Document Title

Outline Construction and Environmental Management Plan

Project

Proposed Residential Development at Anglesea Terrace, Old Station Road, Cork

Client

Land Development Agency on behalf of Cork City Council

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CS CONSULTING
Civil, Structural & Traffic Engineering

OUTLINE CONSTRUCTION AND ENVIRONMENTAL MANAGEMENT PLAN

PROPOSED RESIDENTIAL DEVELOPMENT AT ANGLESEA TERRACE, OLD STATION ROAD, CORK

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1.0 INTRODUCTION

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by Land Development Agency on behalf of Cork City Council to prepare an Outline Construction and Environmental management Plan (OCEMP) for a proposed residential development at Anglesea Terrace, Old Station Road, Cork.

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 Environmental Management Plan (CEMP). The content of the contractor's CEMP will be agreed with Cork City Council (CCC) prior to commencement of works.

The contractor's detailed Construction 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 Management Plan will be strictly adhered to throughout the development's construction stage, 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, the Waste Management (Amendment) Act 2001, and the Protection of the Environment Act 2003.
- 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:

- Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013)
- Integrated Pollution Prevention and Control Directive (1996/61/EC)
- The Waste Framework Directive (Directive 2008/98/EC)
- Environmental Protection Agency Act 1992
- 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
- Environmental Protection Agency (EPA) – Best Practice Guidelines for the Preparation of Resource Management Plans for Construction & Demolition Projects – April 2021
- Construction Industry Research and Information Association (CIRIA), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532)
- Construction Industry Research and Information Association (CIRIA) Environmental Good Practice on Site (4th edition), (C741)
- Enterprise Ireland Best Practice Guide, Oil Storage Guidelines (BPGCS005)

The OCEMP is to be read in conjunction with the engineering drawings and documents submitted by CS Consulting and with all other relevant documentation submitted by other members of the project design team.

2.0 SITE LOCATION AND PROPOSED DEVELOPMENT

2.1 Site Location

The proposed development site is located along Old Station Road to the North, the South link Road bounds the site to the east and Anglesea Terrace is located to the south. The site is located in the administrative jurisdiction of Cork City Council.

Figure 1 – Location of subject lands
(sources: EPA, OSi, OSM Contributors, Google)

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

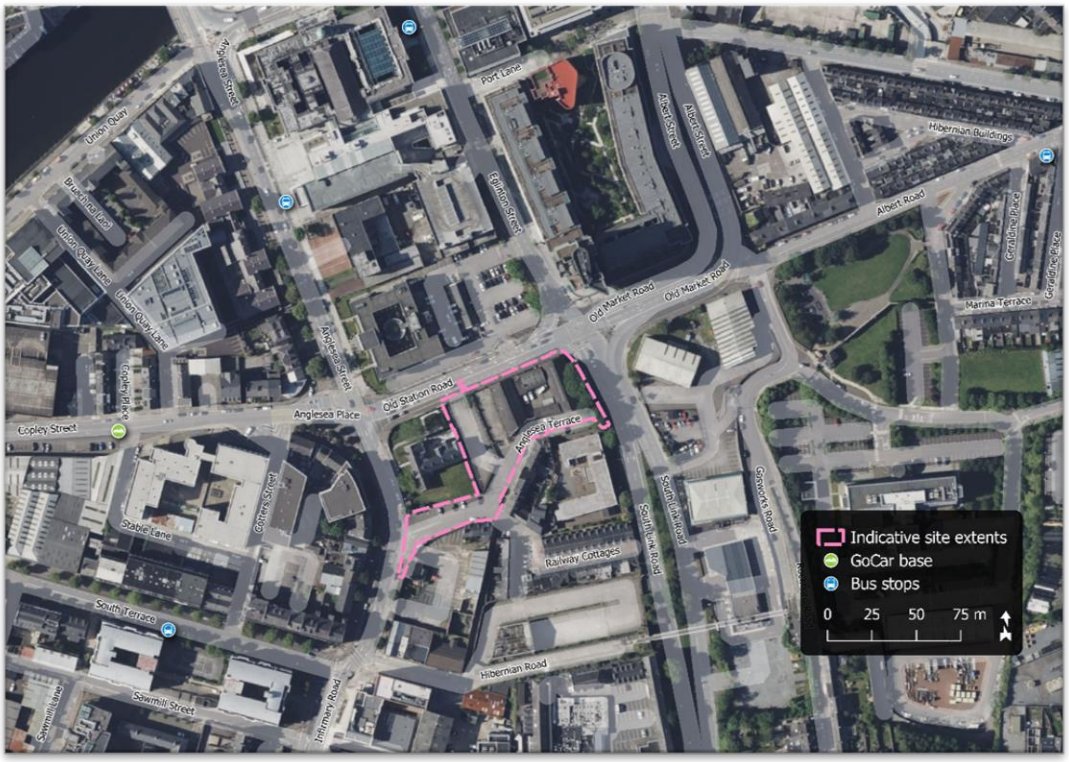

Figure 2 – Subject lands extents and environs
(sources: NTA, GoCar, OSi, OSM Contributors, Microsoft)

The development site is bound to the east by South Link Road, to the north by Old Station Road, to the west by existing building and to the south by Anglesea Terrace.

2.2 Existing Site Condition

The proposed development site comprises of existing buildings and hard standing area. There are existing surface level car parking spaces within the development site.

2.3 Description of Proposed Development

The development proposes the demolition of existing structures and construction of 147 no. residential units and 3 mixed-use units located at Anglesea Terrace, Old Station Road, Cork. Please refer to the description of development in the Architects Design Statement for further details.

3.0 SITE MANAGEMENT

3.1 Construction Programme and Phasing

Subject to a successful grant of planning, it is intended for the works to commence in Q3/Q4 of 2026. The proposed development is anticipated to be constructed over an 18-24-month period approximately.

The development is proposed to be constructed in accordance with the following indicative sequence of works:

- Reduced level excavation
- Foundation construction
- Site services installations (drainage, power, water)
- Building frame and envelope construction
- 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 Anglesea Terrace 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 this vehicular entrance and exit gates, 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, should site conditions require it. A road sweeper will be employed as required to keep all public roads around the site clean.

3.3 Site Security

The site shall be secured with hoarding. This shall be branded using the appointed Contractors' logos. Some marketing images or information boards may also be placed on the hoarding. During working hours, security personnel will be present at all site accesses, and a gateman will control vehicular traffic movements and deliveries to ensure safe access and egress to and from site. Pedestrian access to the site will be controlled by means of a swipe card system or turnstiles at the pedestrian entrance, with a camera remote monitoring system for out of hours.

All personnel will receive a site-specific safety induction, which will change as the work and risks change on the project. At induction, all personnel working on the project will be required

to produce a valid Safe Pass card and any other relevant CSCS cards, which will be validated before personnel may start work on the site.

All plant on site must be securely locked and the keys removed when not in use during the day, and fully immobilised out of hours. All site accesses will have secure gates/doors with security huts, wheel wash if necessary, adequate signage and road markings, etc.

Outside working hours, the site will be covered by a security system that comprises strategically placed cameras, which are triggered to record if infrared security beams are broken by an intruder.

3.4 Protection of Public Areas from Construction Activity

Perimeter hoarding shall 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, shall be kept locked at any time so that these areas are not monitored (e.g., outside working hours). The hoardings shall be well-maintained and shall be painted. Any hoardings may contain graphics portraying project information.

As well as this, appropriate fall arrest and protection measures will be fitted to the elevation facing the public footpaths and roads during the construction of superstructure frames, to prevent any falling objects onto the railway line or public areas. Simple measures such as a flared top section to the site hoarding will be erected, as well as more extensive measures such as netting and full crash barriers where required.

All materials being lifted by crane will be controlled by guide ropes and these movements will be completed only under the strict supervision of appropriately qualified and experienced banksmen. Tower cranes will be fitted with restrictors to prevent them lifting materials over the existing buildings to the west and south of the site.

3.5 Material Hoisting and Movement Throughout the Site

It is envisaged that one or more tower cranes will be set up on site. The erection of the tower crane will be done by mobile crane on site. The dismantling of the crane will be done from the roadside (out of hours) in agreement with CCC. A site-specific crane protocol will be put in place; this will set out the rules and regulations surrounding the use of the cranes on site including the restrictions on lifting over adjoining property.

The Main Contractor's site agent will be the site logistics coordinator and will ensure that all safety measures are in place and complied with, and that hoisting is carried out safely and efficiently. Site-specific crane protocols will be put in place and communicated to all parties.

Materials delivered to site will be delivered on a "just in time" basis, in so far as possible. Materials not required to be hoisted by cranes will be distributed through the site via mini buggy telehandlers to their point of use or onward distribution. As superstructure construction progresses and once the tower crane has been removed, materials required on the upper floors will be distributed by means of a goods hoist.

To control crane movements and to prevent the crane from operating over the property, the crane will be fitted with an electronic limiting system.

3.6 Deliveries and Storage Facilities

An unloading bay shall be provided within the hoarding perimeter, for deliveries to the site. This shall be accessible by tower crane and fork lifts. Appropriately demarcated storage zones will be used to separate and segregate materials. As materials are delivered, there will be an onsite inspection process to ensure that any defective material is identified.

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 rush traffic 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 drop-off and storage area(s)
- Site office(s) and meeting room(s)
- Staff welfare facilities (including but not limited to toilets, drying room, canteen)

Electricity will be provided to the site via the national grid, subject to the restrictions and requirements of ESB Networks.

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. The locations and sizes of these temporary connections will be determined through consultation with Uisce Éireann and CCC and shall be subject to any restrictions and requirements they may impose.

3.8 Site Parking

Due to the site's city centre location and constrained nature, no car parking is to be provided on or near the site for construction personnel or for visitors. Construction personnel will be

encouraged to walk, cycle, or use public transport, and information on local transport services will be published on site.

3.9 Site Working Hours

Construction operations on site will generally be subject to 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 18:00, Monday to Friday, and 08:00 to 14:00 on Saturdays. 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 CCC.

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, in consultation with the Project Supervisor Construction Stage (PSCS), will provide initial site-specific induction training to all construction operatives (including sub-contractors) and will organise regular 'tool-box talks', refresher training, and task-specific training as necessary throughout demolition 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 CCC, 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 CCC to action and close out any complaints made in relation to demolition and construction works.

4.0 ENVIRONMENTAL CONSIDERATIONS

4.1 Construction Stage Water Management

During piling and excavation works it is possible that groundwater will be encountered.

Surface water collected will be treated by sedimentation prior to discharge to the existing combined sewer. Total Suspended Solids (TSS) and colour will be monitored daily by a handheld multi parameter water quality probe.

Any groundwater encountered in excavations and run off generated within the project site during the construction phase will be directed to an onsite settlement pond and/or tank. Runoff will be filtered and treated to remove hydrocarbons and sediment. Total Suspended Solids (TSS), pH/Electrical Conductivity and colour will be monitored daily by a handheld multi parameter water quality probe. In addition, the outlet from the settlement pond will incorporate a turbidity monitor with alarm at high level. In the event of surface water failing to meet the required standards, as set out in the discharge licence, water will be recirculated to the inlet of the settlement pond to provide further time for settlement. A penstock will be provided on the outlet from the settlement pond to control discharge from the site.

Dewatering of all working areas during and at the end of each working day will be undertaken using pumps. A back-up pump and generator will be provided onsite. If necessary, transport of water off-site in tankers (to appropriately licensed facilities) if volumes prevent effective settlement and treatment onsite prior to discharge.

In the event of surface water failing to meet the required standards, as set out in the discharge licence, water will be recirculated to the inlet of the settlement pond to provide further time for settlement. Penstock will be provided on the outlet from the settlement pond to control discharge from the site.

Contaminated groundwater, if encountered on site in excavated areas, could result in contaminated groundwater being directed to the onsite water treatment train and discharged from the construction site. It is noted that the results of site investigations did not identify the presence of any contaminated ground within the site, indicating that ground at the project site is uncontaminated. Notwithstanding the results of the baseline site investigations a comprehensive suite of site investigation will be completed prior to the commencement of construction to confirm the absence of contaminated ground from the site, as indicated by the baseline site investigations. In the event that contaminated ground is identified the extent will be established during the pre-construction site investigations and the ground will be excavated and removed offsite for disposal as per the approach set out in the

Resource & Waste Management Plan. The removal of such contaminated material from the site will eliminate the potential source of future contamination to groundwater.

Where groundwater is struck during the pre-construction site investigations at locations of contaminated ground, groundwater samples will be collected and analysed for contaminant concentrations. Where concentrations exceed environmental quality standards for the specific contaminants present, then the groundwater will be collected during excavation of the contaminated ground and disposed of offsite at a suitably licenced treatment facility. Where no environment quality standards for specific contaminants are exceeded, the groundwater arising from the excavation of contaminated ground will be directed to the onsite settlement and filtration treatment train prior to discharge to the existing sewer network

There shall be no direct pumping of contaminated water from the works to the public drainage at any time.

A self-contained wheel wash will be provided on site as per Section 3.2 above.

In addition to the above the following suite of standard and generic construction measures will be put in place to protect against the generation of contaminated waters at the project site during the construction phase:

- Storage – all equipment, materials and chemicals will be stored a minimum distance of 25m away from any surface water body (i.e. the River Lee). Chemical, fuel and oil stores will be sited on impervious bases and within a secured bund of 110% of the storage capacity, within the laydown area.
- The integrity and water tightness of all the bunding structures and their resistance to penetration by water or other materials stored therein shall also be tested and demonstrated.
- All fuel oil fill areas will have an appropriate spill apron and spill kits will be provided on site.
- Vehicles and refueling - standing machinery will have drip trays placed underneath to prevent oil and fuel leaks causing pollution. Where practicable, refueling of vehicles and machinery will be carried out on an impermeable surface in designated areas, well away from any surface waterbody.
- Maintenance - maintenance of construction plants will not be permitted on site, unless vehicles have broken down necessitating maintenance at the point of breakdown. All necessary pollution prevention measures will be put in place prior to commencement of maintenance in this instance.

- Concrete - Wet concrete operations will be carried out in dry conditions. Runoff from wastewater or contaminated surface water runoff will be directed to construction phase surface water drainage system to be installed on site.
- Mess, sanitation and welfare facilities will be required during construction and will be located at the construction compound. Foul effluent will make use of chemical facilities with periodic removal for offsite disposal.

4.2 Noise

The Contractor shall implement measures to eliminate and reduce noise levels where possible. Potential sources of noise due to works on site include:

- Operation of plant and machinery
- Vehicle movements
- Demolition of existing structures
- Construction of new structures
- Loading, unloading, and distribution of materials

All construction activities shall 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)*.

The following is an outline of the noise control measures to be implemented by the Contractor. These are to be expanded upon in the Contractor's detailed Construction and Environment Management Plan (CEMP) and agreed with Cork City Council (CCC) prior to commencement of works.

4.2.1 General Considerations

- All site staff shall be briefed on noise control measures and best practice methodologies to control noise.
- Site hoarding will be erected to minimise noise transmission beyond the site boundary.
- The Contractor will employ a Dedicated Community Liaison Officer (DCLO) to engage with neighbours on a weekly basis, keep them apprised of the pending works on site and address any concerns raised.
- Internal haul routes shall be maintained, and steep gradients shall be avoided where possible.

- Material and plant loading and unloading shall only take place during normal working hours unless the requirement for extended hours for traffic management (i.e. road closure) or health and safety reasons has been granted (application must be made to the Council a minimum of 4 days prior to proposed works).
- The opening and shutting of gates will be minimised through good coordination of deliveries and vehicle movements.

4.2.2 Plant

- The Contractor will ensure that each item of plant and equipment complies with the noise limits quoted in the relevant EC Directive 2000/14/EC.
- All plant and equipment shall be fitted with appropriate mufflers or silencers of the type recommended by the manufacturer.
- All plant and equipment shall be used only for the tasks for which it has been designed.
- All plant and equipment in intermittent use shall be shut down in the intervening periods between work, or throttled down to a minimum.
- Plant shall be powered by mains electricity wherever possible, rather than by generators.
- Partial or full enclosures shall be provided around fixed plant where possible.
- Movable plant shall be located away from noise sensitive receptors where possible.
- All plant operators are to be qualified in their specific piece of plant.
- Compressors and generators shall be sited in areas least likely to give rise to nuisance.
- Regular and effective maintenance by trained personnel shall be carried out to reduce noise and/or vibration from plant and machinery.

4.2.3 Vehicle Activity

- All vehicle movement on site will occur within permitted working hours, unless permission to the contrary has been granted.
- Loading and unloading shall occur within designated loading areas, as far from noise receptors as possible.
- Deliveries and vehicle movements shall be planned so that vehicles are not waiting or queuing on the adjacent road network.

- The site layout shall be planned to ensure that reversing of vehicles is kept to a minimum.

4.3 Air Quality and Dust Monitoring

Dust prevention measures shall be included for control of any site airborne particulate pollution. The Contractor shall continuously monitor levels of dust and airborne particulate matter (PM_{10} and $PM_{2.5}$) in the vicinity of the site throughout demolition and construction works, in accordance with planning conditions, and records shall 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 shall be in accordance with the German Standard Method for determination of dust deposition rate, VDI 2129, which is a maximum deposition of 350mg/m^2/day, as measured using Bergerhoff-type dust deposit gauges.

The most significant potential sources of dust and airborne particulate matter due to works on site are:

- Excavation and rock breaking
- Vehicle movements
- Loading, unloading, and distribution of materials

Appropriate water-based dust suppression methods (e.g. a 'Dust Boss' spray cannon machine) will be employed by the Contractor to contain dust on site and ensure that the maximum permissible dust deposition threshold is not exceeded. These systems will be closely monitored by site management personnel, particularly during extended dry periods when dust dispersal risk is higher.

The following additional measures are to be taken to reduce the generation of dust during works on site:

- Excavation and construction techniques with reduced dust generation potential shall be preferred.
- Tools and machinery generating dust (e.g. drills) shall be fitted with dust-collection systems where possible.
- Any internal site road that has the potential to give rise to fugitive dust will be regularly watered during dry and/or windy conditions.
- Unbound internal site roads will be restricted to essential site traffic.

- Vehicles delivering or removing material with dust potential (soil, aggregates, etc.) will be enclosed or covered with tarpaulin at all times, to restrict the escape of dust.
- Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods.

4.3.1 Air Quality and Climate Mitigation Measures during Construction and Demolition Works

- Avoid unnecessary vehicle movements and manoeuvring, and limit speeds on site so as to minimise the generation of airborne dust.
- Use of rubble chutes and receptor skips during construction activities.
- During dry periods, dust emissions from heavily trafficked locations (on and off site) will be controlled by spraying surfaces with water and wetting agents.
- Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic only.
- Re-suspension in the air of spillages material from trucks entering or leaving the site will be prevented by limiting the speed of vehicles within the site to 10kmh and by use of a mechanical road sweeper.
- The overloading of tipper trucks exiting the site shall not be permitted.
- Aggregates will be transported to and from the site in covered trucks.
- Where the likelihood of windblown fugitive dust emissions is high and during dry weather conditions, dusty site surfaces will be sprayed by a mobile tanker bowser.
- Wetting agents shall be utilised to provide a more effective surface wetting procedure.
- Exhaust emissions from vehicles operating within the construction site, including trucks, excavators, diesel generators or other plant equipment, will be controlled by the contractor by ensuring that emissions from vehicles are minimised by routine servicing of vehicles and plant, rather than just following breakdowns; the positioning of exhausts at a height to ensure adequate local dispersal of emissions, the avoidance of engines running unnecessarily and the use of low emission fuels.
- All plant not in operation shall be turned off and idling engines shall not be permitted for excessive periods.

- Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods.
- Material stockpiles containing fine or dusty elements including top soils shall be covered with tarpaulins.
- Where drilling or pavement cutting, grinding or similar types of stone finishing operations are taking place, measures to control dust emissions will be used to prevent unnecessary dust emissions by the erection of wind breaks or barriers. All concrete cutting equipment shall be fitted with a water dampening system.

4.4 Migrating Dust and Dirt Pollution

The Contractor will ensure that all construction vehicles that exist 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 system, constructed and located within the site confines if required.
- Ensuring an appropriate secondary wheel or road washing facility is provided as and when required throughout the various stages of construction on site. If conditions require it, a manned power washer shall be put in place to assist the wheel wash system.

Self-contained vehicle wheel wash systems are equipped with automated high-pressure hoses directed onto vehicle wheels, chassis and undersides. Side baffles prevent the dispersal of washed dirt, and an inbuilt reservoir collects all runoff from the wheel wash system. Water is filtered and recirculated within the system, reducing water usage. All washed solids are segregated by settlement and are either reused on site or removed and disposed of in the same manner as other spoil material.

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 storage facilities are used, there will be a bunded filling area using double bunded steel tank at a minimum.

4.5.1 Contaminated Soil

If any contaminated material is encountered, it will need to be segregated from clean/inert material, tested and classified as either non-hazardous or 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.

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

4.5.3 Other known hazardous substances

Paints, glues, adhesives and other known hazardous substances will be stored in designated areas. 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.

In the event that hazardous soil, or historically deposited hazardous waste is encountered during the work, the Contractor must notify the Environment and Transportation Department of Cork City Council, and provide a Hazardous/Contaminated Soil Management Plan, to include estimated tonnages, description of location, any relevant control measures, destination for authorised disposal/treatment, in addition to information on the authorised waste collectors.

4.6 Protection of Watercourses

The following measures will be employed to protect surface water in the receiving environment during demolition and construction, and to prevent its contamination by direct run-off or by infiltration from the development site. These have been developed in accordance with best practice guidance from Inland Fisheries Ireland (2016).

4.6.1 Emergency Response Plan

An Emergency Response Plan shall be prepared, which details the procedures to be followed in the event of flooding, a spill of chemical, fuel or other hazardous wastes, a fire, or non-compliance incident.

All site staff shall be trained in the implementation of the Emergency Response Plan and the use of any spill control equipment, as necessary.

4.6.2 Discharge License

It will not be permitted to discharge into any newly constructed storm water systems or existing 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. Any discharge will first pass through an appropriately-designed silt trap so that only silt-free water leaves the site.

4.6.3 Over Ground Oil/Diesel Storage

Only approved storage systems for oil/diesel within the site will be permitted, (i.e. all oil/diesel storage to be located within a designated area placed well away from any 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. Fuel storage tanks shall be bunded to a capacity at least 110% of the volume of the storage tank (plus an allowance of 30mm for rainwater ingress). Any accidental spillages – however minor – will be dealt with immediately on site by containment/removal from site. Emergency procedures and spillage kits shall be available and construction staff shall be familiar with emergency procedures.

4.6.4 Refueling

Refueling operations will be restricted to a designated bunded area adjacent to the storage area and remote from watercourses.

4.6.5 Concrete Preparation, Placement, and Washout

Pumped concrete shall be monitored to ensure no accidental discharge. Mixer washings and excess concrete shall not be discharged to surface water. Concrete washout areas shall be located remote from any surface water drainage features to avoid accidental discharge to watercourses. All concrete truck washout is to take place back in the ready-mix depot. Discharge water generated during the placement of concrete shall be removed off site for treatment and disposal.

If pouring of cementitious materials is required for the works adjacent to a pond, surface water drainage features, or drainage features connected to same, this shall be carried out in the dry.

4.6.6 Soil movement

The contractor shall avoid work involving moving of soil during heavy rainfall to minimise potential for entrainment of silt. Where forecasts indicate heavy rainfall events, works should be rescheduled accordingly. Temporary construction surface drainage and sediment control measures will be in place before earthworks commence. As per sub-section 4.6.2, only silt-free water will be permitted to leave the site.

4.6.7 Groundwater management

Contaminated groundwater, if encountered on site, could result in contaminated waters being discharged from the construction site. Any such contaminated waters shall be treated using best practice and appropriate measures/controls dependent on the nature of the contamination, prior to discharge to the public drainage network.

There shall be no direct pumping of contaminated water from the works to the public drainage at any time.

4.6.8 Disposal of wastewater off site

Foul drainage from site offices and compounds, where not directed to the existing wastewater network, shall be contained and disposed of off-site in an appropriate manner and in accordance with the relevant statutory regulations, to prevent the pollution of watercourses.

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. These will be available for inspection by the Environment and Transportation Department of CCC at all times.

4.6.9 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.

4.6.10 Maintenance of existing gullies

Gullies on all existing roads used for site access will be maintained and cleaned as required to ensure their continued effective operation.

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.
- Other construction activities on site involving the use of heavy machinery.

The Contractor will be required to comply with the requirements of the planning permission for any vibration limits for the works. The Local Authority, Engineer, Client, and/or Contractor are to establish background vibration levels prior to the commencement of works.

A vibration monitoring system is to be put in place prior to any works taking place and will be maintained in continuous operation throughout demolition and construction works on site. This system is to raise an alarm if an agreed limit is exceeded, at which time the working methods are to be adjusted so as to reduce the vibration generated. Monitoring locations will be selected within the site, close to its boundaries, such that the recorded vibration levels shall always be higher than those experienced outside the site.

4.7.1 Noise and Vibration Mitigation during Construction & Demolition Works

Site-specific mitigation measures will include:

- A strictly enforced noise management programme shall be implemented at the site from the outset of construction activities.
- Noisy stationary equipment shall be sited away from sensitive site boundaries as far as practicable.
- Where reasonable, practicable, noisy plant or activities shall be replaced by less noisy alternatives if noise breaches and/or complaints occur.

- Proper use of plant with respect to minimising noise emissions and regular maintenance will be required.
- All vehicles and mechanical plant will be fitted with effective exhaust silencers and will be maintained in good efficient order.
- Where noisy plant is required to operate in works areas next to residential houses low noise plant options will be used wherever practicable.
- Dumpers and any plant used for moving materials around the site will have high performance exhaust silencers.
- Selected use of rubber-tyred equipment over steel track equipment where practicable.
- The use of inherently quiet plant is required where appropriate – all compressors and generators will be "sound reduced" or "super silent" models fitted with properly lined and sealed acoustic covers, which will be kept closed whenever the machines are in use, and all ancillary pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers.
- All compressors, generators and pumps shall be silenced models fitted with properly lined and sealed acoustic covers or enclosures, which will be kept closed whenever the machines are in use.
- All pneumatic percussive tools such as pneumatic hammers shall be fitted with dampers, mufflers or silencers of the type recommended by the manufacturer.
- Fixed items of plant shall be electrically powered in preference to being diesel or petrol driven.
- Vehicles and mechanical plant utilised on site for any activity associated with the works shall be fitted with effective exhaust silencers and shall be maintained in good working order and operated in a manner such that noise emissions are controlled and limited as far as reasonably practicable.
- Any plant, equipment or items fitted with noise control equipment found to be defective in shall not be operated until repaired / replaced.
- Machines in intermittent use shall be shut down in the intervening periods between works or throttled down to a minimum during periods when not in use.
- Static noise emitting equipment operating continuously shall be housed within suitable acoustic enclosure, where appropriate.
- All excavator mounted pneumatic breakers used for demolition and groundbreaking activities shall be fitted with effective dampeners and /or enclosed within a noise adsorbing blanket structure to minimise noise emissions.

- Site activities shall be staggered when working in proximity to any receptor, that is concrete cutting and rock breaking should where possible. This proposed method of working will provide effective noise management of site activities to ensure that any receptor is not exposed to unacceptably high levels of noise over extended periods.
- Excessive reviving of all vehicles shall be avoided.
- Unnecessary dropping of heavy items onto ground surfaces shall be banned.
- The use of an excavator bucket to break up slabs of concrete or tarmacadam shall not be permitted.
- The dragging of materials such as steel covers, plant or excavated materials along ground surfaces shall not be permitted.
- Plant Reversing Alarms: Where reasonably practicable and deemed safe by risk assessment, taking into account onsite hazards and working environment, the tonal reversing alarms of mobile plant shall be replaced with broadband alarms.

4.8 Hydrological Pathway

4.8.1 Surface Water

The existing surface water infrastructure connecting the project site to the River Lee and the River Lee itself to the north represents the hydrological pathway connecting the project to the Cork Harbour SPA downstream. The potential impact to the River Lee that could arise as a result of the project is the discharge of polluted waters generated at the site to the river via the existing surface water infrastructure. The risk of a direct release of polluted surface waters to the River Lee is considered to be low and not significant given that the project site is buffered from the river by c. 250m.

With respect to indirect discharges for surface water from the project site to the River Lee via the existing surface water infrastructure during the construction phase it is noted that standard best practice measures are identified as mentioned in section 4.1. The implementation of these measures shall provide protection against any potential pollution being generated at the project site. The measures set out in Section 4.1 are consistent with Objective 9.5, Objectives 9.6 and Objectives 9.7 of the Cork City Development Plan 2022 – 2028 and their full implementation will in turn protect the River Lee against pollution during the construction phase of the project.

In view of the separation distance between the project site and the River Lee of c. 250m and the standard and generic construction phase measures that will be implemented

during the construction phase, that can be considered as part of the AA screening exercise carried out by Doherty Environmental, it is found that the construction phase of the project will not pose a risk to the water quality of the River Lee and as such no functional hydrological impact pathway will connect the project to the Cork Harbour SPA during the construction phase of the project.

Surface water will be discharged from the project site to the River Lee during the operation phase. SuDS measures, as described the Engineering Services Report submitted as a separate report for this application, will be implemented during the operation phase to manage and treat surface water generated during the operation phase. Also given that no car parking is proposed as part of the project there will be no potential for surface water to interact with project car parking areas. It is further noted that surface water generated at the project site during the operation phase will not represent a risk to the water quality of the River Lee. For instance the CIRIA c753 Simple Index approach assigns a pollution hazard ranking to surface water generated from residential roofs as very low.

In view of the separation distance between the project site and the River Lee of c. 250m and absence of activities on site that could result in the contamination of surface water during the operation phase and the very low pollution hazard ranking associated with residential roofs, it is found that the operation phase of the project will not pose a risk to the water quality of the River Lee and as such no functional hydrological impact pathway will connect the project to the Cork Harbour SPA during the construction phase of the project.

4.8.2 Wastewater

Wastewater generated during the construction and operation phase will be directed to the Carrigrennan Wastewater Treatment Plant, prior to release to Lough Mahon. A review of the 2024 Annual Environmental Report (AER) (Uisce Éireann, 2023) for the Carrigrennan wastewater treatment plant has been completed. The 2024 AER concluded that the discharge from the wastewater treatment plant does not have an observable impact on the water quality of the receiving waterbody and that the discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status.

It is further noted that Uisce Éireann have confirmed that there is sufficient capacity at the Carrigrennan wastewater treatment plant to treat additional wastewater loads generated by the project.

In view of the above it is found that the wastewater generated by the project will not have the potential to negatively affect the water quality of the receiving waterbody and on this basis no function hydrological impact pathway connects the project to the Cork Harbour SPA or the Great Island Channel SAC.

5.0 TRAFFIC MANAGEMENT

5.1 Work-Specific Construction Traffic Management Plan (CTMP)

Prior to works commencing on site, the lead Contractor appointed to the project will be required to develop a detailed works-specific Construction Traffic Management Plan (CTMP), reflecting the specifics of their final site management and construction methodologies. This plan shall be prepared in consultation with the Design Team, with Cork City Council (CCC), and with An Garda Síochána, and shall be updated as required throughout the project

The principal objective of the CTMP is to proactively manage the impacts of all construction traffic related to the proposed development, upon both the public (off-site) and internal (on-site) environments. It shall aim to ensure that the safety of the public and of construction workers is maintained at all times, that disruptions are minimised, and that all operations are undertaken within a risk-controlled environment. It is noted that the impact of the construction works on the surrounding road network will be temporary in nature.

The final CTMP will be prepared in accordance with the principles outlined below and shall always comply with:

- Chapter 8 of the Department of the Environment Traffic Signs Manual, current edition, published by The Stationery Office and available from the Government Publications Office, Sun Alliance House, Molesworth Street, Dublin 2;
- the Guidance for the Control and Management of Traffic at Road Works (June 2010) prepared by the Local Government Management Services Board;
- the Construction Site Traffic Management Plan (CSTMP) Guidance prepared by the Health and Safety Authority; and
- any additional requirements detailed in TII standards or in the Design Manual for Urban Roads and Streets (DMURS).

Issues addressed in the CTMP shall 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

A liaison officer will be appointed as a point of contact with local residents, CCC, and An Garda Síochána.

Among the traffic management measures to be included in the CTMP are:

- Securely fencing off the site from adjacent properties, public footpaths and roads during the pre-construction phase.
- Providing signage on the surrounding road network to define the access and egress routes for the development.
- Strictly controlling the traffic generated by the construction phase of the development in order to minimise the impact of this traffic on the surrounding road network.
- Adequately signposting and enclosing all road works to ensure the safety of all road users and construction personnel.
- Accommodating all unavoidable personnel and visitor vehicle parking demands on-site or within designated off-site parking areas.
- Implementing a programme of street cleaning as required.
- Making arrangements to facilitate the delivery of abnormal loads to the site.
- Implementing measures to avoid queuing of construction traffic on the adjoining road network.

The following specific traffic control and marshalling measures are to be included in the CTMP, to minimise the potential for obstruction of surrounding streets:

- At no time will construction associated vehicles be stopped or parked along haulage routes.
- Haulage vehicles will not travel in convoys of greater than two vehicles at any time.
- Haulage vehicles will be spaced by a minimum of 250m at all times.
- At no time will haulage vehicles be parked or stopped at the entrance 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.

5.2 Vehicular Access to Site

An existing vehicular access to the site is located on Anglesea Terrace, at its southern boundary. This will serve for all demolition, clearance, piling, and excavation works on the site.

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 (see sub-section 4.3) 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.

Revised access measures may be developed further as part of the final Construction Traffic Management Plan (CTMP) to be prepared by the lead Contractor.

5.3 Construction Traffic Routes

Heavy Goods Vehicle (HGV) traffic to and from the site will follow a designated route, ensuring that heavy construction vehicles avoid sensitive streets to the greatest extents possible and travel as little as possible within the city centre.

The precise designated route will be determined by the lead Contractor at a later stage and agreed with CCC as part of the final Construction Traffic Management Plan (CTMP). It is however expected that this route will require HGVs to arrive and depart from/to the east along South City Link Road (N27), Old Station Road, Anglesea Street (R610), accessing the development site via Anglesea Terrace.

5.4 Onsite Car Parking

Due to the site's city centre location and constrained nature, no car parking is to be provided on or near the site for construction personnel or for visitors. Construction personnel will be encouraged to walk, cycle, or use public transport, and information on local transport services will be published on site.

5.5 Vehicle Movements During Construction

The major construction items include demolition, excavation, construction, and fit out. Heavy Goods Vehicle (HGV) construction traffic to and from the site shall reach a peak during reduced level excavation, which will require the removal of spoil from the site. The final programming and scheduling of such material transfer shall be determined by the lead Contractor appointed to the project. Under a 'worst-case' scenario, however, it is possible that up to 4no. such HGV trips may be made to the site each hour (one HGV arrival and one HGV departure every 15 minutes). This would equate to total traffic movements of 18 Passenger Car Units (PCU) in each of the background peak hours.

In addition to HGV traffic, periodic deliveries of materials to site shall be made by Light Goods Vehicles. To the extent possible, these shall be scheduled to take place outside of the background peak traffic hours. Such trips are also unlikely to occur frequently during the stages of construction that require bulk excavation; LGV trips are therefore unlikely to occur in significant numbers at the same time as HGV trips take place. For the purposes of estimating a worst-case construction traffic generation scenario, however, 5no. LGV arrivals and 5no. LGV departures (total traffic movements of 10 PCU) are assumed in each of the background peak hours.

5.6 Minimisation of Construction Vehicle Movements

Construction vehicle movements will be minimised through:

- Consolidation of delivery loads to/from the site and management of large deliveries on site to occur outside of peak periods.
- Use of precast/prefabricated materials where possible.
- Reuse on site of 'cut' material generated by the construction works, where possible, through various accommodation works.
- Provision of adequate storage space on site.
- Development of a strategy to minimise construction material quantities as much as possible.

5.7 Minimisation of Staff Vehicle Movements

Construction staff vehicle movements to and from the site shall be minimised by promoting more sustainable means of transport among construction personnel. The following headings identify some of the measures to be adopted in this regard.

5.7.1 Walking

Lockers and drying facilities will be provided to allow personnel to store clothing and umbrellas, and to dry wet gear.

5.7.2 Cycling

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

5.7.3 Public transport

Construction staff will be encouraged to use public transport for travel to and from the site. An information leaflet will be provided to all staff as part of their induction on site

highlighting the location of the various public transport services in the vicinity of the construction site.

5.8 Deliveries and Storage Facilities

It is proposed that unloading bays be provided for deliveries to the site within the hoarding perimeter. These should be accessible by crane and teleporters. Appropriately demarcated storage zones will be used to separate 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 peak traffic hours, to avoid disturbance to pedestrian and vehicular traffic in the vicinity of the site.

5.9 Monitoring and Maintenance of Public Roads

A Visual Condition Survey (VCS) will be carried out of all surrounding streets prior to any site works commencing. The lead Contractor will liaise with CCC 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 site 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.

6.0 PROVISIONS FOR CONSTRUCTION

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

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

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 & Demolition

The partial demolition of the existing buildings on the site is required to facilitate the proposed development. The following is a high-level method statement for the demolition of existing buildings:

- Establish a site set-up and welfare facilities.
- Carry out a full asbestos survey. This survey is to be performed before any demolition is performed on site.
- Carry out a detailed services survey of the site to identify all buried services, determine what services are live, redundant and potentially serve neighbouring properties. This survey is to be performed before any demolition is performed on site.
- Carry out any necessary services diversions and decommissioning works.

Any materials identified as being hazardous will be removed and disposed of in strict accordance with the applicable legislation. All services will be disconnected and removed from the building along with a 'soft strip' of any fixtures, fittings, and demountable non-load bearing structure.

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 & Environmental Management Plan in accordance with the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (Department of Environment, Heritage and Local Government, 2006). The Contractor must also outline detailed proposals within the Construction & Environmental Management Plan to accommodate construction traffic.

6.5 Site Service Installations

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

6.6 Construction Building

Following on from demolition, site clearance and excavations, foundations shall be laid. The cores will be undertaken in concrete-framed construction; construction of concrete columns and upper floor concrete slabs; construction of glazing and stone facades; roof completions; mechanical and electrical installations; internal apartment fit out works; and external drainage and services.

On completion of the building structure, the building envelope will be completed and will include glazing and other façade elements, roof finishes and other completions.

6.7 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.

6.7.1 Buildings Structure:

- Installation of any temporary works which needs to be verified as part of detail design.
- Demolition of existing building and hardstanding area.
- Site clearance including install/removal of below-ground services.
- Excavation/fill and construction of the foundations, to support the new vertical structure.
- Stripping old finishes.
- Construction of the new ground-floor slabs.
- Construction of walls, columns, beams and floors slab for the new build extensions at the end of each block. This will be constructed in a sequential manner with the proper integration with the existing adjacent structure.
- Construction of the steel frames and slabs of the additional floors on top of the existing structure and the extensions.
- Building the balcony and walkway frames and slabs on new foundations and tying them to existing columns and walls.

6.7.2 Envelop/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.
- Advancing of external leaf two or three levels behind the structure.

6.7.3 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.

6.7.4 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.

6.7.5 Commissioning:

- 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.


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