

**CONSTRUCTION MANAGEMENT PLAN**

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**PROJECT: SILVER GRANITE, PALMERSTOWN**

**STATUS: PLANNING PERMISSION**

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## 1.0 INTRODUCTION

This Construction Management Plan has been prepared by GDCL Consulting Engineers, on behalf of Hollyville Investment Ltd. to support a Planning Application to South Dublin County Council for development of the site at Silver Granite public house, Kennelsfort Road Upper, Johnstown, Dublin 20. The proposed mixed-use development will comprise of 50 no. apartments, as well as an internal basement, Gastropub, Retail Unit, Pharmacy and Off-License. The purpose of this plan is to provide information necessary to ensure that the management of construction at the site is undertaken in accordance with current legal and industry standards.

## 2.0 DESCRIPTION OF THE PROJECT

### 2.1 Location, Size and Scale of the Development

The site is approximately 0.3ha in area and is bordered to the west by the Walkinstown Kennelsfort Road, Wheatfield Road to the north, a petrol service station to the south and Oakcourt Grove residential estate to the east. The site currently houses a two-storey public house, bookmakers and barbers with off road surface parking. The surrounding area comprises a mix of retail/commercial enterprises and residential development.

The proposed development will involve the demolition of the existing two storey building and infill of the existing basement and the construction of a multistorey mixed-use development consisting of:

- 50 no. apartments, comprising of 25 no. one-bed apartments and 25 no. two-bed apartments;
- Internal Basement, Gastropub, Retail Unit, Pharmacy and Off-License at Ground Floor Level;
- Commercial parking fronting the development
- Resident parking located within the existing adjacent shopping centre carpark

The schedule of areas breakdown for the commercial units are as follows:

**Table 1 - Schedule of Commercial Areas**

	Floor Area (m <sup>2</sup> )
Gastropub	558
Spar	226
Pharmacy	157
Bar/Off License	147
<b>Total</b>	<b>1088</b>

The proposed development will include upgrading of the existing public parking, landscaping and footpaths currently adjoining the existing building.

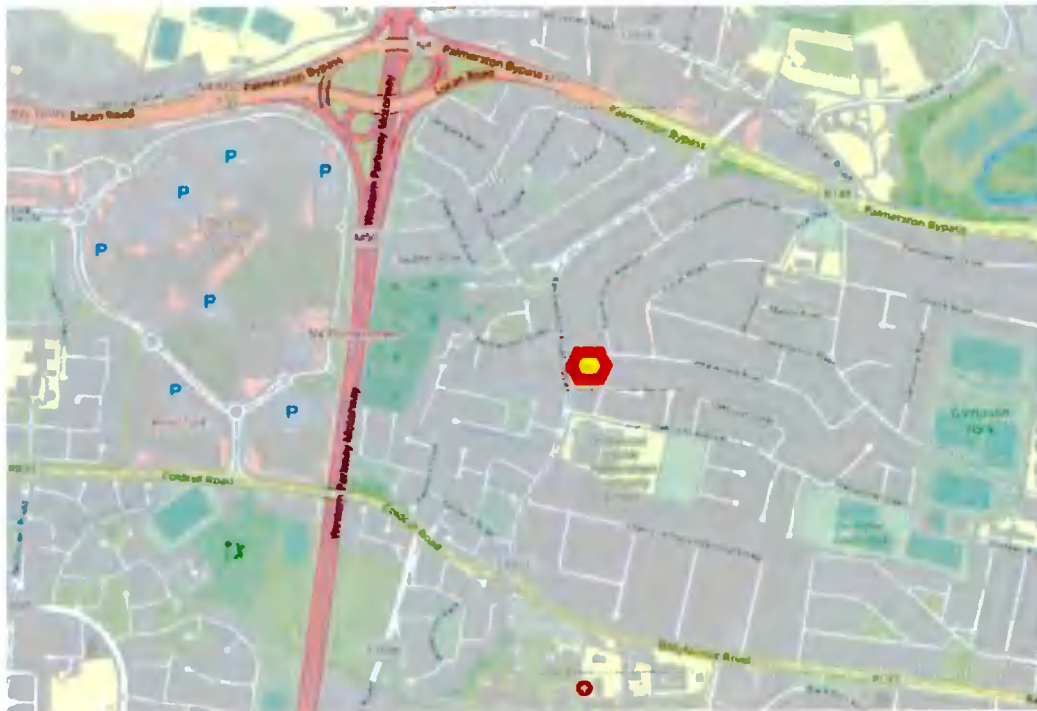


Fig. 1 - Site Location - Aerial View

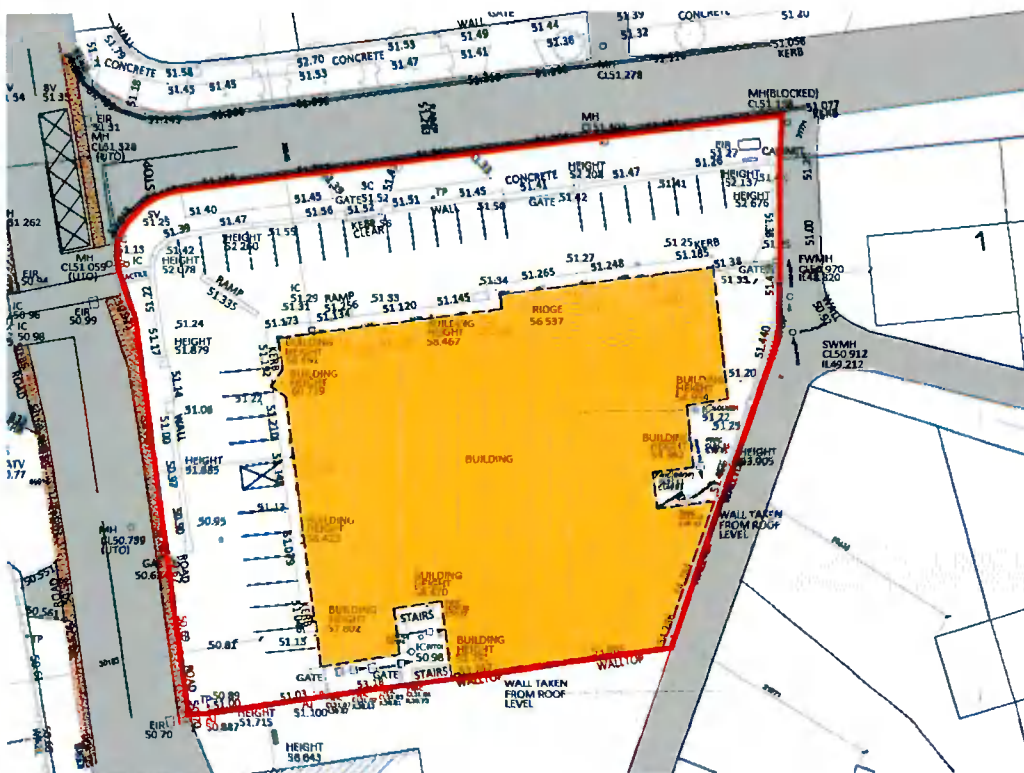


Fig. 2 - Site Boundary (Roof shown hatched)

## 2.2 Modular Construction

Particular attention will be given to the proposed methodology of construction within a confined site and it is therefore proposed to make as much use as is practicable and possible of modular construction methods utilising pre-engineered off-site manufactured components to minimise on-site construction activities and associated potential impacts such as disruption, site traffic etc. This document comprises the Construction Management Plan and in particular provides details of the intended construction practice for the development, proposed hours of working, noise management measures, and also demonstrates how impacts are to be minimised during the construction phase of the development, in the context of an infill development in close proximity to busy thoroughfares such as nearby Kennelsfort Road Upper and Chapelizod Bypass.

## 2.3 Scope of Construction Works

The engineers' and architect's drawings describe in detail the extent of proposed construction works.

The proposed structural scheme may be summarised as follows:

- Foundations: Bored Piles (CFA and/or 'mini-piles')
- Basement: Integrated pile caps and in-situ floor slab
- Ground Floor: Integrated pile caps and in-situ floor slab
- 1st- 4th Floor: Modular construction (pre-engineered /off-site manufactured)
- Roof: Steel framing & glass feature roof (pre-engineered if possible)

## 2.4 Demolition Works – Extent

The proposed part-demolition works will include the following:

- Demolition and removal of existing buildings
- Breaking out of existing slab for new foundations

## 2.5 Justification for Demolition of existing

(i) Local Demand for Residential Accommodation:

The development site is located in Dublin 20 and represents an infill site. The proposed development will provide high quality, much needed residential accommodation and amenities, all of which are considered as significant in terms of consolidating and facilitating the development of the Dublin 20 area, reinforcing, strengthening and protecting its civic design character and dignity of the area and the existing urban settlement.

(ii) Demolition / Enabling Works:

The demolition works are required as part of the fundamental 'enabling works', to allow addition of a new multistorey building comprising of 4 no. storeys as well as a basement. All demolition works will involve elements which are required to be removed to allow construction to proceed and/or are of a quality and material would be completely unsuitable for re-use in a proposed development which is to provide high quality, building regulation compliant 4- storey residential development.

## 2.6 Proposed Demolition Methodology

This outline demolition methodology herein is provided for Planning Permission purposes only. The Contractor must develop a detailed set of Demolition Method Statements and risk assessments in accordance with the current 'Safety, Health and Welfare at Work (Construction) Regulations'.

Work shall be carried out in accordance with BS EN 6187: 2011 Code of Practice for Full and Partial Demolition.

The following provides a 'high-level' summary of what would be considered as a typical acceptable demolition methodology:

### Establish a site set-up and welfare facilities

Erect any necessary hoarding around the perimeter of the site

Carry out an intrusive asbestos survey to identify the presence of any carcinogenic materials, in particular as possible fire protection to steel work, and in plant areas

Carry out a detailed services survey of the site to identify all buried services, determine what services are live, redundant and potentially serve neighbouring properties

Carry out any necessary services diversions and decommissioning works

Carry out a soft strip of the building to remove free-standing units, furniture, floor finishes, ceiling tiles, windows, partitions, doors and door frames, ceiling bulkheads, M&E services, heaters, light fittings, fixtures and fittings, first fix joinery etc.

### Proximity to Public Roads

Partial and limited demolition are proposed which will not occur in close proximity to the adjoining public roads. There will however be a requirement for movement of debris and demolition materials off site which will require construction site traffic management in consultation with SDCC. Construction traffic is dealt with in the Transportation & Traffic Impact Assessment Reports prepared by NRB Consulting Engineers which is also being submitted with the planning permission application. Prior to commencement of the works, the appointed contractor will be required to develop a final Construction Management Plan need which will include proposed Construction

Traffic arrangements in accordance with regulatory requirements and good practice, with reference to the DTO publications "Traffic Management Guidelines" manual and the "Traffic Signs Manual".

## 2.7 Construction and Waste Management

Demolition works at the site will involve the demolition of the existing structures and hard standing areas on site. For detail of the proposed management of all waste generated during the works, reference should be made to the Draft Construction and Demolition Waste Management Plan document.

### **3.0 DEMOLITION PROCEDURES**

The demolition stage will involve the removal of the existing structures and hard standing areas. A formal demolition plan should be prepared for the site; however, in general, the following sequence of works should be followed during the demolition stage.

#### **3.1 Check for Hazards**

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.

#### **3.2 Removal of Components**

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.

#### **3.3 Removal of Roofing**

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

#### **3.4 Excavation of Services, Demolition of Walls and Concrete**

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.

### **4.0 TRAINING PROVISIONS**

A member of the construction team will be appointed as the project waste manager to ensure commitment, operational efficiency and accountability during the construction and demolition phases of the project.

#### **4.1 Training and Responsibilities**

The nominated waste manager will be given responsibility and authority to select a waste team if required, i.e. members of the site crew that will aid them in the organisation, operation and recording of the waste management system implemented on site. The waste manager will have overall responsibility to oversee, record and provide feedback to the client on everyday waste management at the site. Authority will be given to the waste manager to delegate responsibility to sub-contractors, where necessary, and to coordinate with suppliers, service providers and sub-contractors to prioritise waste prevention and material salvage. The waste manager will be trained in how to set up and maintain a record keeping system, how to perform an audit and how to establish targets for waste management on site. The waste manager will also be trained in the best methods for segregation and storage of recyclable materials, have information on the materials that can be reused on site and be knowledgeable in how to implement this Construction Management Plan.



#### 4.2 Site Crew Training

Training of site crew is the responsibility of the waste manager and, as such, a waste training program should be organised. A basic awareness course will be held for all site crew to outline the Construction Management Plan and to detail the segregation of waste materials at source. This may be incorporated with other site training needs such as general site induction, health and safety awareness and manual handling.

This basic course will describe the materials to be segregated, the storage methods and the location of the Waste Storage Areas (WSAs). A sub-section on hazardous wastes will be incorporated into the training program and the particular dangers of each hazardous waste will be explained.

### 5.0 RECORD KEEPING

Records should be kept for all waste material which leaves the site, either for reuse on another site, recycling or disposal. A recording system will be put in place to record the waste arising's on site.

A waste tracking log should be used to track each waste movement from the site. On exit from the site the waste collection vehicle driver should stop at the site office and sign out as a visitor and provide the security personnel or waste manager with a waste docket (or WTF for hazardous waste) for the waste load collected. At this time, the security personnel should complete and sign the Waste Tracking Register with the following information:

- Date Time
- Waste Contractor
- Company waste contractor appointed by e.g. Contractor or subcontractor name
- Collection Permit No.
- Vehicle Reg. Driver Name Docket No. Waste Type EWC/LoW

The waste transfer dockets will be transferred to the site waste manager on a weekly basis and can be placed in the Waste Tracking Log file. This information will be forwarded onto the SDCC Waste Regulation Unit on a monthly basis

Alternatively, each subcontractor that has engaged their own waste contractor will be required to maintain a similar waste tracking log with the waste dockets/WTF maintained on file and available for inspection on site by the main contractor as required.

A copy of the Waste Collection Permits, CORs, Waste Facility Permits and Waste Licences will be maintained on site at all times. Subcontractors who have engaged their own waste contractors, should provide the main contractor with a copy of the waste collection permits and CCR/permit/licence for the receiving waste facilities and maintain a copy on file available for inspection on site as required.

### 6.0 CONSULTATION WITH RELEVANT BODIES

#### 6.1 Local Authority

Once demolition and construction contractors have been appointed and prior to removal of any construction and demolition waste materials offsite, details of the proposed destination of each waste stream will be provided to the SDCC Waste Regulation Unit. SDCC will also be consulted, as required, throughout the demolition, excavation and construction phases in

order to ensure that all available waste reduction, reuse and recycling opportunities are identified and utilised and that compliant waste management practices are carried out.

## **6.2 Recycling/Salvage Companies**

Companies that specialise in construction and demolition waste management will be contacted to determine their suitability for engagement. Where a waste contractor is engaged, each company will be audited in order to ensure that relevant and up-to-date waste collection permits and facility CCR/permits/licences are held. These permit details will be sent to the SDCC Waste Regulation Unit.

## **7.0 CONSTRUCTION TRAFFIC AND SITE ACCESS**

### **7.1 Impact on Public Roads**

It is proposed that the primary Construction Access for the development, subject to agreement with South Dublin County Council, will be via Kennelsfort Road Upper, accessing the construction located within the area reserved for this purpose. The construction of the facility is to be provided under exempted development provisions of Classes 16 & 17, Schedule 2, Part 1 of the Planning and Development Regulations 2000 (as amended). Construction traffic will be managed in a controlled manner on a daily basis throughout the project life and a 'flagman' system will be put in place to ensure close supervision of traffic entering and leaving the site. Site access will be secured for the duration of the development and safety signage placed on all fencing and gates.

As described earlier, off-site manufacture of 'modular' construction elements will be utilised as much as is possible to minimise the daily frequency of site traffic. In addition, in order to reduce the impact of vehicles on the existing properties in the area, the Contractor will provide management of all site traffic movements and parking throughout the duration of the works. It is envisaged that as much as is practicable, large construction vehicles will only be permitted to access site during off-peak hours. While not anticipated, other than for localised lifting of modular elements, movements of large or abnormal loads will be addressed in advance with South Dublin County Council and An Garda Síochána. Also, if required for limited periods, Temporary Road Closures will be agreed in advance with the Authorities.

During the construction vehicle washdown facilities will be provided as required, and all vehicles will be washed down prior to exiting onto the public road. All roads and footpaths adjacent to the site where dust, debris or spillage occurs will be cleaned on a regular basis. All vehicles carrying open loads (e.g. skips) will ensure the loads are properly covered to ensure no spillage of waste material occurs. Delivery vehicles will, insofar as it is possible to enforce, be required to leave the site 'not empty', but rather, through adoption of a 'take-back' policy, all return vehicles will be encouraged to take "associated waste/packaging" off site with them. All pedestrian routes will be clearly defined utilising temporary fencing and pedestrian route signage where necessary. All site operatives will be given a specific site induction, and briefed with reference to the use of designated pedestrian access ways and crossover points.

## **8.0 SITE LOGISTICS**

### **8.1 General Principles**

Set out below are the general principles of the site logistics, these will be developed in greater detail at the construction stage

### **8.2 Site Establishment and Security**

The first stage of the construction programme will be to establish the area as a construction site

- The working areas will be secure and the general public will be separated from the works by the use of solid hoarding and/or well-maintained open mesh fencing
- All gates will be maintained by security guards
- Task lighting for construction activities in areas adjacent to sensitive receptors (i.e. nearby properties) will generally be limited to the agreed working hours
- Site lighting will be kept to a minimum taking into account the needs of site health, safety and security.

### **8.3 Material Storage and Handling**

As described earlier, off-site manufacture of 'modular' construction elements will be utilised as much as is possible to minimise the requirement for storage of materials on site. Contractors and their subcontractors will be expected to maintain a tidy site and to operate a 'just in time' policy for the delivery and supply of materials for the works, particularly the final phase of the works when on site storage will be at a minimum. No unloading on or over the public road or internal access roads will occur.

In general;

- Tanks and drums of liquid chemicals and fuels would be stored in bunded compounds
- Packaging would be returned, where possible.

### **8.4 Site Accommodation and Welfare Facilities**

Site accommodation and welfare facilities will be within the construction laid out in a regular manner and decorated in uniform colour. No overnight or living accommodation will be provided/located within the construction site.

The principal site welfare accommodation will comprise mess rooms, locker rooms, toilets, canteens and showers, all of which will be prefabricated as far as possible with final assembly taking place on site. Preventative pest control measures will also be put in place, i.e. appropriate storage and regular collection/handling and disposal of waste. Regular inspections will be carried out to ensure that good housekeeping measures are maintained at all times. Existing piped and/or Portable chemical toilets will service the construction site. The chemical toilets will be proprietary systems and a licensed contractor will empty these on a regular basis and dispose of the waste to a suitably licensed facility. All cleaning and washing operations will be carried out in designated areas. Siting of temporary site accommodation will be located to facilitate ease of access and construction, to minimise potential disturbance to surrounding properties, and reduce any environmental impact.

In considering site layout, the following will apply:

- Storage sites, fixed plant and machinery, equipment and temporary buildings etc, will be located to limit adverse environmental effects.

- Fuel storage and filing to be bunded
- All reasonable precautions will be taken for the operation of plant and equipment, to avoid nuisance and excess noise impact on the surrounding residents
- Emergency Response Plans will be developed; and
- The standard of fencing/screening during construction will be selected in order to maintain effective site security and achieve appropriate noise attenuation and visual effect in consideration of neighbouring interests
- Control of pests will be carried out using a professional pest control company.

#### **8.5 Site Security**

- It is intended to provide a fully enclosed site utilising perimeter fencing / hoarding
- If sections of the perimeter fencing/hoarding are required to be removed to allow works to progress, then Heras type fencing will be used to maintain a secure perimeter and a designated person will be responsible for the day-to-day maintenance of the perimeter
- It is proposed that 24-hour security will be provided for the duration of the Development

### **9.0 AIR QUALITY**

Construction works will be carried out in such a way as to limit the emissions to air of pollutants (particularly dust and fine particles (PM10)), employing Best Practicable Means. The site will be managed in accordance with the CWMP to minimise the potential effects on air quality from construction. Monitoring will be undertaken throughout the construction period to enable proactive management of dust and PM10 levels. Wind speed and direction will be included in the monitoring.

#### **9.1 Effective Material Storage and Handling**

The storage and handling of construction materials can be a significant dust emission source. The adoption of appropriate dust control measures will greatly reduce dust emissions from these sources and ensure that any adverse effects are reduced or eliminated.

Handling and storage areas will be sited as far away as is reasonably and practically possible from public/residential areas. Handling and storage areas will be actively managed and fine, dry material will be stored inside enclosed shield/coverings or within a central storage area. Any storage areas that are not enclosed will be covered/sheeted. Prolonged storage of debris on site will be avoided. Vehicles carrying dusty materials into or out of the site shall be sheeted down to prevent any escape of materials.

#### **9.2 Construction Plant**

Construction plant can be a significant source of emissions although control measures can be implemented to minimise any adverse impacts. The following measures will be employed:

- Site plant and equipment will be kept in good repair and maintained in accordance with the manufacturers' specifications. Allowing for economic constraints, the plant will be selected on the basis of which has the least potential for dust and other emissions;

- Plant will not be left running when not in use (i.e. no idling);
- Plant with dust arrestment equipment will be used where practical;
- Where practical, cleaner fuels will be employed for construction plant; and
- Enclosures will be erected around major construction plant items as appropriate and where practical.

### 9.3 Vehicle Movements

Vehicle movements may result in dust emissions (by re-suspending dust from the road or from spilling dusty loads) and exhaust emissions. However, a number of control measures can be adopted to eliminate or minimise such emissions:

- Wheel washing facilities close to the site entrance to prevent mud from construction operations being transported on to adjacent public roads;
- Any spillages from vehicles leaving the site will be promptly removed;
- Damping down of site haul roads by water bowser during prolonged dry periods;
- Regular cleaning of hard-surfaced site entrance roads;
- Ensuring that dusty materials are transported appropriately (e.g. sheeting of vehicles carrying spoil and other dusty materials);
- Confinement of vehicles to designated haul routes within the site;
- Restricting vehicle speeds on haul roads and other unsurfaced areas on the site;
- All vehicles will be maintained to minimise exhaust emissions;
- Hoarding and gates to prevent dust breakout; and
- Appropriate dust site monitoring will be included within the site management practices to inform site management of the success of dust control measures used.

### 9.4 Dust

Dust control will be best achieved at sources, and if possible, activities will be carried out in a manner so as to preclude dust generation. Dust levels will be controlled and the development operated in a way which is not detrimental to the amenity of local residents.

If dust is generated, steps will initially be taken to protect workers in the vicinity who shall, as a minimum, be issued with dust masks. Dust will, if possible, be contained in the location in which it is generated, and be controlled and managed therein. Dust suppression measures will be carried out to ensure that dust nuisance affecting neighbouring properties is minimised.

The following control measures and good management practices, will be employed:

- Site operations will be planned to take into account local topography, prevailing wind patterns and local sensitive receptors (e.g. schools, residences)
- Burning of materials on site will be prohibited
- Loading and unloading will only be permitted in designated hard standing areas
- Provision of water sprays and wind/dust fences where possible, particularly in dust sensitive locations
- Stockpiles of soil, arising or other granular material will be sheeted, covered and/or treated to prevent dust raising that may cause risk to health or nuisance to the public
- Hoarding will be erected around construction activities to minimise dust blow from site
- An appointed person will oversee/control activities and handle complaint

## 10.0 NOISE AND VIBRATION

Noise and vibration levels will be controlled as set out below to ensure that the Development is operated in a way that minimises detrimental impact to the amenities of local residents.

### 10.1 Construction Noise

Infrastructure works, excavations, and foundation construction will be among the most significant activities. Although concreting operations will also give rise to noise, the levels generated would not be considered to be significant.

In order to minimise the noise impact further on the nearby properties it is proposed that heavy equipment and machinery including pneumatic drills, construction vehicles and generators only work between the hours shown below. In addition, no deliveries and/or removal of materials will occur outside of these hours. All plant and equipment will be maintained in good working order in accordance with BS.5228 in order to minimise air and noise emissions.

Normal working hours will be maintained in accordance with South Dublin County Council's requirements.

On occasions it may prove necessary to carry out noisy activities outside of normal working hours. In such instances prior consultation will be carried out with South Dublin County Council and local residents outlining the nature and reason for the works and their likely duration.

During construction, the measures summarised below, are to be employed:

- Details of construction activities, prediction levels/assessments will be discussed with the relevant authority, both prior to construction and during construction. Detailed construction programmes will be available in advance of work starting on site;
- Where work outside of agreed hours or likely to exceed specified noise limits, is necessary, then this shall only proceed subject to notification to South Dublin County Council Environmental Health Officer and local residents, and approval given.
- Except for emergency situations, notification will be in advance of any requirement for out of hours/noisy working.
- Where the potential for noise exists, 'Best Practicable Means' will be used to reduce noise to achieve compliance consistent with the recommendations of BS 5228, and may include:
  - i. Careful selection of plant items, construction methods, programming, and implementing a 'noise and vibration protocol', which outlines monitoring frequency and action levels etc;
  - ii. Design and use of site hoarding and screens/noise barriers, to provide acoustic screening at the earliest opportunity;
  - iii. Vehicles and machinery will not be left running when not in use (i.e. no idling); and
  - iv. Choice of routes and programming for the transport of construction materials.

### 10.2 Noise Limits

Noise Limits to be applied for the duration of construction works are as set out in the National Roads Authority (NRA) '*Guidelines for Treatment of Noise and Vibration in National Roads*

*Schemes'* (summarised below in Figure 10.1) and '*BS 5228-1:2009+A1:2014 (Code of Practice for Noise Control on Construction and Open Sites)*'.

BS 5228 applies a noise limit of 70 dBA between 07:00 am and 19:00 pm outside the nearest window of the occupied room closest to the site boundary in suburban areas away from main road traffic and industrial noise. For the duration of construction works, a daytime noise limit (07:00 am to 19:00 pm) of 70 dBA shall apply (in accordance with the requirements of BS 5228 and generally in agreement with the NRA guidelines).