



Waterman Moylan
Engineering Consultants

Construction Management Plan

Barrington Tower SHD, Brennanstown Road, Dublin 18.

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1. Introduction

Waterman Moylan in conjunction with the applicant have prepared the following preliminary Construction Management Plan for the implementation of the construction phase of the proposed Build to Rent (BTE) and Strategic housing development (SHD) at Barrington Tower, Brennanstown Road, Dublin 18.

It is proposed to construct 534 No. residential apartments on the south side of Brennanstown Road (Barrington Tower). It is also proposed to build 1 No. Creche and 1 No. 318 sqm (exclu. Bin Storage) retail facility along with resident support facilities/Resident Services and Amenities. The developer will construct all associated infrastructure to service the development including a network of foul water and surface water drains, watermain and a new access road, footpaths and cycle paths.

The plan sets out typical arrangements and measures which may be undertaken during the construction phase of the project in order to mitigate and minimise disruption / disturbance to the area around the site. The purpose of this report is to summarise the possible impacts and measures to be implemented and to guide the Contractor who will be required to develop and implement the Construction Management Plan on site.

This Construction Management Plan is indicative only and should not be construed as representing the exact method or sequence in which the construction works shall be carried out.

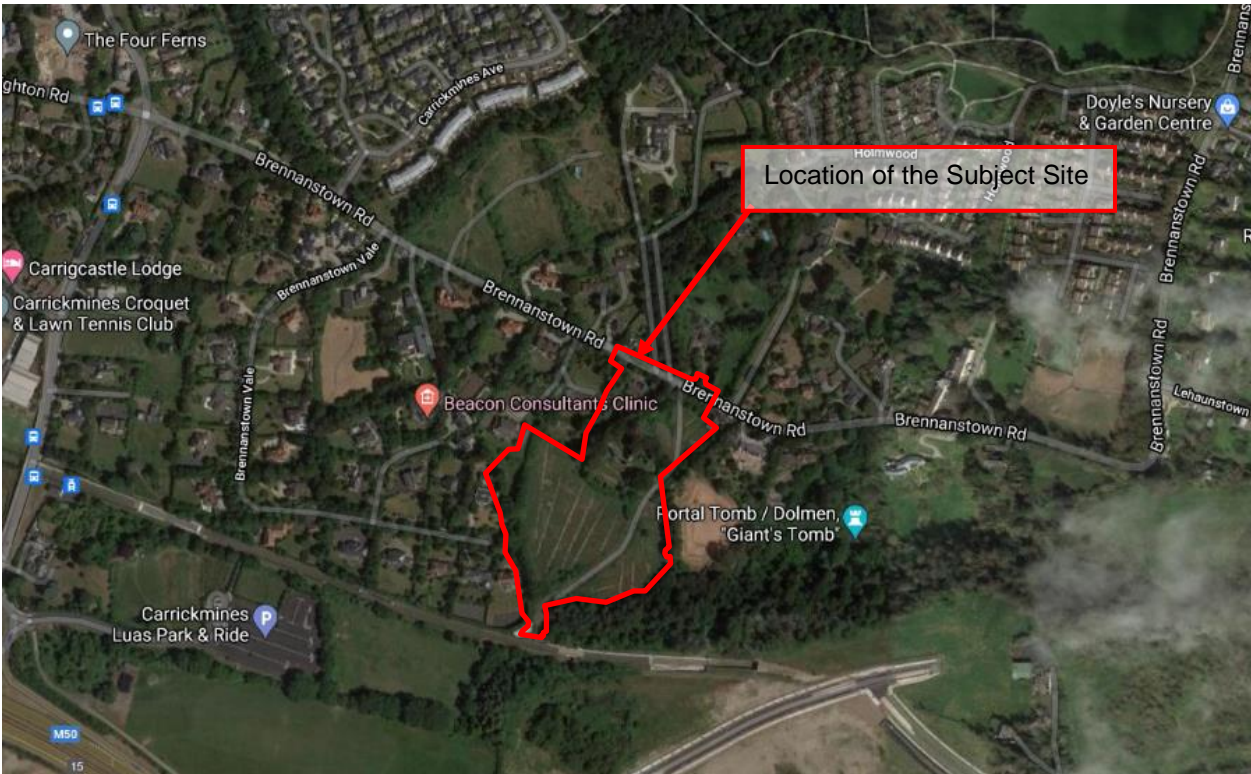
As is normal practice, the Main Contractor for the project is responsible for the method in which the demolition and construction works are carried out and to ensure that best practices and all legal obligations including Local Authority requirements and Health and Safety legislation are complied with. The main contractor is also responsible for the design and installation of all temporary works required to complete the permanent works. This plan can be used by the Main Contractor to develop their final Construction Management Plan. The Applicant reserves the right to deviate from the contents of this report, while still complying with all relevant Local Authority requirements and legislation.

2. Site Description

2.1 Site Location

The site is in Cabinteely, Co. Dublin. It is bounded to the north by Brennanstown Road, to the south by Carrickmines Stream and the Brennanstown Luas stop (not yet open) and to the west by Brennanstown Vale. The proposed development is approximately 4.85 km from Dún Laoghaire Harbour, 1km (c.13-minute walk) east of the Carrickmines Luas station and 3.24 km west from the coastline. Refer to Figure 2-1 for the location of the proposed development.

Figure 2-1 Site Location Map (Google Images)



2.2 Existing Development

The total site area is approximately 3.81 hectares. There are two existing houses on the site which will be demolished as part of the development and the Barrington Tower which will be retained. The remainder of the site is currently greenfield. The site falls from northwest to southeast with the highest ground level of 80.00m OD Malin and the lowest ground level of 63.00m OD Malin.

There are two No. existing vehicular accesses to the site. A large vehicular access with two gates to the east of the site boundary and a smaller vehicular access to the west.

3. The Proposed Development

The proposed 'Build-to-Rent' (BTR) development will consist of the construction of 8 no. blocks in heights up to 10 storeys comprising 534 residential units, a creche, a retail unit, residential support facilities and residential services and amenities. The proposal also includes car and cycle parking, public and communal open spaces, landscaping, bin stores, plant areas, substations, switch rooms, and all associated site development works and services provision. A full description of the development is provided in the statutory notes and in Chapter 3 of the EIAR submitted with this application.

4. General Site Set Up and Pre-Commencement Measures

Detailed condition surveys (including photographs) may be carried out on certain adjacent / adjoining third party buildings prior to any work being carried out on the site. The purpose of the survey would be to record the condition of the properties before the works commence. Copies of these survey reports would be provided to the third-party owners.

A detailed condition survey (including photographs) may be carried out on the roads and footpaths surrounding the site. The purpose of the survey would be to record the condition of the streets and footpaths around the site prior to the works commencing.

A site compound(s) including offices and welfare facilities will be set up by the main contractor in locations to be decided.

Prior to any site works commencing, the main contractor will investigate / identify the exact location of and tag all existing services and utilities around and through the site with the assistance of the relevant DLRCC technical divisions and utility companies.

Typical working hours for the site would be 07.00 to 19.00 Monday to Friday and 08.00 to 14.00 Saturday. No Sunday work will generally be permitted. The above working hours are typical; however, special construction operations may need to be carried out outside these hours in order to minimise disruption to the surrounding area.

5. Site Security and Hoarding Lines

Hoarding lines and site security will be set up within the development site as required.

Hoarding and security fencing will be required on the public roads during the construction works and for construction of the new realigned entrance to the site. Prior to construction commencing on site, a detailed construction traffic management plan will be prepared and submitted by the appointed contractor to DLRCC.

The traffic management plan will identify staging areas, delivery of materials, strategy for large concrete pours, removal of demolition waste, traffic routes etc.

Access gates will be operated by a flagman who will divert incoming / outgoing vehicles / pedestrians and general traffic as necessary.

6. Construction Traffic Routes

Brennanstown Road is approximately 1.9 km long from a signalised junction between Brennanstown Road/Claremont Road/Glenamuch Road North/Brighton Road and continues East/North connecting to Bothar Bhre via a signalised junction. The road provides access to a large number of single residential units along its extent.

Deliveries and access to the construction site will typically be made via Brennanstown road as can be seen in figures 6-1 and 6-2 below.

A restriction on using any of the surrounding residential roads for Construction Traffic will be put in place.

Due regard will be paid to minimising any impacts by construction vehicles on the existing developments in the area. Should routes become an issue, then the position will be reviewed by the Project Team and changes made.

Particular emphasis will be placed on;

- The issue of instructions and maps on getting to site to each supplier sub-contractor to avoid 'lost' construction traffic travelling on unapproved routes;
- Ongoing assessment of the most appropriate routes for construction traffic to and from the site;
- Interface with operation of local traffic;
- Use of banksman and / or traffic lights to control exit of construction vehicles; and
- No construction traffic waiting on the public roads.

A detailed Construction Management Plan will be prepared by the contractor prior to the construction which will outline site logistics and indicate the following:

- Site Boundary Lines;
- Site boundary lines
- Tower Crane Locations;
- Vehicle Entry and exit routes from site;
- Unloading areas;
- Site Offices and welfare facilities;
- Material Storage areas; and
- Banksman Locations.

Figure 6-1 Construction route from site



Figure 6-2 Construction route to site



7. Deliveries

Deliveries and access to the construction site as described in section 6 above.

If large concrete pours are required which may result in congestion at the entrance to the site, the deliveries will be organised such that concrete trucks will queue at a pre-determined staging point and will then be called in by radio as appropriate to the site, via a pre-determined route and to the required access gate.

Set procedures and designated wash-out areas will be provided, or alternatively vehicle wash-out will be prohibited if a suitable wash-out area is not identified.

All delivery vehicles will be co-ordinated as required by a flagman on duty at the relevant access point.

All large pours will be carefully co-ordinated with the roads department at Dun Laoghaire-Rathdown County Council.

8. Parking and Storage

A small amount of parking will be available on site. These will be managed by the contractor to ensure the fire tender access to the development always remains clear. The site is well served by public transport including the LUAS Carrickmines stop approximately 500 m walking distance from the site. Site management will organise additional off-site parking and shared car arrangements if required.

For those who wish to cycle to and from the development, dedicated cycle parking will be provided for the duration of the works within the site. Shower facilities and lockers will also be provided, and cycle links will be maintained at all times.

A Construction Stage Mobility Plan will be prepared by the contractor alongside the Construction Management Plan before starting on site.

The main contractor will be required to schedule delivery of materials daily. If necessary, the main contractor will be required to provide a secure material staging compound on the site.

9. Hours of Operation

9.1 County Development Plan

9.1.1 Construction Management Plans

Section 12.9.4: *Construction Management Plans* of the DLRCC County Development Plan, 2022 – 2028 refers to Construction Management Plans as follows:

The CMP will address issues such as traffic management, hours of working, delivery times, prevention of noise and dust, reinstatement of roadway lining and signing, repair of damage to footways and grass verges and the accommodation of worker parking within the development curtilage. Hours of construction and deliveries should normally be in accordance with the guidance set out in Section 12.9.5 Refer to Section 12.9.6 below for more detailed requirements of the CMP.

9.1.2 Hours of Construction

In the absence of a Construction Management Plan approved by the Planning Authority, Section 12.9.5 of the DLRCC County Development Plan, 2022 – 2028 sets out policy in relation to Hours of Construction as follows:

- Site development and building works shall be restricted to 07.00 to 19.00 Monday to Friday and 08.00 to 14.00 Saturdays. Deviations from these times will only be allowed in exceptional circumstances. No works shall take place on site on Sundays or Bank Holidays.
- There shall be no access onto the site before 07.00 or after 19.00 in the absence of an approved deviation.
- In certain instances, in order to address site specific issues of impact on residential or other sensitive amenity a later start time and/or different hours may be conditioned.

It will be noted that these times are guidelines only and in certain circumstances, it may be necessary for construction works to take place outside of these hours.

9.2 Proposed Working Hours

The proposed working hours for the redevelopment of Barrington site are set out below: -

- Monday - Friday : 07h00 – 19h00
- Saturday : 08h00 – 14h00

9.3 Mitigation Measures

To mitigate the impact of construction activities both during and after trading hours, the following measures are proposed:

- Scheduling of deliveries to avoid interference with the peak hour of traffic movement on Brennanstown Road;
- Co-ordination of deliveries to site with adjoining developments;
- Scheduling of noisier activities as early as possible;
- Noise mitigation measures as Section 10.3 of this Plan; and
- Vibration mitigation measures as per Section 10.4 of this Plan.

In addition, the management at Barrington site will implement a program of consultation for businesses and the community including advance notification of works.

10. Control of Noise & Vibration

10.1 County Development Plan 2016 – 2022

Section 12.9.2: *Noise Pollution* of the County Development Plan 2022 – 2028 notes that

The Planning Authority will use the Development Management process for larger developments or developments close to residential developments:

- *To require the Planning Authority to acknowledge its legal responsibility to attach planning conditions on permissions granted to prevent the development from causing a noise nuisance for adjacent occupiers.*
- *To require developers to produce a Sound Impact Assessment and Mitigation Plan where a noise-generating use is proposed and specialist input is deemed necessary, for any new development that the Planning Authority considers will impact negatively on pre-existing environmental sound levels.*
- *To require developers to produce an Acoustic Design Assessment (informed by guidance such as is set in “ProPG Planning and Noise”, 2018, as referenced in the “Dublin Agglomeration Noise Action Plan 2018-2023”), where a noise-sensitive use is proposed in an area that may have high pre-existing environmental sounds levels.*

10.2 Existing Noise Sources

During daytime periods, the dominant source of noise in the area of Barrington is traffic on the N11 and Brennanstown Road.

The night-time noise levels are dominated by traffic on the Luas line running along the south of the site and Brennanstown Road along the north.

10.3 Construction Noise Management

In the absence of any statutory Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase of a project, it is proposed that the construction works will incorporate:

- Best practice measures relating to the control and minimisation of as set out in BS 5228 (2009) Parts 1 and 2 noise during all phases of the work.;
- Selection of quiet plant including proprietary acoustic enclosures to compressors and generators;
- Control of noise sources including reduction of resonance effects by stiffening and / or the application of damping compounds to panels and / or cover plates;
- Control of rattling and grinding noises by fixing resilient materials between the contact surfaces.
- Screening by demountable enclosures;
- The siting of mechanical plant as far away from residential areas as possible; and
- Regular maintenance of all plant;

Ref: British Standard BS 5228 (2009): Code of Practice for Control of Noise and Vibration on Construction and Open Sites Part 1: Noise.

10.4 Construction Vibration Management

In the absence of any statutory Irish guidance relating to the maximum permissible vibration level that may be generated during the construction phase of a project, it is proposed that the construction works will incorporate:

- Selection of quiet plant with low vibration emissions;
- Provision of anti-vibration mounts on reciprocating plant;
- Limitation of vibration from construction activities to the levels recommended in BS 5228;
- Strip and pad foundations in lieu of piling;
- Materials to be lowered rather than dropped; and
- Resilient materials to be provided on surfaces onto which materials are being lowered.

Ref: British Standard BS 5228 (2009): Code of Practice for Control of Noise and Vibration on Construction and Open Sites Part 2: Vibration.

11. Environmental Effects

11.1 County Development Plan 2022 – 2028

Section 12.9.6: *New Developments – Environmental Impacts* of the Dun Laoghaire Rathdown County Development Plan 2022 – 2028 requires that:

Applications for developments of 10+ residential units or ,500 sq.m commercial shall include:

- A Construction Management Plan that includes the following elements (which can be standalone documents):
 - A construction Waste Management Plan
 - A Construction Environmental Management Plan
 - A Construction Traffic Management Plan
- An operational Waste Management Plan

Applications for developments of 20+ residential units or ≥500sq.m. commercial shall (in addition to the above):

- Submit, prior to commencement of development, details of a Sediment and Water Pollution Control Plan in relation to the construction phase of such developments.
- Implement an appropriate rodent/pest control plan.

Applications for developments of 50+ residential units or ≥1000sq.m. commercial shall (in addition to the above):

- Incorporate where appropriate land for the development of local 'Bring Centres' for recyclable materials, accessible to the general public.
- Include an assessment of the impacts of climate change on their development and make provision for these impacts - particularly relating to drainage design, waste management, and energy use.
- Be designed and constructed in accordance with the provisions of the Greater Dublin Strategic Drainage Study policy document titled 'New Development'.

11.2 Measures to Minimise Nuisance

The measures to be operational at this site will include:

- Use of properly designed access and egress points to minimise impact on both external traffic and amenity of residents;
- Check on each departing vehicle at exit from site to public road;
- Use of banksman and/or traffic lights to control exit of construction vehicles onto public road;
- Controlled off-site HGV holding area where deliveries are called up as required. No HGV's waiting outside site;
- Issue of instructions and maps on getting to site to each sub-contractor to avoid 'lost' HGV's disrupting traffic;
- Establishment and maintenance of HGV holding areas within the site;
- Ongoing assessment of the most appropriate routes for construction traffic to and from the site;
- Interface with operation of HGV traffic from adjacent railway and port terminals; and
- Restriction of work hours to industry standard working hour.

11.3 Site Control Measures

The designated and operational on-site control measures, which will be established and maintained at this site, will include:

- Designated hard routes through site;
- Each departing vehicle to be checked by banksman;
- Wheel wash facility at egress point;
- Provision and facilities to cover lorry contents as necessary;
- Controlled loading of excavated material to minimise risk of spillage of contents;
- Spraying/dampening down of excavated material on site by dedicated crews;
- Use of known routes for lorries to monitor impact on local area; and
- Facility to clean local roads if mud or spillage occurs.
- Hazardous materials to be stored in a designated area on site with appropriate drip trays/bunding and fire extinguishers to contain any spillages.

11.4 Control of Dirt and Dust

The main consideration will be to combat dirt and dust at source so as not to let it adversely affect the surrounding areas. The objective will be to contain any dirt or dust within the site, which is large enough for comprehensive control measures.

The main problems, which may arise during the early part of construction, will be controlled by the measures described above and by the following measures:

- The use of hardcore access route to work front;
- A regime of 'wet' road sweeping can be set up to ensure the roads around the immediate site are as clean and free from dirt / dust arising from the site, as is reasonably practicable. This cleaning will be carried out by approved mechanical sweepers.
- Footpaths immediately around the site can be cleaned by hand regularly, with dampening, as necessary.
- High level walkways and surfaces such as scaffolding can be cleaned regularly using safe 'wet' methods, as opposed to dry methods.
- Vehicle waiting areas or hard standings can be regularly inspected and kept clean by brushing or vacuum sweeping and will be regularly sprayed to keep moist, if necessary.
- Vehicle and wheel washing facilities can be provided at site exit(s) where practicable. If necessary, vehicles can be washed down before exiting the site.
- Netting can be provided to enclose scaffolding in order to mitigate escape of air borne dust from the demolition.
- Vehicles and equipment shall not emit black smoke from exhaust system, except during ignition at start up.
- Engines and exhaust systems should be maintained so that exhaust emissions do not breach stationary emission limits set for the vehicle / equipment type and mode of operation.
- Servicing of vehicles and plant should be carried out regularly, rather than just following breakdowns.
- Internal combustion plant should not be left running unnecessarily.

- Exhaust direction and heights should be such as not to disturb dust on the ground and to ensure adequate local dispersal of emissions.
- Where possible fixed plant such as generators should be located away from residential areas.
- The number of handling operations for materials will be kept to a minimum in order to ensure that dusty material is not moved or handled unnecessarily.
- The transport of dusty materials and aggregates should be carried out using covered / sheeted lorries.
- Material handling areas should be clean, tidy and free from dust.
- Vehicle loading should be dampened down and drop heights for material to be kept to a minimum.
- Drop heights for chutes / skips should be kept to a minimum.
- Dust dispersal over the site boundary should be minimised using static sprinklers or other watering methods, as necessary.
- Stockpiles of materials should be kept to a minimum and if necessary, they should be kept away from sensitive receptors such as residential areas etc.
- Stockpiles where necessary, should be sheeted or watered down.
- Methods and equipment should be in place for immediate clean-up of spillages of dusty material.
- No burning of materials will be permitted on site.
- Earthworks excavations should be kept damp where necessary and where reasonably practicable.
- Cutting on site should be avoided where possible by using pre-fabrication methods to facilitate any temporary works that may be required to enable the demolition.
- Equipment and techniques for cutting / grinding / drilling / sawing etc, which minimise dust emissions and which have the best available dust suppression measures, should be employed.
- Prior to commencement, the main contractor should identify the demolition operations which are likely to generate dust and to draw up action plans to minimise emissions, utilising the methods highlighted above. Furthermore, the main contractor should prepare environmental risk assessments for all dust generating processes, which are envisaged.
- The main contractor should allocate suitably qualified personnel to be responsible for ensuring the generation of dust is minimised and effectively controlled.
- Demolition works to incorporate water spray to reduce dust.

11.5 Water

If groundwater is encountered, the excavations for the basement, drainage pipes, water supply, utilities and foundations may impact the ground water in the site.

The contractor shall develop an appropriate dewatering scheme to keep the basement/excavations free from water and ensure the quality of water leaving the site is high.

During any discharge of surface water from the basement/excavations, the quality of the water will be improved through the provision of settlement tanks and will be regularly monitored visually for hydrocarbon sheen and suspended solids. Periodic laboratory testing of discharge water samples will be carried out in accordance with the requirements of Dun Laoghaire-Rathdown County Council before discharge to the surrounding drainage network.

Appropriate discharge licenses will be acquired from Dun Laoghaire-Rathdown County Council in respect of discharges from dewatering operations.

12. Duties and Responsibilities

12.1 Standards

Insofar as the construction of this development may impact on the surrounding road network, the development and associated roadworks shall be undertaken in compliance with the requirements of Dun Laoghaire Rathdown County Council issued by the Transportation Department in November 2008 and any other requirements that the County Council may impose during the works.

12.2 Project Team

It shall be the duty of the Project Team to provide the main Contractor in good time with all necessary designs, details, drawings and specifications so that the Contractors can, in conjunction with the Project Team prepare detailed proposals and programmes for the execution of the works for submission to Dun Laoghaire Rathdown County Council as required by the *"Directions for Roadworks Control"*.

It shall also be the duty of the Project Team to ensure that the Contractors proposals are reasonable and that they are implemented in a safe and competent manner.

12.3 Main Contractor

It shall be the duty of the Main Contractor in conjunction with the Project Team to prepare detailed construction and traffic management proposals for the implementation of the works.

The Contractor shall give adequate and timely notice to Dun Laoghaire Rathdown County Council as specified in of *"Directions for Roadworks Control"*.

The Contractor(s) shall also be responsible for implementing the traffic management proposals in a safe and competent manner on an ongoing basis.

12.4 Construction Program

At the time of preparing this edition of this Plan in August 2021, the planning application for the proposed redevelopment is being prepared for the formal SHD submission to An Bord Pleanála.

The development provides for a 24-month construction period commencing in 2022 with completion in 2024.

UK and Ireland Office Locations

