

Pollution Control Construction Site

**Handbook**



Regulatory & Supporting Services -  
Environment  
Pollution Control Division  
City Hall  
Cardiff  
CF10 3ND

**February 2013**



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# Part One

## ...Introduction

Cardiff County Council recognises the need to ensure that its residents and businesses are protected from environmental disturbance during the construction of both major and smaller developments throughout the County.

This Handbook has been designed to assist developers and contractors in order to ensure that they undertake their work in the best way possible to reduce the impact of pollution and noise on local communities.

The Council also recognises that new developments within the City can be a reflection of economic growth and that the developments in themselves may bring economic, social and environmental benefits to the citizens of Cardiff. Consequently this Handbook is not intended to deter such activity, but to assist developers in striving to comply with the relevant legislation.

Adherence to this Handbook will demonstrate a positive attitude from contractors and commitment towards minimising environmental disturbance to local residents.

The contractor should always comply with the provisions of: -

- The Control of Pollution Act 1974
- The Environmental Protection Act 1990
- The Clean Air Act 1993
- The Environment Act 1995
- The Contaminated Land (Wales) Regulations 2001
- The Health & Safety at Work Act 1974
- The Building Act 1984

The purpose of this Handbook is to ensure that disturbances due to noise, vibration, dust and smoke arising from demolition and construction works on all building sites, including the public highway, within the County of Cardiff are kept to an acceptable level without the imposition of unnecessary or unduly onerous restrictions on contractors.



The Handbook is also intended to provide guidance to contractors regarding works that may cause concern or disturbance to the public, and to encourage early communication with the Pollution Control Division in order to provide information, seek guidance or clarify methods of work. It is not intended to supersede any other published guidance.

The term 'construction works' in this Handbook applies to site activities, preparation, demolition, excavation, tunnelling works, building operations, structural alterations, repair and maintenance of buildings, transportation of materials and spoil to and from a site.

Although all contractors are expected to adopt the full provisions of the Handbook, it may not be appropriate to apply all the provisions to smaller developments. Cardiff County Council does, however, expect all developers to comply with the spirit of the Handbook.

If contractors wish to undertake work at variance with the provisions of the Handbook, they should consult with the Council prior to implementation, giving as much advance notice as possible.



## Part two

### ...Protection of the public and building

The contractor should ensure that measures are taken to: -

- Protect residents, users of buildings close by and passing members of the public from nuisance or harm, and
- Protect buildings from physical damage caused by vibration.

Contractors should be aware that the Health & Safety Executive is responsible for enforcing safety legislation on demolition and construction sites. This also includes new regulations for working with asbestos or asbestos – containing materials. For further advice or information, please contact ☎ 20 263120. For advice on disposing of asbestos please contact the Environment Agency ☎ 03708506506.

In respect of other controlled waste anyone who produces, imports, keeps or stores, transports, treats or disposes of waste, has a Duty of Care under Section 34 of the Environmental protection Act 1990 to take all reasonable steps to keep waste safe and adequately describe it on transfer. If you give waste to someone else, you must be sure they are a Registered Carrier of Waste and can transport, recycle or dispose of it safely. For advice on disposing of waste please contact the Environment Agency ☎ 03708506506.

Contractors should also be aware that the Building Control Division of Strategic Planning & Environment, Cardiff County Council is responsible for enforcing safety legislation in relation to dangerous structures. However, all construction/demolition sites are inherently dangerous, particularly to children. Building Control therefore recommends that in order to avoid possible future enforcement action, all sites are adequately secured against unlawful entry, outside working hours, by the provision of robust hoardings, adequately designed and installed. The owner of the site may be responsible for the payment of costs in relation to the service where works are needed to prevent public harm. For further information or advice contact ☎ 20 871363 or 20871153 or email: [buildingcontrol@cardiff.gov.uk](mailto:buildingcontrol@cardiff.gov.uk).



## Part three

### ...Hours of work

Where residential occupiers are likely to be affected by noise from construction activities, the hours of noisy work shall normally be restricted to:-

<b>Monday – Friday</b>	<b>8.00 am – 6.00 pm</b>
<b>Saturday</b>	<b>8.00 am – 1.00 pm</b>
<b>Sunday and Bank Holidays</b>	<b>No noisy activities on site</b>

Contractors should note that these hours also relate to vehicles and plant arriving at and leaving the site.

Prior to any works starting, it is good practice for contractors to inform occupiers of all properties which may be affected by noise, dust or vibration arising from the works of the nature of the construction works, proposed hours of work and their expected duration.

Most importantly, contractors should include the name and telephone number of a main contact within the contractor's organisation who is able to give further information and deal with any complaints or emergencies that may arise at any time.

### Variation from Normal Working Hours

It is recognised that there may be circumstances where the restriction on hours of work, as stated above, cannot be adhered to. In these circumstances, the contractor will be required to fully justify any proposed deviation from this Handbook and provide written justification to the Pollution Control Division before any works start outside normal hours.

Provided that the contractor has been able to substantiate the case to the local authority, works may be allowed to proceed in accordance with appropriate alternative conditions.

In any instance where it is necessary or desirable to deviate from this Handbook the contractor should be able to demonstrate that all reasonable steps have been taken to minimise disturbance from the works. Where appropriate, consideration should be given to:

-

- Screening noisy machinery or plant to reduce noise levels at receiver;
- Use of alternate working methods;
- Publicised 'rest periods' during which noisy operations are temporarily stopped;
- The offer of temporary accommodation to residents likely to experience severe and prolonged disturbance;



Prior agreement for works involving any deviation from this Handbook should be sought from Regulatory & Supporting Services - Environment, Cardiff Council, preferably at least 3 days prior to the works commencing. Please contact ☎ 029 20871650 to discuss any amendments.

In the absence of a formal Prior Consent agreement for the operation of noisy work, the Council may serve a Notice under Section 60, Control of Pollution Act 1974, to prohibit or restrict works. Whilst we will have regard to this Handbook the requirements of any Notice will be determined by the particular circumstances of each case and may be more or less onerous than this Handbook. Failure to comply with this Notice may result in legal proceedings being instigated against the person responsible should a breach be proved. Further information on our approach to enforcement action can be found in the *Pollution Control Enforcement Policy*.

In exceptional circumstances, where works being carried out on the Public Highway would cause severe disruption to traffic, permission to work outside the stated hours may be given by Highways & Parks on ☎ 20 785200 in conjunction with Regulatory & Supporting Services – Environment on ☎ 20 871650. Methods to reduce the impact of such works on noise sensitive locations should also be considered, as stated in this Handbook. Roads which may merit deviation from the hours stated above can be found in the Traffic Sensitive Routes Gazetteer available from Highways and Parks, on ☎ 20 785200.

Other circumstances that may necessitate a deviation from this Handbook may arise from Statutory Undertakers who occasionally need to carry out both routine and emergency work outside the above hours. It is accepted that in some of these circumstances, it may be inappropriate to offer the above recommended notice to Regulatory & Supporting Services – Environment but again, all reasonable steps to comply with this Handbook should be undertaken.



## Part four

### ...Noise & Vibration

Noisy plant or equipment shall be situated as far as possible from noise sensitive buildings or sites. Barriers should be effectively placed and employed wherever practicable to reduce the amount of noise from reaching noise sensitive buildings, and may take the form of site huts, partitions, earth bunds or acoustic enclosures.

The following provisions should be adhered to wherever practicable: -

1. Vehicles and mechanical plant used for the purpose of the works shall be fitted with effective exhaust silencers and maintained in good and efficient working order. They should be operated in such a manner so as to minimise noise emissions. The contractor shall ensure that all plant and equipment, including any which is on hire, is well maintained, properly silenced and used in accordance with the manufacturers instructions and BS 5228.
2. Machines in intermittent use should be shut down or throttled down to a minimum when not in use.
3. Compressors should be fitted with properly lined and sealed acoustic covers that should be kept closed whenever in use. Pneumatic percussive tools should be fitted with mufflers or silencers of the type recommended by the manufacturers.
4. Equipment that breaks concrete, brickwork or masonry by bending or bursting shall be used in preference to percussive tools where practicable. Avoid the use of impact tools where the site is close to occupied premises.
5. Where practicable rotary drills and bursters activated by hydraulic, chemical or electrical power shall be used for excavating hard or extrusive material.
6. Where practicable and where there will be no increased risk to supply, equipment powered by mains electricity shall be used in preference to equipment powered by internal combustion engine or locally generated electricity.
7. Neither any part of the works nor any maintenance of plant shall be carried out in such a manner as to cause unnecessary noise or vibration except in the case of an emergency when the work is absolutely necessary for the saving of life or property or the safety of the works.

Plant shall be maintained in a good condition so that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum.

8. Noise emitting machinery, which is required to run continuously, shall be housed in a suitable acoustic lined enclosure wherever practicable.





Care should be taken to reduce noise when loading or unloading vehicles or dismantling scaffolding or moving materials etc. Instructions should be given to ensure that vehicles and plant arriving at and leaving the site should comply with the stated hours of work.

## **Piling**

Piling works are one of the most intrusive construction activities and most annoying to neighbouring occupiers and residents. The noise sensitivity of the area should always be considered when determining the method of piling to be used. Both the Building Control and Pollution Control Divisions of Regulatory & Supporting Services – Environment should be consulted on the reasons for the chosen method of piling.

The use of conventional impact hammers for driven steel piling should, wherever possible, be avoided. Where practicable, jacked or auger piles shall be used in preference to piles driven using other methods. Any pile driving shall be carried out by plant equipped with a recognised noise reducing system.

Where surface contamination or ground gas(es) is present on site, appropriate piling techniques should be adopted to prevent potential or significant, harm or pollution to receptors. (See section on contaminated land.)

In some circumstances, Regulatory & Supporting Services – Environment may limit the hours of piling further than those quoted in Part 3.

## **Gritblasting**

The work area should be close sheeted to reduce dust nuisance from grit. Routine checking is required to ensure that the sheeting remains functional, intact and sealed during the operation. Attention shall also be given to the working platform to ensure that it is properly sheeted or sealed to contain dust.

Non-siliceous grit must be used to avoid the long-term irreversible lung damage from silica dust.

Proper protection will be provided for any structure painted with lead based paint in order to prevent the exposure of workers or the general public to the dust produced.

In cases where water is used for large scale cleaning and blasting the requirements of Environment Agency Wales should be followed.



# Part five

## ...Dust & Air Pollution

### Identification of dust generating activities

Before the start of a project, it is important to identify which activities are likely to generate dust and to draw up action plans to minimise emissions into the atmosphere. A risk assessment should be prepared for all dust generating activities and processes. In assessing the risks associated with dust generation from construction and demolition activities and the need for dust control measures, the following issues need to be considered:

- The nature of the activities to be carried out
- Any dangerous or toxic materials likely to be encountered during demolition or refurbishment
- The weather conditions that are likely to prevail during dust generating operations
- The proximity of dust sensitive receptors such as nearby schools, hospitals and residential, commercial and industrial area
- The effects on the general public and road users

Following this risk assessment, developers may wish to carry out particle emission monitoring, especially if the site is large and in close proximity to sensitive receptors, or at sites containing contaminated soils, or any projects involving large scale demolition and /or earthworks.

Discussions with Regulatory & Supporting Services – Environment should take place at an early stage of the project to determine what, if any, monitoring is needed, possibly taking specialist advice for more complex sites.

Dust emissions arising from construction activities can cause nuisance both within the site and outside the site boundary. Within the site, dust can cause mechanical or electrical faults to equipment, such as computers, and will increase abrasion of moving parts in plant and clogging of filters. In the surrounding environment, it can cause annoyance to neighbours by the soiling of property, in particular, windows, cars and also of washed clothes that have been hung out to dry.

Dust and fine particle generation from construction and demolition activities can be substantially reduced through carefully selected mitigation techniques and effective management. Once particles are airborne, it is very difficult to prevent them from dispersing into the surrounding area. The most effective technique is to control dust at source and prevent it from becoming airborne, since suppression is virtually impossible once it has become airborne. Dust pollution will be minimised during demolition by the complete screening where practicable, of the building or structure to be demolished with debris screens or sheets.

The watering down of the area should be carried out where necessary to minimise dust transfer into neighbouring properties. Water should be available on site for this purpose.



Suitable and sufficient water sprays must be used, ensuring the area is damped down prior to and during demolition.

Cutting, grinding and sandblasting can also be major sources of airborne particles and equipment and techniques incorporating the best available dust suppression measures should be used, for example, use of water sprays and local exhaust ventilation. Cutting on site may be avoided altogether by using prefabrication wherever possible.

## **Stockpiles**

Stockpiles of earth shall be damped down or otherwise suitably treated to prevent the emission of dust from the site. Stockpiles should be planned and sited to minimise the potential for dust generation. The handling of spoil should be kept to a minimum and when materials are deposited onto a stockpile, it should be done from the minimum possible height. Wet material may dry out during periods of hot weather and more frequent damping will be required. Advice and approval from the Environment Agency may be required on how to control the run-off slurry when dusty material is damped down using water. Solid fencing or hoarding can provide shelter from the wind and reduce the possibility of dust suspension from the ground. Stockpiles should also be kept enclosed or under sheeting.

## **Roads**

During dry and windy weather conditions, dust and muck from roads and haulage routes can become airborne through movement of vehicles, both on and outside the site. The contractor shall ensure that the area around and within the site, including the public highway and haulage roads are regularly and adequately swept and damped down to prevent any accumulation of dust and dirt. Wheel washing may be necessary to prevent the transfer of mud etc. to the Public Highway, ensuring that the run off water does not itself become a source of water pollution.

Skips and removal vehicles shall be properly covered when leaving the site. Should fine, powdery materials need to be transported, closed tankers may be the best option. When loading materials onto vehicles and conveyors, use the minimum drop height and enclose or use water rubble chutes where necessary to prevent dust emission. Spoil should be handled in such a way so as it does not give rise to excessive dust or malodours.



## Burning and odours

Burning of materials on site shall not be permitted. Waste timbers may be impregnated with chemical treatments and may be toxic, either in their original form or as partial products of combustion. Building materials which are not contaminated should be reused or reclaimed wherever possible.

The contractor shall take all necessary precautions to prevent smoke emissions or fumes from plant or stored fuel oils from drifting into residential areas. In particular measures should be taken to ensure that all plant is well maintained and not left running for long periods when not in use. Vehicle exhausts should be directed away from the ground and other surfaces and positioned at a sufficient height to ensure dispersal of emissions. Plant and equipment should be operated away from residential areas or sensitive receptors near to the site. Pollution prevention measures should be incorporated to prevent leakage and contain spills of fuel/ heating oils, lubricants and stored chemical products. Advice on preventative measures such as bunding requirements and absorbent materials may be acquired from Environment Agency Wales on ☎ 03708506506 (or Regulatory & Supporting Services - Environment, on ☎ 20 871650).

## Crushing Machines

Any plant used for the crushing of materials should be authorised or permitted by a Local Authority under the Environmental Protection Act 1990 Part I (Prescribed Processes) or the Pollution Prevention And Control (England and Wales) Regulations 2000. All work should be carried out in accordance with the conditions of such an authorisation or permit. Where plant is used to recycle materials, the appropriate licence from Environment Agency Wales shall be obtained. The process operator should notify the Pollution Control Division prior to operation, providing a copy of the Authorisation or Permit. More information can be obtained from Regulatory & Supporting Services – Environment ☎ 20871650.

For more detailed information on control of dust and air pollution, please refer to Control of Dust From Construction and Demolition Activities, BRE 2003.



## Part six

### ...Waste

All contractors have a legal responsibility in respect of the rubbish and waste that they produce to ensure that it is properly stored, that legal arrangements are made for its collection and disposal, and to ensure that a written description of their waste is provided to the person that collects or removes it.

The law on your duty of care on waste is found in the Environmental Protection Act 1990 and your responsibilities can be broadly split into 3 parts:

#### Storage

You must ensure that the waste is stored in suitable containers so that it cannot fall out, blow away or escape from the receptacle. Storage should be as secure as reasonably practicable to prevent breaking open by vandals, thieves, animals, accidents or the weather.

#### Collection

Your waste must be removed by a person who is registered to carry waste by the Environment Agency. If a private contractor takes your waste away – ask to see their Registration Certificate – in the South East Wales Area you can check the validity of their Registration by telephoning the Environment Agency during office hours on 03708506506.

#### Waste Transfer

You must complete a “Duty of Care” waste transfer note, for the person who removes it and for the recipient. Within the note you will provide a written description of the waste you are transferring and where and who it is being transferred to. In this respect it is necessary for you to know where and who it is being transferred to and that all parties have the necessary authorisations. Repeated transfer of the same kind of waste can be covered by one transfer note for up to a year, but any unusual additions to the waste must be notified to the waste remover.

Wastes classed as hazardous have to be removed using “Special Waste”, Section 62 consignment note procedures. These are available from the Environment Agency on 03708506506. If in doubt contact the Council and/or waste contractor for advice. Offenders can be fined up to £5,000 or an unlimited fine if sent to the Crown Court.



## Part seven

### ...Ground Contamination

With proposed development on any land either upon or adjacent to certain types of potentially contaminated land, it is likely that a planning consent has been granted which includes a requirement for ground gas or contaminated land assessments. This is not always the case and the developer or contractor should ensure that desk study assessments are made to identify any previous industrial usage of the land in question.

This may involve consultation with Regulatory & Supporting Services – Environment on ☎ 20 871140 for ground contamination issues or Environment Agency Wales on ☎ 03708506506 regarding contamination of controlled waters. This would be a first stage (desk study) type of enquiry and may include external sources. You may wish that this is undertaken by geotechnical or hydrogeological consultants dependant on the perceived and potential risks.

The risks may be such that a second and or third stage ground investigation is necessary. These would generally relate to intrusive ground investigations. The second stage or tier two approach, would be a targeted sweep of contaminants across the site, perhaps with very limited groundwater assessment. The third stage or tier three approach would be more refined using targeted contaminant suites at specific locations and a more thorough groundwater assessment. It may be necessary that you seek professional chemical, ecotoxicological or risk assessment advice within stage two and three assessments.

Once the second or third stage investigation has been developed, it is necessary to consult with Pollution Control officers on ☎ 20 871650 prior to commencing any fieldwork to agree its scope and extent.

Contamination or ground gas can affect construction materials, such as piles, concrete or synthetic membranes/liners and professional advice should be sought at an early stage. Contact Building Control for further advice on ☎ 20 871363 or 20 871153.

The developer or operator will also need to have cognisance of Regulations that govern contaminated land and controlled waters to prevent potential or significant, harm or pollution to receptors. Advice in relation to regulatory matters can be sought Regulatory & Supporting Services – Environment on ☎ 20 871140 or Environment Agency Wales on ☎ 03708506506.

Information sheets are available on the following topics –

- Redevelopment of Potentially Contaminated Land
- Landfill Gas Protection Measures for New Developments
- Monitoring Regimes for Ground Gas Boreholes
- Testing of Imported Soils/Materials



## Part eight

### ...Considerate Constructors Scheme

The Considerate Constructors Scheme is a voluntary Code of Practice, driven by the industry, which seeks to:

- **Minimise any disturbance or negative impact (in terms of noise, dirt and inconvenience) sometimes caused by construction sites to the immediate neighbourhood.**
- **Eradicate offensive behaviour and language from construction sites.**
- **Recognise and reward the contractor's commitment to raise standards of site management, safety and environmental awareness beyond statutory duties.**

#### Overview:

This important initiative is a voluntary Code of Considerate Practice, which is adopted by participating construction companies, and everyone involved on the construction site.

#### Why:

There are thousands of construction projects in progress at any one time throughout the country. Many are in prime spots, for example the High Street, or in residential areas, and therefore many people pass by them. If these sites always presented an image of competent management, efficiency, awareness of local environmental issues and above all neighbourliness, then each one of them would promote the whole construction industry as caring and responsible. Every site would become a positive advertisement for the industry.

#### What:

The Handbook commits those contractors in the Scheme to be Considerate and Good Neighbours, as well as Clean, Respectful, Safe, Environmentally conscious, Responsible and Accountable.

#### Where:

The Scheme covers the British isles and Ireland with sites as far a field as Jersey and the Scottish Highlands.

#### Who:

Over **6000** sites from all over the UK have registered with the Scheme, and many construction companies and client bodies automatically register all their sites. The Scheme is open to construction companies of all sizes whether they are national, regional or local companies.



**How:**


Posters displayed around the construction site that advertise the Scheme and set out the Handbook to which the constructors are committed. If passers-by wish to comment, the name and telephone number of the Site Manager is clearly displayed alongside the telephone number of the administrators of the Scheme. Those contacted are expected to take the action required.

**When:**

The Scheme started in October 1997. A feature of the Scheme is that regional awards for the best performing sites and constructors are presented annually.

**For further details contact:**

The Considerate Constructors Scheme  
PO Box 75  
Great Amwell, Ware  
Hertfordshire, SG12 OYX.

 01920 485959  
**fax** 01920 485958  
**Freephone** 08007831423  
[enquiries@ccscheme.org.uk](mailto:enquiries@ccscheme.org.uk)

<http://www.ccscheme.org.uk/>



# Part nine

## ...List of Contact Numbers

Regulatory & Supporting Services - Environment (Pollution)	☎	029 20871650
Regulatory & Supporting Services - Environment (Out of Hours)	☎	029 20871650
Regulatory & Supporting Services – Environment (Building Control)	☎	029 20871363 or 029 20871153
Health & Safety Executive	☎	029 20263120
Environment Agency Wales	☎	03708506506
Highways & Parks (Street Works Engineer)	☎	029 20785200

Pollution Control Division  
Regulatory & Supporting Services – Environment  
Cardiff Council  
Cardiff  
CF10 3ND

**Tel: 029 20871650**

**Email: [noise&airpollution@cardiff.gov.uk](mailto:noise&airpollution@cardiff.gov.uk)**

**[contaminatedland@cardiff.gov.uk](mailto:contaminatedland@cardiff.gov.uk)**

**[buildingcontrol@cardiff.gov.uk](mailto:buildingcontrol@cardiff.gov.uk)**

This document is also available on the SRS website: <http://www.cardiff.gov.uk/pollution/>

For further information on Building Control issues :  
<http://www.cardiff.gov.uk/buildingcontrol.htm>