Construction Management Plan

Project:

Clonburris

Cappagh

Dublin 22

Rev0 Prepared: 18.05.2023

1. Introduction

The proposed development, on a site area of 6.2Ha, on lands within the townland of Cappagh, Dublin 22. The proposed development is located west of the Ninth Lock Road, south of the Dublin-Cork railway line, north of Cappaghmore housing estate and Whitton Avenue, and east of an existing carpark / park & ride facility at the Clondalkin Fonthill train station and the R113 (Fonthill Road). The proposed development is located within the Clonburris Strategic Development Zone (SDZ), specifically within the development areas of (i) Clonburris South East (i.e. CSE-S1 & CSE-S2) and (ii) part of Clonburris Urban Centre (i.e. CUC-S4), as identified in the Clonburris SDZ Planning Scheme 2019.

The proposed development consists of the construction of 256 no. dwellings, crèche and 2 no. retail / commercial units, which are comprised of:

- 111 no. 2, 3 & 4 bed, 2 storey semi-detached and terraced houses,
- 100 no. 2 & 3 bed duplex units accommodated in 8 no. 3 storey buildings,
- 45 no. 1, 2 & 3 bedroom apartments/duplex units in Block A (3-6 storeys) & Block K (4 storeys), 1 no. ground floor commercial / retail unit (c.333sq.m) & 1 no. 2 storey creche (c.487sq.m), both in Block A, and 1 no. 2 storey retail /commercial unit in Block K (c.152sq.m).

The proposed development also provides for all associated site development works above and below ground, public & communal open spaces, hard & soft landscaping and boundary treatments, surface car parking, bicycle parking, bin & bicycle storage, public lighting, plant (M&E), utility services & 4 no. ESB sub-stations.

This application is being made in accordance with the Clonburris Strategic Development Zone Planning Scheme 2019 and relates to a proposed development within the Clonburris Strategic Development Planning Scheme Area, as defined by Statutory Instrument No. 604 of 2015. The site has an area of 6.3 Ha. It is proposed to develop this site based on the following schedule of accommodation

Proposed Land Uses	
Land Use	Size
Houses	118
Duplex	104
Apartments	72
Total	**294**

Table 1 Proposed Land Uses

Kelland Homes will act as the PSCS for the project. The proposed site access points are illustrated in Figure 1 below. The South Link Street will provide access to the development. The South Link Street will be constructed separately and is not part of the current planning application

The proposed site access points are illustrated in Figure 1 below

Figure 2: aerial image of site

Primary vehicular access to the development will be via the R113. Pedestrian access will coincide with the vehicular accesses. Additional green links will be provided.

Scope of Project (subject to change):

- Excavation and pouring of concrete strip foundations.
- Blockwork rising walls
- Underground drainage
- Cast insitu ground floor slabs and rising elements
- Blockwork and brickwork rising elements
- Pre-cast floors stairs and balconies
- Aluminium windows and curtain walling.
- Fit out of houses, duplexes and apartments

Prior to the commencement of development Kelland Homes Ltd will submit for the written agreement of the Planning Authority a detailed phasing program (appendix 1) for the approved development that fully accords with the requirements of the Planning Authority.

Prior to the commencement of development, 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 (2021) including demonstration of proposals to adhere to best practice and protocols will be forwarded to the Planning Authority – this is a separate document.
The RWMP will include specific proposals as to how the RWMP will be measured and monitored for effectiveness; these details shall be placed on the file and retained as part of the public record. The RWMP will be submitted to the planning authority for written agreement prior to the commencement of development.
All records (including for waste and all resources) pursuant to the agreed RWMP shall be made available for inspection at the site office at all times.

Given the proximity to Casement Aerodrome, operation of cranes shall be coordinated with Air Corps Air Traffic Services, no later than 28 days before use, contactable at airspaceandobstacles@defenceforces.ie or 01-4037681
Due to the proximity to Casement Aerodrome, we shall implement adequate bird control measures during the construction phase to mitigate the effects of birds on Air Corps flight operations.
Given the proximity to Casement Aerodrome this area may be subject to a high level of noise from aircraft operating in the vicinity of the aerodrome.
Given the proximity of the development to Casement Aerodrome, should negative effects become apparent on air or ATC operations as a result of the photovoltaic cells, then we shall take measures necessary to mitigate these effects to an acceptable level, without delay.

The houses and apartments of this development are constructed, as appropriate, using the Glazing and Ventilation specified in the Acoustic Design Statement they have submitted, to ensure the required noise mitigation and minimise the potential for adverse effects to the occupants. It must be ensured that these mitigation measures include all relevant noise sensitive properties, where the proximity to the adjacent rail line may have adverse effects on the occupants of the properties.

No heavy / noisy construction equipment or machinery (to include pneumatic drills, construction vehicles, generators, etc) shall be operated on or adjacent to the construction site before 07:00 hours on weekdays and 09:00 hours on Saturdays nor after 19:00 hours on weekdays and 13:00 hours on Saturdays, nor at any time on Sundays, Bank Holidays or Public Holidays.
Noise levels arising from construction activities shall not be so loud, so continuous, so repeated, of such duration or pitch or occurring at such times as to give rise to a noise nuisance affecting a person in any premises in the neighbourhood.
During the construction phase of the development, Best Practicable Means shall be employed to minimise air blown dust being emitted from the site. This shall include covering skips and slack-heaps, netting of scaffolding, daily washing down of pavements or other public areas, and any other precautions necessary to prevent dust nuisances.
A suitable location for the storage of refuse shall be provided during the construction and operational phase of the development so as to prevent a public health nuisance.
Noise due to the normal operation of the proposed development, expressed as Laeq over 15 minutes at the façade of a noise sensitive location, shall not exceed the daytime background level by more than 10 dB(A).
Clearly audible or impulsive tones at noise sensitive locations during evening and night shall be avoided irrespective of the noise level.
Signage or lighting to be used on site during the construction of the development must not be intrusive to any light sensitive location including residential properties in close proximity to the development.
We shall ensure that the development shall be operated so that there will be no emissions of malodours, gas, dust, fumes or other deleterious materials on site as would give reasonable cause for annoyance to any person in any residence, adjoining unit or public place in the vicinity.

The Construction Management Plan (CMP) is subject to periodic review and has been developed for the fitout of the section of the building. The CMP is subject to change based on the following:

1. Compliance requirements with South Dublin County Council
2. Requirements by other state bodies
3. Concerns raised by residents, businesses and others affected by the works

The final CMP prepared for the project will be subject to periodic review as part of the management of the construction process.

2.0 Working Hours

It is envisaged that working hours during the course of the construction process will be primarily standard working hours for the construction industry and working hours normally permitted by South Dublin County Council:

1. Mon-Fri - 8am – 6pm
2. Sat – 9am - 1pm.
3. No working on Bank holidays and Sundays.

No works are envisaged to be carried out on Sundays, should the need to work Sundays and or Bank Holidays be required a written submission will be made to South Dublin County Council for permission to do so.

3.0 Site Security

Kelland Homes will ensure the maintenance and cleaning of the site perimeter boundary (fencing / hoarding min 2m in height) during the project works.

At the main pedestrian entrance point to the site, signs will be in place clearly outlining the site safety rules and access points. All operatives will attend a site-specific safety induction course upon commencement on site and complete the induction register to confirm attendance. Safety Inductions will take place on a daily basis. No personnel will be authorised to work or gain access to the site without attending the site specific induction or visitor induction. The induction office will be located within the office compound area.

Personnel visiting the site for a short duration will formally receive a verbal description of the site hazards, emergency escapes, and assembly points and visitors will be accompanied by a person familiar with the site at all times.

All deliveries to site must be pre-booked and deliveries must be accompanied into the site works by the designated flagman. Netwatch or similar CCTV Security system will be implemented on site. Kelland Homes will conduct ongoing inspections of access/egress routes which may be affected by the construction works.

4.0 Noise & Dust Control

A Construction Noise Management Plan will be put in place for the construction process, when required a third-party consultant will be engaged to prepare this report and monitor activity and noise levels generated. The Noise Management Plan will address the following areas:

The Construction and Demolition Good Practice Guide for Construction Sites (link below) will be complied with during the project.

https://www.dublincity.ie/residential/environment/air-quality-monitoring-and-noise-controlunit/good-practice-guide-construction-and-demolition

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	N/A		
6 months to 12 months		N/A	
Over 12 months			1
Proximity of nearest sensitive receptors			
Greater than 50 metres from site	N/A		
Between 25m and 50m		N/A	
Less than 25 metres			1
Hospital or school within 100 metres			N/A
Day time ambient noise levels			
High ambient noise levels (>65dB(A))	N/A		
Medium ambient noise levels (55-65dB(A)		1	
Low ambient noise levels (<55dB(A)			N/A
Working Hours			
M-F: 8am - 6pm; Sat 9am to 1pm	1		
Some extended evening or weekend work		N/A	
Some night time working, including likelihood of concrete power floating at night			N/A
SUBTOTAL A	1	1	2

2. Work information

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

	Low	Medium	High
Risk Assessment A	1	1	2
Risk Assessment B	1	3	1
Total	2	4	3

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

Total Risk level for this project is **Medium**.

Refer to **Appendix of this document** with General Conditions relating to Noise, Dust & Vibration Control Measures to be implemented.

4.1 Noise Sensitive Locations

The site is bounded by an established residential area. Steps will be taken to ensure that any noise arising will be adequately mitigated. It should be noted that as part of the scheme design due consideration has been given to the issue of noise and physical and operational measures have been proposed in order to mitigate potential noise impacts associated with the site.

4.2 Baseline Noise Survey

A baseline noise monitoring programme will be completed prior to construction works commencing. Attended noise monitoring will be carried out at a number of locations yet to be determined. Survey details, procedures and results of this aspect of the baseline noise monitoring programme will be in general in accordance with ISO 1996: Part 2: 2007 2

4.3 Assessment of Noise Effects

Consideration will also be given to advice in relation to establishing significant construction noise effects as set out in BS5228. During the construction and demolition phases, the development shall comply with British Standard 5228 'Noise Control on Construction and open sites Part 1. Code of practice for basic information and procedures for noise control.'

4.4 Best Practice Guidelines for the control of Construction Noise

BS 5228 include guidance on the various aspects of construction site noise mitigation, including, but not limited to:

1. Liaison with neighbours
2. Noise monitoring
3. Hours of works
4. Selection of quiet plant
5. Control of noise sources and screening

The following noise control measures will be implemented on site:

1. All mobile and stationary plant are subject to regular maintenance and inspection to ensure that they remain in good working order;
2. Competent and trained plant and equipment operators will continue to be used at all times;
3. No item of plant or equipment will be allowed to operate where any part of its housing that is designed for sound proofing is absent or not fully in place;
4. Noise monitoring will be periodically conducted to ensure compliance with OH&S requirements;
5. Noise management and control will feature as a regular topic in site Toolbox Meetings to ensure all workers are aware of the need to minimise noise disruption;
6. Consultation with all parties that could be potentially affected by noise will be initiated as identified;
7. Each item of plant used on the project is operated in compliance with the noise limits quoted in the relevant European Commission Directive 2000/14/EC [S.I. No. 632 of 2001] as amended by S.I. 241 of 2006 and all subsequent amendments thereof, and will adopt the recommendations set out in BS 5228 – 1:2009+A1 2014 Code of practice for noise and vibration control on open sites: Part1 Noise with regard to noise mitigation options;
8. Works will be completed within designated times as noted in planning conditions;
9. Noisy stationary equipment such as generator and compressors shall be sited away from sensitive site boundaries as far as practicable.

10. Where reasonable practicable, noisy plant or activities shall be replaced by less noisy alternatives if noise breaches and/or complaints occur;
11. Proper use of plant with respect to minimising noise emissions and regular maintenance will be required;
12. All vehicles and mechanical plant will be fitted with effective exhaust silencers and will be maintained in good efficient order;
13. Where noisy plant is required to operate in works areas next to sensitive buildings acoustic low noise plant options will be used wherever practicable;
14. The use of inherently quiet plant is required where appropriate – all compressors and generators will be "sound reduced" or "super silent" models fitted with properly lined and sealed acoustic covers, which will be kept closed whenever the machines are in use, and all ancillary pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers;
15. All compressors, generators and pumps shall be silenced models fitted with properly lined and sealed acoustic covers or enclosures, which will be kept closed whenever the machines are in use;
16. All pneumatic percussive tools such as pneumatic hammers shall be fitted with dampers, mufflers or silencers of the type recommended by the manufacturer;
17. All plant, equipment, and noise control measures applied, shall be maintained in good and efficient working order and operated such that noise emissions are minimised as far as reasonably practicable;
18. Any plant, equipment or items fitted with noise control equipment found to be defective shall not be operated until repaired / replaced;
19. Machines in intermittent use shall be shut down in the intervening periods between works or throttled down to a minimum during periods when not in use;
20. Static noise emitting equipment operating continuously may be housed within suitable acoustic enclosure, where appropriate;
21. Site activities may be staggered when working in proximity to any receptor, such as concrete cutting or pneumatic breaking should where possible. This proposed method of working will provide effective noise management of site activities to ensure that any receptor is not exposed to unacceptably high levels of noise over extended periods;
22. Excessive revving of all vehicles shall be avoided.
23. Unnecessary dropping of heavy items onto ground surfaces shall not be permitted.
24. The dragging of materials such as steel covers, plant or excavated materials along ground surfaces shall not be permitted.
25. The use of acoustic screens to attenuate noise at source from high noise activities shall be implemented as deemed necessary.
26. The construction contractors shall be informed of the live continuous noise monitoring systems and their mode of operation and shall be included on the text / email alert list to ensure that noise generated by their activities are appropriately managed.
27. A nominated person from the project team will be appointed to liaise with local residents and businesses regarding noise nuisance events as required, and
28. Ongoing meetings with the Clients Representative and the Contractor shall occur to discuss environmental mitigation measures

4.5 The introduction of New Noise Sources Onto the development lands

The potential of any item of plant to generate noise will be assessed prior to the item being brought onto the site.
o Consideration of Alternatives
o Information to be submitted by the contractor
o In-situ Noise Measurement

4.6 Noise Control Audits

Noise control audits will be conducted at regular intervals through the construction phase of the development. In the first instance it is envisaged that such audits will take place on a monthly basis. This subject to review and the frequency of audits may be increased if deemed necessary.
The purpose of the audits will be to ensure that all appropriate steps are being taken to control construction noise emissions. To this end, consideration will be given to issues such as the following:
o Hours of operation being correctly observed
o Opportunities for noise control 'at source'
o Optimum siting of plant items
o Plant items being left to run unnecessarily
o Correct use of proprietary noise control measures
o Materials handling
o Poor maintenance
o Correct use of screening provided and opportunities for provision of additional screening

5.0 Dust Management Plan Overview

The objective of dust control at the site is to ensure that no significant nuisance occurs at nearby sensitive receptors. In order to develop a workable and transparent dust control strategy, the following management plan has been formulated by drawing on best practice guidance from Ireland, the UK and the USA.
Effective site management regarding dust emissions will be ensured by the formulation of a dust management plan (DMP) for the site.

The key features of the DMP are:
o the specification of a site policy on dust;
o the identification of the site management responsibilities for dust;
o the development of documented systems for managing site practices and implementing management controls;
o the development of means by which the performance of the dust management plan can be assessed.

5.1 Dust Site Management

The aim is to ensure good site management by avoiding dust becoming airborne at source. This will be done through good design and effective control strategies.
At the planning stage, the siting of construction activities and storage piles will take note of the location of sensitive receptors and prevailing wind directions in order to minimise the potential for significant dust nuisance. In addition, good site management will include the ability to respond to adverse weather conditions by either restricting operations on-site or using effective control measures quickly before the potential for nuisance occurs:

1. During working hours, technical staff shall be on site and available to monitor dust control methods as appropriate;
2. 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;
3. It is the responsibility of the contractor at all times to demonstrate full compliance with the dust control conditions herein;
4. At all times, the procedures put in place will be strictly monitored and assessed.

The dust minimisation measures shall be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practise and procedures. In the event of dust nuisance occurring outside the site boundary, site activities will be reviewed and satisfactory procedures implemented to rectify the problem. Specific dust control measures to be employed are highlighted below.

5.2 Dust Control – 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 enclosed or covered with tarpaulin at all times to restrict the escape of dust;
2. 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. If practicable, a wheel wash facility will be employed at the exit of the site so that traffic leaving the site compound will not generate dust or cause the build-up of aggregates and fine material in the public domain.

5.3 Dust Management Summary

The pro-active control of fugitive dust will ensure that the prevention of significant emissions, rather than an inefficient attempt to control them once they have been released, will contribute towards the achievement of no dust nuisance occurring during the construction phase. The key features with respect to control of dust will be:

The specification of a site policy on dust and the identification of the site management responsibilities for dust issues;

1. The development of a documented system for managing site practices with regard to dust control;
2. The development of a means by which the performance of the dust minimisation plan can be monitored and assessed;
3. The specification of the measures to be taken to control dust emissions before it occurs and effective measures to deal with any complaints received.

6.0 Vibration Management

Kelland Homes will review the results of Environmental vibration monitoring periodically and take action as appropriate where required. Below is a list of vibration mitigation measures that will be considered during the project

4. Breaking out concrete / rock elements using low vibration generating plant tools.
5. Choosing alternative, lower-impact equipment or methods wherever possible.
6. Scheduling the use of vibration-causing equipment, such as pneumatic breakers and jackhammers, at the least sensitive time of day.
7. Routing, operating or locating high vibration sources as far away from sensitive areas as Possible.
8. Operations shall be sequenced so that vibration causing activities do not occur simultaneously at any one location or in proximity to a receptor.
9. Keeping equipment well maintained in particular the dampening mechanisms associated with pneumatic breakers.

7.0 Roads

Details will also be included in the Construction Stage Health & Safety Plan to be completed, prior to construction commencing, when appointments have been made under Safety and Health legislation.
The Construction Stage Health and Safety Plan will be reviewed and updated as is necessary during the course of the construction phase of the development. Traffic Management Plans (TMP's) will also be reviewed periodically as the development progresses.
A road sweeper will be employed where necessary during the course of the construction process.

When excavated material is transported on adjoining roads between interconnected phases, the contractor/applicant shall have a road sweeper on site all times to ensure the public road and footpaths are clear of mud and debris.

8.0 Site Set up – Construction Start/Completion

The development will be securely fenced off. Hoarding/temporary fencing will be erected to delineate all site works from public areas located adjacent to the development.

South Dublin County Council's relevant departments will be contacted and liaised with prior to the commencement. Where necessary Road Opening Licence applications will be submitted for approval from South Dublin County Council.

9.0 Traffic Management Plans (TMP's)

Kelland Homes acknowledges that there will be an impact of the local areas as a result of the project and will contact the surrounding residents and business owners prior to commencing works and we liaise with them regarding our program of works and site access requirements. This will enable an open line of communication to ensure cooperation between all parties throughout the construction of the Project and allow prompt resolution of any issues which may arise.

Further Kelland Homes will make allowances and commitments for Traffic Management resources to ensure the safe and efficient entry and exit of vehicles from site, including in the vicinity of site.

Adequate signage will be erected to indicate the construction site entrances as per the traffic management scheme as shown in the images on the following page. A separate traffic management document has been prepared (attached appendix 2) and revised during the project.

When excavated material is transported on adjoining roads, there will be a road sweeper on site all times to ensure the public road and footpaths are clear of mud and debris.

Tracked vehicles or cranes will not be allowed to travel on finished public roads without prior written permission of the construction manager and only with use of the timber mats or other approved precautions to prevent damage to the roads.

The major construction items include excavation and construction of attenuation tank, site wide drainage, housing and roads. It is anticipated that the peak of HGV movements to and from the site will be during excavation works and construction of the foundations and reducing of site levels. The peak LGV movements to and from the site will be during the construction. It is anticipated that the construction traffic impact on the surrounding local road network to the proposed development site will be minimal.

Haulage vehicle movements should be fully coordinated to comply with the requirements of the Layout and requirements herein.

1. At no time should construction associated vehicles be stopped or parked along the routes.
2. Haulage vehicles should not travel in convoys of greater than two vehicles at any time.
3. Haulage vehicles should be always spaced by a minimum of 250m.
4. Strictly at no time should haulage vehicles be parked or stopped at the entrance to the site.
5. All loading of excess material will occur within the site boundary.
6. All off-loading of deliveries will take place within the site, away from the public road and will access via the construction site access.

The site entrance gateway will be segregated by means of a hard physical barrier so as to segregate vehicles from pedestrians. Kelland Homes will prepare, revise, maintain and implement a Traffic Management Plan which will be monitored by site management to ensure compliance.

The increase in traffic as a result of construction will be minor and can be readily accommodated within the existing road network.

Construction vehicle movements will be minimized through:

1. Consolidation of delivery loads to/from the site and manage large deliveries on site to occur outside of peak periods;
2. Use of precast/prefabricated materials where possible;
3. ‘Cut’ material generated by the construction works will be re-used on site where possible, through various accommodation works;
4. Adequate storage space on site will be provided;
5. A strategy will be developed to minimise construction material quantities as much as possible;

6. Construction staff vehicle movements will also be minimised by promoting the use of public transport.
7. Movement of vehicles in and out of the site will be wherever possible not during peak traffic times (07.30-09.00 and 16.00-18.00)

Public Transport

Construction staff will be encouraged to use public transport as means to travel to and from the site. All staff will be made aware of the public transport available highlighting the location of the various public transport services in the vicinity of the construction site.

Public Roads

Measures will be put in place as required to facilitate construction traffic whilst simultaneously protecting the built environment. All entrances and temporary roads will be continuously maintained for emergency vehicle access.

The following measures will be taken to ensure that the site, public roads and surroundings are kept clean and tidy:

1. A regular program of site tidying will be established to ensure a safe and orderly site;
2. Scaffolding will have debris netting attached where required to prevent materials and equipment being scattered by the wind;
3. Food waste will be strictly controlled on all parts of the site;
4. Mud spillages on roads and footpaths outside the site will be cleaned regularly and will not be allowed to accumulate.
5. In the event of any waste escaping the site, it will be collected immediately and removed.

10.0 Project C&D Waste Management Plan

The management of all waste materials including contaminated material will be carried out as required under the Waste Management Act and associated environmental regulations.

See also separate biodiversity management plan (appendix 3) and waste management plan (appendix 4).

10.1 Watching Brief

Operatives should look out for any suspicious/unusual signs such as:

1. **Discoloured soil/made ground**: material which appears different from the surrounding material (e.g area of black material)
2. **Irradiance/Oily Sheen on Water**
3. **Odours from material:** areas which emit a strong smell (eg diesel, rotten eggs, almond)

4. **Waste material:** area where relative percentage or type of waste material changes significantly
5. **Asbestos containing materials**

Should any of the above be signs be encountered the operative shall notify the works supervisor and the Discovery Strategy shall be implemented.

10.2 Discovery Strategy

The discovery and management of potentially impacted soils should be dealt with on a case-by-case basis in order to address the specific nature of the ground conditions uncovered. The management options can be dictated by the location of the excavation site.

1. Suspend all works in the immediate area;
2. Do not disturb contamination further;
3. Avoid any contact with the material and/or vapours and assume as hazardous until proven otherwise;
4. Contractor assesses the requirement for any additional health and safety or environmental management control measures (source pathway receptor assessment);
5. Control measures, if required, are implemented;
6. Works supervisor to contact the designated environmental engineer;
7. Environmental engineer to carry out an in-situ assessment of material to be carried out via visual inspection and/or sampling and analysis to delineate and characterise the material;
8. Required assessments/sampling etc. are carried out and findings are discussed with the Contractor;
9. Management strategy for material formulated which is appropriate with in situ assessment results;
10. Site Specific method statement to be produced for removal and disposal of contaminated material to be authored.
11. Works proceed, and Client's Consultant provides a copy of the Method Statement to the relevant authority;

10.3 Wastes arising/proposals for minimisation/reuse/recycling:

Wastes arising from the project are as above for the Construction Phase. C&D waste will arise on the project on the construction and excavation and unavoidable construction waste / material surpluses /damaged materials. The Procurement Manager shall ensure that materials are ordered so that the quantity delivered, the timing of the delivery and the storage is not conducive to the creation of unnecessary waste.

Proposals for minimisation include:

1. Ensuring materials are ordered on an "as needed" basis to prevent over supply to the site
2. Purchasing coverings, panelling or other materials in shape, dimensions and form that minimises the creation of excessive scrap waste on site.

3. Ensuring the correct storage and handling of construction materials to minimise generation of damaged materials /waste e.g. keeping deliveries packaged until they are ready to be used
4. Ensuring the correct sequencing of operations
5. Assigning individual responsibility (through appropriate contractual arrangements) to sub-contractors for the purchase of raw materials and for the management of wastes arising from their activities, thereby ensuring that available resources are not expended in an extravagant manner at the expense of the main contractor.

Proposals for Recycling of waste include:

1. Waste timber can be recycled where the waste is suitable for shredding
2. Timber can also be sent for reprocessing as medium density fireboard
3. Waste Concrete can be utilised as fill material where the required specifications can be met
4. Excavation clay and C&D waste-derived aggregates are considered suitable for certain on-site construction applications.

It is our intention to engage a specialist waste service contractor who will process the requisite authorisations, for the collection and movement of the waste off site, and to bring the material to a facility which currently holds a waste licence/permit.

10.4 Assignment of Responsibilities:

The Site Manager will have overall responsibility for the implementation of the project C&D waste management plan. The Site Manager will be assigned the authority to instruct all site personnel to comply with the specific provisions of the Plan. At the operational level the site manager/site foreman as well as the appropriate personnel from each subcontractor on site shall be assigned the direct responsibility to ensure that the operations stated in the project C&D waste management plan are performed on an on-going basis.
Copies of the Project C&D Waste management plan will be made available to all relevant personnel on site. All site personnel and sub-contractors will be instructed about the objectives of the project C&D waste management plan and informed of the responsibilities which fall upon them as a consequence of its provisions. Where source segregation, selective demolition and material reuse techniques apply, each member of the development management team will be given instructions on how to comply with the Project C&D waste management plan.

10.5 Waste Auditing:

The C&D Waste Manager shall arrange for full details of all movements and treatment of construction and demolition waste discards to be recorded during the construction stage of the project. Each consignment of C&D waste taken from the site will be subject to documentation, and we will ensure full traceability of the material to its final destination.

Details of the inputs of materials to the construction site and the outputs of wastage arising from the project will be investigated and recorded in a waste Audit, which will identify the amount, nature and composition of the waste generated on the site. The waste Audit will examine the manner in which the waste is produced and will provide a commentary highlighting how management policies and practices inherently contribute to the production of construction and demolition waste. The measured waste quantities will be used to quantify the costs of management and disposal in a Waste Audit report. The total cost of C&D waste management will be measured and will take account of the purchase cost of material (including imported soil), handling costs, storage costs, transportation costs, revenue from sales, disposal costs etc. Final Details of the quantities and types of C&D Waste arising from the project will be reviewed for future projects waste management procedures to minimise waste generated and disposal costs.