



**Curve Devco Limited**

# **CONSTRUCTION & DEMOLITION WASTE MANAGEMENT PLAN**

Castle Park  
Castle Park Road,  
Dalkey, Co. Dublin

**Project Info**

<b>Client / PSCS</b>	Curve Devco Limited 5 Harcourt Road, Dublin 2
<b>Key Representative</b>	Robert Gray <b>Tel:</b> 086 775 5251
<b>Site &amp; Location</b>	Castle Park Castle Park Road, Dalkey, Co. Dublin
<b>Work Activity</b>	The development consists of 101 apartments to include 11 Studios, 26 One Beds and 64 Two Beds, basement car park and all associated works.
<b>Proposed Start Date</b>	April 2020
<b>Expected Project Duration</b>	28 Months
<b>Local Council</b>	Dun Laoghaire-Rathdown County Council

**Revision and Distribution**

This Plan and any subsequent revisions/updates shall be co-ordinated by and approved by the Curve Devco Limited Project Manager or Construction Manager before re-issue of this page and changed pages described in the revision table below.

**Revision**

Rev	Description	Section	Approved By	Date
0	Issued for initial review	All	Safety Solutions	13/01/20
1	Update of scope and site layout plan	Fig.1	Safety Solutions	14/01/20

A controlled copy of the document will and shall be retained by the Contracts / Project Manager.

**Purpose**

The generation and implementation of a waste management plan is one of Curve Devco Limited environmental objectives. The purpose of this Plan is to ensure the compliant disposal of non-hazardous and hazardous waste generated on site. All wastes and unwanted materials arising from the works shall be disposed of in accordance with this Plan and the associated operating procedures.

**Applicable Legal Requirements**

- The Waste Management Act, 1996.
- Waste Management (Facility Permit and Registration) Regulations 2007 (SI No. 821 of 2007)
- Waste Management (Collection Permit) Regulations 2007 (SI No. 820 of 2007)
- Waste Management (Miscellaneous Provisions) Regulations 1998 (S.I No 164 of 1998).
- Waste Management (Hazardous Waste) Regulations 1998 (SI No. 163 of 1998) and Waste Management (Hazardous Waste) (Amendment) Regulations, 2000. (S.I. No 73 of 2000).

**Construction & Demolition Waste Management Plan**

This Construction & Demolition Waste Management Plan has been prepared in accordance with the Safety, Health and Welfare at Work (Construction) Regulations 2013, and the Safety, Health and Welfare at work (Exposure to Asbestos) regulations, 2006 (S.I No.386 of 2006). Curve Devco Limited recognizes its duty to comply with the Safety, Health & Welfare Act 2005, general application regulations 2013, Best Practice Guidelines on the Preparation of Waste Management Plans for Construction & Demolition Projects 2006 and all associated legislation.

All those involved with the construction phase have a statutory duty to comply with it and provide Curve Devco Limited with any information in their possession, which may be relevant to safety health and the environment. Curve Devco Limited is committed to putting health and safety first on the project. Curve Devco Limited is also committed to minimising the impact on the environment of the project as far as is reasonably practicable.

A culture of safety and environmental awareness and responsibility will be maintained on the project by:

- Leading by example;
- Providing adequate resources;
- Promoting relevant training; and
- Making the necessary systems and management procedures available.

This document is a living document and will be updated as necessary during the course of the project, such as the appointment of the various Specialist Subcontractors, Nominated and Domestic. As appointed their safety statements and method statements, as appropriate, are obtained to ensure they have assessed any hazards they might expose to the project and which are not already covered - and will have such documentation appended.

This Construction & Demolition Waste Management Plan does not exempt any contractor from any requirements within the contract documentation or the requirements of the Safety Health & Welfare at Work Act 2005; the Safety Health & Welfare at Work (Construction) Regulations, 2013; together with any amendments thereto and other relevant statutory Regulations. Any perceived conflicts should be highlighted at an early stage for clarification.

### Project Description

The project involves the development of 101 dwellings, basement car park and all associated works. The design also incorporates public open space.

The split of the number of apartments by bedrooms is listed below.

- Studios – 11 apartments total
- 1 beds – 26 apartments total
- 2 beds – 64 apartments total

The proposed development sits well within the site boundary as shown in Fig.1 below. The curved building is approximately 15m wide and 175m long. The basement footprint is slightly wider at 22m. The apartment block is proposed to consist of a basement, ground floor and 4 upper stories, with two southern blocks being curtailed at the third story.

**Fig.1 – Proposed Site Layout**



### Responsibilities & Training

The Contracts / Project Manager is assigned responsibility for the implementation of this Plan. A copy of this Plan will be made available to all relevant personnel on site. All site personnel and sub-contractors will be instructed about the objectives of this 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 staff will be given instructions on how to comply with this Plan.

**Demolition Method**

There will be no significant demolition waste generated on site as the site is greenfield and there are no buildings to be demolished. However, in order to construct the dwellings in accordance with the planning permission, it is necessary to excavate large quantities of granite rock. It is estimated that approximately 5,000m<sup>3</sup> of granite will be excavated. Due to the constrained nature of the site and the proximity of adjoining dwellings it is not deemed feasible to recycle the granite on site, i.e. the area required for large crushing plant is not available and noise levels emitted are deemed excessive. That said, where possible, the granite will be reused on-site to construct boundary walls etc.

The superstructure of the building is designed to be constructed from pre-cast concrete which will be manufactured off-site. Bathrooms will also be constructed off-site entirely in pod form and be installed while the pre-cast structure is being erected. This focus on off-site manufacturing will reduce construction traffic drastically (both personnel and deliveries), reduce the need for tree felling and reduce on-site construction waste due to the substantial reduction of on-site trades.

**Granite Extraction**

The granite removed from site will be delivered to a processing plant in Ballinascorney, Co. Dublin where it will be crushed and used in the production of granite paving.

**Management of activities with Risks to Safety, Health and Environment**

All Sub-Contractors will have supplied the PSCS with their site-specific Safety Statements for assessment. On being required they will also supply task specific Method Statements for particular activities. Task specific Method Statements, in addition to describing the sequence and execution of the activity under consideration, will also include resources required. Task specific Method Statements will highlight the hazards as understood by the proposer, the risks associated with the particular hazard and the control mechanisms necessary, if the hazard cannot be eliminated.

Task specific Method Statements will state who might be harmed, the effects on, and the co-operation / attendances required from other contractors and will, in the first instance, be prepared by those proposing to carry out the activity under consideration. The project management will assess or have the task specific method statement assessed, and amended if necessary, prior to the activity proceeding. Curve Devco Limited will assess the information supplied and make all affected of the final outcome, by the most appropriate means. All materials for use will be stored in the designated site area prior to immediate use.

Materials being brought on site, with any potential to affect any person on site, must have its Safety Data Sheet supplied for assessment by Curve Devco Limited prior to being used. All waste will be brought to a designated site area, for segregation, prior to disposal by commercial waste disposal contractors off-site.

All skips will be adequately labelled and placed in the waste compound. All waste removed off site will be recorded on the waste tracking log. All waste will be removed by licenced hauliers and brought away to licenced facilities. All licences and permits will be issued to Curve Devco Limited before works commence.

The movement of vehicles must take account of the traffic rules of the site. Vehicles under contractor's control must, when reversing, have a 'flag man' to watch blind spots to the rear of the vehicles.

### **Waste Management Policy**

The following waste management strategy shall be applied at all times:

#### **'Reduce, Re-use, Recycle'**

**Reduce** - The prevention or minimisation of waste production when undertaking any activity.

**Reuse** - The reuse for the same purpose of a used product or material with minimal (if any) processing (e.g. used equipment, reusable packaging, wood, toner cartridges).

**Recycle** - The use for the same or different purpose of a used product or material which requires processing (e.g. scrap metal, waste oil, paper, cardboard, plastic etc.).

- Curve Devco Limited will document any attempts to secure recycling outlets for waste.
- Curve Devco Limited endeavours to develop a strategy of waste management from site induction to project completion, reinforcing training through toolbox talks and poster campaigns. A culture of site husbandry will be encouraged to minimise the risk of waste pollution either via blown litter or cross contamination of waste streams.
- All unauthorised waste disposal is considered to be an environmental incident and will be reported.

#### **UNDER NO CIRCUMSTANCES SHOULD ANY WASTE MATERIALS BE BURNED.**

### **Definition of Waste and Waste Classification**

**Waste** - Any substances or object belonging to a category of waste specified in the First Schedule (of the Waste Management Act 1996 and amended 2001 regulations) or included in the European Waste Catalogue, which the holder discards or intends or is required to discard and anything which is discarded or otherwise dealt with as if it were waste shall be presumed to be waste until the contrary is proved.

**Re-useable/Recyclable Waste** - Waste which can be cleanly removed, segregated and recycled for potential re uses in the future development of any future proposed development.

**Hazardous waste** - Wastes which can have a harmful effect on the environment and on human health as they exhibit ignitability, reactivity, corrosivity and/or toxicity and / or are listed as hazardous by the European Waste Catalogue and / or may be identified as hazardous by application of the EPA Waste Characterisation Tool compiled by The Clean Technology Centre.

**Construction and Demolition Residual Waste** - Materials resulting from the construction, remodelling, repair, or demolition of buildings and other structures.

**Waste Arising on Site**

It is the responsibility of the HSE Advisor or Project Manager to ensure that all waste generated on site (hazardous and non-hazardous) is stored in an appropriately labelled designated container/collection facility. These containers must be fit for purpose to prevent leaks or spills. Waste streams must not be combined for disposal.

**Waste Licences / Permits**

All waste will be collected by an appropriately permitted waste hauler and treated/disposed of at an appropriately permitted or licensed facility. In addition, copies of all relevant waste disposal licences will be maintained.

**Non-Hazardous Wastes:**

All waste materials will be collected into designated containers, which are transported by the Non-hazardous waste contractor for recycling or disposal. All associated documentation and receipts detailing disposal are maintained and filed by the Contracts / Project Manager and filed in the waste log sheets.

**Hazardous Waste**

All hazardous wastes must be stored in designated, secure and hazard signed areas with adequate clean-up and spillage / emergency response materials appropriate to the hazards of the wastes stored.

It is the responsibility of the producer of a waste not PREVIOUSLY GENERATED ON SITE to notify the environmental officer PRIOR to the waste being generated on site so that storage and disposal may be arranged. The table below outlines the types of hazardous waste anticipated to be generated on site along with the disposal instructions.

It is the responsibility of the designated person to ensure that all material is appropriately stored prior to collection (by a permitted carrier) and disposal at an appropriately licensed facility. Additional documentation is generated in the disposal of hazardous waste. The specific document is dependent on the disposal route.

- Disposal outside Ireland - Transfer Frontier Shipment (TFS) Documentation.
- Disposal within Ireland - WTF forms.

All documentation TFS documents, WTF forms and receipts detailing disposal are maintained and filed by the Environmental Department with the waste manifest.

**Document Control**

The following records will be kept at the site office:

- Waste Management Plan
- Copies of all relevant permits/licences
- Audit reports

- Site waste docket, detailing:
  - The waste carrier(s) used and contact details;
  - Permit No. and Vehicle Registration
  - Waste description and quantity and consignment route number.
  - The disposal site(s) name, License Ref. and contact details
- Weighbridge dockets (Non-hazardous waste)
- Landfill Receipts (Non-hazardous waste)
- WTF forms (Hazardous waste)
- Trans-frontier shipment documents (Hazardous waste)

The Contracts / Project Manager will be informed of inspections by Statutory Bodies, or breach of the Duty of Care by any party involved with the transfer of site waste.

The Contracts / Project Manager will keep full records of every movement of waste from the site. The specifics of the recording process are detailed in the attached waste disposal procedure.

### **Training & Awareness**

Toolbox talks will be carried out to the employees to insure all waste is segregated and recycled as required. All waste info will also be communicated through the use of method statements.

### **Waste Auditing**

The Contracts / Project Manager shall arrange for full details of all arising, movements and treatment of waste to be recorded. Each consignment of waste taken from the site will be subject to documentation, which will conform to the waste manifest attached and ensure full traceability of the material to its final destination.

The amount, nature and composition of the waste generated on the site, will be logged in the waste log. This information can then be used to examine the manner in which the waste is produced and provide a commentary highlighting how management policies and practices may inherently contribute to the production of waste.

### **Waste Management – Housekeeping**

Proper storage and housekeeping on site is everyone's responsibility.

#### Housekeeping

- Keep the site tidy and clean.
- Store all materials neatly and orderly in the appropriate areas.
- If materials are stored incorrectly, they may not be treated as waste and removed for disposal.

#### Litter

- Litter is anything that should be recycled or put in a bin but instead ends up on site.
- It ranges from sweet wrappers and drinks bottles to cigarette butts and discarded works materials.

- Where possible Recycle, otherwise bag and / or bin.

#### Waste Compound

- A compound has been provided where waste can be segregated into recyclables, hazardous and non – hazardous waste.
- Skips and drums are provided for the proper disposal of waste materials within the compound.
- Clear waste from the site into the containers provided.

#### Why Keep the Site Tidy?

- Environmental Reasons
  - Reduced risk of pollution
  - Improved waste management
  - Wildlife safety, litter can pose a health risk if local wildlife eats or get caught in it
- Health and Safety
  - Reduced risk of slips, trips and falls
  - Reduced risk of rodent activity

#### **Waste Traceability**

The Contracts / Project Manager shall arrange for full details of all arising's, movements and treatment of construction and demolition waste discards to be recorded. Each consignment of C&D waste taken from the site will be subject to documentation, which will ensure full traceability of the material to its final destination.

#### **Generated Wastes and Estimated Quantities**

Waste generation will vary by use but the typical waste that will be produced at the proposed development will include the following;

- Dry Mixed Recyclables (DMR) – includes non-confidential waste paper, newspapers, magazines, brochures, catalogues, leaflets, metal cans, plastic bottles, aluminium cans, tins and tetrapak cartons
- Organic waste – generation of food waste in kitchens
- Glass
- General Waste

General construction waste which can be recycled such as timber, plastic and metals will be segregated and collected by approved collection contractors. There will be a general skip for C&D waste not suitable for reuse or recovery. This skip will include general wet waste (mixed food waste and food packaging), polystyrene, contaminated cardboard, plastic etc. Workers on the site will be encouraged to recycle as much municipal waste as possible, i.e. cardboard, plastic, metals and glass.

#### Bulky Waste Collections

These can be completed on request for any build-up of bulky waste onsite such as beds/mattresses, furniture etc.

**BIN QUANTITIES****BLOCK 32 – 101 APTS**

WASTE	VOLUMES	LIFTS PA	SERVICE	QTY BINS
GW	21.45	215	Weekly	4
DMR	19.14	191	Weekly	4
GLASS	1.74	90	Fortnightly	2
COMPOST	15.66	224	Fortnightly	4

**Environmental Risk Assessment****Environmental Risk Level**

CONSEQUENCE	PROBABILITY				
	Frequent (5)	Probable (4)	Occasional (3)	Remote (2)	Rare (1)
(5) Catastrophic	HIGH (25)	HIGH (20)	HIGH (15)	MEDIUM (10)	MEDIUM (5)
(4) Fatal	HIGH (20)	HIGH (16)	MEDIUM (12)	MEDIUM (8)	MEDIUM (4)
(3) Critical	HIGH (15)	MEDIUM (12)	MEDIUM (9)	MEDIUM (6)	LOW (3)
(2) Marginal	MEDIUM (10)	MEDIUM (8)	MEDIUM (6)	LOW (4)	LOW (2)
(1) Negligible	MEDIUM (5)	MEDIUM (4)	LOW (3)	LOW (2)	LOW (1)

Activity	Possible Hazards	Risk Analysis			Controls
		Probability	Consequence	Rating	
<p><b>Waste Handling &amp; Disposal</b></p>	<ul style="list-style-type: none"> <li>•Wasting excess quantities of raw materials</li> <li>• Storing and handling of waste badly leading to environmental impairment (odours etc.)</li> <li>• Disposing of too much waste to landfill</li> <li>• Attraction of pests</li> <li>• Groundwater/ Surface water contamination</li> <li>• Ground contamination</li> <li>• Noise and Vibration associated with the transportation of waste</li> <li>• Emissions of vehicle fumes will contribute to greenhouse effect, the development of photochemical smog and acid rain.</li> </ul>	4	3	12	<ul style="list-style-type: none"> <li>•All reasonable measures will be taken to minimise waste where appropriate.</li> <li>• All subcontractors will adhere to the waste minimisation measures</li> <li>• Only containers suitable for their contents will be used.</li> <li>• Care will be taken to ensure that skips / containers are not overfilled and that wastes cannot be blown away.</li> <li>• The Site Manager will maintain records of all skips/waste taken off-site: the Site Manager / Supervisor will maintain WTF Waste Transfer Notes,</li> <li>• All wastes must be stored in designated areas, which are isolated from surface drains.</li> <li>• Minimise the risk of accidental spillages or leaks.</li> <li>• Provide covers to prevent evaporation and spillage of wastes.</li> <li>• The Site Manager will ensure that the waste carrier is authorised to carry the type of waste intended to be taken from site by confirming with Curve Devco Limited that the necessary documentation has been received.</li> <li>• Where possible the following waste is sent for recycling: Paper, Wood, Plastic, Metal, and Builders rubble.</li> <li>• No waste to be buried or burnt.</li> <li>• Where site constraints do not allow the storage of separate skips all waste is sent for disposal to landfill.</li> <li>• Toolbox talks on this issue with all site personnel.</li> </ul>

Activity	Possible Hazards	Risk Analysis			Controls
		Probability	Consequence	Rating	
<b>Renewable &amp; Non-renewable Resource Consumption</b>	<ul style="list-style-type: none"> <li>• Depletion of water resources</li> <li>• Depletion of land resources</li> <li>• Depletion of energy resources</li> <li>• Fumes produced during the combustion process of fossil fuels will contribute to the greenhouse effect, the generation of photochemical smog's and acid rain</li> <li>• Consumption of natural resources</li> <li>• Environmental impacts associated with the production of raw materials (such as cement)</li> <li>• Consumption of a nonrenewable resources used in the generation of electricity</li> <li>• Environmental impacts associated with the burning of fossil fuels to produce electricity</li> </ul>	3	3	9	<ul style="list-style-type: none"> <li>• Personnel on site will be asked to minimise the amount of water used where possible on site</li> <li>• The policy of reduce, reuse, recycle is adopted on all sites where practicable thereby minimizing the amount of waste going to landfill</li> <li>• Avoid unnecessary idling of construction equipment.</li> <li>• Encourage subcontractor workers to carpool where possible.</li> <li>• Maintain equipment and machinery in good working condition.</li> </ul>

Activity	Possible Hazards	Risk Analysis			Controls
		Probability	Consequence	Rating	
<b>Noise and Vibration Generation</b>	<ul style="list-style-type: none"> <li>• Excessive noise levels on site represent a major hazard to site workers</li> <li>• Can cause offsite complaints and rapidly sour community relations</li> <li>• Disturbance of wildlife and natural heritage</li> <li>• High vibration levels over sustained periods can cause damage to buildings and sensitive equipment within buildings</li> <li>• High vibration levels can also cause disruption to wildlife, and damage geological, geomorphologic and archaeological sites</li> </ul>	3	3	9	<ul style="list-style-type: none"> <li>• All works to comply with BS 5228-1:2009 – Code of practice for noise and vibration control on construction and open site.</li> <li>• Noise levels should not exceed 75 dBa as outlined in BS5228-2009. All breaking works will be restricted to between the hours of 08.00 and 17.00 Monday to Friday. The majority of the demolition methods used will be mechanical munching, to minimise noise.</li> <li>• Intermittent Vibration – Maximum peak particle velocity 10mm/s, Continuous vibration – maximum peak particle velocity 5mm/s.</li> <li>• All planning restrictions will be checked prior to work commencing.</li> <li>• An estimate will be made of the highest noise level likely to be experienced at the façade of the nearest noise sensitive property. Noise monitoring maybe required as part of planning, if so results will be kept on file in the main site office for inspection.</li> <li>• Consideration will be given to the use of alternative plant or construction techniques to reduce the noise levels. If alternatives are not viable, then consideration will be given to the use of barriers to reduce noise.</li> <li>• As much use as possible should be made of existing barriers e.g. site huts, material stockpiles, earthworks and site security hoarding. If this is not possible, then a warning that unavoidable noisy operations will occur on site will be included in any community liaison material issued to nearby residents and building occupiers. The reasons why alternatives are not viable and the likely duration of noisy activities will be given.</li> <li>• Compressor covers will be closed when not in use.</li> <li>• Machinery will not be kept running unnecessarily.</li> </ul>

					<ul style="list-style-type: none"> <li>• The engine exhaust and silencing systems of the vehicles and machines are maintained.</li> <li>• Project personnel (including sub-contractors) are aware of the importance of minimising noise impacts on residential areas adjoining the site.</li> <li>• Complaints about vibration are responded to quickly and appropriate action such as modify the construction method to reduce vibration or measure vibration levels to confirm compliance with standards will be taken.</li> </ul>
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Activity	Possible Hazards	Risk Analysis			Controls
		Probability	Consequence	Rating	
<p><b>Emission to Atmosphere Through vehicles, possible fires or explosions and dust from site activities</b></p>	<ul style="list-style-type: none"> <li>• Fumes produced during the combustion process will contribute to the greenhouse effect, the generation of photochemical smog and acid rain</li> <li>• Dust can affect plant growth and damage crops</li> <li>• Damage to the ecology of watercourses</li> <li>• Dust can cause electrical and mechanical faults in equipment and plant</li> <li>• Health and safety implications for neighbouring community</li> </ul>	4	4	16	<p>Unauthorised personnel are prohibited from entering sites.</p> <ul style="list-style-type: none"> <li>• All large sites are secured by means of hoarding or hares fencing.</li> <li>• Smoking is prohibited indoors.</li> <li>• All reasonable measures will be taken to minimise the creation of dust where appropriate.</li> <li>• All subcontractors will adhere to the dust minimisation measures.</li> <li>• Water bowsers will be used to suppress dust on haul roads and other areas on site where dust is generated. (A fine spray is preferable in suppressing dust in order to avoid excessive watering and the creation of mud or the creation of silty run off water).</li> <li>• If dust-generating activities cannot be avoided, the use of additional screening (e.g. transparent sheeting on bridges crossing sensitive watercourses) for dust will be considered.</li> <li>• Vehicles and plant used on site will be kept well maintained and regularly serviced. All engines will be turned off when the machine/vehicle is not in use.</li> <li>• Fuels, chemicals and other hazardous materials will be stored in an appropriate manner</li> <li>• Waste materials will not be burned on site.</li> </ul>

Activity	Possible Hazards	Risk Analysis			Controls
		Probability	Consequence	Rating	
<p><b>Transport of site machinery, employees, subcontractors and site deliveries</b></p>	<ul style="list-style-type: none"> <li>•The aspects contribute to all impact categories as follows:</li> <li>•The air emissions (e.g. carbon dioxide, hydrocarbons, particulates, nitrogen oxides, CFCs from a/c units) contribute to global warming, local air quality, acidification and ozone depletion;</li> <li>• The aqueous emissions contribute to water pollution; emissions to land (e.g. batteries, tyres, oils) generate a waste burden and contribute to ecotoxicity;</li> <li>•Fuel consumption contributes to resource depletion; buses also generate noise and soot, contributing to dust and noise nuisance;</li> <li>• There is a risk of harm to human health associated with the maintenance of the vehicles and from road traffic accidents</li> <li>• Contribute to noise and vibration</li> </ul>	4	4	16	<ul style="list-style-type: none"> <li>•Where necessary a traffic management plan will be drawn up and consideration given to the following:</li> <li>• The need, as far as practicable, to separate pedestrians and vehicles.</li> <li>• The need for traffic controls (e.g. banks man) where site haul roads cross public roads.</li> <li>• The need to control dust noise and vibration.</li> <li>• The desirability of preventing exhaust emissions from encroaching on nearby properties.</li> <li>• Avoiding congestion on public roads through excessive interface of site traffic with public traffic, including the provision for off- site queuing of delivery vehicles to prevent near-site congestion.</li> <li>• The special problems of dealing with disposal of waste including the opportunity to reduce waste related traffic by waste minimisation, and on-site segregation.</li> <li>• Generally minimising hazards to others and the disturbance caused to neighbours and the local community.</li> <li>• Notices will be clearly displayed at the site entrance reminding drivers to drive carefully to minimise dust and noise and speed limit signs will be erected where appropriate.</li> <li>• Careful driving will reduce dust, fumes and noise.</li> <li>• All delivery routes will be arranged to avoid reversing or other manoeuvring as far as possible.</li> <li>• Delivery drop off points and parking areas will be located as far as away as possible from sensitive neighbours.</li> <li>• Bus use is popularly considered to be preferable to car use due to lower impacts per passenger mile.</li> <li>• Very little control or influence over delivery or sub-contractor choice of transport.</li> </ul>

Activity	Possible Hazards	Risk Analysis			Controls
		Probability	Consequence	Rating	
<b>Litter &amp; Appearance Issues</b>	<ul style="list-style-type: none"> <li>• Visual impact on the local environment</li> <li>• Food waste will encourage vermin such as rats onto site</li> <li>• Site skips being used by unauthorized persons</li> <li>• Health and safety impacts on staff and the surrounding community (i.e. weils disease)</li> </ul>	3	3	9	<ul style="list-style-type: none"> <li>• Skips available on site for all types of waste.</li> <li>• Canteen kept tidy by cleaning contractors therefore, reducing vermin attraction.</li> <li>• Sites have security personnel to monitor unauthorized personnel.</li> <li>• Sites are fully enclosed with signage warning of unauthorised access.</li> </ul>

Activity	Possible Hazards	Risk Analysis			Controls
		Probability	Consequence	Rating	
<p><b>Risk of pollution from contractor activity on-site</b></p>	<ul style="list-style-type: none"> <li>Depending upon the properties of the substance, spillage or leakage can contribute to ecotoxicity, global warming, harm to human health (hazardous substances), local air quality, ozone depletion, and waste burden (from clean-up) and water pollution (if uncontained spillage of liquids).</li> <li>Noise and Vibration associated with the transportation of waste</li> <li>Emissions of vehicle fumes will contribute to greenhouse effect, the development of photochemical smog and acid rain.</li> </ul>	4	3	12	<ul style="list-style-type: none"> <li>Appropriate induction and toolbox talks of environmental site rules are given to all contractors on site.</li> <li>Spill kits are readily available on site.</li> <li>All small containers are stored securely when not in use on an impermeable base.</li> <li>All spillages are reported to the Site Manager who is responsible for investigating and taking remedial action to control the spillage and arrange clean-up operations.</li> </ul>

Activity	Possible Hazards	Risk Analysis			Controls
		Probability	Consequence	Rating	
<b>Storage of hazardous resources on site</b>	<ul style="list-style-type: none"> <li>• Depending upon the properties of the substance, spillage or leakage can contribute to: ecotoxicity, global warming, harm to human health (hazardous substances), local air quality, ozone depletion, waste burden (from clean-up) and water pollution / land contamination (if uncontained spillage of liquids).</li> <li>• Noise, vibration, fume emissions associated with the transport of hazardous substances</li> </ul>	3	4	12	<ul style="list-style-type: none"> <li>• An environmental check is carried out by site management.</li> <li>• All storage tanks are bunded to 110% capacity of the tank.</li> <li>• All spillages are reported to the Site Manager who is responsible for investigating spillages and arranging clean up operations.</li> <li>• All refuelling will be supervised and valves will not be left open unattended.</li> <li>• An emergency spill kit will be kept at each refuelling point.</li> <li>• Bowsers should have an automatic cut-out.</li> <li>• All personnel carrying out refuelling will be made aware of the procedure and know what actions to take in an emergency.</li> <li>• All containers that contain potential pollutants (e.g. fuels, oils and chemicals) will be securely stored.</li> <li>• All containers will be clearly labelled as precautions in the event of spillage. Taps and hoses for leakage will be checked regularly for leakage.</li> <li>• Avoid storing drums tightly against each other drums should be stored so that they can all be inspected for leaks.</li> <li>• Tanks or drums will be stored in a secure bunded container or compound that is locked when not in use. Do not let bunded areas remain filled with rainwater.</li> <li>• Tanks will be sited away from vehicle movements and marked clearly so that they are visible.</li> <li>• Tanks will not be put where there is a direct link to surface watercourse or sewers.</li> <li>• Avoid placing tanks on unmade ground to reduce the risk of soil contamination.</li> <li>• Bunded tanks are protected from vandalism.</li> <li>• The bund should be impermeable to the substance that is being stored in the tank.</li> <li>• Air vent pipes should be positioned so that they can be seen easily and directed so that any discharge (e.g. in the event of the tank being overfilled) is directed into the bund.</li> </ul>

Activity	Possible Hazards	Risk Analysis			Controls
		Probability	Consequence	Rating	
<b>Odour and Dust emissions from site</b>	<ul style="list-style-type: none"> <li>•Disturbance of site neighbours (e.g. residents may have to reclean washing hanging out to dry etc.)</li> <li>• Dust can affect plant growth and damage crops (leading to claims from farmers)</li> <li>• Damage to the ecology of watercourses</li> <li>• Dust can cause electrical and mechanical faults in equipment and plant</li> <li>• Odour can be classified as a statutory nuisance if it is a nuisance or if it is prejudicial to health.</li> <li>• Certain odours can cause nausea and therefore pose a risk of harm to human health.</li> <li>• Odour can also have a local aesthetics degradation impact.</li> <li>• Energy resources being used to clean up the damage dust causes to neighbours, farmers etc.</li> </ul>	3	3	9	<ul style="list-style-type: none"> <li>•All reasonable measures will be taken to minimise the creation of dust where appropriate.</li> <li>• All subcontractors will adhere to the dust minimisation measures.</li> <li>• Water bowsers will be used to suppress dust on haul roads and other areas on site where dust is generated. (A fine spray is preferable in suppressing dust in order to avoid excessive watering and the creation of mud or the creation of silty run off water).</li> <li>• If dust-generating activities cannot be avoided, the use of additional screening (e.g. transparent sheeting on bridges crossing sensitive watercourses) for dust will be considered.</li> <li>• Vehicles and plant used on site will be kept well maintained and regularly serviced. Engines will be turned off when not in use.</li> <li>• Waste materials will not be burned on site.</li> <li>• Consideration will be given to the use of odour suppressants sites where odour is identified during the planning stage as a particular environmental issue (e.g. gasworks sites).</li> </ul>