

Appendix 2

EMS - Process Description, Management and Controls



COLE

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Document Prepared by		July 2014 Revision: 2	
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		Nichol (Road Maintenance) Limited Trading as Cole Contractors Cardiff	
		Name: Steve Nichol	
		Position: Director & Technical Site Manager	
		Signed:	
		Date:	

Contents

	Page No
1 Site Details and Management	3
1.1 Non-technical Summary	3
1.2 Document Status	4
1.3 Site Operator	4
1.4 Site Location, Setting & Environs	5
1.5 Site Management	10
2 Site Operations	12
2.1 Overview of Operations	12
2.2 Waste Pre-acceptance Procedures	13
2.3 Waste Acceptance Procedures	17
2.4 Waste Storage, Treatment and Dispatch Operations	20
2.5 Management Controls	23
2.6 Emissions Control	26
2.7 Records, Reporting/Notification	30
• Appendices	
• EMS - Appendix 1 – Site Plans	
1.1 Site Location Plan	
1.2 Permitted Site Boundary Plan	
1.3 Site Layout Plan	
1.4 Site Drainage Plan	
1.5 External Drainage Plan	
• EMS - Appendix 2 – Management	
2.1 Site Management Structure	
2.2 Training Checklist	
2.3 Training Records	
2.4 Environmental Risk Assessments	
2.5 Maintenance Checklist	
2.6 Maintenance Records	
2.7 Complaints Record	
2.8 Incidents, Accidents and Non-Conformances	
2.9 Site Inspection Checklist	
2.10 Spillage Procedure	
• EMS - Appendix 3 – Accident Management Plan	
• EMS - Appendix 4 – Site Report	
• EMS - Appendix 5 – Emissions Monitoring Plan	

1. Site Details and Management

1.1 Non-technical Summary

A non-technical summary of the **waste management activities** to be carried by Nichol (Road Maintenance) Limited, trading as **Cole Contractors Cardiff** under an **environmental permit authorised by Natural Resources Wales** is provided below::

Cole Contractors Cardiff's own vehicles arrive at their own depot (the Site) at 19 Whittle Road, Leckwith Industrial Estate carrying **road sweepings which are created from their own road cleaning and activities**, under contract to their customers.

Road sweepings are generated from the mechanical removal (brushing and sweeping) of accumulated soils, grit, stones and debris from roads and construction or development sites with their own dedicated road sweeping vehicles.



The sweepings are deposited from these vehicles at the Site onto an **impermeable concreted pad** constructed with retaining walls and bunding which falls to a **series of sediment separators weirs and traps** before finally passing through an **oil interceptor** via the underground surface water drains. All surface waters from the Site and the other surrounding sites and roads then lead into the main **surface water drainage system** running through the Leckwith Industrial Estate which eventually feeds into the River Ely.

Road sweepings deposited at the Site are deposited wet or damp, not least (notwithstanding dry/wet weather conditions) because the sweeping system fitted to the vehicles uses an on-board water spray which helps to aid the collection of the soils and light debris during the sweeping operations.

During temporary storage at the Site, any free or entrained water is allowed to drain naturally under gravity via the Site storage, separation and underground surface waters drainage system.

Unwanted or undesirable debris is manually removed (sorted) from the road sweepings during deposit and inspection during storage, the dewatered sweepings (a soil-like material) are then loaded onto bulk tipping vehicles and dispatched from the Site for recovery, further off-site treatment or where recovery is not feasible, disposal.

1.2 Document Status

- 1.2.1 The information provided in this document aims to provide a **management plan** for the permitted operations which describes the processes and operations and how they are managed and controlled to meet the requirements of **Condition 1 – "General Management"** of the Environmental Permit and any associated best practices and guidance.
- 1.2.2 This document (and any other referenced or associated documents to it) provides information to the **Operator and to the Natural Resources Wales** for the operation and regulation of the activities carried out at the site.

Any proposed changes to the site, its' activities or management should be discussed with the Natural Resources Wales, reviewed and updated within this document beforehand.

- 1.2.3 **This document** (in any form e.g. electronic or hard copy) **should remain with the Operator at all times** during the active & operational status of the site.
- 1.2.4 This document from time to time **may be updated** to reflect best practices, changes to operations and regulations etc. therefore, **current/updated copies of this document are made available by directly contacting the author, requests for copies of this EMS should be made to:**

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1.3 Site Operator

1.3.1 The Site Operator is:

Nichol (Road Maintenance) Limited, **trading as** Cole Contractors Cardiff.

1.3.2 The Site Contact Details are:

Mr Steve Nichol: Technical Site Manager and Company Director

Mobile Tel No.: 07779 0131666

Office Tel No.: 02920 387406

E-mail: steve.nichol@colecontractors.co.uk

1.3.3 Office Correspondence Address

Cole Contractors Cardiff,
19 Whittle Road,
Leckwith Industrial Estate,
Cardiff,
CF11 8AT

1.4 Site Location Setting and Environs

1.4.1 The Site Address & Location is:

Cole Contractors Cardiff,
19 Whittle Road,
Leckwith Industrial Estate,
Cardiff,
CF11 8AT

NGR: ST 16518 75028

1.4.2 The Site

The **[Site]** is located within the North Westerly portion of a large industrial Estate which is located approximately 2 kilometers South West from Cardiff City centre. the main highway access to the site is off the A4232 / B4267 roundabout into Leckwith Industrial Estate, 19 Whittle Road: as shown in **Appendix 1- Site Plans, 1.1 – Site Location Plan**

The **site occupies an area** of approximately 0.235 Hectares (50m x 47m), the permitted site boundary is shown in **Appendix 1- Site Plans, 1.2 – Site Boundary Plan** which comprises of an uncovered waste storage area, offices, workshop, plant and vehicle parking and inspection areas as shown in **Appendix 1- Site Plans, 1.3 – Site Layout Plan**.

The site comprises of surfaced open yard areas where rain water from roofed buildings also drain into the Site surface water drainage system and connects to the external surface water drainage system within the Industrial estate, these drainage systems are is show in **Appendix 1- Site Plans, 1.4 – Site Drainage Plan** and **1.4 – External Drainage Plan**.

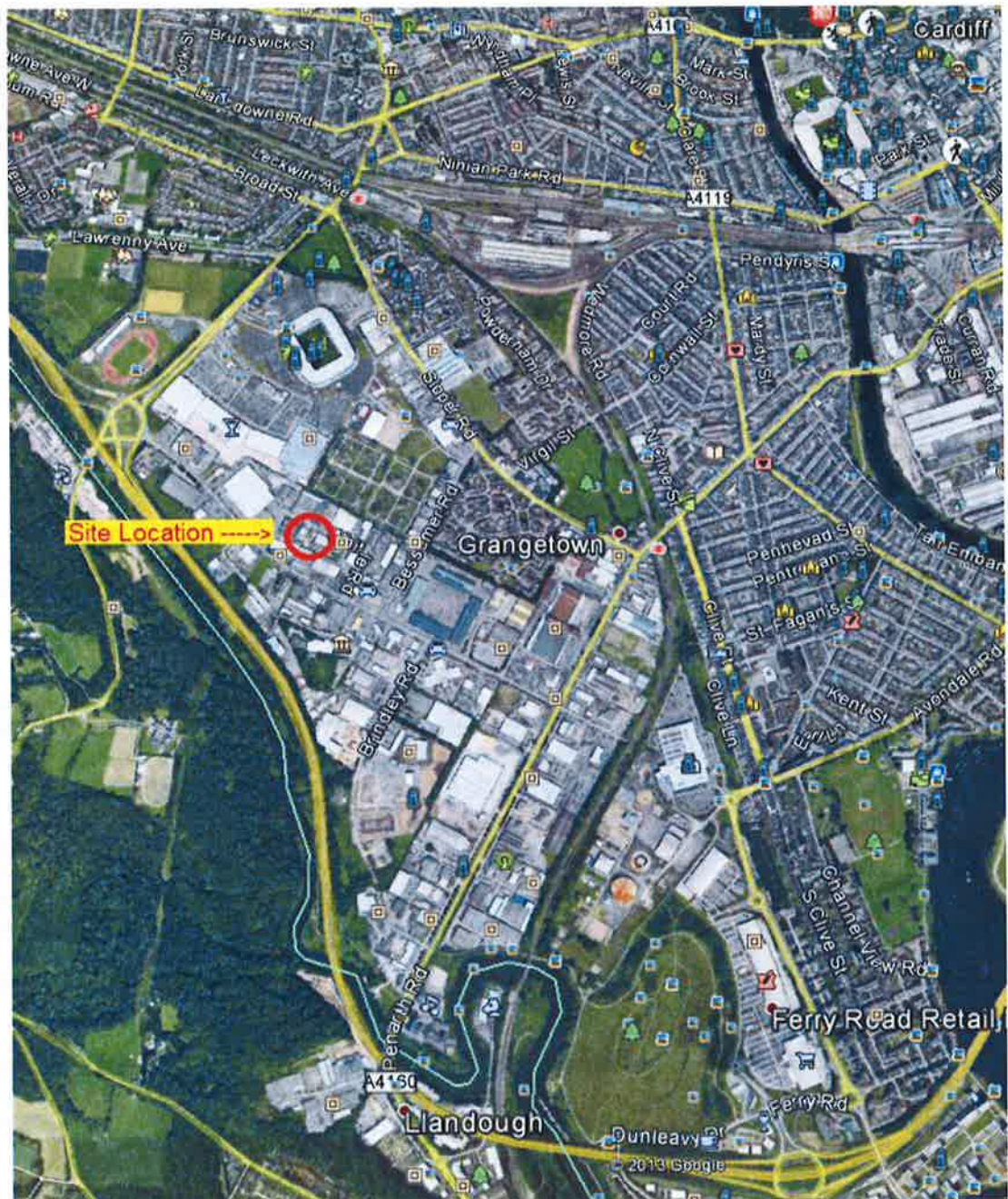
A monitoring program of the surface waters leaving the site is provided separately as an Appendix to this **EMS in Appendix 5 - Emissions Monitoring Plan**.

- **Historically**, the area has been used as a municipal tip prior to the 1970s, since the 1970s the area has been progressively developed into the current commercial and industrial estate to which it is today. **The Site has been used for similar plant hire, road sweeping and road maintenance operations since the early 1980s.**

Nichol (Road Maintenance) Limited have also been continuing these operations trading as the previous occupier Cole Contracting since re-occupying the Site since 2000. Construction of the current and recent **Site storage and dewatering bay** was completed in 2011.

- **Further details** of the site, history and sensitive receptors etc. are provided in **Appendix 4- Site Report (Geotechnology Report)** to this document.

Figure 1.4.2 - Arial View of Site & Environs



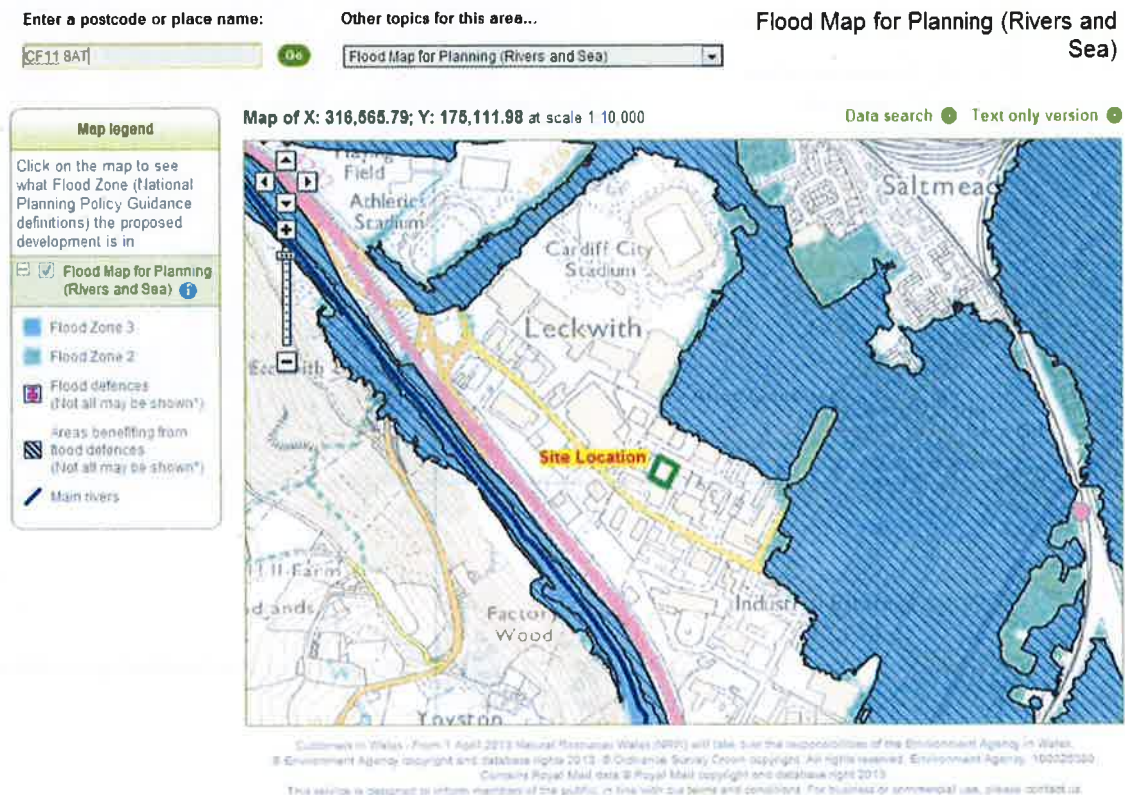
1.4.3 Site Environs & Location to Receptors

- **Risk of Flooding**

The site is also located within 1 Km (980 metres) of a **SSSI - Vale of Glamorgan**, as shown in **Figures 1.4.3.i, 1.4.3.ii and 1.4.3.iii - Site Location and Receptors below**.

The **[Site]** is not located in a flood risk area, although it is near a flood risk zone and is in an area where flood warnings are given as shown in **Figure 1.4.3.i, below**:

Figure 1.4.3 i - Site Location and Receptors

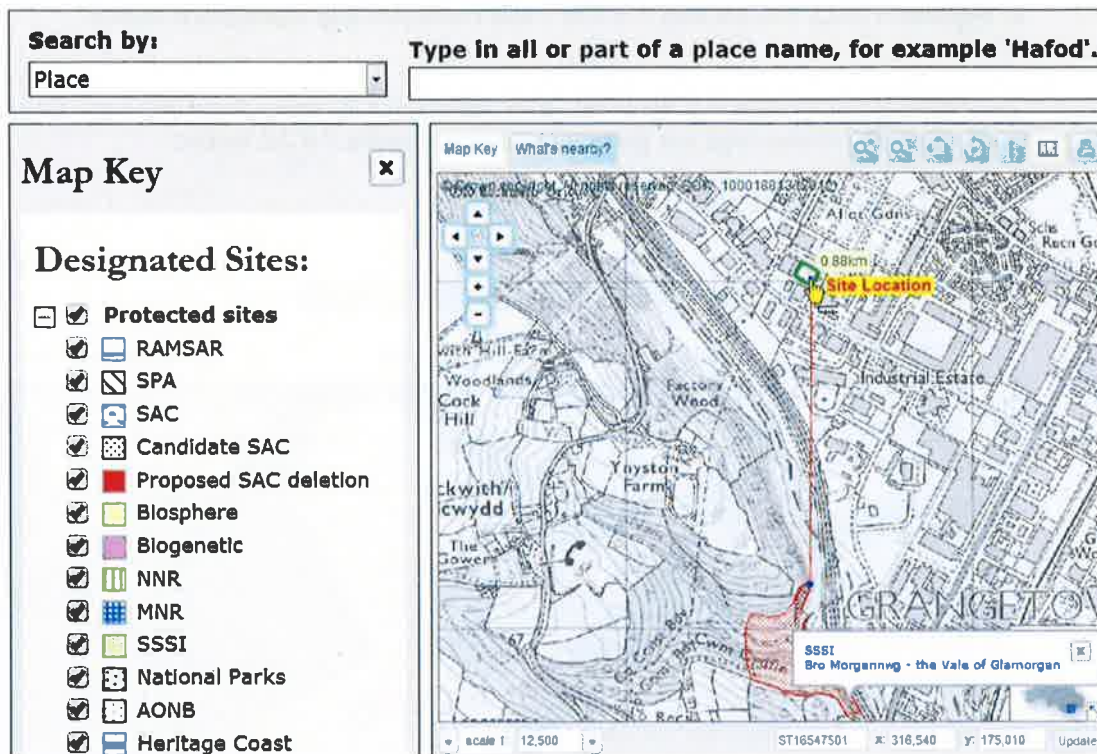


- **Habitats**

The site is also located within 1 Km (980 metres) of a **SSSI - Vale of Glamorgan**, as shown in **Figure 1.4.3.ii, below**:

Figure 1.4.3 ii - Site Location and Receptors

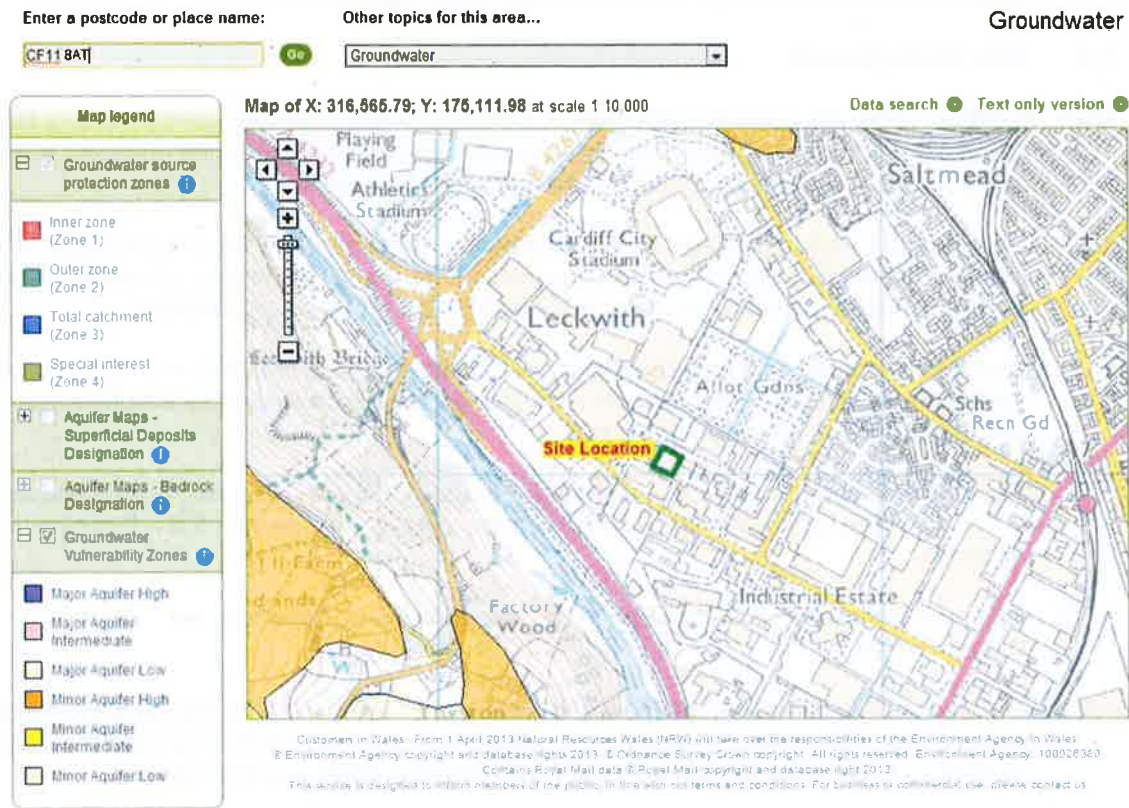
Protected Sites and Landscapes map



- **Groundwater**

The [Site] is not within a groundwater source protection zone and is located on a **Minor Aquifer - Low** as shown in **Figure 1.4.3 iii** below:

Figure 1.4.3 iii Site Location and Receptors



1.4.4 Point Source Emissions

There are *no point source emissions to air or land*, however there is a **point source emission to the surface water drainage system from the storage and dewatering bay**.

1.4.4 Fugitive Emissions

The Site surface water drainage system also collects run-off waters from all other surfaced areas of the site including rain waters from roofed areas, **these fugitive emissions also discharge to the surface water drainage system** which runs along the adjacent road outside the site access gates.

1.4.5 Emissions Monitoring & Site Closure

Historic contamination from previous uses may be present and reference to **Appendix 4-3 – Site Report (Geotechnology Report)** should be made to determine baseline figures, key substances, parameters and target receptors.

However, the date of closure nor the scale or change of activities (as may varied from time to time) at the point of closure cannot be determined at this point, a separate **Site Closure and Monitoring Report** will then need to be compiled, to determine possible impacts to land or

groundwater quality from on-going permitted activities, and at the time of site closure to support the determination of the **Permit Surrender Application**

1.5 Site Management

1.5.1 Staffing at the site typically comprises of a Technical Site Manager, an Operations Manager, Office Clerk, 6 Drivers, 3 Machine Operators & a Mechanic / Fitter, their positions and duties are provided in **Appendix 2.1 – Site Management Structure**.

1.5.2 Competence and training for all site employees is monitored by the Site Manager, a checklist list of training required and completed is kept and maintained in the site office by the Site Manager, which is provided in **Appendix 2.2 – Training Checklist**.

Updates to existing and new **Certificates of Competence** (WAMIAB) is undertaken and environmental & waste management refresher **training is provided by Brightwater Education** for site management & staff.

Training Records for individual site employees are completed and maintained and are kept in the site office by the Site Manager, which is provided in **Appendix 2.3 – Training Records**.

1.5.3 Risk assessments for the site operations are provided in **Appendix 2.4 – Risk Assessments**.

1.5.4 Maintenance is carried out on plant and equipment deployed at the site for waste treatment and recovery operations. A summary of plant and equipment used for on-site treatment operations is provided below in **Table 1.5.4 Itemised Plant and Equipment**.

Table 1.5.4 Itemised Plant and Equipment		
Plant & Equipment	Description	Use
CAT Shovel Loader	Wheeled Mechanical Bucket	Loading and Unloading.
		Sorting and Stockpiling Waste
Forklift Truck	Wheeled Mechanical Forklift	Moving Skips, Containers and Equipment
Multiple Road-Sweepers	Johnson 600 & 650 road-sweeping Vehicles	Cleaning Roads and Site Surfaces
Oil Interceptor	3 Stage interceptor	Pollution Prevention - Fuel & Oil Spills and Leaks

A **checklist list for the maintenance of plant** and equipment and site infrastructure is kept in the site office and maintained by the Site Manager, which is provided in **Appendix 2.5 – Maintenance Checklist**.

Maintenance Records for plant and equipment and site infrastructure are kept in the site office and maintained by the Site Manager, which is provided in **Appendix 2.6 – Maintenance Records**.

1.5.5 Accidents, Incidents and breaches, and complaints occurring or caused by operations at the site are managed by the site manager and recorded.

Records are kept of the following:

- **Complaints** is provided in **Appendix 2.7 Complaints Record**.
- **Incidents and Accidents** is provided in **Appendix 2.8 – Incidents, Accidents and Non-Conformances**.
- **An Accident Management Plan** is provided separately in **Appendix 3 -Accident Management Plan** and is implemented if and when they occur to minimise their potential adverse causes and consequences.

1.5.6 Monitoring of uncontrolled emissions (i.e. fugitive emissions which are not subject to emission limit values) as likely to have an adverse effect to receptors beyond the site are rectified and recorded as described and provided in **Appendix 2.9 – Site inspection Checklist**.

1.5.7 A Spillage Procedure to prevent, contain with and remedy spillages and leaks at the site is provided in **Appendix 2.10 – Spillage Procedure**.

1.5.8 Records of wastes received and dispatched at the site are kept secure by the site manager at the site office.

1.5.9 Hours of Operation are not determined or restricted within the Planning Permissions for the site, however, typical operational times are as follows:

Table 1.5.8 Typical Hours of Operation	
Days	Operational Times
Monday to Friday	08:30 to 18:00
Saturday	09:00 to 14:00
Sundays and Bank Holidays	Closed

1.5.10 Security measures at the site consist of 2 metre high steel palisade fencing topped with razor wire around the perimeter of the site.



Entrance to the site is via a steel gate which is kept locked outside operational hours and a **CCTV** system which continuously monitored during operational and non-operational periods and alarmed to inform the local police of unauthorised intruders outside operational hours.

All working areas and site perimeters at the site are within easy visual range for on-going surveillance during working hours by the site staff.

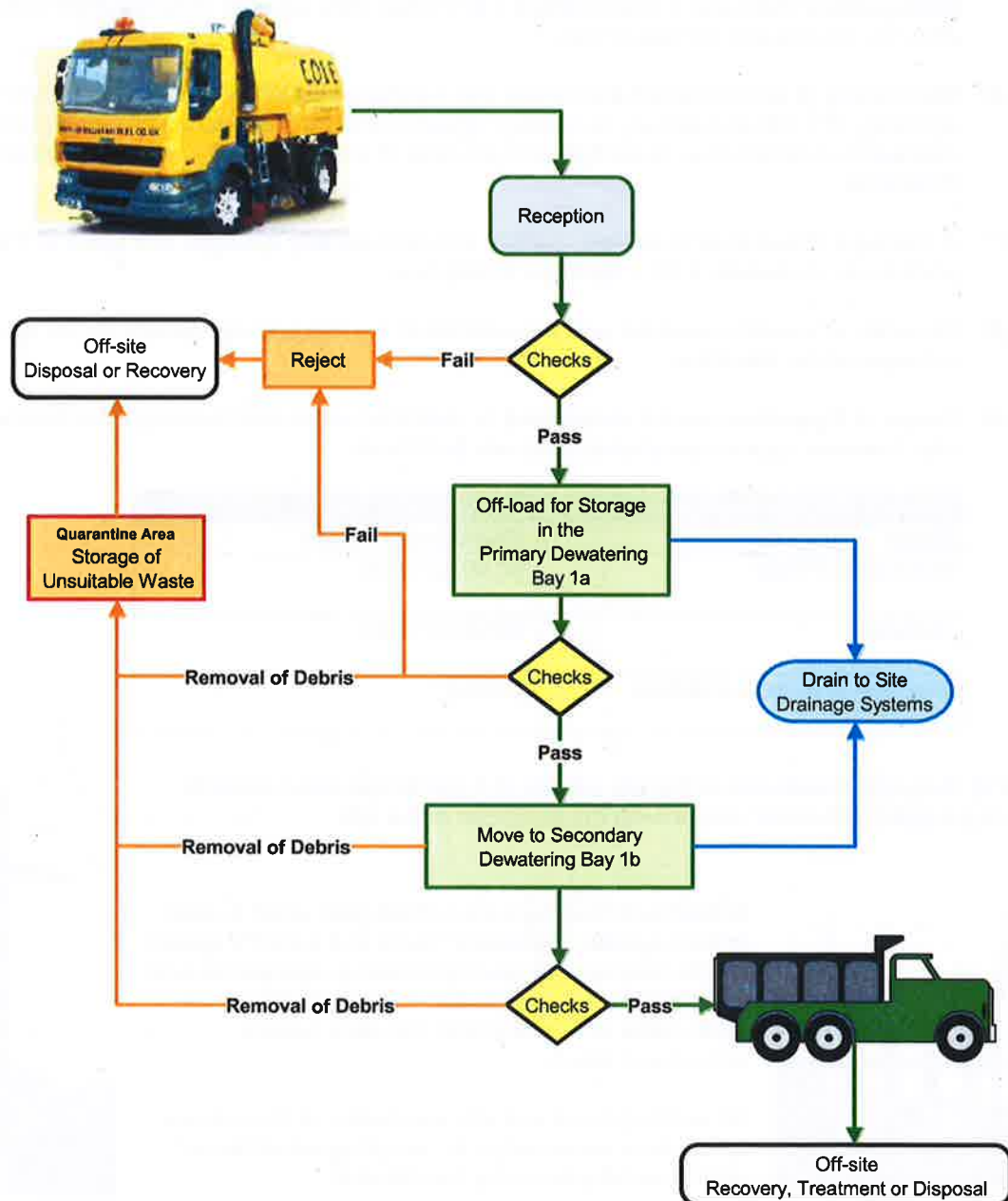


2 Site Operations

2.1 Overview of Operations

The **permitted waste recovery and disposal** carried out at the site are summarised in **Figure 2.1 – Operational Flow Chart** below:

Figure 2.1 – Operational Flow Chart



2.2. Waste Pre-acceptance Procedures

Wastes are generated by Cole Contractors Limited at source during sweeping operations during pre-planned cleaning and maintenance schedules, construction & development projects or from ad-hoc customer requests.

The majority of the material generated by Cole Contractors Cardiff by their sweeping vehicles is soil and stone from the cleaning of site access roads on construction & development sites, where the developer is required to prevent mud and soils from being spread or tracked from the development site onto the public highways.

Other wastes which may be generated from road maintenance or construction & development operations which may be accepted occasionally are gully dredging wastes, dredging spoil from roadside drainage ditches, soils and stones and road plannings.

Where there is known medium or high risk contamination to development sites, roads, site surfaces, drains or ditches e.g. from chemical spillages from commercial/industrial premises or road accidents etc., where polluting wastes have contaminated the surfaces or waters, an independent waste contractor is employed to clean the surfaces and remove the contents to another suitably authorised site that can accept them.

Additional pre-acceptance checks on wastes prior to receipt at the Cole Contractors Cardiff Depot may comprise of the following:

- Pre-determined agreements (quotations) with the customer
- Producer on-site visit & verification checks
- Independent analysis and site reports
- Scheduled dates for cleaning.
- Records of pre-acceptance checks will be kept at the site offices.

Visual observations prior to and during sweeping operations are also carried out by the operatives to avoid collecting contamination and unsuitable debris which may affect the treatment and quality of the resulting soils at the Site

Due to the nature of the wastes the likelihood of removing contaminated wastes are low, however, to further reduce the risks of removing unsuitable wastes for storage and or dewatering at the Site and avoiding unwanted contamination to the surface water drainage system, the following measures for the pre-acceptance procedures are to be employed as general guidelines for the following low, medium and high risk areas and situations as provided in **Figure 2.2 and Tables 2.2a and 2.2b** overleaf:

Figure .2.2 Pre-acceptance Controls

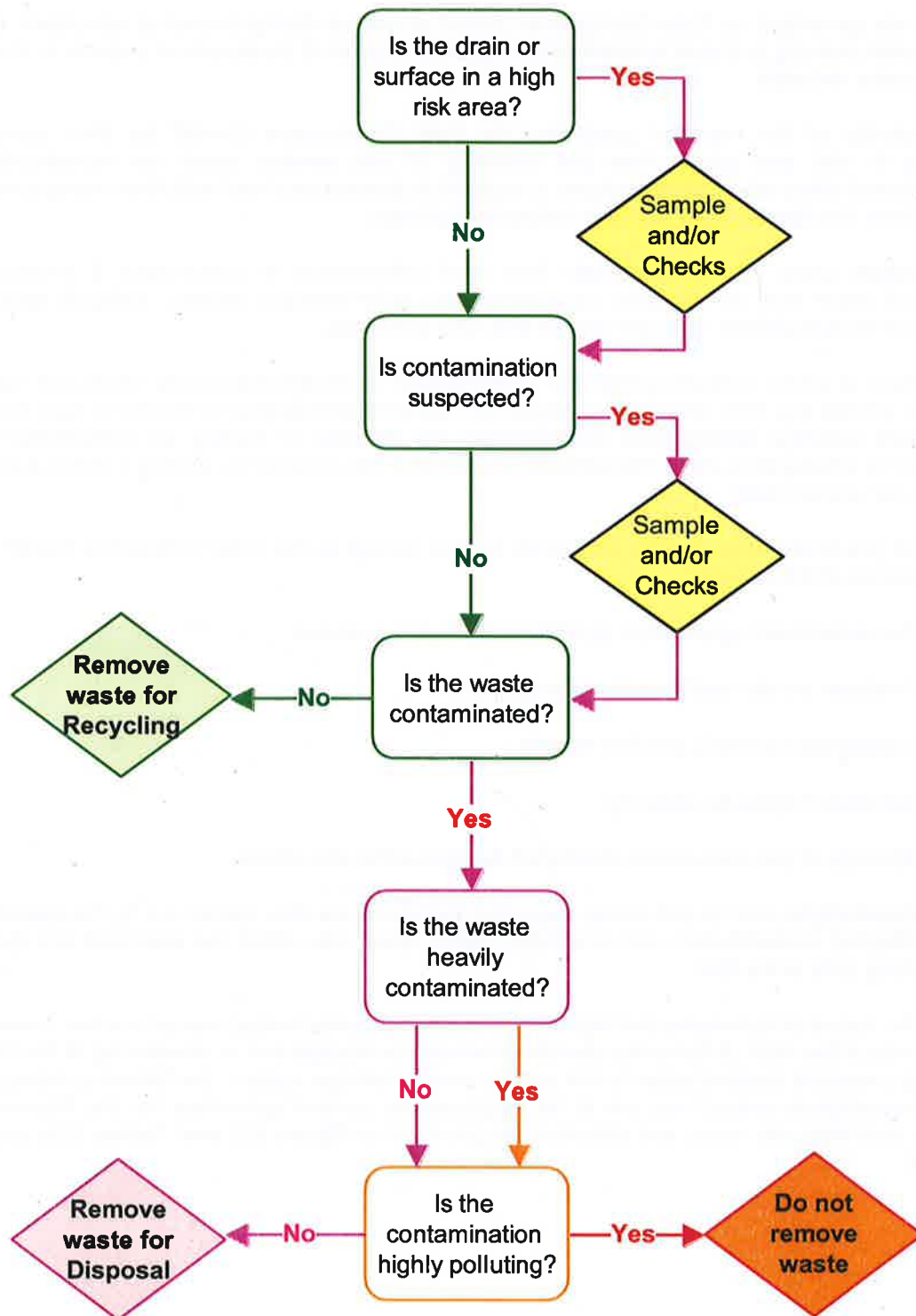


Table 2.2a Pre-acceptance checks and procedures				
Risk Level	Risk Area Types	Standard Checks	Contamination Suspected?	Procedure ¹
1 Low	Site access roads on construction sites for new (greenfield) sites)	Visual & olfactory	No	Remove waste for recycling/recovery
	Rural, country roads, sparsely populated		Yes	Sample, risk level 2
2 Medium	Site access roads on construction sites for certified low risk contamination (brownfield) re-developments.	Visual & olfactory / Sample	No	Remove waste for recycling/recovery
	Urban, town and city, densely populated.		Yes	* Mild contamination * Low polluting e.g. cement, plaster, cooking oils/fat
	Commercial and industrial premises and estates.		Yes	* Heavy contamination * High polluting e.g. engine oil
3 High	Site access roads on construction sites for certified medium or high risk contamination (brownfield) re-developments or remedial sites.	Visual, olfactory & Sample	No	Remove waste for recycling/recovery
	Commercial and industrial premises and estates.		Yes	* Mild contamination * Low polluting e.g. cement, plaster, cooking oils/fat
	Visible signs of polluting run-off or contamination to drain. Other known high risk sites or problem areas.		Yes	* Heavy contamination * High polluting e.g. engine oil

¹ Procedures for suspected contamination levels for wastes are provided in **Table 2.2.b** below

Table 2.2b Pre-acceptance procedures for contaminants		
Contamination Levels	Procedures with General Limitations and Constraints ¹	
* Mild contamination of; * Low Polluting wastes	Remove waste for <i>recovery/disposal</i> only where there is <i>less than 20%w/w total w/w full load</i>	Remove waste for <i>disposal to another authorised facility</i> where there are <i>greater than 20%w/w total full load</i>
* Heavy contamination of; * Low Polluting wastes	Remove waste for <i>recovery/disposal</i> only where there is <i>no greater than 2% total per load</i>	Remove waste for <i>disposal</i> to another authorised facility where there are <i>greater than 2%w/w total per load</i>
* Mild contamination of; * High Polluting wastes	Remove waste for <i>disposal</i> to another authorised facility where there is <i>greater than 2%w/w total per load</i> . Report details to the Operations or Technical Site Manager. Seek further authorisation from the Site manager(s) prior to disposal to another authorised facility.	Do not remove wastes if more than 20%w/w total w/w full load. Contact Natural Resources Wales
* Heavy contamination of; * High Polluting wastes	Do not remove waste. Report details to the Operations or Technical Site Manager. Contact Natural Resources Wales	

2.3 Waste Acceptance Procedures

2.3.1 Wastes Accepted

Wastes to be accepted at the Site consist of the following **simple generic waste descriptions**:

Predominantly:	Occasionally:/ rarely:
Roadsweepings	Gulley dredging wastes / spoil
	Dredging spoil

Permitted waste types and their **six digit Low/EWC Waste codes** to be accepted at the site are provided in **Table 2.3 Wastes Accepted** below

Table 2.3 Wastes Accepted		
LoW/EWC Code	Description	Process Type
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil	
17 05 06	dredging spoil other than those mentioned in 17 05 05	Storage and Dewatering
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	
20 03	separately collected fractions (except 15 01)	
20 03 03	street-cleaning residues	Storage and Dewatering

2.3.2 Arrival of Incoming Waste

Cole Contractors Cardiff own vehicles deliver the waste to the facility via the site entrance adjoining Whittle Road.

The driver parks the vehicle on the protected impermeable concreted surfaced reception area of the Site which gently falls to a drain to the site drainage system. The driver then reports to the office for approval and authorisation prior to offloading the wastes into the storage bay (bay 1a for primary dewatering, or bay 1b for storage).

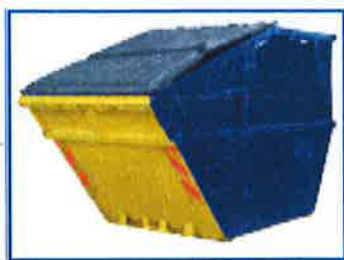
The Site Manager carries out visual checks on the waste and accompanying documentation to confirm that the waste is described adequately, conforms to any pre-acceptance checks and that the waste is permitted for acceptance at the site.

- **Non-hazardous wastes** must be accompanied by a **Duty of Care Waste Transfer Note** and **waste hierarchy declaration**.
- **Hazardous wastes** must be accompanied by a **Hazardous Waste Consignment Note**.
- **Waste carriers** must be registered and have a valid **Carriers Certificate** to carry waste.

The information recorded by the Site Manager or Office Clerk and is kept at the site office, and includes the following details provided in **Table 2.3.2** below:

Table 2.3.2 Waste Receipt Records	
Wastes Received	
1	Time and date
2	Waste carrier licence number
3	Quantity of waste received
4	Waste description and waste LoW/EWC code
5	Physical nature of the waste and packaging/type e.g. solid, loose, bulk, whole item etc.
6	The producer details and local authority production/origin code
7	Controlled waste transfer notes and hazardous waste consignment notes
8	The fate of the waste (i.e. recovery operation(s) type)
9	Pre-acceptance checks (e.g. quotations, agreements & specifications, analysis and producer site visit checks)
10	Any irregularities with the load, prior to offloading and on inspection after acceptance, (e.g. heavy contamination, odours, unsuitable debris, non-permitted wastes and hazardous items etc.)
➤	Where the waste does not conform and cannot be recovered at the site, the site manager or supervisor should refer to and complete Appendix 2.8 – Incidents, Accidents and Non-Conformances .
➤	Controlled waste transfer notes or hazardous waste consignment notes for redirected, rejected or removed wastes
➤	Redirected (rejected) waste/loads for alternative off-site treatment/disposal including any instructions/correspondence from the Natural Resources Wales

2.3.3 Waste rejection and/or quarantine



Unsuitable loads detected arriving at the site following acceptance checks will not be accepted and re-directed back to the producer, holder or other agreed & authorised/permitted facility.

If the site manager finds any irregularities with the documentation or the waste after deposit then the waste will be **either re-loaded back onto the vehicle and rejected** from the site or the waste will be stored within the **quarantine area within a suitable**

sealed, covered locked skip or container on site pending further enquiries and agreement with or instructions received from the Natural Resources Wales.

Where these irregularities occur the site manager or supervisor will record the details as provided in **Appendix 2.8 – Incidents, Accidents and Non-Conformances**

Where there are irregularities found e.g. hazardous items, unsuitable debris or heavy contamination found within the waste after deposit the following procedures provided in **Table 2.3.3 Redirected waste, rejection and quarantine procedures** will be employed depending on the nature and scale of the issues and risk assessed where appropriate:

Table 2.3.3 Redirected waste, rejection and quarantine procedures	
Irregularity	Action
E.g. Hazardous or potentially dangerous items 	▪ Notify the Natural Resources Wales. ▪ If required and safe (risk assessed) to do so, wear appropriate PPE before handling. ▪ Contain and isolate the waste, shut off drains and remove to a sealed and enclosed skip or container for off-site disposal as potential hazardous waste. ▪ Clean any affected surfaces and drains. ▪ Place absorbents and / or contaminated items or debris from affected areas in a sealed container(s). ▪ Dispose of as Hazardous waste using consignment notes to an authorised off-site facility.
Odorous waste	▪ Remove to a sealed and enclosed skip for off-site disposal. ▪ Clean any affected surfaces and areas
Unsuitable other non-hazardous and low risk polluting debris	▪ Remove debris to a sealed and enclosed skip for appropriate off-site disposal

Notifications to the Natural Resources Wales can be made on the following numbers: ▼

- National Natural Resources Wales Customer Service Centre Tel No. 0300 065300
- National Natural Resources Wales Incident Hotline 0800 80 70 60

Following satisfactory checks and recording the driver is then directed to unload the waste in the relevant storage area (bay 1a or 1b).

2.4 Waste Storage, Treatment and Despatch Operations

Process 1 Waste receipt



When the vehicles have completed their works or have reached full capacity (approximately 5 tonnes for road sweepers, 10 tonnes for gully sucking tankers, the wastes are taken to the Site.

The Site is manned at all times when wastes are being received and typically

operates between the hours of 8:30 am to 6pm Mondays to Fridays and 9 am to 4pm on Saturdays, however, under demand or abnormal situations (e.g. emergency repairs) the depot / Site needs to be available any time and day of the week, as when these situations arise. The Site is also equipped with floodlighting which can be used when wastes are accepted during the hours of darkness.

On entering the site the driver reports to the site supervisor where all the details are recorded in the site log these details are retained within the site office. Following satisfactory checks, the wastes are offloaded into the relevant bay 1a primary dewatering or 1b for storage / secondary dewatering.

Process 2 Primary Dewatering - Bay 1a

Wastes are offloaded into Bay 1a by reversing the vehicle into the bay and opening the rear hatch of the barrel, a maximum of 5 tonnes per vehicle (road sweepers) of are off-loaded into the bay for primary dewatering.

The bay is constructed with an impermeable surface which falls to a series of sediment traps and weirs to the drainage system..



The bay (1a & 1b) is enclosed by 3 retaining concrete walls - measuring a total of 14m wide x 6m deep by 2m high. Total maximum capacity for bay 1a & 1b capacity to effectively hold up to 45 tonnes (minimum 9 loads) of Roadsweeping wastes.

Wastes typically undergo primary dewatering for up to 10 days before being moved to the secondary dewatering bay 1b, any unsuitable debris found during deposit, storage and moving the waste is removed.

Process 3 Secondary Dewatering and Waste Storage - Bay 1b



Wastes moved to bay 1b undergo secondary final dewatering typically for up to another 10 days before being despatched for off-site disposal or recovery.

A small ^{mud wall} retaining wall divides the bays and is fitted with a coarse filter which allows waters to drain to bay 1a and the site drainage system.

Other wastes (e.g. soils & stones, road plannings) may also occasionally be stored in this area pending collection.

Process 4 Removal of litter and unsuitable debris - Skip and Quarantine Storage Area

Unsuitable wastes (debris and litter) removed from the waste during deposit, dewatering, moving & sorting are placed within a skip in the Skip and Quarantine Storage area pending transfer to off-site facilities for appropriate recycling or disposal.



Process 5 Off-site uses, disposal or further treatment

Where wastes are assessed as suitable for non-engineered / Q/A approved uses e.g. landfill cover **for beneficial disposal, periodic Full WAC Testing and Characterisation is carried out** and provided for the receiving Landfill Site(s). Alternatively the wastes may be transferred off-site for further treatment at e.g. another soil manufacturing facility.

Where suitability is proven and agreement is made for use off-site for landscaping or non-waste engineering and Q/A approved uses e.g. Landfill restoration, then further detailed soil classification and analysis will be undertaken.

Where any off-site uses is viable, then a separate **Quality Controls Protocol** will be put in place for agreement with **Natural Resources Wales**.

Previous analysis (see **WAC Test - Level 1, Dec 2012** for additional information on CD ROM) indicates that the analysis of the dewatered waste is within the numerical inert Waste Acceptance Criteria.

Quality controls for any off-site uses that can be identified as suitable and appropriate are provided to ensure a high degree of confidence for suitable end use of the treated soils and is summarised in **Figure 2.4.1** below:

Figure 2.4.1 Quality Controls for Off-site Uses



Process 6 Waste dispatch

The resulting waste streams typically despatched from the site under normal and permitted operations are provided in **Table 2.4** below:

Table 2.4 Wastes Dispatched from the Site	
Wastes produced from on-site operations	EWC/LoW and description
Road sweepings from Highway Maintenance	20 03 03 street-cleaning residues
Gulley dredging wastes from Highway Maintenance	20 03 03 street-cleaning residues
Sweepings from gardens and parks	20 02 02 soil and stones
Unsuitable debris and litter removed from on-site wastes	19 12 12 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
Dewatered Soils and Sweepings fit for off-site uses / recovery	19 12 12 soil substitutes other than that containing dangerous substances only
Dredging spoil other than from Highway Gullies or Maintenance	17 05 06 dredging spoil other than those mentioned in 17 05 05
Uncontaminated on-site interceptor water	16 10 02 aqueous liquid wastes other than those mentioned in 16 10 01
On-site generated contaminated (e.g. significant oil or fuel spillage) on-site interceptor waste liquids.	16 10 03* aqueous concentrates containing dangerous substances

2.5 Management Controls

2.5.1 Management Controls

The following list of Management Systems documents for the permitted activities are or will be in place for the waste operations carried out at the site.

- ***Accident Management Plan***

A. The plan identifies events or failures that could damage the environment

The following relevant factors are identified:

- Unloading and spillages from loss of containment of gully wastes
- Blocked drainage systems
- Polluting unwanted emissions to sewer
- Vandalism
- Flooding

B. The plan assesses how likely accidents are likely to happen and the potential environmental consequences

The following assessment criteria are used:

- Probability: how often is this likely to occur?
- What gets out and how much?
- Where would it go – i.e. what or whom would be affected?
- And how would it get there – i.e. pathway by air, along site surfaces etc.
- What would the consequences be?

C. The plan contains actions to minimise the potential causes and consequences of accidents:

The following site controls are to be used:

- Storage of wastes in designated and contained areas
- Barriers to prevent vehicles from damaging equipment
- Maintain primary and secondary containment
- Maintain security fencing and locked gates to minimise the risk of unauthorised access
- Keep a log of all incidents and near-misses
- Maintain and keep appropriate equipment to limit the consequences of an accident e.g. spillage equipment and absorbents
- Site instructions and responsibilities on how (and by whom) each accident scenario should be managed

D. The plan contains actions if an accident happens

- Implementing the accident management plan.
- Investigation of the cause of accident
- Recommended actions to prevent reoccurrence
- Reviewing the plan periodically and after each accident
- Notifying the Environment Agency and other relevant Authorities, e.g. Fire Authority, HSE, Police, etc.

- **Skills and training**

All operational staff and managers are suitably trained and undergo regular training, a list of the skills and training for each staff member is kept at the Highways Clydach Depot. Copies of relevant site operating instructions including a copy of the permit, process description, management and controls are also kept on the site within the site office which are made readily available to operational staff.

- **Site reconnaissance checks**

During operational periods, daily, weekly, monthly and annual checks are made by the site supervisor to inspect waste storage areas, site surfacing, drainage channel and perimeter security fencing. Checks carried out are recorded and any defects detected and necessary repairs made are also recorded in the site diary.

- **Controls to prevent fugitive emissions**

Environmental risk assessments and management plans provided in **Appendix 2.4**, show that there are no serious issues with regards to fugitive emissions being generated from site operations which are capable of causing harm, pollution, nuisances or detriment to the local amenity beyond the site boundary.

The following management controls to ensure that fugitive emissions are adequately prevented or minimised (insignificant) are as follows:

- **Measures to prevent emissions to surface and controlled waters and land and groundwater**
 - i. Inspection of integrity and maintenance of impermeable site surfaces and retaining walls to dewatering bay1a & 1b.
 - ii. Inspection of integrity and maintenance of drainage channel (by regular cleaning/de-silting) and sumps and silt traps.
 - iii. All waste reception, treatment and storage operations to be carried out within the designed impermeable and contained areas on the site.
 - iv. **Keep absorbents readily available on-site for use in containing any potentially polluting spillages** (e.g. fuels or oils) outside the contained drainage areas, refer to **Appendix 2, 2.10 Spillage Procedure**.
 - v. **Monitoring of point source emissions to surface water road drains** as provided in section **2.4 Emissions Control**.
- **Measures to prevent emissions to air**
 - i. Wastes to be stored fully within the confines of each bay and stockpiles to be kept below the high of the walls (2 meters) to prevent wind erosion.
 - ii. **Prevent wind erosion**, stock piles within the bays to be kept moist and / or covered during periods of prolonged dry weather and/or high winds (greater than Beaufort scale 3 (11 knots)).
 - iii. **Loading and unloading** to be carried out **only during low wind speeds** (no greater than Beaufort scale 3 (10 knots)).

The following Beaufort scale in [Table 2.5.1](#) below provides wind speeds and descriptions and the corresponding highlighted [Table 2.5.2](#) provides key coloured *action levels for on-site operations to prevent fugitive emissions occurring*.

Table 2.5.1 BEAUFORT SCALE: Specifications and equivalent speeds for use on land				SPECIFICATIONS FOR USE ON LAND	
FORCE	EQUIVALENT SPEED 10 m above ground		DESCRIPTION		
	miles/hour	knots			
0	0-1	0-1	Calm	Calm; smoke rises vertical	
1	1-3	1-3	Light air	Direction of wind shown by smoke drift, but not by wind vanes.	
2	4-7	4-6	Light Breeze	Wind felt on face; leaves rustle; ordinary vanes moved by wind.	
3	8-12	7-10	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag.	
4	13-18	11-16	Moderate Breeze	Raises dust and loose paper; small branches are moved.	
5	19-24	17-21	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets form on inland waters.	
6	25-31	22-27	Strong Breeze	Large branches in motion; whistling heard in telegraph wires; umbrellas used with difficulty.	
7	32-38	28-33	Near Gale	Whole trees in motion; inconvenience felt when walking against the wind.	
8	39-46	34-40	Gale	Breaks twigs off trees; generally impedes progress.	
9	47-54	41-47	Severe Gale	Slight structural damage occurs(chimney-pots and slates removed).	
10	55-63	48-55	Storm	Seldom experienced inland; trees uprooted; considerable structural damage occurs.	
11	64-72	56-63	Violent Storm	Very rarely experienced; accompanied by wide-spread damage.	
12	73-83	64-71	Hurricane		

Operations Restricted to Action Levels

Table 2.5.2 Key coloured action levels	
Operations are carried out under normal conditions	
Loading and unloading operations are not to be carried out	
Stockpiles in bays to be kept moist and / or covered to prevent prolonged wind erosion	
Site operations cease and are only to be carried under emergency maintenance situations when safe and as necessary	

- **Measures to prevent dust, mud and litter**

- i. Keep site surfaces clean by sweeping.
- ii. ***Ensure skip containing litter and debris is kept closed.***
- iii. Retrieve any loose litter or debris at the end of each working day.

- **Measures to prevent substances introduced into the environment by pests**

- i. Daily inspection and site reconnaissance carried out by the site supervisor.
- ii. Removal of biodegradable/food wastes from stockpiled wastes into enclosed skip.
- iii. On detection of infestation, professional pest controllers are to be employed directly and without delay.

- **Measures to prevent odour**

- i. Odorous consignments are not accepted at the site (pre-acceptance controls) and are redirected for off-site disposal.
- ii. Odorous wastes detected on-site are to be removed immediately for off-site disposal.
- iii. Removal of biodegradable/food wastes from stockpiled wastes into enclosed skip.
- iv. Investigating and responding to any odour complaints received.

- **Measures to prevent noise & vibration**

- i. Receipt of wastes and loading and unloading operations to be carried out within normal working operating hours.
- ii. Ensure that plant and equipment has regular maintenance checks.
- iii. Vehicles silencers are regularly serviced and maintained.
- iv. Investigating and responding to any noise or vibration complaints received & undertaking periodic noise or vibration monitoring as required.

MS 5 Maintenance checklist and maintenance records

A maintenance schedule and maintenance records is kept at the Highways Clydach Depot. Maintenance required from site reconnaissance checks are recorded in the on-site diary by the site supervisor.

2.6 Emissions Control

2.6.1 Point source emissions to air, sewer or groundwater

There are no point source emissions to air, sewer or groundwater from the waste management operations.

2.6.2 Point source emissions to surface water drains

There is a point source emission to surface water road drains outside the site as indicated as **SW1** shown in **Appendix 1.2 Site Layout and Drainage Plan**, details are described below:



Source of emissions are from the dewatering Bay 1a (primary dewatering) and Bay 1b (secondary dewatering) resulting from the settlement by gravity and fall to a contained drainage channel of the wet sweepings arising from the highway maintenance operations carried out by the Cole Contracting Cardiff.

Entrained waters within the waste (along with any rain falling onto the uncovered storage area) **drain freely along an impermeable concrete pad via a series of silt traps and weirs which are constructed adjacent to the pad** before entering directly into a sump which then forms part of the main site surface water drainage systems

Vehicle washing is also being discharged

Waters pass through a series of sumps which help to retain any suspended silt passing through the drains before entering a 3 stage oil interceptor which is located near the enclosed and bunded fuel tank within the centre of the site.

Surface waters from the majority of the site **passes through the oil interceptor to a final sump** before the surface waters exit the site underneath the site entry / exit road adjacent to the site offices.

*It is proposed that **monitoring of surface water quality is carried out at the final drainage sump (manhole) as indicated as SW1** on the adjacent photograph by **taking regular samples for testing at an agreed frequency** required to ensure there is no adverse impacts to external surface water drains or controlled waters.*



Due to the nature of the waste and sources and activities generating them it cannot be determined what substances they might contain, although **previous WAC analysis carried out shows that the**

leachable / soluble substances and parameters was within the Inert parameters set for Inert Landfill.



Quantity of drained **waste waters** directed to the surface water road drains via emission point **SW1** is variable depending on waste input and seasonal variations, however, the maximum quantities of drained **waste waters to the surface water road drains are estimated at a total of 1000 litres per day** based on worst case of 1 x 5 tonne load per day containing a maximum of 1 tonne of entrained free draining water.

Area of waste storage areas only = 109m² (14m x 6m + 5m x 5m).

Area of whole site = 2350m² (50m x 47m).

Proposed substances and parameters for monitoring from the dewatering bay at SW1 surface water road drains outside the site drains may include:

- Visual and Olfactory Observations
- pH
- Total Hydrocarbons
- Electrical Conductivity
- Chemical Oxygen Demand *mg/l*

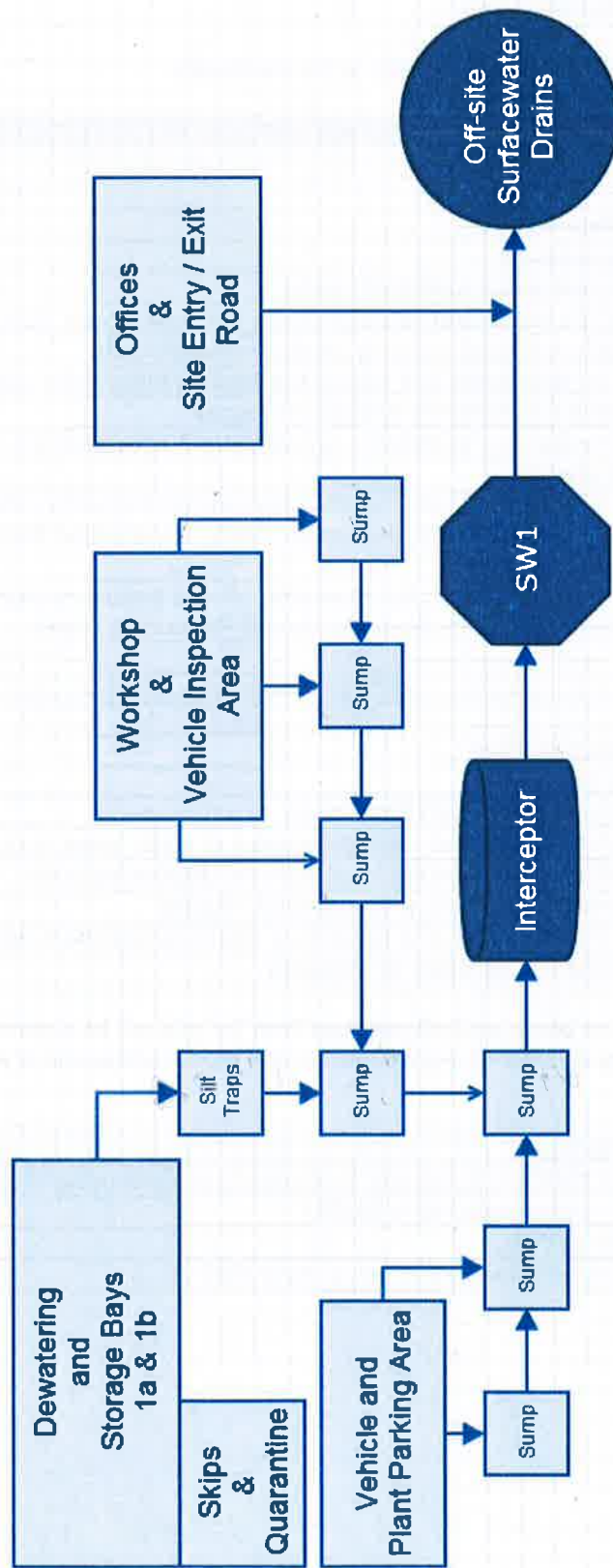


Written **Monitoring Methods and Procedures** to ensure the water quality from the site surface water drainage systems **will need to be agreed with Natural Resources Wales** and provided for inclusion to the site Operating and Monitoring Techniques as provided in **EMS - Appendix 5 – Emissions Monitoring Plan.**

- Suspended Solids
- BOD
- Chemical Oxygen demand

Figure 2.6 below shows how the site surface water drainage system are interconnected and where the proposed most appropriate monitoring point **SW1** is located within the drainage system.

Figure 2.6 Site Drainage Schematics



2.7 Records, Reporting/Notification

2.6.1 The following **records** will be made and kept at the site/facility

Table 2.6.1 Site Records

Wastes Received

1	Time and date
2	Waste carrier licence number
3	Quantity of waste received
4	Waste description and waste LoW/EWC code
5	Physical nature of the waste and packaging/type e.g. solid, loose, bulk, whole item etc.
6	The producer details and local authority production/origin code
7	Controlled waste transfer notes and hazardous waste consignment notes
8	The fate of the waste (i.e. recovery operation(s) type)
9	Pre-acceptance checks (e.g. quotations, agreements & specifications, analysis and producer site visit checks)
10	Any irregularities with the load, prior to offloading and on inspection after acceptance, (e.g. heavy contamination, odours, unsuitable debris, unpermitted wastes and hazardous items etc.)
11	Redirected (rejected) waste/loads for alternative off-site treatment/disposal including any instructions/correspondence from the Natural Resources Wales

Wastes dispatched

1	Time and date
2	Waste carrier licence number
3	Quantity of waste dispatched
4	Waste description and waste LoW/EWC code
5	Physical nature of the waste and packaging/type e.g. solid, loose, bulk, whole item etc
6	The destination of the waste and the local authority destination code
7	The receiving site permit or number or exemption details
8	Controlled waste transfer notes and hazardous waste consignment notes
9	The fate of the waste (i.e. recovery or disposal)

A summary of wastes received and dispatched from the site will be submitted to **Natural Resources Wales** **every quarter** (3 months) within one month of the end of each quarter period.

Surface Waters Monitoring -

Refer to Forms **EMP1 & EMP2** in **Appendix 5 - Emissions Monitoring Plan**

1	Daily checks and observations (form EMP1)
2	Weekly tests (form EMP2)
3	Quarterly independent laboratory analysis (form EMP2)

2.6.2 The following **notifications and reports** will be made to the Natural Resources Wales without delay:

- Quarterly returns for wastes received and dispatched.
- Any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution.
- Any breach of a limit specified in the permit.
- Any significant adverse environmental and health effects.
- Records of complaints, pollution incidents or breaches of the permit and the actions that have been or are intended to be taken to deal with them.

2.6.3 Site Notice Board

A site notice board will be displayed at the site entrance to the facility, and will contain the following information:

Table 2.6.1 Site Notice Board Details	
Facility Name:	Cole Contractors Cardiff
Facility type:	Road Maintenance and Construction Waste Storage and Treatment Facility
Operator:	Cole Contractors Cardiff (Nichol (Road Maintenance) Limited)
Contact Details;	Tel. No. 01220 387406 / 07779 013166 e-mail; info@colecontractors.co.uk
Emergency Contact;	The Site Manager
This permitted facility is authorised by the Natural Resources Wales	
Permit number: EPR/UB3397TY	
Natural Resources Wales (incident hotline)	0800 807060

End.