



PROJECT ENVIRONMENTAL PLAN FOR THE MITIGATION OF ENVIRONMENTAL IMPACT DURING CONSTRUCTION ACTIVITIES

THE DEVELOPMENT OF MAESGWYN ROAD,
WREXHAM

Schedule of Revisions

Rev:	Revision Date:	Prepared by:	Details:
0	May 2012	RH	Original issue
1			
2			
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6			
7			

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1		
2		
3		
4		
5		
6		
7		

PROJECT ENVIRONMENTAL PLAN

INTRODUCTION & CONTENTS

The Technical Department and Site Manager are responsible for ensuring that all elements of this Project Environmental Plan are maintained and suitable for the duration of the project works. This Plan, which is to be retained in the Site Office, is to be made available for inspection at any time whether by interested third parties, our employees or our subcontractors. The following items are included within this Project Environmental Plan:

1. Commitment to impose environmental mitigation measures
2. Site Specific Environmental Objectives and Targets
3. Environmental Hazard Checklists. The *Environmental Hazard Checklist* enable a systematic general examination of the work activities to be undertaken and to identify which elements of our operations require the significant findings to be recorded in a Risk Assessment. This review should refer back to any Pre Construction Health and Safety Information and other relevant information contained within the disposal brief. In addition to a review of previously issued documented information other environmental hazards or risks that may be present or caused during the demolition and construction phase of the project will be evaluated. The Environmental Hazard Checklist is to be reviewed at frequent intervals throughout the construction phase of the project to ensure it remains suitable and sufficient.
4. The Environmental Risk Assessment is required to detail the necessary control measures for site environmental hazards and risks as identified in 4 above. In addition to controlling the hazards and risks, this assessment will detail the person responsible for implementation of the control measure.
5. Implementation controls and monitoring strategies/ arrangements for:
 - Noise
 - Vibration
 - Dust
 - Waste
6. Environmental Reporting Procedure consisting of:
 - Arrangements for dealing with, and recording nuisance complaints
 - General contact arrangements
7. Briefing Arrangements:
 - Arrangements for achieving contractor compliance
8. Appendices
 - Site Plan
 - Background Noise Monitoring Data
 - Environmental Reporting Form
 - Pollution Prevention Guidelines PPG6
 - Index of Morris Homes Health, Safety & Environmental Guidance Notes
 - Environmental Toolbox Talks

Health, Safety & Environmental Supporting Information including a copy of the Morris Homes Construction Health, Safety & Environmental Guidance Notes, COSHH Assessments for general constructional materials and an Index of available Tool Box talks that detail a standard approach for general activities on site, are available within the Construction Phase Health & Safety Plan. These are for general guidance; cover good practice whilst complying with current environmental legislation.

ENVIRONMENTAL MANAGEMENT PLAN

SECTION 1 : Commitment to Environmental Mitigation Measures

Morris Homes is committed to the protection and enhancement of the environment. It recognises the responsibility for the effects its operations have on the environment and is committed to minimising environmental impact. As far as is reasonably practicable this is achieved by:

- Monitoring legislative developments and ensuring all operations are carried out in compliance with applicable legal requirements, Regulations, Codes of Practices and Standards.
- Adopting auditing and monitoring regimes to ensure compliance is achieved and opportunities for improvement identified.
- Identifying environmental aspects of our business, for the purpose of establishing Targets and Objectives, with the aim of attaining continual improvement in all areas of our business.
- Provision of training and education to ensure staff, operatives and others working on behalf of the Company have an adequate understanding of our Policy and standards, relevant legislation and the environmental aspects of the Group Company's activities.
- Early involvement with statutory authorities, customers and others affected by our activities to achieve acceptable practices.
- Planning, assessing and executing works in order to prevent pollution and minimise the environmental impact for those affected by our operations.

PROJECT ENVIRONMENTAL PLAN
SECTION 2 : Site Specific Dust, Noise & Vibration Objectives

Priority	Issues	Objective	Responsible	Target date	Status
1	Noise – Environmental Noise emitted from the activities associated with the use of construction plant and ancillary activities associated with the development works.	All activities are to be suitably planned and executed with noise emissions considered. Noise monitoring, both prior to and during the works will be undertaken by way of verification. Telephone numbers to be posted on site boundary for members of the public to utilise in the event that they have a concern or require information	Site Manager / Contractors Morris Safety Dept to undertake Noise assessments	Monthly or as requested by Contract Team.	i.) Background Noise readings to be undertaken in advance of works commencing. ii.) Sequence of working under review to ensure screening of activities from existing residents. iii.) Continual liaison required regarding issue of nuisance.
2	Vibration – Although no specific criteria in relation to maximum vibration levels and key receptors has been identified, nuisance issues may arise if significant vibrations are caused as a result of the site activities.	Ensure that activities are identified that are likely to cause vibration nuisance. Ensure that arrangements are established for the monitoring of vibrator levels for the purpose of establishing 'high risk' activities and that monitoring equipment is readily available from the Morris Safety Department.	Construction Department / Contractors Morris Safety Dept to undertake monitoring	If Piling activities are required As required	i.) Vibroc V901 identified and available for use. ii.) Will only be deployed if piling activities are required or as a direct query from a member of the public / local resident. iii.) Co-ordination with Contractors ongoing for the purpose of minimising vibration nuisance in advance of works commencing.
3	Dust – During construction activities and associated works, the generation and propagation of dust is likely.	Ensure that activities are identified that are likely to cause dust nuisance. Initial reviews have highlighted abrasive cutting, mixing of mortars and vehicular site traffic as probable originators of dusts. Where third parties identify dust as a nuisance issue, a monitoring strategy will be implemented (using dust deposition gauges) to determine the effectiveness of current controls.	Construction Department / Contractors Morris Safety Dept to undertake monitoring if requested	On going basic monitoring by Site Manager.	i.) Dust deposition gauges with dust pathway devices available for use from the Safety Dept. ii.) Pumps capable of monitoring Pm2.5, PM10 & TSP would also be employed should nuisance complaints arise.
4	Waste – Incorrect storage of materials leading to local contamination issues	Ensure suitable receptors are positioned for the secure storage of waste, minimise packaging wherever possible	Construction Department	Ongoing	iii.) Feedback regarding waste quantities and recycling to be provided by commercial teams.

PROJECT ENVIRONMENTAL PLAN
SECTION 3 : Environmental Hazard Checklist

The environmental hazards listed below are those most commonly found on construction sites and so have been provided as guidance when deciding if a Risk Assessment needs to be recorded. Please note that this checklist is not necessarily a comprehensive list of all potential hazards.

Are there significant findings, which require recording in a Risk Assessment?		Site Wide Work Activities	Observations	Environmental Hazards most commonly found on construction sites
Yes	No			
☒	☐	Dust	Dust monitoring employed. Dust suppression techniques in use Importance of dust nuisance raised during induction	Dry weather excavation/earth moving dusts Cement dusts from mixing, grinding, breaking out, contaminated traffic Wood dusts from timber/joiners yards Brick/silica dusts from haul roads (hardcore dry cutting operations Limestone dusts from backfill/road metal operations Failure to sheet dusty materials if being removed from site Failure to enforce slow speeds across dry and dusty site roads During demolition fail to cover or spray/damp down chutes/skips etc
☐	☒	Smoke	No burning policy explained during induction	Bonfires producing black smoke Burning prohibited materials (cable-rubber etc.) Exhaust smoke from engines
☐	☒	Noxious Odours / Smells		Disturbing substances in ground Exhaust smoke/fumes from plant Use of solvents/glues and paints Blocked F.W. pipes Unemptied portaloos – septic tanks etc
☐	☒	Gases		Release of L.P.G. and other flammable gases to the atmosphere Release of toxic gases to the atmosphere Release of naturally occurring gases during excavation works Excessive release of carbon monoxide by site vehicles/plant Pipeline strikes
☐	☒	Chemical / Organic Fumes		Emissions from the burning or heating of base materials that produce toxic/irritant mists or fumes Spraying of paints, solvents, uncontrolled or unrestricted by enclosures
☐	☒	Noxious/ Chemical/ Mists		Spraying of weed killers or other phytotoxic media in an uncontrolled manner
☒	☐	Fuels	Double banded fuel store onsite.	Contamination due to: spillage during delivery, spillage from storage, spillage during refuelling, spillage during maintenance of plant, waste oils (hydraulic, engine, mineral, gear and lubricating).
☐	☒	Chemicals	Refer to ground investigation report	Contamination due to spillage during delivery, spillage from storage, waste disposal.
☐	☒	Metals	Refer to ground investigation report	Contamination due to toxic metals i.e. cadmium and/or its compounds used in pigments, ferric metals and compounds, aluminium wastes, lead wastes, zinc wastes, copper wastes, waste batteries, chromium wastes & metallic wastes containing cyanide.
☒	☐	Disposal of Waste	Waste segregation and regular removal to reduce possibility of vermin	Fail to identify the type of waste Fail to comply with statutory duties regarding the disposal of waste Dispose of waste material on to or in land that will be adversely affected, including the immediate eco-system Expose the environment to substances that will cause "acute" and/or "chronic" affects Fail to prevent escape of waste (including by vandalism)
☐	☒	Existing Registered Contaminated Sites	Refer to ground investigation report	Removal of spoil, arisings from site Working out with of the E.A. / E.H.O. / Local Authority guidance for the contaminants present Failure to contact the Environment Agency. - Local Authority

✓	☐	Existing Water Courses	Storage of fuel etc to be planned	Use of harmful substances on or near the watercourse Spillages of harmful substance on or near watercourses Storage of harmful substances near unbunded water courses Vandalism
✓	☐	Site Drainage and Consents	To be monitored	Fail to apply for discharge consents from Environment Agency or its agents Fail to provide suitable and sufficient break tanks, settlement tanks, oil separators in the drainage system on dewatering system before discharge Fuel/chemical spillage entering site drainage Silty water from pumping operations entering site drainage Cement/concrete wash out entering site drainage Discharge site water drainage in surface water system Discharge site water drainage pumping onto adjacent land.
✓	☐	Site Water Run Off	To be monitored	Fail to provide a containment system i.e. cut off drains/ditches Fail to provide bunds to storage areas including fuel, chemical and waste storage areas Waste water run offs from wetblast – hydro demolition, high pressure cleaning of metal structures etc
✓	☐	Light Pollution	Compound Lighting to be such that it does not impact on local environment	Site lighting interferes with public lighting creating confusion as to street hazard lighting, traffic lights etc Site lighting is such that it interferes with occupiers enjoyment of their land/dwelling place Site lighting is such that it interferes with air navigation or landing approach lighting Site lighting is such that it interferes with sea or inland water navigation lighting Site lighting is such that it interferes with the natural eco-rhythms of wild life in the vicinity
✓	☐	Noise Nuisance	Sensible approach to hours of work to be adopted taking into account any planning restrictions Noise monitoring available	Failure to apply Best Practice Means (B.P.M.) to reduce noise from operations and plant Failure to identify sensitive receptors within vicinity. (i.e. – Hospitals, Nursing Homes, Homes for the Aged, Schools etc) Failure to apply for Sect 60/61 prior consent notice from Local Authority E.H.O's Leaving plant engines running when not in use Site lighting/power generators Piling operations Demolition Use of plant/tools that produce high frequency sound levels Fail to monitor environmental noise levels
✓	☐	Vibration Nuisance	Vibration monitoring available	Site operations adjacent to sensitive public areas/buildings/dwellings i.e.. piling, demolition Fail to notify Local Authority E.H.O. of potential vibration nuisance Site operations adjacent to sensitive public areas/buildings/dwellings i.e.. piling
☐	✓	Aesthetics		At design stages, fail to allow for the visual impact of any project on the existing landscape/environment and townscape

PROJECT ENVIRONMENTAL PLAN

SECTION 4 : Environmental Risk Assessment – Level of Risk Matrix

Each hazard has associated risks. Use this Level Of Risk matrix to assess the primary risk level (i.e. the risk with no protection or control measures applied), which can be judged as being the likelihood and consequences of harm being realised and who would be exposed to harm. Having assessed the primary risk level record your decision in column (4) of *Risk Assessment*

CONSEQUENCE						
L I K E L I H O O D	Environment	Significant regional impact, widespread long term damage	Significant damage, significant local impact, long term duration	Significant damage, significant local impact, limited duration	Noticeable damage, limited off site impact, limited duration	Negligible Damage
	Health & Safety	Ctastrophic (sudden widespread disaster)	Fatality	Major injury (as defined in RIDDOR)	3 Day Lost Time Accident	Minor injury
	Definite - know that it will happen	Unacceptable	Unacceptable	Unacceptable	Hgh	High
	Probable - may be expected to happen	Unacceptable	Unacceptable	High	Medium	Medium
	Likely - such as might well happen	Unacceptable	High	High	Medium	Low
	Unlikely - not expected to happen	High	Medium	Medium	Low	Negligible
	Improbable - extremely unlikely to happen	Medium	Medium	Low	Negligible	Negligible

PROJECT ENVIRONMENTAL PLAN

SECTION 4 : Environmental Risk Assessment – Level of Risk Matrix

CONTRACT : Maesgwyn Road, Wrexham				DATE OF ASSESSMENT : May 2012			
REGION : Morris Homes (North) Ltd				ISSUE NO : One			
Item No	Activity / Task	Hazard	Likelihood / Consequences What / Who & How	Primary Risk Level	Control Measures	Residual Risk Level	Team Member Responsible for Implementation of control measures
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Construction Operations	Dust	Dust – If uncontrolled potential release of dust from construction activities,, use of construction plant, storage of materials onto local receptors	Medium	Wet cutting techniques to be adopted, roads to be swept at regular intervals, mortar to be provided from a silo in wet state, roads to be damped down if prolonged periods of dry weather are experienced. Wind direction to be monitored Monitoring regime available if required for formal reporting of dust levels.	Low	Site Manager to implement controls Morris Safety Dept to arrange monitoring strategy Site Manager to undertake regular inspections of site
2	Construction Operations	Noise	Noise will be generated by construction plant and associated delivery vehicles.	Low	Works to be sequenced such that noise can be minimised. Equipment to be positioned such that nuisance is minimised. Attenuated equipment to be used where available. No radios to be used by contractors on site. Monitoring of site hours and delivery vehicles to ensure disruption to local residents is minimised.	Negligible	Site Manager to implement controls. Background noise monitoring to be undertaken by Morris Safety Department at regular intervals and in advance of the works commencing. Copies of monitoring to be retained on site.

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Item No	Activity / Task	Hazard	Likelihood / Consequences What / Who & How	Primary Risk Level	Control Measures	Residual Risk Level	Team Member Responsible for Implementation of control measures
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
3	Construction Operations	Vibration	Vibration maybe transmitted to adjacent properties resulting in a nuisance. It is not envisaged that the nationally recognised PPV will be exceeded	Low	None specified, Vibroc monitoring will be undertaken if nuisance complaints are received or in the event that piling operations are required to be undertaken.	Negligible	Morris Safety to undertake vibration monitoring if required or requested to determine if likely nuisance will occur.
4	Construction Operations	Waste	Uncontrolled release of waste leading to local nuisance issues	Medium	Suitable receptors to be positioned around the scheme. Note that if wastes are not segregated at source it will be required to be transferred to a transfer station for correct segregation. Licensed waste carrier to be engaged and duty of care notes retained. Regular inspections of worksite by NHBC and Morris Safety Dept. to monitor housekeeping standards. Regular waste removal from canteen for the purpose of deterring vermin from the area.	Low	Site Manager to monitor. NHBC and Morris Safety Dept. to undertake site inspections Commercial teams to provide feedback on waste quantities.
5	Construction Operations	Effect on local environment from poor storage or refueling	Poorly organised materials or handled chemicals resulting in spills, leading to damage for local flora, fauna and habitats	Medium	Site Stores to be established. Designated fuel stores & refuelling area to be provided. Local TM plan to be produced and fully implemented.	Low	Site Manager to monitor. NHBC to undertake site inspections

PROJECT ENVIRONMENTAL PLAN

SECTION 5 : Monitoring Strategies

Overview of Monitoring Strategies

Dust

If required, Dust Deposition and pathway indicators will be positioned in three locations; typically upwind, within and downwind of the construction operations. The samples from these deposition gauges will be analysed on a monthly basis by an approved laboratory. Morris will evaluate the analytical results provided by the approved laboratory for the purpose of identifying the effectiveness of existing control measures.

Dust Measurement for PM10, PM2.5 & TSP – It is not envisaged that the activities associated with demolition and construction will create particulates of this size.

Noise

A Pulsar Type 30 Sound Level Meter will be utilised to determine both the background levels and the actual noise levels produced during the works. The noise meter is capable of providing real time analysis for the purpose of evaluating 'environmental' noise.

Prior to operations commencing, background readings will be taken on various surrounding boundaries and within the construction area. Noise monitoring will continue throughout the duration of the construction phase at regular intervals to ensure the effectiveness of existing controls.

Vibration

A Vibroc V901 meter will be available for monitoring levels of vibration. The meter will be positioned around the nearest sensitive receptor and results taken. This process will be repeated until such times as the levels of vibration have been measured to all the receptors likely to be affected by vibration.

TYPICAL CONTROL MEASURES FOR DUST SUPPRESSION



For all concrete and stone cutting operations a wet cutting system will be adopted. The devices (pictured left) significantly reduce the amounts of dust generated as depicted on the photographs below.



Mortar will be of the Silo type and will be mixed in enclosed mixing devices, thus reducing the dust associated with conventional mixing methods. A bowser, similar to the type above will be available for damping down roads and haul routes.

PROJECT ENVIRONMENTAL PLAN

SECTION 6 : Reporting Procedure

6.1 Arrangements for dealing with, and recording dust, noise, vibration or other nuisance complaints

If in the event that any person working on behalf of Morris Homes receives a nuisance complaint, it will be immediately brought to the attention of the Site Manager and the following actions undertaken;

1. Upon notification of a complaint the Site Manager will immediately undertake an initial investigation to determine if the complaint can be substantiated.
2. If in the opinion of the Site Manager the complaint is justified he will immediately suspend the operation, giving rise to the complaint.
3. Dependant upon the nature of the incident, the Site Manager may then either issue appropriate instructions to negate the recurrence or alternately request assistance from the Technical and Safety Departments.
4. Irrespective of which option (above) is taken, all complaints will be recorded and retained on site. Records of complaints will be made available to interested parties upon request. A copy of the complaints form is included within the Appendix for information purposes.
5. Upon thorough investigation of the complaint, the complainant will be contacted and sufficiently briefed with regards to what remedial actions were implemented.

6.2 Information for the transfer on monitoring data

(To be determined)

6.3 Relevant Contact Details

Contact Telephone Numbers	Office numbers	telephone	Mobile / Out of Hours
Site Office	tbc		
Regional Office	01625 544 444		
Group Safety Director	01625 544 444		07900 278 250
Regional Construction Director	01625 544 444		
Contracts Manager	01625 544 444		
Site Manager	tbc		
Company Safety Officer	01625 544 444		07917 077 305
Environment Agency Hotline	0800 80 70 60		0800 80 70 60

PROJECT ENVIRONMENTAL PLAN

SECTION 7 : Arrangements for Briefing the Workforce

In order to effectively meet the objectives & targets and notify persons on site of the reporting arrangements, certain members of the workforce will be required to be briefed in the content of this Project Environmental Plan. Note in some situations it may not be relevant to brief all persons in every aspect of this document.

Where the worksite is shared with other occupiers there may be instances where the contents of this Project Environmental Plan should be briefed to the relevant person in control.

Please note all members of the Contract Team must make themselves aware of the contents of this document and sign their name below.

[illegible]

PROJECT ENVIRONMENTAL PLAN
APPENDIX 1 : Site Plan

To be included

ENVIRONMENTAL PLAN
APPENDIX 3 : Environmental Reporting Form

Environmental Issue Reporting Form



This form is generated from : ✓

Community complaint: ☐
 Measured exceedences: ☐
 Self-inspection: ☐
 Member of the workplace: ☐

In regard to the following: ✓

Noise: ☐
 Vibration: ☐
 Dust: ☐
 Other (please specify): ☐

Name:	Date and Time:
Wind direction:	Wind speed:
Cloud cover (%):	Recent rainfall and ground condition:
Nature of the issue:	
Signed:	
Date and time:	
Mitigation measures implemented:	
Signed:	
Date and time:	
Follow up and/or measurement:	
Signed:	
Date and time:	
Additional actions required:	
Signed:	
Date and time:	

Copies of this form should be retained within the Project Environmental Plan for verification

PROJECT ENVIRONMENTAL PLAN
APPENDIX 4 : Pollution Prévention Guidelines PPG6

WORKING AT CONSTRUCTION AND DEMOLITION SITES: PPG6

POLLUTION PREVENTION GUIDELINES

These guidelines are intended to assist those in the construction and demolition industry with responsibility for managing the environmental impact of their activities. Compliance with these should minimise the effect of the work on the environment. The guidelines are jointly produced by the Environment Agency for England and Wales, the Scottish Environment Protection Agency and the Environment and Heritage Service in Northern Ireland, referred to as the Agency or Agencies. Sites are considered according to individual circumstances and early consultation with your local Agency office is advisable. Contact details will be found at the end of these guidelines.

1. LEGAL FRAMEWORK

- a. The Agencies are responsible for both the protection of "controlled waters" from pollution and for the prevention of pollution of the environment, harm to human health and detriment to local amenity by waste management activities under the Environmental Protection Act 1990.

"Controlled waters" include all watercourses, lakes, lochs, coastal waters and water contained in underground strata (or "groundwater") and it is an offence to pollute such waters, either deliberately or accidentally. In addition, the formal consent of the Agency is required for many discharges to controlled waters, including both direct discharges and discharges to soakaways. Such consents are granted subject to conditions and are not granted automatically.
- b. All discharges to the public foul sewer require authorization by the sewerage undertaker and may be subject to the terms and conditions of a trade effluent consent.
- c. Any other waste produced on a construction site will be subject to the Duty of Care (Reference 1) under the Environmental Protection Act 1990 and may also be subject to control under the Waste Management Licensing Regulations 1994. In addition certain hazardous wastes are subject to the Special Waste Regulations 1996. Separate legislation applies in Northern Ireland. Advice is available from the Agencies.

2. INTRODUCTION

Most pollution incidents are avoidable. Careful planning can reduce the risk of pollution. Most of the measures needed to prevent pollution cost very little, especially if they are included at the planning stage. In contrast, the costs of cleaning up a pollution incident can be very high. Moreover, pollution prevention and waste minimisation measures may offer substantial economic benefits. These include reducing the need for expensive raw materials, fewer site accidents and a reduced risk of prosecution for environmental offences. Introduction of pollution prevention measures is the first step, but for these to be effective, managers must be committed and employees must understand why they are needed and be suitably trained. Further guidance on the control of water pollution from construction sites (Reference 2) and a video for use in training sessions is available (Reference 3).

Where a watercourse runs through or adjacent to a site, extra care will be needed, for example to prevent waste from the site being deposited in the watercourse. Additional guidance for such sites is available from the Agencies (PPG5-Reference 4).

3. PLANNING AND PREPARATION

- a. In planning and carrying out any works, precautions must be taken to ensure the complete protection of watercourses and groundwater against pollution. These should include an investigation of past use of the site to ensure that the operations will not disturb contaminated land and a survey of the siting and contents of all storage tanks and pipelines. The Industry profiles published by DEFRA (Reference 5) will assist in identifying potential contamination and ways to reduce their impact, based on former industrial uses of the site. If there is any contaminated land on site, the Local Authority and local Agency officer should be consulted on its remediation or disposal.

- b. Any underground services on the site should be identified and clearly marked before demolition or construction work begins and precautions taken to prevent damage to them. Old storage tanks should be checked and safely emptied before they are moved.
- c. Arrange a site meeting with the local Agency officer before work commences. The advice given both before work starts and during the operations may prevent serious problems arising.
- d. Vandalism and theft are common causes of pollution. Sites should be adequately protected by secure fences and locked access where possible.

4. SITE DRAINAGE

In developed areas it is likely that there will be two types of drainage from a site. It is recommended that manholes on site are colour coded, for example using blue for surface water and red for foul.

a. Surface Water

The surface water drain is designed to carry uncontaminated rainwater directly to a local stream, river or soakaway. In some cases this may be some distance from the site. Nothing which could cause pollution, including silty water, should enter the surface water drains.

b. Foul Water

The foul water drain carries contaminated water to a sewage works for treatment before discharge to a watercourse or soakaway. It may be possible to pump dirty water to a foul sewer, provided the approval of the water undertaker has been received. Where no foul sewer is available, alternative arrangements will be necessary for sewage disposal - see (PPG4-Reference 6).

5. DELIVERIES

Special care should be taken during deliveries, especially when fuels and hazardous materials are being handled. Ensure that all deliveries are supervised by a responsible person, that storage tank levels are checked before delivery to prevent overfilling and that the product is delivered to the correct tank. Put in place a contingency plan and suitable materials to deal with any incident. Ensure that employees know what to do in the event of a spillage. If properly dealt with, a spillage need not result in pollution.

6. STORAGE

Many of the materials used in construction operations, such as oil, chemicals, cement, lime, cleaning materials and paint have the potential to cause serious pollution.

a. Fuels, oils and chemicals

All fuel, oil and chemical storage must be sited on an impervious base within a bund and secured. The base and bund walls must be impermeable to the material stored and of an adequate capacity. Detailed guidelines concerning above ground oil storage tanks are available (PPG2-Reference 7). Storage at or above roof level should be avoided.

Leaking or empty oil drums must be removed from the site immediately and disposed of via a licensed waste disposal contractor.

b. Security

All valves and trigger guns should be protected from vandalism and unauthorised interference and should be turned off and securely locked when not in use. Any tanks or drums should be stored in a secure container or compound, which should be kept locked when not in use. Bowsers should be stored within site security compounds when not in use.

c. Marking

The contents of any tank should be clearly marked on the tank, and a notice displayed requiring that valves and trigger guns be locked when not in use.

d. Removal

Before any tank is moved or perforated at the end of a contract or particularly during demolition works, all contents and residues must be emptied by a competent operator (see 7c) for safe disposal. Pipes may contain significant quantities of oil or chemicals, and should be carefully drained and then capped, or valves closed, to prevent spillage.

7. WASTE MANAGEMENT

The correct handling, storage and disposal of waste materials is vital if environmental harm and public complaint are to be avoided. Schemes which aim to minimise waste and increase recycling are not only beneficial to the environment but can also reduce costs. The Duty of Care (Reference 1) requires waste producers to ensure that waste does not escape from their control and is passed only to an authorised person accompanied by a full written description. Consider how noise and dust emissions can be minimised and do not burn waste on site, as this will cause both pollution and annoyance to neighbours.

a. Waste minimisation

Waste disposal is increasingly costly. Waste minimisation involves reducing the volume of waste produced, reusing the material again (without reprocessing) or recycling (which involves an element of reprocessing). All of these can bring benefits to the environment and significant savings in terms of management time, wasted materials, transport and disposal charges and landfill tax. Further details on waste minimisation for the construction industry will be found in References 8 & 9. Note that concrete crushing plant may require authorisation from the local authority.

b. Waste treatment and storage

All wastes must be stored in designated areas which are isolated from surface drains. Under some circumstances, for example if storing or treating material from a contaminated site, a waste management licence may be required. Skips should be covered to prevent dust and litter being blown out and rainwater accumulation and should be regularly inspected and replaced when full. Where possible, separate skips should be provided so that wastes can be segregated for recycling or to prevent cross contamination. Used chemical containers may need special handling and the manufacturer's instructions should be followed. If plant maintenance is carried out on site, used oil should be stored in a bunded area for collection. Oil and fuel filters should also be stored in a designated bin in a bunded area for separate collection and recycling (PPG8-Reference 10). Used oil and filters are "special waste" - see 7c.

c. Waste disposal

Under the Duty of Care, the waste producer has a duty to ensure that the waste contractor who removes the waste is registered with the Agency. A written description of the waste must be given to the contractor. Certain hazardous wastes are defined as being "special wastes" and a more rigorous consignment note system applies. If there is any doubt, contact the Agency for advice.

8. SILT

Water containing silt should never be pumped directly into a river, stream or surface water drain. Silty water can arise from excavations, exposed ground, stockpiles, plant and wheel washing and site roads.

a. Excavations

Where possible prevent water from entering excavations. Use cut-off ditches to prevent entry of surface water and well point dewatering or cut-off walls for ground water. Use the corner of the excavation as a pump sump and avoid disturbing that corner. Do not allow personnel or plant to disturb water in the excavation.

b. Exposed ground and stockpiles

Minimise the amount of exposed ground and stockpiles. Stockpiles can be seeded or covered and silt fences constructed from a suitable geotextile may be useful.

c. Plant and wheel washing

Wheel washes and plant washing facilities should be securely constructed with no overflow and the effluent should be contained for proper treatment and disposal. A detailed guidance note on the use of pressure washers is available (PPG13-Reference 11)

d. Site roads

These should be regularly brushed or scraped and kept free from dust and mud deposits. In dry weather dust suppression measures may be required.

e. Dealing with silty water

Always ensure that adequate provision for dealing with silty water is included in the site working plan. All discharges off the site will require approval. Where possible discharge to the foul sewer (see section 4b). Discharges to streams, watercourses or soakaways must have the approval of the Agency, which should be obtained well in advance. (A discharge consent can take up to four months to obtain, or even longer for difficult cases). Suitable treatment will be required, which could involve the use of a settlement lagoon or tank or a grassed area.

9. REFUELLING

The risk of spilling of fuel is at its greatest during refuelling of plant. Where possible, refuel mobile plant in a designated area, preferably on an impermeable surface and away from any drains or watercourses. Keep a spill kit available. Never leave a vehicle unattended during refuelling or jam open a delivery valve. Check hoses and valves regularly for signs of wear and ensure that they are turned off and securely locked when not in use. Diesel pumps and similar equipment should be placed on drip trays to collect minor spillages. These should be checked regularly and any accumulated oil removed for disposal.

10. CONCRETE

Concrete is highly alkaline and corrosive and can have a devastating impact on watercourses. It is essential to take particular care with all works involving concrete and cement especially if working near a river, stream or surface water drain. Suitable provision should be made for the washing out of concrete mixing plant or ready mix concrete lorries. Such washings must not be allowed to flow into any drain or watercourse.

11. EMERGENCIES

In the event of a spillage on site, the material should be contained (using an absorbent material such as sand or soil or commercially available booms) and the Agency notified immediately using the emergency hotline number listed at the end of this guidance.

12. REFERENCES

1. Waste Management- The Duty of Care - A code of practice (revised 1996). ISBN: 0-11-753210-X: The Stationery Office Telephone: 08706 005522
2. "Building a cleaner future" training video pack: CIRIA/Environment Agency. To order, telephone 0845 7337700
3. Control of pollution from construction sites: C532
4. PPG5: Working in or near rivers
5. DOE Industry Profiles: DEFRA Publications, Telephone: 08459 556000
6. PPG4: Disposal of sewage where no mains drainage is available
7. PPG2: Above ground oil storage tanks
8. Waste Minimisation and Recycling in Construction - A site handbook: SP133
9. Managing materials and components on site: SP146
References 2, 8 & 9 are published by CIRIA (Construction Industry Research and Information Association) Telephone: 020 7222 8891
10. PPG8: Safe storage and disposal of used oils
11. PPG13: High pressure water and steam cleaners
References 2, 4, 6, 7, 10 & 11 are available free of charge, from the Agencies

All the Agencies' pollution prevention guidance notes are available on the web sites listed below.

ENVIRONMENT AGENCY

HEAD OFFICE

Rio House, Waterside Drive, , Aztec West
Almondsbury, Bristol BS32 4UD.
Tel: 01454 624 400 Fax: 01454 624 409
World Wide Web: <http://www.environment-agency.gov.uk>

REGIONAL OFFICES

ANGLIAN
Kingfisher House
Goldhay Way
Orton Goldhay
Peterborough PE2 5ZR
Tel: 01733 371 811
Fax: 01733 231 840

MIDLANDS
Sapphire East
550 Streetsbrook Road
Solihull B91 1QT
Tel: 0121 711 2324
Fax: 0121 711 5824

NORTH EAST
Rivers House
21 Park Square South
Leeds LS1 2QG
Tel: 0113 244 0191
Fax: 0113 246 1889

NORTH WEST
PO Box 12
Richard Fairclough House
Knutsford Road
Warrington WA4 1HG
Tel: 01925 663 999
Fax: 01925 415 961

SOUTHERN
Guildbourne House
Chatsworth Road
Worthing
West Sussex BN11 1LD
Tel: 01903 832 000
Fax: 01903 821 832

SOUTH WEST
Manley House
Kestrel Way
Exeter EX2 7LQ
Tel: 01392 444 000
Fax: 01392 444 238

THAMES
Kings Meadow House
Kings Meadow Road
Reading RG1 8DQ
Tel: 0118 953 5000
Fax: 0118 950 0388

WALES
Ty Cambria/
Cambria House
29 Newport Road
Cardiff CF24 0TP
Tel: 029 2077 0088
Fax: 029 2079 8555

SCOTTISH ENVIRONMENT PROTECTION AGENCY

CORPORATE OFFICE
Erskine Court
The Castle Business Park
Stirling FK9 4TR
Tel: 01786 457 700
Fax: 01786 446 885
World Wide Web: <http://www.sepa.org.uk>

AREA OFFICES

**HIGHLANDS, ISLAND
AND GRAMPIAN AREA**
Graesser House
Fodderty Way
Dingwall Business Park
Dingwall IV15 9XB
Tel: 01349 862 021
Fax: 01349 863 987

SOUTH WEST AREA
SEPA West
5 Redwood Crescent
Peel Park
East Kilbride G74 5PP
Tel: 01355 574 200
Fax: 01355 574 688

SOUTH EAST AREA
Clearwater House
Heriot-Watt Research Park
Avenue North
Riccarton
Edinburgh EH14 4AP
Tel: 0131 449 7296
Fax: 0131 449 7277

ENVIRONMENT & HERITAGE SERVICE

Calvert House,
23 Castle Place,
Belfast
BT1 1FY
Tel: 028 9025 4868
Fax: 028 9025 4777
World Wide Web: <http://www.shsnigov.uk>

The 24-hour emergency hotline number for reporting all environmental incidents relating to air, land and water in England, Wales, Scotland and Northern Ireland.

EMERGENCY HOTLINE
0800 80 70 60



ENVIRONMENT
AGENCY



ENVIRONMENTAL ALLIANCE – WORKING TOGETHER

PROJECT ENVIRONMENTAL PLAN

APPENDIX 5 : Index of Morris Homes Health, Safety & Environmental Guidance Notes

Contents List: Health and Safety Guidance Notes			
Legislative Requirements		Plant and Equipment	
Health and Safety at Work Act 1974	A1	Abrasive Wheels	D1
Responsibilities, Offences and Penalties etc	A2	Cartridge Operated Tools	D2
Safety Policies	A3	Lifting Equipment & Accessories for Lifting	D3
Consultation with Employees	A4	Mobile Elevating Work Platforms	D4
Induction Training	A5	Plant and Work Equipment	D5
General Safety Legislation	A6	Security on Site	D6
Construction Regulations	A7	Woodworking Machines	D7
Construction (Design and Management) Regulations	A8		
Control of Substances Hazardous to Health	A9	Hazards at Work	
New Roads and Street Works Act 1991	A10	Asbestos	E1
Accident Reporting and Investigation	A11	Buried Services	E2
Accident Prevention and Control	A12	Dust Hazards and the Control of Fumes	E3
Statutory Forms and Notices	A13	Electricity on Site	E4
Young Persons	A14		
Occupational Health and Hygiene		Excavations	E5
Management of Health on Site	B1	Lead Hazards	E6
Behavioural Safety and Science	B2	Demolition	E7
Drugs and Alcohol	B3	Trackside Safety	E8
First Aid at Work	B4	Confined Spaces	E9
Food Safety on Site	B5		
Risk Assessments & Method Statements	B6	Personal Protection	
Manual Handling	B7	Personal Protective Equipment	F1
Safety Inspections, Provision of Safety Information and Safety Auditing	B8	Control of Noise	F2
		Protection of Eyes	F3
		Protection of Skin	F4
		Vibration	F5
Working at Height			
Working at Heights	C1		
Ladders, Steps & Lightweight Staging	C2		
Hoists and Hoist Towers	C3	Fire and Fuels	
Scaffolding – System Scaffolds and Mobile Towers	C4	Fire Prevention & Control in the Office	H1
Scaffolding - Tube & Fitting	C5	Fire Prevention & Control on Site	H2
Roofwork / Safe Working at Heights	C6	Highly Flammable Liquids & Adhesives	H3
Safety Nets and Suspension Equipment	C7	Liquefied Petroleum Gases	H4
Erection of Structural Steelwork	C8	Vehicle Fuels (Petrol, Diesel & LPG)	H5
Contents List: Environmental Guidance Notes			
Waste Management	G1	Works in, Near or Liable to Affect Watercourses	GMH1
Environmental Management: Introduction	G2	Cement and Concrete	GMH4
Fuel, Oil and Chemical Storage and Distribution	GMH1	Energy Management	GMH7
Environmental Noise	GMH2	Management of Environmental Responsibilities	GMH8
Site Drainage	GMH3	Emergencies	GMH9
Silt	GMH4		

PROJECT ENVIRONMENTAL PLAN
APPENDIX 6 : Environmental Toolbox Talks



Environmental Toolbox Talks

Contents:

Environmental Toolbox Talks Contents

- 1. Spill Control**
- 2. Water Pollution Prevention**
- 3. Dust & Air Quality**
- 4. Noise and Vibration**
- 5. Water Pollution – Silt**
- 6. Water Pollution – Cement & Concrete**
- 7. Tree Protection**
- 8. Waste Management – Reduce/Re-use/Recycle**
- 9. Storage of Waste**
- 10. Japanese Knotweed**
- 11. Himalayan Balsam**
- 12. Giant Hogweed**
- 13. Storage and Use of Petrol, Diesel & Oil**
- 14. Material Handling & Housekeeping**
- 15. Archaeology**
- 16. Bentonite**
- 17. Pumping & Over-pumping**
- 18. Washing Down Plant & Machinery**
- 19. Bats**
- 20. Badgers**
- 21. Be a Good Neighbour**
- 22. Great Crested Newts**
- 23. Working on Previously Developed Land**
- 24. Segregation of Waste**

Toolbox Talk Attendance Register

TOOLBOX TALK

No 1

SPILL CONTROL

WHAT?

Accidental releases of oils and chemicals from construction sites make up a large number of pollution incidents that occur each year.

Many spillages can be prevented. It is important that everyone on site knows how to control a spill to minimise its impact.

Would you know what to do?



WHY?

- ☐ **Minimise potential harm:** Spills spread very quickly and lead to environmental harm.
- ☐ **Avoid prosecution:** Fines and clean up costs can be expensive
- ☐ **Public relations:** Avoid negative publicity for the company and our clients and maintain our workload.

DO

- ✓ STOP WORK immediately
- ✓ If spillage is flammable, extinguish all possible ignitions.
- ✓ Identify the source of pollution and rectify the problem
- ✓ Contain the spillage – on land use earth/sand to construct a bund around the spill to stop it spreading. Use booms to contain oil spills that have already entered a watercourse
- ✓ Contact your Line Manager
- ✓ Put on appropriate PPE – typically rubber gloves
- ✓ Protect sensitive areas (e.g. watercourses or surface water drains – use drain covers or use earth/sand to construct a bund)
- ✓ Clean up the spill. Use absorbent granules/pads to mop up spills. Large pools of oil or spills which cannot be absorbed should be removed by gulper
- ✓ Dispose of all contaminated materials (soil/absorbent materials) correctly – those containing substances such as oil, diesel or paint will be hazardous waste. Ensure any contaminated water is taken to an appropriately licensed disposal site.
- ✓ Notify your line manager of actions taken

DON'T

- ✗ DON'T ignore it! STOP WORK and ACT immediately.
- ✗ DON'T hide the incident – ensure you report it and implement controls.
- ✗ DON'T ever hose a spill into the drainage system. Always use absorbent materials.



TOOLBOX TALK

No 2 WATER POLLUTION PREVENTION (FUEL & OIL)

WHAT?

A large number of oil related water pollution incidents occur each year.

Discharging fuel or oil or water containing fuel or oil into drains or watercourses is illegal

Many pollution incidents are from unbunded tanks and can easily be avoided by following simple guidelines.

WHY?

- ☐ **Avoid prosecution:** Your employer or you as an individual can be prosecuted for causing water pollution
- ☐ **Cost:** The costs of clean up far exceed those to put control measures in place
- ☐ **Damage to wildlife:** Long-term damage to watercourses including fish kills. Oil spreads rapidly - one gallon of oil can completely cover a lake the size of two football pitches

DO

General

- ✓ Store oils away from drains or watercourses
- ✓ Return oil and fuels to storage areas after use
- ✓ Locate oil stores away from areas of high vehicular movement to prevent accidental damage
- ✓ Bund individual 205 litre drums to 25%
- ✓ Supervise all fuel deliveries
- ✓ Lock oil stores when not in use
- ✓ Use drip trays under all static plant and during refuelling from mobile plant.

Bulk Storage

- ✓ Bund tanks and bowzers to 110%
- ✓ Ensure bunds are free from cracks and leaks
- ✓ Regularly empty bunds and drip trays of rainwater, which should be treated as contaminated
- ✓ Keep all hoses and pipe work within bunded area after use
- ✓ Keep a spill kit near to fuel and oil storage areas and refuelling areas
- ✓ Report any irregularities or incidents.

DON'T

- ✗ DON'T refuel or store oil within 10m of watercourses or surface water drains
- ✗ DON'T leave bunds and drip trays to overflow
- ✗ DON'T leave refuelling hoses outside of bunds after use
- ✗ DON'T use high pressure delivery systems when filling small containers
- ✗ DON'T hose down spills
- ✗ DON'T ignore spillages.



See also: Toolbox Talk No 1 – Spill control

TOOLBOX TALK

No 3

DUST & AIR QUALITY

WHAT?

Dust, emissions and odours can annoy neighbours and may cause health risks at very high concentrations

WHY?

- ❑ **Avoid nuisance to neighbours:** Dust can settle on neighbours' properties and give rise to local dispute. Poorly controlled emissions and odours from plant or works may give rise to valid complaints.
- ❑ **Avoid programme delays:** The Local Authority has the power to stop works if dust is causing a nuisance. Emission of dark smoke from plant and fires is illegal.
- ❑ **Avoid health problems:** Dust may cause eye irritation or make asthma worse
- ❑ **Avoid impact on ecology:** Dust can damage the ecology of a watercourse and affect plant growth, including crops

DO

- ✓ Keep surfaces swept and damp down with water at regular intervals
- ✓ Minimise drop heights into haulage vehicles and into conveyors
- ✓ Ensure cutting and grinding operations are adequately shielded or wetted
- ✓ Sheet lorries carrying dry materials off site
- ✓ Keep to site speed limits to minimise dust generation
- ✓ Use the wheelwash, for appropriate vehicles, if one is provided on site
- ✓ Store fine, dry materials within buildings or provide adequate protection from the wind.
- ✓ Store bulk cement and bentonite in silos
- ✓ Position silos and stockpiles away from residential areas or watercourses.
- ✓ Clean up or damp down any spillage of dry dusty materials
- ✓ Notify your Line Manager if work activities are causing poor air quality.

DON'T

- ✗ DON'T burn materials on site without approval from your Project Manager. Permission is required first from the Environment Agency
- ✗ DON'T use poorly maintained plant. Black smoke may give rise to poor health and can cause a nuisance
- ✗ DON'T leave plant running if not in use
- ✗ DON'T ignore sources of poor air quality, notify your line manager
- ✗ DON'T ignore complaints



TOOLBOX TALK

No 4

NOISE AND VIBRATION

WHAT?

The Construction Industry is one of the leading sources of noise complaints made to Local Authorities.

Something is considered 'noisy' when the sound is unwanted by the listener. Noise and vibration emissions can disturb local residents and give rise to complaints and delays.

Noisy activities include: excavation, tunnelling, concrete cutting, piling, using un-silenced generators and concrete pours.

WHY?

- ☐ *To act as a good neighbour:* avoid complaints and maintain good relations with the local community
- ☐ *To avoid programme delay:* The Local Authority have the power to stop works if noise from the site is causing a nuisance
- ☐ *To avoid fines:* Failing to meet noise constraints can result in fines.
- ☐ *To avoid structural damage:* vibration may cause structural damage
- ☐ *To comply with contractual requirements*
- ☐ *To prevent harm to wildlife:* Noise can disturb wildlife as well as humans

DO

- ✓ If possible, restrict noisy activities to certain times of the day
- ✓ Adhere to working hours. Some sites are only consented to work at certain times
- ✓ Plan deliveries. Arrange routes and times to minimise potential nuisance to the local community
- ✓ If possible, keep noisy plant away from public areas
- ✓ Minimise drop heights into hoppers, lorries and other plant
- ✓ Use local screening where necessary. Noise can be reduced if a screen is placed between plant and nearby sensitive locations eg. houses. Screens can be straw bales or ply board
- ✓ Use silenced generators and tower lights where necessary
- ✓ Keep acoustic doors and hoods on plant closed – it does make a difference!
- ✓ Contact your Line Manager if you are in doubt about noisy activities.

DON'T

- ✗ DON'T undertake noisy works during the evening, at night or very early in the morning if it can be avoided!
- ✗ DON'T leave doors and hoods open on plant
- ✗ DON'T leave plant running unnecessarily
- ✗ DON'T use poorly maintained plant
- ✗ DON'T ignore complaints from the local community
- ✗ DON'T undertake activities that could cause damage to nearby structures through vibration unless approved by your line manager.



TOOLBOX TALK

No 5

WATER POLLUTION - SILT

WHAT?

Silt is the term used for very fine particles of soil.

Silt mixed with water in the form of mud, can be washed off construction sites into nearby watercourses and drains.

Pollution by silt can be caused by:
rainwater run off from uncovered areas of the site,
pumping out and dewatering of excavations,
tunnelling operations and cleaning of ditches and drains.

Proper planning will prevent these pollution incidents.



WHY?

- ❑ **Avoid environmental harm:** High levels of silt suspended in water can suffocate fish by blocking their gills, can remove essential oxygen from the water and can kill plants, animals and insects living in the water by stopping sunlight reaching them.
- ❑ **Avoid environmental harm:** Silt often combines with other contaminants such as oils and chemicals potentially causing greater pollution than silt alone.
- ❑ **Avoid prosecution:** Because of the potential for harm, it is illegal to allow silt to enter a watercourse or drain. Silt pollution spoils the appearance of watercourses, is easily traceable to the site from where it originated and, in the past, has been a major cause of prosecution.

DO

- ✓ Only discharge silty water into designated settlement systems
- ✓ Check that site drainage and settlement systems are working - discolouration may indicate high pollutant loading
- ✓ Stop pumping and contact your manager if you think a problem is arising
- ✓ Ensure that all hardstandings are kept clean – notify your manager if an area is silty or is covered in mud
- ✓ Notify your manager immediately if you see silty water entering a watercourse or drain and do try to stop it or divert it away by, for example, using sand bags.

DON'T

- ✗ DON'T dewater any excavation without getting permission from your manager
- ✗ DON'T pump silty water directly into rivers, ditches or surface water drains
- ✗ DON'T strip land of vegetation unless it is absolutely necessary – vegetation reduces silt run-off
- ✗ DON'T store soil, stone or similar materials within 10 metres of watercourses or drains
- ✗ DON'T dig a grip to release ponded water to a watercourse or drain.



TOOLBOX TALK

No 6 WATER POLLUTION – CEMENT and CONCRETE

WHAT?

Cement and concrete are probably the most common materials used in construction.

Cement is a highly alkaline material and is corrosive.

If cement or concrete is allowed to enter a watercourse in an uncontrolled manner it can have a devastating impact on wildlife.

WHY?

- ❑ **Avoid environmental harm:** Water contaminated with cement is highly alkaline and can be toxic to fish, plants and animals living in watercourses. Cement particles entering a watercourse can clog fishes' gills and also destroy their spawning grounds.
- ❑ **Avoid prosecution:** It is illegal to allow cement, unset concrete or washout water containing cement to enter a watercourse or drain.
(Special permission is needed before construction work can take place in a watercourse).



DO

- ✓ Identify all watercourses, gullies and drains prior to commencing work
- ✓ Store bulk and bagged cement and concrete additives at least 10 metres away from watercourses, gullies and drains
- ✓ Undertake mixing/batching works well away from watercourses and drains.
- ✓ Use only designated areas for concrete washout
- ✓ Where necessary protect nearby drains against washout water running into them.
- ✓ NOTIFY your manager IMMEDIATELY if you see any concrete spillages or concrete washout likely to cause pollution.

DON'T

- ✗ DON'T hose down spills of concrete or cement into surface water drains.
- ✗ DON'T allow washout water to flow into any watercourse or drain.
- ✗ DON'T allow ready-mix trucks to washout anywhere other than in areas designated for the purpose.
- ✗ DON'T wash off any tools or plant in watercourses

TOOLBOX TALK

No 7

TREE PROTECTION

WHAT?

Trees and hedgerows are an important part of the environment and the countryside.

They provide a vitally important habitat for wildlife and many trees and hedgerows are protected by law.



WHY?

- ❑ **Avoid prosecution:** It is illegal to cut down trees protected by law under a Tree Preservation Order or to grub up certain countryside hedges.
- ❑ **Avoid environmental harm and prosecution:** During certain times of the year trees and hedgerows may contain nesting birds. Nesting birds are protected by law against disturbance under the Wildlife and Countryside Act.
- ❑ **Ensure safety is maintained:** Damaged trees may become unstable and potential hazards.

DO

- ✓ Check with your manager before felling any trees or removing any hedgerows
- ✓ Clear only vegetation as instructed by your manager
- ✓ Check for nesting birds and if any are found contact your manager immediately
- ✓ Ask your manager what protection is required to trees and hedgerows
- ✓ Check with your manager before excavating near to trees and hedgerows.

DON'T

- ✗ DON'T undertake tree felling or hedgerow clearance during the bird nesting season
- ✗ DON'T undertake any works to, or near to, trees without authorisation from your manager
- ✗ DON'T track vehicles or plant over tree protection areas
- ✗ DON'T store materials, especially fuels and oils under or near trees.



image: www.freemagics.co.uk



TOOLBOX TALK

No 8 WASTE MANAGEMENT – REDUCE / RE-USE / RECYCLE

WHAT?

The construction industry generates over 70 million tonnes of waste per year and it is estimated that this total includes 13 million tonnes of construction materials thrown away unused

To minimise waste we must

- Firstly **Eliminate** the waste if we can
- secondly **Reduce** the waste we create
- then **Reuse** materials until we can't use them again and
- only then **Recycle** the waste. Only if we can't recycle can we
- finally **Dispose** of the waste to landfill.



WHY?

- ❑ **Avoid environmental harm:** Reduction, reuse and re-cycling of waste minimises the environmental impacts of disposal of waste to landfill.
- ❑ **Reduce costs:** The true cost of waste is more than just the disposal cost and is made up of
 - the original purchase price of the material
 - the cost of unloading, handling, storage and transporting the material around site
 - the cost of collecting the waste or damaged material, reloading, moving and storing waste on site
 - the cost of transporting waste to a tip, the tipping charges and landfill taxes
 - the purchase price of replacing damaged and wasted materials.

DO

- ✓ **Eliminate** unnecessary wastage by storing materials neatly on flat solid ground to avoid damage and loss
- ✓ **Reduce** the amount of waste you create on site
- ✓ Keep materials in their packaging for as long as possible to protect them from damage
- ✓ Keep significant offcuts for use elsewhere
- ✓ **Reuse** materials until no longer fit for purpose, for example, shuttering, fencing
- ✓ Then reuse materials for alternative purposes for example, use old shuttering ply for hoardings
- ✓ **Recycle** materials whenever possible
- ✓ Segregate waste on site into different types
- ✓ Store waste in the appropriate skip or container until removed from site

DON'T

- ✗ **DON'T** put waste materials into the wrong waste container
- ✗ **DON'T** open new cans or pallets before the ones in use are empty
- ✗ **DON'T** leave materials unprotected and where they are likely to be damaged by, for example, rain or mud.
- ✗ **DON'T** burn or bury waste – it's illegal
- ✗ **DON'T** mix different types of waste – it prevents recycling



TOOLBOX TALK

No 9

STORAGE OF WASTE

WHAT?

Allowing waste to escape into the environment not only causes nuisance to neighbours and generates a poor public image it is illegal

WHY?

- ❑ **Avoid prosecution:** It is the duty of all waste producers to prevent their waste escaping into the environment.
- ❑ **Reduce costs:** The segregation of waste into separate containers or skips can lead to lower costs by
 - reducing disposal costs and landfill tax payments through preventing the contamination of inactive wastes by active wastes
 - maximising the potential for reusing and recycling materials
 - making it easier to see how much of each type of waste is being produced and hence where efforts to reduce waste need to be targeted

DO

- ✓ Keep sites tidy and collect up any waste regularly
- ✓ Use waste containers or skips suitable for the type of waste being stored
- ✓ Use skips with lids or cover them with sheets or nets to prevent dust and litter being blown out
- ✓ Check that containers and skips are not corroded or worn out to minimize the risk of accidental spillages or leaks
- ✓ Mark waste containers clearly with their intended contents and ensure labels on containers are kept in good order
- ✓ Segregate waste before putting it into the designated containers
- ✓



DON'T

- ✗ DON'T throw materials into the wrong container
- ✗ DON'T contaminate one waste type with another
- ✗ DON'T mix hazardous with non-hazardous waste – it's illegal
- ✗ DON'T give waste away, all waste taken off site needs to be accompanied by paperwork
- ✗ DON'T damage covers over or bunds around any skips or containers
- ✗ DON'T burn or bury waste – it's illegal
- ✗



TOOLBOX TALK

No 10

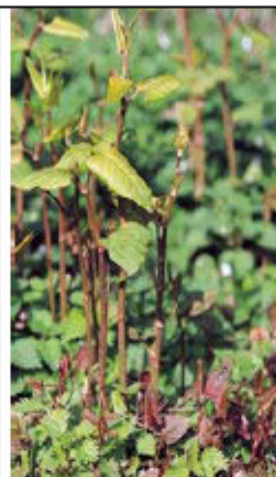
JAPANESE KNOTWEED

WHAT?

Japanese Knotweed (*Polygonum cuspidatum*) was originally introduced to the UK as an ornamental plant but has spread extensively in the wild. With its rapid growth of more than 20mm a day, it forms dense clumps over 3m high which crowd out and prevent the growth of native plants.

The rhizome root system, from which new plants grow, can extend several metres away from the original plant and be up to 2m deep. The plant spreads so rapidly not only through progression of its root system but because any fragments of its stem or root will grow to form a new plant (a piece as small as 0.8 grams can regenerate). This makes it a very difficult plant to eradicate.

Japanese Knotweed will grow in any type of soil no matter how poor and is often found along railways, riverbanks, roads and particularly on derelict sites.



Identification

- o Japanese Knotweed forms dense clumps and grows up to 3 metres tall
- o The stem is hollow with distinct nodes like bamboo and breaks easily. In Spring it is fleshy and red tinged and in Summer it is green with purple speckles.
- o Leaves in Spring are pinky red and uncurl as the stem grows. In Summer they become large oval or heart shaped mid-green.
- o Flowers are cream coloured and appear in drooping clusters towards the end of August.
- o The plant dies before November often leaving behind the upright brown, hollow, woody stalks.

WHY?

- ❑ **Avoid environmental harm:** Japanese Knotweed shades out native plants by producing a dense canopy of leaves early in the growing season. Although Japanese Knotweed is not toxic to humans or animals, it offers a poor habitat for insects, birds and mammals.
- ❑ **Avoid prosecution:** It is illegal "to plant or otherwise encourage" the growth of Japanese Knotweed. This could include cutting the plant or roots and disturbing or moving surrounding soil which may contain root material unless as part of an eradication process.
- ❑ **Prevent damage to structures:** The plant is strong enough to penetrate foundations, walls, roads and drainage pipework.

DO

- ✓ **IMMEDIATELY** stop all work within 7 metres of the suspect plant and contact your line manager for instructions if you think you have identified Japanese Knotweed on your site.

DON'T

- ✗ **DON'T** excavate or move any soil from within 7 metres of a Japanese Knotweed plant without instruction
- ✗ **DON'T** track plant or vehicles over the area
- ✗ **DON'T** stockpile potentially contaminated material within 10 metres of a watercourse or drain.



TOOLBOX TALK

No 11

HIMALAYAN BALSAM

WHAT?

The tallest annual plant now growing in the British Isles, Himalayan Balsam (*Impatiens glandulifera*) was introduced to the UK 150 years ago as an ornamental plant but quickly spread into the wild.

Himalayan Balsam thrives because each plant produces more than 500 seeds before it dies in the Autumn. When the seed pods are ripe, the slightest touch causes them to burst open catapulting and dispersing the seeds up to 7m away.

They are often found growing along rivers, disused railway lines or in similar linear corridors.



Identification

- Himalayan Balsam grows up to 2.5m tall.
- The stem is pinky red, hollow, sappy and brittle.
- Leaves occur in two's or three's from the same point on the stem, are spear shaped with serrated edges, shiny and dark green with a reddish mid-rib.
- Flowers, which are similar to a Foxglove, are purplish pink, carried on long stalks and appear from June to October.
- Seed pods, which are brown / black are produced from August to October.

WHY?

- ❑ **Avoid environmental harm:** As one of the most invasive species in the British Isles, Himalayan Balsam dominates habitats, grows densely and shades out native plants. Biodiversity is affected as the consequent loss in plant diversity leads to a reduction in the population of insects and birds.
- ❑ **Avoid environmental harm:** Dead stems washed into and clogging up watercourses cause an increased risk of flooding.

DO

- ✓ Stop work in the immediate area and contact your manager for instruction if you think you have identified Himalayan Balsam on your site.

DON'T

- ✗ DON'T disturb the seedpods.
- ✗ DON'T move soil that may contain seeds or other plant material without specific instructions.



TOOLBOX TALK

No 12

GIANT HOGWEED

WHAT?

Introduced as an ornamental plant 150 years ago, Giant Hogweed (*Heracleum mantegazzianum*) is now wide spread throughout the UK. It is a perennial plant that flowers only in its 4th year of growth and, having flowered, it dies.

Throughout its life each plant can grow to over 5m tall and its flowers can disperse as many as 50,000 seeds allowing the species to spread rapidly and widely. These seeds can remain viable on or in the ground for up to 15 years.

It thrives in any habitat but particularly where soil has been disturbed such as riverbanks, derelict land or railway embankments.



Identification

- o Giant Hogweed grows up to 5m tall.
- o The stem starts growing in March / April and is green but develops dark red / purple spots or blotches during summer. It is hollow, furrowed or ribbed, has sparse spiky hairs and can be 100 mm across.
- o Leaves are dark green, have deeply cut lobes with ragged edges, can be 1 metre across and form in a rosette.
- o Flowers are white, umbrella like and up to 500 mm across and appear from June in the 4th year
- o Seedpods, which are beige, are produced from August to October.

WHY?

- ❑ **Health hazard:** The plant contains large amounts of poisonous sap, which, on contact with the skin and in the presence of sunlight, causes severe irritation, swelling and painful watery blisters. This reaction can occur up to 24 hours after exposure to sunlight. Contact with eyes can cause temporary blindness.
- ❑ **Avoid environmental harm:** As it spreads it endangers the survival of native plants. The loss of other vegetation may lead to excessive erosion of soil as the giant hogweed dies back in winter. Giant Hogweed can cause significant harm to grazing animals.
- ❑ **Avoid prosecution:** It is illegal "to plant or otherwise encourage" the growth of Giant Hogweed. This could include moving surrounding soil which may contain either seeds or plant material unless as part of an eradication process.

DO

- ✓ IMMEDIATELY stop all work near to the suspect plant and contact your line manager for instructions if you think you have identified Giant Hogweed on your site.
- ✓ Seek medical advice if you have been in contact with the sap
- ✓ Wear protective clothing before touching the plant.

DON'T

- ✗ DON'T handle the plant until further advice is taken.
- ✗ DON'T move soil that may contain seeds without specific instructions.

TOOLBOX TALK

No. 13 STORAGE and USE OF PETROL, DIESEL and OILS

WHAT?

Petrol, diesel and oils inappropriately used, stored or disposed of can give rise to pollution of the environment.

Generally these substances are released into the environment through spillages during delivery or use or through waste materials being poured directly to drains or gullies or being burned.



WHY?

- ❑ **Avoid prosecution:** If pollution is caused then prosecution may follow.
- ❑ **Avoid environmental harm:** Petrol, diesel and oil are all highly harmful to plants, animals and humans
- ❑ **Cost:** The cost of clean up and legal proceedings following a spillage incident far exceeds the cost of putting proper control measures in place.

DO

Storage

- ✓ Store bulk petrol, diesel and oil in bunded tanks and store smaller containers on drip trays that have 110 % capacity of the largest container
- ✓ Keep a spill kit near to fuel and oil storage areas
- ✓ Store petrol, diesel and oil away from drains or surface watercourses.
- ✓ Always put lids on any containers after use.
- ✓ Ensure that all containers are undamaged.

Use

- ✓ Use the automatic shut off "pistol grip" delivery systems when refuelling from tanks or mobile bowser – do not tamper with the shut off system at any time.
- ✓ Return spare fuels and oils to proper storage areas
- ✓ Ensure that all refuelling is constantly attended and only undertaken at least 10m away from watercourses and drains.
- ✓ Lock the mobile bowser or storage tank after use.
- ✓ Use drip trays under all static plant and during refuelling from mobile plant.
- ✓ Clean up any minor spillages
- ✓ Use funnels when refuelling small plant and equipment to avoid spillages.

Disposal

- ✓ Ask your manager what to do with waste oil, petrol and diesel prior to any disposal.

DON'T

Storage

- ✗ DON'T refuel or store oil tanks within 10m of watercourses or surface water drains
- ✗ DON'T leave bunds and drip trays to overflow
- ✗ DON'T leave refuelling hoses outside bunds after use
- ✗ DON'T use high pressure delivery systems when filling small containers

Use

- ✗ DON'T leave refuelling operations unattended at any time
- ✗ DON'T leave containers open when unused
- ✗ DON'T leave containers in an area where they can be damaged
- ✗ DON'T ignore spillages

Disposal

- ✗ DON'T pour petrol, diesel or waste oil down drains or gullies
- ✗ DON'T try to dispose of petrol, diesel or waste oils by setting fire to them.



TOOLBOX TALK

No 14 MATERIAL HANDLING and HOUSEKEEPING

WHAT?

Poor storage and handling of materials creates waste.

Waste is a loss of resource and is very costly.

Poorly stored materials increase the risk of pollution incidents.

WHY?

- ☐ **Reduce costs:** Wastage costs money: - not only the cost of the cost of replacement materials but also the disposal cost of those that are damaged.
- ☐ **Reduce pollution risk:** Good storage reduces the risk of spillages.
- ☐ **Avoid waste:** Re-use of materials reduces the requirement for new materials.
- ☐ **Improved safety:** A tidy site is a safe site.
- ☐ **Public image:** Good housekeeping creates a positive image to the general public.

DO

- ✓ Avoid double handling as much as possible: less effort, less damage, less wastage
- ✓ Supervise the delivery of materials to ensure correct location and method of storage
- ✓ Check that a material is fully used prior to starting a new batch
- ✓ Return to storage any materials that have not been used
- ✓ Use off-cuts where possible
- ✓ Re-use formwork as often as practically possible
- ✓ Designate an area for surplus concrete – it can be crushed and re-used
- ✓ Pick up litter



DON'T

- ✗ DON'T store or leave unprotected any materials that can be damaged by weather, eg. cement bags
- ✗ DON'T over order materials
- ✗ DON'T put materials in a skip if they still have a use
- ✗ DON'T use new lengths of pipe or cable for short pieces of work. Minimise the need for off-cuts
- ✗ DON'T store together any materials that can contaminate each other.



TOOLBOX TALK

No 15

ARCHAEOLOGY

WHAT?

Archaeology is the study of human history through the excavation of sites and the analysis of physical remains.

Where no other records exist, it is often the only source of information about our previous occupation of an area from the earliest inhabitants many thousands of years ago to more recent times of just a hundred years or so.

It is not only buildings and their foundations but also artefacts such as jewellery, pottery, coins, bones and skeletons that need expert examination before removal and preservation.



WHY?

- ❑ **Avoid prosecution:** It is illegal to damage some monuments and archaeological structures.
- ❑ **Avoid environmental harm:** Archaeology is an important part of our heritage and valuable and irreplaceable remains can easily be damaged on construction sites.

DO

- ✓ Stop work if you find any archaeological features and immediately contact your manager for instructions
- ✓ Obey the advice provided by any appointed archaeologist.



DON'T

- ✗ DON'T assume that any artefacts or features discovered are unimportant
- ✗ DON'T remove any 'finds' such as coins, pottery, or bones from the site. It is illegal
- ✗ DON'T undertake work adjacent areas of archaeological importance without considering if any damage may be caused
 - vibration may cause cracking
 - dewatering may cause a preserved feature to settle and crack.
- ✗ DON'T drive vehicle through protected sites

TOOLBOX TALK

No 16

BENTONITE

WHAT?

Bentonite is a type of clay that swells and gels when dispersed in water when it then has thixotropic properties. That is it acts like a liquid when agitated or stirred and like a solid when left at rest.

As "mud" it is used as a lubricant when drilling or pipe pushing and as "slurry" it is used to fill and support the sides of excavations during the construction of diaphragm walls, cut-off walls, or piles.

Bentonite is delivered to site as a powder or as granules before being mixed with water. The mud or slurry is pumped to point of use, recovered during excavation or when displaced by concrete, pumped to treatment tanks to remove contamination and then reused in the work.

The use of bentonite can lead to spillage around operational areas and around mixing, pumping and storage equipment.



WHY?

- ❑ **Avoid environmental harm:** Liquid bentonite is highly polluting and if it enters watercourses or drains can give rise to damage to plants and animals in watercourses.
- ❑ **Avoid prosecution:** If not correctly managed, bentonite in powder form can become airborne causing dust nuisance to local residents leading to legal action by the Local Authority. Pollution of watercourses by bentonite may lead to prosecution by the Environment Agency or Scottish Environmental Protection Agency.
- ❑ **Cost:** The cost of clean up and legal proceedings far exceeds the cost of putting proper control measures in place. Waste bentonite is very expensive to dispose of!

DO

Storage

- ✓ Keep dry powder or granule containers closed so that bentonite cannot become airborne or be damaged by rain or moisture.

Use

- ✓ Ensure that bentonite does not spill onto the ground.
- ✓ Ensure that if spillages do occur they are promptly cleared up.
- ✓ Protect watercourses and drains from any spillage of liquid bentonite.
- ✓ Report immediately to your manager any incidents where bentonite is seen entering a watercourse or a drain, or is becoming airborne.

Disposal

- ✓ Ask your manager what to do with waste bentonite.



DON'T

Storage

- ✗ DON'T leave containers or bags containing bentonite open to the air.
- ✗ DON'T ignore spillages on the ground.

Use

- ✗ DON'T intentionally allow liquid or powdered bentonite to spill onto the ground.

Disposal

- ✗ DON'T pour bentonite into watercourses or drains
- ✗ DON'T give bentonite away to third parties without checking with your manager

TOOLBOX TALK

No 17

PUMPING AND OVERPUMPING

WHAT?

Excavations often require prior dewatering of the ground and / or the pumping out of any rainwater or groundwater collected in them. Both processes require the disposal of water pumped out, which can find its way into a watercourse, or, if contaminated and with prior consent of the Statutory Sewerage Undertaker, it can be discharged to a sewer.

Sections of existing sewers and pipelines are sometimes taken out of service to allow repair or alterations and flows can be maintained by installing temporary pumps and 'overpumping' those sections.



WHY?

- ❑ **Avoid harm to the environment:** Water pumped from excavations can be muddy (silty) and, when the excavations are in previously developed or 'brownfield' land, it can be contaminated. The improper discharge of water polluted by mud or contaminants can cause serious damage to watercourses.
- ❑ **Avoid harm to the environment:** Overpumping is often required in maintaining the flows of foul sewage, which, if it is allowed to escape to find its way into a watercourse, can have a devastating effect on wildlife.
- ❑ **Avoid prosecution:** It is illegal to allow polluted water to enter a watercourse or surface drain
- ❑ **Avoid flooding:** If water is discharged into a sewer or gully of insufficient capacity then flooding will occur, potentially causing pollutants to enter watercourses or creating nuisance to site operations.

DO

- ✓ Check with your line manager, prior to pumping, whether any treatment systems are required before final discharge of pumped out water. Typical systems include: settlement tanks or lagoons, discharge over grassed areas, through silt socks or hay bales.
- ✓ Check that the point of discharge is to the correct location, that is to the sewer, manhole or gully as set out by your line manager.
- ✓ Check that all couplings and other pipework fittings are secure.
- ✓ Periodically check that any treatment systems are working and that water being finally discharged is clear of silt or solids that may give rise to pollution and is not causing damage to the bed or banks of any watercourse
- ✓ **NOTIFY** your line manager immediately if you notice:
 - pollution (muddy water, oils etc) occurring;
 - the discharge causing flooding; or
 - any pipework is damaged or connections have broken or are leaking.

DON'T

- ✗ **DON'T** leave pumping operations unattended for long periods unless authorised to do so by your line manager.
- ✗ **DON'T** continue with overpumping if the receiving sewer or pipeline cannot cope with the capacity.
- ✗ **DON'T** ignore signs that pollution is occurring, for example muddy water entering watercourses or gullies.
- ✗ **DON'T** tamper with pipework or discharge points without the authorisation of your line manager.

TOOLBOX TALK

No 18

WASHING DOWN PLANT & MACHINERY

WHAT?

Washing down plant and machinery, hosing down concrete truck mixers or degreasing engines can all lead to serious pollution incidents if it is not properly carried out.

The resulting dirty water should not be allowed to enter surface water drains or road gullies, which generally discharge directly into local streams, rivers or soakaways.

Careful consideration must be given to where washing down is carried out.



WHY?

- ❑ **Avoid environmental harm:** Dirty washing and rinsing water may contain dislodged mud, grease, oils, detergents, cleaning agents or toxic chemicals and materials that can kill fish and other aquatic life and which may also seriously affect the surrounding environment.
- ❑ **Avoid prosecution:** It is an offence to allow polluting matter such as silt, cement, concrete, fuel, oils, cleaning chemicals and detergents to enter a watercourse or a drain.
- ❑ **Cost:** The cost of cleaning up a pollution incident far exceeds the cost of putting proper control measures in place.

DO

- ✓ Ask your manager if there is a place specially designated for washing down plant and machinery
- ✓ Use only these designated wash down areas whenever they are provided
- ✓ Ensure that any wash down slurry or residue is contained and cannot enter drains or watercourses
- ✓ Check with your manager before using degreasing or cleansing solutions— don't just assume they can be used
- ✓ Report to your manager any washing down that may cause a pollution incident.

DON'T

- ✗ DON'T wash down before finding out the proper place in which to do it
- ✗ DON'T wash down directly into watercourses or surface water drains
- ✗ DON'T allow dirty wash down water to go down roadside gullies
- ✗ DON'T wash down near material or storage areas or immediately next to working areas
- ✗ DON'T use any more water than is necessary – reduce waste.

TOOLBOX TALK

No 19

BATS

WHAT?

There are 16 species of bat in the UK and of these 6 are endangered or rare and 6 other species are classed as vulnerable.

Because so many bats are endangered, both UK and European legislation gives them complete protection. Since they tend to return to the same roosts each year, these sites are also protected whether the bats are present or not.

The most common UK bat is the Pipistrelle. It is only 40 mm long and weighs about 5 grams.



IDENTIFICATION

- o Places where you might find bats include holes and cracks in trees, roofs and walls of houses and buildings, under bridges, underground in caves and old railway tunnels.
- o Every building and mature tree is a potential bat roost.
- o Look out for bat droppings – dark brown or black, about 4 to 8mm in length. They look like mouse droppings but crumble easily, as they are made up of insect fragments. In well-established roosts, droppings may be several centimetres deep.
- o Other signs include a characteristic odour and large numbers of moth wings discarded by feeding bats.

WHY?

- ❑ **Avoid prosecution:** It is a criminal offence for anyone to
- intentionally kill, injure or handle a bat
 - possess a bat (whether live or dead)
 - disturb a roosting bat
 - damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.

Breaking the law can lead to fines of up to £2000 per bat and/or up to 6 months in prison.

DO

- ✓ If you think you have found a bat or a bat roost on site, IMMEDIATELY stop all works in the area and inform your line manager.



DON'T

- ✗ DON'T try to touch or handle a bat. They are very delicate and you are very likely to cause them serious harm – it is also breaking the law.

TOOLBOX TALK

No 20

BADGERS

WHAT?

One of Britain's best loved wild animals, Badgers are a protected species.

Both the animals and their setts are protected by law.

It is illegal to carry out any construction work close to a badger sett without taking steps to positively avoid damage and without an appropriate Licence.

It is no excuse in law to be unaware of the presence of Badgers.



Identification

- Most badgers have the characteristic black and white striped face although very occasionally they can be creamy white (albino) or red/ginger in colour. Fully grown adults can be up to 1 metre in length and weigh up to 14 kg.
- The sett entrance is usually D shaped and at around 300mm wide by 200mm high is larger than either a fox or rabbit hole. There may be signs of freshly excavated material at the entrance or piles of leaves, dry grass, straw or bracken, which the badgers take inside to use as bedding.

WHY?

- ☐ **Avoid prosecution:** It is a criminal offence to
- kill, injure or take a badger
 - disturb a badger when it is occupying a sett
 - interfere with a badger sett by damaging or destroying it
 - obstruct the access to, or any entrance of, a badger sett.

DO

- ✓ **IMMEDIATELY** Stop work and inform your line manager if you discover a badger sett or see a badger on your site.

DON'T

- ✗ **DON'T**
- use heavy machines within 30 metres or
 - use light machines within 20 metres or
 - hand dig or clear scrub within 10 metres of a badger sett before checking with your line manager whether a Licence is necessary.

TOOLBOX TALK

No 21

BE A GOOD NEIGHBOUR

WHAT?

Many in the local community will regard the start of construction work in their neighbourhood with great concern.

The public are often afraid that construction work will bring noise, dust, road closures, increased heavy road traffic and disruption to normal life.

Being a good neighbour means all those involved in a construction project acting with consideration for all those who live and work in the area surrounding the construction site to minimise their inconvenience.



WHY?

- ❑ **Public image** Being a good neighbour creates a positive image of the industry
- ❑ **Avoid programme delays** If neighbours complain to their Local Authorities about dust or noise nuisance caused, the Local Authority can impose conditions and restrictions on working, which can lead to delays.
- ❑ **Avoid prosecution** If any problems being caused by dust or noise are not satisfactorily resolved the Local Authority can prosecute those responsible.
- ❑ **Reduce costs** If good relations can be established with neighbours, many issues such as access to site, material deliveries and working hours can be improved through friendly negotiation.

DO

- ✓ Be polite and considerate to members of the public at all times
- ✓ Take accurate notice of any complaint made by a neighbour and pass it on to your line manager
- ✓ Only use approved routes to access the site
- ✓ Use only designated parking areas, if they are provided, otherwise always park vehicles with consideration for the needs of others
- ✓ Keep dust and noise to a minimum
- ✓ Always close any noise reducing engine covers while plant is in use
- ✓ Direct site lighting and task lighting away from neighbouring properties
- ✓ Tell your line manager if rubbish bins or skips are full or nearly full
- ✓ Notify your line manager immediately if you find any flytipped waste in the area

DON'T

- ✗ DON'T obstruct vehicle accesses or driveways to neighbouring properties
- ✗ DON'T obstruct public rights of way such as pavements, footpaths, bridleways
- ✗ DON'T drag mud onto the roads outside the site - make sure vehicle wheels are clean before leaving
- ✗ DON'T trespass on neighbour's land
- ✗ DON'T leave engines running unnecessarily
- ✗ DON'T shout on site or have noisy radios on



- ✗ DON'T shout or whistle at passers-by
- ✗ DON'T drop litter or leave sites untidy
- ✗ DON'T leave gates to the site open.

TOOLBOX TALK

No 22

GREAT CRESTED NEWTS

WHAT?

The Great Crested Newt (*Triturus cristatus*) is the largest and the rarest of the 3 species of newts found in the UK. There are now thought to be only 360,000 left and, despite conservation programmes, its numbers have been declining rapidly over the past thirty years due to loss of habitat.

Great Crested Newts and their habitats are protected by law.



Identification

- o Grows to around 170mm (almost 7 inches) in length with a rough, granular skin
- o Back and flanks are brownish black with darker spots.
- o Vivid orange or yellow belly has an irregular pattern of black spots or blotches

Male

- o Jagged crest on the back with a smoother edged crest above and below the tail.
- o White, silver or grey stripe running from the tail tip, fading as it reaches the abdomen

Female:

- o Does NOT have a crest
- o Yellow-orange stripe running along the lower edge of the tail.

Suitable Habitat:

- o Ponds and very slow moving watercourses.
- o Woodland, scrub, hedgerows, rough grass land and derelict sites surrounding ponds and watercourses.

WHY?

- ☒ **Avoid prosecution:** It is an offence to
- intentionally or recklessly kill, injure, capture, trade or even to disturb a Great Crested Newt.
 - damage, destroy or obstruct habitats where Great Crested Newts live or breed.
- Prosecution could lead to a fine of up to £5000 per newt affected and in some cases up to 6 months imprisonment.

DO

- ✓ Stop work in the immediate area and contact your manager for instruction if you think you have identified Great Crested Newts on your site
- ✓ Watch out when moving logs, stones or rubble or clearing the site near to ponds. These are favourite habitats for Great Crested Newts

DON'T

- ✗ DON'T try to touch or otherwise disturb any Great Crested Newt

TOOLBOX TALK

No 23

WORKING ON PREVIOUSLY DEVELOPED LAND

WHAT?

Land which has previously been built on or used by industrial processes ("brownfield land") or which has in the past had imported material placed upon it ("made ground") may be contaminated with substances which are harmful to humans, wildlife and /or the surrounding environment.

Contaminants could be present in solid form such as asbestos or tar residues, in liquid form such as oils or solvents or even as a gas such as methane.

Since potentially contaminated material can sometimes be discovered where it is not expected it is always wise to remain observant during digging operations.



Photo: © CECNM, Imperial College London

WHY?

- ❑ **Health hazard:** Exposure to certain contaminants may cause skin and/or respiratory irritation, cancer or birth defects. Wearing the correct Personal Protective Equipment (PPE) can prevent ill health.
- ❑ **Avoid environmental harm:** Working in contaminated soils without the proper precautions and controls may result in pollution and / or harm spreading into the surrounding land, adjacent watercourses or into the atmosphere.
- ❑ **Avoid prosecution:** Any pollution escaping from the site may lead to prosecution.
- ❑ **Public relations:** The bad publicity arising from pollution incidents damages the reputation of the company.

DO

- ✓ Always wear the correct protective clothing
- ✓ Wash your hands and all areas of exposed skin after working in made ground or brownfield land.
- ✓ Look out for changes to the types of material being worked in which may show up as
 - Differences in colour or texture
 - The presence of refuse (rubbish) or other foreign objects.
 - Differences in smell - common contaminants such as oils, landfill gases and degrading waste have distinctive odours

If you see changes like these

STOP WORK

make the area safe and notify your Line Manager.

- ✓ Prevent the spread of contaminated dust – either cover the source or damp it down

DON'T

- ✗ DON'T take off PPE.
- ✗ DON'T smoke or eat whilst working in made ground.
- ✗ DON'T permit colleagues or other operatives to enter the contaminated land until your line manager instructs you to do so.



TOOLBOX TALK

No 24

SEGREGATION OF WASTE

WHAT?

Segregating wastes into hazardous, non-hazardous and inert waste types for disposal can help minimise costs and maximise the opportunities for recovery and recycling of wastes. Look out on waste containers for these standard signs, which are being introduced across the UK to encourage and improve the segregation of waste.



WHY?

- ❑ **Avoid prosecution:** It is illegal to mix hazardous waste with other waste types which are to be sent directly to landfill. You could be fined up to £20,000 and imprisoned for up to 2 years.
- ❑ **Avoid environmental harm:** Incorrectly disposing of hazardous waste could cause water pollution and damage habitats. Landfills and waste treatment centres are specially designed to be able to handle specific wastes without causing environmental harm.
- ❑ **Reduce Costs:** Segregating wastes can minimise landfill tax and can also allow certain types of waste to be recycled and reused on site.

DO

- ✓ Look out for the standard signs shown here and whenever possible segregate wastes into the different types
- ✓ Use enclosed or covered skips
- ✓ Ask your line manager for advice if you are unsure about correct waste segregation on site

DON'T

- ✗ DON'T overfill skips
- ✗ DON'T mix different types of waste
- ✗ DON'T put liquids and flammable wastes into skips



