

JACHIN GROUP (SOLUTIONS) LTD

Environmental and Sustainability Policy and Management System

Contents

Section	Subject	Contents
1	Environmental Policy	1.1 Commitment and Policy 1.2 Environmental Policy Statement
2	Planning	2.1 Initial Environmental Review 2.2 Environmental Impacts/Aspects 2.3 Register of Environmental Effects 2.4 Register of Legislation & Guidance 2.5 Hazardous Waste 2.6 Site Waste Management Plans
3	Implementation & Operation	3.1 Define Organisation and Personnel 3.2 Training 3.3 Environmental Supply Chain Management
4	Checking & Corrective Action	4.1 Monitoring and complaints. 4.2 Records 4.3 Management Review
5	Appendices	5.1 Glossary 5.2 Initial plan – your organisation 5.3 Framework aspects register 5.4 Environmental law 5.5 Plan for internal environmental audit

SECTION 1

ENVIRONMENTAL AND SUSTAINABILITY POLICY

1.0 POLICY STATEMENT

The company recognises that its activities have an impact on the environment and is committed to improving its environmental and sustainability performance and minimise the harmful effects through caring policies and effective management.

The company accepts and acknowledges its obligations and responsibilities under legislation and guidance dealing with environmental issues that affect or arise as a consequence of its business.

The company will apply the methodology of its Environmental Management System (EMS) to identify and determine the environmental and sustainability issues requiring attention and implementation of the measures to achieve improvement. Attention will be given to:

- Achieving good environmental standards in all activities carried out by the company.
- Contributing towards a sustainable safe and high-quality environment in the areas where project sites are based.
- Environmental awareness and understanding of our business amongst those working for or on behalf of the company, providing training as necessary and encouraging subcontractors and suppliers to adopt sound environmental practices.
- The considerate use of land undergoing development having special regard to archaeology finds and the storage, treatment, and disposal of any waste, hazardous or potentially toxic materials to avoid environmental harm.
- The use and re-use of materials to minimise and curtail creating waste and, whenever practicable, using materials and products from sustainable sources.
- Control the emission of pollutants, noise and dirt, and the use of potentially harmful substances and treatments during construction activities.
- Conserve energy through sensible selection, use and management of resources, equipment, plant, and transport.
- Communicating this Environmental Policy and Action Plan updates to all interested parties including customers, suppliers, and employees, encouraging their active involvement in environmental issues.
- Pursuing and encouraging environmental sustainability
- Regularly assessing the environmental impact resulting from business operations and remaining fully informed of recognised best practices.
- Meeting our legal obligations
- The continued development, monitoring and investigation of systems, practices, and procedures at each stage of construction to ensure the environment remains a foremost consideration.

SECTION 2

PLANNING

2.1 INITIAL ENVIRONMENTAL REVIEW

In order for an organisation to be sure that it has identified all of its significant aspects and their associated impacts it needs to examine its activities methodically. This is the purpose of the initial environmental review.

It provides a snapshot of a company's environmental performance at a particular moment in time.

It involves collecting information on a company's environmental impacts and the management structures in place to deal with these impacts. A thorough and comprehensive review provides a solid basis for developing a register of environmental impacts and an environmental programme.

This process can be carried out for construction sites, offices, workshops.

As a starting point, Appendix 2 provides a format for questioning the company activities and allowing points to be identified on any environmental aspects and impacts. Appendix 3 can be adopted to record the significant factors.

CONSIDER THE FOLLOWING POINTS

General issues

- Assessment, control and reduction of the environmental impact of the activity reviewed
- Consumption, management and choice of energy
- Management, savings, choice and transportation of raw materials, including consumption and use of water
- Avoidance, recycling, reuse, transportation and disposal of waste
- Evaluation, control and reduction of noise within and outside the site
- Selection of new production processes and changes to production processes
- Planning of production design, packaging, transportation, use and disposal
- Environmental performance and practices of contractors, subcontractors and suppliers
- Prevention and limitation of environmental accidents
- Contingency procedures in case of environmental accidents
- Staff information and training on environmental issues
- External information on environmental issues

The Company Issues

- Legal compliance
- Emergency/contingency plans
- Management structure
- Employee awareness and training
- Public relations
- Market pressures
- Use of contractors / sub-contractors

The Business Functions

- Process design / operation/construction
- Waste disposal
- Solid waste management
- Emissions/ discharges
- Water use discharges
- Raw materials
- Storage on site
- Transport and distribution
- Energy source / use
- Product design
- Packaging

The Office Based Functions

- Energy use
- Waste disposal
- Paper use
- Water use

2.2 Environmental Impacts and Aspects

Identification of environmental aspects and impacts

An organisation's policy, objectives and targets should be based on knowledge about the environmental aspects and significant environmental impacts associated with its activities, products or services. This can ensure that the significant environmental impacts associated with these aspects are taken into account in setting the environmental objectives. The relation between environmental aspects and impacts is one of cause and effect. An environmental aspect refers to an element of an organisation's activity which can have a beneficial or adverse effect on the environment. For example, it could involve a discharge, an emission, consumption or reuse of a material, or noise.

An impact refers to the change which takes place in the environment as a result of the aspect. Examples of impacts might include contamination of water or depletion of a natural resource.

The identification of environmental aspects from the initial review and the evaluation of environmental impacts is a process that can be dealt with in four steps: Refer to (Appendix 2)

- Step 1: Select an activity or process. (The selected activity or process should be large enough for meaningful examination and small enough to be sufficiently understood.)
- Step 2: Identify environmental aspects of the activity product or service. (Identify as many environmental aspects as possible associated with the selected activity or process.)
- Step 3: Identify environmental impacts. (Identify as many actual and potential, positive and negative, environmental impacts as possible associated with each identified aspect.)
- Step 4: Evaluate significance of impact. (The significance of each of the identified environmental impacts can be different for each organization. Quantification can aid judgment. Evaluation can be facilitated by considering environmental concerns (the scale of the impact, the severity of the impact, probability of occurrence, duration of impact) and business concerns (potential regulatory and legal exposure, difficulty of mitigating the impact, costs of mitigating the impact, effect of change on other activities and processes,
 - concerns of interested parties, effects on the public image of the organisation).

This section is intended to provide a process for an organisation to identify significant environmental aspects that should be addressed as a priority by the organisation's environmental management system. This process should consider the cost and time of undertaking the analysis and the availability of reliable data. Information already developed for regulatory or other purposes may be used in this process. Organisations may also consider the degree of practical control they may have over the environmental aspects being considered.

Organisations determine what their environmental aspects are taking into account the inputs and outputs associated with their current and relevant past activities, products and services. Examples are listed below:

Construction Inputs	Construction Outputs
Land stripping Existing services/building Enabling Contamination Traffic Excavations Construction materials Electricity Gas Water Fuels Chemicals White goods Temporary facilities Noise Confined space Roadworks Storage	Visual Noise Dust Dewatering Sewerage adaptations and releases Surface water / rainwater Contamination Chemical Fumes Effect on the land / biodiversity/ ecosystem Recycled material Waste materials Mud on roads Materials Waste Carriage

2.3 REGISTER OF ENVIRONMENTAL EFFECTS

Risk Assessment for Emissions (Part A) and Contamination (Part B)

PART A: Health Effects of Pollution Emissions

Introduction

Pollution emissions from construction sites can have a detrimental effect on health and the local environment. Particles and vaporous discharges can have an adverse impact on the health of site operators and local residents by affecting particularly the eyes, nose, mouth, lungs and skin. Fine particles can penetrate deep into the lungs, contributing to respiratory and cardiovascular problems. Large particles can cause nuisance through soiling of surfaces such as cars, property and washing. Excessive noise levels can be a hazard to site workers and can annoy neighbours and disturb local wildlife. Following good environmental practice to control these emissions.

Construction project environmental checklist - controlling particles, vapor and noise

	Yes	No	N/A
Have the Local Authority Environmental Health and Planning Departments been contacted and involved?			
Have other regulators such as the Environmental Agency, Health and Safety Executive, etc. been contacted and involved (e.g. for water run-off)?			
Have environmental risk assessments been completed?			
Have method statements been completed, agreed and put in place?			
Have appropriate working hours been agreed?			
Is the site in a Local Authority Air Quality Area (AQMA)?			
Has any statutory noise control been taken under COPA1974 or EPA1990?			
Are there any specific requirements identified by the Local Authority or other regulator?			
Are methodologies for monitoring in place?			
Have particles, vapour or noise emission limits been agreed or imposed?			
Will breaches of emission limits shut down activities on the site?			
Are the costs and consequences of shutdown known by everyone?			
Have positions of site entrances and haul roads, and speed limits been considered?			
Have low pollution-emitting materials and techniques been specified?			
Does construction plant fitted with dust control measures also have appropriate silencers?			
Have costs of pollution control equipment and operation been incorporated into project specification and tenders?			
Is the specified pollution control equipment available for immediate use when needed?			
Are particle, noise and vapour control 'champions' to be appointed?			
Have the 'champions' been given sufficient time and resources for the task and level of responsibility?			
Are procedures for site logging of pollution-generating activities and control measures in place?			
Are public relations and information systems in place?			
Have the site management team and contractors been trained and informed?			
Are incentives or penalties in place for staff/contractors?			

PART B: Contamination

Introduction

The construction industry contributes the greatest number of significant pollution incidents within the industrial sector (over 500 per year in England and Wales). Efforts are being made at all levels within the construction industry to implement general environmental improvements. This guide of good practice is intended to provide readily accessible guidance and training for use on site. CIRIA publication Control of water pollution from construction sites (C532) provides more detailed guidance for consultants and contractors. The user can make each guide site specific and apply a risk factor if appropriate.

Aims

The aim of this guide of good practice is to assist construction contractors on-site in identifying appropriate methods of protecting the water environment. This guide summarises good practice advice and can be used by any size of company. The aim is also to present a standard of performance which, if adopted, should reduce the number of pollution offences committed by contractors, result in significant cost benefits to all contractors and improve environmental awareness and quality at construction sites.

Benefits

Improving water management is beneficial for any construction site, large or small. Environmental performance is increasingly regulated by national legislation and, as a result, clients and employers within the industry are looking towards better demonstration of good water management from their workforce.

The economic benefits of effective water management are significant:

- Avoidance of fines and prison sentence – it is illegal to discharge any polluting matter into a watercourse or groundwater, or to discharge to a foul sewer without consent. Road drains, surface water drains, and overland spills are included. Fines are unlimited (on indictment), and the additional legal costs can be 20 times the fine. You would also have to pay the cost of clean-up, even if not prosecuted.
- Less time and money spent in cleaning up
- Improved tender opportunities for companies with a good track record.
- Employment opportunities are improved if you can demonstrate awareness of good water management practice.
- Many employers will take disciplinary action if you are responsible for bad practice or a pollution incident.
- Construction activities cannot only cause serious harm to water bodies, plants and wildlife; they can affect the quality and availability of drinking water resources and can be visually unattractive. A minor spillage could lead to pollution, for example a gallon (4.5 l) of oil can completely cover a lake the size of two football pitches.

- The normal limits set by environmental regulators for silt or mud in water pumped to a watercourse are equivalent to just half a tablespoon of soil in a bath.

Core subjects and guidance

There are 11 key issues. Many of these overlaps, but all should be considered.

1. Site Set-up
2. Site drainage
3. Treatment of site water
4. Water disposal
5. Material Storage
6. Silt
7. Fuel/oil storage and use
8. Concrete, cement and bentonite
9. Working near watercourse
10. Demolition
11. Emergency response

Each topic is covered on a single sheet. One side gives a brief list of points summarising issues you need to consider avoiding water pollution. It is recommended that you give all points due consideration and act upon them. On the other side is a checklist that will jog your memory, help monitor the day-to-day performance of the site and alert you to areas where actions may be required.

The three columns on the right-hand side allows for quantification to be recorded if appropriate.

Consider photocopying the checklists and completing them during regular site walkovers to ensure your site remains pollution and prosecution free.

The guidance given is intended to point out the best practice for managing water on site including site set-up, determining where and how to dispose of site water, and taking appropriate action in the event of a spillage. It is intended to support and not replace established contractual procedures or method statements.

Terms and Definitions

The term **environmental regulator** includes the Environmental Agency (England and Wales), the Scottish Environmental Protection Agency, the Environmental and heritage Service in Northern Ireland and the Department of Public Services in Jersey and Guernsey.

Where Environmental Agency Pollution Guidelines (PPG) are referred to, similar versions may be obtained from the Scottish Environmental Protection Agency.

Where guidance refers to **asking permission**, this includes obtaining permits to work, regulatory consents, approvals or verbal agreement as required, and should be sought from the person in control of the site e.g. main contractor, and/or the environment regulator as required.

Things to consider when setting up sites:

Contact the environmental regulator at an early stage of the project to seek advice on the probable pollution prevention measures and licences that will/may be required during the project. Ensure the environmental regulator or relevant body has given permission before work commences.

- Be aware if the site is in a sensitive area, for example near a watercourse or in a designated conservation area. If so, there are likely to be restrictions placed on the site such as limited fuel/oil storage (ask the client or main contractor).
- Include environmental issues as part of the site set up risk assessment.
- If the site is already contaminated before you begin work, ensure that you are not identified as the polluter and take measures to prevent the spread of contamination.
- Identify all potential drainage on site and be aware of where they discharge to. These may include land drains, foul sewers, surface water drains and soakaways. Mark them appropriately to allow them to be identified easily.
- Consider different techniques for dewatering (see water disposal) prior to beginning work.
- Consider sewage disposal (Portaloos, cabins etc.) where no mains sewerage is available (see references).
- Locate all plant and activities away from drains and watercourses where possible, particularly the following:

Fuel/oil storage	Batching plant	Material storage
Topsoil storage	Plant maintenance	Waste disposal area

- Locate fuel stores (tanks, drums and bowers), plant storage, maintenance areas and waste storage areas on impermeable surfaces: consider protecting them from rainwater. Ensure that they are properly bound.
- Surface water runoff should be intercepted and diverted before entering the site.
- Minimise the length of haul routes, reduce the gradient where possible and keep at least 10m away from watercourses (regional restrictions apply to distances from watercourses).
- Consider construction of haul routes with a permeable surface laid on geotextile if possible.
- Provide a secure area for storing waste materials.
- Consider construction of gullies/ditches alongside haul routes and around the perimeter of the working area to collect and channel surface water.

- Consider providing wheel wash facilities and/or methods to keep haul routes and access free from mud and dust to minimise silty runoff. Contain the water and dispose of it correctly.
- Ensure the site is adequately protected and secured against trespassers and vandalism to prevent damage to fuel stores or water protection measures.
- Ensure that all personnel on site receive environmental awareness training during their site safety induction, and programme environmental toolbox talks into a training and awareness programme. Ensure that they are aware of spill response procedures.

(Continued overleaf)

Site Location

Date.....

Use the left-hand box to indicate whether the question is relevant i.e. Yes, No, N/A
If the question is relevant, quantify the level of risk by checking the appropriate box i.e., Minimal, Moderate or Significant.

		Minimal	Moderate	Significant
	Have environmental issues been included on a site set up risk assessment?			
	Has permission been granted by the environmental regulator or relevant body to discharge water and effluent from the site?			
	Is drainage identifying foul and surface water drainage accessible?			
	Have nearby rivers, streams or groundwater etc., been identified?			
	Are drains, etc., appropriately marked to distinguish them?			
	Are fuel bunds and/or double skinned tanks provided?			
	Is a waste storage area provided?			
	Has dewatering and disposal of water been considered?			
	Is the site adequately protected against vandalism, theft and breakage?			
	Is a wheel wash or road cleaning equipment provided?			
	Is/are a designated haul route(s) indicated?			
	Have environmental issues been included in the site induction?			
	Are site personnel aware of the spill response procedure and storage issues?			
Control measures:				
Signed:				

Things to consider for site drainage:

There are generally three types of drainage on site:

1. Surface water drains are designed to carry uncontaminated rainwater directly to a stream, river or soak away, which may be some distance from the site.
2. Foul water drains are designed to carry foul water directly to a sewage works for treatment before being discharged to a watercourse.
3. Soakaways
 - Existing and constructed site drainage plans should be readily accessible.
 - Clearly distinguished between the surface and foul manhole covers and gullies on site and mark them appropriately.
 - **Nothing** should be allowed to enter surface water drains, except clean rainwater. Material and plant should not be stored near drains (e.g. stockpiles, fuel, paint, pumps, and generators).
 - Even if described as bio-degradable, detergents are not suitable for discharge to surface water drains. Use of detergents should be carried out in designated areas draining to the foul sewer.
 - It is **ILLEGAL** to discharge into foul sewers without agreement from the sewerage undertaker.

REDUCE WATER USAGE

- Construct temporary and permanent drainage works as early as possible to divert surface water away from the earth works operations.
- Divert clean surface water away from bare ground using trench drains.
- Prevent surface water entering excavations – use sand bags or similar.
- Minimise groundwater ingress into excavations.

REUSE WATER

- If settlement facilities are being used on site, use water from them to damp down haul roads in dusty conditions.
- Use water from settlement facilities to wash out concrete lorries.

RECYCLE WATER

- Recycle water used in concrete batching plants.
- Recycle water in wheel

washes.

(Continued overleaf)

Site Location**Date**.....

Use the left-hand box to indicate whether the question is relevant i.e. Yes, No, N/A
If the question is relevant, quantify the level of risk by checking the appropriate box i.e. Minimal, Moderate or Significant.

		Minimal	Moderate	Significant
	Is the site drainage plan up to date and accessible?			
	Are foul and surface drain types appropriately marked and known to site personnel?			
	In wet weather is site runoff contained and not directly entering a watercourse or surface water drain?			
	Are materials and plant stored away from all drains? (e.g. stockpiles, fuel, paint, pumps, generators).			
Control measures:				
Signed:				

Things to consider when treating on-site water:

The main pollutants from construction are SILT, Fuel/OIL, CONCRETE and CHEMICALS. These could come from general site runoff, pumping out excavations and spills for example.

It is ILLEGAL to put any polluting matter into controlled waters without obtaining permission from the environmental regulator. Controlled waters include rivers, streams, coastal waters, ponds, lakes, lochs, docks, and groundwater.

Prior to discharge, even to foul sewer, ALL site water may require treatment by one or a combination of simple methods.

Silt can be removed by:

- settling out in a tank, ponds or lagoons, AND/OR
- allowing it to infiltrate through a large area a grassy ground, geotextile filters, straw bales or a skip containing fine aggregate.
- Chemical treatment with flocculants

Where sustainable draining systems (SUDS) such as ponds are to be part of the completed construction, consider installing these at the outset and utilising them as a means of treating silt laden waters during construction.

Use a silt removal method that will cope with the volume of water, concentration and type of silt (chalk/clay etc) – water should be kept as still as possible. Around two or three hours retention time is generally required to reduce suspended solids. Finer materials will take longer to settle.

Oil and concrete should **NOT** enter site water in the first place.

Prevent oil pollution by using:

- Suitable bunded storage of fuel/oil, and use of drip trays under plant AND
- An oil separator (if a permanent interceptor is required, consider installing it as early in the works as possible, or install a temporary one), AND/OR
- Commercially available absorbent granules, pads or booms.

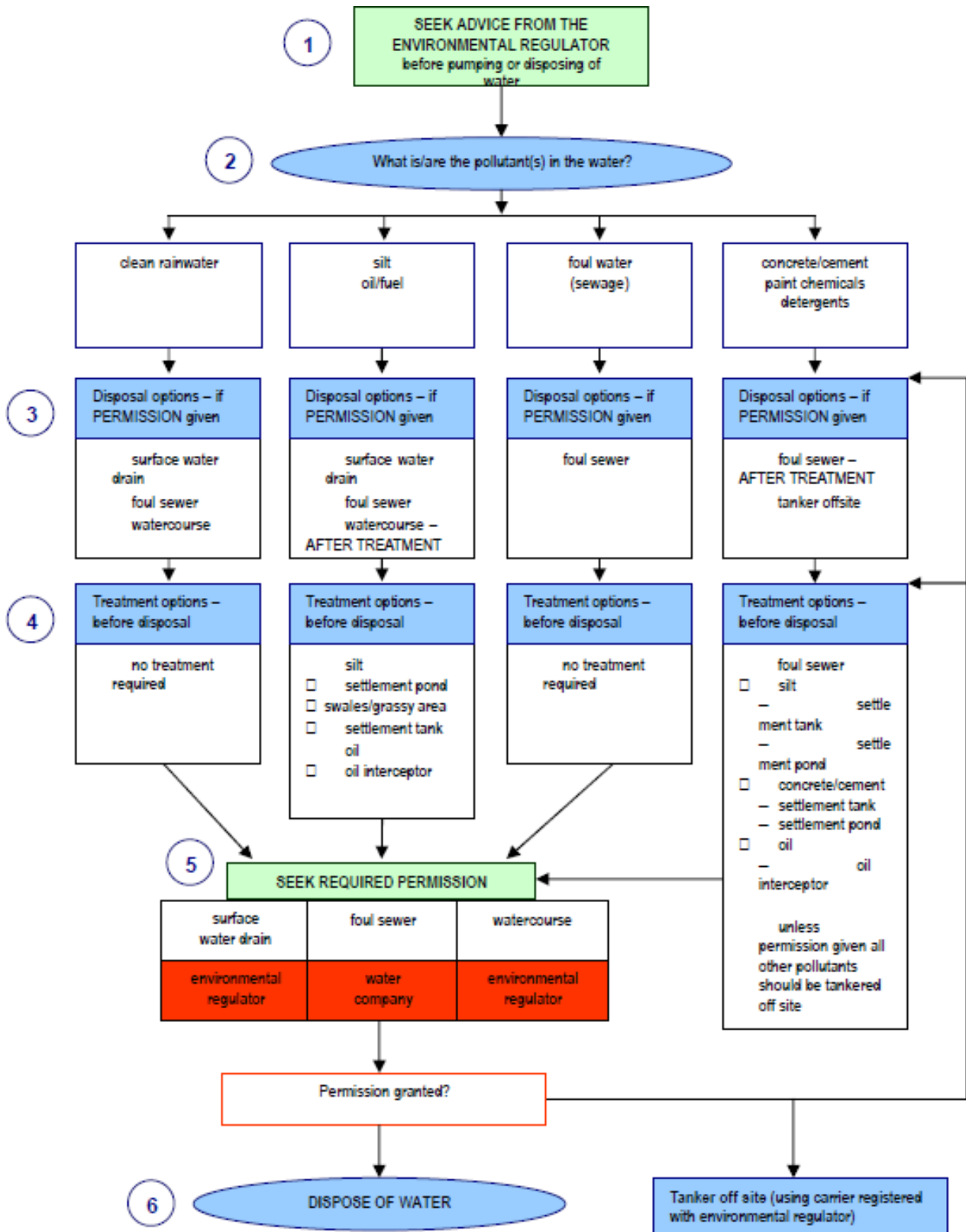
Wet concrete pollution is silty and very alkaline (high pH), which can have a serious effect on watercourses, consider treating by the following before disposal:

- Settling out in settlement tank, pond or lagoon, AND/OR
- Chemical treatment to adjust the pH prior to disposal – specialist advice is required as the treatment itself can cause harm to the receiving watercourse.
- Diluting with clean rainwater from site cabin or building roofs can also adjust pH.
- Chemical testing is likely to be required to confirm the pH before disposal. Simple paper pH kits are readily available, cheap and easy to use.

Follow the flowchart overleaf to determine how to treat and dispose of site water. Inspect discharges regularly to check treatment is effective.

Clean out settlement facilities and outlets etc. regularly – consider implementing a maintenance scheme. (Continued overleaf)

Treatment of site water checklist



Things to consider when disposing of site water:

Where contamination waters are to be disposed of from construction sites the operator should consider the availability and access to foul sewers as a first option.

It is **ILLEGAL** to discharge to the foul sewer without permission (see the flowchart on treatment of site water to determine who permission is required from).

Clean water **ONLY** can be discharged to surface water drains/sewers, as they may outfall into a watercourse, possibly some distance from the site. The source can easily be traced back.

Permission is required from the sewerage undertaker first to check that surface water sewers and pumping stations have capacity to take the volume.

It is **ILLEGAL** to put any polluting matter into controlled waters without obtaining permission from the environmental regulator. Controlled waters include rivers, streams, coastal waters, ponds, lakes, lochs, docks, and groundwater.

DO NOT discharge anything to a watercourse without consent from the environmental regulator.

Care should be taken to discharge watercourses at a rate that **DOES NOT ERODE** the bank or bed of the watercourse mobilising silt. Consider more than one discharge point. If a settlement tank is being used to treat water, ensure that the flow rate of the water will allow settlement.

Prior to discharge, even to foul sewer, **ALL** site water may require treatment by one or a combination of simple methods.

Follow the flowchart provided in the treatment of site water section to determine appropriate treatment and disposal routes.

Inspect discharges regularly to check for signs of pollution, monitor flow rates and check that the correct disposal route is being used (foul sewer/surface drain/designated disposal point).

You may need to carry out monitoring of sediment/chemical loads to ensure that the discharge complies with the consent(s).

Where not connected to foul sewer, sewage (from portable toilets, etc) should be disposed of under Duty of Care and not through site surface drainage (unless a consent has been given) or direct to a watercourse.

(Continued overleaf)

Site Location**Date**.....

Use the left-hand box to indicate whether the question is relevant i.e. Yes, No, N/A
If the question is relevant, quantify the level of risk by checking the appropriate box i.e. Minimal, Moderate or Significant.

		Minimal	Moderate	Significant
	Is there any visible sign or smell of pollution in watercourses at or near the site (if applicable)?			
	Is the water treatment method effective?			
	Is the water discharged from the site silty or discolored?			
	Is there an oily sheen visible on-site discharge?			
	Is there oil visible in water storage areas, e.g. pond/lagoon?			
	If a settlement tank is used, is water moving too fast and/or is it overflowing?			
	Are straw bales and/or oil absorbent materials securely fixed, if used?			
	Do any oil absorbent materials require replacing, if used?			
	Is any sediment/chemical monitoring required to comply with discharge consents?			
	Are outfalls and pipework clean and clear of litter etc?			
	If a flow meter is required to monitor discharge or dewatered volumes, what is the reading?			
Control measures:				
Signed:				

Things to consider when storing materials and waste site:

Consider whether large volumes of polluting materials need to be stored on the site. Can the material be delivered to site in quantities that can be used on the day delivered, or delivered at a rate that prevents a large volume building up on site?

Consider whether potentially polluting materials can be eliminated from the process, for example work such as painting or stripping beams could be undertaken off site or alternative processes may be suitable.

Use material safety data sheets to identify potentially polluting materials, this information will also identify how these materials should be stored.

Make sure that appropriate spill response equipment is located near to the material should containment fail or material be spilled and ensure site staff know how to use it.

Consider the correct disposal route for waste materials (Duty of Care), check to see if they can be reused or recycled but ensure they are stored safely on site prior to disposal. Cover skips to prevent litter being blown out. Label skips.

Consider establishing a central store location away from sensitive areas of the site such as rivers, streams, drainage or settlement facilities. Identify how pollution could occur and what measures should be implemented to reduce the likelihood of water pollution. Protect stores from flooding where required (e.g. if the site is near a river or on the floor plain).

Ensure stores are adequately protected and secured against trespassers and vandalism.

Regularly check to see what materials are in stock. Store drums, oil and chemicals on an impervious base and within a secure bund. Keep lids on. Always store containers upright unless using flow control taps for controlled pouring from barrels and drums.

Raise the awareness of safe storage and disposal of materials on site using the toolbox talk type training method.

Consider training the store man to give out instructions on the safe storage of materials to personnel booking out material from the store compound.

Ensure topsoil and/or soil heaps are located at least 10m away from water courses (regulators may vary this distance), consider seeding them or covering them with a tarpaulin to prevent silty runoff and losses due to wind. Consider constructing a stilt fence at the base of the pile using a suitable geotextile.

(Continued overleaf)

Site Location**Date**.....

Use the left-hand box to indicate whether the question is relevant i.e. Yes, No, N/A
If the question is relevant, quantify the level of risk by checking the appropriate box i.e. Minimal, Moderate or Significant.

		Minimal	Moderate	Significant
	Are all containers of materials e.g., oils, paints, chemicals etc stored in a bunded area?			
	Is/are the areas(s) clearly marked?			
	Are materials stored in suitable containers that are appropriately labelled with fitted lids, taps and tops in good condition?			
	Are there control measures and/or spill response kits/ material located near to bulk store, accessible and in appropriate quantities?			
	Is material stored to guard against breakage or vandalism (vehicle movements, corrosion or theft)?			
	Are stores protected against flood damage or inundation (e.g. is site within flood plain etc.)?			
	Is waste stored in a designated area?			
	Is the waste storage area in good condition and contained to prevent rainwater infiltration?			
	Are stockpiles causing silty run off?			
	Are stockpiles too steep and/or stored near drains or watercourses?			
Control measures:				
Signed:				

Things to consider when managing silt:

The most common form of water pollution from construction is suspended sediments – more commonly known as silty water, muddy water, or dirty water.

Silt also carries other contaminants such as oil and chemicals. Silt pollution is easily identified by discoloration of the water.

Do not pump silty water to the watercourse.

Do not strip more land than is needed. Divert clean water away from bare ground.

Divert silty water away from drains and watercourses using sandbags for example.

Consider alternative de-watering methods e.g. sump pumping.

Plan for the treatment of silty water when pumping out excavations or managing surface water runoff. Regularly check nearby water courses for silt pollution.

Silt can be removed by:

- Setting out in settlement tank, pond or lagoon, AND/OR
- Allowing it to infiltrate through a large area of grassy ground, geotextile filters, straw bales or a skip containing fine aggregate
- Chemical treatment with flocculants (advice from a specialist and environmental regulator required)

Use a silt removal method which will cope with the volume of water, silt concentration and silt type (chalk, clay etc.) – water should be kept as still as possible. Around two to three hours retention time is generally required to reduce suspended solids, finer materials will take longer to settle. Ensure that water flowing through these systems is moving slowly enough to allow the sediment to settle out and that the systems do not overflow.

Consider providing wheel wash facilities and/or methods to keep haul routes and access free from mud and dust to minimise silty runoff. Contain the water and dispose of it correctly.

(Continued overleaf)

Site Location**Date**.....

Use the left-hand box to indicate whether the question is relevant i.e. Yes, No, N/A

If the question is relevant, quantify the level of risk by checking the appropriate box i.e. Minimal, Moderate or Significant.

		Minimal	Moderate	Significant
	Is there a regular check of water courses being done (if applicable)?			
	Is there any visible sign of discolouration in watercourses (if applicable) at or near the site?			
	Is water discharged from the site silty or discoloured?			
	Is the surface water runoff directly entering a watercourse or drain?			
	Is any water treatment method (if applicable) effective?			
	If a settlement tank is used, is water moving too fast and/or is it overflowing?			
	Are straw bales securely fixed, if used?			
Control measures:				
Signed:				

Things to consider when storing and using fuel and oil:

Consider whether fuel storage is needed on site, how much is to be stored and how in large tanks, small stores or a mobile bowser.

Check whether the main contractor, if applicable, has fuel storage requirements, and ensure your procedures follow them.

Risk assess the fuel/oil storage location identifying potential routes for pollution should containment fail. Fuel/oil stores must be located away from the site drainage system and the edge of watercourses.

If this is not possible, ensure adequate measures are identified to prevent or contain any spillage such as creating a fall away from any drainage grid or blocking drainage points.

Fuel/oil stores must be in an area away from vehicle movement to prevent collision.

Fuel/oil storage must be sited on an impermeable base within a bund to contain at least 110 % of the maximum capacity. See Environment Agency PPG 2 and 26 for a standard fuel storage design). All ancillary equipment (valves, hoses, etc) should be contained securely within the bund when not in use. Ensure that tanks are properly labelled as to their contents and capacities.

Keep a store of spill response equipment at the fuel facility and bowzers, if necessary, locate a sign telling the operator what to do in the event of a spillage and where the nearest spill response kit is located (see the section on spill response for further advice).

Consider protecting the fuel bund from rainwater – this can be achieved by building a scaffold lean-to or other appropriate sheeted or enclosed structure.

Guard facilities against vandalism and theft, ensure that hoses are not vulnerable to being tampered with or cut for unauthorised access; the facility should be locked off when not in use.

Use drip trays under all static plant such as pumps and generators and during refueling from mobile plant and empty them regularly into an appropriately contained area (main fuel bund or designated bowser) for disposal off-site.

Ensure that the facilities are checked on a regular basis to ensure any leaks or drips are fixed to prevent loss and pollution.

Fuel/oil deliveries should be supervised by a designated person.

Bulk fuel stores must be clearly marked as to their content to help prevent delivery personnel mixing fuel types. Check there is enough capacity in the tank before fuel delivery.

(Continued overleaf)

Site Location**Date**.....

Use the left-hand box to indicate whether the question is relevant i.e. Yes, No, N/A

If the question is relevant, quantify the level of risk by checking the appropriate box i.e. Minimal, Moderate or Significant.

		Minimal	Moderate	Significant
	Is the bund in good condition with no cracks or evidence of leakage, particularly at corner points?			
	Is the bund free from excessive rainwater and debris build-up?			
	Are all tank components (hose, valves etc) contained within the bund?			
	Are there any leaks from the hoses, joints or valves on the facility?			
	Is the facility locked off when not in use?			
	Is the fuel/oil facility appropriately labelled as to its content and capacity?			
	Is the fuel/oil facility guarded against vehicle damage?			
	Are spill response material and emergency instructions located nearby and readily accessible by the operator?			
	Is the spill response material in good condition?			
	Have spills been effectively managed, if necessary, including disposal of absorbent materials?			
	Are drip trays in place beneath all un-enclosed plant?			
	Do the drip-trays need emptying / do they overflow in rainy weather?			
Control measures:				
Signed:				

Things to consider then using concrete, cement or bentonite:

Concrete, cement and bentonite are highly alkaline and corrosive and can have a devastating impact on watercourses.

Take particular care with all works involving production, transport and placement of concrete, cement or bentonite especially if working near a river, stream or surface water drain and ensure operations are planned and supervised.

Use methods to minimise grout loss during shuttered pours.

Place covers over freshly poured concrete to prevent the surface washing away in heavy rain. Do not hose down spills of concrete, cement or bentonite into surface water drains.

Washout of concrete, cement or bentonite mixing plant or ready-mix lorries and equipment should be carried out in a designated impermeable contained area.

Washout water must not be allowed to flow into any drain or watercourse. If necessary, protect nearby drains from receiving washout water.

Try to reuse washout water as much as possible, and then dispose of it by tinkering off site in accordance with Duty of Care or discharging to foul sewer with agreement from the sewerage undertaker.

Washout water, surface water, runoff and water from excavations may require adjustment of the pH in a lagoon prior to discharge due to the alkaline cement – obtain specialist advice from the environmental regulator as acid conditions can also have serious effect on watercourses.

If a concrete or bentonite batching plant is used, re-circulate the water used in it. Ensure bentonite lagoons are adequately contained to avoid leakage.

(Continued overleaf)

Site Location**Date**.....

Use the left-hand box to indicate whether the question is relevant i.e. Yes, No, N/A

If the question is relevant, quantify the level of risk by checking the appropriate box i.e. Minimal, Moderate or Significant.

		Minimal	Moderate	Significant
	Are measures being used to protect drains and watercourses from liquid concrete, cement or bentonite?			
	Are concrete lorries washing out in the designated area?			
	Is the designated area away from drains and watercourses?			
	Is the washout being suitably contained?			
	Does the washout area require pumping out to taker (or foul sewer if agreement from sewerage undertaker is given)?			
Control measures:				
Signed:				

Things to consider when working in or near watercourses:

Working over or near watercourses carries additional concerns due to the risk of pollutants directly affecting water quality.

Avoid entry into water where possible. Stabilise routes used for construction traffic or construct a temporary bridge or culverted crossing.

Plant work in or near the watercourse should be well maintained and regularly checked.

Consider erecting barriers on crossings or around working areas, e.g. bridge cleaning, to prevent excessive amounts of dust and spray entering the watercourse.

An impervious bund (i.e. cofferdam) should be constructed around works in a watercourse to prevent water entering the area of works. Additionally, no water should be allowed to escape from the cofferdam into the watercourse during works.

If working adjacent to a watercourse, ensure that a suitable method for containing any surface water is provided (e.g. cut off ditches and interceptors).

Avoid siting cabins, containers, workshops, plant materials stores and storage tanks on the floodplain of watercourses.

The risk of fuel spillage is greatest during refueling activities. No refueling should be undertaken in, over, or adjacent to the watercourse. Refuel plant in a designated area at least 10m away from the watercourse.

Consider using biodegradable oils when working in or near watercourses.

Adequate stocks of absorbent materials, such as sand or commercially available spill kits and booms, should always be available. Establish spill response stations.

Use of wet concrete and cement in or close to any watercourse should be carefully controlled.

The use of quick setting mixes may be appropriate. Prevent concrete pumps, lorries and skips from slewing over water while placing concrete.

(Continued overleaf)

Site Location**Date**.....

Use the left-hand box to indicate whether the question is relevant i.e. Yes, No, N/A

If the question is relevant, quantify the level of risk by checking the appropriate box i.e. Minimal, Moderate or Significant.

		Minimal	Moderate	Significant
	Is any material, plant, plant movement etc. within 10m "buffer zone" (environmental regulator may vary this distance) from edge of watercourse (where NOT undertaking works on the banks e.g. bridge works)?			
	If using a cofferdam to retain water, it is in good condition and working effectively?			
	Is the watercourse silty or discolored downstream of the works?			
	Is there an oily sheen visible on water?			
	Is enough emergency spill response material nearby?			
	Are all staff aware of the location of spill kits and know how to use the kits properly?			
	Are approach ways to the watercourse kept free from buildup of mud?			
	Are the banks or bed of the watercourse being affected outside the area of works due to water pumping or vehicle movements etc.?			
	Are any spray, dust or other airborne materials entering the watercourse?			
Control measures:				
Signed:				

Things to consider when working on demolition sites

Identify all tanks and pipelines both above and below ground before work begins.

Identify and mark out all existing live/redundant services (e.g. water mains, sewers and storm drains). Be aware of the routes for surface water, foul water, and trade effluent.

Before removing or perforating tanks or pipelines check that all of their contents and residues have been emptied by a competent operator for safe disposal (Duty of Care). Pipes may contain significant quantities of oil or chemicals, and should be capped, or valves closed to prevent spillage.

Identify and label all drums and containers of waste materials.

Consider establishing a bunded central store location for waste materials away from sensitive receptors such as watercourses, drainage or settlement facilities.

Store drums, oils and chemicals on an impervious base and within a secure bund.

Consider the correct disposal route for waste materials (Duty of Care), check if they can be reused or recycled but ensure they are stored safely on site prior to disposal.

Cover skips to prevent litter being blown out. Label skips to distinguish general and hazardous (e.g. oily) wastes.

Identify any contaminated ground and/or groundwater at the site. Ensure it is controlled and handled appropriately (Health and Safety, Duty of Care).

If contaminated materials are encountered, seek specialist advice before carrying on.

Consider damping down the site to prevent dust blowing into watercourses. Prevent silty runoff due to damping down or rainfall from entering watercourses (see the section on silt).

Ensure all plant and equipment is well maintained to prevent leakage and store away from watercourses. Ensure you have sufficient types and quantities of spill response equipment available on site.

(Continued overleaf)

Site Location**Date**.....

Use the left-hand box to indicate whether the question is relevant i.e. Yes, No, N/A

If the question is relevant, quantify the level of risk by checking the appropriate box i.e. Minimal, Moderate or Significant.

		Minimal	Moderate	Significant
	Have all underground tanks, pipes and services been located and their locations marked?			
	Are tanks etc. appropriately labelled as to their content and capacity?			
	Is there any visible sign of leaking tanks or pipes etc.?			
	Is there any visible sign of contaminated ground or ground water?			
	Are all waste materials being stored in suitable labelled containers in designated area?			
	Is dust being generated by site activities? If so, is a bowser or other source of water available?			
	Is dust or other materials entering a watercourse, (if applicable)?			
	Is runoff from the site adequately prevented from entering watercourses or soakaways?			
	Are spill response materials and emergency instructions located nearby and readily accessible?			
Control measures:				
Signed:				

SPILL RESPONSE

Things to consider for spillage response procedure

Follow the response procedure overleaf. If the client or main contractor already has a spill response procedure in operation, integrate into that.

Inform all personnel about the spill response procedure through toolbox talks and/or construction projects.

Use reminder posters identifying the key essential elements of the spill response procedure, located in appropriate areas such as fuel storage areas, mess cabins, security points or on the back of toilet doors.

In the event of a significant spill contact the hotline for the Environmental Agency. Scottish Environmental Protection Agency and Northern Ireland Environmental and Heritage Service 0800 807060.

Know names and telephone numbers of others you need to inform (includes alerting people out of hours) and who should contact them:

- Client
- Regulators
- Water Company
- Neighbours
- Other stakeholders

Consider a professional 24-hour call-out clean-up service. Names and numbers of companies are available from the local environmental regulator.

Ensure you have sufficient types and quantities of spill response equipment available on site.

Keep spill kits where spills may occur, e.g. at refueling points or on plant working near a watercourse.

The material safety data sheets and COSHH assessments will assist in identifying appropriate spill measures for dealing with hazardous materials.

Dispose of used response material appropriately, e.g. oily granules or pads should be bagged up and placed in the designated special waste skip.

	Pollutants				
	Concrete/ Cement	Paints	Oils	Silt	Detergent s
Spill on ground					
Sand				X	
Straw bales	X	X			X
Absorbent granules	X	X		X	X
Geotextile fence		X	X		X
Drip Trays	X			X	X
Pad rolls	X	X		X	X



Drain seat					
Earth bunds					
Spill in Water					
Straw bales	X	X			X
Pads/rolls	X	X		X	X
Booms	X	X		X	X
Stop further spill contain and inform environmental regulator immediately					

Checklist

Site Name:

Spillage Response Procedure

What to do if you find a spillage of any substance on site.

STOP	CONTAIN	NOTIFY
<p>STOP work immediately and prevent any more material spilling, e.g. right an oil drum, close valves.</p>		<p>Eliminate any source of ignition, e.g. switch off plant, extinguish cigarettes.</p>
<p>CONTAIN the spillage using bunds of earth or sand, drip tray etc., immediately.</p>		<p>Check the spill has not reached any nearby drains/manholes, watercourses, ponds and other sensitive areas. Bund drains/manholes to stop the substance entering the draining system.</p>
<p>NOTIFY your foreman/supervisor immediately giving the following information:</p> <ul style="list-style-type: none"> ▪ Whether material has entered the drain/watercourse or is affecting the environment. ▪ Material involved. ▪ Location. ▪ Reason for the incident. ▪ Quantity involved. 		
<p>MAJOR - Cannot be controlled; pollution has entered or could enter a drain or watercourse. Report to foreman/supervisor immediately.</p> <p>MINOR - Can be controlled; pollution has not entered and cannot enter a drain or watercourse.</p>		
<p>MAJOR - Contain and report immediately to contact detailed below</p> <p>MINOR - Clean up immediately using appropriate materials (granules, pads etc.)</p>		
<p>Environmental Agency, Scottish Environmental Protection Agency, Northern Ireland Environmental and Heritage Service.</p>		

2.4 REGISTER OF LEGISLATION AND GUIDANCE

Environmental Law applicable in England, Scotland, Northern Ireland

Developing a register of legislation is the key to identifying where the company's activities are affected by the aspects and impacts already identified.

Appendix 3 lists the relevant construction related environmental legislative requirements. Each site must understand how the legislation applies to its activities in addition to incorporating any local requirements.

NOTE - It is important that the register is kept current and up to date. The company will need to establish its own sources to meet their requirements

2.5 HAZARDOUS WASTE

Introduction

Hazardous Waste is so called because it has hazardous properties that may render it harmful to human health or the environment. Examples of wastes classed as hazardous include:

- 2.5.1 Asbestos
- 2.5.2 Lead-acid batteries
- 2.5.3 Electrical equipment
- 2.5.4 Contaminated land
- 2.5.5 Solvents
- 2.5.6 Fluorescent light tubes
- 2.5.7 Chemical wastes
- 2.5.8 Pesticides

Under the Duty of Care, waste producers have a duty to classify and describe their waste correctly; this includes selecting the most appropriate six-digit code from the European Waste Catalogue (EWC).

The European Waste Catalogue (EWC) lists all waste, grouped according to generic industry or process. Each waste has a six-digit code.

Waste is hazardous if it is classified as such in the EWC. Hazardous Wastes are identified in the EWC with an (*).

Some wastes are classed as hazardous outright. Other wastes require separate assessments to determine whether they are hazardous or not, depending on the number of dangerous substances present above threshold concentrations.

Information contained on the SAFETY DATA SHEET should accompany materials/chemicals received at site and should assist in determining if your waste is hazardous.

This section provides a practical approach to classifying hazardous waste by:

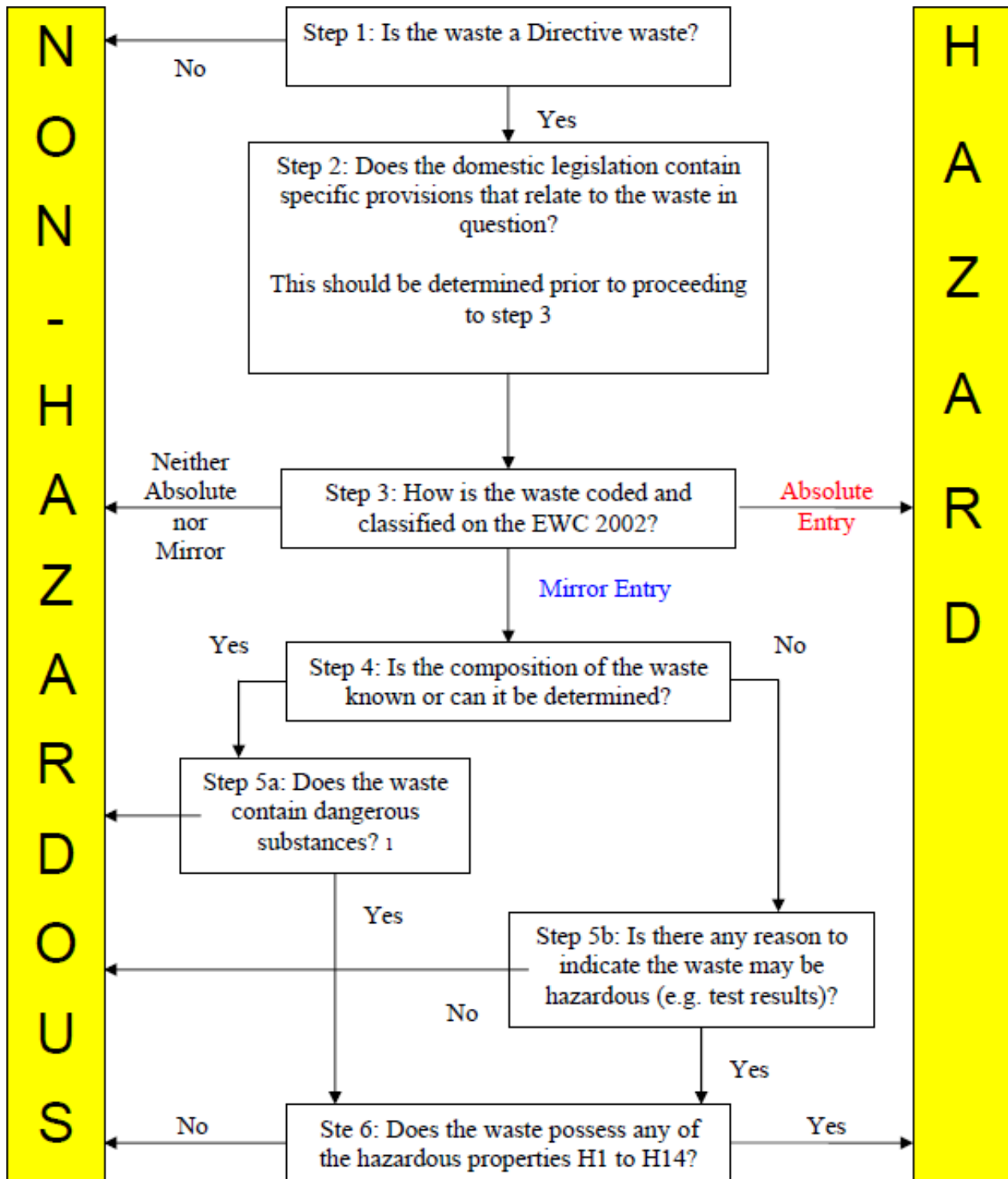
- 2.5.9 outlining the methodology for assessing wastes based on the EWC 2002; and
- 2.5.10 highlighting where to find more detailed advice in the Technical Guidance Note.

Hazardous Waste Assessment Methodology

There is a series of steps involved in determining if a waste is hazardous or non-hazardous.

- **Step 1:** Is the Waste a Directive Waste?
- **Step 2:** Does the domestic legislation contain specific provisions that relate to the waste in question? This should be determined prior to proceeding to step 3.
- **Step 3:** How is the waste coded and classified in the EWC 2002?
- **Step 4:** Is the composition of the waste known or can it be determined?
- **Step 5a:** Does the waste contain dangerous substances?

- **Step 5b:** Is there any reason to indicate the waste may be hazardous (e.g. test results)?
- **Step 6:** Does the waste possess any of the hazardous properties H1 to H14? (Refer to data sheets).



Infectious substances should be considered at this stage of the Hazardous Waste Methodology

Hazardous Waste: Interpretation of the definition of the classification of hazardous waste

The EWC refers to three types of entry:

Absolute Entries

A number of wastes marked with an asterisk (*) are deemed to be hazardous regardless of their composition or concentration of any “dangerous substance” within the waste. Such entries have been termed “absolute entries” and are coloured **red** in this document for clarity.

Mirror Entries

Some wastes have the potential to be either hazardous or not, depending on whether they contain dangerous substances at or above certain thresholds. These wastes are covered by linked (usually paired) entries, collectively called **mirror entries** that comprise.

- 2.5.11 a hazardous waste entry marked with an asterisk (*), coloured blue in this document,
- 2.5.12 and
- 2.5.13 an alternative non-hazardous waste entry (or entries) not marked with an asterisk.

Non-Hazardous Entries

Where a waste is not listed in the EWC 2002 with an asterisk, then it is not hazardous. However, where the non-hazardous entry forms part of a mirror entry assessment is required to determine whether the hazardous or non-hazardous waste entry is applicable.

Classification of hazardous waste Consolidated European Waste Catalogue

The aim of this section is to provide guidance on the use of the European Waste Catalogue. The EWC contains 20 chapters that are based upon the source that generated the waste or upon the type of waste. Chapter 17 of this document relates to construction and demolition wastes.

17 - Construction and Demolition Wastes (including excavated soil from contaminated sites)

17 01 concrete, bricks, tiles and ceramics

17 01 01 concrete

17 01 02 bricks

17 01 03 tiles and ceramics

17 01 06* mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing dangerous substances M

17 01 07 mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06

17 02 wood, glass and plastic

17 02 01 wood

17 02 02 glass

17 02 03 plastic

- 17 02 04* glass, plastic and wood containing or contaminated with dangerous substances M
- 17 03 bituminous mixtures, coal tar and tarred products
 - 17 03 01* bituminous mixtures containing coal tar M
 - 17 03 02 bituminous mixtures other than those mentioned in 17 03 01
 - 17 03 03* coal tar and tarred products A
- 17 04 metals (including their alloys)
 - 17 04 01 copper, bronze, brass
 - 17 04 02 aluminium
 - 17 04 03 lead
 - 17 04 04 zinc
 - 17 04 05 iron and steel
 - 17 04 06 tin
 - 17 04 07 mixed metals
 - 17 04 09* metal waste contaminated with dangerous substances M
 - 17 04 10* cables containing oil, coal tar and other dangerous substances M
 - 17 04 11 cables other than those mentioned in 17 04 10
- 17 05 soil (including excavated soil from contaminated sites), stones and dredging spoil
 - 17 05 03* soil and stones containing dangerous substances M
 - 17 05 04 soil and stones other than those mentioned in 17 05 03
 - 17 05 05* dredging spoil containing dangerous substances M
 - 17 05 06 dredging spoil other than those mentioned in 17 05 05
 - 17 05 07* track ballast containing dangerous substances M
 - 17 05 08 track ballast other than those mentioned in 17 05 07
- 17 06 insulation materials and asbestos-containing construction materials
 - 17 06 01* insulation materials containing asbestos M
 - 17 06 03* other insulation materials consisting of or containing dangerous substances M
 - 17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03
 - 17 06 05* construction materials containing asbestos M
- 17 08 gypsum-based construction material
 - 17 08 01* gypsum-based construction materials contaminated with dangerous substances M
 - 17 08 02 gypsum-based construction materials other than those mentioned in 17 08 01
- 17 09 other construction and demolition wastes
 - 17 09 01* construction and demolition wastes containing mercury M
 - 17 09 02* construction and demolition wastes containing PCB (for example PCB-containing sealants, PCB containing resin-based floorings, PCB-containing sealed glazing units, PCB-containing capacitors) M
 - 17 09 03* other construction and demolition wastes (including mixed wastes) containing dangerous substances M
 - 17 09 04 mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03

Environment Agency Hazardous Waste:

Interpretation of the definition and classification of hazardous waste (2nd edition) A22.

Hazardous Waste Regulations 2005

Advice on the Notification of premises

This section sets out some factors to be considered in determining what premises are and gives some examples. It particularly focuses on buildings / sites that have multiple occupiers.

- General requirement to notify
- What is premises?
- Mobile Services
- Yards/Waste Transfer/Contaminated Land

Requirement to Notify

Producers of hazardous waste are required to notify premises at which they produce hazardous waste. Some premises are exempt from notification. Those are premises:

- listed in regulation 23(3) of the Hazardous Waste (England and Wales) Regulations 2005
- (HWR); and
- at which less than 200kg (in total) of hazardous waste is produced in any twelve-month period; and any hazardous waste produced there is removed by a registered carrier (under the Control of Pollution (Amendment) Act 1989) or a person exempt from registration.

It is an offence not to notify premises at which hazardous waste is produced (unless they are exempt premises) or to remove hazardous waste from premises, which are not notified (or exempt from notification).

Premises

Premises for the purposes of the HWR include any ship and any other means of transport from which a mobile service is operated.

Thus, premises should be given its ordinary meaning but recognising that they can include ships and other vehicles such as road vehicles, trains, barges, aircraft etc. from which a mobile service is operated.

It will be a question of fact what premises are. All the circumstances need to be considered but the following factors are likely to be relevant (though this is not an exhaustive list – all the facts must be considered):

- is an area used exclusively by an operating unit;
- is there a specific area in which a particular activity is carried out separate from other activities occurring at the site;
- is there clear demarcation between areas – this could be physical separation such as walls or boundaries or if not physical a clear understanding that an area is for one operator's use;

- does an operator have the right to exclude others from their work area; and is there a legal interest in a particular space – a legal interest should be given a wide meaning and can include a license – we should not be asking to see those documents it is enough to know that use of a particular area is controlled by some form of legal agreement between parties.

DEFRA's guidance on the HWR

<http://www.defra.gov.uk/environment/waste/special/pdf/hwr-notifguidance.pdf> provides:

“Where organisations have multiple premises, each premises will need to be notified to the Environment Agency, unless exempt, although a central office may do this on behalf of the individual premises if they wish. If single premises are occupied by a number of different organisations producing hazardous waste, the part of the premises occupied by each organisation should be individually notified.”

Mobile services and premises at which >200kg hazardous waste will be produced –

Regulation 21 requires that a producer must notify the relevant premises. Regulation 29 provides that where a

producer operates a mobile service the relevant premises are the service premises. If a person operates a mobile service premises, they must notify their service premises. They are not entitled to operate under any exemption applicable to site premises.

Mobile service operators should notify the premises from which they operate their service (referred to in the HWR as service premises) where they produce hazardous waste at premises, which they do not own or occupy, (referred to in the HWR as the site premises or related premises) and the quantity of hazardous waste they produce is less than 200kg in any twelve month period.

The less than 200kg limitation relates to each site at which the mobile service operator produces hazardous waste. Thus the notification for the mobile service operator can be used for any number of premises at which that operator produces less than 200kg of hazardous waste in any twelve-month period. If the mobile service provider visits the same premises several times during a twelve-month period, they must ensure that the less than 200kg qualifying limitation for those premises is not exceeded. Where the mobile service operator produces more than 200kg at a particular site during a twelve month period, that site must be notified to the Environment Agency, but the mobile service operator can continue to use the notification for the mobile service at other premises visited where less than 200kg of hazardous waste is produced.

If more than one service provider produces hazardous waste at specific premises, each of them can rely upon the less than 200kg limit because the qualifying limit applies the “hazardous waste produced in the course of that service”. For example, there could be five mobile service producers attending a set of premises. Each of them could produce up to 200kg of hazardous waste in any twelve-month period and each of them could rely on their service premises notification.

If any mobile service provider produces 200kg or more of hazardous waste at any site premises they must notify the site premises (see regulation 24(1)(d)).

Business units producing their own hazardous waste (as opposed to any produced by a visiting mobile service) cannot rely on the mobile service notification for their own waste and would need

to notify unless exempt.

Generally, a mobile service provider will have to comply with the consignment note requirements under the HWR when the waste is moved from the site premises to their depot or another facility.

Where there is an **open yard and several operators** each have responsibility for and use of a clearly defined part of that yard each part should be notified. Where there is no clear distinction, the entire premises should be notified.

The total amount of hazardous waste produced by all the producers at the site should be considered in deciding whether the premises are exempt or not. If there is any doubt whether the premises are exempt or not, it is open to any of the operators of the yard to notify the premises. If the premises are not notified and the exemption limit is exceeded, all the producers will be liable to prosecution.

Waste transfer stations or collection points will be required to notify because they will be premises from which hazardous waste will be removed as provided for by regulation 21 HWR.

Contaminated land sites where more than one producer may be operating at any one time (unless there is a genuinely discrete area operated as separate premises from the contaminated land site) should be treated as single premises and notified once. The obligation for the notification should generally be arranged by the main contractor for the site. There is no requirement to expect each subcontractor to notify the premises separately.

2.6 SITE WASTE MANAGEMENT PLAN

DESIGN PHASE REQUIREMENTS

Any efforts to improve resource efficiency and minimise waste during the design phase of a construction project should be described in the site waste management plan. This would simply be a statement that confirmed whether alternative, more resource-efficient methods had been adopted, and if desired the degree of cost savings. This would allow the source of any cost-savings to be more easily traced as the plan would encompass the entire design-build process.

PRE-COMMENCEMENT

For all projects over £250,000 a SWMP is prepared which includes the following information:

The identity of:

- the person who drafted the Plan;
- the person in charge of the project; and
- the contractor used (if there is more than one contractor, the principal contractor);

A description of the works proposed including the:

- location of the site; and
- the estimated value of the project;
- a description of the waste type that will be produced in the course of the project;
- an estimate of the volume of each different waste produced;
- the waste management action proposed for each waste type ie reuse, recycling, recovery or disposal; and
- a declaration that the person in charge of the project and the principal contractor will take all reasonable steps to ensure that waste management controls eg the duty of care, will be observed.

COMMENCEMENT OF WORK

Projects over £250,000 and less than £500,000 in value – when employed as main contractor.

Once work begins, certain levels of monitoring and recording will be required.

The person in charge or the contractor would need to record:

- the identity of the waste management contractor removing the waste;
- the types of waste removed; and
- the site that the contractor is taking the waste to.

Within one month of the work being completed he must add to the plan:

- Confirmation that the site waste management plan has been monitored on a regular basis to ensure that work is progressing according to the plan and that the plan was updated in accordance with this regulation; and a description of any lessons learnt from any

differences in circumstances between the first draft of the site waste management plan and actual performance.

Projects over £500,000 – when employed as main contractor

More details of what happens are required and the Plan itself is regularly reviewed.

The person in charge or the contractor would need to record:

When any waste is removed from the construction site -

- the identity of the waste management contractor removing the waste;
- copy of, or reference to, the waste carrier registration of the carrier, and a
- copy of, or reference to, the waste transfer note.

As often as necessary to ensure that the plan accurately reflects the progress of the project, and in any event not less than every six months, he must -

- assess the plan;
- record the types and quantities of waste produced;
- record the types and quantities of waste that have been -

(a) re-used on-site,

(b) re-used off-site;

(c) recycled for use on-site;

(d) recycled for use off-site;

(e) sent to recycling facility;

(f) sent to waste management licence exempt site; or

(g) sent to landfill site for disposal; and

produce a further plan, if it is necessary to do so, making changes necessary to reflect the progress of the project.

Within one month of the work being completed he must add to the plan -

- confirmation that the site waste management plan has been monitored on a regular basis to ensure that work is progressing according to the plan and that the plan was updated in accordance with this regulation;
- a description of any lessons learnt from any differences in circumstances between the first draft of the site waste management plan and actual performance
- a comparison of the estimated quantities of each waste type against the actual quantities of each waste type;
- where relevant, drawing on any lessons learnt, an action plan to address these for the next project; and
- an estimate of the cost savings that have been achieved by completing and implementing a site waste management plan.

Site Waste Management Plan Checklist

Project name				
Project address/location				
Main contractor Name and signature				
Client Name and signature				
Project Stages		Questions to consider	Yes / No	Comment: If 'yes', what action have you taken/do you propose to take? If 'no', why not?
Policy	1	Has your organisation adopted a waste management policy?		
	2	Has the client signed the Site Waste Management Plan?		
	3	Have relevant sub-contractors producing significant wastes streams been identified?		
	4	Have the identified sub-contractors signed the Site Waste Management Plan?		
Procurement	5	Has a careful evaluation of materials been made so that over-ordering and site wastage is reduced?		
	6	Has full consideration been given to the use of secondary and recycled materials?		
	7	Is unwanted packaging to be returned to the supplier for recycling or re-use?		
	8	Can unused materials be returned to purchaser or used on another job?		
Project planning	9	Has responsibility for waste management planning and compliance with environmental legislation been assigned to a named individual at main contractor		
	10	Has a project programme been developed to include likely waste arising (how much, when, and what types)?		

Project planning	11	Has an area of the site been designated for waste management, including segregation of waste?		
	12	Have targets been set for the different types of waste likely to arise from the project?		
	13	Have measures been put in place to deal with expected (and unexpected) hazardous waste?		
	14	Has disposal of liquid wastes such as wash-down water and lubricants been considered?		
	15	Where relevant, has a discharge consent been obtained from the Agency?		
	16	Has agreement been sought from the sewerage company for trade effluent discharge?		
	17	Have opportunities been considered for re-use of materials on site?		
	18	Have opportunities been considered for re-use of materials off site?		
	19	Have opportunities been considered for on-site processing and re-use of materials?		
	20	Have opportunities been considered for reprocessing materials off-site?		
	21	Have you considered what is the most appropriate sites for disposal of residual waste from the project?		
	22	Are there opportunities for reducing disposal costs from waste materials which may have a commercial value?		
Site operations	24	Has responsibility for waste management on site and compliance with environmental legislation been assigned to a named individual?		
	25	Have toolbox talks been planned for all site personnel about waste management on site?		
	26	Are selected waste materials segregated to allow best value to be obtained from good waste management practices?		
	27	Are containers/skips clearly labelled to avoid confusion?		
	28	Are Duty of Care procedures complied with, including provision of transfer notes and checking authorisation of registered carriers, registered exempt sites and licensed waste management facilities?		
	29	Are any checks made that excavation waste is received at the intended site?		

Site operations	30	Is implementation of agreed waste management procedures monitored?		
	31	Are reports regularly produced regarding waste quantities and treatment/disposal routes, and on costs incurred?		
	32	During site operations, are barriers to good waste management practice considered and noted for incorporation into the post-completion review?		
Post completion	33	Has a final report of use of recycled and secondary materials, waste reduction, segregation, recovery and disposal, with costs and savings identified, been completed?		
	34	Has the final report been signed by the relevant sub-contractors and the client?		
	35	Have key waste management issues been considered for action at future projects?		

Site Waste Management Plan data sheet

Project name							
Project address/location							
Main contractor							
Person responsible for waste management on site (name and job title)							
Person and company completing this form, if different							
Types of waste arising (add more rows if needed):							
Material	Quantity (in m ³)						
	Re-used on-site	Re-used off-site	Recycled for use on-site	Recycled for use off-site	Sent to recycling facility	Sent to WML	Disposal to landfill
Inert							
Active							
Hazardous							
Totals (in m³)							
Performance score as %*							
SWMP Target %*							

*There is an option to develop this form as a measurement tool to evaluate against each waste stream.

SECTION 3

IMPLEMENTATION & OPERATION

3.1 Define Organisation and Personnel

The successful implementation of an environmental management system calls for the commitment of all employees of the organisation. Environmental responsibilities therefore should not be seen as confined to the environmental function, but may also include other areas of an organisation, such as operational management or staff functions other than environmental.

Responsibilities and Accountabilities

The commitment of all employees to the successful implementation of an environmental management system should begin at the highest levels of management. Top management should establish the organisation's environmental policy and ensure that the environmental management system is implemented. As part of this commitment, top management should designate (a) specific management representative(s) with defined responsibility and authority for implementing the environmental management system. In large or complex organizations there may be more than one designated representative. In small or medium sized enterprises, these responsibilities may be undertaken by one individual.

It is also important that the key environmental management system responsibilities are well defined and communicated to personnel. People should know whose job it is to do what. The organizational structure usually consists of four main elements: the organizational chart, job descriptions, clear reporting lines and procedures, and performance targets. The organizational chart visualizes the organizational structure, main responsibilities and reporting lines. Issues that could be considered in developing the organisational structure are:

- provision of resources;
- action to prevent non-compliance;
- identifying potential problems;
- recommending solutions to problems and verifying their implementation; and
- acting in emergency situations.

It is often recommended that the environmental management responsibilities should follow the operational hierarchy, so that it becomes part of the everyday management of running the enterprise.

The environmental manager should be responsible, either directly or by managing others, for ensuring that the environmental management system is established, implemented and effective.

Top management should ensure that an appropriate level of resources are provided to ensure that the environmental management system is implemented and maintained.

For an organisation implementing an EMS simultaneously at head office and at site level defining responsibility is critical in often complicated situations. The following example shows clearly the structure and responsibilities.

3.1 Training and Communications

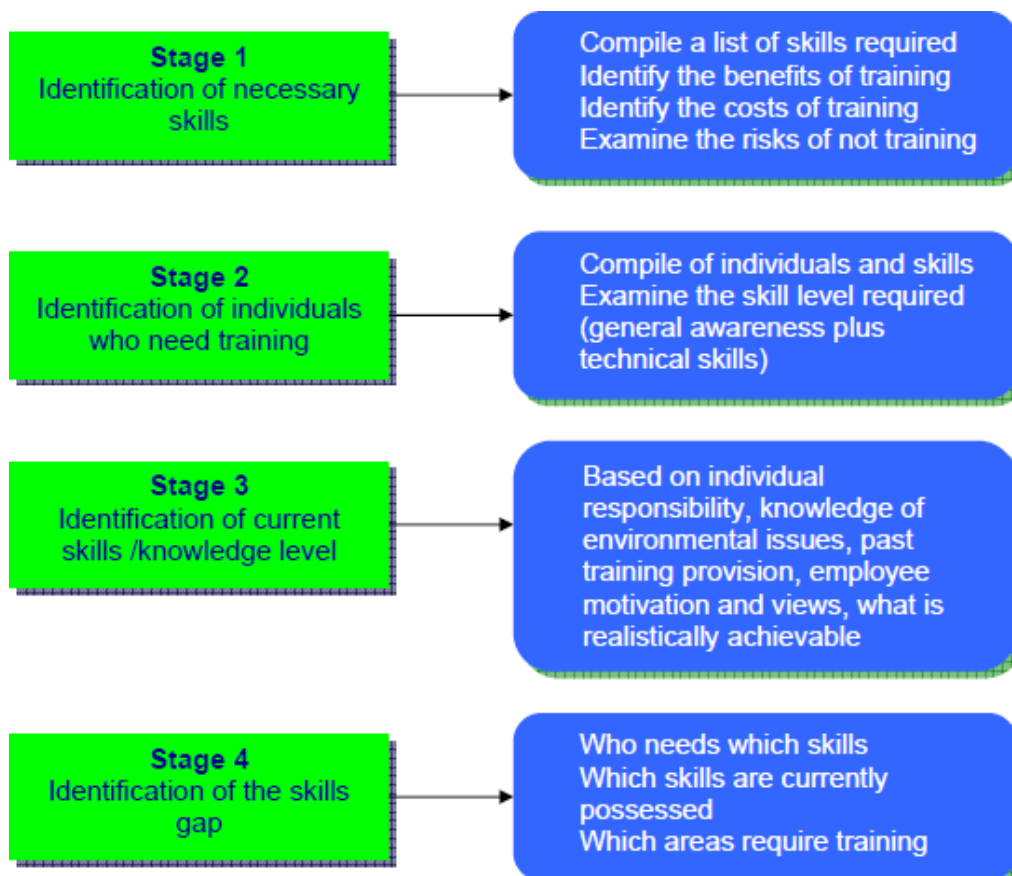
To be successful, responsibilities should be supported by the necessary authority and training to enable the individuals to carry out their tasks effectively. An effective and on-going training program is necessary for all levels of the organisation to ensure awareness of environmental issues.

Training needs have to be assessed taking into account the job to be carried out, and the skills, education and experience of the individuals in charge.

Training should instruct on the organisation's environmental policy, objectives and action program.

It should address the significant environmental impacts, actual or potential, and the environmental benefits of improved personal performance. Equally, it should highlight the potential consequences of departure from specified operating procedures. A successful training program is an interactive process that provides the participants with information, awareness, knowledge, understanding and motivation. This interactive process requires managers to respond to suggestions and initiatives raised pursuant to the training sessions. Even if the suggestions are not appropriate, they need to be treated seriously so that the initiative and impetus of the training is maintained. The benefits of training can be quickly lost if the employees feel that the training is carried out in a vacuum, and that other sections of the organisation are not fulfilling their roles.

Developing training needs analysis



3.1 ENVIRONMENTAL SUPPLY CHAIN MANAGEMENT (ESCM)



The environmental performance of an organisation's suppliers can have a direct impact on the environmental performance of the organisation, as can the perceived or real environmental impacts associated with the products an organisation procures. For this reason, an important area of environmental management in the construction industry is the management of the supply of services and products, otherwise referred to as environmental supply chain management (ESCM).

The supply chain is defined as the stream of activities involved in providing goods or services to customers. Supply chain management is where an organisation exercises control or influence over that stream of activities.

A principal aim of traditional (i.e. not specifically environmental) supply chain management is to minimise the costs and non-value-adding activities associated with each stage of the chain, while increasing the value-added activities. In terms of ESCM, an example of the costs and non-value-added activities would be the costs of disruption of supply through protester action or pollution charges.

Construction company supply chains include the following:

- building and assembly services to the industry, based on skills, know-how and reputation; examples include trade contractors and specialist contractors
- professional services to the industry, also based on skills, know-how and reputation; examples include architects and engineers
- materials and products, goods and services for the industry based on functionality; examples include building material suppliers.

The supply chain is often described as a cycle, in which raw materials are the cradle and final disposal is the grave, but through recycling these materials stay in the cycle, thus avoiding the use of more raw materials. To truly control their environmental impacts, construction companies need to control or influence those impacts that occur both upstream and downstream from their activities.

The role of ESCM in EMS development

ESCM can be an important tool in the development of an EMS. For many construction companies, the role played by suppliers and contractors will be one of their significant aspects and will require management through either operational control or setting objectives and targets. Suitable objectives and targets may involve a commitment to begin to evaluate the supply chain and progress to managing that chain once the evaluation is complete.

Once ESCM is established, companies can then establish approved supplier lists and develop operational control procedures to ensure that environmental criteria are considered when purchasing decisions are made.

The business case for ESCM

ESCM can assist in meeting many business goals including:

- avoiding environment-related disturbances to supplies, such as protester action
- ensuring continuity of supply, for example, where a product may be withdrawn from sale for environmental reasons
- meeting environmental legal requirements by evaluating suppliers
- facilitating the establishment of EMSs through the control of environmental aspects
- meeting customer requirements through provision of environmentally sound products
- maximising market position against competitors

To achieve best practice in environmental supply chain management, the following processes should be considered:

- purchasing to environmental specifications
- consideration of alternative products and services
- evaluating the commitment and performance of suppliers
- working together for continuous improvement and cost-effectiveness

It is important to recognise environmental supply chain management as a risk-management process, the risks in question being associated with the product and its manufacture or with the supplier or both.

Product evaluation

A product risk assessment should be based on the company's understanding of the product and its supply chain issues. Companies may find they do not have the technical knowledge to establish such risks and may wish to employ outside expertise.

Product risk checklist

Identification

Is there a risk (real or perceived)? Are any of the products, subcontracts or services we buy:

- Nasty, dirty or obnoxious?
- Regularly mentioned in the media.
- Targeted by pressure groups?
- Subject to action by competitors?
- Of concern to customers?
- The subject of frequently asked questions?
- Affected by corporate priorities?
- Affected by government priorities?
- Concerns of neighbours or the community?
- Sourced, wholly, or in part, from developing countries?

Evaluation

- How could these risks impact the business?
- How big would this impact be?
- How likely is the impact to occur?
- Do we need to do something?
- What action can be taken?
- What are the costs and benefits of taking action?

Management

- Is there a clear alternative?
- Will the alternative comply with specifications?
- Can we buy less?
- Can we change the way we use the product?
- Can we change the way a service is carried out?
- Can we afford to change?
- Have we the time to change?
- Can we influence suppliers to provide an alternative?

Where there is an alternative:

- Can we agree an environmental product specification?
- Can we build it into policy or the position statement?
- Should we inform other buyers and suppliers?

Barriers to change:

- No alternatives available
- Additional expense
- Customers specification
- Develop an action plan to overcome the barriers where this would be beneficial

Supplier evaluation

This can take the form of methods such as:

- questionnaires
- discussions (meetings, email, telephone)
- site visits
- product-led evaluations
- recommendation

It should be noted that suppliers are often inundated with requests for information, so it is appropriate to target data-gathering to the information that is really needed.

The following supplier checklist details some of the criteria for high and low risk.

Supplier risk checklist

Indicator of high risk

- High expenditure – as an indicator of dependence
- Low expenditure – as an indicator of lack of influence
- A high risk product or service
- Size
- Unknown, new supplier
- Track record
- No or inadequate environmental policy or EMS
- Monopolistic or dominant market position
- On local authority blacklist
- Prosecutions
- Reputation
- The requirement to manage waste

- No R&D Bad press
- Poor management and people
- Country of origin
- Number of outlets
- Subject of pressure group action
- Countries of origin up the supply chain

Indicators of low risk

- Accreditations
- Customer base
- High position in the Business in the Environment Index of Corporate Environmental Management
- Nominated responsible director
- Policy statement, EMS and environmental reporting

- Reputation and knowledge of the business
- Low-risk product or service
- Support from pressure groups

The information obtained from using this checklist should be evaluated against the risks associated with the product or service provided. When evaluated together, high-risk products from high-risk suppliers should be avoided.

Producing a position statement

Companies may wish to formulate a position statement on environmental supply chain management to promote their environmental responsibility to customers and suppliers. Such a statement should include the following:

- statement of the significant environmental impacts affected by purchasing
- consideration of alternative specifications
- demonstration of efficient use of materials
- assessment of the commitment of suppliers
- a commitment to work in partnership with suppliers
- the provision of relevant training both internally and externally to key suppliers
- the establishment of management systems

Action planning

Once a company has evaluated its products and suppliers and has established those that are high risk, the next stage is to implement a plan to reduce this risk either by considering alternative products or suppliers or by working with suppliers to help them reduce or manage the risk.

One option is to reduce the number of suppliers to a list of preferred suppliers. Where it is decided to do this or to continue with the current supply list, the overall objective should be for the whole supply chain to work together in partnership. The partnering process will often lead to improved working relationships and better customer focus.

SECTION 4

CHECKING & CORRECTIVE ACTION

4.1 Monitoring

Measuring, monitoring and evaluating are key activities of an environmental management system, to ensure that the organisation is performing in accordance with the environmental policy, objectives and action program.

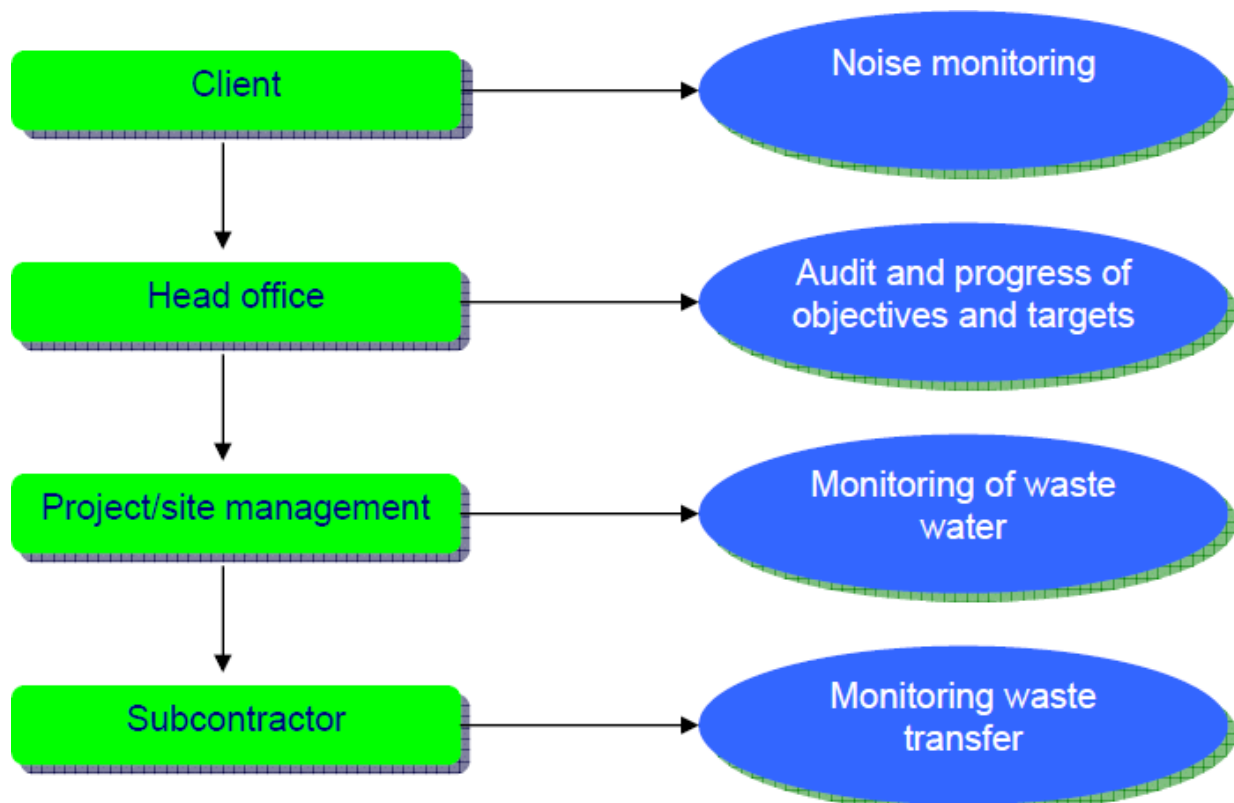
In establishing and maintaining procedures for investigating and correcting non-conformance, the organisation should include the following basic elements:

- a) identifying the cause of the non-conformance;
- b) identifying and implementing the necessary corrective action;
- c) implementing or modifying controls necessary to avoid repetition of the non-conformance;
- d) recording any changes in written procedures resulting from corrective action.

Audits may be performed by personnel from within the organization or by external persons selected by the organisation. In either case the persons conducting the audit should be in a position to do so impartially and objectively. A timetable for planning audits is shown in Appendix 4.

Regular inspections should be carried out to see if the correct management procedures are adopted and implemented at site level.

Responsibilities for Monitoring and Measuring



Complaints

Any complaints will be reported to the Contracts or project manager. The incident will be investigated, and disciplinary action taken if required or necessary.

4.2 Records

Demonstrate how and what records will be filed and archived as part of the system. It is important that records are retained to validate. Consideration may be given to the following:

- Reported incidents
- Incidents
- Insurance Claims
- Audit Reports
- Minutes
- Inspections
- Non-Compliances
- Sub-Contractor Incidents
- Sub-Contractor Info
- Publication of results

4.3 Management Review

The organisation should review and continually improve its environmental management system, to achieve overall improvement in environmental performance. At regular intervals management should carry out a review of the environmental management system to ensure its continuing suitability and effectiveness.

The scope of the review should be comprehensive, though not all elements of an environmental management system need to be reviewed at once and the review process may take place over a period.

Some issues to be considered in the review are:

- review of the environmental objectives and targets;
- audit findings;
- concerns amongst relevant interested parties; and
- evaluation of the effectiveness of the environmental management system;
- evaluation of the suitability of the environmental policy and the need for changes in the light of changing legislation, changing expectations and requirements of interested parties, changes in the products or activities of the organisation, developments in technology, lessons learned from environmental incidents, market preferences, reporting and communication.

APPENDICES

5.1 GLOSSARY

Best available techniques/technology (BAT) – The techniques/technology most effective in preventing, minimising or rendering harmless polluting releases and that are economically and technically viable. The techniques/technology should be procurable by operators of the process in question, and while they do not have to be in general use, they should be generally accessible.

Availability can include techniques/technology still at the pilot stage. ‘Technique’ includes both the plant in which the process is carried out and how the process is operated. It includes the numbers and competencies of staff, working methods and supervision, and the design, construction, layout and maintenance of buildings.

Best practicable environmental option (BPEO) – The option which provides the most benefit or least damage to the environment, at an acceptable cost in both the long and short term. Emissions and wastes should be minimised and re-used, recovered or recycled, or directed to the environmental medium (air, water, land) where the least environmental harm will occur.

Clean technology – Technology which is designed to reduce environmental impacts (often waste material) from equipment or processes.

Continual improvement – Process of enhancing the EMS to achieve improvements in overall environmental performance in line with the organisation’s environmental policy.

Environmental aspect – An element of an organisation’s activities, products and services which can **interact** with the environment viz. ‘causes’.

Environmental impact – Any **change** to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation’s activities, products or services viz. ‘effects’.

Environmental Management System (EMS) – The part of the overall management system that includes organisational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the Environmental Policy.

Environmental Policy Statement – The organisations statement of intent in response to environmental matters.

Environmental supply chain management (ESCM) – the supply chain relates to the stream of activities involved in providing goods or services to customers. ESCM is where an organisation exercises control or influence over that stream of activities.

Mass Balancing – The measurement of the total inputs of a substance into a process, and the total outputs of that substance from the process, in order to assess the extent and nature of any losses of that substance at various stages in the process. Once assessed, a plan can be implemented to reduce these losses.

Objectives - An objective is a long-term goal that defines what is to be achieved in a particular area e.g. reduce energy consumption. Objectives should illustrate a commitment to environmental improvement and can be set for investigation or ongoing management of environmental issues. New objectives need to be set once original objectives have been met.

Prevention of pollution – Use of processes, practices, materials or products that avoid, reduce or control pollution, which may include recycling, treatment, process change, control mechanisms, efficient use of resources and material substitution.

Register of legislation - Documentation that demonstrates the organisation has access to and understanding of its environmental legal requirements.

Significant environmental aspect – An environmental aspect that has or can have a significant environmental impact.

Sustainable development – Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development requires the maintenance or improvement of social, economic and environmental standards.

Register of legislation - documentation that demonstrates the organisation has access to and understanding of its environmental legal requirements.

Targets – Each objective is normally supported by shorter-term targets, the achievement of which results in the achievement of the overall objective. A target quantifies an objective, e.g. “reduce energy consumption by 20% within two years”. Targets usually focus on environmental compliance and reducing risk.

5.2 INITIAL REVIEW PLAN

ISSUE	NOTES
Assessment, control and reduction of the environmental impact of the activity reviewed	
Consumption, management and choice of energy	
Management, savings, choice and transportation of raw materials, including consumption and use of water	
Avoidance, recycling, refuse, transportation and disposal of waste	
Evaluation, control and reduction of noise within and outside the site	
Selection of new production processes and changes to production processes	
Planning of product design, packaging, transportation, use and disposal	
Environmental performance and practices of contractors, subcontractors and supplies	
Prevention and limitation of environmental accidents	
Contingency procedures in case of environmental accidents	
Staff information and training on environmental issues	
External information on environmental issues	
Legal compliance	
Emergency/contingency plans	
Management structure	
Employee awareness and training	
Public relations	
Market procedures	
Process design/operation	
Waste disposal	
Solid waste management	
Emissions/ discharges	
Water use/ discharges	
Raw materials	
Storage on-site	
Transport and distribution	
Energy source/use	
Product design	

Packaging	
Energy use	
Waste disposal	
Paper use	
Water use	

5.3 FRAMEWORK ASPECTS REGISTER

Indicate workplace	ASPECTS	CONDITIONS			IMPACT		
		Normal	Abnormal	Emergency	Minimal 1	Moderate 2	Significant 3
	Air Emissions						
	Chemical Handling & Storage						
	Packaging						
	Resources						
	Chemical Handling & Storage						
	Complaints						
	Energy Usage						
	Ground Contamination Material						
	Handling & Storage						
	Resources (office consumables)						
	Waste Management						
	Water Supply						
	Other						

Qualification of aspects defined as Minimal (1), Moderate (2) and Significant (3) are as follows:

- **Minimal 1** - These aspects are Minimal in terms of impact, due to careful management of the potential to cause an impact.
- **Moderate 2** - These aspects are Moderate in terms of impact, due to the extent of potential pollution.
- **Significant 3** - May cause the organisation to be out of legal compliance; May cause the organisation to be out of legal compliance in the future; May result in civil litigation; Are perceived to be a problem by the public or customers, or has received complaints; Are perceived to be a problem by bankers or shareholders; Result from poor management of resources, raw materials or wastes; Could restrict future strategic development of the organisation; Affect the validity of insurance; Result in the direct release of non-permitted noxious or persistent substances.

5.4 Plan for internal environmental audit

Company/dept								Form No						
Area Procedure to be audited	Team/person responsible	MONTHS												
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Week No of planned environmental audit:	Environmental audit completed					Follow-up on corrective actions								
Date:	Signature:					Position:								

This policy will be reviewed annually.

For Jachin Group (Solutions) Ltd

Date: 31st January 2024