Digital Netherlands VIII B.V. (Netherlands)

INXN DUB15/16

Construction Management Plan

CMP01

Issue 1 | 27 July 2021

Job number 280503-01

Arup
50 Ringsend Road
Dublin
D04 T6X0
www.arup.com

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Job title		INXN DUB15/16		Job number 280503-01
Document title		Construction Management Plan		File reference
Document ref		CMP01		
Revision	**Date**	**Filename**		
Draft 1	24 Jun 2021	Description	First draft	
			Prepared by	Checked by	Approved by
		Name	Garreth Walker & Justin Van Der Merwe	Tom Blake	Tom Blake
		Signature			
Issue 1	27 Jul 2021	Filename	27-07-21_INXN DUB1516_CMP_2nd submission_rev2.docx		
		Description	First Issue		
			Prepared by	Checked by	Approved by
		Name	Garreth Walker & Justin van der Merwe	Tom Blake	Tom Blake
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			

Issue Document verification with document ☑

Contents

1 Introduction

1.1 Project Description

The development will consist of:

10 year permission for the following development: Removal of an existing unused waste water treatment facility on site and the erection of two data centre buildings, gas powered energy generation compound, and all other associated ancillary buildings and works. The two data centre buildings, DUB 15 and DUB 16, will comprise a total floor area of c. 33,577m^2 over two storeys. The first 2 storey data centre building (DUB15), located to the south west of the site, will comprise 16,865m^2 data storage use, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space. A second 2 storey data centre building (DUB16), located to the south east of the site, will comprise 16,712m^2 data storage areas, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space. Both data centre buildings will reach a height of 20m. Emergency generators and associated emission flues and plant are proposed in compounds adjacent to each data centre building. Gas powered energy generation is proposed to the north east corner of the site to provide electricity for the proposed development. The application proposes to re-route and widen an existing watercourse constructed following an earlier planning permission. It is proposed to reroute this watercourse along the eastern and southern boundary of the site. Landscaping is proposed to the south of the site to screen the buildings. Fencing and security gates are proposed around the site. New access roads within the site are proposed along with 71 car parking spaces and 26 cycle spaces, bin stores, site lighting, and all associated works including underground foul and storm water drainage attenuation and utility cables and all other ancillary works. A Natura Impact Statement will be submitted to the planning authority with the application.

1.2 Site Location

The 6.181ha site of the proposed development is located in Profile Park, Nangor Road, Clondalkin, Dublin 22, within the administrative boundary of South Dublin County Council. The site is a mixture of a brown and green field site with two existing data centre buildings, as well as associated yard and car park.

The site is bounded by Grange Castle Golf Course to the East, undeveloped land to the North and West and agricultural land to the South. The site is accessed from the North from the roundabout junction of Profile Park and the R134 New Nangor Road. The surrounding area is an industrial business park, including data storage centres and warehouses.

2 Overview

The Construction Management Plan (CMP) is intended to:

- Provide an overview description of the construction phasing (Section 5)
- Provide an outline of the construction activities (Section 6)
- Provide a possible outline construction and fit out programme (Section 7)
- Provide an overview of the site establishment and site management measures to be implemented (Sections 8 and 9)

It is intended that this CMP would be expanded and updated by the contractor prior to the commencement of any construction activities on site.

Following appointment, the contractor will be required to develop more specific Method Statements and a more detailed (bespoke, contract-specific) CMP that is cognisant of the proposed construction activities, equipment, and plant usage for the proposed development.

This CMP should not be considered a detailed Construction Method Statement as it would be the responsibility of the contractor, appointed to undertake the individual works, to fully plan the works prior to commencement of construction.

2.1 Roles and Responsibilities

Employer

Digital Realty are the Employer and will appoint project managers on their behalf to oversee the construction stage of the project

Project Manager

The Project Manager will act on behalf of the Client, with responsibility for managing construction of the Proposed Development within the agreed environmental constraints in conjunction with all other necessary management processes.

Contractor

It is assumed that a number of Contractor(s) (including specialist contractors and sub-contractors) will be appointed during construction of the Proposed development. There may be separate contractors for the Enabling Works and the Main Construction Contract.

3 Health and Safety

A PSDP has been appointed for the planning stage of the project and Digital Realty will make the required appointments in advance of the commencement of detailed design and construction stages. These will include the Project Supervisor Design Process (PSDP), Contractor and Project Supervisor Construction Stage (PSCS).

During the development of the scheme, the PSDP will coordinate the designers and ensure that all risks are assessed. The PSDP will prepare the Preliminary Health and Safety Plan in advance of the construction stage and this will inform the contractor of Particular Risks, residual risks and particular sequences of work during the design of the scheme.

The contractor and PSCS have responsibility for health and safety during the construction of the scheme and will develop the project Safety and Health plan.

At completion of construction the Safety File is produces and will be provided to Irish Water to ensure the development can be operated safely.

4 Control of Construction Processes

4.1 Training, Awareness and Competence

The Contractor(s) will set out a programme of training to enable all site personnel to be aware of the potential risks during the construction progress.

All staff and visitors to the site will receive a site induction on first visit to the site. This will include health and safety topics, site layout, emergency procedures, welfare provisions and other items specific to safe operation within the site.

Safety Awareness Toolbox Talks will be delivered by the Site Manager on a regular basis. These will provide an update to the site team on any relevant Health and Safety issues as the construction progresses.

Selected members of the site management team including the Construction Site Foremen will be given practical training in the use of the spill kits, appropriate PPE, clean-up procedures and the appropriate disposal and recycling plans.

5 Phasing

The development will be constructed, fit out and commissioned across eight phases, with the construction works taking place during phases 1a and 3a.

Phases 1b to 2b and 3b to 4b are fit out and commissioning of white space within the datacentre buildings only;

Building	Phase	Description
DUB15 + Energy Centre	1a	• All construction works serving the 20MW shell, substructure, superstructure, and underground services for the DUB15 building. • Internal fitout of the first 10MW fundamental block & 5MW deployment, PBB and front of house areas. First Floor S210/S215
	1b	• Internal fitout of the second 5MW deployment. Ground Floor S110/S115
	2a	• Internal fitout of the second 5MW deployment. Ground Floor S110/S115
	2b	• Internal fitout of the second 5MW deployment. Ground floor S120/S125
DUB16	3a	• All construction works serving the 20MW shell, substructure, superstructure, and underground services for the DUB16 building. • Internal fitout of the first 10MW fundamental block & 5MW deployment, PBB and front of house areas. First Floor S210/S215.
	3b	• Internal fitout of the second 5MW deployment. Ground Floor S110/S115.
	4a	• Internal fitout of the second 10MW fundamental block & 5MW deployment. First Floor S220/S225
	4b	• Internal fitout of the second 5MW deployment. Ground Floor S120/S125

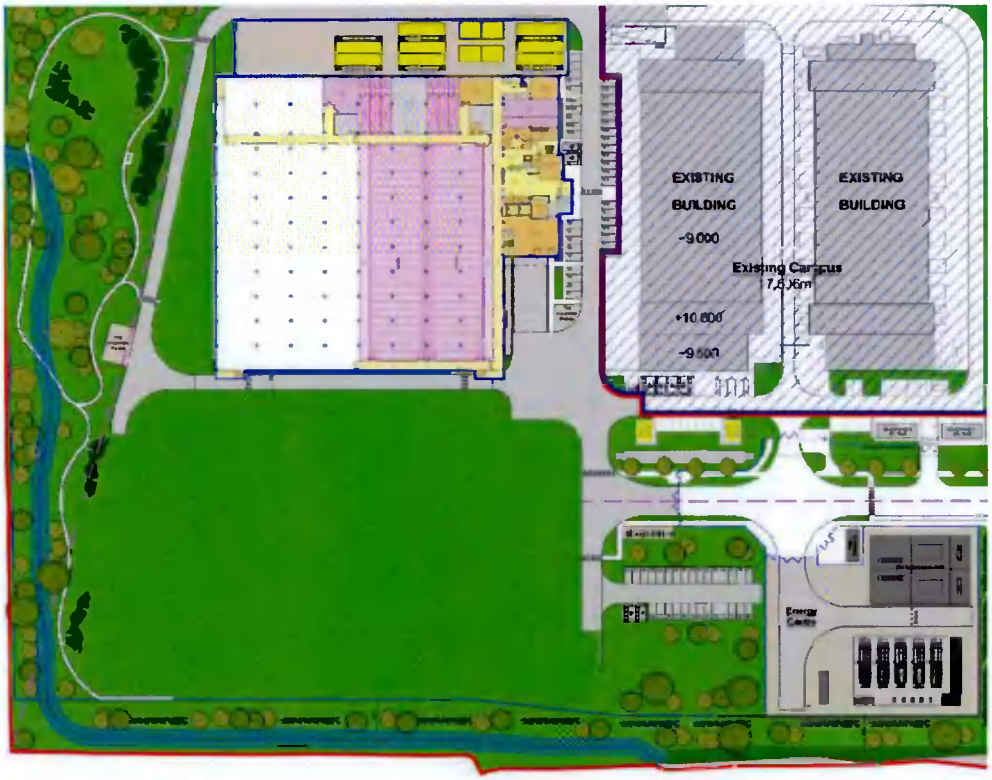

Figure 1: Proposed Site Layout at Phase 1a + 1b Completion

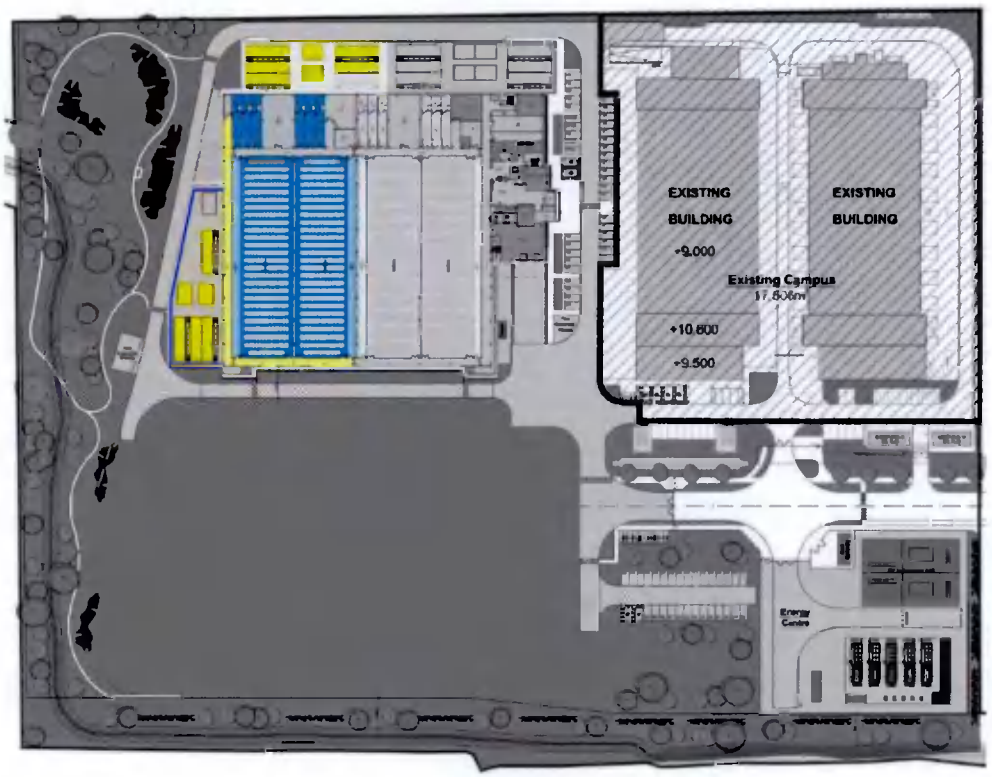

Figure 2: Phase 2a + 2b Fit Out Works

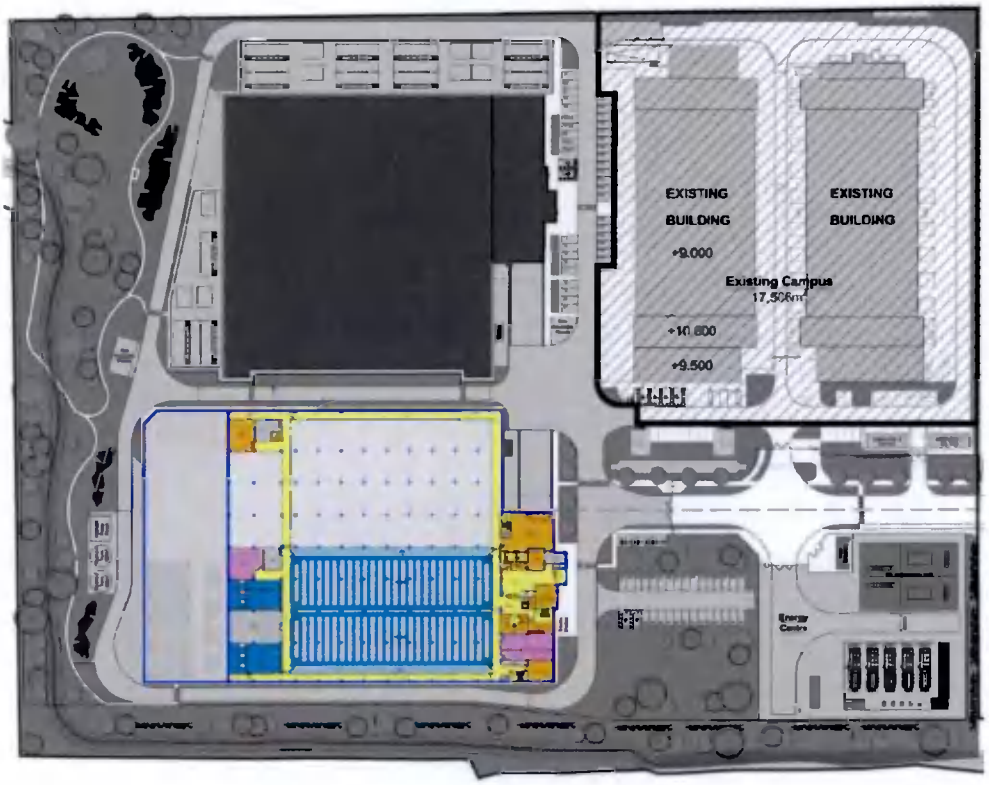

Figure 3: Phase 3a + 3b Construction and Fit Out Works

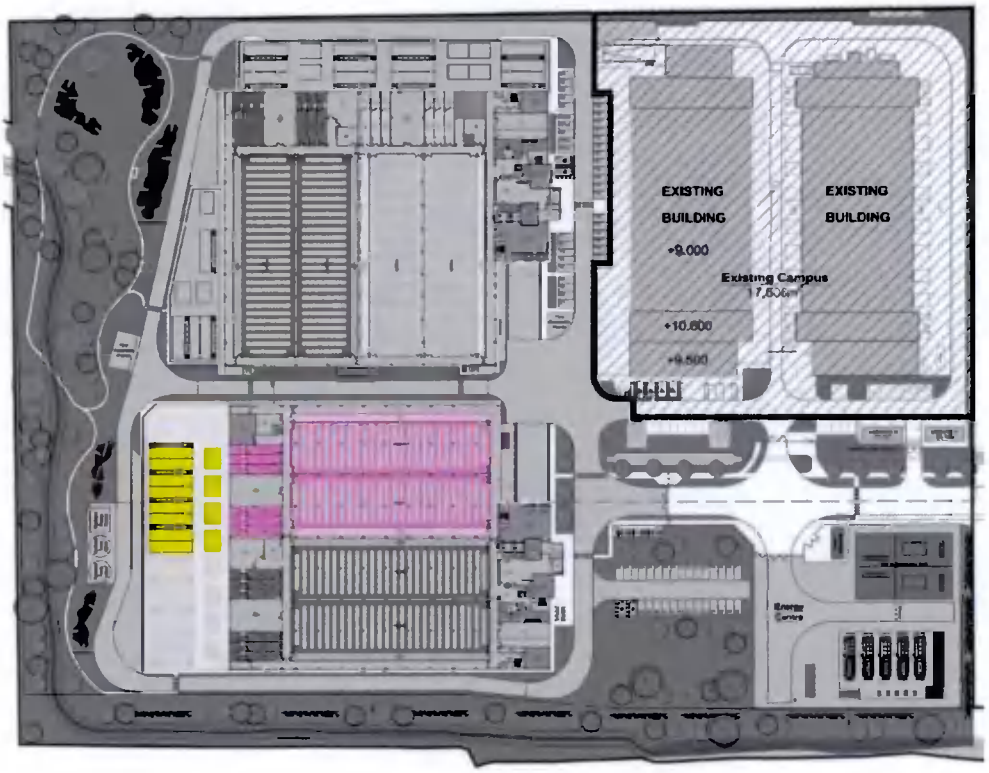

Figure 4: Phase 4a + 4b Fit Out Works

6 Outline of the Construction Activities

This section of the CMP identifies the main construction works during each phase and the anticipated duration of those phases

6.1 Construction Programme

Construction will be undertaken over a 70-month period, including a 10 month break in construction due to limited power availability, as shown in section 7. An illustration of the construction and fit out phasing is provided above in section 5.

In total the construction activities on site are anticipated to last 18 months for the DUB15 building, the energy centre and all landscaping and external areas. Construction works for the DUB16 building are anticipated to last 10 months.

The buildings are planned to be fit out and commissioned in 6 month phases, with 4 fit out and commissioning phases per building.

6.2 Construction Activities

Phase	Package	Works	Timescale (Months)
0	Mobilisation and Site Establishment	• Site Compound • Temporary Staff Parking • Temporary Power Connection • Temporary Water Connection	1
1a	Enabling Works	• Remove Spoil / Level site • Divert Services in Estate Road • Divert Fibre Crossing Site • Stream Diversion • Sewerage Works Decommissioning • Site Preparation	4
	Bulk Earthworks and Underground Services	• Level Site to Formation Levels • Foul Drainage • Surface Water • Water Main • Power and Fibre Ducting • Building Formation and Subbase	3
	Dub 15 (Western Building) Construction	• Foundations • Primary Steel Frame • Decking • Rebar Fixing • Floor Concrete • Secondary Steel Frame • Façade • Block Partitions, Lifts and Risers	10
	DUB 15 (Western Building) Fit-out	• Screeds • Lightweight Partitions • MEP • Firestopping • Finishes	6
	Energy Centre Construction	• Foundations • Walls • Roof • Fit-out • Finishes	6
	External Areas	• Landscaping • Roads and Car Parking • Streetlights and Road Signage • Diesel Tank • Sprinkler Tanks • Attenuation Tanks	11
1b	Phase 1b – Fit-out	• MEP in DUB15 area 2	6
	Break	• Construction Break due to limited power availability until 2025	10
2a	Phase 2a – Fit-out	• MEP in DUB15 area 3	6
2b	Phase 2b – Fit-out	• MEP in DUB15 area 4	6
3a	Dub 16 (Eastern Building) Construction	• As per DUB15 Construction	10
3a	Dub 16 (Eastern Building) Fit-out	• As per DUB 15 phase 1a Fit-out	6
3b	Fit-out	• MEP in DUB16 area 2	6
4a	Fit-out	• MEP in DUB16 area 3	6
4b	Fit-out	• MEP in DUB16 area 4	6

8 Site Establishment

8.1 Construction Compound

The construction compound will be located on site within the planning boundary (as seen in Figure 5 below) for the duration of the project. On-site accommodation will consist of:

- Adequate materials drop-off and storage area;
- Set down areas for trucks;
- Site offices; and
- Staff welfare facilities (i.e. toilets etc.).

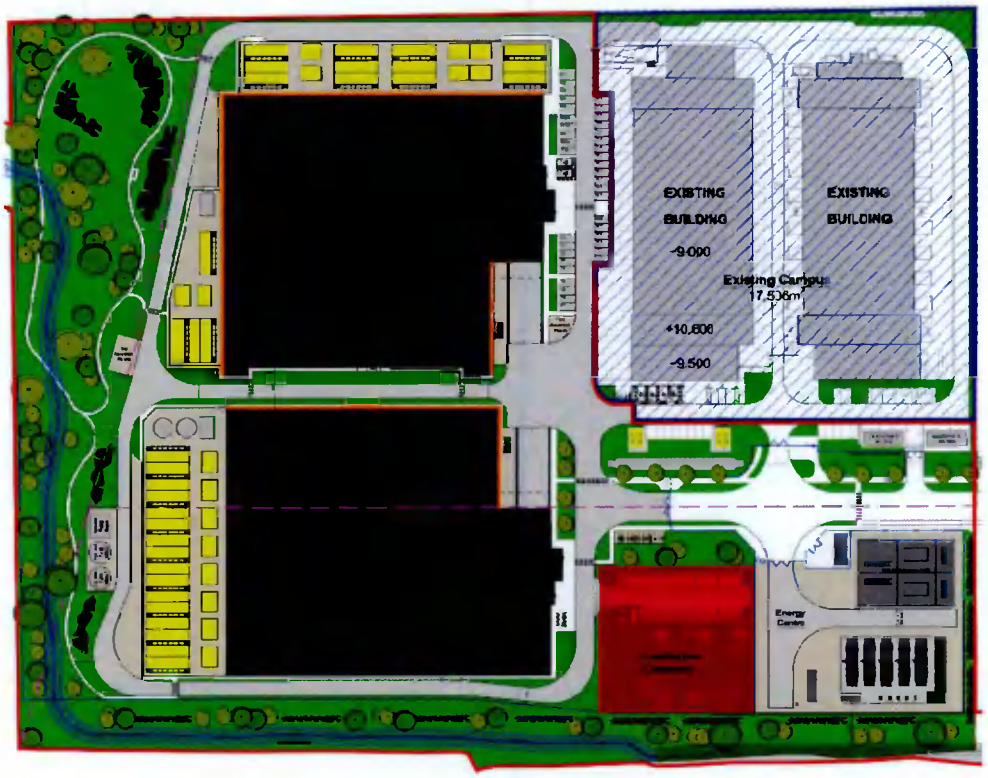

Figure 5 Site plan showing construction compound

The construction compound will be engineered with appropriate services and will be hoarded or fenced off for security purposes. The compound will be used as the primary location for the storage of materials, plant, and equipment, site offices (which may be two to three stories in height), and worker welfare facilities.

An access control facility will be provided to restrict compound access to site personnel and authorised visitors only.

Materials to be stored on site will be stored in a safe manner and will minimise the risk of any negative environmental effects and will be managed on a 'just-in-time' basis. All fuel storage areas will be bunded in the compound and will be clearly

marked. A dedicated fuel filling point will be set up on site with all plant brought to this point for filling.

Temporary toilets and wash facilities will be provided for construction workers. These facilities may require periodic waste pumping and waste offsite haulage, which will be carried out by an authorised sanitary waste contractor. Alternatively, the Contractor may utilise an existing foul drainage connection for site welfare facilities, subject to license agreement with Irish Water.

Appropriate lighting will be provided as necessary at the construction compound. All lighting will be installed to minimise light spillage from the site and will be temporary, i.e. confined to use during construction only.

9 Site Management

9.1 Good Housekeeping

The Contractor will employ a "good housekeeping" policy at all times. This will include, but not necessarily be limited to, the following requirements:

- General maintenance of working areas and cleanliness of welfare facilities and storage areas;
- Provision of site layout map showing key areas such as first aid posts, material storage, spill kits, material and waste storage, welfare facilities etc;
- Maintain all plant, material and equipment required to complete the construction work in good order, clean, and tidy;
- Keep construction compounds, access routes and designated parking areas free and clear of excess dirt, rubbish piles, scrap wood, etc. at all times;
- Details of site managers, contact numbers (including out of hours) and public information signs (including warning signs) will be provided at the boundaries of the working areas;
- Provision of adequate welfare facilities for site personnel;
- Installation of appropriate security, lighting, fencing and hoarding at each working area;
- Effective prevention of oil, grease or other objectionable matter being discharged from any working area;
- Provision of appropriate waste management at each working area and regular collections to be arranged;
- Excavated material generated during construction will be reused on site as far as practicable and surplus materials/soil shall be recovered or disposed of to a suitably authorised waste facility site;
- Effective prevention of infestation from pests or vermin including arrangements for regular disposal of food and material attractive to pests will be implemented. If infestation occurs the contractor will take appropriate action to eliminate and prevent further occurrence;
- Maintenance of any wheel washing facilities and other contaminant measures as required in each working area;
- No discharge of site runoff or water discharge without agreement of the relevant authorities;
- Open fires will be prohibited at all times;
- The use of less intrusive noise alarms which meet the safety requirements, such as broadband reversing warnings, or proximity sensors to reduce the requirement for traditional reversing alarms;

- Maintenance of public rights of way, diversions and entry/ exit areas around working areas for pedestrians and cyclists where practicable and to achieve inclusive access;
- All loading and unloading of vehicles will take place off the public highway wherever this is practicable; and
- Material handling and/or stockpiling of materials, where permitted, will be appropriately located to minimise exposure to wind. Water misting or sprays shall be used as required if particularly dusty activities are necessary during dry or windy periods.

9.2 Site Security

Security of the construction site and the perimeter will be the responsibility of the appointed contractor. High quality hoarding will be provided around the site in addition to the existing site boundaries.

The site hoarding will consist of 3m high hoarding of solid construction. It will be structurally stable and include details of the project and contractor.

The primary function of site security will be to ensure that no unauthorised entry to site occurs. There will be hoarding around the construction areas to minimise the risk of vandalism and unauthorised access.

9.3 Site Hoarding

The Demolition and Enabling Works Contractor will establish a site boundary with the provision of appropriate signage, construction of hoarding, and welfare facilities, site office, and establishment of appropriate access and egress.

The site hoarding (or fencing where appropriate) will be established around the work area before any significant construction activity commences and will be 3m in height. The hoarding will be well maintained and painted and may contain graphics portraying project information

Construction site hoarding is used to provide a secure site boundary to what can be a dangerous environment for people who have not received the proper training and are unfamiliar with construction operations. Site hoarding also performs an important function in relation to minimising some of the potential environmental impacts associated with construction, namely:

- Noise;
- Visual impact; and
- Dust.

The extent of compound and facilities required by the Contractor will vary throughout the duration of the works.

Controlled access points to the site, in the form of gates or doors, will be kept locked for any time that these areas are not monitored (e.g. outside working hours).

9.4 Lighting

Temporary lighting to support construction work will generally be limited to working hours. Site lighting will be kept to a reasonable minimum wherever possible, except where it is essential for health and safety or security reasons to limit intrusion onto adjacent properties and sky glow.

Site lighting would typically be provided by tower mounted 1000W metal halide floodlights. The floodlights would be cowled and angled downwards to minimise spillage to surrounding properties. The following measures will be applied in relation to site lighting:

- Lighting will be provided with the minimum luminosity sufficient for safety and security purposes. Where practicable, precautions will be taken to avoid shadows cast by the site hoarding on surrounding footpaths, roads and amenity areas;
- Motion sensor lighting and low energy consumption fittings will be installed to reduce usage and energy consumption; and
- Lighting will be positioned and directed so as not to unnecessarily intrude on adjacent buildings and land uses, ecological receptors and structures used by protected species, nor to cause distraction or confusion to passing motorists, river users or navigation lights for air or water traffic.

9.5 Water Management

Site drainage will be provided to collect surface runoff prior to discharge to the local drainage network – all in accordance with the necessary Dublin City Council approval.

9.5.1 Dewatering

Dewatering may be required for local excavations, such as foundations, service trenches or lift pit locations. Any local dewatering is to be discharged to the local surface water network by agreement with the Local Authority and will include necessary treatment as required. such as silt traps and settlement tanks.

Local dewatering is likely to be necessary for only a portion of the construction programme.

9.5.2 Surface Water Run-Off

Appropriate settlement tanks and silt traps shall be incorporated to capture any excess silt in the run-off before discharging to the local surface water drainage network, subject to Local Authority Approval. Temporary measures will be installed if required to ensure that surface water runoff is contained within the site before being discharged to the drainage network.

9.6 Hours of Working

Normal working hours during the construction phase will typically be as follows:

Start	Finish	
0700	1800	Monday to Friday
0800	1400	Saturday

However, it may be necessary, in exceptional circumstances, to work outside of these hours at night and at weekends during certain activities and stages of the development. These will be agreed in advance with DCC and advertised in advance to relevant stakeholders.

9.7 Employment

The construction workforce numbers will vary depending on the construction stage of the project. However, it is anticipated that at the peak of the works, the workforce is not expected to exceed 300 employees.

9.8 Construction Health and Safety

The appointed Contractor will be required to ensure all Health & Safety requirements are met and that the site is operated in a safe manner at all times.

All construction staff and operatives will be inducted into the security, health and safety and logistic requirements on site prior to commencing work.

All contractors will be required to progress their works with reasonable skill, care and diligence and to proactively manage the works in a manner most likely to ensure the safety, health and welfare of those carrying out construction works, all other persons accessing the subject site and interacting stakeholders.

Contractors will also have to ensure that, as a minimum, all aspects of their works and project facilities comply with legislation, good industry practice and all necessary consents.

The requirements of the Safety, Health and Welfare at Work Act 2005, the Safety, Health and Welfare at Work (Construction) Regulations, 2006 and other relevant Irish and EU safety legislation will be complied with at all times.

As required by the Regulations, a Health and Safety Plan will be formulated which will address health and safety issues from the design stages through to completion of the construction and maintenance phases. This plan will be reviewed and updated as required, as the development progresses.

In accordance with the Regulations, a "Project Supervisor Construction Stage" will be appointed as appropriate. The Project Supervisor Construction Stage will assemble the Safety File as the project progresses.

Further, any requirements of the Irish Aviation Authority (IAA) with regards to lighting, crane operation etc. will be fully complied with.

9.9 Emergency Response Provision

The Contractor will maintain an emergency response action plan which will cover all foreseeable risks, i.e. fire, spill, flood, etc. The response plan will be developed in accordance with the site emergency plan. Appropriate site personnel will be trained as first aiders and fire marshals. In addition, appropriate staff will be trained in environmental issues and spill response procedures.
Equipment and vehicles will be locked, have keys removed and be stored securely in the works area.

7 Outline Construction and Fit Out Programme