with the Construction Manager to confirm that appropriate measures are being implemented with regards to traffic management requirements.
- Management and implementation of temporary traffic management measures.
- Ensuring compliance with health and safety relating to operations and live traffic.
- Management of site access points and layouts.
- Monitoring of traffic management measures adopted.
- Liaison with relevant authorities.
- Share information on nearby public transport stations and stops, and cycle routes with Construction Site Managers and Logistics Managers to brief site operatives during daily site inductions.
- Review and update traffic management plans as the construction progresses and submit updated versions to DCC for review and approval.

Visitors

Visitors to the School Street site when under construction have a responsibility to adhere to all site safety procedure and adherence to the construction access routing and restrictions.

4.6.2.2 Communication, Liaison and Complaints

DCC will appoint a dedicated liaison officer (e.g., the Project Owner or CPM or an alternative stakeholder manager) who will act as coordinator with the contractor's and all internal and external stakeholders unless agreed otherwise. This includes liaising with residents, members of the public, and the local community and statutory authorities where relevant.

All communications with stakeholders shall be cleared with DCC in advance. The appointed contractor shall provide all necessary information, details and records to facilitate the role of the DCC liaison, including briefing packs where required.

The appointed contractor shall detail their procedures and timescales for recording, acknowledging, investigating and responding to complaints and who is responsible for the same. The DCC liaison officer will review the procedure and agree on protocols for the implementation of these works.

At all times the sub-contractor is to maintain a professional manner and respect the neighbouring residents, businesses and co-workers.

4.6.2.3 Document Control, Approvals and Requirements

Detailed CTMP

Following the appointment of a contractor, a detailed CTMP for the site will be produced as part of the contractual agreements for the construction of the School Street site. The detailed CTMP will be agreed with DCC before commencement.

The appointed contractor will take ownership of this outline CTMP and any subsequent revisions or sub-plans and will be required to review and update as and when conditions change.

The appointed contractor's detailed CTMP will also incorporate the following:

- Appraisal of the existing environment.
- Health and Safety Legislation and Guidance.
- Site Layout, Traffic Routes and Control Measures.
- Start and finish dates.
- Hours of working.
- Temporary Traffic Management Plan.
- Machinery to be used on site.
- Any flammable / highly combustible materials to be stored on site.
- Hot works on site.
- Temporary lighting.
- Measures to prevent Foreign Object Debris (FOD).
- Procedures to be followed during Low Visibility Procedures (LVP).
- Access and egress routes to the site for personnel and deliveries.
- Access Routes for Emergency Services.
- Designated vehicular access routes.
- Designated pedestrian access routes.
- Site red line boundary.
- Vehicular / pedestrian demarcation barriers.
- Site Security gates.
- Traffic route crossover points for site pedestrian traffic.
- Operational Requirements
- Local Authority (DCC) Requirements.
- Plan of work including details of all phases and sub-phases, and any requirements to move the site hoarding.

All records will be held on file, including all certificates and inspection of records that are required for traffic management and logistics purposes.

Implementation

In order to ensure compliance by contractors and suppliers, the requirements of the CTMP will be included in all contracts tender documents and will be discussed in detail prior to awarding a contractor.

During the construction phase the Contractor will ensure that drivers will be briefed regularly, and that compliance with the plan will be checked daily.

Failure by contractors and / or suppliers to comply with the requirements will result in reprimands of those responsible followed by removal of the driver / company from the project and termination of the contract if failure to comply persists.

Monitoring

The CTMP and any subsequent revisions or sub-plans will be regularly reviewed and updated by the project manager to consider the changing patterns of both the existing traffic and the construction traffic following consultation with DCC and the Gardaí. A list of indicators should be agreed for monitoring construction at the School Street site. This may include:

- Total number of vehicle movements in set time periods i.e. day, week, month;
- Type of vehicle movement i.e. waste, plant, material deliveries;
- Distance travelled; and
- Effectiveness of logistics management.

Legal Requirements

This outline CTMP and any subsequent detailed revisions or sub-plans will follow the following legal requirements:

- Traffic Signs Manual, issued by the Department of Transport, Tourism and Sport (November 2021), Chapter 8 – Temporary Traffic Measures and Signs for Roadworks (August 2019).
- Guidance for the Control and Management of Traffic at Road Works 2nd edition, issued by the Department of Transport, Tourism and Sport (2019).
- Design and Site Management Requirements of the SHWW (Construction) Regulations 2013 issued by the Health and Safety Authority.
- Roads Act 2007.
- Road Traffic Act 1961 to 2014.
- Safety Health and Welfare at Work (General Application) Regulations 2007 (Chapter 1 of Part 7: Safety Sign at Places of Work) (amended 2010).
- Road Traffic (Construction, Equipment and Use of Vehicles) Regulations 2010.

- Specification TS4 – Guidelines, Certification Scheme, and Specification for the Construction of Traffic Signs, Department of the Environment, Community and Local Government (2001).

5. Environmental Considerations and Mitigation Requirements

5.1 Air Quality and Climate

Fugitive emissions of airborne particulate matter are readily produced through the action of abrasive forces on materials and therefore a wide range of site preparation and construction activities have the potential to generate this type of emission, including:

- Earthworks, including the handling, working and storage of materials
- Construction activities
- The transfer of dust-making materials from the Site onto the local road network

For each of the potential sources of an environmental impact on the existing environment, the contractor will identify the control and protection measures to be implemented so that construction works are carried out in such a manner that ensures that emissions of dust and other pollutants are limited. Good practice methods shall be employed to minimise disruptions and risks to human health, and to avoid unnecessary impacts on sensitive ecological habitats. The contractor shall follow the relevant mitigation measures that are outlined within the oCEMP and any additional mitigation measures from the planning consent document. It is the responsibility of the contractor at all times to demonstrate full compliance with the dust control conditions herein.

Important aspects of air quality mitigation include:

- The assignment of responsibility for dust and emissions (including odour) management to an individual member of the contractor's staff (i.e., CEMPC)
- Training staff to understand the importance of the issue
- Communicating with the local community (as necessary)

5.1.1 General measures

The contractor will be required to implement measures to minimise the amount of dust and other emissions, including odour, produced during the construction phase of the Proposed Development, including the production of a DMP as part of the CEMP. These measures include but are not limited to:

- Where appropriate and practicable, hard surface roads should be wet swept to remove any deposited materials; un-surfaced roads should be restricted to essential site traffic only; and wheel-washing facilities should be located at all exits from the construction site
- There will be a Duty of Care on the contractor to ensure that dust-raising activities are located away from sensitive receptors, such as nesting birds and residential dwellings, as much as feasibly possible and duration kept to a minimum when in proximity to a receptor/activity
- Regular site inspections shall be undertaken by the contractor's CEMPC/ESR to monitor compliance with the CEMP and record inspection results. It is anticipated that a daily visual check will be carried out and these records will be available to the Applicant and/or DCC upon request.
- The contractor shall comply with the mitigation measures that may be provided in planning consent documents, best practice guidance, statutory authority requirements and any updated or new supplementary environmental reports made available to the contractor as necessary
- Works shall be planned to consider the location of sensitive receptors, sensitive core activities associated with operation of other businesses, local topography, wind direction and any potential sources of pollution
- Community engagement should be undertaken before works commence on site explaining the nature and duration of the works to local residents and businesses.
- Air quality measurements should be taken within the Site and surrounding air to ensure the particulate matter levels are in accordance with planning conditions

5.1.2 Dust control

Measures to minimise the amount of dust produced might include dampening haul roads and stockpiles, keeping roads clean, and using covers to minimise dust blow from haulage vehicles. Appropriate measures shall reflect the nature of the construction activity (type, dust source points, construction operation periods, and time of year) as well as ameliorating conditions (such as prevailing wind directions and speeds, typical precipitation and the dampening effect of retained soil moisture). Possible methods of reducing and controlling dust emissions during construction which shall be incorporated into the CEMP are listed in Table 2.

Table 2. Dust Control Measures

Activity	Possible Dust Control Methods
Drilling	• Use dust-extraction equipment such as filters, on exhaust air emissions from drill rigs.
Cutting of concrete and road surface	• Dampen material. • Ensure the cutting saw is fitted with a wet system. • Cover exposed area. • Ensure cutting only takes place within hoarding areas where possible.
Earthworks	• Exposed earthworks shall be kept damp at all times. If not possible, windbreaks shall be used. • Sealing or seeding of surfaces to stabilise them as soon as possible.
Loading/Unloading	• Reduce drop heights wherever practicable. • Ensure activities take place within hoarding areas where possible. • Avoid overloading vehicles.
Material Storage	• Dampen material. • Protect from wind and store under cover. • Screen material to remove dusty fractions prior to external storage. • Keep at an appropriate distance from Site boundary and sensitive receptors. • Keep at a suitable height. • Minimise drop heights. • Avoid double handling of material where possible. • Regular Site inspection for spillages of dusty materials. • Establish procedures for dealing with spillages of dusty materials.
Soil handling and storage	• Restrict the duration of the activity. Seal or seed storage mound surfaces as soon as is practical. • Protect surfaces from winds until disturbed areas are sealed and stable.
Site fires	• Not permitted
Transport by and use of vehicles and Site plant	• Restrict vehicle speed. • Avoid site vehicles and plant left running unnecessarily; turn off machinery not in use. • Keep vehicles and machinery in good working order. • Water unsurfaced roads and paved roads. • Wheel or body wash at an appropriate distance within the Site. • Load and unload in areas protected from wind. • Minimise drop heights. • Minimise vehicle and plant movements around the Site. • Sheet or cover loaded vehicles. • Use water sprays/spray curtains to moisten material. • Sweep/wash paved roads. • Regularly maintain and keep clean hardstanding surfaces on Site. • Minimise the use of diesel or petrol-powered generators and plant.

5.2 Cultural Heritage

A desk-based appraisal was undertaken on the 7th of January 2025, to identify any features of cultural significance in the surrounding environs of the Proposed Development. The search used publicly available data from online mapping tools made available by the Government of Ireland (i.e., the Heritage Maps viewer and the Historic Environment Viewer). No sites of cultural heritage significance were identified within the application site.

For each of the potential sources of an environmental impact on the existing cultural heritage assets, the contractor will identify the control and protection measures to be implemented. The following mitigation and general control measures should be followed as a minimum to ensure no significant adverse direct and indirect effects on these assets arise from the Proposed Development.

- The contractor shall ensure that mitigating measures outlined in the outline CEMP, planning consent, the Applicant's and/or DCC's requirements, and any updated or new supplementary environmental reports are included in the CEMP.
- The contractor will agree with the planning authority details regarding any further cultural heritage requirements (including, if necessary further testing) prior to commencement of construction works and demolition on the Site.
- There is the potential that unexpected archaeological remains may be discovered within the Proposed Development. If any features of archaeological potential are discovered during the course of the construction phase, further archaeological mitigation may be required such as preservation in-situ or by record.
- Should any archaeological material be found on site during construction works, works which could affect the find will be stopped and shall not proceed until after a qualified Archaeologist's report has been submitted and permission to proceed has been received in writing from the DCC in consultation with the Heritage Services of the Department of Tourism, Culture, Arts, Gaeltacht, Sport, and Media.
- Any archaeological evaluation and mitigation works should be undertaken by a suitably qualified archaeologist working under licence in accordance with an archaeological Programme of Works that sets out the scope of work and is approved in advance by the DCC Heritage Officer and the NMS.

5.3 Biodiversity

For each of the potential sources of an environmental impact on the existing environment, the contractor will identify the control and protection measures to be implemented. The following general control and mitigation measures should be followed as a minimum to ensure no significant adverse direct and indirect effects on ecological features arise from the Proposed Development.

- Any ecological requirements set out in a grant of planning will be incorporated into the contractor's CEMP and adhered to during the construction works.
- The contractor will be required to implement appropriate communications including reporting of environmental practice on-site, toolbox talks, daily briefings, an environmental noticeboard (with ecological information, spill/emergency response and refuelling area/procedure) and signage (including ecological exclusion areas).
- All site personnel involved in the construction of the Proposed Development will be made aware of the ecological features present and the mitigation measures and working procedures which must be adopted. This will be achieved as part of the site induction process through the delivery of a toolbox talk. In addition, briefings will be provided to all site personnel in advance of those works which are considered to present an increased risk of impacting upon ecological features.
- Good practice guidance on pollution prevention will be followed at all times, including implementation of the following:
    - Controls and contingency measures will be provided to manage run-off from construction areas and to manage sediment.
    - Pollution prevention measures will be implemented for all construction works.
    - There will be no direct discharge of water from any construction area into any water bodies.
    - All oils, fuels, lubricants, and/or other chemicals will be stored in an appropriate secure container in a suitable storage area, with spill kits provided at the storage location and at places across the Site. There will be no storage of any oils, fuels, lubricants, and/or other chemicals within 30 m of surface waters.
    - All refuelling and servicing of vehicles and plant will be carried out in a designated, bunded area with an impermeable base, at least 30 m from surface waters.

  - No on-site batching of concrete should occur. Washout from mixing will be carried out only in a designated contained impermeable area.
  - Soil exposure during the construction works will be reduced and exposed soil will be reinstated as rapidly as possible.

- The contractor's CEMP will include a Pollution Prevention Plan (PPP) (or similar document) which will set out procedures and diagrams for:
  - Dewatering of excavations to sustainable drainage system (SuDS) treatment area.
  - Temporary soil storage.
  - Fuel storage/refuelling.
  - Concrete wash-out area.
  - Preventing existing drainage features becoming pathways for construction run-off.
  - Reducing soil exposure and reinstating as rapidly as possible.
  - Temporary construction SuDS such as ditches with check dams, clean water ditches, settlement ponds, silt fencing and straw bales.
  - Contingency measures.
- The contractor will not be permitted to use materials that could cause heavy metal, sulphide, or strong acid pollution of run-off, and must use aggregates free of excessive fines and clays.
- Root protection zones will be established around retained trees, in accordance with the relevant guidance. These will be clearly demarcated, and no machinery will enter these areas, nor will any material be stored within them.
- Any seeding of grass along verges should include native local flowering species that provide food for pollinators, such as plants that produce pollen and nectar throughout the year.
- Pre-works check for invasive species will be conducted by a suitably experienced ecologist. Should invasive species be identified on site, the contractor will be required to agree with DCC and implement an invasive species management plan (ISMP).
- Standard measures for protected species and wildlife in general will be implemented, including:
  - Sightings of protected or notable species within the Site or immediate surroundings will be recorded. If any evidence or sightings of protected or notable species occur within 30 m of works, then works in that area will stop immediately and advice will be sought from the ECoW.
  - Any artificial lighting which is required (e.g., for security purposes) will be directed on to required areas and light spill will be minimised by the use of beam deflectors. Lighting will not be used such that there is light spill on to surrounding habitat which could be used by important species (e.g., by foraging or commuting bats).
  - Any excavations will be left with a method of escape for any animal that may enter overnight and will be checked at the start of each working day to ensure no animals are trapped within them.
  - Wherever possible, tree felling and vegetation removal works which will directly impact upon areas of vegetation which could be used by nesting birds will be undertaken outside the breeding season (taken to be March to August, inclusive). Where this cannot be achieved, a pre-works check for active nests will be conducted by a suitably experienced ornithologist. Each new construction/felling area will be checked not more than 72 hours prior to commencement of works as nests can be quickly established. Where any active nests are identified, suitable exclusion zone(s) will be established and maintained until the ornithologist determines that the breeding attempt(s) have concluded.
  - Any pipes will be capped or otherwise blocked at the end of each working day, or if left for extended periods of time, to ensure no animals become trapped.

5.3.1 Roles and Responsibilities

The following duties in relation to ecology should be included under the Environmental Manager Responsibilities:

- Prior to commencement of construction, a suitably experienced ECoW, will be appointed by the contractor. The ECoW will be a full member of a relevant professional institute such as the CIEEM, have relevant experience in the management of ecological constraints during construction, and hold or have held a protected species licence(s) in the Republic of Ireland. The ECoW shall be appointed sufficiently in advance of the Proposed Development to arrange for any mitigation requirements to be incorporated into the contractor's site-specific Method Statements and programme.
- The ECoW will be responsible for advice and provision of services in relation to implementation of ecological mitigation measures described in the planning package in addition to any required as a condition of any consent(s). The ECoW will be engaged and consulted on a regular basis by the Environmental Manager.
- The Environmental Manager and the ECoW will ensure that the ecological mitigation and control measures are satisfactorily implemented.
- The contractor will liaise with the ECoW on all matters relating to ecology including mitigation (particularly protected species including roosting bats and nesting birds).
- The contractor will engage and consult with the ECoW and a bat specialist prior to any felling or removal of trees within the Site and if bats are unexpectedly encountered during any element of construction works.

The contractor will accommodate the ECoW, whose role will be to:

- Oversee carrying out of pre-construction surveys to the appropriate specifications.
- Communicate relevant matters to DCC and other stakeholders as relevant.
- Attend site meetings and input to contractor toolbox talks prior to commencement of the Proposed Development.
- Determine the potential requirement for licences and provide specialist input.

5.4 Land and Soils

In the absence of adequate management and mitigation measures, the risk of potential negative impacts on the land and soils environment occurring during the construction phase of the Proposed Development can arise from several activities, for example, weathering and erosion of the surface soils, increased silt levels or pollutants from the construction processes, accidental spills, and impacted runoff.

In order to prevent spillages of fuels to ground, and to prevent any consequent soil quality impacts, it will be necessary to adopt mitigation measures during the construction phase. These include (but are not limited to):

- Designating a bunded storage area at the contractor's compound for all oils, solvents, and chemicals used during construction. Oil and fuel storage tank design will be bunded to a volume of not less than the greater of 110% of the capacity of the largest tank or drum within the bunded area, or 25% of the total volume of the substance which could be stored within the bunded area, with impermeable bases within each contractor's storage area as required. Drainage from the bunded area will be diverted for collection and safe disposal. All containers within the storage area will be clearly labelled so that appropriate remedial action can be taken in the event of a spillage. When moving drums from the bunded storage area to locations along the Proposed Development, a suitably sized spill pallet will be used for containing any spillages during transit.
- Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles, will take place in designated areas which will be away from surface water gullies or drains. Spill kit facilities will be provided at the fuelling areas in order to provide for accidental releases or spillages in and around the area. Any used spill kit materials will be disposed of using a licenced hazardous waste contractor in accordance with relevant legislation.
- Where mobile fuel bowsers are used on the Proposed Development, in the event of a machine requiring refuelling outside of the designated area, fuel will be transported in a mobile double skinned tank. Any

flexible pipe tap, or valve will be fitted with a lock where it leaves the container and locked shut when not in use. Each bowser will carry a spill kit, and each bowser operator will have spill response training.

- The contractor will develop procedures and contingency plans to deal with emergency accidental spills and leaks.
- The Contractor and ESR will inspect the refuelling area at the compound at least daily during operation of the compound to verify that drip-trays are being used consistently by site staff (and are being regularly emptied to a bowser)

In addition to the above measures, mitigation and monitoring measures to limit potential impacts associated with the use of natural resources throughout the construction of the Proposed Development shall also be implemented (refer also to the oRWMP produced for this planning application):

- The source of backfill material will be vetted for environmental management status, regulatory and legal compliance status.
- Backfill material will be sourced from suppliers which comply with vetting requirements only.
- Periodic reviews of the backfill supplier's license will be undertaken.
- In the event recycled aggregate is used as backfill, chemical testing will be undertaken to confirm that it is suitable.
- A contractor's RWMP will be prepared taking account of the oRWMP produced for this planning application as well as a Soil Management Plan.

5.5 Water

Development works by their nature have the potential to impact surface waters and groundwater by way of pollution. Examples of potential sources of impacts include:

- Polluted discharges from Site:
  - Discharge of vehicle wash-down water.
  - Discharge of construction materials, e.g., uncured concrete.
  - Uncontained spillage of wastewater effluent.
  - Uncontrolled sediment erosion and contaminated silty runoff
  - Refuelling facilities, chemical and waste storage or handling areas.
- Changes to the existing drainage network including interception and redirection of natural and artificial watercourses (e.g., drainage channels).
- Increased runoff from cleared and capped areas (relative to greenfield values).

The implementation of appropriate control measures in accordance with the contractor's CEMP and best management practices will reduce the risk of accidents from polluting substances entering surface water and groundwater.

5.5.1 Water Quality Management Plan

The contractor shall be responsible for developing a WQMP that relates to its construction activities. The WQMP should be included within the CEMP. The Plan shall apply to all works carried out by the contractor and any sub-contractors under its control, and should be agreed between the contractor, DCC, and relevant stakeholders.

The WQMP will also address licensing requirements, monitoring requirements, discharge points, and maintenance requirements in relation to the management of surface water during the construction phase. Construction works will be undertaken in accordance with all relevant guidance, including the following:

- Inland Fisheries Ireland (2016). *'Guidelines on protection of fisheries during construction works in and adjacent to waters'.*

- CIRIA (2001). *'Control of water pollution from construction sites. Guidance for consultants and contractors (C532)'.*
- CIRIA (2015). *'Environmental good practice on site guide (fourth edition) (C741)'.*

The WQMP should include specifics on the technical specification, installation, and maintenance of any pollution control tools used, as well as monitoring and sampling requirements. Any deviation from the agreed WQMP should be reviewed and agreed by all parties.

In terms of specific mitigation measures relating to sedimentation, the CEMP must include:

- Procedures for dewatering the Site during construction works including licensing requirements, monitoring requirements, discharge points, and maintenance requirements of any water treatment plants.
- Put in place measures that will minimise erosion by reducing disturbance and stabilising exposed materials.
- Consider and document control measures to minimise the release of mobilised sediment which may arise during the construction phase despite the erosion control measures.
- Preventing silt pollution minimising the generation of silt-laden runoff which can be achieved by the careful planning of site works by the contractor so that activities likely to generate silt-laden runoff are carried out during drier weather and erosion of surface soils and excavations is controlled.
- Stockpiles will be kept to a minimum to control erosion areas of exposed ground. Stockpiles shall be minimised to reduce silty runoff and located at least 30 m away from surface waters, drains, and dewatering points.
- Consideration shall be given to groundwater level and ground saturation to prevent excessive overland flow and associated scouring and mobilisation of suspended solids. The area to be stripped shall be kept to a minimum and phased during the planning and construction phase to reduce the amount of land exposed
- Mud shall be controlled at entry and exits to the Site using wheel washes and/or road sweepers, and tools and plant must be washed out and cleaned in designated areas. Consideration of containment of wheel washings for treatment prior to discharge shall be given.

5.5.2 General measures

The following mitigation and general control measures should be followed as a minimum to ensure no significant adverse direct and indirect effects on the environment arise from the Proposed Development

- The contractor shall ensure that mitigating measures, planning consent, good practice measures, DCC's requirements, and any updated or new supplementary environmental reports are included in the CEMP.
- The contractor will develop an ERP to be followed in the event of spills and leaks.
- Materials and equipment to implement the spill response and control plan must be available on site at all times. These should be in clearly marked response points, which can be accessed by all staff. They must be checked on a daily basis to ensure that all required materials are in place. All staff on site must be aware of these items and be trained on procedures to implement in the case of a spill. Any used spill kits will be disposed of using a hazardous waste disposal contractor and in accordance with all relevant EU and Irish waste management legislation.
- Mobile bowsers, tanks, and drums will be stored in secure, impermeable storage areas.
- Bunded storage will be provided for potentially hazardous materials (i.e., oils, hydraulic fluids, greases, solvents, chemicals, and paints) used during the works. Oil and fuel storage tank design will be bunded to a volume of not less than the greater of 110% of the capacity of the largest tank or drum within the bunded area, or 25% of the total volume of the substance which could be stored within the bunded area, with impermeable bases within each contractor's storage area as required.
- Hazardous materials will be stored in designated appropriately bunded areas, which will be located away from all surface waters with nearby drains to be protected as appropriate.
- A plant maintenance programme will be implemented.
- Plant will be refuelled in designated refuelling areas where possible.

- All water runoff from designated refuelling areas shall be channelled to an oil interceptor or an alternative treatment system prior to discharge.
- Drip trays will be used during refuelling operations if performed outside of a contained area and spill kits will be carried in the fuel bowser vehicle.
- Leaking or empty fuel drums shall be removed from Site immediately and disposed of via an appropriately licensed waste disposal contractor.
- Welfare facilities will be provided for the contractors on site during the construction works. During construction, portable sanitary facilities will be provided with waste collected and disposed of appropriately.

5.5.3 Control of Concrete and Lime

Mitigation and monitoring measures to limit potential impacts associated with the use of concrete and lime throughout the course of the Proposed Development are as follows:

- Ready-mixed concrete will be brought to the Site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated water (for example, storm water) to the underlying subsoil and groundwater.
- The pouring of concrete will take place within a designated area protected (for example, by a geosynthetic material) to prevent concrete runoff into the soil/groundwater media.
- Any use of concrete in proximity to surface waters will be carefully controlled to avoid spillage. No on-site batching should occur. Washout from mixing will be carried out only in a designated contained impermeable area.
- Washout of concrete transporting vehicles will take place at an appropriate facility, offsite where possible such as the concrete manufactures premises. Alternatively, where wash out takes place onsite, it will be carried out in a designated, carefully managed onsite wash out area.
- Wastewater from washing of concrete lorry chutes will be directed into a concrete washout container, lined with an impermeable membrane. The container should be of good condition, should not overflow or leak and should be easily accessible to construction vehicles. The containers must be checked and emptied at a frequency equivalent to the volume of concrete being used and no runoff should leave the washout location. The area must be clearly marked and must be located away from storm drain inlets, open drainage facilities, water courses and ditches.

5.6 Noise and Vibration

Noise and vibration impacts may arise from a wide variety of sources during construction and to varying degrees during the course of the works, depending upon the stage of construction (i.e., ground works, etc.).

The contractor shall comply with any limits or requirement for mitigation measures that may be provided in a planning consent or any post-planning agreement with DCC. The contractor shall act in accordance with the applicable requirements of relevant legislation and guidance including:

- Dublin City Council (DCC) *'Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition'*
- Safety, Health and Welfare at Work (General Application) Regulations 2007, Part 5 Noise and Vibration
- The British Standards Institution (2014) ('*Code of practice for noise and vibration control on construction and open sites – Part 1: Noise*' (BS 5228-1:2009+A1:2014).
- The British Standards Institution (2014) ('*Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration*' (BS 5228-2:2009+A1:2014).
- Health and Safety Authority (2007). '*Guide to the Safety, Health and Welfare at Work (General Application) Regulations 2007: Chapter 1 of Part 5: Control of Noise at Work*'.
- National Roads Authority (NRA) (2014) *'Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes'.*

5.6.1 Noise and Vibration Limits

The contractor will be responsible for compliance with prescribed noise and vibration levels set in a grant of planning or agreed between the contractor and DCC during the post-planning stage. This shall apply to all works carried out by the contractor and any sub-contractors under their control. Any deviation from the threshold noise levels agreed with DCC will only be allowed in exceptional circumstances and when prior written approval has been received from DCC. The requirement whether or not to undertake noise and vibration monitoring will be agreed with DCC.

5.6.2 General measures

The contractor will address noise and vibration in the CEMP, through measures such as the following where appropriate:

- A site representative and designated noise liaison responsible for matters relating to noise and vibration will be appointed prior to construction on site. The designated noise liaison can be the ECoW. Any complaints should be logged, investigated, and followed up in a prompt fashion and, where required, measures taken to ameliorate the source of the noise complaint. In addition, prior to particularly noisy construction activity, e.g., excavation close to a property, the Site contact should inform the nearest noise sensitive locations of the time and expected duration of the works.
- The site representative and designated noise liaison will also liaise with environmental advisors, relevant authorities/environmental bodies, and the local community as required with respect to noise and vibration impacts during the construction phase.
- Good community relations shall be established and maintained throughout the construction process. This shall include informing residents on progress and ensuring measures are put in place to minimise noise and vibration impacts.
- The contractor will highlight through Method Statements and/or risk assessment specific activities that will create significant noise and vibration levels. Contractors will demonstrate how they will mitigate/manage these emissions. The contractor will implement mitigation measures where noise sources are located near sensitive receptors and where required on Site. Where significant noise or vibration levels are expected, this will be communicated with any affected parties.
- All noise generating construction plant shall be shut down when not in use.
- The contractor shall select construction plant with low inherent potential for generation of noise and/or vibration.
- The hours of working should be planned, and account should be taken of the effects of vibration upon persons in areas surrounding Site operations and upon persons working on site, taking into account the nature of land use in the areas concerned, the duration of work, and the likely consequence of any lengthening of work periods.
- Where reasonably practicable, low vibration working methods should be employed. Consideration should be given to use of the most suitable plant, reasonable hours of working for operations which might give rise to perceptible vibrations, and economy and speed of operations.
- The loading and unloading of materials shall take place away from residential properties, ideally in locations which are acoustically screened.
- Materials shall be handled with care and placed rather than dropped where possible. Drop heights of materials from lorries and other plant shall be kept to a minimum.
- Modern plant shall be selected which complies with the latest European Commission noise emission requirements. Electrical plant items (as opposed to diesel powered plant items) shall be used wherever practicable.
- Site operations and vehicle routes shall be organised to minimise the need for reversing movements.
- No employees, subcontractors, and persons employed on the Site shall cause unnecessary noise from their activities, e.g., excessive 'revving' of vehicle engines, music from radios, shouting and general behaviour, etc. All staff inductions at the Site shall include information on minimising noise and reminding them to be considerate of the nearby residents.

- As far as practicable, noisier activities shall be planned to take place during periods of the day which are generally considered to be less noise-sensitive or when existing ambient noise levels are higher to help mask the construction noise, i.e., not particularly early or late in the day.
- Measures shall be put in place to ensure that employees know that minimisation of noise will be important at the Site.
- Any machinery which is in intermittent use shall be shut down in intervening periods of non-use or where this is impracticable, it shall be throttled back to a minimum.
- All plant and vehicles shall be maintained in good mechanical order and fitted with the appropriate silencers, mufflers or acoustic covers where applicable.

5.7 Landscape and Visual

Construction activities and the presence of vehicles and machinery may result in impacts to the landscape character or visual amenity within the surrounding environs of the Proposed Development.

Measures aimed to reduce these impacts will include:

- Minimising disturbance of existing vegetation where possible.
- Providing screening where needed, reflecting vegetation patterns of local habitats, and reducing impacts on the landscape character of the area.
- Planting road boundaries to reduce headlight glare intrusion into adjacent properties.
- Locating signage sensitively so that it does not increase the visual effect upon dwellings.
- Rounding of the top and bottom of cut and fill slopes to tie in smoothly with existing adjacent landform.
- Provision of sufficient protection for trees to be retained in areas close to construction works.

5.8 Resources and Waste Management

An oRWMP has been prepared for the Proposed Development by AECOM and contains further details pertaining to resources and waste management; this document should be read in conjunction with the oCEMP.

The contractor shall be responsible for developing a detailed RWMP related to their construction activities. The RWMP shall apply to all works carried out by the contractor and any sub-contractors under their control. In preparing the RWMP, the contractor shall take into account any measures set out in any planning consent document, the relevant legislation, and industry best practice, including the Environmental Protection Agency's (EPA) 'Best Practice Guidelines on the Preparation of Resource & Waste Management Plans for Construction and Demolition Projects' (2021).

In developing the RWMP, the contractor shall consider the reuse of uncontaminated materials excavated from the Site during the works where practicable, where permitted under the relevant waste legislation, and where the material meets the engineering requirements.

6. Summary

This outline CEMP shall be further refined and expanded by the contractor into a full contractor's CEMP as more information becomes available and more certainty in terms of the proposed layout, construction methods, programme, and potential environmental impacts. The full contractor's CEMP will be prepared prior to commencement of construction and with the approval of the Applicant DCC. Additionally, the outline CEMP should be read in conjunction with the outline RWMP prepared for the Proposed Development.

Appendix A – Air Quality Monitoring and Noise Control Unit's Good Practice Guide

Comhairle Cathrach Bhaile Átha Cliath
Dublin City Council

Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition

Prior to the commencement of work on the site a construction and demolition plan must be developed. When developing the construction and demolition plan reference must be made to the requirements of the **Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition.**

Regardless of the risk category initially assigned to a development on receipt of a complaint additional control measures may be required.

This Guide has been produced with reference to the London Good Practice Guide: Noise and Vibration Control for Demolition and Construction produced by the London Authorities Noise Action Forum, July 2016.

In order to ensure that demolition and construction work does not have an adverse impact on those living and working nearby, the following best practice guidance has been developed. All construction and demolition work has the potential to have adverse environmental impacts no matter what the scale. The following best practice guide sets out the measures which all developers should consider prior to commencement of work and provides further recommendations for the control of noise, vibration and air pollution.

A risk based approached is to be used taking into account the locality, nature of the work and the expected duration of the work.

Risk Assessment A – Locality/Site Information

The site should be assessed in relation to the duration of the work, distance to sensitive receptors, ambient noise levels and working hours. Tick the field most likely to apply and add up the number of ticks in each column.

Risk Assessment B - Work Information

Tick the field that is most likely to represent the works in each category, add up the total number of ticks in each column.

Total Risk Assessment

The table ‘total risk assessment’ contains the sub-total numbers from ‘Risk Assessment A and B. The column in total risk assessment with the most ticks indicates the risk category that should be employed for the site.

If two risk categories have an equal number of ticks, the higher category of the two shall apply. Once the risk category is known the ‘good practice measures’ outlined in this code of practice shall be employed.

NB: Please note that Dublin City Council may provide a final risk assessment level based on local environmental and historical factors which may be appropriate to the site in order to ensure that residential amenities of residents in adjoining and adjacent premises are protected.

1. Locality

Identify those who may be affected by noise, including particularly sensitive locations (hospitals/schools) and determine ambient noise levels (noise maps or noise monitoring). Sensitive receptors include, residents, businesses etc.

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

2. Work information

	Low	Medium	High
Location of works			
Majority within existing building			
Majority External			
External Demolition			
Limited to two weeks			
Between 2 weeks and 3 months			
Over three months			
Ground Works			
Basement level planned			
Non-percussive methods only			
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			
Between 1 week and 1 month			
Greater than 1 month			
SUBTOTAL B			

	Low	Medium	High
Risk Assessment A			
Risk Assessment B			
Total			

The column in total risk assessment with the most ticks indicates the risk category that should be employed for the site.

1. General Considerations

All site staff shall be briefed on noise mitigation measures and the application of best practicable means to be employed to control noise.	All sites
Good Quality site hoarding should be erected to maximise the reduction in noise levels	Medium and High risk sites
The contact details of the contractor and site manager shall be displayed to the public, together with the permitted operating hours, including any special permissions given for out of hours work	Medium and High risk sites
The site entrance shall be located to minimise disturbance to noise sensitive receptors	Medium and High risk sites
Internal haul routes shall be maintained and steep gradients shall be avoided	Medium and High risk sites
Material and plant loading and unloading shall only take place during normal working hours unless the requirement for extended hours is for traffic management(i.e. road closure) or health and reasons(application must be made to DCC a minimum of 4 days prior to proposed works)	All sites
Use rubber linings in chutes, dumpers and hoppers to reduce impact noise	Medium and High risk sites
Minimise opening and shutting of gates through good coordination of deliveries and vehicle movements	Medium and High risk sites
No materials shall be burned on site	All sites
Adequate dust/debris screening should be in place at the site boundary to contain and minimise the amount of windblown dust. This must be maintained in good condition at all times.	Medium and High Risk sites
All consignments containing material with the potential to cause air pollution being transported by skips, lorries, trucks or tippers must be covered during transit on and off site.	All sites
The site shall be dampened down as necessary to minimise windblown dust when necessary or during periods of dry weather. Where dust is likely to be a persistent problem a water spray system e.g. (IBC tanks fitted with hoses) must be put in place from the commencement of the works where required.	All sites
Dust suppression equipment must be used when point source emissions are likely.	All sites
The entry and exit points to the site should be constructed of hard standing which is regularly dampened to minimise dust emissions.	Medium and High Risk Sites

Use of road sweeper and/or hand held dust vacuums as required to wash external site perimeter to include pavements.	All sites

2. Plant

Ensure that each item of plant and equipment complies with the noise limits quoted in the relevant European Commission Directive 2000/14/EC	All sites
Fit all plant and equipment with appropriate mufflers or silencers of the type recommended by the manufacturer	All sites
Use all plant and equipment only for the tasks for which it has been designed	All Sites
Shut down all plant and equipment in intermittent use in the intervening periods between work or throttle down to a minimum	All sites
Power all plant by mains electricity where possible rather than generators	Medium and High Risk Sites
Maximise screening from existing features or structures and employ the use of partial or full enclosures for plant	Medium and High Risk Sites
Locate movable plant away from noise sensitive receptors	All sites

3. Vehicle activity

Ensure all vehicle movements (on site) occur within normal working hours. (other than where extension of work requiring such movements has been granted in cases of required road closures or for health and safety reasons)	All sites
Plan deliveries and vehicle movements so that vehicles are not waiting or queuing on the public roads. If unavoidable engines should be turned off.	Medium and High Risk Sites
Minimise the opening and closing of the site access through good coordination of deliveries and vehicle movements	Medium and High Risk Sites
Plan the site layout to ensure that reversing is kept to a minimum	Medium and High Risk Sites
Where reversing is required use broadband reverse sirens or where it is safe to do so disengage all sirens and use banks-men	Medium and High Risk Sites
Rubber/neoprene or similar non-metal lining material matting to line the inside of material transportation vehicles to avoid first drop high noise levels.	Medium and High Risk Sites
Wheel washing of vehicles prior to exiting the site shall take place to ensure that adjoining	Medium and High Risk Sites

roads are kept clean of dirt and debris. Regular washing of adjoining streets should also be carried out by the developer, as required by mechanical road sweepers	

4. Demolition Phase

Employ the use of acoustic screening; this can include planning the demolition sequence to utilise screening afforded by buildings to be demolished.	Medium and High Risk Sites
If working out of hours for Health and Safety reasons (following approval by DCC) limit demolition activities to low level noise activity unless absolutely unavoidable)	All sites
Use low impact demolition methods such as non-percussive plant where practicable	Medium and High Risk Sites
Use rotary drills and 'bursters' activated by hydraulic or electrical power or chemically based expansion compounds to facilitate fragmentation and excavation of hard material.	High Risk sites
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	Medium and High Risk Sites
Consider the removal of larger sections by lifting them out and breaking them down either in an area away from sensitive receptors or off site.	High Risk Sites

5. Ground Works and Piling Phase

The following hierarchy of groundwork/piling methods should be used if ground conditions, design and safety allows: • pressed in methods, e.g., hydraulic jacking • Auger/bored piling • Diaphragm walling • Vibratory piling or vibro-replacement • Driven Piling or dynamic consolidation	Medium and High Risk Sites
The location and layout of the piling plant should be designed to minimise potential noise impact of generators and motors	Medium and High Risk Sites
Where impact piling is the only option utilise a non-metallic dolly between the hammer and driving helmet or enclose the hammer and helmet with an acoustic shroud	Medium and High Risk Sites

Consider concrete pour sizes and pump locations. Plan the start of concrete pours as early as possible to avoid overruns	Medium and High Risk Sites
Where obstructions are encountered, work should be stopped and a review undertaken to ensure that work methods that minimise noise are used.	Medium and High Risk Sites
When using an auger piling rig do not dislodge material from the auger by rotating it back and forth. Use alternate methods where safe to do so.	Medium and High Risk Sites
Prepare pile caps using methods which minimise the use of breakers, e.g., use hydraulic splitters to crack the top of the pile.	Medium and High Risk Sites

6. Monitoring

Establish pre-existing levels of ambient noise by baseline monitoring or use of the noise maps.	Medium and High Risk Sites
Carry out regular on site observation monitoring and checks/audits to ensure that BPM is being used at all times. Such checks shall include; • Hours of work • Presence of mitigation measures • Number and type of plant • Construction methods Site reviews must be recorded and made available for inspection	High Risk Sites
Monitor noise and vibration continuously during demolition, piling, excavation and sub and superstructure works at agreed locations and report to DCC at agreed intervals and in an agreed format. To comply with this the following must take place. The monitoring locations for existing sites as agreed with officers of Dublin City Council must remain in situ. If additional monitoring is required this will be provided and the new locations will be agreed with Dublin City Council. For all new sites the monitoring locations must be agreed with Dublin City Council. The results of the monitoring must be forwarded to officers of the Air Quality Monitoring and Noise Control Unit every two weeks in the following format: • Provide the construction noise level as defined in British Standard 5228 and the peak particle velocity readings for the hours of operation of the site. This will	High Risk Sites

include the construction noise level for any overtime period worked outside of normal working hours. Provide a report detailing and discussing the noise and vibration levels over the reporting period. If a breach is recorded the follow up action that took place to prevent any further breaches must be included in the report. • This information must be provided in electronic format If results are required owing to complaints the results will be provided as soon as possible by the contractor to Dublin City Council.	
Appraise and review working methods, processes and procedures on a regular basis to ensure continuous development of BPM	Medium and High Risk Sites
The 'ABC' Method detailed in Paragraph E.3.2 of BS 5228-1:2009 +A1:2014 shall be used to determine acceptable noise levels for day, evening and night time work.	Medium and High Risk Sites
Vibration levels must be kept below 1.0 mm/sec (PPV) where possible. Where levels are expected to exceed this value. Dublin City Council should be notified.	Medium and High Risk Sites
Appropriate dust suppression must be employed to prevent fugitive emissions affecting those occupying neighbouring properties or pathways	All sites
Street and footpath cleaning must be undertaken during the demolition and ground works phase to minimise dust emissions	Medium and High Risk Sites
The following air quality monitoring procedures must be applied: 1. Continuous real time particulate (i.e. PM10 and PM2.5) monitoring along the site boundary must be undertaken during any demolition, ground works or during a construction phase which Dublin City Council deems necessary. The location of particulate monitors to be agreed with DCC prior to installation. The results of the monitoring shall be made available to DCC on request in an agreed format. 2. Dust deposition monitoring must be undertaken using a methodology agreed in advance with DCC.	Medium and High Risk Sites

7. Communication and Liaison

A Community Liaison Plan should be developed by the developer in consultation with local residents/businesses and a single point of contact nominated to engage with Dublin City Council and the residents/businesses and to handle complaints and communication of site information. A copy of this plan must be sent to Dublin City Council Planning Department as a matter of urgency in the case of sites where development has already commenced and 14 days in advance of commencement of works for any other site	Medium and High Risk Sites
Contact details for the site manager and liaison officer should be displayed prominently on the site hoarding	Medium and High Risk Sites
All staff should be briefed on the complaints procedure and the mitigation requirement and their responsibilities to register and escalate complaints received.	Medium and High Risk Sites
Send regular updates at appropriate intervals to all indentified affected neighbours/ businesses via a newsletter and post relevant information on the site hoarding. Also make the information available via email/website including weekly noise monitoring reports	Medium and High Risk Sites
Arrange regular community liaison meetings at appropriate intervals including prior to commencement of the project.	High Risk Sites
Meet regularly with neighbouring construction sites to ensure activities are coordinated to minimise any potential cumulative issues.	High Risk Sites

Extensions of Working Hours in <u>exceptional circumstances</u>

Ensure at least 4 days notice is given to Dublin City Council Planning Department when applying for extensions to normal working hours. Do not undertake out of hours work unless permission to do so has been granted.	All sites
The applicant must demonstrate in writing that the works required cannot be carried out during normal working hours. The documentation sent in must be accompanied by a detailed engineering or/and traffic management or/and safety case as to why the works are required outside normal hours. Power floating after 6pm is the only activity that will be permitted during the extensions where they relate to required large concrete pours. All reasonable and appropriate measures to minimise noise associated with these works	All sites

must be put in place and no works other than those approved may be carried out during extended working hours. The Developer/his agent must give the times and dates of the proposed work, and the mitigation measures that are to be used to minimise noise/disturbance	
Advise neighbours about requirement for and duration of any permitted works outside of normal working hours, and associated environmental mitigation measures being put in place during the course of the extended works, following receipt of approval from DCC	All sites
All complaints will be referred directly to the site liaison person and a reply must issue to the complaint within 3 hours of receipt of the complaint.	All sites
A log of all complaints and a summary of how they were dealt with should be kept and be made available to DCC, as required	All sites
Any breaches of permitted working hours or permitted extended working hours or developers or subcontractors not carrying out their requirements under this protocol may lead to enforcement action and may also result in the withdrawal of any extension of hours of works for a period that will be at the discretion of Dublin City Council.	All sites