This Report has been cleared for submission to the Board by the Programme Manager
Signed: _____ **Date:** 6/5/09

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

OFFICE OF CLIMATE, LICENSING & RESOURCE USE

REPORT OF THE TECHNICAL COMMITTEE ON OBJECTIONS TO LICENCE CONDITIONS

TO:	Directors	
FROM:	Technical Committee	**- Environmental Licensing Programme**
DATE:	5th May 2009	
RE:	Objection to Proposed Decision for Behans Land Restoration Limited, Waste Reg.: W0247-01.	

Type of facility:	Soil Recovery Facility
Classes of activity (**P** = Principle Activity):	4th Schedule: 4 (**P**) & 13
Quantity of waste managed per annum:	400,000 tonnes (maximum)
Classes of waste:	Inert soils and stones for land restoration, inert construction and demolition waste for recycling.
Location of activity:	Blackhall, Punchestown, Naas, Co. Kildare.
Licence application received:	17/06/2008
PD issued:	21/11/2008
First party objection received:	18/12/2008
Third Party Objection received:	None
Submissions on Objections received:	None

Facility

The waste licence application relates to the restoration of a former sand and gravel quarry using imported inert soils and stones, and recycling of inert construction and demolition waste at Blackhall, Punchestown, Naas, Co. Kildare, approximately 5km south-east of Naas. The facility has operated under a series of waste permits issued by Kildare County Council since commencement of site restoration works in 2001. The ongoing works will eventually result in complete infilling of a large open void and restoration of the landscape to its original pre-excavation condition. The restored land will be used as agricultural grassland. One submission was received in relation to the licence application but this was subsequently withdrawn.

Consideration of the Objection

The Technical Committee (TC), comprising of Ciara Maxwell (Chairperson) and Loretta Joyce, has considered all of the issues raised in the Objection and this report details the TC's comments and recommendations following the examination of the Objection together with discussions with the inspector, Aoife Loughnane, who also provided comments on the points

raised. The TC also consulted technical and sectoral experts Dr. Jonathan Derham and Brian Meaney.

This report considers the first party objection.

First Party Objection

The applicant objects to the Proposed Decision (PD) on the grounds that in the applicant's opinion the PD includes a number of specific provisions and references which:

(i) do not adequately reflect the fact that the waste recovery facility is currently existing;

(ii) do not take account of the need for a transition period, whereby the applicant is allowed a reasonable period of time to upgrade its existing site infrastructure and introduce new management systems to comply with the additional requirements of the Waste Licence, over and above those previously identified in its Waste Permit from Kildare County Council;

(iii) do not recognise the nature of its established business, specifically the origin and nature of the waste streams being imported and recovered at the site, and

(iv) do not recognise its environmental record in operating and managing the existing waste recovery facility from its establishment in 2001 to date.

The applicant makes two general points of objection (Section 2 of Objection) which refer to the PD as a whole and makes a further nine specific objections (Section 3 of Objection).

A.1 'Commencement Date' (Conditions 2.2.1, 2.2.2.8, 3.1, 3.2.1, 6.7, 6.10, 7.1, 8.8.2, 9.1, 9.2 & 12.1)

In this, the first of two 'General Comments on the Proposed Waste Licence', the applicant objects to the use of the following phrases – "prior to the commencement of the licensed activity" and "within (defined time frame) of the date of commencement of the licensed activity".

The applicant points out that the facility being licensed is already established and is operating in accordance with a Waste Permit, issued by Kildare County Council. The licence application was prompted solely by the change in the threshold limits for Waste Facility Permits in accordance with the Waste Management (Facility Permit and Registration) Regulations 2007 (S.I. No. 821 of 2007), as amended.

In order to ensure a smooth transition between authorisation by Permit and Licence and to prevent unnecessary cessation of activities in the intervening period, the applicant requests that the permitted timeframe to upgrade its existing site infrastructure and introduce new management systems in accordance with the requirements of the Waste Licence is not less than 12 months.

The applicant requests that the phrase "prior to the commencement of licensed activities" be amended to read "within 12 months of grant of this waste licence". Similarly, the applicant requests that the phrase "within (defined time period) of the date of commencement of the licensed activity" be amended to read "within (defined time period) of the date of grant of this waste licence".

Technical Committee's Evaluation: The Technical Committee considers that since the activity is currently operational, it would be clearer to state the timeframes involved having regard to the date of grant of licence. The TC has reviewed each of the timeframes in the applicant's objection and these are tabulated below. Some of these are standard Waste licensing timeframes, which are not considered to be unduly onerous on the company. Nevertheless, the TC recommends that some timeframes be amended, given the reasons outlined in the objection.

The TC recommends an additional change to Condition 8.8.2 to require the submission of waste acceptance procedures for approval by the Agency within three months of the date of grant of licence. This takes account of significant changes to the acceptance criteria requirements as outlined below in Section A.3 below. The proposed amendment to Condition 12.1.1 includes a reduction in the annual charge proposed for the facility. This issue is discussed further in Section A.6 below.

Condition	**Concerning**	**Timeframe in PD**	**Applicant's Proposed Timeframe**	**TC Recommends**
2.2.1	EMS	Prior to commencement of the licensed activity	Within 12 months of the date of grant of licence	Within 9 months of the date of grant of licence
2.2.2.8	Maintenance Programme	Within 6 months of commencement	6 months	6 months
3.1	Infrastructure	Prior to commencement	12 months	12 months
3.2.1	Facility Notice Board	Prior to commencement	12 months	4 months
6.7	Integrity Testing	Prior to commencement	12 months	9 months
6.10	Data Management System	Prior to commencement	12 months	9 months
7.1	Energy Efficiency Audit	Within one year of commencement	12 months	12 months
8.8.2	Waste acceptance procedures	Prior to commencement	12 months	3 months
9.1.	Accident Prevention Procedure	Prior to commencement	12 months	6 months
9.2	Emergency Response Procedure	Prior to commencement	12 months	6 months
12.1 (twice)	Agency Charges	Date of commencement	Date of grant of licence	Date of grant of licence

Recommendation 1: The following conditions should be amended to read as follows:

2.2.1 **Within nine months of the date of grant of this licence** the licensee shall establish and maintain an Environmental Management System (EMS). The EMS shall be updated on an annual basis.

2.2.2.8 Maintenance Programme

The licensee shall establish and maintain, **within six months of the date of grant of this licence**, a structured programme for maintenance and service of vehicles and equipment. This programme shall be supported by appropriate record-keeping systems and diagnostic testing.

3.1 **Within twelve months of the date of grant of this licence,** the licensee shall establish all infrastructure referred to in this licence, to the design set out in the Application documentation or **as** may be otherwise specified or varied by the conditions of this licence.

3.2.1 The licensee shall, **within four months of the date of grant of this licence**, provide a Facility Notice Board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions on the board shall be 1200 mm by 750 mm. The notice board shall be maintained thereafter.

6.7 **Within nine months of the date of grant of this licence** the integrity and water tightness of all tanks, bunding structures and containers and their resistance to penetration by water or other materials carried or stored therein shall be tested and dem onstrated by the licensee. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.

6.10 **Within nine months of the date of grant of this licence** the licensee shall develop and operate a Data Management System for collation, archiving, assessing and graphically presenting the monitoring data generated as a result of this licence.

7.1 The licensee shall carry out an audit of the energy efficiency of the site **within twelve months of the date of grant of this licence**. The audit shall be carried out in accordance with the guidance published by the Agency, "Guidance Note on Energy Efficiency Auditing". The energy efficiency audit shall be repeated at intervals as required by the Agency.

8.8.2 **Within three months of the date of grant of this licence the licensee shall submit for Agency approval** written procedures for the acceptance and handling of all wastes at the facility.....

9.1 **Within six months of the date of grant of this licence** the licensee shall ensure that a documented Accident Prevention Procedure is in place that addresses the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.

9.2 **Within six months of the date of grant of this licence** the licensee shall ensure that a documented Emergency Response Procedure is in place, that addresses any emergency situation which may originate on-site. This procedure shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary.

12.1.1 The licensee shall pay to the Agency an annual contribution of **€10,408**, or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency,

towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Waste Management Acts 1996 to 2008. The first payment shall be a pro-rata amount for the period from the **date of grant of this licence** to the 31st day of December, and shall be paid to the Agency within one month **from the date of grant of this licence**.....

Recommendation 2: Amend *Schedule E* as follows:

Schedule E: Reporting

Report	Reporting Frequency Note1	Report Submission Date
Annual Environment Report (AER)	Annually	By 31st March of each year.
Record of incidents	As they occur	Within five days of the incident.
Specified Engineering Works reports	As they arise	In advance of the works commencing.
Bund, tank and container integrity assessment	As they arise	**Within nine months of the date of grant of licence**, and every three years thereafter as part of AER.
Licence monitoring requirements	Annually	As part of AER.
Any other monitoring/reports	As they occur	Within ten days of obtaining results.

Note 1: Unless altered at the request of the Agency.

A.2 Reference to 'Landfilling' (Conditions 3.15.2, 3.17, 11.6(viii) & 12.2.2 [ELRA])

The applicant is concerned that a number of references to landfills and landfill guidance documentation in the PD may lead outside observers to infer that it is engaged in landfilling activity.

The applicant asserts that its primary objective is waste recovery for land restoration purposes, by means of deposit of inert waste on land. Although the applicant recognises that there is no existing guidance on the operation of licensed recovery facilities of this type and scale, the applicant nonetheless considers it inappropriate for the Agency to refer to Landfill Guidance Manuals in the PD as these relate to a fundamentally different waste activity.

Technical Committee's Evaluation: Under the Waste Management (Facility Permit and Registration) Regulations (S.I. No. 821 of 2007, as amended), large inert waste facilities accepting greater than 100,000 tonnes (total) of natural soils and subsoils fall within the remit of EPA waste licensing. It has been accepted by the Agency, supported by the DoEHLG, that natural soils/subsoils infilling activities such as that undertaken at Behan's may be classed as waste recovery rather than disposal.

Although the facility is not strictly a 'landfill' within the meaning of the Landfill Directive, the scale of the activity under consideration is significant; over the period of fifteen years the applicant expects to import 4 million tonnes of inert waste, (max. 400,000 tonnes per annum), as well as 600,000 tonnes of inert C&D waste for recycling over the same period (≈ 45,000 tonnes per annum).

In the absence of published guidance specifically dealing with soil recovery facilities the Technical Committee considers it appropriate and relevant to look to published guidance documents on landfilling. The TC recommends no change to the Conditions listed above, other than to remove 'landfill' from the description of the facility's EMP in Condition 11.6(viii).

Recommendation: Amend Clause (viii) of Condition 11.6 to read as follows:

(viii) the current Environmental Management Plan (EMP), and

A.3 ***Schedule A.2*** **Acceptance Criteria**

The applicant considers that the requirement in Schedule A.2 for basic characterisation testing to include a chemical analysis on a representative sample for every 2,000 tonnes (or portion thereof) of each excavation or demolition works is excessive and is ill-suited and impractical for its established business model and customer profile. The following reasons are given to support this stance:

(1) All waste materials to be accepted at the facility are included on the list of wastes in Clause 2.1.1 in Section 2 of the Annex to Council Directive 2003/33/EC [1] which are assumed to satisfy (i) the criteria set out for the definition of inert waste in Art. 2(e) of the Landfill Directive (1999/31/EC) and (ii) the criteria listed in Section 2.1.2 of the Annex to 2003/33/EC.

(2) The facility has operated under Permits issued by Kildare County Council for over seven years with no requirement for characterisation testing and with no adverse impact on soil or groundwater quality.

(3) Most of the imported material is sourced from small scale excavation works undertaken by, or on behalf of, utility companies, such as ESB, Bord Gáis, Eircom, BT, cable companies and local authorities (water services). Therefore, quantities from a specific excavation are normally in the region of 80 to 100 tonnes of excavated soil and stone (4 to 5 HGV loads) imported over a one to two day period.

(4) Generally such utility works are undertaken at short notice in response to unexpected breakdowns or disruption of services. It would be impractical and prohibitively costly to arrange for pre-excavation and sampling, which would give rise to as much disruption and cost as the actual excavation to repair or install the particular utility. Furthermore, it would add a 7 to 10 day delay to the works in order to obtain sample test results before proceeding to excavate the soil (again). Advance soil quality analysis is not normally carried out by utility companies even in the case of planned utility installation works and is unlikely to be undertaken in the short to medium term.

(5) The increased costs in implementing the proposed test regime will have to be passed on to the applicant's customers in the form of increased gate fees. The costs would be proportionately higher for the applicant given the relatively small volume of excavated materials imported from each site. The current market rate for recovery/re-use of inert soil and stones is, and has been for many years, no more than a few euro per tonne. Cost sensitivity is such that the applicant maintains that if compelled to implement the proposed characterisation testing regime and insist

[1] Council Decision 2003/33/EC of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC.

that its clients provide it with the results of advance soil quality testing, the applicant will lose most of its existing client base. Materials would instead be diverted to permitted sites where no requirement for characterisation testing exists. The applicant states that if the Agency adheres to the characterisation testing required in the PD, the process of licensing soil recovery sites will have the "rather perverse effect of encouraging large numbers of small permitted facilities at the expense of larger licensed facilities".

In view of these factors, and notwithstanding the applicant's view that no prior characterisation of inert waste is appropriate or required at this waste recovery facility (in keeping with stated accepted practice throughout the EU), the applicant suggests an amendment to Schedule A.2 to the effect that:

(i) the requirement for a representative load from every excavation/ demolition/ waste removal works to be subjected to a comprehensive assessment which satisfies Level 1 Basic Characterisation applies only to excavation/ demolition/ waste removal works which ***generate in excess of 2,000 tonnes of recoverable material from a single source site,*** *and*

(ii) in addition, the applicant shall, on an annual basis, subject materials recovered and deposited on land over the preceding year to comprehensive assessment which satisfies Level 1 Basic Characterisation requirements by excavating trial pits, taking representative samples and subjecting them to chemical analysis at a rate of one test sample per 10,000 tonnes of recovered material.

Technical Committee's Evaluation: The Technical Committee has considered the various issues raised by the applicant and notes that the current gate fee for Inert Waste is *circa* €2 per tonne. The TC acknowledges that the facility is proposing to import principally excess soils, stones and broken rock excavated on construction sites, rather than a range of inert wastes as in the meaning of Council Directive 1999/31/EC, and therefore the facility may be considered to be of lower environmental risk than an Inert Landfill. Nonetheless, the TC notes that a significant difference in a typical Inert Landfill and the Soils Recovery Facility under consideration is the protection afforded by a liner in the case of an engineered landfill.

The Technical Committee has considered the applicant's proposal for basic characterisation but is not satisfied with the proposal in that the applicant has stated that there may never be works which generate >2,000 tonnes from a single source and secondly, the monitoring proposed after placement of waste is deemed to provide insufficient control of acceptance procedures.

In order to ensure reasonable enforcement of the acceptance procedures by means of testing, whilst avoiding incurring disproportionate expense, the Technical Committee recommends requiring Level 1 testing - Basic Characterisation – at a rate of 1 sample per 2,000 tonnes for single sources generating more than 2,000 tonnes of material. Furthermore, a representative sample shall be taken once from the first 2,000 tonnes of waste deposited from such sources and once for every 250 loads of waste thereafter for Level 2 (Compliance) testing. The TC recommends testing one sample per 2,000 tonnes of waste accepted from the collective of sources generating less than 2,000 tonnes of waste. The criteria for Level 1 and Level 2 testing to be agreed in accordance with Condition 8.8.2. All batches (< 5,000 tonnes) of recycled C&D waste used for site engineering/development works shall, post-processing but prior to use, be subjected to testing. The TC recommends including additional testing of the deposited waste in *Schedule C.4,* as proposed by the applicant in its objection. The rate of

sampling proposed - at one sample for every 6,000m^3 filled, to a maximum of 40 samples per annum – equates to one sample per 10,800 tonnes at the placed density of 1.8 tonnes/m^3 proposed by the applicant.

The TC recommends the insertion of an additional waste type, 17 01 03 (tiles and ceramics) in *Table A.1*, as requested by the applicant in Attachment H.1 of the application form. This will enable both source segregated tiles and ceramics (17 01 03) and mixtures of concrete, bricks, tiles and ceramics (17 01 07) to be accepted at the facility. The TC recommends incorporating an additional footnote (Note 2) to enable future additions to the list of acceptable waste streams subject to prior Agency approval. Finally, in light of the amendments to the schedules outlined below, the TC recommends that Condition 8.8.2 be amended for clarity.

Recommendation 1: Replace *Schedule A: Limitations* as follows.

Recommendation 2: Amend *Schedule C.4 Waste Monitoring* as outlined below.

A.1 Waste Acceptance

Only the inert wastes in Table A.1 are acceptable for recovery at the facility unless otherwise agreed with the Agency. These wastes must satisfy the criteria in ***Schedule A.2: Acceptance Criteria for materials to be used for restoration at the facility*** of this licence.

Table A.1 Waste Categories and Quantities

EWC CODE	WASTE TYPE Notes 1 & 2	MAXIMUM (tonnes per annum) Note 5
17 05 04	Soil and stones other than those mentioned in 17 05 03 Note 3	344,000
17 01 01 17 01 02 **17 01 03** 17 01 07	Concrete Note 4 Bricks Note 4 Tiles and ceramics Note 4 Mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06 Note 4	56,000
	TOTAL	400,000

Note 1: In the case of suspicion of contamination, (either from visual inspection or from knowledge of the origin of the waste), testing **in accordance with *Schedule A.2* below shall be applied or the waste should be refused/rejected.**

Note 2: **Any proposals to accept other compatible waste streams must be agreed in advance by the Agency and the total amount of waste must be within the total amount specified.**

Note 3: This waste stream may be used for site restoration purposes without further processing.

Note 4: These waste streams may be processed at the facility and subsequently re-used for site engineering/ development works or exported off-site as recycled aggregates.

Note 5: The limitation on individual waste types may be varied with the agreement of the Agency subject to the total limit remaining the same

A.2 Acceptance Criteria for materials to be used for restoration (including site engineering/development) at the facility

The general characterisation and testing must be based on the following three level hierarchy:

Level 1: Basic Characterisation

This constitutes a thorough determination, according to standardised analysis and behaviour testing methods, of the short and long-term leaching behaviour and/or characteristic properties of the waste.

Level 2: Compliance Testing
This constitutes periodical testing by simpler standard analysis and behaviour-testing methods to determine whether a waste complies with condition and /or specific reference criteria. The tests focus on key variables and behaviour identified by basic characterisation.

Level 3: On-site verification
This constitutes rapid check methods to confirm that a waste is the same as that which has been subjected to compliance testing and that which is described in any accompanying documents. It may merely consist of a visual inspection of a load of waste before and after unloading at the waste facility.

Each and every load of waste (and accompanying documents) accepted for recycling or proposed to be used for restoration at the facility shall undergo Level 3 verification/inspection as a minimum. And, notwithstanding Condition 11.9, the following information shall be recorded in relation to each and every waste load following such inspection:

Waste producer	Type of process producing the waste
Source and origin of waste	Amount of waste
Licensee's job/order/invoice number	Existing data on the waste
Vehicle registration number	Physical form
Description of the waste	Colour
Waste Type and EWC code	Odour

Soil and stones (EWC code 17 05 04) from single sources where the total quantity of waste expected to be generated is greater than or equal to 2,000 tonnes shall be subject to Level 1 and Level 2 testing. Level 1 (characterisation) testing shall be carried out prior to agreeing acceptance of the waste. Level 2 (compliance) testing shall be carried out on representative samples of waste upon delivery. A representative sample shall be taken once from the first 2,000 tonnes of waste deposited and once for every 250 loads of waste thereafter. Part of each sample shall be retained at the facility for three months and be available for inspection/analysis by the Agency. The criteria for Level 1 and Level 2 testing shall be agreed in accordance with Condition 8.8.2.

Where single sources generate less than 2,000 tonnes of soil and stones (EWC code 17 05 04), one sample for every 2,000 tonnes of waste accepted from the collective of small single sources shall be characterised according to criteria to be agreed in accordance with Condition 8.8.2 (and to incorporate appropriate elements of Level 1 and/or Level 2 testing).

Wastes of EWC code 17 01 01, 17 01 02, 17 02 03 and 17 01 07, where these are to be used for site engineering/ development works, shall be subject, on a batch basis post-processing but prior to use, to Level 1 and/or Level 2 testing according to a procedure to be agreed in accordance with Condition 8.8.2. For sampling and characterisation purposes, individual batches shall be no larger than 5,000 tonnes. All batches of recycled waste used for site engineering/development works, however small, shall be associated with at least one sample taken for Level 1 and/or Level 2 testing and records shall be maintained to demonstrate this.

In relation to all wastes proposed to be tested according to agreed protocols, including soil and stones (EWC code 17 05 04) and wastes of EWC code 17 01 01, 17 01 02, 17 02 03 and 17 01 07, the licensee shall, in accordance with Condition 8.8.2, propose maximum concentrations and/or trigger levels for contaminants in the materials proposed to be recovered (as restoration materials). The exceedance of these maximum concentrations and/or trigger levels shall be considered an incident and non-compliant materials shall be dealt with in accordance with Condition 9.3. Arrangements shall be made for the removal of the material for disposal at an authorised facility.

Sampling and testing shall be carried out by independent and qualified persons and institutions. Laboratories shall have proven experience in waste testing and analysis and an efficient quality assurance system.

C.4 Waste Monitoring

Waste class	Frequency	Parameter	Method
Non-inert waste to be removed off-site for recovery/disposal	Per consignment	Basic Characterisation	Standard Method
Deposited waste Note 1	Dependent on rate of waste deposition. Maximum 40 samples per year	To be agreed	To be agreed
Other Note 2			

Note 1: A representative sample of the deposited waste shall be taken at least every 3 metres depth and 2,000m^2 area of fill, or at an equivalent frequency as may be agreed. Samples of the deposited waste shall be taken by trial pit or other appropriate method.

Note 2: Analytical requirements to be determined on a case by case basis.

Recommendation 3: Replace Condition 8.8.2 as outlined. Delete existing conditions 8.8.3 and 8.8.4 and re-number 8.8.5 as follows:

8.8.2 **Within three months of the date of grant of this licence the licensee shall submit for Agency approval** written procedures for the acceptance and handling of all wastes at the facility. **These procedures shall be in accordance with the requirements of *Schedule A: Limitations* of this licence.**

8.8.3 No hazardous or liquid wastes shall be disposed of at the facility.

A.4 *Schedule A.3* Limit Values for Pollutant Content

The applicant considers that the requirement in Schedule A.3 for the eluate [2] quality of any Level 1 or Level 2 compliance testing on waste for placement at the facility to be equivalent to background water quality established at the upgradient well to be unreasonable and/or unworkable in practice for the following reasons:-

(i) variability in the test results of the upgradient well due to natural variability, sampling and handling errors, laboratory test errors, etc.;

(ii) the proposed limit values might exclude soils with different geochemistry due to soil type and underlying geology, thereby restricting intake at the recovery facility to soil excavated in the surrounding area;

(iii) ultimately, applying such limits would result in each soil recovery facility having a unique set of waste acceptance criteria which would effectively limit options for Contractors and introduce greater confusion and uncertainty and less competition in the soils recovery market. And if the acceptance criteria are not adopted consistently across the market, the applicant contends that it is unreasonable that it should find itself placed at a commercial disadvantage;

[2] The term 'Eluate' describes the solution obtained in laboratory leaching tests of waste. The eluate may then be analysed for physical and chemical properties.

(iv) *the results of tests on eluates derived from soil samples (expressed as mg/kg) and groundwater test results (expressed in mg/l) cannot be readily compared and may require review on an ongoing basis by technical specialists, thereby incurring greater costs and delays;*

(v) *a significant proportion of soils imported, separated and/or recovered at the facility are sourced from utilities excavations in urban or suburban environments where the quality of soils excavated is slightly degraded when compared with soils from Greenfield sites. Setting limits as proposed in the PD may restrict acceptance of soils from utility excavations and result in the loss of business and diversion of soils to permitted facilities operating to other, less stringent acceptance criteria;*

(vi) *the facility has, to date, adopted acceptance procedures which have regard to the inert waste acceptance criteria specified in Section 2.1.2 of Council Decision 2003/33. The applicant contends that the application of these limit criteria has ensured that the operation of the facility has had no adverse impact on groundwater quality.*

Technical Committee's Evaluation: It is imperative that this sand/gravel aquifer, with a high vulnerability rating, supplying local private wells be adequately protected. The Leaching Limit Values specified for inert waste as per Council Decision 2003/33/EC would not apply in the case of an unlined facility with no leachate management system. The Council Decision speaks to the Landfill Directive which stipulates requirements for engineered landfills. As a consequence, for land restoration activities involving uncontaminated natural soils and subsoils, stringent acceptance criteria must be adopted to ensure no adverse impact on groundwater.

The Technical Committee acknowledges that there may be some natural variation in the geochemistry of soils imported to the facility. The EPA publication *"Towards Setting Guideline Values for the Protection of Groundwater in Ireland"* (Interim Report, 2003) deals with this issue in Chapter 3.3 (page 19), where a useful comparison of Interim Guideline Values (IGVs) with the natural hydrochemistry of different aquifers (including sand/gravel aquifers) is presented for core parameters.

In the absence of legislative environmental quality standards for groundwaters, the TC considers that the only practicable solution is to require adequate testing of waste as discussed in Section A.2 above, and ensure that any works with the potential to impact on groundwater quality are undertaken with due care. To this effect, the TC proposes to strengthen Groundwater Management conditions, 6.14.3 and 6.14.4, by requiring that these groundwater management operations, (i.e. infilling of low-lying areas and collection and discharge of the groundwater spring), be undertaken as Specified Engineering Works. The requirements for SEWs stipulated in Condition 3.3 of the Proposed Decision will therefore apply to these works. The TC agrees with the applicant's request to delete *Schedule A.3* and recommends that additional SEWs be included in *Schedule D.*

Recommendation: Delete *Schedule A.3* and amend *Schedule D: Specified Engineering Works* as follows:
Specified Engineering Works
Installation of weighbridge and new wheel wash facility.
Installation of groundwater management infrastructure.
Infilling of low-lying areas of the facility (Condition 6.14.3).
Collection and discharge of groundwater spring discharge (Condition 6.14.4).
Installation of surface water management infrastructure.
Installation of Interim Dust/Noise abatement for onsite equipment.
Removal of site infrastructure.
Any other works notified in writing by the Agency.

A.5 Condition 3.15.1 & *Schedule C.2.2* Groundwater

The applicant objects to the requirement in Condition 3.15.1 to maintain at least 2 upgradient and 5 downgradient groundwater monitoring boreholes at the facility. Prior to applying for a licence, the applicant installed 3 monitoring boreholes (1 upgradient and 2 downgradient). The applicant considers the requirement for an additional 4 monitoring boreholes excessive given that –

(i) the waste recovery activities present a very low risk to the environment;

(ii) groundwater testing to date has confirmed that the operation of the facility has had no adverse impact on groundwater quality, and

(iii) Section 4, Annex III of Council Directive 1999/31/EC on the landfill of waste, although not applicable to this activity, stipulates that a minimum of 3 groundwater monitoring wells (1 upgradient and 2 downgradient) should be installed at landfill facilities which would normally be expected to present significantly higher risks to the environment.

The applicant proposes, as an alternative, to monitor groundwater in 2 of the existing surface water bodies on the former quarry floor which are in hydraulic continuity with the groundwater table for as long as they remain exposed and monitoring of the private groundwater well (Well 1) at the applicant's residence, which would effectively be a third downgradient monitoring well.

The applicant further considers that the requirement to undertake quarterly monitoring and testing for a number of parameters as per Schedule C.2.2 is excessive in light of the environmental record and performance to date and the low level of environmental risk of soil recovery activities undertaken at the site. The applicant requests that the Agency reduce the frequency of monitoring to bi-annually.

Technical Committee's Evaluation: The Landfill Directive (1999/31/EC), though not strictly relevant to this facility, stipulates the minimum requirements for groundwater monitoring – *" at least one measuring point in the groundwater inflow region and two in the outflow region. This number can be increased on the basis of a specific*

hydrogeological survey and the need for an early identification of accidental leachate release in the groundwater."

The Technical Committee notes that this is an unlined facility in a sand/gravel aquifer, with a high vulnerability rating, which supports pumped private water supplies in the area. The applicant made the case for not requiring a liner during the licensing process based on the types of waste to be accepted; uncontaminated natural soils and subsoils. Other than the acceptance procedures, the only indisputable means of demonstrating that the activity is having no adverse impact on groundwaters is to monitor boreholes. It is essential that adequate monitoring be undertaken to enable early detection of any deterioration in quality or change in groundwater levels. Furthermore, it is desirable that the applicant installs sufficient monitoring boreholes at this stage, since verification boreholes will be required upon closure of the facility, as per CRAMP (Condition 10), in order to facilitate surrender of the licence.

The TC considers that in light of the heterogeneous nature of the site, the scale of the site (38.1 hectares), and the proximity of downgradient vulnerable receptors (located at the facility boundary), at least two upgradient and four downgradient monitoring boreholes are necessary to ensure that localised groundwater flow into and out of the site is sufficiently characterised and monitored.

The TC does not consider that the applicant's well (Well 1), adjacent to the site, or the surface ponds, are appropriate downgradient monitoring locations. Notwithstanding this, the TC recommends that monitoring of adjacent private well supplies, (Well 1 and Well 2), as proposed by the applicant, be continued to demonstrate ongoing quality at these vulnerable receptors and analysis submitted to the Agency as part of the Annual Environmental Report (AER). The TC recommends amending *Schedule C, Table C* accordingly.

The TC recommends amending Condition 3.15.1 to reduce the number of downgradient wells to a minimum of 4 and recommends that a new condition, 3.15.2, be inserted to require the submission of a proposal for the location and depths of the three additional monitoring boreholes within twelve months of the date of grant of licence; the locations of boreholes to be reassessed and agreed with the Agency every three years.

In relation to monitoring frequencies, the Technical Committee considers that quarterly monitoring is appropriate and is not unduely onerous for the parameters – Level, Visual Inspection, pH, Electrical Conductivity, Ammoniacal Nitrogen (as N), Chloride and Sulphate. The TC recommends that frequency of analysis for the remaining parameters - Dissolved Metals, Total Petroleum Hydrocarbons, Total PAH and List I/II organic substances - be reduced from bi-annually (or quarterly in the case of Dissolved Metals) to annually.

Recommendation 1: Amend Condition 3.15.1 and insert new Condition 3.15.2 as detailed below. Re-number existing Conditions 3.15.2 and 3.15.3 as appropriate.

3.15.1 The licensee shall provide and maintain at least 2 upgradient and **4 downgradient** groundwater monitoring boreholes at the facility.

3.15.2 The licensee shall submit a proposal for the location and depth (borehole and screen area/level) of groundwater monitoring boreholes GW4, GW5 and GW6 to the Agency for approval within twelve months of the date of grant of this licence. The location of all monitoring boreholes shall be subject to reassessment and agreement by the Agency every three years.

Recommendation 2: Amend *Schedule C*, Table C and *Schedule C.2.2* as outlined below.

SCHEDULE C: Control & Monitoring

Table C: Environmental Monitoring Locations [Note 1]

GROUNDWATER	DUST	NOISE
GW1 (PBH2a) **(upgradient)** [Note 2]	D1	N1
GW2 (PBH1a) **(downgradient)** [Note 2]	D2	N2
GW3 (PBH3) **(downgradient)** [Note 2]	D3	N3
GW4 **(upgradient)** [Note 3]		
GW5 **(downgradient)** [Note 3]		
GW6 **(downgradient)** [Note 3]		

Note 1: These monitoring locations may be amended with the agreement of the Agency under Condition 6.6 of this licence.

Note 2: Monitoring locations as shown on Figure EMP5 *Environmental Monitoring Locations* of the Waste Licence Application documentation.

Note 3: **Monitoring locations to be agreed with the Agency in accordance with Condition 3.15.2.**

Note 4: **The results of any analyses carried out on private well supplies adjacent to the facility shall be submitted to the Agency as part of the AER.**

C.2.2. Monitoring of Groundwater

PARAMETER [Note 1]	GROUNDWATER Monitoring Frequency
Level	Quarterly
Visual Inspection	Quarterly
PH	Quarterly
Electrical Conductivity	Quarterly
Ammoniacal Nitrogen (as N)	Quarterly
Chloride	Quarterly
Sulphate	Quarterly
Dissolved Metals	**Annually**
Total Petroleum Hydrocarbons	**Annually**
Total PAH	**Annually**
List I/II organic substances [Note 2]	**Annually**

Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.

Note 2: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (US Environmental Protection Agency method 525 or equivalent, and pesticides (US Environmental Protection Agency method 608 or equivalent).

A.6 Condition 12.1.1 Agency Charges

The applicant considers that the annual charge of €11,574 is significantly in excess of the annual contribution of €7,269 recommended in the Inspector's Report. The applicant requests that the Agency review this provision and reduce the amount to that recommended by the inspector and points to the annual charge of €6,983 for a nearby inert landfill at Ballymore Eustace operated by KTK Sand and Gravel (W0156-01).

Technical Committee's Evaluation: The annual charges are determined as the contribution deemed necessary to cover the anticipated enforcement and monitoring efforts required for the activity. The anticipated enforcement efforts are adjusted to be appropriate to the scale of the risks associated with the activity.

The Technical Committee notes that the 2008 fee invoiced to the KTK facility (W0156-01) was €9,188 (the charge of €6,983, mentioned in the applicant's objection, relates to the charge stipulated on grant of licence in 2002, which has increased in line with inflation and Agency charges).

The Agency has reduced the inspector daily rates and standard charges that are applied to all licensees for 2009. Taking these reductions into account, the Technical Committee notes that the annual charge may be reduced to €10,408, which the TC considers appropriate for the facility. Table 1 below outlines the adjusted annual charge calculation for this facility:

Table 1. Adjusted annual charge calculation.

Standing Charge [Note 1]	€538
Compliance Assessment	€4,304
Audit & Inspections	€3,228
Sampling & Analysis of Emissions	€2,338
Total	**€10,408**

Note 1: The standing charge is applied in respect of each licensed activity to cover the Agency's enforcement overheads, (e.g. the requirements to maintain and manage files, archiving, maintaining incident/emergency response capabilities, EU enforcement, reporting, laboratory analysis, etc.).

Recommendation: Amend Condition 12.1.1 as follows:

12.1.1. The licensee shall pay to the Agency an annual contribution of **€10,408**, or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Waste Management Acts 1996 to 2008.....

A.7 Condition 3.6 Office Facilities

Condition 3.6 of the PD requires the applicant to provide a site office at the facility. The applicant requests that this condition be amended to allow for the current office to be maintained. The current office is located at the adjoining private residence occupied by its

directors. The applicant further requests that Condition 3.6.2 and Condition 3.6.3 be amended to require that phones and faxes be provided and maintained 'at the facility office' rather than 'at the facility'. The applicant proposes to establish a separate dedicated office within the confines of the site to facilitate members of the public who wish to inspect files and/or obtain information about the facility in accordance with the requirements of Condition 2.2.2.7 of the PD.

Technical Committee's Evaluation: The Technical Committee considers that an office in the adjacent residence is acceptable and recommends that Condition 3.6 be amended accordingly. This amendment shall not affect the requirement in Condition 2.2.2.7 for the applicant to establish and maintain a Public Awareness and Communications Programme to ensure that members of the public can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility.

Recommendation: Amend Conditions 3.6.1 and 3.6.2 as follows and delete Condition 3.6.3 of the Proposed Decision.

3.6.1 The licensee shall provide and maintain a site office at**, or adjacent to,** the facility. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.

3.6.2 The licensee shall **provide and maintain** a working telephone, fax machine and a method for electronic transfer of information **at the site office**.

A.8 Condition 3.16.2 10m Buffer Zone

Condition 3.16.2 requires the applicant to maintain a 10m buffer zone between existing boundary hedgerows and the infilling works. The applicant, while agreeable to this provision in principle, requests amendment of the condition to allow works within the buffer zone only insofar as may be necessary to -

(i) profile the ground surface to provide for overground run-off of surface water rather than create closed depressions or artificial deep ditches immediately inside the site boundary and/or

(ii) better blend the proposed landform into the landscape.

Technical Committee's Evaluation: The Technical Committee agrees that the wording should be clarified to allow for the stated profiling works and recommends an amendment to Condition 3.16.2.

Recommendation: Amend Condition 3.16.2 as follows:

3.16.2 The licensee shall maintain a 10m buffer zone between the existing boundary hedgerows and the infilling works. **This buffer zone may be profiled during site restoration works in accordance with Condition 10.2.**

A.9 Condition 7.1 and Condition 7.2 Energy Audit

The applicant considers that the requirement for an energy audit at the facility is excessive given that almost all energy consumption at the site is related to the operation of diesel powered plant and machinery and that the resulting scope to achieve energy, environmental

and cost efficiencies is extremely limited. The applicant proposes instead an alternative condition requiring it to ensure that all plant and machinery is serviced and maintained on a regular basis and no less than once annually.

Technical Committee's Evaluation: The Technical Committee considers that baseline energy auditing is best practice for any business and may help reduce costs as well as reduce consumption. Legally, the requirement for the carrying out of an energy audit at the facility arises out of the Waste Management Acts 1996 to 2008 which stipulates in Section 40(4)(f) that the Agency shall not grant a waste licence unless it is satisfied that energy will be used efficiently in the carrying on of the activity concerned. The audit shall be concerned with identifying all *practicable* opportunities for energy use reduction and efficiency, including regular servicing and maintenance of plant and machinery as proposed by the applicant. The TC therefore recommends no change.

Recommendation: No change.

A.10 Condition 3.14 Wind Sock

The applicant considers that there is no technical need for a wind sock at the facility and is concerned that having a wind sock may give members of the public the misleading impression that the facility gives rise to environmentally significant emissions to air or that it is a waste disposal or landfill site.

Technical Committee's Evaluation: The requirement to provide and maintain a wind sock is a standard condition for all waste facilities. It is particularly important in relation to complaints management (dust, etc.,) that the public and the Agency have a ready means of identifying wind direction relative to the site and receptors. Therefore, the TC recommends no change to this condition.

Recommendation: No change.

A.11 Condition 4.4 Dust deposition limits ~ Clarification

The applicant requests clarification of the wording of this condition to indicate that dust deposition limits shall apply to 'deposition levels beyond the site boundary'.

Technical Committee's Evaluation: The Technical Committee notes that *Schedule B.5* sets a dust deposition limit of 350mg/m^2/day for a 30 day composite sample at monitoring locations D1, D2 and D3. These monitoring points are located along the boundary of the facility. The TC notes the requirement for a 10 metre buffer zone between boundary hedgerows and infilling works (Condition 3.16.2). This requirement, together with the dust control measures stipulated in Condition 6.13, should enable satisfactory compliance with the dust deposition limits at the facility boundary. The TC recommends amendment of the wording of the condition to clarify that the dust deposition limits apply at the facility boundary.

Recommendation: Amend Condition 4.4 to read as follows:

4.4 Dust from the activity shall not give rise to deposition levels **at the facility boundary** which exceed the limit value.

Finally, the Technical Committee notes the following clerical correction that should be made prior to issue of the Final Decision.

Recommendation: Amend Condition 3.9.1 to read as follows: 3.9.1 The licensee shall provide and maintain a construction and demolition waste recovery area at the facility as described in section 2.2 of the EIS. The **infrastructure** shall include appropriate bunding to provide visual and noise screening.

Overall Recommendation:

It is recommended that the Board of the Agency grant a licence to the applicant

(i) for the reasons outlined in the Proposed Decision and
(ii) subject to the conditions and reasons for same in the Proposed Decision, and
(iii) subject to the amendments proposed in this report.

Signed,

Ciara Maxwell,
for and on behalf of the Technical Committee.