

Our Ref : JBA2901-10/L18/dl  
Your Ref : 213-1

Licensing Unit  
Office of Licensing and Guidance  
Environmental Protection Agency  
Headquarters,  
P.O. Box 3000,  
Johnstown Castle Estate  
County Wexford

30 MAY 2005

30 May 2005

Dear Sir / Madam

**Re : Roadstone Dublin Ltd. : Landfill Remediation, Blessington, Co. Wicklow**

Further to your letter dated 26 April 2005 issued in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations, we write to formally clarify the waste tonnages associated with the proposed waste remediation of unauthorised landfill sites on lands owned by Roadstone Dublin Limited at Blessington, Co. Wicklow.

Our Waste Licence Application provides for

- (i) removal and transfer of a maximum of 180,000 tonnes of domestic, commercial and industrial (DCI) waste (including intermixed soil and soil in immediate contact with waste bodies) to the proposed engineered landfill and
- (ii) recovery of a maximum of 120,000 tonnes of construction and demolition (C&D) waste.

The total weight of DCI waste to be removed and transferred to the engineered landfill (a maximum of 180,000 tonnes) is made up of the following :

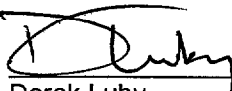
- (i) buried DCI waste (52,300 tonnes), as assumed in the Quantitative Risk Assessment;
- (ii) potentially contaminated soil intermixed with DCI waste and immediately surrounding it (101,600 tonnes);
- (iii) residual, non-recoverable C&D waste (11,000 tonnes) and
- (iv) a contingency allowance of just under 10% of the total.

The calculation of these tonnages, and the assumptions made therein, are outlined in detail in the revised version of Attachment H1 which is appended to this letter.

You will note that your letter dated 26 April 2005 inadvertently misread the 126,000m<sup>3</sup> of DCI waste alluded to in the original version of Attachment H1 of the Waste Licence Application as 126,200tonnes.

In summary therefore, the Waste Licence Application provides for the handling of a maximum of 300,000 tonnes of waste (comprising 180,000 tonnes of DCI waste and 120,000 tonnes of C&D waste).

Yours sincerely,  
For John Barnett & Associates Ltd.

  
Derek Luby  
Associate

cc Pat Martin / Mark Prendergast (Roadstone Dublin)

Enc Attachment H1 – Revision 1

30 MAY 2005

**ATTACHMENT H1**  
**WASTE TYPES AND QUANTITIES**

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## ATTACHMENT H1 – WASTE TYPES AND QUANTITIES

The approximate volumes of buried domestic, commercial and domestic (DCI) waste revealed by the environmental investigations undertaken by Wicklow County Council between December 2002 and February 2003 are shown in Table H1 below, together with the estimated volume of soil in contact with the waste to be excavated and removed :

Area No.	Estimated surface area of DCI waste	Estimated average thickness of DCI waste	Estimated volume of DCI waste	Allowance for 0.5m above and below waste body	Allowance for 0.5m to side of waste body	Total volume of DCI waste
	(m <sup>2</sup> )	(m)	(m <sup>3</sup> )	(m <sup>3</sup> )	(m <sup>3</sup> )	(m <sup>3</sup> )
1	16,000	4	64,000	16,000	6,400	86,400
4	5,000	1	5,000	5,000	280	10,280
6	4,000	6	24,000	4,000	1,520	29,520
<b>Total</b>			93,000	25,000	8,200	126,200

**Table H1 Basis for Estimation of Total Volume of DCI Waste**

It is assumed on the basis of visual observations on site during the environmental investigations that approximately 25% (by volume) of the overall DCI waste body comprises intermixed soil, predominantly silt. This suggests a volume of 69,750 m<sup>3</sup> of DCI waste was transported to and buried at the three sites. Assuming the DCI waste has an average density of 0.75 tonnes/m<sup>3</sup>, the weight of buried DCI waste is therefore approximately **52,300 tonnes**. This figure was assumed in the Quantitative Risk Assessment, reproduced in Appendix 6 of this Waste Licence Application.

For the purposes of this Waste Licence Application, it is assumed that the remaining volume of intermixed soil (23,250 m<sup>3</sup>) and soil in contact with the waste body (33,200m<sup>3</sup>) has contaminant concentrations in excess of acceptable limits and will need to be transferred to the engineered landfill facility. If it is assumed that the average density of this soil is 1.8 tonnes/m<sup>3</sup>, the corresponding weight is **101,600 tonnes**.

The volume of construction and demolition (C&D) waste overlying the DCI waste which will be excavated and processed on site during the remediation works is estimated, on the basis of visual observations made during the environmental investigations, to be approximately 55,000m<sup>3</sup>. The C&D waste typically comprises timber, plastic, tiles, plaster, concrete, tie-wire, ducting, pipework etc. in a soil matrix. The objective of the C&D waste processing activity is to separate the waste material from the soil matrix and recover / re-use it insofar as is possible. Assuming the C&D waste (in soil matrix) has a density of 2.0 tonnes/m<sup>3</sup>, it weighs approximately **110,000 tonnes**. The proposed weight of C&D waste to be recovered or re-used by the proposed remediation scheme is determined by

- (i) assuming that 10% of the C&D waste by weight (11,000 tonnes) cannot be recovered or re-used and is disposed of at the residual non-hazardous landfill and
- (ii) allowing a contingency of approximately 20% (by weight) of recoverable or re-useable C&D waste.

This yields a maximum projected tonnage of **120,000 tonnes** of C&D waste (in soil matrix) to be recovered or re-used by the proposed remediation works.

The proposed weight of DCI waste to be removed to the engineered landfill is made up of the following :

- (i) buried DCI waste (52,300 tonnes);
- (ii) soil intermixed with DCI waste and immediately surrounding it (101,600 tonnes);
- (iii) residual, non-recoverable C&D waste (11,000 tonnes) and
- (iv) a contingency allowance of just under 10% of the total.

This yields a maximum projected tonnage of **180,000 tonnes** of DCI waste to be disposed of at the proposed engineering landfill.

## EWC CATALOGUE CODES

The DCI waste to be excavated, removed and transferred to the engineering landfill was originally disposed of in an uncontrolled and unregulated manner. It is likely that the various waste fractions are intermixed to a degree which makes detailed sub-division into their original waste streams for the purposes of this waste licence application practically impossible. Much of the excavated DCI waste is likely to be classified as intermixed municipal waste, with an EWC Code of 20 03 01.

The bulk of the C&D waste to be excavated and processed comprises C&D waste with EWC Catalogue codes as follows :

Waste	EWC Code
Concrete	17 01 01
Brick	17 01 02
Wood	17 02 01
Glass	17 02 02
Plastic	17 02 03
Iron and Steel	17 04 05
Mixed Metals	17 04 07
Soil	17 05 04

The proposed remediation works will provide for a detailed record to be kept of all waste excavated, recovered and transferred to both the engineered landfill and off-site, and will include, where appropriate records of relevant EWC Catalogue Codes.

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**APPENDIX 6C**

**SURFACE WATER MONITORING (JAN 2003 – SEPT 2004)**

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