

CYNON VALLEY BOROUGH COUNCIL



CONTROL OF POLLUTION ACT 1974

LICENCE TO DISPOSE OF WASTE



The Cynon Valley Borough Council in pursuance of the powers conferred on them by the Control of Pollution Act 1974, hereby licence:-

Cynon Valley Waste Disposal Company Limited,

herein after called the "licence holder" to operate a Landfill Facility (herein after called the "facility") on land at

BRYN PICA REFUSE DIPOSAL SITE, MERTHYR ROAD, LLWYDCOED, ABERDARE
grid reference SO 009 053

which is edged in red on the drawings attached to this licence, being land occupied by the licence holder.

This licence is granted subject to the conditions set out in the schedules attached hereto.

Dated this 20th day of July 1993.

Signed *M. Edwards*
(Authorised Officer)

* The licence holders attention is drawn to the notes overleaf*

NOTES

These notes are for general guidance only and do not constitute an authoritative statement of the law.

1. This licence relates only to the requirements of the Control of Pollution Act 1974 for the deposit of waste and the use of plant or equipment subject to the conditions set out in the Schedules and does not constitute a consent required by other legislation. In particular it is the responsibility of the licence holder to comply with any requirements of the HEALTH AND SAFETY AT WORK ETC., ACT 1974, THE RADIOACTIVE SUBSTANCES ACT 1960, THE TOWN AND COUNTRY PLANNING ACTS, BUILDING REGULATIONS, and ALL RELEVANT WATER PROTECTION AND PUBLIC HEALTH legislation including the provisions of the ENVIRONMENTAL PROTECTION ACT 1990 currently in force.

2. All discharges to sewer and watercourse have to meet the requirements of the National Rivers Authority and the Water Company. Any diversion of or other changes will also require National Rivers Authority or Water Company approval.

3. If the licence holder ceases to occupy the land specified above, then the licence may be transferred to the new occupier after giving notice to the Disposal Authority which has the right to decline to accept the new licence holder.

4. If the licence holder wishes to cancel this licence, it must be returned to the Disposal Authority together with a notice stating that the licence is no longer required. Cancellation of the licence will not affect any outstanding liability of the licence holder under the conditions of the licence.

CONTRAVENTION OF LICENCE CONDITIONS

Attention is drawn to the provisions of sections 3, 7, 9 and 16 of the Control of Pollution Act 1974. A brief resume is included below.

Section 3.

Prohibits under penalty the deposit of waste, or the use of plant and equipment, otherwise than in accordance with the terms of a licence. This Section applies to all the conditions contained herein, including any which may be the subject of appeal to the Secretary of State under Section 10 of the Act.

Any deposit which takes place without compliance with all the licence conditions may lead to prosecution under this Section.

Section 7

Activities which cause pollution of water, danger to public health or would be seriously detrimental to the amenities of the locality may lead to revocation of this licence.

Section 9

Non compliance with any licence conditions may lead to the revocation of this licence.

Section 16

The licensing authority is empowered to require the removal of any controlled waste deposited in any circumstances where any of the conditions contained in this licence are not being complied with.

Penalties under Section 3

A Corporate body or person who contravenes Section 3 subsection (1) shall, subject to subsection (4), be guilty of an offence and liable on summary conviction to a fine of an amount not exceeding Scale 5, (currently £5,000, October 1992), or on conviction on indictment to imprisonment for a term not exceeding two (2) years or a fine or both.

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SCHEDULE A - Definitions

1. In this licence, an "emergency" is defined as a case where a person has reasonable cause to believe that circumstances exist which are likely to endanger life or health or cause damage to property or pollution of water.
2. In this licence a "flammable liquid" shall have the same meaning as ascribed to it by the Classification Packaging and Labelling of Dangerous Substance Regulations 1984 which includes a liquid mixture of liquids or liquid containing solids in solution or suspension which when listed in accordance with Part IV of Schedule 1 of the Classification Packaging and Labelling of Dangerous Substance Regulations 1984, gives off a flammable vapour at a temperature not exceeding 55 degrees Centigrade.
3. A "competent person" shall for the purposes of this licence mean a person who through training and or qualification understands the terms and conditions of this licence and is responsible for ensuring the facility's compliance with the licence.
4. In this licence "fly tipping" is defined as the unregulated and hence illegal dumping of waste material.
5. In this Licence, "Environmental Hazard" is defined as the presence of waste on land which has been deposited in such a manner or in such a quantity (whether that quantity by itself or cumulatively with other deposits of the same or different substances) as to subject persons or animals to a material risk of death, injury or impairment of health or as to threaten the pollution (whether on the surface or underground) of any water supply.
6. An "authorised officer" is an officer authorised by the Disposal Authority for the purposes of the Control of Pollution Act 1974.
7. In this Licence, "Operation" is defined as the receipt, handling or removal of waste from the facility.
8. In this licence, "Household Waste" and "Clinical Waste" shall have the same meanings as ascribed to them by the Collection and Disposal of Waste Regulations 1988 (SI 1988 No. 819).
9. In this Licence "Recycling" is defined as the collection and separation of materials from waste and subsequent processing to produce marketable products.
10. In this licence, "Reclamation" is defined as the collection

and separation of materials from the waste stream.

11. In this licence, "Special Waste" shall have the same meaning as ascribed to it under the Control of Pollution (Special Waste) Regulations 1980.
12. "Chartered specialist" shall mean a person who by qualification and experience is able to demonstrate a thorough knowledge and has experience of Construction Quality Assurance when applied to the lining and capping of landfill sites. Such a person shall be as a minimum a corporate member of a recognised professional institution.
13. The "containment principle" is where the polluting components of wastes are retained within the landfill for sufficient time to allow biodegradation and attenuation processes to have occurred, thus preventing the escape of polluting species at unacceptable concentrations.
14. Notwithstanding the above, words and phrases in this licence have the meanings ascribed to them by the Control of Pollution Act 1974 and it's associated regulations.

Schedule B- TYPES OF WASTE

Types of waste materials accepted at the facility and the maximum quantities accepted **per day** shall consist only of the following solid wastes.

1. Household and commercial waste	300 tonnes
2. Non-hazardous Industrial Wastes	450 tonnes
3. Street sweeping and gully emptying wastes	50 tonnes
4. Animal Carcasses	1 tonne

EXCLUSIONS

Notwithstanding the generality of the types of waste specified in this Schedule the following wastes shall be specifically excluded from delivery to the facility without the prior written approval of the Disposal Authority.

- a/ Controlled Waste being defined as "special waste".
- b/ Substances within the control of the Radioactive Substances Act 1960 and subsequent amendments.
- c/ Percussives and explosives and other substances with similar characteristics, excepting where such waste are in such a form or state where the percussive or explosive properties are and will remain ineffective;
- d/ Any waste containing substances listed in the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972.
- e/ Drummed waste or liquid wastes (other than road sweeping/gulley emptying wastes).

SCHEDULE C- GENERAL CONDITIONS

C1. (a) The following documents, submitted as part of the application for this licence shall be referred to as the working plan:-

- the statement of intended methods of operations contained within the documents entitled "Bryn Pica Refuse Disposal Site Working Plan" and "Bryn Pica Refuse Disposal Site Working Plan Addendum";
- the letter headed "LICENCE APPLICATION : BRYN PICA APPLICATION", dated 5 April 1993;
- the 1:10560 site location plan; and
- the 1:1250 plan drawings, numbered 2148/2, 2148/3, 2148/4, 2148/5, 2148/7, 2148/8 and 2148/9.

(b) Prior to any operations taking place under the terms of this licence the working plan shall have been agreed in writing by the Disposal Authority. The Licence holder shall obtain written consent from the Disposal Authority for any proposed change in the actual conduct of the operations from the proposals agreed in the working plan, as altered by any previous change agreed by the Disposal Authority, before such change is implemented.

(c) Any reference in this licence to the working plan shall include a reference to any modification to the statement or the drawings which have been agreed in writing by the Disposal Authority as appropriate.

(d) Subject to the terms and conditions of this licence, the site shall be operated in accordance with the working plan.

(e) Within 14 days of the date of issue of this licence the licence holder shall commission a qualified hydrogeologist, with a thorough knowledge and experience of modern landfill practices, to undertake a hydrogeological investigation of the waste disposal site. The investigation shall establish the geological and hydrogeological conditions at the site, including groundwater and surface water levels, direction of flow and quality.

(f) Within 4 months of the date of issue of this licence a preliminary report of the findings to date of the investigation, referred to in Condition C1.(e), shall be submitted to the Disposal Authority. The report shall include recommendations for:-

- (i) a programme of works for the operational management of Phase 1 so as to prevent pollution of water; this shall include a leachate management plan, addressing leachate minimisation, collection, treatment and control, and a timetable for all proposed works;
- (ii) such further investigations as necessary to establish the ground/surface water conditions in and around the

site.

(g) The programme of works as recommended in the hydrogeological report, as required by condition C1(f), shall be adopted as a formal amendment to the working plan and shall be implemented within a timescale agreed with the Disposal Authority, after consultation with the National Rivers Authority.

(h) Within 12 months of the date of issue of this licence, the licence holder shall submit to the Disposal Authority a second report detailing all the findings of the hydrogeological survey. The report shall also detail, in the light of the further investigations, recommendations for any changes to the existing operational practices, particularly the leachate management plan, necessary to safeguard against pollution of water. All recommendations shall be implemented to a timetable agreed with the Disposal Authority.

(i) No further waste shall be deposited at the site if, after 13 months of the date of issue of this licence, the leachate management plan, as an amendment to the Working Plan, has not been agreed with the Disposal Authority.

(j) Phases 2 to 5 of the site shall be operated on the containment principle and no wastes shall be deposited in these phases until they have been lined with a natural or synthetic material.

(k) Within 24 months from the date of issue of this licence a working plan detailing the proposed method of operation of Phases 2 to 5 will be submitted to the Disposal Authority.

(l) No waste shall be deposited in Phases 2 to 5 until the working plan submitted in accordance with condition C1.(i) has been agreed in writing by the Disposal Authority.

C2. A copy of any notice of instruction including discharge consents received in respect of the facility from any authority, other than the Disposal Authority, which in any way related to the use of the facility, shall be given to the Disposal Authority within three days of the receipt of such notice of instructions.

Schedule D - SITE PREPARATION WORKS

D1. Phases 2 to 5 of the site shall be lined using a natural or synthetic material. The material used and the method and specifications for emplacement shall be suitable for the types and quantities of wastes accepted and the climatic/site conditions likely to be experienced whilst the licence is in effect.

D2. If the licence holder chooses to install a synthetic liner, it shall have an emplaced permeability coefficient of less than 1×10^{-9} metres/sec and be guaranteed by the manufacturer as being suitable in accordance with condition D1. A copy of the guarantee shall be forwarded to the Disposal Authority prior to the installation of the liner.

D3. If the licence holder chooses to install a natural liner it shall have an emplaced permeability coefficient of less than 1×10^{-9} metres/sec and be a minimum of 1 metre thickness, measured normal to the surface.

D4. The lining of the site shall be supervised by an independent chartered specialist. The supervising specialist shall have full professional indemnity insurance for an appropriate amount agreed with the Disposal Authority.

D5. On completion of the lining works for each of the Phases, 2 to 5, the supervising specialist shall produce a report detailing all the tests carried out and the results obtained, together with a statement confirming that the liner meets the specification detailed in condition D2 or D3, as appropriate. The report shall also include location plans for the tests carried out and plans detailing the construction of the liner. The report shall be submitted to the Disposal Authority within 2 months of the completion of any phase. Lining of any subsequent phase shall not begin without the agreement of the Disposal Authority.

D6. Subsequent to the installation of the liner and prior to the deposit of waste, measures shall be taken to protect the integrity of the liner to ensure that the specification detailed in condition D2 or D3, as appropriate, is maintained.

D7. In accordance with the detail of the working plan a site office, equipped with a telephone shall be provided and maintained at the facility. The office shall be protected by gas detection equipment such that an alarm is activated at or above 20% of the Lower Explosive Limit for methane.

D8. Gates, walls and fencing shall be provided at the facility to prevent unauthorised access to the site. The gates and fencing shall be maintained to the specification detailed in the working plan, any damage noted being repaired within 7 days. Site gates shall be locked outside operating hours and at any time the site is left unattended. Appropriate warning signs shall be provided along the perimeter of the site.

D9. An identification board of durable material and finish shall be displayed at the entrance to the facility. This shall give the name of the facility, the name, address and telephone number of the operator and of the Disposal Authority, the hours of operation and the telephone numbers of the personnel to contact in the event of an emergency.

D10. The site shall be prepared to allow landfilling in cells. The cell size shall be determined by a water balance calculation which shall be recalculated prior to the construction of each new cell to allow for any changes in waste input and seasonal rainfall. Details of the calculation and sequence of filling of cells shall be included in the working plan.

D11. A surface water cutoff ditch shall be constructed around the perimeter of the operational area so as to intercept all surface water runoff from surrounding land, including restored areas.

D12. All surface water cutoff ditches shall be maintained in effective working order at all times.

D13. Primary site roads shall be metalled and secondary site roads shall be constructed of hardcore and quarry waste in accordance with the working plan and such that they are adequate for the traffic usage of the site.

D14. If empty skips are to be stored on site an area shall be provided in accordance with the working plan for such storage.

D15. Provision shall be made within the confines of the site for the parking, loading and unloading of vehicles transporting waste for recycling to and from the facility in accordance with the working plan.

D16. Arrangements shall be made for storing and maintaining machinery and equipment based on site, in accordance with the working plan.

D17. Tanks or drums used for the storage of liquids which may be polluting, including any fuels or oils, shall be contained in a bunded compound whose volume is at least 25% of the total volume or 110% of the volume of the largest storage vessel whichever is the greater. Storage vessels shall be constructed of material suitable for the liquids they contain and labelled to show their contents. They shall conform, where necessary to all relevant safety construction standards and shall be regularly inspected to ensure their integrity.

D18. Any flexible delivery pipe permanently attached to any tank shall be fitted with a tap or valve which closes automatically when not in use and shall be locked in such a way which ensures that it is kept within the bund when not in use.

D19. Measures in accordance with the working plan shall be taken to prevent damage to all pipework, valves, pumps, and storage tanks.

D20. A diary/log book shall be provided and retained on site. The diary/log book shall be available for the licence holder, accredited agent or employees and for authorised officers to read or record comments pertaining to the activities at the facility.

D21. A weighbridge shall be installed and maintained in accordance with the details of the working plan. The weighbridge shall be maintained in working order and shall be used, together with procedures detailed in the working plan, to ascertain and record the weight in tonnes of each load of waste delivered to and removed from the site.

D22. If street sweeping and road gulley emptyings are to be accepted a designated area shall be provided for the discharge of these materials.

D23. A civic amenity area will be provided for the reception of household waste delivered by householders.

D24. If franchised salvage is to be carried out at the site an appropriate area shall be provided for the operation, in accordance with the working plan.

D25. Any trees or bushes on areas which are to be tipped on shall be grubbed up and crushed prior to the deposit of any waste.

Schedule E -OPERATION OF SITE

E1. The types and quantities of waste accepted shall consist only of those specified in Schedule B of this licence.

E2. Wastes shall be only delivered to and removed from the facility during the following hours:-

	Time of Opening	Time of Closing
Monday to Friday	07.30	16.00
Saturday	07.30	13.00
Sunday/Bank Holidays	Closed	

Except in cases of emergency, no delivery or removal of wastes or related operations may take place outside these hours without the prior written approval of the Disposal Authority. All circumstances of emergency shall be reported forthwith in writing to the Disposal Authority.

E3. No deposit or other operation shall take place during the hours of darkness unless suitable lighting has been provided. Details of the lighting shall be included in the working plan. The hours of darkness are those covered by statutory lighting up times published by the Science and Engineering Research Council.

E4. During all operational and maintenance periods the facility shall be manned by a competent person who is capable of ascertaining that only waste that is permitted under the terms of the licence is deposited at the site. This person shall hereafter be referred to as the Site Supervisor. The name of the site supervisor and the name of the person who will deputise in their absence will be supplied in writing to the Disposal Authority within 21 days of the date of issue of this licence.

E5. As far as is practicable, the Site Supervisor shall establish the nature of the waste prior to deposit to ensure that it is permitted under the terms of the licence.

E6. A written daily record (manual or computerised) shall be kept detailing the names of the waste carriers and the types and quantities of waste deposited. This record shall also include details of all materials recycled on site. In the event that the weighbridge is inoperable, the record of the waste shall be based on the vehicle carrying capacity.

E7. Copies of a monthly summary of the record as required by condition E6 shall be forwarded to the Disposal Authority at monthly intervals, to arrive within 14 days of the end of the period to which it refers.

E8. No waste shall be deposited at the tipping face unless there

is a site operative in attendance to supervise the deposit.

E9. The site shall be progressively filled in accordance with the details of the working plan with waste deposited in cells to minimise leachate production. Care shall be taken when forming cell walls and floors to not impede the upward movement of landfill gas or create a perched water table.

E10. The phasing and duration of landfilling shall be carried out as detailed in the working plan and each phase shall, unless otherwise agreed with the Disposal Authority, be completed before landfilling is commenced in each subsequent phase.

E11. All waste shall be inspected by the site operative after it has been deposited at the working face. If the operative observes any waste not permitted under Schedule B then the waste shall not be compacted, but removed from the tipping area in accordance with the working plan.

E12. The Disposal Authority shall be notified immediately of any waste that is rejected as being unsuitable for disposal at the site by virtue of Conditions E5 and E11. This notification shall include, as far as possible, details of the nature and quantity of the waste involved, the date and time of its rejection, the name and address of the producer of the waste, the registration number of the vehicle delivering the waste and the name and address of the vehicle driver and the carrier's Registration number.

E13. The layers of waste shall be formed by using suitable compaction equipment with a blade or some other appropriate levelling device. The waste shall either:-

i/ be deposited on the surface of the site behind the face and partially compacted by a tractor or other compacting machine before being pushed over the face, or it shall;

ii/ be deposited on the ground forming the base of the site or on a previous layer in front of the face and shall be formed in to a compacted layer by being pushed upwards and driven over by a tractor or other compacting machine.

E14. The depth of a layer of waste shall not after initial compaction exceed 2 metres.

E15. Working flanks and faces shall be compacted to form gradients not steeper than 1:3.

E16. The surface flanks and faces shall be sufficiently well compacted and covered with non-biodegradable material to prevent the escape of litter, attraction of flies and other pests and the emanation of smell. Waste in any area or flank of fill not in use for longer than 48 hours shall be covered with suitable non-degradeable, non combustible material to a depth of not less than 15 centimetres.

- E17. Wastes shall be compacted and formed into a layer as soon as possible after deposit and not later than at the end of the working day on which the waste was received.
- E18. Each layer of waste and covering material shall be laid to a fall to encourage surface water run off from the tipping area.
- E19. All large containers such as furniture crates and hollow containers shall be crushed, broken up or flattened and covered each day by other wastes such that they are not within 1 metre of the surface or 2 metres of the flanks or face.
- E20. Unless previously agreed with the Disposal Authority all long objects including trees, lamp posts etc., shall be broken up into lengths not exceeding 2 metres before being backfilled.
- E21. Unless otherwise agreed with the Disposal Authority waste consisting wholly or mainly of animal or fish waste or other noxious material shall be securely bagged when delivered to site and deposited in accordance with the working plan.
- E22. The location of deposits of each load of clinical waste, waste subject to specific orders of the Ministry of Agriculture, Fisheries and Food, and any other waste which must not be disturbed shall be fully recorded on a site plan to a scale of 1:1250 or as otherwise agreed with the Disposal Authority and as specified in the working plan. Such records are to be kept on site and available for inspection by the Disposal Authority. A copy of these records shall be forwarded to the Disposal Authority within 28 days of the site ceasing to accept waste.
- E23. No excavation shall take place within 10 metres of any such deposit in condition E22.
- E24. The area provided for the discharge of street cleaning and road gully emptyings shall at the end of each working day be covered to prevent the escape of windborne materials. The deposit of such materials shall be reflected in the water balance calculation for the site, in accordance with condition D10.
- E25. No previously deposited and compacted waste shall be removed from the site, moved within the site or otherwise displaced, other than in accordance with the franchised salvage operation as detailed in the working plan, without the prior written agreement of the Disposal Authority.
- E26. In accordance with the working plan, contaminated surface run-off waters shall be collected and treated as leachate such that no clean waters at the facility become contaminated.
- E27. In accordance with the working plan effective measures shall

be taken to ensure that windborne materials are contained within the site. Waste which does leave the site shall be retrieved and disposed of before the end of the following day.

E28. Litter shall not be allowed to accumulate within the facility. Not less frequently than once per seven days or at a greater frequency as directed by the Disposal Authority any litter which has collected within the facility or its immediate environs shall be gathered and disposed of in such a way as to prevent pollution of water, danger to public health or be seriously detrimental to the amenities of the locality.

E29. All vehicles visiting the site carrying light wastes shall be adequately covered to prevent any loss of contents by wind or movement of the vehicle.

E30. No waste material shall be burnt within the boundaries of the facility. Any fire occurring within the confines of the facility shall be treated as an emergency and immediate action shall be taken to extinguish it. All outbreaks of fire shall be reported immediately to the Disposal Authority and a note of the incident made in the site diary. Fire fighting equipment and emergency water supplies shall be provided, regularly maintained and identified at the facility in accordance with the working plan.

E31. Precautions shall be taken to deal effectively with vermin insects and odours. A written record of the treatment undertaken shall be made in the site diary.

E32. Should there be, in the opinion of the Disposal Authority, a problem at the site due to the presence of birds, either on the grounds of public health or serious detriment to the local amenity then measures shall be taken to prevent the attraction and congregation of birds at the site.

E33. Measures shall be taken in accordance with the working plan to prevent site traffic depositing mud, debris or any other material on the public highway. These measures shall include the sweeping of hard surface areas, entrance and the public highway leading from the facility as necessary.

E34. Both primary and subsidiary site roads shall as necessary in dry weather, be sprayed with sufficient clean water to prevent dust occurring, but without creating excessive surface run-off, to prevent pollution of water, danger to public health or be seriously detrimental to the amenities of the locality.

E35. Empty skips shall only be stored in the designated areas of the site. Precautions shall be taken to ensure that no waste is allowed to accumulate within the the empty skips.

E36. Measures, including proper maintenance and use, shall be taken to control the noise of machinery and vehicles operating at

the facility which may be a danger to public health or be seriously detrimental to the amenities of the locality.

E37. The final layer of waste shall be deposited in a manner and consist only of materials which shall not penetrate nor affect the integrity and performance of the site cap.

E38. Should through the programme of monitoring and having regard to the trigger levels referred to in condition F7, pollution of ground/surface water be detected and attributed to the landfilling of wastes covered by this licence, the licence holder shall within three months, or as otherwise agreed with the Disposal Authority, submit a programme of works, or a revised scheme to minimise such pollution.

E39. Any cessation of operations for a period in excess of 3 months shall be notified to the disposal Authority. Not less than 14 days notice shall be given to the disposal Authority of the date on which operations are to recommence in the event of such a cessation.

RECLAMATION

E40. Within 6 months of the date of issue of this licence the operator shall provide the Disposal Authority with an operational statement for the civic amenity and franchised salvage operations. The statement shall include details of how the facilities are to be operated, including details of any surfacing and drainage works.

E41. Waste delivered to the Civic Amenity Area shall only be deposited in skips or other containers, purpose designed for the reception of wastes.

E42. No biodegradable waste shall be allowed to remain in the Civic Amenity Area for longer than 24 hours.

E43. Waste materials segregated for resale or reuse shall only be loaded, unloaded, sorted or stored in the designated Civic Amenity Area and Franchised Salvage Area, as indicated in the working plan.

E44. If required by the Disposal Authority, any waste or other material segregated for resale or reuse shall be removed forthwith, if, according to the Disposal Authority, it is giving rise to pollution of water, danger to public health or is seriously detrimental to the amenities of the locality.

E45. There shall be no processing or treatment of waste at the facility except for the sorting of materials suitable for recycling.

SCHEDULE F - SITE MONITORING**LANDFILL GAS**

F1. The management of landfill gas at the site shall accord with the recommendations of Her Majesty's Inspectorate of Pollution's Waste Management Paper No. 27 "The Control of Landfill Gas" (1991) and any subsequent amendments.

F2. Measures shall be taken to prevent migration of landfill gas either from the site or to inappropriate places within the site. Within 12 months of the date of issue of this licence investigations shall be carried out, by experienced consultants, to ascertain the degree of potential migration within or from the site and to determine what measures are necessary to prevent serious detriment to the local amenities or a danger to public health.

F3. Within 13 months of the date of issue of this licence and further to the investigations required by Condition F2, a comprehensive gas management plan shall be forwarded to the Disposal Authority. It shall include, as an amendment to the Working Plan:-

i) full details of all main services on and within 250 metres of the site boundaries and all developments within 250 metres of the site boundaries;

ii) full details of all measures to be provided to vent gas and/or control migration;

iii) full details of all monitoring to be undertaken and the frequency of such monitoring, including the number, position, specification and drilling logs of boreholes.

F4. During the first 12 months following their installation all boreholes shall be monitored for landfill gas at monthly intervals. The results of such monitoring shall be forwarded to the Disposal Authority within 14 days of them becoming available. Such results shall, or otherwise as directed by the Disposal Authority, be used to set 'trigger levels' for monitoring the effectiveness of the gas management plan.

F5. Any part of the gas monitoring/control system that fails to meet the design standards detailed in the gas management plan or becomes unsuitable for its intended purpose shall be repaired or replaced after consultation with and the agreement of the Disposal Authority.

GROUND\SURFACEWATER AND LEACHATE

F6. During the first 12 months following their installation all groundwater monitoring boreholes shall be monitored at a frequency of at least once per month for the determinands detailed in Schedule H. The results of such monitoring shall be forwarded to the Disposal Authority within 14 days of them becoming available.

F7. The groundwater analysis results obtained during the monitoring required by condition F6 shall, or otherwise as agreed by the Disposal Authority, be used to set 'trigger levels' for monitoring the effectiveness of the leachate management plan.

F8. After the initial 12 month monitoring period, groundwater monitoring shall be undertaken in accordance with Schedule H.

F9. Monitoring of groundwater shall be undertaken by pumped water samples or as otherwise agreed with the Disposal Authority. The methodology for such sampling and analysis shall be as agreed with the Disposal Authority.

F10. Monitoring points, in accordance with the Working Plan, shall be provided, up gradient and down gradient of the site, to enable the quality of surface waters to be determined. For the first 12 months following the date of issue of this licence such monitoring shall be undertaken every 2 months and thereafter shall be at quarterly intervals. The determinands for such monitoring shall be as detailed in Schedule H.

F12. Within 6 months of the date of issue of this licence monitoring points shall be provided within each cell to enable the level and quality of leachate to be determined. The methodology of such monitoring shall be agreed with the Disposal Authority.

F13. For 12 months following their installation the monitoring points referred to in condition F12 shall be sampled at monthly intervals for the determinands detailed in Schedule H. The results of such monitoring shall be forwarded to the Disposal Authority within 14 days of them becoming available.

F14. After the initial 12 month monitoring period the leachate monitoring points shall be sampled in accordance with Schedule H.

F15. Groundwater levels and leachate levels and depths shall be recorded at monthly intervals and the results correlated to Above Ordnance Datum (AOD).

F16. The monitoring of ground/surface water and leachate shall be undertaken by a competent person(s) with appropriate training and as agreed with the Disposal Authority.

F17. A record shall be kept of the quantities of leachate removed from the site and actual rainfall for the landfill area. These details shall be submitted to the Disposal authority at the end of each 12 month period.

MISCELLANEOUS

F18. The number and position of all monitoring points shall be agreed with the Disposal Authority. The location of all

monitoring points shall be marked on plan drawings and details of the specification and drilling logs shall be provided for all boreholes.

F19. Any groundwater, leachate or gas monitoring boreholes that for whatever reason become unsuitable for the purpose for which they are designed shall be restored or replaced as a matter of urgency, and within a maximum within 2 months of becoming unserviceable. A record shall be kept available for inspection of all such servicing.

F20. A note shall be made in the site diary whenever monitoring/sampling of landfill gas, ground/surface water or leachate is carried out. A copy of all monitoring results shall be supplied to the Disposal Authority within 14 days of the end of each quarter. All data relating to leachate, ground and surface water shall also be supplied to the National Rivers Authority. The analysis of samples of ground/surface waters and leachate shall be carried out at NAMAS accredited laboratory or other suitable laboratory as agreed with the Disposal Authority.

F21. The programme of monitoring shall be subject to periodic review, dependant on the results obtained. Any changes to the monitoring programme shall be agreed in writing with the Disposal Authority.

SCHEDULE G - SITE CAPPING

G1. When final level has been reached in a phase, each cell shall in accordance with the working plan be capped to prevent :-

- i) the uncontrolled migration of landfill gas into surface soils of site;
- ii) the penetration of surface water into waste bearing layers of the site;
- iii) the egress of leachate from the surface of the site.

G2. If a natural material is to be used to cap the site, it shall be a minimum of 1.0 (one) metre thickness (measured normal to the surface) and have an emplaced permeability of not greater than 1×10^{-9} m/sec. If a cap made from a synthetic material is to be used it shall have an emplaced permeability coefficient of not greater than 1×10^{-9} m/sec and be guaranteed by the manufacturer. A copy of the guarantee and any supporting documentation shall be forwarded to the Disposal Authority prior to the installation of the cap.

G3. The capping shall not be allowed to affect the integrity of the gas venting system.

G4. A programme of Construction Quality Assurance detailing all the works prior to the commencement of restoration, including respectively permeability tests and specifications for emplacing the impermeable cap shall be submitted to the Disposal Authority within 18 months of the date of issue of this licence.

G5. The capping of the site shall be supervised by a competent independent chartered specialist. On completion of the cap the specialist shall furnish a "compliance document" to the Disposal Authority. This report shall contain details of the tests carried out and the results obtained, together with a statement that the cap meets the specification in condition G2. Location plans of all tests carried out and plans detailing the construction of the cap shall be included with the "compliance document". The supervising specialist shall have full professional indemnity insurance for an appropriate amount agreed with the Disposal Authority.

G6. Cover shall be provided to minimise the ingress of surface water until such time as the cap has been emplaced.

G7. In accordance with the working plan, to ensure its integrity and performance the cap shall be covered with at least 1.0 (one) metre of soil forming material to prevent desiccation, penetration of roots or erosion of the cap. The depth of each soil component shall be detailed in the working plan.

G8. Until final restoration, completed areas shall be graded and maintained in a tidy condition and where necessary action shall

be taken to control or destroy weeds.

G9. The final surface of the site shall be adequately contoured to allow for settlement and to encourage surface water run off.

G10. Final restoration shall be to the agreed contours in accordance with the working plan. Details of restoration including cross sectional drawings showing the proposed site profile at the time of restoration and indicating in the working plan.

SCHEDULE H - ENVIRONMENTAL MONITORING**GROUNDWATER**

For the first 12 months:-

monthly water levels, pH, temperature, electrical conductivity, ammoniacal nitrogen, chlorides, sulphates, alkalinity as CaCO₃, TON, TOC, Na, K, Ca, Mg.

Thereafter:-

quarterly pH, temperature, electrical conductivity, ammoniacal nitrogen, chlorides;

annually

pH, temperature, electrical conductivity, ammoniacal nitrogen, chlorides, sulphates, alkalinity as CaCO₃, TON, TOC, Na, K, Ca, Mg.

SURFACE WATER

For the first 12 months:-

every 2 months pH, temperature, electrical conductivity, dissolved oxygen, ammoniacal nitrogen, chlorides.

Thereafter:-

quarterly pH, temperature, electrical conductivity, dissolved oxygen, ammoniacal nitrogen, chlorides.

LEACHATE

For the first 12 months:-

monthly leachate level, pH, temperature, electrical conductivity, ammoniacal nitrogen, chlorides, sulphates, alkalinity as CaCO₃, COD, BOD, TOC, TON, Na, K, Ca, Mg, Fe, Mn, Cd, Cr, Cu, Ni, Pb, Zn.

Thereafter:-

quarterly pH, temperature, electrical conductivity, ammoniacal nitrogen, chlorides, sulphates, alkalinity as CaCO₃, COD, BOD, TOC, TON, Na, K, Ca, Mg;

annually

pH, temperature, electrical conductivity, ammoniacal nitrogen, chlorides, sulphates, alkalinity as CaCO₃, COD, BOD, TOC, TON, Na, K, Ca, Mg, Fe, Mn, Cd, Cr, Cu, Ni, Pb, Zn.

NOTES

BOD - Biochemical Oxygen Demand

COD - Chemical Oxygen Demand

TOC - Total Organic Carbon

TON - Total Oxidised Nitrogen