Licence No:

JL/WR/L/LF/S(141)/6.95

OUTGOING

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DEVON COUNTY COUNCIL

ENVIRONMENTAL PROTECTION ACT 1990 (SECTION 37)

NOTICE OF VARIATION OF WASTE MANAGEMENT LICENCE

To the licence holder(s): Devon County Council

Of: County Hall, Topsham Road, Exeter, Devon, EX2 4QD

WHEREAS the DEVON COUNTY COUNCIL as Waste Regulation Authority and in pursuance of Section 5 of the Control of Pollution Act 1974 granted a licence number WR/L/S(141)07.91 to deposit waste on the land described in the licence dated 23 July 1991 subject to the conditions set out therein

NOTICE IS HEREBY GIVEN that the DEVON COUNTY COUNCIL as Waste Regulation Authority modifies the details relating to the licence holder(s) and the conditions to which the licence is subject by substituting the conditions set out in the following pages of this notice in place of all previous conditions.

Such variation shall take effect on the 8 June 1995 at midnight

N.B. **The person served with this notice may appeal against the authority's decision to the Secretary of State within six months or such longer period as the Secretary of State may allow. (See notes at the back of this licence).**

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DEFINITIONS

Where definitions are used in the conditions of this licence they shall have the meaning given to them by the following Acts & Regulations, or their successors:

The Control of Pollution Act 1974
The Control of Pollution (Special Waste) Regulations 1980 [SI 1980 No. 1709]
The Collection and Disposal of Waste Regulations 1988 [SI 1988 No. 819]
The Control of Pollution (Amendment) Act 1989
The Environmental Protection Act 1990
The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991 [SI 1991 No. 1624]
The Environmental Protection (Duty of Care) Regulations 1991 [SI 1991 No. 2839]
The Controlled Waste Regulations 1992 [SI 1992 No. 588]
The Radioactive Substances Act 1993
The Waste Management Licensing Regulations 1994 [SI 1994 No. 1056]
The Waste Management Licensing (Amendment etc.) Regulations 1995 [SI 1995 No. 288]
The Environment Act 1995

European Community (1975). Council Directive on waste, 75/442/EEC.
European Community (1976). Dangerous Substances Directive on pollution caused by certain substances discharged in the aquatic environment of the community 76/464/EEC
European Community (1979). Council Directive on the protection of groundwater against pollution caused by certain dangerous substances, 80/68/EEC.
European Community (1991). Council Directive amending directive 75/442/EEC, (91/156/EEC)
European Community (1991). Council Directive on hazardous waste 91/689/EEC

ENDORSEMENTS

ENDORSEMENTS
(Continued)

SECTION 1 OPERATIONAL CONTROL AND ADMINISTRATION

1.1 Definition of the Authority

The Devon County Council Waste Regulation Authority or its successor Regulation Authority and any officer of the Authority authorised to perform the regulatory function of the Authority.

1.2 Definition of the Site

(a) The extent of licensed activities. The area outlined in green on the site plan (Reference Schedule A.1 (a)) denotes the boundary within which activities controlled by this licence must be undertaken. No such activities shall take place outside the area bounded by the green line on the site plan.

(b) The extent of storage, handling, deposit, keeping and treatment of waste. The area outlined in red on the site plan (Reference Schedule A.1 (a)) denotes the boundary within which the storage, handling, deposit, keeping and treatment of waste must be undertaken. No waste shall be stored, handled, deposited, kept or treated outside the area bounded in red on the site plan.

1.3 Technical Competence (SCHEDULE E)

(a) A person or persons in charge of the supervision of the site must either be in possession of a Certificate of Technical Competence (COTC), a provisional COTC (pCOTC) awarded by the Waste Management Industry Training and Advisory Board (WAMITAB), or be exempt from this requirement under Regulations 4 & 5 of The Waste Management Licensing Regulations, 1994.

(b) This site requires that the Technically Competent person must hold a relevant certificate to level 3 as given in Table 1, of the Waste Management Licensing Regulations 1994, or be exempt from this requirement as detailed in condition 1.3(a).

(c) A list of technically competent persons involved in the management of the site shall be submitted to and agreed in writing by the Authority. The Authority shall be notified immediately in writing of any change in the technically competent management.

(d) **Waste shall not be accepted at the site at any time when technically competent management is not available.**

1.4 Supervision

(a) Sufficient management and supervision shall be provided at the site throughout the permitted operating hours to ensure that operations comply with this licence and the Working Plan. Other persons employed on the site shall be instructed on those conditions appropriate to their function and the responsibilities the licence conditions impose upon them.

(b) A minimum staffing complement shall be defined in the Working Plan and agreed in writing by the Authority.

(c) The acceptance and disposal of waste shall at all times be the responsibility of the licence holder. The status of the person who is given responsibility for the daily control of the site shall be such that his decisions represent those of the licence holder. For the purposes of this licence this person shall be defined as the 'nominated person.

1.5 Working Plan (SCHEDULE B.1)

(a) The drawings and statements of intended methods of operation submitted as part of the application for this licence and any later drawings or written statements received and agreed in writing by the Authority in substitute for, or in the augmentation of such drawings and statements will hereinafter be referred to as the "Working Plan".

(b) Subject to the terms of this Licence the holder shall conduct operations in accordance with the agreed Working Plan. Any condition of this licence shall take precedence over any statements within the Working Plan.

(c) The Working Plan shall be agreed in writing by the Authority prior to the commencement of any site preparation and development work referred to in the licence conditions.

(d) At the written request of the Authority the Working Plan shall be reviewed by the licence holder in consultation with the Authority and the details documented in writing to the Authority.

(e) The Authority shall be notified in writing at least one month in advance of any proposed change in the actual conduct of operations from the proposals shown in the Working Plan. Such change shall not be implemented without the prior written agreement of the Authority. The agreed changes shall be included in the Working Plan.

(f) Once the changes have been agreed by the Authority the Working Plan shall be updated to show each change and two copies of the amendments shall be forwarded to the Authority.

(g) A plan showing details of the progress of landfill operations shall be submitted to the Authority on the first working day of February during each year of the of the site until it has been completely restored. This plan shall include details of restoration and active tipping areas. It shall include the details required under condition 1.8 of this licence and any other details requested in writing by the Authority.

(h) No operations or activities shall take place on the site after 1 April 1996 unless and until a scheme of delegation has been supplied to and agreed in writing by this Authority, or its successor.

(I) Operations shall not commence or recommence at the site unless and until a working plan or Remediation Statement has been submitted and agreed in writing by this Authorit, or its successor.

1.6 Waste Categories and Restrictions

(a) The categories of wastes permitted for receipt at the site are listed below and detailed in APPENDIX I.

(i) Category A Waste

(b) **No other wastes are permitted at the site.**

(c) The total quantity of waste disposed of at the site shall not exceed:

tonnes per annum	**4,999**

The maximum daily intake of waste to be received at the site shall be defined in the Working Plan and agreed in writing by the Authority. The daily intake of waste to be deposited shall be limited to such quantities as can be managed readily by the personnel, plant and machinery available at the time to comply with the Working Plan.

(d) **No deposits of waste shall be made when the site is unmanned.**

(e) A full analysis shall be obtained by the licence holder for material known to be contaminated, or material which the licence holder has reason to believe may be contaminated, prior to its acceptance at the site.

(f) Analyses of all samples required by this licence shall be obtained from a laboratory for which analytical methods have been formally accredited by third party assessment to European Standard EN: 45000 (e.g. NAMAS), or other alternative laboratory standard as agreed in writing by the Authority.

(g) Analysis results submitted to the Authority shall include:

(i) A location plan detailing all sampling points (depth of sample where applicable)

(ii) All tests and results carried out on each of the samples (all metal results shall specify "total" or "available" concentrations and units). Details of routine analysis suites are given at the bottom of APPENDIX III.

(h) (i) If any sample has contaminant levels above those given in APPENDIX III then the results must be submitted to the Authority for a decision regarding the most suitable disposal route.

(ii) Material having contaminant concentrations in excess of those specified in APPENDIX III shall not be accepted for disposal at the site without the prior written agreement of the Authority.

(iii) Contaminated material for which agreement by the Authority has been given must be accompanied to the site by the form (WR/SOL/1), issued by the Authority which details the suitability of the material for disposal at the landfill.

(i) No waste contained in skips shall be accepted at the site without the prior written agreement of the Authority.

The following details shall be included in an application to receive skip waste:

(i) Volume of waste to be disposed of,
(ii) Uniformity of the waste,
(iii) Precise location of the source of waste, including NGR and location plan (scale 1:1250 or similar) with the scale specified,
(iv) Date on which waste is to be removed from the site where it is produced,
(v) Any relevant physical or chemical analysis of the waste,
(vi) Procedures for verifying and auditing the composition of the waste prior to disposal,
(vii) Reason for the use of a skip.

1.7 Hours of Operation

(a) Materials shall not be received or handled at the site except during the following times.

Monday to Friday	08.00 - 18.00 hours
Saturday	08.00 - 13.00 hours
Sunday and Public Holidays	NO OPERATION

(b) Materials shall only be accepted at the site up to 15 minutes before the end of each working day or other period as detailed in the Working Plan and agreed in writing by the Authority.

(c) Except in cases of emergency no waste shall be received outside these hours without the prior written agreement of the Authority. All cases of emergency shall be notified to the Authority immediately and the details entered in the site diary.

1.8 Records, Reports and Registers

(a) The licence holder shall keep and maintain all records required in this licence. Excepting a more specific condition all such records shall be kept in the site office or a secure container on site as detailed in the Working Plan and agreed in writing by the Authority and shall be made available to the Authority whenever required.

(b) Records of documentation shall be kept and maintained to allow easy access to information on:
(i) The registration numbers of the vehicles entering the site carrying waste for disposal
(ii) The metric tonnage of waste imported.
(iii) The source of the waste (County).
(iv) The registration number and tonnage of the vehicle and the destination, name address and certificate number of the carrier removing waste not authorised by Condition 1.6 (c).
(v) Transfer notes for materials entering and leaving the site.

(c) The volume of waste entering the site shall be recorded for 1.8 (b)(ii), based on the carrying capacity of each vehicle. Density figures used to calculate the tonnage shall be contained within the Working Plan and agreed in writing by the Authority.

(d) Calendar monthly summaries of the waste input and that being taken away from the site, shall be sent to the Authority at monthly intervals on the form supplied by the Authority. These shall be received by the Authority no later than 10 days after the end of the previous month. Monthly records shall include:

(i) tonnage of Category A Waste disposed of within the landfill
(ii) tonnage of waste removed from the site as unauthorised (to include licensed facility to which waste was taken)
(iii) Source of waste (County) for 1.8 (d) (I).

(e) Annually, on the first working day of February, the licence holder shall provide on a commercially confidential basis, an estimate of the remaining capacity of the site in terms of:
(i) volume remaining in cubic metres and tonnes, and
(ii) remaining life expectancy in years.

(f) The licence holder shall undertake an annual review of the records and procedures and produce a report which shall be submitted to the Authority on the first working day of February each year. The report shall include:

(i) A review of all routine monitoring data and any results from investigations that may have been undertaken. The report is to highlight any pollution risks to the surrounding environment,
(ii) A review of waste management practices and control,
(iii) An overview of site development,
(iv) Details of any amendments to the Working Plan,
(v) Annual waste input rates as a summary of the information supplied in condition 1.8(d),
(vi) Void take-up during the previous year and an appraisal of any differential settlement which has taken place on the site,
(vii) A summary of complaints received from individuals or organisations relating to operations at the site,
(viii) Inspection frequencies for vermin, insect and bird control and inspection report findings,

Following agreement by the Authority the annual report shall be incorporated into SCHEDULE B.2.

(g) From the date of issue of this licence, the licence holder shall maintain all analysis results which are provided as a requirement of condition 1.6 (e). These records shall be maintained by the licence holder for inspection by the Authority until a certificate of completion has been issued for the site.

(h) A site diary shall be maintained on site to record important dates and events. These shall include dates of commencement and completion of all engineering construction works, plant breakdown, emergencies, unauthorised waste received and actions taken to deal with it, sampling exercises, severe weather, environmental problems, remedial action and any other details required by conditions of this licence.

(i) The site shall be equipped with a radio or telephone link.

(j) A copy of this licence, any subsequent modifications and a copy of the contemporary Working Plan shall be available on site where it can be read by site staff and any visitors during normal hours of operation.

1.9 Temporary Cessation

Not less than 14 days prior notice shall be given in writing to the Authority when operations are to commence (or recommence in the event of a temporary cessation of operations for a period in excess of three months).

1.10 End of Tipping Operation

The licence holder shall inform the Authority in writing of the date tipping is to cease at the site.

1.11 Site Licence Contraventions

No waste shall be received at the site at any time when any condition of this licence is being contravened and action, which is viewed appropriate by the Authority, is not being taken to remedy the situation. The receipt of waste shall not recommence without the prior written agreement of the Authority.
It is an offence contrary to section 33(6) of the Environmental Protection Act 1990 to contravene any condition of this licence.

1.12 Reception of Waste

(a) **No unauthorised material shall be kept, stockpiled or stored within the licensed area.**

(b) On arrival at the site, all vehicles shall report to the nominated person who shall establish the type, origin and quantity of waste delivered, whether the waste complies with the stated description and whether it is acceptable under the terms of this licence. If a load is suspected to contain material other than that authorised by this licence then the load must be refused entry to the site.

(c) Measures which the nominated person shall implement to minimise the quantity of unauthorised material being brought to the site shall be detailed in the Working Plan and agreed in writing by the Authority.

(d) After deposit, drivers shall be requested to remain with their vehicles on the site until the entire load has been inspected. If unauthorised waste is present within the load then this must be removed immediately. This shall be re-loaded onto the vehicle from which it came and removed from the site with the appropriate Transfer Note.

(e) At the written request of the Authority and notwithstanding the requirements of condition 1.12 (d) above,

(i) Loads delivered to the site shall be subject to random detailed inspection by the licence holder.

(ii) A scheme shall be drawn up in consultation with the Authority detailing procedures for random waste checking. This scheme shall be detailed in the Working Plan for agreement in writing by the Authority. The scheme shall make adequate provision for:

(a) A minimum percentage of loads to be subject to random detailed inspection.
(b) Criteria for the selection of loads for detailed inspection.
(c) The number of loads to be inspected on any single occasion.

(d) Procedures for assessing the contents of loads including waste analysis where appropriate.
(e) Record keeping and review
(f) Any other relevant matter notified to the licence holder in writing by the Authority.

(iii) The licence holder shall give the Authority at least 3 working days notice of when random inspections are to be carried out.

1.13 Unauthorised Waste

(a) In all cases where waste not authorised under condition 1.6 (a) and is comprised of Special, Radioactive or Explosive Waste is delivered to the site, it shall be reported to the Authority immediately. Details of the material, the company delivering the material, the registration number of the vehicle and the name of the driver, in addition to any other details which can be obtained by the licence holder on reasonable enquiry shall be recorded in the site diary.

(b) If unauthorised waste is present in the licensed area no further waste shall be received or deposited until the unauthorised waste has been removed from the site in accordance with a scheme detailed in the Working Plan and agreed in writing by the Authority.

SECTION 2 LANDFILL SITE DEVELOPMENT AND OPERATION

2.1 Identification Board

(a) An identification board of durable material and finish, in a form agreed by the Authority shall be displayed at the entrance to the site. The board shall show:

(i) The name of the site,
(ii) The name, address and telephone number of the licence holder and the Authority,
(iii) The telephone number and name of a person to be contacted in case of an emergency,
(iv) The hours of operation of the site.

(b) The board shall be maintained in a legible condition to the satisfaction of the Authority throughout the operative period as defined by condition 3.11. Any changes to the information given on the board shall be incorporated into the board within one month of such a change.

2.2 Security

(a) No waste shall be accepted at the site until the appropriate security measures detailed in condition 2.2 (b) has been installed to the satisfaction of the Authority.

(b) Gates, fences, hedge and tree boundaries as detailed in the Working Plan shall be provided and maintained around the entire boundary of the site to a minimum height of 1.0 metre or other height as agreed in writing by the Authority.

(c) Gates adjacent to the public highway shall be securely locked shut at all times outside the hours of operation or when the site is unsupervised.

(d) All damage to gates, fences, hedges and tree boundaries which impairs their effectiveness shall be repaired as soon as practicable with at least temporary but secure repair being achieved by the end of the working day on which the damage occurs.

(e) Control over the licensed area shall be exercised to prevent any interference with the waste on site by unauthorised persons in accordance with details in the Working Plan agreed in writing by the Authority.

2.3 Primary Access Road

(a) The site road from the public highway to a point defined in the Working Plan shall be defined as the primary access road. The primary access road shall be:

(i) constructed from concrete or tarmac, and shall be formed to be self draining in accordance with construction specifications detailed in the Working Plan and agreed in writing by the Authority,
(ii) capable of being swept by a mechanical sweeper and taking loaded vehicles without deformation,
(iii) a minimum of 2.5 metres wide or other width as detailed in the Working Plan and agreed in writing by the Authority and shall be maintained in good repair such that any pothole is repaired within 5 working days.

(b) No waste shall be received until the primary access road has been constructed to the satisfaction of the Authority.

(c) All drains and inlets shall be inspected weekly and shall be kept free from mud and debris.

2.4 Secondary Access Road

(a) The secondary access road shall be defined as the site access road which connects the primary access road to the active disposal area. The secondary access roads shall:

(i) be constructed to a depth of between 0.3 - 0.5 metres of stone, hard-core or other suitable material and where necessary overlay a fabric stabilisation mat as detailed in the Working Plan and agreed in writing by the Authority.

(ii) be maintained in good condition to permit access, at all times and irrespective of weather conditions, to all vehicles which are directed to the working face.

(b) Asbestos or asbestos products (e.g. sheets and pipes) shall not be used in the construction of any site roads.

(c) All secondary access roads shall be ripped up and removed upon completion of the cell or phase they serve and the material relocated to serve the next active area as defined in the Working Plan. Failure to reuse site road material may compromise determination of the Certificate of Completion.

2.5 Wheel Cleaning

(a) All appropriate and necessary steps shall be taken to ensure that mud and other debris is not deposited on the public highway. The primary access road shall be swept or washed as frequently as is necessary or as required by the Authority to ensure that vehicles leaving the facility do not deposit any slurry, mud or other debris on the public highway. Should mud or other debris be carried onto the public highway then immediate action shall be taken to clean the affected area. No further waste shall be received at the site until such time as the affected areas have been thoroughly cleansed.

(b) Should mud and debris be deposited on the highway on more than 6 occasions during any 12 month period, then wheel cleaning equipment to a specification submitted to and agreed in writing by the Authority, shall be installed, maintained and used to prevent the transference of mud from the site onto the site access road and public highway.

2.6 Storage Tanks

(a) Fuel oils and other liquids required for operational purposes shall be stored in tanks or drums. Tanks or drums excepting those containing clean water, shall be contained within an impervious, leak-proof containment compound which has a capacity in excess of 110% of the capacity of the largest tank or drum. Draw and fill pipes shall be within the curtilage of the compound except for flexible filling pipes during filling. All plant and equipment shall be attended to during filling to prevent spillage.

(b) The containment compound shall be inspected daily and kept free from water and debris to ensure that greater than 105% of the capacity of the largest tank or drum remains at all times.

(c) The containment compound shall be marked with a line to indicate the level at which less than 105 % of the capacity of the largest tank or drum remains. This shall be regarded as an action level and should quantities of water and/or debris exceed this level immediate action shall be taken to clear the containment compound. Material removed from the containment compound shall be disposed of at a suitably licensed site or other method as detailed in the Working Plan and agreed in writing by the Authority.

(d) Tanks and drums shall be labelled to show their contents.

(e) Any failures in the integrity of the compound shall be repaired immediately. Fuel and oil shall be removed from the tank or drum pending any repair or maintenance of the containment compound and stored in an alternative tank or drum contained as for 2.6 (a).

2.7 Queuing and Parking

(a) Adequate queuing space off the public highway and commensurate with the scale of operation shall be provided for vehicles entering the site.

(b) Adequate parking space off the public highway and commensurate with the scale of operation shall be provided for staff and visitors using the site.

(c) The queuing and parking arrangements for the site shall be detailed in the Working Plan and agreed in writing by the Authority

2.8 Insecure Loads and Spillage

(a) All vehicles and containers containing waste, entering, using or being parked on the site other than in the course of unloading shall be adequately secured to prevent the escape of waste.

(b) Adequate arrangements shall be made to contain and collect all spillage arising from site operations as detailed in the Working Plan and agreed in writing by the Authority.

2.9 Lighting

If operations at the site are undertaken during the hours of darkness (as defined by The Road Vehicle Lighting Regulations 1989) then adequate lighting shall be provided and used to illuminate all operating areas of the site as detailed in the Working Plan and agreed in writing by the Authority.

2.10 Fires

(a) **No fires shall be permitted on the site.**

(b) A fire on site shall be regarded as an emergency and immediate action shall be taken to extinguish it. Procedures to be adopted in the case of fire shall be detailed in the Working Plan and agreed in writing by the Authority in consultation with the Devon Fire and Rescue Service. The procedures shall be displayed where all persons employed at the site can readily read them. Persons employed at the site shall be instructed on the content of the procedures. The displayed procedures shall be maintained in a legible condition to the satisfaction of the Authority.

(c) Should fire break out within the waste mass, the area of the fire shall be effectively sealed-off and no further deposit shall take place in that phase until the fire has been extinguished for a period of at least 72 hours. The licence holder shall notify the Authority and Devon Fire and Rescue Service immediately of any outbreak of fire. Details of the incident shall be confirmed in writing within 48 hours.

(d) The emergency procedures for dealing with fires on the site shall have regard to the possible danger and increased pollution threat to the environment caused by extinguishing the fire with water. Every attempt shall be made to minimise this pollution potential. Water supplies for fire fighting purposes and portable fire fighting equipment shall be available and maintained. Water supplies shall be suitably protected against freezing.

2.11 Weed Control

Measures shall be taken, in accordance with guidance given in "Weed Control and Environmental Protection" (ISBN 0 11 752708 4), to control or destroy weeds on all areas of the site including previously operational phases. Particular attention shall be paid to controlling noxious and injurious weed species e.g. Common Ragwort (*Senecio jacobaea*), Broad Leaved Dock, Curled Dock, Creeping Thistle (*Cirsium arvense*), Spear Thistle (*Cirsium vulgare*), Himalayan Balsam (*Impatiens glandulifera*), Wild Oats and Japanese Knotweed (*Reynoutria japonica*). Control measures shall be specified in the Working Plan and shall agreed in writing by the Authority. Wherever possible environmentally friendly products or methods shall be used. If herbicides are used then these shall not be allowed to enter any controlled water.

2.12 Site Preparation Works

(a) Initial and phased site preparation works necessary to ensure the integrity of the site in terms of pollution control shall be completed to the standards detailed in the agreed Working Plan and in accordance with the conditions set out below before waste is received into that specific phase. A competent and appropriately qualified person shall supervise all engineering and construction preparatory works. Phasing of works shall be in accordance with the Working Plan.

(b) The Authority shall be notified in writing at least 5 working days prior to the commencement and completion of any engineering works to permit inspection and where necessary agreement of the works.

(c) Where available, the certified records of the site preparatory works shall be sent to the Authority and when agreed these documents shall form part of SCHEDULE B4.

(d) **No waste shall be accepted at the site until the certified records of works carried out at the site have been agreed in writing by the Authority.**

2.13 Noise and Vibration

The Licence holder shall adopt the best practicable means to minimise the levels of noise arising from the development as detailed in the Working Plan and agreed in writing by the Authority.

2.14 Pest Control

(a) All necessary precautions shall be taken and regular inspections of the site made to prevent the infestation of birds, vermin, or insects on the site. A best practicable means of control shall be used as detailed in the Working Plan and agreed in writing by the Authority

(b) The frequency of inspections and procedures to be adopted in the case of such infestation shall be as detailed in the Working Plan and agreed in writing by the Authority.

(c) Any suspected infestation, where control is not achievable by the licence holder shall be reported to a competent pest control operator for immediate action as detailed in the Working Plan and agreed in writing by the Authority.

(d) A record of all such infestation and action taken to alleviate the problem shall be maintained in the site diary for inspection by an authorised officer of the Authority.

(e) Where vermin have been controlled using a rodenticide, the bodies shall be immediately bagged and removed to a suitably licensed facility. Wherever possible environmentally friendly products shall be used for the control of vermin.

2.15 Dust

In dry weather site roads shall be sprayed with water to suppress dust. If water is obtained from the public water supply mains then this activity shall cease on the instruction of the Statutory Water Undertaker.

2.16 Phasing of Operations

(a) Wastes shall be deposited within defined areas to enable progressive filling to occur. The cells within each phase shall be progressively filled in accordance with the scheme detailed in the Working Plan and agreed in writing by the Authority.

(b) The size of each phase shall be detailed in the Working Plan and agreed in writing before filling commences. Each phase, once filled, shall be progressively restored as detailed in APPENDIX VII.

(c) Only one phase within the site shall take waste at any given time during the operation of the site, except when the emergency tipping area (as defined by condition 2.20) is in use or with the prior written agreement of the Authority. Phases may be subdivided into smaller working areas in accordance with the Working Plan and with the prior written agreement of the Authority.

2.17 Breakdown

Any temporary cessation as a result of plant or equipment breakdown which requires the diversion of wastes away from the site shall be notified to the Authority immediately. Details of the diversion arrangements and contingency measures to be taken shall be as detailed in the Working Plan and agreed in writing by the Authority.

2.18 Topsoil Stripping

Stripping of topsoil when undertaken, shall be carried out in stages to enable the preparation of the next phase of tipping in accordance with the agreed Working Plan. Stripped topsoil shall be retained on site for use during reinstatement.

2.19 Compaction

(a) Waste shall be deposited adjacent to the tipping face and partially compacted by machine before being pushed over or into the face. Secondary compaction to produce a uniform layer shall then be undertaken. The depth of a layer of waste shall not, after secondary compaction, exceed 2.5 metres.

(b) The tipping face and flanks shall be compacted to form gradients not steeper than 1:3 but of sufficient gradient to encourage surface water run-off.

(c) The physical stability of the landform shall be monitored throughout the operative period. Any instability of the landfilled wastes must be rectified immediately in accordance with a scheme detailed in the Working Plan and agreed in writing by the Authority.

(d) **No waste shall be deposited in water.**

(e) All wastes shall be suitably levelled and compacted by the end of each working week or other time period as detailed in the Working Plan and agreed in writing by the Authority.

2.20 Adverse weather

In adverse weather, an emergency tipping area shall be constructed and operated as for all other phases in accordance with the Working Plan and as agreed in writing by the Authority. Wastes shall be diverted to the emergency tipping area only with the prior agreement of the Authority.

SECTION 3 ENVIRONMENTAL CONTROL

3.1 Monitoring (SCHEDULE B.1 (f))

(a) The monitoring section of the Working Plan shall include all appropriate and necessary steps to be taken to prevent the risk of pollution of the environment or harm to human health from the generation and lateral migration of landfill gas or leachate produced within the site. A scheme for the monitoring and control of landfill gas and leachate shall be detailed in the monitoring section of the Working Plan.

(b) Details required in the monitoring section of the Working Plan shall include as a minimum:

(i) The location and construction of monitoring positions.
(ii) The frequency of monitoring
(iii) Types of monitoring equipment, sampling techniques and service/ calibration history
(iv) Suites of analyses to be undertaken
(v) Presentation of results
(vi) Action to be taken if trigger levels are exceeded
(vii) Remedial works

(c) The monitoring section of the Working Plan shall be reviewed at the request of the Authority in addition to the annual review, to take account of changing circumstances such as may arise from the results of the monitoring programme or development within or near to the site.

(d) Costs incurred in complying with the monitoring section of the Working Plan shall be borne by the licence holder. Any measures required by the Authority to deal with pollution migration beyond the boundaries of the site shall be carried out forthwith by the licence holder and at the holders own expense.

3.2 Monitoring Positions

(a) A minimum number of 2 surface water monitoring positions shall be established outside the site. One shall be located up gradient and one down gradient of the site. Details of precise locations shall be included in the monitoring section of the Working Plan and agreed in writing by the Authority.

(b) A minimum number of three groundwater monitoring positions shall be located around the perimeter of the site. A minimum of one shall be up groundwater gradient of the landfill and a minimum of two shall be down groundwater gradient of the landfill. The precise location of these monitoring positions shall be detailed in the Working Plan and agreed in writing by the Authority.

(c) Gas monitoring positions shall be located outside the perimeter of the site at a minimum of 250 metre intervals except where adjacent to property where they shall be at a minimum of 100 metre intervals or other distances as agreed in writing by the Authority. The location of these monitoring positions shall be detailed in the Working Plan and agreed in writing by the Authority.

(d) A minimum of one observation position shall be located within each major phase at an engineered low point in the cell. The precise location of the observation positions shall be submitted to and agreed in writing by the Authority. The observation positions shall be used for monitoring both leachate and landfill gas within the body of the waste.

3.3 Construction of Monitoring Positions

(a) Groundwater monitoring positions shall be drilled to a minimum depth of 5.0 metres below the long-term mean rest water level for the site or other depth with the prior written agreement of the Authority. Monitoring positions shall not interconnect different horizons of an aquifer or different aquifers. Monitoring positions shall be designed to sample one aquifer horizon only based on the advice of the Authority in consultation with the National Rivers Authority (NRA) or its successor.

(b) Off site landfill gas monitoring positions shall be drilled to a depth of at least 5.0 metres below the base of the lowest part of the landfill or other depth with the prior written agreement of the Authority.

(c) The observation position shall be a minimum of 15 centimetres in diameter and must be raised in advance of the waste.

(d) All monitoring positions shall be constructed of materials and to a specification detailed in the Working Plan and agreed in writing by the Authority. All monitoring positions shall be maintained in good working order until the end of the Operative Period. Damaged, broken or inaccessible monitoring positions shall be repaired or replaced within 28 days of detection of such damage or other period as agreed in writing by the Authority.

(e) All monitoring positions for groundwater and landfill gas shall be surveyed in, with the top of the monitoring position and ground level being given in metres Above Ordnance Datum (mAOD). The surveyed locations shall be presented on as-built drawings. All monitoring positions shall be clearly marked with reference numbers and/or letters and access shall be provided to enable monitoring to be undertaken both by the licence holder and the Authority in accordance with the monitoring section of the Working Plan.

(f) The permanent lining in both groundwater and gas monitoring positions shall be finished off at approximately 0.5 metres above ground level. These shall be encased within a metal cover with a screw cap, or similar, to protect against vandalism or accidental damage. Alternative cap designs may be permitted with the prior written agreement of the Authority.

3.4 Background Monitoring

(a) (i) Prior to the deposit of any wastes, a comprehensive groundwater and surface water survey shall be undertaken to establish background groundwater levels and principal determinand concentrations around the site. Principal determinands to be recorded are contained within APPENDIX VA and VB. The survey shall consist of a minimum of 6 monitoring visits to be carried out over a three month period.

(ii) All the perimeter groundwater boreholes and surface water monitoring positions, detailed in the Working Plan and agreed in writing by the Authority, shall be monitored. Four data sets shall be for the reduced analysis (Suite 1) and two shall be for the full analysis (Suite 2).

(iii) Water levels within the groundwater monitoring positions shall be taken prior to sampling. All water levels shall be recorded in m AOD.

(iv) All data shall be supplied to the Authority within 7 days of the results being made available.

(b) (i) Prior to the deposition of any wastes, a survey shall be undertaken to establish background concentrations of landfill gas at the site. Parameters to be recorded are contained within APPENDIX VD. The survey shall consist of a minimum of 6 monitoring visits to be carried out over a three month period.

(ii) The locations of all off site monitoring positions and spike holes shall be detailed in the monitoring section of the Working Plan and agreed in writing by the Authority. All such monitoring positions shall be monitored.

(c) At each landfill gas monitoring visit the barometric pressure shall be recorded:

(i) a minimum of two hours before landfill gas monitoring begins
(ii) when the first landfill gas reading is taken
(iii) when the last landfill gas reading is taken
(iv) a minimum of two hours after landfill gas monitoring.

(d) Barometric pressure and landfill gas data shall be sent to the Authority within 7 days of the data being obtained.

3.5 Groundwater and Surface Water Monitoring (SCHEDULE A.2 (a) & (b))

(a) Groundwater and surface water shall be monitored, sampled and analysed as detailed in the monitoring section of the Working Plan and agreed in writing by the Authority, until the issue of a Certificate of Completion. Consideration must be given to the standards given in Waste Management Paper Numbers 4 & 26 (or their successors), and the details specified in APPENDIX IV A and B.

(b) Trigger levels shall be set for the 'principal pollution indicators' - ammoniacal nitrogen, biochemical oxygen demand, chloride and electrical conductivity - at all groundwater and surface water monitoring positions. Initial trigger levels shall be determined from the background monitoring as required by condition 3.4 (a) above. The trigger levels for ammoniacal nitrogen, biochemical oxygen demand, chloride and electrical conductivity shall be determined as follows:

Standard deviation multiplied by two and added to the mean of the sample population.

The standard deviation for each monitoring position is calculated using the appropriate formula:

Where the number of samples (n) is ≤ 30

$$s.d = \sqrt{\frac{n\sum x^2 - (\sum x)^2}{n(n-1)}}$$

Where the number of samples (n) is > 30

$$s.d = \sqrt{\frac{n\sum x^2 - (\sum x)^2}{n^2}}$$

(c) For any additional monitoring positions trigger levels shall be determined as for 3.5 (b). The trigger levels for each monitoring position shall be reviewed annually. Alternative methods of setting trigger levels may be employed with the written agreement of the Authority in consultation with the NRA or its successor. Where River Ecosystem Quality Objectives are assigned to watercourses which form part of the sampling programme these River Ecosystem Quality Objectives shall take precedence over trigger levels set using the statistical calculations in condition 3.5 (b). The reviewed trigger levels shall be incorporated into the annual review of the monitoring section of the Working Plan (SCHEDULE A.2).

(d) Should data obtained as a result of the reduced analysis (APPENDIX V, Suite 1) exceed the trigger levels for groundwater and/or surface water (as given in SCHEDULE A.2 (a) and (b) respectively) these shall be highlighted (in coloured pen or other form as agreed by the Authority) on the submitted data sheets. Where trigger levels are exceeded the appropriate action procedures as detailed in the monitoring section of the Working Plan shall be implemented. A separate system shall be used to highlight full analysis (APPENDIX V, Suite 2) groundwater data which exceeds the drinking water quality standards given in APPENDIX IV A. The same system shall be adopted for surface water results which, with reference to the EC Dangerous Substances Directive, exceed the values specified in APPENDIX IV B.

(e) At the written request of the Authority, a random selection of samples shall be analysed for ionic balance. The stability of the sample should be such that the difference shall be within $\pm$ 5%. Any difference greater than this shall be investigated to determine whether the source of difference is due to incorrect sampling, storage or analysis of the samples. Anions and cations to be used for the ionic balance calculation are given in APPENDIX VI

(f) Should groundwater level results indicate non-cyclic or unaccountable rapid variation then continuous or at least twice daily records of groundwater level shall be undertaken from monitoring positions agreed with the Authority.

3.6 Protection of Watercourses

(a) No deposit shall take place until surface water drainage from the surrounding land has been diverted away from the site, or any other measures as considered appropriate by the Authority in consultation with the NRA or its successor have been implemented.

(b) No deposit shall take place until a scheme has been submitted to and agreed in writing by the Authority which details the drainage arrangements for the site including both operational and restored areas. The scheme shall specify measures to prevent material from entering any watercourse or culvert.

3.7 The Control of Polluting Discharges

(a) No discharge from the site to surrounding water courses or drainage ditches shall be permitted except in accordance with the written consent of the NRA or its successor. The licence holder shall take all necessary steps to ensure that there is no pollution of adjacent water courses, drains or underground strata caused by operations at the site. In the event of any such water pollution arising as a result of surface water running off or percolate from the site, the licence holder shall, at his own expense, undertake such remedial action as required by the Authority in consultation with the NRA or its successor.

(b) Surface waters shall only be discharged from the site by way of the drainage system detailed in the Working Plan and agreed in writing by the Authority. There shall be no discharge from the site to sewers except in accordance with a written consent from the statutory water undertaker.

(c) A copy of all written consents shall be supplied to the Authority.

3.8 Landfill Gas

(a) Landfill gas monitoring positions shall be monitored a minimum of monthly for the principal components of landfill gas; methane, carbon dioxide and oxygen in accordance with the monitoring section of the Working Plan, and APPENDIX VC, or as otherwise agreed in writing by the Authority, until the issue of a Certificate of Completion.

(b) Should landfill gas concentrations in any off-site gas monitoring position exceed 1% by volume methane (trigger level) or 1.5% by volume carbon dioxide (trigger level) above natural background concentrations, then an Emergency Procedure as detailed in the monitoring section of the Working Plan and as agreed in writing by the Authority shall be implemented immediately.

(c) A scheme for presenting landfill gas monitoring data shall be submitted to and agreed in writing by the Authority. The scheme shall include a method for highlighting recorded values which exceed trigger levels set in condition 3.8 (b) above and any remedial action taken.

(d) The emergency procedure shall include provision for the weekly monitoring of all affected monitoring positions identified under 3.8 (b) and the implementation of remedial measures to reduce any observed elevated concentrations. Once weekly monitoring has indicated that the implemented remedial measures have resulted in a reduction in landfill gas concentration to below trigger levels, monthly monitoring or other period may be recommenced with the written agreement of the Authority.

3.9 Monitoring Records

(a) All monitoring results shall be forwarded to the Authority within 7 days of the results becoming available or other time period as agreed in writing by the Authority.

(b) The monitoring results shall be submitted in their original form and not as a copy, or summary, of the data (unless specified as a requirement by the Authority). Laboratory verification of the results may be requested in writing by the Authority. An up to date copy of the records relating to at least the previous 12 months monitoring programme shall be maintained on site for inspection by an authorised officer of the Authority.

3.10 Remedial Action

(a) Instances of water pollution, landfill gas migration or monitoring results exceeding the predetermined trigger levels shall be reported to the Authority immediately. Action shall be taken to minimise the environmental impact and where possible, remove the source of the pollution. No waste shall be accepted whilst trigger levels are exceeded, unless appropriate remedial action as agreed in writing by the Authority, has been taken.

(b) **Failure to take appropriate remedial action whilst trigger levels are exceeded may be construed as a breach of licence conditions.**

3.11 Operative Period and Certificate of Completion

(a) The Operative Period shall have effect until the following has been achieved:

(i) the maximum concentration of methane is less than 1% by volume and the concentration of carbon dioxide is less than 1.5% by volume above natural background concentrations measured in all monitoring positions within the wastes over a 24 month period. Monitoring shall be undertaken on at least four separate occasions during this period, including two occasions when atmospheric pressure is falling and is below 1,000 mbar.

(b) To achieve a certificate of completion, additional monitoring positions may be required. The numbers and locations of these additional positions shall be detailed in the monitoring section of the Working Plan and agreed in writing by the Authority.

(c) The Operative Period exists until a certificate of completion has been issued by the Authority.

(d) Post-operational pollution controls shall be maintained to ensure that the site presents no risk of pollution of the environment, harm to human health or serious detriment to the amenities of the locality pending the issue of a certificate of completion. Remedial works shall be undertaken to repair or replace damaged or deteriorating management and monitoring systems throughout the Operative Period.

SECTION 4 LANDFILL SITE RESTORATION

4.1 Site Restoration

A scheme for the reinstatement of the site shall be detailed in the Working Plan and agreed in writing by the Authority prior to any reinstatement works being carried out.

4.2 Restoration Contours and Final Layer

The restoration contours of the site shall be submitted to and agreed in writing by the Authority and shall comply with the relevant planning permission. The final levels of waste shall be surveyed-in and profile boards erected in advance of the cells becoming full. The waste shall be deposited in each cell to a depth consistent with that of the restoration contours for the site. The restoration contours shall be sufficient to give minimum, final, settled gradients of between 1 in 20 and 1 in 30 or other gradient detailed in the Working Plan and agreed in writing by the Authority. The final layer of waste deposited shall, to a depth of at least 1.0 metre, be kept free of materials likely to interfere with final restoration or subsequent after use.

4.3 Failure to perform Progressive Restoration

Should the final restoration layer fail to be installed in any phase within six months of completion of filling within that phase, further receipt of waste at the site shall cease until the restoration layer has been installed to the satisfaction of the Authority.

4.4 Reinstatement Soil

The site shall be restored in accordance with APPENDIX VII.

APPENDIX I

WASTE CATEGORY A: **AUTHORISED**

Soil

Rock

Stone

Clay

Sand

Brick Bats

Slates

Uncoated clay-based tiles

EXCLUSIONS

Wastes are not permitted if they:

(a) are mixed with or contaminated with any material other than those listed in Category A above, or

(b) are in sludge or liquid form, (not self supporting), or

(c) contain concentrations of contaminants above those given in Appendix III, or

(d) are in a dust, ash, powdered or particulate form.

APPENDIX II

LIST I AND LIST II SUBSTANCES AS DEFINED BY EC GROUNDWATER DIRECTIVE (80/68/EEC)

LIST I OF FAMILIES AND GROUPS OF SUBSTANCES

These substances should be prevented from being discharged into ground water.
List I contains the individual substances which belong to the families and groups of substances specified below, with the exception of those which are considered inappropriate to List I on the basis of a low risk toxicity, persistence and bioaccumulation.

1 **organohalogen compounds and substances which may form such compounds in the aquatic environment**

2 **organophosphorus compounds**

3 **organotin compounds**

4 **substances which possess carcinogenic, mutagenic or teratogenic properties in or via the aquatic environment. (*)**

5 **mercury and its compounds**

6 **cadmium and its compounds**

7 **mineral oils and hydrocarbons**

8 **cyanides**

LIST II OF FAMILIES AND GROUPS OF SUBSTANCES

Discharges of these substances into ground water should be minimised.
List II contains the individual substances and categories of substances belonging to the families and groups of substances listed below which could have a harmful effect on groundwater.

1 **the following metalloids and metals and their compounds:**

1.	**Zinc**	**2.**	**Copper**	**3.**	**Nickel**
4.	**Chrome**	**5.**	**Lead**	**6.**	**Selenium**
7.	**Arsenic**	**8.**	**Antimony**	**9.**	**Molybdenum**
10.	**Titanium**	**11.**	**Tin**	**12.**	**Barium**
13.	**Beryllium**	**14.**	**Boron**	**15.**	**Uranium**
16.	**Vanadium**	**17.**	**Cobalt**	**18.**	**Thallium**
19.	**Tellurium**	**20.**	**Silver**		

2 **biocides and their derivatives not appearing in List I**

3 **Substances which have a deleterious effect on the taste and/or odour of ground water and compounds liable to cause the formation of such substances in such water and to render it unfit for human consumption.**

4 **Toxic or persistent organic compounds of silicon and substances which may cause the formation of such compounds in water, excluding those which are biologically harmless or are rapidly converted in water into harmless substances.**

5 **inorganic compounds of phosphorus and elemental phosphorus**

6 **fluorides**

7 **ammonia and nitrites**

(*) where certain substances in List II are carcinogenic, mutagenic or teratogenic they are included in category 4 of List I

APPENDIX III

GUIDANCE CONCENTRATIONS FOR CONTAMINANTS IN MATERIAL TO BE USED WITHIN THE SITE

	(mg/kg)		(mg/kg)
pH (no units)	6 - 8	**Aluminium**	100,000
Antimony	30	**Arsenic**	30
Barium	500	**Beryllium**	5
Boron (water soluble)	3	**Bromine**	20
Cadmium	3	**Chromium**	100
Chromium (hexavalent)	15	**Cobalt**	20
Copper	140	**Fluorine**	500
Iodine	5	**Iron**	50,000
Lead	550	**Magnesium**	500
Manganese	500	**Mercury**	1.5
Nickel	75	**Selenium**	3
Strontium	150	**Molybdenum**	10
Silver	1	**Thallium**	1
Sulphur (free)	100	**Sulphide (free)**	10
Tellurium	1	**Tin**	20
Titanium	200	**Vanadium**	100
Zinc	300	**Cyanide (free)**	1
Ferricyanide	100	**Thiocyanate**	10
Phenol	1	**Benzene**	0.01
Ethyl benzene	0.05	**Toluene**	0.05
PAHs	1	**Coal Tar**	100
PCB's	0.01		
Extracts:			
Toluene	(0.2%) 2000		
Cyclohexane	(0.1%) 1000		

Concentrations obtained from:

1. The Interdepartmental Committee on the Redevelopment of Contaminated Land (ICRCL 59/83)
2. Kelly 1979 Site Investigation and Materials Problems. Proceedings of a Conference on the Reclamation of Contaminated Land (Eastborne)
3. Table B2/12 of Appendix III GLC Guidelines for Assessing Contaminated Soil
4. Dutch Criteria Index for Assessing Soil Contamination

Notes: Above limits are for "total" concentrations unless otherwise stated. In certain instances, however, it may be possible to demonstrate to the satisfaction of the Authority that elevated metal concentrations are naturally occurring or that the elevated metal concentrations are "locked" within the material structure and unavailable for uptake or leaching. One method of determining this is to analyse for both "available" and "total" metal concentrations in the samples. Such analysis shall only be undertaken following discussion with the Authority.

In general, routine analysis suites will include: copper, nickel, zinc, chromium, lead, cadmium and toluene extract. Further analyses may be required should elevated levels of any of the seven parameters listed above be present. If details regarding the previous uses of the site are available then a more 'tailored' analytical suite may be used with the prior written agreement of the Authority.

APPENDIX IVA

ASSESSMENT OF GROUNDWATER IN RELATION TO THE DRINKING WATER QUALITY STANDARDS

Parameter	Units	Value (maximum unless otherwise stated)	Parameter		Value (maximum unless otherwise stated)
Colour	mg/l Pt/Co Scale	20	**Mercury**	µg/l	1
Turbidity (including suspended solids)	Formazin turbidity units	4	**Nickel**	µg/l	50
Odour (including hydrogen sulphide)	Dilution number	3 at 25°C	**Lead**	µg/l	50
Taste	Dilution number	3 at 25°C	**Antimony**	µg/l	10
Temperature	°C	25	**Selenium**	µg/l	10
Measure of the hydrogen ion concentration	pH	9.5 (5.5 minimum)	**Boron**	µg/l	2000
Conductivity	uS/cm	1500 at 25°C	**Barium**	µg/l	1000
Chloride	mg/l	400	**Pesticides individual total**	µg/l	0.1 0.5
Calcium	mg/l	250	**PAHs**	µg/l	0.2
Total hardness	Ca mg/l	60 (minimum)	**Benzo 3,4 Pyrene**	ηg/l	10
Alkalinity	HCO_3 mg/l	30 (minimum)	**Zinc**	µg/l	5000
Sulphate	mg/l	250	**Phosphorus**	µg/l	2200
Magnesium	mg/l	50	**Fluoride**	µg/l	1500
Sodium	mg/l	150	**Silver**	µg/l	10
Potassium	mg/l	12	**Arsenic**	µg/l	50
Dry residues	mg/l	1500 (after drying at 180°C)	**Cadmium**	µg/l	5
Nitrate	mg/l	50	**Cyanide**	µg/l	50
Nitrite	mg/l	0.1	**Chromium**	µg/l	50
Kjeldhal nitrogen	mg/l	1	**Tetrachloro-methane**	µg/l	3
Oxidizability (permanganate value)	mg/l	5	**Trichloroethane**	µg/l	30
Total Organic Carbon	mg/l	No significant increase	**Tetrachloroethene**	µg/l	10
Dissolved or emulsified hydrocarbons	µg/l	10	**Substances extractable in chloroform**	mg/l dry residue	1
Phenols	µg/l	0.5	**Aluminium**	µg/l	200
Surfactants (as lauryl sulphate)	µg/l	200	**Iron**	µg/l	200
Manganese	µg/l	50	**Copper**	µg/l	3000

APPENDIX IVB

ASSESSMENT OF SURFACE WATER IN RELATION TO THE EC DANGEROUS SUBSTANCES DIRECTIVE ON POLLUTION CAUSED BY CERTAIN SUBSTANCES DISCHARGED IN THE AQUATIC ENVIRONMENT OF THE COMMUNITY (76/464/EEC)

ENVIRONMENTAL QUALITY STANDARDS (EQSs) FOR LIST I SUBSTANCES (INLAND WATERS)

Parameter	Units	Value	Status [1]
Mercury	µg/l	1.0	AA, T
Cadmium [2]	µg/l	5.0 1.0	AA,T AA,T,B [4]
Hexachlorocyclohexane (HCH) [2]	µg/l	0.1 0.05	AA,T AA,T,B [4]
Tetrachloromethane (CTC)	µg/l	12	AA,T
DDT (para-para DDT isomer) [2]	µg/l	0.01	AA,T
Total DDT [2]	µg/l	0.025	AA,T
Pentachlorophenol [2]	µg/l	2	AA,T
"The Drins" (from 1st January 1989)	µg/l	0.03 [3]	AA,T
Aldrin (from 1st January 1994)	µg/l	0.01	AA,T
Dieldrin (from 1st January 1994)	µg/l	0.01	AA,T
Endrin (from 1st January 1994)	µg/l	0.005	AA,T
Isodrin (from 1st January 1994)	µg/l	0.005	AA,T
Hexachlorobenzene (HCB) [2]	µg/l	0.03	AA,T
Hexachlorbutadiene (HCBD) [2]	µg/l	0.1	AA,T
Chloroform	µg/l	12	AA,T
1,2-dichloroethane	µg/l	10	AA,T
Trichloroethylene	µg/l	10	AA,T
Perchloroethylene	µg/l	10	AA,T
Trichlorobenzene	µg/l	0.4	AA,T

Proposals have been published for the following List I substances but these have not, so far, been adopted:

Trifluralin, endosulphan, simazine, triorganotin compounds (tributyltin oxide, triphenyltin acetate, triphenyltin oxide, triphenyltin hydroxide), atrazine, organophosphorus substances (azinphos-methyl, azinphos-ethyl, fenitrothion, fenthion, malathion, parathion, and parathion-methyl, dichlorvos).

Notes:

[1]AA= Annual Average, T=Total, B=Background Monitoring
[2]A "standstill" provision exists for concentrations in sediments and/or shellfish and/or fish
[3]Maximum of 0.005 for Endrin
[4]B=Background Monitoring: only applies at designated end of catchment sites

EQSs FOR LIST II SUBSTANCES (INLAND WATERS) (1)

Parameter	Units	Value(3)		Hardness	Status (2)
		A std	B std	(mg $CaCO_3$/l)	
Lead	µg/l	4	50	0 to 50	AA,D
		10	125	50 to 100	
		10	125	100 to 150	
		20	250	150 to 200	
		20	250	200 to 250	
		20	250	>250	
Chromium	µg/l	5	150	0 to 50	AA,D
		10	175	50 to 100	
		20	200	100 to 150	
		20	200	150 to 200	
		50	250	200 to 250	
		50	250	>250	
Zinc	µg/l	8	75	0 to 50	AA,T
		50	175	50 to 100	
		75	250	100 to 150	
		75	250	150 to 200	
		75	250	200 to 250	
		125	500	>250	
Copper	µg/l	1	1	0 to 50	AA,D
		6	6	50 to 100	
		10	10	100 to 150	
		10		150 to 200	
		10	10	200 to 250	
		28	28	>250	
Nickel	µg/l	50	50	0 to 50	AA,D
		100	100	50 to 100	
		150	150	100 to 150	
		150	150	150 to 200	
		200	200	200 to 250	
		200	200	>250	
Arsenic	µg/l	50		All	AA,D
Boron	µg/l	2000		All	AA,T
Iron	µg/l	1000		All	AA,D
pH	pH values	6 to 9		All	95% of samples
Vanadium	µg/l	20	20	0 to 200	AA,T
		60	60	200 +	
Tributyltin	µg/l	0.02		All	M,T
Triphenyltin	µg/l	0.02		All	M,T
Polychlorochlormethyl-sulphonamidodiphenyl ether (PCDSs)	µg/l	0.05		All	T, 95% of samples
Sulcofuron	µg/l	25		All	T, 95% of samples
Flucofuron	µg/l	1.0		All	T, 95% of samples
Permethrin	µg/l	0.01		All	T, 95% of samples
Cyfluthrin	µg/l	0.001		All	T, 95% of samples

Notes:

(1) National Environmental quality standards recommended for the UK.
(2) AA = Annual Average; D = Dissolved; T = Total; M = Maximum Allowable Concentration
(3) **A std** denotes standards fro the protection of sensitive aquatic life
B std denotes standards for the protection of other aquatic life

APPENDIX VA

MINIMUM MONITORING REQUIREMENTS FOR GROUNDWATER ANALYSIS

Suite 1 (Reduced analysis)

pH
Biochemical Oxygen Demand
Conductivity (µS/cm)
Ammoniacal nitrogen (mg/l)
Chloride (mg/l)
Water Level (mAOD)

Suite 2 (Full analysis)

Biochemical Oxygen Demand	Sulphate (mg/l)	Alkalinity (mg/l)
Chemical Oxygen Demand	Nitrate (mg/l)	Nitrite (mg/l)
Conductivity (µS/cm)	Total Organic Carbon (mg/l)	Sodium (mg/l)
Ammoniacal nitrogen (mg/l)	Potassium (mg/l)	Calcium (mg/l)
Chloride (mg/l)	Magnesium (mg/l)	Iron (mg/l)
Manganese (mg/l)	Cadmium (µg/l)	Chromium (µg/l)
Copper (µg/l)	Nickel (µg/l)	Zinc (µg/l)
Lead (µg/l)	pH	Water level (mAOD)

Additional analysis which may be required should any groundwater trigger levels be significantly exceeded as agreed with the Authority

Thallium (µg/l)	Molybdenum (µg/l)	Cobalt(µg/l)
Tellurium (µg/l)	Vanadium (µg/l)	Beryllium (µg/l)
Titanium (µg/l)	Barium (µg/l)	Arsenic (µg/l)
Poly Aromatic Hydrocarbons (µg/l)	Aluminium (µg/l)	Phenols(µg/l)
Uranium (µg/l)	Phosphorus (µg/l)	Fluoride (µg/l)
Silver (µg/l)	Cyanide (µg/l)	Trichloroethene(µg/l)
Mercury (µg/l)	Antimony (µg/l)	Tetrachloroethene (µg/l)
Selenium (µg/l)	Boron (µg/l)	Benzo 3,4 pyrene (ng/l)
Pesticides - total substances (µg/l)	Para - dichlorobenzene (µg/l)*	Tin (µg/l)
Tetrachloromethane (µg/l)	Dissolved or emulsified hydrocarbons (µg/l)	

* This can be useful to assess whether observed contamination is attributable to landfilling operations. Para-dichlorobenzene is present in toilet disinfection blocks

APPENDIX VB

MINIMUM MONITORING REQUIREMENTS FOR SURFACE WATER ANALYSIS

Suite 1 **(Reduced analysis)**

Temperature (°C)
pH
Dissolved Oxygen (%)
Biochemical Oxygen Demand
Conductivity (µS/cm)
Ammoniacal nitrogen (mg/l)
Chloride (mg/l)

Suite 2 **(Full analysis)**

pH	Dissolved copper (µg/l)	Dissolved Oxygen (%)
Total zinc (µg/l)	Biochemical Oxygen Demand	Dissolved iron (mg/l)
Chemical Oxygen Demand	Hardness (mg/l)	Conductivity (µS/cm)
Sulphate (mg/l)	Ammoniacal nitrogen (mg/l)	Alkalinity (mg/l)
Chloride (mg/l)	Total phosphorus(mg/l)	Non ionised ammonia (mg/l)
Nitrite (mg/l)	Suspended solids (mg/l)	

Additional analysis may be required should any surface water trigger levels be significantly exceeded as agreed with the Authority. See additional parameters listed under groundwater analysis.

APPENDIX VC

MINIMUM MONITORING REQUIREMENTS FOR LANDFILL GAS

Description of Weather
Temperature (°C)
* Methane (percent by volume and/ or Lower Explosive Limit (LEL))
Carbon dioxide (percent by volume)
Oxygen (percent by volume)

Make and Serial Number of monitoring equipment used
Date of Last Calibration and Copy of the Certificate
Date of Next Calibration
Details of in-house calibration Check Procedures

Any of the following may be required at the written request of the Authority. These secondary testing requirements shall only be made if significant landfill gas generation is occurring at the site:

Gas Chromatography to be conducted on a number of samples of landfill gas.
Methane/Ethane ratio testing
Hydrogen Sulphide (percent by volume)
Carbon Monoxide (percent by volume)

* - Readings taken as LEL concentration shall be converted to % by volume and both values entered on the appropriate form.

APPENDIX VI

Ionic balance check (on a random selection of samples)

Sodium	Potassium	Calcium
Magnesium	Ammoniacal nitrogen	Iron
Manganese	Chloride	Sulphate
Nitrate	Nitrite	Phosphate
Total alkalinity*	pH	

*As $CaCO_3$ at pH 4.5

APPENDIX VII

RESTORATION - SOILS HANDLING

1. Following grading to agreed contours the final layer of waste shall be ripped or ploughed to a depth of 450 millimetres and then picked using appropriate stone picking machinery towed by low ground bearing plant. Hand picking may be acceptable but only at the discretion of the Authority. Picking shall be carried out to remove items likely to interfere with normal agricultural cultivation.

2. Following grading, subsoiling and picking of the final layer of waste, 300 millimetres of subsoil shall be spread in dry conditions. The replaced subsoil shall be ripped or ploughed with an agricultural wing-tined implement which shall reach 150 millimetres into the surface of the underlying wastes.

3. Following placement of the subsoil, topsoil shall be spread over the site in dry conditions to a depth of 150 millimetres. The full depth of topsoil shall be ripped or ploughed with an agricultural wing-tined implement at a spacing not exceeding one and a half times the working depth of the tines and shall reach at least 150 millimetres into the underlying subsoil.

4. A comprehensive field drainage scheme shall be detailed in the Working Plan and agreed in writing by the Authority. Field drainage shall be installed within 1 year of restoration.

5. Reinstatement of subsoil and topsoil shall take place between the dates of 1st April to 1st November. All operations involving soil replacement and cultivation treatments shall only be carried out when the full volume of soil involved is in a suitably dry moisture condition to minimise soil damage and to maximise the effects of the subsequent operations.

6. The land shall be returned to the agreed afteruse immediately following completion of restoration.

Attention is drawn to all the requirements of Town and Country Planning particularly those which affect reinstatement, access and any measures to prevent the pollution of water.

Dated this 8TH **day of** JUNE **1995**

Signed

I G WHITE
COUNTY WASTE REGULATION OFFICER

Duly authorised on behalf of Devon County Council.

Note: Failure to adhere to the above conditions constitutes a contravention of the Environmental Protection Act 1990, in respect of which the enforcement action will be taken.

1. If an applicant is aggrieved by the decision of the waste regulation authority in granting a licence subject to conditions or modifying such conditions, he may appeal to the Secretary of State, Department of the Environment, in accordance with Section 43 of the Environmental Protection Act 1990. Appeals must be notified within six months of the date of this notice to the Secretary of State, Department of the Environment, Romney House, 43 Marsham Street, London, SWIP 3PY. The Secretary of State has power to allow a longer period for the giving of an appeal but he will not normally be prepared to exercise this power unless there are special circumstances which excuse the delay in giving notice of an appeal.

2. It will be necessary for the licence-holder to comply with statutory obligations under other legislation (in particular, the Health and Safety at Work etc, Act 1974, Planning, Water Protection and Environmental Health Legislation). The issue of a licence under Part II of the Environmental Protection Act 1990 does not remove the need for the licence-holder to ensure that he is able to comply with other legislation.

3. The conditions of a Waste Management Licence may be modified at any time by the waste regulation authority and will be modified in order to ensure compliance with the requirements of any statutory regulations or to prevent pollution of the environment, harm to human health, or serious detriment to amenities. A licence may be revoked, partly revoked or suspended if such pollution, danger or detriment cannot be avoided by modification of licence conditions. Additionally a licence may be revoked, partly revoked or suspended where the holder has ceased to be a fit and proper person by reason of his having been convicted of a relevant offence.

SCHEDULE A

1. Plans

(a) Site Plan

(b) Location

Dallacombe Farm, Blackawton, Dartmouth

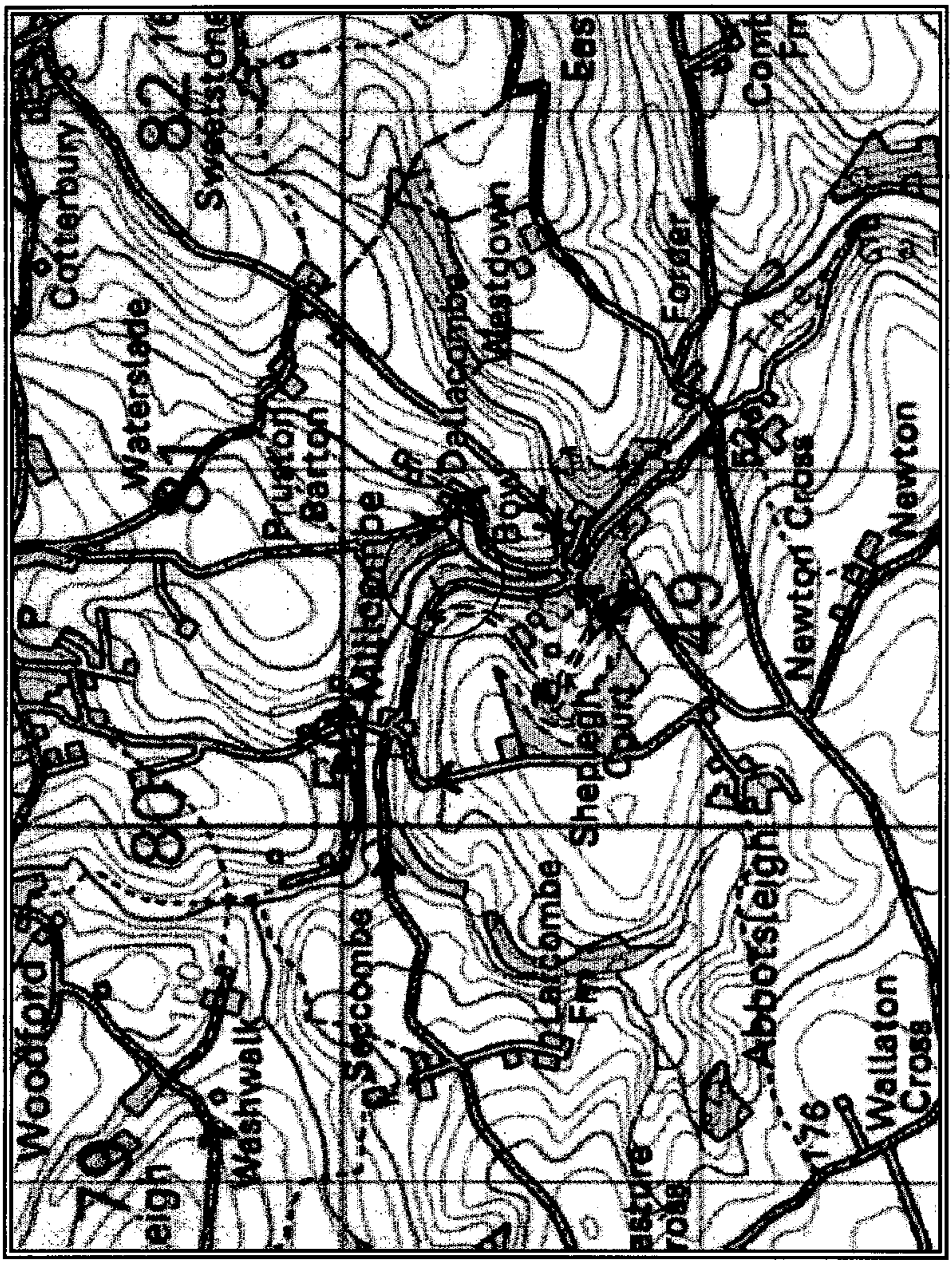
Site Plan



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Dallacombe Farm, Blackawton, Dartmouth

Location Map
OSGR 807 496



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