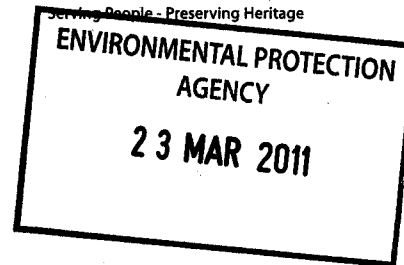
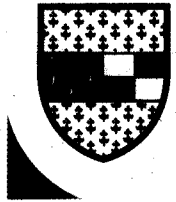


21st March 2011



Environmental Licensing Programme
Environmental Protection Agency
P.O. Box 3000
Johnstown Castle Estate
Co. Wexford.

Re: **Dunmore Landfill Waste Licence No. W0030-02, Condition 1.2 – Request for Technical Amendment**

Dear Sir/Madam

Kilkenny County Council requests a technical amendment to Condition 1.2 of Waste Licence No. W003-02 and the background to this request is set out below.

In requesting the technical amendment Kilkenny County Council notes that all landfilling operations at Dunmore have ceased and the landfill has been fully capped in accordance with the EPA licence requirements.

Condition 1.2 of EPA Licence W0030-02 states the following:

For the purposes of this licence the facility is the area of land outlined in red on Drawing No. 2000-112-01 Rev. A – Site Plan of the application. Any reference in this licence to 'facility' shall mean the area thus outlined in red'.

In support of our request for a technical amendment I attach the following for information:

- Technical Report prepared by Fehily Timoney and Company on foot of discussions with the Office of Environmental Enforcement.
- Kilkenny County Council correspondence to the Office of Environmental Enforcement dated 27th January 2011.
- Office of Environmental Enforcement correspondence to Kilkenny County Council dated 7th March 2011.

In summary the technical amendment proposes the consolidation of the facility area which is subject to the requirements of the licence. The proposed facility area is illustrated on Drawing No. LW1011201-001 as detailed in Appendix 1 of the Fehily Timoney Report.

Kilkenny County Council, with the consent of elected members, proposes to lease approximately 10 acres of lands to Kilkenny County Board (GAA) for the purposes of pitch development. The proposed lands to be leased are also illustrated on Drawing No. LW1011201-001. OEE correspondence dated 7th March 2011 confirms that, while there are no OEE objections to the proposed relocation of some monitoring points and the provision of ongoing access to all monitoring points associated with the

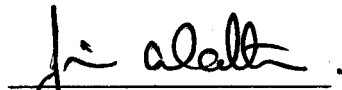
licence, there is a requirement to seek a technical amendment to the licence boundary in order that our aims can be fulfilled in this matter.

It is also noteworthy that, any proposed development on the subject lands will be subject to the provisions of the Planning and Development Acts 2000-2010.

The Fehily Timoney Report concludes that the proposals will not provide for an increase in or changes to emissions from the landfill. In addition ongoing monitoring of the landfill site is facilitated by way of relocation of 4 monitoring points and the provision of unrestricted monitoring access to all 19 monitoring points which will be located outside the proposed, revised licence area. Such provision will be included in any lease contract for the lands.

In conclusion therefore Kilkenny County Council requests a Technical Amendment to Condition 1.2 of EPA Waste Licence W0030-02 providing for a revision to the licence area as described above. Such revision, we consider, facilitates both the ongoing protection of the landfill containment system and landfill monitoring requirements, whilst allowing for after-use measures to be advanced, all consistent with EPA Guidelines for landfill restoration and aftercare.

Yours faithfully


Simon Walton
Senior Engineer
Roads

c.c. Philip O'Neill, Director of Services, Water Services & Environment.

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**WASTE LICENCE BOUNDARY AMENDMENT
DUNMORE LANDFILL, COUNTY KILKENNY
WASTE LICENCE REF. NO. W0030-02
ORIGINAL
KILKENNY COUNTY COUNCIL**

User is Responsible for Checking the Revision Status of This Document

Rev.Nr.	Description Changes	of	Prepared by	Checked by	Approved by	Date
0	Issue to Client		AR/MG	SM <i>SM</i>	<i>AS</i>	31.01.11

Client: Kilkenny County Council

Keywords: Waste Licence Amendment, landfill, Dunmore

Abstract: This document describes the proposed amendment to the waste licence 'red line' boundary at Dunmore Landfill, Kilkenny.

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Drawing LW10-112-01-001	Site Layout
Drawing LW10-112-01-002	Existing Monitoring Locations
Drawing LW10-112-01-003	Proposed Revised Monitoring Locations

1 INTRODUCTION

1.1 Preamble

Kilkenny County Council (KCC) intends to lease a portion of their landholding at Dunmore Landfill to the Gaelic Athletic Association (GAA) for the construction of a playing pitch and associated infrastructure. In order to facilitate this, it is proposed to revise the waste licence boundary to omit the leasable lands from the licensed boundary.

Following discussions with the Environmental Protection Agency (11th November 2010), it has been agreed that KCC will make two submissions to the Agency, as follows:

- Phase 1 – Describe the background to the proposal and the implications for the landfill, specifically addressing the slope stability assessment, identification of the waste footprint in relation to the proposed 'red line' boundary, an assessment of monitoring locations which will be affected by the proposal and an assessment of the impacts of the proposal on the restoration and aftercare plan for the site.
- Phase 2 – following review of the Phase 1 submission, and additional consultations with the EPA if required, a formal application will be made to the EPA for a change of licence boundary.

This report constitutes the Phase 1 submission. KCC has retained Fehily Timoney and Company (FTC) to prepare this submission on their behalf.

It should be noted that development of the playing pitches will be subject to development consent being granted by Kilkenny County Council. The GAA (Kilkenny County Board) will submit a planning application to Kilkenny County Council in respect of this development. This report does not in any way purport to seek development consent for this proposed development.

1.2 Background

Kilkenny County Council has operated a landfill at Dunmore since 1989. A waste licence (Reg. No. 30-1) was issued to the Council for the facility on 23rd November 1999. A revised licence (W0030-02) was issued to the Council in 2002.

Landfilling at the site ceased in January 2010. Capping of Cells 13 and 14 commenced in September 2010 and is now substantially complete, save for some top soiling and grass seeding which is due for completion in March 2011.

It is now proposed to revise the waste licence site boundary to facilitate the leasing of lands to the GAA for the development of a playing pitch and associated infrastructure.

Drawing LW10-112-02-001 shows the existing site layout, together with the current waste licence boundary and the proposed revised waste licence boundary.

2 STABILITY ASSESSMENT

2.1 Introduction

2.1.1 Site Description

The site is located within the River Nore Valley, approximately 5km north of Kilkenny City and bounds the main N77 road.

The original site comprised former sand and gravel quarries, known locally as O'Neill's Pit and Roche's Pit. The Council commenced waste landfilling operations in 1989. O'Neill's pit was developed and landfilled first. The Council acquired adjoining land (Bergin's) and continued its landfilling operations in this section until 1997. Landfilling commenced in the area known as Roche's Pit in summer 1997. The extended site is on agricultural land adjoining the existing site.

Local topography is undulating. Land use in the surrounding area is mainly agricultural and includes livestock, dairying and tillage.

A large gravel pit and concrete manufacturing plant operates on adjoining lands to the south of the facility. Private domestic residences in the vicinity are concentrated at Dunmore village and at Heneberry Cross Roads with other houses and residential farms dispersed along the public roads in the area.

Cells 8, 9, 10, 11 and 12 located within the south-west corner of the site have recently been re-graded and capped. Cells 13 and 14 at the north-western section of the site were active at the time of the topographical survey.

2.1.2 Slope Stability Analysis Method

SLOPE/W software of GEO-SLOPE International Ltd. was used to assess the stability of Dunmore landfill waste embankment. SLOPE/W is a general software tool for the slope stability analysis of earth structures. It uses the limit equilibrium method of analysis by using the idea of dissecting a potential sliding mass into vertical slices. It assesses the factor of safety for both, moment and force equilibrium based on various methods, including Bishops, Janbu and Morgenstern-Price.

Using this software, it is possible to deal with complex stratigraphy, highly irregular pore-water pressure conditions, a variety of linear and nonlinear shear strength models, virtually any kind of slip surface shape, concentrated loads and pressure lines. Limit equilibrium formulations based on the method of slices are also being applied more and more to the stability analysis of structures such as tie-back walls, nail or fabric reinforced slopes, and even the sliding stability of structures subjected to high horizontal loading arising, for example, from ice flows.

Traditionally, the factor of safety is defined as that factor by which the shear strength of the soil must be reduced in order to bring the mass of soil into a state of limiting equilibrium along a selected slip surface. The results of the analysis show the overall stability of the embankment expressed as a factor of safety. The definition of factor of safety used within SLOPE/W is:

$$F = \frac{\text{Available restoring moment (or forces)}}{\text{Total disturbing moment (or forces)}}$$

2.1.3 Limitation of Slope Stability Analyses

Shear strength parameters for landfill waste have been estimated based on parameters used by Kolsch (1995) and Thomas *et al* (1999).

Ground water in landfills may occur in irregular perched bodies as opposed to interconnected liquid bodies. For the purposes of this analysis a general leachate level has been considered in analyses.

2.1.4 Factors Controlling the Stability of Landfill Slopes

The factors controlling the stability of landfill slopes are:

- Slope geometry
- Geology
- Properties of the landfill wastes
- Properties of the supporting soil
- Groundwater/leachate levels within the waste
- Groundwater levels in the supporting soil
- Surcharge.

2.2 Design Criteria

2.2.1 Slope Geometry

Using the latest topographical survey prepared by Focus Surveys Ltd. typical cross-sections through the waste slopes of the site were taken at the locations shown on Drawing LW1011201_001 which is included in Appendix 1. The side slopes analysed were within recently capped slopes along the proposed amended boundary.

Slope A - A is approximately 9 m high, 46 m long and has a maximum slope of 1:1.6 (vertical : horizontal) along the middle part of the slope but typical slopes of 1:2.

Slope B - B is approximately 5 m high and 56 m long, with a maximum slope of 1:1.8 (vertical : horizontal) near the toe of the slope and typical slopes of 1:2.

Slope C - C is approximately 6 m high and 49 m long, with a maximum slope of 1:1.4 (vertical : horizontal) near the toe of the slope and typical slopes of 1:2.

All three sections are presented on Figures 3.1 to 3.3.

2.2.2 Geology

Information pertaining to the subsurface stratigraphy at the cell locations was obtained from site investigation data contained within a Hydrogeological report prepared by K.T. Cullen dated March 29, 1988 and from Trial Pits excavated in February 2005 by FTC during the Phase 2 capping process of the Dunmore landfill facility.

From the information obtained, it is understood that the site is underlain predominantly by a silty clay and/or sandy clay till unit overlying a sandy gravel deposit.

The slope cross-sections were created in Slope/W with the underside of the waste being near elevation 50.5 mAOD. The waste was then modelled with a 500 mm thick gravel bedding layer underlain by a 1 m thick clay liner and covered by a 1 m thick clay capping layer. The clay liner was modelled overlying the native Clay Till, which extended to a thickness of 1m. This native clay was then underlain by sandy gravel.

2.2.3 Waste Parameters

Table 2.1 below shows the parameters used for the landfill waste materials.

Table 2.1: Shear Strength Parameters for Waste Materials

Material	Waste (Old)	Waste (Fresh)
Cohesion (c')	10 kN/m ²	10 kN/m ²
Effective friction angle (ϕ')	22°	15°
Unit weight γ	11 kN/m ³	9.5 kN/m ³

The parameters shown in Table 2.1 are the typical ranges of values from published papers on the properties of waste. The published data suggests that the old waste parameters may be adopted after a period of about seven years. For the purpose of this analysis, the more conservative figures for fresh waste have been adopted for Slope A-A located within the more recently filled cells and the parameters for old waste have been used for Slopes B-B and C-C which are located in cells which have been filled for at least 8 years.

Design values for use in the slope stability analyses have been derived using IS EN-1997-1 Design Approach 3. This design approach is considered to be the most logical approach for slope stability analysis as it includes partial factors for both material properties and variable loads (for example traffic loads). Table 2.2 shows the partial factors have been applied to the characteristic values to give the derived parameters used during the SlopeW analysis as presented in Table 2.3.

Table 2.2: Partial Factors Used to Derive Design Parameters

Set	Partial Factor	Parameter
M2	$\gamma_{c'}$	1.25 Effective cohesion
	$\gamma_{\phi'}$	1.25 Effective angle of friction
	γ_{γ}	1 Soil density
A2	γ_Q	1.3 Traffic Loading (variable unfavourable)
R3	$\gamma_{R;e}$	1 Earth resistance

Table 2.3: Design Parameters for Waste materials

Material	Old Waste	Fresh Waste
Cohesion (c')	8 kN/m ²	8 kN/m ²
Effective friction angle (ϕ')	17.6°	12°
Unit weight γ	11 kN/m ³	9.5 kN/m ³

2.2.4 Properties of the Supporting Soil and Capping Layer

Table 2.2 below shows the typical parameters used for the clay capping, gravel base, clay liner, underlying native clay and sandy gravel.

Table 2.2: Shear Strength Parameters for Supporting Materials

Material	Clay Capping	Gravel Base	Clay Liner	Native Clay	Sandy Gravel
Effective Cohesion, c' , kN/m ²	4	0	1	2	0
Effective Friction angle, ϕ'	29°	35°	26°	29°	35°
Bulk unit weight, γ , kN/m ³	18	22	19	19	21

Table 2.3 shows the design parameters which have been derived using the partial factors given in Table 2.2.

Table 2.3: Design Parameters for Supporting Materials

Material	Clay Capping	Gravel Base	Clay Liner	Native Clay	Sandy Gravel
Effective Cohesion, c' , kN/m ²	3.2	0	0.8	1.6	0
Effective Friction angle, ϕ'	23.2°	28°	20.8°	23.2°	28°
Bulk unit weight, γ , kN/m ³	18	22	19	19	21

2.2.5 Groundwater and Leachate levels in the Supporting Soil

The leachate level within the cells is generally maintained at 0.5 to 1 m above the clay liner through pumping. The slope stability sections have been modelled using a leachate level of 1.5 m above the clay liner.

2.2.6 Surcharge

All the analyses considered the movement of traffic by the use of a surcharge of 20 kN/m² at the top of the slope. Applying a partial factor of 1.3 as per IS EN 1997-1 Design Approach 3 (variable, unfavourable action), a design load of 26 kN/m² has been applied to the models.

2.2.7 Slope Stability Analyses

Slope stability models were run for three representative sections to assess the slope stability of the landfill waste embankment. The results of these analyses are summarised in Table 3.1 with factors of safety calculated for Bishop, Janbu and Morgenstern-Price methods. Table 3.1 also gives the location of each slope, the make-up assumed (including material parameters applied where relevant), the groundwater level simulated, and the length of the relevant slip. A constant surcharge 26 kN/m² was used for all the analyses.

A typical slope analysis for each slope and presented graphically in Figures 2.1 through 2.3.

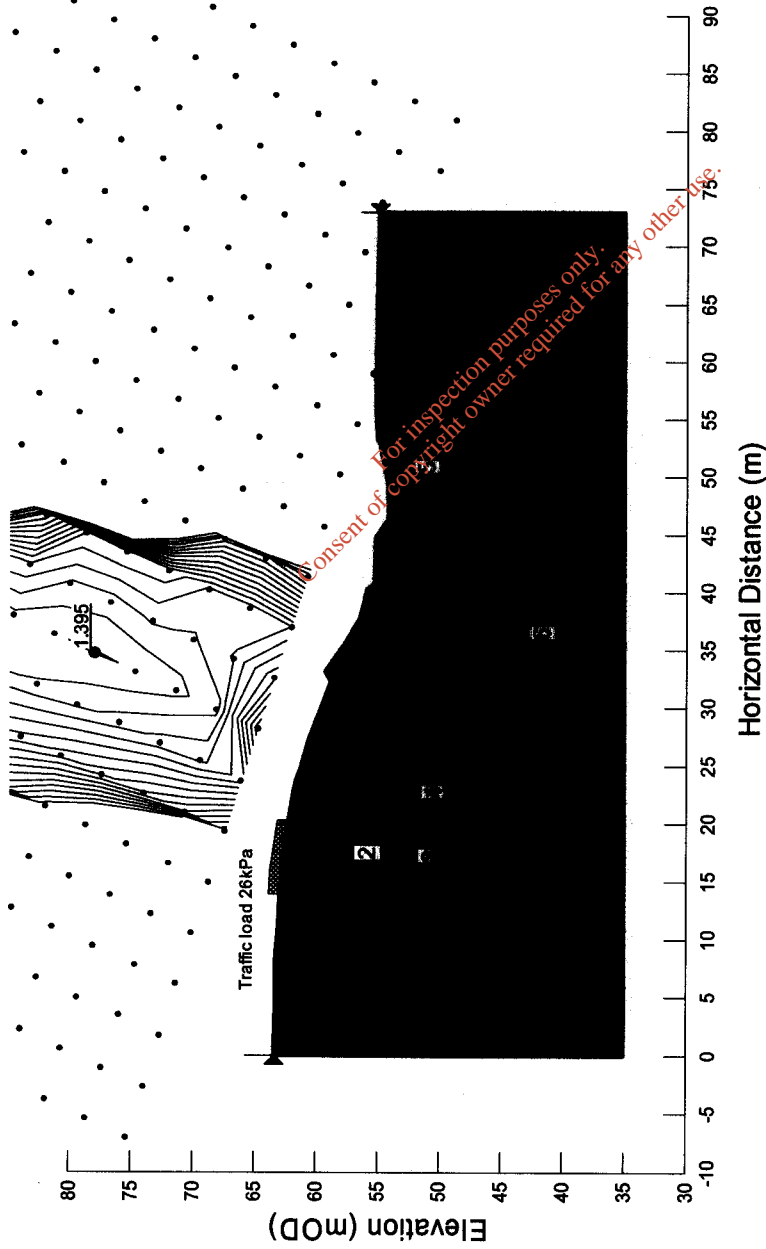
2.2.8 Factors of Safety

Factors of safety for potential slope failures ranged from 1.03 to 2.94. By adopting the methods of analysis given in IS EN 1997-1, the factor of safety against failure is included in the partial factors applied to the analysis rather than to the end result. Hence, a factor of safety below 1.0 indicates that the slope has an insufficient factor of safety against failure in the long term. A factor of safety of 1.0 or greater indicates that the slope is considered stable.

Table 2.3: Slope Analysis Results

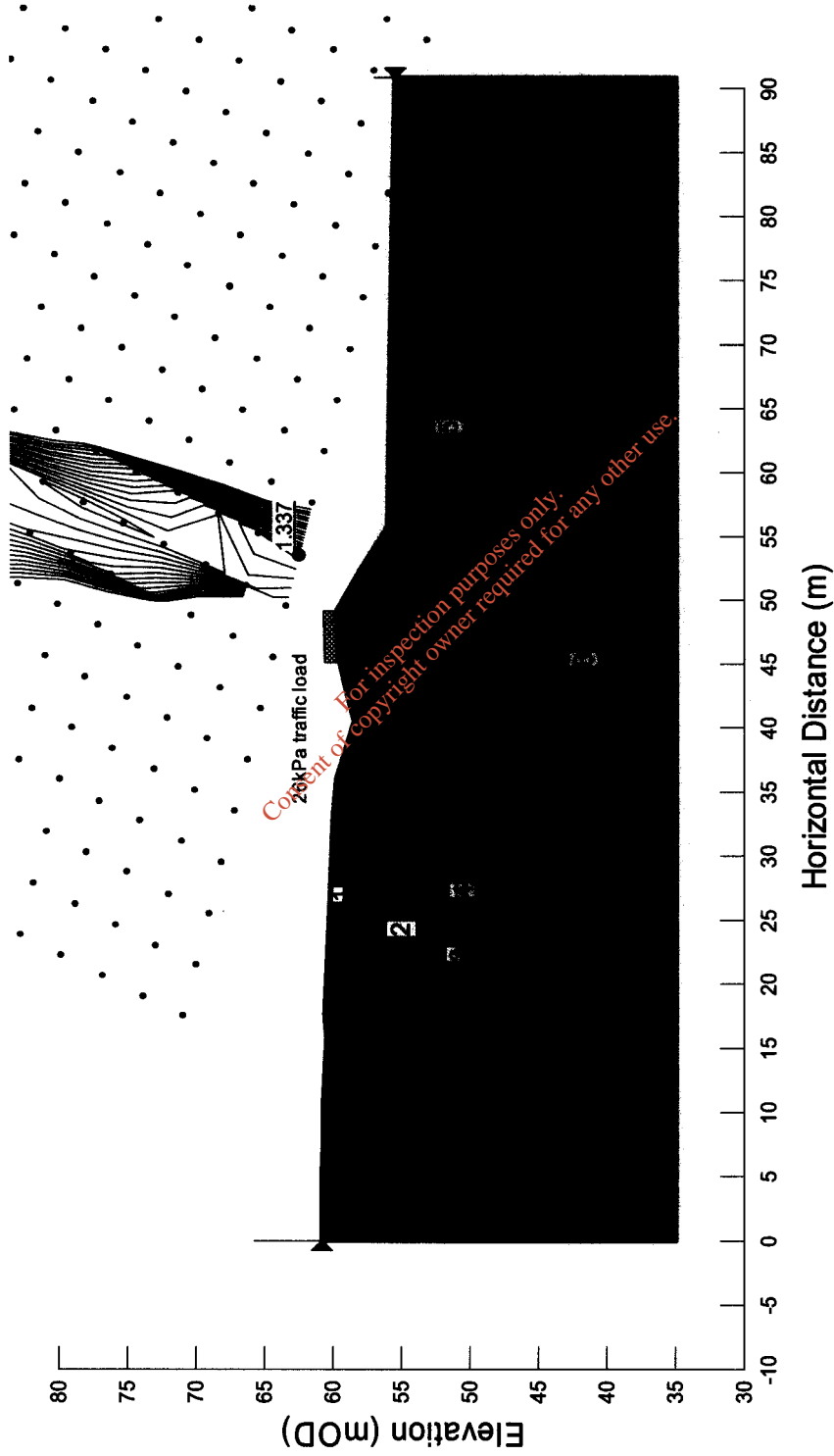
Slope Name	Waste Description	Groundwater Table	Design Factor	Factor of Safety	Factor of Safety	Factor of Safety	Failure Mode
A-A	10,9,5,15 (Fresh waste)	1.5 m above clay liner (52 mOD)	1.39	1.39	1.25	28	Deep rotational slip in capping and waste
	10,9,5,15 (Fresh waste)	1.5 m above clay liner (52 mOD)	1.18	1.19	1.03	6	Shallow rotational slip in capping
B-B	10,11,22 (Old waste)	1.5 m above clay liner (52 mOD)	1.34	1.34	1.14	10	Deep rotational slip in capping and waste
	10,11,22 (Old waste)	1.5 m above clay liner (52 mOD)	1.24	1.24	1.29	8	Shallow rotational slip in capping
C-C	10,11,22 (Old waste)	1.5 m above clay liner (52 mOD)	2.94	2.93	2.65	16	Deep rotational slip in capping, waste, liner and clay
	10,11,22 (Old waste)	1.5 m above clay liner (52 mOD)	1.16	1.16	1.14	4	Shallow rotational slip in capping

Figure 2.1: Typical deep slope failure for Slope A-A with groundwater level 1.5 m above liner, 52mOD (fresh waste, Morgenstern-Price method)



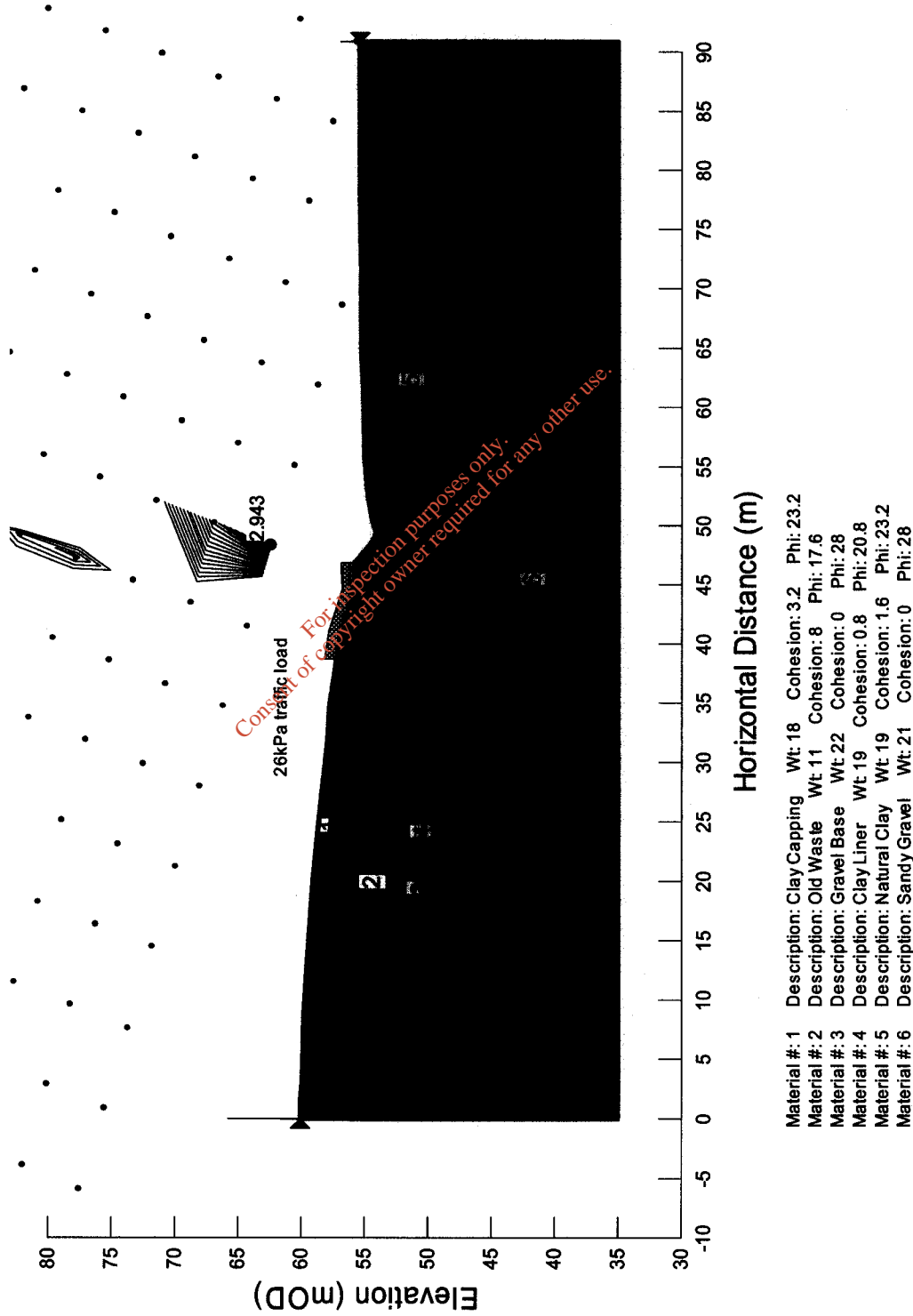
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Figure 2.2: Typical deep slope failure for Slope B-B with groundwater level 1.5 m above liner, 52mOD (old waste, Morgenstern-Price method)



Material #: 1	Description: Clay Capping	Wt: 18	Cohesion: 3.2	Phi: 23.2
Material #: 2	Description: Waste	Wt: 11	Cohesion: 8	Phi: 17.6
Material #: 3	Description: Gravel Base	Wt: 22	Cohesion: 0	Phi: 28
Material #: 4	Description: Clay Liner	Wt: 19	Cohesion: 0.8	Phi: 20.8
Material #: 5	Description: Natural Clay	Wt: 19	Cohesion: 1.6	Phi: 23.2
Material #: 6	Description: Sandy Gravel	Wt: 21	Cohesion: 0	Phi: 28

Figure 2.3: Typical deep slope failure for Slope C-C with groundwater level 1.5 m above liner, 52mOD (old waste, Morgenstern-Price method)



Material #:	1	Description:	Clay/Capping	Wt:	18	Cohesion:	3.2	Phi:	23.2
Material #:	2	Description:	Old Waste	Wt:	11	Cohesion:	8	Phi:	17.6
Material #:	3	Description:	Gravel Base	Wt:	22	Cohesion:	0	Phi:	28
Material #:	4	Description:	Clay Liner	Wt:	19	Cohesion:	0.8	Phi:	20.8
Material #:	5	Description:	Natural Clay	Wt:	19	Cohesion:	1.6	Phi:	23.2
Material #:	6	Description:	Sandy Gravel	Wt:	21	Cohesion:	0	Phi:	28

2.3 Discussions and Conclusions

Out of the six case scenarios analysed, factors of safety range from 1.03 to 2.94, with all six scenarios having factors of safety greater than 1.0, as required for long-term stability of permanently capped slopes when analysed in accordance with IS EN1997-1. As discussed in Section 2.8, by adopting the methods of analysis given in IS EN 1997-1, the factor of safety against failure is included in the partial factors applied to the analysis rather than to the end result. Hence, a factor of safety below 1.0 indicates that the slope has an insufficient factor of safety against failure in the long term. A factor of safety of 1.0 or greater indicates that the slope is considered stable.

The factor of safety for slope A-A ranges from 1.03 to 1.39. This slope can therefore be considered stable provided that leachate levels are monitored and maintained.

The factor of safety for slope B-B ranges from 1.14 to 1.34. This slope can therefore be considered stable provided that leachate levels are monitored and maintained.

The factor of safety for slope C-C ranges from 1.14 to 2.85. This slope can therefore be considered stable provided that leachate levels are monitored and maintained.

The potential failure planes observed show both deep-seated failure planes through the waste in addition to small-scale shallow failures. The lengths of the potential rotational slips are in the range of 10 to 28 m, whilst the shallow translational type slips are in the range 4 to 8 m.

On the basis of the analyses presented, the landfill side slopes analysed are considered stable providing that leachate levels are regularly monitored and prevented from rising to levels above the maximum levels permitted under the licence conditions.

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3 ADDITIONAL CONSIDERATIONS

3.1 Extent of Waste Footprint

The approximate extent of the waste footprint along the eastern boundary of the site has been determined through an examination of historical topographical surveys and record drawings from previous works contracts at the site. Information from site personnel has also been used in the development of the extent of waste line. The interpolated extent of waste line is shown on Drawing LW10-112-01-001 in blue.

The proposed revised waste licence boundary is indicated on Drawing LW10-112-01-001. The revised boundary is typically 10 -15 m (minimum distance of 2.75 m) from the interpolated extent of waste line.

3.2 Assessment of Existing Monitoring Points

Existing monitoring points are shown on Drawing LW10-112-01-002. A number of existing monitoring points which currently lie within the waste licence boundary will be located outside the proposed revised waste licence boundary.

These monitoring points are as follows:

Table 3.1: Monitoring Locations outside revised waste licence boundary

Monitoring Point	Description	Existing	Revised	Action
NS1	Noise Monitoring	249,725	160,830	Access to be provided
NS2	Noise Monitoring	249,852	160,740	Access to be provided
NS3	Noise Monitoring	250,006	160,593	Access to be provided
NS4	Noise Monitoring	250,003	160,571	Access to be provided
NS5	Noise Monitoring	249,981	160,896	Access to be provided
DG2	Dust Monitoring	249,700	160,638	To be relocated 15 m due west & access to be provided
DG5	Dust Monitoring	249,940	160,588	Access to be provided
GM4	Gas Monitoring (Perimeter)	249,867	160,441	Access to be provided
GM10	Gas Monitoring (Perimeter)	249,900	160,467	Access to be provided
GM11	Gas Monitoring (Perimeter)	249,930	160,497	Access to be provided
GM12	Gas Monitoring (Perimeter)	249,930	160,535	Access to be provided
GM13	Gas Monitoring (Perimeter)	249,900	160,568	To be relocated 50 m due west inside revised WL boundary
GM14	Gas Monitoring (Perimeter)	249,879	160,632	To be relocated 15m due south & access to be provided
GM16	Gas Monitoring (Perimeter)	249,820	160,707	Access to be provided
GM21	Gas Monitoring (Perimeter)	249,751	160,443	To be relocated 20 m due west & access to be provided
GM22	Gas Monitoring (Perimeter)	249,764	160,401	Access to be provided
GM23	Gas Monitoring (Perimeter)	249,811	160,374	Access to be provided
GW2	Groundwater Monitoring	249,867	160,440	Access to be provided
Upstream A	Surface Water Monitoring	249,978	160,617	Access to be provided

Of the monitoring points listed above, the bulk will be kept in their existing locations with a wayleave to facilitate monitoring and inspection. Where the monitoring locations will be affected by the proposed development, they will be replaced either inside the revised waste licence boundary, or outside the boundary (again with a wayleave for access).

The relocation of some monitoring points will mean that trending of monitoring data over years may not be possible. However, in terms of the data collected, the information obtained from new wells will add to the information gathered over the previous years of monitoring at the site.

Drawing LW10-112-01-003 shows the proposed revisions to the monitoring locations at Dunmore Landfill.

3.3 Restoration and Aftercare Plan

Original restoration and aftercare proposals were submitted to the Agency in 2001 as part of a waste licence application. Details of the proposed restoration and aftercare plans have also been included in Annual Environmental Reports submitted to the Agency.

The current restoration and aftercare status is as follows:

- Cells 1 to 7 have been fully capped with an impermeable cap, which has been grass-seeded and landscaped.
- Cells 8 to 10 have been capped with an engineered capping system. Again, this cap has received grass-seeding.
- Cells 11 to 12 have been capped with an engineered capping system, and grass-seeded.
- Capping of Cells 13 and 14 commenced in September 2010 and is now substantially complete, save for some top soiling and grass seeding which is due for completion in March 2011.

Remaining areas of land will be restored as woodland/grassland and managed by specialist forestry management firms under contract with KCC.

The proposed waste licence boundary revision will mean that some areas originally proposed for restoration as woodland/grassland may now be developed as playing pitches with associated infrastructure. In addition, the area to the east of the entrance road (which was originally proposed for restoration as woodland, will require paving/hardstanding areas for car parking for users of the playing pitches.

The EPA's Landfill Manual "Landfill Restoration and Aftercare" details a number of proposed after-use options for landfill sites, including amenity use for sporting purposes. Development of the pitches will be carried out in accordance with the guidance published in this manual. All such proposals will be subject to development consent being granted by Kilkenny County Council, in accordance with the Planning and Development Regulations.

4 SUMMARY

Kilkenny County Council proposes to lease a portion of land at Dunmore Landfill to the GAA for development as playing pitches. This will require a change to the current waste licence boundary.

Fehily Timoney & Company considers that this is a viable option for the following reasons:

- Slopes adjacent to the proposed revised waste licence boundary have been subjected to a detailed stability assessment which indicates that the slopes can be considered stable.
- The waste body does not extend into the land to be leased to the GAA, and lies entirely within the proposed revised waste licence boundary.
- Any works that may be carried out by a third party in the leased lands will not impact on the integrity of the landfill containment system.
- Environmental monitoring at the site will continue using existing or redeveloped monitoring locations.
- The proposed development of the leased land as playing pitches meets the Agency guidelines for proposed after-use as set out in the EPA Landfill Manual "Landfill Restoration and Aftercare".

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5 REFERENCES

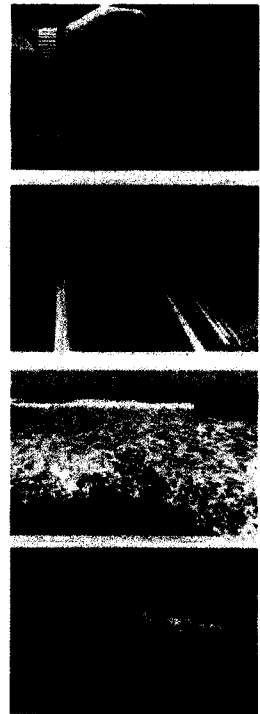
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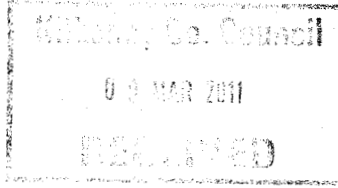
Appendix 1

Drawings

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07/03/11

Our Ref: W0030-02/ GC17ID

Dear Mr Walton,

I refer to your correspondence dated 27/01/11, received by the Agency on the 07/02/11, in relation to your request for approval for a change to the original Restoration Plan;

1. To amend the site boundary of the Dunmore Landfill facility to facilitate a proposal to lease a portion of the site to the Gaelic Athletic Association for the construction of a playing pitch and associated infrastructure, and
2. To relocate 4 monitoring points (DG2, GM13, GM14 & GM21) which will be impacted by the proposed development, and
3. A further 15 monitoring points will be located outside the amended site boundary but access will be provided.

The approval is sought under Condition 1.2 of the Waste licence W0030-02.

This proposed change to the site boundary, (1. above), cannot be accommodated under Condition 1.2 of your licence.

A Technical Amendment (Section 96(1) of the EPA Acts/Section 42(B) (1) of the Waste Management Acts (WMA)) or a Review of your licence (Section 90(1) of the EPA Act/Section 46(8) of the WMA) will be required to provide for the proposed changes.

To determine if the proposed change can be accommodated by Technical Amendment you should submit the following information to the Agency's Environmental Licensing Programme (ELP), EPA, P.O. Box 3000, Johnstown Castle Estate, Co. Wexford:

- Details of the requested change(s)
- Reasons for the change(s) requested
- Details of any increase or changes in emissions resulting from the change(s)
- An assessment of the likely impacts of any increase/changes in emissions

If the alteration is considered to be a significant change and cannot be accommodated by a Technical Amendment, then the ELP section will notify you of the process for applying for a Review.

With regard to the relocation of the monitoring points DG2, GM13, GM14 & GM21, this is to the satisfaction of the Agency and can be accommodated under the existing Licence Condition 8.2 providing that the new locations are demonstrated to be representative of emissions from the site.



The proposal to retain access to the other 15 monitoring points identified in the proposal which will be located outside the proposed site boundary is also to the satisfaction of the Agency and can be accommodated under Licence Condition 8.2, provided that the monitoring points retain integrity and remain representative of emissions from the site, and are adequately protected during the development works.

Please quote the above reference in any future correspondence in relation to this matter.

Yours sincerely

A handwritten signature in black ink, appearing to read "Irene Doyle", is written over a horizontal line.

Irene Doyle
Office of Environmental Enforcement

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27th January 2011

Ms. Irene Doyle,
Office of Environmental Enforcement,
Regional Inspectorate,
Seville Lodge,
Callan Road,
Kilkenny.

**Re: Proposed surrender of lands from Licence No. W0030-02
Dunmore Landfill Site, Co. Kilkenny.**

Dear Ms. Doyle

I refer to the above and to our meeting dated Thursday 11th November 2010 in connection with same.

To advance the surrender of the relevant lands from the current E.P.A. Licence, the Agency requested the following:

- The submission of a surrender application to the O.E.E. based on a risk assessment of the issues arising from the proposed surrender
- Once the surrender application details are agreed with the O.E.E., Kilkenny County Council will seek to secure the surrender of the lands from the licence by way of a Technical Amendment application to the E.P.A. Licensing Section.

In dealing, at this stage, with the specific matters pertaining to the surrender application to the O.E.E. I note that we were requested to address a number of issues of concern to the Office of Environmental Enforcement and specifically the following:

- Slope Stability Report for Cells 13 and 14.
- Survey of retained landfill area relative to proposed area to be surrendered from licence.
- Relocation of monitoring points to facilitate surrender of lands from licence and/or protection of access to existing monitoring points to facilitate ongoing licence monitoring obligations.
- Variances of proposals with the Restoration Plan submitted with the licence application.

In response to the matters raised I attached for your information and attention report entitled 'Waste Licence Boundary Amendment, Dunmore Landfill' completed by Fehily Timoney & Company on behalf of and in consultation with Kilkenny County Council.

In summary the Report provides for the following:

- Slopes associated with Cells 13 and 14 are considered stable.
- The waste boundary and entire landfill area remain within the revised, proposed licence area. Furthermore the boundary of the proposed lease area ensures no potential for impact on the landfill arising from works on this boundary.
- Some environmental monitoring points require relocation and access to all monitoring points will be facilitated by way of design of the proposed lease area and the inclusion of specific wayleaves providing access to monitoring locations within the proposed lease area.
- Proposals are consistent with the provisions of the EPA landfill Manual 'Landfill Restoration and Aftercare'.

In conclusion I respectfully request your consideration of our proposal, all with a view to advancing matters towards the submission of a technical amendment application to EPA Licensing.

Yours faithfully

Simon Walton
Senior Engineer
Roads

c.c. Carol McCarthy, A/Senior Engineer, Environment Section, Kilkenny County Council.

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