
Outline Construction Management Plan
for
SHD Development at Newtown, Malahide Road

Doc No. WS-06-A

Prepared by:



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1.0 Introduction

1.1 Background

Joseph O'Reilly Consulting Engineers were commissioned by Claregrove Developments Ltd to input and coordinate an "Outline Construction Management Plan" to accompany a planning submission for the proposed Strategic Housing Development at Newtown, Malahide Road, Dublin 17. The "Outline Construction Management Plan" should be read in conjunction with the "Demolition Method Statement" prepared by JOR Consulting Engineers which accompanies this submission. The Construction Management Plan includes a description of the proposed works and how these works will be managed for the duration of the works on site. This plan will be updated by the contractor and agreed with Dublin City Council (DCC) in advance of the construction phase.

1.2 Existing Site & Site Location

The application site contains a Topaz filling station and vacant commercial buildings, including a former motor showroom (Crossan Motors) with offices, a tyre centre and a commercial workshop and office. The site is bound by a local residential access road and Clare Village residential apartments to the east and south east, Grove Lane to the south west, a tyre centre (Fast Fit) to the north and Malahide Road (R107) to the west. The topography of the site slopes from the southwest to the northeast with a slope across the site from the northwest (Malahide Road) to the southeast (rear Access Road). There is approximately 2.4m fall between the highest and lowest parts of the site.



Figure 1

1.3 Outline of Proposed Works

The proposed development will consist of 331 residential units, built in two blocks (Block A to the southwest and Block B to the north), ranging in height from 8 to 10 storey's. The 331 no. units proposed consist of the following:

- 82 no. 1-bedroom units
- 239 no. 2 bedroom units
- 10 no. 2-bedroom duplex units

Block A contains a double height ground floor level containing two no. commercial units (for Class 1- Shop / Class 2- Office / Restaurant / Café use), a reception area, and an internal / undercroft ground floor car park accessed off Grove Lane incorporating bicycle parking and refuse storage areas. 2 no. duplex units over two levels are located to the rear of Block A; Block B contains a double height ground floor level containing ancillary communal support facilities and amenities, which includes a reception area, a shared work space, a gym and a laundry, a commercial unit (for Class 1- Shop / Class 2- Office / Restaurant / Café use), and a childcare facility, with associated outdoor play area. 8 no. duplex units are located to the rear of Block B over two levels. Block B includes an internal / undercroft car park area over four levels (including partial basement) to be accessed from the Malahide Road and incorporating car, motorcycle, bicycle parking and refuse storage areas;

Block B contains an internal communal amenity space at seventh floor level, lettable storage space from first to eighth floor level and office space from first to sixth floor level and eighth floor level.

2.0 Construction Management Plan

2.1 Construction Program & Phasing

Subject to a successful grant of planning, it is intended for the works to commence as soon as practical. The proposed development is anticipated to be constructed over an 38 month period.

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

- Set up site perimeter hoarding
- Demolition and Site Clearance;
- Reduced Level excavations, basement construction and foundations;
- Construct Building Frame and Envelope;
- Finish Interior and Exterior Landscaping.

2.2 Vehicular Access to Site

The site is currently accessed from Malahide Road via two existing entrances. It is anticipated that for the duration of the works all access and egress for deliveries will be from Malahide road/Grove Lane. Construction traffic attending the site will be required to use the road hierarchy of Malahide Road as the main route to and from the site in order to restrict movements through areas of residential areas.

Security personnel will be present at the entrance/exit of the site to ensure all exiting traffic will do so safely. A wheel wash will be installed at the exit from the site to prevent any dirt being carried out into the public road. If necessary, a road sweeper will be used to keep the public road in the local vicinity clean.

2.3 Protection of Public Areas from Construction Activity

Perimeter hoarding will be provided around the site to provide a barrier against unauthorized access from the public areas. Controlled access points to the site, in the form of gates or doors/turnstiles, will be kept locked for any time that these areas are not monitored (e.g. outside working hours).

The hoarding will be well-maintained, and will be painted and may contain graphics portraying project information. The hoarding is of particular importance along the boundaries with public road infrastructure to prevent access by the public. As well as this

appropriate fall arrest and protection measures will be fitted to the elevation facing the public footpaths and roads during the construction of the superstructure frame to prevent any falling objects onto the public areas.

All materials being lifted by crane will be controlled by guide ropes and will only be completed under the strict supervision of appropriately qualified and experienced banksmen. Tower cranes will be fitted with restrictors to prevent them lifting materials over existing buildings.

Nets and screens will be used to close in works at the perimeter of buildings to prevent any debris exiting the building. Method statements will be prepared by the contractor where any plant is operating adjacent to existing buildings.

2.4 Site Security

The site will be secured with a solid timber hoarding 3.2m or 2.4m high. Fully enclosed scaffolding and additional netting will be installed over the public roads to catch any debris that could fall from height. For additional protection of pedestrians either a fully enclosed roof to the hoarding or an additional 500mm fluted section can be provided to the hoarding on the road side as well as along the public footpaths. Hoarding will be designed by a competent temporary works engineer. The site hoarding will be branded using the appointed Contractors logos etc. Some marketing images or information boards may also be placed on the hoarding.

Access to site will be controlled by means of swipe card system or turnstiles and camera remote monitoring system for out of hours. During working hours, a gateman will control traffic movements and deliveries to ensure safe access and egress to site.

All personnel working on site must have a valid Safe Pass card and be inducted by the Main Contractor with regard to site specific information.

2.5 Material Hoisting & Movement throughout the Site

It is envisaged that 2-3 No. Tower Cranes will be erected on the project to assist with superstructure and façade works. In addition to the tower crane, separate mobile crane visits may be required from time to time. These visits will be coordinated with the other site activities and crane operations to ensure all risks are correctly assessed and

mitigated against. Material hoists and teleporters may also be utilised around the perimeter of the building within the site as required during the projects to facilitate material movement and waste movements out of the building. With the commencement of the fit out activities material hoists strategically positioned will play a key role for successful project delivery. They are also less susceptible to being effected by inclement weather conditions.

2.6 Deliveries & Storage Facilities

It is proposed that unloading bays are provided for deliveries to the site within the hoarding perimeter. They should be accessible by tower crane and fork lifts. Appropriately demarcated storage zones will be used to separate and segregate materials.

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

2.7 Site Accommodation

On site accommodation, will consist of;

- Adequate materials drop-off and storage area
- Staff welfare facilities i.e. toilets, site offices etc.
- A temporary electricity supply will be provided to the site via national grid.

Water supply to the site will be provided by means of a temporary connection to the public water main. Similarly, a temporary connection for foul water drainage will be made to the public network on agreement with the Local Authority. It may be possible to utilise branch connections already in place on the existing site to minimise/prevent disruption to the public space outside of the site boundary when making these temporary connections.

2.8 Site Parking

Due to the location and nature of access to the site, there will be no site parking or construction parking anywhere on the site. Construction staff will be encouraged to use public transport and information on local transportation will be published on site.

2.9 Site Working Hours

Construction operations on site will generally be between the hours of 07:00 and 19:00, Monday to Friday, and 08:00 to 14:00 on Saturdays. However, 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. These will be agreed with the necessary parties prior to commencement.

Similarly, deliveries of materials to site will generally be between the hours of 07:00 and 19:00, Monday to Friday, and 08:00 to 14:00 on Saturdays. There may 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.

3.0 Environmental Issues

3.1 Noise

Noise monitoring will be established on site throughout the project. Noise monitoring is going to be carried out for a period of at least 2 weeks prior to any works commencing, in order to establish a baseline, and communicating the results to DCC in the form of baseline reports.

All construction activities will be carried out in compliance with the recommendations of BS 5228, Noise Control on Construction and open sites part 1 and comply with BS 6187 Code of Practice for Demolition. These measures employed to ensure compliance will include: -

- Noise monitoring stations, which will be monitored daily, will be located on site and at recommended locations in the vicinity of the site to record background and construction noise activity.
- The best means practical will be used to minimize the noise produced by all on site operations.
- Proper maintenance of all operating plant to ensure noise emission compliance.

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- All operating plant will be selected on the bases of incorporating noise reducing systems, and at a minimum be fitted with effective exhaust silencers.
 - Compressors will be fitted with acoustically lined covers, which will remain closed while the machines are in operation.
 - Plant such as pumps and generators which are required to work outside of normal working hours will be enclosed with acoustic enclosures.
 - There will be strict adherence to the site working hours stipulated in the Planning Conditions.

3.2 Air Quality Monitoring

Appropriate Air Quality and Dust monitoring will be carried out on a regular basis in accordance with DCC planning conditions and records will be kept of all such monitoring for review by the Planning Authority.

3.3 Migrating Dust & Dirt Pollution

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:

- Ensuring construction vehicles have a clean surface to travel on within the site (i.e. haul road)
- Ensuring all construction vehicles are inspected by the gateman for cleanliness prior to exiting the site
- Ensuring an appropriate wheel or road washing facility is provided as and when required throughout the various stages of construction on site

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.

3.4 Harmful Materials

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

4.0 Traffic Management

4.1 Access to the Site

It is anticipated that, following grant of planning permission, construction will commence in Autumn 2019. Prior to any works on site the appointed contractor will prepare a detailed Construction Traffic Management Plan and agree its proposals with Dublin County Council and An Garda Síochána. It is proposed that construction traffic will access the site via Cork St. This will be discussed in detail by the appointed contractor with continuous liaison with DCC Roads and Traffic Division.

4.2 Construction Parking

Due to the location and nature of access to the site, there will be no site parking or construction parking anywhere in the vicinity of the site. Nearby off site car parking will be identified to avoid congestion in the surrounding areas and minimise disruption for local retailers, offices and residents. Construction staff will also be encouraged to use public transport and information on local transportation will be published on site.

4.3 Vehicle Movements during Construction

The most onerous construction period with regards to traffic generation is expected to be the demolition, site clearance and excavation stage, which will include the removal of excavated material away from the site. The volumes of traffic generated during this period are unlikely to be in excess of 10 two-way trips per hour. The total construction traffic volumes per hour are not significant in terms of the overall existing traffic flows. These flows are not expected to significantly impact on the capacity of the surrounding road network.

4.4 Minimise Construction Vehicle Movements

Construction vehicle movements will be minimized through:

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- Consolidation of delivery loads to/from the site and manage large deliveries on site to occur outside of peak periods;
 - Use of precast/prefabricated materials where possible;
 - 'Cut' material generated by the construction works will be re-used on site where possible, through various accommodation works;
 - Adequate storage space on site will be provided;
 - A strategy will be developed to minimise construction material quantities as much as possible;
 - Construction staff vehicle movements will also be minimised by promoting the use of public transport

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

Cycling

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

Car Sharing

Car sharing among the construction staff will be encouraged, especially from areas where construction staff may be clustered. We will aim to organize shifts in accordance to staff origins, hence enabling higher levels of car sharing. Such a measure offers a significant opportunity to reduce the proportion of construction staff driving to the off-site car parking facility, and will minimize the potential traffic impact on the road network surrounding this facility.

Public Transport

We will issue an information leaflet to all staff as part of their induction on site highlighting the location of the various public transport services in the vicinity of the construction site.

4.5 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 DCC Roads & Traffic Department 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.

4.6 Project Specific Traffic Management Plan

A detailed project specific traffic management plan will be developed by contractor and agreed with DCC and on Garda Síochána prior to works commencing on site. This plan will be updated as requires throughout the project.

Issues addressed in Traffic Management Plan will include:

- Public safety
- Construction traffic routes
- Deliveries' schedule
- Special deliveries (wide and long loads)
- Traffic flows
- Signage and lighting
- Road opening requirements

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- Road closures
 - Lighting

A liaison officer will be appointed for contact with local residents, DCC and the Gardaí.

5.0 Protection of Neighbouring Structures

5.1 Monitoring

Monitoring regime of settlement and vibration will be agreed with DCC prior to commencing works on site.

Specialist contractors may be appointed to provide monitoring throughout demolition and construction works either continuously or periodically as agreed with DCC.

A vibration monitoring strategy will be implemented on site. (Alarmed) vibration monitors will be fixed to adjoining structures or any structures deemed within the zone of influence of the construction works. Monitors will be installed two weeks prior to any demolition works to establish a baseline and will remain in situ until after piling and substructure work is completed. The critical vibration levels allowable will be based on guidance in BRE403.

Movement will be monitored through a weekly survey of targets fixed to adjoining structures or any structures deemed within the zone of influence of the construction works. The limits for settlements of structures immediately adjacent to any piling works will be determined through further analysis of the piling solution (specialist FEA), with guidance sought from Ciria C580 in terms of maximum settlement limits. Gross movement of the substructure will be limited to a level that will cause 'negligible' or at worst 'cosmetic' damage to adjoining structures as defined in BRE251.