ENVIRONMENT AGENCY

OUTGOING

OTHER

THE ENVIRONMENTAL PROTECTION ACT 1990
WASTE MANAGEMENT SITE LICENCE
MODIFICATION

QUERCIA LTD
ASPINALL HOUSE
WALKER OFFICE PARK
BLACKBURN
BB1 2QE

FOR THE SITE AT

CLAYTON HALL LANDFILL SITE
DAWSON LANE
WHITTLE LE WOODS
CHORLEY

Waste Management Licence Number 74

ENVIRONMENT AGENCY

ENVIRONMENTAL PROTECTION ACT 1990
SECTION 37

WASTE MANAGEMENT LICENCE
NOTICE OF MODIFICATION

LICENCE REF No: 74	**FACILITY TYPE: Landfill**
LICENCE HOLDER: **Quercia Ltd** **Aspinall House** **Walker Office Park** **Blackburn** **Lancashire** **BB1 2QE** **Company Reg No: 01108984**	**LICENSED FACILITY:** **Clayton Hall landfill site** **Dawson Lane** **Whittle-le-Woods** **Chorley**

WHEREAS on the 16th December 1977 the Lancashire County Council issued a waste disposal licence (now to be treated as a waste management licence) in pursuance of its powers under Part 1 of the Control of Pollution Act 1974 for the above named facility to you

AND WHEREAS on the 1st April 1996 the powers and duties of all waste regulation authorities in England and Wales transferred to the Environment Agency ("the Agency") by virtue of section 2 of the Environment Act 1995

AND WHEREAS the conditions of the said licence were modified on 11th September 1979, 22nd September 1982, 7th May 1986, 18th June 1986, 18th September 1987, 11th December 1991, 1st June 1994, 7th July 1994, 11th November 1994, 25th November 1994, 1st May 1995, 2nd May 1995, 12th March 2002,

NOTICE IS HEREBY GIVEN that the Agency modifies the conditions of the said licence in accordance with Sections 37(1)(a) and 37(1)(b) of the Environmental Protection Act 1990 and as set out in the Schedule attached to this notice.

Signed S Hindle Name Susan Hindle

Environment Management Team Leader

Dated 2 January 2003

This modification shall take effect on 6th January 2003 at 00.01 hours

YOUR ATTENTION IS DRAWN TO THE RIGHTS OF APPEAL AT THE END OF THIS NOTICE.

The Environment Agency, PO Box 519, South Preston, Lancashire, PR5 8GD
Tel: 01772 339882, Fax: 01772 627730

EXPLANATORY NOTES - including rights of appeal.

RIGHTS OF APPEAL

Section 43(1) of the Environmental Protection Act 1990 provides that:

Where, except in pursuance of a direction given by the Secretary of State, the conditions of a licence are modified, the licence holder may appeal from the decision to the Secretary of State.

Therefore, if you feel aggrieved by the decision detailed on the attached notice, you may obtain the appropriate form on which to give written notice of an appeal from :-

The Planning Inspectorate
Room 4/19
Eagle Wing, Temple Quay House
2 The Square
Temple Quay
Bristol
BS1 6PN

Tel: 0117 372 8812
Fax: 0117 372 6093

For Wales, the address is – The Planning Inspectorate
Crown Buildings
Cathays Park
Cardiff
CF10 3NQ

Tel: 02920 823859
Fax: 02920 825150

This notice of appeal should be accompanied by the following information:

A statement of the grounds of appeal;
A copy of any application to modify the licence;
A copy of the licence;
A copy of any correspondence relevant to the appeal;
A copy of any other document relevant to the appeal including, in particular, any relevant consent, determination, notice, planning permission, established use certificate or certificate of lawful use or development; and
A statement indicating whether you wish the appeal to be in the form of a hearing or on the basis of written representations.

You are also required to serve a copy of your notice of appeal, together with copies of any the above documents that have accompanied your notice of appeal, on the Environment Agency (at the address overleaf). You should appeal within 6 months of the date that this notice takes effect but the Secretary of State may allow notice of appeal to be given after the expiry of this time period.

SCHEDULE

Modification of conditions under sections 37(1)(b) as follows:

Delete existing conditions 5, 6 c) and d) and addition of new condition 5 to permit the acceptance of municipal waste.

Modification of conditions under sections 37(1)(a) as follows:

Delete existing conditions 2, 3, 8, 21 d), 23, 29, 30, 44, 49, 52 and definitions

Addition of new conditions 2, 3, 8, 21 d), 21 e), 21f), 30, 44, 59, 60, 61, 62 and 63.

All the conditions of the licence, 1 to 63, including the modified conditions, are reproduced below for ease of reference, as follows:

"1. Waste shall not be deposited on any part of the site other than in accordance with the terms and conditions of this Licence and the details contained in the working plan. The Environment Agency shall be entitled to agree in writing with the Licence Holder that the working plan may be varied, and any such variation shall form part of this Licence. The working plan and any such variation shall be carried out.

SITE PREPARATORY WORKS

2. a) All facilities, works and information referred to by Conditions 3, 4, 16, 19, 22, 28, 30 a) and b), and 31 (hereinafter called preparatory works) shall be constructed, undertaken or provided before the deposit at the site of any waste material other than that required for the purpose of the preparatory works.

All preparatory works shall be carried out and maintained to the standard set out in the working plan and required by this Licence. The provision of all preparatory works must be approved in writing by the Environment Agency and before the deposit of any other waste materials at the site.

The only waste materials to be used for preparatory works shall be uncontaminated soil, clay, natural sand, glass, slate, concrete, bricks and ceramics, and shall be suitable for the purpose of forming the preparatory works.

b) At least 14 days notice in writing must be given to the Environment Agency of the following events unless otherwise agreed with the Environment Agency:

i) The commencement of any preparatory works at the site;

ii) The commencement of reception of waste materials other than those being used for preparatory works; and

iii) Cessation of waste disposal activities for a period in excess of 28 days.

3. All materials used for site preparatory works as specified in the working plan - the manner in which they are used and the supervision of their use shall be in accordance with the 'Earthworks on Landfill Sites- A Technical Note on the Design, Construction and Quality Assurance of Compacted Clay Liners' 1996 as published by the North West Waste Regulation Officers Technical Sub-Group.

4. Within 14 days of the completion of the works referred to in Condition 3 the Licence Holder shall

provide the Environment Agency with confirmation in writing by the person who supervised the works, that the works have been carried out in compliance with Condition 3.

TYPES OF WASTE

Permitted types of waste

5. No wastes other than those that are specified in Annex A to this licence shall be deposited at the site.

Excluded waste types and loading

6 a) Wastes of the type and with the characteristics specified in section 3.1 of the modified working plan shall be specifically excluded.

b) Specified wastes shall only be accepted and deposited at the site at the rates specified in sections 3.2 and 3.3 of the modified working plan.

c) No more than 40 tonnes per day of foundry sand shall be deposited at the site and this waste shall be admixed with other wastes materials so as to dilute the waste in the landfill.

Permitted quantities of wastes

7. The total quantity of waste accepted at the site per year shall not exceed 149,000 tonnes.

Exclusion of Special Waste Types With Specified Hazard Characteristics

8. Notwithstanding the specification of permitted waste types under condition 6, special wastes shall not be accepted which have any of the following specified characteristics:

Table 8. Excluded special wastes with specified hazard codes

Hazard Code	Hazardous Properties
H1	Explosive
H2	Oxidising
H3-A	Highly Flammable
H3-B	Flammable
H5	Harmful
H8	Corrosive
H9	Infectious
H10	Teratogenic
H11	Mutagenic
H12	Substances or preparations which release toxic or very toxic gases in contact with water, air or an acid.
H14	Ecotoxic

Exclusion of wastes with other specified characteristics

9. Notwithstanding the specification of permitted waste types under conditions 5, 6 and 7 above, wastes shall not be accepted at the site which have any of the following characteristics:

Table 9. Excluded wastes of specified form and type

Waste Characteristic	Type
Form and Type:	Liquids
Properties:	No acid waste or acidic compounds of wastes which are acidic upon hydrolysis.

Table 9. Excluded wastes of specified form and type	
Waste Characteristic	Type
Form of containers and degree of mixing within containers:	Bulk tankers

10. Deleted.

11. Deleted

12. The types of waste which may be deposited within Area A defined in drawing No. AB/CH/11-90/333 on the site are the following wastes in solid form:

uncontaminated soil, clay, natural sand and rock;

13. (a) Save as hereinafter mentioned in (b) below none of the waste types listed in Condition 5 shall be deposited on any part of the site other than Area B as defined in Drawing No AB/CH/11-90/333.

(b) The waste types listed in Condition 12 shall not be deposited on any part of the site other than Areas A or B as defined in Drawing No AB/CH/11-90/333 unless the prior written approval from the Environment Agency is obtained and subject to such conditions as may be required.

SITE OPERATION

14. Any deposit of any material containing asbestos in any form on the site shall be dealt with in accordance with the IWM Code of Practice.

15. The Licence Holder shall take all reasonable steps to bring to the attention of users of the site the provisions of Conditions 5, 6 and 12 of this licence.

16. Waste shall not be deposited on any part of the site until the Licence Holder has notified the Environment Agency in writing of:

i) The name, business address and telephone number of:

(a) The person or persons having authority to accept or reject waste at the site;

(b) The person or persons responsible for the day to day control of operations on the site;

(c) Person or persons responsible for site security; and

(d) The person or persons responsible for ensuring that the conditions of this Licence are complied with.

ii) The name, address and telephone number to be used in the event of an emergency outside normal business hours. The Police and County Fire Brigade shall also be notified at the stations, which would normally attend an emergency at the site.

Any change in the information required under this condition shall be notified immediately to those Authorities and to the Environment Agency.

17. Operations shall not be carried out on the site unless:

(a) The minimum manning levels detailed in the working plan are being complied with; and

(b) At least one of the persons listed in each of the subsections in Condition 16 i) (a) - (d) are present on site and performing their duties to the standard outlined in the working plan.

18. Any person named in Condition 16 above shall have read and understood the contents of all the documents that are required by the terms and conditions of this Licence to be kept in the site office.

19. Waste shall not be deposited on any part of the site until a site control office at the location detailed in the working plan has been provided.

SITE RECORDS

Security of records

20. a) All records which are required to be made under the other conditions of this licence and the working plan shall be maintained and kept secure from loss, damage or deterioration, and shall be kept for at least 2 years in accordance with section 5.1 of the modified working plan.

Availability of records

b) All records which are required to be made under the other conditions of this licence and the working plan shall be made available for inspection at the place where they are kept immediately when required by an authorised officer of the Agency.

Recording special waste deposits

c) A record shall be maintained of the location of each special waste deposit in accordance with section 5.4 of the modified working plan.

Recording of wastes accepted and removed

d) A record shall be kept of each load of waste accepted and each load of waste removed from site. This record shall include the following details:

i) Loads in:- Nature (solid, sludge or liquid), waste type as specified under condition 5, quantity (tonnes), date received, date accepted.
ii) Loads out: Nature (solid, liquid or sludge), waste type as specified under condition 5, quantity of waste removed (tonnes), date removed.

Summary records of wastes accepted and removed

e) A summary record of the waste types accepted and removed from the site shall be made for each month of the financial year, and shall be submitted to the Agency within two weeks following the end of the month. The summary record shall be in a format agreed by the Agency in writing and shall include the specified details:

i) description, EWC code, quantity and nature of waste accepted;
ii) description, EWC code, quantity and nature of waste removed.

Site diary/day book

f) A site diary/day book shall be kept secure and shall be available for inspection at the site when required by an authorised officer of the Agency. This shall include a record of the following events:

i) Breakdown and maintenance of plant and equipment;
ii) Details of inspections by site staff and any remedial actions taken;
iii) Emergencies, such as fires, and any actions taken;
iv) Problems with wastes received and any action taken;
v) Details of any asbestos fibres monitoring carried out;
vi) Complaints about site operations and actions taken;
vii) Environmental problems and any action taken;

viii) Despatch of records to the Agency; and
ix) Attendance of technically competent management on site, including the time arrived at the site and the time left the site.

Each record shall be completed within 24 hours.

WASTE ACCEPTANCE AND CONTROL PROCEDURES

Waste acceptance procedures

21. a) All wastes shall be received, inspected, accepted or rejected, and recorded in accordance with sections 4.1, 4.2, 4.3, 4.4, 4.5 and 5.3 of the modified working plan.

Waste despatch procedures

b) All outgoing wastes shall be inspected, despatched and recorded in accordance with sections 4.4 and 5.3 of the modified working plan.

Waste sampling and testing

c) All incoming wastes shall be sampled and tested to confirm their composition and characteristics, in accordance with sections 4.6 and 4.7 and Table B of the modified working plan.

Control of asbestos

d) Asbestos wastes shall be accepted, controlled and disposed of in accordance with sections 3.2 and 4.2 iii) of the modified working plan and the "Integrated Management System Procedures Manual, EP26 Disposal of Asbestos Waste at Clayton Hall" (with the exception of section 5.19 of this document). Consignment notes shall be kept at the site for the life-time of site operations.

Provision of asbestos fibres monitoring and sampling system

e) A written report, to be produced in accordance with the Health & Safety Executive guidance note ' EH10 Asbestos – Control Limits, Measurements of Airborne Dust Concentrations and Assessment of Control Measures' (as revised), shall be submitted to the Environment Agency within one month of the date of issue of this modification. Following written agreement by the Environment Agency the report shall form part of the working plan.

Asbestos monitoring action plan

f) In the event that any results exceed the trigger level specified in the Health and Safety Executive guidance note 'EH10 Asbestos – Control Limits, Measurement of Airborne Dust Concentrations and Assessment of Control Measures' (as revised):

i) the results shall be notified to the Agency immediately and confirmed in writing immediately;
ii) the area of asbestos disposal shall be sprayed with water immediately;
iii) any loose asbestos shall be double bagged and disposed of in accordance with condition 21 d) above; and
iv) the event and remedial action shall be recorded in the site diary/day book.

22. Waste shall not be deposited on any part of the site until a site identification board of durable material and finish has been provided at the site in accordance with the Working Plan.

23. Deleted.

24. Waste materials shall not be delivered or deposited less than half an hour before the finishing times stated:

(a) At Condition 23 above; or

(b) At Condition 25 below

whichever is the sooner.

25. Waste shall not be deposited on any part of the site during the hours of darkness unless lighting independent of the vehicles and earthmoving plant has been provided and is being used.

26. Deleted.

27. Deleted.

28. Waste shall not be deposited on any part of the site until gates and fencing have been provided and installed to the specification and at the locations shown in the working plan. Gates and fencing shall be inspected daily. Any defects to the standard specified in the working plan shall be remedied by the end of the working day. A record of such inspections, defects and remedial action shall be kept in the day book. The gates shall be kept locked shut at all times when the site in unsupervised and all reasonable precautions shall be taken to prevent unauthorised access to the site.

29. Deleted.

30. a) A daily inspection shall be undertaken of the B5248 highway for a distance of 150 metres either side of the site access road. A record of this inspection shall be made in the site diary/day book.

b) In the event that mud, debris and litter arising from the site is deposited onto public areas outside the site, remedial measures shall be implemented immediately, in accordance with the following requirements:

i) a mechanical road-sweeper shall clean the affected sections of highway; and
ii) other affected areas shall be swept and the mud, debris and litter collected and removed.

c) Within 2 months of the date of issue of this modification the licence holder shall submit a written report to the Environment Agency which provides details on the measures to be provided at the site to prevent the deposit or tracking of mud, debris or litter arising from the site onto public areas outside the site, which shall include public highways and areas of public access outside the site. The report shall include details of the wheel cleaning facilities to be provided, their operation and maintenance. The report, following agreement by the Environment Agency, shall be incorporated into the working plan

d) Municipal waste shall not be deposited on any part of the site until facilities for vehicle cleaning have been provided to the specification outlined in the agreed referred to in (c) above. These facilities shall be maintained to the standard specified in the report and shall be used effectively to prevent the transfer of materials onto the public highway and areas of public access outside the site by vehicles using the site.

31. Waste shall not be deposited on any part of the site until a road has first been constructed within the site to the specification and at the location shown in the working plan. Hardcore containing asbestos in any form shall not be used for the construction of the road. The road shall be inspected daily. The road shall be maintained in accordance with the working plan to ensure it remains in a good structural condition with a clean even surface and effective drainage to prevent waterlogging of the surface or structure. A record of all such inspections and any remedial action shall be kept in the daybook.

32. In dry weather water spraying shall be carried out as necessary in order to effectively suppress dust.

33. Litter netting shall be provided to the specification and at the location shown in the working plan. Subsidiary netting around the working area shall be provided to the specification shown in the working plan. Subsidiary netting shall be moved in accordance with wind direction and operating requirements in order to effectively retain litter on site. Litter netting shall be kept substantially free

from trapped materials, which shall be collected as necessary. All reasonable precautions shall be taken to prevent windblown material from leaving the site.

34. Emergency arrangements as set out in the working plan shall be implemented during high wind conditions where the problem threatens to overcome the measures normally applied.

35. Any loose waste or litter on the site or its environs shall be gathered immediately and disposed of in accordance with the terms and conditions of this Licence. Any waste or litter which is not of a type for which the site is licensed to receive shall be disposed of at an appropriately licensed facility.

36. Any material or equipment stored on the site shall be kept tidy in containers or at locations shown in the working plan.

37. No waste material shall be burnt on any part of the site and immediate steps shall be taken to ensure that any fire on site is extinguished in accordance with procedures set down in the working plan. All outbreaks of fire shall be notified to the Environment Agency as soon as practicable and in any case not later than 10.00am on the following working day after such incident. At any time when a fire is burning on the site, no waste shall be deposited on any part of the site. A record shall be kept of the details of any incident including the notification to the Environment Agency in the daybook.

38. In order to prevent the formation of voids all waste deposited at the site shall be crushed, broken up, filled in, flattened or otherwise treated.

39. Solid waste shall be deposited in operating cells as shown in the working plan. Baled waste shall be deposited in accordance with the Working Plan. Bales shall be stacked no more than 3 high on any one level. Any void in excess of 150 mm between bales shall be infilled with sand or other free flowing cover material in order to prevent the formation of voids. Solid waste other than baled waste shall be compacted and formed into an approximately horizontal layer to be not greater than 2.5 metres in depth after compaction. Such compacting and layering shall be carried out progressively and in any event by no later than the end of the working day during which the waste was deposited.

40. No waste shall be deposited on any part of the site at the start of a working day unless all solid waste previously deposited on any part of the site has been compacted and layered in accordance with Condition 39.

41. The waste shall be compacted to form gradients not steeper than 1 in 3 (an angle not greater than 18° to the horizontal). The flanks of the waste may be steeper provided they are bunds constructed from materials suitable for that purpose.

42. Cover material shall be applied throughout the working day to all waste deposited so that by the end of the working day no waste material other than cover material is exposed. Cover material shall be applied to a minimum depth of 150mm. Any cover material eroded, washed off or otherwise removed shall be replaced by the end of the working day to comply with this condition. In the case of baled landfill, the working face shall be covered in accordance with the arrangements set out in the Working Plan.

43. Each layer of waste and cover material shall be laid to a fall to encourage surface water run-off. Surface water shall not be permitted to pond on the working area or any other part of the site that has been landfilled but shall be discharged in accordance with arrangements specified in the working plan. No discharge of water shall take place from the site other than in accordance with any required consent from the Environment Agency.

ENVIRONMENTAL CONTROL

44. Measures shall be implemented and maintained throughout the operational life of the site to control and monitor the presence of pests on the site, in accordance with section 9 of the working plan and Table 44 below. The objective of these measures shall be to prevent pest infestations that are likely to cause pollution of the environment or harm to human health or serious detriment to the amenity of the locality.

Table 44 Standards for monitoring and control of pest infestations

Monitoring of pest infestations	i)	An inspection of deposited wastes for pest infestations shall be carried out at least at weekly intervals by the site supervisor, and shall be recorded in the site diary/day book.
Pest infestations action plan	i)	On detection or notification of pest infestations, immediate action shall be taken to secure the attendance of a professional pest control contractor, to eliminate the pest infestation.
	ii)	The incident and the remedial action shall be recorded in the site diary/day book.

45. The Licence Holder shall take all reasonably practicable steps to prevent the contamination of the adjacent River Lostock and Bryning Brook.

In the event of such contamination occurring immediate steps shall be taken to mitigate the effects of the contamination and to prevent further contamination. The Environment Agency shall be notified as soon as practicable and in any case not later than 10.00am the following working day after such incident.

46. Surface water samples shall be taken in accordance with a surface water-monitoring programme specified in the working plan. The programme shall detail location, sampling procedures, sampling frequencies, parameters and analytical methods to be used. The results and an interpretation of the results shall be submitted to the Environment Agency in writing at intervals of no more than 13 weeks.

47. Groundwater samples shall be taken in accordance with a groundwater-monitoring programme specified in the working plan. The programme shall detail borehole locations, sampling procedures, sampling frequencies, parameters and analytical methods to be used. The results and an interpretation of the results shall be submitted to the Environment Agency at intervals of no more than 13 weeks.

48. Monitoring of water levels within the site shall be carried out in accordance with a water level monitoring programme specified in the working plan. The programme shall detail location and specification of monitoring points, and frequency of monitoring. The results and an interpretation of the results shall be forwarded to the Environment Agency at intervals of no more than 13 weeks.

49. Deleted.

50. A record shall be kept in the daybook of all sampling and monitoring carried out under the monitoring programmes.

51. The site shall be surveyed within two weeks of each anniversary of the issue of this Licence with respect to fixed ground level datum points as specified in the working plan and the remaining void space calculated. A copy of the plan, calculations and results of the survey shall be submitted to the Environment Agency within two weeks of the survey being completed.

52. Deleted.

53. Deleted.

54. Within 4 months of the date of issue of the modification dated 11 November 1994, or other date agreed in writing in advance with the Environment Agency, the Licence Holder shall submit a report in writing to the Environment Agency in relation to the requirements of Regulation 15 of The waste Management Licensing Regulations 1994 SI 1056 and Council Directive 80/68/EEC. The report shall include the following:

(1) Relevant site investigation and monitoring data and interpretation of the data;

(2) An examination of the hydrogeological conditions of the area in and around the site;

(3) An examination of the possible purifying powers of the soil and subsoil;

(4) An assessment of the risk of pollution and alteration of the quality of the groundwater including the risk of harm to other aquatic systems and ecosystems and the likelihood of impeding exploitation of ground resources, from any discharge, whether direct or indirect, of list I or list II substances;

(5) Recommendations of the essential precautions which must be taken, paying particular attention to the nature and concentration of the substances present in the matter being disposed of or tipped, the characteristics of the receiving environment and the proximity of the water catchment areas, in particular those for drinking, thermal and mineral water;

(6) Recommendations of the technical precautions necessary:

(i) In the case where groundwater is considered to be permanently unsuitable for other uses, to ensure that no substance in list I can reach other aquatic systems or harm other ecosystems, to ensure that the presence of any list I substance once discharged into groundwater will not impede exploitation of ground resources and to prevent any pollution of groundwater by list II substances; and

(ii) In the case where groundwater is not considered to be permanently unsuitable for other uses, to prevent any discharges into groundwater of substances in list I and to prevent any pollution of groundwater by substances in list II.

A description of how item (4) above is to be carried out shall be submitted to the Environment Agency in writing for approval in advance of the risk assessment being carried out.

Within 14 days of the date of issue of the modification dated 25 November 1994, or other date agreed in writing with the Environment Agency, the Licence Holder shall submit the following information in writing to the Environment Agency:

(i) The names and dates of birth of all persons who are providing technically competent management in respect of the activities authorised by this licence;

(ii) Details of the management structure, including the positions and duties of each of the persons named in (i) above within the management structure; and

(iii) Details of how the management structure provides control of the day to day activities at the site, which are authorised by this Licence.

Any change in any of the information submitted in accordance with the requirements of this condition shall be notified in writing to the Environment Agency as soon as possible or in any case within 14 days of the change being notified, or otherwise becoming known to the Licence Holder.

Any proposed change to the management structure involving the inclusion of additional or replacement personnel should include, for each person, details of relevant qualifications and, where applicable, a summary of relevant experience, including dates.

56. Within six weeks of the date of issue of the modification dated 1 May 1995, a revised environmental monitoring programme shall be submitted in writing for the approval of the Environment Agency.

The monitoring programme shall be revised to meet, as a minimum, the standards specified in Waste Management Paper No. 4 (1994) and shall include a quality assurance plan and quality control procedures.

The approved programme shall take affect on 1 May 1995 or any other date notified to the Licence Holder in writing by the Environment Agency.

57. Waste tyres shall not be deposited unless they have been previously baled.

58. Tyres shall not be deposited until a fire fighting procedure has been submitted to, and approved in writing by, the Environment Agency. The fire fighting procedure shall be implemented in the case of any fire on site.

59. Conditions 1.1.1 to 1.9 in Annex B shall form part of this modification.

60. Throughout the operational life of the site measures shall be implemented and maintained to control and monitor the presence of scavenging birds and other scavengers on the site in accordance with section 9.1 of the working plan and the standards specified in Table 60. Such measures shall prevent the presence of scavenging animals or flocks of scavenging birds on the site, that are likely to cause harm to human health or serious detriment to the amenity of the locality.

Table 60 Standards for monitoring and control of scavengers

Monitoring of scavengers	i)	Waste that is likely to attract scavengers shall be routinely monitored for the presence of scavengers throughout the working day by the site supervisor.
Scavengers action plan	i)	On detection or notification of scavengers, immediate action shall be taken to: a) Remove or deter them from the site; and b) Isolate and secure the wastes attracting scavengers against further scavenging.
	ii)	The incident and the remedial action shall be recorded in the site diary/day book.

61. *Control, monitoring and reporting of dusts, fibres and particulates*

Throughout the operational life of the site, measures shall be implemented and maintained to control and monitor emissions of dusts, fibres and particulates from the site, to meet the standards in Table 61 below. Such measures shall prevent releases in such quantities or concentrations that are likely to cause pollution of the environment or harm to human health or serious detriment to the amenity of the locality.

Table 61 Standards for monitoring and control of aerial emissions of dusts, fibres and particulates	
Monitoring of aerial emissions	Visual monitoring of aerial emissions shall be carried out: i) by the site manager or supervisor, at least twice per day, at the site boundary situated downwind of the waste operations, and shall be recorded in the site diary/day book; and ii) by site staff supervising individual waste handling operations during the carrying out of these operations.
Aerial emissions action plan	i) on detection or complaint of visible aerial emissions that are being, or are likely to be, transported beyond the site boundary, immediate action shall be taken to stop the waste handling operations giving rise to the emissions and to suppress the aerial emissions from the waste. ii) The incident and the remedial action shall be recorded in the site diary/day book.

62. All emissions to air from the specified waste management operations on the site shall be free from visible concentrations of dusts, fibres or particulates as are likely to cause pollution of the environment or harm to human health or serious detriment to the amenity of the locality outside the site boundary, as perceived by an authorised officer of the Agency.

Interpretation

63. In these conditions and their interpretation, unless the context otherwise requires, the following terms have the specified meanings:

"accepted"
for waste being delivered to the site, shall mean accepted as waste input to the site for storage and/or processing and/or disposal under the specified waste management operations;

"authorised officer of the Agency"
means any person(s) authorised in writing by the Agency pursuant to section 108(1) of the 1995 Act to exercise any of the powers specified in subsection (4) of that section;

"clinical waste"
has the meaning as defined in regulation 1(2) of the Controlled Waste Regulations 1992 or any statutory provisions amending or replacing them;

"Code of Practice"
means the technical paper published by the Institute of Wastes Management entitled Code of Practice for the Disposal of Asbestos waste or any other relevant publication notified to you subsequently by the Environment Agency.

"consequences"
for **risk assessments** carried out within these conditions, means the adverse effects of harm as a result of realising a **hazard** which cause the quality of human health (other than health and safety of site staff or visitors to the site covered under the Health and Safety at Work Act 1974) or the environment to be impaired in the short or longer term;

"cover material"
means any waste uncontaminated soil, clay, natural sand, rock, glass, slate, concrete, brick and ceramics, or other waste or material agreed in writing with the Environment Agency, and which is being used for, or is intended to be used for, the covering of all other wastes authorised by the terms and conditions of this Licence to be deposited at the site.

"day book" or "site diary"
is a hard backed book which is pre-printed as a calendar and which allows adequate space for the daily insertion of all of the information required by the terms and conditions of this Waste Disposal Licence.

"The Earthworks Specification"
is a technical publication relating to earthworks on landfill sites which was previously published by the National Rivers Authority, Richard Fairclough House, PO Box 12, Knutsford Road, Latchford, Warrington, WA4 1HG and which is attached to this Licence. The Environment Agency may subsequently supersede this publication with any other relevant publication.

"engineer"
for engineering works specified in these conditions, means a person who works in the relevant branch of engineering, as a qualified professional;

"engineered"
for works specified in these conditions, means carried out and completed using the relevant engineering process specified in these conditions;

"engineered landfill containment system"
means all elements (other than leachate and landfill gas management systems, and intermediate and final caps), relating to engineered liners for final disposal to land, and incorporating liners for individual cells and the site as a whole, and including methods of liner protection and leakage detection;

"engineered site containment and drainage system"
means all elements relating to engineered containment of activities on the site, other than final disposal to land, and incorporating site surfacing, bunding and drainage systems, buildings and fixed tanks;

"engineering"
for engineering works specified in these conditions, means the relevant process of design, construction or installation, quality assurance or validation or commissioning specified in these conditions;

"engineering survey"
means a survey carried out in accordance with recognised or approved standards by a suitably qualified competent person;

"environmental targets or receptors"
for **risk assessments** carried out within these conditions, shall mean identified human and environmental populations or components, as specified in these conditions or otherwise agreed by the Agency within these conditions;

"EWC"
means the European Waste Catalogue laid down in Commission Decision 94/3/EC as amended by Commission Decision 2000/532/EC as amended.

"groundwater"
means any water contained in underground strata;

"hazard"
means a property or situation that in particular circumstances could lead to harm;

"hours of darkness"
are defined by the statutory lighting up times published by the Science Engineering Research Council.

"immediately"
for carrying out of actions under the conditions, shall mean without delay and within a reasonable time, taking into account any more immediate direct action necessary to prevent or minimise risk to human health and the environment. For carrying out notifications to the Agency, shall also mean by the fastest effective means available (for example, telephone) and confirmed in writing within 1 working day (or such other time as may be agreed by the Agency within the conditions);

"inert waste "
means waste which when disposed of in or on land does not undergo any significant physical, chemical or biological transformation;

"landfill gas management system"
means all elements relating to landfill gas extraction from individual landfill cells and the landfill mass as a whole, and incorporating methods of landfill gas drainage, containment and the subsequent disposal system, whether it be a methane oxidation system, landfill gas flare, landfill gas engine(s) or otherwise, either on or off the site;

"leachate management system"
means all elements relating to leachate extraction from individual landfill cells and the landfill mass as a whole, and incorporating methods of leachate drainage, containment and the subsequent treatment and/or disposal system, either on or off the site;

"Load"
means the waste discharged from one vehicle or receptacle in a single delivery.

"maintenance"
for engineering maintenance specified in these conditions, means the process of inspection, testing, repair of the relevant engineering works specified in these conditions;

"Operations"
means the deposit of waste and all matters incidental thereto and all other activities carried out pursuant to the requirements of this Waste Management Licence.

"preparatory works"
means engineering works required prior to the carrying out of the activities authorised by this licence;

"probability"
means the quantified expression of chance, denoted either as:

- the ratio or percentage of the occurrence of a particular event as one among a number of possible events;
- or as the frequency of occurrence of a particular event in a given period of time;

"received"
for waste being delivered to the site, shall mean delivered to the site and undergoing the waste acceptance procedures specified in the working plan, including storage of those wastes during those procedures prior to acceptance of the waste;

"release pathways"
for **risk assessments** carried out within these conditions, shall mean the routes by which defined **hazards** may potentially realise their **consequences**, defined in terms of releases or emissions from the site that go beyond the site containment or boundary via one or more of the following routes, either directly or indirectly: **Land; Groundwater; Surface water; Atmosphere**;

"relevant offences"
are offences within the meaning of regulation 3 of the Waste Management Licensing Regulations 1994 or any statutory provisions or regulations amending or replacing them;

"risk"
means a combination of the **probability** and **consequences** of occurrence of a defined **hazard**;

"risk assessment"
means the systematic identification, analysis, estimation and evaluation within a defined **scope** of the defined **risks** of a particular activity, operation, process or design, carried out and reported by suitably qualified or competent persons, using recognised quantified or semi-quantified methods and techniques.
Unless otherwise agreed by the Agency within these conditions, a risk assessment shall include and record the following:

- definition of the **hazards** associated with an activity, operation, process or design;
- assessment of the **probability** of those **hazards** occurring;
- determination of the potential **consequences** of those hazards for defined **environmental targets or receptors**, taking into account defined **release pathways** and defined protective measures;

- evaluation of the potential **magnitude** of those consequences and the **probability** of their occurrence;

"scope of risk assessment"
means the boundaries of the **risk assessment** and the **risks** to be assessed within those boundaries, as defined in the conditions or otherwise agreed by the Agency within the conditions;

"special waste"
has the meaning as defined by regulation 2 of the Special Waste Regulations 1996 or any statutory provisions or regulations amending or replacing them;

"surface water management system"
means all elements relating to collection of rain water or surface water from individual landfill phases and the landfill site as a whole, and incorporating methods of water collection, containment and the subsequent treatment and/or disposal system, either on or off the site;

"surface water"
means any lake, pond, river or watercourse whether natural or artificial;

"the 1994 Regulations"
means the Waste Management Licensing Regulations 1994 and any statutory provisions or regulations amending or replacing them.

"the Agency"
means the Environment Agency;

"the Licence Holder"
means the Licence Holder specified in this licence or other person to whom the licence has been transferred in accordance with section 40 of the Environmental Protection Act 1990;

"the operator"
means a person who is in occupation of the site and has responsibility for carrying out day to day activities at the site;

"the site"
means the land edged red on Plan Number AB/CH/11-90/333A dated 11-90 and which is attached hereto, the land, structures, plant and equipment to which this licence relates;

"time periods, e.g. annually, quarterly, monthly, per year, etc. "
Where periods are referred to in conditions, they shall be calculated in the following way:

- annually or per year: 1 April to 31 March;
- quarterly: 1 April to 30 June, 1 July to 30 September, 1 October to 31 December, 1 January to 31 March;
- monthly: calendar month;
- weekly: Monday to Sunday.

Where the issue of the licence does not coincide with the start of any of these periods, then any relevant limits for the first period shall apply pro rata;

"waste"
means controlled waste as defined in section 75(4) of the 1990 Act and the Controlled Waste Regulations 1992 or any statutory provisions or regulations amending or replacing them;

"Working Day"
means 7.30am to 6.30pm Monday to Friday inclusive and 8.00am to 12 noon on Saturdays.

"working plan"

means the working plan identified in writing by the Agency at the time of issue of this licence and any subsequent amendments to it made in accordance with the conditions of this licence.

1.1 Landfill gas management systems: landfill gas collection, extraction and disposal or use

Provision of landfill gas management system

1.1.1 Within six months of the date of issue of this modification a landfill gas management system shall be provided for each existing cell or phase and subsequently for all new cells & phases the objective of which shall be to collect, extract and dispose of or utilise landfill gas arising from the site in such a way that it does not cause pollution to the environment, harm to human health or serious detriment to the amenities of the locality.

Design and operational standards for landfill gas management system

1.1.2 The landfill gas management system for each cell or phase shall be designed, constructed, operated, maintained and monitored to meet the design and operational standards specified in table **1.1A**

Table 1.1A Design and operational standards for landfill gas management system

a)	Landfill gas management system capacity and extent	The landfill gas management system shall have sufficient capacity and extent to enable the collection, extraction and disposal or use of the landfill gas which is generated at its maximum rate in that cell or phase.
b)	Landfill gas collection and extraction system	The landfill gas collection and extraction system shall be designed, constructed and maintained to: i. withstand physical damage from the loading imposed by the waste, and any compaction operations working over the system; ii. be resistant to chemical attack in the landfill internal environment; iii. avoid damage to the engineered containment which may be caused through the installation or loading of the landfill gas management system; iv. control and manage landfill gas condensate.
c)	Landfill gas treatment, disposal and utilisation	Except where a landfill gas utilisation system or alternative system of disposal has been implemented and is being operated and maintained in accordance with the other conditions of this modification, landfill gas collected and extracted from each cell or phase shall be treated and disposed of through a landfill gas flaring system.
d)	Operation, maintenance and review of landfill gas management system:	i. The landfill gas management system shall be operated and maintained to meet the standards specified in the other conditions of this modification for: • balancing the extraction system; and • limiting emissions from the site, landfill gas flaring system and any landfill gas utilisation system provided. ii. Telemetry shall be provided measuring temperature of the flare, and oxygen and methane in the input gas iii. Telemetry shall be maintained between the specified nominated person and any part of permanent landfill gas system and any landfill gas utilisation system provided, and shall be managed to provide immediate notification to specified nominated person, so as to ensure that failure of the system at any time is notified immediately to the site management. iv. A review of all component parts of the gas management system shall be carried out on an annual basis, to ensure that the system is continuing to meet its design and performance standards. The first review shall be carried out not more than one year following the date of its commissioning, and subsequent reviews shall be carried out not more than one year following the previous review. v. A written report of each review and its results shall be submitted in writing to the Agency within one calendar month of the review being completed.
e)	Action plan for failure of, or damage to, components of the landfill	In the event of detection of a failure of a landfill gas flare or any landfill gas utilisation system provided, or of damage to their components:

Table 1.1A Design and operational standards for landfill gas management system	
gas flare and any landfill gas utilisation scheme provided.	i. the Agency shall be notified immediately; and ii. the flare or utilisation system shall be repaired or replaced within 6 hours, unless otherwise agreed in writing by the Agency.

Design report on landfill gas management system

1.1.3 Prior to the installation of a landfill gas management system in a cell or phase, the licence holder shall submit to the Agency a written design report detailing the proposed engineered landfill gas management system, which shall include the information set out in table **1.1B**. Following written agreement by the Agency of the design report, it shall be incorporated into the working plan. No waste shall be deposited in any new cell or phase unless the design report for that cell or phase has been submitted.

Table 1.1B Details to be included in report on landfill gas management system

a)	Landfill gas management system infrastructure	Description, including design specification and scale drawings and plans, for: i. any additional landfill gas barriers which are to be provided, other than those specified in the existing engineered landfill containment system for that cell or phase; ii. landfill gas collection and extraction pipes; iii. protection systems for landfill gas collection pipes; iv. pumping systems for landfill gas, including any storage systems prior to treatment and disposal or use.
b)	Operation of the system	Description of how the landfill gas management system will be: i) operated; ii) maintained in accordance with the manufacturers' or designers' recommendations/ specifications - this shall include a maintenance programme giving frequencies and subjects of inspection, with procedures, responsibilities, actions and deadlines for routine replacement and repair in the event of failed, defective or damaged components.
c)	Treatment and disposal or utilisation systems for landfill gas	Description, including design specification and scale drawings and plans, for: i) landfill gas flaring systems; ii) landfill gas power units, where these are to be provided; iii) alternative treatment or disposal systems, where these are to be provided.

Construction quality assurance of landfill gas management system

1.1.4 Prior to construction of the landfill gas management system for each cell or phase a Construction Quality Assurance Plan covering all elements of the engineered landfill gas management system for that cell or phase shall be submitted in writing to the Agency. No waste shall be deposited in any new cell or phase unless the CQA Plan for that cell or phase has been submitted to the Agency and agreed in writing by the Agency.

1.1.5 Prior to construction of the landfill gas management system for each cell or phase, details of the identities and relevant qualifications of the personnel who will be providing Quality Assurance of the construction shall be submitted to the Agency.

1.1.6 The engineered landfill gas management system for each cell or phase shall be constructed and recorded in accordance with the Construction Quality Assurance Plan.

1.1.7 Changes to the Construction Quality Assurance Plan and quality assurance personnel, shall not be implemented unless they have been agreed in writing by the Agency.

1.1.8 Within 1 month following completion of the landfill gas management system for each cell or phase, the Validation Report on the construction of the engineered landfill gas collection and extraction system for that cell or phase shall be submitted in writing to the Agency.

1.2 Monitoring and reporting of landfill gas within the waste (internal landfill gas monitoring)

Provision of internal landfill gas monitoring system

1.2.1 Within three months of the date of issue of this modification, for each cell or phase and for all new cells and phases, an internal landfill gas monitoring system shall be provided in accordance with the following requirements of this condition (unless the landfill gas management system is in place and operational to collect, extract and dispose of or utilise the landfill gas arising from that cell or phase, in accordance with the other conditions of this modification). The objective of the internal landfill gas monitoring system shall be to measure and characterise the landfill gas arisings within that cell or phase, so as to determine when the landfill gas collection, extraction and disposal or utilisation system can be made operational.

Design and operational standards for internal landfill gas monitoring system

1.2.2 The installation of the internal landfill gas monitoring system provided within each cell or phase shall be designed, constructed, inspected, maintained, documented and recorded to meet the standards specified in table **1.2A** below, unless otherwise agreed in writing by the Agency.

Table 1.2A Standards for internal landfill gas monitoring system

a)	Design of landfill gas monitoring systems	i. At least two monitoring points shall be installed per hectare of waste or part thereof, with a minimum of four for each cell or phase. ii. The monitoring points shall be evenly distributed within the area of each cell or phase and shall be installed to the full depth of the waste. iii. Each monitoring point shall permit a representative sample of landfill gas to be taken at any time.
b)	Construction and installation of landfill gas monitoring systems	i. The installations shall consist of monitoring points containing a rigid HDPE casing of minimum internal diameter of 50mm. ii. The space surrounding the monitoring point casing shall be packed with non-calcareous pea gravel and completed at the surface with a gas tight seal. iii. The monitoring point casing shall consist of manufactured perforated pipe within the response zone of the monitoring point and plain pipe through the gas tight seal. iv. The monitoring point casing shall be completed at the surface with a removable gas tap, suitable for gas sampling, and secure and protected from damage or vandalism . v. Each monitoring point shall be permanently labelled with a unique identification number.
c)	Inspection and maintenance of landfill gas monitoring systems	i. Monitoring installations shall be inspected for defects and damage during each routine monitoring exercise. ii. Defects and damage shall be noted in the site diary, remedial measures shall be undertaken as soon as possible and in any case within 1 month of the defect or damage being detected.
d)	Records	A record shall be kept in the site diary of all remedial actions undertaken.

Design report on internal landfill gas monitoring system

1.2.3 Prior to the installation of the internal landfill gas monitoring system in a cell or phase, the licence holder shall submit to the Agency a written design report detailing the proposed landfill gas monitoring system, which shall include the information set out in table **1.2B**. Following written agreement by the Agency of the design report, it shall be incorporated into the working plan.

Table 1.2B Details to be included in design report on internal landfill gas monitoring system		
a)	Landfill gas monitoring system infrastructure	Description, including design specification, scale drawings and location plans, for: i. any landfill gas monitoring wells which are to be provided within the waste body; ii. any other system which is to be provided for monitoring landfill gas within the waste body (other than that provided to balance the landfill gas collection and extraction system, and covered by the other conditions of this modification)
b)	Operation of the system	Description of how the internal landfill gas monitoring system will be: i) operated; and ii) maintained in accordance with the manufacturers' or designers' recommendations/ specifications - this shall include a maintenance programme giving frequencies and subjects of inspection, with procedures, responsibilities, actions and deadlines for repair and replacement in the event of failed, defective or damaged components.

Construction quality assurance of internal landfill gas monitoring systems

1.2.4 Prior to construction of any fixed engineered components of the internal landfill gas monitoring system in a cell or phase, a Construction Quality Assurance Plan covering all elements of the internal landfill gas monitoring system for that cell or phase shall be submitted in writing to the Agency. No waste shall be deposited in any new cell or phase unless the CQA Plan for that cell or phase has been submitted to the Agency and agreed in writing by the Agency.

1.2.5 Prior to construction of the fixed engineered components of the internal landfill gas monitoring system in a cell or phase, details of the identities and relevant qualifications of the personnel who will be providing Quality Assurance of the construction shall be submitted to the Agency.

1.2.6 The fixed engineered components of the internal landfill gas monitoring system for each cell or phase shall be constructed and recorded in accordance with the Construction Quality Assurance Plan.

1.2.7 Changes to the Construction Quality Assurance Plan, quality assurance personnel, and detailed method statement shall not be implemented unless they have been agreed in writing by the Agency.

1.2.8 Within 1 month following completion of any fixed engineered components of the internal landfill gas monitoring system for each cell or phase, the Validation Report on the construction for that cell or phase shall be submitted in writing to the Agency.

Quality assurance plan for internal monitoring of landfill gas

1.2.9 Prior to the commissioning and operation of the internal landfill gas monitoring system, the licence holder shall submit in writing to the Agency a quality assurance plan for the internal monitoring of landfill gas, which shall meet the standards specified in table **1.2C** below

Table 1.2C Standards for quality assurance plan for internal landfill gas monitoring

Landfill gas monitoring and sampling records	Specified standards
a) Quality assurance of monitoring and sampling	i) Monitoring shall only be carried out by suitably competent/qualified staff. ii) Validation of results shall be carried out by a designated quality assurer adequately experienced in landfill gas engineering. iii) Monitoring equipment shall be calibrated and serviced in accordance with the manufacturer's recommendations.
b) Making of records	Records shall include the following: i) Determinands monitored/sampled; ii) Specified details of measurements/samples to support analytical and QA requirements; including dates, times, locations, personnel undertaking monitoring; iii) Results of measurements/sample analyses, with error limits; iv) Interpretation and review of results; v) Validation of accuracy and validity of results, by designated quality assurer.
c) Submission of records	A copy of the quality assured records of each monitoring and sampling result shall be submitted to the Agency within 1 month of its being carried out.

Internal landfill gas monitoring programme

1.2.10 Monitoring of landfill gas within each cell or phase shall be carried out and recorded in accordance with the standards specified in table **1.2D** below.

Table 1.2D Standards for internal landfill gas monitoring and sampling programme

Landfill gas monitoring determinands	Monitoring frequencies	Units and accuracy	Trigger levels
Methane	weekly, from starting input of waste	% v/v and to 0.3%	No trigger level –information supporting analyses of methanogenic status of cell or phase
Carbon dioxide	weekly, with methane monitoring	% v/v and to 0.3%	No trigger level –information supporting analyses of methanogenic status of cell or phase
Oxygen	weekly, with methane monitoring	% v/v and to 0.3%	No trigger level –information supporting analyses of methanogenic status of cell or phase
Atmospheric pressure	with methane monitoring	mbar to 1mbar, and whether rising or falling	No trigger level –information supporting analyses of methanogenic status of cell or phase

1.3 Monitoring and balancing of landfill gas extraction

Provision of monitoring system for the landfill gas extraction system

Within three months of the date of issue of this modification, for each cell or phase and for all new cells or phases, an extraction landfill gas monitoring system shall be provided in accordance with the following requirements of this condition. The objective of the extraction landfill gas monitoring system shall be to monitor the landfill gas being extracted from that cell or phase, and to enable the operation of the landfill gas collection and extraction system to be balanced against the landfill gas generated from that cell or phase.

Design and operational standards for monitoring landfill gas extraction system

1.3.1 The extraction landfill gas monitoring system provided for each cell or phase shall be designed, constructed, inspected, maintained, documented and recorded to meet the standards specified in table **1.3A** below, unless otherwise agreed in writing by the Agency.

Table 1.3A Standards for monitoring landfill gas extraction system		
a)	Design of monitoring points for landfill gas extraction	i. At least one monitoring point shall be installed on the well side of the valve for each extraction well or manifold. ii. Each monitoring point shall permit a representative sample of landfill gas to be taken at any time.
b)	Construction and installation of monitoring points	Each monitoring point shall be secure and protected from damage or vandalism.
c)	Inspection and maintenance of monitoring points	i. Monitoring points shall be inspected for defects and damage during each routine monitoring exercise. ii. Defects and damage shall be noted in the site diary, remedial measures shall be undertaken as soon as possible and in any case within 1 month.
d)	Records	A record shall be kept in the site diary of all remedial actions undertaken.

Design report on monitoring system for landfill gas extraction system

1.3.2 Prior to the installation of the extraction landfill gas monitoring system in a cell or phase, the licence holder shall submit to the Agency a written design report detailing the proposed system, which shall include the information set out in table **1.3B**. Following written agreement by the Agency of the submission of the design report, it shall be incorporated into the working plan.

Table 1.3B Details to be included in design report on monitoring system for the landfill gas extraction system		
a)	Extraction landfill gas monitoring points design	Description, including design specification, scale drawings and location plans.
b)	Operation of the monitoring points	Description of how the monitoring points will be: i) operated; and ii) maintained in accordance with the manufacturers' or designers' recommendations/ specifications - this shall include a maintenance programme giving frequencies and subjects of inspection, with procedures, responsibilities, actions and deadlines for repair and replacement in the event of failed, defective or damaged components.

Construction quality assurance of monitoring points for landfill gas extraction system

1.3.3 Prior to installation of the extraction landfill gas monitoring points for a cell or phase, a Construction Quality Assurance Plan covering those monitoring points shall be submitted in writing to the Agency. No waste shall be deposited in any new cell or phase unless the CQA Plan for that cell or phase has been submitted to the Agency and agreed in writing by the Agency.

1.3.4 Prior to installation of the extraction landfill gas monitoring points for a cell or phase, details of the identities and relevant qualifications of the personnel who will be providing Quality Assurance of the installation shall be submitted to the Agency.

1.3.5 The monitoring points for each cell or phase shall be installed and recorded in accordance with the Construction Quality Assurance Plan.

1.3.6 Changes to the Construction Quality Assurance Plan, quality assurance personnel, and detailed method statement shall not be implemented unless they have been agreed in writing by the Agency.

1.3.7 Within 1 month following completion of the installation of any extraction landfill gas monitoring points for each cell or phase, the Validation Report on the construction for that cell or phase shall be submitted in writing to the Agency.

Quality assurance plan for monitoring of landfill gas extraction

1.3.8 Prior to the commissioning and operation of the landfill gas collection and extraction system, the licence holder shall submit in writing to the Agency a quality assurance plan for the monitoring of landfill gas extraction, which shall meet the standards specified in table **1.3C** below

Table 1.3C Standards for quality assurance plan for monitoring of the Landfill gas extraction system

Landfill gas monitoring and sampling records	Specified standards
a) Quality assurance of monitoring and sampling	i) Monitoring shall only be carried out by suitably competent/qualified staff. ii) Validation of results shall be carried out by a designated quality assurer adequately experienced in landfill gas engineering. iii) Monitoring equipment shall be calibrated and serviced in accordance with the manufacturer's recommendations.
b) Making of records	Records shall include the following: i) Determinands monitored/sampled; ii) Specified details of measurements/samples to support analytical and QA requirements; including. Dates, times, locations, personnel undertaking monitoring; iii) Results of measurements/sample analyses, with error limits; iv) Interpretation and review of results; v) Validation of accuracy and validity of results, by designated quality assurer.
c) Submission of records	A copy of the quality assured records of each monitoring and sampling result shall be submitted to the Agency within 1 month of its being carried out.

Monitoring programme for landfill gas extraction system

1.3.9 Monitoring of landfill gas within the extraction system for each cell or phase shall be carried out and recorded in accordance with the standards specified in table **1.3D** below. Variation of monitoring frequencies and / or trigger levels can be dependent on stabilisation and performance profiling of wells and cells. Any proposed changes to the frequencies and / or trigger levels require prior agreement with the Agency and incorporation into the Working Plan.

Table 1.3D Standards for balancing and monitoring of extraction system

Landfill gas monitoring determinands at each well or manifold (unless stated)	Monitoring frequencies	Units and accuracies	Trigger levels
Methane	Fortnightly from commissioning the extraction system	% ± 0.3%	<20%
Carbon dioxide	Fortnightly from commissioning the extraction system	% ± 0.3%	No trigger level – information enabling balancing of landfill gas extraction
Oxygen	Fortnightly from commissioning the extraction system	% ± 0.1%	>5% at each well
Flow rate or suction	Fortnightly from commissioning the extraction system	m^3/h or(±) mbar	No trigger level – information enabling balancing of landfill gas extraction
Openness of valve aperture (for use on manifold systems)	Fortnightly from commissioning the extraction system	% open	No trigger level – information enabling balancing of landfill gas extraction
Composition [including trace components] of raw landfill gas from the extraction line, prior to the disposal system	6 monthly	$\mu g/m^3$	No trigger level – information supporting analysis of landfill gas generation and emissions from the site
Temperature at each well head provided the agreed well head design allows.	Fortnightly	°C ± 0.5°C	No trigger level – information enabling monitoring of landfill gas extraction

Landfill gas extraction balancing

1.3.10 In the event that any of the results of the landfill gas extraction monitoring exceed the relevant trigger levels specified in table **1.3D** above, immediate action shall be taken to balance the system to ensure that the measured values are maintained in accordance with the specified trigger levels.

1.4 Monitoring and reporting of emissions from landfill gas flares

Quality assurance plan for monitoring of flare emissions

1.4.1 Prior to the commissioning and operation of the landfill gas flare for a cell or phase, the licence holder shall submit in writing to the Agency a quality assurance plan for the monitoring of emissions from the flare, which shall meet the standards specified in table **1.4A** below

Table 1.4A Specified standards for quality assurance plan for monitoring of emissions from landfill gas flares

Monitoring and sampling records	Specified details
a) Quality assurance of monitoring and sampling	i) Monitoring shall only be carried out by suitably competent / qualified staff. ii) Monitoring equipment shall be calibrated and serviced in accordance with the manufacturer's recommendations. iii) A sample of emission gases shall be collected from each flare at least once per year and shall be subjected to laboratory analysis using gas chromotography or an alternative methodology agreed in writing by the Agency.
b) Making of records	Records shall include the following: i) Determinands monitored/sampled; ii) Specified details of measurements/samples to support analytical and QA requirements, including dates, times, locations and personnel undertaking monitoring; iii) Results of measurements/sample analyses, with error limits; iv) Interpretation and review of results; v) Validation of accuracy and validity of results, by designated quality assurer.
c) Submission of records	A copy of the quality assured records of each monitoring and sampling result shall be submitted to the Agency within 1 month of its being carried out. If any of the monitoring points have not been sampled or any analysis not included, an explanation of this omission shall be included in the submission.

Emission monitoring and sampling programme

1.4.2 Upon commissioning of the landfill gas flare for a cell or phase, and from then on, monitoring of emissions from the flare shall be carried out to measure and record the determinands specified in table **1.4B** in accordance with the specified standards, and the measurements shall be made and recorded in accordance with the agreed quality assurance plan.

Table 1.4B Landfill gas flare monitoring programme – determinands and standards

Monitoring determinand	Monitoring frequencies	Units and accuracies	Trigger levels at NTP and 3% O_2, unless otherwise agreed in writing by the Agency
Unburned hydrocarbons	6 monthly from commissioning system	mg/Nm^3± 1 mg/Nm^3	≥10 mg/Nm^3
Oxides of nitrogen (NO_x)	6 monthly from commissioning system	mg/Nm^3± 1 mg/Nm^3	≥150 mg/Nm^3
Carbon monoxide (CO)	6 monthly from commissioning system	mg/Nm^3± 1 mg/Nm^3	≥ 50 mg/Nm^3
Temperature	6 monthly from commissioning system	°C ± 1%	≤1000°C.*
Retention time	6 monthly from commissioning system	seconds ± 0.01 seconds	≤0.3 seconds*
Gas Flow Rate	6 monthly from commissioning system	Cubic metres of landfill gas per hour ±1%	Minimum level recommended in the relevant design specification
Sulphur Dioxide (SO_2)	Annually from commissioning system	mg/Nm^3± 1 mg/Nm^3	No trigger level – information supporting analyses of results
Hydrogen Chloride (HCl)	Annually from commissioning system	mg/Nm^3± 1 mg/Nm^3	No trigger level – information supporting analyses of results
Hydrogen Fluoride (HF)	Annually from commissioning system	mg/Nm^3± 1 mg/Nm^3	No trigger level – information supporting analyses of results
Trace compounds & Furans / Dioxins	Annually from commissioning system	μg/Nm^3± 1 μg/Nm^3	No trigger level – information supporting analyses of results

Note: NTP = Normal Temperature and Pressure at 0°C and 1013 mbar.

* Unless alternative performance criteria demonstrated to meet desired emission standards above.

Emissions monitoring action plan

1.4.3 Prior to the commissioning of each landfill gas flare, an emissions action plan shall be submitted to the Agency in writing which shall specify actions to be taken in the event that trigger levels are exceeded, or analysis indicates a trend against background that is likely to exceed trigger levels.

1.4.4 In the event that any results exceed the relevant trigger levels specified in table **1.4B** above:

a the results shall be notified to the Agency immediately; and

b the action plan shall be implemented immediately, and its implementation recorded in the site diary.

1.5 Monitoring and control of landfill gas utilisation systems and alternative systems of disposal

1.5.1 Landfill gas utilisation systems and alternative systems of disposal to landfill gas flaring shall not be installed or implemented in any cell or phase unless a quality assurance plan and programme to monitor and control the emissions against specified limits have been submitted in writing to, and agreed in writing by, the Agency. Following written agreement by the Agency of the quality assurance plan and programme, it shall be incorporated into the working plan.

1.5.2 Monitoring, maintenance and control of emissions from the utilisation system or alternative disposal system shall be carried out in accordance with Table 1.5 unless an alternative has been agreed in writing with the Agency and incorporated into the Working Plan.

Table 1.5 Standards for emission monitoring and sampling programme of utilisation plant.

Emission monitoring determinands	Monitoring frequencies	Units and accuracies referenced to NTP at 0°C + 1013mbar + 5%O_2
Engine Oil Analysis	Weekly	*varied*
Total chlorinated hydrocarbons within inlet gas	Monthly upon commissioning, after first quarter annually thereafter.	[mg/Nm^3±1 mg/Nm^3]
Unburned hydrocarbons	monthly upon commissioning, after first quarter annually thereafter.	[mg/Nm^3±1 mg/Nm^3]
Oxides of nitrogen (NO_x)	monthly upon commissioning, after first quarter annually thereafter	[mg/Nm^3±1 mg/Nm^3]
Sulphur Dioxide (SO_2)	monthly upon commissioning, after first quarter annually thereafter	[mg/Nm^3±1 mg/Nm^3]
Carbon monoxide (CO)	monthly upon commissioning, after first quarter annually thereafter.	[mg/Nm^3±1 mg/Nm^3]
Hydrogen chloride (HCl)	monthly upon commissioning, after first quarter annually thereafter.	[mg/Nm^3±1 mg/Nm^3]
Hydrogen Fluoride (HF)	monthly upon commissioning, after first quarter annually thereafter.	[mg/Nm^3±1 mg/Nm^3]
Polycyclic aromatic hydrocarbons	third month after commissioning, then at one year, thereafter every two years.	[µg/Nm^3±1 µg/Nm^3]
PCDDs	third month after commissioning, then at one year, thereafter every two years.	[µg/Nm^3±1 µg/Nm^3]
PCDFs	third month after commissioning, then at one year, thereafter every two years.	[µg/Nm^3±1 µg/Nm^3]
Organosulphur compounds	third month after commissioning, then at one year, thereafter every two years.	[µg/Nm^3±1 µg/Nm^3]
Temperature	Monthly	°C ±1%
Other halogenated organic compounds	third month after commissioning, then at one year, thereafter every two years	[µg/Nm^3±1 µg/Nm^3]

1.6 Landfill gas monitoring and reporting external to the waste

Provision of external landfill gas monitoring system

1.6.1 Within three months of the date of issue of this modification, for each existing cell or phase and before any wastes are deposited in each new cell or phase an external landfill gas monitoring system shall be provided in accordance with the following requirements of this condition. The objective of the external landfill gas monitoring system shall be to enable monitoring of the gases in the ground outside the waste body, so as to determine whether landfill gas is migrating from the site.

Design report on the external landfill gas monitoring system

1.6.2 Prior to the installation of the external landfill gas monitoring system for each cell or phase, the licence holder shall submit to the Agency a written report detailing the proposed landfill gas monitoring system, which shall include the information set out in table **1.6A**. Following written agreement by the Agency of the design report, it shall be incorporated into the working plan.

Table 1.6A Details to be included in report on external landfill gas monitoring system

a)	Landfill gas monitoring system infrastructure	Description, including design specification, scale drawings and location plans, for any landfill gas monitoring boreholes which are to be provided outside the waste body.
b)	Operation of the system	Description of how the external landfill gas management monitoring system will be: i) operated; ii) maintained in accordance with the manufacturers' or designers' recommendations/ specifications - this shall include a maintenance programme giving frequencies and subjects of inspection, with procedures, responsibilities, actions and deadlines for repair and replacement in the event of failed, defective or damaged components.

Design and operational standards for external landfill gas monitoring system

1.6.3 The engineered external landfill gas monitoring system provided for each cell or phase shall be designed, constructed, inspected, maintained, documented and recorded to meet the standards specified in table **1.6B** below.

Table 1.6B Standards for external landfill gas monitoring system

a)	Design of external landfill gas monitoring system	The location, spacing and depth of boreholes shall be as specified in the agreed design report.
b)	Construction and installation	Unless otherwise agreed in writing by the Agency: i) the installations shall consist of boreholes of a minimum diameter of 150mm, containing a rigid HDPE casing of minimum internal diameter of 50mm; ii) the annulus of the borehole shall be packed with non-calcareous pea gravel and completed at the surface with a gas tight seal; iii) the borehole casing shall consist of plain pipe through the gas tight seal and manufactured perforated pipe within the response zone of the borehole; iv) the borehole casing shall be completed at the surface with a removable gas tap, suitable for gas sampling, and these headworks shall be secure and protected from damage or vandalism v) each borehole shall be permanently labelled with a unique identification number vi) during construction of the boreholes a record shall be made of the subsurface geology encountered during drilling and the geology shall be described by an appropriately qualified geotechnical engineer or similar person, who shall also provide a record of the 'as-built' dimensions of the monitoring installation.
c)	Inspection and maintenance	i) Monitoring installations shall be inspected for defects and damage during each routine monitoring exercise. ii) Defects and damage shall be noted in the site diary, remedial measures shall be undertaken as soon as possible and in any case within 1 month. iii) A record shall be kept in the site diary of all remedial actions undertaken. iv) A review of the system shall be carried out on an annual basis, to ensure that the system is continuing to meet its design and performance standards. The first review shall be carried out not more than one year following the date of its installation, and subsequent reviews shall be carried out not more than one year following the previous review. v) A written report of each review and its results shall be submitted in writing to the Agency within one calendar month of the review being completed.

Construction quality assurance of external landfill gas monitoring systems

1.6.4 Prior to construction of any fixed engineered components of the external landfill gas monitoring system associated with a cell or phase, a Construction Quality Assurance Plan covering those elements of the external landfill gas monitoring system associated with that cell or phase shall be submitted in writing to the Agency. No waste shall be deposited in any new cell or phase unless the CQA Plan for that cell or phase has been submitted to the Agency and agreed in writing by the Agency.

1.6.5 Prior to construction of the fixed engineered components of the external landfill gas monitoring system, details of the identities, relevant qualifications of the personnel who will be providing Quality Assurance of the construction shall be submitted to the Agency.

1.6.6 The fixed engineered components of the external landfill gas monitoring system for each cell or phase shall be constructed and recorded in accordance with the Construction Quality Assurance Plan.

1.6.7 Changes to the Construction Quality Assurance Plan, quality assurance personnel, and detailed method statement shall not be implemented unless they have been agreed in writing by the Agency.

1.6.8 Within 1 month following completion of the any fixed engineered components of the external landfill gas monitoring system for each cell or phase, the Validation Report on the construction for that cell or phase shall be submitted in writing to the Agency.

External landfill gas monitoring and sampling programme

1.6.9 Monitoring and sampling of landfill gas external to the waste body of each phase shall be carried out and recorded in accordance with the standards specified in Table **1.6C** below or otherwise agreed in writing with the Agency and incorporated into the Working Plan.

Table 1.6C Standards for external landfill gas monitoring and sampling programme

Landfill gas monitoring determinands	Monitoring frequencies	Units and accuracies	Trigger levels
Methane	Monthly, from: Starting input of waste or agreed specified date	% v/v and 0.3%	>1%
Carbon dioxide	Monthly, with methane monitoring	% v/v and 0.3%	>1.5 %
Oxygen	Monthly, with methane monitoring	% v/v and 0.3%	< 18%
Atmospheric pressure	Monthly, with methane monitoring	mbar and to1mbar	None
Differential pressure	Monthly, with methane monitoring	mbar and to1mbar	Not applicable.

Baseline monitoring results (External)

1.6.10 No wastes shall be deposited in any new cell or phase unless:

a background monitoring has been carried out in accordance with the external landfill gas monitoring plan for that cell or phase over a minimum period of 3 consecutive months prior to the programmed date for commencing deposit in that cell or phase;

b the results of the background monitoring have been collected, interpreted and a report compiled and submitted to the Agency and receipt of the report has been acknowledged in writing by the Agency.

Monitoring and sampling records

1.6.11 A record of the external landfill gas monitoring and sampling results shall be made and submitted to the Agency in accordance with the standards specified in Table **1.6D** below.

Table 1.6D Standards for external landfill gas monitoring and sampling records	
a) Quality assurance of monitoring and sampling	i) Monitoring shall only be carried out by suitably competent / qualified staff. ii) Monitoring equipment shall be calibrated and serviced in accordance with the manufacturer's recommendations. iii) Samples of gas shall be collected during routine monitoring from at least 10% of the monitoring wells annually and subjected to laboratory analysis using gas chromatography to confirm the accuracy of field measurements.
b) Making of records	Records shall include the following: i) Determinands monitored/sampled; ii) Specified details of measurements/samples to support analytical and QA requirements, including dates, times, locations and personnel undertaking monitoring; iii) Results of measurements/sample analyses, with error limits; iv) Interpretation and review of results against trigger levels; v) Validation of accuracy and validity of results, by designated quality assurer.
c) Submission of records	A copy of the quality assured records of each monitoring and sampling result shall be submitted to the Agency within 1 month of its being carried out.

Emissions monitoring action plan

1.6.12 Prior to the commissioning of the external landfill gas monitoring system for each cell or phase, an emissions action plan shall be submitted to the Agency in writing which shall specify actions to be taken in the event that trigger levels are exceeded, or analysis indicates a trend against background that is likely to exceed trigger levels.

1.6.13 In the event that any results are not in accordance with the relevant trigger levels specified in table **1.6C** above:

a the results shall be notified to the Agency immediately; and

b the action plan shall be implemented immediately, and its implementation recorded in the site diary.

1.7 Monitoring and control of odorous emissions

1.7.1 Within three months of the date of issue of this modification, a plan for monitoring and controlling the emission of odours from the site shall be provided in writing to the Agency. The objective of the plan shall be to prevent emissions of odours from the site in such quantities or concentrations that are likely to cause pollution of the environment or harm to human health or serious detriment to the amenity of the locality.

1.7.2 The plan shall specify the frequencies, times, locations and methods of monitoring for odorous emissions, and the actions to be taken in the event of detection or notification of odorous emissions from the site. Following written agreement of the plan by the Agency, it shall be incorporated into the working plan. Once agreed the plan and any subsequent agreed amendments to it shall be implemented while the licence subsists.

1.7.3 The measures specified in the plan to monitor, control and minimise the emission of odours from the site shall meet the standards specified in Table **1.7A.**

Table 1.7A Standards for monitoring and control of emissions of odours

a)	Monitoring of odorous emissions	Olfactory monitoring of aerial emissions from the site shall be carried out: i) in accordance with the agreed monitoring plan, and shall be recorded in the site diary; and ii) by site staff supervising individual waste handling operations, during the carrying out of those operations.
b)	Odorous emissions action plan	i) On detection or notification of aerial emissions of odour that are being, or are likely to be, transported beyond the site boundary, at such levels that they are likely to cause pollution of the environment or harm to human health or serious detriment to the amenity of the locality, immediate action to be taken to stop the waste handling operations giving rise to the emission and to suppress the aerial emission from the waste. ii) The incident and the remedial action shall be recorded in the site diary.

1.7.4 All emissions to air from waste management operations on the site shall be free from odours at levels as are likely to cause pollution of the environment or harm to human health or serious detriment to the amenity of the locality outside the site boundary, as perceived by an authorised officer of the Agency.

1.8 Amendments to working plan

1.8.1 The Licence Holder shall give the Agency prior notice in writing of any proposed change to the documents which have been agreed and incorporated in the working plan in accordance with the other conditions of this modification notice.

1.8.2 The prior written notice shall be accompanied by a copy of the proposed changes, and by a written assessment of the effect that implementing the proposed change would have on the risk posed by the site to human health and the environment.

1.8.3 The Licence Holder shall provide up to 6 additional copies of the proposed change and supporting risk assessment to the Agency, when required by the Agency in writing.

1.8.4 The proposed change shall not be implemented unless it has been agreed in writing by the Agency. Following agreement, the Licence Holder shall give the Agency prior written notification of the implementation date of the change, and from that date the changed section shall be deemed to replace the previous version of that documentation.

ANNEX A – PERMITTED WASTES (Page 1 of 9)	
EWC	**Description**
01	**WASTES FROM MINERAL EXCAVATION**
01 01 01	Waste from mineral metalliferous excavation
01 01 02	Waste from mineral non-metalliferous excavation
01 03	**Wastes from physical and chemical processing of metalliferous minerals**
01 03 06	Tailings other than those mentioned in 01 03 04 and 01 03 05
01 03 08	Dusty and powdery waste other than those mentioned in 01 03 07
01 03 09	Red mud from alumina production other than those mentioned in 01 03 07
01 04	**Wastes from physical and chemical processing of non-metalliferous minerals**
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	Waste sand and clays
01 04 10	Dusty and powdery waste other than those mentioned in 01 04 07
01 04 11	Waste from potash and rock salt processing other than those mentioned in 01 04 07
01 04 12	Tailings & other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 & 01 04 11
01 04 13	Waste from stone cutting and sawing other than those mentioned in 01 04 07
02	**WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING, AND FISHING. FOOD PREPARATION & PROCESSING**
02 01	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting & fishing**
02 01 01	Sludges from washing & cleaning
02 01 03	Plant tissue waste
02 01 04	Waste plastics (except packaging)
02 01 07	Waste from forestry
02 03	**Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea & tobacco preparation & processing; conserve production; tobacco processing; yeast & yeast extraction production, molasses preparation & fermentation**
02 03 01	Sludges from washing, cleaning, peeling, centrifuging and separation
02 03 02	Waste from preserving agent
02 03 03	Waste from solvent extraction
02 03 04	Materials unsuitable for consumption or processing
02 03 05	Sludges from on-site effluent treatment
02 04	**Wastes from sugar processing**
02 04 01	Soil from cleaning & washing beet
02 04 02	Off-specification calcium carbonate
02 04 03	Sludges from on-site effluent treatment
02 05	**Wastes from the dairy products industry**
02 05 01	Materials unsuitable for consumption or processing
02 05 02	Sludges from on-site effluent treatment
02 06	**Wastes from the baking and confectionary industry**
02 06 01	Materials unsuitable for consumption or processing
02 06 02	Waste from preserving agents
02 06 03	Sludges from on-site effluent treatment
02 07	**Wastes from the production of alcoholic and non-alcoholic beverages (Except coffee, tea & cocoa)**
02 07 01	Waste from washing, cleaning & mechanical reduction of raw materials
02 07 02	Waste from spirits distillation
02 07 03	Waste from chemical treatment
02 07 04	Materials unsuitable for consumption or processing
02 07 05	Sludges from on-site effluent treatment

TABLE A – PERMITTED WASTES (Page 2 of 9)	
EWC	**Description**
03	**WASTES FROM WOOD PROCESSING & THE PRODUCTION OF PAPER, CARDBOARD, PULP, PANELS & FURNITURE**
03 01	**Wastes from wood processing & the production of panels & furniture**
03 01 01	Waste bark & cork
03 01 05	Sawdust, shavings, cuttings, wood, particle board & veneer other than those mentioned in 03 01 04
03 03	**Wastes from pulp, paper & cardboard production & processing**
03 03 01	Waste bark & wood
03 03 02	Green liquor sludge (from recovery of cooling liquor)
03 03 05	De-inking sludges from paper recycling
03 03 07	Mechanically separated rejects from pulping of waste paper & cardboard
03 03 08	Waste from sorting of paper & cardboard destined for recycling
03 03 09	Lime mud waste
03 03 10	Fibre rejects, fibre-, filler-and coating sludges from mechanical separation
03 03 11	Sludges from on-site effluent treatment other than those mentioned in 03 03 10
04	**WASTES FROM THE LEATHER, FUR & TEXTILE INDUSTRIES**
04 02	**Waste from the textile industry**
04 02 09	Waste from composite materials (impregnated textile, elastomer, plastomer)
04 02 10	Organic matter from natural products (e.g. grease, wax)
04 02 15	Waste from finishing other than those mentioned in 04 02 14
04 02 17	Dyestuffs & pigments other than those mentioned in 04 02 16
04 02 20	Sludges from on-site treatment effluent treatment other than those mentioned in 04 02 19
04 02 21	Waste from unprocessed textile fibres
04 02 22	Waste from processed textile fibres
06	**WASTES FROM INORGANIC CHEMICAL PROCESSES**
06 03	**Wastes from the MFSU of salts & their solutions & metallic oxides**
06 03 14	Solid salts & solutions other than those mentioned in 06 03 11 and 06 03 13
06 03 16	Metallic oxides other than those mentioned in 06 03 15
06 05	**Sludges from on-site effluent treatment**
06 05 03	Sludges from on-site effluent treatment other than those mentioned in 06 05 02
06 06	**Wastes from the MFSU of sulphur chemicals, sulphur chemical processes & desulphurisation processes**
06 06 03	Wastes containing sulphides other than those mentioned in 06 06 02
06 11	**Waste from the manufacture of inorganic pigments & opacificiers**
06 11 01	Calcium-based reaction wastes from titanium dioxide production
07	**WASTES FROM ORGANIC CHEMICAL PROCESSES**
07 01	**Wastes from the manufacture, formulation, supply & use (MFSU) of basic organic chemicals**
07 01 12	Sludges from on-site effluent treatment other than those mentioned in 07 01 11
07 02	**Wastes from the MFSU of plastics, synthetic rubber & man-made fibres**
07 02 12	Sludges from on-site effluent treatment other than those mentioned in 07 02 11
07 02 13	Waste plastic
07 02 15	Waste additives other than those mentioned in 07 02 14
07 03	**Wastes from the MFSU of organic dyes and pigments (except 06 11)**
07 03 12	Sludges from on-site effluent treatment other than those mentioned in 07 03 11

TABLE A – PERMITTED WASTES (Page 3 of 9)	
EWC	**Description**
08	**WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY & USE (MFSU) OF COATINGS (PAINTS, VARNISHES & VITREOUS ENAMELS), ADHESIVES, SEALANTS & PRINTING INKS**
08 01	**Wastes from MFSU & removal of paint & varnish**
08 01 12	Waste paint & varnish other than those mentioned in 08 01 11
08 01 14	Sludges from paint or varnish other than those mentioned in 08 01 13
08 01 18	Waste from paint or varnish removal other than those mentioned in 08 01 17
08 02	**Wastes from MFSU of other coatings (including ceramic materials)**
08 02 01	Waste coating powders
08 03	**Wastes from MFSU of printing inks**
08 03 07	Aqueous sludges containing ink
08 03 13	Waste ink other than those mentioned in 08 03 12
08 03 18	Waste printing toner other than those mentioned in 08 03 17
08 04	**Wastes from MFSU of adhesives & sealants (including waterproofing products)**
08 04 10	Waste adhesives & sealants other than those mentioned in 08 04 09
08 04 12	Adhesive & sealant sludges other than those mentioned in 08 04 11
08 04 14	Aqueous sludges containing adhesives or sealants other than those mentioned in 08 04 13
09	**WASTES FROM THE PHOTOGRAPHIC INDUSTRY**
09 01	**Wastes from the photographic industry**
09 01 07	Photographic film & paper containing silver or silver compounds
09 01 08	Photographic film & paper free of silver or silver compounds
09 01 10	Single-use cameras without batteries
09 01 12	Single-use cameras containing batteries other than those mentioned in 09 01 11
10	**WASTES FROM THERMAL PROCESSES**
10 01	**Wastes from power stations & other combustion plants (except 19)**
10 01 05	Calcium-based reaction waste from flue gas desulphurisation in solid form
10 01 07	Calcium-based reaction waste from flue gas desulphurisation in sludge form
10 01 15	Bottom ash, slag & boiler dust from co-incineration other than those mentioned in 10 01 14
10 01 17	Fly ash from co-incineration other than those mentioned in 10 01 16
10 01 19	Wastes from gas cleaning other than those mentioned in 10 01 05, 10 01 07 & 10 01 18
10 01 21	Sludges from on-site effluent treatment other than those mentioned in 10 01 20
10 01 23	Aqueous sludges from boiler cleansing other than those mentioned in 10 01 22
10 01 24	Sands from fluidised beds
10 01 25	Waste from fuel storage & preparation of coal-fired power plants
10 02	**Wastes from the iron & steel industry**
10 02 01	Waste from the processing of slag
10 02 02	Unprocessed slag
10 02 08	Solid waste from gas treatment other than those mentioned in 10 02 07
10 02 10	Mill scales
10 02 12	Waste from cooling water treatment other than those mentioned in 10 02 11
10 02 14	Sludges & filter cakes from gas treatment other than those mentioned in 10 02 13
10 02 15	Other sludges & filter cakes

TABLE A – PERMITTED WASTES (Page 4 of 9)	
EWC	**Description**
10	**WASTES FROM THERMAL PROCESSES (Cont.)**
10 03	**Wastes from aluminium thermal metallurgy**
10 03 02	Anode scraps
10 03 05	Waste alumina
10 03 16	Skimmings other than those mentioned in 10 03 15
10 03 18	Carbon containing waste from anode manufacture other than those mentioned in 10 03 17
10 03 20	Flue gas dust other than those mentioned in 10 03 19
10 03 22	Other particulates & dust (including ball mill dust) other than those mentioned in 10 03 21
10 03 24	Solid waste from gas treatment other than those mentioned in 10 03 23
10 03 26	Sludges & filter cakes from gas treatment other than those mentioned in 10 03 25
10 03 28	Waste from cooling water treatment other than those mentioned in 10 03 27
10 03 30	Waste from treatment of salt slags & black drosses other than those mentioned in 10 03 39
10 05	**Wastes from zinc thermal metallurgy**
10 05 01	Slags from primary & secondary production
10 05 04	Other particulates & dust
10 05 09	Waste from cooling water treatment other than those mentioned 10 05 08
10 06	**Wastes from copper thermal metallurgy**
10 06 01	Slags from primary & secondary production
10 06 02	Dross & skimmings from primary & secondary production
10 06 04	Other particulates & dust
10 06 10	Waste from cooling water treatment other than those mentioned in 10 06 09
10 07	**Wastes from silver, gold & platinum thermal metallurgy**
10 07 01	Slags from primary & secondary production
10 07 02	Dross & skimmings from primary & secondary production
10 07 03	Solid waste from gas treatment
10 07 04	Other particulates & dust
10 07 05	Sludges & filter cakes from gas treatment
10 07 08	Waste from cooling water treatment other than those mentioned in 10 07 07
10 08	**Wastes from other non-ferrous thermal metallurgy**
10 08 04	Particulates & dust
10 08 09	Other slags
10 08 11	Dross & skimmings other than those mentioned in 10 08 10
10 08 13	Carbon containing waste from anode manufacture other than those mentioned in 10 08 12
10 08 14	Anode scrap
10 08 16	Flue gas dust other than those mentioned in 10 08 15
10 08 18	Sludges & filter cakes from flue gas treatment other than those mentioned in 10 08 17
10 08 20	Waste from cooling water treatment other than those mentioned in 10 08 19
10 09	**Wastes from casting of ferrous pieces**
10 09 03	Furnace slag
10 09 06	Casting cores & moulds which have undergone pouring other than those mentioned in 10 09 05
10 09 08	Casting cores & moulds which have undergone pouring other than those mentioned in 10 09 07
10 09 10	Flue gas dust other than those mentioned in 10 09 09
10 09 12	Other particulates other than those mentioned in 10 09 11
10 09 14	Waste binders other than those mentioned in 10 09 13

TABLE A – PERMITTED WASTES (Page 5 of 9)	
EWC	**Description**
10	**WASTES FROM THERMAL PROCESSES (Cont.)**
10 10	**Wastes from casting of non ferrous pieces**
10 10 03	Furnace slag
10 10 06	Casting cores & moulds which have not undergone pouring other than those mentioned in 10 10 05
10 10 08	Casting cores & moulds which have not undergone pouring other than those mentioned in 10 10 07
10 10 10	Flue gas dust other than those mentioned in 10 10 09
10 10 12	Other particulates other than those mentioned in 10 10 11
10 10 14	Waste binders other than those mentioned in 10 10 13
10 11	**Waste from manufacture of glass & glass products**
10 11 03	Waste glass-based fibrous materials
10 11 05	Particulates & dust
10 11 10	Waste preparation mixture before thermal processing other than those mentioned in 10 11 09
10 11 12	Waste glass other than those mentioned in 10 11 11
10 11 16	Solid waste from flue-gas treatment other than those mentioned in 10 11 15
10 11 18	Sludges & filter cakes from flue-gas treatment other than those mentioned in 10 11 17
10 12	**Wastes from manufacture of ceramic goods, bricks, tiles & construction products**
10 12 01	Waste preparation mixture before thermal processing
10 12 03	Particulates & dust
10 12 05	Sludges & filter cakes from gas treatment
10 12 06	Discarded moulds
10 12 08	Waste ceramics, bricks, tiles & construction products (after thermal processing)
10 12 10	Solid waste from gas treatment other than those mentioned in 10 12 09
10 12 12	Waste from glazing other than those mentioned in 10 12 11
10 12 13	Sludge from on-site effluent treatment
10 13	**Wastes from manufacture of cement, lime & plaster & articles & products made from them**
10 13 01	Waste preparation mixture before thermal processing
10 13 04	Waste from calcinations & hydration of lime
10 13 06	Particulates & dust (except 10 13 12 and 10 13 13)
10 13 07	Sludges & filter cakes from gas treatment
10 13 09*	Waste from asbestos cement manufacture containing asbestos
10 13 10	Waste from asbestos cement manufacture other than those mentioned in 10 13 09
10 13 11	Waste from cement based composite materials other than those mentioned in 10 13 09 & 10 13 10
10 13 13	Solid waste from gas treatment other than those mentioned in 10 13 12
11	**WASTES FROM CHEMICAL SURFACE TREATMENT & COATING OF METALS & OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY**
11 01	**Wastes from chemical surface treatment & coating of metals & other materials (e.g. galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising)**
11 01 10	Sludges & filter cakes other than those mentioned in 11 01 09
11 01 14	Degreasing waste other than those mentioned in 11 01 13
11 02	**Wastes from non-ferrous hydrometallurgical processes**
11 02 03	Wastes from the production of anodes for aqueous electrolytical processes
11 05	**Wastes from hot galvanising processes**
11 05 01	Hard zinc
11 05 02	Zinc ash

TABLE A – PERMITTED WASTES (Page 6 of 9)	
EWC	**Description**
12	**WASTES FROM SHAPING & SURFACE TREATMENT OF METALS & PLASTICS**
12 01	**Wastes from shaping & physical & mechanical surface treatment of metals & plastics**
12 01 01	Ferrous metal filings & turnings
12 01 02	Ferrous metal dust & particles
12 01 03	Non-ferrous metal filings & turnings
12 01 04	Non-ferrous metal dust & particles
12 01 05	Plastic shavings & turnings
12 01 13	Welding waste
12 01 15	Machining sludges other than those mentioned in 12 0114
12 01 17	Waste blasting material other than those mentioned in 12 01 16
12 01 21	Spent grinding bodies & grinding materials other than those mentioned in 12 01 20
15	**WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS & PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED**
15 01	**Packaging (including separately collected municipal packaging waste)**
15 01 01	Paper & cardboard packaging
15 01 02	Plastic packaging
15 01 03	Wooden packaging
15 01 04	Metallic packaging
15 01 05	Composite packaging
15 01 06	Mixed packaging
15 01 07	Glass packaging
15 01 09	Textile packaging
15 02	**Absorbents, filter materials, wiping cloths & protective clothing**
15 02 03	Absorbents, filter materials, wiping cloths & protective clothing other than those mentioned in 15 02 02
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 & vehicle maintenance (except 13, 14 & 16 06 & 16 08)**
16 01 03	End-of-life tyres
16 01 04*	End-of-life vehicles
16 01 06	End-of-life vehicles, containing neither liquids nor other hazardous components
16 01 11*	Brake pads containing asbestos
16 01 12	Brake pads other than those mentioned in 16 01 11
16 01 16	Tanks for liquefied gas
16 01 17	Ferrous metal
16 01 18	Non-ferrous metal
16 01 19	Plastic
16 01 20	Glass
16 01 22	Components not otherwise specified
16 02	**Wastes from electrical & electronic equipment**
16 02 14	Discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 16	Components removed from discarded equipment other than those mentioned in 16 02 15

TABLE A – PERMITTED WASTES (Page 7 of 9)	
EWC	**Description**
16	**WASTES NOT OTHERWISE SPECIFIED IN THE LIST (Cont.)**
16 03	**Off-specification batches & unused products**
16 03 04	Inorganic wastes other than those mentioned in 16 03 03
16 03 06	Organic wastes other than those mentioned in 16 03 05
16 08	**Spent catalysts**
16 08 01	Spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (Except 16 08 07)
16 08 03	Spent catalysts containing transition metals or transition metal compounds not otherwise specified
17	**CONSTRUCTION & DEMOLITION WASTES (INLCUDING EXCAVATED SOIL FROM CONTAMINATED SITES)**
17 01	**Concrete, bricks, tiles & ceramics**
17 01 01	Concrete
17 01 02	Bricks
17 01 03	Tiles & ceramics
17 01 07	Mixtures of concrete, bricks, tiles & ceramics other than those mentioned in 17 01 06
17 02	**Wood, glass & plastic**
17 02 01	Wood
17 02 02	Glass
17 02 03	Plastic
17 03	**Bituminous mixtures, coal tar & tarred products**
17 03 01*	Bituminous mixtures containing coal tar
17 03 02	Bituminous mixtures other than those mentioned in 17 03 01
17 03 03	Coal tar & tarred products
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 & steel
17 04 06	Tin
17 04 07	Mixed metals
17 04 10*	Cables containing oil, coal tar and other dangerous substances
17 04 11	Cables other than those mentioned in 17 04 10
17 05	**Soil (including excavated soil from contaminated sites), stones & dredging spoil**
17 05 04	Soil & stones other than those mentioned in 17 05 03
17 05 06	Dredging spoil other than those mentioned in 17 05 05
17 05 07*	Track ballast containing dangerous substances
17 05 08	Track ballast other than those mentioned in 17 05 07
17 06	**Insulation materials & asbestos-based construction materials**
17 06 01*	Insulation materials containing asbestos
17 06 04	Insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 06 05*	Construction materials containing asbestos
17 08	**Gypsum-based construction material**
17 08 02	Gypsum-based construction materials other than those mentioned in 17 08 01
17 09	**Other construction & demolition waste**
17 09 04	Mixed construction & demolition waste other than those mentioned in 17 09 01, 17 09 02 & 17 09 03

TABLE A – PERMITTED WASTES (Page 8 of 9)	
EWC	**Description**
19	**WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS & THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION & WATER FOR INDUSTRIAL USE**
19 01	**Wastes from incineration or pyrolysis of waste**
19 01 02	Ferrous materials removed from bottom ash
19 01 12	Bottom ash & slag other than those mentioned in 19 01 11
19 01 14	Fly ash other than those mentioned in 19 01 13
19 01 16	Boiler dust other than those mentioned in 19 01 15
19 01 18	Pyrolysis waste other than those mentioned in 19 01 17
19 01 19	Sands from fluidised beds
19 02	**Wastes from physico/chemical treatments of waste (e.g. dechromatation, decyanidation, neutralisation)**
19 02 03	Premixed waste composed only of non-hazardous waste
19 02 06	Sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 03	**Stabilised/solidified wastes**
19 03 05	Stabilised wastes other than those mentioned in 19 03 04
19 03 07	Solidified waste other than those mentioned in 19 03 06
19 04	**Vitrified waste & wastes from vitrification**
19 04 01	Vitrified waste
19 05	**Wastes from aerobic treatment of solid wastes**
19 05 01	Non-composted fraction of municipal & similar waste
19 05 02	Non-composted fraction of animal & vegetable waste
19 05 03	Off-specification compost
19 08	**Wastes from waste water treatment plants not otherwise specified**
19 08 01	Screenings
19 08 02	Waste from desanding
19 08 05	Sludges from treatment of urban waste water
19 08 09	Grease & oil mixture from oil/water separation containing only edible oil & fats
19 08 12	Sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
19 08 14	Sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 09	**Wastes from the preparation of water intended for human consumption or water for industrial use**
19 09 01	Solid waste from primary filtration & screenings
19 09 02	Sludges from water clarification
19 09 03	Sludges from decarbonation
19 09 04	Spent activated carbon
19 09 05	Saturated or spent ion exchange resins
19 09 06	Solutions of sludges from regeneration of ion exchangers
19 10	**Wastes from shredding of metal-containing waste**
19 10 01	Iron & steel waste
19 10 02	Non-ferrous waste
19 10 04	Fluff – light fraction other than those mentioned in 19 10 03
19 10 06	Other fractions other than those mentioned in 19 10 05
19 11	**Wastes from oil regeneration**
19 11 06	Sludges from on-site effluent treatment other than those mentioned in 19 11 05

TABLE A – PERMITTED WASTES (Page 9 of 9)	
EWC	**Description**
19	**WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS & THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION & WATER FOR INDUSTRIAL USE**
19 12	**Wastes from the mechanical treatment of waste (e.g. sorting, crushing, compacting, palletising) not otherwise specified**
19 12 01	Paper & cardboard
19 12 02	Ferrous metal
19 12 03	Non-ferrous metal
19 12 04	Plastic and rubber
19 12 05	Glass
19 12 07	Wood other than those mentioned in 19 12 06
19 12 08	Textiles
19 12 09	Minerals (e.g. sand, stones)
19 12 10	Combustible waste (refuse derived fuel)
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 19 12 11
19 13	**Waste from soil & groundwater remediation**
19 13 02	Solid wastes & sludges from soil remediation other than those mentioned in 19 13 01
19 13 04	Sludges from groundwater remediation other than those mentioned in 19 13 03
20	**MUNICIPAL WASTES (HOUSEHOLD WASTE & SIMILAR COMMERCIAL, INDUSTRIAL & INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS**
20 01	**Separately collected fractions (except 15 01)**
20 01 01	Paper & cardboard
20 01 02	Glass
20 01 08	Biodegradable kitchen & canteen waste
20 01 10	Clothes
20 01 11	Textiles
20 01 25	Edible oil & fat
20 01 28	Paint, inks, adhesives & resins other than those mentioned in 20 01 27
20 01 30	Detergents other than those mentioned in 20 01 29
20 01 32	Medicines other than those mentioned in 20 01 31
20 01 34	Batteries & accumulators other than those mentioned in 20 01 33
20 01 36	Discarded electrical &electronic equipment other than those mentioned in 20 01 21, 20 01 23 & 20 01 35
20 01 38	Wood other than those mentioned in 20 01 37
20 01 39	Plastics
20 01 40	Metals
20 01 41	Wastes from chimney sweeping
20 02	**Garden & park wastes (including cemetery waste)**
20 02 01	Biodegradable waste
20 02 02	Soil & stones
20 02 03	Other non-biodegradable wastes
20 03	**Other municipal wastes**
20 03 01	Mixed municipal waste
20 03 02	Waste from markets
20 03 03	Street cleaning residues