

**Residential Development at
Lehaunstown Land, Cherrywood**

**Outline Construction Management Plan
232250-PUNCH-XX-XX-RP-C-0006**

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1 Introduction

The purpose of this document is to briefly outline the general activities required for the construction of a proposed residential development on a site located at Lehaunstown Land, Cherrywood, Dublin 18.

A Main Contractor has not yet been appointed to carry out the proposed works. Once appointed, it will be the responsibility of the Main Contractor to prepare and submit a detailed construction management plan for the Client's submission to the local authority for approval. The construction management plan will be a live document that will be updated throughout the project lifecycle by the Main Contractor as required.

Regardless of the form of contract, the Contractor will be contractually bound by any conditions arising from the site constraints identified and specified, all Statutory Regulations governing the works, and any additional measures or modifications that may be imposed on the proposed development by the local authority.

2 Proposed Development

The proposed development comprises residential units together with associated parking, communal space and public open space. The residential units will be made up of terraced houses, duplexes and apartment buildings ranging in height from 2 to 4 storeys. Vehicular and pedestrian access will be provided from the proposed Lehaunstown Neighbourhood Road to the west of the site.

The proposed works are outlined in a series of architectural drawings prepared by ABK Architects and engineering drawings prepared by PUNCH Consulting Engineers and supplied as part of the planning documentation.

Please refer to Architectural Documents for proposed site layout. The site location is shown in Figure 2-1.

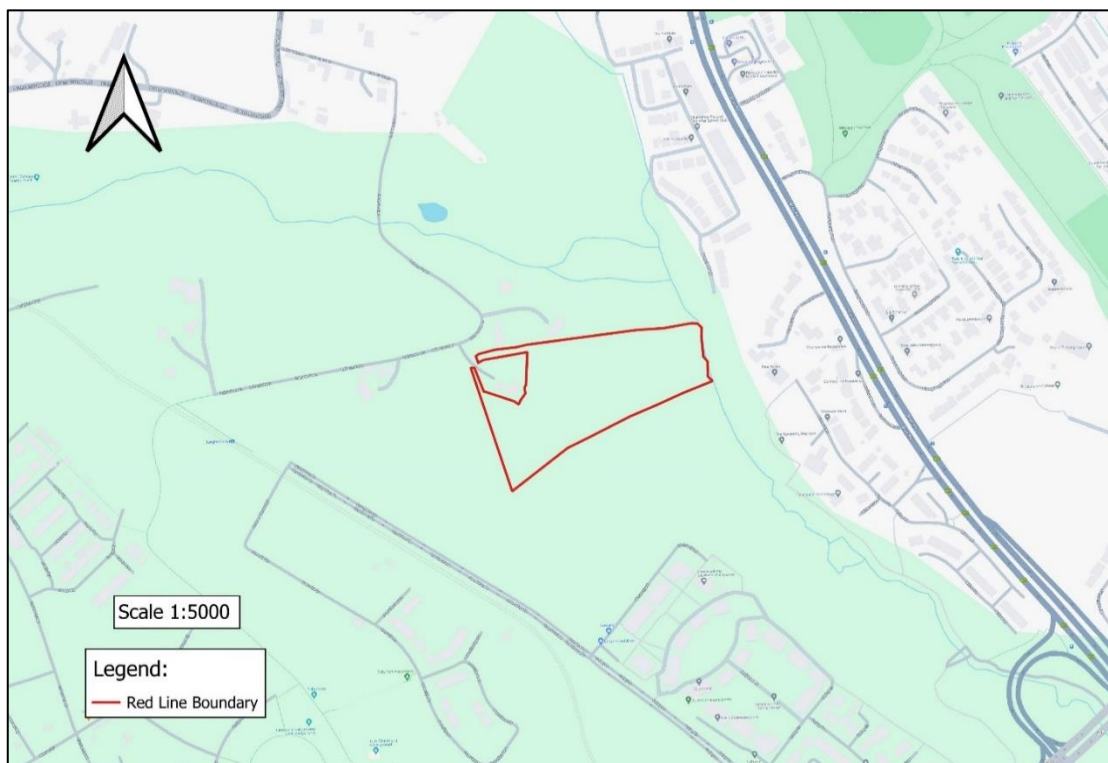


Figure 2-1: Site Location.

3 Indicative Construction Programme

It is estimated that the construction programme for the works associated with the proposed works will last 24 months from the date of commencement. This estimation is based on the typical construction programmes for other similar developments that are currently underway. It is envisaged that construction of the proposed building and external works will be carried out over a single phase. The Main Contractor will be required to prepare a detailed construction programme as part of their tender proposal.

4 Site Set-Up and Security

The Main Contractor will be required to submit a site layout plan that will detail the proposed location of the site compound. The Contractor will ensure that the site compound will be serviced as required and will be secured with appropriate fencing/hoarding. The site compound will be used as the primary location for the storage of materials, plant and equipment, site offices and worker welfare facilities. As Project Supervisor Construction Stage (PSCS), the Contractor will be responsible for site security, and they are to ensure that the site and site compound are adequately secured at all times.

The site compound will be used as the primary location for the storage of materials, plant and equipment, site offices and worker welfare facilities. As Project Supervisor Construction Stage (PSCS), the Contractor will be responsible for site security, and they are to ensure that the site and site compound are adequately secured at all times.

As with the other construction activities that are being carried out within the Dún Laoghaire-Rathdown County Council (DLRCC) remits, activities associated with the construction compounds will be subject to restrictions to the nature and timing of operations so that they do not cause undue disturbance to neighbouring areas and communities.

The site layout plan will also include the site perimeter and the proposed detail with regards the hoarding and gate system.

Please refer section 6 for indicative site set up and to section 7 for outline traffic management plan.

5 Site Access

Temporary access to the site can be gained via Lehaunstown Lane to the north of the site (Figure 5-1), but this access point will not be suitable beyond getting access for preliminary site investigations. Access to the site during construction and upon completion is discussed in section 7 and is illustrated in Figure 7-2.

Permanent access to the site is to be provided via the new Lehaunstown Neighbourhood Road. Please refer to Figure 5-2 for the proposed permanent access to the development site as well as other relevant roads that are to be built as part of the Cherrywood SDZ.



Figure 5-1: Lehaunstown Lane looking at temporary site access. © Google Maps

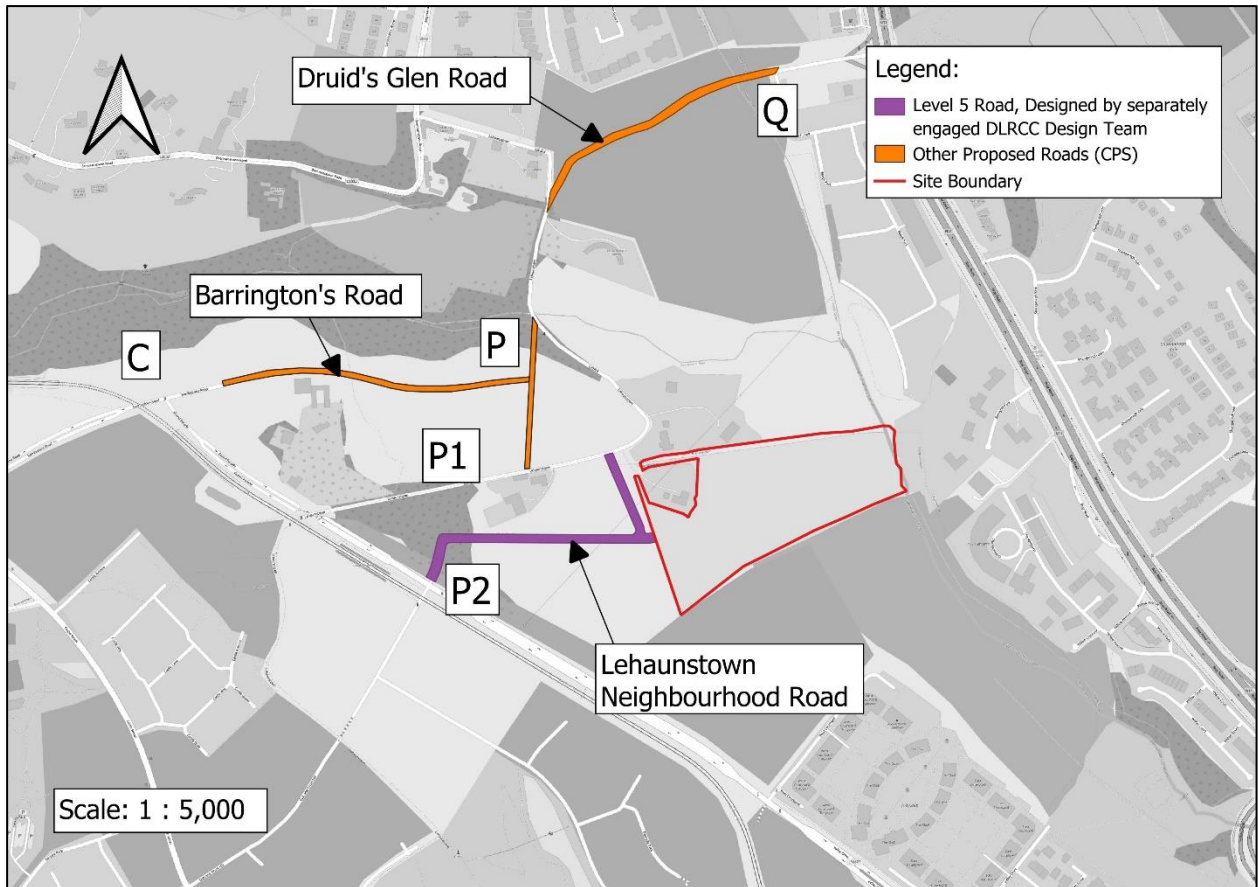


Figure 5-2: Permanent Access to the site upon completion via Lehaunstown Neighbourhood Road.

6 Material Storage and Delivery

The Contractor will ensure that the delivery of materials is coordinated to minimise impacts to adjacent properties. The Contractor will ensure that all materials are adequately stored and secured in their site compound.

The Contractor will ensure the roads adjacent to the site are kept clean and free of debris. Please see below Figure 6-1 for outline site compound for the proposed development. Please note that the proposed Pond 2A site compound is also proposed to be placed on the development site.

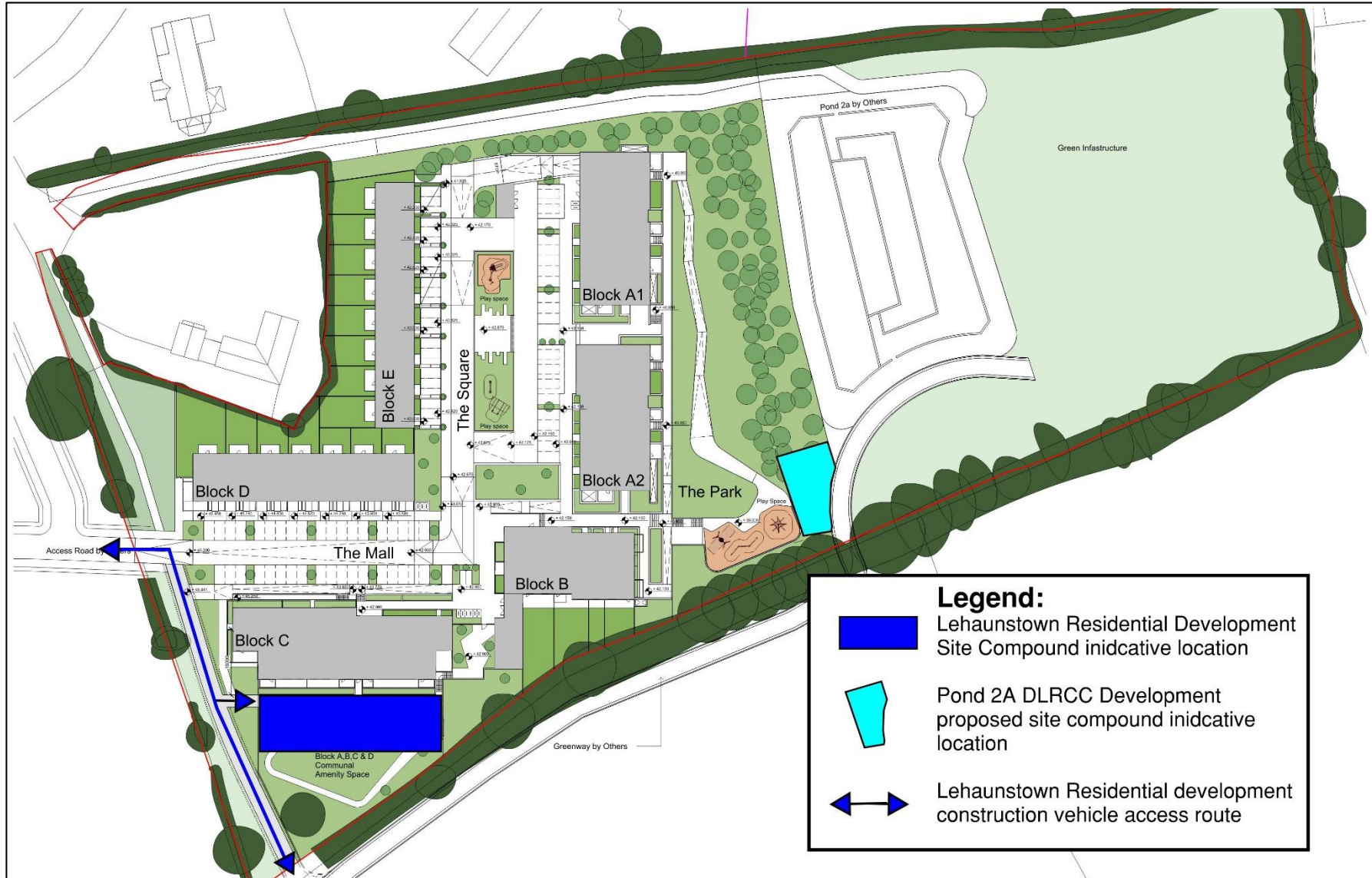


Figure 6-1: Site Compound Location

7 Outline Construction Traffic Management Plan

7.1 Introduction

The Contractor will be required to prepare and submit a detailed traffic management plan as part of their tender submission. Once appointed, the preferred Contractor will further develop the traffic management plan as required for the developer to submit to the local authority for approval in advance of works commencing onsite. The Contractor will ensure that advanced warning signs are erected on approaches to the site as required by the PSCS. The Contractor will use a competent sign provider and all signage that meets the requirements of the Safety, Health & Welfare at Work (General Applications) Regulations 2007 and Chapter 8 Traffic Signs Manual. Any proposed temporary road markings must also confirm to the requirements of Chapter 8 of the Traffic Signs Manual.

7.2 Local Road Network

Please refer Figure 7-1 for an illustration of the current and proposed local road network.

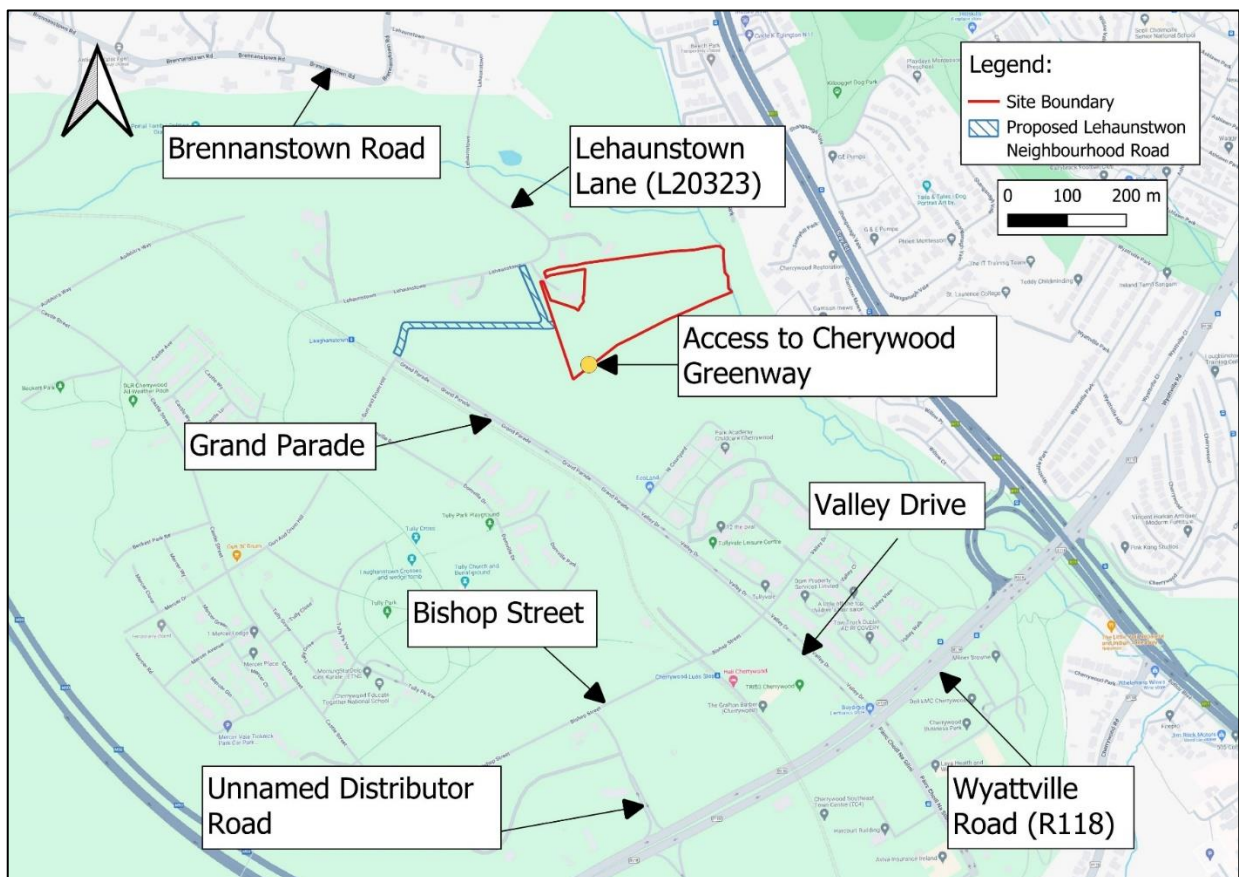


Figure 7-1: Surrounding Road Network

7.3 Proposed Construction Access

There are currently no proposals to introduce temporary road closures or temporary traffic light signals to facilitate construction of the proposed development.

There are currently no proposals to amend the existing local access arrangements to the surrounding areas. The site will be accessible by public footpaths/roadways. The temporary hoarding along the site perimeter may necessitate the erection of temporary internal footways. Where required, these shall be built in accordance with Traffic Management Guidelines.

This proposed construction access/ egress to the site from current publicly available roads would be along one or some of the routes as illustrated in Figure 7-2, and as summarised below:

1. **Lehaunstown Neighbourhood Road** - this access road may be under construction at a similar time to the housing development. Once these road works are completed, then construction access could be provided along this route.
2. **Greenway route through site** - this access route through the site would be available as needed to provide construction vehicle access between route 1 and 3, or to provide local construction vehicle access from route 1 or route 3 to the site
3. **Haul road** - Route no 3 is a temporary haul road access that is proposed to be shared with construction vehicle access to the pond 2A site. This route is expected to be used if route no 1 is not available.

All construction vehicle access is to be provided with permission from relevant landowners, and the specific route within the site is expected to change during the course of construction. Refer Figure 6-1 for proposed indicative layout of site compound.

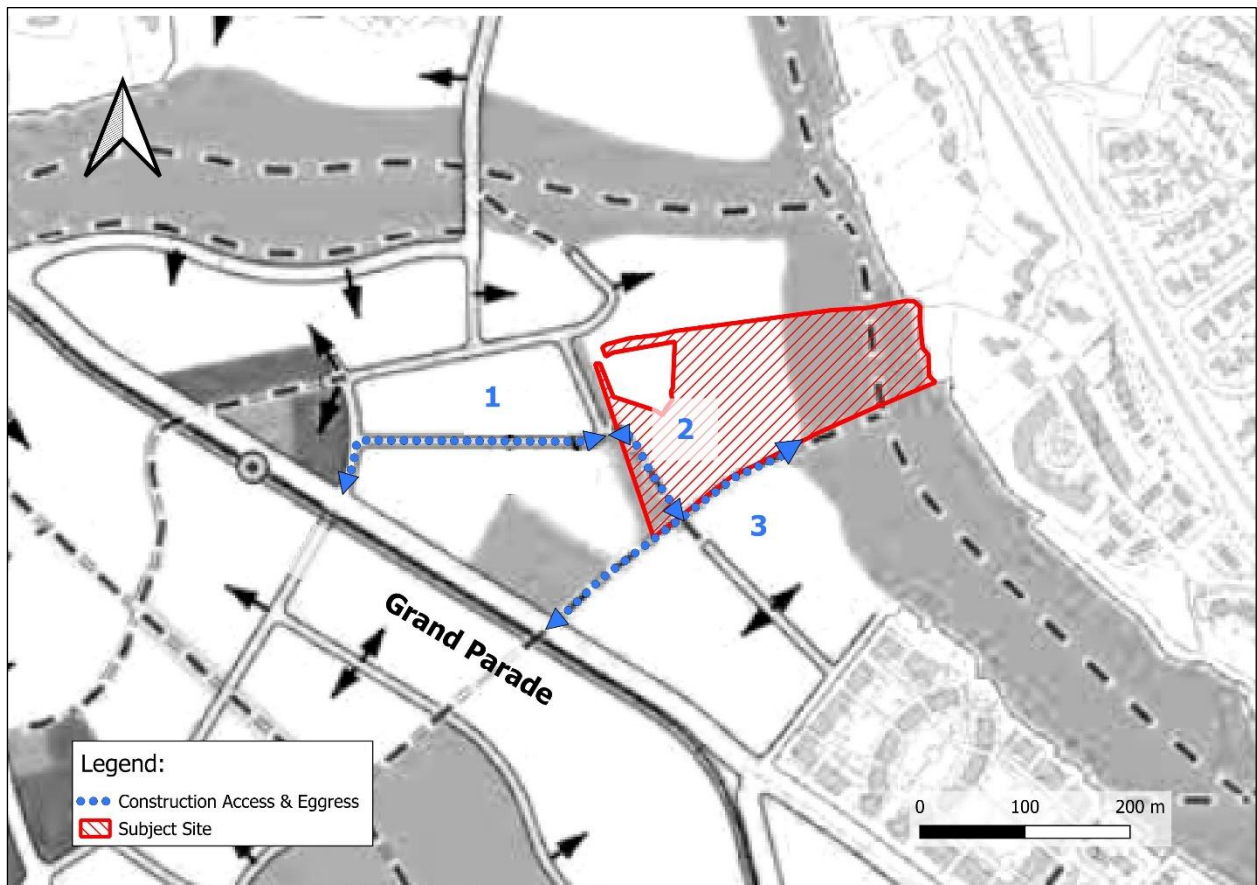


Figure 7-2: Proposed Access routes to/ from the site.

7.4 Cherrywood Planning Scheme Infrastructure

Table 6.1.2 from the Cherrywood Planning Scheme (CPS) describes the required infrastructure to facilitate proposed developments within Lehaunstown. Table 7-1 below is an extract from Table 6.1.2 details the upgrades to the local road network.

Pending the delivery of other proposed roads under the CPS, in particular Druid's Glen Road, an alternative construction access route to the North of site will become available. Druid's Glen Road would allow for access to the N11 via an alternative route should it be required. Currently there is no alternative construction access from the north due to construction access via Brennanstown Road not being permitted.

Table 7-1: Infrastructure Requirements Development Area 1 Lehaunstown (Extract from Table 6.1.2 of the Cherrywood Planning Scheme)

Road Requirements	Comment
- Complete existing Tully Vale Road from A to B in accordance with cross sections.	- Already constructed by others
- Extend Grand Parade B to C and close Lehaunstown Lane at its intersection with the western side of Druid's Glen Road.	- Already constructed by others
- Construct Barrington's Road P to C to D.	- Not part of this project
- Construct Druid's Glen Road Q to P.	- Not part of this project
- Construct street P-P1-P2.	- Not part of this project
- Other Streets in Development Area 1 to be constructed to meet needs of the housing development.	- Level 5 road adjacent to P1 / P2 to be designed by separately engaged DLRCC design team as part of separate project to service site and connect to Grand Parade. Civil consultant is SYSTRA.
- Construct D-D1 in accordance with cross section.	- Not part of this project
Construction Access	Comment
- Extend Grand Parade B-C to suit 'Access' needs.	- Already constructed by others.
- Construct access road from N11, P-Q.	- As required by contractor during works.
- Existing public roads must be kept operational.	- By contractor during works.
- Access from Brennanstown Road will not be permitted.	- By contractor during works.

7.5 Outline Traffic Management in Local Area

The Main Contractor will ensure that Brennanstown Road is not used for construction access and that all existing public roads remain operational during the course of the works. The Main Contractor will also be responsible for all site access and works activity and must ensure that entrance points to the construction zone are controlled as required.

The management of construction traffic on the public road network both around and through Lehaunstown Neighbourhood Road and Grand Parade is a critical part of the overall project. It must be actively managed by the Contractor. Depending on timelines, the Contractor may need to coordinate construction traffic with any nearby permitted developments (as appropriate).

The Contractor must submit a Construction Traffic Management Plan to the Local Authority for approval. Haulage vehicle movements should be fully coordinated to comply with the requirements of the agreed plan:

- a) Construction vehicles must not stop or park along the routes at any time;
- b) Haulage vehicles must not travel in convoys greater than two vehicles at any time;
- c) Site entrance to remain free of parked or stationary vehicles at all times;
- d) All loading of demolition material will occur within the site boundary;
- e) All off-loading of deliveries will take place within the site, remote from the public road and will access via the agreed construction access point.

The site is located in an urban area where the road and junction space is shared with public road users and the flow of construction traffic will need to be marshalled and controlled to ensure that potential conflicts are avoided as much as possible.

7.6 Proposed Construction Parking

The contractor shall, as much as possible, reduce the amount of construction staff parking during the works. Parking requirements can be reduced through the use of a variety of methods, including: carpooling, local shuttle bus services, the use of public transport, and limitation of contractor parking availability.

When required for the works, construction staff parking is to be provided only within the development boundary.

8 Potential Interface with Other Projects

Given the development activity associated with the Cherrywood SDZ, the proposed works will likely have an interface with other projects within the locality. The appointed Contractor will need to coordinate with other Contractors as required to ensure a smooth interface between projects.

There may be a number of PSCS's operating in the urban locality at any one time on individual sites. It will be responsibility of the appointed Contractor as PSCS to ensure that delivery and haul routes, site access and egress points and potential crossing points associated with the site are fully coordinated and agreed with other Contractors in advance of the works commencing.

Particular other developments that are likely to be in construction at the same time as the proposed development is:

1. Pond 2A works development. The site compound for these two sites is proposed to be shared within the residential development site. Please refer section 6 for explanation and to Figure 6-1 for indicative location for each site compound.
2. Lehaunstown Neighbourhood Road. This is the development of the road that is proposed to service the proposed development.

9 General Construction Approach

9.1 Construction Working Space

Construction working space will be set out in the detailed construction management plan at compliance stage.

Construction access routes, haul routes and delivery routes to the site are to be agreed with the Engineer/Employer's Representative in advance of works commencing onsite.

Any road closures required will be submitted and approved in advance with the local authority. It is the responsibility of the Main Contractor to prepare and submit the road closure application to the local authority in advance of works commencing onsite.

9.2 Outline Works Description

The construction works will involve an indicative sequence of works, as described in short below. The Contractor will outline works which impact public spaces within the Construction Management Plan that shall be subject to submission and agreement with DLRCC.

9.2.1 Hoarding, Site Set-up and Formation of Site Access/Egress

The site area will be enclosed with hoarding, details of which are to be agreed with DLRCC. Hoarding panels will be maintained and kept clean for the duration of the works. This will involve erecting hoarding around the proposed construction perimeter in line with the finished development extents.

9.2.2 Tree Protection

Tree and hedge protection as per the project arborist's requirements will be installed prior to the commencement of site clearance works. Please refer to the arborist's report for further information on tree protection works associated with the works.

The available site footprint will enable the Contractor to set up the site compound within the site boundary.

The Contractor will be responsible for the security of the site. The Contractor will be required to:

1. Operate a Site Induction Process for all site staff.
2. Ensure all site staff shall have current 'Safe Pass' cards and appropriate PPE.
3. Install adequate site hoarding to the site boundary.
4. Maintain site security at all times.
5. Install access security in the form of turn-styles and gates for staff.
6. Separate public pedestrian access from construction vehicular traffic.

9.2.3 Site Clearance and Demolition

The existing site is a greenfield site and will require extensive site clearance of soil and vegetation in order to establish the basement level.

It is noted that the proposed development consists of the construction of a basement, multiple storeys of residential apartments and the associated site landscaping and ancillary development.

9.2.4 Construction Sequence

The construction of the proposed new residential apartment structure will consist of bulk excavation, installation of basement structure and construction of an RC framed structure.

The construction methodology and programme of these activities will be dictated by the Contractor.

9.2.5 Bulk Excavation

The basement areas will involve the excavation and removal of material from site. If stockpiling of excavated material is not possible or not permitted on the site due to site constraints, this material will be exported as it is excavated.

A desk-top study of historic information relating to the vicinity notes the ground comprising of the following build-up:

- Limestone Till on;
- Clay (till derived from limestones) on;
- Weathered Granite Rock;
- Granite Bedrock.

Site Investigations have been carried out on site. Rotary Core Boreholes on site indicate potential rock at depths between 5.5m below ground level (BGL).

The basement formation level is at c38.625mOD. Given the rock levels locally as per the site investigations results, it is likely that rock will be encountered during excavation. Further Site Investigations may be necessary to confirm ground conditions to inform basement construction.

The Contractor must prepare a Construction and Demolition Waste Management Plan in accordance with the “Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects” (Department of Environment, Heritage and Local Government, 2006) and ensure that all material is disposed of at an appropriately licensed land fill site. The Contractor must also outline detailed proposals within the Construction Management Plan to accommodate construction traffic.

9.2.6 Construction Sequence of Substructure

The nature and type of the proposed development with its basement indicates that to prevent any potential risk of groundwater intrusion into the lower structure the basement will be constructed as a watertight box, the proposed grade for the basement is Grade 2, as per BS 8102:1990. The proposed structural integrity of the basement and its ability to prevent groundwater intrusion into the site is deemed sufficient to mitigate the potential risk to acceptable limits. The concrete works will involve concrete deliveries to site and adequate wash-down and wheel wash facilities must be provided for the concrete wagons.

9.2.7 Construction Sequence of Superstructure

The construction of the superstructure will involve complex sequencing of activities and various construction methodologies could be adopted to deliver the Contract. The nature of the building, the column grid and economic factors, among other issues, would suggest that the building will be constructed utilising a reinforced concrete frame. The façade may consist of a unitised system to limit the extent of scaffold required, or a more traditional ‘stick’ system to the Architect’s specification.

As noted, the construction methodology and therefore the programme of the construction activities will be dictated by the Contractor.

Building Structure:

- Construction of the foundation basement slab and permanent retaining wall structures;
- Construction of rising elements to Level 0 and construction of Level 0 floor slab;
- Similar sequence of construction of rising elements and floor slabs.

Envelope / Cladding:

- Commencement of envelope works to Level 1 when structure has progressed to approximately Level 2/3;
- Advancing of Cladding two levels behind the structure.

Mechanical & Electrical Fit-Out:

- First fix will commence from ground floor level upwards;
- This will be followed by the second fix and final connections.

Fit-Out:

- Initial installation of stud work when cladding completed and floor is weather tight;
- Installation of equipment and associated connection to services;
- Completion of finishes.

Commissioning:

- The final commissioning period will commence during fit-out.

The construction sequence of the house units will be similar in nature to the apartment build but with no basement construction and potentially an alternative structural form.

The external landscaping works will then be completed at the site.

The above represents a high-level indicative construction sequence only. The actual sequence will be dictated by the Contractor. The Contractor will issue a detailed construction programme outlining the various stages prior to commencement of works. The Contractor is required to obtain all necessary licences from DLRCC.

10 Waste Management Plan

The Main Contractor will be required to prepare a detailed waste management plan for the project. This will be included in the overall construction management plan that will be submitted to the local authority.

Records shall be kept tracking all waste generated from site to final destination, records will be maintained and made available for inspection. A Construction and Demolition Resource Waste Management Plan (RWMP) as set out in the Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for C&D Projects (EPA 2021) shall be developed, implemented and updated throughout the project, identifying type of materials/proportion of re-use/recycled materials and future maintenance to support the implementation of Government and EU circular economy policy. This will be agreed with DLRCC prior to commencement of the works.

11 Communications and Local Stakeholder Management

The Contractor will, as required, liaise with owners of the local properties in advance of works commencing onsite. The Contractor will use a competent sign provider and all signage used will meet the requirements of the Safety, Health & Welfare at Work (General Applications) Regulations 2007 and Chapter 8 of the current version of the Traffic Signs Manual.

A Public Liaison Plan shall be developed and implemented for the duration of the works, covering the following:

1. Appointment of a Liaison Officer as a single point of contact to engage with the local community and respond to concerns.
2. Keeping local residents informed of progress and timing of particular construction activities that may impact on them.
3. Provision of a notice at the site entrance identifying the proposed means for making a complaint.
4. Maintenance of a complaints log recording all complaints received and follow up actions.

The specific requirements for communications and stakeholder management will be outlined to the contractor so that the contractor can implement the communications and stakeholder management.

12 Construction Noise, Dust and Vibration

The Main Contractor will be required to monitor noise, dust and vibration as will be outlined in the planning conditions. The Contractor will establish baselines for noise, dust and vibration in advance of works commencing onsite. As part of their detailed construction management plan, the Contractor will be required to clearly indicate how they plan on monitoring noise, dust and vibration throughout the course of the project. Vibration and noise will be especially critical in relation to the basement construction and associated piling works. The Contractor will also be required to clearly outline the mitigation measures they plan on putting in place to ensure any breaches in the baselines are mitigated.

Prior to the commencement of the proposed site works noise, vibration and dust monitoring stations to be installed and maintained to provide continuous monitoring to measure and record the impact of site activities on local receptors. Noise monitoring will comply with the recommendations contained in BS 5228 and shall be installed, monitored and reported on at weekly intervals by a suitable qualified specialist company for the duration of the contract. All monitoring data to be compiled into a weekly technical monitoring report which shall identify remedial measures where levels exceed relevant limit values.

This will be agreed with DLRCC prior to commencement of the works.

12.1 Dust Management

The objective of dust control is to ensure that no significant nuisance occurs at nearby sensitive receptors. Effective site management regarding dust emissions will be the responsibility of appointed contractor by preparation of a dust management plan (DMP).

The key features of the DMP are:

1. Identification of the site manager with responsibilities for dust.
2. Systems for managing site practices and implementing management controls.
3. Assessment of the performance of the dust management plan.

12.1.1 Site Management

The aim is to avoid dust becoming airborne at source. This will be done through good design and effective control strategies.

Good site management will include the ability to respond to adverse weather conditions by either restricting operations on-site or using effective control measures.

The following measures should be taken in order to avoid dust nuisance occurring:

1. There will be a designated person monitoring performance to ensure that the proposed construction phase mitigation measures are implemented and that construction impacts are minimised.
2. During working hours, dust control methods will be monitored as appropriate, depending on the prevailing weather conditions.
3. Complaint registers will be kept on site detailing all telephone calls and letters of complaint received in connection with construction activities, together with details of any remedial actions carried out.
4. At all times, the procedures put in place will be monitored and assessed.

12.1.2 Dust Control Measures

Soil and Rock Excavation

Soil and rock excavation and rock breaking during periods of high winds and dry weather conditions can be a significant source of dust. During dry and windy periods, and when there is a likelihood of dust nuisance, a bowser will operate to ensure moisture content is high enough to increase the stability of the soil and rock and thus suppress dust. During periods of very high winds, construction activities can generate significant dust emissions and should be postponed until the winds have subsided.

Site Traffic on Public Roads

Spillage and blow-off of debris, aggregates and fine material onto public roads should be reduced to a minimum by employing the following measures.

1. Vehicles delivering material with potential for dust emissions to an off-site location shall be always enclosed or covered with tarpaulin to restrict the escape of dust.
2. At the main construction traffic exit, equipment for wheel washing should be made available. Site constraints may not allow for a full-size wheel wash facility. In addition, public roads outside the site shall be regularly inspected for cleanliness, as a minimum on a daily basis, and cleaned as necessary. A road sweeper will be made available to ensure that public roads are kept free of debris.
3. Vehicles onsite shall turn off engines when not in use to prevent idling emissions.

12.2 Noise Management

Some impact of noise is likely to occur as a result of the construction activity. Construction work is of a temporary nature and the resulting noise levels are usually acceptable, subject to typical management and time control procedures which are common to most development projects.

Construction plant used on site will comply with the relevant Irish regulations in relation to noise and vibration requirements.

Noise will be minimized as far as possible, by limiting the use of compressors and other plant to stated hours and by fitting and use of silencing devices wherever practicable. Attention should be paid to the recommendations given in the latest version of BS 5228. 'Noise Control on construction & Open Sites' & BS6187 Code of Practice for Demolition.

12.2.1 Noise Mitigation Measures

The "DLRCC Good Practice Guide for Construction and Demolition Environmental Management" sets out a risk-based approach to be used for construction projects. This risk matrix has been completed and included in a copy of "DLRCC Good Practice Guide for Construction and Demolition Environmental Management" contained in Appendix A. The results of this assessment indicate that the scheme is high risk in terms of noise.

Mitigation measures outlined in the DLRCC Good Practice Guide for Construction and Demolition Environmental Management shall be adopted for the site. All site staff shall be briefed on the measures and the application of best practicable means to be employed to control noise.

An independent acoustic consultant shall be engaged by the contractor prior to the commencement of site activities and shall review the implementation of the recommended mitigation measures on a monthly basis. The nominated contractor shall appoint a designated person to manage all environmental complaints including noise and vibration, these will be logged and investigated where required. The nominated person will also liaise with and inform local residents and DLRCC regarding out of hours works.

All on-site generator units (if required) used to supply electricity to the site shall be silenced models or enclosed and located away from any receptor. Mains power shall be used to supply electricity to all site offices and site lighting at the earliest instance and the use of generators during the night-time shall be avoided.

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. Noisy stationary equipment shall be sited away from sensitive site boundaries as far as practicable. Noisy plant or activities should be replaced by less noisy alternatives if noise breaches and/or complaints occur. Proper use of plant with respect to minimising noise emissions and regular maintenance will be required, where noisy plant is required to operate in work areas next to residential houses low noise plant options will be used where possible. Selected use of rubber-tyred equipment over steel track equipment can be utilised. Machines in intermittent use shall be shut down when not in use. Static noise emitting equipment operating continuously shall be housed within suitable acoustic enclosure. The use of acoustic screens to attenuate noise at source shall be implemented as deemed necessary.

13 Construction Surface Water Management Plan

13.1.1 Site Surface Water Runoff

Throughout the works, all surface water (water from excavations etc.) will be discharge to a holding tank on site. From here the water will be discharge to a series of settlement tanks. These tanks will act as primary and secondary settlement. The settlement tanks will be of sufficient number and size to allow the necessary retention time for solids to settle. The discharge water from the final tank will be routed to the existing combined water system with approval from the local authority. Visual checks and sampling of the pumping and settlement system will be carried out on a routine basis.

The Cabinteely River runs near to the proposed site. It is important to be cognisant and aware of the potential spillages and deposits from construction related materials during the construction phase. Mitigation measures to be explored are as follows;

- Stockpiling and storage areas to be located away from open drains, waterbodies and any other contributing water source to the river.
- Carry out excavation works during dry periods to limit sediment run-off.
- Installation of silt trenches adjacent to river to retain sediment from surface run-off.
- Re-fuelling of construction vehicles to take place in designated areas. These areas are not be located in the vicinity of surface water drains/water courses etc.
- A concrete truck washdown area will be provided for the site for trucks to use after delivery of concrete. This area will be adequately bunded to mitigate the risk of contaminated runoff discharge to the River. Concrete trucks are to be washed down within the concrete truck washdown area after delivery of concrete, prior to exiting the site. Washdown runoff will be appropriately treated prior to discharge.
- Minimising exposed surfaces and employing silt fencing in areas of temporary topsoil stockpiling will limit the potential for excess sediment movement within the site at source.
- Management and auditing procedures, including tool box talks to personnel, will be put in place to ensure that any works which have the potential to impact on the aquatic environment are being carried out in accordance with the contactors environmental controls, which will be consistent with the submitted construction management plan and construction and demolition waste management plan and any planning conditions.
- Existing and proposed surface water drainage and discharge points will be mapped on the Drainage layout. These will be noted on construction site plans and protected accordingly to ensure water bodies are not impacted from sediment and other pollutants using measures to intercept the pathway for such pollutants.

The measures as outlined shall be managed in order to appropriately manage oils ,fuels, lubricants and other contaminants, to mitigate the risk of impact on the Cabinteely River and other water bodies.

13.1.2 Disposal of Water, Wastewater and Sewage

All site facilities during construction will be located adjoining to the site. The facilities will include canteen, toilet block and drying room for all staff/workers. If viable, these facilities will be connected to the Irish Water sewage system with local authority / Irish Water approval. If a water connection is not available, wastewater is to discharge to a site wastewater holding tank and discharged to a licenced facility.

13.1.3 Temporary Development Drainage Discharge

The development requires the adjacent Pond 2A works to be completed to facilitate permanent surface water drainage connection. Subject to the specific program for both projects, a temporary drainage discharge to the Cabinteely River may be required during construction. This discharge is to be controlled as outlined in section 13.1.1 above.

All required licences from local government shall be obtained by the contractor to implement this discharge.

14 Working Hours

It is anticipated that construction working hours will be stipulated in the planning conditions attached to the planning grant. Any working hours outside the normal construction working hours will be agreed with DLRCC. The planning of such works will take consideration of sensitive receptors, in particular any nearby businesses.

The working hours are as follows;

- 07:00 a.m. to 18:00 p.m. Monday to Friday,
- 07:00 a.m. to 14:00 p.m. Saturday

No activities shall take place on Sundays or Bank Holidays.

15 Lighting

There are no proposals to alter the existing lighting arrangements in the area. It is not envisaged that any existing public lighting will need to be disconnected as a result of the proposed works. Appropriate lighting will be provided as necessary at construction compounds. All lighting will be installed so as to minimise light spillage from the site.

16 Ecological Protection

Please refer to ecological documentation for all appropriate ecological protection requirements.

17 Pest Control

An appropriate rodent/pest control shall be developed and implemented for the duration of the works on site. A licensed pest management professional shall be consulted for an expert opinion and to develop a site appropriate plan with consideration to the existing natural site conditions and features.

Monitoring reports will be prepared at regular intervals and submitted to DLRCC during the works. Details for same to be agreed with DLRCC.

18 Arboricultural Impact and Tree Protection Strategy

A Tree Protection Strategy is provided as part of the arboricultural element of the submission with the aim of ensuring retained trees are maintained for the duration of the construction stage of the development free of negative construction related impacts.

Please refer to Site Arborist documentation for further information.

19 Construction Employment

Construction employment numbers will vary depending on the construction stage of the project and the actual approach adopted by the Contractor. However, it is anticipated that at the peak of construction there will be a workforce of approximately 30-40 people employed.

**Appendix A DLRCC Good Practice Guide for Construction & Demolition
Environmental Management**



Good Practice Guide for Construction and Demolition Environmental Management



August 2022

Practice Guide for Construction and Demolition.

In order to ensure that demolition and construction work does not have an adverse impact on those living and working nearby, the following best practice guidance has been developed. All construction and demolition work has the potential to have adverse environmental impacts no matter what the scale. The following best practice guide sets out the measures which all developers should consider prior to commencement of work and provides further recommendations for the control of noise, vibration and air pollution.

Prior to the commencement of work on the site a construction and demolition plan must be developed. When developing the construction and demolition plan reference must be made to the requirements of this document

Disclaimer: This Guide does not constitute an Approved Code of Practice and it neither replaces nor provides an authoritative statement of the law or of the policies and standards of any local authority on which users should take their own advice as appropriate.

Regardless of the risk category initially assigned to a development on receipt of a complaint additional control measures may be required.

This Guide has been produced with reference to the London Good Practice Guide: Noise and Vibration Control for Demolition and Construction produced by the London Authorities Noise Action Forum, July 2016.

Early Planning During the Design Phase

During the design phase it is recommended that the constructability of any proposals considers, among other things, the practicality of employing measures that can be incorporated to minimise noise and vibration and dust nuisance.

In many cases, simple measures can be highly effective if properly planned. For example, the provision of electrical power on site can be used to avoid the later use of generators. Demolishing structures in a manner which means that any structure providing screening to neighbouring properties remains in place as long as practicable, thus minimising the noise level at that neighbouring property.

In controlling the noise from construction sites the choice of plant (i.e. controlling noise and vibration at source) and obstructing the path of noise to the receiver through the introduction of hoardings / acoustic barriers / layout design etc., are the primary considerations which need to be planned early on in the development process.

The hours of work also need to be considered in order to mitigate the effects of the noise and vibration on sensitive receptors.

The risk assessment approach described in 'Risk Assessment Approach' set out below, can further assist in early planning of construction works.

Risk Assessment

A risk based approach is to be used taking into account the locality, nature of the work and the expected duration of the work.

Risk Assessment A – Locality/Site Information

The site should be assessed in relation to the duration of the work, distance to sensitive receptors, ambient noise levels and working hours. Tick the field most likely to apply and add up the number of ticks in each column.

Risk Assessment B - Work Information

Tick the field that is most likely to represent the works in each category, add up the total number of ticks in each column.

Total Risk Assessment

The table 'total risk assessment' contains the sub-total numbers from 'Risk Assessment A and B. The column in total risk assessment with the most ticks indicates the risk category that should be employed for the site.

If two risk categories have an equal number of ticks, the higher category of the two shall apply. Once the risk category is known the 'good practice measures' outlined in this guide shall be employed

1. Locality

Identify those who may be affected by noise, including particularly sensitive locations (hospitals/schools) and determine ambient noise levels (noise maps or noise monitoring)

	Low	Medium	High
Expected duration of work			
Less than 6 months			
6 months to 12 months			
Over 12 months			X
Proximity of nearest sensitive receptors			
Greater than 50 metres from site			
Between 25m and 50m			
Less than 25 metres			
Hospital or school within 100 metres			X
Day time ambient noise levels			
High ambient noise levels (>65dB(A))			
Medium ambient noise levels (55-65dB(A))		X	
Low ambient noise levels (<55dB(A))			
Working Hours			
7am – 6pm Mon-Fri; 8am-1pm Sat	X		
Some extended evening or weekend work			
Some night time working, including likelihood of concrete power floating at night			
SUBTOTAL A	1	1	2

	Low	Medium	High
Location of works			
Majority within existing building			
Majority External			X
External Demolition			
Limited to two weeks			
Between 2 weeks and 3 months			
Over three months			X
Ground Works			
Basement level planned			X
Non-percussive methods only			
Percussive methods for less than 3 months			
Percussive methods for more than 3 months			
Piling			
Limited to one week			
Bored Piling Only			
Impact or vibratory piling			X
Vibration generating activities			
Limited to less than 1 week			
Between 1 week and 1 month			
Greater than 1 month			X
SUBTOTAL B			5

	Low	Medium	High
Risk Assessment A	1	1	2
Risk Assessment B			5
Total	1	1	7

The column in total risk assessment with the most ticks indicates the risk category that should be employed for the site.

1. General Considerations

All site staff shall be briefed on noise mitigation measures and the application of best practicable means to be employed to control noise.	All sites
Good Quality site hoarding should be erected, designed to maximise the reduction in noise levels	Medium and high risk sites
The contact details of the contractor and site manager shall be displayed to the public, together with the permitted operating hours, including any special permissions given for out of hours work	Medium and high risk sites
The site entrance shall be located to minimise disturbance to noise sensitive receptors, subject to traffic restrictions	Medium and high risk sites
Internal haul routes shall be maintained and steep gradients shall be avoided, where possible	Medium and high risk sites
Material and plant loading and unloading shall only take place during normal working hours unless the requirement for extended hours is for traffic management(i.e. road closure) or health and reasons (application must be made to DLR a minimum of 4 days prior to proposed works)	All sites
Use rubber linings in chutes, dumpers and hoppers to reduce impact noise	Medium and high risk sites
Minimise opening and shutting of gates through good coordination of deliveries and vehicle movements	Medium and high risk sites
No materials shall be burned on site	All sites
Adequate dust/debris screening should be in place at the site boundary to contain and minimise the amount of windblown dust. This must be maintained in good condition at all times.	Medium and high risk sites
All consignments containing material with the potential to cause air pollution being transported by skips, lorries, trucks or tippers must be covered during transit on and off site.	All sites
The site shall be dampened down as necessary to minimise windblown dust when necessary or during periods of dry weather. Where dust is likely to be a persistent problem a water spray system e.g. (IBC tanks fitted with hoses) must be put in place from the commencement of the works where required.	All sites
Dust suppression equipment must be used when point source emissions are likely.	All sites
The entry and exit points to the site should be constructed of hard standing which is regularly dampened to minimise dust emissions.	Medium and high risk sites
Use of road sweeper and/or hand held dust vacuums as required to wash external site perimeter to include pavements.	All sites
Implementation of a detailed complaints recording and handling procedure	All sites

2. Plant

Ensure that each item of plant and equipment complies with the noise limits quoted in the relevant European Commission Directive 2000/14/EC	All sites
Fit all plant and equipment with appropriate mufflers or silencers of the type recommended by the manufacturer	All sites
Use all plant and equipment only for the tasks for which it has been designed	All sites
Shut down all plant and equipment in intermittent use in the intervening periods between work or throttle down to a minimum	All sites
Power all plant by mains electricity where possible rather than generators	Medium and high risk sites
Maximise screening from existing features or structures and employ the use of partial or full enclosures for plant	Medium and high risk sites
Locate movable plant away from noise sensitive receptors	All sites

3. Vehicle activity

Ensure all vehicle movements (on site) occur within normal working hours. (other than where extension of work requiring such movements has been granted in cases of required road closures or for health and safety reasons)	All sites
Plan deliveries and vehicle movements so that vehicles are not waiting or queuing on the public roads. If unavoidable engines should be turned off.	Medium and high risk sites
Minimise the opening and closing of the site access through good coordination of deliveries and vehicle movements	Medium and high risk sites
Plan the site layout to ensure that reversing is kept to a minimum	Medium and high risk sites
Where reversing is required use broadband reverse sirens or where it is safe to do so, disengage all sirens and use trained banks-men	Medium and high risk sites
Wheel washing of vehicles prior to exiting the site shall take place to ensure that adjoining roads are kept clean of dirt and debris. Regular washing of adjoining streets should also be carried out by the developer, as required by mechanical road sweepers	Medium and high risk sites

4. Demolition Phase

Employ the use of acoustic screening; this can include planning the demolition sequence to utilise screening afforded by buildings to be demolished.	Medium and high risk sites
If working out of hours for Health and Safety reasons (following approval by DLR) limit demolition activities to low level noise activity unless absolutely unavoidable)	All sites
Use low impact demolition methods such as non-percussive plant where practicable	Medium and high risk sites
Use rotary drills and ‘burstors’ activated by hydraulic or electrical power or chemically based expansion compounds to facilitate fragmentation and excavation of hard material.	Medium and high risk sites
Avoid the transfer of noise and vibration from demolition activities to adjoining occupied buildings where possible through cutting any vibration transmission path, or by structural separation of buildings	Medium and high risk sites
Consider the removal of larger sections by lifting them out and breaking them down either in an area away from sensitive receptors or off site.	High risk sites

5. Ground Works and Piling Phase

The following hierarchy of groundwork/piling methods should be used if ground conditions, design and safety allows: <ul style="list-style-type: none"> • pressed in methods, e.g., hydraulic jacking • Auger/bored piling • Diaphragm walling • Vibratory piling or vibro-replacement • Driven Piling or dynamic consolidation 	Medium and high risk sites
The location and layout of the piling plant should be designed to minimise potential noise impact of generators and motors	Medium and high risk sites
Where impact piling is the only option utilise a non-metallic dolly between the hammer and driving helmet or enclose the hammer and helmet with an acoustic shroud	Medium and high risk sites
Consider concrete pour sizes and pump locations. Plan the start of concrete pours as early as possible, subject to DLR approval, to avoid time overruns	Medium and high risk sites
Where obstructions are encountered, work should be stopped and a review undertaken to ensure that work methods that minimise noise are used.	Medium and high risk sites
When using an auger piling rig do not dislodge material from the auger by rotating it back and forth. Use alternate methods where safe to do so.	Medium and high risk sites
Prepare pile caps using methods which minimise the use of breakers, e.g., use hydraulic splitters to crack the top of the pile.	Medium and high risk sites

6. Monitoring

Establish pre-existing levels of ambient noise by baseline monitoring or use of the noise maps.	Medium and high risk sites
Carry out regular on site observation monitoring and checks/audits to ensure that BPM is being used at all times. Such checks shall include; <ul style="list-style-type: none"> • Hours of work • Presence of mitigation measures • Number and type of plant • Construction methods Site reviews must be recorded and made available for inspection	Medium and high risk sites
Monitor noise and vibration continuously during demolition, piling, excavation and sub and superstructure works at agreed locations and report to DLR at agreed intervals and in an agreed format. To comply with this the following must take place. <ul style="list-style-type: none"> • The initial monitoring locations must be agreed with officers of DLR and must remain in situ, unless agreed otherwise. If additional monitoring is required the new locations must be agreed with DLR. • The results of the monitoring must be forwarded to officers of DLR Environmental Enforcement Section every two weeks in the following format: <ol style="list-style-type: none"> 1. <i>Provide the construction noise level as defined in British Standard 5228 and the peak particle velocity readings for the hours of operation of the site. This will include the construction noise level for any overtime period worked outside of normal working hours.</i> 2. <i>Provide a report detailing and discussing the noise and vibration levels over the reporting period.</i> 3. <i>If a breach is recorded the follow up action that took place to prevent any further breaches must be included in the report.</i> 4. <i>This information must be provided in electronic format If results are required owing to complaints the results will be provided as soon as possible by the contractor to DLR.</i> 	Medium and high risk sites
Appraise and review working methods, processes and procedures on a regular basis to ensure continuous development of BPM	Medium and high risk sites
The 'ABC' Method detailed in Paragraph E.3.2 of BS 5228-1:2009 shall be used to determine acceptable noise levels for day, evening and night time work.	Medium and high risk sites
Vibration levels are recommended to be kept below 1.0 mm/sec (PPV) where possible. Where levels are expected to exceed this value residents must be warned and an explanation given.	Medium and high risk sites
Appropriate dust suppression must be employed to prevent fugitive emissions affecting those occupying	All sites

neighbouring properties or pathways, in so far as possible Street and footpath cleaning must be undertaken during the demolition and ground works phase	
The following air quality monitoring procedures must be applied: <ol style="list-style-type: none"> Continuous real time particulate (i.e. PM10 and PM2.5) monitoring along the site boundary must be undertaken during any demolition, ground works or during a construction phase which DLR deems necessary. The location of particulate monitors to be agreed with DLR prior to installation. The results of the monitoring shall be made available to DLR on request in an agreed format. Dust deposition monitoring must be undertaken using a methodology agreed in advance with DLR 	Medium and high risk sites

7. Liaison with Local Community and Businesses

Appointment of a Liaison Officer as a single point of contact to engage with the local community and respond to concerns	Medium and high risk sites
Keeping local residents and businesses informed of progress and timing of particular construction activities that may impact on them, including any special permissions given for out of hours work.	Medium and high risk sites
A copy of this plan must be sent to DLR as a matter of urgency in the case of sites 14 days in advance of commencement of works for any site	High risk sites
Send regular updates at appropriate intervals to all identified affected neighbours/ businesses via a newsletter and post relevant information on the site hoarding. Also make the information available via email/website including weekly noise monitoring reports	High risk sites

8. Complaints Handling

Maintenance of a site complaints log detailing <ol style="list-style-type: none"> Name and address of complainant Time and date complaint was made Date, time and duration of noise, or other issues complained of Characteristics of nuisance, such as noise rumble, clatters, intermittent, etc. Likely cause or source of nuisance Weather conditions, such as wind speed and direction Investigative and follow -up actions, including response sent to complainant 	All sites
Contact details for the site manager and liaison officer should be displayed prominently on the site hoarding	All sites