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Environmental good practice – pocket book



*sharing knowledge
building best practice*

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Environmental good practice – pocket book Checklists

CIRIA

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Summary

This pocket book was produced to accompany the updated version of Environmental good practice on site produced in 1998 through Research Project 559.

The research leading to the publication of the more detailed handbook Environmental good practice on site (CIRIA publication C650), from which this pocket book is derived, was funded by CIRIA Core Programme and the Environment Agency.

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Contents

About this pocket book	5
1 Benefits and obligations	6
2 General site management issues	
Dealing with regulators	7
Selecting and managing subcontractors	7
Management and site control	8
Managing materials	9
Managing site traffic	9
Liaising with the local community	10
Good housekeeping	11
Site security	11
3 Environmental issues	
Archaeology and built heritage	13
Buying, storing and managing materials	15
Dust, emissions and odours: avoid causing a nuisance	22
Ground contamination	25
Noise and vibration: the need to control it	27
Traffic management and vehicle use	30
Waste	33
Water	35
Wildlife and natural features	39

About this pocket book

This pocket book contains a series of good practice checklists to follow while working on a project, from design and planning through the construction phase on site, to project completion. It is relevant to both small and large-scale projects.

By using these checklists regularly on site, it can be the difference between a project being perceived as following good, opposed to bad, environmental practice. The checklists are divided into three sections:

- Benefits and obligations
- General site management issues
- Environmental issues.

For more information to supplement the checklists, refer to the guidance contained within the more detailed handbook, *Environmental good practice on site* CIRIA C650.

Section I: Benefits and obligations

Good environmental practice on site has many benefits, environmental, social and economic.

Environmental benefits

- Reduced damage to the surrounding air, water resources, land and to fauna and flora from potentially damaging activities
- Reduced demand for resources through better material selection, procurement and management, less wastage and greater use of recycled, reclaimed and sustainably sourced materials.

Social benefits

- Reduced nuisance to neighbours by talking to the local community before and throughout the project, keeping them informed of any works that could cause a nuisance.

Economic benefits

- Improved opportunities to tender through demonstration of sound environmental performance and effective risk management
- Less money wasted on fines for non-compliance with legislation and associated costs of clean-up, legal fees and management time
- Fewer delays to the project by identifying the characteristics of your site in advance of construction commencing, reducing costs incurred by detailed surveys
- Less money lost through wasted resources that may have to be disposed of to landfill
- Improved environmental profile by establishing good relationships with environmental regulators and the local authority.

Many construction companies have an environmental policy that requires the site to follow good practice on site and minimise environmental damage.

Section 2: General site management issues

Dealing with regulators	
Plan ahead and give regulators advanced warning of potential problems	
Give regulators the time they need to process your enquiry	
Always display the relevant emergency number for the regulators	
Ensure site personnel know the correct procedures for reporting incidents	
Always notify the environmental regulator of any reportable contamination	

Selecting and managing sub-contractors	
Sub-contractors should present proof of their past environmental performance along with records of past and pending prosecutions	
Ensure that sub-contractors have a copy of the site environmental management plan before beginning work	
Ensure sub-contractors attend environmental training sessions/inductions	
Ensure sub-contractors are aware of their environmental obligations on the project	
The contract should include requirements to follow good environmental practice	
Audit the performance of sub-contractors during the project	

Management and site control	
Define environmental responsibilities	
Ensure everyone on site is aware of their responsibilities and liabilities	
Through a site induction make everyone aware of project environmental issues and environmental standards	
Site personnel need to be aware of spill or other contamination response procedures and storage requirements	
Adequately protect site against vandalism, theft and breakage	
Ensure consent has been granted to discharge water and effluent from the site	
A drainage plan identifying foul and surface water drainage needs to be accessible	
Identify nearby rivers, streams or groundwater etc, and ensure they are inspected regularly	
Appropriately mark drains to distinguish them	
Provide fuel bunds and/or internally banded tanks	
Provide a waste storage area	
Wheel wash or road cleaning equipment should be provided	
Indicate all designated haul routes	
Display environmental awareness posters/bulletins	
Display warning signs on site prominently	
The company environmental policy should be available to refer to	

Managing materials	
Order the correct quantity of materials to arrive when they are needed to reduce the required storage time and risk of damage and theft	
Find out in what form materials will be delivered, so that the appropriate unloading plant can be arranged and space set aside	
Ensure deliveries are received by a member of site personnel who is able to carry out a quality inspection, and ensure that the materials are unloaded to the appropriate place and take action if an accident occurs	
Select packaging materials for deliveries that can assist effective/secure storage and movement of materials on site	
Arrange “take back” of packaging materials with suppliers	
Avoid sensitive times for deliveries, eg rush hour	

Managing site traffic	
Develop a traffic management plan	
Designate an area of the site for site personnels' vehicles	
Put procedures in place to prevent delivery vehicles from queuing outside the site boundary	
Make delivery drivers aware of traffic restrictions on and around the site	
Delivery vehicle engines should be turned off while waiting to be unloaded	
Vehicles should be loaded and unloaded off the highway wherever possible	
Provide wheel washing facilities to avoid the spread of mud onto public highways	

<i>Liaising with the local community</i>	
Identify key local community representatives, such as parish councillors, and keep them informed of progress	
Visit occupants of sensitive buildings and keep them informed of progress	
Prepare a leaflet and distribute it to nearby residents or occupiers. Provide updates or regular contributions to existing community newsletters	
Engage with the local community by working with local schools and charities	
Write articles about the progress on site for the local media	
Display a "Contact Board" at the site perimeter so that the public know whom to contact if they have a complaint or a comment to make. Use this board to display information on project phasing and other relevant matters	
Join a considerate contractor scheme	
Establish a complaint line and check that it works by calling it	
Deal with any complaints that arise quickly and in accordance with a defined complaints procedure. Create a log of complaints. Make sure all complaints are properly followed up and resolved	

Good housekeeping	
Segregate different types of waste as it is produced and arrange frequent removal	
Keep the site tidy and clean, as a tidy site is a safe site	
Ensure that no wind-blown litter or debris leaves site	
Ensure that material and plant storage areas are properly managed, cover lightweight materials with sheeting if necessary	
Keep hoardings tidy – repair and repaint when necessary removing any fly posting or graffiti	
Frequently brush-clean the wheel washing facilities	
Keep haul routes clean	
Keep roads free from mud by using a road sweeper	
Ensure site is secure	

Security measures – site boundary	
Secure the site boundary using perimeter fencing and high quality locks on gates. Solid barriers (eg hoardings) are more difficult to scale than chain link fences and prevent casual surveillance by prospective thieves	
Do not stack materials against the inside or outside of a site boundary/fence as this can provide an opportunity for vandals and thieves to scale it	

Security measures – within site	
Ensure that materials that are potentially hazardous are well secured. It is a legal requirement to lock fuel outlets when they are not in use, and provide secondary containment for oil in storage	
Secure plant to prevent vandalism and immobilise plant and equipment over night	
If the site is large or at high risk from trespassers Install deterrents such as lights, warning notices, 24-hour security guards, alarm systems and Closed Circuit Television (CCTV)	
Monitor movement of people on and off site through the use of site passes or swipe cards	
Position the site manager's office to give a good view of the site	
Inform local police about the site and seek their advice on security	
Consult Fire Brigade for advice on storing fuel and flammable materials on site	
If the site experiences a problem such as vandalism or graffiti, ensure that appropriate clean-up/repair is undertaken promptly, to discourage further problems from occurring	

Section 3: Environmental issues

Archaeology and built heritage

Watching brief	
Be prepared for unexpected finds whether or not known archaeological or historical features have been identified on your site	
During excavations look out for burned or blackened material, brick or tile fragments, coins, pottery or bone fragments, skeletons, timber joists or post holes, brick or stone foundations and in-filled ditches	
If addressed at the right time and in the right way, finds may not necessarily affect the progress of the works	
If you are unsure about a find call in an archaeologist to assess it	
An archaeologist employed by the company may be able to agree suitable mitigation strategies by telephone with the planning authority archaeologist	
With the right advice the delay might be much less than any statutory period	

<i>If any unexpected finds are encountered</i>	
Stop work immediately in the area	
Protect the find by fencing/blocking it off and contact the site manager	
Contact the local archaeological officer at the local authority	
Consider seeking specialist archaeological advice on how to proceed	
If human remains are discovered a Home Office licence will be required before works can continue	

<i>Contractor responsibilities (not expected to be an expert)</i>	
Pursue the contractual obligations, eg providing attendances and/or access to professional archaeologists, sharing of Health and Safety documentation	
Protect known archaeological and heritage sites	
Report any significant finds arising during construction	

Buying, storing and managing materials

Materials resource efficiency	
When ordering avoid: <ul style="list-style-type: none">● Over-ordering● Ordering inappropriate lengths● Ordering for delivery at the wrong time	
When deliveries arrive on site avoid: <ul style="list-style-type: none">● Damage during unloading● Delivery to inappropriate areas of site● Delivery of damaged goods● Accepting deliveries of incorrect specification or quantity	
When storing materials avoid: <ul style="list-style-type: none">● Exceeding their shelf life● Damage or contamination from incorrect storage● Loss, theft and vandalism	
When handling materials avoid: <ul style="list-style-type: none">● Damage or spillage through incorrect or repetitive handling● Delivering the wrong materials to the workplace	

Use of aggregates on site	
<p>Ensure suitability for use</p> <ul style="list-style-type: none"> ● Make sure that materials do not contain contaminants and that pH levels are suitable for use where the site is located. This can be achieved by undertaking: <ul style="list-style-type: none"> ○ a laboratory (UKAS accredited) analysis of contaminants present ○ leachate tests for the contaminants identified 	
<p>Consultation</p> <ul style="list-style-type: none"> ● The environmental regulator has a remit to protect groundwater sources from contamination and must be consulted before any recycled materials are used in the ground ● The laboratory results should be forwarded to the local environmental regulator Technical Team for approval to ensure that local conditions do not prevent the use of such materials 	

Materials storage checklist (general).

Please note some of these points may be legal requirements.
Check with your environmental regulator.

Store all containers of materials, such as oils and paints in a bunded area	
Clearly mark the area(s)	
Store materials in suitable containers that are appropriately labelled with fitted lids, taps and tops in good condition	
Put control measures in place and/or locate spill response kits/material near to bulk stores and ensure they are accessible and fully stocked	
Store material so as to guard against breakage, vandalism or theft	
Protect stores against flood damage or inundation	
Store waste in a designated area and separate into different waste streams	
Ensure the waste storage area is in good condition and contained to prevent rainwater infiltration	
Stockpiles should not cause silty runoff	
Stockpiles should not be too steep and/or stored near drains or watercourses	
Store away from main site access roads	

<i>Managing stockpiles</i>	
Store topsoil for reuse in piles less than 2 m high to prevent damage to the soil structure	
Segregate different grades of soil	
Position spoil and temporary stockpiles well away from watercourses and drainage systems	
Minimise movements of materials in stockpiles to reduce degradation of the soil structure	
Silty water formed by erosion of the stockpile must be managed correctly	
Direct surface water away from the stockpiles to prevent erosion at the bottom	
Place silt screens around spoil heaps to trap silt in any surface water run-off	
Vegetate long-term stockpiles to prevent dust in dry weather conditions, and reduce erosion of the stockpile to form silty runoff. Ensure adequate weed control	

Refuelling protocol	
Designate a bunded refuelling area preferably isolated from surface water drains, if not possible; install an oil separator in the surface water drainage system	
Avoid using remote fill points. Where these are unavoidable install suitable oil separators to the surface drainage system	
Avoid refuelling close to watercourses. Where this is unavoidable keep materials such as absorbent pads or booms readily available in case of spillage	
All refuelling must be supervised. Do not leave valves open unattended (NB: auto-close valves may be a legal requirement)	
Keep an emergency spill kit at each refuelling point. If mobile refuelling is carried out, ensure each bowser carries a spill kit	
Bowsers should have an automatic cut out	
Ensure that personnel carrying out refuelling are aware of the protocol and know what actions to take in an emergency	

Storing fuels and chemicals	
Securely store all containers of potential pollutants (eg fuels, oils and chemicals) according to oil storage legislation	
Label containers clearly so that appropriate remedial action can be taken in the event of a spillage	
Regularly check taps and hoses for leakage	
Avoid storing drums tightly against each other. Store drums so that they can all be inspected for leaks	
Prevent damage from vandalism. Ensure that all valves and trigger guns are vandal and tamper proof	
Clearly mark the contents of any tank. Display a notice that demands that valves and trigger guns are locked when not in use	
Store tanks or drums in a secure bunded container or compound that is locked when not in use	
It may be particularly necessary to have an impermeable base where chemicals are stored in areas of groundwater risk. This should be identified in the contract but may be worth discussing with the environmental regulator	
Provide separate fill pipes for each tank unless the tanks are interconnected by a balance pipe of greater flow capacity than the fill pipe	
Mark fill pipes with the product type and a tank number where there is more than one tank	
Before moving a drum, check the bung is secure	

Bunding tanks	
To avoid accidental spillage, bund tanks with a minimum capacity of 110% of the volume of the largest tank or 25% of the total storage capacity, whichever is the greater	
Do not allow banded areas to fill with rainwater or slops (ideally, provide a cover)	
Empty any water collected in an appropriate way	
Site tanks away from vehicle movements and mark them clearly so that they are visible and so that people know they are a potential risk	
Do not put tanks where there is a direct link to surface drains, watercourses or sewers. Avoid placing tanks on unmade ground, to reduce the risk of soil contamination. Protect from vandalism	
The bund should be impermeable to the substance that is being stored in the tank	
Position air vent pipes so that they can be seen easily and directed so that any discharge (eg in the event of the tank being overfilled) is directed down into the bund	
Fill points should be inside the bund	
Fit any pumps sited outside the bund with a non-return/check valve installed in the feed line	