



**OFFICE OF  
LICENSING &  
GUIDANCE**

**REPORT OF THE TECHNICAL COMMITTEE ON  
OBJECTIONS TO LICENCE CONDITIONS**

<b>TO:</b>	Directors	
<b>FROM:</b>	Technical Committee	<b>- LICENSING UNIT</b>
<b>DATE:</b>	17/6/04	
<b>RE:</b>	Objection to Proposed Decision for Hardbog Landfill, Waste Reg: 19-1	

Application Details	
Type of facility:	Landfill
Location of facility:	Hardbog, Grangemockler, Co Tipperary
Licence application received:	11/11/97
PD issued:	31/12/03 (for reconsidered application)
First party objection received:	27/1/04
Third Party Objections received	Two received 27/1/04
Submissions on Objections received:	Three received 25/3/04

### Application

The application is for a new landfill facility accepting 40,000 tonnes per annum. The facility will be an engineered landfill on a greenfield site. The proposed facility comprising some 15.4 hectares is to be located in the townland of Hardbog, approximately 25 km north of Clonmel and 1.6 km to the east of the junction of the N76 and the Ahenny Road. The nearest villages are Grangemockler to the west and Ninemilehouse to the northwest both approximately 1.5km from the site. The nearest residential property is approximately 700 m from the facility boundary and there is a total of five residential properties within 750 m of the edge of the facility. The Ahenny road is used by the local community for walking, cycling, and for movement of livestock. Land and properties owned by The Camphill Community is situated less than 1km to the southwest of the facility, and at the time of the application provided accommodation and training to approximately 45 individuals with special needs.

The history of the processing of the application is well documented in the Inspectors Report to the Board dated 28/11/03 and will not be revisited here.

## Consideration of the Objection

The Technical Committee, comprising of Dr Jonathan Derham (Chair), Ms Pernille Hermansen and Mr Malcolm Doak, has considered all of the issues raised in the Objections and this report details the Committee's comments and recommendations following the examination of the objections.

There were two requests for an Oral Hearing (from third parties). The Board of the Agency considered these requests on 24/02/04; and it was decided not to hold an Oral Hearing.

This report considers the two valid third party objections and the first party objection, as well as three Submissions on Objections. For convenience the objections are referenced as follows:

- A. First Party Objection – Mr J Harney for South Tipperary Co Co (the applicant, STCC in this text).
- B. Third Party Objection – Mr J Teppan, Camphill Communities of Ireland (abbreviated to CCI in this text).
- C. Third Party Objection – Mr J O'Sullivan, Environmental Management Services Ltd., made on behalf of the Grangemockler & Hardbog Environmental Group (abbreviated to GHEG in this text).

These three parties also made submissions on the objections received (following circulation). Where possible, and for clarity any submission on objections made by the parties are dealt with in association with the objection to which they relate.

## First Party Objection

This objection was submitted by Mr J Harney for South Tipperary County Council. The Council comment that they welcome the proposed decision, however object on a number of points citing concern that the licence should be clear, concise and unambiguous. The Objection was prepared by consultants Fehily Timoney & Co on the instruction of the Council.

The GHEG made a submission on the statement by the First Party that the County Council welcome the licence. The GHEG state that they assume this acceptance in principle means that the Council will comply with any licence that may be issued.

### A.1 Activities Licensed

*The objection notes that the name given for licensee in the proposed decision is Tipperary (SR) County Council. This should read South Tipperary County Council.*

Technical Committee's Evaluation: When the applicant made their application the official title of the County was Tipperary (South Riding) County Council. Section 10 of the Local Government Act 2001 provided for the changing of the County Council's name to South Tipperary County Council, on Establishment Day for the purposes of the Act. This day was 1 January 2002 (c.f. SI 591/2001). Any licence issued should reflect this change in name. The

Technical Committee also note that the name of the licensee on the cover of the proposed decision and in the Introduction section should more correctly read South Tipperary County Council.

**Recommendation :** Replace the name of the licensee wherever it occurs in the licence to *South Tipperary County Council*.

### **A.2. Condition 1.5.3**

*The applicant objects to the definition of Animal By-Products in the Interpretation and as controlled by Condition 1.5.3. EC Regulation 1774/2002 supersedes the referenced documents in the Interpretation in relation to the understanding of animal by-products. The new definition is very wide and includes the likes of catering waste. The applicant comments that the banning of all animal by-products will be problematic. They do add that the likes of bone-meal, whole carcasses, etc will not be accepted at the landfill.*

Submission(s) on Objection: The GHEG in a submission on this objection state that wastes such as catering waste, out-of-date food stuffs, etc., should not be allowed in the landfill under EU Landfill Directive obligations, as well as in the interest of disease prevention.

Technical Committee's Evaluation: The new EC Regulation does significantly expand on the understanding of what is to be considered an animal by-product. It is understood that despite the very best efforts of waste separation and waste pre-treatment it will not be possible to prevent some catering waste (for example) from finding its way into the landfill. The EC Regulation along with identifying what are animal by-products also sets out strict criteria for the treatment and disposal of such wastes, including what waste streams are acceptable in a landfill and what treatment is required (if any) prior to landfill disposal. The definition in the glossary should be changed to reflect the new EC Regulation and condition 1.5.3 requires slight modification. In relation to the GHEG concerns it should be noted that the EC Regulation specifically provides for certain waste streams to go to landfill and not to agricultural recovery or similar. This is for the purpose of disease control and food-chain contamination.

**Recommendation:** Amend Interpretation entry for Animal By-Products in the Interpretation to read:

**Animal by-products** As defined in EC Regulation 1774/2002 of 3/10/02 *laying down rules concerning animal by-products not intended for human consumption*, and amendments.

Replace condition 1.5.3 with the following:

*1.5.3 No animal by-products, other than strictly in the circumstances permitted in EC Regulation 1774/2002, shall be accepted at the landfill.*

Insert new 1.5.4 (and renumber existing 1.5.4 to 1.5.5)

*1.5.4 No hazardous wastes, liquid wastes or loads comprising mainly of loose*

*potentially litter forming plastic shall be disposed of at the facility.*

### **A.3. Condition 1.4 and Table A.1 of Schedule A**

*The applicant expresses concern in relation to the inconsistency between the list of wastes in Condition 1.4 and that detailed in Table A.1 of Schedule A as well as the treatment obligations specified in both parts. The applicant states this gives rise to uncertainty. The applicant also raises concern that Footnote 2 to Table A.1 does not permit variation in tonnages of waste types other than Household & Commercial.*

Submission(s) on Objection: The GMHG on this objection comment that the bullet points in condition 1.4 should be reproduced in Table A.1 and not deleted: this to ensure compliance with Landfill Directive pre-treatment requirements.

Technical Committee's Evaluation: There is no need for the four bullet points in Condition 1.4 as all the necessary controls are detailed in Table A.1. The bullets act to emphasise that the wastes are to be pre-treated, but the lists of waste differ from that detailed in Schedule A. Note 1 to Table A.1 adequately covers the pre-treatment requirement, though the derogation for inert waste present in Condition 1.4 is not expressed in the footnote. For practical purposes it should also be possible to vary the individual accepted tonnages, by agreement, for the other waste types accepted at the facility.

**Recommendation:** Replace condition 1.4 with the following:

*Waste activities at this facility shall be limited as set out in Schedule A.*

Add the following text to Note 1 of Table A.1 of Schedule A:

*This provision may not apply to inert wastes for which treatment is not technically feasible nor to any other waste for which such treatment does not contribute to the objectives of the Landfill Directive as set out in Article 1 of the Directive by reducing the quantity of the waste or the hazards to human health or the environment.*

Delete the Note 2 references after the Waste Type entries for Household and Commercial in Table A.1. Replace Note 2 to Table A.1 with the following:

*The tonnage of individual waste types accepted at the facility may be altered with the prior agreement of the Agency provided that the total amount of all wastes accepted at the facility does not exceed 40,000 tonnes per annum.*

### **A.4. Condition 1.5.1 and Condition 5.2**

*The applicant suggests that these conditions duplicate each other. Moreover the applicant comments that the wording needs to be modified to reflect that Local Authority vehicles are excluded (as against exempted) from the requirement to hold a permit. The applicants suggests that condition 5.2 be deleted.*

Submission(s) on Objection: The GMHG in a submission on this objection ask that the condition not be amended as otherwise it could lead to the possibility of any waste disposal vehicle being able to dispose waste at the site.

Technical Committee's Evaluation: The applicant is correct in noting that these conditions duplicate each other. As the condition is more appropriate in the section of the licence dealing with Facility Operation & Waste Management the Technical Committee believe it is more appropriate to maintain the condition 5.2 and delete Condition 1.5.1. Slight amendment to the condition will cater for the 'excluded' local authority collection vehicles (c.f. Section 34 of the Waste Management Acts 1996 to 2003). The concerns of GHEG are not diminished by this clarification, and in any case whether or not a vehicle has the correct documentation does not mean that landfill operator will accept the waste load. The power/obligation to refuse incompatible and non-permitted waste remains with the landfill operator.

**Recommendation:** Delete Condition 1.5.1. In Condition 5.2 add the following text after the word 'permits' where it appears for the first time:

*, unless exempted or excluded,*

#### **A.5. Conditions 3.6.2, 3.17.2, 3.22.2(a) and 3.22.4**

*The applicant notes that these conditions require that certain actions should happen prior to the start of the construction of the site. The applicant notes that there appears to be contradiction and some timing issues with the conditions arising from the wording used. The applicant requests that the conditions be clearer, and they need to acknowledge that some of the conditions are dependent on actions arising from other conditions. Some examples are cited.*

Submission(s) on Objection: CCI & GHEG comment in submissions on this objection that the applicants had no difficulty installing exploration boreholes to date and that it is not 'impossible' to install more (c.f. condition 3.22.2(a)) in advance of the site road. The GHEG comment that the applicant's objection suggests they wish to 'escape' certain requirements regarding provision of infrastructure. The GHEG add that there is no reason why works such as the cattle grid, monitoring boreholes, access road, etc., should not be constructed before construction work on the landfill itself begins.

Technical Committee's Evaluation: It is somewhat of a circular argument for certain conditions which require specified works in advance of construction, when these works themselves are construction activities. In the case of Condition 3.6.2 the intent of the condition is clear and any reasonable reading would give an understanding of what is required, i.e., a cattle grid must be one of the first elements to be constructed in relation to the development of this site. However, for greater clarity a revised text is proposed below. Also a definition of initial development works is included in the interpretation section of the licence. This will bring clarity, and as no specific priority is given, will at the same time allow the applicant certain flexibility in the timing of the individual elements of the initial development works, and in any case before major cell construction earthworks commence.

In the case of condition 3.17.2 it is acknowledged that the text is awkward. The objectives for this condition are similar to those articulated in the preceding paragraph, in that there are clearly some development works that have to be in place early in the construction phase(s) so that adequate protection for the environment and safety is provided. The provision of site roads does not belong in the surface water section of infrastructure; this matter being adequately covered in Condition 3.6.

In the case of Conditions 3.22.2(a) and 3.22.4 clarity can be improved by text amendments similar to those discussed in the previous two paragraphs.

These clarifications do not dilute the concerns of CCI and GHEG in relation to the provision of certain construction works early in the development of the site.

**Recommendation:** Replace Condition 3.2.1 with the following:

*Three months prior to the commencement of site development, the licensee shall submit to the Agency for its agreement a construction schedule, sequence and timescale (Construction Plan) incorporating the requirements of this licence. This Plan shall have regard to the following development phases: (i) Initial Development Works (ii) Main infrastructure development works (pre acceptance of waste for disposal), and (iii) Future/planned works (in parallel with waste disposal, e.g. future cell development/phasing). The Construction Plan for cell development shall have regard to the sequencing necessary to provide medium and long term screening of the completed cells*

Replace condition 3.6.2 with the following:

*The initial development works at the site shall include the installation of a livestock grid at the entrance to the facility. This grid shall be maintained for the duration of the licensed activity.*

Include the following definition in the Interpretation section of the licence:

***Initial development works***      *Means such works, actions or constructions as may be specified, which for the purposes of environmental protection and safe construction and operation of the facility, have to be carried out in the initial stages of site development, and in any case prior to the commencement of construction of the landfill cells.*

Replace condition 3.17.2 with the following:

*The initial developments works at the site shall include construction of surface water retention ponds and associated surface water management infrastructure.*

Replace condition 3.22.2(a) with the following:

*The licensee shall as part of the initial development works for the site, install groundwater monitoring points as specified in Table D.1.1. of Schedule D.*

Replace the first sentence of condition 3.22.4 with the following:

*The licensee shall, as part of the initial development works for the site, install the following:*

....

**A.6. Conditions 3.11, 3.15.1, 3.16.1, 3.22.3, 7.8.1, 7.9, 8.9, 8.17.1, 11.4.1, 11.4.5, 12.2.2, 12.3 & Table D.2.1.**

*The applicant notes that these conditions introduce a range of obligations on the licensee that must be fulfilled/actioned prior to waste activities commencing. However a range of styles of text is used all essentially controlling the same matter – work to be done prior to commencement. To avoid ambiguity the applicant requests that the condition text in all the conditions be altered to state 'prior to the commencement of licensed activities'.*

Submission(s) on Objection: The GHEG submission on this objection agree that there should be no ambiguity. However, they urge that if modifications are to be made there should be no reduction in the effect of the conditions.

Technical Committee's Evaluation: There is in some cases a slight wording difference in relation to works or actions required before waste receiving operations commence at the facility. It is recognised that the textural differences are unnecessary in most cases. In the case of Conditions 3.22.3 and 3.15.1, these are cell development/disposal specific conditions (and not general waste acceptance related condition), and should not change. To use the wording presented by the applicant '*prior to the commencement of the licensed activity*' may also be problematic as all site development works are part of the activities controlled under the licence. These may not involve waste acceptance. The conditions have to be clear whether the condition requires works or actions prior to the acceptance of waste, or to precede certain elements of the site development works.

**Recommendation:** In the case of conditions 3.11, 3.16.1, 7.8.1, 7.9, 8.9, 8.17.1, 11.4.1, 11.4.5, 12.3 and note 1 to Table D.2.1 change the text 'commencement of waste activities' or 'commencement of waste disposal activities' as the case may be, to:

*... commencement of waste acceptance*

In the case of Condition 12.2.2 replace the first part of the sentence with:

*At least six months prior to the commencement of waste acceptance, the...*

**A.7. Condition 3.19**

*The applicant objects to the requirement in Condition 3.19 to have the external road improvement works completed before any site development works. This it is argued is unreasonable and impractical. Some of the initial site development works are*

*small and will not significantly impact on the external road (e.g. monitoring well installation). The applicant also wishes the text in Conditions 3.19.3 and 3.19.4 to be clarified in respect of which road is being referred to (Ahenny Road – Public Road). The applicant acknowledges that it is understood to be the same road but requests clarity on this point.*

Submission(s) on Objection: CCI in a submission on this objection request that the Agency insist on the road improvement works being completed prior to any site works. Their concern is in relation to the safe movement of animals and any impact construction vehicles (and others) will have on farm use of the local road network. GHEG also share the view that the road improvements should be completed as soon as possible and before heavy earthworks. They do not want this condition changed save for allowing works like installation of the monitoring boreholes.

Technical Committee's Evaluation: In respect of Condition 3.19.1 the timing of the upgrade of the external road can be afforded some flexibility in relation to the installation of other initial and small-scale site development infrastructure. In any case the improvement to the public road should precede the main traffic intensive civil engineering works on the site (e.g. construction of internal haul roads and landfill cells).

Condition 3.19.3 is clear in its current construction. Condition 3.19.4 speaks to concerns of landfill related traffic queuing on public roads: and not just the Ahenny road. Some rewording of the condition may assist clarity.

**Recommendation:** Replace the first part of Condition 3.19.1 with the following:

*The program of Initial Development Works for the site shall include the provision of road improvements, and erection of road signage, as described ....*

Replace the second sentence of Condition 3.19.4 with the following:

*No facility traffic shall be allowed to queue on public roads adjacent to the site.*

#### **A.8. Condition 3.21**

*The applicant objects to the requirement in Condition 3.21.1 to have a telemetry based monitoring system in place prior to the operation of the surface water lagoon. The lagoon is one of the first elements to be installed and electricity services may not be supplied to this location in the early development of the site. The applicant would wish to be allowed to undertake manual monitoring and hand operation of the penstock until construction works are sufficiently advanced to allow for installation of the support infrastructure for the telemetry system.*

Technical Committee's Evaluation: The Technical Committee agree with the proposal. The installation of utilities to different parts of a site runs in conjunction with construction of other infrastructure, and not generally in advance of major infrastructure. The continuous monitoring should as a minimum be in place prior to the acceptance of waste for disposal at the site.



**Recommendation:** Replace the first part of Condition 3.21.1 with the following:

*Prior to the commencement of waste disposal activities an appropriate ....*

Delete the last sentence of Condition 3.21.2 (*The monitoring infrastructure ... .. water lagoon*).

Insert a new condition 3.21.3:

*Manual monitoring and operation of surface water discharges/infrastructure by hand during the construction of the facility and prior to the acceptance of waste for disposal, is acceptable.*

Delete the text '*continuous*' where it first appears in Condition 8.8.1.

Delete the last sentence of Condition 8.8.1 as this is already covered in Condition 8.1

Add the following sentence to Note 9 of Table D.6.1:

*Continuous monitoring where specified shall be commenced prior to the acceptance of waste for disposal at the site.*

#### **A.9. Condition 4.1**

*The applicant objects to the wording in Condition 4.1 which does not allow for settlement in the waste mass. The applicant suggests a text amendment.*

Submission(s) on Objection: The GHEG in a submission on this objection note that the pre-settlement height should not be exceeded.

Technical Committee's Evaluation: The applicants point is accepted, though the text suggested is not preferred.

**Recommendation:** Insert the following text before the word 'final' in Condition 4.1:

*... post-settlement ...*

#### **A.10. Conditions 5.8.11 and 7.3**

*The applicant notes that there is a duplication of control in these conditions and further that one of them has a 'where required' qualification on the action specified. The applicant proposes deletion of one of the conditions and a text remedy to allow wheel-wash where required and an exemption for private cars and vans.*

Submission(s) on Objection: The GHEG in a submission on this objection comment that all vehicles, without exception, should use the vehicle wash.

Technical Committee's Evaluation: The duplication is agreed. The exemption for private cars and vans not involved in disposal or construction activities is reasonable, as these vehicles represent a very low nuisance risk. As to the use of the 'where required' qualifier, the Technical Committee are not of the opinion that any vagueness be attached to the necessity to prevent nuisance or pollution from dirty vehicles leaving the site. It is a matter of good practice that all appropriate vehicles exiting the site pass through the wheel cleaner. Condition 7.3 as currently constructed speaks to all the necessary controls and concerns: and furthermore does not capture private vehicles not directly associated with construction or disposal activities.

**Recommendation:** Delete Condition 5.8.11.

Note: On a point of law (c.f. recent smoking in the workplace ban) the Technical Committee recommend the deletion of the last six words in Condition 5.8.12 of the proposed decision.

#### **A.11. Condition 5.9.2**

*The applicant refers to the use of text 'producers who hold a disposal permit', and comment that it is not clear what this permit is.*

Technical Committee's Evaluation: It is not entirely clear whether the condition speaks of a waste collection permit, or a recovery or disposal permit. Moreover, Local authority vehicles carrying sewage sludges to the site do not need either such permits. In fact this condition is not necessary as the requisite controls are adequately addressed in Condition 5.2 (as amended under Objection A.4 above).

**Recommendation:** Delete Condition 5.9.2.

#### **A.12. Condition 6.7.1**

*The applicant objects to the banning of tonal or impulsive noise at the facility boundary. The applicant comments that the use of reversing beepers on site plant and delivery vehicles (H & S requirement) will make compliance with this requirement difficult. The applicants ask that this condition be deleted.*

Submission(s) on Objection: The CCI in a submission on this objection note that the condition as constructed recognises the very sensitive receiving environment. However, CCI note the applicants safety concerns and suggests that reversing beepers be exempted from the condition. The GHEG in a submission on this objection state that the condition should not be diluted. They add that the difficulty facing the Council on this matter attests to the unsuitability of the site.

Technical Committee's Evaluation: It is recognised that 'reversing beepers' are a H&S requirement. It is also recognised that these alarms can be a source of nuisance; particularly at noise sensitive receptors. It may not be possible to

prevent these particular sounds travelling to the boundary, or for that matter occasionally to receptors, nevertheless it is possible to reduce their impact by the use of noise attenuation measures. The wording of the condition can be revised to give some relief to the applicant and at the same time protecting receptors from noise nuisance. The residents will be further protected by inclusion of a definition of noise sensitive receptors in the licence.

**Recommendation:** Replace Condition 6.7.1 with the following:

*The licensee shall ensure that tonal and/or impulsive noise emissions from the facility shall not result in nuisance at noise sensitive receptors.*

Include in the Interpretation section of the licence the following:

***Sensitive Receptor***      *Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of nuisance.*

#### **A.13. Condition 8.7.1**

*The applicant observes that provision of the data specified in this condition is contingent on access to private lands and/or the co-operation of landowners in the area and time-frame specified. The applicants would wish this condition to be amended to reflect this by including text reflecting the 'co-operation' of landowners.*

Submission(s) on Objection: The CCI in a submission on this objection notes that the wording of Condition 8.7.1 already caters for the applicants concerns, and no change is needed. The GHEG also believe there is no need to change this condition.

Technical Committee's Evaluation: The EIA directive provides for similar type of access difficulties by requiring EIS documents to outline 'constraints' in relation to the data submitted. The Agency cannot bind via a licence, a third party (not connected with the licence), to grant access to their lands for licensees: nor is it entirely appropriate to acknowledge in a legal document such as a licence that parties not connected to a licence may not 'co-operate'. The most appropriate mechanism to record data gaps in a report is via a 'constraints' section in said report. Despite the views of CCI & GHEG the Technical Committee believe an amendment to the text of the condition is appropriate; and one which does not diminish their rights or the applicants obligations.

**Recommendation:** Insert a new sentence before the last paragraph of Condition 8.7.1 as follows:

*The drawing should be accompanied by a report documenting any constraints encountered in gathering the specified data. Subject to ....*

#### **A.14. Condition 8.11**

*The applicant objects to the requirement in Condition 8.11 to exclude Badgers from the facility. The applicants note that 'facility' includes the landfill footprint and all the buffer lands. It is also noted that to reduce visual impact the security fence (identified in Condition 3.5.1) will not pass around the perimeter of the facility, but rather around the footprint of the landfill and other key infrastructure [c.f. drawings referenced in Condition 3.5.1]. The applicants comment that there is little value in excluding Badgers from buffer areas not enclosed within the agreed security fence line.*

Submission(s) on Objection: The CCI in a submission on this objection comment that this is the first time that a site fence around the landfill footprint has been mentioned. The CCI comment that there is no proposal regarding this fence available to comment on. The GHEG in a submission on this objection state that there is some concern regarding the possibility of badgers, who may have access to the site, carrying disease out into neighbouring farms. They want the fencing condition to remain and the fence to be made badger-proof.

Technical Committee's Evaluation: The applicant's objection is accepted. As for the submission on this point from CCI the Technical Committee note that a plan location and details for the security fence are presented in, *inter alia*, Figure 3.2 of the EIS; in section D.1 of the licence application documentation (Volume 2 of 4); and in section D of additional information (Article 16) supplied for the waste licence application (received 18 Nov 1998). The concerns of GHEG are noted, and continue to be catered for in the text of the condition.

**Recommendation:** Replace the last word in Condition 8.11 with the following:

*... area to be fenced in accordance with the provisions of Condition 3.5.1.*

#### **A.15. Condition 11.6.1 and Table E.1**

*The applicant notes the contradiction in the reporting deadline for the AER as specified in these two parts of the licence.*

Technical Committee's Evaluation: The reporting for AER's is 31<sup>st</sup> March of every year; to include the relevant data for the previous calendar year or part there-of (since licensed), as may be appropriate.

**Recommendation:** Replace Condition 11.6.1 with the following:

*The licensee shall submit to the Agency for its agreement by 31<sup>st</sup> March of each year (commencing 2005), an Annual Environmental Report (AER) covering the previous calendar year, or part there-of as may be appropriate.*

Amend report submission date for AER in Table E.1 to read:

*31<sup>st</sup> March of each year*

#### **A.16. Condition 12.1.1**

*The applicant objects to the annual fee of €33,526.00 for this licence stating that they consider it excessive. Furthermore the applicants observe that much of the site development work is contingent on the up-grade of the local road, which may take over a year. The applicant suggests a modified fee should be in place for the construction period to reflect the lower Agency workload.*

Submission(s) on Objection: The CCI in a submission on this objection would wish the road improvements to be carried out prior to any other site development works.

Technical Committee's Evaluation: The fee is made up of a number of components – Monitoring, report assessment, and inspection/auditing. The Agency compliance monitoring for surface waters and groundwaters will exist during the construction period, as will the need to review reports submitted which are independent of road improvement works. Also the construction stage of a landfill is usually inspection intensive due to the need to inspect certain key engineering works (e.g. cell construction). Audits are unlikely in the construction period. All-in-all the Agency effort is likely to be less than that when the site is fully operational and accepting waste. It is difficult to accurately predict the level of Agency effort for a construction period that has so many dependencies/variables in relation to progress. That being the case it is proposed that the applicant pay the fee specified in the licence and at the beginning of the subsequent charge year, put in an application for a rebate based on non-expended Agency effort for the previous year (presuming that waste acceptance did not commence in the previous year). No change is therefore necessary.

**Recommendation:** No change.

#### **A.17. Condition 12.4**

*The applicant requires that this condition be clarified to state, explicitly, whether or not the 1% fee includes or excludes the landfill levy.*

Technical Committee's Evaluation: To set the levy as a percentage of the gate fees is not directly proportionate to the level of activity or impact of the landfill. Gate fees will vary depending on the size of contracts, and there are different tax bands depending on the class of waste. So to avoid accounting difficulties and to create a fund proportionate to the level of activity at the site it is proposed the fund be set as a simple proportion of the tonnage of waste received. The rate set herein will yield a fund equivalent to that envisaged in the Proposed Decision.

**Recommendation:** Replace Condition 12.4 with the following:

The Licensee shall pay €1 (Index Linked) for every tonne of waste accepted for disposal in the landfill, into a ring-fenced community support and development fund. Prior to the commencement of waste disposal activities the Licensee shall establish a community managed charitable trust (or equivalent) to manage and discharge this fund for the benefit of the social

and physical environment of the local community.

#### **A.18. Schedule C, Table C.5**

*The applicant objects to the inclusion of a limit on VOC's for the gas flare stack at the landfill. The objection notes a number of examples of similar facilities licensed by the EPA and where such limits do not apply. The applicant suggests that TA Luft Organics levels are used instead.*

Submission(s) on Objection: The CCI in a submission on this objection state that the Agency should not change any of the emission limits stipulated, adding that there are health concerns. The GHEG voice similar concerns in their submission on this objection. They ask that the emission limits be stricter to take account of the vulnerability of the residents of the Camphill Community.

Technical Committee's Evaluation: The make-up of landfill gas is substantially methane and CO<sub>2</sub> with varying concentrations of normal air gases (N & O). Trace mercaptans are usually present which give the characteristic odour. Also some H<sub>2</sub>S can be present if large quantities of Construction & Demolition type waste are present. Irish landfills are not characterised by large quantities of industrial/chemical waste sludges or similar, nor is co-disposal practiced. As a consequence the concentration of non-methane VOC's in the waste is generally very low. The concept of BAT for landfills has evolved over recent years with draft BAT notes published for consultation last year by the Agency. The draft BAT note for landfill specify ELV's for VOC in flare stacks and landfill gas utilization plants. Limits for un-burnt carbon (which would include VOC's) are suggested for the gas flare stack but not the utilization plant. In the 2003 proposed decision for Hardbog the emissions limit schedule (Table C.5) included VOC limits for gas flaring and utilization plants. The issue identified in the BAT note for landfill gas flares in relation to un-burnt carbon is really a matter of combustion efficiency. The EU Landfill directive does not require limits for, or monitoring of, non-methane organics in gas emissions.

Having regard for the nature and composition of the waste proposed for this facility, the EU Directive, recent Agency licence decisions and the draft BAT note for landfills, the Technical committee are not convinced of the need for ELV's for VOC - or for that matter TA Luft Organics - in landfill gas flare and/or utilization plants. An annual VOC screen on emissions for these units would suffice and would generate useful data for the purposes of ongoing review of emissions and the identification of any unusual concentrations of organic chemical compounds. The key issue with these units is that the landfill gases are being burnt off. Combustion efficiency monitoring would therefore be of value for these units. One of the main methods to assess combustion efficiency is by measuring carbon monoxide in the exhaust gas. This parameter is already included in the monitoring requirements for gas flaring/utilization in the Hardbog proposed determination. Retention time in flare combustion units is also key to reducing the occurrence of un-burnt carbon (VOC's etc). The recently revised EPA landfill Monitoring guidance note makes this point. The Monitoring schedule in the Hardbog Proposed Decision should also reflect this best practice. These changes will better inform the operators, the EPA and the local community in relation to the effective management of gas flaring/utilisation units on the site. In relation to health issues it is noted that

the methane emissions from the landfill are chemically identical to the digester methane produced on the Camphill Community campus.

**Recommendation:** Delete the fourth and fifth rows of Table C.5 ('Total VOC's as carbon', and 'Total non-methane VOC's').

In Table D.3.1 in the first column under Process Parameters include the following row:

<b>Retention Time</b>	Annually	Not applicable	Standard method
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#### A.19. Schedule C, Table C6

*The applicant objects to the limits for flow and composition for Leachate in Table C.6. The applicant notes that they do not treat leachate on site and therefore have no control over its composition as such. They also question the environmental purpose of these limits.*

Submission(s) on Objection: The CCI in a submission on this objection comment that the landfill infrastructure such as water retention ponds and leachate lagoons need to be reduced in size to match the scaled down landfill proposal. The CCI also comment that given the applicants stated concern regarding limits for leachate production, the leachate should be treated on-site. The GHEG comment in their submission on this objection that the leachate emissions table should not be deleted.

Technical Committee's Evaluation: The quality of leachate produced at a landfill is influenced by, *inter alia*, the waste types accepted at the landfill, the state of decomposition of the waste, the age of the waste and the climatic/meteorological conditions. The volume of leachate produced is a factor of meteorological conditions, type of waste (dry, sludges, etc), and the manner in which the site is operated (size of operational areas, temporary capping, restoration progress, etc). One of the principal contributing factors to leachate production at an operational site is rainfall, which is outside the control of the applicant. However, the applicant has considered this aspect and included an appropriately sized leachate lagoon based on worst case rainfall data. Condition 5.11.3 of the proposed decision requires that the frequency of removal of leachate be such that there is a minimum freeboard of 0.5m in the lagoons at all times. The requirement in Condition 5.11.1, to maintain leachate head in the cells to maximum 1m on the liner at any time also influences the amount of leachate to be removed to the lagoons and by association from the site. These aspects of control will influence the maximum quantity tankered off in any one day. The only reason to limit the volume of leachate to be removed from the site was if the receiving treatment plant could not cater for greater volumes. The leachate from the proposed facility is intended to go to Clonmel WWTP. The 40m<sup>3</sup> of leachate represents about 0.5% of the daily intake at Clonmel (based on 2002 Urban WW report); which is very small and unlikely to represent a capacity problem for the plant should volumes increase somewhat. There is nothing to stop the landfill operator bringing leachate to

other WWTP's (subject to EPA approval) to prevent overloading at one plant. It is not appropriate to limit the volume of leachate to be tankered off the site.

In relation to the quality of the leachate and the emission limits thereon, such limits will have been informed by the treatability of the leachate at the recipient WWTP. For leachates generated in a landfill, stored in a lagoon and taken by tanker to a treatment works, temperature is a non-issue. There is thus not a need to set an ELV for temperature. The BOD ELV is very low for the acetogenic phase of a landfill (i.e. early stages of burial and degradation) and may be very problematic for a landfill to achieve without some primary treatment on-site. For the other parameters the huge dilutions available at the Clonmel intake will reduce the strength of the leachate considerably. Normal practice is to drip feed the landfill leachate from a holding tank at the municipal WWTP in to the intake for the system, thereby preventing shock loads. There is little a site such as that proposed at Hardbog can do to alter the strength of its leachate (for the waste types to be accepted) short of dilution with fresh water or construction of a treatment system on site. The latter is not proposed at this time.

Given the arrangements in place and the type of operation involved, the Technical Committee are not satisfied that ELV's applied to the leachate tankered off-site for treatment are appropriate, practical, or enforceable.

In relation to the scaling down of the infrastructure there are no proposals from the applicant in that regard received to date. There is an avenue open to the applicant to apply under Condition 3.3 of the Proposed Decision (if granted as a Final Decision) to agree detail of specific technical works. In any event over-design of pollution control facilities such as leachate and surface water lagoons is not necessarily an unacceptable weakness in the proposal.

**Recommendation:** Delete Table C.6.

## Third Party Objections

Two Third Party Objections are considered, for convenience they are labelled:

- B. Mr J Teppan, Camphill Communities of Ireland (abbreviated to CCI in this text)
- C. Mr J O'Sullivan, Environmental Management Services Ltd., made on behalf of the Grangemockler & Hardbog Environmental Group (abbreviated to GHEG in this document)

For clarity any Submission on Objections made by the First Party in relation to the Third Party objections are dealt with in association with the objection to which they relate.



## **B. Mr J Teppan, CCI**

The CCI make a number of points in their objection which is supported by 625 letters signed by individuals who, it is stated, share the concerns of the CCI.

Submission(s) on Objection: GHEG in a submission on this Objection comment that they fully support the concerns expressed by CCI in their objection.

### **B.1. Health issues:**

*The CCI in their objection comment that they have repeatedly highlighted in the submissions made to date, and in the Oral Hearing, that the therapeutic work undertaken at the Camphill Community is sensitive, and furthermore the residents may have low immunological protection thresholds. The CCI refer to medical opinion submitted as part of the licensing process to support their view. The CCI ask that the emission standards set in the licence may not be appropriate for people with lower immunological tolerances. The CCI are concerned that the building of a landfill may close their facility.*

Submission(s) on Objection: STCC comment is a submission on this objection that the proposed landfill is to be a modern well-managed facility. Accordingly some of the concerns raised by CCI in their Objection (and attachments) simply will not arise. Furthermore, casual access to the landfill by residents of the Community is very unlikely given the mandatory security requirements in the proposed licence (fencing, etc). Finally, STCC mention that site traffic is only permitted to use nominated roads, and these are not close to the Community.

Technical Committee's Evaluation: The concerns of CCI in relation to health issues are acknowledged. These issues have been considered throughout the entire period of processing this application, including the Oral Hearing already held for this facility. No new evidence has been brought forward by CCI. In a recently published major study by the UK Government<sup>1</sup> it was concluded that:

*"... we found no consistent evidence that people living close to landfill sites accepting MSW suffered worse health than people living further away from such sites. In particular, we found that the weight of evidence is against any increased incidence of cancers in people living near to landfill sites."*

The CCI residences are located 2km from the proposed landfill, and the nearest lands are 1km away. The Technical Committee are not convinced that the environment for CCI would be compromised to the extent that closure of the facility is inevitable following commencement of waste disposal activities. Located 2km from the landfill, any emissions associated risk to the Community are considered negligible.

The Proposed Decision as drafted includes numerous conditions to limit and manage the emissions and operations at the facility such that in accordance with the principles of BAT any risk to human health and the environment is mitigated. Correct management and vigilant enforcement will ensure the

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<sup>1</sup> Review of Environmental and Health Effects of Waste Management: Municipal Solid Waste and Similar Wastes. Department for Environment, Food and Rural Affairs, London. 2004.

concerns of CCI are addressed through the correct operation of the proposed landfill.

**Recommendation:** No change.

## B.2. Facility Size

*The CCI consider that the limited size of the facility compromises the Agency's view of best practice and the requirement for a 100m buffer zone. CCI contend that the applicants do not have enough land available to them to cater for needs of the County let alone the SE Region. It is suggested that the landfill has only a four year capacity. CCI believe it is not financially viable to incur the costs to develop such a small facility.*

Submission(s) on Objection: STCC deal with the alleged reduced capacity of the landfill in a submission on Objection C.8 below.

Technical Committee's Evaluation: There is currently no statutory guidance for 'buffer' zones around landfills. A buffer or 'cordon sanitaire' is intended to provide space or distance between an activity and a receptor for the purpose of mitigating an actual, potential or perceived impact on that receptor. And not all receptors are sensitive to the same impact. For example, in a landfill situation where potential impacts might include noise, dust, odour, visual, litter, gas migration, leachate, etc.; a receptor such as a commercial tree plantation will not be as sensitive to noise as may a local house. An unlined landfill with no gas collection network may require a larger buffer to afford the necessary risk reduction for a local house than may be the case for a modern facility with full containment and gas venting/collection. So the concept of a buffer will mean different things depending on the circumstance. The distance provided between an identified receptor and a landfill footprint will depend on, inter alia:

- The nature of the waste,
- The design of the landfill (containment, emissions control, etc),
- The landfilling sequence,
- The scale of operations,
- The environmental controls exercised during the operation of the landfill,
- Direction of prevailing wind, groundwater and surface water flow,
- The geology of the area,
- The topography of the area vis-a-vis the elevation of dwellings and the final profile of the landfill,
- The level of screening and landscaping provided,
- The type of receptor,
- Proximity of receptor,
- Etc.,

The landfill is part of an integrated waste management strategy, involving the segregation of recyclables and compostable materials. This will ensure the available void is maximised and a life-span of considerably more than 4 years suggested by CCI assured. With good recycling and recovery rates the life

expectancy for this proposed facility would be expected to be in the order of 15 years. Landfill is a necessary element of an integrated waste management solution for residual materials not possible or suitable for recovery.

**Recommendation:** No change.

### **C. Mr Jack O’Sullivan, Environmental Management Services Ltd., on behalf of the Grangemockler & Hardbog Environmental Group (GHEG).**

EMS writing on behalf of GHEG present a large document in support of its objection. The document contains a deal of information on the history of this application process and on the concerns of the local community groups. Many of the issues raised in the objection are matters of principle in relation to the proposed decision and the basis for that decision, and not in relation to specific conditions or reasons for same. Many of the grounds for objection have previously been considered at the Oral Hearing and at the Board of the Agency and in most cases [objections] no new information has been submitted to merit reconsideration of the decision as a whole or of specific conditions. The objection considers that a number of the licence conditions contradict each other or will be impossible to comply with. These are detailed below. The GHEG conclude that the waste licence should be refused.

#### **C.1 EPA Further Information Issues & EIS**

*This objection is similar to submissions made in relation to the licence determination. GHEG state that the EPA request (of 10 April 2001) for further information (following High Court ruling) was too narrow [buffer zone assessment], and that the request should have opened up the whole site suitability consideration again. GHEG also consider the County Council response on the land-use within 100m of the boundary to be inadequate. GHEG also content that the additional information was inadequate in relation to the EIA Directive requirements. They argue that a new and revised EIS should have been submitted as the original one was flawed.*

Submission on Objection: STCC in a lengthy submission on the objection to the adequacy of the EIS reject the arguments of GHEG. They note that legal provisions were such that the EIS did not have to be revisited under the amended EIA Directive requirements which came into force in Ireland in 1999.

Technical Committee’s Evaluation: The Agency request for additional information was focused on issues in relation to the order of the High Court (buffer issue) and other minor matters. No further information on site suitability was required except in-so-far as it related to the buffer issue. The Agency considered the information supplied by the applicant compliant with the request for information. The matter of the EIS has already been considered by the Agency on both occasions when the recommended Proposed Decision was considered and also by the Chairman of the Oral Hearing. The EIS was considered to be compliant. The objector has not offered any substantive new information to suggest that this decision is flawed. The Technical Committee accept the legal position noted by STCC that for development applications

made under the old EIA requirements, these continue to apply even as the new provisions come into force.

**Recommendation:** No change.

## C.2 Waste Pre-Treatment issues

*GHEG comment that the applicant has not stated exactly how pre-treatment of the waste (in accordance with landfill directive requirements) will be achieved. If these are to be on-site they need to be dealt with in the EIS.*

Submission on Objection: STCC note that treatment can include sorting & segregation as well. The landfill is part of a regional strategy and as a result much of the pre-treatment will be undertaken elsewhere.

Technical Committee's Evaluation: Pre-treatment of the waste streams where practicable will for the most part be undertaken at numerous locations around the region, in accordance with an integrated waste strategy. The processes are designed to reduce the leachate and gas potential of the facility (organic waste removal), and thereby the potential impact of the facility. Condition 1.5.4 requires details of pre-treatment to be agreed in advance. If any on-site pre-treatment is proposed which would be deemed significant, then a licence review and EIS would be highly likely.

**Recommendation:** No change.

## C.3 Health Concerns

*GHEG object to the licence on the grounds that the operation of the facility will detrimentally impact on the vulnerable residents of Camphill Community. GHEG refer to medical concerns raised at the Oral Hearing and in written submission. The objection cites a number of references on the issues of health and waste management.*

Submission on Objection: STCC note that the objection is selective in its quotations. STCC add that a recent article in the Medical Journal (V97,#1) concluded that 'congenital anomalies were not found to occur more commonly in proximity to municipal landfills'.

Technical Committee's Evaluation: This Objection reflects the concerns of Mr Teppan (CCI), see response to Objection B1 above.

**Recommendation:** No change.

## C.4 Farming Impact

*GHEG object to the facility on the grounds that the presence of the landfill and all associated potential impacts (birds, litter, chemicals, ..) will harm the organic farming industry established in the locality. GHEG also raise concerns in relation to the movement of cattle on the roads to be used by landfill traffic and access to fields.*

Submission on Objection: STCC do not accept that the landfill will impact on organic farming. They note that this issue was considered in the EIS and was extensively argued at the Oral Hearing and in submissions. On the issue of the cattle path and movement of animals on the same road used to access the landfill the applicants comment that they will meet or exceed the requirements of Condition 3.19.1 [dealing with this issue].

Technical Committee's Evaluation: The Technical Committee are satisfied that correct management of the proposed facility and compliance with the proposed licence conditions, in addition to the 70m buffer zone, will ensure that any landfill associated risks to farm produce are mitigated. In relation to the movement of cattle, the Technical Committee are satisfied that Condition 3.19.1 as drafted adequately addresses the concerns expressed in the objection.

**Recommendation:** No change.

## C.5 Condition 3.14 Buffer Zone

*The GHEG objection states that a buffer zone of 100m to 150m would be considered as best practice for landfills. They suggest that the buffer zone in the case of this application should be at least 150m. GHEG state that wild animals and vermin entering the landfill will carry biological contamination to neighbouring lands; this risk further underpinning the need for a buffer zone greater than 100m.*

Submission on Objection: STCC state that they are not objecting to the 70 buffer zone specified in the Proposed Decision.

Technical Committee's Evaluation: There is no doubt that the provision of a buffer zone or 'cordon sanitaire' around a landfill within which landfilling is not permitted is a useful and necessary element of modern landfill operation and nuisance control. However as articulated in the Technical Committee response to Objection B.1 above the size of these zones is influenced by many site specific factors. It must be understood that the provision of this zone is not the sole element of mitigation of landfill impact. It should be considered as one element of a composite solution to effective landfill design and management, and in these circumstances the Technical Committee consider that the 70m buffer zone set in Condition 3.14 is appropriate. Other elements include the likes of the lining system, emissions collection and abatement, daily cover, fencing, etc.

**Recommendation:** See recommendation to Objection B1 above.

## C.6 Condition 3.13.5 Hydraulic Trap & Phased Construction

*GHEG contend that the groundwater flow up into the landfill due to the hydraulic trap [base of landfill lower than groundwater table] would result in a leachate management crises in the event of rupture of the landfill liner. GHEG note that Condition 3.13.5 refers to 'the hydraulic trap' and that the 'benefits' of this engineering scenario would not be realised during the phased construction of the cells. The objection comments that unless the groundwater table is maintained below the flexible membrane liner level during construction it would float. This dewatering would negate the 'benefits' of the hydraulic trap. CHEG comment that it is impossible to build the facility in phases and comply with the hydraulic trap concept. Other points are made in relation to the apparent inconsistencies in stated construction with respect to the piezometric surface.*

Submission on Objection: STCC comment that the potential for leachate migration from the facility in the event of a leak is reduced as a consequence of the hydraulic gradient. They suggest that in the event of a large inflow of groundwater to the facility the lagoons may have to be expanded. Such additional works are provided for in the licence.

Technical Committee's Evaluation: The Objection confuses piezometric surface with natural groundwater level. The groundwater at Hardbog is confined; it is contained in the underlying siltstone bedrock which is overlain by up to 23.5m thick of low permeability stiff gravelly clay (permeability range of  $1 \times 10^{-8} \text{m}^3/\text{m}^2/\text{s}$ ). The term piezometric level is a term used to describe an imaginary surface representing the pressure of groundwater and defined by the level to which water will rise in a well<sup>2</sup>. Principally, actual surrounding groundwater levels need to be higher than the base of the landfill if a hydraulic trap is to occur at Hardbog. In effect there is a 'potential' difference between groundwater rest level (piezometric surface) and groundwater in the confined layer. At Hardbog, Groundwater is not 'flowing' upwards through the clay horizon. It is confined by it, as proved by the majority of the investigation bore-holes into the clay which were dry, indicating that groundwater has not breached the seal of the thick deposits of clay.

The design proposed for the facility complies with EU Landfill Directive standards. Moreover, its function and performance is not reliant on the groundwater regime under the site. It is not dependant on the cited 'hydraulic trap' process. Indeed a condition requiring the maintenance of the 'hydraulic trap' implies an ownership of or executive control over the groundwater resource which the applicants do not have. However there is merit in monitoring this matter for the benefit of the construction of the landfill.

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<sup>2</sup> From: Glossary of Hydrology. American Geological Institute, 1998

**Recommendation:** Replace Condition 3.13.5 with the following:

*The licensee shall devise and install, to the agreement of the Agency, a method to monitor hydrostatic pressure on the formation level/liner system for the period of construction and initial filling. This method to include for any appropriate groundwater control for the specified period.*

### **C.7 Condition 3.1.8.2 Groundwater Discharge**

*GHEG argue a hypothetical situation where groundwater contaminated by leachate might be discharged to the surface water lagoons prior to discharge to surface waters. This would cause pollution. Additionally GEHG argue that the construction related pumped groundwater discharges to surface water need to account for winter river flows as construction is a year-round activity.*

Submission on Objection: STCC in a submission on this objection say that the potential for rupturing will be mitigated by groundwater control, and furthermore in the event of a leak leachate will not escape, rather groundwater will enter.

Technical Committee's Evaluation: The first concern is in relation to the possibility of leachate contaminated pumped groundwater being discharged untreated to surface waters. The scenario advanced is hypothetical, nevertheless Conditions 6.1 and 6.2 are notable in that they prohibit the discharge of unapproved effluent/water streams and also prohibit the pollution of the environment by emissions from the site. It is submitted that these controls adequately address the concerns of the Objector.

**Recommendation:** No change.

### **C.8 Condition 3.14.1 - Landfill Void/Capacity**

*GHEG comment that the stipulated buffer zone reduces the available void for the site to sub-economic levels. The objection supports its point by reference to detail in the application and supporting documentation, or assumptions derived therefrom. They conclude that the landfill would be full in four years.*

Submission on Objection: STCC in a submission on this objection dispute the calculations and assumptions made by GHEG. They conclude that the available void is in keeping with that stated in the Proposed Decision.

Technical Committee's Evaluation: The Technical Committee are not convinced of the arguments of GHEG on this point. While it is accepted that there will be some reduction in available void due to the buffer zone, it is considered that many of the GHEG assumptions are too conservative in relation to void availability (e.g. compaction density, daily cover thickness, use, etc.,).

**Recommendation:** No change.

### **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 determination and
- (ii) subject to the conditions and reasons for same in the Proposed Determination,
- and
- (iii) subject to the amendments proposed in this report.

Signed

Dated

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Dr Jonathan Derham  
for and on behalf of the Technical Committee