

Project

Proposed Mixed-use Development, Castleforbes, Sheriff St Upper, Dublin 1

Report Title

Preliminary Construction Management Plan

Client

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Author: Prinavan Chetty

Reviewed by: Nick Fenner

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DBFL Consulting Engineers

Dublin Office

Ormond House
Upper Ormond Quay
Dublin 7

Tel 01 4004000
Fax 01 4004050
Email info@dbfl.ie
Web www.dbfl.ie

Waterford Office

Suite 8b The Atrium
Maritana Gate,
Canada Street
Waterford

Tel 051 309500
Email info@dbfl.ie
Web www.dbfl.ie

Cork Office

Phoenix House
Monahan Road
Cork

Tel 021 2024538
Email info@dbfl.ie
Web www.dbfl.ie

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1.0 INTRODUCTION

- 1.1 This document is an initial Preliminary Construction Management Plan for the proposed works for a mixed-use development on a site which forms part of the Castleforbes Business Park, Sheriff St Upper, Dublin 1. It includes an outline description of the proposed works and how these works will be managed for their duration. It includes details of the Preliminary Construction Management Traffic Plan, refer to section 9.
- 1.2 This project is currently at planning stage and as such input from the contractor has not been incorporated into the plan. On appointment of a contractor this preliminary document will be issued to them to be further developed into their final construction management plan for the project.
- 1.3 The outline plan seeks to demonstrate how works can be delivered in a logical, sensible and safe sequence with the incorporation of specific measures to mitigate the potential impact on people and the surrounding environment.
- 1.4 Nothing stated in this document shall supersede or be taken to replace the terms of the Contract or the detailed design description issued with the Contract tender or the conditions of planning. Similarly, the issues covered within this document may be amended or added to by the Main contractors or in accordance with their specific works proposals, sequencing and procedures.
- 1.5 When read by the contractor, this document should be read carefully in conjunction with all drawings, specifications and survey information provided.
- 1.6 Any consequences that result through failure to implement measures in this construction plan, or inadequate development of this plan by the contractor are the responsibility of the contractor and not DBFL.

2.0 SITE DESCRIPTION & EXISTING CONDITIONS

2.1 The proposed site is located in Dublin 1, in the North Dock area of Dublin City, approximately 1.4km north-east of the City Centre as shown in Figure 2-1. The site is approximately 2.02Ha which forms part of the Castleforbes Business Park, Sheriff Street Upper, Dublin 1 (D01 VX48). The site is currently occupied by several warehouses and associated yards.

The site is bound by East Road to the west, an Irish Water pump station and CIE lands to the north, and Sheriffs Street Upper to the south.

As per Dublin City Councils development plan, the site has been zoned Z14, to seek the social, economic and physical development and/or rejuvenation of an area with mixed use, of which residential and “Z6” would be the predominant uses.

Generally, the site is relatively flat with a slight fall from the south to north of the site.

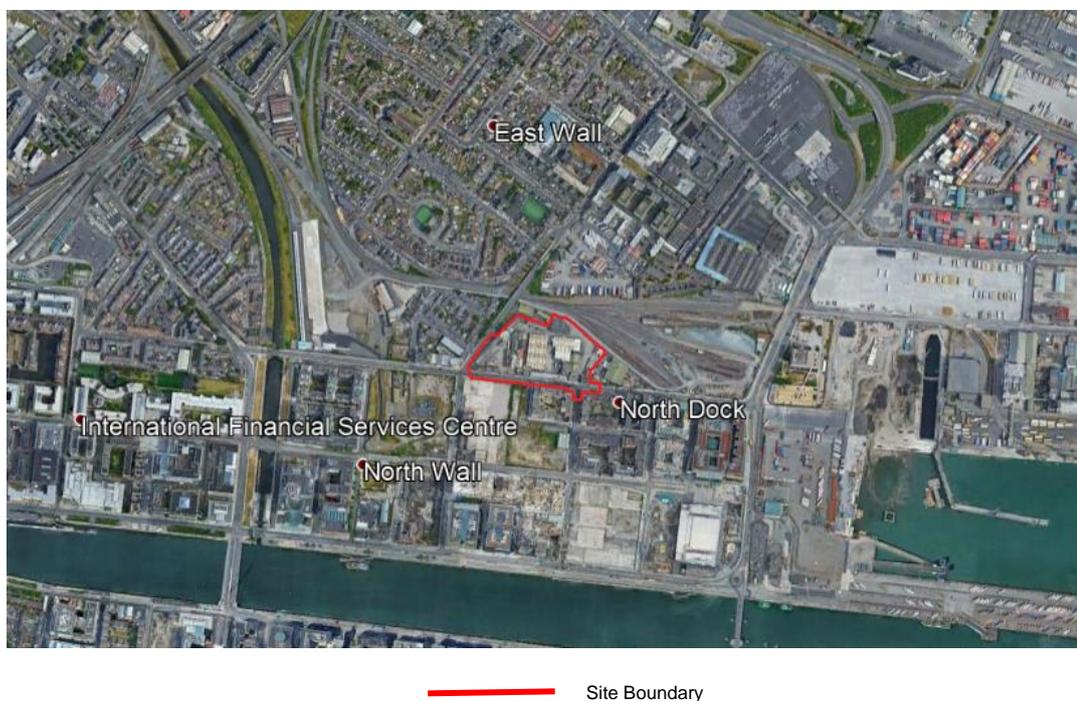


Figure 2-1: Site Location (Site Boundary Indicative Only)

2.2 The development will consist of the demolition of all structures on the site and the construction of a mixed use development set out in 9 no. blocks, ranging in height from 1 to 18 storeys, above part basement/upper ground level, to accommodate 702 no. residential units (comprising 100 studios, 406 no. 1 bed units, 169 no. 2 bed units, 15 no. 3 bed units, 8 no. duplex units and 4 no. live/work units), retail, creche, cultural space and residential tenant amenity. The site will accommodate car parking spaces, bicycle parking, storage, services and plant areas. The residential buildings are arranged around a central open space (at ground level) and raised residential courtyards at upper ground level over part basement level. Ground floor level uses located onto Sheriff Street and into the central open space include a cultural building and live/work office space. Two vehicular access points are proposed along Sheriff Street, and the part basement car parking is split into two areas accordingly, accommodating 1,040 bicycle

parking spaces (including 30 no. disable spaces), 179 car parking spaces, plant, storage areas and other associated facilities. The main pedestrian access is located centrally along Sheriff Street with additional access points from East Road and from the eastern end of Sheriff Street. The application also includes for a pocket park on the corner of Sheriff Street and East Rd to be provided as a temporary development prior to additional future development on this part of the site.

3.0 CONSTRUCTION PROGRAMME & PHASING

3.1 General

3.1.1 The project is currently at planning stage and subject to approval and detailed design. It is estimated that the works would be tendered the first quarter of 2021 with commencement in mid 2021, an estimated site programme of 30 months depending on construction phasing.

3.1.2 The proposed order of construction of key elements is as follows, however this is subject to detailed review by the Contractors at construction stage and specifics may require adjustment once the contractor has been appointed:

- Site Setup;
- Demolitions and site clearance;
- Enabling Infrastructure Works
- Earthworks, including cut and fill and disposal of excess material off site;
- Construction of substructure;
- Super Structure Frame to buildings in sequence;
- Roof and Façade finishes;
- Internal fit out;
- External site works and tie into Sheriff Street Upper.

3.2 Site Setup

3.2.1 Immediately after access to the site is made and it is secure, the site compound will be established. Existing site services will be isolated including the decommissioning of any existing substations in conjunction with the ESB and the provision of a temporary builders' power supply.

3.2.2 The site will be secured with hoarding on all open sides and accessible approaches. The site boundary will be established as indicated by the red-line on the planning drawings and Figure 3-1.



Figure 3-1: Indicative site boundary

3.3 Demolitions and Site Clearance

- 3.3.1 It is anticipated that full demolition of the existing buildings perimeter walls on site will be required prior to the commencement of any construction works. The site also comprises of mainly hard standing area which will need to be cleared.
- 3.3.2 Any demolition that is required will be carried out by a competent Demolition Subcontractor in accordance with the current code for demolition and the consultant engineer's specification.

3.4 Earthworks

- 3.4.1 Earthworks will consist of reducing existing levels for the proposed basement structure and foundations. Suitable material such as rock will be crushed and used on site where possible. Excess material will be disposed offsite to a suitably licensed facility in accordance with the project's Construction Waste Management Plan.
- 3.4.2 The temporary storage of soil will be carefully managed to prevent any potential negative impact on the receiving environment. This material will be stored away from the surface water drainage network.

4.0 WORKING HOURS

- 4.1 Working hours will be strictly in accordance with the granted planning conditions with no works on Sundays or Bank Holidays. If work is required outside of these hours, written approval will be sought by the contractor from the Local Authority.
- 4.2 It is anticipated that normal working hours may be 8am to 7pm Monday to Friday and 8am to 2pm on a Saturday. Working outside these hours will be subject to agreement with the Local Authority.
- 4.3 Deliveries of material to site will be planned to avoid high volume periods. There may be occasions where it is necessary to have deliveries within these times. The Contractor will develop, agree and submit a detailed Traffic Management Plan for the project prior to commencement.

5.0 DUST & DIRT GENERATION

- 5.1 The Contractor shall put in place a regime for monitoring dust levels in the vicinity of the site during the works. The level of monitoring and adoptions of mitigation measures will vary throughout the construction works depending on the type of activities being undertaken and the prevailing weather conditions at the time.
- 5.2 The siting of activities and storage piles will take note of the location of sensitive receptors and prevailing wind directions in order to minimise the potential for significant dust nuisance.
- 5.3 The Construction team will monitor the contractor's regime on an ongoing basis throughout the project to endeavour to minimise impact on a surrounding community.
- 5.4 If dust levels become an issue, then all dust generating activities on site will cease until such time as weather conditions improve (e.g. wind levels drop or rain falls) or mitigation measures such as damping down of the ground are completed.
- 5.5 If the site conditions require it, wheel wash facilities will be provided at the egress point from the site. During peak vehicle movements, where there is a likelihood of dirt on construction vehicles exiting the site, a dedicated road sweeper will be put in place until these works are completed.
- 5.6 If dirt generation extends onto public roads, road sweeping will be carried out as well, including if necessary, the cleaning of silt from road gullies.
- 5.7 Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods. Material stockpiles containing fine or dusty elements shall be covered with tarpaulins. Aggregates will be transported to and from the site in covered trucks.
- 5.8 Where drilling or pavement cutting, grinding or similar types of stone finishing operations are taking place, measures to control dust emissions will be used to prevent unnecessary dust emissions by the erection of wind breaks or barriers. All concrete cutting equipment shall be fitted with a water dampening system.
- 5.9 The following measures shall be taken to avoid dust nuisance occurring under unfavourable meteorological conditions:
 - The appointed Contractor must monitor the sub contractors' performance to ensure that the proposed mitigation measures are implemented and that dust impacts and nuisance are minimised;
 - During working hours, dust control methods will be monitored as appropriate, depending on the prevailing meteorological conditions;
 - The name and contact details of a person to contact regarding air quality and dust issues shall be displayed on the Site boundary, this notice board should also include head/regional office contact details;

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- It is recommended that community engagement be undertaken before works commence on-site explaining the nature and duration of the works to local residents and businesses;
 - A complaints register will be kept on site detailing all telephone calls and letters of complaint received in connection with dust nuisance or air quality concerns, together with details of any remedial actions carried out;
 - The contractor shall, at all times, demonstrate full compliance with the dust control conditions herein; and
 - At all times, the procedures put in place will be strictly monitored and assessed.
- 5.10 A complaints log shall be maintained by the construction site manager and in the event of a complaint relating to dust nuisance, an investigation shall be initiated.
- 5.11 The dust minimisation measures shall be reviewed at regular intervals during the works to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust using best practice and procedures.

6.0 NOISE & VIBRATION

- 6.1 The Contractor shall ensure that the level of noise and vibration resulting from the construction of the works does not constitute a nuisance, and that noise and vibration emissions conform to the requirements of BS 5228: 2009 Code of Practice for Noise and Vibration Control on Construction Sites, Part 1 and Part 2. All plant shall be adequately silenced to conform to the requirements of BS 5228.
- 6.2 Short-term vibration levels and continuous vibration guideline levels as measured in buildings shall be less than the guideline values in BS 5228.
- 6.3 Vibration limits to be applied for infrastructure works are those specified in the NRA document Guidelines for the Treatment of Noise and Vibration in National Road Schemes (NRA, Revision 1, 2004). Allowable vibration (in terms of peak particle velocity) at the closest part of sensitive property to the source of vibration, at a frequency of:

Allowable vibration velocity (Peak Particle Velocity) at the closest part of any sensitive property to the source of vibration, at a frequency of		
Less than 10Hz	10 to 50Hz	50 to 100Hz (and above)
8 mm/s	12.5 mm/s	20 mm/s

Table 2: Allowable vibration during road construction in order to minimise the risk of building damage

- 6.4 If significant noise and vibration activities are to be carried out on site, the contractor will ensure that there is prior liaison with other resident / local business etc. with a view to ensuring that excess noise is not generated by the works beyond the site curtilage and that contract details are available along with agreed protocols.
- 6.5 Contractor to use the Best Management Practice and mitigation measures to prevent or minimise noise levels from the works through the provision and proper maintenance, use and operation of all machinery. Items of plant which create high noise levels should not be used on the periphery of the site. Contractor shall operate in accordance with the Safety, Health and Welfare at Work (General Application) Regulations 2007, part 5 Noise and Vibration.
- 6.6 The contractor shall appoint a designated person to manage all environmental complaints including noise. A noise complaint procedure shall be implemented in which the details of any noise related complaint are logged, investigated and where required, measures are taken to ameliorate the source of the noise complaint. A strictly enforced noise management programme shall be implemented at the site from the outset of construction activities.
- 6.7 Appropriate signage shall be erected on all access roads in the vicinity of the site to inform HGV drivers that engines shall not be left idling for prolonged periods and that the use of horns shall

be banned at all times. HGV's queuing on any local or public road shall not be permitted and it shall be the responsibility of site management to ensure this policy is enforced.

- 6.8 All onsite generator units (if required) used to supply electricity to the site shall be super silenced or enclosed and located away from any receptor.
- 6.9 The principal of controlling noise at source shall be implemented at the site. Best practice mitigation techniques as specified in *BS 5228:2009+A1 2014 – Noise and Vibration Control on Construction and Open Sites* shall be implemented during the construction phase and are detailed in this Section.

7.0 SITE SETUP

- 7.1 The existing site entrance is off Sheriff Street Upper and will also be used as the site's construction entrance. Specific control measures will be implemented to fully segregate the construction traffic from external pedestrian traffic.
- 7.2 The proposed site access is detailed in Figure 7-1 and Figure 7-2. The Contractor shall provide arrangements to provide for vehicular traffic to the site with control measures where crossing the public footpath. The proposed location of the Contractor compound will be internally within the site.



Figure 7-1: Plan of existing and proposed site access



Figure 7-2: Street view of existing and proposed site access

- 7.3 Hoardings will be painted timber hoarding circa 2.4m including supports and appropriate anchoring (Designed by Temporary Works Engineer), external lighting and Safety signage. Site hoarding will include Health and Safety warnings at appropriate intervals.
- 7.4 Site security will be provided by way of a monitored infrastructure systems such as site lighting and CCTV cameras, when deemed necessary.

8.0 POLLUTION CONTROL

- 8.1 Contamination of Watercourses and ground water is a risk during the construction phase especially in the construction of the proposed basement of the development. Detailed construction method statements will need to be approved by the client's design team.

Identified risks include spillages into water courses and unprotected ground, allowing pollutants to enter watercourses or ground water. The measures proposed to be put in place to mitigate this risk would be the use of exclusion zones where practicable and exclusion of construction vehicles from areas near the stream. Exclusion zones would be defined by erecting a 1m high barrier along the watercourse formed by steel road pins supporting an orange PVC barrier with warning signs appropriately fixed at regular intervals.

- 8.2 Sediment and Erosion – Similar to the above, adjacent watercourses/groundwater need to be protected from sedimentation and erosion due to direct surface water runoff generated onsite during the construction phase. To prevent this from occurring surface water discharge from site will be managed and controlled for the duration of the construction works until the permanently attenuated surface water drainage system of the proposed site is complete.

A temporary drainage system shall be installed prior to the commencement of the construction works to collect surface water runoff by the site during construction.

- 8.3 Accidental Spills and Leaks – All oils, fuels, paints and other chemicals will be stored in a secure bunded construction hardstand area. Refueling and servicing of construction machinery will take place in a designated hardstand area which is also remote from any surface water features. A response procedure will be put in place to deal with any accidental pollution events and spillage kits will be available and construction staff will be familiar with the emergency procedures and use of the equipment.

- 8.4 Concrete – Concrete batching will take place off site, wash down and wash out of concrete trucks will take place off site and any excess concrete is not to be disposed of on site. Pumped concrete will be monitored to ensure there is no accidental discharge. Mixer washings are not to be discharged into surface water drains.

- 8.5 Disposal of Wastewater from Site – Discharge from any vehicle wheel wash areas is to be directed to on-site settlement tanks/ponds, debris and sediment captured by vehicle wheel washes are to be disposed off-site at a licensed facility.

Foul drainage discharge from the construction compound will be tankered off site to a licensed facility until a connection to the public foul drainage network has been established.

9.0 CONSTRUCTION TRAFFIC

9.1 General Site Access/Egress

- 9.1.1 The site will be accessed from the existing Site entrance off Sheriff Street Upper for the Demolition and Excavation works and Traffic volumes are not anticipated to be significant. Warning signage will be provided for pedestrians and other road users on all approaches in accordance with Chapter 8 of the Traffic Signs Manual and the Contractor's Traffic Management Plan.
- 9.1.2 As part of the Construction Stage Safety Plan for the works a Construction Traffic Management Plan (CTMP) will be prepared in accordance with the principles outlined below and held on site. It shall comply at all times 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;
 - Any additional requirements detailed in the Design Manual for Roads and Bridges & Design Manual for Urban Roads & Streets (DMURS)
- 9.1.3 During the construction of the proposed infrastructure works, suitable excavated material that can be reused for construction and fill activities will be retained on site where possible. Any unsuitable material or unusable material will be disposed offsite to a suitably licensed landfill facility in accordance with the regulations for same and the project Construction Waste Management Plan.
- 9.1.4 Construction traffic will consist of the following categories:
- Private vehicles owned and driven by site construction and supervisory staff.
 - Excavation plant, dumper trucks and materials delivery vehicles involved in site development works.

9.2 Staff and Parking

- 9.2.1 The site is readily accessible by public transport with Dublin Bus services and DART stations all within nearby walking distance. On-site employees will generally arrive before 07:00, thus avoiding the morning peak hour traffic. Construction employees will generally depart after 17:00. It should be noted that a large proportion of construction workers may arrive in shared transport.
- 9.2.2 Construction traffic will not be permitted to park on the public roads or within the general area outside the main site.

9.3 On-Site Accommodation

9.3.1 Facilities will be provided by the contractor within the confines of the site hoarding as follows:

- Adequate materials drop-off and storage area;
- Set down areas for trucks;
- Dedicated staff parking and visitor parking;
- Staff welfare facilities i.e. toilets etc.

9.4 Construction Activities

9.4.1 The most onerous construction period with regards to traffic generation is expected to be HGVs during the following work elements:

- Demolition and Excavation stage where waste and soil are removed from site;
- Bringing construction materials to site;
- Bringing concrete to site for Sub and Superstructure.

9.5 Minimisation of Movement and Impact

9.5.1 Construction vehicle movements and their impact will be minimised through:

- Consolidation of delivery loads to / from the site and management of large deliveries on site to occur outside of peak periods;
- Use of precast / prefabricated materials where possible;
- "Cut" materials generated by the construction works to be re-used onsite where possible, through various works;
- Adequate storage space on site to be provided;
- The design of the works has involved an element of minimising the quantity of material to be removed from site by way of cut and fill balance;
- Scheduling of movements to outside peak traffic times and school pick-up / drop-off times.

9.6 Public Roads

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

- A regular programme of site tidying to be established to ensure a safe and orderly site;

- Mud spillages on roads and footpaths outside the site to be cleaned regularly and will not be allowed to accumulate;
- Wheel-wash facilities or similar will be provided for vehicles exiting the site if deemed appropriate or when significant vehicle movements are planned (e.g. disposal of topsoil from site);
- Dedicated road sweeper will be put in place if site conditions require.