

Project

The Grove SHD – Student Accommodation Scheme

Report Title

Construction & Environmental Management Plan

Client

Colbeam Limited

INFRASTRUCTURE



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1.0 INTRODUCTION

- 1.1 This document is an initial Preliminary Construction & Environmental Management Plan for the proposed works to associated with the construction of the proposed development as described in Section 2 below and as indicated in Figure 1 below. It includes an outline description of the proposed works and how these works will be managed for their duration. It includes details of the Preliminary Construction Management Traffic Plan.
- 1.2 This project is currently at planning stage. At construction stage, this preliminary document will be issued to the contractor to be further developed into their final construction and environmental management plan for the project.
- 1.3 The outline plan seeks to demonstrate how works can be delivered in a logical, sensible and safe sequence with the incorporation of specific measures to mitigate the potential impact on people and the surrounding environment.
- 1.4 The construction & environmental management issues addressed in this plan include noise and vibration, traffic management, working hours, pollution control, archaeology, arboriculture, dust control, road cleaning, compound / public health facilities and staff parking.

2.0 PROPOSED DEVELOPMENT

2.1 The development will principally consist of: the construction of a Student Accommodation development containing 698 No. bedspaces with associated facilities located in 8 No blocks, which range in height from part 3 No. storeys to part 6 No. storeys over part lower ground floor level (7 No. storeys as viewed from an internal courtyard). Some 679 No. bedspaces are provided in 99 No. clusters ranging in size from 5 No. bedspaces to 8 No. bedspaces, each with a communal Living/Kitchen/Dining room. The remaining 19 No. bedspaces are accessible studios. The includes the provision of communal residential amenity space at lower ground floor level (349 sq m) including the provision of a movie room (108 sq m), a music room (42 sq m) and a laundry (37 sq m); communal residential amenity space (1,356 sq m) at ground floor level including the provision of a gym (228 sq m), reception desk and seating area (173 sq m), a common room (338 sq m), a study space (104 sq m), a library (64 sq m), a yoga studio (74 sq m), a prayer room (33 sq m) and group dining (33 sq m).

The development also includes staff and administrative facilities (195 sq m); 9 No. car parking spaces; 4 No. motorcycle parking spaces; 860 No. cycle parking spaces; refuse stores; signage; an ESB substation and switchroom; boundary treatments; green roofs; PV panels; hard and soft landscaping; plant; lighting; and all other associated site works above and below ground. The development includes the demolition of part of the Goatstown Afterschool building (558 sq m) and the construction of a new external wall to the remaining ope, in addition to the demolition of a prefabricated structure adjacent to the Afterschool building (161 sq m).

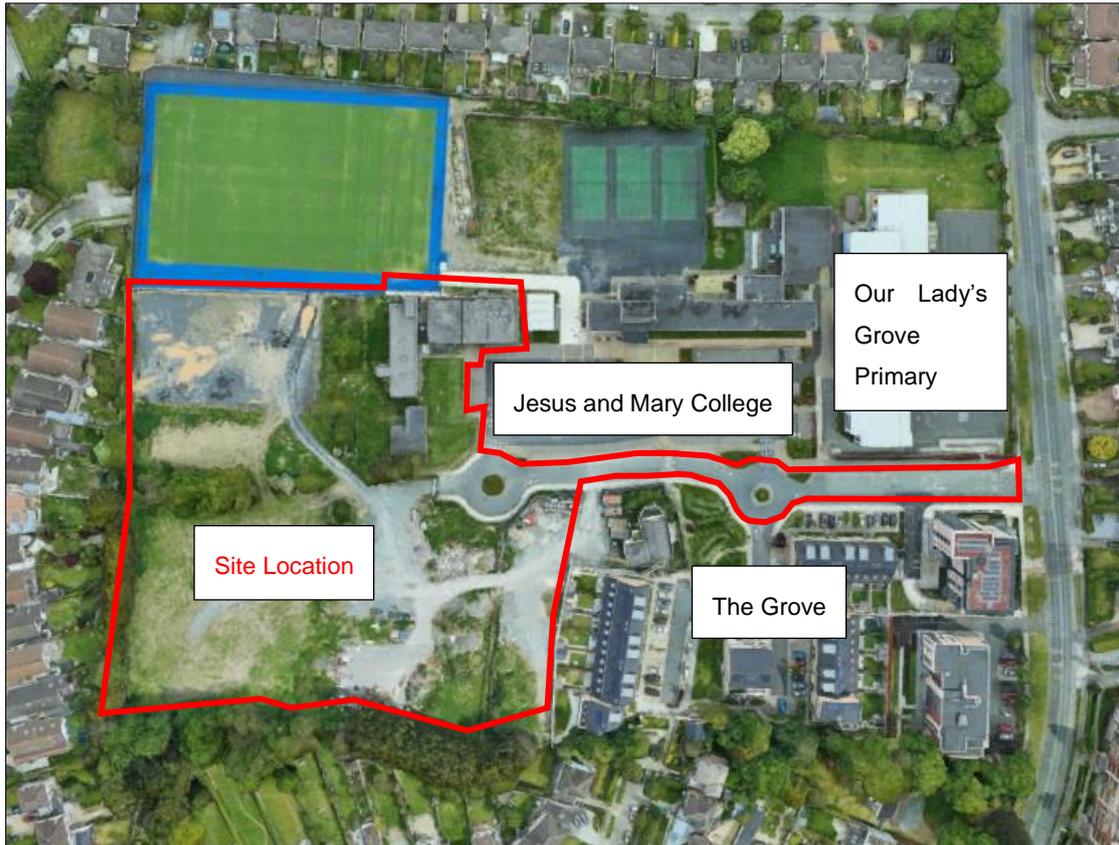


Figure 1 Location of Subject Site (Google Earth)

The development includes the demolition of a 2-storey former secondary school building and an existing separate prefabricated single storey building to the south. These are outlined in Figure 2.

There is an existing single storey structure connected to the school building which is occupied by Grove After School Day-Care and this will be retained in operation throughout the works. A boiler room to the north west of the day-care centre, which serves the building, will also be retained.

3.0 SITE WORKS

3.1 The proposed order of construction of key elements is subject to detailed review by the Contractor at construction stage and in general will be as follows:

- Site Setup.
- Service terminations and positive identification of any services on the site by the utility providers.
- Provision of temporary power, lighting and water services.
- Set up of site accommodation and welfare facilities.
- Identification of the trees that are required to be removed and the removal of these along with scrub and vegetation, in accordance with the aboricultural report.
- Identification of trees to be retained and protection of same.
- Identification of any hazardous materials on site
- Designation of exclusion zones for the demolition/dismantling.
- Demolition and site clearance.
- Earthworks, including cut and fill and disposal of excess material off site;
- External site works/ infrastructure;
- Construction of substructure/hardstand area;
- Construction of superstructure;

3.2 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 identified/isolated in conjunction with the ESB and the provision of a temporary builder's power supply.

The site will be secured with hoarding on all open sides and accessible approaches.

3.3 Demolition Works

The demolition works (and making good) associated with part of Goatstown Afterschool building will take place over the summer break when the after-school facility is not in use.

Demolition works will be carried out by a suitably qualified demolition contractor, who will be required to submit a detailed method statement including the sequence of works, segregation and disposal process and outline all proposed health and safety measures.



Figure 2 Scope of Demolition Works

Demolition works require the provision of temporary fencing on site to define any exclusion zones or protected areas. The works will be separated from outside traffic, passing public and the adjoining day-care centre. Protective screens will be used, where necessary, to ensure that no debris enters the grounds of the day-care centre, ensuring the safety of the staff and pupils.

Demolition warning signage will be erected around the site to warn others of the dangers inside the site. The main site safety notice will be erected at the site entrance outlining the safety requirements for the site. Task specific signs will be erected inside the site as required.

The relevant utility suppliers will be contacted to arrange the correct disconnection for each utility service identified on-site in accordance with the current legislation, “*Safety, Health and Welfare at Work (Construction) Regulations (2013)*”.

Possible utilities include but not limited to:

- Electricity – ESB Networks
- Gas Mains – Bord Gais
- Telecommunications – Eircom Networks & Virgin Media

All demolition works will be carried out in a phased nature to ensure minimal disruption is caused to both the day-care centre and passing members of the public.

3.4 Infrastructure Works

The site infrastructure works include the provision of the permanent entrance to the site and the permanent connection of all the utilities and services required for the site.

Provision of the permanent infrastructure to the site will be carried out as early as possible in the programmed works as to possibly incorporate the temporary site requirements with the permanent requirements.

Engagement with the service and utility providers will be entered into early in the design stage to allow for adequate planning of utility infrastructure.

It is the aspiration of the applicant to minimise disruption of existing services and public roads and pathways in the providing of services to the site, this will be done in consultation with the service providers and Dún Laoghaire Rathdown County Council.

Indicative Enabling Works Methodology is as follows:

- Live services will be terminated and where possible will be removed off site, with the cooperation of the utility providers.

- Temporary power and water services will be arranged for the site accommodation and welfare facilities. The site accommodation and welfare facilities will be set up in a location as not to be in the way of the construction, and at a point close to the site entrance.
- During any demolition works, all work done will be according to method statements detailed by both contractor and consultant method statements.
- Dust suppression will be carefully monitored and controlled with the careful use of water
- Noise levels will be controlled and works undertaken in such a way as to minimise the detrimental impact on adjoining property and local residents.

3.5 Earthworks

Earthworks will consist of reducing existing levels for the proposed sub-structure and foundations. Excess material will be disposed offsite to a suitably licensed facility in accordance with the construction waste management plan.

3.6 Foundations

Foundations will comprise traditional RC concrete pad and strip foundations founded onto suitable bearing strata as referred to in the Site Investigations report.

Refer to the following DBFL foundation drawings for further details:

- 200012-DBFL-A1-F1-DR-S-8000
- 200012-DBFL-B1-F1-DR-S-8000
- 200012-DBFL-C1-F1-DR-S-8000
- 200012-DBFL-D1-F1-DR-S-8000
- 200012-DBFL-EF1-F1-DR-S-8000

4.0 CONSTRUCTION TRAFFIC

4.1 General Site access / Egress

4.1.1 All traffic for required works will enter the site via Goatstown Road and will be routed to the site via the primary road network in the area. 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.

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

- Chapter 8 of the Department of the Environment Traffic Signs Manual, current edition, published by The Stationery Office, and available from the Government Publications Office, Sun Alliance House, Molesworth Street, Dublin 2;
- 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 & Design Manual for Urban Roads & Streets (DMURS);

4.1.3 All major deliveries/removals that may affect access for emergency vehicles or cause blockage to the existing road system shall be undertaken outside normal working hours and shall be agreed in advance. Trucks will turn around within established site areas.

4.1.4 During demolition, the majority of vehicle movements will result from the removal of material, typically carried out by 8-wheel trucks and Roll on/Roll off rubbish skips. All excavated suitable material from construction of proposed infrastructure works will be reused for construction and fill activities where possible and appropriate. Any unsuitable material will be disposed of off-site at a suitably licensed landfill facility.

4.1.5 Construction traffic will include the following categories:

- Private vehicles owned and driven by site construction and supervisory staff.
- Excavation plant and dumper trucks involved in site development works and materials delivery vehicles.
- Mobile crane for lifting of prefabricated units.

4.1.6 Appropriate Traffic Management Procedures will be put in place to have a safe and coordinated access and egress of construction vehicles to the site as they pass by the

adjacent schools and local residential areas. Speed limit signs will be posted as well as warning signs to notify construction vehicles of nearby schools and residential areas and alert these people of the construction site. The contractor will liaise with both primary and secondary schools regularly in relation to significant site works to avoid clashing school activities. Prior to commencement on site and further to discussions with key stakeholders including the local schools it may prove beneficial to have an operative manning the site access to minimise disruption to school related traffic during school start and finish times.

4.2 **Staff and Parking**

On-site employees will generally arrive before 08:00, thus avoiding the morning peak hour traffic, and will generally depart after 18:00.

Construction traffic will not be permitted to park on the public roads or within the general area outside the main site.

In general, the impact of the construction period will be temporary in nature.

4.3 **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 areas for trucks;
- Dedicated staff parking and visitor parking;
- Staff welfare facilities i.e. toilets etc.

4.4 **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;
- Delivery of materials by HGV's will not be permitted to site during school drop off and pick-up times.
- 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;
- Scheduling of movements to outside peak traffic times and school pick-up / drop-off times.

4.5 **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.

5.0 WORKING HOURS

Working hours will be strictly in accordance with the granted planning conditions with no works on Sundays or Bank Holidays. If work is required outside of these hours, written approval will be sought by the contractor from the Local Authority.

It is anticipated that normal working hours may be 8am to 7pm Monday to Friday and 8am to 2pm on a Saturday. Working outside these hours will be subject to agreement with the Local Authority.

Deliveries of material to site will be planned to avoid high volume periods to avoid clashing with school activities. 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.

6.0 NOISE & VIBRATION

During the construction works the Contactor shall comply with:

- BS 5228: 2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites, Part 1, and Part 2.
- Guidelines for the Treatment of Noise and Vibration in National Road Schemes (NRS, Revision 1, 2004)
- Safety, Health and Welfare at Work (General Application) Regulations 2007, Part 5 Noise and Vibration.

The noise limits to be applied for the duration of the works are those specified in the B Category of BS 5228. These limits are summarised below and will be applied at the nearest sensitive receptors to the works.

- Night (23:00-07:00) = 50dB
- Evening (19:00-23:00) = 60dB
- Day (07:00-19:00) = 70dB

The total noise (LAeq) which should not be exceeded during daytime is therefore 70dB.

Vibration limits to be applied for the works are those specified in the NRA document Guidelines for the Treatment of Noise and Vibration in National Road Schemes (NRA, Revision 1, 2004). These limits are outlined below:

Allowable Vibration (in terms of peak particle velocity) at the closest part of sensitive property to the source of vibration, at a frequency of:

<u>Less than 11Hz</u>	<u>11 to 50 Hz</u>	<u>50 to 110 Hz (and above)</u>
3mm/s	3 to 8mm/s	8 to 11mm/s

In general, the contractor shall implement the following mitigation measures during the proposed works:

- Avoid unnecessary revving of engines and switch off equipment when not required.
- Keep internal haul roads well maintained and avoid steep gradients.
- Minimise drop height of materials.
- Start-up plant sequentially rather than all together

- All vehicles and mechanical plant used for the Works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order. In addition, all diesel engine powered plant shall be fitted with effective air intake silencers. All compressors shall be “sound reduced” models fitted with properly lined and sealed acoustic covers which shall be kept closed whenever the machines are in use. All ancillary pneumatic percussive tools shall be fitted with mufflers or silences of the type recommended by the manufacturers, and where commercially available, dampened tools and accessories shall be used.
- All ancillary plant, such as generators and pumps, shall be positioned to ensure minimum noise disturbance. If operating outside the normal working week, acoustic enclosures shall be provided.

More specifically the Contractor shall ensure that:

- In accordance with Best Practicable Means, plant and activities to be employed on site are reviewed to ensure that they are the quietest available for the required purpose.
- Where required, improved sound reduction methods are used e.g. enclosures.
- Site equipment is located away from noise sensitive areas, as much as physically possible.
- Regular and effective maintenance by trained personnel is carried out to reduce noise and / or vibration from plant and machinery.
- Hours are limited during which site activities likely to create high levels of noise and vibration are carried out.

A site representative responsible for matters relating to noise and vibration will be appointed as part of the Construction & Environmental Management Plan (construction stage).

A noise and vibration monitoring specialist will be appointed to periodically carry out independent monitoring of noise and vibration during random intervals and at sensitive locations for comparison with limits and background levels. It is proposed that noise and vibration levels be maintained below those outlined above as part of these infrastructure works.

7.0 POLLUTION CONTROL

All works carried out as part of these infrastructure works will comply with all Statutory Legislation including the Local Government (Water Pollution) acts, 1977 and 1990 and the contractor will be required to co-operate fully with the Environmental Section of Dún Laoghaire Rathdown County Council.

As part of the overall construction methodology, the following issues have been identified as being of risk and/or concern to pollution and will be addressed:

- Contamination of Groundwater

There is a risk that ground water could become contaminated with lime from cement which could subsequently find its way into the local adjacent watercourses. The measures proposed to be put in place to mitigate any potential damage from the effluent of contaminated ground water would be to create an exclusion zone, as far as reasonably practicable.

- Sediment & Erosion

Similar to the above, groundwater needs 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 the site will be managed and controlled for the duration of the construction works until the permanent surface water drainage system (including attenuation and storage) for the proposed site is complete. A temporary positive drainage system shall be installed prior to the commencement of the construction works to collect surface water runoff by the site during construction. A series of geotextile lined cascading, high level outfall, settling basins will be installed upstream of the agreed discharge point. This temporary surface water management facility will throttle runoff and allow suspended solids to be settled out and removed before being discharged in a controlled manner to the agreed outfall. All inlets to the cascading settling basins will be riprapped to prevent scour and erosion near the inlet.

Surface water discharge from site will be managed and controlled for the duration of the construction works until the permanent surface water drainage system is complete.

- Discharge Licences

It will not be permitted to discharge into any newly constructed storm water systems without adhering to the conditions of the discharge licence and agreeing the same with the Site Manager and Local Authority Area Engineer.

- Over Ground Oil / Diesel Storage

Only approved storage system for oil / diesel within the site will be permitted, (i.e. all oil / diesel storage to be located within a designated area placed furthest away from adjacent watercourses and contained within constructed bunded areas e.g. placed on 150mm concrete slab with the perimeter constructed with 225mm solid blockwork rendered internally). The bunded area will accommodate the relevant oil / diesel storage capacity in case of accidental spillage. Any accidental spillages will be dealt with immediately on site by containment /removal from site.

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 (when not possible to carry out such activities off site). 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.

- Concrete Washout

The washing out of concrete trucks on site will not be permitted as they are a potential source of high alkaline discharges to watercourses. Wash down and wash out of concrete trucks will take place off site and any excess concrete will not be disposed off 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.

- Disposal of Wastewater off Site

The Site Management Team will maintain a record of all receipts for the removal of toilet or interceptor waste off site to insure its disposal in a traceable manner. These will be available for inspection by the Environmental Section of Dún Laoghaire Rathdown County Council.

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.

- Road Sweepers / Cleaning

The cleaning of public roads in and around the subject site will be undertaken to reduce environmental impacts and care will be taken to prevent any pollution of watercourses from this activity.

- Refuse Removal

During the phases of demolition, large amounts of refuse is produced predominantly from the soft strip of the buildings scheduled for demolition, in which all furniture, fixings, trimmings and waste rubbish which remaining inside the buildings will be segregated and sorted. Any items wished to be retained by the client is to be pointed out to the contractor prior to commencement of the works. Any deleterious materials will be identified prior to the commencement of the works and removed in accordance with the statutory regulations. Refuse produced during demolition between floor levels will be lowered by teleporters or similar.

During phases of the construction of infrastructure, refuse is produced predominantly by delivery package material such as protective timber pallets, polymer straps and plastic covers. Additional refuse may include discarded construction materials, material containers, contractor's sundries, hoarding/shutter boards, and tools.

Waste skips will be provided in designated skip drop zones will be dropped into skip storage zones during both demolition and construction.

All relevant refuse from both demolition and construction is to be disposed off-site to licensed disposal facilities for processing and recycling where possible.

8.0 ECOLOGY

An '*Ecological Impact Assessment*' has been carried out of the subject site by Scott Cawley Ltd. Reference should also be made to the '*Appropriate Assessment Screening Report*' by Scott Cawley Ltd.

During construction, all mitigation measures listed in the Ecological Impact Assessment prepared by Scott Cawley (Section 6 of their report), will be implemented in full.

During construction, reference should be made to the above specialist reports and all construction works proposed shall take account of any recommendations included.

9.0 ARBORICULTURE

An Arboricultural Report has been prepared by The Tree File Limited and should be referred to for a detailed description of the tree protection strategy to be adopted in tandem with this Construction & Environmental Management Plan for the proposed development.

The aforementioned report specifically outlines the main requirements in relation to the existing trees on the subject site and these are summarised as follows:

- Retention of existing trees.
- Identification of existing trees to be removed from the site.
- Site Monitoring during Construction Works including assessing the impact of plant, equipment, vehicles and compacting of the ground has on the soil profiles.

Reference should be made to the above specialist report and associated drawings for further details and all construction works proposed shall take account of same.

10.0 DUST CONTROL

- 10.1 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.
- 10.2 The Construction team will monitor the construction regime on an ongoing basis throughout the project to endeavour to minimise impact on a surrounding community.
- 10.3 During the proposed infrastructure works the following mitigation measures shall be implemented to minimise dust emissions:
- Construction techniques shall minimise dust release into the air.
 - Spray exposed site haul roads during dry and / or windy weather.
 - Provide wheel washing facilities at all exit points.
 - Provide tarpaulins over all unacceptable excavated materials being carted off site.
 - Control vehicle speeds and impose speed restrictions, (speed can mobilise dust).
 - Sweep hard surface roads, inside and outside the site, to ensure roads are kept clear of debris, soil or other material.
 - Locate stockpiles away from sensitive receptors, (i.e. receptors sensitive to dust release in particular the Goatstown After School building and Jesus and Mary College Secondary School and Our Lady's Grove Primary School).
- 10.4 During dry spells and if deemed necessary, monitoring of dust levels shall be carried out using the Bergerhoff Method i.e. analysis of dust collecting jars left on-site (German Standard VDI 2119, 1972). Results will be compared to the TA Luft guidelines (TA Luft, 1972). Should an exceedance of the TA Luft limit occur during, additional mitigation measures, for example more regular spraying of water, shall be implemented.
- 10.5 Particular attention will be given to the control of dust using the measures listed above given the location of the proposed development in the vicinity of Goatstown Afterschool and adjacent secondary and primary schools and adjacent residential areas.

- 10.6 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.

11.0 ROAD CLEANING / WHEEL WASHING

Provision will be made for the cleaning by a road sweeper etc. of all access routes to and from the site, during the works. Road cleaning shall be undertaken daily during the completion of the works. A wheel wash facility will also be provided on site to clean site traffic leaving the site. Wastewater generated at this washing facility will be suitably treated on site and all settled silts will be disposed offsite to a licensed landfill.

All road sweeping vacuum vehicles will be emptied off site at a suitably licensed facility.

12.0 COMPOUND FACILITIES / PARKING

The compound shall be constructed using a clean permeable stone finish and will be enclosed with security fencing. A recommended layout for the site compound for both the demolition of existing buildings and construction of required infrastructure works is illustrated as per Figure 3 below. The contractor may provide their own layout, which will be subject to approval from both the client and the resident engineer. It is expected that the layout will adapt over the construction period.



Figure 3: Indicative Site Compound Location

Warning signage will be erected along the approaches to the site on Goatstown Road. Vehicles that are required to remain on site or park for any duration they will be required to enter the site therefore providing clear access to the day-care centre. A series of 'way finding' signage will be provided to route staff / deliveries into the site and to designated compound / construction areas.

Areas within the designated site compound include site accommodation providing suitable washing / dry room facilities for construction staff, canteen, sanitary facilities, first aid room, office accommodation etc. Access to the compound will be further security controlled and all site visitors will be required to sign in on arrival and sign out on departure.

Recommended security protocols should ensure that entrance gates always remain closed whilst the entrance is not in use. The opening and closing of the security gates will be the

responsibility of a designated gate man provided by the contractor, whole role involves controlling the vehicles entering and exiting of the site. All site visitors will be required to sign in on arrival and sign out on departure, recorded details of visitors will be made by the designated by the gate man at kept at the site office.

All vehicles will be positioned on the site in designated parking spaces, with large delivery and construction vehicles entering, leaving, or manoeuvring within the site be accompanied by a trained and competent banksman provided by the contractor. Delivery and construction vehicles will not be permitted to park outside the day-care centre.

Site Parking will provide a permeable hardstand area for contractors, consultants, and the client. This area is only intended for small vehicles such as passenger vehicles, and vans.

The delivery and storage zone will provide an area for delivery vehicles to offload goods, and the storage of both construction and demolition plant and materials. The area will also provide designated zones for refuelling of plant and processing required materials for construction such as mixing of concrete mortar. If necessary, the area can be used for temporary storage of excavated material that is intended to be disposed of, however, measures of mitigating pollution including dust control need to be implemented.

Skip storage areas will be used for the temporary storage of refuse. Any reusable materials will be set aside in a designated area of the site for transport to licensed recycling facilities. The area is located to allow for easier collection and disposal of refuse to off-site licensed disposal facilities for processing and recycling.

Processed materials may be segregated on site into recommended categories such as:

- Mixed C&D Waste
- Recycling
- Timber
- Scrap Metal
- Clean Rubble

Teleporters will be used for general unloading during the structural and envelope works, unloading over the public roadway and path will be avoided, however if required, all relevant contact, procedures and authorisation will be made with the relevant local authority.

All works carried out within the skip storage areas, delivery and storage zones will need to comply with overall construction methodology, especially with reference to mitigating issues identified as being of risk and/or concern of contributing to pollution, including dust control.

The contractor will strive to maintain a tidy site and to operate a “just in time” policy for the delivery and the supply of materials for the works, particularly the final phase of the works when on site storage will be at a minimum. On completion of the works all construction materials, debris, temporary hardstands etc. from the site compound will be removed off site and the site compound area.

13.0 CONCLUSION

A Construction & Environmental Management Plan (construction stage) will be prepared and agreed with Dun Laoghaire Rathdown County Council prior to commencement on site and will incorporate the recommendations of this planning report, recommendations of all specialist reports, and any planning conditions relating to construction activity.