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Outline Construction Management Plan

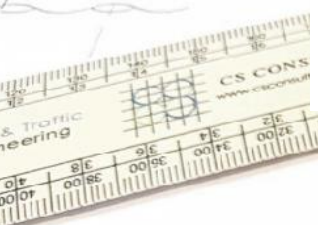
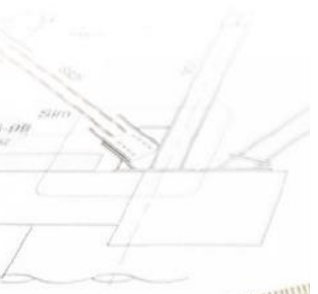
Proposed Mixed-Use Development

Belgard Square East, Belgard Road and Blessington Road, Dublin 24

Client: Ravensbrook Limited

Job No. Q003

June 2022



OUTLINE CONSTRUCTION MANAGEMENT PLAN

PROPOSED MIXED-USE DEVELOPMENT, BELGARD SQUARE EAST, BELGARD ROAD AND BLESSINGTON ROAD, DUBLIN 24

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BS 1192 FIELD **Q003-CSC-ZZ-XX-RP-C-0005 Outline Construction Management Plan 20220602**

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1.0 INTRODUCTION

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by Ravensbrook Limited to prepare a Outline Construction Management Plan (OCMP) for a proposed mixed-use development located on the site at Belgard Square East, Belgard Road and Blessington Road, Dublin 24.

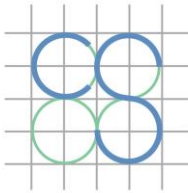
The aim of this OCMP is to address issues that can arise during construction including noise and vibration, traffic management, working hours, pollution control, dust control, road cleaning, compound / public health facilities and staff parking, all associated with the construction works. This plan will be agreed with South Dublin County Council (SDCC) in advance of the construction phase.

This Outline Construction Management Plan (OCMP) has been prepared to give an overview of the processes to be employed during construction of this project. Prior to the on-site activities commencing. Prior to commencement this plan shall be updated to include the following additional detail;

- Operational Health & Safety (OH&S) Management Plan;
- Environmental Management Plan, including Waste Management Plan;
- Pedestrian and Traffic Management Plan.

The OCMP will be integrated into and implemented throughout the construction phases of the project to ensure the following:

- that all site activities are effectively managed to minimise the generation of waste and to maximise the opportunities for on-site reuse and recycling of waste materials.
- that all waste materials generated by site activities, that cannot be reused on site, are removed from site by appropriately permitted waste



haulage appointed Contractors and that all wastes are disposed of at approved waste licensed/permitted facilities in compliance with the Waste Management Acts 1996 to 2011. The embodied carbon of the existing structure shall be considered during demolition and as much material as possible shall be reused such as tarmac/ asphalt and concrete recycling for hardcore operations.

- that any environmental impacts (noise, vibration, dust) of project construction work activities on receptors and properties located adjacent to the project work areas, and on the local receiving environment, are managed and controlled.

2.0 SITE LOCATION AND PROPOSED DEVELOPMENT

2.1 Site Location

The proposed development site is located on the site at Belgard Square East, Belgard Road and Blessington Road, Dublin 24. The site is located in the administrative jurisdiction of South Dublin County Council (SDCC) and has a total area of circa 1.26ha.



Figure 1 – Site Location

(map data: EPA, NTA, OSM Contributors)

The location of the proposed development site is shown in Figure 1 above; the indicative extents of the development site, as well as relevant elements of the surrounding road network, are shown in more detail in Figure 2.

The development site is bound by Belgard Square East to the west, Blessington Road to the north, Belgard Road to the east and existing commercial developments to the south.



Figure 2 – Site Environs

(map data: EPA, NTA, OSM Contributors)

2.2 Existing Land Use

The site is currently a brownfield site consisting primarily of hardstanding surfacing. No existing buildings are present on site. The site does not currently generate any vehicular traffic.

3.0 PROJECT DESCRIPTION

The proposed development will consist of the demolition of existing boundary wall and construction of:

c. 2,289 sqm of retail/commercial floor space across 10 no. units including retail, restaurant/café and Class 2 financial/professional services and office use, and a crèche (257sqm) at ground and first floor levels;

310 no. build to rent residential apartments including 99 no. one bedroom units, 203 no. 2 bedroom units and 8 no. three bedroom units within a part 6 to part 12 no. storey development across 3 blocks over partial basement;

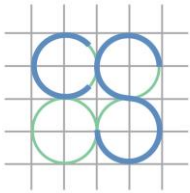
c. 2,223 sqm of communal external amenity space provided in the form of a ground floor garden and external terraces at fifth, sixth, seventh and eighth floor levels; c. 1,026 sqm of public open space provided in the form of a central courtyard with landscaped areas at site perimeters;

c. 1,785 sqm of resident support facilities and services and amenities provided at basement, ground and first floor levels;

Vehicular access to the basement development from a new access point at Belgard Square East;

A new tertiary route will be provided in the southern part of the site linking Belgard Square East and Belgard Road;

Provision of 130 no. car parking spaces (including 8 no. club car spaces and 6 no. disabled access spaces) at basement level in addition to 5 no. set down spaces (4 no. serving creche) and 1 no. disabled access space at ground level, layby on Belgard Square East, 6 no. motorcycle spaces and a total of 763 no. bicycle parking spaces;



Provision of 4 no. Ø0.3m microwave link dishes to be mounted on 2 no. steel support pole affixed to lift shaft overrun, all enclosed in radio friendly GRP shrouds, together with associated equipment at roof level at Block B;

Provision of 3 no. ESB substations with switch rooms and plant rooms at basement level, hard and soft landscaped areas, bin and bicycle stores, public lighting, attenuation, green roof, plant at roof level, service connections and all ancillary site development works.

4.0 SITE MANAGEMENT

4.1 Construction Program & Phasing

Subject to a successful grant of planning, it is intended for the works to commence in Q2 2023. The proposed development is anticipated to be constructed over a 24-month period.

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

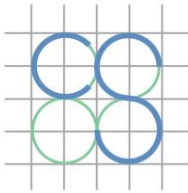
- Set up site perimeter hoarding, maintaining existing pedestrian and traffic routes around the site;
- Install health and safety and environmental protection measures;
- Demolition of existing structure with consideration for embodied carbon of the existing building elements and potential reuse of materials;
- Site Clearance;
- Installation of temporary works and Reduced Level excavations;
- Site services installations (drainage, power, water and the like);
- Construct Building Frame and Envelope;
- Finish Interior and Exterior Landscaping

4.2 Site Establishment

All necessary accommodation, material handling and secure storage shall be provided for site operations.

The facilities to be provided and maintained will 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 will comply with the requirements of all relevant authorities and be wholly contained within the hoarded site. All construction plant and equipment will be progressively removed when no longer required.

First Aid facilities for the use of all construction staff in the form of a fully provisioned first aid area within the site office with life-saving and safety equipment as required by relevant statutes, authorities such as, Health and Safety Authority guidelines and awards like information on occupational first aid training and occupational first aid training provider requirements will be maintained at all times.

All required permits such as fire safety, materials & workmanship, sound, drainage & wastewater disposal etc., shall be obtained. All relevant applicable fees shall be paid and all conditions complied with.

4.3 Hoarding and Fences

Prevention of unauthorised access to the site is a very high priority and will be vigorously managed throughout the construction period. When the appointed Contractor is appointed, the site will be secured with site barriers and hoardings in accordance with the final construction management plan.

Any hoardings and signboards to the perimeter of the site will comply with the requirements of the relevant authorities and the relevant Health and Safety Acts.

A single project signboard shall be erected to the hoarding at the main entrance points to identify the site. Both the Hoardings and the Project signboard shall be illuminated.

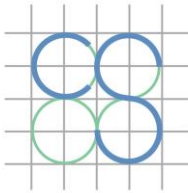
4.4 Services Relocations and Temporary Protection of Public Domain

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

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

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

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 is to be installed and maintained during the duration of the works until they are no longer required.

4.5 Major Plant and Equipment

Plant and equipment used during the entire works are:

- articulated and rigid trucks;
- rigs, bulldozers, excavators, backhoes, with ancillary equipment (rock hammers or saws);
- cranes;
- Piling rigs;
- concrete delivery trucks and concrete pumps;
- man, and material hoists;
- scissor, boom and forklifts.

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

4.6 Vehicular Accesses to Site

Access to the subject development site is currently possible at 2no. locations on Belgard Square East on the western boundary of the site and 1no. location on Blessington Road on the northern boundary of the site. Vehicular access to the site during construction shall be from Belgard Square East, at the location of the proposed tertiary road access junction, a separate pedestrian only entrance will be installed at this location to segregate vehicular and pedestrian movements to/from the site. A pedestrian only entrance shall also be installed at the northern boundary of the subject development site.

Advanced warning is to be provided to all users on the road and directional signage for site traffic.

Revised measures will be developed further as part of the Construction Traffic Management Plan (CTMP) in consultation with the Design Team and SDCC.

The principal objective of the CTMP is to ensure that the impacts of all building activities generated during the construction of the proposed development upon both the public (off-site) and internal (on-site) workers environments, are fully considered and proactively managed / programmed respecting key stakeholders requirements thereby ensuring that both the public's and construction workers safety is maintained at all times, disruptions minimised and undertaken within a controlled hazard free / minimised environment. It is noted that the impact of the construction works will be temporary in nature.

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

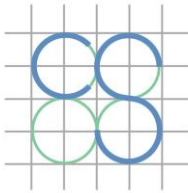
- Chapter 8 of the Department of the Transport Traffic Signs Manual,
- Guidance for the Control and Management of Traffic at Road Works (Second edition, 2010); and
- The Design Manual for Roads and Bridges & Design Manual for Urban Roads & Streets (DMURS).

4.7 Site Security

Access to site will be controlled by means of a camera remote monitoring system for out of hours use. During working hours, a gateman/or bankman will control traffic movements and deliveries.

Site lighting during non-operation hours will also be installed and maintained throughout the construction period to promote active passive surveillance and aid site security measures. Lighting is to be agreed in advance with local authority.

All personnel working on site will be required to have a valid Safe Pass card.



4.8 Material Hoisting & Movement Throughout the Site

Tower cranes will be utilised on site. Crane use will be coordinated with the other site activities to ensure that all risks are correctly assessed and guarded against. A detailed crane analysis will be prepared for verification of the safe load parameters. No loads will be lifted over the public domain or adjacent properties. It is noted that there is a statutory requirement to provide notifications in advance to IAA and to Casement Aerodrome with regard to cranes during construction. It is also proposed to notify HSE Aero-medical Unit prior to commencement of works.

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.

4.9 Deliveries & Storage Facilities

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

4.10 Site Accommodation

Site offices and construction compound will be located within the site boundary.

On-site facilities shall include:

- a materials and equipment storage area;
- a site office;
- staff welfare facilities (e.g. toilets, drying room, canteen, etc.).

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

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

4.11 Site Parking

Given the constraints of the proposed development site parking will be very limited. Site staff are encouraged to travel to site via other means such as public transport.

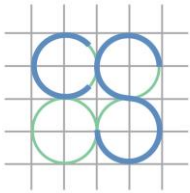
4.12 Site Working Hours

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

- Monday to Friday: 07:00 to 19:00
- Saturdays: 09:00 to 13:00
- Sundays & Bank 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.

If there are instances where work must be carried out outside of the permitted times the Environmental Health Officer, local residents and business in areas which are likely to be affected by noise from the proposed works shall be in advance in letter form or leaflet or advertisement. They must also be notified



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of the appointed Contractor carrying out the works, their name and number, the reason for the works and the likely duration.

5.0 ENVIRONMENTAL MANAGEMENT

Guidelines and controls for all activities that may impact on the surrounding environment for the duration of the works, including; air, water, land, natural resources, flora, fauna, humans, and their interrelation shall be complied with.

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

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

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

5.1 Materials and Decontamination

Excavation works will address the requirements of the site investigation report and all materials and contamination encountered during the works shall be treated and removed.

5.2 Noise

Measures to eliminate and reduce noise levels shall be implemented.

All construction activities will be carried out in compliance with the recommendations of BS 5228, Noise Control on Construction and open sites part 1 and comply with BS 6187 Code of Practice for Demolition, South Dublin County Council Development Plan (2016-2022), and Draft South Dublin County Council Development Plan (2022-2028).

The *South Dublin County Council Development Plan 2016 – 2022* states the following in relation to noise reduction;

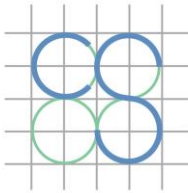
- IE7 Objective 3 (section 7.7.0):
 - To implement the relevant spatial planning recommendations and actions of the Dublin Agglomeration Environmental Noise Action Plan 2013 – 2018.
- IE7 Objective 4:
 - To ensure that future developments are designed and constructed to minimise noise disturbance and take into account the multi functional uses of streets including movement and recreation as detailed in the Urban Design Manual (2009) and the Design Manual for Urban Roads and Streets (2013).
- Section 11.6.3
 - The Planning Authority will have regard to the Dublin Agglomeration Environmental Noise Action Plan 2013 – 2018,

Dublin Local Authorities (2013) when assessing development proposals along major road and rail transport corridors, with a view to reducing noise from new sources and to identify and protect areas of low sound levels. Development proposals with the potential to give rise to significant noise impacts may require a Noise Impact Assessment and mitigation plan to minimise noise disturbances and protect the amenities of the area.

- The Planning Authority will carefully consider the location of noise sensitive developments so as to ensure they are protected from major noise sources where practical. Furthermore, the provision of appropriate mitigation measures for existing areas adjacent to major noise sources is supported and will be considered having regard to the visual amenity and the proper planning and sustainable development of the area.
- Where development sites adjoin residential properties, the Planning Authority will generally attach a condition to grants of planning permission restricting the operation of equipment or machinery (to include pneumatic drills, construction vehicles, generators, etc.) on or adjacent to the site before 7.00 hours on weekdays and 9.00 hours on Saturdays, after 19.00 hours on weekdays and 13.00 hours on Saturdays and at any time on Sundays, Bank Holidays or Public Holidays.

The *Draft South Dublin County Council Development Plan 2022 – 2028* reiterates the same commitments as present in the 2016 Development Plan.

- Section 13.9.3
 - The Planning Authority will have regard to the Dublin Agglomeration Environmental Noise Action Plan (2018 – 2023), or superseding plan, when assessing development proposals along major road and rail transport corridors, with a view to reducing



noise from new sources and to identify and protect areas of low sound levels.

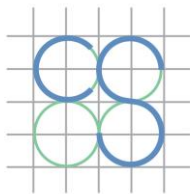
- Development proposals with the potential to give rise to significant noise impacts may require a Sound Impact Assessment and Mitigation Plan to minimise noise disturbances and protect the amenities of the area.
- The Planning Authority will carefully consider the location of noise sensitive developments to ensure they are protected from major noise sources where practical. Furthermore, the provision of appropriate mitigation measures for existing areas adjacent to major noise sources is supported and will be considered having regard to the visual amenity and the proper planning and sustainable development of the area.
- Where development sites adjoin residential properties, the Planning Authority will generally attach a condition to grants of planning permission restricting the operation of equipment or machinery (to include pneumatic drills, construction vehicles, generators, etc..) on or adjacent to the site before 07.00 hours on weekdays and 09.00 hours on Saturdays, after 19.00 hours on weekdays and 13.00 hours on Saturdays and at any time on Sundays, Bank Holidays or Public Holidays

The following is an outline of the possible noise mitigation measure which shall be considered for implementation on site to address potential noise levels;

5.2.1 General Considerations:

- All site staff shall be briefed on noise mitigation measure.
- Site hoarding will be erected to maximise the reduction in noise levels.
- A liaison officer shall be put in place to engage with neighbours on a weekly basis and keep them informed 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).
- Minimise opening and shutting of gates through good coordination of deliveries and vehicle movements.
- Plant
- Each item of plant and equipment shall comply with the noise limits quoted in EC Directive 2000/14/EC.
- Fit all plant and equipment with appropriate mufflers or silencers of the type recommended by the manufacturer.
- Use all plant and equipment only for the tasks for which it has been designed.
- Shut down all plant and equipment in intermittent use in the intervening periods between work or throttle down to a minimum.
- Power plant by mains electricity where possible rather than generators.
- Employ partial or full enclosures for fixed plant.
- Locate movable plant away from noise sensitive receptors.
- All plant operators to be qualified in their specific piece of plant, and no plant operator shall be allowed to operate plants outside of their expertise.
- Compressors and generators will be sited in areas least likely to give rise to nuisance.
- Vehicle activity:
- Ensure all vehicle movement on site 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.
- Plan deliveries and vehicle movements so that vehicles are not waiting or queuing on the public road, if unavoidable engines will be turned off.
- The site layout shall be planned to ensure that reversing is kept to a minimum.

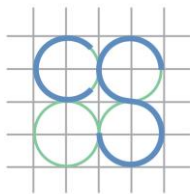
5.3 Air Quality & Dust Monitoring

The *South Dublin County Council Development Plan 2016 – 2022* states the following in relation to air quality.

- IE7 Objective 1 (section 7.7.0):
 - To implement the provisions of EU and National legislation on air, light and noise control and other relevant legislative requirements, as appropriate, in conjunction with all relevant stakeholders.
- IE7 Objective 2:
 - To implement the recommendations of the Dublin Regional Air Quality Management Plan to protect people from the harmful health effects associated with air pollution, to preserve good air quality where it exists and to improve air quality where it is unsatisfactory.
- Section 11.6.3
 - In considering development proposals for planning permission the Planning Authority will have regard to the Local Government (Planning and Development) General Policy Directive 1988 (as may be amended) issued by the Minister for the Environment and Local Government relating to air quality standards nationally, and to the Dublin Regional Air Quality Management Plan, Dublin Local Authorities (2009).

The *Draft South Dublin County Council Development Plan 2022 - 2028* states the following in relation to air quality;

- Section 11.6
 - Clean air is essential in ensuring a high-quality environment for the wellbeing of the residents and success of the economy of the County. It also plays a key role in managing climate action. The impact of noise on human health is increasingly being recognised by the World Health Organisation and others including the EU. As the world has urbanised, the level of light pollution has increased.
 - Air quality management is carried out under the provisions of the Air Pollution Act (1987). Air quality monitoring stations collect data on ambient air levels assessed against European legal limit values and World Health Organisation guideline values.
 - The network is managed by the EPA, in partnership with Local Authorities and other public/semi-state bodies and universities.
 - The Council has a number of air quality monitoring stations in the County managed by the Environmental Health Team at Tallaght, Rathcoole and Walkinstown.
 - Up to date information on air quality for the Dublin Area is available at www.epa.ie/air/quality.
- Section 13.9.3
 - In considering development proposals for planning permission, the Planning Authority will have regard to the Local Government (Planning and Development) General Policy Directive, 1988, (as may be amended) issued by the Minister for the Environment and Local Government relating to air quality standards nationally, and to the Air Quality Management Plan for the Dublin Region.



Dust prevention measures shall be included for control of any site airborne particulate pollution. Dust levels shall be monitored in the vicinity of the site in accordance with planning conditions. Records shall be kept of such monitoring for review by the Planning Authority. The minimum criteria to be maintained shall be the limit for Environmental Protection Agency (EPA) (2006) Environmental Management Guidelines recommends to use of the Bergerhoff method for measuring dust deposition. In line with this approach, the guidelines recommend the TA Luft dust deposition limit value of 350mg/m² /day (total dust deposition averaged over a 30 day period), measured at site boundaries.

Dust shall be continuously monitored over the variation of weather and material disposal to ensure the limits are not breached throughout the project.

5.4 Migrating Dust & Dirt Pollution

The following measures will form part of the dust management strategy:

- A regime of "wet" road sweeping will be set up to ensure the roads around the immediate site are as clean and free from dirt/dust arising from the site, as is reasonably practicable.
- Footpaths immediately around the site will be cleaned by hand regularly, with damping as necessary.
- Scaffolding to be cleaned regularly. Netting will be provided to enclose scaffolding at sensitive areas of the site.
- Vehicle waiting areas or hard standings will be regularly inspected and kept clean.
- Vehicle and wheel washing facilities will be provided at the site exit where practicable. If necessary, vehicles can be washed down before exiting the site.
- Internal combustion plant will not be left running unnecessarily.
- Fixed plant such as generators will be located away from residential areas.

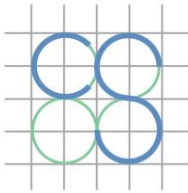
- The number of handling operations for material will be kept to a minimum in order to ensure that dusty material is not moved or handled unnecessarily.
- The transport of dusty materials and aggregates will be carried out using covered/sheeted lorries.
- Vehicles loading will be dampened down and drop heights for material to be kept to a minimum.
- Dust dispersal over the site boundary will be minimised using static sprinklers or other watering methods necessary.
- Stockpiles of material will be kept to a minimum and may be sheeted or watered down. These will be located away from sensitive boundaries.
- Equipment and techniques for cutting/grinding/sawing/sanding etc., which minimise dust emissions and which have the best available dust suppression measures, will be employed.
- Where possible pre-mixed plasters and masonry compounds will be used to minimise dust arising from on-site mixing.

Prior to commencement, construction operations which are likely shall be identified to generate dust and to draw up action plans to minimise emissions. Furthermore, environmental risk assessments shall be prepared for all dust generating processes, which are envisaged.

Suitably qualified personnel shall be responsible for ensuring the generation of dust is minimised and effectively controlled.

5.5 Harmful Materials

Harmful material (such as cement, construction dust, lead, solvents, carbon-monoxide (CO), etc.,) will be stored on site for use in connection with the construction works only. These materials will be stored in a controlled manner.



Where on-site facilities are used there will be a bunded filling area using double bunded steel tank at a minimum.

5.6 Vibration

Works shall be carried out such that the effect of vibration on the adjoining buildings and surroundings is minimised and does not cause any damage.

Requirements of the planning permission shall be complied with for any vibration limits for the works. In the absence of any Local Authority requirements, the following table shall set the limitations:

Table 1 – Trigger values for vibration

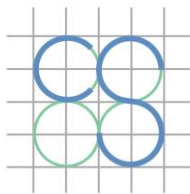
Trigger Level	Peak Particle Velocity (PPV)	
	50Hz and below	Above 50Hz
1	10 mm/s	10 mm/s
2	10 mm/s	12 mm/s
3	10 mm/s	15mm/s

Background vibrations shall be established prior to commencement.

An appropriate vibration monitoring equipment (like seismographs, accelerometers, displacement gauges, strain gauges, and inclinometers) is to be put in place prior to any works taking place. 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 vibrations generated.

6.0 WASTE MANAGEMENT

Refer to Construction and Demolition Waste Management Plan (C&DWMP) submitted under separate cover within this planning application for details of waste management during the demolition and construction phase of the subject development.



7.0 TRAFFIC MANAGEMENT

7.1 Site Traffic, Traffic and Pedestrian Management

The construction site will be delineated by means of hoardings and lockable gates with screened fencing at the entry and exit points. Pedestrian traffic and safety at the entrances shall be to the forefront during works on site. Where possible, all vehicles will enter and exit the site in a forward direction.

Pedestrians will have right of way. If required, alternate pedestrian routes around the site will be created and clearly signed.

7.2 Access to the Site

Construction traffic will access the site via a network of local distributor roads which connect to the N81, which subsequently connects to the M50.

7.3 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 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.

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.

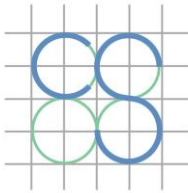
Under a 'worst-case' scenario, however, it is possible that up to 10no. delivery trips may be made to the site each hour during this phase (one HGV arrival and one HGV departure every 6 minutes). In addition to HGV traffic, periodic deliveries of materials to site shall be made by Light Goods Vehicles (LGVs). Under a worst-case construction traffic generation scenario, 6no. such LGV arrivals and 6no. LGV departures (one LGV arrival and one LGV departure every 10 minutes) are assumed in each of the background peak hours. No car parking provision for construction personnel is likely to be provided on site during construction works as the subject development is situated in the proximity of high frequency public transport.

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

- 10no. HGV arrivals and 10no. HGV departures in each of the peak hours;
- 6no. LGV arrivals and 6no. LGV departures in each of the peak hours;

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 the 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.
- Strictly 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.

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

The increase in traffic as a result of construction will be minor and can be readily accommodated within the existing road network. However, the site is located in an urban setting where restricted road and junction space is shared with vulnerable road users and the flow of construction traffic will need to be marshalled and regulated to ensure that potential conflicts are avoided as much as possible.

7.4 Minimization of Construction Vehicle Movements

Construction-related vehicle movements will be minimized through:

- consolidation of delivery loads to/from the site and scheduling of large deliveries to occur outside of peak periods;
- use of precast/prefabricated materials where possible;
- reuse of 'cut' material generated by the construction works on site 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;
- promotion of public transport use by construction personnel, in order to minimise staff vehicle movements.

The following headings identify some of the measures to be encouraged:

7.4.1 Cycling

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

7.4.2 Car Sharing

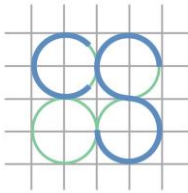
Car sharing among construction personnel will be encouraged, especially from areas where construction personnel may be clustered. Shifts shall be organised in accordance with personnel origins where possible, hence enabling higher levels of car sharing. Such a measure offers a significant opportunity to reduce the proportion of construction personnel driving to the site and will minimise the potential traffic impact on the surrounding road network.

7.4.3 Public Transport

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

7.5 Public Roads

A Visual Condition Survey (VCS) will be carried out of all surrounding streets prior to any site works commencing. Transportation and Infrastructure department of SDCC shall be consulted to agree any changes to load restrictions and construction access routes for the site. Measures will be put in place as required to facilitate construction traffic whilst simultaneously protecting the built environment.



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

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

- a regular 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;
- in the event of any fugitive solid waste escaping the site, it will be collected immediately and removed.

7.6 Mitigation Measures

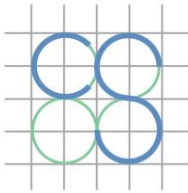
In order to ensure satisfactory operation of the construction stage the following is proposed:

- Site offices and compound will be located within the site boundary. There will be limited on-site parking for staff and visitors. Construction staff will be encouraged to use public transport and information on local transportation will be published on site.
- Truck wheel washes will be installed at construction entrances.
- Any specific recommendations regarding construction traffic management made by the Local Authority will be adhered to.

The following mitigation measures will be incorporated into the CTMP:

- During the pre-construction phase, the site will be securely fenced off from adjacent properties, public footpaths and roads.
- The surrounding road network will be signed to define the access and egress routes for the development.
- The traffic generated by the construction phase of the development will be strictly controlled in order to minimise the impact of this traffic on the surrounding road network.
- All road works will be adequately signposted and enclosed to ensure the safety of all road users and construction personnel.
- Construction staff will be encouraged to use public transport and information on local transportation will be published on site.
- A programme of street cleaning if/when required.
- Any associated directional signage
- Any proposals to facilitate the delivery of abnormal loads to the site
- Measures (such as placing appropriate signage at the vehicular access, planning the deliveries during the non-peak hours, etc.,) to obviate queuing of construction traffic on the adjoining road network.

Neighbouring road and building users will be informed in advance of construction works to further ameliorate disruption due to construction activities



8.0 COMPOUND FACILITIES / PARKING

The construction compound for the infrastructure works shall be entirely within the site boundary. The compound shall be constructed using a clean permeable stone finish and will be enclosed with security fencing. Site accommodation to be provided will include suitable washing / dry room facilities for construction staff, canteen, sanitary facilities, first aid room, office accommodation etc. Access to the compound will be security controlled and all site visitors will be required to sign in on arrival and sign out on departure.

It is noted that site parking will be limited due to site constraints and parking will generally be limited on site.

A material storage zone will also be provided in the compound area. This storage zone will include material recycling areas and facilities.

A series of 'way finding' signage will be provided to route staff / deliveries into the site and to designated compound / construction areas.

On completion of the works all construction materials, debris, temporary hardstands etc. from the site compound will be removed off site and the site compound area reinstated in full on completion of the works.

9.0 PROVISIONS FOR CONSTRUCTION

9.1 Hoarding, Set-up of Site & Access/Egress Points

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

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

A "Just in Time" approach will be required for the delivery of building materials such as concrete formwork etc.

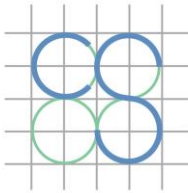
9.2 Removal of Services

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.

9.3 Demolition and Site Clearance

The site is currently an unused carpark and requires demolition and clearance. A detailed demolition method statement will be required and agreed with local authority before commencing. The following is a high-level method statement for the clearance of the site:

- Establish a site set-up and welfare facilities;
- Establish health and safety, environmental controls and temporary works
- Carry out an invasive species survey using a qualified and approved surveyor;



- 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.
- Carry out any necessary services diversions and decommissioning works.

Breaking ground will only take place following a full survey. Any materials identified as being hazardous will be removed and disposed of in strict accordance with EPA. In the event that hazardous soil, or historically deposited waste is encountered during the construction phase, SDCC shall be notified and a Hazardous/Contaminated Soil Management Plan shall be provided, to include estimated tonnages, description of location, any relevant mitigation, destination for disposal/treatment, in addition to information on the authorised waste collector(s). All services will be disconnected and removed. Existing structure and hard standing and concrete foundations if encountered will be broken by excavators or similar. All reinforced concrete will be partially processed on site to separate the steel from the concrete. All materials will either be fully separated on site and disposed of to the applicable landfills / processing facility or failing that material will be sent to a processing facility for separation. Relevant certification and documentation confirming the final separation and most environmentally friendly disposal will be available.

9.4 Temporary Works

Installation of temporary works to allow for basement and general excavation will be required and it is likely that a piled perimeter wall will be used to facilitate further works.

9.5 Excavation

This development will involve a bulk excavation and removal of material during the construction of the building foundations.

Please refer Construction and Demolition Waste Management Plan (CDWMP) prepared by CS Consulting and submitted with this planning application for further details.

9.6 Site Service Installations

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

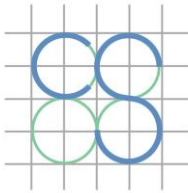
9.7 Construction Stage

Subject to a successful grant of planning, it is intended for the works to commence in Q2 2023. The proposed development is anticipated to be constructed over a 24-month period.

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

- Temporary works installation likely to include piled perimeter
- Reduced level excavations;
- Foundation construction, rising elements and podium slab
- Construct cores and buildings structural frame including supporting rising elements and transfer structures.
- Façade and framing;
- Finish interior and exterior landscaping

Please note the above shall be carried out in accordance with the particular construction phasing and appointed Contractor programme.



10.0 SUMMARY & CONCLUSION

- The construction of activity of the proposed development shall be in accordance with the guidelines mention in various authorities such as South Dublin County Council Development Plan 2016-2022, Draft South Dublin County Council Development Plan 2022-2028, Environmental Protection Agency etc.
- The construction site working hours shall be in accordance with SDCC Development Plan 2016-2022, and Draft SDCC Development Plan 2022-2028
- The construction activity shall have no / minimal impact on the surrounding environment.
- The construction related traffic shall have minimal impact on the surrounding road network. Most of the deliveries shall be carried out during the off-peak hours.