NEIGHBOURHOOD SERVICES SCRUTINY FORUM AGENDA

Tuesday, 16 March 2010

at 4.00 pm

in Committee Room B, Civic Centre, Hartlepool

MEMBERS: NEIGHBOURHOOD SERVICES SCRUTINY FORUM

Councillors S Akers-Belcher, Barker, R W Cook, Coward, Fleming, J Marshall, Rogan, Worthy and Wright

Resident Representatives: John Cambridge and Brenda Loynes

Also invited to attend:

The Mayor, Stuart Drummond

Councillors Aiken, C Akers-Belcher, Allison, Atkinson, Brash, S Cook, Cranney, Fenwick, Fleet, Flintoff, Gibbon, Griffin, Hall, Hargreaves, Hill, Jackson, James, Laffey, Lauderdale, A E Lilley, G Lilley, London, A Marshall, McKenna, Dr Morris, Payne, Plant, Preece, Richardson, Shaw, Simmons, Sutheran, Thompson, Tumilty, Turner, Wallace, Wistow, Young

Resident Representatives: Christine Blakey, Ronald Breward, Liz Carroll, Bob Farrow, Mary Green, Ray Harriman, Ted Jackson, Jean Kennedy, Rose Kennedy, Evelyn Leck, Alan Lloyd, John Lynch, Brian McBean, Mary Power, Julie Rudge, Iris Ryder, Linda Shields, Bob Steel, Joan Steel, Sally Vokes and Maureen Waller

1. APOLOGIES FOR ABSENCE

2. TO RECEIVE ANY DECLARATIONS OF INTEREST BY MEMBERS

3. MINUTES

3.1 To confirm the minutes of the meeting held on 1 March 2010 *(to follow)*

4. RESPONSES FROM THE COUNCIL, THE EXECUTIVE OR COMMITTEES OF THE COUNCIL TO FINAL REPORTS OF THIS FORUM

No items

5. CONSIDERATION OF REQUEST FOR SCRUTINY REVIEWS REFERRED VIA SCRUTINY CO-ORDINATING COMMITTEE

No items

6. CONSIDERATION OF PROGRESS REPORTS/BUDGET AND POLICY FRAMEWORK DOCUMENTS

No items

7. ITEMS FOR DISCUSSION

Investigation into the Possible Environmental Impacts of Dust Deposits on the Headland and Surrounding Areas

7.1 Evidence from key groups:-

(a) Covering Report – *Scrutiny Support Officer;* and

(b) Evidence from:-

(i) Van Dalen;

(ii) PD Ports;

(iii) Heerema; and

(iv) the Regeneration and Neighbourhoods Department

7.2 Feedback from the site visit held on 19th February 2010, the observations of ships from the Town Wall, the visits to properties on the Headland and the Focus Group held on 23rd February 2010:-

(a) Covering Report – *Scrutiny Support Officer*

(b) Verbal Feedback from the:-

(i) site visit held on 19th February 2010;

(ii) observations of ships from the Town Wall;

(iii) visits to properties on the Headland; and

(iv) Focus Group held on 23rd February 2010

8. ISSUES IDENTIFIED FROM FORWARD PLAN

9. ANY OTHER ITEMS WHICH THE CHAIRMAN CONSIDERS ARE URGENT

ITEMS FOR INFORMATION

Date of Next Meeting:- Tuesday, 23 March 2010 at 2.00 pm in the Council Chamber, Civic Centre, Hartlepool

HARTLEPOOL BOROUGH COUNCIL

POLLUTION PREVENTION & CONTROL ACT 1999

ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS 2007

Provenance	Date
Application for Authorisation (EPA 90)	31st March 1992
PPC Permit transferred automatically to EP Permit	6th April 2008

Ref EP2008/05

PD Teesport, Queens Square, Middlesbrough TS2 1AH is hereby authorised to carry out a mineral process as described below, in accordance with the following conditions.

Address of Permitted Activity:

PD Teesport
Dock Office,
Cleveland Road,
Hartlepool
TS24 0UZ

Description of Permitted Activity:

The discharging of coal of various sizes and petroleum coke by ship's cranes and/or quayside cranes from ship's hold to quay and/or direct to road transport at Victoria Harbour. The process falls within the definition contained in Section 3.4 (Part B) of Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2007

Conditions:

Monitoring, Sampling and Measurement of Emissions

1. The supervisor responsible for the loading/discharging of cargo shall, where any visible escape of dust is observed to be blowing off-site, or when any malfunction or breakdown likely to lead to such an emission is found, shall:
   a) carry out investigation into the cause
   b) take prompt corrective action to prevent any further emission
   c) record the result of all such investigations and details of action taken in the logbook required by condition 3.

2. Weather forecasts relevant to the time of loading/discharge shall be obtained, including forecast wind speed and direction and made available to the supervisor responsible for the discharge of the vessel. All such details shall be recorded in the logbook.

3. The results of all monitoring and inspections, and any other information which may be required by any condition in this authorisation, shall be recorded in a logbook. The logbook shall be retained by the operator for a minimum of two years and made available for examination by the local authority at all reasonable times.

4. Cargoes arriving at the Port shall be monitored for free moisture content where practicable. Test results provided by the shipper will normally be acceptable provided they are traceable to the cargo and that it can be demonstrated that no deterioration has taken place during the voyage. Where a cargo is found to have a low free moisture content and it could give rise to emissions of particulate matter, consideration shall be given to the practicability of wetting the cargo in the ship's hold after the ship's survey.

Materials Handling

5. Cargo shall only be discharged from the ship's hold by means of sealed grabs.

6. Crane operators shall ensure that the grab is fully closed prior to emerging from the ship's hold. If material is still observed to be spilling or overflowing from the grab as it emerges from the hold, the operator shall pause the operation until such time as the material stops spilling or overflowing.

7. When cargo is being discharged into a quayside hopper, the grab shall be lowered as far as is practical into the hopper before the grab is opened. The grab shall not be opened until the base of the grab is at or below the top of the hopper.

8. Quayside hoppers shall not be overfilled such that the product protrudes above the top of the hopper.

9. When cargo is discharged directly to the quay, this shall be done by the creation of a temporary stockpile of sufficient size to ensure that loading shovels are not constantly clearing the entire pile to the road vehicle. Temporary stockpiles shall be maintained in clearly defined areas and loading to road vehicles shall be designed to keep pace with discharge operations from the ship.

10. No grab shall be permitted to discharge cargo direct to the quayside or a temporary stockpile until the grab has been lowered to a height of not more than one metre above any surface beneath the point of discharge.

11. Cleaning of ships' decks and the quay shall be undertaken during and after discharge of each cargo consignment, by vacuum or wet methods.

12. The sweeping up of any cargo residues from the working areas and the re-incorporation of the residue into temporary stockpiles shall be carried out during every lull in operations and at the end of each working period.

13. Loading of vehicles shall be undertaken in such a manner that there is no overloading leading to peaks of cargo above the sides of vehicles or over spill from the vehicle to the quay or road surface.

14. If the nature of the cargo or weather conditions are such that materials can be seen to be blowing from wagons, then arrangements shall be put in hand to ensure remedial action is taken before they leave the site.

15. In the event of the vessel's cargo not being worked during any extended period of time, e.g. one full working shift, all stockpiles shall be cleared from the quay unless specific arrangements have been made for dust control of the stockpiles.

16. The applicant shall give the local authority prior notice of the date, time and location of all local handling operations.

General Operations

17. There shall be designated routes of access and exit from the quayside.

18. All roadways and areas where there are regular movements of vehicles shall be kept in a clean and damp condition throughout the operation.

19. Any coal or coal products deposited beyond the stockpiles shall be cleaned by vacuum or wet methods.

20. A supervisor, who is a member of the process management personnel, or an appointed representative, shall be present and easily identifiable on site at all times when the process is in operation. Any person designated as being in charge of operations shall be vested with sufficient authority to suspend operations or take any other action necessary to ensure compliance with all conditions contained in this authorisation.

21. All staff shall be made aware of the requirements of this authorisation and be given sufficient instruction to ensure their compliance.

22. Suitable means for dispensing water to all parts of the application sites, including the tops of any stockpiles, shall be provided and maintained in a working condition at all times. The system so provided shall be capable of delivering water in sufficient quantity to maintain the whole site in a damp condition where necessary.

23. On completion of the discharge operation the quay shall be cleaned of all residues of cargo using either vacuum methods or wet sweeping. This shall be carried out without delay at the end of the discharge operation.

24. At all times when this authorisation is in force a copy of the said authorisation shall be made available to all persons who have duties which are or may be affected by the matters set out in this authorisation.

25. In the event of adverse weather conditions when dust can be observed blowing off-site and dust suppression measures have proved ineffective all operations, with the exception of dust suppression measures, shall be suspended until such time as dust emissions are brought under control.

26. The discharging of petroleum coke shall only be permitted at the northern end of Irvine's Quay as indicated on Annex 1 of the original authorisation, and within the North Basin.

27. The discharging of any cargo that has attained a temperature in excess of 50 degrees Centigrade shall not be permitted.

28. The discharge of washed, screened petroleum coke only shall be permitted at the southern end of the Deep Water Berth.

.....**(Signature)**.....**(Date)**

Head of Procurement Property and Public Protection

Hartlepool Borough Council
The Pollution Prevention Control Act 1999
Environmental Permitting (England & Wales) Regulations 2007

EXPLANATORY NOTE

These notes are provided for the operator of an installation or mobile plant to assist in the interpretation of their duties under the provisions of the above-mentioned legislation, with particular reference to the permit issued by Hartlepool Borough Council. These notes do not form part of the Permit or conditions attached to it.

1. BAT CONDITION

Article 2(11) of the IPPC Directive defines "best available techniques" as follows:

"'Best available techniques' shall mean the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole.

- **BEST** shall mean most effective in achieving a high general level of protection of the environment as a whole.
- **AVAILABLE** techniques shall mean those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator.
- **TECHNIQUES** shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

The installation and mobile plant should be operated such that -

(a) all the appropriate preventative measures are taken against pollution, in particular through application of the best available techniques; and

(b) no significant pollution is caused.

In relation to the Permit you should be aware that, amongst other aspects of the installation

operation and management, this residual duty will apply to:-

- the control of emissions to ensure that offensive odours are not caused beyond the installation boundary,
- maintenance, service and repair of equipment,
- keeping of spares and consumables,
- the training of installation operators, and supervision of workers
- management of the installation in relation to maintenance of a high standard of housekeeping.

2. STATUTORY REQUIREMENTS

This Permit does not detract from any of the following statutory requirements where applicable:-

(a) The requirement to obtain Planning Permission for the installation and any new construction.
(b) The requirement to obtain discharge consent from the Environment agency.
(c) The requirement to obtain Building Regulation approval for any construction work.
(d) The requirement of a Waste Disposal Licence.
(e) The requirement to comply with the Health and Safety at Work etc Act 1974.

3. PUBLIC REGISTER

Local authorities are required by EP regulation 46 to maintain a Public Register containing information on all the LA-IPPC and LAPPC installations and mobile plant they are responsible for. The register is available for inspection by the public free of charge during office hours (Monday to Friday 9.00am to 5.00pm) at

Hartlepool Borough Council,
Neighbourhood Services Department
Public Protection & Housing
Victoria Road
Civic Centre
Hartlepool
TS25 8AY

Subject to exclusions of commercially confidential information and information affecting national security, registers will contain the following:

a. Applications for a permit;
b. Notices asking for information and responses to such;
c. Advertisements and representations in response to such (unless requested not to by the person responding)
d. In the case of c) above, a statement to the effect that representations were made but have been omitted – must not identify the person making the representation;
e. Statutory consultee responses to applications or applications for variations;
f. Permits;
g. Notifications of changes in the operation of installations;
h. Applications for variations, transfers or surrenders of permits;
i. Variations, transfers and surrenders granted;
j. Revocations;
k. Enforcement or suspension notices;
l. Notices withdrawing enforcement and suspension notices;
m. notice of an appeal including the grounds of the appeal, relevant correspondence between the appellant and the regulator, and the decision/notice which is the subject of the appeal;
n. Representations in response to appeal (unless requested not to by the person responding);
o. In the case of n) above, a statement to the effect that representation were made but have been omitted – must not identify the person making the representations;
p. The appeal decision and any accompanying report;
q. Convictions, formal cautions; to include the name of the person, date of conviction/caution, and (where appropriate) penalty and name of court. This requirement does not override the Rehabilitation of Offenders Act 1974 regarding spent conditions, and authorities must take care to remove relevant entries at the appropriate time;
r. Monitoring data obtained by the authority from its own monitoring, or sent to the authority on accordance with a permit condition or regulation 28(2) notice;
s. If any monitoring information is omitted because it is commercially confidential, the authority must put a statement on the register indicating whether relevant permit conditions are being complied with, based on the withheld information;

Commercial Confidentiality

An operator may request certain information to remain confidential i.e. not be placed on the public register. The operator must request the exclusion from the public register of commercially confidential information at the time of supply of the information requested by this notice or any other notice. The operator should provide clear justification for each item wishing to be kept from the register. The amount of information excluded from the register should be kept to the minimum necessary to safeguard the operator's commercial advantage.

The general principle is that information should be freely available to the public. An operator may request certain information in relation to a LA-IPPC or LAPPC permit to remain confidential, i.e. not be placed on the public register. The onus is on the operator to provide a clear justification for each item he or she wishes to be kept from the register. EP regulation 45 defines 'commercial information' as "information that is commercially or industrially confidential in relation to any person".

Local authorities will also take into account whether the information at issue could be obtained or inferred from other publicly accessible sources.

The local authority will determine this request within 28 days of the date of such an application and will issue a Determination Notice detailing their decision. The notice may specify a time period over which the information is to remain commercially confidential (if not specified, it will be four years beginning with the date of the determination). The operator may appeal to the Secretary of State within 21 days of the notification of the decision.

If the application is granted the local authority will place a statement on the public register stating that certain information has been withheld and stating the reasons why, plus whether this information is relevant to a permit condition, and whether the permit condition has been complied with.

Further guidance on commercial confidentiality can be found in Chapter 8 of the LA-IPPC and LAPPC manual.

National Security

EP regulation 47 allows for information to be kept from public registers for reasons of national security. For this to happen, the Secretary of State/Welsh Ministers must determine that placing the information on the register would be contrary to the interests of national security. An operator who believes any information meets this test may apply to the Secretary of State/Welsh Ministers.

The operator must notify the local authority that he or she has asked for this determination, but must not exclude the information from any submission to the authority, such as a permit application. The Secretary of State/Welsh Ministers may direct the authority on what information, if any, to exclude from the register.

Any such applications must be made to either:

Secretary of State for Environment,
Food and Rural Affairs
Nobel House
17 Smith Square
LONDON
SW1P 3JR

and should be marked "application under the Environmental Permitting Regulations".

4. UPGRADING PROGRAMMES

The following information does not comprise part of the Permit, but contains guidance, which should be noted when considering the upgrading programme.

Aim of Upgrading Programme

To identify the areas where the existing installation does not meet the required standards ("new process" standards), as detailed in the relevant Secretary of State's Process Guidance Note, the steps to be taken to meet these standards, and the time-table of dates by which these steps are to be implemented. (You are advised to refer to the Department of Environment, General Guidance

Note 4 - Interpretation of terms used in Process Guidance Notes (available from H.M. Stationery Office)).

Content of Upgrading Programme

There is not a specified format for an upgrading programme but, wherever possible, it should identify reasonably precise actions to be taken and the dates on which these actions will be instigated. If abatement plant is to be installed technical specifications and schematic drawings along with operational procedures should be detailing in the upgrading plan.

Council Action upon receipt of Upgrading Programmes

It is an offence not to submit the upgrading programme by the date specified in the Permit.

The Council will assess the adequacy of the submission and if satisfied with the content, will place it on the Public Register (operators may apply for matters which are considered to be commercially confidential to be excluded from the Register).

The Council will bring the upgrading programme within the terms of the Permit by issuing a Variation Notice to add the programme as a condition to the initial Permit. This will ensure that commitments given are made into enforceable conditions (this may not preclude changes to the programme where there are sound reasons for such a change).

5. FEES

(EP regulation 65).

Operators must pay an annual subsistence charge to cover local authorities' continuing regulatory costs once a permit has been issued. It will cover such things as checking monitoring data or carrying out inspections. The level of subsistence charge is contained in the relevant charging scheme and will become due on 1st April each year. The operator is liable for the full subsistence charge for the year of operation. You are advised that if you fail to pay the fee due promptly, the Council may revoke the Permit.

The risk-based charging scheme was introduced in 2006/7 for all standard activities. The risk-based method applies a low, medium or high risk rating to activities operating at an installation. The resulting subsistence fees are proportionate to the risk rating. This risk-assessment method uses a "point scoring" approach which combines the indicative environmental impact assessment (EIA) of the activity itself and the Operator Performance Assessment (OPA) covering the operational aspects of the installation. This is outlined in the Risk-Based Inspection Methodology which is available on the PPC web pages

6. TRANSFER OF PERMITS

LA-IPPC and LAPPC installations may change hands through normal business transactions. EP regulation 21 therefore allows for permit transfers either for the whole installation, or for one or more parts of it through partial transfer arrangements. New operators should have the appropriate management systems and the competence to run installations properly in compliance with the conditions of the existing permits.

When an operator wants to transfer all or part of a permit to someone else, he/she and the proposed transferee must make a joint application and also pay a fee. They must both sign the application form. The joint application should contain their telephone numbers and addresses plus any additional correspondence address. The application should be accompanied by the current permit document and must include the appropriate transfer fee.

7. PROCESS VARIATIONS

A local authority may decide that the existing permit conditions require amendment without receiving any notification or application from the operator (EP regulation 20(1)). This is most likely to occur when the authority decides that the conditions need varying having conducted a periodic review in accordance with EP regulation 34, or in the light of revised guidance from Defra/WAG, or because of the transfer of a permit to another operator. Other instances could be the revision of a relevant environmental quality standard, the declaration of an area as an air quality management area, or (in the case of LA-IPPC) a requirement from the Environment Agency to revise a water-related condition.

If there is no such condition included in their permit, operators should be aware that there are risks to them should they fail to notify the relevant local authority of a change. The risks are that the authority decides that the change means that the operator is either carrying on the activity beyond the extent authorised by the existing permit, or is doing so in contravention of an existing permit condition. Both are offences under EP regulation 38. On the positive side, some changes could result in a lowering (as well as, potentially, raising) of an installation's risk rating. These could include alterations to management or training practices, or technical changes such as the use of less toxic chemicals.

Many changes will not have consequences for the environment and notification will be unnecessary; although there may be cases where it is nonetheless good practice for an operator to do so in order to keep the authority informed. It is also good practice to notify authorities of any administrative changes, such as the name or address of the operator (where the installation has not changed ownership), and authorities can simply amend the permit without going through any formal procedures.

The IPPC Directive definition of 'substantial change', which is incorporated by the EP Regulations, is "a change in operation which, in the opinion of the regulator, may have significant negative effects on human beings or the environment". For installations subject to the Solvent Emissions Directive, further criteria may be relevant.

If an operator has any doubt over whether a particular change is substantial, he/she should ask the opinion of the relevant local authority.

8. APPEALS

Under EP regulation 31 operators have the right of appeal against the enforcing authority in the following circumstances:

1. refusal or deemed refusal to grant a permit;
2. refusal of an application to vary a permit;
3. if the operator disagrees with the conditions imposed by the authority as a result of a permit application or an application for a variation notice;
4. refusal of an application to transfer a permit, or if the operator disagrees with the conditions imposed by the authority to take account of such a transfer;

5 refusal of an application to surrender a permit, or if the operator disagrees with the conditions imposed by the authority to take account of the surrender;

6 the service of a variation notice (not following an application by the operator), a revocation notice, an enforcement notice, or a suspension notice on the operator;

7 the deemed withdrawal by a local authority of a duly-made application because the operator has not provided further information (paragraph 4 of Schedule 5 to the EP Regulations).

Under EP regulation 53(1) operator has the right of appeal against a decision that information will not be withheld from the public register for reasons of commercial confidentiality.

The rights to appeal listed in 1-6 above do not apply where the decision or notice implements a direction given by the Secretary of State or Welsh Ministers. There is also no right of appeal if a revocation notice has been served for non-payment of subsistence fees (EP regulation 31(3)).

Appeals under 3-6 above do not stop the conditions coming into effect. Appeals against variation, enforcement and suspension notices do not stop the notices coming into effect. However, appeals against revocation notices suspend the operation of the notices coming into effect until the appeal is decided or withdrawn.

Notice of appeal against the conditions attached to the permit must be given within six months of the date of the notice, which is the subject matter or the appeal. The Secretary of State may in a particular case allow notice of appeal to be given after the expiry of this period, but would only do so in the most compelling circumstances.

How to appeal

There are no charges for appealing and there is no statutory requirement to submit an appeal form. However, an appeal form has been prepared and is available for use at http://www.planning-inspectorate.gov.uk/pins/environment/environment/index.htm. For an appeal to be valid, appellants (the person/operator making the appeal) are legally required to provide all of the following (see EP Regulations Schedule 6, paragraph 2(2)):

- written notice of the appeal
- a statement of the grounds of appeal
- a statement indicating whether the appellant wishes the appeal to be dealt with by written representations procedure or at a hearing - a hearing must be held if either the appellant or local authority requests this, or an appointed person or the Secretary of State/Welsh Ministers decide to hold one (appellants must copy the above three items to the local authority when the appeal is made)
- a copy of any relevant application
- a copy of any relevant permit
- a copy of any relevant correspondence between the appellant and the regulator
- a copy of any decision or notice, which is the subject matter of the appeal.

Appellants should state whether any of the information enclosed with the appeal has been the subject of a successful application for commercial confidentiality under EP regulation 49 and provide relevant details. Unless such information is provided all documents submitted will be open to inspection.

Where to send your appeal documents

Appeals should be despatched on the day they are dated, and addressed to:

The Planning Inspectorate
Environment Team, Major & Specialist Casework
Room 4/04 Kite Wing
Temple Quay House
2 The Square
Temple Quay
Bristol BS1 6PN
Tel: 0117 372 8726
Fax: 0117 372 8139

On receipt of an appeal and during the appeal process both main parties will be informed by the Inspectorate about the next steps, which will explain the procedures and submission timetable for representations. To withdraw an appeal – which may be done at any time - the appellant must notify the Planning Inspectorate in writing and copy the notification to the local authority who must in turn notify anyone who has expressed an interest in the appeal.

Costs

The operator and local authority will normally be expected to pay their own expenses during an appeal. Where a hearing or inquiry is held as part of the appeal process, by virtue of paragraph 5(6) of Schedule 6, either the appellant or the authority can apply for costs. Applications for costs are normally heard towards the end of the proceedings and will only be considered if the party claiming them can show that the other side behaved unreasonably and put them to unnecessary expense. There is no provision for costs to be awarded where appeals are dealt with by written representations.

Following an application for costs, the Inspector or the Secretary of State/Welsh Ministers will act in the spirit of DOE Circular 8/93 – The Award of Costs in Planning and Other Proceedings. Schedule 6, paragraph 5(6) of the EP Regulations applies section 250 (as modified) of the Local Government Act 1972 to hearings and inquiries. Under section 250, persons may be summonsed to appear to give evidence, the appointed person may seek recovery of his or her certified costs from either party and may make a costs order so that one party pays part of the other side's costs.

9. Secretary of State's Guidance

This permit is covered by Secretary of State's Guidance:

PG3/5 (05) Secretary of State's Guidance for Coal, Coke, Coal Product and Petroleum Coke	**www.defra.gov.uk/environment/index.htm**
Pollution Prevention and Control Act 1999	**www.defra.gov.uk/environment/index.htm**
Environmental Permitting (England & Wales) Regulation 2007	**www.defra.gov.uk/environment/index.htm**
General Guidance Manual on Policy and Procedures for A2 and B Installations	**www.defra.gov.uk/environment/index.htm**

10. Reporting Requirements and Contact Details

Where a Permit condition imposes a requirement to forward documents to the Local Authority or to report a specified occurrence the following address and telephone number shall be used:

By Post

Hartlepool Borough Council,
Neighbourhood Services Department
Public Protection & Housing
Victoria Road
Civic Centre
Hartlepool
TS25 8AY

By Telephone

During office hours: 01429 254143

Facsimile No.: 01429 523169

creating a better place

Environment Agency

Our Ref: WML 570

Date: 2 February 2009

1 CHURCH STREET
11 FEB 2009

Hartlepool Borough Council
Commercial Waste Team
Civic Centre
Victoria Road
Hartlepool
TS24 8AY

Dear Sir/Madam

Environmental Protection Act 1990
Waste Management Licensing Regulations 1994 (as amended)

Please find enclosed a Waste Management Licence EAWML 100226 issued to:

Van Dalen UK Limited

For Site At: **Irwins Quay**
Hartlepool Export Terminal
Hartlepool
Cleveland
TS24 0UZ

CHIEF EXECUTIVE'S DEPT.
HARTLEPOOL
10 MAR 2009
PASSED TO
DEALT WITH
FILE No

On **28 January 2009**

Should you require any further information please contact NPT officer, Judith Ford on 01925 542 773.

Yours faithfully

Louis Wood

Louis Wood
Permitting Support Centre

creating a better place

Environment Agency

Our Ref: WML 570

Date: 2 February 2009

1 CHURCH STREET
11 FEB 2009

Hartlepool Borough Council
Commercial Waste Team
Civic Centre
Victoria Road
Hartlepool
TS24 8AY

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CHIEF EXECUTIVE'S DEPT
HARTLEPOOL
10 MAR 2009
PASSED TO
DEALT WITH
FILE NO

On **28 January 2009**

Should you require any further information please contact NPT officer, Judith Ford on 01925 542 773.

Yours faithfully

Louis Wood

Louis Wood
Permitting Support Centre

Licence Number EAWML100226

with Introductory Note

Facility Type: Metal Recycling Site and Storage of Furnace Ready Scrap Metal for Recovery

Environmental Protection Act 1990

Van Dalen UK Limited

Irvins Quay
Hartlepool Export Terminal
Hartlepool
Cleveland
TS24 0UZ

Contents

Licence Number EAWML100226

with Introductory Note

Facility Type: Metal Recycling Site and Storage of Furnace Ready Scrap Metal for Recovery

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Hartlepool
Cleveland
TS24 0UZ

Contents

Licence

Environmental Protection Act 1990
Waste Management Licensing
Regulations 1994

Environment Agency

Waste Management Licence Number EAWML100226

Facility Type: Storage of Furnace Ready Scrap Metal for Recovery and Scrap Metal.

The Environment Agency ("the Agency") in exercise of its powers under Section 36 of the Environmental Protection Act 1990, hereby authorises:

Van Dalen UK Limited ("the licence holder"),

whose registered office is:

8 Grangemill Lane
Sheffield
South Yorkshire
S9 1HW

Company registration number 04031206

to carry out the keeping of waste at:

Irvins Quay
Hartlepool Export Terminal
Hartlepool
Cleveland
TS24 0UZ

the boundary of which is shown on the site plan at schedule 1 to this licence to the extent authorised by and subject to the conditions of this licence.

Signed	Date
	28 January 2009

Kelly Bailey
Authorised to sign on behalf of the Agency

Licence
Environmental Protection Act 1990
Waste Management Licensing
Regulations 1994

Environment Agency

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Company registration number 04031206

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Hartlepool Export Terminal
Hartlepool
Cleveland
TS24 0UZ

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to the extent authorised by and subject to the conditions of this licence.

Signed	Date
	28 January 2009

Kelly Bailey
Authorised to sign on behalf of the Agency

1 - MANAGEMENT

1.1 General management

1.1.1 The activities shall be managed and operated:

(a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the licence holder as a result of complaints; and

(b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any persons having duties that are or may be affected by the matters set out in this licence shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Accident management plan

1.2.1 The licence holder shall:

(a) maintain and implement an accident management plan;

(b) review and record at least every 4 years or as soon as practicable after an accident; (whichever is the earlier) whether changes to the plan should be made;

(c) make any appropriate changes to the plan identified by a review.

1.3 Site security

1.3.1 Site security measures shall prevent unauthorised access to the site, as far as practicable.

2 – OPERATIONS

2.1 Licensed activities

2.1.1 The licence holder is authorised to carry out the activities specified in schedule 2, table 2.1 ("the activities").

2.2 Waste acceptance

2.2.1 Wastes shall only be accepted if:

(a) it is of a type and quantity listed in schedule 2, table 2.2; and

(b) it conforms to the description in the documentation supplied by the producer and holder.

2.2.2 Records shall be maintained of all waste accepted onto the site.

1 - MANAGEMENT

1.1 General management

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2.2.2 Records shall be maintained of all waste accepted onto the site.

3.7 Monitoring

3.7.1 This licence does not require any monitoring of the activities, emissions or the environment.

4 – INFORMATION

Records

4.1.1 All records required to be made by this licence shall:

(a) be legible;

(b) be made as soon as reasonably practicable;

(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

(d) be retained, unless otherwise agreed by the Agency, for at least 6 years from the date when the records were made, or in the case of the following records until licence surrender:

(i) off-site environmental and health effects; and

(ii) the condition of land and groundwater

4.1.2 Any records required to be made by this licence shall be supplied to the Agency within 14 days, where the records have been requested in writing by the Agency.

4.2 Reporting

4.2.1 All reports and notifications required by the licence shall be sent to the Agency using the contact details supplied in writing by the Agency.

4.2.2 A summary report of the waste types and quantities accepted and removed from the site shall be made for each year. It shall be submitted to the Agency within one month of the end of the year, and shall be in the format required by the Agency.

4.3 Notifications

4.3.1 The Agency shall be notified without delay following the detection of:

(a) any malfunction, breakdown or failure of equipment or techniques, accident or fugitive emission which has caused, is causing or may cause significant pollution.

(b) the breach of a limit specified in this licence; and

(c) any significant adverse environmental and health effects.

4.3.2 Written confirmation of actual or potential pollution incidents and breaches of emission limits shall be submitted within 24 hours.

4.3.3 Prior written notification shall be given to the Agency of the following events and in the specified timescales:

(a) as soon as practicable prior to the permanent cessation of any of the activities.

(b) cessation of operation of all or part of the activities for a period likely to exceed 3 months;

(c) resumption of the operation of all or part of the activities after a cessation notified under (b) above

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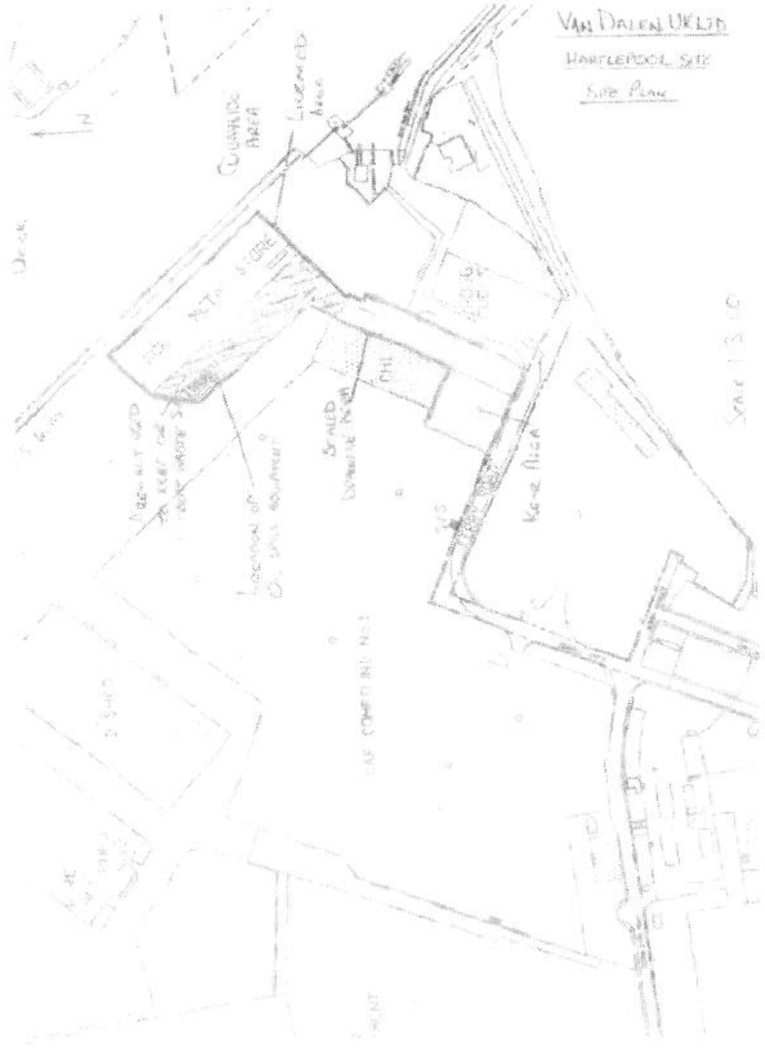
Schedule 1- Site plan



Schedule 1- Site plan

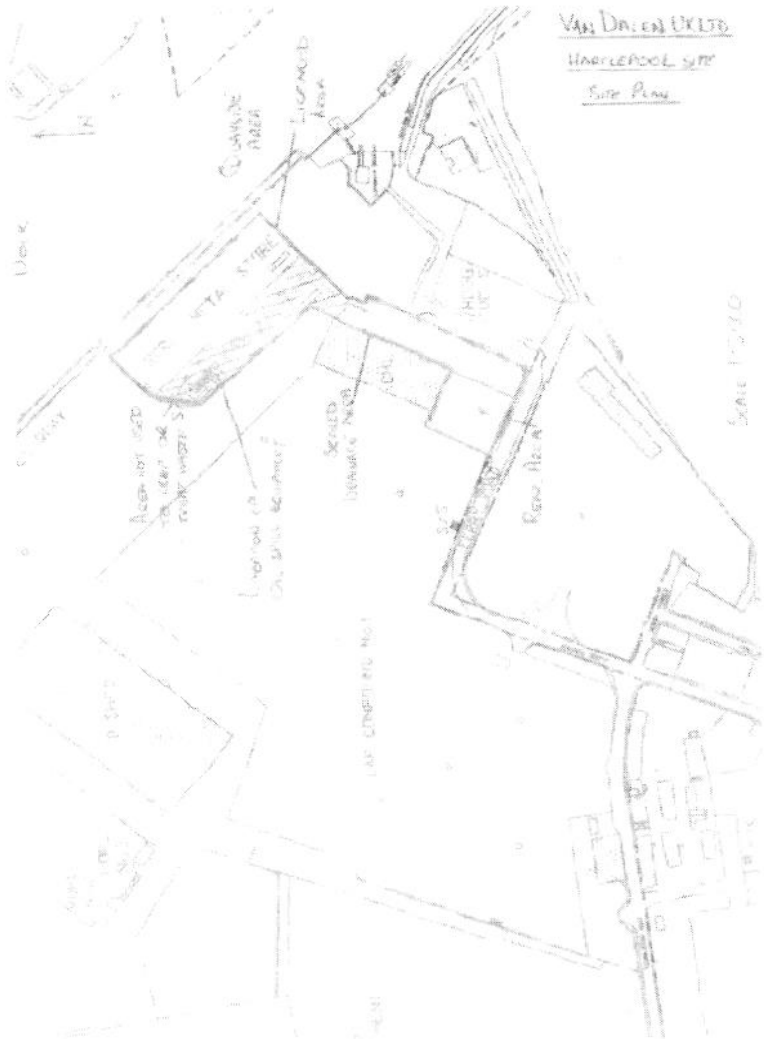


Table 2.2 Licensed waste types and quantities	
10 09	wastes from casting of ferrous pieces
10 09 03	furnace slag
10 10	Wastes from casting of non-ferrous pieces
10 10 03	furnace slag
12	WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS
12 01	wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 01	ferrous metal filings and turnings
12 01 02	ferrous metal dust and particles
12 01 03	non-ferrous metal filings and turnings
12 01 04	non-ferrous metal dust and particles
15	WASTE PACKAGING;ABSORBENTS,WIPING CLOTHS,FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
15 01 04	metallic packaging
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14,6 06 and 16 08)
16 01 06	End-of-life vehicles containing neither liquids nor other hazardous components
16 01 17	ferrous metal
16 01 18	non ferrous metal
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13 (ferrous and non-ferrous metal waste only)
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15 (ferrous and non-ferrous metal waste only)
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 04	metals (including their alloys)
17 04 01	copper, bronze, brass
17 04 02	Aluminium
17 04 03	Lead
17 04 04	Zinc
17 04 05	iron and steel
17 04 06	Tin
17 04 07	mixed metals
17 04 11	cables other than those mentioned in 17 04 10
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 01	Wastes from incineration or pyrolysis of waste
19 01 02	ferrous materials removed from bottom ash
19 10	wastes from shredding of metal-containing wastes
19 10 01	iron and steel waste
19 10 02	non-ferrous waste
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 02	ferrous metal
19 12 03	non-ferrous metal
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions (except 15 01)
20 01 40	metals

Detailed Chronological list of events

20th June 2008

- HBC Officer visited Irvine's Quay to observe unloading operations of Routile shipment. Problems observed with leakage around the grabs and dust emissions from the hoppers and from wagons carrying routile to the warehouses.

- Officer forwarded copies of photographs to Sean Beach at PD Ports and asked for his comments. Officer spoke to him on the phone and he said he would look to carrying out further improvements to the hoppers and also that they would ensure that in future all the wagons used to ferry the routile will be well sealed. They had sent a number of wagons away because they were leaking.

3rd July 2008

- HBC Officer observed dust being emitted from Irvine's Quay. Routile delivery emitting clouds of dust from hoppers. Contacted the dock office. They have being trying different set ups in the hoppers to see if they can improve the situation. One of the hoppers had been set fully open and the dust was just blowing straight back out.
  Hopper taken out of action until gate closed back down again.
  Officer had meeting with Sean Beach and he agreed to contact their engineers and get more work carried out on hoppers.

- Van Dalen where using sprinkler systems and new loading procedures throughout the rest of 2008 and we did not observe any problems or receive any reports from residents of any dust problems.

20th January 2009

- Call received from a resident of Sea View Terrace re brown spots on windows. These had been replaced by Heerema last year. HBC Officer visited premises and found small orangey brown spots but only on the first floor front window sills and nowhere else. This is some distance away from the docks and the affected windows are on the opposite side of the property. The source of this is unlikely to be from the port.

20th February 2009

- Call from a resident of the Town wall re limestone dust all over cars and property.

- HBC Officer spoke to Sean Beach at the port. Limestone had been unloaded on part of dock not normally used for this product. They have cleared all the limestone away and cleaned area up.

23rd February 2009

- Call from another resident of the Town Wall. He had come back from holiday to find his property covered in dust. Explained that we were aware of this incident and it had been dealt with.

4th March 2009

- Annual Environmental permit inspection undertaken for Coal and Coke deliveries. During inspection had a discussion with Sean Beach about work carried out on hoppers.

2nd July 2009

- HBC Officers visited Irvine's quay with and observed routile delivery. Still clouds of dust emanating from top of hoppers and around the wagons in the base of the hoppers. We took a number of photographs. The weather was dry and sunny with a very light SW breeze. Although there were dust emissions from the hopper they were being contained within the port due to the weather conditions. Officers spoke to Sean Beach and he accepted that there are still problems with the hoppers. The routile being unloaded this time is the natural routile which is less dense than the normal shipments. He informed me that he currently has difficulty in obtaining any funding due to the current financial climate. Officers explained to him that we are continuing to monitor and that if we get evidence that any of the material being loaded or unloaded is getting off the port then we will take formal action. He said he will forward the details of our conversation to his superiors and try to get funding to do more work to the hoppers.

20th August 2009

- 16:30: Officer received phone call from Town Wall Resident to say that scrap was being unloaded from the ship and was creating a lot of dust. An Officer visited Town Wall at 17:00. The unloading process was nearly complete and not much dust could be seen. The Officer was informed that the dust had been much worse during the afternoon. The Officer took some photos and drove to the other side of the port to capture some more photos. Unfortunately the process had ceased by the time the Officer arrived at the other side of the port.

8th September 2009

- 14:45: Call received from a resident of the Town Wall to say that there was large amounts of dust blowing off the 4 or 5 piles of material that is stored around the buildings at Van Dalen's and wanted us to take photographs. The wind was extremely strong and gusty and the officer explained that considering the severe weather conditions it would be difficult for anyone to stop dust blowing around but that we would visit. Officers visited the site at 15:00hrs. There was no evidence of any dust blowing off the stock piles that the resident was referring to. There were considerable amounts of dust blowing off all road surfaces, off the dock surfaces, off the surfaces

in Hoggs Fuels etc. The wind was extremely strong and gusty and very warm. There was no loading or unloading taking place in the Port. Officers visited Town Wall. There was some evidence of dust blowing off Irvine's Quay, and also considerable amounts of sand and dust blowing off Middleton Beach and the Banjo Pier opposite Town Wall, there was no obvious dust blowing off any of the piles of scrap metal. The port had their bowser operating damping down the surfaces but this was drying out very quickly in the wind. Officers spoke to a resident on the Town Wall. He informed the officers that the Port had been running the Bowser all day.

The officers took a number of photographs during our visit.

14th September 2009

- HBC Officer had telephone conversation with Sean Beach at PD Ports re the Hoppers. Sean confirmed that they had carried out modifications to one of the hoppers and that this had resulted in improvements to any dust emissions from the hoppers. They are going to undertake the same modifications to the other hoppers. The Officer also raised the issue of the holes in the sheds around the routile store to the rear of Van Dalen's site. Sean said that although the brickwork is damaged the routile is stored within another bund inside the building and is contained within the bunding.

22nd September 2009

- Telephone call received from a resident of the Town Wall about Van Dalen's tipping scrap from wagons at 7:00am and 7:30am. He was referring to an agreement that was negotiated between the residents and THPA and Hartlepool Steels some years ago. He was informed by the officer that this was an informal agreement that had been made with previous operators and not with Van Dalen and that it had no legal standing. The Officer informed him that he would contact Van Dalen and see what I could sort out for them. The Officer spoke to Ian Baxter at Van Dalen's. He said that if a delivery arrives then they have to tip it as the vehicle has to move on to other jobs. He said nothing has changed in all the years they have been on Irvine's quay; they have always started at 7:00am and do load ships as early as 6:00am on occasions. He said they do stick by the previous agreement and only load Girder and Plate between 8:00am and 8:00pm. He said he would see what he could do to move scrap deliveries to a later time. The Officer rang the resident back and explained the action taken. The resident was not too happy and said that he would ring every time there was an early delivery.
  HBC officer rang the Environment Agency and asked them if they would also raise this issue with Van Dalen during their next inspection.

19th October 2009

- Resident of Town Wall phoned Hartlepool Borough Council to say that a lot of dust was coming from the unloading scrap process.

- HBC Officer visited the dock area and took photos of scrap being unloaded. The photo's showed that the grab's were releasing the scrap too high, creating dust plumes.

- HBC Officer informed Sean Beach about the dust complaint and that an officer had observed the grabs releasing the scrap too high creating dust plumes. HBC Officer sent Sean Beach the photographs.

20th October 2009

- Sean Beach emailed HBC Officer to say that he had ensured that all staff was aware of the situation and to tighten up on procedures. Sean expressed that he had spoken to both crane drivers and showed them the pictures of the dust as they cannot see the dust plume from the position they sit at. Sean also said he had spoken to Superintendents and Shift Managers and asked them all to be aware of the situation and monitor the loading. Sean also sent a copy of a notice which he had consequently produced and put out to his staff.

2nd November 2009

- Resident of Town Wall phoned Hartlepool Borough Council complaining about the dust coming from the scrap loading process.

- HBC Officer visited site and took photographs. Wind appeared to be blowing dust from scrap heap. Did not appear to be blowing in the direction of Town Wall. The resident complained about the dust on his window sill. HBC Officer took a sample from it and said it would be sent off for sampling.

6th November 2009

- Resident of the Town Wall phoned Hartlepool Borough Council to say that the crane drivers were playing music last night which disturbed him. They were also scraping the bucket on the ground.

- HBC Officer phoned Sean Beach, PD Ports, to inform him of the complaint. Sean there is a notice out to shift managers that there should be no drots outside of sheds and would check this

- E-mail received from Sean Beach with copy of notice issued to all crane drivers and shift managers warning them about radios. Staff informed that if radios played over tannoy systems then disciplinary action will be taken.

19th November 2009

- Resident of the Town Wall contacted Hartlepool Borough Council regarding dust coming from the routile sand unloading process.

- Further resident contacted Hartlepool Borough Council regarding dust coming from the routile sand unloading process.

- HBC Officers visited the site and took photos of the unloading. Although an improvement in the hoppers, dust blow back from the top of the hopper still a problem and one of the grabs was much worse than the other for leakage.

- The petri dishes for Town Wall and Northgate to be sent off to be analysed.

24th November 2009

- Resident of Town Wall contacted Hartlepool Borough Council to say that routile sand was being unloaded at 10pm last night during high winds. The resident also complained about the noise due to the alarms of vehicles reversing and banging noises due to the buckets scraping the quay.

- HBC Officer contacted Cleveland Cascade regarding dust escaping from the hoppers. Cleveland Cascade confirmed they could look into designing improvements on the hoppers.

- HBC Officer sent Sean Beach an email which included the photographs of unloading operations taken 19/11/09. HBC Officer informed Sean that he had had some discussions with Cleveland Cascades regarding the dust issue who informed him that they could probably provide a hopper that would improve the situation of dust emissions from the top of the hoppers.

- Sean Beach emailed HBC Officer to confirm the events on 23/11/09 when a resident of Town Wall had contacted him regarding the noise.
  Sean confirmed that the banging noise had actually been coming from M.V "BBC Thailand". The noise was sets of "Between Decks" (Tween decks), that had been in the process of being refitted, and had been making the "booming" noise in the now, empty ship. Sean contacted the agent for the ship GAC OBC and asked them to get the crew to stop the activity in the ship until daylight hours which they did. Sean also mentioned that he had met with a supplier of loading machine and explained the "white noise" type of beepers, who to his credit he immediately contacted his engineering dept and arranged to have them supplied and fitted.

  Sean also confirmed that a sheet is being issued to the night shift gangs to ensure that the noise is kept under control.

25th November 2009

- HBC Officers visited dock area at 12.00 to observe routile sand unloading. No unloading was taking place

- The Environment Agency contacted HBC Officer to inform that they had received a complaint from Councillor Marshall regarding dust coming from

routile ship at 12.00. HBC Officer confirmed that no unloading of routile sand was being undertaken at this time.

- HBC Officer visited site at 15:30 to monitor unloading of routile sand.

- Petri dishes to be sent off for sampling.

1st December 2009

- Resident of Town Wall contacted Hartlepool Borough Council regarding unloading of white dolomite.

- Petri dishes to be sent off for sampling.

4th December 2009

- HBC Officer attended a meeting at PD Ports Meeting with Cleveland Cascades at PD Ports. Ian Barnard from Cleveland Cascades was present along with Sean Beach, Ken Smith and two of the engineers from PD Ports. Cleveland Cascades agreed to investigate whether they could design a hopper to reduce the amount of dust emitted during the unloading process. Cleveland Cascades confirmed that they would take measurements when the next routile ship was in (due 22/12/09)

9th December 2009

- HBC Officers attended a meeting with residents at 23 Town wall. Mr and Mrs Graham and Mrs Rennie attended.

- It was agreed to install noise monitoring equipment into Mr Graham's house to monitor the noise from the ports.

- It was agreed that during the next routile sand delivery (22 December 2009) an officer would monitor in the evening.

- It was emphasised to residents that they should contact officers as soon as possible whenever there is a dust incident

22nd December 2009

- HBC Officer installed noise monitoring equipment (DAT) in residents house on Town Wall

24th December 2009

- HBC Officer removed the DAT from resident's house. Nothing had been recorded as the ship's arrival had been delayed.

- Complaints received fro 2 residents of the Town Wall about routile ship unloading on Irvine's Quay and alleged clouds of dust blowing everywhere. HBC Officers visited Town Wall and spoke to one of the residents during the visit. The grabs where unloading at a low level and discharging deep into the hoppers as per instructions. Usual leakage from the side of the grabs and visible dust emissions from the tops of the hoppers. Some of this dust appeared to be lifting and drifting in the light wind towards Thorpe Street area of the headland. Resident was trying to claim that this dust must be dropping somewhere and even suggested as far away as Throston. Officers visited Thorpe Street/Northgate Area, downwind of the ship. They could find no evidence to suggest the dust was leaving the port area and causing any nuisance. The ground was covered in snow and ice and there was no evidence of any deposits on the snow, no evidence on any window cills, no evidence on the petri dishes that where put out earlier that morning or on vehicles including a white van which was parked in Thorpe Street.

5th January 2010

- Hartlepool Borough Council received a phone call from a resident of Town Wall complaining about the dust created from the routile sand unloading process.

- HBC Officer visited the dock area and took photos. The grabs were being released too high above the hopper.

- HBC Officer emailed Sean Beach photo's of routile sand unloading.

- Sean Beach replied to HBC Officer that he would use the photo's in the bulletin

18th January 2010

- Resident of Town Wall phoned Hartlepool Borough Council regarding dust coming from the routile sand unloading process
-
- HBC Officer visited dock area. One hopper appeared noticeably worse than the other for dust escaping. Grabs being lowered correctly. Dust did not appear to be blowing anywhere – would sit in the air for a few seconds and then disappear.

19th January 2010

- Resident of Town Wall contacted Hartlepool Borough Council to say the noise at the docks from reversing vehicle alarms and general traffic kept him awake during the night.

- Another resident of Town Wall also contacted Hartlepool Borough Council to say that the noise had disturbed her during the night.

- HBC Officer contacted Sean Beach regarding the noise complaint.

- Sean Beach explained they hire a company in for vehicles and has already given instructions that all vehicles are fitted with a white noise beeper. All of PD Ports vehicles are fitted with white noise beepers now. Regarding traffic noise, Sean confirmed that there were only five wagons in which is not different to normal and the noise may have travelled due to it being a clear, still night. Sean Beach also confirmed that Cleveland Cascade's had been in yesterday to take measurements on the hoppers re possible improvements to reduce the dust emissions.

- Paul from PD Ports contacted HBC Officer to confirm that the mistake was due to the hire company. The company was informed previously about only using vehicles with white noise beeper alarms. The company has been informed again to ensure that all vehicles used at the port have white noise broadband alarms.

- HBC Officer contacted resident of Town Wall to arrange to install the DAT at his property when scrap or routile sand loading/ unloading is taking place.

2nd February 2010 - 9th February 2010

- Noise monitoring undertaken at Town Wall premises. No noise nuisance established. Rutile ship unloading.

16th February 2010 - 22nd February 2010

- Noise monitoring undertaken at Town Wall premises. Officer visited Town Wall 22:50- 23:40 on Wednesday 17th February. Although cranes and vehicles on the Port where audible at the Town Wall the level of noise was not considered to be a nuisance. Noise monitoring equipment collected from resident at Town Wall on Monday 22nd February. The resident confirmed that noise had not been a problem during this delivery.

www.environment-agency.gov.uk

Monitoring of particulate matter in ambient air around waste facilities

Technical Guidance Document (Monitoring) M17

ENVIRONMENT AGENCY

Overview

Technical Guidance Document M17 is issued by the Environment Agency as one of a series providing support to its regulatory officers, monitoring contractors and those sectors of the waste industry involved in environmental monitoring. M17 provides information on the monitoring methods and techniques available for assessing levels of particulate matter in ambient air around waste facilities regulated by the Agency.

The term 'monitoring' encompasses both quantitative measurements of particulates, and semi-quantitative or even subjective assessments (e.g. visual dust assessments). However, this guidance focuses on quantitative measurements of particulate matter and, although it provides background information on risk assessment, this document's purpose and focus are confined to monitoring.

Operators of waste facilities are normally expected to carry out monitoring themselves. In all cases, the cost and effort expended in monitoring should be proportionate to the risk posed by the waste facility and the environmental benefit gained from monitoring. This document does not state definitive best available techniques (BAT) or the most appropriate measures to prevent pollution of the environment or harm to human health. Instead, the intention is to provide information to aid the selection of a suitable monitoring method for a given application.

How to use this guidance

This document is divided into three distinct parts and a series of appendices.

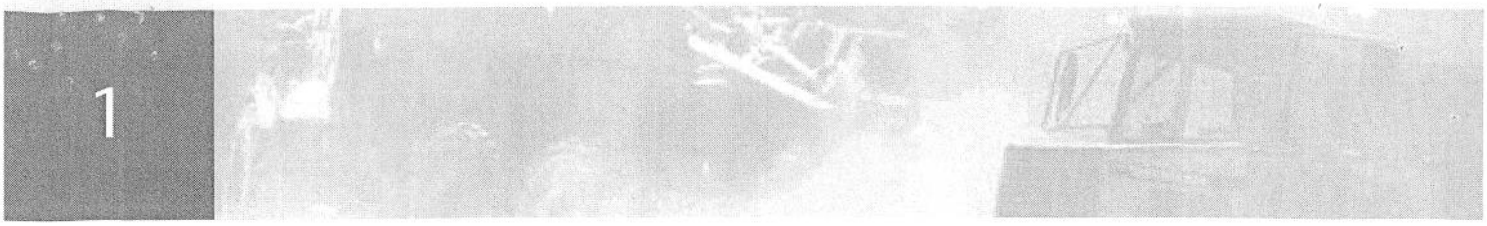
Part I: Principles, guidance and strategy gives guidance on the many factors that should be taken into account when considering a monitoring programme and how these factors should be used to develop a monitoring strategy. The issue of environmental risk posed by the site is vital when deciding the monitoring strategy; hence, a short summary of risk principles is included. Part I also gives background information on legislation, abatement, health effects and air quality criteria. Readers are referred to an appendix for details about the principles underlying the different techniques for measuring particulates.

Part II: Specific monitoring methods can be considered a stand-alone directory of specific published methods for monitoring particulate matter. In this guidance, the term 'monitoring method' is used to refer to a published or documented procedure for using the monitoring approach and technique that has been developed such that comparable results can be obtained when the monitoring is carried out at different times and places or by different organisations. 'Monitoring technique' refers to the analytical principle behind the monitoring. Wherever possible, the preferred method for monitoring around waste facilities is indicated.

Part III: Key fact sheets contains a number of succinct fact sheets covering a broad range of different types of waste management facility. The complete guidance document is comprehensive and, necessarily, large. The key fact sheets enable officers to focus rapidly on relevant sections of the document when dealing with site-specific monitoring issues related to particulate matter.

Appendices include:

- case studies (a mixture of real examples and hypothetical studies illustrating a wide range of approaches);
- particulate measurement techniques;
- guidelines for locating monitoring stations;
- methods for summarising data;
- sources of further information.



1 Legislative framework

This chapter provides guidance on:

- environmental protection legislation applicable to waste facilities;
- planning laws that cover proposals for certain types of waste facility;
- the wider provisions of environmental management and assessment strategy that affect waste facilities.

1.1 Background

The principal types of waste facility† covered by this guidance and which are potential sources of particulate-phase air pollutants are listed in Table 1.1. Those facilities of main concern (in bold) are landfills, scrapyards, transfer stations and composting plants. Their relative importance may change with developments in Government policy and legislation such as the Landfill Directive (Council of the European Union, 1999). For example, disposal by landfill may decrease relative to incineration and composting. The legislative framework relating to particulate air pollution at waste management facilities can be divided into four main areas as shown in Figure 1.1.

Figure 1.1 Legislative framework relevant to air quality for waste facilities

1.2 Environmental protection legislation

On 1 April 1996, waste regulation in England and Wales became the responsibility of the Environment Agency.

Part II of the Environmental Protection Act 1990 (EPA 90) (as amended) and associated regulations implement the Waste Framework Directive (75/442/EEC) and apply to the keeping, treating and disposal of 'controlled waste'. Part II EPA 90 developed from the provisions of Part I of the Control of Pollution Act 1974 relating to waste on

Table 1.1 Types of waste management facilities

Waste facility	Sub-divisions
Transfer stations (including those that also undertake treatment activities)	Biodegradable, commercial and industrial waste, clinical waste and inert waste
Recycling facilities, including **scrap yards**	Materials recovery facilities (MRFs), mixed waste recycling facilities, paper/card sorting plants, scrap metal yards and other waste treatment facilities
Incinerators	Including energy-from-waste and refuse-derived fuel (RDF) plants
Landfills	Hazardous, non-hazardous waste and inert waste
Composting sites	Green waste and kitchen waste (biodegradable), or mixed waste
Civic amenity sites	Waste delivered by householders
Construction and demolition recycling sites	Building materials

† The term 'facility' is used to cover sites regulated by the Agency under a waste management licence issued under EPA 1990 (Part II) and a PPC permit issued under the PPC Regulations 2000.

2.2 Classification by physical behaviour in air

2.2.1 *Suspended particulates and deposited particulates*

A basic classification of particulates may be made into those that are easily deposited and those that remain suspended in the air for long periods. This division is extremely useful: deposited dust[†] is usually the coarse fraction of particulates that causes dust annoyance, whereas suspended particulate matter is implicated more in exposure impacts.

This document uses, for convention, the format of 'annoyance' to refer to nuisance in respect of relevant objectives under the EC Framework Directive[#]; 'nuisance' is taken to refer to statutory nuisance in respect of the powers of environmental health authorities.

There is no sharp dividing line between the sizes of suspended particulates and deposited particulates, although particles with diameters >50 µm tend to be deposited quickly and particles of diameter <10 µm have an extremely low deposition rate in comparison (DoE, 1995). In reality, the size ranges of the suspended particulates and deposited particulates that are collected relate strongly to the two very different approaches used to sample these fractions (see Appendix B, Sections B1 and B2).

2.3 Classification by size

2.3.1 *Size distribution of airborne particulate matter*

It is generally accepted that particulate emissions fall into three main categories.

- **Primary particles** are derived directly from combustion sources such as road traffic, power generation and industrial processes.
- **Secondary particles** are formed by chemical reactions in the atmosphere and consist primarily of sulphates and nitrates.
- **Coarse particles** comprise emissions from a wide range of sources including resuspended dusts from road traffic, construction works, mineral extraction processes, wind-blown dusts and soils, sea salt and biological particles.

Little information is available on the significance of the different particle-size ranges for emissions from waste facilities. However, the Department for Food, Environment and Rural Affairs (Defra) estimates that fugitive dusts, stockpiles, quarries and construction, together contribute up to 5 µg/m^3 towards annual mean background concentrations of the coarse fraction (2.5–10 µm diameter) of particulates in the immediate local areas to sources (Defra, 2002). The contribution of these sources to the fine fraction (<2.5 µm diameter) is not thought to be significant.

On this basis, one might expect waste facilities such as landfills, waste transfer stations, composting facilities and metal recycling premises to make little contribution to $PM_{2.5}$ as their emissions are likely to consist mainly of coarse particles. To better characterise particulate emissions at waste facilities, it is necessary to make an inventory of the sources and then consider each separately. For example, sources at landfills might be:

- the landfill construction/excavation works
- waste acceptance and storage
- waste treatment
- waste emplacement
- vehicular traffic[‡].

A similarly complex set of sub-sources is likely to exist for waste transfer stations, composting facilities and metal recycling facilities.

2.3.2 *PM_{10}, $PM_{2.5}$ and other size classifications*

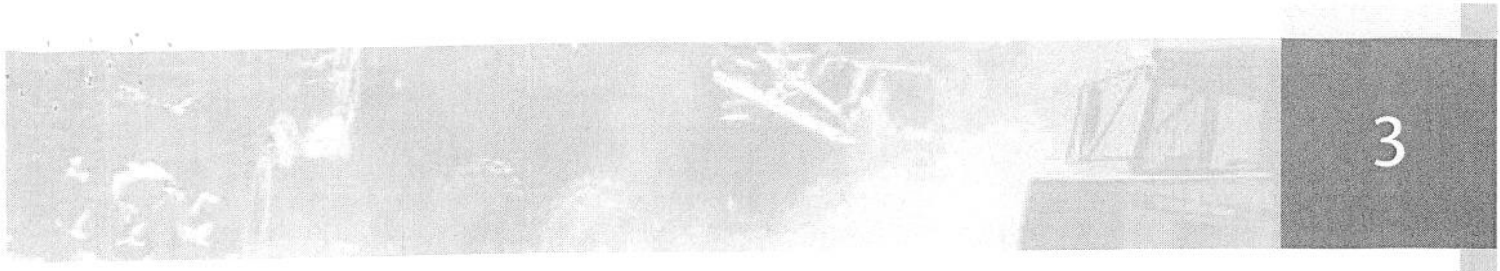
As stated above, particulate pollutants in ambient air are diverse in character and cover a size range from <0.1 µm to >100 µm (Figure 2.2). Hence, classification of particulates by size is arguably the most useful and most popular means of characterisation. The most recent size-based particulate classifications are PM_{10} and $PM_{2.5}$, which refer to particulate matter <10 µm and <2.5 µm diameter, respectively. These particular size cut-off points are chosen because they correspond with different degrees of penetration by particles of the respiratory system.

Total inhalable, thoracic and respirable particles are classifications derived in the same way. In the UK, however, these terms are used more frequently in occupational hygiene than in ambient monitoring, where PM_{10} and $PM_{2.5}$ have been adopted. The total inhalable dust fraction is that which is captured by inhalation. The dust fraction reaching all the way to the lungs is termed the thoracic dust fraction. The fine dust that can penetrate even further into the lungs, bronchioles and alveoli is known as the respirable dust fraction. PM_{10} is roughly equivalent to thoracic particles, and $PM_{2.5}$ is roughly equivalent to respirable particles.

† Deposited matter can also be described by the terms dustfall and dry deposition.

The EC Framework Directive on Waste makes it a relevant objective to ensure that waste is recovered or disposed of, in particular, without causing nuisance through noise or odour. In the UK, this objective is accommodated by the Waste Management Licensing Regulations 1994.

‡ Some US studies have focused on diesel trucks delivering waste, as these are believed to be a significant source of $PM_{2.5}$.



3

Sources, abatement and exposure impacts

This chapter provides background information on:

- how particulate matter is generated at waste facilities;
- the potential exposure impacts from exposure to the types of particulate matter emitted by waste facilities;
- common methods to prevent or reduce emissions of particulates at waste facilities;
- why there needs to be an unbroken source-pathway-receptor link before exposure to particulates can occur;
- the main routes of human exposure from particulates at waste facilities.

3.1 Releases of particulate matter at waste management facilities

There are many sources and release mechanisms for particulate matter at waste management facilities. Table 1.1 shows the types of waste found at the different types of waste facility; Table 3.1 shows some of the types of waste that may act as sources of particulate-phase airborne contaminants under certain conditions. It should be emphasised that these are simply examples. Other sources could well lead to the same airborne particulate contaminants. In addition, Table 3.1 does not imply that these particulate contaminants are present in the greatest quantities; some are present at only trace levels but, nevertheless, may be important because of their potential significant exposure impacts.

Table 3.1 Potential particulate-phase contaminants at waste facilities†

Type of particulate	Examples of particulate contaminants	Examples of waste types that may act as sources
General particulate matter#	Deposited dust, suspended particulates, e.g. TSP, PM_{10}, $PM_{2.5}$	Many waste materials including household, commercial and construction/ demolition waste
Organic species (non-biologically active)	Cellulose-based particulates Dioxins PCBs PAHs	Composting Incineration of chlorinated plastics Contaminated oils and transformers Diesel exhausts and combustion
Inorganic species	Minerals (e.g. quartz and silica) Metals (e.g. lead, cadmium, mercury, copper, aluminium, vanadium and zinc)	Soil and rocks Incinerator ash, batteries, glassware, leather, plastics, ferrous materials, electronic components and paint chips
Fibres	Asbestos, MMMFs	Insulation materials, some building materials
Micro-organisms and bioaerosols	Viable or total pathogens, bacterial toxins, bacterial endotoxins, cell-wall components, ß-glucans, fungal spores, viruses.	Municipal waste, green waste, compost, biosolids, industrial sludges from food processing and papermaking, faeces of domestic animals, clinical waste, sanitary waste, putrefying foods and packaging materials

† See Crook (1995) and South (2001).

In practice, it is necessary to refer collectively to particulates that are not of concern specifically due to their chemical composition, particle size or shape. The term 'general particulate matter' is used for such particulates.

For a waste material to generate airborne particulate matter, there must be a release mechanism. Some of the activities that generate particulate matter and disperse it in air include (in no particular order of importance):

- movement of waste to and from the facility;
- storage of waste (under certain conditions) on the facility;
- the handling and processing of the waste materials (e.g. shredding of green waste, turning of windrows and daily cover);
- wind scouring of waste surfaces.

Vehicles driven on the facility can also have a significant impact through the:

- resuspension of deposited particulates on roadways and hard-standing;
- transport of larger particles on vehicle bodies;
- generation of particulates by vehicular exhaust fumes.

The relative importance of individual release mechanisms will differ for the different waste management facilities covered by this guidance.

External factors influence the degree to which the release and dispersion take place. Meteorological conditions are important, especially the amount of rain and strength of wind. Facilities that process wastes inside buildings are typically affected less by meteorological conditions than wastes processed in the open air.

At some types of waste facility, bioaerosols form a significant proportion of the total particulate matter (TPM) emitted. For example, at composting facilities, micro-organisms such as fungi, bacteria, actinomycetes, protozoa and algae are suspended in an aerosol with, in most cases, organic-based particulate (e.g. cellulose) attached to it. Aerosols of fungal spores are also found downwind of transfer stations, materials recycling facilities and the active faces of landfill sites. At some landfills, a bioaerosol may be generated from the soil during daily cover activities.

Medical waste, if not thoroughly treated, has the potential to generate harmful bioaerosols, including human pathogens. While many medical waste facilities are self-contained, some medical waste tends to be present in municipal solid waste; therefore, facilities accepting these wastes have the potential for aerosols containing at least some pathogenic micro-organisms.

3.2 Exposure impacts

The potential impacts from exposures to particulate air pollutants around waste facilities are summarised in Table 3.2. The health effects experienced will depend on the actual exposure that occurs (see Section 3.4).

Table 3.2 | Potential exposure effects of particulates from waste facilities

Type	Examples	Potential health effects[1]
General particulate matter	Deposited dust	Annoyance. Unlikely to have a significant adverse health effect.
	Suspended particulates (e.g. TSP, PM_{10}, $PM_{2.5}$)	Respiratory problems may be related to certain components or represent non-specific effects of inhaled particles. The presence of other pollutants in the environment and adsorption on the surface of particles may affect the potential health impact. Some indicators of ill-health are pulmonary inflammation, exacerbation of asthma and changes in lung function
Organic species (non-biologically active)	PCBs PAHs Dioxins	These compounds are toxic and may be carcinogenic.
Inorganic species	Minerals (e.g. quartz and silica)	Lung disease
	Solid alkalis	Eye damage
	Metals (e.g. nickel, lead, cadmium, mercury, copper, aluminium, vanadium and zinc) and their compounds	Sensitisation, dermatitis, toxic; some are carcinogens (e.g. hexavalent nickel).
Fibres[2]	Asbestos	Lung disease, carcinogenic
	MMMFs	Irritant to skin and respiratory system.
Micro-organisms and bioaerosols (Swan *et al*, 2003)	Bacteria	Allergic reactions from inhalation
	Coliforms	Gastro-intestinal disorder, with symptoms of nausea, vomiting and diarrhoea. Main exposure route by ingestion. Respiratory infection from dust may be less likely.
	Endotoxins	Short-term illness: 'inhalation fever'/organic toxic dust syndrome (flu-like symptoms, fever, myalgia, malaise). Chronic exposure: bronchitis, reduced lung function, etc.
	Fungi, including *Aspergillus spp.*	Many spores are ubiquitous indoors and out, and rarely have adverse effect on inhalation, but are potentially allergenic if inhaled in large numbers. In rare instances, can cause severe infections, e.g. invasive aspergillosis.
	Mycotoxins	Acute or chronic disease from the most common exposure route of ingestion of fungally contaminated food. Has been hypothesised that dust inhalation may contribute to occupational lung diseases.
	Glucans	Inhalation may contribute to inflammatory responses and adverse lung function effects.

1 These are the potential impacts; the health effects experienced will depend on the actual exposure that occurs (see Section 3.4).
2 Although these fibres can be considered under the category inorganic species, they differ from most other inorganic particles in their methods of monitoring and their mechanisms for health impacts. For these reasons, fibres have been considered separately.

3.3 Control of particulate matter at waste facilities

3.3.1 *General considerations*

A number of issues warrant careful consideration when examining the abatement of particulates at waste facilities.

- It is important to recognise that prevention of emissions (e.g. by enclosure), reduction of emissions (e.g. by adopting better working practices) or abatement of particulates at the source of generation are likely to be more effective than suppression of particulates once they have become airborne.
- Particle size is very important. Coarse particles have much faster settling rates than finer particles and will therefore settle out as deposited dust quite close to the source, whereas fine particulate matter may remain airborne for longer periods and travel much greater distances. Many dust-suppression techniques are ineffective for finer particles.
- The choice of abatement method should achieve the required environmental benefits, at proportionate effort and cost.

3.3.2 *Abatement of particulate emissions from point sources*

Abatement options vary according to the type of emission source. So-called 'end-of-pipe' abatement is commonly used to reduce emissions to air from point sources, e.g. chimney stacks serving waste incinerators, RDF plant and some waste transfer stations. Such abatement techniques include scrubbers and bag filters.

3.3.3 *Abatement of particulate emissions from fugitive and area sources*

Fugitive emissions and particulate emissions from large area sources cannot be abated by end-of-pipe techniques. The issue should be addressed in the first instance by the introduction of good working practices to prevent the initial suspension or re-suspension of particulate matter at the waste site.

3.3.4 *Control measures for composting facilities*

Control measures that have been suggested (Swan *et al.*, 2003) for composting facilities include:

- using enclosed or in-vessel systems;
- ensuring the compost feed is in good condition;
- keeping the compost damp with a clean water source;
- more regular turning of windrows (thus reducing the growth of Aspergillus fumigatus);
- using water misting devices over the screen conveyors;
- using a dust hood and baghouse dust collection system over the screen;
- using water sprays to suppress dust in the composting area floor;
- keeping hard surfaces and roads damp, and cleaning them regularly.

The following techniques apply generally to waste facilities and should be considered for preventing particulate matter reaching off-site receptors or leaving certain areas of the waste facility.

3.3.5 *Dust suppression using water mists and sprays*

Suppression systems involving fine mists and coarser sprays are common both in indoor waste facilities and at the boundaries of waste facilities (especially landfills). Because indoor facilities typically have a lower ambient air velocity, a fine water mist can be applied to the working area and to the waste itself without becoming entrained away from its target. A disadvantage of indoor water-mist systems is moisture accumulation on concrete floors; this can be a safety hazard and may promote the growth of harmful micro-organisms within the settled dust. Good housekeeping is needed to prevent this.

For the same reasons, outdoor site boundary systems typically rely on coarser water droplets. The droplet diameter selected dictates the degree of suppression of inhalable dust fractions. The principal technical advantages and disadvantages of the two systems are summarised in Table 3.3. Plate 3.1 shows an example of a site-boundary dust suppression system.

3.3.6 *Site management techniques for preventing and minimising dust generation*

The prevention and minimisation of the generation of particulate matter emissions should be a fundamental part of the design, infrastructure and operation of waste management facilities. Possible measures include:

- limiting vehicular speeds to prevent resuspension and entrainment;
- paving any dirt tracks on the approach to the site exit;
- ensuring roads on site meet certain standards to give a smaller surface area for the settling and resuspension of dust;

3.4 Exposure impacts: the source–pathway–receptor chain

3.4.1 *Definitions and meanings of terms*

Monitoring of air quality around waste facilities forms part of the management of environmental risk from such facilities. A waste facility can often become an emotive local issue, with much of the argument centring around just how much risk it poses. However, problems arise because a number of terms and phrases (particularly hazard and risk) have been applied interchangeably and possess different meanings to different parties, or have developed common usage that lacks precision and is open to ambiguity.

The following definitions apply in environmental risk assessment (see OECD, 1995; Calow, 1997; Hurst, 1998; EARA, 1999):

- **Hazard** – the inherent *potential* of a substance or physical situation to cause harm.
- **Risk** – an estimation of the *likelihood* of that potential being realised, within a specified period or in specified circumstances, and the consequence.
- **Environmental** – referring to the routes of exposure for humans, wildlife and local and global atmosphere.

For example, a scrap yard may be considered a hazard due to the potential health impact of toxic heavy metals; the corresponding risk might be that there is a 1 in 100 chance per year that residents in nearby houses would receive a significant exposure to, say, nickel.

An important principle is that this assessment should continue in a tiered way with the level of detail being appropriate to the stage of development of the facility; this approach is outlined in risk assessment guidance from Defra (DETR *et al.*, 2000). Several Agency guidance documents of a more specific nature (Environment Agency, 2000b; 2002a) exist at a level below this overarching guidance.

3.4.2 *The source-pathway-receptor link*

Three components need to be present before an exposure risk exists, namely:

i a **source** (e.g. green waste at a composting facility);

ii a **pathway** made up of a release mechanisms (e.g. shredding of green waste leading to a bioaerosol) and a transport mechanism (e.g. dispersion of the bioaerosol in ambient air);

iii a **receptor** (e.g. a neighbouring resident) located at an exposure point (e.g. a nearby residential dwelling), who experiences exposure via an exposure route (e.g. inhalation of the bioaerosol).

This chain of events, shown diagrammatically in Figure 3.1, is termed an exposure pathway and is the complete environmental route by which particulates from the waste facility can reach receptors. The pathway must exist to result in exposure. If any parts of the source-pathway-receptor chain are missing, then there is no risk of exposure.

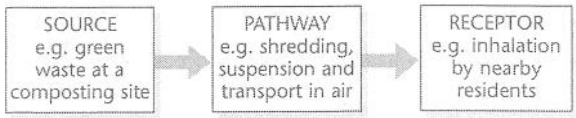


Figure 3.1 The source-pathway-receptor link

3.4.3 *Exposure routes for humans*

People can be exposed by inhalation, the oral route (ingestion) and the dermal (skin contact) route. Some examples of human exposure by these routes relevant to waste facilities include:

- **Air inhalation** – inhalation of contaminants such as particulate matter, aerosols and gases emitted from a waste site.
- **Dermal contact** – skin contact resulting from exposure to airborne particulates or skin contact with particulate-phase pollutants that have been deposited on land or water.
- **Soil/dust ingestion** – ingestion of polluted dust or soil as a result of the contamination of hands while playing or working outdoors. Soil and contaminated pasture is also ingested by grazing animals and may enter the human food chain via milk or meat.
- **Eating** – the consumption of fish from local streams and rivers is a potential source of indirect exposure to releases from a waste site. Ingestion of local produce and crops can be a major route of exposure for some pollutants (e.g. dioxins and lead).
- **Drinking** – groundwater and surface water containing chemicals can be consumed directly as potable water. Alternatively, the water can be an indirect exposure route because it can support edible fish stocks or have been used to irrigate market gardens or arable crops.

Depending on the nature of the activity or on the vicinity of the waste facility, receptors can be exposed via one or a combination of these routes (Eduljee, 1998) (Table 3.4). Exposure pathways relevant to the assessment of risks to human health from the landfilling of household wastes are shown in Figure 3.2. Monitoring programmes around waste facilities must be designed to provide information representative of the type and degree of exposure likely to be experienced. The monitoring programme should be risk-based, with the effort and cost expended commensurate with the likely environmental benefit to be gained.

Table 3.4 Example pathways for particulate pollutant releases from waste facilities

Release mechanism	Transport mechanism	Exposure route
Emissions to air by, for example, vehicle movements around the site	Suspended particulate matter dispersed in air	Via inhalation of particulate matter suspended in the air
	Eventual deposition onto soil followed by uptake by crops	Via ingestion of crops
	Eventual deposition onto surface waters	Via drinking water or ingestion of fish

The exposure at a particular point will depend on the complex relationship between the source, the pathway and the receptor. One important factor is the distance between the source and the receptor. Particles are subject to aerodynamic and gravitational effects, which determine the distance they will travel. Large particles generally settle out quite close to the site, whereas fine particles can travel great distances. For example, particles with diameters >50 μm tend to be deposited quickly, whereas particles of diameter <10 μm have an extremely small deposition rate in comparison (DoE, 1995). A pilot sampling survey can be used to provide some information on how particulates vary with distance. In some instances, computer modelling can also be valuable in this respect.

Large particles (>30 μm) responsible for most dust annoyance mostly deposit within 100 m of the source (the source is not usually located at the waste facility boundary.) Intermediate-sized particles (10–30 μm) are likely to travel up to 200–500 m. Smaller particles (<10 μm) can travel up to 1 km from the source, although very small particles can travel much further (DETR, 2000a). Government guidance for air quality review and assessment (DETR, 2000c) around quarries, stockpiles and landfill sites suggests that such sources are likely to add about 3 $\mu g/m^3$ to the annual mean background concentration of receptors within 200–400 m of the sources.

A detailed review of background levels of particulate phase pollutants is outside the scope of this document although, due to their topicality, brief mention is made in other sections of those for bioaerosols, PM_{10} and $PM_{2.5}$. Information on current background levels of air pollutants can be viewed at http://www.airquality.co.uk.

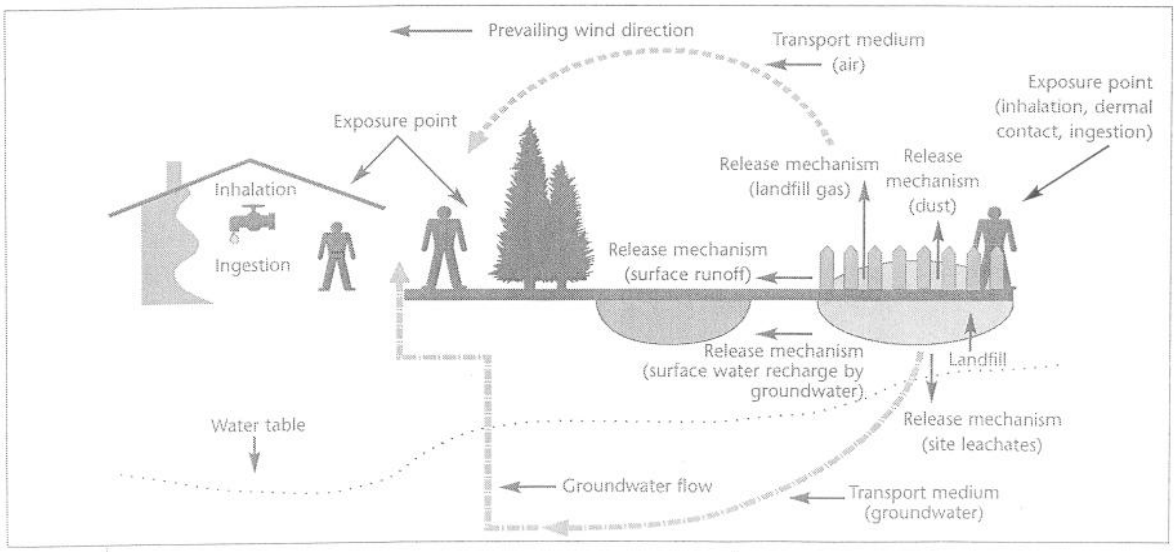


Figure 3.2 Releases and exposure pathways related to biodegradable waste landfills†
Source: Eduljee (1998)

† Note: this diagram identifies releases to all environmental media (not just particulates to air).

Air quality criteria

This chapter provides guidance on:

- the different air quality criteria that exist for particulate matter;
- how to choose the most appropriate air quality criterion for a waste facility;
- air quality criteria for assessing annoyance dust around waste facilities;
- air quality criteria for different types of suspended particulate matter around waste facilities.

4.1 Choosing the right air quality criterion

4.1.1 Types of air quality criteria

A number of air-quality criteria have been set for particulate pollutants in different situations. It is important that the correct criterion is chosen as the comparison benchmark for any monitoring carried out around a waste facility.

The various concentration or deposition-based air quality criteria can be placed into four main groups according to their intended application (Figure 4.1).

However, impacts for certain species (e.g. dioxins and metals) can also be assessed by a different approach that uses a quantitative estimate of the risk.

4.1.2 Hierarchy of air quality criteria

A hierarchy exists for the various air quality criteria, with statutory limits† (e.g. EC directive limits and national air quality standards and objectives) taking precedence over other official criteria, e.g. World Health Organization (WHO) guidelines and Environmental Assessment Levels (EALs). These in turn take precedence over any 'custom and practice' guidelines or 'yardsticks' based on, e.g. Occupational Exposure Standards (OESs). In some cases, more than one air quality criterion may apply and a comparison can be made with each.

The principles summarised in Figures 4.1 and 4.2 can be used to choose the appropriate air quality criteria for monitoring either nuisance dust or suspended particulate matter around waste facilities. However, the selected air quality criterion must still be technically fit for purpose; in particular, it is important to use an air quality criterion having the most appropriate averaging period. This is discussed in detail in Chapter 5.

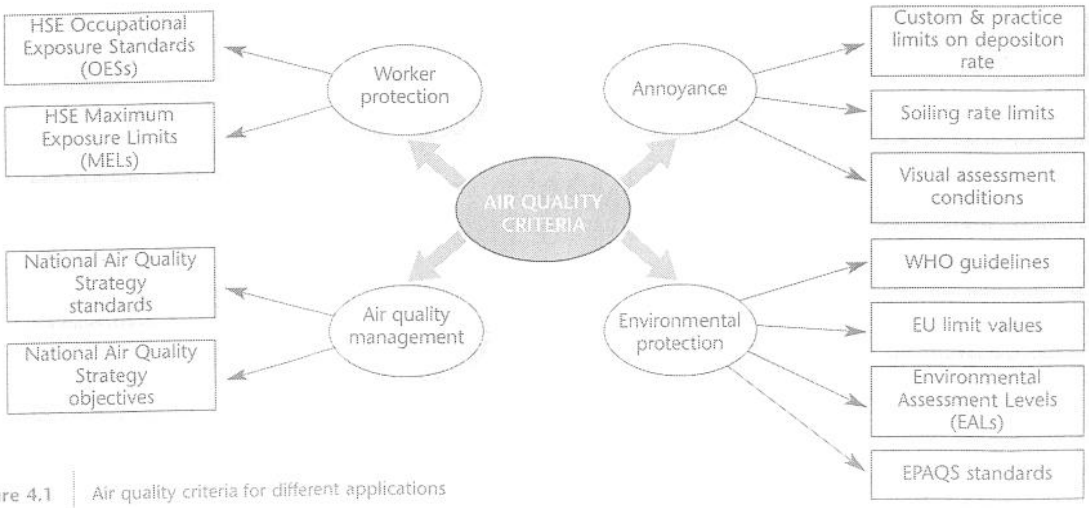


Figure 4.1 Air quality criteria for different applications

† For the purposes of Best Practicable Environmental Option (BPEO) assessments undertaken for IPC/IPPC, the Agency applies the collective term Environmental Quality Standard (EQS) to cover limits set by UK statute or EC directive.

There is no simple formula to determine at how many positions along the boundary sampling should be carried out. However, it is not good practice to base any inference on a single measurement and so there should be a minimum of two sampling stations[#] along each boundary. For a quadrilateral-type site, monitoring would then be from eight positions in total, which is consistent with guidance issued in 1995 for mineral works (DoE, 1995) that 4–8 sampling positions are suitable for large sites covering many hectares (with more needed for sites that are complex or situated close to built-up areas).

For further information on the number of sampling positions required, see later in this section.

Assessment of the air quality impact of an individual waste facility

Dispersion modelling may have been carried out as part of the environmental statement for planning purposes or as part of the application for a permit to operate the waste facility. If such modelling data are available, they can be used as the basis for locating sampling stations.

Computer dispersion modelling can give spatially resolved predictions of ground level concentrations, allowing the sampling stations to be located where peak pollutant levels are expected. More details on dispersion modelling and its applications are given in Technical Guidance Note M8 (Environment Agency, 2000c). It is also possible to use historical meteorological data as an aid for siting samplers when assessing the air quality impact of a waste facility.

For multi-station networks, a number of spacing configurations have been recommended (Pio, 1986) and include:

- location of stations on concentric circular lines around the area of interest;
- location of stations on typical trajectories of surface winds;
- location of a random heavy density of stations in the core of interest with random open spacing further out;
- location of stations on an equally spaced grid pattern.

The network spacing may then be modified to take account of topographical features and, if available, dispersion modelling or an emissions inventory. Most sampling surveys require one or more stations at background locations for comparative purposes. These should be located away from the influence of major sources.

Guidelines have been provided in Appendix C on where to locate samplers for the following applications:

- fugitive particulate emissions from waste facilities;
- controlled particulate emissions from stacks (engines, flares and some waste transfer facilities (WTFs);
- fugitive and controlled emissions from a waste facility;
- distinguishing the impact of a waste facility from other sources;
- monitoring to establish the frequency of peak levels from a particular waste facility.

Monitoring of exposure impacts or annoyance in the surrounding community

To assess the health risks of a pollutant to a community, the sampling stations should be located at the major concentrations of population (e.g. areas of residential housing) where people are exposed continuously for long periods. In some cases, it may be appropriate to monitor at sensitive locations (e.g. schools or hospitals), where the occupants may be especially vulnerable to poor air quality. While due regard needs to be given to where the maximum concentrations or depositions of particulates are expected to occur, in some surveys it is equally or more important to locate the samplers at sensitive receptors or main areas of habitation.

Some pollutants have important exposure routes apart from inhalation, which may need to be considered. A common example is lead, which may be ingested as dust on vegetables; a full assessment may involve herbage sampling. Other studies may not be concerned with the effects on human health, but on the impact on fauna and flora.

Topographical considerations

The dispersion of particulates over an area can be affected by:

- the overall roughness of the terrain (including the prevalence of buildings and the type of vegetative cover), which effects general turbulence in the air;
- individual topographic features causing localised airflow patterns.

Sampling stations should not be located in areas with unusual topographic effects (e.g. valleys, water–land boundaries, hills or ridges), unless their investigation forms part of the aims and objectives of the study. A common local effect is the formation of eddies by

This should be the aim, but costs and practicability need to be taken into account (see Section 5.4.2). It will usually be economic and practical for deposited dust, but may not be for more complex monitoring for suspended particulate and especially where further analysis is required, e.g. for heavy metals. For these, sampling at a single point along each boundary may need to suffice.

Key Fact Sheet

Metal recycling facilities

Introduction

This sheet summarises key facts from Technical Guidance Document M17 *Monitoring particulate matter in ambient air around waste facilities* that are relevant to metal recycling facilities, including fragmentisers.

This fact sheet applies only to monitoring particulate matter in ambient air. It is not intended for source emission (stack) monitoring or workplace monitoring to assess occupational exposure.

Major sources of particulate matter *Refer to M17, Part I, Chapter 3.*

Type of emission	Source	Activity involved
Controlled emissions of particulate matter	*Fragmentisers and other equipment*	*Breaking, cutting, crushing, screening, etc.*
	Chimney stacks or vents	*Serving workplace dust extraction systems in waste containment buildings or enclosures*
Area source emissions of particulate matter	*Uncontained or unenclosed areas of metal waste*	*Disturbance of the metal waste by, for example, tipping, moving, crushing, shredding, screening and stockpile abrasion*
Fugitive emissions of particulate matter	*At many location (e.g. roads and surfaces) across the waste facility*	*General waste operation such as vehicle movements*

Types of particulate matter *Refer to M17, Part I, Chapters 2 and 3 and Chapter 5 (Section 5.2), including Figure 5.2 decision flow chart (reproduced at the end of Part III).*

Major type of particulate matter likely† to be present:	*General particulate matter/ dust (refer to Section 3.1 for definition)* *Heavy metals, e.g. lead, copper, manganese, cadmium, chromium, nickel, vanadium*
Particulate types likely to present in minor# proportions:	

† This list is not exhaustive; it is only an indication of the types of particulate matter likely to be present. In practice, the magnitude of a type of particulate matter emitted will depend on the characteristics of waste source/stream and the release mechanisms.

\# The impact of a type of particulate matter will depend not just on the quantity emitted but also other factors such as its hazardous nature. Some contaminants may be present in only trace amounts, but may have the potential to cause significant exposure impact. The final decision on whether to monitor for a particular determinand should be risk-based, taking into account waste composition, scale/quantities and operations.

HARTLEPOOL BOROUGH COUNCIL

CHIEF EXECUTIVE'S DEPARTMENT

CIVIC CENTRE, HARTLEPOOL, CLEVELAND, TS24 8AY

DX 60669 HARTLEPOOL - 1

Telephone: 01429 266522
Fax: 01429 869625

Our Ref: AJW/JR Your Ref:

When telephoning please ask for: Mrs Whitaker
Ext 2013

2 March 1995

Dear Sir

Petition - Irvines Quay

I acknowledge receipt of the petition, containing 34 signatures, concerning dust from Irvines Quay.

The petition will be submitted to the next meeting of the Environment Committee and I will, therefore, communicate with you further in due course.

Yours faithfully

P B L TAYLOR
CHIEF ADMINISTRATIVE OFFICER

c.c. Director of Housing and Environmental Health
(FAO - Chief Environmental Health Officer)

ADM17975/CEX/ADMIN

HARTLEPOOL BOROUGH COUNCIL

CHIEF EXECUTIVE'S DEPARTMENT

CIVIC CENTRE, HARTLEPOOL, CLEVELAND, TS24 8AY

Telephone : 0429 266522
Fax : 0429 869625

Our Ref: JM/DB/APW Your Ref:

Please ask for: Cllrs MacRae/Bentley

August 7, 1992

To the residents of Town Wall

Dear Sir/Madam

RE: Headland Scrap Problem

On August 6th Councillors MacRae and Bentley were present when the new owners of Tees and Hartlepool Port Authority attended the Civic Centre to hear of the concerns expressed by Headland residents relating to the noise/dust problems.

Three senior Port representatives attended, they were Mr F R Brown, Managing Director Teesside Holdings, together with Mr Palmer, Engineering/ Environmental Director and local Port representative Mr Bill Niblock, Manager of Hartlepool Docks.

After a long discussion it was resolved that Council members would make a site visit of the area. This would particularly benefit those members who are perhaps less familiar than Ward members with the local geography. It was also suggested that the site visit should take place at a time when the loading of industrial scrap is in progress. It was felt by Ward members that this is the noisiest grade of handled scrap and is causing the most serious problems.

The Board Members present listened to the general nature of the complaint but requested time to reconsider and evaluate recorded incidents.

A further meeting will be arranged after the site visit.

Yours sincerely

J MacRae & D Bentley

COUNCILLORS J MACRAE AND D BENTLEY

JM9965/CEX/MEMBERS

POWELL DUFFRYN plc

Powell Duffryn House, London Road,
Bracknell, Berkshire RG12 2AQ.
United Kingdom.
Telephone 01344 53101
Fax No 01344 50599

26 April 1995.

Dear Mr. Graham,

Thank you for your letter dated 20 April. I have, of course, been made aware previously of the views of local residents concerning the scrap metal trade being conducted through Hartlepoool. Indeed, I have also been advised of the arrangements put in place to seek to minimise the disruption that this trade may cause. No-one would be more pleased than me to be able to secure alternative business more appropriate to the value of the Quay and it is to this end that considerable effort is being made by the Port's management team. However, I am sure you understand that we live in a very competitive climate and we have not yet been successful in securing such business.

Concerning our plans for the development of Tees Port, it may prove possible to transfer this trade to that location in two or three years' time when the development is complete, so long as this can be done with the consent of our customer.

I have passed your comments to the Port's management team who I know are aware of the local view and I am sure they will continue to bear this opinion in mind as they formulate future policy.

Yours sincerely,

W.G. Andrews
Managing Director
& Chief Executive.

Copy To:
Mr. John G. Holloway,
Chief Executive, Tees & Hartlepool Port Authority,

Minutes of Tees & Hartlepool Port Authority Ltd/ Hartlepool Borough Council/Residents Liaison Group held on Monday, 7 March 1994

Those Present :

Representing THPA Ltd

W B Niblock, Docks Manager
N Jackson, General Services Manager
R Lowes, Public Relations Officer

Representing HBC - Officers

P J Nutt, Chief Environmental Health Officer
F A Patterson, Director of Housing/Environmental Health

Representing HBC - Councillors

Coun. Mrs M Watson (Chairman of Environment Committee)
Coun. W Stott
Coun. C Stubbs, Ward Member
Coun. D Bentley, Ward Member
Coun. J MacRae, Ward Member

Representing Residents

Mrs L Rennie
J Graham

Representing Hartlepool Steels

M Priestman
G Smith

RL welcomed participants to the meeting. He stated that THPA was pleased to accept the invitation to be part of the liaison group and hoped that meetings such as this would lead to a better understanding of the commercial requirement of the dock and of the potential problems experienced by residents.

Mrs Rennie tabled a number of letters from residents of the Town Wall regarding points they wished to be addressed by the liaison group.

A long discussion took place on a wide range of issues raised by the residents representatives including :-

a) Late Night Working. An undertaking was given by THPA Ltd that, whenever

possible, heavy scrap which consists of plate and girders would be limited to loading between the hours of 8.00 a.m. and 8.00 p.m. There had been occasions (four in the last six months) when it had been necessary to work outside these hours to ensure that vessels could meet tidal deadlines enabling them to safely leave port. Hartlepool Steels representatives outlined the substantial costs involved in ships not being able to leave on schedule.

It was suggested that elderly residents found it frightening to hear unexpected noises late at night.

It was confirmed that THPA Ltd would abide by the agreement to limit working hours wherever possible and it was agreed that on occasions when this did not prove possible, residents representatives would be fully informed in order that all residents of the Town Wall could be forewarned.

b) **Height of Scrap**. It was agreed that the height of scrap would be kept to a minimum wherever possible.

c) **Noise**. It was suggested that a great deal of noise nuisance resulted from the way the scrap was loaded and handled on the quayside. It was acknowledged that some forms of scrap created more noise than others, but THPA Ltd agreed to ensure that noise from quayside handling was kept to a minimum and that scrap be loaded into the holds of ships rather than being "dropped from a great height" as some residents had suggested.

d) **Movement of Whole Scrap business to Tees**. THPA Ltd stated that this was not really a viable proposition at present as there was currently no quayside facility available for such a purpose.

e) **Dust**. Efforts to reduce dust had been made by THPA Ltd and Hartlepool Steels. Sprinkling had been considered but this was not easy in practical terms. Further investigation of other solutions would be made. It was suggested that not all dust emanated from the scrap terminal and there was no evidence that any dust was of a toxic nature. It was suggested that reduced heights of scrap and more careful handling as mentioned above would help reduce the dust problem.

Position of Scrap on Irvines Quay. THPA Ltd reported that the requirements of the Irvines Quay as a whole, including the heavy lift facility at the west end and the loading requirements of ships generally, determined that the scrap handling could only be sited in its present position. It was denied that it had even been indicated to residents that scrap would be handled at the west end of the quay.

g) **Acoustic Barrier**. Coun. MacRae suggested that the erection of an acoustic barrier might alleviate the noise and dust problems. Hartlepool Steels stated that bearing in mind the relative locations of the scrap, quayside and residential properties, such a barrier effect would be extremely difficult, if not impossible, to achieve. Residents observed that such a barrier, if erected, could prove to be more unsightly than the scrap.

Hartlepool Steels stated that they would use the now established communication link with residents to keep them fully in the picture with regards to the forward programme for scrap handling. Mrs Rennie and Mr Graham accepted an invitation to visit the scrap location and meet the staff situated there.

It was agreed by all participants that the meeting had been constructive and worthwhile and that regular meetings of the liaison group should be established on a quarterly basis. Councillors and council officers were to refer to municipal diaries and come up with a suggested date in June 1994.

Statutory Nuisance

As part of the scrutiny investigation and within the report from the Director of Regeneration and Neighbourhoods, officers had provided the following definition:

A test for statutory nuisance is generally accepted to be the 'private nuisance common-law test' that is, judged by the standard of the reasonable man, and whether the activity amounts to an unreasonable interference with the use and enjoyment by the claimant of his/her land, taking into account the nature of the area, has the activity materially and unreasonable detracted from his/her enjoyment of their own property?.

Section 79 of the Act defines the following matters as constituting a statutory nuisance;

(d) any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance and

(g) noise emitted from premises so as to be prejudicial to health or a nuisance

Section 80 of the Act states;

(1) where a Local Authority is satisfied that a statutory nuisance exists, or is likely to occur or recur, in the area of the authority, the Local Authority shall serve a notice ('an abatement notice') imposing all or any of the following requirements-

(a) requiring the abatement of the nuisance or prohibiting or restricting its occurrence or recurrence

(b) requiring the execution of such works, and the taking of such steps as may be necessary for any of those purposes

In the case where a nuisance arises on an industrial, trade or business premises it is a defence to prove that the best practicable means were used to prevent, or to counteract the effects of, the nuisance. Section 79 (9) defines 'practicable' as reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications.

Case law was also provided to help clarify the situation regarding damage to property:

Case law exists related to statutory nuisance from dust arising from port activity. Wivenhoe Port -v- Colchester BC [1985] J.P.L. 175 was a case in relation to statutory nuisance caused by dust from the handling of soya meal. It was held in the Crown Court that a nuisance within the definition of statutory nuisance must interfere materially with the personal comfort of residents in the sense that it materially affected their well being although it might not be prejudicial to their health. Dust falling on vehicles might be an inconvenience to their owners and might even diminish the value of the car but this would not be a statutory nuisance. In the same way dust falling on a garden, or inside a shop would not be a statutory nuisance but

dust in the eyes or hair even if not shown to be prejudicial to health would be an interference with personal comfort.

It is the opinion of the professional officers that there is not sufficient evidence to pursue action for a statutory nuisance.

So, therefore……What does constitute a Nuisance?

1. There is no clear objective definition as to what constitutes a nuisance. It has been said that there is a scale between mildly irritating and intolerable and in each case the determination of whether a nuisance exists is a matter of judgement *(Budd v Colchester BC 1997)*. In addition, the determination is based upon an objective test of reasonableness. In cases that have been considered, courts have not taken regard of the particular sensitivities of an individual *(Heath v Brighton Corporation 1908)*. Indeed the concept was clearly stated in 1872 in respect of noise:-

   '…a nervous, or anxious, or prepossessed listener hears sounds which would otherwise have passed unnoticed, and magnifies and exaggerates into some new significance, originating within himself, sounds which at other times would have been passively heard and not regarded' *(Gaunt v Fynney 1872).*

2. Therefore a person with a particularly sensitive olfactory or auditory response is not given any higher standard of protection than a person with 'normal' response. However, although there are powers under section 82 of the 1990 Act for an individual to take action, the primary enforcement method relies on the local authority taking action. The local authority must be of the opinion that either substantial personal discomfort or a health effect must exist. There are eight key issues to consider when evaluating whether a nuisance exists:-

i. **IMPACT** - this is a measure of the impact of the alleged nuisance on the receptor. In some cases assessment of the impact can be supported by objective measurements (such as noise) but in many cases it will be the subjective view of the local authority as to the degree of health risk or interference. In addition to the impact on individuals the authority should consider the extent of the impact (how many persons, how far from the source etc.)

ii. **LOCALITY** - the potential for amenity interference is largely related to the character of the neighbourhood. It was famously summarised as 'what would be a nuisance in Belgrave Square would not necessarily be so in Bermondsey *(Sturges v Bridgman 1879)*. Many odour and noise nuisances are due to the proximity of the receptor to a source that is generally out of character with the area (for example a factory or a waste water treatment works adjacent to a housing estate). The number of persons affected and the degree of intrusion will depend upon the proximity of the source and receptor and the sensitivity of the receptors.

iii. **TIME** - many nuisances have a significant impact because of the time at which the nuisance occurs and the degree of impact changes depending upon the time of occurrence. For example noise from an entertainment facility would be less acceptable after 23.00 hours. Also odours are often subjectively more

annoying during periods when members of the public are outdoors (for example daytime periods during summer months).

iv. **FREQUENCY** - nuisances that occur frequently or continuously are more likely to be determined to be a nuisance (depending to some degree on the impact). For example dust emissions from a quarry once per month would be regarded very differently to emissions four days per week for 6 weeks a year. Restriction of the frequency of an activity may be method of abatement (a farm was limited to spreading manure for 15 days per year - *Wealden DC v Hollings 1992*). However, in some circumstances odours that are released periodically can be more intrusive and in this case the odour frequency is often assessed in conjunction with the odour's persistence in the environment.

v. **DURATION** - in general short-term events would be regarded differently to longer period or continuous impact. For example a person practicing a musical instrument for one hour would be assessed differently to a four-hour practice session. However the duration would have to be considered alongside the time and frequency - practice for one-hour at 23.00 hours or every day may constitute a nuisance. Similarly a fixed period temporary noise source (such as construction works) may not constitute a nuisance *(Gosnell v Aerated Bread Co Ltd 1894)*.

vi. **CONVENTION** - convention is important when determining what a reasonable person would find objectionable. For example whilst some persons may find the noise of garden equipment on a Sunday morning objectionable - however such practice is widespread and accepted and would be unlikely to be held as a nuisance. Therefore the existence of a widespread practice or common usage in an area is an important factor (*Leeman v Montagu 1936)*.

vii. **IMPORTANCE** - the importance of an activity in respect of the community is a key consideration. For example major road improvements that will improve the air quality and noise environment for many may cause some disturbance to a few persons - this is a balance that should be considered. However, there is a point when even a socially beneficial activity creates such an effect that it becomes unacceptable and hence a nuisance (*Dennis v Ministry of Defence 2003)*. This needs to also be considered along with the avoidability of the impact and also the principle of best practicable means.

viii. **AVOIDABILITY** - even though an activity may have social importance there should be a balance as to whether reasonable steps have been taken to minimise the impact. For example it would be difficult to control noise from a children's playground during the day but there are many methods available to reduce the impact of dust from the extraction equipment at a woodworking factory.

3. The standard cannot be defined precisely and much will depend on the view taken by the court of the seriousness of the harm, the health impact and a balance of the key issued outlined above.