

Project

The Ted, Dun Laoghaire, Build to Rent

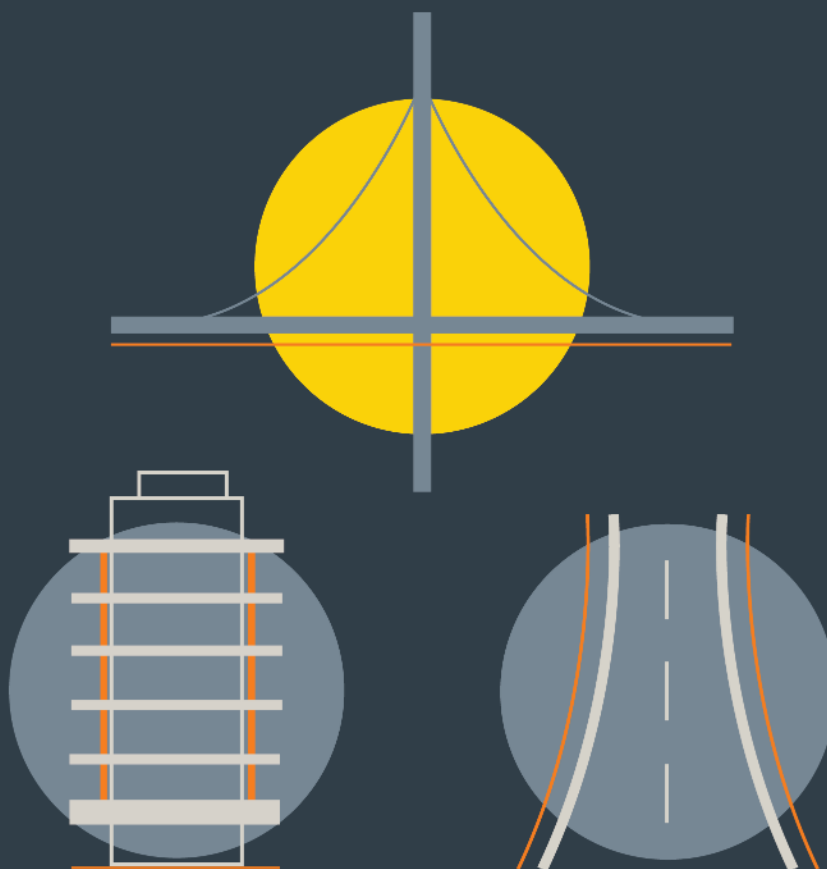
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Preliminary Construction Management Plan / Construction Traffic Management Plan

Client

Ted Living Limited

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1.0 INTRODUCTION

1.1 Overview and Context

DBFL have been instructed to prepare Preliminary Construction Management Plan / Preliminary Construction Traffic Management Plan (PCMP/PCTMP) for a proposed mixed-use development Tedcastles, located in Dun Laoghaire, Co. Dublin (shown on Figure 1-1) to:

- outline the proposed works and how these works will be managed for their duration; and
- assess the traffic implications for the construction activities associated with a planning application.

The project is currently at planning stage and as such input from the Contractor has not been incorporated into the plan. On the appointment of a Contractor, this document will be issued to them to be further developed, in consultation and approval with Dun Laoghaire-Rathdown County Council (DLRCC), into their adopted CMP/CTMP for the subject site prior to the commencement of construction works on site.

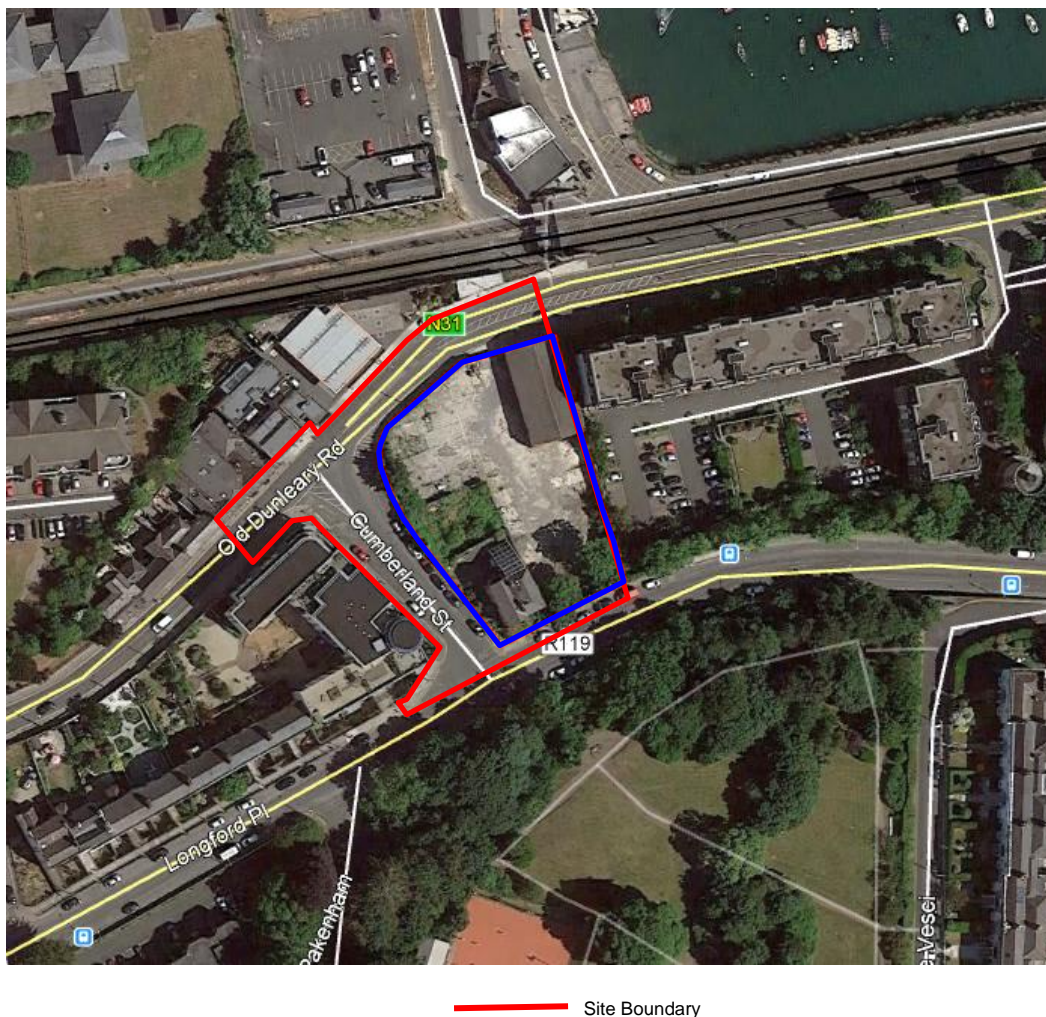


Figure 1-1: Site Location (Site Boundary Indicative Only)

1.2 Objectives

This outline plan seeks to demonstrate how works can be delivered in a logical, sensible, considerate and safe sequence with the incorporation of specific measures to mitigate the potential impact of construction activities and traffic upon people affected by the subject site works, local residents and businesses and the immediate urban environment.

The objectives of this document are to:

- Outline minimum road safety measures to be undertaken at site access/egress locations during the works and including approaches to such access/egress locations;
- Demonstrate to the Developer and Contractor the need to adhere to the relevant guidance documentation for such works;
- Ensure construction activities are planned and executed to maximise the effectiveness, efficiency and sustainability of such works as they progress without impeding existing operational needs of existing or surrounding properties;
- Provide the basis for the preparation of a final Construction Management Plan by the Contractor appointed to carry out the works.

Nothing stated in this document shall supersede or be taken to replace the terms of the Contract or the Conditions of Planning. Similarly, the issues covered within this document may be amended or added to by the Main Contractor or in accordance with their specific works proposals, sequencing and procedures.

Upon review by the Contractor, this document should be studied carefully in conjunction with all scheme drawings, specifications, and survey information provided in addition to any potential planning conditions applied by the local planning authority.

2.0 SITE DESCRIPTION AND EXISTING CONDITIONS

The subject site is located in Dun Laoghaire, Co. Dublin, adjacent to the West Pier of Dun Laoghaire Harbour. The site is approximately 0.31Ha (0.56Ha including the public realm area) and is currently occupied by an Dun Leary House and associated maintenance buildings. The subject site comprises mostly hardstanding area.

The site is bound by streets on three sides, with Old Dunleary Road to the north, Dunleary Hill to the south and Cumberland Street to west, with an existing residential development bounding the site to the east.

The location of the proposed site in relation to the surrounding road network is illustrated in *Figure 2-1* while the extent of the proposed development is shown in *Figure 2-2*.

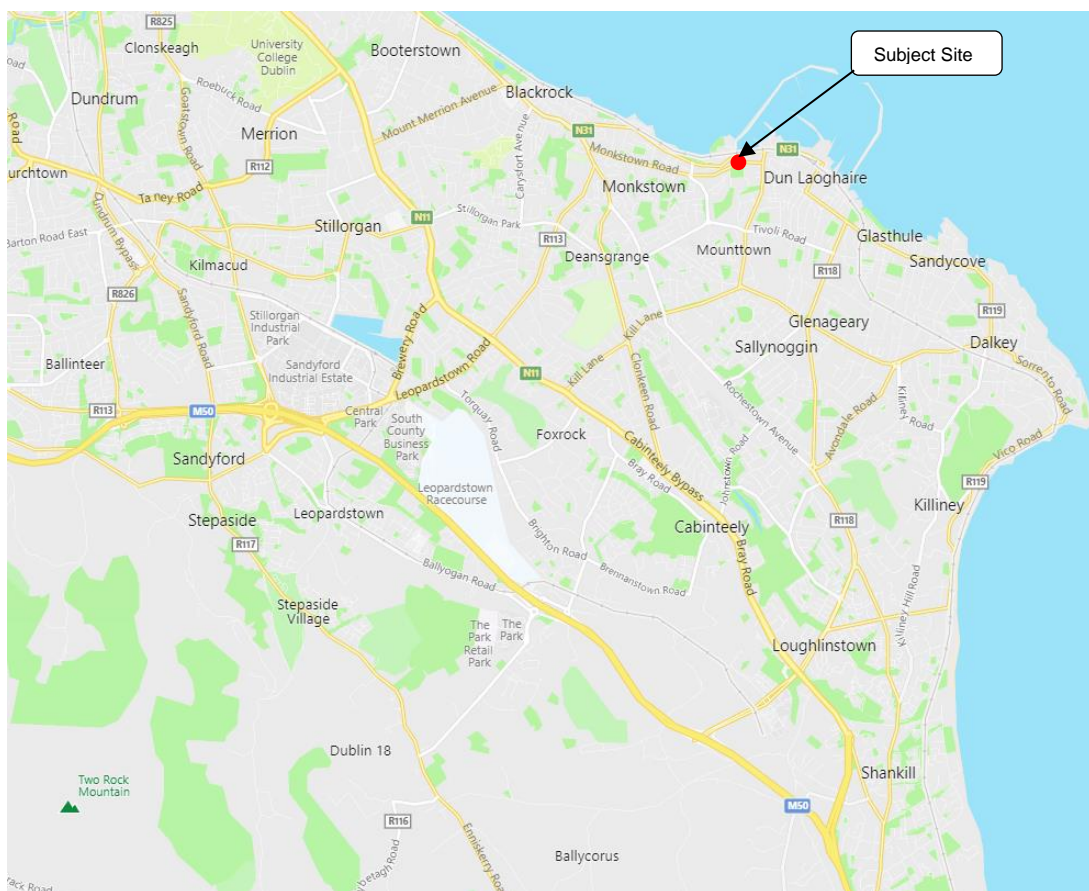


Figure 2-1: Site Location in Dun Laoghaire

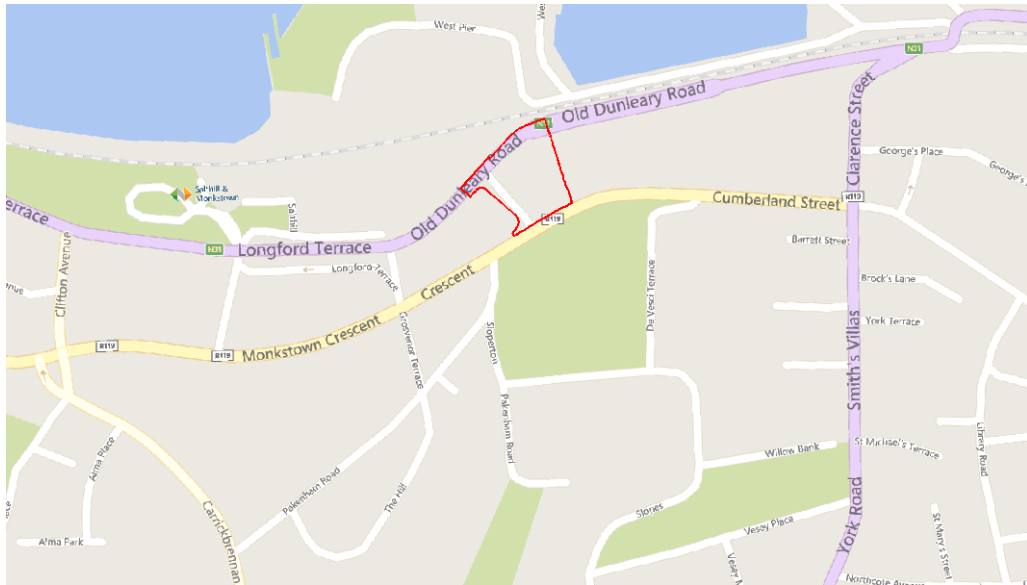


Figure 2-2: Extent of works in relation to road network

3.0 CONSTRUCTION PROGRAMME AND PHASING

3.1 Overview

This section sets out and describes the proposed sequencing for the proposed development and associated works. The Contractor will clearly outline the works which impact public spaces, as shown on DBFL drawings TED-DBFL-RD-SP-DR-C-1101 and TED-DBFL-CS-SP-DR-C-1201, within the final Construction Management Plan that will be submitted and agreed with by DLRCC.

3.2 Proposed Development and Associated Works

The proposed development at the former Ted Castles site and Dun Leary House (a proposed Protected Structure), Old Dun Leary Road, Cumberland Street and Dun Leary Hill, Dun Laoghaire will consist of:

- The provision of 146 no. apartment units (Build to Rent) and all associated ancillary facilities (including residential amenities) in a building with an overall height ranging from 6 storeys (with set backs from 4th & 5th storey) addressing Dun Leary Hill, to 5 and 8 storeys (with set back from 7th storey) addressing Old Dun Leary Road and 6-7 storeys (with set backs at 8th storey) addressing Cumberland Street. The proposal provides for private and communal open spaces in the form of balconies and terraces throughout;
- A retail unit (c.290m²) at ground floor level addressing Old Dun Leary Road and Cumberland Street;
- The refurbishment, partial removal and adaptation of a 4 storey building on site known as “Dun Leary House” (a proposed Protected Structure) to provide co-working office suites (c.247m²) at Levels 01,02 and 03. The works will include partial removal of original walls and floors, removal of non original extensions to Dun Leary House, repointing and repair of brickwork and granite fabric, reinstatement of timber sash windows, removal of existing roof, alterations and reinstatement of internal floor layouts, reinstatement of entrance point on Dun Leary Hill, removal of non-original level 00 and linking the existing building to the new development from level 00 to level 03 with the construction of 3 new floors of development (with set back at roof level) above the existing building. It is proposed to repair, reinstate and improve the existing boundary treatment to Dun Leary House;
- Provision of 52 no. car parking spaces in total - 44 no. car parking spaces provided at level 00. At Cumberland Street 11 no. existing on street car parking spaces will be removed and 8 no. on street car parking spaces provided. Provision of 277 bicycle parking spaces (94 no. cycle parking spaces accommodated in bicycle stands and 183 no. long term bicycle parking spaces within a secure storage area) and 4 no. motorbike parking spaces, all at Level 00. A new vehicular entrance/cycle path (off the Old Dun Leary Road), ancillary plant areas, ESB substation and storage areas;
- Extensive hard and soft landscaping throughout, green roof, public lighting, signage, boundary treatments and public realm improvements;

- The demolition of the existing open fronted shed on site and all associated ancillary site services and site development works.

3.3 Sequence of Project

The project is currently at planning stage and subject to approval. It is estimated that the works would commence in late 2020 with an estimated site programme of 18-24 months.

The proposed sequence of construction of the main elements, which are subject to detailed review by the Contractor at construction stage and may require adjustment once the Contractor has been appointed, are as follows:

- Sewer diversion;
- Site setup;
- Site clearance and demolition works;
- Earthworks for basement;
- Basement works;
- Super structure frame;
- Roof and façade finishes;
- Internal fit-out; and
- External site works.

3.4 Site Management

The Contractor will be responsible for the over site management for the duration of the proposed works. The Contractor must progress their works with reasonable skill, care, diligence and must proactively manage the works in a manner most likely to ensure the safety and welfare of those carrying out the construction works. Contractors are further required to ensure that all aspects of their works and project facilities comply with good industry practice, statutory instruments and all necessary consents. These will be further developed within the Contractor's Construction Management Plan in relation to Health and Safety requirements. Such requirements include, but is not limited to, compliance with the Safety, Health and Welfare at Work Act 2005, as amended, and the Safety, Health and Welfare at Work (Construction) Regulations 2013.

3.5 Site Setup

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.

The subject site at present only has a single entry-point for vehicles on Old Dunleary Road. There is an existing pedestrian access on Cumberland Street at the north western side of the

site, however it is overgrown and does not seem to be in use. There is also pedestrian access to the existing house from the south west of the site.

The Contractor shall provide for any necessary traffic management arrangements to ensure all vehicular access requirements to the site can be delivered in safe and appropriate manner with the necessary consideration afforded to existing local access requirements.

At locations where construction traffic may cross a public footpath when accessing/exiting the subject site, the appropriate control measure will be implemented. The proposed location of the Contractor compound may be internally within the site however there remains the potential of a supplementary off-site compound to be used subject to the Contractor's specific requirements.

The site will be secured with hoarding on all open sides and accessible approaches. The hoarding details are to be agreed with DLRCC in advance. Hoarding panels will be maintained and kept clean for the duration of the development. Site hoarding will also include Health and Safety warning at appropriate intervals.

Site security will be provided by way of a monitored infrastructure system including site lighting and CCTV cameras with all site entrances manned by personnel.

Prior to the commencement of physical works on-site the Contractor will undertake a condition survey of the local transport infrastructure (footpaths and road carriageway etc.) that adjoin the site boundary and the principal routes.

3.6 Demolitions & Site Clearance

It is anticipated the demolition of the existing open fronted shed on site and all associated ancillary site services and site development works (shown in Figure 3-1) will be required prior to the commencement of any construction works. The refurbishment, partial removal and adaptation of a 4-storey building on site known as "Dun Leary House" (a proposed Protected Structure) will also form part of the works.

Any demolition that is required will be carried out by a competent Demolition Sub-Contractor in accordance with the current code for demolition and the consultant engineer's specification.

The site has a vegetation coverage in isolated areas which will need to be removed as part of the works, this will need to be undertaken with cognisance of the Arborist and Ecological Reports.

Prior to commencing works, buildings and structures to be demolished will be checked for any likely hazards including asbestos, ACMs, electric power lines or cables, gas reticulation systems, telecommunications, unsafe structures and fire and explosion hazards, e.g. combustible dust, chemical hazards, oil, fuels and contamination.

A pre-demolition survey will be carried out by a competent person and a survey report which contains a register with risk assessments for Asbestos Containing Materials (ACMs) shall be prepared.

All hazardous materials will be removed first. All components from within the buildings that can be salvaged will be removed next. This will primarily include metal however may also include timbers, doors, windows, wiring and metal ducting, etc.

Steel roof supports, beams etc. will be dismantled and taken away for recycling/salvage.

Services will be removed from the ground and the breakdown of walls will be carried out once all salvageable or reusable materials have been taken from the buildings. Finally, any existing foundations and hard standing areas will be excavated.

3.7 Earthworks

Earthworks will consist of reducing existing levels for the proposed 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.



Figure 3-1: Indication of building demolitions and vegetation to be cleared

4.0 FOUNDATION DESIGN AND CONSTRUCTION

4.1 Current Proposed Foundation Solution

4.1.1 Augered Bored Piles

The selection of the current foundation proposal of augered bored piles is based on results of the site investigations, the structural modelling, loading calculations and site constraints. If during excavation of the foundations and basement unexpected ground conditions arise that vary from the site investigations results, it may be necessary to amend the indicative foundation solutions proposed at this juncture.

Augered bored piles are the current proposed solution for the following reasons:

- Because of the extensive depth to a suitable bearing stratum beneath the extents of site, bulk excavation would be required with foundations extending to a significant depth. Extensive temporary works would be required to stabilise the trenches during this work. For this reason, augered piles are considered a more appropriate foundation solution than standard deep strip footings and pads. The use of augered piles will mean that the Contractor will have to address specific concerns regarding noise, vibration, disposal of pile uprisings and the use of very heavy plant on site requiring the design and installation of piling mats. In the case of augered piles the building will be supported on a system of ground beams, pile caps and suspended slabs supported on the piles. The piles themselves will be augered into the stiff clays to gain capacity through a combination of end bearing and friction along the pile shaft. The design of these piles will be by a piling specialist.
- Augered bored piles can transfer large loads to the stiff clay encountered during the site investigation works.
- A secant pile wall is required to be constructed in the temporary case to restrain the deep excavation. The piling rig required to install the secant pile wall can also install the augered bored piles, therefore there is no need to mobilise an additional piece of equipment to the site.

4.2 Other Solutions

4.2.1 Driven Precast Piles

In principle driven precast piles will act in the same way as augered bored piles, as noted above. However, there are a few key differences as follows:

- The capacity of driven precast piles will be less than augered bored piles, as such the quantity of piles will have to increase, as will the size of the pile caps over these piles.
- A different piling rig will be required to drive the precast piles compared to the piling rig that will already be onsite to install the secant pile wall.

- Unlike augered bored piles, precast piles are driven into the ground without any augering required. Therefore, there will be no pile uprisings from the augering process that need to be disposed of.

5.0 HOURS OF WORK

Subject to any potential planning authority limitations and specific Client requirements, on-site construction operations will generally be undertaken between the hours of:

- Weekdays: 07h00 to 18h00, Monday to Friday; and
- Weekends: 08h00 to 14h00 on Saturdays.

The proposed sewer diversion is anticipated to entail overnight works between the hours of 22h00 and 06h00 which is discussed in further detail under section 9.3.2.

There will be no activity on site on Sundays and Public Holidays. However, it may be necessary for some construction operations to be undertaken outside these times, for service diversions and connections, concrete finishing and fit-out works etc. Such works will be agreed in advance with DLRCC.

Similarly, deliveries of materials to site will generally be between the hours of 07h00 and 19h00, Monday to Friday, and 08h00 to 17h00 on Saturdays, subject to planning authority limitations and specific Client requirements. These 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.

There will be no material deliveries to/from site on Sundays and Public Holidays. There may be occasions where it is necessary to make certain deliveries outside these times, where large loads are limited to road usage outside peak times etc.

The construction shift times will ensure that construction traffic will have limited impact on the traditional peak periods of 08h00 to 09h00 and 17h00 to 18h00 as it is envisaged most construction workers will be at work at 08h00 and depart after 18h00.

Working hours will be strictly in accordance with the granted planning conditions. If work is required outside of these hours, written approval will be sought by the Contractor from the Local Authority with residents and businesses being informed.

6.0 DUST AND DIRT GENERATION

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.

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.

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.

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.

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.

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.

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.

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.

7.0 NOISE & VIBRATION

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. The “*Outward Noise Impact Assessment*” has been taken into consideration in this section.

The short-term vibration levels and continuous vibration guideline levels as measured in buildings shall be less than the guideline values in BS 5228.

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, 2014). 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

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.

The Contractor is 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 Control of Noise / Vibration at Work.

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.

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.

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.

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.

8.0 POLLUTION CONTROL

8.1 Overview

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.

8.2 Sediment and Erosion

Groundwater will 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 MANAGEMENT

9.1 Construction Traffic Impact

The major construction items for the proposed development include demolition, excavation, basement construction, superstructure construction and fit out. It is anticipated that the peak of HGV movements to and from the site will be during the excavation and construction of the basement. The peak HGV movements to and from the site will be during the substructure and superstructure construction. It is anticipated that the construction traffic impact on the surrounding local network to the proposed development site will be minimal.

9.2 General Site Access/Egress

The site will be accessed from the existing entrance off Old Dunleary Road for the construction traffic; 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. 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.

As part of the Construction Stage Safety plan for the works a Traffic Management Plan (TMP) will be prepared in accordance with the principles outlined below and it shall always comply with the requirements of:

- Chapter 8 of the Department of the Environment Traffic Signs Manual (August 2019), published by The Stationery Office, and available from the Government Publications Office;
- 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 (DMRB) and the Design Manual for Urban Roads and Streets (DMURS).

The following will require consideration:

- Public traffic external to the site;
- Public cyclists external to the site;
- Public pedestrians external to the site;
- Site operatives accessing and exiting the site;
- Vehicle speed limits;
- Signage – both warning and regulatory

The existing right-of-way for the pedestrian walkways around the site will be maintained during works so far as possible. However, the proposed improvement works to the public realm may

prove necessary for the footpaths along Cumberland Street (shown on Figure 9-1) to be closed, or partially closed, temporarily during the course of the subject construction works:

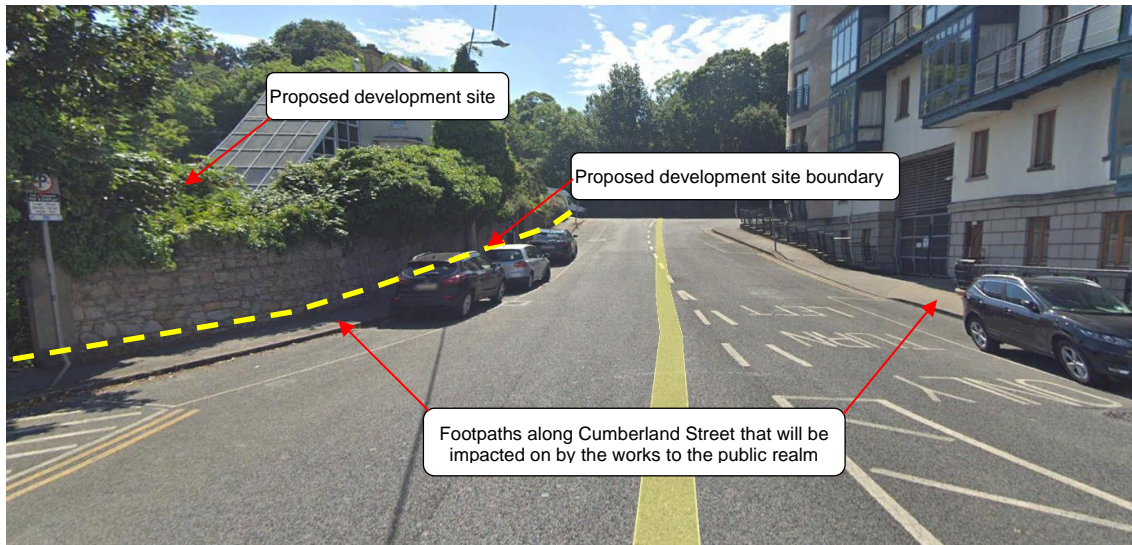


Figure 9-1: Footpaths along Cumberland Street

Where the footpath crosses the proposed construction access route (refer to Figure 9-2), traffic management will be implemented by the Contractor. The Contractor's Construction Management Plan (CMP) must include specifications regarding the quality of temporary reinstatements and the timelines for permanent reinstatements of roads and sidewalks affected by the works.

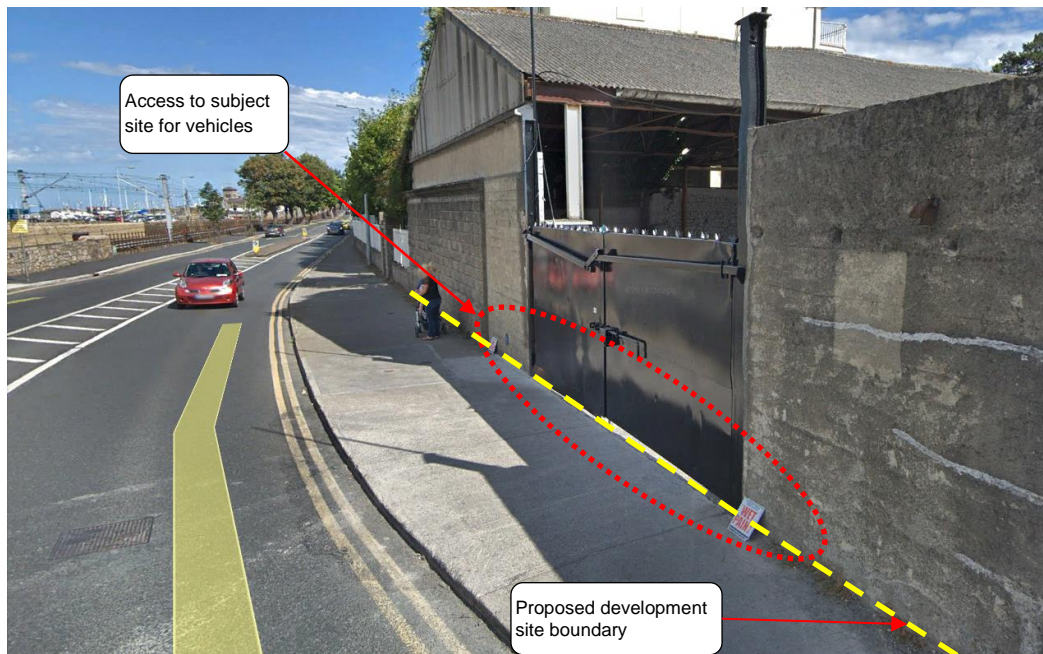


Figure 9-2: Vehicular access to subject site

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.

9.3 Affected Properties

9.3.1 Overview

The existing access points to the various properties that are anticipated to be impacted on by the construction activities related to the proposed development and external works are shown in Figure 9-3 and the descriptions of these access points are set out in Table 9-1. These access points are expected to be impacted on by the proposed foul sewer diversion and public realm works.

Table 9-1: Access point descriptions

No.	Access Description
1	Pedestrian access to private development
2	Vehicular and pedestrian access to private development
3	Vehicular access to Circle K petrol station delivery zone
4	Vehicular access to Circle K petrol station
5	Vehicular access to private property
6	Pedestrian access points to private properties

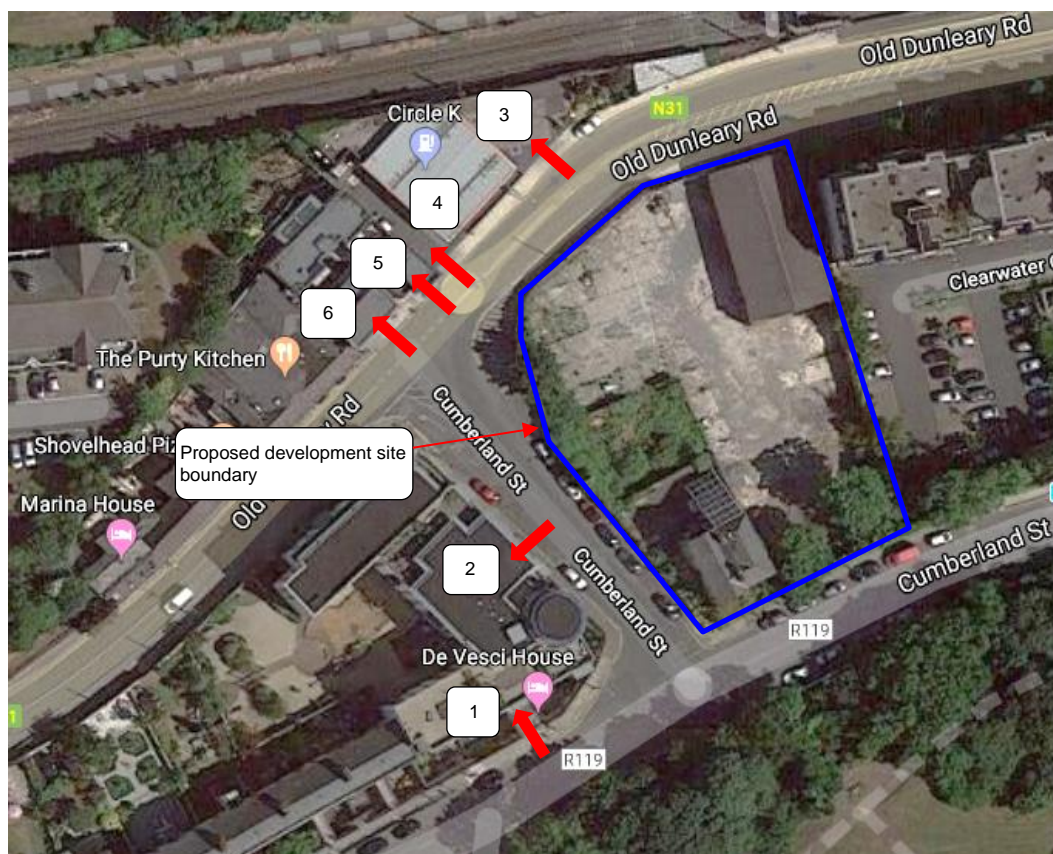


Figure 9-3: Existing access into the site

9.3.2 Foul Sewer Diversion

It is anticipated that the proposed diversion of the Irish Water overflow culvert will be carried out during the Summer months (June – September) when road traffic volumes are expected to be at its lowest. This will commence by means of what is expected to be a combination of partial road closures, along the affected section of Old Dunleary Road, for various segments of the diversion as described under Table 9-2 and illustrated on Figure 9-4.

The Contractor will be responsible for the planning the phasing of works, temporary traffic management arrangements and determining time frames with approvals from the relevant Local Authority.

Table 9-2: Description of proposed works during foul diversion

Segment	Description of expected proposed road closures	Approximate Duration
MH-A to A1	Partial road closures with contraflow conditions implemented during construction of the works. Works to occur in segments.	4 – 5 days
A1 to MH-B	No road closure of Old Dunleary Road as works occur within paint island.	2 – 3 days

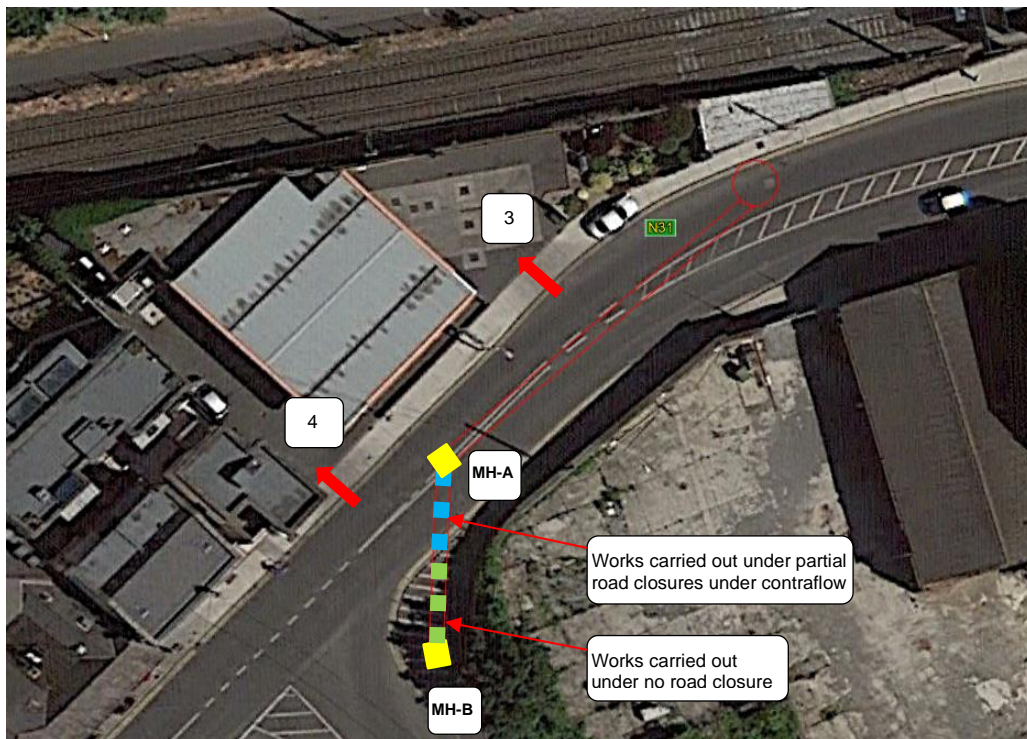


Figure 9-4: Proposed foul sewer diversion

The petrol station on Old Dunleary Road is currently accessed by way of two entry points (access points 3 and 4). The first access (shown in Figure 9-5) is used primarily by private vehicles while the second access (shown in Figure 9-6) provides access for both private vehicles and delivery vehicles.

The entrances to the petrol station will still be accessible during the works for the proposed foul sewer diversion. The access for private vehicles (access point 4) and for delivery vehicles (access point 3) will both be clear at all times during the diversion. The Contractor is to ensure

that this access is clear during any deliveries; and communication with the petrol station is critical.

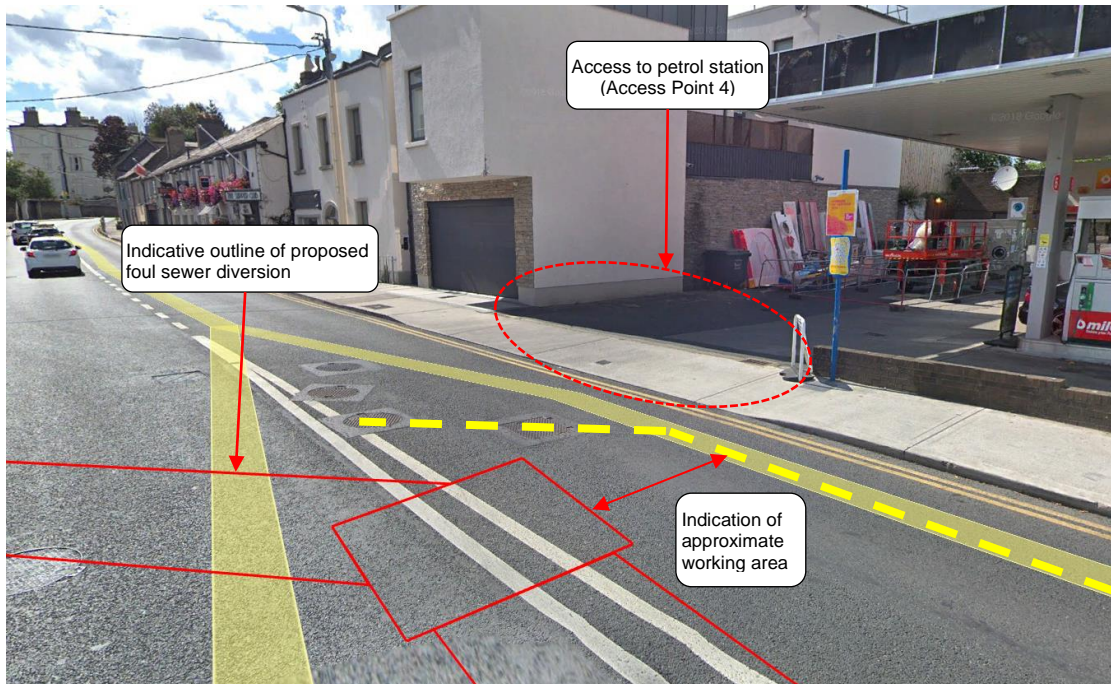


Figure 9-5: Access to petrol station (Source: Google Earth Street View)

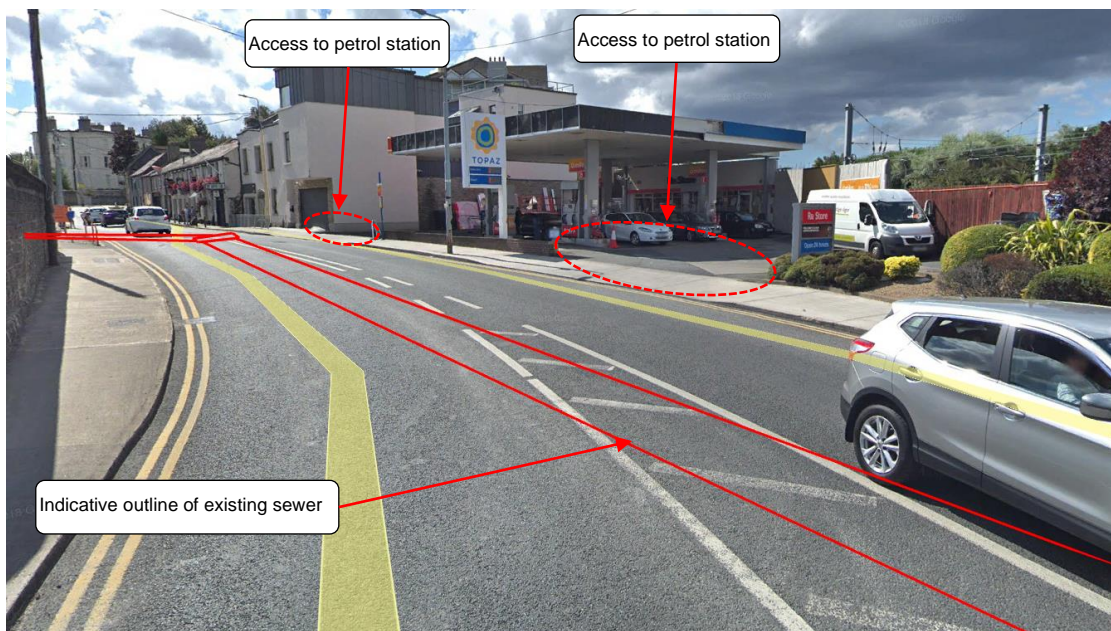


Figure 9-6: Access to petrol station (Source: Google Earth Street View)

9.3.3 Improvements of Public Realm

External works to improve the public realm that will comprise the upgrading of the Old Dunleary Road/Cumberland Street junction to be signal controlled as well as the upgrading of Cumberland Street in accordance with the Design Manual for Road and Urban Streets

(DMURS) as illustrated in Figure 9-7. A courtesy crossing is proposed for the southern end of Cumberland Street in the form of a raised table and paved crossing.

The works to the public realm are expected to commence once the proposed development nears completion and is not expected to completely obstruct any of the private entrances. The Contractor is to ensure that all private entrances affected by the works can be safely accessed at all times.



Figure 9-7: Proposed improvements to the public realm

9.4 Proposed Routes for Construction Traffic

Proposed routes for construction traffic, as per the arrangements proposed in Figure 9-8, will need to respect the local road networks' existing vehicle regulations (including banned movements at off-site junctions) and should be formally agreed with DLRCC prior to commencing any construction works. Construction traffic will consist of the following categories:

- Private vehicles owned and driven by site construction and supervisory staff. This category will predominantly include private motor cars and LGVs.
- Excavation plant, dumper trucks and material delivery vehicles involved in site development works. This could include three or four axle rigid HGVs and five or more axle articulated HGVs.

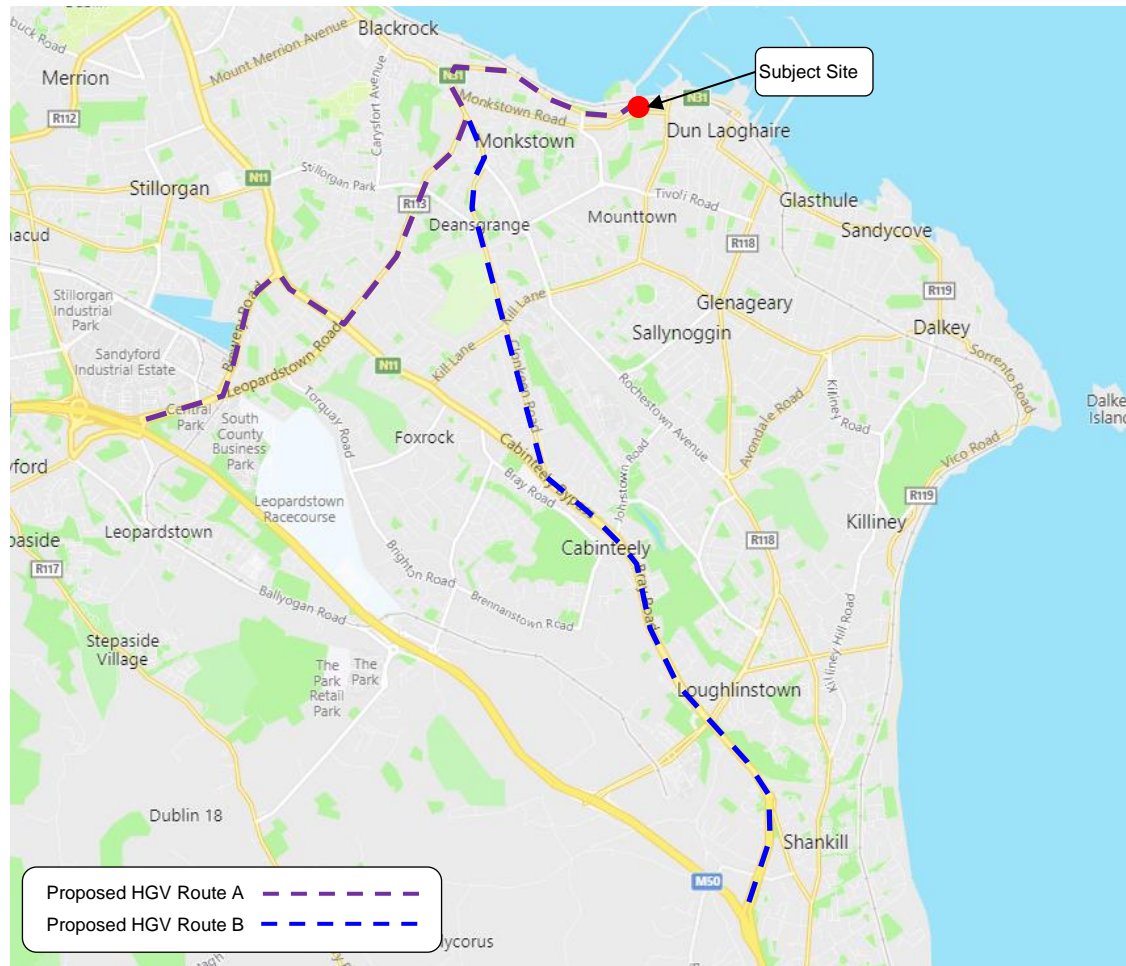


Figure 9-8: Proposed routes for construction traffic

9.5 Staff Parking and Logistics Management

The site is highly accessible by public transport with Dublin Bus and DART services within walking distance. These linkages are illustrated in Figure 9-9. Due to the constraints of the subject site, parking will not be permitted on-site once the proposed development's superstructure works commence.



Figure 9-9: Existing bus routes (source: transportforireland.ie)

All operatives will be encouraged to use sustainable travel options when traveling to/from the subject site. The Contractor and subContractors (with large numbers of on-site personnel) will be obliged to provide private transport from an appropriate park and ride facility.

The Contractor may seek to implement a Contractor's compound with some element of parking provided off-site, subject to the availability of local opportunity sites. This off-site parking facility will be ideally located within walking distance of the proposed development but will not significantly impact the traffic network surrounding the subject site.

On-site employees will generally arrive before 07h00, thus avoiding the morning peak hour traffic. Construction employees will generally depart after 18h00. It should be noted that a large proportion of construction workers may arrive in shared transport. Carpooling will minimise any impact on the traffic network through the reduction of the number of vehicles arriving to the site.

Construction traffic will not be permitted to park on the public roads or within the general area outside the main site. Furthermore loading/unloading of all delivery/collection vehicles will not be permitted to be undertaken whilst the vehicle is parked on the public road network. All construction related traffic will be required to park within the site boundary. Construction traffic overspill concerns will be addressed immediately. All lifting activities, undertaken utilising a crane, will be confined to within the boundary of the subject construction works.

The Contractor will identify a dedicated 'delivery zone' on-site. In response to the site-specific characteristics this delivery zone is likely to be located in the northwestern corner of the site. The delivery zone is likely to incorporate the following principal elements:

- A dedicated area to accommodate the swept path requirements of the largest HGV vehicle that will be permitted access to the site.
- A temporary materials storage area where materials can be offloaded immediately from the delivery vehicle prior to being transferred elsewhere on site.
- Located within the reach (and lifting capacity) of the onsite crane.

The Contractor will appoint a logistics manager who will be responsible for managing the delivery zone and coordinating all deliveries into and collections from the subject construction site. When approaching the logistics manager to book a delivery / collection slot the supervisor will need to confirm the following information:

- The name of the company and contact details of who the delivery is for;
- The approximate time of arrival on-site within a reasonable buffer period to allow for any traffic conditions;
- What material is being delivered / collected;
- The type of vehicle that will be transferring the materials;
- The proposed method of unloading / loading; and
- The name and contact details of at least two Contractor / sub-Contractor personnel who will be made available to assist gate security with the loading / unloading activity and traffic / pedestrian safety.

9.6 On-Site Accommodation

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 / loading / unloading areas for trucks;
- Vehicle turning area; and
- Staff welfare facilities i.e. toilets etc.

9.7 Construction Activities

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.

9.8 Minimisation of Movement and Impact

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.

9.9 Public Roads

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.

10.0 GENERAL MITIGATION MEASURES

10.1 Bat Assessment

The following proposed mitigation measures have been identified in line with the “Bat Assessment of the Buildings and lands at Old Dunleary Road, Tedcastle’s site, Dun Laoghaire Proposed for Development and Implications for Resident and Local Bat Fauna”:

- Carry out an assessment of the buildings on site. If bats are noted, then a derogation must be sought from NPWS which will involve additional measures to protect bats prior to and during demolition and the provision of alternative roost sites for bats within the development.
- Incorporate bat boxes (Schwegler types 2F or 2FN or similar approved) into the site to provide bat roost opportunities. The bat boxes shall be attached to suitable tree/buildings away from lighting and scrub.
- Provide vegetative cover, native and local plant species where possible.
- Control lighting to avoid light pollution of green areas and target areas of human activity.