

INSPECTORS REPORT

WASTE LICENCE REGISTER NUMBER 47-1

FACILITY: Kerdiffstown, Naas, Co. Kildare

APPLICANT: Neiphin Trading Limited

RECOMMENDATION: That a licence be granted subject to conditions.

(1) Introduction

The application by Neiphin Trading Limited relates to an operating but unauthorised integrated waste management facility, which comprises of a non-hazardous waste landfill, inert waste landfill (separate landfill areas are proposed at the facility for the disposal of non-hazardous waste and inert waste respectively) and infrastructure for the recovery of commercial/industrial waste and construction and demolition waste at Kerdiffstown, Co. Kildare. The facility is located off the local distributor road (PI 175A) approximately 3.5km northeast of Naas and some 0.5km to the west of the N7 National Primary Route and Johnstown Village. The land use in the surrounding area varies and includes agricultural and recreational use (Naas golf course). There are approximately 20 houses within 200m of the facility, including Kerdiffstown House. The nearest residence from the boundary of the facility is 10m.

The applicant applied in May 1998 to the Agency for a waste licence to restore a sand and gravel pit to original ground surface levels using construction and demolition waste. The applicant subsequently updated the application in September 2000 to include for the development of waste recovery infrastructure and a lined landfill. The applicant made further modifications to their application in additional information dated October 2001 which was submitted in response to an Article 16 notice. The original application was for a facility comprising some 16 hectares while the updated application includes for approximately 28 hectares.

Classes 1, 4, 5, 6, 11, 12 and 13 of the Third Schedule and Classes 2, 3, 4, 11, and 13 of the Fourth Schedule were applied for in the application (Third and Fourth Schedules of the Waste Management Act are attached as Appendix 1).

The Recommended Proposed Decision (PD), for the reasons set out in Section 9 of this report prohibits the carrying on of the following classes of waste activities: Classes 6, 11 and 12 of the Third Schedule and Class 2 of the Fourth Schedule. The PD permits, subject to the conditions contained therein, the recovery of waste and the landfilling of waste at the facility.

Quantity of waste applied for (tpa)	<ul style="list-style-type: none">➤ 630,000 t/a (includes acceptance into the facility of 300,000t/a and excavation on-site of 330,000t/a as given in the updated application dated October 2001).➤ The original application (May 98) was for the acceptance of 250,000t/a of construction and demolition waste.
Prescribed date for application	01/05/97
Application received	12/05/98
Environmental Impact Statement Required & Valid	Yes
Number of Submissions Received	3
Most Recent Site Visit	11/02/02

Appendix 2 contains a location drawing (Fig 3.1.1 'Proposed Extent of Excavations and Landfill Operations')

(2) Facility Development

The site is a sand and gravel pit that has a history of various extractive and backfill operations. Information submitted by the two Dean Waste Company Limited facilities (Waste Licences Reg. No. 42-1 and 45-1) in Dublin, which contravenes conditions of the respective licences, indicates that they are sending 200,000 tonnes of waste to the Neiphin Trading Facility. Landfilling of waste (commercial and construction/demolition) from these licensed facilities at the Neiphin Trading Facility has been observed by Agency Inspectors. The applicant's proposal includes for the extraction of waste previously deposited at the facility to create void for the lined landfill. The applicant estimated (additional information dated October 2001 which was submitted in response to an Article 16 notice) that 1,101,000m³ or 1,761,600 tonnes would need to be excavated to develop the lined areas of the landfill. The applicant presents two scenarios (attached as Appendix 3) in terms of time required to do this work, 5.34 years or 8.01 years respectively.

The proposed waste recovery infrastructure includes provision of a mobile unit developed by the applicant for recovery of wastes excavated on-site and also construction and demolition (C&D) waste delivered to the facility. The mobile unit consists of screens to remove fines less than 20mm, an air clarifier to remove light weight fractions such as plastics, a magnet to remove metals and a picking line where wastes other than rock, stone, concrete etc. will be manually picked. The wastes passing the picking line, rock, stone etc will be crushed into various size fractions. The applicant also proposes to recover C&D waste and commercial/industrial waste inside a proposed building. Limited detail is provided in the application on the proposed waste activities to be carried out inside the building other than listing that the waste recycling will require equipment such as conveyors, magnet, eddy current for removing aluminium, picking stations, balers, bobcat loaders, fork lifts and wheeled loader.

The PD permits the excavation of waste and the acceptance of waste for recovery subject to adequate processing plant capacity being available at the facility. The applicant is required to provide details to the Agency of this plant capacity prior to the carrying on of the waste activity and requires the applicant to cease waste operations until infrastructure is in place. The PD requires all waste recovery operations to be carried out on hardstanding surfaces and requires the processing of waste to take place within an enclosed building unless otherwise agreed with the Agency. Waste arising from the recovery process for disposal must also be stored on a hardstanding surface.

The PD permits a lined landfill for the disposal of non-hazardous waste to be developed at the facility. The development of the lined landfill will incorporate leachate collection. Leachate management infrastructure is also required to cater for any leachate generated from previous landfilling within the facility. Leachate from the proposed waste activities will in the short term be collected and tankered off-site for treatment at a Local Authority Sewage Treatment Works. In relation to this, the applicant did not include any details of an agreement with a Local Authority. In the future, the applicant proposes to connect the leachate discharge to the local sewer network subject to Local Authority approval.

Inert waste may also be disposed of at the facility subject to it meeting the criteria specified in the PD. Frequent analysis of inert waste accepted or recovered at the facility is required to verify that it is inert. Where inert waste does not satisfy the specified criteria it must be disposed of to an appropriate facility, which may include the on-site lined landfill provided that the waste can be classified as a non-hazardous waste. Waste may only be transported from the facility to authorised facilities, which must be agreed in advance with the Agency. Waste soils/fines (less than 20mm) generated from the process of recovery of waste excavated on-site shall be landfilled. The reason for this is that shredded mixed non-inert waste has been previously disposed of at the facility. This includes waste from the two Dean Waste Company Limited facilities (Waste Licensed Reg. No. 42-1 and 45-1).

Existing infrastructure at the landfill facility includes site offices, weighbridge and wheel cleaning unit. The PD requires waste inspection and quarantine areas to be installed at the facility.

The applicant has planning permission, which relates to the retention and completion of landfilling with waste arising within EWC Code 170000 (construction and demolition wastes), for part of the facility. The proposed waste activities at the facility, including landfill which differs from that in the planning permission, will require planning permission. The applicant has made an application for planning permission for the proposed waste recovery building at the facility and the decision of the Planning Authority to grant permission is currently under appeal by the applicant and by local residents to An Bord Pleanála.

The applicant applied to accept waste between the hours of 07.00 to 18.00 Monday to Friday inclusive and 07.00 to 17.00 on Saturdays and to operate during the hours of 07.00 to 20.00 Monday to Friday inclusive and 07.00 to 18.00 on Saturdays. Having regard to the close proximity of houses the hours of waste acceptance are restricted to start at 08.00 and the hours of operations from 07.30.

The final profile of the facility, its restoration and aftercare are controlled by *Condition 4 Restoration and Aftercare*. This requires the restoration of all areas of the facility, including areas where waste has been previously landfilled and where it is not proposed to remove the waste to create void for the development of lined cells. Condition 4.4 specifies final capping requirements for all areas of the facility, including areas where waste has been landfilled. The applicant initially applied to restore the facility to the levels of the surrounding land, which is approximately 100m OD (EIS dated June 1997 - Volume 1, Section 5.10 'Landscape and Visual Impacts' and Volume II Figure 28 'Proposed Final Contours and Future Monitoring'). In the updated submission dated September 2000 the applicant proposed a final profile of 118m OD (as shown in Drawing No. NTL/04 'Proposed Landfill Surface Contours'). Subsequently, in the additional information dated October 2001, which was in response to an Article 16 notice from the Agency, the applicant proposed a final profile of 108m OD (as shown in Drawing No. NTL/04a 'Proposed Landfill Surface Contours for Fill Areas A & B'). The PD requires the final profile to be consistent with the surrounding landscape and restricts the final profile height to 100m OD (Poolbeg Datum).

(3) Waste Types and Quantities

The applicant proposes to process up to 630,000 tonnes of waste per annum at the facility. This includes the acceptance of 100,000 t/a of commercial/industrial waste and 200,000 t/a of construction and demolition waste. Waste for disposal to the lined landfill is limited to 183,000 t/a as per the application. Inert waste accepted at the facility or derived from the waste recovery process on-site must satisfy the criteria in Schedule F of the PD. The quantities of inert waste allowed for restoration of the facility are limited to that required to achieve the final profile specified in *Condition 4*. Schedule A specifies the waste types and quantities to be accepted at the facility. The total landfill capacity is not available as the PD restricts the final profile to 100m OD and places restrictions on the formation levels of the landfill liner. Void space calculations are required under Condition 8.9 within three months of the date of grant of the licence.

(4) Emissions to Air

Emissions to air from the facility include landfill gas, dust, odours, and noise. Future emissions to air will include landfill gas combustion products. Emission limit values and environmental monitoring are set in *Schedule C: Emission Limits* and *Schedule D: Monitoring* respectively.

Landfill Gas

Monitoring results submitted to the Agency as part of the Article 16 notice reply dated October 2001 indicate landfill gas is being generated from waste disposed of at the facility to date, e.g. at monitoring point G29 gas readings of methane 56.3% and carbon dioxide 42.7%. Condition 3.15 of the PD requires measures for the control of landfill gas, which include installation of perimeter monitoring wells and a requirement to assess the feasibility of the utilisation and/or flaring of the landfill gas. Trigger levels for methane and carbon dioxide are set in the PD.

The applicant proposes to construct a building in which waste will be recovered at the facility. There is a risk to such buildings from landfill gas and the PD requires the applicant to have regard to DoE guidance document '*Protection of New Buildings and Occupants from Landfill Gas*'.

Noise & Dust

Noise monitoring results indicate that noise levels (LA_{eq}) at the boundary of the facility are in excess of 55dBA. The main noise impact can be attributed to passing traffic. Noise and dust monitoring requirements from the facility are established under *Condition 8.1* and emission limits are set under Schedule C.

Nuisance Control

Potential nuisances are controlled by *Condition 7* 'Environmental Nuisances'. There are a number of houses located along the local distributor road (PI 175A). To avoid potential nuisances, the PD requires that only non-putrescible waste be landfilled at the facility. An odour management plan for the facility is required. The PD requires the filling of the quarry back to ground level consistent with the surrounding landscape and does not require provision of a buffer zone.

Colonies of sand martins have been noted nesting in the facility and the PD requires a report outlining alternative suitable habitats in the vicinity and mitigation measures to deal with these birds.

(5) Emissions to Groundwater

Site Hydrogeology

The overburden consists of deposits of glaciofluvial outwash deposits (sand and gravel interbedded with fine-grained silty and clayey sediments). The sand and gravel layers are laterally and vertically discontinuous. The discontinuous layers of outwash sands and gravel can provide enough water for domestic or farm supplies. The thickness of overburden is estimated to vary from 6m to 15m between the base of the landfill and the bedrock surface (The floor of the sand and gravel pit is estimated at approximately 82 to 83m OD).

The glacial deposits overlie bedrock belonging to the Ballysteen Formation, which the GSI classify as a poor aquifer (the GSI states that this may be regarded as a preliminary classification as little fieldwork has been done on bedrock in the area under assessment).

There would appear to be a groundwater divide in the shallow overburden with groundwater flowing towards the River Morell and also in a westerly direction.

Groundwater Quality

Groundwater monitoring indicates elevated levels for certain chemical parameters e.g. ammonical nitrogen, chloride, calcium, manganese, iron and nickel. All wells monitored on either 19/09/01 or 11/10/01 indicated elevated levels of ammonical nitrogen (ranged from 0.23mg/l at BH16 to 1.92mg/l at BH17). Monitoring results show the highest elevated levels of ammonical nitrogen have been found in shallow overburden boreholes (TP2 and TP7

indicate levels of 9mg/l (monitoring dated 13/05/97) and 64mg/l (monitoring dated 24/10/97) respectively). Monitoring results of a sample from the wheel wash dated 25/05/00 indicates an elevated level of ammonical nitrogen (1.8mg/l); it is noted that the wheel wash discharges to ground. It is likely that past waste activities at the facility are contributing to the elevated levels of ammonical nitrogen, especially in results for the shallow overburden boreholes.

The applicant states that a survey indicates that there are no active groundwater wells within 500m of the site as the area is on mains water supply. A submission by the Society of Saint Vincent De Paul states that they rely on a groundwater well as a reserve supply. It is unclear if livestock water supplies in the area are obtained from either groundwater or surface water resources. The PD requires the applicant to provide an alternative water supply if monitoring of wells (including wells used for livestock water supply) indicates that the facility is having a significant adverse effect on the water quality. Groundwater monitoring trigger levels are to be established prior to acceptance of waste at the facility. Groundwater monitoring is required by *Condition 8.1*.

The PD requires that waste recovery activities be carried out on hardstanding areas (*Condition 5*) with collection of leachate and surface water. The PD allows the development of lined cells for the disposal of non-hazardous waste. The base of the landfill liner formation is required to be at least 1m above the groundwater table. Remediation measures of groundwater/leachate are required by *Condition 3*. The capping of the landfill should reduce the amount of leachate generated. The monitoring requirements for groundwater and leachate are contained in Schedule D of the PD.

(6) Emissions to Surface Waters

The facility is located within the catchment of the Morell River, which is a tributary of the River Liffey. The Morell River flows in a north to northwest direction to the east of the facility. The applicant states that there is no direct discharge to surface water from the proposed activities within the facility. To the south and south west of the facility the catchment drains by a man-made channel to the Grand Canal.

Monitoring results dated 11/10/01 and submitted with information dated October 2001 indicate slight contamination of the Morell River with elevated levels of ammoniac nitrogen at SW2 0.3mg/l, at SW3 0.32mg/l, at SW4 0.29mg/l and at SW7a 0.28mg/l. The applicant reports that the drain supply (man made channel) to the Grand Canal has the appearance of being seriously polluted with much of the waterway being blocked by waste from fly tipping. The applicant states that the channel to the Grand Canal is unrelated to the application site.

Condition 3.16 requires management of surface water at the facility.

(7) Waste Management, Air Quality and Water Quality Plans

Waste Management Plan

The Waste Management Plan (2000 - 2005) for County Kildare, which was adopted by Kildare County Council on the 17/7/00, has been considered.

Air Quality Management Plan

There is no Air Quality Management Plan for County Kildare.

Water Quality Management Plan for the River Liffey

The Water Quality Management Plan for the Liffey Catchment has been considered.

(8) Submissions/Complaints

A total of 3 valid submissions were received in relation to the waste licence application.

Two of these submissions were from Duchas The Heritage Service stating that they had no concerns or comments regarding the application.

The other submission was from the Society of Saint Vincent De Paul, which states that the Society runs a holiday centre on a property adjoining the applicants facility. Issues raised in the submission are dealt with below.

Water flows from the dump across our land to the Morell River and to a well which is our reserve water supply, the nature of the material to be dumped needs to be restricted to ensure that neither the river nor the well are polluted.

Response

This matter is dealt with under Section 5 Emissions to Groundwater, Groundwater Quality of this report.

The operator should be required to cover up dumped material to ensure that birds are not attracted to it and that it is not blown onto adjoining lands. The operator should be required to gather up any materials, which blows around. The operator should restrict dumping to one area. When dumping is completed in one area, grass trees or shrubs would be sown on it to present a good appearance. When dumping is complete, the operator should be required to landscape the entire site and to remove old equipment.

Response

The PD requires cover to be applied daily to landfilled waste and restricts the landfill operator to one working face. Landscaping and restoration of the facility is required during and after the filling of cells. The PD also requires measures be put in place to control litter and birds.

As dumping has progressed, the level of the dump has been raised twenty or thirty feet above the level of our land. The operator should be required to slope the material dumped to limit the possibility of it sliding into our property and to plant grass etc., on it for same purpose.

Response

The PD requires an ongoing assessment of slope stability and requires the restoration and landscaping of all the facility including the slopes referred to.

The operator should be required to ensure that the damage and mess caused by the large number of lorries using the dump to the public road at the entrance to the dump, or the traffic lights at Johnstown Cross and at our entrance gate is kept to a minimum and is cleared up and made good at regular intervals.

Response

The PD requires that roads be kept free of any debris caused by vehicles entering or leaving the facility. Any such debris must be removed without delay. It also requires vehicles delivering or removing waste from the facility are appropriately covered. The issues relating to road maintenance are matters for the planning authority.

The operator should be required to provide security for compliance with the terms of the licence, particularly with those conditions which are to be compiled with after dumping has ceased.

Response

The PD requires an Environmental Liability Risks Assessment to be carried out and a Financial Provision to be put in place prior to the commencement of waste disposal activities. The facility shall remain under licence after landfilling has ceased.

(9) Recommendation

Classes 1, 4, 5, 6, 11, 12 and 13 of the Third Schedule and Classes 2, 3, 4, 11 and 13 of the Fourth Schedule were applied for in the application.

It is recommended that a licence with conditions be granted for Classes 1, 4, 5, and 13 of the Third Schedule and Classes 3, 4, 11, and 13 of the Fourth Schedule as applied for in the application.

Third Schedule, disposal activities

Classes 1 and 5: relate to landfilling of waste.

Class 4: relates to a leachate holding tank.

Class 13: refers to storage of waste on-site prior to removal and disposal elsewhere.

Fourth Schedule, recovery activities

Class 3: relates to reclamation of metals.

Class 4: relates to the recovery of inert inorganic materials such as concrete and subsoil.

Class 11: relates to the use of wastes reclaimed in activity 4 of the Fourth Schedule.

Class 13: refers to the storage of any material on the site prior to reclamation.

In coming to this recommendation, I consider that these activities would, subject to the conditions of the recommended Proposed Decision, comply with the requirements of Section 40(4) of the Waste Management Act 1996. However, the facility may cause environmental pollution as previous waste disposal activities were carried on at an unlined site.

I recommend that Classes 6, 11, and 12 of the Third Schedule and Class 2 of the Fourth Schedule be refused:

Third Schedule, disposal activities

Class 6: relates to the possible pre-treatment of organic waste in a building to meet EU Directives. Insufficient information has been submitted within the application to allow an assessment of this waste activity and I therefore recommend that it not be licensed.

Class 11: The description given for Class 11 relates to the reuse of waste, however this is a disposal activity. I therefore recommend that it not be licensed.

Class 12: relates to possible baling of waste on-site. Insufficient information has been submitted within the application to allow an assessment of this waste activity and I therefore recommend that it not be licensed.

Fourth Schedule, recovery activities

Class 2: relates to possible pre-treatment of organic waste in a building to meet EU Directives. Insufficient information has been submitted within the application to allow an assessment of this waste activity and I therefore recommend that it not be licensed.

Signed _____
Peter Carey

Dated: 04/09/02

APPENDIX 1

THIRD AND FOURTH SCHEDULES OF THE WASTE MANAGEMENT ACT 1996

THIRD SCHEDULE Waste Disposal Activities	FOURTH SCHEDULE Waste Recovery Activities
1. Deposit on, in or under land (including landfill).	1. Solvent reclamation or regeneration.
2. Land treatment, including biodegradation of liquid or sludge discards in soils.	2. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
3. Deep injection of the soil, including injection of pumpable discards into wells, salt domes or naturally occurring repositories.	3. Recycling or reclamation of metals and metal compounds.
4. Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.	4. Recycling or reclamation of other inorganic materials.
5. Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.	5. Regeneration of acids or bases.
6. Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1. to 10. of this Schedule.	6. Recovery of components used for pollution abatement.
7. Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1. to 10. of this Schedule (including evaporation, drying and calcination).	7. Recovery of components from catalysts.
8. Incineration on land or at sea.	8. Oil re-refining or other re-uses of oil.
9. Permanent storage, including emplacement of containers in a mine.	9. Use of any waste principally as a fuel or other means to generate energy.
10. Release of waste into a water body (including a seabed insertion).	10. The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.
11. Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.	11. Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.
12. Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.	12. Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule.
13. Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.	13. Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

APPENDIX 2
LOCATION PLAN

APPENDIX 3

Waste Excavation/Landfilling Scenarios as Presented by Applicant (From information dated October 2001 submitted in response to Agency Article 16 Notice)