



**OFFICE OF CLIMATE,  
LICENSING &  
RESOURCE USE**

**INSPECTORS REPORT ON A LICENCE APPLICATION**

<b>To:</b>	Directors	
<b>From:</b>	Suzanne Wylde	<b>- LICENSING UNIT</b>
<b>Date:</b>	1 NOVEMBER 2007	
<b>RE:</b>	APPLICATION FOR A WASTE LICENCE (REVIEW) FROM MURPHY CONCRETE (MANUFACTURING) LTD, HOLLYWOOD GREAT, NAGS HEAD, THE NAUL, CO. DUBLIN, LICENCE REGISTER W0129-02	

**Application Details**

Type of facility:	Landfill for inert waste
Class(es) of Activity ( <b>P</b> = principal activity):	3 <sup>rd</sup> Schedule: Classes 1, 5( <b>P</b> ) & 13 4 <sup>th</sup> Schedule: Classes 3, 4 & 13
Quantity of waste managed per annum:	500,000 tonnes per annum
Classes of Waste:	Inert wastes arising from construction & demolition activities (e.g. soil & stones, concrete, bricks, tiles, etc.) Inert dredging spoils. Inert wastes from the mineral extraction activities at the associated shale & limestone quarry.
Location of facility:	Hollywood Great, Nags Head, The Naul, Co. Dublin (E315723, N258073)
Licence application received:	20 <sup>th</sup> July 2007
Third Party submissions:	Three
EIS Required:	Yes
Article 14 Notices sent:	17 <sup>th</sup> August 2007
Article 14 compliance date:	23 <sup>rd</sup> October 2007
Site Inspection:	2 <sup>nd</sup> October 2007

## 1. FACILITY AND REASONS FOR THE APPLICATION FOR A LICENCE REVIEW

Murphy Environmental (a registered trading division of Murphy Concrete (Manufacturing) Ltd) operates an inert landfill at Hollywood Great, Nags Head, The Naul, Co. Dublin, on behalf of Murphy Concrete (Manufacturing) Ltd (Figure 1). The total area of the landfill footprint is 23 hectares. The site is strategically located in North County Dublin as the only inert landfill in the region.

The site is located approximately 4km southeast of the town of Naul. It is located approximately 1km east of the regional road R108 and is accessed by a minor road, which links the M1 to the R108.

Planning permission for restoration and infill of the quarry with inert building material of the quarry was granted in 1988, for a period of 15 years (i.e. until 2003). An EPA waste licence was granted to the facility in 2002 (W0129-01). A subsequent planning permission was granted in 2004 to restore and infill the area covered by the EPA waste licence. This planning permission and waste licence were for the infill of the quarry at a rate of 340,000 tonnes per annum for a period of 15 years. In May 2007, Murphy Environmental was granted planning permission to vary the previous planning authorisation, to continue infill of the quarry but at an increased rate of 500,000 tonnes per annum and over an increased area, so as to ensure that the quarry can be infilled and fully restored by the date agreed in the 2004 planning permission (i.e. 6<sup>th</sup> October 2019).

The reason for this review application is 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.



**Figure 1:** Aerial view of the quarry and inert landfill at Hollywood Great, The Naul, Co. Dublin.

## 2. OPERATIONAL DESCRIPTION

The site is an active shale and limestone quarry that has been in operation since the 1940's. Quarrying will be complete at the facility by the end of 2007. The landfill is for the purposes of restoration and infilling of the quarry to land for the purposes of agriculture. The company has estimated that there is approximately 3.2 million cubic metres of void space remaining at the landfill.

The facility operates Monday to Friday (0700–1900) and Saturdays (0700–1700). Waste will only be accepted at the facility between the hours of 0800–1800, Monday to Friday and between the hours of 0700–1600 on Saturdays. These hours of operation are in line with planning permission for the site (Planning Reference: F07A/0262).

The landfill accepts inert construction and demolition wastes and inert dredging spoils. The restoration work will continue to be completed on a phased basis through the construction of suitably lined landfill cells. To date waste has been accepted at the site from such projects as the Landsdowne Road & Croke Park refurbishments, the RDS Simmonscourt and Sir John Rogerson's Quay.

Waste accepted at the site undergoes three levels of testing: Level 1 Characterisation testing, Level 2 Compliance testing and Level 3 On-site Verification testing. Level 1 testing constitutes through determination of the short and long-term behavioural properties of the waste (laboratory testing). Level 2 testing constitutes periodical testing (every 1 in 100 loads), of a select set of parameters identified by Level 1 basic characterisation, to further verify the level 1 laboratory results. Level 3 on-site verification may consist of visual and odour inspection at the site before and after unloading at the site. If the details of the waste are all satisfactory the waste is directed to the appropriate tipping face in a landfill cell.

The facility is located in a rural and agricultural area where residential dwelling are dispersed in the surrounding area. Potential impacts on these dwellings would be noise and dust, which are both largely associated with the quarrying activities, due to cease before year end. The monitoring results from either of these parameters has proved problematic in the existing licence. There is also a local authority controlled waste permit facility located north west of the site. This site also borders the stream adjacent to the Murphy Environmental site.

It is intended to relocate the facility entrance to the northern side of the site in the near future (Figure 1). This is to allow for trucks to queue off the road, before the weighbridge (the weighbridge is currently immediately inside the site entrance), fewer residential premises will be passed accessing the site and also the new entrance will be further away from the graveyard near the site.

### **3. USE OF RESOURCES**

The RD requires that energy efficiency auditing be carried out within twelve months to identify opportunities for energy use reduction and efficiency (Condition 7). It is not anticipated that there will be a greater demand on energy and resources as a result of increased rate of fill and extended landfill footprint.

#### **3.1 Fuel**

Fuel is used on site in the form of green diesel (for site plant) and road diesel (for waste transport vehicles). 135,961 litres of road diesel and 676,681 litres of green diesel were used by the site in 2006. All fuel is stored in bunded areas and the integrity and water tightness of these shall be demonstrated to the Agency (Condition 6.10).

### 3.2 Water

Mains water is pumped onto the site for drinking water purposes. Water is also used on site for controlling dust and mud nuisance at the site. This water is collected rainwater, used in the wheelwash, sprinkler system and water bowsers. The water in the wheelwash system is recycled in order to keep water requirements at a minimum. In 2006, the site used a total of 2,640m<sup>3</sup> of water.

### 3.3 Electricity

Electricity is used on site for heating, lighting and electronic equipment. Approximately 94,680kWh of electricity was used in 2006. This is the total energy consumption for both quarry and landfill activities. However, it is thought that the quarry activities have a greater energy demand, than that of the landfill activities. A 100% renewable energy provider powers all Murphy Environmental and Murphy Concrete Manufacturing Ltd operations.

## **4. EMISSIONS**

### 4.1 Air

The only emissions to air from the facility are likely to be dust. The most likely sources of dust emission are from the following activities on site:

- Quarrying of rock;
- Crushing of quarried rock;
- Screening of finished material;
- Loading of aggregate product to trailers and transfer;
- Depositing of inert material in the landfill cell;
- Vehicles moving in the reception and deposit areas.

Due to increased levels of vehicle movements associated with the higher rate of filling, this has the potential to increase dust levels in and around the site. The quarry void, being significantly below surrounding ground levels, acts as a natural mitigation measure for minimising the migration of dust to the surrounding environment. Condition 4.4 of the RD stipulates that dust and particulate emissions from the facility must not exceed the limits set in the *Schedule B.5*. The licensee is required to carry out dust monitoring on a quarterly basis (*Schedule C.2.4 Dust Monitoring*). BAT for dust mitigation measures at a landfill states that dusty waste may be pre-treated (conditioned) using water. Murphy Environmental use sprinklers, water bowsers and a wheelwash to minimise dust emissions from the site in accordance with BAT.

The existing waste licence W0129-01 required Murphy Environmental to carry out PM<sub>10</sub> monitoring at 6-monthly intervals. Subsequent to very insignificant results and agreement with the Office of Environmental Enforcement (OEE), this was changed to respirable dust monitoring. This monitoring was subsequently discontinued (with the agreement of the OEE). The licensee may be required to carry out this monitoring again at the discretion of the Agency.

### 4.2 Emissions to Sewer

There are no emissions to sewer from the site. Sanitary waste from the site is collected in the septic tank and tankered off-site on a regular basis to the Ringsend Wastewater Treatment Plant.

#### 4.3 Emissions to Surface Waters

There are seven proposed discharge points to the stream that runs along the northern boundary of the site.

The discharge points from facility comprise of the storm water discharge from the hardstanding area around the site offices, water pumped from the quarry floor, surface water run-off from northern part of the site and also water from rock cells (deep quarry pits) at the southern part of the site.

There are two silt settlement ponds currently located in the northern part of the site. It is proposed to relocate the silt settlement ponds further east on the site in the future, as they are currently situated in what is planned as Phase II of the infill. The ponds regulate the discharge of surface water runoff to the stream running along the northern boundary of the site. Water (comprising clean rainwater from the base of the quarry) is pumped to the ponds, left to 'settle' for a period of time, to allow any sediment suspended in the water to settle out and subsequently only clean water is discharged to the stream (SWD-3).

The remaining discharge points (SWD-2, 4, 5, 6 & 7) comprise of ground water and rainwater being discharged from quarry cells. Not all of the discharge points are active on a constant basis.

Surface water monitoring is carried out bi-annually at two monitoring points. One is just upstream of the facility at Clonany Bridge (SW1) and the other, downstream of the facility at Joinery Bridge (SW2). Results are compared to the Surface Water Regulations (S.I. 294 of 1989). The stream water is classed as A3 in this area and according to EPA water quality data is "moderately polluted". All monitoring results comply with A3 surface water regulation limits.

The storm water run-off from yard areas is addressed in Section 4.4 of this report.

#### 4.4 Storm Water Runoff - waste reception & yard areas

The storm water runoff from the hardstanding area around the yard is collected into a silt settlement tank and oil interceptor at the northwestern side of the site. Discharge to the stream (discharge point SWD-1) from the settlement tank is via a ditch that runs parallel to the public road.

A risk assessment was conducted at the site to determine the requirements for fire-fighting and firewater retention facilities for the site. The risk assessment concluded that firewater retention capability at the site is not required. The increased rate of fill and extended restoration footprint does not alter this requirement.

#### 4.5 Emissions to ground/groundwater:

There are no direct emissions to groundwater from the facility. The PD and existing licence (W0129-01) requires that the base and side walls of the landfill cells be lined with a mineral layer with a hydraulic conductivity of less than  $1 \times 10^{-7}$  m/sec or similar, to prevent any groundwater contamination. The liner being used by the licensee is using blue clay (sourced on site) with permeability less than  $1 \times 10^{-10}$  m/sec, exceeding the requirements of the licence.

There are nine on-site monitoring boreholes. The boreholes are monitored both quarterly and annually, depending on the parameters being monitored, as per Schedule C.2.2. There are no private wells in the area of the facility.

#### 4.6 Leachate Monitoring

Rainwater percolates through the deposited material in the landfill cells and is contained within the confines of the engineered cells. If required this may be pumped out and disposed of at a licensed facility. Leachate build up in the cells has not been an issue to date. At present any leachate that builds up in the cells is recirculated back over the existing landfill cells (as will be the case on future landfill cells). This removes a large component of the aqueous content of the leachate.

In the future leachate build up may become an issue and it is proposed to treat the leachate using (a) a mobile or temporary leachate treatment plant, (b) removal of the leachate for treatment at off-site treatment plant, or (c) a combination of both methods.

The Annual Environmental Reports (AERs) for 2005 & 2006 stated that levels of sulphate, chloride, conductivity and ammoniacal nitrogen were in exceedance of the A3 drinking water limits but typical of inert landfill leachate.

Under the conditions of the existing licence (W0129-01), leachate is monitored on a six monthly basis from a qualitative perspective. It is not proposed that this will change.

#### 4.7 Wastes Generated:

The only wastes generated on site are general waste from the canteen, paper and small amounts of unacceptable waste removed from incoming loads of C&D waste. Paper is removed off-site for recycling. Permitted waste collectors remove general waste to an approved waste management facility (Condition 8.2 requires that this continue). The total waste removed from the site in 2006 was 12.5 tonnes (including paper for recycling). It is not anticipated that there will be any significant change in this as a result of the review.

#### 4.8 Noise

Noise generated at the site is due to quarrying activity and landfilling of inert waste. There are two primary sources of noise impact from the site, plant equipment and vehicular movement. It is not expected that noise generation at the site will increase with the additional waste tonnages to be accepted.

There are five noise monitoring points proposed, to be the subject of an annual noise report, to be submitted as part of the AER. The existing licence contains three monitoring points. The increased number of monitoring points is to coincide with the expansion of the landfill footprint. The annual noise monitoring reports have not shown noise nuisance to be an issue from the site in the past.

#### 4.9 Nuisance

Due to the inert nature of the waste being landfilled at the site, there have been no issues with odour, litter, vermin or birds. It is not anticipated that the proposed extended restoration footprint or increased annual rate of filling will have any such

nuisance issues associated with it. Mud is the primary nuisance associated with this type of facility. Condition 3.10.2 states that all vehicles leaving the facility must use the wheel cleaning facilities at the exit/entrance.

The issue of dust is briefly addressed in Section 4.1 above. During periods of dry weather, site roads, stockpiles and other areas will be sprayed with water to prevent airborne dust nuisance (Condition 6.15).

## **5. RESTORATION**

The operators (Murphy Environmental Ltd), in consultation with the Agency, established a fund for restoration of the facility. The duration of fund shall be for the lifetime of the landfill plus 30 years and 6 months. Condition 10 of the RD recommends that this fund be maintained.

The most recent planning permission, granted in May 2007 (Planning ref F07A/0262) states that restoration must be complete within the lifetime of the planning permission, i.e. by October 2019.

Due to the inert nature of the waste accepted at the site, the restoration layer will consist of 0.5m of subsoil and 0.5m of topsoil.

## **6. CULTURAL HERITAGE, HABITATS & PROTECTED SPECIES**

An archaeological field walking survey and a desktop survey were carried out to determine the presence of sites of archaeological or historical importance in the existing quarry, the landfill and the surrounding area. Three features were noted and investigated during the walking survey, two of which are outside the site boundary and mark the remains of an old entrance and monument, respectively. One feature is within the site boundary but is a possible site and could only be identified from aerial photographs. The EIS recommends that archaeological monitoring be carried out during and after the removal of the large stockpile on site. This recommendation is reflected in the RD (Condition 6.24). The stockpile consists of overburden material from the site. This material may be used on the site in the future to bring cells up to required levels, prior to putting in the cell lining material.

The site is not located on or adjacent to any ecologically designated area. There are no significant environmental emissions from the facility, which could give rise to adverse effects on designated sites. It is thought that the quarry restoration and mitigation measures will enhance the ecological value of the site and the surrounding locality.

## **7. WASTE MANAGEMENT, AIR QUALITY AND WATER QUALITY MANAGEMENT PLANS**

### *Waste Management Plan for 2005-2010 for the Dublin Region*

The inert landfill at Hollywood Great is in line with the waste management plan for the region, which states that a fitting way to dispose of C&D waste would be to have a limited number of C&D waste management points, for example situated in old quarries. The plan further advises that local authorities consult with the National Construction & Demolition Waste Council (NCDWC) and Construction Industry

Federation (CIF) to encourage the establishment of a number of large scale processing facilities for C&D waste.

*Air Quality and Water Quality Management Plans*

The facility does not significantly impact on any National or European legislation in relation to water or air quality.

**8. ENVIRONMENTAL IMPACT STATEMENT**

I have examined and assessed the EIS and having regard to the statutory responsibilities of the EPA, I am satisfied that it complies with Article 94 and Schedule 6 of the Planning and Development Regulations 2001 (SI 600 of 2001) and EPA Licensing Regulations (SI 85 of 1994, as amended).

**9. BEST AVAILABLE TECHNIQUES (BAT)**

I have examined and assessed the application documentation and I am satisfied that the site, technologies and techniques specified in the application and as confirmed, modified or specified in the attached Recommended Decision comply with the requirements and principles of BAT. I consider the technologies and techniques as described in the application, in this report, and in the RD, to be the most effective in achieving a high general level of protection of the environment having regard - as may be relevant - to the way the facility is located, designed, built, managed, maintained, operated and decommissioned.

**10. COMPLIANCE WITH DIRECTIVES/REGULATIONS**

The licence conditions have been specified in line with the Water Framework Directive, the Landfill Directive and with the principles of Best Available Techniques (BAT) as discussed throughout this report.

**11. COMPLIANCE RECORD**

Murphy Environmental Ltd has a history of good compliance with the conditions of waste licence W0129-01. The OEE is satisfied with the procedures in place at the landfill for managing the facility in a manner that is not likely to cause environmental pollution.

**12. FIT & PROPER PERSON ASSESSMENT**

The licensee currently holds two EPA waste licences, one for the facility at Hollywood Great (the subject of this review – W0129-01) and another licence for a similar waste management facility at Gormanstown, Co. Meath (W0151-01). Neither facility has committed offences under the Waste Management Act (1996-2005). Staff employed by Murphy Environmental are fully trained and have the necessary technical knowledge and qualifications to manage the facility to the highest environmental standards.



The company has demonstrated to the Agency that it is capable of meeting any financial commitments or liabilities that may be entered into in carrying out waste management activities at the facility.

### **13. SUBMISSIONS**

The Agency has received three submissions in relation to this review application from the Planning Department of Fingal County Council, the Eastern Regional Fisheries Board and the Department of the Environment, Heritage & Local Government.

- 1.) Fingal County Council reviewed the waste licence application and had no comments to add on the application.
- 2.) The Eastern Regional Fisheries Board made a number of points –
  - i) any polluting matter must be prevented from entering the river system;
  - ii) measures should be taken to ensure comprehensive protection of the local aquatic ecological integrity, with only clean uncontaminated waters entering the surface water network;
  - iii) a comprehensive approach must be taken for achieving stream protection during construction and operation, given the significant potential for release of sediments in particular from this facility to the surrounding watercourses;
  - iv) BAT and a Sustainable Drainage System (SuDs) should be implemented at the site;
  - v) any construction works at the site must not in any way impact on the passage of salmonids;
  - vi) consultation of the “Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites” when undertaking any works at the site;
  - vii) appropriate environmental protection is the responsibility of the developer and contractor involved.

This submission has been noted and the points addressed in it have been incorporated into the conditions of the recommended decision.

- 3.) The Department of the Environment, Heritage & Local Government (DoEHLG) stated that the quarry face should be retained as part of the restoration plan as it hosts a Peregrine falcon nest. The peregrine falcon is an Annex 1 species under the Birds Directive.

The comments of the DoEHLG have been specifically referenced as Condition 10.8.3 of the RD.

### **14. CHARGES**

The annual charge for 2007 as calculated by the OEE is €16,275. The recommended decision has retained this charge as no significant increase in enforcement is expected as a result of this review, as per Condition 12.1.

### **15. OVERALL ASSESSMENT AND RECOMMENDATION**

Having assessed all the documentation, particulars and information submitted with this application, and taking into consideration the compliance history of this facility

and the requirements of fit and proper person, I recommend that Murphy Concrete Manufacturing Ltd review application register W0129-02 for extended landfill footprint and increased waste acceptance tonnage per annum, be granted, subject to conditions.

Signed:

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*Suzanne Wylde*

*Inspector*

***Procedural Note***

*In the event that no objections are received to the Proposed Decision on the application, a licence will be granted in accordance with Section 43(1) of the Waste Management Acts 1996-2005.*