

SCHEDULE 2

Regulations 5 and 8(3)(a)(i)

GENERAL REQUIREMENTS FOR LANDFILLS

- 1.—(1) The location of a landfill must take into consideration requirements relating to –
 - (a) the distances from the boundary of the site to residential and recreational areas, waterways, water bodies and other agricultural or urban sites;
 - (b) the existence of groundwater, coastal water or nature protection zones in the area;
 - (c) the geological or hydrogeological conditions in the area;
 - (d) the risk of flooding, subsidence, landslides or avalanches on the site; and
 - (e) the protection of the natural or cultural heritage in the area.
- (2) A landfill permit may be issued for the landfill only if –
 - (a) the characteristics of the site with respect to the requirements in sub-paragraph (1); or
 - (b) the corrective measures to be taken,

indicate that the landfill does not pose a serious environmental risk.

(3) In this paragraph “nature protection zone” means an area of special scientific interest within the meaning of Article 28(11) of the 2002 Order or a European site within the meaning of regulation 10(1) of the Conservation (Natural Habitats, &c.) Regulations (Northern Ireland) 1995⁽¹⁾.

2.—(1) Subject to the following provisions of this paragraph, appropriate arrangements shall be made with regard to the characteristics of the landfill and prevailing meteorological conditions in order to –

- (a) control rainwater entering the landfill body;
- (b) prevent surface water or groundwater from entering into landfilled waste;
- (c) collect contaminated water and leachate and treat it to the appropriate standard so that it can be discharged.

(2) Arrangements need not be made in accordance with sub-paragraph (1)(c) if the Department decides that the landfill poses no potential hazard to the environment in view of its location and the kinds of waste to be accepted at the landfill.

(3) This paragraph shall not apply to inert landfills.

3.—(1) The landfill must be situated and designed so as to –

- (a) provide the conditions for prevention of pollution of the soil, groundwater or surface water; and
- (b) ensure efficient collection of leachate as and when required by paragraph 2.

(2) Soil, groundwater and surface water is to be protected by the use of a geological barrier combined with –

- (a) a bottom liner during the operational phase of the landfill; and
- (b) a top liner following closure and during the after-care phase.

(3) The geological barrier shall comply with the requirements of sub-paragraph (4) and shall also provide sufficient attenuation capacity to prevent a potential risk to soil and groundwater.

(4) The landfill base and sides shall consist of a mineral layer which provides protection of soil, groundwater and surface water at least equivalent to that resulting from the following permeability and thickness requirements –

(1) [S.R. 1995 No. 380](#)

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- (a) in a landfill for hazardous waste: $k \leq 1.0 \times 10^{-9}$ metre/second: thickness \geq 5 metres;
- (b) in a landfill for non-hazardous waste: $k \leq 1.0 \times 10^{-9}$ metre/second: thickness \geq 1 metre;
- (c) in a landfill for inert waste: $k \leq 1.0 \times 10^{-7}$ metre/second: thickness \geq 1 metre.

(5) Where the geological barrier does not meet the requirements of sub-paragraph (4) naturally, it may be completed artificially and reinforced by other means providing equivalent protection; but in any such case a geological barrier established by artificial means must be at least 0.5 metres thick.

(6) A leachate collection and sealing system to ensure that leachate accumulation at the base of the landfill is kept to a minimum must also be provided in any hazardous or non-hazardous landfill in accordance with the following table –

Leachate collection and bottom sealing

<i>Landfill category</i>	<i>Non-hazardous</i>	<i>Hazardous</i>
Artificial sealing liner	Required	Required
Drainage layer \geq 0.5 metres	Required	Required

(7) Where the potential hazards to the environment indicate that the prevention of leachate formation is necessary, surface sealing may be prescribed taking account of the following guidelines –

<i>Landfill category</i>	<i>Non-hazardous</i>	<i>Hazardous</i>
Gas drainage layer	Required	Not required
Artificial sealing liner	Not required	Required
Impermeable mineral layer	Required	Required
Drainage layer $<$ 0.5 metres	Required	Required
Top soil cover $<$ 1 metre	Required	Required

(8) The requirements of sub-paragraphs (3) to (7) may be reduced to an appropriate extent if on the basis of an assessment of environmental risks, having regard in particular to Council Directive [80/68/EEC](#) of 17 December 1979(2) (groundwater) –

- (a) it has been decided in accordance with paragraph 2 that the collection and treatment of leachate is not necessary; or
- (b) it is established that the landfill poses no potential hazard to soil, groundwater or surface water.

4.—(1) Appropriate measures must be taken in order to control the accumulation and migration of landfill gas.

(2) Landfill gas must be collected from all landfills receiving biodegradable waste and the landfill gas must be treated and, to the extent possible, used.

(3) The collection, treatment and use of landfill gas under sub-paragraph (2) must be carried on in a manner which minimises damage to or deterioration of the environment and risk to human health.

(4) Landfill gas which cannot be used to produce energy must be flared.

(2) O.J. No. L20, 26.1.80 p. 43 as amended by Directive [91/692/EC](#) (O.J. No. L377, 31.12.91 p. 48)

5.—(1) Measures must be taken to minimise the nuisances arising from the landfill in relation to –

- (a) emissions of odours and dust;
- (b) wind-blown materials;
- (c) noise and traffic;
- (d) birds, vermin and insects;
- (e) the formation of aerosols; and
- (f) fires.

(2) The landfill must be equipped so that dirt originating from the site is not dispersed onto public roads and the surrounding land.

6.—(1) The placement of waste must ensure stability of all the waste on the site and associated structures and in particular must avoid slippages.

(2) Where an artificial barrier is used, the geological substratum must be sufficiently stable, taking into account the morphology of the landfill, to prevent settlement that may cause damage to the barrier.

7.—(1) The landfill must be secured to prevent free access to the site.

(2) The gates of the landfill must be locked outside operating hours.

(3) The system of control and access to each facility must provide systems to detect and discourage illegal dumping in the facility.