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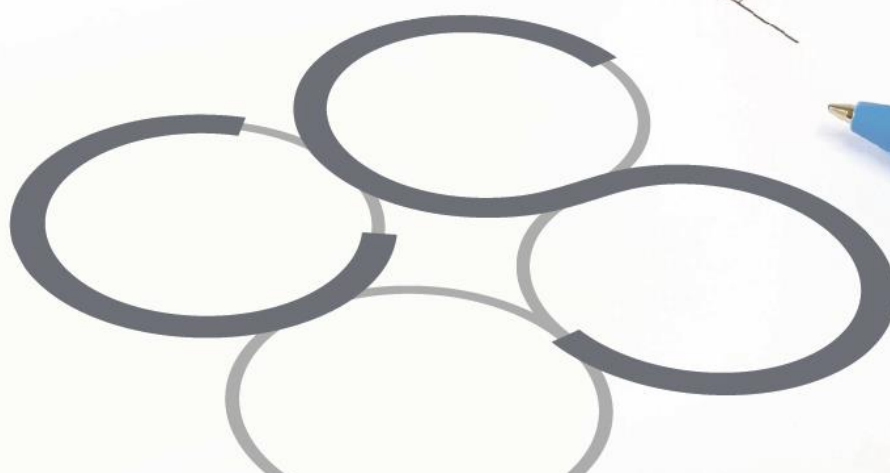
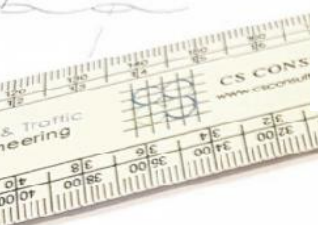
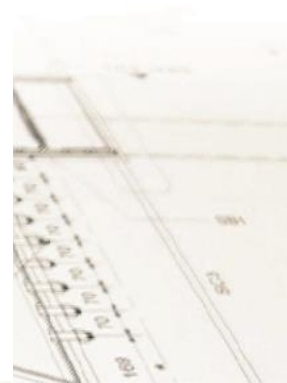
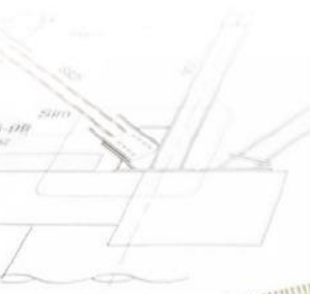
Outline Construction Management Plan

Block 5 and Block 6 Clongriffin, Dublin 13

Client: The Land Development Agency

Job No. C216

August 2024



OUTLINE CONSTRUCTION MANAGEMENT PLAN

BLOCK 5 AND BLOCK 6, CLONGRIFFIN, DUBLIN 13

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1.0 INTRODUCTION

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by the Land Development Agency (LDA) to prepare an Outline Construction Management Plan (OCMP) for a proposed standalone Large-scale Residential Development (LRD) at Block 5 and Block 6, Clongriffin, Dublin 13.

The OCMP 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 revise and expand upon the OCMP to produce a detailed Construction Management Plan (CMP). The content of the Contractor's CMP will be agreed with Dublin City Council (DCC) 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 OCMP. It will also incorporate the following:

- an Operational Health & Safety (OH&S) Management Plan.
- an Environmental Management Plan (including a Waste Management Plan).
- 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:

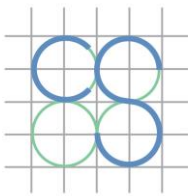
- That all site activities are effectively managed to minimise the generation of waste and to maximise the opportunities for on-site reuse and recycling of waste materials.
- That that all waste materials generated by site activities, which cannot be reused on site, are removed from site by appropriately 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.
- The management and control of 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.
- Compliance with all planning conditions and requirements imposed in relation to waste management.

The OCMP demonstrates how the appointed Contractor and the appointed Project Supervisors (including Site Manager and Health & Safety Officer) 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) (as amended)
- Industrial Emissions (Integrated Pollution Prevention and Control) Directive (2010/75/EU)
- The Waste Framework Directive (EU) (2018/851)
- Environmental Protection Agency Acts 1992 to 2024 (as amended)
- Waste Management Acts 1996 to 2024 (as amended)
- Waste Management (Collection Permit) Regulations 2007 (as amended)

- Waste Management (Facility Permit and Registration) Regulations 2007 (S.I. No. 821 of 2007)
- Local Government (Water Pollution) Acts 1977 to 2024 (as amended)
- Environmental Protection Agency (EPA) – Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects (2021)
- European Union (Waste Directive) Regulations 2011–2020

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



2.0 SITE LOCATION AND PROPOSED DEVELOPMENT

2.1 Site Location

The application site is located within zoned development lands to the north-west of Clongriffin railway station in Dublin 13. It is bounded to the north and west by recently completed residential developments, and to the east and south by undeveloped lands. The site has a total area of approx. 2.2ha and is in the administrative jurisdiction of Dublin City Council (DCC), adjacent to the City Council's boundary with Fingal County Council.

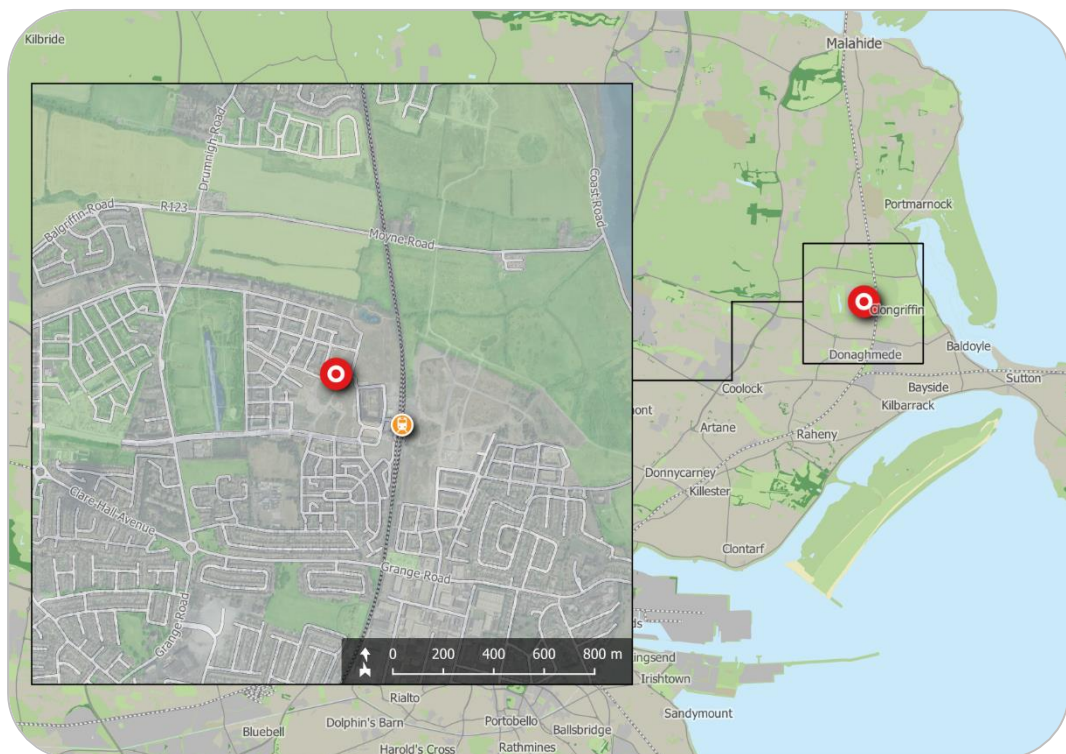


Figure 1 – Development site location
(sources: EPA, OSi, OSM Contributors, Google)

The location of the development site is shown in **Figure 1** above; its extents and environs are shown in more detail in **Figure 2**.

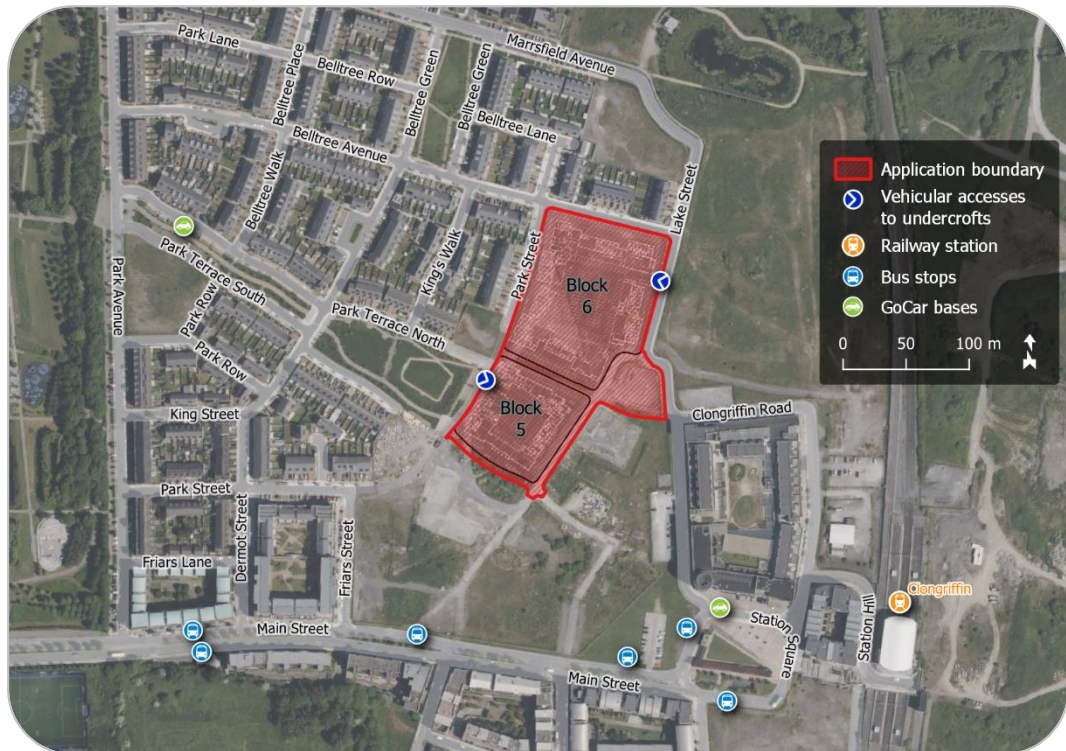


Figure 2 – Development site extents and environs
(sources: NTA, GoCar, OSi, OSM Contributors, Microsoft)

2.2 Existing Subject Site Condition

The subject development site itself is generally greenfield, although parts of it have been used for access and storage to facilitate construction on adjacent lands.

2.3 Description of Proposed Development

The proposed development will consist of the construction of two Blocks ranging in height between 3- to 7-storeys to provide 408 no. apartments (comprising 180 x 1 bed; 226 x 2 bed and 2 x 3 bed units) together with ancillary car- ; bicycle and motorcycle parking provision. Ancillary communal amenity spaces are provided at podium level within the respective courtyards and at 4th floor roof terrace level.



At ground floor level provision is made for 1,209 sq.m Community / Arts and Cultural floorspace and a childcare facility of 413 sq.m (with an ancillary play area of 125 sq.m). Other facilities provided at ground floor level include refuse / bin stores; energy centre, plant rooms and integrated ESB substations and associated switch rooms. On-street loading bays are provided along Lake Street and Dargan Street.

Other works include the provision of road infrastructure and green infrastructure (in the form of a public open space / landscaped pocket park extending to 1,433 sq.m in area) together with street planting and public lighting throughout plus all associated engineering and site works (including an external multi-functional community / arts and cultural events space of 315 sq.m along Market Street and all underground services and utility connections) necessary to serve the proposed development.

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 Q4 2024. The proposed development is anticipated to be constructed in a single phase over a period of approximately 24 months, with final occupation in early 2027.

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

- Establishment of site perimeter hoarding and access provisions, maintaining existing pedestrian and traffic routes around the site.
- Site clearance.
- Reduced level excavations.
- Site services installation (drainage, power, water).
- Construction of building frames and envelopes.
- Internal roadway and footpath construction.
- Internal building fit-out and exterior landscaping.

3.2 Site Establishment

All necessary accommodation, material handling, and secure storage facilities will be provided and maintained for construction site operations. These shall include:

- Construction plant
- Hoisting equipment and cranes
- Scaffolding, platforms, access ladders, barriers, handrails
- Barricades and hoardings
- Temporary driveways, road crossovers and construction zone



- 24/7 emergency vehicle access to site during working hours
- On-site hardstand areas for vehicle loading and unloading
- Storage sheds and compounds
- Rubbish sorting areas
- Site amenities with all required equipment and facilities
- Construction worker accommodation
- First aid facilities
- Site administration accommodation

Construction plant and site amenities shall comply with the requirements of all relevant authorities and be wholly contained within the hoarded site. All construction plant and equipment shall be progressively removed when no longer required.

First aid facilities for the use of all construction staff shall be maintained at all times, in the form of a fully provisioned first aid area within the site office with lifesaving and safety equipment, as required by the relevant statutes, authorities, and awards. All required permits will be obtained and applicable fees paid, and all conditions thereof complied with.

3.3 Site Security

Prevention of unauthorised access to the site is a very high priority and shall be vigorously managed throughout the construction period. Controlled access points to the site, in the form of gates or doors, will be kept locked at any time that these are not in use (e.g., outside working hours).

Access to site will be controlled and monitored. During working hours, a gateman shall control traffic movements and deliveries. Outside of site working hours, 24-hour site monitoring by on-site personnel and CCTV will be implemented.

Perimeter hoarding will be provided around the site to provide a barrier against unauthorised access from the public areas. A project signboard will be erected on the hoarding at each main entrance point, to identify the site. Hoardings will contain graphics portraying project information.

The hoarding will be well-maintained and will be painted. Hoardings and signboards at the perimeter of the site shall comply with the requirements of the relevant authorities and the relevant Health and Safety Acts.

3.4 Site Accommodation

On-site facilities shall include:

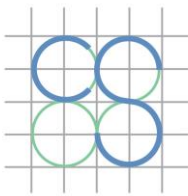
- Materials and equipment storage area
- Site office and meeting room
- Staff welfare facilities (including but not limited to toilets, drying room, canteen)

Electricity will be provided to the site via the national grid, 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 DCC, and shall be subject to any restrictions and requirements they may impose.

3.5 Vehicular Access to Site

Vehicular construction traffic access to and from the site is discussed in subsection **6.2** (page 29).



3.6 Material Hoisting and Movement Throughout the Site

It is envisaged that the use of several tower cranes and the periodic use of mobile cranes shall be sufficient for all construction works on site. Mobile crane visits shall be coordinated with the other site activities to ensure that all risks are correctly assessed and guarded against. A detailed crane analysis shall be prepared for verification of the safe load parameters. No loads shall be lifted over the public domain or adjacent properties.

Hoists and teleporters may also be used within the site and around its perimeter as required during the project, to facilitate material and waste movements into and out of the site.

3.7 Deliveries and Storage Facilities

Unloading bays will be provided for deliveries to the site, within the hoarding perimeter; these will 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.

3.8 Site Parking

Vehicle parking for construction personnel shall be accommodated within the construction compound. To the extent possible, personnel shall however be encouraged to use public transport, and information on local transportation shall be published on site. As described in the accompanying Residential Travel Plan Framework document, the development site is very well served by high-quality public transport (both bus and rail).

3.9 Site Working Hours

Subject to the agreement of the Planning Authority, the following site operation hours are proposed:

- Monday to Friday: 08:00 to 19:00
- Saturdays: 08:00 to 14:00
- Sundays and Public Holidays: Works not permitted

It may be necessary for some construction operations to be undertaken outside these times, for example: service diversions and connections; concrete finishing and fit-out works; etc. There may also 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 operations or deliveries will be agreed in advance with DCC.

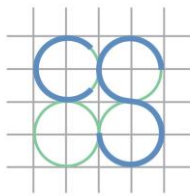
3.10 Services Relocations and Temporary Protection of Public Domain

Prior to commencement of works, detailed dilapidation reports shall be carried out for footpaths, kerbs, road pavements, and utility infrastructure features of the main access routes in the vicinity of the site.

Protection will be provided to existing surrounding building elements potentially impacted by the works. Protection may be in the form of screened hoardings, scaffolding and fencing, taped drop sheets and the like, all installed prior to commencement.

The type of required hoardings, scaffolding and fencing shall vary over the duration of the works, depending on how the site activities potentially impact on the adjoining public domain.

Dial-before-you-dig enquiries and detailed services location investigations shall be carried out to identify any need for temporary protection of elements of existing utility infrastructure that are not to be diverted as part of the works.



All temporary protection will be installed and maintained for the duration of the works, until no longer required.

3.11 Major Plant and Equipment

Plant and equipment expected to be used during the construction works include:

- Articulated and rigid trucks
- Rigs, bulldozers, excavators, backhoes, with ancillary equipment (rock hammers or saws)
- Mobile cranes
- Concrete delivery trucks
- Concrete pumps
- Man and material hoists
- Scissor, boom, and fork lifts

All plant and equipment shall be operated by experienced and qualified personnel with the appropriate registrations.

3.12 Staff Training and Certification

It will be ensured 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. Staff compliance with all site protocols will be monitored, and corrective action taken in response to any breaches.

In consultation with the Project Supervisor Construction Stage (PSCS), initial site-specific induction training will be provided to all construction operatives (including sub-contractors) regular 'tool-box talks', refresher training, and task-specific training will be organised as necessary throughout the construction works.

3.13 Record Keeping

Records will be kept by the main 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 DCC, 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.

3.14 Complaints Procedure

A Complaints Procedure System shall be drawn up and administered by the main Contractor. A record of each complaint shall be logged (date and time,



description of complaint, complainant details, etc.), including actions to be carried out and ultimately confirmation that the complaint has been closed out by both Contractor and complainant. Records shall be kept and made available to DCC upon request. Where a record of a complaint is requested by the complainant, this shall be made available to that complainant upon request.

3.15 Designated Community Liaison Officer

A Designated Community Liaison Officer (DCLO) shall be appointed as a point of contact with local residents, DCC, and An Garda Síochána. The DCLO shall also consult and coordinate with DCLOs on other nearby active sites and ensure that the CMP for the development speaks to the CMPs of the adjacent and interfacing sites.

The Designated Community Liaison Officer shall be responsible for ensuring that complaints are dealt with and shall do so in accordance with the Complaints Procedure System outlined above. The DCLO shall liaise with members of the public as required to provide updates on the status of complaints and to ensure complaints are treated fairly and transparently. Where record of complaints is required by the complainant this shall be provided to the complainant by the DCLO. Requests by DCC or by members of the public for complaint records shall be dealt with in accordance with the requirements of GDPR legislation.

4.0 ENVIRONMENTAL MANAGEMENT

Guidelines and controls will be established for all activities with the potential to impact on the surrounding environment at any time during 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 statutory, contractual, and procedural obligations relating to environmental management.

4.1 Noise

Measures will be implemented 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 (not applicable in this case)
- 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) to the extent that this is applicable.

The following is an outline of the noise control measures to be implemented on site. These are to be expanded upon in the Contractor's detailed Construction Management Plan (CMP) and agreed with Dublin City Council (DCC) prior to commencement of works.



4.1.1 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.
- A Dedicated Community Liaison Officer (DCLO) will be employed 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.

4.1.2 Plant

- It will be ensured that each item of plant and equipment complies with the noise limits quoted in Directive 2000/14/EC.
- All plant and equipment will 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.

4.1.3 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.

4.2 **Air Quality and Dust Monitoring**

Dust prevention measures shall be included for control of any site airborne particulate pollution. Levels of dust and airborne particulate matter (PM₁₀ and PM_{2.5}) in the vicinity of the site will be monitored continuously throughout 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/m²/day as measured using Bergerhoff type dust deposit gauges.



The most significant potential sources of dust and airborne particulate matter on a typical construction site are:

- Demolition of existing structures (not applicable in this case)
- Large-scale earthworks
- 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 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:

- 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 using unbound internal site roads will have their speed limited to a maximum of 20km/h, and this speed restriction will be rigidly enforced.
- 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 Control of Dust and Dirt Pollution

It will be ensured 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 roads).
- Ensuring an appropriate wheel washing facility is provided as and when required throughout the various stages of construction on site.

4.4 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.

4.4.1 Contaminated soil

A site investigation carried out by Site Investigations Ltd (SIL) in November 2023 identified no contaminated material within samples taken from the development site.

If any contaminated material is subsequently encountered, this 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.

4.4.2 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 refuelling techniques, it is not expected that there will be any fuel/oil wastage at the site.

4.4.3 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 main Contractor will notify the Environment & Transportation Department of Dublin City Council and provide a Hazardous/Contaminated Soil Management Plan that includes estimated tonnages, description of location, any relevant control measures, destination for authorised disposal/treatment, in addition to information on the authorised waste collectors.

Please refer to the accompanying Construction and Demolition Waste Management Plan (CDWMP) for further detail of waste materials expected to be generated during construction, as well as for details of the disposal of these.

4.5 Protection of Watercourses

The development site does not include any existing watercourses, open drains, ditches, or other significant land drainage features. The closest open watercourse to the development site is the Mayne River, approximately 130m to the north. The proposed development therefore has negligible potential to directly contaminate any existing watercourse.

Within the wider Clongriffin masterplan area, an existing local surface water drainage network is in place. All runoff collected by this network drains to the Clongriffin attenuation pond, which is located adjacent to the Mayne River and discharges to it. During the proposed development's construction stage, it is therefore necessary to ensure that contaminants do not enter this attenuation pond (and thence the river) via the existing surrounding surface water drainage infrastructure.

It is also necessary to ensure that indirect contamination of the Mayne River does not occur through subsurface groundwater movement from the development site.

Pollution will be prevented from occurring through best site management practice. The following measures will be employed to protect surface water in the receiving environment during construction activities, 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).



4.5.1 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.

4.5.2 Discharge licences

It will not be permitted to discharge into any previously existing or 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.

4.5.3 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 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. 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.

4.5.4 Refuelling

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

4.5.5 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.

4.5.6 Soil movement

Work involving movement of soil during heavy rainfall will be avoided, to minimise the potential for silt entrainment. Where forecasts indicate heavy rainfall events, works will be rescheduled accordingly. Temporary construction surface drainage and sediment control measures will be in place before earthworks commence. As per sub-section **4.5.2**, only silt-free water will be permitted to leave the site.

4.5.7 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 surface water network. There shall be no direct pumping of contaminated water from the works to the surface water drainage/stream network at any time.

If dewatering is required, water shall be treated prior to discharge to the existing sewer or watercourse. This shall include treatment via petrol



interceptor and treatment for silt removal either via silt trap, settlement tanks or ponds.

4.5.8 Disposal of wastewater off site

To prevent the pollution of watercourses, foul drainage from site offices and compounds, where not directed to the existing wastewater network, will be collected in self-contained sanitary facilities, the contents of which will be regularly removed and disposed of by a licenced contractor at a designated wastewater treatment facility, in accordance with the relevant statutory regulations,

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 DCC's Environment & Transportation Department at all times.

4.5.9 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.

4.5.10 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.

4.6 Vibration

The Contractor will 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. Any vibration limits for the works that are stipulated in the planning conditions will be complied with. In the

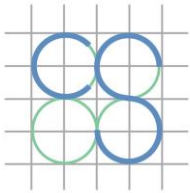
absence of any Local Authority requirements, the following table shall set the limitations.

Table 1 – Trigger Values for Vibration

Trigger Level	Peak Particle Velocity (PPV)	
	50Hz and below	Above 50Hz
1	10 mm/s	10 mm/s
2	10 mm/s	12 mm/s
3	10 mm/s	15mm/s

The Administrator, 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 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.



5.0 WASTE MANAGEMENT

A Construction and Demolition Waste Management Plan (CDWMP) has been prepared by CS Consulting as part of this application. Refer to this report for details of waste management during the construction stage of the proposed development.

6.0 CONSTRUCTION TRAFFIC MANAGEMENT

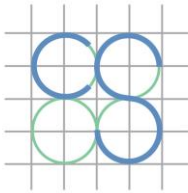
6.1 Works-Specific Construction Traffic Management Plan (CTMP)

Prior to works commencing on site, the lead Contractor appointed to the project will 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 Dublin City Council (DCC), 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 Transport 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.
- 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, DLRCC, 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 stage.
- 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 stage 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.

6.2 Vehicular Access to Site

All vehicular traffic to and from the site will travel from/to the west, via Clongriffin Main Street. An indicative designated route for construction traffic is shown in **Figure 3**; this allows for access via surrounding lands also in the applicant's ownership.

It is noted that the existing configuration of Main Street allows left turns only for any traffic turning onto Main Street at any point between Park Avenue and Station Square. Traffic arriving from the north and heading west must therefore first follow Main Street to the east and then make a loop around Station Square before continuing westward back along Main Street. To minimise departing construction traffic's travel distance around Station Square, it is instead proposed to route this traffic via Clongriffin Road, approaching Station Square

directly from the north. An alternative departure route (also shown in **Figure 3**) would follow Park Street and Park Avenue; this would however require greater travel distance along residential streets with perpendicular parking and with more numerous pedestrian crossing points.

The final routing of construction traffic between Main Street and the development site will be determined prior to commencement and agreed with DCC as part of the final Construction Traffic Management Plan (CTMP), having regard to:

- Final construction compound location(s).
- The status and condition of surrounding streets (including those not yet finished).
- Nearby bus service operations.
- Any specific requirements of Dublin City Council.

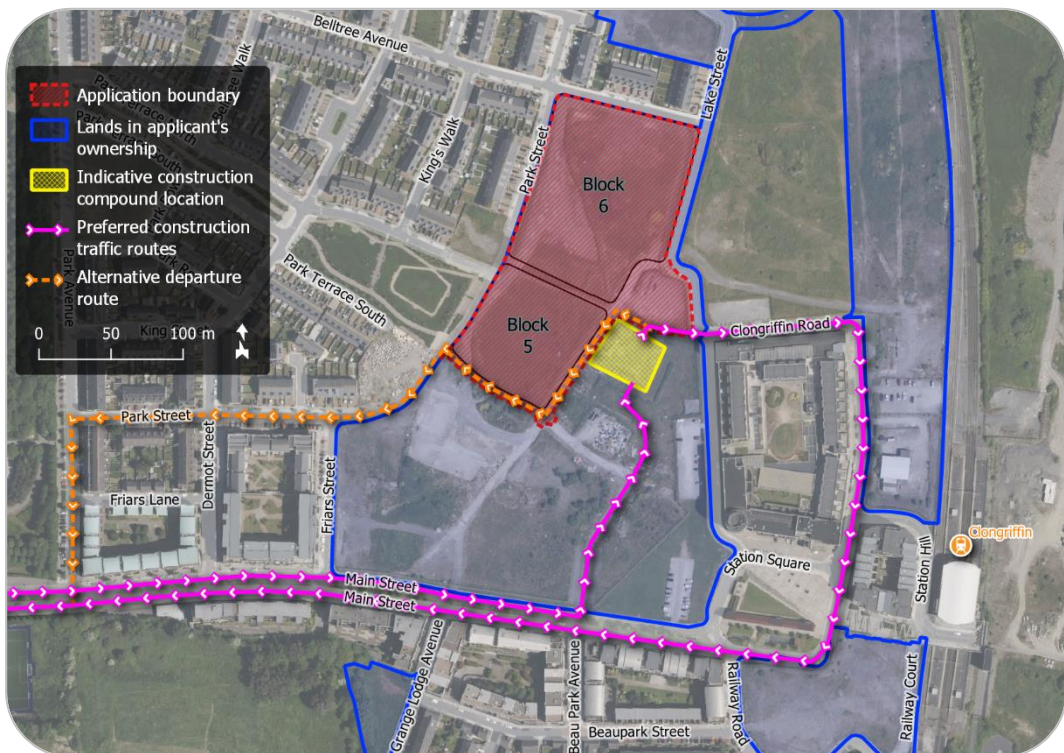


Figure 3 – Indicative construction traffic routes
(sources: OSi, OSM Contributors, Microsoft)

Security personnel will be present at the entrance/exit of the site to ensure all exiting traffic will exit safely. A vehicle wheel wash system will be operated at the exit from the site, when conditions require it, 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.

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

6.3 Onsite Car Parking

Sufficient car parking will be provided within the construction compound to cater for construction personnel and visitors driving to site, thereby minimising the risk of overspill parking on surrounding streets. The quantum of onsite car parking to be provided will be determined by the Contractor and will reflect staffing levels and available alternative transport options.



It is nevertheless intended that onsite car parking be used primarily by construction staff and visitors for whom a car or van is the only practical means of travel to site (either by reason of journey origin or the need to transport specialist equipment). All construction personnel shall therefore be encouraged to use public transport or to cycle when travelling to site, and all contractors shall be required to make reasonable provision for shared transport of workers to site (e.g. charter buses or car sharing arrangements). As described in the accompanying Residential Travel Plan Framework document, the development site is very well served by high-quality public transport (both bus and rail).

6.4 Vehicle Movements During Construction

The major construction activities include site clearance, excavation, construction, and fit out. Heavy Goods Vehicle (HGV) construction traffic to and from the site shall reach a peak during preliminary earthworks, which may require the removal of spoil from the site and/or the importation of soil and aggregate. The final programming and scheduling of any 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 or the importation of fill material; 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.

As car parking for construction personnel will be provided on site during construction works; some vehicular trips shall be made to and from the site each day by construction personnel commuting to and from work. The majority of these trips are expected to fall outside the background traffic peak hours. In the worst-case scenario, it is assumed that 10no. such light vehicle trips may be made to the site during the AM peak hour, and 10no. such trips may be made from the site during the PM peak hour.

The anticipated worst-case scenario vehicular trip generation of the subject site during construction is summarised in **Table 2**.

Table 2 – Maximum Peak Hour Construction Traffic Generation

Time Period	Heavy Goods Vehicles	Light Vehicles	TOTAL (PCU) ¹
Arrivals			
AM Peak	4	15	24
PM Peak	4	5	14
Departures			
AM Peak	4	5	14
PM Peak	4	15	24
Total Trips			
AM Peak	8	20	38
PM Peak	8	20	38

This projected construction-stage vehicular trip generation shall not significantly increase total traffic flow volumes at any nearby road junction and therefore does not have the potential to significantly affect the operation of the surrounding road network.

¹ Light Vehicle (car or LGV) = 1 PCU; HGV = 2.3 PCU



6.5 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.

6.6 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.

6.6.1 Walking and Cycling

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

6.6.2 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.

6.6.3 Car Sharing

Organisational support and encouragement will be provided for car sharing amongst staff, particularly those for whom end-to-end public transport journeys are impractical. To the extent possible, the Contractor will endeavour to arrange staff shift patterns to facilitate shared journeys by staff who would drive similar routes.

6.7 **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.

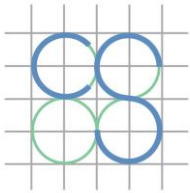
All deliveries to site will be scheduled to ensure their timely arrival and avoid need for storing large quantities of materials on site. Deliveries will be scheduled outside of peak traffic hours, to avoid disturbance to pedestrian and vehicular traffic in the vicinity of the site.

6.8 **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 DCC 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 program 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.

7.0 PROVISIONS FOR CONSTRUCTION

7.1 Hoarding, Site Set-Up, and Access/Egress Points

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

7.2 Removal of Services

Prior to any works commencing, 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.

7.3 Demolition Works

No extant structures are present on the subject site, and no demolition works will be required.

7.4 Site Clearance and 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 lead 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 lead Contractor will prepare a Construction Waste Management Plan in accordance with the *Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects* (EPA, 2021), and must ensure that all material is disposed of at an appropriately licensed

land fill site. Any materials identified as being hazardous will be removed and disposed of in strict accordance with the applicable legislation.

Refer to sub-section **4.5** of this report for details of measures that will be employed to prevent contamination of existing watercourses and groundwater during excavation.

7.5 Site Service Installations

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

7.6 Construction Stage

Following on from site clearance and excavations, piled foundations will be installed below ground beams and pile caps. Building frames, external building envelopes, and roofs will then be constructed. Works to the façade will commence following partial completion of the external envelope. Once the buildings are weather sealed, the internal fit out and completion works will take place.

7.7 Superstructure

The construction of the superstructure will involve complex sequencing of activities and various construction methodologies could be adopted. It is envisaged that all buildings will be constructed as reinforced concrete frames (walls and columns), supporting precast concrete floor slabs overlaid with structural screed. At first floor level there will be elements of transfer structure above the undercroft car parks.

Façades will consist of a combination of brickwork and rendered blockwork. 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.

7.7.1 Buildings Structure:

- Installation of piled foundations, pile caps, and ground beams.
- Construction of load bearing walls and reinforced concrete beams and columns.
- Installation of precast floor panels (including roof) on load bearing walls.
- Installation of screed on precast floor panels.

7.7.2 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.
- Advancing of external leaf two or three levels behind the structure.

7.7.3 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

7.7.4 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.

7.7.5 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 will issue a detailed construction programme outlining the various stages, prior to commencement of works.

7.8 Erection and Operation of Cranes

It is envisaged that several tower cranes will be temporarily erected to accommodate the construction works for the distribution of reinforcing steel, concrete skips, concrete formwork elements, and general building materials. All necessary licences will be obtained from the Local Authority. A 'mast climber' may be installed at some local areas to facilitate particular façade features. The mast climber is essentially a climbing platform that allows the user to safely access any level without the requirement for a full scaffold tower.

7.9 Provisions for Works in Proximity to Dublin Airport

Prior to the commencement of works on site, representatives of the applicant will engage in a consultation process with the Dublin Airport Authority and the Irish Aviation Authority.