



Fingal County Council
Comhairle Contae Fhine Gall



Fingal Landfill Project



VOLUME 3

Environmental Impact Statement

Technical Appendices A,B,C,D



WASTE MANAGEMENT PLAN
Working for the Dublin Region

April 2006

RPS

ENVIRONMENTAL IMPACT STATEMENT

For The Proposed

Fingal Landfill

April 2006

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VOLUME 1	NON-TECHNICAL SUMMARY
VOLUME 2	MAIN REPORT
VOLUME 3 - 5	TECHNICAL APPENDICES

VOLUME 3 – TECHNICAL APPENDICES

Appendix A (Human Beings, Social and Community)

Appendix B (Landscape)

Appendix C (Surface Water)

Appendix D (Aquatic Ecology)

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APPENDIX A

HUMAN BEINGS, SOCIAL AND COMMUNITY

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1 INTRODUCTION

This report considers and assesses the potential impacts/effects of the proposed development on the “community” in the general vicinity of the site. For the purposes of this EIS, community is defined as those living and working in the vicinity of the site and the existing services currently providing for the community. The chapter also looks at the general “amenity” characteristics of the area within which the “community” exists. Specific impacts in relation to health and property values are examined in **Chapter 3, Section 3.1** and **Chapter 3, Section 3.3** of the EIS.

2 METHODOLOGY

The methods used to examine the potential impact of the development on the community living and working the vicinity of the proposed site included;

- Examination of census data and other demographic data;
- Examination of the Fingal County Development Plan and active planning applications;
- Site visits and drive by surveys of residences, places of employment and local facilities;
- Consultation with statutory bodies and participation at workshops held with local residents and other interested parties;
- Summary analysis of the results of the detailed examination of the potential impact and mitigation measures proposed for the various aspects of the environment carried out by other specialist consultants.

Regard was had to the EPA's “Advice Notes on Current Practice (in the preparation of Environmental Impact Statements 2003)” (with specific reference to Project Type 31) and “Guidelines on the Information to be contained in Environmental Impact Statements”. In particular, reference was made to the guidance on addressing the environmental topic “Human Beings”. The Advice Notes defines this topic as covering the existence, activities, and well being of people as groups or populations and directs that the EIS concentrate on topics, which are manifest in the environment such as new landuses, more buildings or greater emissions.

3 EXISTING ENVIRONMENT

3.1 LOCATION

The proposed site is located in the District Electoral Division (DED) of Lusk in the County of Fingal, straddling the townlands of Tooman, Nevitt, Ballystrane, Johnstown, Jordanstown, Rowans Little, Knightstown and Walshestown, adjacent to and 0.2km west of the M1 motorway (**Figure 3.1**). The site to be acquired for the proposed development occupies an area of approximately 210 hectares (500 acres), which is currently under agricultural production. The land of the proposed site gently slopes towards the east with views towards Lambay Island, Howth and Dublin Bay.

3.2 CONTEXT

The proposed site is located in an area identified as Rural in the current Fingal County Development Plan (2005-2011). Fingal County contains a large area of rural land much of which is under strong development pressure for residential and economic uses from urban areas such as Dublin City and from within the rural community itself. The strategies identified in the County Development Plan for rural areas seek to;

- Protect rural villages and settlement clusters by means of appropriate sustainable development, which will preserve the character of villages and settlement clusters and to support local services;
- Channel housing demand in rural areas into the villages and settlement clusters and to strictly limit the development of new housing in the countryside by ensuring only essential functionally related housing is permitted. All new housing in rural areas will have to comply with the Rural Housing Policy identified in the Plan;
- Ensure the continuity and viability of agriculture and horticulture within rural areas and to encourage farm diversification and agri-businesses at appropriate locations, while sustaining the rural character of the countryside as a valuable resource.

3.2.1 Landuse Zoning and Specific Objectives

The objective of the landuse zoning "RU Rural and Agricultural" of lands within and surrounding the development site is "to protect and provide for the development of agricultural and rural amenity". This zoning objective "*seeks to protect the agricultural areas of the county by ensuring that all new development is functionally related to agriculture and horticulture and to protecting the role and operational needs of agriculture and horticulture; while also seeking to preserve the rural amenity though ensuring new developments fit into the landscape sensitively and the natural features such as hedgerows and tree lines on ridges are protected*" (Fingal County Development Plan 2005-2011). Use Classes related to this Zoning Objective, which are permitted in principle, include "refuse landfill".

The zoning objectives for the area to the north east of the site, located around the Courtlough Interchange on the M1 motorway are to facilitate opportunities for general industrial and science and technology based employment.

The small settlement located adjacent to The Five Roads crossroads/Hedgestown is identified as a Rural Cluster and the zoning objective for this area is to protect residential amenity and the character of settlement clusters and provide for small-scale infill development to serve local needs. This settlement is over 400 metres from the nearest point of the proposed site, is over 600m from the proposed disposal area and is separated from the proposed development by both the M1 and the N1 roads. However, it is visually connected with the site. A small area of this settlement is zoned as a Rural Business centre with the objective to provide for and facilitate agri-business uses.

The small settlement at Wimbletown is also zoned as a Rural Cluster. This settlement is located approximately 750 metres to the south-west of the proposed development but is largely visually isolated from the site.

The Rural Village of Ballyboghil is located some 2.3 km to the south-west of the site and the zoning objectives for the village includes the protection of the special character of rural villages and provide for improved village facilities and local housing needs in accordance with the Local Area Plan which was adopted by Fingal County Council on March 8th 2004.

The high ground to the west of the site is zoned objective HA; to protect and improve high amenity areas.

Specific Objectives in the vicinity of the site include sensitive landscape and preservation of views (see Chapter 3 Section 3.7 of the EIS for further detail).

3.3 LAND USE

Agricultural production and low density rural housing is the current main landuse in the area though planning permission has been granted for the development of a business park adjacent to the site. A large quarry and inert landfill is located in an elevated position to the west of the site. There are also a number of small businesses in the general vicinity of the site and a national school to the east of the site on the far side of the M1 motorway, which borders the eastern edge of the site.

The landuse within the site acquired for the proposed landfill is typical of the general agricultural landuse in the environs of the site. There are three principal landuses; tillage, grassland, and woodland and four principal agricultural enterprises; tillage, dairying, drystock (horse, sheep and cattle) and commercial woodland. Grassland is the largest landuse at 51% with tillage the next largest at 45%. (See Chapter 3 Section 3.14 – Material Assets Agriculture of the EIS)

3.4 CURRENT POPULATION/ PROJECTED POPULATION

According to the County Development Plan, (based on figures presented in the Strategic Planning Guidelines GDA) the population of Fingal is estimated to increase from 196,413 in 2002 to 259,757 in 2010; an increase of 24% over the 8 year period.

All of the land to be acquired for the proposed landfill is within the District Electoral Division (DED) of Lusk, the total area of which is 4,239 hectares. The acquired site represents approximately 5% of the land area in the DED. The total population for the DED at the last census (2002) was 4,131, of which 2,051 were males and 2,080 females. The percentage change in population from the previous census (1996) was +10.5 % and the actual change in population was an increase of 391 (CSO, 2003). Of the 4,131 population in the DED, 2456 of these live within the urban area of Lusk. Thus, the average density in the rural area of the DED was approximately 39.5 people per square kilometre in 2002.

It is estimated that the County of Fingal has an average household size of 3.18 (people per household) (CSO, 2003), somewhat above the average households size of 2.86 in the GDA as a whole. Taking the 3.18 value as a conservative estimate of household size in the general vicinity of the proposed landfill, along with the total number of residences within various distance bands from the edge of the "investigated area", the current population resident within these bands can be estimated (**Table 3.1**). The predicted percentage population increase for the county from 2002 to 2010 as stated above is 24%, therefore extrapolating from this percentage; the increase over 6 years (present to 2011) would be predicted to be 18%. Taking this value as the percentage increase in population over 6 years, the potential population in the vicinity of the site can be estimated (**Table 3.1**).

As the settlement policy of Fingal Co. Co. is to concentrate future development in settlement clusters rather than in rural areas and it is estimated that the average household size will decrease in future years (GDA average at 2.5 per household in 2011 (SPG GDA April 2000)), this potential increase in population in the rural environs of the development may not occur irrespective of the presence of the proposed development. However, a number of designate settlements are located within 4 to 5km distance of the site and the population in these settlements are likely to increase at the predicted rate.

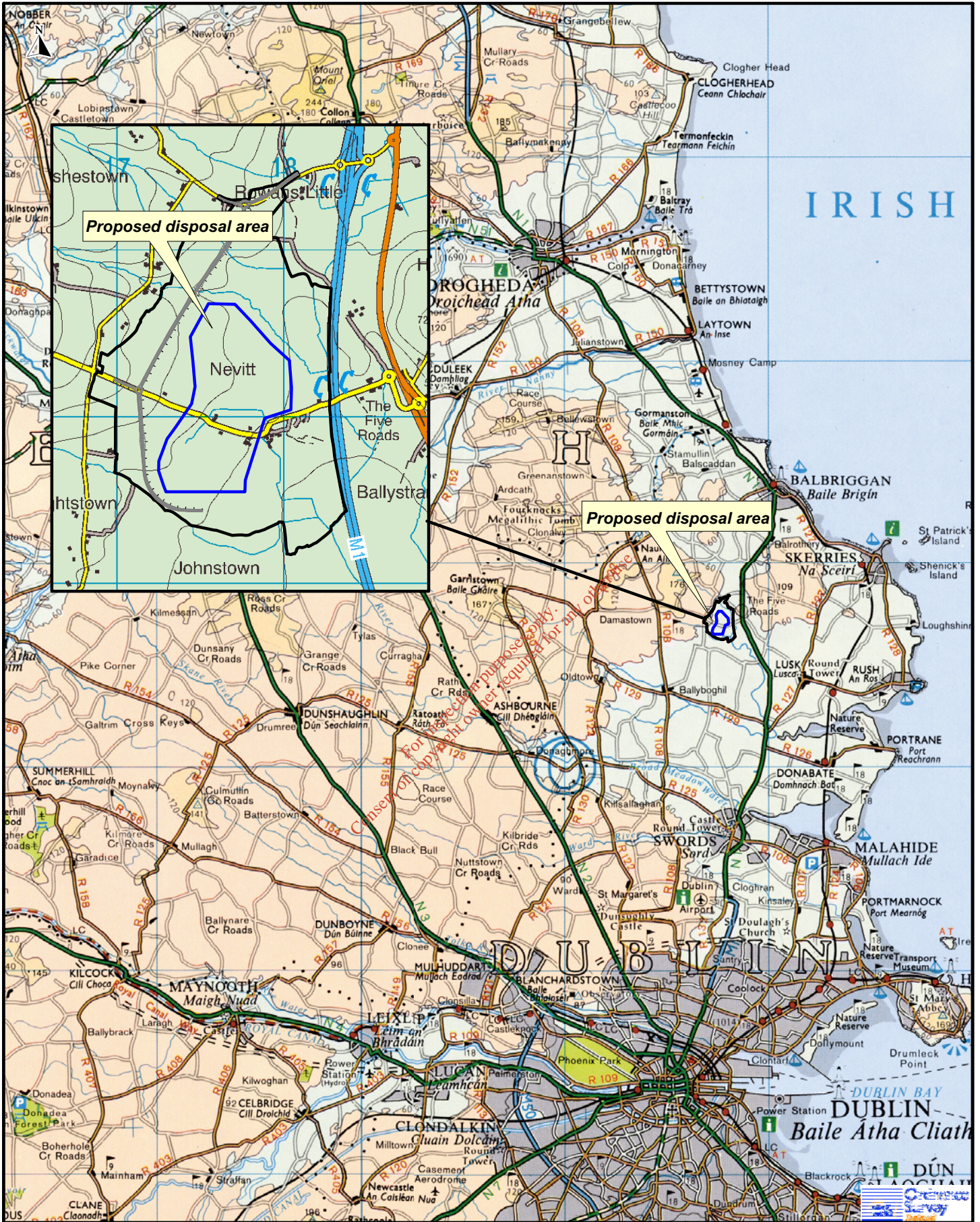
Table 3.1 Current and Predicted Potential Populations within 1km, 2km, 3km, 4km and 5km Distance Bands from the edge of the Investigated Area

Distance Band	No. of Residences	Current Population 2005 ^a	Predicted Potential Population 2011 ^b
<1km	118	375.25	442.78
<2km	259	823.62	971.87
<3km	497	1,580.46	1,864.94
<4km	1804	5,664.56	6,684.18
<5km	2869	9,123.42	10,765.62

^a Based on predicted average household size of 3.18 (CSO, 2002)

^b Populations predicted based on Figures presented in the Strategic Planning Guidelines GDA

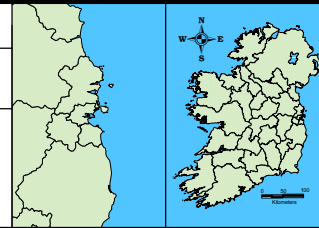
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Project **Fingal Landfill Project**

Figure 3.1

Title **Location Map**



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RPS Consulting Engineers

Carnegie House
Library Road
Dun Laoghaire
Co. Dublin, Ireland

T +353 (0)1 2020870
F +353 (0)1 2020707
E ireland@rpsgroup.com
W www.rpsgroup.com/ireland

3.5 SETTLEMENT AND HOUSING

3.5.1 Settlement

The village/ town of Lusk is the nearest urban centre to the proposed site lying some 3.75km to the south east of the investigated area. It is a historic village with a very distinctive character. Extensive lands around the village are zoned for residential development, and there are significant opportunities for appropriate infill development within the village core. The development strategy for the village, as outlined in the County Development Plan is to consolidate the planned growth of this distinct and separate settlement and to ensure in particular that the level of retail and local services concentrated in the village core grows to serve the expanding village population. Existing and future development will be consolidated within well-defined town boundaries. The current population is circa 2500 and this is forecast to increase significantly by 2011. It is estimated that more than 1200 new houses will be built in Lusk by 2011.

Balrothery village, part of the major urban centre of Balbriggan is located approximately 5.5km north east of the proposed site. It is separated from the southern development boundary of Balbriggan by a small greenbelt and an existing golf course. The village has undergone significant residential development over the past few years and a further 270 houses are planned for the village within the lifetime of the current development plan. The development strategy for Balrothery is to consolidate the existing and developing urban form, to protect and enhance amenities, to ensure the integration of the undeveloped zoned lands with the existing village, in accordance with the adopted Local Area Plan, and to maintain the village's separation from Balbriggan.

Ballyboghil and the Naul are the nearest "rural villages" to the proposed site, both located to the west of the site.

Ballyboghil village functions as a local centre, servicing the agricultural hinterland. The original village core is sparse and underdeveloped, centred on the church and school. Over recent years the village has developed an elongated linear form, extending for approximately 1.5km along the R108 regional road and comprising a mix of small housing developments situated at right angles to the main road and single 'one-off' housing. The population is circa 300.

The Naul Village is located on the Fingal and Meath county boundary. It functions as a local centre, servicing the agricultural hinterland. The Village Square and Main Street provide the focus of the built form of the village. The square contains a range of nineteenth and early twentieth century buildings, including the re-thatched Seamus Ennis Music Centre, which is an important social and community focal point for the general area. The village has a population of circa 200.

There are three rural clusters in the general vicinity of the site, at Wimbletown to the south west Hedgestown (Five Roads) to the east and Colecot to the south east of the site. These areas have more limited characteristics than villages and have a more residential focus, with fewer services available. Their role is to provide a viable alternative to rural housing in the open countryside and support local service provision in a sustainable way. The local national school is located at the rural cluster of Hedgestown/The Five Roads, which also accommodates an agri-business unit.

3.5.2 Housing

In relation to settlement in the countryside, the Development Plan stipulates that in order to protect and manage the rural area for future generations only new housing functionally related to the area will be considered within the open countryside.

The settlement pattern in the countryside is generally linear, bordering to the roadside. The average density of rural housing within a radius of one kilometre of the edge of the investigated area is 9.9 houses per square kilometre. This decreases to 9.4 houses per square kilometre within a radius of 2km and increases to 10 within 3 km radius from the edge of the investigated area. However, the density increases to 23.2 and 25.6 houses per square kilometre within 4 and 5 km radius, as the settlements of Lusk, Balrothery, the Naul and Ballyboughill are located in these areas (**Table 3.2**). **Figure 3.2** shows the number and location of residences within these distance bands and is based on information available in the An Post Geo-directory.

There is a cluster of eight houses in the area known as the Nevitt, which is located towards the centre of the investigated area and these houses will be acquired should the development proceed. There are also a significant number of houses (approx 19) along the road bounding the western side of the investigated area and a smaller number (approx. 3) on the Rowans Little road which bounds the north side of the area. There are also a number of recently granted planning permissions and planning applications for residential developments on the roads surrounding the proposed site. The curtilage of all these houses is greater than 250-metres from the proposed disposal area.

Table 3.2 Number of houses/km² for each housing distance

Housing Distance					
	1km	2km	3km	4km	5km
Number of Houses	118	259	497	1804	2869
km²	11.93	27.59	49.5	77.7	112.2
Houses/km²	9.9	9.4	10.0	23.2	25.6

3.6 EMPLOYMENT OPPORTUNITIES IN THE AREA

Agriculture and businesses supporting agricultural production were traditionally the main source of employment in the immediate area of the landfill site. However, alternative sources of employment now available in the general locality are identified below.

A joinery shop on the road to the west of the site employs 52 employees from Balbriggan, The Naul, Skerries, and the wider area. A number of small haulage operators are located in the area. There are also currently 2 inert waste facilities (A&T Tipper Hire and Clashford Recovery Facility Limited) within 2km of the edge of the investigated area. A new industrial site, the M1 Business Park, is being developed towards the north east of the site. A quarry and a licensed inert landfill facility is located to the west of the site, 2km from the site boundary.

In addition, planning permission has been granted for a business park at the Courtlough Interchange that will provide general industrial and science and technology based employment in the future. Also, between the years 2000 and 2005 a number of developments proposed for the surrounding environ of the proposed landfill have been granted planning permission (e.g. joinery workshop extension at Tooman; construction of a motorway services centre and associated facilities, 124 bed hotel and restaurant and petrol filling station at the junction of Courtlough/Rowan's Road). These developments, if and when realised, will provide a potential source of employment for the local workforce.

The area surrounding the proposed development is located within commuting distance of employment centers in Fingal, Dublin City and the GDA.

3.7 SOCIAL/COMMUNITY INFRASTRUCTURE IN THE AREA

The County Development Plan states that Fingal Council will actively protect and support essential local services for the rural community. The provision of services to meet the needs of the community will, generally, be located in the Rural Villages, both for reasons of sustainability, and to help reinforce the role of the village as the centre for the community. Other objectives included in the Development Plan regarding social and community infrastructure include;

- Protecting the existing network of schools within the rural community and to actively encourage the provision of safe access to such facilities, and
- To support the provision of library services to rural community both through the mobile service and the existing Council library in Garristown.

The number of existing community facilities located within a 5 km radius of the edge of the investigated area are indicated in the **Tables 3.3, 3.5 and 3.6** and are listed in **Appendix A**. These facilities include primary and secondary schools, sports clubs, community halls, libraries, post office, and shops. The nearest shops are currently located in Lusk, Ballyboghil and Man O' War.

3.7.1 Schools

A total of 11 schools are located within 5km of the proposed landfill site (see **Figure 3.2** and **Table 3.3**). **Appendix A** contains a list of all the schools within 5km of the "investigated area".

Only one primary school, Hedgestown National School (Scoil Baile Falbhach - Roll number 17472M), is located within 1km of the proposed landfill site. The number of pupils on the school roll for 2004/05 was 60. **Table 3.4** shows that there has been a decline in pupil numbers attending the school over the last number of years.

In 2004, Hedgestown National School was listed on the School Building Programme issued by the Department of Education and Science. The school project was assigned to a Band 2 rating which refers to a project, which is essential and involves a requirement for additional classroom accommodation over and above the current complement of mainstream permanent classrooms (Department of Education and Science, 2006).

Table 3.3 Pupil number attending Hedgestown National School (Department of Education and Science, 2006)

School Year	Males	Females	Total
2004/2005	35	25	60
2003/2004	34	24	58
2002/2003	41	26	67
2001/2002	42	25	67

Table 3.4 Number of Schools within 5km of Proposed Landfill Site

Distance Band	< 1km	< 2 km	< 3 km	< 4 km	< 5 km
No. of Schools	1	2	2	9	11

3.7.2 Sports Clubs

A number of sports clubs are located within 5km of the proposed landfill site (see **Figure 3.2** and **Table 3.5**). However, no clubs are located within the 1km proximity of the proposed landfill site. A list of the sports clubs within the 5km band is listed in **Appendix A**.

Table 3.5 Number of Sports Clubs within 5km of Landfill Site

Distance Band	< 1km	< 2 km	< 3 km	< 4 km	< 5 km
No. of Sports Clubs	0	4	4	8	11

3.7.3 Communities Facilities

A number of other community facilities are located within 5km of the proposed landfill site (see **Figure 3.2** and **Table 3.6**). However, none of these facilities are located within 3km of the proposed site. A list of the community facilities within the 5km band is listed in **Appendix A**.

Table 3.6 Number of Community Facilities within 5km of Landfill Site

Distance Band	< 1km	< 2 km	< 3 km	< 4 km	< 5 km
No. of Community Facilities	0	0	0	4	8

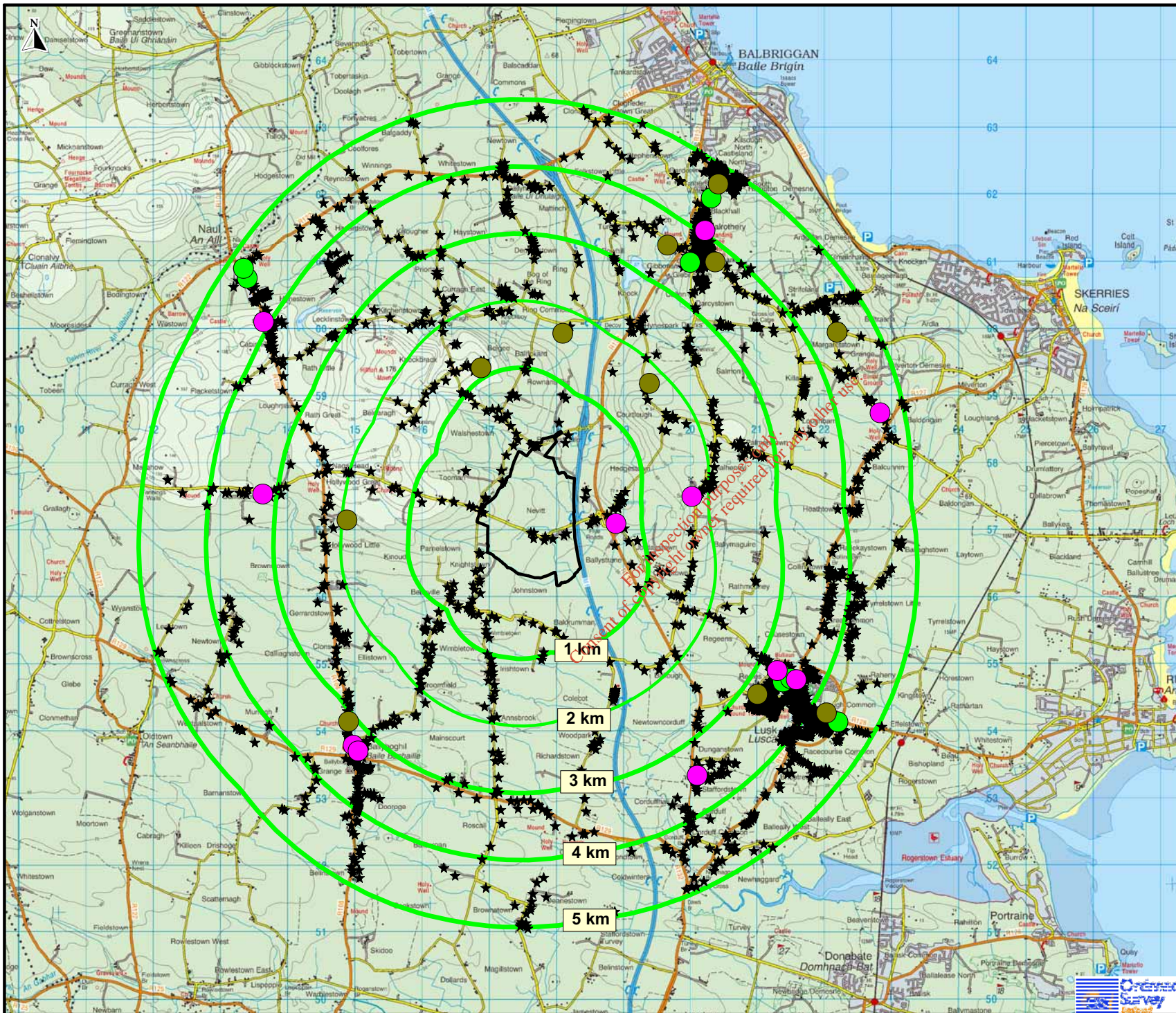
3.7.4 Remand Centre

Two remand centers are located in Oberstown approximately 1.2km from the edge of the investigated area. The Oberstown Remand Centre caters for 35 individual and the Trinity House facilitates for up to 24 individual.

3.7.5 Hospitals and Care Institutions

There are no hospitals or other care institutions within 3 km of the proposed site.

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Legend

- Sports Club
- School
- Community Facility
- ★ Residence
- Buffer

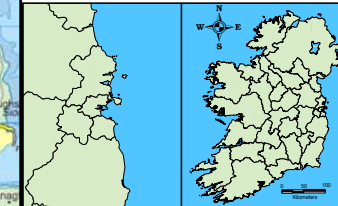
Residences <1km of Investigated Area = 118

Residences <2km of Investigated Area = 259

Residences <3km of Investigated Area = 497

Residences <4km of Investigated Area = 1804

Residences <5km of Investigated Area = 2869



Project **Fingal Landfill Project**

Title **Housing Densities**

Figure 3.2

RPS Consulting Engineers
 Carnegie House
 Library Road
 Dun Laoghaire
 Co. Dublin, Ireland
 T +353 (0)1 2020970
 F +353 (0)1 2020707
 E ireland@rpsgroup.com
 W www.rpsgroup.com/ireland

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3.8 ROAD INFRASTRUCTURE AND PUBLIC TRANSPORT

All of the roads in the vicinity of the site, with the exception of the M1 to its east, are of local road status and provide linkages to nearby villages such as The Naul and Ballyboghil. The proposed site is split by a road (the Nevitt road) running approximately East/West through the Nevitt from the Five Roads on the R132 (N1) to the Nags Head on the R108, Ballyboghil to Naul Road. With the exception of this road, the local roads in the environs of the site are relatively lightly trafficked. There is significant heavy vehicle traffic on the Nevitt road emanating from a quarry and waste management facilities located to the west of the proposed site. Approximately 0.2 km east of the site however, a significant amount of infrastructural development has been constructed, which includes the M1 Dublin to Belfast Motorway and the R123.

Public transport in the immediate area of the site is limited although the wider area is served by both bus and rail services. Bus Eireann provides a regular expressway service (No 100 or No 101) from Dublin to Drogheda and vice versa stopping at various locations including Balrothery and Balbriggan. This service operates throughout the day and has increased services during the AM and PM peak periods (approximately every 15 to 30 minutes). There is also a Dublin Bus Service No 33 Dublin to Balbriggan, which provides a local bus service. This bus route, serves a number of locations including Drumcondra, Dublin Airport, Swords, Rush and Lusk. This is a regular service running throughout the day roughly once an hour with increased services during AM and PM peak periods. These bus services can be reached from the R132 near the Five Roads junction where there are bus stops and bus lay-bys provided on both sides of the road. There is also a school bus serving schools in Swords, which collects children from the area.

The proposed landfill site is approximately 10km from the Dublin to Belfast railway line. The nearest railway stations are Skerries and Lusk. These stations have regular services to and from Dublin City Centre and all major towns including Drogheda, Dundalk, Belfast etc.

There are taxi services available in the area.

There are currently no cycling or pedestrian facilities available in the vicinity of the proposed Fingal Landfill site with the exception of the footpaths on the Nevitt Road and Rowans Road where they cross the M1. There are also footpaths provided on the link road from the Nevitt Road to Man O'War, and on the R132 (near the Five Roads junction), which are largely used by school children attending the local primary school at Hedgestown. There is anecdotal evidence that the majority of pupils from the catchment west of the M1 attending the primary school, are delivered to the school by car due to concerns about pedestrian safety on the local road network, particularly the Nevitt Road.

3.9 SUMMARY OF GENERAL COMMUNITY AND AMENITY CHARACTERISTICS OF THE AREA

The proposed site is situated in the relatively rural setting in North County Dublin, west of the M1 motorway, with Lusk and Balbriggan being the closest "large" centres of population. The area enjoys a moderate climate with prevailing winds from the south and west. Ambient air quality reflects the rural nature of the location with low pollutant and noise levels. Existing noise levels are dominated by traffic along local roads and noise from traffic on the M1 (see Sections 3.5, 3.4 and 3.6 in the EIS for details on Air, Climate and Noise). The landscape has an open aspect with the land sloping from west to east affording good views from the western (top) boundary of the site south-eastwards across Dublin Bay.

There are approximately 118 residences within 1km of the proposed site, 259 within 2 km and 497 within 3 km. With the exception of the cluster of 8 houses at the Nevitt, the settlement pattern in the vicinity of the site is generally linear with residences fronting onto the local road network. Fingal's development policy of restricting residential development in rural areas has led to the refusal of

residential planning applications in the general vicinity of the site. However, permissions have been granted for a number of dwellings in recent years and a number of these are currently under construction (Fingal County Council, 2006).

There is no specific community focus within the proposed site or its immediate vicinity though the national school Hedgestown does provide a social focus for families with children of primary school going age. The Nevitt road, which traverses the proposed site, gives the most direct access to the school from the west.

Agriculture, light industry, rural housing and quarrying have been the traditional landuses in the surrounding area. However, in more recent years, 2 waste facilities for managing inert material have been established to the north and west of the proposed site and a business park is being developed around the Courtlough Interchange on the M1 to the north-east of the site.

While the development objectives for rural areas within the county are to “protect and provide for the development of agricultural and rural amenity” while “seeking to preserve the rural amenity though ensuring new developments fit into the landscape sensitively”, current development pressure, largely due to the proximity of the area to the GDA has already eroded, to some extent, the rural nature of the area. The presence of the M1 motorway, the new business park and planned associated development at the Courtlough Interchange are examples of this development pressure.

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4 PUBLIC CONSULTATION UNDERTAKEN

Non-statutory consultation was undertaken in relation to the proposed Fingal landfill development at the Nevitt to ensure that the views of various stakeholders, the community and individuals are taken into account in the decision making process.

Two community workshops/consultations on the proposed landfill took place on Friday 8th April 2005 and on Friday 13th January 2006 at the North County Cricket Club, Balrothery. The local community were invited to come and discuss the proposed development with the experts preparing the Environmental Impact Statement. In addition, regular circulars were delivered to approx. 90 houses adjacent to the site updating them on the progress of the proposal and a funding contribution was made available to a local group, the Nevitt Lusk Action Group, to engage their own hydrogeological consultant.

4.1 WORKSHOP 1 – 8TH APRIL 2005

The main issues raised by the public in relation to the potential impact of the development on the community were (i) the potential for foul odours emissions (ii) air borne pollution (iii) increased vermin (iv) litter control (v) health implications (vi) impact on landscape (visual) (vii) negative effects on water quality (viii) increased traffic (ix) property depreciation (x) fragmentation of the community (xi) potential loss of future pupils for Hedgestown school (xii) potential loss of employees of existing businesses in the area. The worry of not knowing what was going to happen with respect to the development was also identified as an impact of the planning stage of the development. These issues have been addressed in the relevant EIS Chapters as indicated in **Table 4.1**.

Table 4.1 Summary of Issues from Public Consultation - 8th April 2005

Principle Issues	Sub issues	Issues addressed by the following
Construction Activities	Traffic	EIS - Chapter 3 Section 3.19
Operational Activities	Air Borne Pollution	EIS – Chapter 3 Section 3.4
	Vermin	EIS - Chapter 3
	Odour	EIS – Chapter 3
	Traffic	EIS – Chapter 3 Section 3.19
Landscaping	Impact on Visual Landscape	EIS –Chapter 3 Section 3.7
Water Quality	EIS – Chapter 3 Section Chapter 3.8	
Property	Property Depreciation	EIS – Chapter 3 Section 3.3
Social and Community	Fragmentation of Community	EIS – Chapter 3 Section 3.2
	Potential Loss of Employees	
Education	Potential loss of Future Pupils	EIS – Chapter 3 Section 3.2
	Location of landfill access points in relation to the school	
Health	Physical health	EIS – Chapter 3 Section 3.1
Material Assets	Property Depreciation	EIS – Chapter 3 Section 3.3

4.2 WORKSHOP 2 – 13TH JANUARY 2006

The main issues/requests raised by the public in relation to the potential impact of the development of the landfill were (i) issues relating to groundwater (ii) impacts on visual landscape (iii) issues relating to archaeology, architectural and cultural heritage (iii) human culture and (iv) issues relating to road design. These issues have been addressed in the relevant EIS Chapters as indicated in **Table 4.2**.

Table 4.2 Summary of issues from Public Consultation –13th January 2006

Principle Issues	Sub Issues	Issues Addressed by the following
Ground Water	Pollution	EIS – Chapter 3 Section 3.9
	Direction of groundwater flow	
	Position of wells south west of the site	
Visual Impacts	Montage positioning	EIS – Chapter 3 Section 3.7
	Assessment of properties	
Archaeology, Architectural & Cultural Heritage	National Significance of Site	EIS – Chapter 3 Sections 3.17 & 3.18
	Effects of Landfill Leaks in relation to Sites left in situ	
	Effect of Landfill on belowground Sites	
	Ritualised landscape & a Sacred place	
Road Design	Standard of Carriageway Required	EIS – Chapter 2
	Cycletrack Requirement	
	New Roundabout at Nevitt Road	

5 POTENTIAL EFFECTS/IMPACTS OF THE DEVELOPMENT

5.1 INTRODUCTION

This section identifies the potentially significant impacts on the community and amenity characteristics of the area if the proposed development goes ahead. It is acknowledged that while potentially significant impacts may not actually occur, the perception that they may occur can in itself be a significant impact on the community's enjoyment of the environment in which they live.

5.2 LANDUSE

The development of the proposed landfill at the Nevitt will result in the change of use of approximately 210 hectares of land from agricultural enterprises to initially, use as a waste management facility and ultimately to revert back to agriculture in those areas suitable and the rest in public amenity usage. The impact of this change of use on agricultural development at a local and national level is discussed in Chapter 3 Section 3.14 of the EIS.

Subject to the finalisation of the phasing of the development, it is likely that this change of use will take place on a phased basis with the southern end of the site initially being developed and restored. While the entire site would be acquired from the existing owners at the outset of the development, it may be the case that agricultural activities may continue on parts of the site for some considerable time to come.

5.3 POPULATION, SETTLEMENT AND HOUSING

The proposed development would result in the acquisition of the cluster of 8 houses located at the Nevitt within the proposed site. Based on the average house occupancy in the county, a direct impact of the development would be to remove 25 people from the current community, approximately 6.5% of the estimated community living within 1 km of the development site (investigated area).

Concerns expressed at the public consultation workshops held with stakeholders during the preparation of the EIS indicate that there is a perception among the community that the presence of the landfill development and its potential impact on health and the quality of the environment will result in existing members of the community wanting to move away from the area and will discourage potential new residents from moving into the area – resulting in a decrease in the population in the immediate area of the development.

However, as indicated in the section 3.5 above, there is currently significant pressure on housing within Fingal and in the greater Dublin area and it is unlikely that there will be any significant long term effect on population numbers in the area due to the presence of the landfill development. In addition, new development at the Courtlough Business Park and Courtlough Interchange has the potential to bring new demand for housing in the area. The identification of the Five Roads/Hedgestown as a rural cluster in the current County Development Plan may also encourage housing development in the area.

In addition, the current proposal is for the development of the site to begin at its southern end, which is furthest distanced from housing on the perimeter roads. Measures to minimise any detrimental impact of the operational phase of the development will be well established by the time development takes place towards the residences on the northern end of the site and it is anticipated that community confidence in the management of the site will have been established by that time.

Chapter 3, Section 3.3 of the EIS on Disamenity Affect deals with the potential impact of the development on the residential property market in the vicinity of the development site.

5.4 EMPLOYMENT IN THE AREA (ECONOMIC ACTIVITY)

It is expected that during the construction phase of the proposed landfill employment opportunities will be available for the local labour force. A beneficial knock on effect to some local businesses and services is likely to occur. During its operational phase, which is likely to be up to 30 years, the development is likely to afford employment opportunities to the work force in the area and to support the economy of the area.

A concern expressed at the public consultation workshop was that the presence of the development and its perceived impact on health and the quality of the environment would result in employees in businesses located in the vicinity of and overlooking the development leaving their jobs.

However, these businesses are located at the northern end of the site and as stated above, it is anticipated that confidence in the proper management of the facility will have been established by the time development takes place in this area of the site. Therefore it is not anticipated that the development will have any significant detrimental impact on employment in businesses in the vicinity of the site.

5.5 SOCIAL AND COMMUNITY INFRASTRUCTURE

With the exception of the closure of the section of the Nevitt Road, which traverses the site, no social or community infrastructure will be directly impacted by the development of the facility. The closure of this road will result in closure of direct access from the Nags Head to the motorway overbridge at the Five Roads/Hedgestown and access to the M1. Access to the M1 and Hedgestown would be via a new road around the north of the site joining the Rowan Little Road just west of the Courtlough Interchange. The impact of this closure is discussed in detail in Chapter 3 Section 3.19 of the EIS.

With respect to Hedgestown primary school, concern has been expressed by the headmaster of the school that the presence of the landfill within the catchment area of the school will result in a reduction in the number of children seeking places at the school. The headmaster noted that the proposed development will occupy a significant area of the catchment of the school which extends some 2 km to the west of the M1.

There are currently 3 children of primary school age living in the houses that would be demolished due to the development. These children represent 5% of the current school roll of 60 pupils. However, it is considered that the proposed development of the landfill will not adversely impact upon numbers attending Hedgestown National School in the long term, as over the past few years a continual increase in planning applications for new dwellings in the surrounding area has been received and granted (Fingal County Council, 2006). As stated in section 3.4 above, it is considered that the presence of the landfill development will not have any long-term significant impact on the numbers of people living in the area. It must also be noted that it is estimated that more than 1200 new houses will be built in Lusk by 2011 and significant residential developments have occurred in Balrothery (4km North East of proposed site) over the past few years and a further 270 houses have been planned for the village within the lifetime of the current Development Plan. There is also a general lack of available primary school places in the East Meath-North Dublin area and the school has the potential of drawing pupils from a larger area than its current immediate catchment.

The impact of the proposed alteration to traffic flows in the vicinity of the school due to the closure of the Nevitt road is discussed in detail in Chapter 3, Section 3.19 of the EIS. It is sufficient to say here that the alterations in traffic flows will have a positive effect in traffic volumes using the road network in

the vicinity of the school. In particular it will remove a considerable volume of heavy vehicles arriving at the Five Roads junction from the Nevitt road and will make access to the schools playing pitches safer in terms of potential traffic hazards.

5.6 GENERAL COMMUNITY AND AMENITY CHARACTERISTICS OF THE AREA

The potential impact of the development on the various amenity characteristics of the area such as landuse, landscape character, air and noise quality, human health, and traffic are examined in detail in the EIS.

The results of these examinations indicate that the development of the site will have a profound impact on the residents and landowners currently occupying the development site. These residents represent approximately 6.5% of the community living within 1 km of the development site. However, with the implementation of appropriate design and operational methods, the presence of the landfill at the Nevitt will have only a moderate impact on residences and businesses located on the north-western and western boundaries of the site and a slight impact on the wider community in the area in terms of changes in the amenity characteristics of the area.

However, it is acknowledged that the perceived potential impact of the presence and operation of the development may initially have a significant impact on the community in the vicinity of the site in terms of concerns regarding property values, health security and general enjoyment of the environment.

6 PROPOSED MITIGATION MEASURES

6.1 GENERAL

Measures to mitigate potential impacts of the development on health, property devaluation and the various amenity aspects of the environment are detailed in the EIS. The proposed development will be designed and operated to the best international standards. Ongoing environmental monitoring will ensure that the facility is operated within the terms of its waste license as set down by the Environmental Protection Agency.

The perceived impact of the development on the overall well being of the community and environment in the vicinity of the development will be mitigated by involving the community in the management of the facility through the creation of a local liaison committee and through the creation of a community fund to be spent on community projects/facilities and environmental initiatives/improvements that would benefit the local community (this community fund is discussed in section 6.2 below).

A proactive consultative approach has been ongoing between the landfill developer (Fingal Co. Co.) and the local community. This consultative process will be formalised with the establishment of a local liaison committee, which will meet with the developer and operator throughout the construction and operational phases of the proposed development. Through this liaison committee, the local community will be able to voice concerns regarding the construction and operation of the site and get direct feedback from the developer as to how these concerns will be/have been addressed.

6.2 COMMUNITY "GAIN"

The perceived impacts on a community are difficult to quantify and as such are difficult to mitigate. A direct impact such as land loss may be mitigated by compensation, and engineering and licensing may

mitigate indirect impacts such as emissions. Two national policy documents on waste management, "Changing our Ways, 1998" and "Taking Stock and Moving Forward, 2004" both recognise this issue and both policy documents recognise that the community should have some "gain" to offset the effects, perceived or otherwise, of a proposed facility. In the policy document 'Changing our Ways, 1998' it states -"*Local authorities, working closely with local communities, should utilise a proportion of income from waste charges and gate fees to mitigate the impact of such facilities*" and in "Taking Stock and Moving Forward" it states – "*attached to the grant of planning permission for major pieces of waste infrastructure requiring operators to contribute (generally on the basis of the waste accepted at the facility) a special fund which is used to support certain initiatives in the local area*".

Therefore, the mitigation measure to offset the perceived effect of this proposed landfill shall be a fund to support certain initiatives that will benefit the local community. The value of this fund shall be based on the quantity waste accepted at the landfill. A community liaison committee shall undertake the management of this fund. The committee shall include equal representation from the local authority, the landfill operator, local residents and elected members of Fingal County Council.

The amount of this fund varies from landfill to landfill but is typically in the order of €1.25 per tonne of waste accepted at landfill. The developer (Fingal County Council) proposes to set aside €1.25 per tonne of waste into a community gain fund, which in the context of the proposed facility at Fingal would generate a significant fund for community gain.

7 RESIDUAL IMPACTS

With the exception of the landowners and residents currently located within the proposed development site; appropriate design, licensing and operation of the landfill will ensure that the development does not have a significant impact on the community living and working in its vicinity. However, the presence of such a facility in the community will initially have a moderate impact on the well being of the community in terms of the perceived impacts of the development.

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8 REFERENCES

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EPA (2002) *Guidelines on the Information to be Contained in Environmental Impact Statements*. CAAS Environmental Services Ltd, Merrion Square, Dublin 2.

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Fingal County Council (2005) *Fingal County Development Plan 2005 -2011*

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Department of Education and Science www.education.com

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Appendix A

Register of Community Facilities, Schools and Sports Clubs within 5km of the Investigated Area

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Community Facility	Location	Easting	Northing
Naul Community Hall	Naul Village, Naul, Co. Dublin	313358.3440	260774.3280
Community Hall	The Green, Lusk, Co. Dublin	321304.8440	254867.0310
Lusk Community Hall and Library	The Green, Lusk, Co. Dublin	321338.7500	254756.6090
Kingdom Hall	Blackhall, Balbriggan, Co. Dublin	320270.5000	261969.6720
Lusk Scout Hall	Chapel Road, Lusk, Co. Dublin	321451.7810	254803.6720
Seamus Ennis Centre	Naul Village, Naul, Co. Dublin	313302.4060	260920.4220
Balrothery Community Centre	Balrothery, Balbriggan, Co. Dublin	319958.7190	261007.5160
Community Unit for the Elderly	Station Road, Lusk, Co. Dublin	322160.7500	254159.4060

School	Location	Easting	Northing
Lusk National School	Chapel Road, Lusk, Co. Dublin	321539.2500	254787.8440
Milverton National School	Milverton, Skerries, Co. Dublin	322788.0310	258768.7190
Old School House	Damastown, Naul, Co. Dublin	313589.6250	257556.0630
Naul National School	Naul Hill, Naul, Co. Dublin	313600.5310	260123.0470
Ballyboghil National School	Naul Road, Ballyboghil, Co. Dublin	314935.3440	253811.8590
Balrothery National School	Coach Road, Balrothery, Co. Dublin	320178.0310	261483.3440
Corduff National School	Corduff, Lusk, Co. Dublin	320064.6560	253363.6090
Scoil Falbhach	Jordanstown, Lusk, Co. Dublin	318849.9380	257116.3590
Scoil Bachal Iosa	Naul Road, Ballyboghil, Co. Dublin	315008.6250	253726.6560
Ivy Howe Montessori	The Green, Lusk, Co. Dublin	321256.2810	254924.8280
Trinity Remand Centre	Oberstown, Lusk, Co. Dublin	319982.3440	257517.6250

Sports Clubs	Location	Easting	Northing
Lusk United Football Club	Station Road, Lusk, Co. Dublin	321988.5630	254292.2030
Balbriggan Golf Club	Blackhall, Balbriggan, Co. Dublin	320375.2500	262177.7190
North County Cricket Club	Inch, Balbriggan, Co. Dublin	319621.2810	261266.1090
Balrothery Pitch and Putt Club	Darcystown, Balbriggan, Co. Dublin	320332.1880	261014.4690
Knockbrack Cricket Club	Belgee, Rings Commons, Balbriggan, Co. Dublin	316842.3330	259437.8230
Hollywood Lakes Golf Club	Hollywood Little, Hollywood, Ballyboghil, Co. Dublin	314843.7500	257167.8750
Ballyboghil Golf Club	Naul Road, Ballyboghil, Co. Dublin	314866.7190	254165.1880
Courtough Gun Club	Courtough, Balbriggan, Co. Dublin	319349.4880	259204.7750
Saint Macullin's GAA Club	Regles, Lusk, Co. Dublin	320961.2190	254569.5780
Ring Common's Sports Centre	Bog of the Ring, Ring Commons, Co. Dublin	318060.3130	259953.8750
Skerries Diving School	Margaretstown, Skerries, Co. Dublin	322147.5310	259967.7030