

Cost Benefit Analysis for Subordinate Legislation Proposed by Geraint Davies AM

Introduction

Geraint Davies, AM tabled a No – Named Day Motion on July 2002 that instructs the Minister for Environment, Planning and Transport to bring forward draft subordinate legislation to amend Section 87 (1)(c) of the Environment Act 1995.

Following further work carried out over the summer, an amendment has been tabled, also in the name of Geraint Davies.

A Objective

The objectives of the proposal are:

- ◆ To provide information regarding the composition of emissions from landfill sites, including the measurement of emissions from flares.
- ◆ To form part of a public health study to assess the effects of long-term exposure to emissions from landfill sites.

B Context

Nantygwyddon

On the 4th July 2000 the National Assembly resolved that the Environment, Planning and Transport Committee should conduct an investigation into the Nantygwyddon landfill site, investigating the health, environmental and planning issues involved. This followed claims by local residents that fumes, odours and other emissions from the landfill site were having an adverse effect on their health, the health of their unborn children as well as the quality of life within their community.

The ensuing Nantygwyddon report, written by independent investigator, David Purchon, contained lessons, conclusions and recommendations specific to the site. As a result of this report, the disposal of waste at Nantygwyddon was immediately ceased. In addition, Rhondda Cynon Taff County Borough Council began monitoring air quality in the community around Nantygwyddon, performing regular sampling in various locations.

European legislative context

Council Directive 1999/31/EC on the landfill of waste (the Directive) was adopted in 1999 and required transposition into UK law by 16 July 2002. The regulatory and technical requirements of the Directive were implemented in England and Wales through the (England and Wales) Regulations 2002.

The Directive includes a range of regulatory controls over landfills that must be applied to both new and existing landfills. Many of the controls reflect those already in place through the waste management-licensing regime under the *Environmental Protection Act 1990*. However, one of the key changes introduced by the Directive is the classification of landfills into three types: hazardous, non-hazardous or inert. Of the sixty-five landfill sites in Wales, actively receiving waste, fifteen have been

classified as hazardous in accordance with the requirements of Schedule 4 of the 2002 Regulations.

Twenty-two sites accept biodegradable waste and are likely to produce substantial amounts of gas. Of these twenty-two sites, eight do not have gas treatment while six have flares. The remaining eight have energy generation mainly in the form of electricity generating engines. All these latter sites would have a flaring system alongside the engine in the event of a problem.

There remain, however, serious concerns of populations living close to landfill sites throughout Wales that their health may be at risk. The proposed legislation, therefore, aims to extend the monitoring of emissions to all hazardous and non-hazardous landfill sites.

Current Situation

Existing Local Authority Powers and Statutory Duties

Local Authorities have a duty to review air quality in their areas and to assess compliance with the health-based air quality objectives set out in the National Air Quality Strategy. However, at present there are standards set for only seven pollutants of concern. Therefore the status quo does not provide a comprehensive analysis of the emissions from landfill sites.

Local Authorities also have a duty to inspect their areas for statutory nuisances and a duty to investigate complaints regarding statutory nuisances. Landfills have the potential to emit odorous gases or gases which are prejudicial to health. Both examples may be considered statutory nuisances. Local Authorities therefore have a duty to investigate them. If a statutory nuisance exists, or is likely to exist or to recur, the Local Authority must serve notice requiring the nuisance to be abated. The legislation does not specify how the investigation should be completed. Monitoring employing instruments is not specifically required. There is also no requirement to monitor within communities.

Environment Agency

Landfill operators will now come under the new Pollution Prevention and Control (PPC) permit system, which replaces the previous Waste Management License (WML) scheme. Under the new PPC permit system, operators are set more stringent environmental targets (which now take into account public health as well through the statutory consultation with health professionals) than under the old WML scheme. They are given a permit to emit/discharge certain “relatively safe” levels of compounds from their installations activities. The permits can be tailored by the Agency to include any conditions, which are a requirement of granting a PPC permit.

The Agency will carry out its own monitoring of installations regulated under the PPC system in order to enforce the regulations and conditions that they stipulate on the PPC permits. This is a control measure and they can alter or increase the number of conditions on a PPC permit where it is deemed necessary and fair to do so.

There will be no specific requirement to monitor the communities within proximate zone of landfill sites.

C Options and Assessment of Benefits

Objectives	Option 1 – Do nothing Option	Option 2- Limited Option	Option 2- Preferred Option
To provide information regarding the composition of emissions from landfill sites, including the measurement of emissions from flares	This information would only be of benefit to the communities of Nantygwddon.	This option only includes sites which flare landfill gas.	<p>Provide data for comparison against standards, e.g. WHO and other sources of industrial pollution.</p> <p>Provide detailed information regarding composition of emissions from flares and landfill sites, thereby identifying particular household or industrial chemicals that produce the most adverse gases so to allow action to exclude them</p>
To provide an accurate picture of air quality in communities near landfill sites right across Wales as part of a public health study to assess the effects of long- term exposure to emissions from landfill sites.	Would not be of benefit to all communities across Wales.		<p>Provide additional information for a comprehensive public health assessment as to whether residency in the vicinity of a landfill site poses any excess risk to health and well being of individuals.</p> <p>Provide information on the effects on children, whose developmental health are of great concern to communities.</p>

			Increase uptake of separation of putrescible material and toxic household liquids from landfilled refuse.
			Assist improvement in management of landfill sites.

D Assessments of Costs

COST CATEGORY	OPTION 1	OPTION 2	OPTION 3
(annual costs except where stated)	Do nothing/do minimum.	Draft subordinate legislation under Section 87 (1)(c) of the Environment Act 1995 to make provision for the measurement and characterisation of emissions from landfill gas flaring in communities within a proximate zone of landfill sites. Note that this will enable the assessment of the effects of long-term exposure to emissions from landfill sites.	Draft subordinate legislation under Section 87 (1)(c) of the Environment Act 1995 to make provision for the measurement and characterisation of landfill gas emissions from landfill sites in communities within a proximate zone of landfill sites. Note that this will enable the assessment of the effects of long-term exposure to emissions from landfill sites.
Direct costs (Costs falling on the Assembly which are directly attributable to the option)		Staff costs approx. £15,500 (around 90 days), for consulting on draft legislation and preparing legislation for consideration by the Assembly Translation, printing and publicity costs unquantified but limited, likely to be less than £5,000	Staff costs approx. £15,500 (around 90 days), for consulting on draft legislation and preparing legislation for consideration by the Assembly Translation, printing and publicity costs unquantified but limited, likely to be less than £5,000
Indirect costs (Costs falling on the Assembly which cannot be directly attributed)		Accommodation costs. In-house copying, telephones, lighting etc	Accommodation costs. In-house copying, telephones, lighting etc
Opportunity costs		Plenary Costs – Assembly staff time (incl. Legal, Committee Sec, Chamber Sec, ROP, Translation)	Plenary Costs – Assembly staff time (incl. Legal, Committee Sec, Chamber Sec, ROP, Translation)
Other costs (including costs falling on other bodies and unquantified costs)	Unquantifiable health costs due to direct exposure to emissions not detected through existing monitoring.	Costs of measurement: It is not possible without detailed investigation to estimate accurately the cost of monitoring emissions from gas flaring. Each site will require	Costs of measurement: It is not possible without detailed investigation to estimate accurately the cost of monitoring emissions from landfill sites. Each site will

	<p>Unquantifiable health costs due to psychological effects of a lack of knowledge regarding the effects emissions.</p>	<p>tailored monitoring depending upon such factors as topography and the nature of the waste. However, basic portable monitoring equipment costs in the region of £60,000-100,000. Annual running costs may be in the order of £20,000 per annum per unit.</p> <p>Unquantifiable costs of staff required to use the monitoring equipment.</p> <p>Monitoring in communities may be unreliable due to emissions from other sources such as car and household emissions.</p> <p>The monitoring equipment may have use beyond that of measuring landfill site emissions and, where that is the case, the costs of the monitoring equipment would be shared with those other uses. Hence capital and running costs may be lower in these instances.</p> <p>Unquantifiable costs of a possible future health assessment.</p> <p>Existing legislation requires gas monitoring which, in some instances, may duplicate that required under Option 2.</p> <p>Monitoring may already be undertaken by operators at some sites. In this case the cost of monitoring emissions will be reduced accordingly.</p>	<p>require tailored monitoring depending upon such factors as topography and the nature of the waste. However, basic portable monitoring equipment costs in the region of £60,000-100,000. Annual running costs may be in the order of £20,000 per annum per unit.</p> <p>Unquantifiable costs of staff required to use the monitoring equipment.</p> <p>Monitoring in communities may be unreliable due to emissions from other sources such as car and household emissions.</p> <p>Considering the larger number of sites to be measured than in Option 2, the costs of monitoring are likely to be larger than in the case of Option 2.</p> <p>The monitoring equipment may have use beyond that of measuring landfill site emissions and, where that is the case, the costs of the monitoring equipment would be shared with those other uses. Hence capital and running costs may be lower in these instances.</p> <p>Unquantifiable costs of a possible future health assessment.</p> <p>Existing legislation requires gas monitoring which, in some instances, may duplicate that required under Option 3.</p> <p>Monitoring may already be undertaken by operators at some sites. In this case the cost of monitoring emissions will be reduced accordingly.</p>
<p>Total costs (including unquantified costs)</p>	<p>Unquantifiable other costs.</p>	<p>Approximately £20,500 in direct costs. Unquantifiable indirect, opportunity and other costs.</p>	<p>Approximately £20,500 in direct costs. Unquantifiable indirect, opportunity and other costs.</p>

E Justification of Proposed Option

Option 3 is the favoured option.

A review of 46 human health studies found a possible link of health issues with proximity of landfill sites, although confounding factors cannot be excluded.

(Environment Agency 2002. Environmental Facts and Figures :Landfill)

In his lessons for the future, Mr Purchon noted in his report that the “*local authority Rhondda Cynon Taff County Borough Council does not have meaningful local air quality data [...] For reasons of environmental health capability generally, this needs to be urgently addressed.*” The proposed amendment would ensure that communities across Wales would have access to meaningful air quality data, as well as a means to assess the impact of landfill sites on public health.

F Course of Action

If the motion is approved in Plenary, the Assembly Minister for Environment, Planning and Transport shall bring forward the draft legislation within a period of 3 months for the date of resolution.