

Environmental Management System

Crown Hill Topsoil

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1. INTRODUCTION:

The aim of the EMS is to identify all of the likely environmental aspects and impacts of the processes carried out at Crown Hill Services and to propose suitable mitigation to minimise their environmental impact.

2. THE SERVICE:

Crown Hill Topsoil provide recycled topsoil and aggregates, as well as wood chip, to the construction industry.

We provide a range of different quality soils, sands and aggregates to private and commercial customers. We are also looking to supply hire skips in the near future.

The key aspects of the service are:

- Sourcing and collecting aggregates;
- Assessment of sourced material;
- Inspection of sourced material for possible contaminants;
- Grading the soil and aggregate using a screen;
- Testing soils and aggregates produced;
- Chipping Timber;
- Storage of graded aggregates, soil and timber;
- Loading and delivery of processed material to customers;
- Storage of empty skips (full skips not kept on site);
- Delivery and receipt of skips;

3. LOCATION OF THE SITE:

Our Depot is at Unit 1009 of the Caerwent Army Training Estate in Caldicot.

4. LOCATION SENSITIVITY:

The Caerwent Army Training Estate is a large area of land in Caerwent, Caldicot, owned by the Ministry Of Defense. It is predominantly used for training exercises, but a portion of the land is segregated off for use commercially.

The entire estate is fenced off, and access is only permitted by passing a checkpoint at the entrance, which will grant permission for entry. As a result, there is very little traffic movement through the area, with little interaction with the general public.

The site is around 550m from the nearest residential property, which is a farm house to the west of the site. The nearest residential area is the housing estate to the south of the training estate, 950 metres from the site border. These are unlikely to be affected by site activities, however there is a negligible risk that they may experience nuisance from noise and dust generated from the works.

The MOD buildings in the area are sparse, and often vacant, although there are several other small commercial companies within the estate. When in use, the buildings may also be affected by noise and dust generated from the works.

Llanmelin wood is located immediately adjacent to the northern boundary of the site. This woodland contains Llanmelin Hillfort, which is an iron age hillfort located approximately 220m north west of the site.

The nearest watercourse is Castorogi Brook, which is located approximately 330m west of the site.

No contaminated land has been identified at the site, although the works involve the processing of materials from off site, so a risk of bringing in contaminated material is present.

5. ROLES AND RESPONSIBILITIES:

The Managing director shall have overall responsibility for overseeing the management of the environmental aspects of the operation of the facility.

CONTACT DETAILS:

Simon Stone

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6. ASPECT IDENTIFICATION:

Before they can be controlled, it is necessary to identify all of the likely environmental aspects associated with the works and to ensure that they are fully understood. The following table **WILL** reviewed **6 MONTHLY** for the duration of the works. Overall responsibility for the completion of this table lies with the **Managing Director**.

The table will be used to gauge the likelihood and the significance of impacts. Significance is scored using the assessment method below:

Key:	L = Likelihood	I = Magnitude of Impact	S = Significance
Significance Rating:	A = Unlikely B = Possible C = Probable D = Identified Impact	1 = No Impact 2 = Low / Insignificant Impact 3 = Moderate Impact 4 = High Impact	A 1 – 4 B 1 – 4 C 1 – 4 D 1 – 4

Consents/Consultation	Potential	Applicable	Significance			Control Measures Reference
			L	I	S	
Does the project require an Environmental Impact Assessment under the regulations		X				
Does the site require planning permission?	Planning Permission granted with specific conditions on environmental performance to be fulfilled.	✓				
Will consultation be required with the LA Env Health Dept	Potential for nuisance to residents- noise, vibration, dust, light, traffic and mud on roads	✓	B	2	B2	10.5 - Nuisance
Does the site fall within any designated areas (SSSI, SAC, LNR, NNR, etc)		X				

Cell and Tissue Culture	Experiment	Date	Group/Class	Instructor/Supervisor
<p>1. Preparation of cell suspension from tissue.</p> <p>2. Seeding cells into culture flasks.</p> <p>3. Maintenance of cells in culture.</p>	<p>1. Preparation of cell suspension from tissue.</p> <p>2. Seeding cells into culture flasks.</p> <p>3. Maintenance of cells in culture.</p>	<p>10/10/2023</p>	<p>1. 10/10/2023</p> <p>2. 10/10/2023</p> <p>3. 10/10/2023</p>	
<p>4. Observation of cell morphology and growth.</p> <p>5. Harvesting cells for analysis.</p>	<p>4. Observation of cell morphology and growth.</p> <p>5. Harvesting cells for analysis.</p>	<p>10/10/2023</p>	<p>1. 10/10/2023</p> <p>2. 10/10/2023</p> <p>3. 10/10/2023</p>	
<p>6. Calculation of cell yield.</p> <p>7. Discussion of results.</p>	<p>6. Calculation of cell yield.</p> <p>7. Discussion of results.</p>	<p>10/10/2023</p>	<p>1. 10/10/2023</p> <p>2. 10/10/2023</p> <p>3. 10/10/2023</p>	
<p>8. Conclusion.</p>	<p>8. Conclusion.</p>	<p>10/10/2023</p>	<p>1. 10/10/2023</p> <p>2. 10/10/2023</p> <p>3. 10/10/2023</p>	

Surface and Groundwater	Potential	Applicable	Significance			Control Measures Reference
			L	I	S	

Does a watercourse run through the site?		X	B	2	B2	10.1 – Protection of Surface and Groundwater
Is there a requirement for a soakaway on site?		X				
Will it be required to discharge to a mains sewer?	Site runoff will be discharged into existing site drainage.	✓	B	3	B3	10.1 - Protection of Surface and Groundwater.
Is the site in a flood risk area?		X				Natural Resources Wales Flood Risk Map does not indicate risk of flooding.

Risks of Pollution	Potential	Applicable	Significance			Control Measures Reference
			L	I	S	
Hydrocarbon and metal contaminated runoff from contaminated land, entering watercourses and groundwater.	No contaminated land identified at the site.	X				10.1 – Protection of Surface and Groundwater
Silt contaminated runoff into watercourses and groundwater	It is likely that surface runoff from the site discharges into the River Severn	✓	B	2	B2	Site runoff will enter existing drainage which will drain to surface water or the sea. 10.1 – Protection of Surface and Groundwater
Hydrocarbon contaminated runoff into watercourses and groundwater	Leaks from plant and machinery, spillage during transport, storage or refuelling.	✓	B	4	B4	11 – Emergency Preparedness and Response 10.1 – Protection of Surface and Groundwater
Silt contaminated runoff into Surface Drains	Existing surface drainage will be retained and utilised, on site. Silt contamination can arise from	✓	B	3	B3	10.1 – Protection of Surface and Groundwater

Hydrocarbon contaminated runoff into Surface Drains.	
Asbestos Contamination	

earthworks and concrete cutting activities.	
Leaks from plant and machinery, spillage during transport, storage or refuelling.	
No asbestos identified, cautionary approach will be adopted during the processing of material from off-site	

✓	B	4	B4	
✓	B	3	B3	

11 – Emergency Preparedness and Response
10.1 – Protection of Surface and Groundwater
11– Emergency Preparedness and Response
SWMP
10.5 – Nuisance.
10.6 – Contaminated Materials

Ecology	
Have any protected species been identified around the site?	

Potential	
There is historical data of great crested newt presence in the area.	

Applicable	Significance		
✓/x	L	I	S
✓	D	3	D3

Control Measures Reference
10.1– Protection of Surface and Groundwater

Surface and Groundwater	Potential	Applicable	Significance			Control Measures Reference
			L	I	S	
Does the work directly affect a watercourse e.g. alteration of alignment, bridge construction, etc.		X				
Does a watercourse run through the site?		X				
Will the works take place in a sensitive catchment?	All runoff from the works feed into the Severn	X ✓	B	3	B3	10.1 – Protection of Surface and Groundwater
Will the works affect groundwater or drainage into an aquifer?		X				10.1 – Protection of Surface and Groundwater
Will the works require abstraction from a watercourse or aquifer?		X				

Will the works require discharge to a watercourse or aquifer?		X				
Is there a requirement for a soakaway on site?		X				
Will it be required to discharge to a mains sewer?		X				
Are the works in a flood risk area?	National Resources Wales Flood Risk Map does not indicate risk of flooding.	X				

Waste Reduction, Reuse and Recycling		Potential	Applicable	Significance			Control Measures Reference
				L	I	S	
Will the work produce controlled wastes?	Breach of Waste Management Legislation due to the incorrect storage and disposal of wastes.	✓	D	2	D2	01 – SWMP	
Will the project produce Hazardous Wastes?	Breach of Hazardous Waste Regulations: <ul style="list-style-type: none">- Hazardous Waste Producers Premises Notification.- Unsatisfactory storage of Hazardous Waste.- Incorrect disposal of Hazardous waste.	✓	D	2	D2	0Appendix 1 – SWMP	

Storage Risks	Potential	Applicable e ✓/x	Significance			Control Measures Reference
			L	I	S	
Fuels – Storage location – watercourses, boreholes, etc	Fuel for plant and equipment stored in static and mobile bowzers, leakage from plant and machinery.	✓	D	2	D2	10.1 – Protection of Surface and Groundwater 11 – Emergency Preparedness and Response
Will Chemicals/Hazardous materials be stored and used on site?		X				
Will hydrocarbons be stored on site?	Bulk hydrocarbons will be stored in a double skinned bowser within the site compound. Leakage, spillage to ground or into watercourses. Compliance with the Oil Storage Regulations required.	✓	D	2	D2	10.1 – Protection of Surface and Groundwater 11 – Emergency Preparedness and Response
Will refuelling of plant take place on site?	Refuelling of plant will be carried in the compound area and on site.	✓	D	2	D2	10.1 – Protection of Surface and Groundwater 11 – Emergency Preparedness and Response

Nuisances	Potential	Applicable e ✓/x	Significance			Control Measures Reference
			L	I	S	
Will potentially noisy activities take place on site?	Use of plant and machinery, including, disc cutters and pneumatic breakers	✓	C	3	C3	10.5- Nuisance
Will the works produce odours?		X				
Will the works generate significant amounts of dust?	Dust could be generated during delivery and processing of materials	✓	B	2	B2	10.5 – Nuisance 0 – Control of emissions to air.
Will the works generate ground borne vibration?	Low levels of ground borne vibration could be produced during dumping and sorting of materials.	✓	A	2	A2	10.5 - Nuisance

Will the works cause Traffic Disruption						
Will additional lighting be required for the works?	Localised task lighting could be required.	✓	C	2	C2	10.5- Nuisance
Will the project be visual intrusive.		X				
Will nuisance affect residential properties?	There are residential properties 550m to the east of the works which may be affected	✓	B	2	B2	10.5- Nuisance
Will nuisance affect business properties	There are a few business properties surrounding the site which may be affected	✓	B	3	B3	10.5- Nuisance
Will nuisance affect recreation, schools, worship, community buildings		X				

Contaminated Land		Control Measures Reference			
Is there identified contamination on site?	Potential	Applicable	Significance		
		✓/x	L	I	S
	There is no evidence of contamination at the site. MOD records have been reviewed with no evidence of previous contaminative uses. Potential for contaminated materials to be imported within material entering the site. Controls to be put in place to prevent this.	X			
	No asbestos has been identified but there is potential for it to exist within materials brought on site	✓	B	3	B3
Is there asbestos on site?					
	No evidence.	X			
Is there evidence of disused drums and canisters on site?					
		10.6 – Contaminated Materials			
		0 – Control of emissions to air.			
		10.3 – Monitoring of emissions to air			
		Appendix 1 – SWMP			
		10.6 – Contaminated Materials			

Archaeology and Heritage		Potential			Applicable	Significance			Control Measures Reference	
Will the facility affect a scheduled ancient monument?					✓/x	L	I	S		
Will the facility impact on a listed building or structure?					X					
Does the facility affect any known archaeology?		No known archaeology, precautionary approach to be adopted.			X					
Agriculture:		Potential			Applicable	Significance			Control Measures Reference	
Will the facility affect agricultural land?					✓/x	L	I	S		
					X					

7. MATERIALS REGISTER:

Material	Storage	Use	Disposal
Diesel	In double skinned bunded tank with all delivery pipes being in a locked container within the bund – refer to section: 0		All plant and machinery to be inspected for leaks throughout the working shift. Care to be taken during refuelling – procedure I 10.1.1
Lubricants	In double skinned bunded tank with all delivery pipes being in a locked container within the bund – refer to section: 0		All plant and machinery to be inspected for leaks throughout the working shift. Care to be taken during refuelling – procedure I 10.1.1

8. CONSENTS:

CONSENTS:

Consents will be required for the following aspects of the project:

Aspect	Consent Required / Consenting Body
The beneficial use of inert construction waste.	Environmental Permit for Waste Management
The production of Hazardous Waste	Hazardous Waste Producers Premises Notification – National Resources Wales

9. LEGAL REGISTER:

Below is a list of Environmental Legislation applicable to the works undertaken at the facility and the areas of operations controlled by this legislation:

Legislation:	Implications on Operations:
Climate Change Act 2008	Sets 2050 as the target for reducing greenhouse gas emissions, outlines a carbon budgeting system, greenhouse gas emissions trading schemes, financial incentives for businesses to reduce waste and recycle more. Puts onus (not statutory requirement) on businesses to monitor and report greenhouse gas emissions.
Control of Asbestos Regulations 2006 SI 2739	Requires employers to assess risks and limit employees exposure. Also requires employers to have the correct license before working with asbestos and to ensure that their employees have proper training.

Control of Substances Hazardous to Health Regulations 2002 SI 2677/ Amendment 2003 SI 978 / Amendment 2004 SI 3386	Requires employers to assess the risks of, prevent or control to hazardous substances and monitor employees exposure. Also places duties on employees concerning their own protection from such exposure. / Amendment – amends 2002/2677 by adding new definitions and additional hazardous substances / Amendment – Amends 2002/2677 by introducing new exposure limits and amending the duty to review control measures.
Anti-social Behaviour Act 2003.	Extends the powers of to clean up the environment, and applies controls over noisy premises, advertisements and waste.
Clean Neighbourhoods and Environment Act 2005	Introduces additional noise, litter and waste controls including site waste management plans and classifies artificial lighting as statutory nuisance.
Noise Emission in the Environment by Equipment for Use Outdoors Regulations 2001 SI 1701	Establishes maximum noise levels for equipment used outdoors, such as generators.
Environmental Protection Act 1990	Defines the legal framework for Duty of Care for Wastes, contaminated land and statutory nuisance.
Waste Batteries and Accumulators Regulations 2009 SI 890	Establishes a legal framework and schemes for collecting, treating and recycling portable, industrial and vehicle batteries.
Control of Pollution (Amendment) Act 1989	Requires carriers of controlled waste to register with the Environment Agency and outlines the penalties for vehicles shown to have been used for illegal waste disposal.
Controlled Waste Regulations 1992 SI588 – Amendment 1993 SI566	Defines household, industrial and commercial waste for waste management licensing purposes.
Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991 SI 1624	Introduces a registration system for carriers of controlled waste.
Environment Act 1995	Establishes the Environment Agency as the regulatory bodies for contaminated land, control of pollution, conservation or enhancement of the environment and fisheries.
Environmental Protection Act 1990	Defines within England Scotland and Wales the legal framework for duty of care for waste, contaminated land and statutory nuisance.

Environmental Protection (Duty of Care) Regulations 1991 SI 2839	Imposes a duty of care on any person who imports, produces, carries, keeps, treats or disposes of controlled waste, to ensure there is no unauthorised or harmful depositing, treatment or disposal of the waste.
Environmental Protection (Duty of Care) (Wales) (Amendment) Regulations 2003 SI 1720	Amends 1991/2839 to allow waste collection authorities in Wales to serve notices on people required to keep written descriptions of waste and transfer notices, and to require them to produce such documents to the authority within a specified time.

10. ASPECT MITIGATION PROCEDURES:

10.1 PROTECTION OF SURFACE AND GROUND WATER:

10.1.1 SITE DRAINAGE

As the site is predominantly located on hardstanding permeable material, site drainage is dominated by infiltration to groundwater. There are no point source emissions of drainage water from any of the storage areas on site. Soil storage and processing are carried out within the covered areas of the site, so runoff from rainwater will be minimal.

Runoff from the asphalt road surfaces is collected in an open pipe which flows to a settlement pond, before being discharged to the existing site drainage to the south of the site.

Site drainage does not flow to the Dinham Meadows SSSI to the west, nor does it discharge to Llanmelin Wood to the north.

Monthly inspections of the settlement pond will ensure that it does not become overloaded with silt, resulting in the drainage backing up and the water flowing around the site uncontrolled. If significant silt build up is identified during the course of these inspections, the silt will be cleared and the silt fence replaced.

Highways are regularly swept to keep them free of site material. This further reduces the potential for silt to enter the drainage water.

10.1.2 CONTROL OF HYDROCARBONS AND CHEMICALS INTO SURFACE AND GROUND WATER:

Definitions:

Double skinned tank – twin walled tank where there is a small gap between the inner skin and the outer skin. All ancillary equipment i.e. inlet outlet pipes, sight glasses etc fall outside the second skin. These tanks alone do not fulfil the requirements of the Control of Pollution (Oil Storage)(England) Regulations 2001.

Secondary Bund – bunded area around an oil, fuel or chemical container which encompasses all of the ancillary equipment from the containers i.e. inlet/outlet pipes, sight glasses etc.

Integrally Bunded Tanks – These are purpose built storage units whereby the tank is situated within a liquid tight steel container. All gauges and ancillary equipment are also located within the container. The containers are lockable to prevent tampering.

Risks:

Leakage of fuels and oils from plant and machinery.

Leakage/spillage of fuels, oils and chemicals from containers.

Spillage of fuel during refuelling.

Runoff from excessive use of shuttering oil.

Hydrocarbons washed out from un-cured bituminous paints and sealants.

Pathway:

Hydrocarbons and chemicals entering existing site drainage.

Hydrocarbons and chemicals entering watercourses or groundwater.

Hydrocarbons and chemicals entering drainage from site offices, canteen, storage units.

Controls:

Re-fuelling of plant and machinery shall not take place within 10m of a watercourse or 50m of a borehole. Fuelling is only to be carried out by appropriately trained personnel, issued with appropriate PPE.

The re-fuelling of static and small items of plant shall be carried out by a suitably trained, designated person using fuel cans with spouts which can be inserted into re-fuelling apertures of the plant being re-fuelled. If such fuel cans are not available a funnel will be used.

Bowsers used for the re-fuelling of plant shall be Integrally bunded and stored in a secure location overnight.

All fuels, oils and chemicals to be stored in suitable containers within controlled secondary bunded enclosures such as concrete bunds or drip trays. These shall be positioned remote from surface water drainage.

Suitable security shall be provided for fuel and chemical storage areas.

The secondary containment system must provide storage for at least 110% of the tanks maximum capacity. If more than one container is stored, the system must be capable of storing 110% of the biggest container's capacity or 25% of the capacity of all of the containers within the bund, whichever is the greater.

Drip trays and bunds shall not be penetrated by any valve or pipe used for draining the bund.

All tanks shall be labelled to show their contents, volume, refill procedure and spill response procedure.

Plant and vehicles should be inspected for oil and fuel leaks prior to the start of each shift.

All static plant should be placed within a drip tray which more than covers the footprint of the plant with a capacity of 25% of the fuel or oil capacity of the plant. Drip trays should be fitted with integral oil traps to allow them to drain or provision should be made for the removal of water during wet weather.

All containers of hydrocarbons or chemicals used out on site should be placed in a drip tray as above.

COSHH and Environmental Hazard data sheets shall be obtained for all chemicals bought to site and copies shall be kept at the same location as the chemicals are stored. Attention shall be paid to instruction for environmental conditions in which chemicals are to be stored i.e. temperature, humidity, expose to ultra violet light, etc.

10.1.3 PREVENTION AND CONTROL OF SILT CONTAMINATED RUNOFF INTO SURFACE AND GROUND WATER:

Risks:

Silt contaminated water flowing into highway drainage and subsequently into controlled waters.

Pathways:

Silt contaminated water entering existing surface drainage.

Controls:

To prevent silt being mobilised and site runoff becoming contaminated, the following good practice will be employed:

- All works will be undertaken under cover, using the storage sheds already present on the site.
- Clean water from non-works areas will be diverted away from works areas to prevent it becoming contaminated.
- Confine site traffic to dedicated hard surfaced haul roads. These haul roads are to be maintained clear of loose material.
- Damping down for dust suppression to be carefully coordinated to ensure excessive volumes of water are not sprayed onto areas, mobilising suspended solids.
- To prevent silted water migrating into existing drainage and subsequently into controlled watercourses the following measures shall be taken:
- Silt contaminated water will be directed away from drains. If necessary, this will be directed onto broken ground and allowed to soak away or into excavations, where silt can settle out.
- Drains will be protected using sandbags and geotextile filters.
- Areas around drains will be maintained free from site material.

10.2 CONTROL OF EMISSIONS TO AIR:

10.2.1 DUST AND PARTICULATES:

Dust emitted from site can cause severe nuisance to surrounding residents, businesses and facilities. In its simplest form it can cause additional cleaning work and reduce resident's quality of life but in its most severe form it can have acute effects on people health especially those suffering with respiratory conditions such as asthma. Dust can also carry contaminants which has great impacts on health.

Dust can also have an impact on the ecology of the area blanketing vegetation preventing it from transpiring and reducing food sources for animals and invertebrates.

Risks:

- Dust emitted from material processing operations
- Dust emitted from vehicle movements
- Dust emitted from cutting operations
- Dust emitted from materials handling.

Controls:

Material Handling

All material will be stored within manufacturer's containers, in a secure dry location. Tipping heights and rates will be minimised for materials which contain fine particles. In handling areas, bowsers, sprinklers, spay mist systems and screens, shall be used to prevent dust.

Vehicles & Plant Movement

Haul routes will be maintained clear from site material and if required shall be dampened down in dry weather conditions, using water from grey sources where possible. All vehicles and plant on site shall be fully serviced and maintained, where possible vehicles used will comply with Euro IV and V standards. No vehicle on site shall be permitted that emits black smoke. No plant or machinery shall be left running when not in use. Site speed limits shall be enforced and speeds limits on haul roads reduced in dry weather to reduce dust generation,

Control of Site Operations

Equipment likely to generate excessive quantities of dust shall be enclosed, shielded, fitted with dust suppression, extractors, filters and scrubbers. Drop heights shall be kept to a minimum during the movement of materials. Where appropriate spray mist systems, windbreaks, netting screens or semi-permeable fencing shall be used to reduce dust emissions. Where necessary, water sprays shall be employed to control dust generated during construction operations. If equipment which produces excessive dust (concrete cutting and scabbling) does not have suppression equipment fitted, a water mist shall be used to damp down dust i.e. backpack sprayer or in extreme circumstances a jet wash.

10.3 MONITORING OF EMISSIONS TO AIR:

10.3.1 DUST AND PARTICULATES:

Visual monitoring for dust shall be undertaken daily during periods of dry weather.

10.3.2 SMOKE:

Burning on site is prohibited unless under consent of the Natural Resources Wales and the local Authority Environmental Health Department.

10.4 WASTE REDUCTION AND MANAGEMENT:

For all waste issues connected with the project please refer to the 'Site Waste Management Plan'.

10.5 NUISANCE:

10.5.1 NOISE AND VIBRATION:

The estate is not very busy due to the restricted access of the area. There are several small business operating in the area and a residential area 550m to the west. There is, therefore, some potential for noise and vibration to cause a nuisance.

RISKS:

Disturbance to residents and businesses from construction noise.

Disturbance to residents and businesses from dust.

Local authority enforcing a prohibition notice on the site or a particular activity due to excessive noise.

Disturbance to visitors of the surrounding areas due to the above.

NOISE CONTROLS:

- 1 (a) All vehicles and mechanical plant used for the purpose of the Works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order to ensure effective noise reduction;
- (b) 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 percussion tools shall be fitted with mufflers or silencers of the type recommended by the manufacturer and shall be maintained in good and efficient working order to ensure effective noise reduction;
- (c) Machines in intermittent use shall be shut down in the intervening periods between work or throttled down to a minimum. Ensure equipment is turned off when not in use;
- (d) All audible warning systems and alarms shall be designed, where reasonably practicable, to minimise noise. Non-audible warning systems shall be utilised in preference;
- (e) Plant known to exhibit acoustic directivity, i.e. emit noise strongly in one direction, shall be oriented so that the noise is directed away from noise sensitive receptors;

- (f) Where possible carry out loading and unloading during working hours and away from noise sensitive areas.
- 2 The normal working hours within the Site shall be Monday to Friday between 07:00 and 19:00 hours and Saturday between 07:00 and 13:00, with no working on Sundays and public holidays.
- 3 The noise levels (see Note (i) below) scheduled below for periods outside the normal working hours will only be permitted when consent has been given to exceptional working.

VIBRATION

In the event that vibration levels are perceived to be causing damage to properties, Crownhill Services are required to evaluate possible damage in accordance with:

BS 7385: Part 1 and Part 2 and

BS 5228: Part 4: 1992

CONTROL OF VIBRATION AT SOURCE

General

Vibration can be more difficult to control than noise, and there are few generalisations that can be made about its control. It should be borne in mind that vibration may cause disturbance by causing structures to vibrate and radiate noise in addition to perceptible movement.

Substitution

Where reasonably practicable, plant and/or methods of work causing significant levels of vibration should be replaced by other less intrusive plant and/or methods of working.

Vibration Isolation of Plant at Source

Vibration from stationary plant (eg generators, pumps, compressors) may, in some instances, prove disturbing when located close to sensitive premises or when operating on connected structures. In these instances, equipment should be relocated or isolated using resilient mountings.

CONTROLLING THE SPREAD OF NOISE

Methods of Control

If noisy processes can be avoided, then the amount of noise reaching the neighbourhood should be limited. Alternative ways of doing this are either to increase the distance between the noise source and the listener or to introduce noise reduction screens.

Distance

Increasing the distance is often the most effective method of controlling noise. This may not be possible when work takes place on a restricted site or fixed structures, eg railway tracks.

Stationary plant such as compressors and generators can be located away from the work area so as to avoid being close to any noise-sensitive area.

CONTROLLING THE SPREAD OF VIBRATION

Where reasonably practicable, vibrating equipment should be located as far from sensitive premises as possible, and if on a structure, not on one which is continuous with that of the sensitive premises. In some instances it may be possible to reduce transmitted vibration by cutting a structure to separate site work from sensitive premises. It is important to take account of safety and structural issues before carrying out any work of this nature.

10.5.2 DUST:

A requirement for dust suppression will be assessed. If required, dust suppression will be implemented during periods of dry weather. Jet washers and mobile bowsers will be used for this. A water source will be established within the site compound.

10.5.3 MUD ON ROADS:

All vehicles leaving the site shall be cleared of site material if required using a combination of dry brushing and jet washing.

If site material is noted on highways around the site, a road brush will be bought to site to remove it.

10.5.4 LIGHTING:

If task lighting is to be used, the use will be minimised and lighting units will be angled away from residential properties. If possible, task lighting will be mains powered to avoid the use of diesel generators.

10.5.5 COMPLAINTS

Claims are received either into the main switchboard or via the MOD Gatehouse. We have no formal procedure for dealing with complaints, but complaints are taken seriously with actions taken as soon as possible.

10.6 CONTAMINATED MATERIALS

If indicators of contaminated materials are discovered (odours, discolouration, sheens on water, bubbling, hazardous waste items) the works Manager will be contacted. A suitable course of action will then be developed.

Training will be provided for personnel in the recognition of the indicators of contaminated material and actions to be taken on discovery.

10.7 ECOLOGICAL CONSTRAINTS AND MITIGATION

There is historical data of the presence of Great Crested Newts (GCNs) in the vicinity of the site. Recent surveys commissioned by the Ministry of Defence suggests that there is no GCN presence near the site (Please see Great Crested Newt Location Plan EV-13-0901-103)

The installation of newt fencing along the boundary of the site prevents newts from moving into the works area. This fencing is installed where areas of grassland and vegetation meet the site boundary. These are the primary areas where newts may enter the site area. The roads and hardstandings do not need to be fenced off due to the very low probability that newts would move along such a surface. This fencing is checked quarterly to ensure that it is still intact and in working condition.

Site walkovers are undertaken annually to assess the presence of newts across the site. These are conducted by an ecologist holding a Great Crested Newt European Protected Species Licence. If any newts are found to be present on or near the site, the mitigation measures in place will be reassessed.

A cautionary approach is adopted for all material movements. Site employees are briefed on GCN identification during toolbox talks. If any newts are identified during the course of the works, that activity will cease immediately. Consultation will be undertaken with an ecologist holding a Great Crested Newt European Protected Species Licence before any further works in that area can be undertaken.

11. EMERGENCY PREPAREDNESS AND RESPONSE:

11.1 EMERGENCY CONTACTS:

Managing Director: Simon Stone - 07880 722 436

Environment Agency: 0800 807060

Emergency Services: 999 (Request service required)

11.2 DEFINITIONS:

Environmental emergencies can be broken down into two categories, Environmental Incidents and Environmental Issues.

11.2.1 ENVIRONMENTAL INCIDENT:

An inappropriately controlled emission to land, sea, air or water (e.g. spillage, fumes, dust, vibration, noise, disposal) that has potential to cause environmental harm if not controlled properly.

A substantiated complaint from a third party affected by the project.

An event causing major quantifiable environmental harm.

A breach of a consent licence that may lead to statutory intervention.

A breach of Environmental Legislation.

Issue of a statutory enforcement notice, Local Authority, Environment Agency (Works Notice)

An environmental emergency (i.e. an event on site that is not under control and requires assistance from external bodies to minimise potential harm to the environment)

Examples:

Spillage of fuels, oils and chemicals on land and into water.

Silt contaminated runoff entering watercourses, drainage and other sensitive environments.

Discharge of concrete or grout into surface/ground water or other sensitive receptor.

Unauthorised burning of material on site.

Unreasonable noise at sensitive receptor.

Breach of local authority consents for noise, vibration or dust.

Incidents involving Environment Agency action or intervention. (e.g. sampling)

Nuisance from dust blowing off site

11.2.2 ENVIRONMENTAL ISSUE:

An unforeseen occurrence which will impact on the works.

An environmental incident caused by a third party not connected with the scheme but which impinges on the scheme.

An environmental incident beyond the control of the contractor.

Examples:

The discovery of contaminated material, where no contamination indicators were found in the SI or historical site documents.

Discovery of protected species where there were no indicators.

Flooding from events outside the 1 in 100 year probability.

11.2.3 RESPONSIBILITIES

In all cases responsibility for immediate action lies with the person discovering the incident. They should take whatever actions they can, to immediately stop the source and contain the pollution.

In all cases the incident shall be immediately reported to the manager. The Incident Controller shall coordinate resources to put the containment and mitigation plan in place.

CrownHill will assist in post incident training, incident reporting/monitoring and documentation for the EMS.

11.2.4 SPECIFIC POLLUTION INCIDENTS.

Fuel or Oil entering a watercourse or drainage:

The response will depend on the amount of hydrocarbon spilt and the flow of the river. As a general rule the following steps should be taken.

Stop release of fuel by removing the source or by using plastic sheeting and bunding.

Deploy an oil absorbent boom across the watercourse to contain the spill.

Place oil absorbent mats on the water surface to absorb the oil. N.B. once used these are to be stored and disposed of as special waste. Impermeable gloves and boots and disposable overalls are to be worn.

The above items can be found in the oil spill kit, these are located with foremen, environmental coordinator, store man and in the environmental emergency area in main stores.

Contaminated water can also be pumped from the watercourse into a sealed container for disposal by a registered waste handler.

Natural Resources Wales to be contacted (0800 807060)

Fuel or Oil spillage on land:

Stop release of fuel by removing the source or by using plastic sheeting and bunding.

Excavate oil contaminated soil and place in an oil tight container. This must be disposed of by a specialist waste handler as special waste.

If spillage is onto a hard surface, all drains and gullies must be sealed immediately. Absorbent materials such as sand, sawdust, straw or oil absorbent granules/mats are to be placed over the contaminated area to soak up the spill. These should then be removed and stored and disposed of as special waste. Impermeable gloves and boots and disposable overalls are to be worn.

The above items can be found in the oil spill kit, these are located with foremen, environmental coordinator, store man and in the environmental emergency area in main stores.

Natural Resources Wales to be contacted (0800 807060)

Spillage of chemicals:

Where possible remove source of pollution.

Obtain as much information on the chemical spilt as possible to evaluate the potential harm it could cause to staff and the environment.

If it can be ascertained that there is no significant health and safety risk the chemicals should be dealt with as oil, above.

If a potential health and safety risk is identified the area should be evacuated and the emergency services contacted.

11.2.5 ENVIRONMENTAL RESPONSE EQUIPMENT

Spill kits are available from the foremen

11.2.6 INCIDENT REPORTING

All personnel on site have a duty to report any situation, occurrence or activity which poses a risk to the environment. Reporting shall be broken down into three categories:

Hazard



Near Miss



Incident



All occurrences shall be reported to the Section Foreman or Site Agent immediately.

Incidents must be reported immediately to the Incident Controller who will be responsible for assessing the incident and reporting it to the responsible agencies (EA, CADW, CCW, ENV Health, etc)

The following details should be recorded by the Incident Controller:

- Time, date and location of the incident
- The root causes of the incident
- Actions taken to remedy the incident
- Personnel involved
- Third parties and statutory bodies involved
- Procedures put in place to ensure there is no re-occurrence.

12. TRAINING:

All staff involved with the project shall be trained to a level to ensure that they are more than capable of carrying out their duties with minimal environmental impact.

Personnel will be given instruction on specific aspects of the works, in small groups. If required supporting material shall be utilised such as manufacturer's instructions or company handouts.

13. DOCUMENTATION, REPORTING AND DATA GATHERING:

13.1 DOCUMENTATION:

13.1.1 WASTE:

Please refer to the Site Waste Management Plan for information on waste management documentation.

13.1.2 CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH (COSHH):

COSHH data sheets will be required for all materials and substances bought onto site and for any man made materials or substances encountered on site. COSHH data sheets shall be filed alphabetically and stored in the Site Agents Office.

13.2 ENVIRONMENTAL SITE INSPECTIONS:

Environmental site inspections shall be carried out weekly by the Managing Director. These will involve a site walk through, with observations being made and corrective actions assigned. The findings of site inspections shall be recorded and shall be communicated to the site team during construction meetings and actions shall be assigned to close out the corrective actions. Progress against these actions shall be reported at the next construction meeting and closeout of site inspections shall be carried out through the QA document control process.

14. APPENDIX 1: SITE WASTE MANAGEMENT PLAN

This document covers:

- Waste management licence and exemption requirements
- Procedures for the segregation and storage of waste on site
- Waste avoidance and reduction
- Disposal of waste to Registered Carriers
- Premise notification for the production of hazardous waste
- Waste documentation required
- Auditing and monitoring of final waste disposal arrangements
- Arrangements for the storage and disposal of hazardous waste.

1. WASTE PREVENTION:

The construction industry generates approximately 70 million tonnes of construction and demolition waste every year. This is removed from site, and most commonly dumped in landfill sites. Landfill is expensive, but there are also hidden costs involved: many of the materials had to be purchased in the first place, they then need to be stored onsite and transported offsite, and there are thousands of man hours associated with handling.

The true cost of waste is equal to

$$\begin{array}{lcl} \text{The original purchase} & & \text{The cost of their} & & \text{The loss of income from} \\ \text{price and transportation} & + & \text{handling, storage,} & + & \text{not salvaging the} \\ \text{costs of the materials} & & \text{transport and disposal} & & \text{materials} \end{array}$$

It makes both financial and environmental sense; therefore, to look carefully at the way waste is managed throughout the site. The best way to reduce the volume of waste for disposal is to not let material become waste in the first place. This can be achieved in the following ways:

- Good Design – when specifying materials consider the form in which they will be supplied i.e. the physical size, try to specify materials which will need minimal amounts of trimming. Geotextiles for example if you require 20m lengths and rolls are 50m long, there will be a 10m wastage per roll, which is a wastage of 20%. This concept can also be extended to the design of temporary works i.e. shuttering which can be re-used by casting items in bays and then moving the shuttering along.
- Good storage of materials – much waste is generated due to damage to materials during storage, from collisions with vehicles, water damage, vandalism and crushing damage from being staked to high. Provision should therefore be made for the storage of materials under cover in a secure shelved environment.
- Wastage through over ordering – materials are over ordered and left in the yard to become damaged and eventually be discarded. This can be avoided by carefully calculating the volumes of materials required and operating a 'just in time' ordering system.
- Wastage through over supply – if it is too easy for site personnel to obtain materials, they will use more as it is easier to go to the stores and get a new tool, piece of PPE or materials rather than look for used items.

2. WASTE DEFINITIONS:

Waste is defined under Article 1a of the European Waste Framework Directive as

“Any substance or object.... which the holder discards or intends or is required to discard”.

Wastes can be broadly classified into:

- Controlled wastes, and
- Non-controlled wastes.

2.1 CONTROLLED WASTE:

Controlled waste is defined as any waste subject to the provisions of the Control of Pollution Act 1989 (COPA, as amended) and the Environmental Protection Act (EPA). Controlled wastes are: commercial and industrial waste (including construction and demolition waste); household waste. Agricultural and mining waste are not controlled waste. All controlled wastes are listed in the List of Wastes (formerly, European Waste Catalogue 2002 (LOW)) and are assigned a unique six digit reference number. This number must be used when describing the waste during the completion of waste transfer notes (see below)

Non-controlled Waste – anything which is not controlled waste i.e. certain wastes from agriculture, mines, quarries and sewage treatment works.

Controlled waste can be further divided into:

- Hazardous
- Hazardous Inert
- Non Hazardous

Construction and demolition wastes are classified as Controlled Waste unless they have hazardous properties i.e. contain substances which are hazardous to health or the environment (see Hazardous Waste below) such as, asbestos, oil, heavy metals, toxic substance, etc. As controlled waste they are regulated by legislation. The principal piece of waste legislation is the ‘Waste Management Regulations’

2.2 HAZARDOUS WASTE:

The ‘co-disposal’ of Hazardous Waste and Non-Hazardous Wastes in landfill is illegal. If Hazardous Waste is to be disposed of to landfill, that landfill must be authorised to accept it. Some landfill sites which are classed as non-hazardous may be able to accept certain stable non-reactive Hazardous Wastes.

Article 1(4) of the Hazardous Waste Directive (HWD, Council Directive 91/689/EC) defines Hazardous Waste as wastes featuring on a list drawn up by the European Commission, because they possess one or more of the hazardous properties set out in the HWD. There are 14 hazardous properties set out in Annex III of the HWD and each is given a Hazard Reference H1 to H14.

H1	'Explosive' – substances or preparations which may explode under the effects of flame or which are more sensitive to shocks or friction than dinitrobenzene.
H2	'Oxidising' – substances and preparations which exhibit highly exothermic reactions when in contact with other substances, particularly flammable substances.
H3A	<p>'Highly Flammable'</p> <ul style="list-style-type: none"> - Liquid substances having a flashpoint of below 21°C, or - Substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any application of energy, or - Solid substances and preparations which may readily catch fire after brief contact with a source of ignition, or - Gaseous substances and preparations which are flammable in air at normal pressure, or - Substances and preparations which, in contact with water or damp air, evolve highly flammable gases in dangerous quantities.
H3B	'Flammable' – liquid substances and preparations having a flashpoint equal or greater than 21°C and less than or equal to 55°C.
H4	'Irritant' – non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with skin or mucous membrane, can cause inflammation.
H5	'Harmful' – substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may involve limited health risks.
H6	'Toxic' – substances and preparations (including very toxic substances and preparations) which, if they are inhaled or ingested or if they penetrate the skin, may involve serious, acute or chronic health risks and even death.
H7	'Carcinogenic' – substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce cancer or increase its incidence.
H8	'Corrosive' – substances and preparations which may destroy living tissue on contact.
H9	'Infectious' – substances containing viable micro-organisms or their toxins which are known or believed to cause disease in man or other living organism.
H10	'Toxic to Reproduction' – substances or preparations which, if they are inhaled or ingested or if they penetrate the skin, may produce and increase in the incidence of non-hereditary adverse effects in the progeny and/or of male or female reproductive functions or capacity.
H11	'Mutagenic' – substances or preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce hereditary genetic defects or increase their incidence.

H12	Substances and preparations which release toxic or very toxic gases in contact with water, air or an acid.
H13	Substances and preparations capable by means, after disposal, of yielding another substance, e.g. a leachate, which possesses any of the characteristics listed above.
H14	'Ecotoxic' – substances or preparations which present immediate or delayed risks for one or more sectors of the environment.

The first stage in ascertaining whether a waste is a Hazardous Waste is to determine whether it is a Directive Waste or a Controlled Waste. If it is neither of these it cannot be classified as a Hazardous Waste. A directive waste is a waste as defined in Article 1(a) of Council Directive 75/442/EEC and a controlled waste is defined in Section 75(4) of the Environmental Protection Act. These are both relatively complex pieces of legislation but with some exceptions they describe controlled or directive wastes as those specified in the European Waste Catalogue and hence given a unique six figure reference.

The LOW then outlines a procedure for classifying hazardous wastes. Certain wastes are designated as being Absolute Entries and LOW and others are categorised as being Mirror Entries. An absolute entry is one which is deemed hazardous regardless of its composition i.e. it does not matter what percentage of the waste is composed of hazardous properties. If a waste is deemed an absolute entry no further assessment is required. Potential Absolute Wastes used in the construction industry are:

- 08 01 21 – waste paint or varnish remover.
- 16 01 07 – oil filters
- 17 03 03 – coal tar or tarred products.

Absolute entries are highlighted in red in the LOW and are marked with an 'A' in the consolidated version. There are however a number of absolute entries which have corresponding non-hazardous entries, which should be used when the absolute entry is not appropriate.

Mirror entries are wastes which have potential to be hazardous or non-hazardous depending on their composition and the concentration of 'dangerous substances'. The majority of hazardous mirror entries are easily identified because they make a general reference to 'dangerous substances' and include the phrase 'containing dangerous substances'. To ascertain whether a mirror entry is hazardous, an assessment has to be carried out of the waste. This will involve assessing the substances within the waste, which can often be done from manufacturers data sheets but if no data sheets are available 'waste acceptance criteria tests' (WAC) will need to be performed by a laboratory. The exact nature of these tests will depend on the likely composition and nature of the waste (providing there is sufficient knowledge regarding the likely composition of the waste, there is no point testing for substances which know will not be present). A laboratory or consultant could offer advice on this. Information on waste composition can also be found in the Approved Supply List which gives hazard information for many common chemicals.

Hazardous mirror entries are highlighted in blue in LOW or marked with an 'M' in the consolidated version.

Hazardous Wastes likely to be encountered are:

- Aerosols – paints, cleaners, oils, etc
- Grease Cartridges – Grease inserts from grease guns used for lubricating machines.
- Wastes Oils and Oily Materials – oil from machines, oily rags and gloves, oil filters, etc
- Surplus Paints, Thinners and Sealants and their Containers.
- Batteries – all types of batteries are now covered under the EU Batteries Directive but to all intents and purpose should be treated as Hazardous.
- Fluorescent Lighting Tubes – These should be kept intact as they contain hazardous gasses and metals, including mercury.

These wastes must be segregated from the general waste stream and must be assessed for their acceptance to landfill.

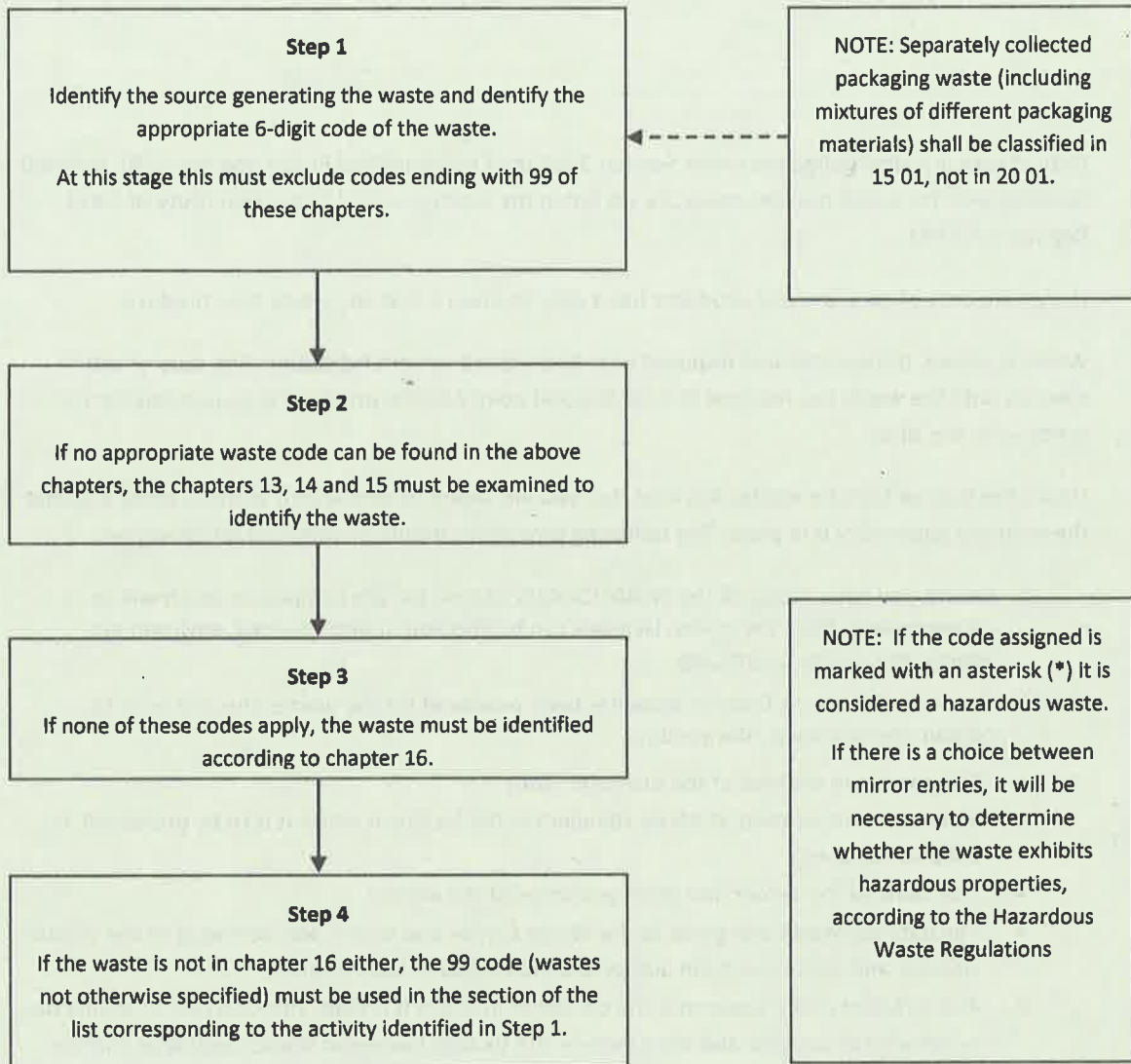
2.3 HAZARDOUS WASTE PREMISES NOTIFICATION:

If it is likely that more than 500kg of hazardous waste will be produced per year you must register as a hazardous waste producer. This can be done via the Environment Agency web site for a fee of £18:00 per annum. This must be done for each facility or site from which hazardous waste is to be collected.

Site / Facility	SIC Code	Hazardous Waste Producers Registrations No	Start Date
Unit 1009, Caerwent Army Training Estate, Caldicot. NP26 5XL	45.21	Not currently required as we do not believe the site will produce more than 500kg of Hazardous Waste per year. This situation will be continuously reviewed.	

2.4 OBTAINING THE LIST OF WASTE (FORMERLY EUROPEAN WASTE CATALOGUE) NUMBER FOR A WASTE:

For this procedure a copy of the LOW will be required, this can be found in **Appendix 3**:



2.5 LEGAL FRAMEWORK

Environmental Permitting (Ep), Formerly Waste Management Licensing (Wml):

Sites where waste is processed, treated or disposed of, need to hold a valid Environmental Permit issued by the Environment Agency. As part of our Duty of Care for the wastes we produce we must ensure that the site to which the waste is being taken is licensed to accept that waste. Certain waste management activities are designated as being exempt from Waste Management Licensing and can operate under a Waste Exemption. Waste Exemptions are issued under the following categories:

- Use
- Treatment

- Disposal
- Storage

For further information on this refer to the Environment Agency website at <http://www.environment-agency.gov.uk/business/topics/permitting/32322.aspx>

2.6 DUTY OF CARE:

Duty of care is a legal obligation under Section 34 of the Environmental Protection Act 1990. Detailed requirements for waste transfer notes are set out in the Environmental Protection (Duty of Care) Regulations 1991.

Under the duty of care, a waste producer has a duty to ensure that any waste they produce

Waste is stored, transported and disposed of in line with all current legislation. The duty of care extends until the waste has reached its final disposal point and the producer is responsible for the waste until this time.

Under the Duty of Care for wastes it is vital that you are aware of where your waste is going and that the required paperwork is in place. The following procedure should be followed for all wastes:

- 1) Ensure you have a copy of the Waste Carriers License for any companies which will be carrying waste from the works. Licenses can be checked at <http://www2.environment-agency.gov.uk/epr/search.asp>
- 2) Ensure that a Waste Transfer Note has been produced for the waste. This will need to contain the following information:
 - The name and location of the producer (you)
 - The name and location of Waste Handler i.e. the facility at which it is to be processed, re-used or disposed.
 - The name of the carrier and the registration of the vehicle
 - The date the waste was given to the Waste Carrier and date it was delivered to the Waste Handler and signatures from authorised individuals at each location.
 - A description of the waste and the container in which it is held. This description should be as detailed as possible and must include the six digit European Waste Catalogue number
- 3) A copy of the Waste Management License, Environmental Permit or Waste Exemption for the premises to which the waste is being taken. These can also be checked at <http://www2.environment-agency.gov.uk/epr/search.asp>
- 4) Discretely follow one of the Waste Carriers vehicles to these premises to ensure that the waste is being taken to where they say it is. Remember the waste is still your responsibility until its final disposal.
- 5) Inspect the Waste Management Companies facilities to ensure you are satisfied with the way in which your waste is being treated or disposed of.
- 6) Copies of Waste Transfer Notes must be retained for a period of two years.

2.7 FILLING IN THE PAPERWORK:

When waste is transferred from one person to another, the person accepting the waste must have a description of that waste in order for them to be able to correctly transport, store and dispose of the waste. This is achieved through the use of a Waste Transfer Note which contains details on the waste producer, the waste acceptor and the nature of the waste via a physical description and a six digit waste code which is taken from the European Waste Catalogue. Waste transfer notes must be retained by the waste consigner.

Transfer notes for hazardous waste must also contain a unique six digit reference number issued by the Environment Agency. These need to be notified to the EA a minimum of three days in advance of the waste transfer taking place and there is a fee of £28 for this. There are exceptions to this whereby waste carriers can purchase hazardous waste transfer notes in advance and can then carry out collections as necessary.

2.8 IDENTIFICATION OF SPECIFIC WASTE STREAMS:

The key waste streams produced by the company are wood and general construction waste i.e. worn out or damaged PPE, empty paint and sealant containers, wood treated with preservatives, geotextile offcuts, etc. The fate of these and other potential wastes needs to be considered to ensure that they are disposed of within the duty of care for the waste and also in the most sustainable manner. Use the table below to detail all of the wastes associated with the company and record strategies for their re-use, recycling or disposal. Consideration should also be given to the storage of the wastes prior to recovery or disposal. The priority for the disposal of wastes should be considered in this order:

- Re-use
- Recovery
- Recycle
- Disposal

Waste	Waste Designation	Recovery/Disposal Route
Timber and Vegetation Waste	Controlled	<p>All timber will be assessed for use as commercial timber. All other timber will be sections and cut into firewood (this is generally donated back to the communities in which we work)</p> <p>Timber and brash is chipped and sold on, used as biofuel, or removed to composting facilities to be turned into compost.</p>
Waste Wood	Controlled	<p>Off cuts which are large enough to have potential for re-use will be returned to the stores and inventoried back into stock.</p> <p>Any pieces of wood which are not large enough to be re-used or are damaged shall be placed into the wood skip at the Principal Contractors waste recycling facility.</p>
Mixed Waste: General mixed waste.	Controlled	<p>These are generally materials which cannot be segregated at site level i.e. mixed plastics which are not accepted by recyclers, wood which has been contaminated with paints or preservatives, materials which have been contaminated with site materials, containers which previously contained hazardous wastes but which now contain less than 1% of the original volume of that substance. This waste is placed into the general waste skip within the Principal Contractors Waste Recycling Facility which is then collected by a registered waste handler and taken to their MRF for post sorting.</p> <p>In instances where we are working within our own section of the site and significant volumes of waste are generated, waste will be placed into our own skips. We generally use mixed waste skips which are returned to the waste management companies Materials Recycling Facility to be post sorted. Each sorted fraction can then be disposed of via the most sustainable route. These facilities will be inspected as part of the procurement process.</p>

Waste	Waste Designation	Recovery/Disposal Route
Waste oils, from contamination of oils stored on site and residues caught in drip trays.	Hazardous	All waste oils are removed from site by our service agents and disposed of through a licensed waste management company.
Waste plastic, aluminium, glass beverage containers from the office and yard.	Controlled	Office – Plastics, glass and cardboard is recycled through a recycling bin in the office canteen. This is recycled by our landlord. Yard - These are collected in recycling bins, and then collected by the Local Authority as part of their black box scheme.
Waste office paper and newspapers	Controlled	This shall be collected in the recycling bin in the office and then emptied into the recycling bin in reception.
Cardboard	Controlled	Cardboard boxes will be either reused for packing outgoing items or will be flat packed and stored in the offices for office waste, the stores for workshop waste. This will then be disposed of via a waste recycler.
Paint, sealant and solvent containers including aerosol paint tins.	Hazardous	If containers which formerly contained hazardous materials now contain less than 1% of the original material, these can be classified as controlled waste. All other waste streams shall be returned to the Principal Contractors compound for disposal through their Hazardous Waste system. It shall be ensured that the Principal Contractor is made aware of the nature of these wastes.

Waste	Waste Designation	Recovery/Disposal Route
Canteen and food waste.	Controlled	Office – Food waste is disposed of into the bin in the kitchen. Yard – Operatives take all food waste home with them.
Dry Cell Batteries	Hazardous	Placed into the battery recycling box in the office.
Electrical and Electronic Equipment - WEEE	Controlled/Hazardous	If electrical or electronic items which are no longer required were purchased after 13 th August 2005 and are being exchanged for equivalent equipment the distributor must accept the equipment back and arrange for its disposal. If this is not the case WEEE must be disposed of via an Approved Authorised Treatment Facility (AATF). WEEE must also be stored separately from other waste streams. Some WEEE will be classed as Hazardous Waste and must be disposed of as such (computer screens, TV's, etc)

2.9 WASTE HANDLING AND STORAGE:

This section sets out the requirements for waste storage within the offices and stores. Waste produced on site will be either returned to the yard for re-use, recycling or disposal or will be disposed of in line with our clients EMS / Site Waste Management Plan under their Duty of Care.

Waste Materials (Feed Stock) – Waste materials to be processed are predominantly stored in the covered areas of the site, in stockpiles not exceeding 3m in height. The first level of materials classification is undertaken at the site of origin. The site of origin is visited to allow the materials to be assessed. Suppliers are required to provide reasonable evidence that there is no suspicion of contamination. Materials are further classified on arrival at site (see below) and are segregated into the relevant stockpile to aid blending.

Suppliers are required to demonstrate that materials are from an un-contaminated source through a desk study of the site identifying potential polluting activities. If contamination is suspected geochemical testing is required to demonstrate that the proposed materials are inert and free from contamination. We are extremely careful as to the source of our feed materials due to the risks and costs associated with the disposal of contaminated soils. All loads are inspected on arrival on site for evidence of contamination i.e. discolouration, odours, sheens on water within the soil, soapiness in texture, foreign objects such as containers or asbestos shards. If any of these factors are detected the load is rejected.

General Controlled Wastes – these will be everything which is not hazardous waste which cannot be reused, recovered or recycled. General controlled wastes will usually be stored in the container in which they are to be removed from site and this container should be sighted as close to the point of production for the waste as possible. Issues to be considered with regard to the sighting of controlled waste containers are:

- Containment – the waste within the container should not be allowed to pollute the surrounding environment. This could include contaminated runoff from containers, dust blown from containers containing dusty wastes, odours from odours wastes.
- Security – wastes should be stored so that they cannot be tampered with. This could include being set alight, being removed from their container and subsequently causing pollution, being available to vermin and thus presenting health issues.
- Ease of access – Waste containers should be easily accessed so that waste can be placed into them using whatever means required. This will prevent wastes being spilt around the container and causing contamination.
- Sufficient space – enough room should be allocated to allow for the correct number of containers to be stored to allow the necessary level of segregation of wastes.

Hazardous Wastes - by their nature these wastes are hazardous and so it is imperative that they are contained in a manner where they cannot cause 'harm'. Hazardous wastes should be stored in sealed containers which in turn are stored in a secure controlled location. Sealed containers can range from specialised skips to 205 litre barrels with sealable lids. Secure contained location could be a bunded area within a plant yard or a container from which liquids cannot escape. If bunded areas exposed to the elements can be covered this will prevent the unnecessary removal of contaminated rain water.

2.10 WASTE STORAGE LOCATIONS:

Waste Stream:	Storage Location:
Wood	Waste wood skip in office yard / clients waste management facilities in line with the clients Site Waste Management Plan.
Cardboard	In cardboard bin in office carpark. In cardboard bin in yard. In principal Contractors Carboard Bin.
General Mixed Waste	Clients waste management facilities in line with the clients Site Waste Management Plan.
Beverage containers	In bins in canteens
Printer cartridges	In bin in reception
Paper	In recycled paper bins in offices and printing areas.
Batteries	In bin in reception.

3 . INSPECTION, AUDITING AND EVALUATION OF WASTE MANAGEMENT:

3.1 WASTE INSPECTIONS:

The Waste Champion shall be responsible for ensuring that waste is being disposed of in the most sustainable manner and stored and disposed of within the duty of care for that waste stream. They should therefore ensure that waste storage and disposal facilities are inspected regularly. Inspections should include the following points:

- Are materials which could be re-used being included in the waste stream?
- Are materials which could be recycled being included within the waste stream for disposal?
- Are wastes being stored in correct containers within the duty of care for that waste?
- Are containers in sound condition and secure?
- Are wastes being collected by reputable waste management companies/recyclers? Have you obtained copies of their waste carriers/management licenses or waste exemption registrations?
- The volumes of materials leaving sites as waste (broken down into waste types)
- The volumes of recyclable materials leaving site (broken down into material types)
- The volumes of materials diverted from the waste stream.
- Volumes of recycled materials used in lieu of virgin resources.

- Inspections shall be carried out of waste disposal facilities, to ensure waste is being correctly stored and disposed of. Findings shall be recorded on Audit Record Reports and shall be retained on site as part of the Duty of Care.

Inspections should be carried out at a frequency to ensure that measures put in place are effective.

3.2 WASTE AUDITS:

Waste audits shall be carried out to the following schedule and will consider the following:

Audit	Frequency
Use the http://www2.environment-agency.gov.uk/epr/ website to check that waste carriers have Carriers Licenses, waste handlers have Environmental Permits, Waste Management Licenses or Waste Exemptions.	As part of the procurement process as waste contractors are procured.
Inspections of skips and waste containers to confirm they contain the correct waste stream i.e. wood waste in wood waste skip. Ensure they have not been overfilled.	Weekly
Inspections of recycling facilities to ensure they contain the correct recycling stream and that the recycling stream has not been contaminated.	Weekly
Audit of Waste Transfer notes and monthly returns. This should include controlled waste transfer notes, hazardous waste transfer notes and monthly returns.	Monthly

3.3 WASTE TRAINING AND COMPETENCY

Staff shall be provided with adequate training to be able to:

- Identify waste types and be aware of the potential re-use/disposal route. For the majority of staff on site this will take the form of a basic understanding of waste types and if there is any ambiguity a route to seek advice. For foremen, supervisors and managers further training will be given on accurately designating materials and wastes and the optimal recovery/disposal route.
- Review designs and be able to specify alternative materials such as recycled materials and products or materials and products with recycled content. Staff should also be able to review designs from the perspective of leanness of design, assessing whether structures or items have been over designed. This training should be confined to design and management staff. Training should include a basic understanding of the legislation involved and how it affects the company, sources of advice on the re-use, recycling of materials and the availability of materials with recycled content.
- Stores personnel should be given specific training on identifying waste types, segregating waste types, storage and disposal of wastes in line with best practice. This should include

- information on correctly describing and consigning wastes and the necessary QA to ensure compliance with regulatory obligations.
- Commercial staff should be given training on sustainable procurement. This should include issues such as procuring materials with recycled content and recording data on recycled content of materials procured, reviewing the environmental credentials of suppliers such as ISO 14001 registration and membership of environmental stewardship bodies (FSC), negotiating sustainable deals including the collection of packaging materials and excess materials and the supply of tailor made items to reduce wastage.

3.4 FREQUENTLY ASKED QUESTIONS REGARDING WASTE:

Q: If I have a container which contained a substance which is hazardous e.g. paint, sealant, thinners. Is the container a Hazardous Waste?

A: Whether or not an item is Hazardous Waste is based on two criteria:

- Does the item contain a substance which has Hazardous properties.
- Does the item contain a sufficient quantity of that substance to be classed as hazardous?
- Determining this is complex and reference should be made to section 6.2 above.

Q: Should I segregate my waste on site or place it all into one container and then let the waste management company sort it at their Materials Recovery Facility?

A: These two options are known as source segregation and post sorting. On site separation is preferable as this reduces contamination to the wastes, i.e. if cardboard is mixed with general waste it can become contaminated (dirty, wet, etc) and can then not be recycled efficiently. The ability to segregate waste at source will be dependent on the nature of the project i.e. linear scheme with several small waste collection and storage areas or a small site with a single large waste collection and storage area. On some linear sites it may be possible to return most of the waste to the site compound where it could be segregated and then collect the remainder at other locations such as structures where it would need to be post sorted. Often it is possible to collect certain predominate waste streams which are produced in a certain area and then place all of the remaining waste streams into one container to be post sorted. Depends on the amount of room available at the site and the layout facilities the waste management company is able to offer. Many claim that they will

Q: What information does a **Waste Transfer Note** need to contain?

A: Controlled Waste Transfer Notes need to contain the following information:

- A Waste Transfer reference number so that the consignment can be tracked and can be identified on a monthly return.
- A description of the waste – this should include the six digit European Waste Catalogue / List of Wastes Number, a physical description of the waste and the type of container in which the waste is stored.
- The quantity of the waste. This can be in m3 or tonnes, but if given in m3 an estimate of the weight of the waste must be given.
- The date the waste was collected.

- Details on the current holder of the waste including – name, address, status i.e. Waste Producer, Waste Importer and the signature of their representative.
- Details of the person collecting the waste including – name address and status i.e. transportation company or waste disposer. It should ideally also contain their Waste Carriers License number.
- Details of the place of transfer of the waste including – the name and address of the waste management company, a description of the facility and the signature of the person receiving the waste.
- The date the waste was received by the waste management facility.

Q: What is WEEE and what do I need to do with it?

A: WEEE is Waste Electrical and Electronic Equipment i.e. anything with a plug or which requires batteries to work. The disposal of this equipment is covered under the WEEE Regulations. These state:

You can return WEEE free of charge to the manufacturer under the following conditions (note this is the manufacturer and not the supplier or retailer):

- It was purchased new after the 13th August 2005
- If you are replacing WEEE produced before the 13th August 2005 with equivalent EEE, you can return the WEEE free of charge to the manufacturer of the new equipment.
- If you rent or lease EEE you can also return WEEE free of charge to your equipment supplier.

In reality, most EEE suppliers will not directly accept WEEE but will deal with it through a 'take back system' operated by a compliance scheme. If you contact the supplier they will give you details of their compliance scheme and they will arrange disposal. To be able to do this you will need the **Producer Registration Number** which was supplied with the product, this allows you to identify the producer of the equipment. The retailer or supplier of the EEE may be able to arrange disposal directly but they are under no obligation to do this free or charge. To determine if the WEEE was produced after the 13th August 2005 look for the sticker with the **crossed out wheellie bin symbol**. Lists of approved WEEE producers, compliance schemes, recyclers and exporters can be found at <http://www.environment-agency.gov.uk/business/topics/waste/32086.aspx>

Q: Do I need to register my site as a Hazardous Waste Producer?

A: If you believe that your site will produce more than 500kg of hazardous waste in a year, you need to register it as a Hazardous Waste Producer. For a description of what constitutes a hazardous waste please refer to question above. If you are unsure but think that it is likely that you will produce close to or more than 500kg of hazardous waste per annum then it is prudent to register with the EA. This can be done via their website at www.environment-agency.gov.uk/business/topics/waste/32198.aspx at a cost of £18.00.

Q: HOW DO I DISPOSE OF / RECYCLE BATTERIES?

A: Under the Waste Batteries and Accumulators Regulations 2009 all 'Industrial' batteries and accumulators are banned from disposal in landfill. Industrial batteries include any batteries which are used in industrial equipment. These must be stored in a container which will not allow leakage of any substances from the batteries and is clearly labelled with the contents. Batteries can only be disposed of by a waste management company which has a license to accept that waste.