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## Attachment A: Non-technical Summary

### A. Introduction

The Waste Licence Review Application is concerned with the restoration and infill of a quarry located at Hollywood Great in North County Dublin. The facility operates as an inert landfill facility under EPA Licence W0129-01.

The Applicant is Murphy Environmental, a registered trading division of Murphy Concrete (Manufacturing) Ltd (MCM).

The Waste Licence Review Application has been prepared in conjunction with an EIS and planning application (Ref F07A/0262), which was granted by Fingal County Council on the 31<sup>st</sup> of May 2007. The permission approved the infill of an extended quarry area, and at an increased rate per year in order complete the restoration project within 15 years as per previous planning permission granted on the 7<sup>th</sup> of October 2004 (Ref. F04A/0363).

An EPA Waste Licence (No. W0129-01) controlling the restoration and infill of the quarry was issued in December 2002. The area covered by this application was 13.56 hectares and permission was sought to provide fill to the quarry at a rate of 340,000 tonnes per year. Since the grant of Waste Licence W0129-01 in 2002, Murphy Environmental has put in place the necessary infrastructure and systems to implement the Waste Licence and appropriately manage the facility. The Hollywood site was the first privately-operated landfill to receive accreditation to ISO14001, the international standard for Environmental Management Systems.

This Waste Licence Review Application seeks permission from the Agency to extend the landfill footprint of the facility, in line with the quarry footprint and to increase the rate of infill to 500,000 tonnes per annum.

There are no proposed changes to waste types or activities, although the Application makes provision for "Class 5, Waste Disposal Activities" as per the Waste Management Acts, 1996-2007, for "specially engineered landfill, including placement into lined discrete cells, which are capped and isolated from one another and the environment".

### B. General

Murphy Environmental (a division of Murphy Concrete (Manufacturing) Ltd.) is currently operating a facility located at Hollywood Great, Nags Head, Naul Co. Dublin under EPA Waste Licence No. W0129-01.

It is proposed that the facility will be licensed to extend its infill area and accept up to 500,000 tonnes of waste per annum. Only inert waste will be accepted at the facility. The location of the facility is shown on **Map 1**.

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**Waste Management (Licensing) Regulations 2004**

The information required by Article 12(1)(u) of the Waste Management (Licensing) Regulations, SI 395 of 2004 is as follows:

***(a) Name, address, telephone and fax numbers of the applicant, the address to which correspondence relating to the application should be sent and, if the applicant or operator is a body corporate, the address of its registered office or principal office***

The Waste Licence Review application is being made by Murphy Environmental (a registered trading division of Murphy Concrete (Manufacturing) Ltd. (MCM)). The existing Waste Licence (W0129-01) holder is Murphy Concrete (Manufacturing) Ltd. Murphy Environmental was established as a trading division of MCM for the purposes of managing and operating the EPA Waste Licence and all waste-related activities. Murphy Environmental was formally registered as a trading division of MCM in February 2003.

Throughout the application documentation, "Murphy Environmental (a registered trading division of Murphy Concrete (Manufacturing) Ltd." is hereinafter referred to as "Murphy Environmental".

*Facility address and contact details (also the address for correspondence):*

Murphy Environmental  
Hollywood Great  
Nags Head  
Naul  
Co. Dublin  
Tel: 01 8433744  
Fax: 01 8633747  
Email: [patricia\\_rooney@murphyenvironmental.ie](mailto:patricia_rooney@murphyenvironmental.ie)

*Address of principal office of body corporate:*

Murphy Concrete (Manufacturing) Ltd  
6 Hampton Place  
Balbriggan  
Co. Dublin  
Tel: 01 8412827  
Fax: 01 8412547

***(b) Name of the planning authority in whose function area the relevant activity is or will be carried on***

The planning authority is Fingal County Council. This review is in accordance with an appropriate planning consent, Ref. F07A/0262.

***(c) In the case of discharge of any trade effluent or other matter (other than domestic sewage or storm water), give the name of the sanitary authority***

No discharge to sewer is proposed.

***(d) Location or postal address and the National Grid reference of the facility***

The facility address is Hollywood Great, Nags Head, Naul, Co. Dublin. The grid reference is E315723 N258073.

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**(e) Describe the nature of the facility, including the proposed capacity, and in the case of an application in respect of the landfill of waste, the requirements specified in Annex 1 of the Landfill Directive**

The facility is an existing EPA-licensed inert landfill facility (Waste Licence No. W0129-01). This Waste Licence Review Application seeks to extend the landfill footprint, in line with quarrying activity to attain full restoration and reinstatement of the site. The existing licence (W0129-01) permits the acceptance of 340,000 tonnes of inert waste per annum. This Waste Licence Review Application seeks to increase this to 500,000 tonnes per annum.

The requirements specified in Annex 1 of the Landfill Directive are discussed in detail in this Application and accompanying EIS, including site location, water control and leachate management, protection of soil and water, gas control, nuisances and hazards, stability and barriers.

**(f) Class or classes of activity concerned**

The proposed classes of activity in accordance with the Waste Management Acts 1996-2007 are as follows:

**Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts 1996-2007**

Class 1: **Deposit on, in or under land (including landfill):**

This activity is limited to the deposition of inert material.

Class 5: **Specially engineered landfill, including placement into lined discrete cells, which are capped and isolated from one another and the environment:**

This is the principle activity. This activity is limited to the deposition of inert waste in lined landfill cells. [Principal activity]

Class 13: **Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced:**

This activity is limited to storage of unacceptable wastes in a designated area pending their dispatch to appropriate disposal facilities.

**Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996-2007**

Class 3: **Recycling or reclamation of metals and metal compounds:**

This activity is limited to provide for the recovery of limited amounts of metal waste delivered to the facility with Construction & Demolition waste. Recovered metals shall be dispatched onwards to appropriate recovery facilities. Metal waste is not acceptable for disposal at this facility.

Class 4: **Recycling or reclamation of other inorganic materials:**

This activity is limited to the recovery of inert material for use in site development and site restoration works.

Class 13: **Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced:**

This activity is limited to the storage of wastes for recovery purposes at this facility (e.g. stockpiles of soil) and the temporary storage of unacceptable waste types such as timber and metal pending their dispatch to appropriate recovery facilities.

The proposed class of landfill in accordance with Article 4 of the Landfill Directive is "landfill for inert waste".

**(g) Specify, by reference to the relevant European Waste Catalogue (EWC) codes as presented by Commission Decision 2000/532/EC of 3 May 2000, the quantity and nature of the waste or wastes which will be treated, recovered and disposed of**

Is it proposed to accept up to 500,000 of inert waste tonnes per annum at the facility. It is proposed that, as per existing arrangements, any waste which is proven to be inert and in compliance with Waste Acceptance Criteria will be acceptable; therefore no listing of EWC codes is proposed.

**(h) Specify the raw and ancillary materials, substances, preparation, fuels and energy which will be utilised in or produced by the activity**

Fuel for machinery and equipment, and energy in the form of electricity for lighting and site buildings requirements will be used. Details are provided in this Application.

**(i) Plant, methods, processes, ancillary processes, abatement, recovery and treatment systems and operating procedures for the activity**

Plant and processes are described in Attachment D; treatment and abatement systems are discussed in Attachment F.1. The facility has developed detailed Waste Acceptance and operational procedures. This management system has been verified as meeting the requirements of ISO14001, the international standard for Environmental Management Systems.

**(j) Paragraphs (a) to (g) of section 40(4) of the Act**

Section 40(4) of the Waste Management Acts 1996 to 2007 states that the Agency shall not grant a waste licence unless it is satisfied that the following points have been complied with:

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*(a) any emissions from the recovery or disposal activity in question ("the activity concerned") will not result in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value, prescribed under any other enactment*

The facility will be managed and operated to minimise environmental impact. Environmental monitoring is conducted for dust, surface water, groundwater and noise to ensure that relevant emission limit values are not exceeded.

*(b) the activity concerned, carried on in accordance with such conditions as may be attached to the licence, will not cause environmental pollution,*

The facility currently holds an EPA Waste Licence, No. W0129-01. All the conditions of this licence are adhered to and any additional conditions will also be adhered to.

*(bb) if the activity concerned involves the landfill of waste, the activity, carried on in accordance with such conditions as may be attached to the licence, will comply with Council Directive 1999/31/EC on the landfill of waste*

The facility holds ISO:14001 accreditation, the international standard for Environmental Management Systems. This system ensures legal compliance with all relevant legislation. All proposals, SEWs etc made to the Agency in relation to site development works and/or operational issues are referenced to the requirements of the Landfill Directive.

*(c) the best available technology not entailing excessive costs will be used to prevent or eliminate or, where that is not practicable, to limit, abate or reduce an emission from the activity concerned,*

A significant capital investment has been made at the facility to eliminate or control emissions, e.g. surface water management system, concrete hardstanding, wheelwash, bowsers, sprinkler systems, settlement ponds, etc.

*(cc) the activity concerned is consistent with the objectives of the relevant waste management plan and will not prejudice measures taken or to be taken by the relevant local authority or authorities for the purpose of the implementation of any such plan.*

Section 19.2 of the Dublin Region Waste Management Plan 2005-2010 outlines the following objectives in relation to C&D Waste Infrastructure Requirements:

- Provision of additional C&D Waste Recycling Facilities in the Region for recycling of C&D waste – including separation of materials, and crushing/grading of rubble for re-use as aggregate.
- Fingal County Council propose to establish a C&D waste recycling facility at Kilshane Cross as part of an integrated recycling facility
- Provision of facilities to cater for delivery of C&D waste by small-scale producers.
- Additional facilities in the Greater Dublin Region to cater for C&D waste, at existing quarries and other suitable locations – these should include front-end removal & recycling of recoverable waste, and limited to disposal of non-recoverable waste (soil) only.
- Use of soil material for beneficial use where possible, in preference to disposal. Examples of beneficial use include: landfill restoration, amenity projects (parks, golf courses), quarry reinstatement, major reclamation/ infill projects that have been approved in planning.

- Restriction on the placing of C&D waste in Permitted sites on agricultural land, in favour of full processing. The only material that will be considered is clean soil, and only where alternative larger authorised facilities are not already in place. The full cost of regulation will be recovered by the Local Authority.
- Promote the use of large construction sites as suitable locations for temporary recycling facilities for the duration of site works.

As a significant facility for the Dublin Region, the Hollywood facility provides an important outlet for the disposal of inert Construction & Demolition material, in a facility operated in line with best practice in environmental and operational control. The facility also serves to reinstate and restore a quarry.

*(d) if the applicant is not a local authority, the corporation of a borough that is not a county borough, or the council of an urban district, subject to subsection (8), he or she is a fit and proper person to hold a waste licence,*

Murphy Environmental currently hold two EPA Waste Licences, Hollywood (W0129-01) and Gormanston (W0151-01). Both of these facilities are ISO:14001 accredited. No offences under the Waste Management Act 1996 to 2005 have occurred at either facility.

*(e) the applicant has complied with any requirements under section 53.*

The Applicant in Attachment J has addressed financial commitments and liabilities.

*(f) energy will be used efficiently in the carrying on of the activity concerned*

The facility will not be an intensive energy-user. Energy is monitored and reported to the Agency on an annual basis as part of the AER.

*(g) any noise from the activity concerned will comply with, or will not result in the contravention of, any regulations under section 106 of the Act of 1992*

Regular noise monitoring is conducted to ensure that noise emission limits are complied with, see Attachment F.6.

***(k) Particulars of the source, location, nature, composition, quantity, level and rate of emissions arising from the facility and, where relevant, the period or periods during which such emissions are made or are to be made***

See Section E.

***(l) Details, and an assessment of the effects, of any existing or proposed emissions on the environment, including any environmental medium other than that into which the emissions are, or are to be, made***

See Section I.

***(m) Monitoring and sampling points and indicate proposed arrangements for the monitoring of emissions and the environmental consequences of any such emissions.***

See Section F.

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**(n) Proposed arrangements for the prevention, minimisation and recovery of waste arising from the activity concerned**

Non-conforming waste or waste generated on site (e.g. office waste paper, general municipal waste) will be transported only by licensed hauliers, and with the prior approval of the Agency, for recycling or disposal, as appropriate.

**(o) Proposed arrangements for the off-site treatment or disposal of solid or liquid waste**

Non-conforming waste or waste generated on site (e.g. office waste paper, general municipal waste) will be transported only by licensed hauliers, and with the prior approval of the Agency, for recycling or disposal, as appropriate.

**(p) Existing or proposed measures, including emergency procedures, to prevent unauthorised or unexpected emissions and minimise the impact on the environment of any such emission**

See Section J.

**(q) Proposed measures for the closure, restoration, remediation or aftercare of the facility concerned, after the cessation of the activity in question**

See Section K.

**(r) Financial provision as is proposed to be made by the application and such charges as are proposed or made**

See Section K.

**(s) State whether the activity is for the purpose of an establishment to which the European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulation 2000 apply**

Not applicable.

**(t) In the case of an activity which gives rise or could give rise to an emission into an aquifer containing List I and II substances, describe the existing or proposed arrangement necessary**

There liner system detailed in Section D.3 will prevent emissions to groundwater. Furthermore, due to the inert nature of the wastes involved, harmful leachates/runoffs will not be produced.

**(u) Include a non-technical summary of the information provided in accordance with paragraphs (a) to (t) of this sub-articles**

As per Attachment A.

## C. Management of the Facility

Murphy Environmental employs a skilled and experienced team of waste management professionals to manage all aspects of the facility. The management team includes a General Manager for Murphy Environmental, a Facility Manager at Hollywood and an Assistant Facility Manager. An office team is in place, which has responsibility for operating the weighbridge and office/administration duties. The operations team prepare the site for the deposition of inert materials, direct and control incoming vehicles in restoration areas, and manage restoration activities, under direction from the Facility Manager. Murphy Environmental's consultant teams further support the company.

Murphy Environmental has put in place an Environmental Management System (EMS) at the site to help manage its environmental issues and records. A documented EMS is required under Condition 2.3 of the existing Waste Licence (W0129-01); however, Murphy Environmental is going beyond these requirements and has developed an ISO 14001:2004 Accreditation Certificate EMS. Mr. Dick Roche, T.D., Minister for the Environment, Heritage & Local Government presented Murphy Environmental with the ISO 14001 Award in April 2005.

The following are the opening hours prescribed under the existing licence W0129-01. No changes are proposed as part of the Waste Licence Review Application.

Hours of Operation: 7.00am to 7.00pm Monday to Friday  
7.00am to 5.00pm Saturday

Waste Acceptance Hours: 8.00am to 6.00pm Monday to Friday  
7.00am to 4.00pm Saturday  
No waste acceptance on bank holidays.

In accordance with Article 14 of the Landfill Directive (1999/31/EC), a Conditioning Plan is not required at the facility, as the Waste Licence (W0129-01), was issued in 2002, post the transposition of the Directive.

## D. Infrastructure and Operation

### D.1 Infrastructure

In accordance with EPA licence conditions (W0129-01) and EPA Landfill Manuals, the following infrastructure works have been completed at the site since the issue of the Waste Licence in 2002.

- Hardstanding Areas
- Weighbridge
- Wheelwash
- Bunded Fuel Storage Areas
- Waste Quarantine Area
- Waste Inspection Area
- Services and Lighting
- Traffic Control
- Sewage and Surface Water Drainage Infrastructure
- Plant sheds, garages and equipment compound

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- Site Accommodation
  - Fire Control System, including water supply

Additional/revised infrastructure proposed for the purpose of the Waste Licence Review Application includes additional perimeter fencing/boundary treatment along new facility boundaries and ongoing development of site roads.

There will be no civic amenity or composting infrastructure on site.

## **D.2 Operation**

The site is an active shale and limestone quarry. Extraction is continuing in the north and south of the quarry. Crushing and screening activities are conducted by Murphy Concrete (Manufacturing) Ltd. on-site.

The site is currently licensed to accept 340,000 tonnes per annum of inert construction & demolition and inert dredging spoils. The planning permission granted in May 2007 allows an extended area to be infilled, at an increased rate of 500,000 tonnes per annum. Operationally, these permissions are subject to this EPA Waste Licence Review Application.

Restoration of the site will continue to be completed on a phased basis, involving the construction of lined landfill cells. Restoration works will be completed in agreement with the EPA and in line with best practice outlined in the EPA Landfill Restoration Manual.

A Waste Placement Procedure has been developed for the Hollywood Landfill. This sets out waste placement processes for the Hollywood facility and outlines the basis by which areas of the landfill site is delineated into cells and phases. This procedure is reviewed on an annual basis. It is not proposed that there will be changes to this procedure in relation to the Waste Licence Review Application.

## **Emissions to the Environment**

### **Air - Dust**

The quarry void at Hollywood acts as a natural defence against dust migrating from the site towards the surrounding landscape. A number of specialist pieces of infrastructure have been purchased for the site to alleviate the problem of dust/mud. These include a roadsweeper, wheelwash, bowser and sprinklers, which have made a significant contribution towards keeping the roads and air clean in the area surrounding the site. It is not expected that dust levels will increase as a result of the proposed extension of the landfill footprint.

It is suggested that a combination of dust/mud control measures available at the site will be adequate to maintain any increased dust emissions associated with increased truck movements. This will be verified by ongoing dust monitoring and reporting to the Agency. Murphy Environmental must comply with dust emission limit values as prescribed by the EPA in Waste Licence W0129-01.

### **Noise**

The noise generated on site at present is due to quarrying activities and the landfilling of inert waste. This is not expected to increase with the additional tonnages to be accepted. There are currently 3 noise monitoring points in accordance with the current Waste Licence W0129-01. It is proposed that the number of monitoring points is increased to 5 following the Review of Waste Licence.

### **Groundwater**

Emissions to groundwater are estimated to be minimal due to very low permeability lined landfill cells. The nature of the emissions would generally pose a low environmental risk. There are currently 7 groundwater-monitoring boreholes on-site; it is proposed that the number of monitoring wells will increase to 9 following the Review of Waste Licence.

### **Surface Water**

Settlement ponds, constructed in the north of the site, regulate the discharge of surface water runoff to the stream running along the northern boundary of the site. Operation of the settlement ponds will continue following review of the Waste Licence.

### **D.3 Liner System**

Three engineered cells have been constructed at the site to date. A Specified Engineering Works (SEW) proposal is submitted to the EPA for approval before commencement of construction of the landfill cells and methodologies as per the EPA Landfill Site Design Manual are followed. Fill material sourced on-site was used to provide a level surface, upon which a clay lining was laid to a thickness of over 1 meter. The clay lining material (glacial overburden till) that overlies the bedrock formations was sourced on site. This glacial material, commonly known as "blue clay", yielded a co-efficient of permeability of less than  $1 \times 10^{-10}$  m/sec.

It is proposed to repeat this clay lining procedure for all new and additional cells to be engineered on the site. Full details on the construction of new cells will be agreed in advance with the Agency as an SEW. Murphy Environmental will employ a competent, independent engineer to supervise construction. Murphy Environmental will submit results of permeability, testing, leak detection surveys, etc. to the Agency prior to filling.

### **D.4 Leachate Management**

At present, Leachate from each of the monitoring points (three in number in July 2007) is assessed, from a quality perspective on a bi-annual basis. It is not proposed that this will change as a consequence of the review.

It is expected, when capping of the site is complete, that the generation of leachate will effectively be terminated. At that point, it is expected that leachate levels will be minimal, as a consequence of the Operational Leachate Management Plan. It is thus proposed that assessment of the leachate levels, in all monitoring points, be undertaken on a reduced basis (annually is proposed) at that point.

### **D.5 Landfill Gas**

Gases are generally generated in a landfill as a consequence of the anaerobic biodegradation of organic matter in the deposited waste. Household waste is generally 30 to 40% organic material.

The types of wastes that can be accepted at the site are governed by the EPA Licence and are restricted to inert wastes, which do not produce significant volumes of landfill gas.

Therefore, the potential for and the amount of landfill gas generated will be insignificant and monitoring is not proposed. However in accordance with Licence Condition 3.14.1 of the current Waste Licence (W0129-01), all existing and new boreholes will be designed to also facilitate landfill gas monitoring.

The landfill will continue to be an inert landfill and therefore the landfill gas generated will remain insignificant and monitoring is not proposed.

#### **D.6 Capping System**

The restoration layer will comprise a 0.5m subsoil layer and 0.5m topsoil layer, in accordance with the EPA Landfill Restoration Manual. Restoration will take place progressively as the development phases are completed, in consultation with the EPA as an SEW (Specified Engineering Work) and in line with best practice outlined in the EPA Landfill Restoration Manual. Murphy Environmental will employ a competent, independent engineer to supervise and assess capping.

It is proposed that the capping system will remain unchanged for this Waste Licence Review Application.

### **E. Emissions**

#### **Emissions to Surface Water**

The four potential discharge points are as follows:

SWD1: Water discharge after flowing through silt trap/oil interceptor

SWD2: Water pumped from base of quarry (Discharge currently inactive, but may be required again in future)

SWD3: Water discharge from settlement ponds

SWD4: Quarry water discharge from rock cell at south of site

#### **Emissions to Sewers**

Wastewater from the staff office and canteen area is currently discharged to a septic tank system; this is routinely tankered to the Sewage Treatment Works in Ringsend. It is not anticipated that this arrangement will be altered as a result of this review.

#### **Emissions to Groundwater**

There are no direct discharges to groundwater. It is not anticipated that this review will alter this position.

#### **Noise Emissions**

There are two primary sources of noise impact in the operational context:

- Plant equipment;
- Vehicular movement;

A variety of items of plant will be in use, such as excavators, lifting equipment, dumper trucks, compressors and generators. There will be vehicular movements to and from the site that will make use of existing roads. There are no significant sources of vibration associated with the operational phase of the proposed development.

There will be no significant noise impact associated with vehicle movements on the site. The predicted increase in site-generated traffic post-development means that the impact in relation to noise from additional vehicles on public roads is not anticipated to be significant.

### **Dust and Mud**

A number of measures have been taken by Murphy Environmental to mitigate against dust and mud nuisance on and around the site:

- Purchase of a road sweeper dedicated for use at the site. The sweeper is a Johnston 600 series.
- Installation of a wheelwash, which must be used by all vehicles exiting the landfill/quarry.
- A mobile water bowser is on site at all times, for deployment during periods of dry weather.
- Sprinklers are situated in the entrance/reception area, for use as dust suppression.
- Use of a concrete surface at the entrance to the site reduces dust generation in this area.
- Quarterly monitoring and reporting the EPA, as per licence requirements.

The mitigating measures employed by Murphy Environmental in the control of dust and mud have made a significant contribution towards controlling these nuisances in and around the site, since commencement of operations. The infrastructure is now in place to mitigate against these impacts.

It is not expected that dust levels will increase as a result of the proposed extension of the landfill footprint. It is suggested that a combination of dust/mud control measures available at the site will be adequate to maintain any increased dust emissions associated with increased truck movements. This will be verified by ongoing dust monitoring and reporting to the Agency. Murphy Environmental must comply with dust emission limit values as prescribed by the EPA in Waste Licence W0129-01.

### **Litter and Vermin Control**

There are currently no litter or vermin issues on site associated with landfilling operations or otherwise. It is not anticipated that there will be litter/vermin issues associated with the proposed extended restoration footprint or increased annual rate of filling.

### **Bird Control**

Birds are not a nuisance on site as the waste for deposition is inert. Since landfilling operations began in Summer 2003, no scavenging birds have been noted. The Licence Review Application will have no impact in this regard.

### **Odour Control**

There are no odour impacts at the site. The inert materials to be landfilled will not cause an odour impact. No domestic or putrescible waste will be accepted on site. There will be odour issues associated with the proposed extended restoration footprint or increased annual rate of filling.

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## Fire Control

Patel Tonra Ltd., acting on behalf of Murphy Environmental, conducted a risk assessment to determine the requirements for fire-fighting and firewater retention facilities at Hollywood Landfill facility in June 2003. The study covered both quarry and landfill operations.

The Risk Assessment report to determine the requirements for fire-fighting and firewater retention facilities at Hollywood Landfill facility was prepared with reference to the EPA Manual on Firewater Retention Facilities (1995). It was deemed that firewater retention capability at the site was not required. There will be no additional fire risk issues associated with the proposed extended restoration footprint or increased annual rate of filling.

## F. Control and Monitoring

A full list of all current (as per W0129-01), new (for the purpose of the Waste Licence Review Application) and proposed on-going (post-Review) monitoring locations for noise, dust, surface water discharge, leachate, surface water and groundwater water is attached in **Appendix 8**. Also attached are **Drawings 7 – 9** illustrating these monitoring locations:

>Drawing 7: Monitoring Locations under W0129-01

>Drawing 8: Monitoring Locations for Waste Licence Review Application  
Compilation

>Drawing 9: Proposed Monitoring Locations

### Surface Water

Pursuant to Condition 3.13.2 and Schedule B of the EPA Waste Licence, a surface water drainage control for the hard standing areas of the site is in place. During 2006, Murphy Environmental undertook the construction of surface water management 'settlement' ponds, located in the north of the site. The settlement ponds regulate the discharge of surface water runoff to the stream running along the northern boundary of the site.

### Groundwater

The control measures include:

- Backfilling all excavations below the water table with inert native materials.
- Controlling the type of wastes landfilled
- Construction of an engineered, lined and capped landfill
- Removal of sewage off-site to an approved facility
- Bunding of fuel tanks and the provision of spill kits to be used in the case of an emergency

### Noise

Under W0129-01, an annual noise survey is carried out on and in the environs of the site. For the purpose of the Waste Licence Review Application additional monitoring took place at N7, N8 and N9. The predicted increase in noise levels associated with vehicles at any of the road junctions in the vicinity of the proposed development is not significant.

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### **Leachate**

Rainwater that percolates through the surface of deposited materials is contained within the engineered landfill cells and may be pumped out if required, and disposed of to a licensed facility.

### **Landfill Gas**

As an inert landfill, the potential for landfill gas generation at the Hollywood site is insignificant, and thus no infrastructure (in this regard) is proposed.

### **Dust**

A dust deposition monitoring survey was carried out at the site to determine deposition levels. There were a total of six dust sampling points monitored for the Waste Licence Review Application.

### **Odour**

The nature of the inert waste limits the potential for odour generation and odour impacts. Therefore, no likely additional significant impact is predicted. Odours will be assessed on a weekly basis by the site supervisor, as is currently the case.

## **G. Resource Use and Energy Efficiency**

Mains water is piped onto site for drinking water purposes. Water is also used for toilets, kitchen facilities, etc. Water is used for dust and mud control purposes in water sprinklers, wheelwash, bowser and roadsweeper. Water is collected from rainwater runoff. Water used in the wheelwash is filtered and recycled to reduce water requirements. Records of water usage are maintained on site, as a part of an energy efficiency audit, in accordance with Condition 11.5 of Waste Licence W0129-01 and reported to the EPA in the AER.

Energy in terms of fuel use will include diesel used for on-site vehicles and machinery. Records of fuel usage is maintained, as a part of an energy efficiency audit, in accordance with Condition 11.5 of Waste Licence W0129-01 and reported to the EPA in the AER.

Energy is used on-site in terms of electricity for lighting (interior and exterior), heating and electronic equipment. Records of electricity usage are maintained on site, as part of an energy efficiency audit, in accordance with Conditions 11.5 of Waste Licence W0129-01 and reported to the EPA in the AER. In early 2006 Murphy Environmental changed a portion of its electricity usage to Airtricity, a 100% renewable energy provider and by early 2007 all Murphy Environmental and Murphy Concrete operations were powered by Airtricity.

## **H. Material Handling**

### **Waste Types and Quantities**

Hollywood is currently licensed (under EPA Licence No. W0129-01) to accept up to 340,000 tonnes per annum of inert waste, within a landfill area of 13.56 Hectares.

It is proposed to increase the landfill area to 23 Hectares and the tonnage to be accepted to 500,000 tonnes per annum of inert waste.

### **Waste Acceptance Procedures**

Detailed procedures have been drawn up for the acceptance and handling of the waste. Detailed Waste Acceptance Procedures have been developed for Hollywood Landfill, in accordance with Waste Licence W0129-01 and Council Decision (2003/33/EC) Establishing Criteria and Procedures for the Acceptance of Waste at Landfills.

The waste handling procedure details how waste is deposited directly into the landfill cell, as directed by the banksman. Each landfill cell is notionally sub-classified into grids, identified by a unique reference number, in order to identify the specific deposition area of each waste load and build up a 3-D model of each landfill cell. The grid location of each incoming load is saved on weighbridge software.

Permitted waste collectors remove general waste, from the site canteen, etc. off site to an approved waste facility. Waste paper is collected and removed off site by permitted waste collectors for recycling. Also small amounts of waste are removed off-site, composed of material removed from incoming C&D materials to be deposited in the landfill cells. No significant differences in waste generation on-site are expected as a result of the proposed increased tonnages and extended footprint.

## **I. Existing Environment and Impact**

Detailed monitoring of the environment around the facility is carried out in accordance with the conditions of the current Waste Licence W0129-01. A detailed analysis of all results shows that there have been no observable adverse effects on the environment and ecology due to the landfill facility.

### **Dust**

Dust monitoring consists of quarterly environmental dust sampling located at four main positions at the site. For the purpose of the review an additional two monitoring points close to the proposed new licensed boundary were sampled During Q2, 2007, all results were below the EPA Licence Limit of 350 mg/m<sup>2</sup>/day in spite of the exceptionally dry weather conditions (14.8mm of rainfall during the 30 days). This is thought to be related primarily to the performance of the dust control infrastructure at the facility, e.g. the wheelwash, sprinklers and the road sweeper. The dust deposition rates near residential locations are consistently low at the facility.

### **Surface Water**

Surface Water monitoring is carried out bi-annually at the site in compliance with Schedule D of Waste Licence W0129-01. The surface water was sampled at two locations: upstream from the site at Clonany Bridge (SW1) and downstream at the Joinery Bridge (SW2). Results were compared against Surface Water Regulations, SI No. 294 of 1989 – The European Communities (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations. A3 river water quality was used as river water quality in this area is generally “moderately polluted” according to EPA water quality data. All parameters comply with A3 Surface Water Regulation limits.

### **Groundwater**

Groundwater monitoring is carried out at the site in compliance with Schedule D of Waste Licence W0129-01. Groundwater analytical results are compared against the Groundwater Directive (80/68/EEC) and the Drinking Water Directive (98/83/EC) and also trigger levels as specified by the EPA for this site. Additional groundwater monitoring boreholes are proposed of the purpose of the Waste Licence Review. Due to the type of process being carried out at the site it is not envisaged that groundwater quality will be adversely affected by this proposal.

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### Noise

Noise is measured annually at three sensitive locations; for the purpose of the review an addition two locations were monitored. In summary, the measured noise levels at Location N4 were within the daytime EPA criterion of 55dB  $L_{Aeq}$  (30 Minutes). While the measured noise levels at Locations N5 to N9 exceed the EPA noise limit values during daytime, the dominant source of noise affecting these locations is road traffic along local roadways. It may therefore be concluded that this facility is in compliance with the noise limits specified in Schedule C of its Waste Licence. It is not envisaged that the noise levels at the site will increase due to the proposal, however ongoing additional monitoring locations are proposed.

## J. Accident Prevention and Emergency Response

Murphy Environmental has a detailed Emergency Preparedness and Response Procedure to deal with spillages, fires and other potential emergencies. A full-time Health and Safety Officer is employed by Murphy Environmental and a number of personnel have taken part in health and safety training. Site emergency response equipment includes fire extinguishers spill containment, clean-up kits and defibrillators.

## K. Decommissioning, Remediation, and Aftercare

Murphy Environmental, in consultation with the EPA, has established a restoration fund linked to the volume of incoming waste. The duration of the fund shall be the life of the landfill plus 30 years and 6 months.

Waste Licence W0129-01 sets conditions on Murphy Environmental for restoration and aftercare of the facility. Recommendations made in the EPA Landfill Manual for Restoration and Aftercare and any other relevant guidelines will be followed for this process.

The existing infrastructure, such as site office, weighbridge, etc. will be decommissioned upon completion of the final landfill phase.

It is not anticipated that the proposal will require a review of these arrangements.