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Outline Construction and Environmental Management Plan

Project

Residential Development at Summerhill Road, Dunboyne, Co. Meath

Client

Solkerry Ventures Ltd



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OUTLINE CONSTRUCTION AND ENVIRONMENTAL MANAGEMENT PLAN

RESIDENTIAL DEVELOPMENT AT SUMMERHILL ROAD, DUNBOYNE, CO. MEATH

CONTENTS

1.0 INTRODUCTION 1

2.0 SITE LOCATION AND PROPOSED DEVELOPMENT 3

2.1 Site Location 3

2.2 Existing Site Condition 4

2.3 Description of Proposed Development 4

3.0 LOGISTICS 6

3.1 Construction Programme and Phasing 6

3.2 Vehicular Access to Site 6

3.3 Protection of Public Areas from Construction Activity 6

3.4 Site Security 7

3.5 Material Hoisting and Movement throughout the Site 7

3.6 Deliveries and Storage Areas 7

3.7 Site Accommodation 7

3.8 Site Parking 7

3.9 Site Working Hours 8

3.10 Staff Training and Certification 8

3.11 Record Keeping 8

3.12 Complaints Procedure 9

3.13 Designated Community Liaison Officer 9

4.0 GENERAL ENVIRONMENTAL PROTECTION MEASURES 10

4.1 Surface Water Treatment 10

4.2 Noise 11

4.3 Air Quality and Dust Monitoring 12

4.4 Migrating Dust and Dirt Pollution 13

4.5 Harmful Materials 13

4.8 Horizontal Directional Drilling (HDD) 16

5.0 TRAFFIC MANAGEMENT 17

5.1 Site Traffic, Traffic and Pedestrian Management 17

5.2 Vehicular Access to Site 17
5.3 Minimisation of Construction Vehicle Movements 17
5.4 Project Specific Traffic Management Plan 19
5.5 Vehicle Movements During Construction 19

6.0 PROVISIONS FOR CONSTRUCTION 22
6.1 Hoarding, Set-up of Site, and Access/Egress Points 22
6.2 Removal of Services 22
6.3 Site Clearance and Demolition 22
6.4 Excavation 22
6.5 Site Service Installations 22
6.6 Superstructure 23

7.0 SEDIMENT AND WATER POLLUTION CONTROL PLAN 24

8.0 RESPONSES TO ITEMS RAISED IN MCC OPINION 25
8.1 Item 4 25
8.2 Item 13 25

FIGURES

Figure 1 – Location of subject lands 3
Figure 2 – Subject lands extents and environs 4

1.0 INTRODUCTION

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by Solkerry Ventures Ltd. to prepare an Outline Construction Environment Management Plan (OCEMP) to accompany a planning application for a proposed residential development at Summerhill Road, Dunboyne, Co. Meath.

The OCEMP is a preliminary plan. This provides a framework within which all final construction processes, site management arrangements, and environmental protection measures employed during construction are to be specified. Construction of the proposed development will be under the control of a lead contractor, who will be appointed following a grant of planning permission. Upon appointment, once familiar with the site and having developed a final detailed methodology for construction, the lead contractor will expand upon the OCEMP to produce a detailed Construction and Environmental Management Plan (CEMP). The content of the contractor's CEMP will be agreed with Meath County Council (MCC) prior to commencement of works.

The contractor's detailed Construction and Environmental Management Plan will give greater detail of construction management arrangements and processes, while adhering to the stipulations of this OCEMP. It will also incorporate the following:

- an Operational Health & Safety (OH&S) Management Plan
- an Environmental Management Plan (including a Waste Management Plan); and
- a Construction Traffic Management Plan (including a Pedestrian Management Plan)

The contractor's Construction & Environmental Management Plan shall be integrated into and implemented throughout the construction stage of the project to ensure the following:

- That all site activities are effectively managed to minimise the generation of waste and to maximise the opportunities for on-site reuse and recycling of waste materials.
- To ensure that all waste materials generated by site activities, which cannot be reused on site, are removed from site by appropriately permitted waste haulage contractors and that all wastes are disposed of at approved licensed facilities in compliance with the *Waste Management Act 1996 (as amended)*, and *Best Practice Guidelines for the Preparation of Resource & Waste Management Plan for Construction & Demolition Projects (EPA, 2021)*.
- To manage and control any environmental impacts (noise, vibration, dust, water) that construction activities may have on the local receiving environment, in particular on receptors and properties adjacent to the construction site.

- To comply with all planning conditions and requirements imposed in relation to waste management.

The OCEMP demonstrates how the appointed contractor, and the appointed Project Supervisors (Site Manager, Health & Safety Officer, and Project Ecologist) will comply with the following relevant legislation and best practice guidelines:

- Integrated Pollution Prevention and Control Directive (1996/61/EC)
- The Waste Framework Directive (Directive 2008/98/EC)
- Waste Management Act 1996, the Waste Management (Amendment) Act 2001 and the Protection of the Environment Act 2003
- Waste Management (Collection Permit) (Amendment)(No.2) Regulations 2016
- Waste Management (Permit) Regulations 1998 (SI No. 165 of 1998)
- Department of the Environment, Heritage and Local Government – Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects – June 2006
- Local Government Water Pollution Act 1977
- Wildlife Act 1976 (as amended by the Wildlife (Amendment) Acts 2000 to 2012)
- Environmental Protection Agency (EPA) – Best Practice Guidelines for the Preparation of Resource Management Plans for Construction & Demolition Projects – 2021.
- Eastern Regional Fisheries Board, (2006), Fisheries Protection Guidelines: Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites.
- CIRIA (2002) Control of water pollution from construction sites: guidance for consultants and contractors (SPI56) Construction Industry Research and Information Association.

2.0 SITE LOCATION AND PROPOSED DEVELOPMENT

2.1 Site Location

The proposed development site is located immediately to the east of the R157 in Dunboyne, Co. Meath. The site is situated approx. 800m west of Dunboyne town centre and extends to approximately 6.76 hectares in area. The site falls within the administrative jurisdiction of Meath County Council.

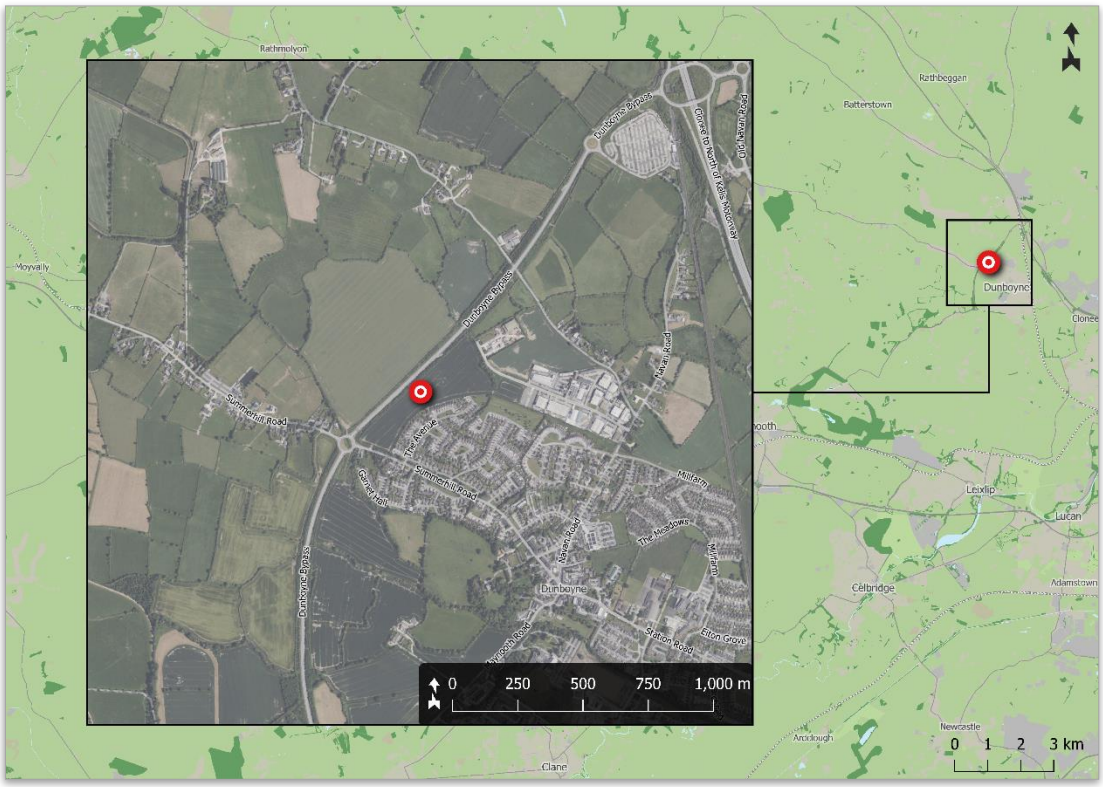


Figure 1 – Location of subject lands
(sources: OSM Contributors, Microsoft)

The location of the subject lands is shown in **Figure 1**; their extents and environs are shown in more detail in **Figure 2**.

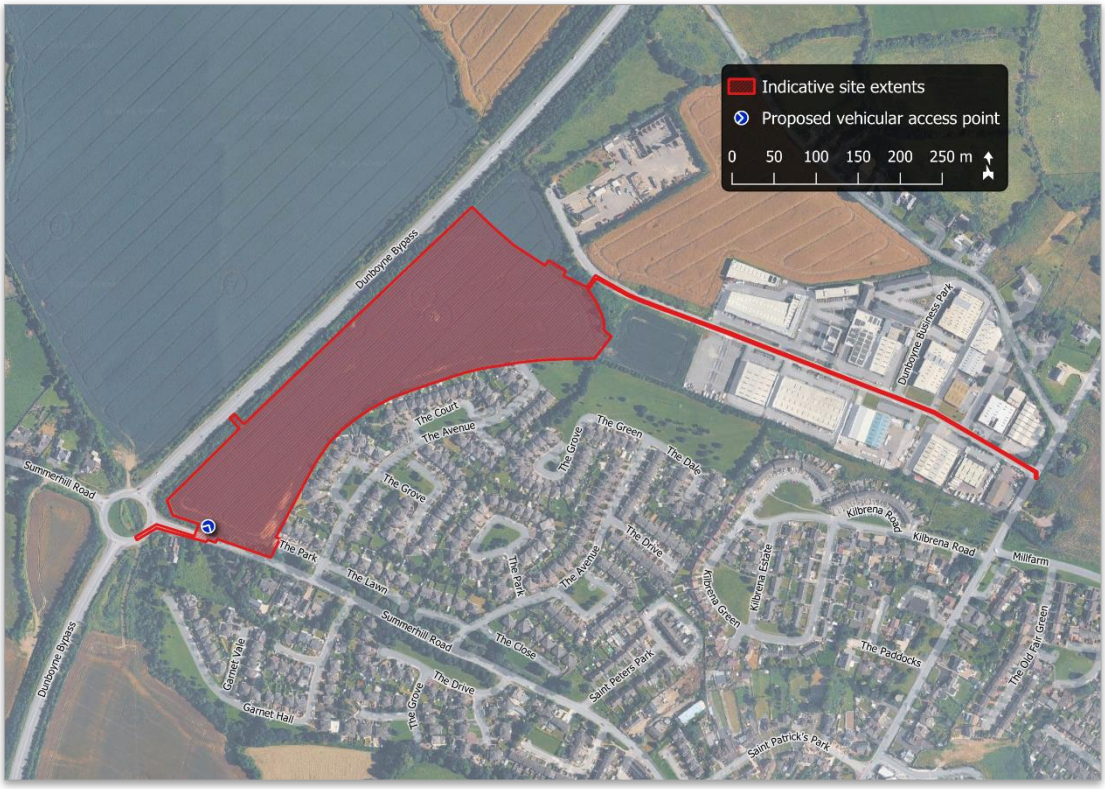


Figure 2 – Subject lands extents and environs
(sources: NTA, Microsoft)

The proposed development site is bounded to the west by the R157 Regional Road, to the north by Dunboyne Business Park, to the east by an existing residential estate, and to the south by Summerhill Road.

2.2 Existing Site Condition

The site is currently undeveloped greenfield land and does not generate any existing traffic volumes.

2.3 Description of Proposed Development

The proposed development will consist of a Large-Scale Residential Development comprising 248 no. residential units and 1 no. childcare facility with associated car parking, bicycle parking, public open spaces, communal open spaces and all ancillary works.

The development shall comprise;

- Construction of 248 no. residential units as follows:
  - 170 no. 2 storey houses in a mix of terraced, semi-detached and detached unit types consisting of 27 no. 2-bedroom units, 124 no. 3-bedroom units and 19 no. 4-bedroom units. Each house will have an associated rear private garden.

  - 26 no. apartment units in a single 4 storey block consisting of 13 no. 1-bedroom units and 13 no. 2-bedroom apartments. All apartment units will be provided with private open space areas in the form of balconies.
  - 52 no. duplex units in 4 no. 3 storey blocks (A-D) consisting of 26 no. 2-bedroom units and 26 no. 3-bedroom units. All duplex units will be provided with private open space areas in the form of balconies/terraces.
  - Communal open space associated with the proposed apartment / duplex units will be provided in the form of 5 no. landscaped areas located in the vicinity of the units (total approx. 1,340.4 sqm).
- 1 no. childcare facility at ground floor of apartment Block A with dedicated external open space (GFA approx. 285.7 sqm).
- Total provision of 388 no. car parking spaces including 6 no. accessible spaces and 24 no. EV charging spaces (357 no. resident car parking spaces, 18 no. residential visitor car parking spaces and 13 no. car parking spaces dedicated for the creche facility) and a total of 429 no. bicycle parking spaces (319 no. secure resident spaces and 88 no. visitor spaces for the apartment / duplex / mid-terrace units; and 14 no. childcare facility staff spaces and 8 no. childcare facility visitor spaces).
- Landscaped public open space areas including children's play areas totalling approx. 10,775 sqm;
- A new vehicular and pedestrian access point is proposed via a simple priority junction on Summerhill Road (L2228).
- All associated site and infrastructural works including a foul pump station with 24hr storage and associated rising main (580m) discharging to an existing foul line at the Navan Road and Dunboyne Business Park Road junction; diversion of an existing 600 mm diameter storm pipe and proposed storm drain outfall to the R157 / Summerhill Road roundabout; internal roads, road markings, homezones, footpaths and cycle infrastructure; provision of 3 no. ESB substations; bin stores and associated bin staging areas; public lighting; all hard and soft landscaping works; natural and formal play equipment; boundary treatment works including retaining walls; green roof; PV panels and all associated site clearance, excavation, landscape and development works.

3.0 LOGISTICS

3.1 Construction Programme and Phasing

Subject to a successful grant of planning, it is intended for the works to commence in Q1/Q2 2027. The proposed development is anticipated to be constructed over 24-month period.

The development is proposed to be constructed on the following basis:

- Set up site perimeter hoarding, maintaining existing pedestrian and traffic routes around the site.
- Site clearance.
- Reduced level excavations and foundation construction
- Site services installations (drainage, power, water)
- Construct Building Frame and Envelope
- Building superstructure and roof construction for duplexes
- Finish interior and exterior landscaping.

3.2 Vehicular Access to Site

It is anticipated that for the duration of the construction works all construction access and egress for deliveries will operate via Summerhill Road along the southern boundary of the development site. In addition, one or more separate pedestrian only entrance(s) to the site shall be installed, to segregate vehicular and pedestrian movements to and from site.

Security personnel will be present at the entrance/exit of the site to ensure all egressing traffic will do so safely. A wheel wash will be installed at the exit from the site to prevent any dirt being carried out into the public road. A road sweeper will be employed as required to keep all public roads around the site clean.

3.3 Protection of Public Areas from Construction Activity

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

The hoarding will be well-maintained and will be painted. Any hoardings may contain graphics portraying project information.

3.4 Site Security

The site will be secured with a hoarding. This will be branded using the appointed Contractors' logos. Some marketing images or information boards may also be placed on the hoarding. Access to site will be controlled and monitored outside of site working hours.

All personnel working on site must have a valid Safe Pass card.

3.5 Material Hoisting and Movement throughout the Site

Hoists and teleporters may be utilised as required during the project to facilitate material movement into the structures and waste movements out. With the commencement of the fit-out activities, hoists strategically positioned shall play a key role for successful project delivery. They are also less susceptible to being affected by inclement weather conditions.

3.6 Deliveries and Storage Areas

It is proposed that unloading bays are provided for deliveries to the site within the hoarding perimeter. They should be accessible by forklifts. Appropriately demarcated storage zones will be used to separate and segregate materials.

All deliveries to site will be scheduled to ensure their timely arrival and avoid need for storing large quantities of materials on site. Deliveries will be scheduled outside of background peak traffic hours (within the permitted site working hours) to avoid disturbance to pedestrian and vehicular traffic in the vicinity of the site.

3.7 Site Accommodation

On-site facilities will consist of:

- Materials storage area
- Site office & meeting room
- Staff welfare facilities including but not limited to toilets, drying room, canteen.

Electricity will be provided to the site via the national grid.

Water supply to the site will be provided by means of a temporary connection to the public watermain. Similarly, a temporary connection for foul water drainage will be made to the public network.

3.8 Site Parking

There will be limit on-site parking for staff and visitors. Construction staff will be encouraged to use public transport, and information on local transportation will be published on site.

3.9 Site Working Hours

Construction operations on site will generally be subject to a planning permission and conditions. However, it may be necessary for some construction operations to be undertaken outside these times, for example, service diversions and connections, concrete finishing and fit-out works.

Deliveries of materials to site will generally be between the hours of 07:00 and 19:00, Monday to Friday, and 08:00 to 14:00 on Saturdays (subject to planning conditions). There may be occasions where it is necessary to make certain deliveries outside these times, for example, where large loads are limited to road usage outside peak times. Any such deliveries will be made with the advance agreement of Meath County Council.

3.10 Staff Training and Certification

The lead Contractor appointed to the project will be responsible for ensuring that all personnel working on site have a valid Safe Pass card, as well as the requisite certification(s) pertaining to the specific tasks that they will perform on site. The Contractor will also be responsible for monitoring staff compliance with all site protocols and taking corrective action in response to any breaches.

The Contractor, consultation with the Project Supervisor construction Stage (PSCS), will provide initial site-specific induction training to al construction operatives (including sub-contractors) and will organize regular 'tool-box talks', refresher training, and task-specific training as necessary throughout demonstration and construction works.

3.11 Record Keeping

Records shall be kept by the Contractor and/or by the PSCS (as appropriate) to satisfy the applicable legislation and best practice guidelines in relation to all activity on site. These records will be made available for review and audit as required by MCC, the Health & Safety Authority (HSA), the Environmental Protection Agency (EPA), and any other entities with a legitimate interest.

These records must include (but may not be limited to):

- Records of all personnel working on site (including dates present).
- Records of all visitors attending site.
- Records of all training sessions conducted.
- Records of all plant and machinery used on site (including dates of arrival, dates of operation, and dates of removal).

- Records of all deliveries made to site.
- Records of all potentially hazardous materials stored on site.
- Records of all potentially hazardous materials encountered on site.
- Records of all waste material leaving the site (whether for reuse, recycling, recovery, or disposal).
- Records of any accidents or spills occurring on site.
- Records of engagement with the Project Ecologist, Project Archaeologist, and Site Engineer.
- Records of any site protocol breaches by construction personnel.
- Records of all noise level, vibration level, and air quality monitoring.

A separate Resource Waste Management Plan (RWMP) has been prepared by AWN and is submitted as part of this final planning application. This provides more detail of waste management record-keeping procedures.

3.12 Complaints Procedure

A Complaints Procedure System shall be drawn up by the Contractor. Records of all complaints shall be logged (date and time, items raised, etc.), to include:

- nature of the complaint;
- actions to be carried out in response; and
- details of complaint resolution.

3.13 Designated Community Liaison Officer

The lead Contractor will employ a Designated Community Liaison Officer (DCLO) prior to commencement of the works. The DCLO's role shall be to liaise and coordinate with other nearby construction sites, neighbours, and businesses. The DCLO shall also co-ordinate with MCC to action and close out any complaints made in relation to demolition and construction works.

4.0 GENERAL ENVIRONMENTAL PROTECTION MEASURES

4.1 Surface Water Treatment

All existing surface water drainage elements (including adjacent watercourses) will be maintained free from waste materials generated during the construction of the proposed development, including the initial site clearance and excavation. Routine visual inspections by the contractor shall reduce any risk of excess construction materials causing obstructions to surface water drainage and any potential flooding occurring. A maintenance schedule and operational schedule must be established by the contractor for silt and pollution control measures during the construction period. This should be undertaken in consultation with the relevant statutory authorities.

Run-off from the working site or any areas of exposed soil shall be channelled and intercepted at regular intervals for discharge to silt traps or lagoons. A temporary positive drainage system shall be installed prior to the commencement of the construction works, to collect surface water runoff from the site during construction. A series of geotextile-lined cascading, high level outfall settling basins will be installed upstream of an agreed discharge point, the location of which is to be determined by the contractor as part of their detailed Construction and Environmental Management Plan and approved by Meath County Council. This temporary surface water management facility will throttle runoff and allow suspended solids to be settled out and removed before being discharged in a controlled manner to the agreed outfall. All inlets to the cascading settling basins will be riprapped to prevent scour and erosion in the vicinity of the inlet.

Pouring of concrete shall be carried out in the dry and allowed to cure. Mixer washings and excess concrete shall not be discharged to surface water. Implementation of comprehensive and strict site housekeeping measures to isolate concrete from local surface waters is essential.

Oil storage tank(s) and the associated filling area and distribution pipe work shall be separated by at least 10m from surface watercourses. Storage tanks shall have secondary containment provided by means of an above ground bund to capture any oil leakage, irrespective of whether it arises from leakage of the tank itself or from associated equipment (such as filling and off-take points, sighting gauges, etc.), all of which should be located within the bund. The bund specification should conform to the current best practice for oil storage (Enterprise Ireland BPGC5005).

Weather conditions and seasonal weather variations shall also be taken account of when planning stripping of topsoil and excavations, with an objective of minimising soil erosion.

Hazardous construction materials shall be stored appropriately to prevent contamination of watercourses or groundwater. Spill kits shall be kept in designated areas for re-fuelling of construction machinery.

4.2 Noise

The Contractor will implement measures to eliminate where possible and reduce noise levels where not.

All construction activities will be carried out in compliance with the recommendations of BS 5228, Noise Control on Construction and open sites part 1 and comply with BS 6187 Code of Practice for Demolition.

Potential sources of noise impact include construction activities on site which may involve the use of heavy machinery.

All works on site will comply with BS 5228 2009 which gives detailed guidance on the control of noise and vibration from construction activities. In general, the contractor will implement the following mitigation measures during the proposed infrastructure works:

- Avoid unnecessary revving of engines and switch off equipment when not required.
- Minimise drop height of materials.
- Start-up plant sequentially rather than all together.

More specifically the Contractor will ensure that:

- In accordance with Best Practicable Means, plant and activities to be employed on site are reviewed to ensure that they are the quietest available for the required purpose.
- Hoarding and sound barriers are provided and, where required, improved sound reduction methods are used (e.g., enclosures), particularly for works carried out near the site's eastern boundary closest to Broad Lough.
- Site equipment is located away from noise sensitive areas as much as physically possible.
- Loading and unloading will occur within designated loading areas as far from noise receptors as possible.
- Equipment will be fitted with appropriate silencers where possible.
- Regular and effective maintenance by trained personnel is carried out to reduce noise and / or vibration from plant and machinery.

- Hours are limited during which site activities likely to create high levels of noise and vibration are carried out – no noisy activities will be carried out outside of the permitted construction hours.

A site representative responsible for matters relating to noise and vibrations will be appointed prior to construction on site. This individual will be responsible for engagement with local residents, advance notice for noisy activities and the maintenance of a complaints register/ record.

A noise and vibration monitoring specialist will be appointed to carry out independent monitoring of noise and vibration during critical periods at sensitive locations.

4.2.1 Construction Noise Mitigation Recommendations

Best practice control measures for noise from construction sites are found within BS 5228 (2009 +A1 2014) part 1. Construction noise impacts are expected to vary during the construction phase of the project, this impact will depend on the distance between the construction activities and noise sensitive receptor. The contractor will ensure that all best practice noise and control methods will be used, to ensure any negative noise impacts at offsite noise sensitive locations are minimized.

The best practice measures set out in BS 5228 (2009) Part 1 includes guidance on several aspects of construction site mitigation measures, this includes the;

- Selection of quite plant and equipment
- Noise control and source of the noise
- Screening, and
- Public liaison.

Please refer to Acoustic Design Statement prepared by Wave Dynamics Acoustics Monitoring Environmental submitted under a separate cover for further details.

4.3 Air Quality and Dust Monitoring

Dust prevention measures will be included for control of any site airborne particulate pollution. The Contractor will monitor dust levels in the vicinity of the site in accordance with planning conditions. Records will be kept of such monitoring for review by the Planning Authority. There are currently no national or European Union standards of air quality with which levels of dust deposition can be compared. The minimum criteria to be maintained will be in accordance with the German Standard Method for determination of dust deposition rate (VDI 2119), which is a maximum deposition of 350mg/m^2/day as measured using Bergerhoff type dust deposit gauges.

The Contractor will continuously monitor dust over the variation of weather and material disposal to ensure the limits are not breached throughout the project. Potential sources of dust impact are present due to construction activities on site.

4.4 Migrating Dust and Dirt Pollution

The Contractor will ensure that all construction vehicles that exit the site onto the public roads will not transport dust and dirt to pollute the external roadways. This will be achieved through a combination of the following measures:

- Ensuring construction vehicles have a clean surface to travel on within the site (i.e., haul road).
- Providing a "Full-Body Self Contained" wheel wash, constructed and located within the site confines.
- Ensuring an appropriate wheel or road washing facility is provided as and when required throughout the various stages of construction on site. If conditions require it then a manned power washer will be put in place to assist the wheel wash system.

The use of appropriate water-based dust suppression systems will greatly reduce the amount of dust and windborne particulates as a result of the construction process. This system will be closely monitored by site management personnel particularly during extended dry periods and in accordance with site management methods.

4.5 Harmful Materials

Harmful material will be stored on site for use in connection with the construction works only. These materials will be stored in a controlled manner. Where on-site facilities are used there will be a bunded filling area using double bunded steel tank at a minimum.

4.5.1 Potentially Hazardous Wastes to be Produced

Contaminated Soil

If any contaminated material is encountered, it will need to be segregated from clean/inert material, tested and classified as either non-hazardousor hazardous in accordance with the EPA publication entitled 'Waste Classification: List of Waste & Determining if Waste is Hazardous or Non-Hazardous' using the HazWasteOnline application (or similar approved classification method). The material will then need to be classified as clean, inert, nonhazardous or hazardous in accordance with the EC Council Decision 2003/33/EC, which establishes the criteria for the acceptance of waste at landfills.

Fuel/Oils

As fuels and oils are classed as hazardous materials, any on-site storage of fuel/oil, all storage tanks and all draw-off points will be bunded and located in a dedicated, secure area of the site, away from watercourses.

Provided that these requirements are adhered to and site crew are trained in the appropriate refuelling techniques, it is not expected that there will be any fuel/oil wastage at the site.

Other known Hazardous Substances

Paints, glues, adhesives and other known hazardous substances will be stored in designated areas away from watercourses. They will generally be present in small volumes only and associated waste volumes generated will be kept to a minimum. Wastes will be stored in appropriate receptacles pending collection by an authorised waste contractor. In addition, WEEE (containing Construction and Demolition Waste Management Plan 11 hazardous components), printer toner/cartridges, batteries (Lead, Ni-Cd or Mercury) and/or fluorescent tubes and other mercury containing waste may be generated during construction activities. These wastes (if encountered) will be stored in appropriate receptacles in designated areas of the site pending collection by an authorised waste contractor.

4.6 River Tolka_020

- Discharge Licences – It will not be permitted to discharge into any newly constructed storm water systems or watercourse without adhering to the conditions of the discharge licence and agreeing the same with the Design Team, Site Manager and Local Authority Area Engineer.
- Over Ground Oil / Diesel Storage – Only approved storage system for oil / diesel within the site will be permitted, (i.e., all oil / diesel storage to be located within a designated area placed furthest away from adjacent watercourses and contained within constructed bunded areas e.g., placed on 150mm concrete slab with the perimeter constructed with 225mm solid blockwork rendered internally). The bunded area will accommodate the relevant oil / diesel storage capacity in case of accidental spillage. Any accidental spillages will be dealt with immediately on site however minor by containment/removal from site.
- Re-fuelling will be contained within a designated area adjacent to the storage area.
- Concrete Washout – The washing out of concrete trucks on site will not be permitted as they are a potential source of high alkalinity in watercourses. Consequently, it is a requirement that all concrete truck washout takes place back in the ready-mix depot.

- Disposal of Wastewater off Site – The Site Management Team will maintain a record of all receipts for the removal of toilet or interceptor waste off site to insure its disposal in a traceable manner.
- Road Sweepers/Cleaning – The cleaning of public roads in and around the subject site will be undertaken to reduce environmental impacts and care will be taken to prevent any pollution of watercourses from this activity.

4.7 Vibration

The Contractor will be required to carry out their works such that the effect of vibration on the adjacent buildings and surroundings is minimised, and that no damage to these results from construction activity on site. Potential sources of significant vibration include:

- Reduced level excavation and/or rock breaking.
- Construction of piled basement walls.
- Other construction activities on site involving the use of heavy machinery.

The Contractor will be required to comply with any planning conditions relating to vibration limits and vibration monitoring.

The Contractor will establish guidelines and controls for all activities that may impact on the surrounding environment for the duration of the works, including; air, water, land, natural resources, flora, fauna, humans, and their interrelation.

The project is to be developed to enable to all personnel with the means to understand their responsibilities and to meet the Contractor's statutory, contractual and procedural obligations relating to environmental management.

For each activity, the environmental aspects and associated actual and potential impacts are to be identified as they relate to the following environmental elements:

- emissions to air
- releases to water
- releases to land
- use of raw materials & natural resources
- use of energy
- waste and by-products
- community & neighbours
- flora & fauna
- heritage & cultural.

4.8 Horizontal Directional Drilling (HDD)

It is proposed to use HDD method to make a new watermain connection and a new foul drainage connection to the proposed office development. HDD is a construction technique whereby a tunnel is drilled under a waterway (in this case, under River Tolka_020), and a pipeline or other utility is pulled through the drilled underground tunnel.

5.0 TRAFFIC MANAGEMENT

5.1 Site Traffic, Traffic and Pedestrian Management

The anticipated truck movements from and to the site in relation to the preliminary programme for the works will be specified in the construction methodology by the main contractor.

The construction site will be delineated by means of hoardings and lockable gates with screened fencing at the entry and exit points. The Contractor will pay particular attention to pedestrian traffic and safety at the entrances. All vehicles will enter and exit the site in a forward direction.

Pedestrians will have right of way. If required, alternate pedestrian routes around the site will be created and clearly signed. Depending on the progress of the works and temporary constraints imposed by the construction methodology, the location of access and exit points to the site may vary.

5.2 Vehicular Access to Site

It is anticipated that for the duration of the construction works, all construction traffic including deliveries, will access and egress the site via the existing access located along the southern boundary of the site on Summerville Road.

Security personnel will be present at the entrance/exit of the site to ensure all exiting traffic will do so safely. A self-contained wheel wash system will be installed at the exit from the site, to minimise dirt being carried out into the public road, and a road sweeper will be employed as required to keep public roads around the site clean.

The vehicular access to the construction site shall include the following design elements:

- Sufficient entrance width to permit two rigid body vehicles to pass one another (i.e. one can enter while another waits to leave).
- An entrance gate set back a minimum of 18m from the public road edge, to ensure that vehicles may leave the road completely before having to stop.
- Appropriate sight lines for vehicles exiting onto the public road, to be ensured by removing existing visual obstructions and by appropriate design of perimeter hoarding.
- Directional signage for site traffic and advance warning signage for all other road users.

5.3 Minimisation of Construction Vehicle Movements

Construction vehicle movements will be minimised through:

- Consolidation of delivery loads to/from the site and manage large deliveries on site to occur outside of peak periods.
- Use of precast/prefabricated materials where possible.
- 'Cut' material generated by the construction works will be re-used on site where possible, through various accommodation works.
- Adequate storage space on site will be provided.
- A strategy will be developed to minimise construction material quantities as much as possible.
- Construction staff vehicle movements will also be minimised by promoting the use of public transport.

5.3.1 Cycling

Cycle parking spaces will be provided on the site for construction personnel. In addition, lockers will be provided to allow cyclists to store their cycling clothes.

5.3.2 Car Sharing

Car sharing among construction personnel will be encouraged, especially from areas where construction personnel may be clustered.

The contractor shall aim to organize shifts in accordance with personnel origins, hence enabling higher levels of car sharing. Such a measure offers a significant opportunity to reduce the proportion of construction personnel driving to the site and will minimise the potential traffic impact on the surrounding road network.

5.3.3 Public Transport

Construction personnel will be encouraged to use public transport as means to travel to and from the site. An information leaflet shall be provided to all personnel as part of their induction on site, highlighting the location of the various public transport services in the vicinity of the construction site.

5.3.4 Protection of Public roads

A Visual Condition Survey (VCS) will be carried out of all surrounding streets prior to any site works commencing. The Contractor will liaise with Meath County Council Roads and Traffic Department to agree any changes to load restrictions and construction access routes for the site. Measures will be put in place as required to facilitate construction traffic whilst simultaneously protecting the built environment.

All entrances and temporary roads will be continuously maintained for emergency vehicle access.

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

- A regular programme of site tidying will be established to ensure a safe and orderly site.
- Scaffolding will have debris netting attached to prevent materials and equipment being scattered by the wind.
- Food waste will be strictly controlled on all parts of the site.
- Mud spillages on roads and footpaths outside the site will be cleaned regularly and will not be allowed to accumulate.
- Wheel wash facilities will be provided for vehicles exiting the site

5.4 Project Specific Traffic Management Plan

A detailed project specific traffic management plan will be developed by the Contractor and agreed with MCC prior to works commencing on site. This plan will be updated as required throughout the project.

Issues addressed in the Traffic Management Plan will include:

- Public safety
- Construction traffic routes
- Deliveries schedule
- Special deliveries (wide and long loads)
- Traffic flows
- Signage and lighting
- Road opening requirements
- Road closures
- Lighting

5.5 Vehicle Movements During Construction

The major construction items include excavation, construction, and fit out. It is anticipated that the peak of HGV movements to and from the site will be during excavation works and construction of the building foundations and basement. The peak LGV movements to and from the site will be during the building construction and fit out. It is anticipated that the construction traffic impact on the surrounding local road network will be minimal.

The final programming and scheduling of excavation, and construction works shall be determined by the appointed contractor. Under a 'worst-case' scenario, however, it is possible that up to 10no. delivery trips may be made to the site each hour during this phase

(one HGV arrival and one HGV departure every 6 minutes). In addition to HGV traffic, periodic deliveries of materials to site shall be made by Light Goods Vehicles (LGVs). Under a worst-case construction traffic generation scenario, 10no. such LGV arrivals and 10no. LGV departures are assumed in each of the background peak hours.

Limited car parking for construction personnel is likely to be provided on site during construction works; some vehicular trips shall therefore be made to and from the site each day by construction personnel commuting to and from work. However, as the site working hours are expected to be from 08:00 to 20:00 (subject to planning conditions), the majority of these trips are expected to fall outside the background traffic peak hours. In the worst-case scenario, it is assumed that the equivalent of 10no. light vehicle trips may be made to the site during the AM peak hour, and the equivalent of 10no. such trips may be made from the site during the PM peak hour.

It is therefore expected that – under a worst-case scenario – vehicular traffic to and from the development site during the construction phase shall comprise the following:

- 10no. HGV arrivals and 10no. HGV departures in each of the peak hours;
- 10no. LGV arrivals and 10no. LGV departures in each of the peak hours;
- 10no. car arrivals (construction personnel) in the AM peak hour; and
- 10no. car departures (construction personnel) in the PM peak hour.

The Contractor must submit a Construction Traffic Management plan to the Local Authority for approval. Haulage vehicle movements should be fully coordinated to comply with the requirements of the layout and requirements herein.

- At no time should construction associated vehicles be stopped or parked along the routes;
- Haulage vehicles should not travel in convoys of greater than two vehicles at any time;
- Haulage vehicles should be spaced by a minimum of 250m at all times;
- At no time should haulage vehicles be parked or stopped at the entrance(s) to the site;
- All loading of excess material will occur within the site boundary;
- All off-loading of deliveries will take place within the site, away from the public road and will access via the construction site access.

The routes to and from the site shall depend on where the excavated material will be taken to and from where construction material will be brought into the site. The above locations will be identified by the appointed Contractor at a later stage and appropriate routes will be

agreed with Meath County Council as part of the Contractor's detailed Construction Management Plan.

The increase in traffic as a result of construction will be minor and is expected to be readily accommodated by the existing road network.

6.0 PROVISIONS FOR CONSTRUCTION

6.1 Hoarding, Set-up of Site, and Access/Egress Points

The site area will be enclosed with hoarding, details of which are to be agreed with Meath County Council. Hoarding panels will be maintained and kept clean for the duration of the project.

This will involve erecting the hoarding around the proposed site perimeter in line with the finished development description

6.2 Removal of Services

Prior to any works a utility survey will be carried out to identify existing services. All services on site will be disconnected, diverted or removed as agreed with service providers.

6.3 Site Clearance and Demolition

The site of the proposed development is greenfield, there are no existing structures on site which require demolition.

6.4 Excavation

This development will involve excavation and removal of material from site for foundations and regrading of the site profile.

It is not envisaged that rock will be encountered during the excavation works. The appointed contractor will engage with the project archaeologist prior to the commencement of excavation on site. Excavation will be carried out under the supervision of the project archaeologist.

The Contractor must prepare a Construction Waste Management Plan in accordance with the "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Project's (Department of Environment, Heritage and Local Government, 2006) and ensure that all material is disposed of at an appropriately licensed land fill site. The Contractor must also outline detailed proposals within the Construction and Environmental Management Plan to accommodate construction traffic.

6.5 Site Service Installations

Drainage, power, water and the like will be installed to serve the proposed development.

6.6 Superstructure

The construction of the superstructure shall involve a coordinated sequencing of activities, and various construction methodologies could be adopted to deliver the Contract. As noted, the construction methodology and therefore the programme of the construction activities will be dictated by the Contractor. The following outlines a general construction sequence for the superstructure:

6.6.1 Buildings Structure

- Installation of any temporary works which needs to be verified as part of detail design
- Site clearance including install/removal of below ground services, demolition and removal of existing slabs
- Excavation and construction of the foundations, to support the new vertical structure.
- Construction of new vertical structure and horizontal structure to form floor slabs and core structures in a sequential manner, with integration of the new elements (as required) into the existing structure.

6.6.2 Envelope / Cladding

- Commencement of envelope works to ground floor when structure has progressed to approximately Level 2/3, with suitable temporary openings in the façade left for ease of transport of construction material.

6.6.3 Mechanical & Electrical fit-out:

- First fix will commence at each level behind structure;
- This will be followed by the second fix and the final connections.

6.6.4 General fit-out:

- Initial installation of stud work when cladding is complete, and floor is weather tight;
- Installation of equipment and associated connection to services;
- Completion of finishes.
- The final commissioning period will commence during fit-out;

The above is an indicative construction sequence. The final sequence will be dictated by the Contractor. The Contractor must issue a detailed construction programme outlining the various stages prior to commencement of works.

7.0 SEDIMENT AND WATER POLLUTION CONTROL PLAN

All works carried out as part of these infrastructure works will comply with all Statutory Legislation including the Local Government (Water Pollution) acts, 1977 and 1990 and the contractor will co-operate in full of the Environmental Section of Meath County Council.

As part of the overall construction methodology, the following issues will be addressed and have been identified as being of particular risk and/or concern to pollution.

7.1.1 Contamination of Watercourse / Groundwater

There is a risk that ground water could become contaminated with lime from cement which subsequently finds its way into the local adjacent watercourses. The measures proposed to be put in place to minimise or eliminate any potential damage from the effluent of contaminated ground water would be to create an exclusion zone, as far as reasonably practicable, by the erection of a visible 1.0m high barrier along watercourses. This will be formed by means of steel road pins, which will be used to support a PVC 'orange' barrier with warning signs appropriately fixed at regular intervals. The signs shall read **'NOTICE – NO DISCHARGE OF ANY KIND IS PERMITTED IN THIS VICINITY OR BEYOND THIS EXCLUSION ZONE'.**

7.1.2 Sediment and Erosion

Similar to the above, adjacent watercourses/groundwater need to be protected from sedimentation and erosion due to direct surface water runoff generated onsite during the construction phase. To prevent this from occurring surface water discharge from the site will be managed and controlled for the duration of the construction works until the permanently attenuated surface water drainage system of the proposed site is complete. A temporary positive drainage system shall be installed prior to the commencement of the construction works to collect surface water runoff by the site during construction. This temporary surface water management facility will throttle runoff and allow suspended solids to be settled out and removed before being discharged in a control manner to the agreed outfall.

In general measure to be implemented during the construction stage are:

- Minimisation site disturbance
- Implement sediment control (as outlined above)
- Minimise the potential for erosion
- Prevent sediment-contaminated water leaving the site
- Such measures shall be agreed as part of the sites discharge licence.

8.0 RESPONSES TO ITEMS RAISED IN MCC OPINION

8.1 Item 4

Item 4(b) Environmental Assessment

Management of the trees and hedgerows should form part of the Landscape Management Plan, where it is proposed to retain them on the site. Mitigation and monitoring proposal should be included in the CEMP and an appropriate management plan should be submitted with the application.

Response to Item 4(b)

Please refer to 'Tree Protection Plan and Method Statement' prepared by CM Arbor Limited. This document provides appropriate mitigation and management proposals for management of the trees and hedgerows.

8.2 Item 13

Item 13(a) CEMP/ Waste Management

The Applicant should submit a Construction Environmental Management Plan (CEMP) and Waste Management Plan. This will need to take account of any mitigation proposed in the EIAR, AA, EcIA, Arboricultural Assessment, or other environmental assessments, etc.

The applicant has obligations under the Waste Management Act 1996 as amended with details to be included in the CEMP. The CEMP must address extremes of weather, impacts on receptors and mitigation; and should be kept as a live document, communicated to all relevant personnel on site. Where relevant, consultation with the Environment Department regarding the CEMP of Meath County Council may be required.

The applicant is also referred to EPA (2021) Best Practice Guidelines for the preparation of Resource & Waste Management Plans for Construction & Demolition Projects (see Section 3.1 on pages 9 and 10 of the document and Text box 2 and 3[1])

Response to item 13(a)

The present document Outline Construction and Environmental Management Plan (OCEMP) prepared by CS Consulting takes into account the mitigation measures as proposed in EIAR, AA, EcIA, Arboricultural Assessment, or other environmental assessments, etc. This OCEMP addresses all the queries mentioned above in section 3.0 and 4.0.

[1] https://www.epa.ie/publications/circular-economy/resources/CDWasteGuidelines.pdf

OCEMP is a preliminary plan and shall be a live document. This document will need to be updated by the Contractor during the construction stage.



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