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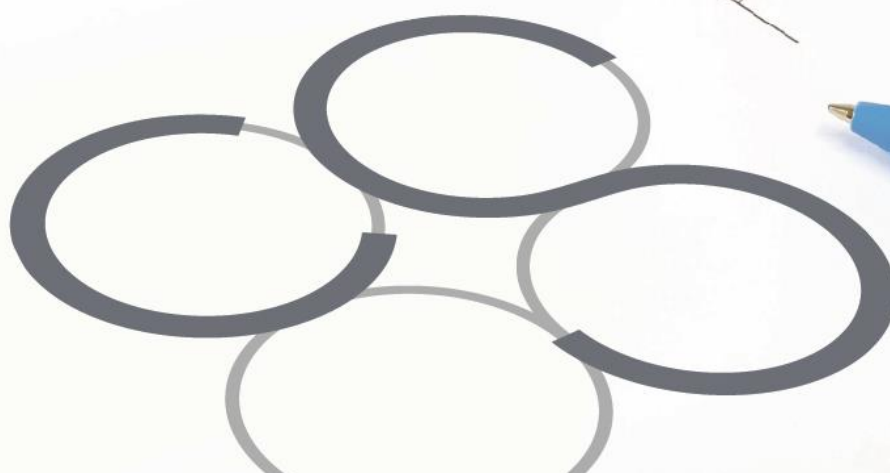
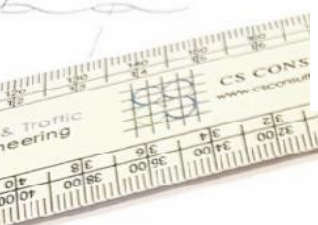
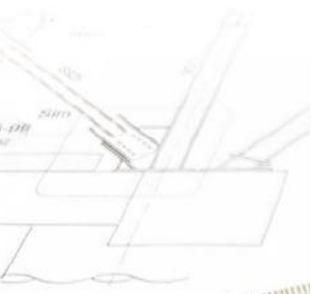
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Outline Construction Management Plan
Strategic Housing Development (SHD)
Heuston South Quarter, St. John's
Road West, Kilmainham, Dublin 8

Client: HPREF HSQ Investments Ltd.

Job No. H087

October 2021



OUTLINE CONSTRUCTION MANAGEMENT PLAN
STRATEGIC HOUSING DEVELOPMENT (SHD)
HEUSTON SOUTH QUARTER, ST. JOHN'S ROAD WEST, KILMAINHAM, DUBLIN 8

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File Location: Job-H087\B_Documents\C_Civil\A_CS Reports\OCMP

BS 1192 FIELD HSQ-CSC-ZZ-XX-RP-C-0008-P7

Job Ref.	Author	Reviewed By	Authorised By	Issue Date	Rev. No.
H087	DM	GF	OS	05.10.2021	P7
H087	DM	GF	DR	20.09.2021	P6
H087	DM	GF	DR	23.07.2021	P5
H087	DM	DR	DR	30.06.2021	P4
H087	DM	DR	DR	21.06.2021	P3
H087	PS	NB	DR	10.12.2020	P2
H087	PS	NB	DR	16.10.2020	P1

1.0 INTRODUCTION

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by HPREF HSQ Investments Ltd. to prepare an Outline Construction Management Plan (OCMP) for a proposed residential development at Heuston South Quarter, Dublin 8.

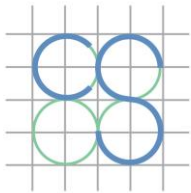
The aim of this OCMP is to address issues that can arise during construction including noise and vibration, traffic management, working hours, pollution control, dust control, road cleaning, compound / public health facilities and staff parking, all associated with the construction works. This plan will be updated by the contractor and agreed with Dublin City Council (DCC) 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, this plan will be revised by the appointed lead contractor and expanded to produce a Detailed Construction Management Plan, which shall incorporate:

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

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

- 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.
- all waste materials generated by site activities, that cannot be reused on site, are removed from site by appropriately permitted waste



haulage contractors and that all wastes are disposed of at approved waste licensed/permitted facilities in compliance with the Waste Management Acts 1996 to 2005;

- any environmental impacts (noise, vibration, dust, water) 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 is located on St. John's Road West at the Heuston South Quarter complex in Dublin 8, within the administrative jurisdiction of Dublin City Council. The site has an area of 1.08ha and is bounded to the west by the gardens of the Royal Hospital Kilmainham, to the north by St. John's Road West, and to the east and south by existing office and residential buildings forming Phase 1 of the larger HSQ development (which extend to Military Road, further to the south-east).

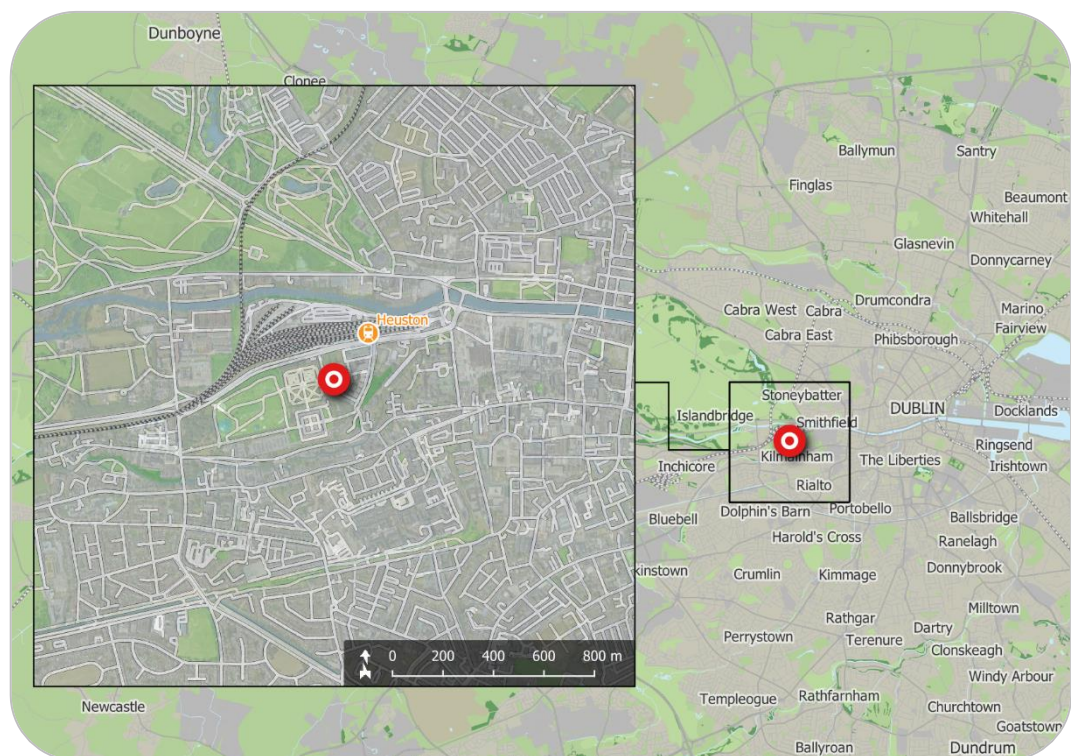


Figure 1 – Location of proposed development site
(map data & imagery: EPA, OSi, OSM Contributors, Google)

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.

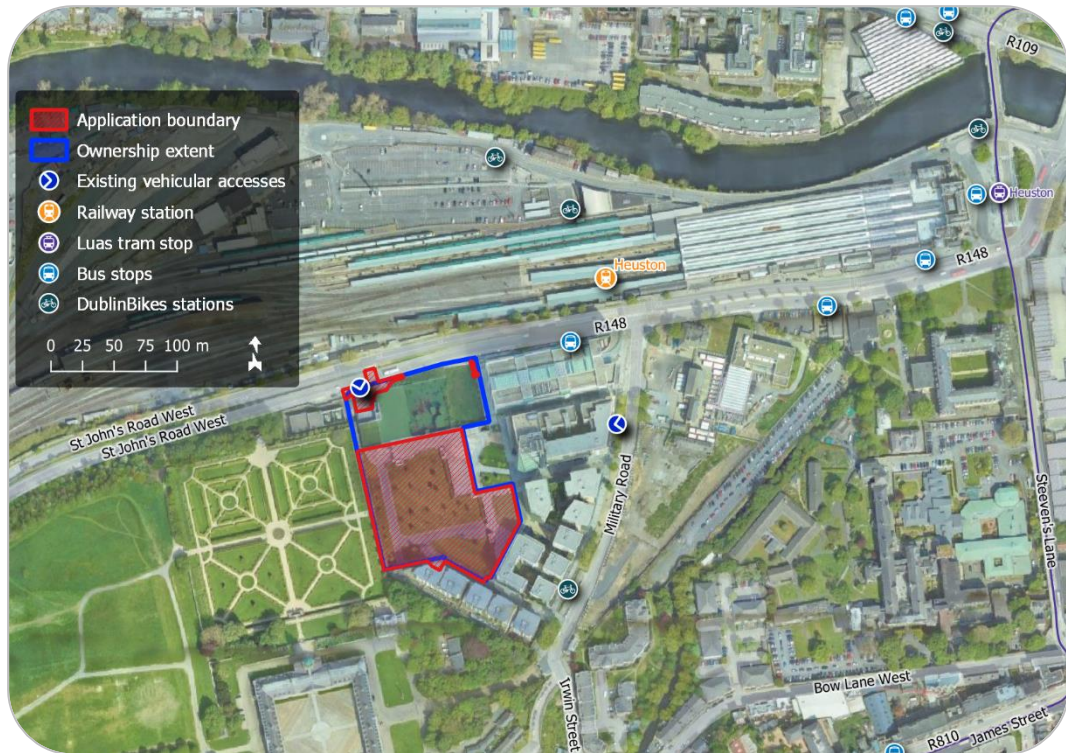


Figure 2 – Site extents and environs
(map data & imagery: NTA, DCC, OSi, OSM Contributors, Google)

2.2 Existing Land Use

The subject site comprises part of the undeveloped area of the site which comprises an existing basement structure at level -2 with rising elements capping at the existing podium level. Along the western boundary of the site, a secant pile retaining wall was built retaining lands within the gardens of the Royal Hospital Kilmainham. The majority of the existing works are to the centre of the site, which has been landscaped as an interim measure to improve its aesthetics pending its complete redevelopment. There is already an established road, pedestrian, and cycle network in the vicinity of the site, allowing a high level of permeability.

3.0 PROJECT DESCRIPTION

The proposed development will consist of a residential development of 399 no. 'Build To Rent' residential units and all ancillary and associated uses, development and works, and a retail unit of 120 sq m, on a site of 1.08 ha. The proposed development consists of:

- Site clearance and localised demolitions to remove part of the podium and Basement Level -1 reinforced concrete slabs at the interface of the proposed Blocks A and B, together with the incorporation of part of the existing double basement level structure extending to approximately 7,613 sq.m over two levels (excluding an area of 3,318 sq.m that will be backfilled at Basement Level -1) within the proposed development.
- The construction of 5 no. buildings (Blocks A to E) ranging in height between 3- to 18-storeys over double basement level / podium level to provide a residential / mixed use development to provide 399 Specific BTR (Build to Rent) units with a total gross floor area of 29,391 sq.m, comprising 46 no. studios, 250 no. one bedroom units, 90 no. 2 bedroom / 4 person units and 13 no. 2 bedroom / 3 person units; internal communal ancillary residential services / amenities to include a shared co-working area / lounge (178 sq.m) and gym (102 sq.m) at lower ground floor level, and lounges on either side of a residential foyer at ground floor / podium level within Block A (196 sq.m), and a TV Room / lounge (57 sq.m) at ground floor / podium level within Block C.
- An independent retail unit (120 sq.m) is proposed at ground floor / podium level within Block B.
- A double basement is provided that will be integrated within the existing basement levels serving the wider HSQ development and will be accessed from the existing vehicular ramped accesses/egresses onto/off St. John's Road West and Military Road to the north and east,

respectively. Basement level -1 provides: a refuse store; 80 no. car parking spaces (including 4 no. disabled spaces and 8 car club spaces); 4 no. motorcycle parking spaces; and, secure bicycle parking / storage in the form of 251 no. double stacked cycle parking spaces providing capacity for 502 no. secure bicycle storage spaces for residents. An additional 49 no. Sheffield type bicycle stands are provided at basement level -1 to provide 98 no. visitor cycle spaces (inclusive of 8 no. designated cargo bike spaces, that will also be available for the shared use with residents of the scheme) and a further 55 no. Sheffield type bicycle stands are provided at podium level to provide 110 no. cycle parking spaces (108 no. visitor cycle parking spaces (inclusive of 6 no. designated cargo bike spaces) and 2 no. cycle parking spaces in connection with the retail unit). All bicycle parking at basement level is accessed via a dedicated cycle lift from podium to basement level -1 that is situated to the south of Block B.

- Works proposed along the St John's Road West frontage include the omission of the existing left-turn filter lane to the vehicular ramped access to the HSQ development and re-configuration of the pedestrian crossings at the existing junction together with the re-configuration of the existing pedestrian crossing over the westbound lanes of St. John's Road West leading to an existing pedestrian refuge island. Re-alignment of the existing footpath along the site frontage onto St John's Road West to tie into the reconfigured junction arrangement and provision of a link to a new lift to provide wheelchair access from St John's Road West to the HSQ podium.
- Communal Outdoor Amenity space is provided for residents in the form of rooftop terraces (totalling 1,179sqm), and lower-level communal courtyards between blocks (totalling 960sqm).
- Hard and soft landscaping works are proposed at podium level which includes the extension and completion of the public plaza to the east

of Block A; the provision of footpaths; a MUGA (Multi Use Games Area) and informal play areas for children (totalling 1,670sqm).

- A double ESB substation/switch room at ground / podium level within Block A, and a single substation/switch room at ground / podium level within Block B together with associated site development works, which includes the realignment / reprofiling of an existing vehicular access ramp at the southern end of the site between basement levels -1 and -2 and the closure / removal of a second vehicular access ramp between the subject site at basement level -1 and the raised basement level -1 under the Telford building.

3.1 Construction Phasing

Subject to a successful grant of planning, it is intended for the works to commence in Q2 / Q3 2022. The proposed development is anticipated to be constructed over a period of approximately 24-30 months.

During the construction works, access to the existing development basement areas will be maintained, with car access encouraged to utilise the Military Road access point. An agreed traffic management strategy for the existing basement carpark will be provided to all residents and staff currently utilising the basement. This traffic management plan will be monitored on an ongoing basis throughout the works and altered as required depending on construction sequence. Access for large servicing and delivery vehicles to the retail units, and delivery areas at basement level, shall also be maintained from St John's Road. Construction traffic generation and the interim temporary diversions of existing traffic are addressed in the Traffic and Transport Assessment.

The shared access will necessitate a full time Traffic Management Operative at the St John's Road and Military Road access point for the duration of the works (see Figure 3).

The current indicative phasing suggests that the blocks shall be constructed from South to North; i.e. Blocks B, C and D, followed by Blocks A and E. The final phasing, and associated Construction Traffic Management Plans shall be appointed by the appointed Contractor, and submitted to DCC for approval, prior to commencement.

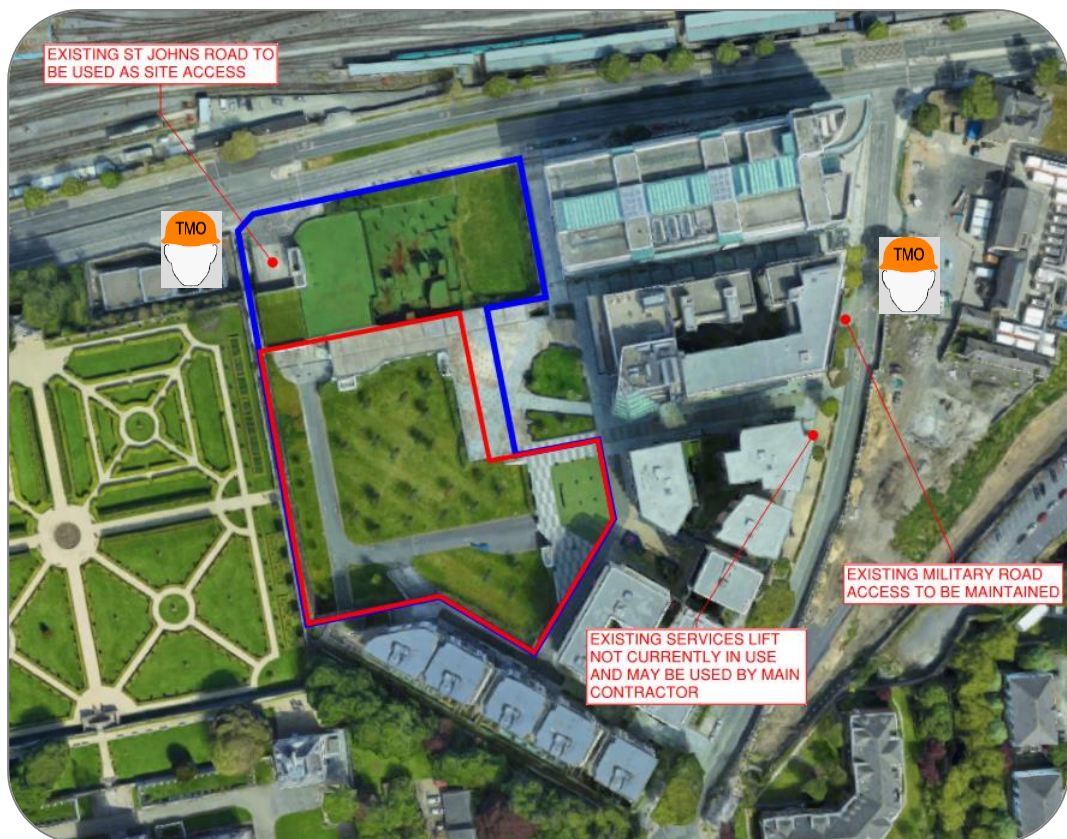


Figure 3 – Site access points
(background imagery: Google)

4.0 SITE MANAGEMENT

4.1 Site Establishment

The contractor will provide all necessary accommodation, material handling and secure storage for its operations.

The facilities to be provided and maintained by the contractor will include:

- construction plant;
- hoisting equipment and cranes;
- scaffolding, platforms, access ladders, barriers, handrails;
- barricades and hoardings;
- temporary driveways, road crossovers and construction zone;
- continuous 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 and awards will be maintained at all times by the contractor.

The contractor will obtain all required permits, pay the applicable fees and comply with all conditions.

4.2 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 contractor is appointed, the site will be secured with site heras fencing until a hoarding is erected 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. All hoarding positions shall respect the existing vehicular routes at podium level for servicing and emergency vehicles.

The contractor will be required to erect a single project signboard to the hoarding at the main entrance points to identify the site.

4.3 Services Relocations and Temporary Protection of Public Domain

Prior to any works commencing on site, detailed dilapidation reports will be carried out to properties and buildings adjoining the site.

Further 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.

The contractor will provide protection 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 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.

4.4 Major Plant and Equipment

Plant and equipment used during the entire works are:

- articulated and rigid trucks;
- CFA Pilling-rigs, bulldozers, excavators, backhoes, with ancillary equipment (rock hammers or saws);
- Tower cranes/mobile cranes;
- concrete delivery trucks;
- concrete pumps;
- personnel, and material hoists;
- scissor, boom and fork lifts.

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

4.5 Vehicular Access to Site

The site is currently accessed directly from St. John's Road West. It is anticipated that for the duration of the construction works all construction access and egress for deliveries will enter via St. John's Road West, which provide access to the M50. The following are some measures that will be implemented to accommodate smooth traffic flows.

- Entrance will be wide enough to ensure two rigid body vehicles can pass each other, i.e. one can enter while another waits to leave
- Entrance gate will be set back a minimum of 18m from the road edge to ensure all vehicles leave the road before stopping
- Appropriate sight lines will be provided by placing the hoarding well enough back from the kerb edge.
- Advanced warning 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)** developed by the contractor in consultation with the Design Team and Dublin City Council.

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 Environment Traffic Signs Manual, current edition, published
- by The Stationery Office, and available from the Government Publications Office, Sun Alliance House, Molesworth Street, Dublin 2;

- Guidance for the Control and Management of Traffic at Road Works (June 2010) prepared by the Local Government Management Services Board; and
- Any additional requirements detailed in the Design Manual for Roads and Bridges & Design Manual for Urban Roads & Streets (DMURS).

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

- No construction traffic access will be permitted to the site via Military Road unless explicitly agreed with DCC and only then in exceptional circumstances
- Provision of sufficient on-site parking and compounding to ensure no potential overflow onto the local network.

The site will be able to accommodate employee and visitor parking throughout the construction period with construction of temporary hardstanding areas.

Finally, if deemed necessary truck wheel washes will be installed at construction entrances and 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.
- All employees and visitors vehicle parking demands will be accommodated 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 to obviate queuing of construction traffic on the adjoining road network.

4.6 Site Security

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

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

4.7 Material Hoisting & Movement Throughout the Site

It is expected that three to four tower cranes may be required on site to assist with superstructure and façade works during construction. All lifting activities will have to be coordinated on site by the appointed person on site. All lifts will have to have a proper lift plan in place prior to commencement. No loads will 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.

4.8 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, and will access via St John's Road only.

4.9 Site Accommodation

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 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.

4.10 Site Parking

Vehicle parking for construction personnel shall be accommodated within the development site. To the extent possible, personnel will also be encouraged to use public transport, and information on local transportation will be published on site.

4.11 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: 08:00 to 14:00
- Sundays & Bank Holidays: Works not permitted (unless under permit)

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.

4.12 Covid-19 Pandemic Standard Operating Procedures

The main contractor will be required to implement the relevant HSE & CIF Covid-19 guidelines in accordance with CIF Construction Sector C-19 Pandemic Standard Operating Procedures. A non-exhaustive list of measures will include:

- The Main Contractor will be required to appoint a C-19 Compliance Officer.
- All visitors to have completed the CIF C-19 online induction
- Temperature checks for all visitors when entering the site
- Social distancing measures to be observed. In particular in canteens and drying rooms
- Hand sanitizer stations at regular intervals on site
- One-way system on site pedestrian access routes

5.0 ENVIRONMENTAL MANAGEMENT

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

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

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

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

5.1 Materials and Decontamination

Excavation works will each address the requirements of this investigation report and verify the treatment and removal of all materials and contamination encountered during the works.

5.2 Storm Water and Waste Management

Storm water and wastewater management will be constructed as per the conditions of an approved planning permission. The purpose of these procedures is to ensure that storm water and wastewater runoff is managed and that there is no off-site environment impact caused by overland storm water flows.

The project environmental management plan will be developed in detail to include:

- silt control on the roads;
- discharge water from dewatering systems;
- diversion of clean water;
- treatment and disposal of wastewater from general clean-up of tools and equipment;
- spills control;
- a buffer zone of at least 20m separating working machinery from watercourses;
- a prohibition on machinery entering watercourses;
- refuelling of machinery off-site or at a designated bunded refuelling area;
- silt trapping and oil interception (to be considered where surface water runoff may enter watercourses).

5.3 Noise and Vibration

During the construction works the Contactor shall comply with:

- Safety, Health and Welfare at Work (General Application) Regulations 2007, Part 5 Noise and Vibration.

- The Environmental Impact Assessment Report (EIAR) accompanying this planning application.
- BS 5228-1:2009+A1:2014 & BS 5228-2:2009+A1:2014

BS5228-1:2009+A1:2014 recommends that, for soundly constructed residential property and similar structures that are generally in good repair, a threshold for minor or cosmetic (i.e. non-structural) damage should be taken as a peak component particle velocity (in frequency range of predominant pulse) of 15mm/s at 4Hz increasing to 20mm/s at 15Hz and 50mm/s at 40Hz and above. Below these values minor damage is unlikely. Where continuous vibration is such as to give rise to dynamic magnification due to resonance, the guide values may need to be reduced by up to 50%. BS 5228-2:2009+A1:2014 also comments that important buildings which are difficult to repair might require special consideration on a case-by-case basis.

All works on site shall comply with BS 5228-2:2009+A1:2014 which gives detailed guidance on the control of noise and vibration from construction activities.

In general, the contractor shall implement the following mitigation measures during the proposed infrastructure works:

- Avoid unnecessary revving of engines and switch off equipment when not required.
- Keep internal haul roads well maintained and avoid steep gradients.
- Minimise drop height of materials.
- Start-up plant sequentially rather than all together.

More specifically the Contractor shall ensure that:

- A construction noise and vibration management plan are prepared.

- In accordance with Best Practicable Means, plant and activities to be employed on site are reviewed to ensure that they are the quietest available for the required purpose.
- Hoarding to be provided and where required, improved sound reduction methods are used e.g. enclosures.
- Site equipment is located away from noise sensitive areas, as much as physically possible.
- Regular and effective maintenance by trained personnel is carried out to reduce noise and / or vibration from plant and machinery.
- Hours are limited during which site activities likely to create high levels of noise and vibration are carried out.

A site representative responsible for matters relating to noise and vibration will be appointed prior to construction on site.

A noise and vibration monitoring specialist will be appointed to carry out independent monitoring of noise and vibration during critical periods at sensitive locations for comparison with limits and background levels. It is proposed that noise and vibration levels be maintained below those outlined above as part of these infrastructure works.

All vehicles and mechanical plant used for the purpose of the works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order.

In addition, all diesel engine powered plant shall be fitted with effective air intake silencers. All compressors shall be “sound reduced” models fitted with properly lined and sealed acoustic covers which shall be kept closed whenever the machines are in use. All ancillary pneumatic percussive tools shall be fitted with mufflers or silences of the type recommended by the

manufacturers, and where commercially available, dampened tools and accessories shall be used.

All ancillary plant, such as generators and pumps, shall be positioned to cause minimum noise disturbance. If operating outside the normal working week acoustic enclosures shall be provided.

Where construction activities are required near neighbouring noise sensitive properties, a solid hoarding of approximately 2.4m in height should be erected to provide a degree of acoustic screening to the lower storeys.

Local screening should be provided for stationary plant such as generators and compressors.

An acoustically screened area should be provided on the site specifically for noisy operations such as grinding and cutting metal.

A noise liaison officer should be appointed and charged with the responsibility of keeping people informed of progress and by setting down procedures for dealing with complaints.

5.4 Air Quality Monitoring

An air quality monitoring (Air Quality and Dust monitoring) specialist will be appointed to carry out independent monitoring during critical periods at sensitive locations for comparison with limits and background levels.

5.5 Migrating Dust & Dirt Pollution

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

- Hard surface roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads will be restricted to essential site traffic.
- Any road that has the potential to give rise to fugitive dust must be regularly watered, as appropriate, during dry and/or windy conditions.
- Vehicles exiting the site shall make use of a wheel wash facility where appropriate, prior to entering onto public roads.
- Vehicles using site roads will have their speed restricted, and this speed restriction must be enforced rigidly. On any unsurfaced site road, this will be 20kph, and on hard surfaced roads as site management dictates.
- Vehicles delivering material with dust potential (soil, aggregates) will be enclosed or covered with tarpaulin at all times to restrict the escape of dust.
- Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary.
- 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.
- During movement of materials both on and off-site, trucks will be stringently covered with tarpaulin at all times. Before entrance onto public roads, trucks will be adequately inspected to ensure no potential for dust emissions.
- Restrict un-surfaced roads to essential site traffic.

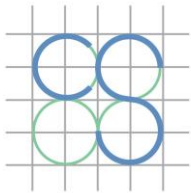
- Construction techniques shall minimise dust release into the air.

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

5.6 Vibration Control & Mitigation Measures

The following specific vibration mitigation and control measures shall be considered during the construction phase:

- Breaking out concrete elements using low vibration tools;
- Choosing alternative, lower-impact equipment or methods wherever possible;
- Scheduling the use of vibration-causing equipment, such as jackhammers, at the least sensitive time of day;
- Routing, operating or locating high vibration sources as far away from sensitive areas as possible;
- Sequencing operations so that vibration causing activities do not occur simultaneously;
- Isolating the equipment causing the vibration on resilient mounts;
- Keeping equipment well maintained;
- Confining vibration-generating operations to the least vibration-sensitive part of the day which could be when the background disturbance is highest.



5.7 Harmful Materials

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

6.0 WASTE MANAGEMENT

A separate Construction and Demolition Waste Management Plan has been prepared by CS Consulting and submitted under separate cover within this planning application. Please refer to this report for details on waste management during the demolition and construction phases of the project.

7.0 TRAFFIC MANAGEMENT

7.1 Site Traffic, Traffic and Pedestrian Management

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

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

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

7.2 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.

7.2.1 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.

7.2.2 Car Sharing

Car sharing among construction personnel will be encouraged, especially from areas where construction personnel may be clustered. The contractor shall aim to organize shifts in accordance with personnel origins, hence enabling higher levels of car sharing. Such a measure offers a significant opportunity to reduce the proportion of construction personnel driving to the site and will minimise the potential traffic impact on the surrounding road network. The car sharing protocol will be coordinated with the CIF Construction Sector C-19 Pandemic Standard Operating Procedures guidance regarding site personnel sharing a vehicle together.

7.2.3 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.

7.3 Public Roads

A Visual Condition Survey (VCS) will be carried out of all surrounding streets prior to any site works commencing. The contractor will liaise with the Transportation and Infrastructure department of 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 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.

8.0 COMPOUND FACILITIES / PARKING

The construction compound for the 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. During sign in all visitors will be required to comply with all site regulations.

A permeable hardstand area will be provided for staff parking and these areas will be separate from designated machinery / plant parking.

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 Dublin City Council as previously mentioned. 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.

9.2 Removal of Services

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

9.3 Site Clearance

The existing land previously underwent construction works and the site may contain existing services and hazards.

- The following is a high-level method statement for the demolition/break up of existing hardstanding.
- Establish a site set-up and welfare facilities.
- Prior to commencement of any earthworks, an invasive species inspection shall be carried out in accordance with the guidance outlined in the Wildlife Act 1976 and 2000 and further regulated through the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011). Should the survey identify any areas of Japanese Knotweed infestation, a Treatment Plan shall be developed in accordance with published guidelines (namely, *The*

Environment Agency, Managing Knotweed on Development Sites, Knotweed Code of Practice, 2013).

- 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. To be performed before any ground break up is performed on site.
- 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 the applicable legislation. All services will be disconnected and removed. Any existing slabs or hardstanding and concrete foundations will be broken by excavators. 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 Excavation

The current landscaped area to the centre of the site was formed in 2013/2014. Approximately 3m of inert material was imported to form the landscaping. The excavated site below this imported material consists of virgin black boulder clay, typical of this area of the city. In addition, a perimeter secant pile wall was constructed around the proposed site in 2004/2005, with additional works carried out in 2013/2014. Therefore it will not be necessary to construct any further perimeter piled walls.

Before foundation works commence, site flooding mitigation measures must be put in place and appropriate method statements submitted to the design team.

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

9.5 Foundation Works

It is likely that a mix of CFA piling (approx. 150no.) and traditional strips will be required for the substructure of the apartment blocks. The excavation and preparation of the foundation works will generate spoil that must be disposed of at an appropriate licensed land fill site. The concrete operations associated with the foundation will require concrete deliveries to site.

9.6 Superstructure

The construction of the superstructure will involve complex sequencing of activities and various construction methodologies could be adopted to deliver the Contract. As noted, the construction methodology and therefore the programme of the construction activities will be dictated by the Contractor.

The following are potential options for the superstructure design:

9.6.1 Apartment Blocks

- RC Column & Flat Slab

- RC/Masonry Cross Wall & Precast Slab
- Precast Concrete Twin Wall & Precast Slab

9.6.2 Building Structure:

- Demolition of the existing basement and podium structure where required.
- Construction of the foundations/substructure.
- Construction of rising elements to 1st floor and 1st floor slabs.
- Similar sequence of construction of rising elements and floor slabs.
- Note allowance for service construction concurrently or before superstructure.

9.6.3 Envelope / Cladding:

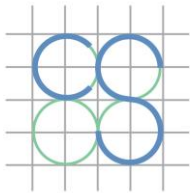
- Envelope works will follow in a sequential manner.

9.6.4 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.

9.6.5 Fit-out:

- Initial installation of any stud work when cladding is complete and floor is weather tight.
- Installation of equipment and associated connection to services.
- Completion of finishes.



9.6.6 Commissioning:

- The final commissioning period will commence during fit-out.

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

9.7 Erection and operation of cranes

It is envisaged that three to four tower cranes will be temporarily erected to accommodate the construction works for the distribution of reinforcing steel, concrete skips, concrete formwork element and general building materials. The Contractor will need to obtain all necessary licences from the Local Authority. A “mast climber” may be installed at some local areas to facilitate 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.

10.0 CONCLUSION

This Outline Construction Management Plan (OCMP) has been prepared for a proposed residential development at Heuston South Quarter, Dublin 8 to give an overview of the processes to be employed during construction of this project.

The aim of this OCMP is to address the following issues that can arise during construction:

- noise and vibration
- traffic management
- working hours
- pollution control
- dust control
- road cleaning
- compound / public health facilities and staff parking
- construction methodology

This plan will be revised by the appointed lead contractor and expanded to produce a Detailed Construction Management Plan which will be agreed with Dublin City Council (DCC) in advance of the construction phase.