



ENVIRONMENTAL MANAGEMENT SYSTEM (INCORPORATING COMPANY ENVIRONMENTAL POLICY)

Reviewed: September 2016

**For and behalf of
AC Union Limited**
2nd Floor Sutherland House
70-78 West Hendon Broadway
London
NW19 7BT

T: 0207 272 7678
E: info@acunion.co.uk

Table of Contents

Part 1	Mission Statement	3
Part 2	Introduction	4
Part 3	Organisational Structure	5
3.01	Board of Directors	6
3.02	Director with Special Responsibilities	6
3.03	Environmental Consultant	7
3.04	Managers & Supervisors	7
3.05	Employees & Sub contractors	8
Part 4	The Arrangements	9
4.01	Consultation with Employees	9
4.02	Environmental Implementation Standards	9
4.03	Environmental Performance	10
4.04	Environmental Incidents	10
4.05	Environmental Auditing	10
4.06	Environmental Improvement Programme	10
4.07	Environmental Impact Assessments	11
4.08	Reporting an Environmental Incident	11
4.09	Recycling	12
4.10	Energy	12
4.11	Using consultants	12
4.12	Provision of Information, Instruction and Training	12
4.13	Site Waste Management Plans	12
4.14	Site Environmental Plan	13
4.15	Material Sourcing	13
4.16	Validation	14
Part 5	Review of the Policy Statement	14
	Appendix	
1	Control of Water Pollution and Land Contamination	15
2	Control of Site Generated Dust	17
3	Control of Site Generated Noise	18

Table of Revision		
Date	Comments	
Sept 2016	Reviewed and Updated Policy	
	Additions	
	Amendments	

Part 1

MISSION STATEMENT

The objective of AC Union Limited is to run its operations avoiding unnecessary or unacceptable effects on the environment. Any effects will be minimised as far as practicable. Environmental considerations will be given equal importance to the more traditional business issues such as production, research, sales, safety and finance.

The Company will work towards achieving its environmental objectives by:

- Ensuring the Company's commitment to continual improvement is reinforced throughout the company and the measures through its KPIs and policies and procedures.
- Minimising the impact of all its operations on the local and global environment and the quality of life of the local communities in which the Company operates.
- Meeting all relevant statutory regulations.
- Maintaining the cleanliness and appearance of premises to the highest practical standards.
- Aiming for efficient use of all resources used in its operations and by reduction of waste through process improvements. Recycling of material is continued wherever feasible and further positive steps are taken to conserve resources, particularly those that are scarce or non-renewable.
- Fully considering, in advance where possible, the environmental effects of any significant new development and adjust the Company's plans accordingly.
- Providing customers with the information necessary to enable our products to be properly used, stored and disposed of so as to avoid unacceptable effects on the environment.
- Working with suppliers to ensure that the products and the services they supply are environmentally acceptable.
- Providing the necessary information to enable Employees to operate the processes properly and with minimal effects on the environment.

The duty of care under the Control of Pollution (Amendment) Act 1989, Environmental Protection Act 1990 and the Controlled Waste Regulations 1992 is recognised by the Company during the undertaking of its Construction works and is met with by the following basic principals:

- Preventing anyone keeping, depositing, disposing of or recovering our 'controlled waste' without a waste management licence or an exemption from the need for a licence.
- Stopping materials escaping from our control or the control of anyone else by packaging it appropriately.
- Ensuring waste is only transferred to an authorised person. Making sure that a person or business is authorised to deal with our particular type of waste.
- Ensuring that the waste being transferred is accompanied by a written description that will enable anyone receiving it to dispose of it or handle it in accordance with his or her own Duty of Care.

Where AC Union Limited conduct works, which may have an effect on the environment, careful planning will be implemented to reduce the risk of pollution. AC Union Limited recognises that most pollution incidents are avoidable, and the measures to avoid pollution can in most instances cost very little if included at the planning stage.

Where planning works, it may be suitable to prepare an Environmental Plan, which will accompany the Principal Contractors Construction Phase Plan and provide guidance on reducing the impact of works on the surrounding areas, nearby watercourses and the environmental as a whole. In addition Specialist Consultants may be appointed to assist with environmental issues during the concept and design phases.

For and on behalf of AC Union Limited

Mr Asher Grosskopf Date: 1st September 2016
Director Responsible for Environmental Management

Part 2

INTRODUCTION

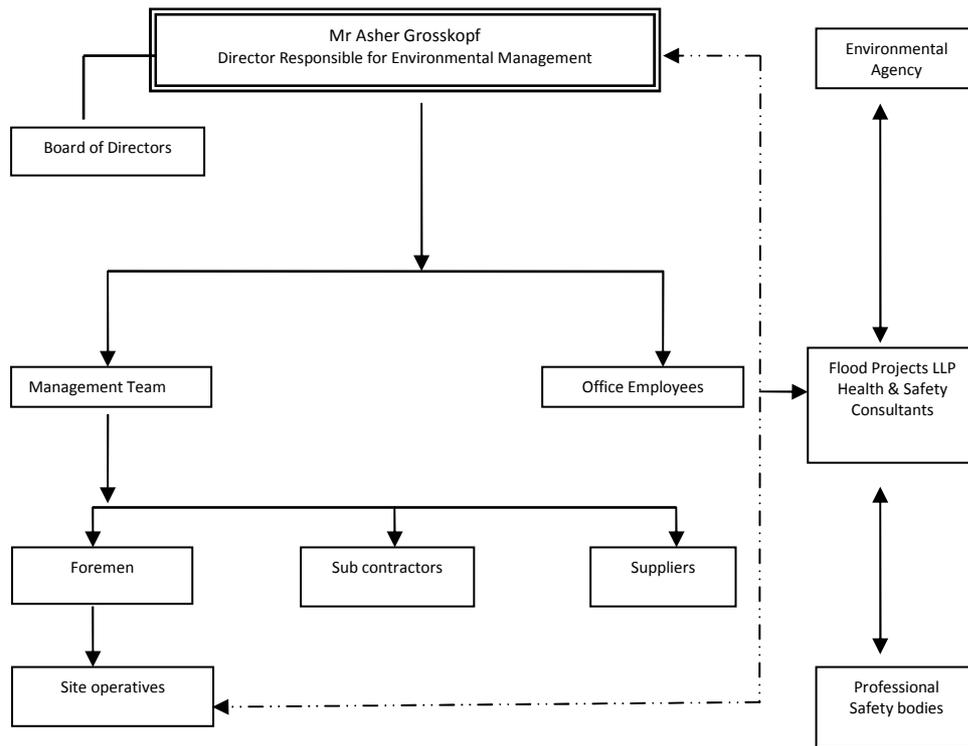
A first step in demonstrating environmental responsibility will be to draft an environmental policy statement or code of practice against which the company is willing to be judged. This has to be a worthwhile and practical document and not something that contains platitudes and generalisations.

Planned prevention or reduction of environmental waste and pollution is more cost effective than cleaning up it is therefore in the interest of any company to minimise the waste and pollution so to reduce costs in the long term.

Consideration will be given to devising codes of practice for all employees, which will include consideration and mitigation of environmental impact of each job. Each employee will receive a copy of this environmental policy, which will identify their responsibilities towards the achieving company's mission statement.

The company's environmental policy will start from the premise that the company is part of the local community and it has impact on the environment in the immediate vicinity of the site and more widely by bringing in raw materials and energy, distributing its products and discharging emissions and waste.

Part 3



← - - - - - → Indicates a routing for advice, inspection, consultation and communication

————— Indicates Management Responsibilities

3.01 BOARD OF DIRECTORS

The Board of Directors will ensure insofar as is possible establish and maintain environmental policies for all operations that may have a detrimental effect on the environment. This objective will be achieved by:

- The allocation of responsibilities to personnel employed or controlled by the Company.
- Having available such in-house expertise and external consultants as may be required.
- Requiring that such training, instruction, monitoring and information is arranged and presented as and when required.
- Maintaining a Director with special responsibility for the environmental management programme and its implement.
- Ensuring the Company's commitment to continual improvement is reinforced throughout the company and the measures through its KPIs and policies and procedures.

The Board of Directors will initiate, commission, encourage and support such environmental management initiatives as may be required by change of statutes passed by Parliament.

The Board of Directors will ensure that adequate and suitable funds are allocated each financial year, to allow those responsible for the environmental management programme to carry out their duties and duty of care without financial hindrance.

3.02 DIRECTOR WITH SPECIAL RESPONSIBILITY FOR THE ENVIRONMENTAL MANAGEMENT PROGRAMME

The Director appointed will have the full support and commitment from fellow directors, executives, managers and employees. The Director will report each Quarter to the Board of Directors on matters influencing the environmental management requirements and the standards achieved by the company.

In order to assist the Director with special responsibilities to discharge his duties, the Board of Directors will make available suitable expertise in environmental management. This internal and external specialist will be required to inform the Director on any standards or developments that may influence the environmental management programme.

3.03 ENVIRONMENTAL CONSULTANT

The appointed environmental consultant will report to the Director with special responsibility for environmental management. He will also be available to other members of the management team on matters influencing environmental management including:

- Keeping himself and management informed of the existing and pending legislation regarding environmental management and their impact on working practices.
- Proposes suitable and adequate continuing environmental training for all employees including environmental inductions for all new starters and sub contractors.
- Maintaining and co-ordinating the environmental management system.
- Investigating environmental incidents that have or may rise to a loss of company resources and reports all statistics causes and results of investigations.
- Liaise with the Environmental Agency and other enforcing agencies.
- Assisting environmental risk assessors in carrying out statutory assessments.
- At the request of managers carries out COSHH assessments on new substances, controls.
- Maintaining and improving company emergency procedures.

3.04 MANAGERS AND SUPERVISORS

All company managers are responsible for the environmental safety of staff, customers and visitors within their areas of responsibility.

They are also responsible for:

- Providing procedures and instructions for safe working practices.
- Ensuring staff under their responsibility are suitably trained and competent for their duties.
- Assessing for risks to the environment from work activities and working conditions.
- Monitoring operations regularly to ensure that work continues to be carried out environmentally safely in accordance with procedures and instructions provided.
- Ensuring that equipment performs correctly and is environmentally safe to operate.
- Monitoring environmental safety in their areas of supervision by inspection or audit.
- Ensuring that all environmental damage or near misses are reported and investigated and that investigating results are passed directly onto the responsible Director within 24hrs.
- Ensuring environmental safety is designed into all activities and equipment prior to the commencement of work in order to eliminate or control risks.
- Ensuring that employees and contractors are aware of the correct procedures for dealing with materials spillage's and disposal of hazardous waste in a manner that is both safe and environmentally responsible.
- Ensuring that employees are aware of the arrangements and actions required in the event of an environmental incident.
- Providing adequate staff supervision particularly for young workers, new employee's, contractors, or employees carrying out unfamiliar tasks.

3.05 EMPLOYEES –SUB CONTRACTORS

The co-operation of every person employed by the company is essential to the success of the environmental policy.

The company's environmental policy places duties on all employees.

These are:

- To follow the company's environmental rules and procedures.
- To minimise waste and recycle waste materials wherever practical.
- To comply with clients environmental requirements when operating on their premises.

All employees have a duty to comply with all the Company environmental rules, procedures and instructions laid down.

- They will report promptly to their manager any defects found in vehicles, equipment or any environmental hazard observed.
- They will report immediately to their manager any incident involving environmental damage or risk.
- Observe all laid down procedures concerning processes, materials and substances used.
- Where required, attend as requested any training course designed to further the need of environmental safety.
- Observe all emergency and evacuation procedures in place.

Part 4

4.0 ARRANGEMENTS

4.01 CONSULTATION WITH EMPLOYEES

The company will consult with employees and their representatives through committees, meetings, toolbox talks and other methods where any changes to the operation present an impact on the environment.

All consultations will be recorded and any results or actions identified will be posted on all company notice boards giving the information its widest circulation.

4.02 ENVIRONMENTAL IMPLEMENTATION STANDARDS

Responsible managers will ensure that a document is prepared covering the environmental aspects of their operations. These documents will identify the hazards within the workplace which may present risk to the environment. Systems for eliminating or reducing these risks and for the complying with the environmental standards will be identified along with methods for monitoring the effectiveness of the procedures.

Each document will include the following items:

- The provision of, instruction and training
- Environmental performance standards
- Environmental incident investigation and reporting
- Auditing procedures
- Environmental improvement programme

Where appropriate, each document will include an environmental impact assessment.

4.03 ENVIRONMENTAL PERFORMANCE

Environmental matters will be properly considered in all new developments and procedures, paying particular attention to the requirements of the Environmental Protection Act 1990.

Methods that have been established for monitoring and recording compliance with legal obligations in respect of routine liquid and gaseous effluent discharges and liquid and solid disposal will be detailed.

Methods used for elimination of waste at source or recycling or reuse of materials will be included, paying particular attention to the possibilities for materials substitution in processes.

4.04 ENVIRONMENTAL INCIDENTS

Investigation and reporting all abnormal occurrences with environmental implications will be recorded and investigated along with any complaints from 3rd parties.

Investigations will be carried out by the responsible manager with assistance from the environmental advisor where required.

All environmental incident reports will be forwarded to the responsible Director for comment and raising at the following Board of Directors meeting.

4.05 ENVIRONMENTAL AUDITING

The arrangements, format and frequency of all environmental audits will be documented in line with environmental audit procedures. Such audits will be carried out as necessary or when significant changes to the 1990 Act or significant changes to the company's operations.

Where audits are carried out, a copy will be forwarded to the responsible Director for comment and or action.

Environmental Inspections

The company will conduct a system of site environmental inspections. Where a site environmental inspection is conducted, the site agent will be issued with a copy of the environmental inspection report, which will detail any issues, which have been noted during the inspection. The Site Agent will be expected to comply with any requirements stipulated by the Inspecting Person immediately (where practicable). Enquiries will be first addressed with the Inspecting Person. If further issues are to be addressed, the company management is to be contacted. Where requests for works to cease are made on environmental grounds, this will be complied with and any enquiries will be made with company management.

4.06 ENVIRONMENTAL IMPROVEMENT PROGRAMME

The Company will prepare annually an environmental improvement programme, which will include plans in each of the following areas

- Objectives
- Audit programme
- Training needs
- Review of resources to support the programme

4.07 ENVIRONMENTAL IMPACT ASSESSMENTS

Before the introduction of new plant, equipment, processes or construction projects, a systematic study will be undertaken to ensure that adequate consideration is given to possible environmental hazards as a minimum this will include:

- Identification of substances that may cause harm to the environmental.
- Assessments of the techniques available to eliminate, minimise or render harmless releases of such substances as to establish “best environmental techniques” (BAT).
- An assessment of the possible impact of the process on the environment to establish “Best practical environmental option” (BEPEO).
- Where existing installations and processes there is a record of poor environmental performance the process/installation will be assessed and included in the environmental improvement programme.

The details of an environmental impact assessment should contain but not be limited to:

- the task or work operation or area
- source of impact
- environmental impact
- impact (to whom)
- existing measures taken to control impact
- resulting effects
- results A, M, U
- actions required to further reduce impact and carbon footprint
- results A, M, U
- further actions required to reduce impact and carbon footprint
- completed by

4.08 REPORTING AN ENVIRONMENTAL INCIDENT

As a Company we will ensure that all environmental incidents are reported through the normal channels and will also ensure that all managers and supervisors follow the company procedures and arrangements. This will be achieved by ensuring that the following incidents are reported to the environmental agency using the incidents Hotline:

- damage or danger to the natural environment
- pollution to water all land
- dead fish or fish gasping for air
- water courses blocked by a vehicle or falling tree causing risk to flooding
- flooding from main rivers or the sea
- illegal dumping of hazardous waste on large amount of industrial waste
- illegal removals from water courses
- unusual changes in river flow
- collapsed or badly damaged river or canal banks

Incident Hotline

T: 0800 807 060

24-hour service

4.09 RECYCLING

The company will within its environmental management systems identify those materials that are subject to disposal by normal methods and assess if recycling is an option for their disposal.

The company will make the necessary arrangements for the recycling of:

- Paper
- Cardboard
- Metals (including aluminium cans from canteen)
- Clean Topsoil
- Clean Rubble
- Timber
- Plastics and Polythene
- Any other natural products that can be recycled

4.10 ENERGY

The company will assess and implement methods of conserving energy with its operations by simple practical solutions. The company identify that saving energy is financially the right thing to do as well as environmentally sound.

The company will achieve this by:

- The use of fuel efficient vehicles.
- The installation of low energy lighting in offices.
- The installation of PIR lights in areas where pedestrian traffic is low.
- The installation of “energy star” PC’s.
- The installation of thermostatic controlled heating and ventilation controls.
- Any other cost effective energy reducing controls as required by the company.

4.11 USING CONSULTANTS

Where the company identifies a need for the use of external consultants it will ensure that the appointed consultant provides:

- The service that the company requires.
- Within the price the company requires.
- Within the time constraints the company sets.
- At the standard the company sets.

4.12 PROVISION OF INFORMATION, INSTRUCTION AND TRAINING

The company will ensure that the methods by which suitable information, instruction and training will be delivered, is by formal environmental induction training, team talks and standing operational work standards. The company will make available to employees any statutory instruments, codes of practice and company procedures as required.

Where any training is given the supervising manager will keep suitable records.

4.13 SITE WASTE MANAGEMENT PLANS

The Site Waste Management Plans Regulations 2008 were revoked in October 2013

Quote from the Environmental Agency (the intended policy objective of this revocation is de-regulation as part of the government Red Tape challenge process. this will allow businesses to use the site waste management plans as a flexible resource efficiency tool, rather than an inflexible piece of legislation. The SWMPs are still recommended where appropriate and it is likely that they will be retained for larger construction projects).

Where the Company act as the Principal Contractor, which undertakings may have an effect on the environment, careful planning will be implemented to reduce the amount of waste produced by the site. The Company recognises that waste management is an integral part of the overall site environmental management plan and that measures to avoid excessive waste can in most instances cost very little if included at the planning stage.

As the Principal Contractor the Company will:

- Review the plan
- Record quantities and types of waste produced
- Record the types and quantities of waste that have been
- Reused (on or off site)
- Recycled (on or off site)
- Sent to other forms of recovery (on or off site)
- Sent to landfill
- Otherwise disposed of
- Update the plan to reflect the progress of the project

4.14 SITE ENVIRONMENTAL PLANS

Where the company conducts works, which may have an effect on the environment, careful planning will be implemented to reduce the risk of environmental damage. The company recognises most environmental incidents are avoidable and can in most instances cost very little if included at the planning stage.

Where planning works, it may be suitable to prepare an Environmental Plan, which will accompany the Site Health and Safety Plan, and provide guidance on reducing the impact of works on the surrounding areas, nearby watercourses and the environmental as a whole. In addition, Specialist Consultants may be appointed to assist with environmental issues during the concept and design phases.

This may include but not be restricted to:

- introduction
- environmental impact register
- environmental site plan
- nature project
- existing environment
- existing traffic system
- environmental limitations
- special licences
- environmental reporting and recording
- external aspects
- existing environment (natural)
- existing environment (man-made)
- internal aspects
- site waste management plan

4.15 MATERIAL SOURCING

The company recognises the importance of ethical material sourcing, resource efficiency and conservation of the natural environment. In response, we will carry out all reasonable measures to develop, meet or exceed targets set both internally and externally and will aim for continually improved material sourcing performance through implementation of the following:

- Promotion of the use of sustainable materials, wherever possible from our accredited sources and suppliers.
- Promoting the use of products approved by One Planet Products.
- Minimising the production of waste, and reusing and recycling materials wherever possible.
- Achieving best practice in site waste management through the use of our site waste management procedures.
- Minimising supply chain delivery distances and commercial vehicle movements by implementing smart logistics planning.
- Sourcing materials from within the local area of our operational sites; thereby supporting local businesses.

4.16 VALIDATION

The company will validate this environmental policy and related environmental management procedures by means of regular inspections and audits covering all aspects of environmental management.

Inspections will be carried out for:

- Regular housekeeping audits.
- Energy wastage.
- Waste products recycling .
- Introduction of new plant, installation or modifications.
- The disposal of waste products.

Part 5

5.0 REVIEW OF THE POLICY STATEMENT

This policy will be reviewed, extended or modified as necessary by the Director with special responsibility for the environmental management policy in consultation with relevant specialists and employees with special responsibilities.

It will be supported and enhanced by the addition of the local procedures and environmental management documentation.

Appendix 1

DETAILED PROCEDURE FOR THE CONTROL OF WATER POLLUTION AND LAND CONTAMINATION

Sources

Pollution is the release from any process of substances that are capable of causing harm to human health, property and other living things. Water pollution can occur to any watercourse, such as a river, stream, canal, lake or pond, or to groundwater.

The pollution of groundwater is of the most concern in relation to the pollution of land. If land is polluted through construction operations, there can be environmental implications for subsequent use of the land.

Construction Operations

Water pollution associated with construction operations can arise from the following causes:

Disposal of waste material - Rain and dust suppressions sprays on waste will cause solids to be released into the drainage systems. In the case of demolition works, the solids will principally be concrete dust, rock dust, sand, etc.

Lime within the concrete dust may dissolve within the water to create an alkaline solution, but the pH is unlikely to be raised significantly due to the quantity of lime present.

Other sources of water pollution from construction operations may arise from its contamination in a previous use, for example:

- Oil, solvents and other contaminating material could be carried with the suspended matter.
- Contaminants which are soluble in water, for example road salt, may also pollute the water.

In the case of the former, if chlorinated solvents were present, some may dissolve in the waste, drain as a separate layer or contaminate land. Likewise lubricating oil and fuel oil may also form a separate layer due to the oil/water surface interaction, whilst certain toxic components of the oil may dissolve in the water or contaminate land.

Storage of feedstock, and of unwanted or recycled non-aggregate materials

Contaminants are often held within the finer grade material of the aggregate, such as silts and clays, and so processing of feedstock will concentrate the contaminants in finer product types, held in storage bays.

Similar processes will occur within storage as described for the processing of waste, although the residence time may be much greater. Therefore the water entering or contained in the material will become more concentrated with dissolved substances, in particular road salt and lime from the concrete.

Disposal of unwanted material

If unwanted material is unsuitable for other purposes and recycling is not a viable option, then it will be disposed to a licensed waste management site, where leachate will be controlled.

Transport of material

In wet conditions, the delivery and tipping of materials and the moving of materials around site by loaders and dump trucks will be a major source of suspended solids in run-off. Likewise, dust from vehicles, which accumulates on the roads, will be suspended in run-off after rainfall, or by water used in dust suppression equipment. Therefore in construction operations, where it is likely vehicles will become dirty, it will be necessary for vehicles to pass through wheel washers before entering the public highway. The washings will likely contain an amount of highly suspended solid.

Operation of plant and vehicles

Construction operations will use powered machinery, fuel oil, lubricating oil and grease in various plant, equipment and vehicles on site, which have the potential to contaminate water or land. Storage of these fuels in tanks or drums may also be a cause of potential pollution problems during filling, dispensing and if leaking or spillage were to occur. Solvents, like degreasers, and detergents could also be a potential contaminant to water or land during plant and vehicle maintenance.

All of the above can have an effect on the following receptors and environmental resources:

Controlled waters - These have statutory protection and it is an offence to make a discharge to controlled waters without the permission or consent of the regulator.

Effects on people - Industrial and agricultural use, or potable water supply by water companies and others, can be disrupted or generate health risks respectively. Construction operations involving demolition or excavation are especially at risk of causing pollution of groundwater.

Nature conservation - Aquatic plants, invertebrates (insects, larvae, shrimps etc.), fish and birds can suffer detrimental effects from highly suspended solid loads and oil/solvents in water from construction operations.

Mitigation Measures

The means of avoiding or mitigating the main potential water and land pollutants from our construction operations are explained below:

Suspended solids

Suspended solids will be controlled during the construction operations by:

- Hardstanding areas, which are attributed to reducing the generation of suspended solids in water, will be provided on site roadways and areas subject to operational use.
- Arranging site layout and managing vehicular movements so as not to travel close to water courses or drive over non-hardstanding areas.
- Keeping roads and wheels clean to help prevent fine material from being distributed.
- Implement control measures to avoid discharge of suspended solids to water courses, subject to approval of the planning authority and agreement of the Environment Agency, through: segregated drainage, silt traps, settlement pools, filtration systems (microstrainers, filters or filter presses), which may be used with flocculant, partial recirculation of screened or partially treated drainage for wheel washing or onto land for irrigation (upon agreement reached with the planning authority).

Water Contamination and Land Contamination from Fuel and Lubricating Oils

The company will implement such procedures to prevent contamination by implementing the below controls as required:

- Storage of the minimum quantity of lubricating oil and fuel on site and within one area.
- Proper and secure bunding.
- Provision of equally secure measures on any mobile equipment used for refuelling permanent plant that cannot travel to the designated refuelling area.
- Use of an impermeable area fitted with a boundary drain with oil separator for the designated refuelling area.
- Service and maintenance programme on all vehicles and plant to avoid leakage or spillage of oil or fuel to the ground.
- Scheduled maintenance programme for emptying and servicing oil separators on site.
- Provision of sand to treat small areas of spillage, for its removal and disposal.
- Holding and use of oil absorbent mats and/or bunds for dealing with accidental spillages to water.
- Written procedures to be followed for dealing with oil spillage.

DETAILED PROCEDURE FOR THE CONTROL OF SITE GENERATED DUST**Sources**

PM10 are the very small particles of dust that can reach deep into the lungs. The Quality of Urban Air Review Group (QUARG) in their 3rd report (1996) found the following levels of PM10 in the environment attributed to certain activities:

- 2% construction
- 11% mining and quarrying
- 26% road transport

Not a significant source

General plant and equipment use on construction sites

Therefore the main source on PM10 for the latter will be associated with internal combustion engine exhausts, although vehicle movements of sources of/processed materials to/from/across site will add the PM10 for road transport in the area.

Dust Source Types

Dust sources associated with mineral, waste and construction type activities fall into two types:

Stationary

Material mixing plant and conveyor transfer of material, large stockpiles/spoil heaps with no containment where the surface is vulnerable to wind erosion.

Mobile

Vehicles travelling over unmade surfaces, particularly at high speeds, cause particles to be elevated with the finer particles capable of being carried long distances beyond site boundaries. Transportation and handling of material using loaders, excavators, and lorries can produce dust through spillage and wind erosion.

Mitigation Measures**Enclosures and other measures**

The following will assist eliminate wind entrainment of dust and therefore prevent the dust becoming airborne at source.

Buildings - Equipment operating inside will be fitted with specialist dust collection and filtration equipment for the working environment and to reduce dust escaping, through material access and exits from the building.

Temporary enclosures - Constructed using sheet material such as plywood on scaffolding.

Localised enclosures – may be fabricated to fit around specific dust sources on site.

Bays or bunkers - Help to contain granular material.

Water suppression – Where identified fine water spray heads directed into a dust cloud will help mitigate dust concentrations and the effectiveness of this can be further improved by adding a chemical wetting agent to the water.

Minimise drop height of material - Free falling fine material can be taken by the wind and larger material can fragment on compaction, therefore discharge of the material from rubble chutes should be as close as possible to the skips.

Appendix 3**DETAILED PROCEDURES FOR THE CONTROL OF SITE GENERATED NOISE****Sources**

Noise emitted from construction sites is normally not sufficiently high to cause physical damage to property or the hearing off those persons outside the site perimeter, but it may well be high enough to cause disturbance. Noise is therefore a 'nuisance' issue for construction operations.

Plant and Equipment

Plant equipment is normally hydraulically activated with the hydraulic pressure generated by a diesel engine, which is one source of noise. Construction tools and equipment is normally electrically driven and noise generated by the tool during cutting, drilling and grinding operations. In both, noise is also created by material impacting metal hoppers and chutes and from the impact of the jaws or hammers on the material.

Vehicle Movements

Also, there is the noise associated with vehicle movements, including tipping and loading of material and the actual vehicles themselves; for example: the noise from large diesel engines, hissing air brakes, the body of an empty lorry going over a bump in the road (known as a 'body slap'), sounders that activate when the reverse gear is selected and are used to protect people by warning them that a vehicle is reversing (a common cause of complaint).

Mitigation Measures**Locate Plant Appropriately**

Where possible the plant will be located away from noise sensitive neighbours and vehicle routes arranged so that reversing is not required. Reversing generally requires revving of engines and the possible use of audible reversing warnings, where alternatives to reversing alarms cannot be found.

Manage and Control the Way Plant is used

Site management will try and programme working as far as possible to match the surrounding noise climate and sensitivities. Councils normally expect contractors to adhere to the following hours of work, where the work causes noise audible at the site boundary in residential areas: Monday to Friday 8:00 am to 6:30 pm, Saturday 8:00 am to 1:00 pm, and Sundays and Bank Holidays: No working. However, in the commercial centre of cities, the office workers would be working during the day and so the area would be more sensitive to noise than in the evenings.

Where noise operations are unavoidable the project manager will maintain good community relations and warn nearby residents in advance. It may be possible to substitute newer quieter plant for existing plant, so that the actual noise output forms part of the purchasing decision.

Silence Existing Plant

It may be possible to carry out simple modifications of existing plant, for example by lining rubble chutes and skips with resilient material, so as to reduce noise.

Use fences and bunds

This is a common way of reducing noise beyond the site boundary. To be effective, they will obscure the line of sight between the noise source and the receptor, but without having an adverse visual impact in their own right. Sometimes temporary stockpiles can be located to act as noise barriers.

Enclose noise sources

A more expensive way of reducing noise is to enclose static equipment and screens within a building, with the added benefit of reducing dust emissions. Also, dust mitigation measures such as covers can help reduce noise.

Strategic approaches to noise reduction

A risk assessment carried out at the planning stage, which can identify possible noise sources and levels and who is affected will be carried out to minimise noise pollution.

To control the identified noise sources and levels the following items will be considered by the Company as the best practicable means to minimise noise on the site.

- The quietest plant and machinery available will be used. For example, hoists and cement mixers will be electrically powered wherever possible.
- All equipment will be properly maintained, so that no unnecessary noise is caused.
- Acoustic covers to such items as compressors and generators will always be kept in place.
- When machinery is not actually in use, it will be switched off and not left running.
- Stationary noise sources will be sited, whenever possible, away from noise sensitive areas, such as nearby dwellings. Acoustic barriers will be used to shield such noise sources. These can be purpose-built, or sometimes materials on site, such as bricks, sheds or even mounds of earth can be used.
- Employees will be informed of the noise control measures required by, or agreed with the Client and will receive training where necessary.