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## 6. RANKING OF SHORT-LISTED SITES

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Table 6.1 sets out the evaluation of the three sites with regard to their suitability for landfill.

Using the existing knowledge base and the additional information gathered during the preliminary site investigations, the three sites are ranked. The scoring system uses a number of evaluation factors and assigns a weighting factor based on the relative importance of that factor. The weighting factors are 5, 10 and 15 for the degree of adverse environmental impact unless mitigated (i.e. slight, significant and profound). Each site receives a ranking, based on available information, of 0, 1 or 2, which is then multiplied by the weighting factor. A ranking of 0 indicates that the site is least suitable for landfill development in relation to that aspect. A ranking of 2 indicates most suitable. The ranking is multiplied by the weighting factor to give a score for each evaluation factor. The scores are added to give a total weighted score. The higher the score, the more suitable the site.

The scoring of sites indicates that the Drehid site is the most suitable of the three. It scores 220 out of a possible score of 310. Usk Quarry is ranked second with a score of 180 and Newtowndonore ranks third with a score of 170. As discussed in Section 5, the Newtowndonore site should be considered no further because of its underlying geology and proximity to a proposed well field.

**Table 6.1: Site Ranking as Regards Suitability for Landfill**

EVALUATION FACTOR	EXPLANATION OF EVALUATION FACTOR	WEIGHT	Usk Quarry Ranking (Score)	Newtowndonore/ Mylerstown Ranking (Score)	Drehid Ranking (Score)
<b>SOCIAL/CULTURAL</b>					
Proximity of dwellings	The greater the buffer distances, the more suitable the site.	15	0 (0)	1 (15)	2 (30)
Housing density	Number of houses per unit area within 1 km of site boundary offset. The lower the density, the more suitable the site.	15	1 (15)	1 (15)	2 (30)
Visibility	The less visible the site from the roads or houses, or the ease for which screening can be provided, the more suitable the site.	10	1 (10)	1 (10)	2 (20)
Archaeology	The absence of recorded archaeology, the more suitable the site.	10	2 (20)	2 (20)	1 <sup>3</sup> (10)
Landuse	The limited existing land-use or limited land-use potential, the more suitable the site.	5	1 (5)	1 (5)	2 (10)
<b>GROUNDWATER</b>					
Aquifer classification	The lower the aquifer classification, the more suitable the site.	15	2 (30)	1 (15)	1 (15)
Aquifer vulnerability	The lower the vulnerability, the more suitable the site.	10	0 (0)	0 (0)	2 (20)
Public drinking water supply	The lower the potential for impact on public drinking water supply, the more suitable the site.	10	2 (20)	0 (0)	1 (10)
<b>ENVIRONMENTAL</b>					
Proximity to pNHA	The further away from pNHAs, the more suitable the site.	15	0 (0)	2 (30)	2 (30)
Ecology of the site	The lower the ecological importance the more suitable the site.	10	2 (20)	0 (0)	1(10)
<b>ENGINEERING</b>					
Access/road network	The better the road network, the more suitable the site.	10	2 (20)	1 (10)	0 (0)
Proximity to waste centre	The nearer the site to the waste centre (refer to Figure 1.1) the more suitable the site.	10	1 (10)	2 (20)	1 (10)
Available land bank	The larger the site, the more scope for design alternatives, the more suitable the site.	10	1 (10)	2 (20)	2 (20)
Surface water management	The ease with which surface water can be controlled, the more suitable the site.	5	1 (10)	1 (5)	1 (5)
Leachate management	The volume of leachate predicted and its disposal options. The lower the volumes and nearer to a wastewater treatment plant, the more suitable the site.	5	2 (10)	1 (5)	0 (0)
<b>TOTAL</b>			<b>180</b>	<b>170</b>	<b>220</b>

1. The maximum possible score is 310 points.
2. The score given for each evaluation factor is determined by multiplying the weighting by the ranking. The scores are added to give a total weighted score.
3. Archaeology for Drehid is conservatively given a Score of 1, however, this score could increase if the non-existence of a number of toghers is confirmed.

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## **7. CONCLUSIONS AND RECOMMENDATIONS**

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The most suitable site for development as a waste management facility is the Drehid site. The southern part of the site is considered to have the greatest potential. It is recommended that an environmental impact assessment be carried out over this area of the site. If appropriate, a waste licence application should be lodged with the EPA.

The Usk Quarry is the second ranked site. The Newtowndonore site should not be considered further in light of its proximity to a proposed well field and the current understanding of the hydrogeology in the area.

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## GLOSSARY OF TECHNICAL TERMS

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Bostonhill Formation:	Argillaceous limestone, commonly dolomitised. It is classified as a minor aquifer, locally important.
Calp Limestone:	Varied dark grey to black basinal limestone and shale. They are generally poor aquifers, however where clean limestone is dominant, well yields are high.
Carrighill Formation:	Calcareous greywacke, siltstone and shales, with occasional sandstones. They are classified as poor aquifers.
Dolomite:	Calcium and magnesium-bearing carbonate minerals or rock composed of these minerals.
Feighcullen Formation:	Mixed limestone-dominant sequence with units of coarse skeletal calcarenites, micrite and oolite. It is classified as a minor aquifer, locally important.
Greywacke:	Sandstone or siltstone cemented by a high proportion of mud.
Integrated Waste Management Facility:	A facility using several alternative waste management techniques to manage and dispose of specific components of a waste stream. These alternatives include source reduction, recycling, composting, energy recovery and landfilling.
Karstification:	The dissolution of calcareous rocks (limestone, gypsum, etc.) by groundwater resulting in the formation of sinkholes and caves.
MRF (Materials Recovery Facility):	A facility which recovers recyclable material from waste.
Residual Waste:	Waste remaining after processing, composting or recycling. Residues are usually disposed of in landfills.

Toghers:	Name given to a trackway constructed across a bog. They are generally made of wood.
Vulnerability:	A measure of the susceptibility of an aquifer to pollution. It is rated as extreme, high, moderate or low depending on (unsaturated) overburden thickness and type.
Waulsortian Limestone:	Massive, unbedded limestones prone to karstification. They are classified as locally important, moderately productive aquifers in County Kildare.