

# ENVIRONMENTAL IMPACT STATEMENT

for

## CARA ENVIRONMENTAL TECHNOLOGY

## GREENOGUE INDUSTRIAL ESTATE, DUBLIN

### MAIN DOCUMENT Volume 2 of 3

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**ENVIRONMENTAL IMPACT STATEMENT**

**FOR**

**WASTE TRANSFER STATION**

**GREENOGUE INDUSTRIAL ESTATE**

**NON-TECHNICAL SUMMARY**

**VOLUME I OF III**

**REVISION CONTROL TABLE**

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## PREAMBLE

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The subject of this Environmental Impact Statement (EIS) is a proposed waste management facility located within to the Greenogue Industrial Estate, Rathcoole, Co. Dublin. The site is accessed via the regional road, R120, linking Rathcoole and Newcastle. The site is former arable land that has recently been prepared for development.

The waste management facility at Greenogue will comprise a waste transfer station and is intended to serve the hazardous and non-hazardous waste disposal needs primarily of the greater Dublin area. The activities at the facility will entail acceptance, sorting and repackaging of wastes including household hazardous waste and onward shipping to recycling/recovery facilities. The lifespan of the facility is expected to be at least 20 years. The facility will be the subject of a waste licence application issued by the Environmental Protection Agency.

The EIS is subdivided into 3 Volume, namely:

- Volume 1, Non-Technical Summary
- Volume 2, Section 1 is an introductory section which introduces the proposed development
- Volume 2, Section 2 discusses the planning and development context of the proposed site
- Volume 2, Section 3 assesses the need for the proposed development
- Volume 2, Section 4 is a description of the existing site and the proposed development
- Volume 2, Sections 5 through 15 deal with the various elements of the existing environment, the potential effects of the proposed development and the relevant mitigation measures;
- Volume 3, Appendices contain additional technical material

Fehily Timoney & Co. (FTC) on behalf of Cara Environmental Technology Ltd. has prepared this Environmental Impact Statement. Cara Environmental Technology intends to submit this document to South Dublin County Council as part of the Planning Application for the proposed waste management facility and to the Environmental Protection Agency (EPA) in support of a Waste Licence Application.

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# 1. INTRODUCTION

---

## 1.1. Proposed Development Overview

Cara Environmental Technology Ltd. intends to develop a waste transfer station at Greenogue Industrial Estate, Co. Dublin. The development will comprise of site preparation and the erection of a transfer station, an ancillary storage and an office building. The proposed transfer station is designed to be capable of handling 57,000 tonnes of waste per annum of which 30,000 tonnes will be hazardous waste while the remaining 27,000 will be non-hazardous. There will be no public access to the site. All wastes delivered to the site will be from approved waste contractors.

No explosive or radioactive wastes will be accepted at the site.

No hazardous waste treatment will be conducted on site and no additional hazardous waste will be produced as a result of the facility's operation other that the waste accepted by the facility.

Household, local authorities and industry in the Region are currently producing all wastes proposed to be handled by the waste transfer station. All activities undertaken at the waste transfer station will be subjected to a Waste Management Licence issued by the Environmental Protection Agency (EPA).

The proposed facility is not a Seveso II facility (under the European Communities [Control of Major Accident Hazards Including Dangerous Substances] Regulations 1999) as levels of all dangerous substances to be stored on site are below the thresholds as set out in Annex 1 of the Directive.

## 1.2. Site Location

The site of the proposed development is located within the extension to the Greenogue Industrial Estate and is accessed via a regional road, the R120, linking Rathcoole and Newcastle. An existing road servicing the Greenogue Industrial Estate will be used as the access road to the site. The site location is National Grid reference E 0 0158 N O 2879 as shown on "Site Location" Figure 1.1.

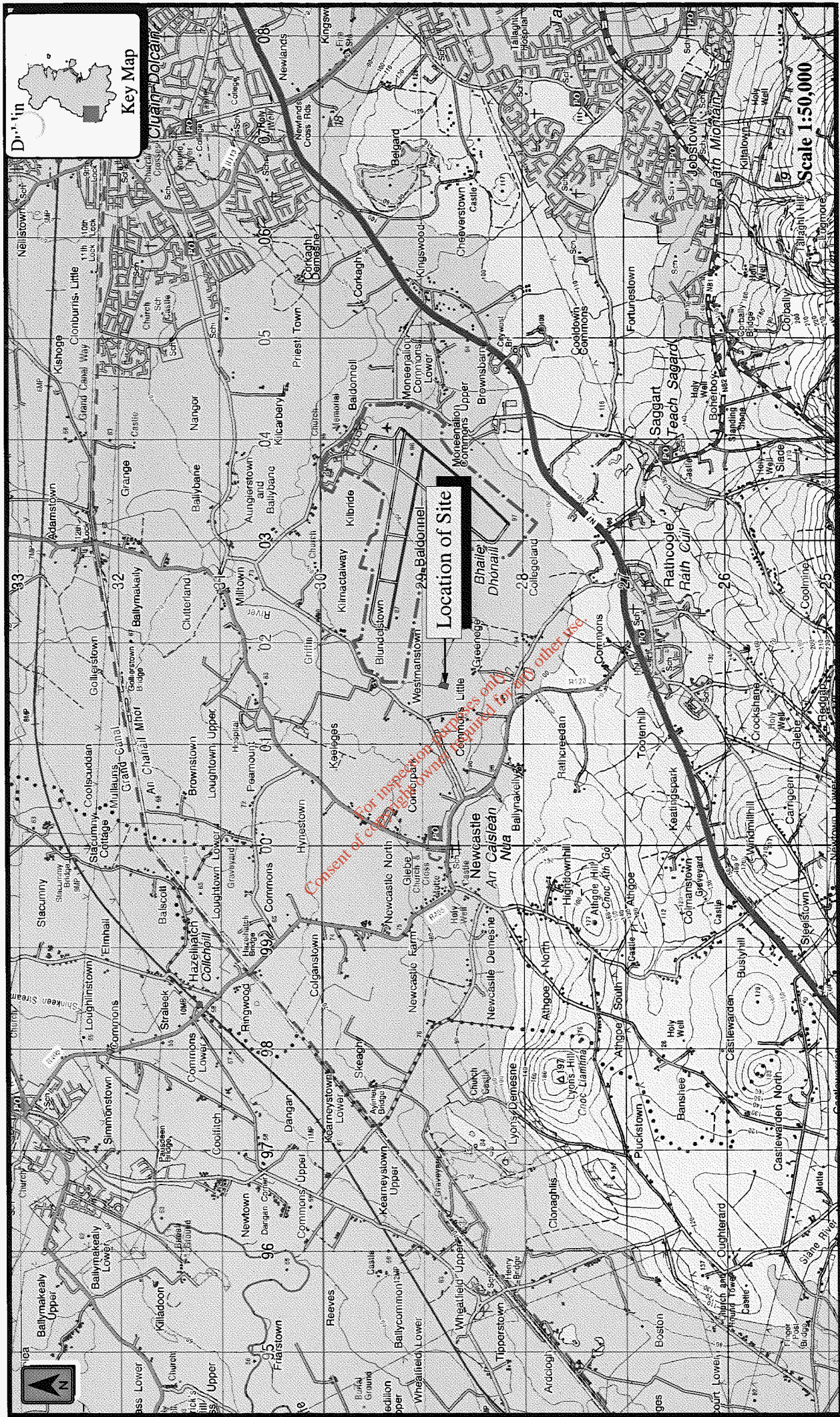
The entire facility will be located on 0.5 hectares. This site forms part of the extension to the Greenogue Industrial Estate, previously agricultural land.

The principal elements of the development are shown on Figure 1.2 "Site Layout" and are listed as follows:

- Main warehouse building to be used for the handling and bulking of waste prior to onward transport to relevant recycling/recovery/disposal facilities;
- Site infrastructure including a weighbridge, transfer building, office building, access road and car parking facilities;
- Hazardous waste storage facilities;
- 3 No. Tanker Parking Bays
- Landscaping

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### 1.3. The Applicant

Cara Environmental Technology (CET) is a leading waste management company. A company that successfully combines state-of-the-art waste recovery, treatment, and disposal technology with the highest standards of client service in the industry.

Cara has employees experienced chemists and logistic and regulatory experts with a combined experience exceeding 50 years in both non-hazardous and hazardous waste management. A number of staff are certified as safety advisors under the Carriage of Dangerous Goods Act, 1998

Cara holds both ISO 9001 and ISO 14001 certification and is committed to continuous quality and environmental improvement.

### 1.4. Contributors to the Environmental Impact Statement

Fehily Timoney & Co prepared the Environmental Impact Statement (EIS) and the following specialist consultants contributed to its preparation.

- Margaret Gowan & Associates Archaeological Consultants
- Moloney and Millar Architects
- Stephen Ward Planning Consultant
- Robin Knox Fire Management Consultant

### 1.5. Regulatory Context

#### Environmental Impact Assessment

The proposed development requires an EIA under the European Communities (Environmental Impact Assessment) (Amendment) Regulations 1999 (S.I. No. 93 of 1999), First Schedule, Part II (11. other projects) under the following category:

*Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of the First Schedule and under the Planning and Development Act, 2000 and the Planning and Development Regulations 2001.*

## Pre-Submission Consultations

Submissions from statutory bodies were sought on 20<sup>th</sup> September 2001 and February 11<sup>th</sup> 2002. Organisations and individuals contacted are set out in Table 1.1.

This document constituent the EIS prepared under the European Communities (Environmental Impact Assessment) (Amendment) Regulations, (S.I. No. 93 of 99).

The EIS examines each of the specialised topics providing

- a description of the existing baseline conditions
- an assessment of the potential effects beneficial and adverse of the proposed development upon the environment,
- measures to mitigate any adverse effects and any adverse in the environmental topics.

### **1.6. Structure of EIS**

The document has been prepared in accordance with guidelines provided by the EPA included in:

- (a) Advice notes on Current Practice (in the preparation of Environmental Impact Statements)
- (b) Draft Guidelines on the Information to be contained in Environmental Impact Statements.

The document has been structured according to the direct format structure, as described in (b) above. The draft guidelines recommend that EIS documents be kept as concise as possible.

The report is submitted in three volumes:

- |           |                       |
|-----------|-----------------------|
| Volume 1: | Non-Technical Summary |
| Volume 2: | Main Report           |
| Volume 3: | Appendices.           |

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## 2. PLANNING AND DEVELOPMENT CONTEXT

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### 2.1. Site Location and Description

The application site is located within Greenogue Industrial Estate, an area characterised by long established industrial use since the 1960's.

The Industrial Estate, together with the application site, are currently zoned under Zoning Objective 'E' for industrial and related uses as set out in the statutory Development Plan pertaining to the area which is the South Dublin County Development Plan 1998, as amended.

The application site that extends to 0.5 hectares is located at the northern part of the Industrial Estate. The urban settlement of Newcastle lies c.1.5 km to the west of the subject site, with Rathcoole and Saggart located c.2 km and 2.5 km respectively, to the south east. Casement Aerodrome, a State military airport, is located 0.5 km to the north of the application site.

Vehicular access to the site is achieved via the R120 Rathcoole to Newcastle Regional Road, which runs along the southern boundary of the industrial estate. An internal road layout currently exists within the Greenogue Industrial Estate, which will be utilised to provide internal access at the application site.

### 2.2. Proposed Development

The proposed development comprises a main warehousing unit to be used for the handling, sorting and repackaging of waste materials, including hazardous waste, a hazardous waste store, a three bay tanker parking area, ancillary office and site works on a site which extends to 0.5 hectares.

For the purposes of clarity, no explosive or radioactive wastes will be handled at the proposed waste transfer station.

The schedule for the buildings is as follows:

- Warehouse/Transfer Station
- Hazardous Chemical Storage Area
- Tanker Bays
- Welfare Facilities and Ancillary Offices
- Dispatch Assembly Area
- Car Parking
- Site Development Works

### 2.3. South Dublin County Development Plan 1998

The statutory Development Plan pertaining to the site is the South Dublin County Development Plan 1998. Set out below is a number of Development Plan considerations including policies objectives and development control standards that affect the proposed waste transfer station.

#### Refuse Transfer Station- Definition

Schedule two of the Plan, a refuse transfer station is defined as:

*“A structure or land usually enclosed and screened and which is used for the temporary storage of waste materials pending transfer to a final disposal facility, or for re-use. The definition includes a baling station, recycling facility, civic amenity facility, materials recovery facility and materials recycling facility”<sup>1</sup>.*

**The proposed development conforms to all of the policies set out in the South Dublin Development Plan. The proposed operations at the waste transfer station are highly compatible with the overall thrust of waste management policies as set out in the Development Plan, where waste prevention, reuse and reduction are strongly emphasised. The proposed transfer station is situated within an existing industrial estate, and is compatible with the employment policies contained within the Development Plan. The location of the proposed development, strategically placed on the outskirts of Dublin, provides access to the source market via the national and regional road system and also ease of access to Dublin Port via N7, M50, M1 and the Dublin Port Tunnel.**

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<sup>1</sup> South Dublin County Development Plan, pg 149

## Zoning Objectives

The site is affected by zoning objective E- *To provide for Industrial and related uses*, as indicated in the Development Plan as shown in Figure 2.3. The Plan<sup>2</sup> sets out uses which are permitted in principle on lands, affected by zoning objective E. These include:

Abattoir, Advertisements and Advertising structures, Carpark, Cash & Carry/Wholesale Outlet, Crèche/Nursery School, Enterprise centre, Halting Sites/ Group Housing, Heavy Vehicle Park, Household Fuel Depot, Industry-General, Industry-Light, Industrial-Special, Motor Sales Outlet, Office-based Industry, Open Space, Petrol Station, Public Services, **Refuse Transfer Station**, Science and Technology Based Enterprise, Scrap Yard, Service Garage, Shop-Local, Transport Depot, Warehousing.

**The proposed development conforms to the zoning objectives of the statutory Development Plan as they affect the site.**

**The proposed development is sited in an existing industrial estate where roads and infrastructure are already in place to serve the development. The layout of the proposed development is of the high quality with buildings having a modern finish. Landscaping and boundary treatments have been incorporated into the proposed development scheme in the interests of visual amenity.**

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<sup>2</sup> South Dublin County Development Plan, Table 3.8

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### 3. ASSESSMENT OF NEED

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#### 3.1. Current Waste Management Legislation and Policy

Current legislation and policy in relation to waste management has undergone significant developments since the implementation of the Waste Management Act, 1996. The Act provides the legislative framework that facilitates the implementation of sustainable waste management practices

#### 3.2. National Waste Management Policy

The DoELG policy statements have highlights the need for major change in the planning, financing and operation of waste management by local authorities. They outline a clear commitment to reduce dependency on landfill as a primary waste disposal route. These encourage the development of a smaller number of well-designed and managed landfills for the receipt of *residual* waste. Residual waste is waste which has undergone some form of treatment to remove recyclable material or to further process the waste in order to achieve a volumetric reduction.

#### 3.3. National Hazardous Waste Management Plan

The primary objective of the Plan is “to prevent the production of hazardous waste and to minimise the effect of hazardous waste on the environment”. The secondary objective is the safe management of hazardous waste.

**The proposed hazardous waste transfer station at Greenogue will facilitate the collection, sorting and bulking of recyclable materials prior to onward shipment to appropriate recycling facilities. This development will contribute to a reduction in waste going to landfill and an increase in the recycling of municipal waste.**

### 3.4. Need for the Proposed Development

If the targets outlined in the Policy Documents, "Changing Our Ways" and "Prevented and Recycling Waste; Delivering Change" are to be achieved then additional appropriate infrastructure must be provided. This proposed waste transfer station would significantly contribute to achieving recycling targets and diverting waste from landfill.

Hazardous waste categorisation in the revised European Waste Catalogue, effective from 1<sup>st</sup> January 2002, is based on the composition of the waste. The revision of the catalogue has led to an increase in the quantity of waste produced nationally. This has increased demand for appropriate hazardous waste management facilities.

The National Hazardous Waste Management Plan identifies areas with significant scope for improvement of collection rates. These include:

- oil filters
- lead-acid batteries
- other batteries
- fluorescent lamps

The development of the transfer station will facilitate the collection, bulking up and repackaging of such wastes and will lead directly to an improvement in collection rates and appropriate management of these wastes.

The aim of Cara Environmental Technology Ltd. proposed waste transfer station is to provide a facility for the collection, sorting, storage and repackaging of recyclable, hazardous and non-hazardous waste prior to transportation to recycling and treatment facilities. Such a facility will have a positive impact on attaining the objectives and targets outlined the Waste Management Policies and will assist with the full implementation of the waste management legislative framework.



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## 4. DESCRIPTION OF THE EXISTING SITE AND THE PROPOSED DEVELOPMENT

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### 4.1. Existing Site Setting

The site of the proposed development is accessed via a regional road, the R120, linking Rathcoole and Newcastle. The existing road servicing the Greenogue Industrial Estate will be used as the access road to the site. The site location is shown on Figure 1.1.

The site covers an area of approximately 0.5 hectares, which, in the past, was used as arable land for growing cereal crops.

The Greenogue Industrial Estate, located to the south of the proposed site, has been in existence since the early 1960s, providing a location for various small to medium sized companies. The 1998 South Dublin Development Plan re-zoned the area adjacent to the existing industrial site for industrial development to allow for expansion of the industrial site. The site is currently being expanded to the west and north and, when complete, will border the Cara Environmental Technology site to the west and south.

### 4.2. Principal Elements of the Proposed Development

The principal elements of the development are shown on Figure 1.2 "Site Layout" and are listed as follows:

- Main warehouse building to be used for the handling and bulking of waste prior to onward transport to relevant recycling/recovery/disposal facilities;
- Site infrastructure including a weighbridge, transfer building, office building, access road and car parking facilities;
- Hazardous waste storage facilities;
- 3 No Tanker Parking Bays
- Landscaping

### 4.3. Nature and Sources of Waste

The transfer station is expected to receive the following types and quantities of waste:

**Table 4.1: Types and Quantities of Waste**

<b>Waste Type</b>	<b>Tonnes per annum</b>
Household waste delivered to civic waste facilities and other bring facilities	2,000
Other household waste	5,000
Commercial Waste	5,000
Sewage Sludges	2,000
Construction and Demolition Waste	1,000
Industrial Sludges	2,000
Industrial waste not elsewhere specified	10,000
Hazardous Waste	30,000
<b>Total</b>	<b>57,000</b>

Of the 57,000 tonnes of waste to be handle at the proposed waste transfer station only 30,000 tonnes are considered as hazardous waste. Figure 4.2 illustrates the relative volumes of hazardous and non- hazardous wastes to be handled at the proposed facility. Of the 30,000 tonnes of hazardous waste, 15,000 tonnes will be taken on site in sealed containers utilising the overnight tanker parking facility. This waste will not be removed from their original containers at the overnight parking facility

### 4.4. On Site Activities

The transfer station building to facilities the following activities:

- Waste Reception
- Waste Inspection
- Waste Quarantine
- Waste Sorting
- Waste Bulking and Repackaging.
- Waste Storage
- Waste Transportation off site to waste recovery, recycling and disposal facilities

Examples of potential waste streams and typical handling/repackaging techniques are outlined in Table 4.2 below.

**Table 4.2: Waste Categories and Handling/Repackaging**

<b>Waste type</b>	<b>Typical Waste Handling</b>
Paints/solvents	Drum up Shred / baler containers
Pesticides etc.	Bulk liquid to IBC and shred containers
Waste pharmaceuticals	Secure packing for destruction
Batteries	Bulk up and repack.
Inks	Drum up
Fluorescent Tubes	Bulk to coffin containers
Paper	Baled
Card	Baled
Plastic	Shredded and baled or granulated and bagged.
Soils (contaminated)	Storage for shipment (in ASPs)
Metals	Wash, bale/crush/shred
Glass	Wash, crush
Waste electronics	Bulk for recycling, dismantling
White goods	Bulk for recycling, dismantling

#### 4.5. Site Management

The site will be managed by a Facilities Manager. Standard operational procedures based on relevant environmental, safety and quality guidelines will be adhered to at all times.

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## 5. HUMAN BEINGS

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### 5.1. Human Beings in the Existing Environment

There are no hospitals, holiday accommodation or hotels within 1km of the site. These categories were selected in accordance with the EPA Guidance Notes for Applicants for waste disposal activities (other than landfill). The nearest hospital is Tallaght hospital, some 6.5km to the east of the site. The nearest hotel is approximately 3km southeast of the site in Saggart. Commercial activity is limited to units on the existing industrial estate, adjacent to the proposed site.

The nearest schools are in Newcastle and Rathcoole, some 1.7km and 2km away respectively. There is a Montessori school approximately 687 m to the southeast of the site

The population of the main towns in the area as per the 1991 and 1996 Central Statistics Office census figures are outlined in Table 5.1 below.

**Table 5.1: Populations Statistics of Main Towns**

Town / Area	1991	1996	% Change
Rathcoole	3,575	3,448	-3.6
Newcastle	2,563	2,374	-7.4
Saggart	1,493	1,408	-5.7
Lucan	14,431	20,183	+39.9
Clondalkin	38,752	41,617	+7.4
South Dublin County	208,739	218,728	+4.8
Leinster	1,860,949	1,924,702	+3.4
State	3,525,719	3,626,087	+2.8



FOOTPATH GRASS VERGE

FOOTPATH

FOOTPATH

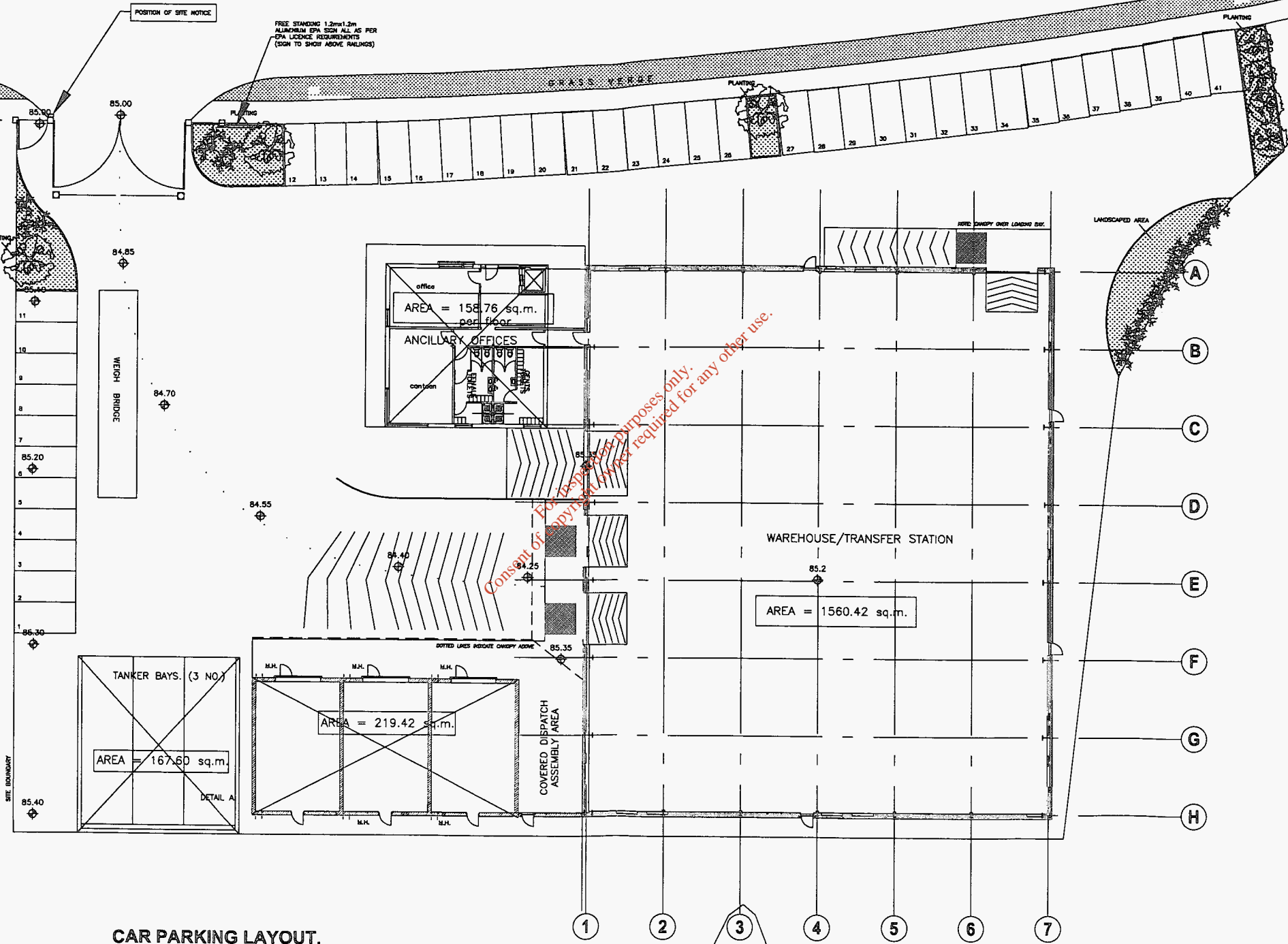
POSITION OF SITE NOTICE

FREE STANDING 1.2m x 1.2m ALUMINIUM EPA SIGN ALL AS PER EPA LICENSE REQUIREMENTS (SIGN TO SHOW ABOVE RAILINGS)

**AREAS OF BUILDINGS:**

WAREHOUSE/TRANSFER STATION:	1560.43 sq.m.
OFFICES:	158.76 sq.m. x 3
TANKER BAY:	167.60 sq.m.
HAZARDOUS CHEMICAL STORES:	219.42sq.m.
<b>TOTAL:</b>	<b>2106.21sq.m.</b>

AREA OF SITE:	5000 sq.m.
TOTAL LANDSCAPED AREA:	133.89sq.m.
TOTAL HARDSTANDING AREA:	2759.90sq.m.



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**CAR PARKING LAYOUT.**  
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Client  
**CARA ENVIRONMENTAL TECHNOLOGY LIMITED.**

Project Title  
**PROPOSED WAREHOUSE AND OFFICES AT NEWCASTLE, CO. DUBLIN.**

Drawing Title  
**CAR PARKING LAYOUT.**

Project Manager  
**THOMAS F. MCGEOUGH & CO.**

Drawing Status : **PLANNING**

Scale	Date	Drawn	R.T.	Drawing No.	Rev.
1:200	FEB '02	Chkd	D.K.	569-42-14	

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### 5.1.1. Noise in the Existing Environment

A noise assessment was carried out on 10<sup>th</sup> September 2001 in order to establish background noise levels in the existing environment. Most of the background noise can be attributed to construction activities and associated traffic in the extended area of the industrial estate to the south and west of the site and are therefore not absolutely indicative of background levels under normal circumstances.

### 5.1.2. Traffic in the Existing Environment

The R120 linking Rathcoole and Newcastle provides access to the site via an existing road servicing the Greenogue Industrial Estate. The National Roads Authority (NRA) has placed a traffic counter on the R120 between Lucan and Newcastle which over a 2 year period recorded an Annual Average Daily Traffic (AADT) of 55,225 vehicles per day of which 10% were Heavy Goods Vehicles (HGVs).

A road traffic survey was conducted along the R120 between the junction for Newcastle/the industrial estate and the N7 on Thursday 27<sup>th</sup> September 2001. During the traffic survey, road works were taking place on the local road between the Greenogue Industrial estate and the N7, with no access for N7 bound traffic. This would have an impact on the overall results.

The survey took place over two one and half hour periods (08:30-10:00 hours and 16:30-18:00 hours) and resulted in a two-way morning peak flow of 874 passenger carrying units (pcu) and a peak evening flow of 813 pcu. The survey was conducted at these times as the R120 would be generally used as a commuter route from Newcastle to the Dublin and Naas. The heavy goods vehicle content over the three-hour period was 6%.

Vehicles accessing the site from Dublin City can do so via the National Primary Routes N4 and N7. These intersect the R120 at Rathcoole and Lucan.

### 5.1.3. Air Quality in the Existing Environment

Total suspended particulates (TSPs) were monitored on the 27<sup>th</sup> of September 2001. Total dust deposition (TDD) monitoring was carried out over a period of 30 days between 27<sup>th</sup> of September and the 25<sup>th</sup> of October, 2001.

The air quality in the region overall is typical of a suburban environment

### 5.1.4. Health and Safety

The design and construction of the plant at Greenogue will be conducted under the legislation Safety, Health and Welfare at Work (Construction) Regulations 2001. The aim of these regulations is good management of the entire construction process from design through construction and on to repair and maintenance.

## **5.2. Potential Impacts of the Proposed Development on Human Beings**

### 5.2.1. Potential Impacts of the Proposed Development on Noise

The noise levels recorded during the noise assessment in September 2001 were not indicative of the typical background levels. The elevated readings were a result of construction activities of the adjacent units within the industrial estate. Monitoring for noise during construction of the proposed waste management facility will be conducted. This will enable sensitive locations (if any) to be identified.

### 5.2.2. Potential Impacts of the Proposed Development on Traffic

The new facility will generate traffic from the arrival of waste to the transfer station and its subsequent transferral to relevant recycling/recovery/final disposal facilities.

The average weekly number of vehicles expected to travel to and from the transfer station from Monday to Saturday is 312.

The transportation element of the proposed development is not expected to create any safety problems as long as appropriate access arrangements are maintained at the site entrance.

Access to the site will be mainly from the R120. The increase in traffic (less than 1%) along the R120 will have no significant impact on the amenity of residents and surrounding landowners in the area.

### 5.2.3. Potential Impacts of the Proposed Development on Air

Operations at the transfer station will be properly controlled and will not give rise to nuisances associated with dust and odour.

### 5.2.4. Potential Impacts of the Proposed Development on Health and Safety

Design, construction and operation of the development will be carried out in full compliance with the Safety, Health and Welfare at Work Regulations 2001.

The site will be secure at all times during construction and operation. It will be necessary for all persons entering the site to report reception.

## **5.3. Mitigation Measures**

### 5.3.1. Noise

All process activities will be conducted within the waste transfer station building and therefore there will be no significant impact on the local environment.

### 5.3.2. Traffic

As access to the proposed site will be solely off the R120, the percentage increase in traffic (particularly trucks) along the R120 and the major road network leading to the R120, will have no significant impact on the amenity of residents and surrounding land owners in the area.



### 5.3.3. Air

Good site housekeeping in the vicinity of the waste transfer station will keep dust levels to a minimum.

All vehicles servicing the transfer station will be adequately covered. This will mitigate any potential nuisance associated with litter and odour.

### 5.3.4. Health and Safety

It is not expected that the development will have a negative impact upon the health and safety of either employees or neighbouring residents. All precautions will be taken during the construction and operation of the plant to ensure that stringent health and safety policies and procedures are adhered to at all times.

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## 6. GEOLOGY AND HYDROGEOLOGY

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### 6.1. Existing Geology and Hydrogeology

The bedrock at the site has been identified as Calp Limestone ranging in age from Chadian to Brigantian (GSI, 1994). It typically consists of dark grey, fine grained, graded limestone with interbedded black, poorly fossiliferous shales.

The area is covered mainly in wet mineral and organic soils (grey brown podzolics). This overburden may host a perched water table, or tables, but these will probably be of low yield and low quality. There are no significant gravel deposits in the area. The depth to bedrock at the site is not known, and therefore groundwater vulnerability cannot be determined.

### 6.2. Potential Impacts on the Geology and Hydrogeology

It is not anticipated that the development will have any impact upon the geology of the area.

### 6.3. Mitigation Measures

Mitigation measures are not required.

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## 7. SURFACE WATER

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### 7.1. Hydrology in the Existing Environment

The site lies within the catchment of the Griffeen River. Various tributaries of this river rise approximately 5km to the south and west of the site and flow northward eventually joining the River Liffey near Lucan. A minor tributary of the Griffeen River flows along the northern boundary of the site before joining the main river to the west of the site.

The physio-chemical quality of the water in this tributary stream was monitored on 4<sup>th</sup> October 2001.

The results show that levels of ammoniacal nitrogen and phosphates are above the recommended limits as set out in the Surface Water Regulations (75/440 EEC), indicating possible contamination from agricultural sources. This is consistent with the water quality in other streams and rivers in the vicinity, including the Griffeen River.

Historical surface water quality monitoring in the Griffeen River and its tributary streams indicates pollution.

### 7.2. Potential Impact on Surface Water Quality

Activities and processes at the site that could potentially impact surface water quality, if uncontrolled, include:

- Liquid run-off from waste handling
- Stormwater run-off from hardstanding areas
- Foul water generation
- Accidental spills/leaks

### 7.3. Mitigation Measures

It is intended that the physical transfer of all waste will be conducted under roofed conditions. The mitigation measures to be employed at the site to protect the quality of the surrounding surface water bodies include leachate minimisation, control of stormwater run-off, foul water management and emergency control procedures.

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## **8. CLIMATE**

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### **8.1. Climate in the Existing Environment**

The long-term weather patterns at the Greenogue reflect regional conditions affecting the Leinster area, and are dominated by low fronts predominantly from the south-west and occasionally from the east.

Meteorological measurements taken from the closest synoptic station at Casement Aerodrome (National Grid co-ordinates O 041295) provide data for localised conditions or microclimate.

The annual average rainfall in the area is 709.1mm, measured at Casement Aerodrome.

The prevailing wind direction is predominantly from the south-west with occasional winds from the east. The mean windspeed is 10.9 knots (5.6m/sec). Average monthly and annual rainfall data for Casement Aerodrome is set out in Table 6.1.

### **8.2. Potential Impacts on Climate**

The development is not expected to have an impact on climate.

### **8.3. Mitigation Measures**

Mitigation measures are not required.

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## 9. CULTURAL HERITAGE

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### 9.1. Cultural Heritage in the Existing Environment

A desk based archaeological assessment was undertaken in order to identify any archaeological constraints associated with the proposed development. A detailed independent assessment was also carried out for the site, see Appendix 12. The 1998 South Dublin County Development Plan was also consulted.

There are no sites of archaeological or historical interest on the proposed site. The nearest site of archaeological interest to the proposed development is

### 9.2. Potential Impacts on Cultural Heritage

It is not expected that there will be any negative impacts on the archaeological sites in the area as a result of the development.

### 9.3. Mitigation Measures

Additional mitigation measures are considered unnecessary.

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## 10. ECOLOGY

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### 10.1. Ecology in the Existing Environment

The proposed site does not lie within a proposed Natural Heritage Area (pNHA) as listed by Duchas. It is not listed as a Special Area of Conservation (SAC) designated in accordance with Council Directive 92/43/EEC and adapted in Ireland under S.I. No.94 of 1997.

The site consists of disturbed land that has been used in the past for arable production. The last cereal crop was harvested in 1999. Since then the site has been prepared for development and has been colonised by typical disturbed ground species such as wild turnip *Brassica rapa*, Shepard's purse *Capsella bursa pastoris*, groundsel *Senecio vulgaris* and common mouse ear *Cerastium fontanum*. Other species present on site include thistle, perennial rye grass and common fumitory *Fumaria officinalis*.

### 10.2. Potential Impacts of the Development on Ecology

The site will be changed from an agricultural site to an industrial one. As the site is of low conservation value however this is not considered to be a significant negative impact.

### 10.3. Mitigation Measures

The landscaping of the site will include the planting of trees and shrubs that are common in the adjacent lands such as ash, alder, birch, beech, larch and hawthorn. This will compensate for any the loss of habitat associated with the development.

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## 11. LANDSCAPE AND VISUAL IMPACTS

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### 11.1. Landscape in the Existing Environment

The landscape of the area is generally agricultural with a low level of visual amenity. The site is situated in an area zoned for industrial development however, and a large industrial estate is currently under construction in the immediate vicinity of the site

The site has already been prepared for development, in keeping with the adjacent areas to the west and south of the site where the construction of an industrial estate is almost complete. There is tillage to the north and east of the site.

The nearest private residence is to the north west of the site. The site is visible from this residence. There are no other residences to the north of the site from which the site is visible.

### 11.2. Potential Impacts on the Visual Environment

The area within which the site is located is a developing industrial estate adjacent to an existing industrial estate. The area is not visually attractive and the development of the site will not have a significant negative impact on the immediate area.

### 11.3. Mitigation Measures

Wind blown litter will not be generated at the site as all waste handling will be conducted internally.

The site boundaries will be planting with screening vegetation to minimise the visual impact.

The colours and materials to be used on the facades of the building will blend in with those of the newly constructed industrial estate adjacent to the site.



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## **12. LANDUSE**

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### **12.1. Landuse in the Existing Environment**

The proposed site for the waste transfer facility is located within the industrial zone of Greenogue, Rathcoole, Co. Dublin approximately 1.5km to the west of Newcastle and 0.5km south of Baldonnel military aerodrome.

The site has a total area of approximately 0.5 hectares which was previously arable land which has been prepared for development. Adjacent to the proposed site is a similar development of light industrial warehouses.

There are no schools, churches, hospitals or within a 500m radius of the site. The nearest residence to the proposed facility is approximately 0.4 km to the centre of the site.

### **12.2. Characteristics of the Development which may Impact upon Land Use**

The impact of the proposed development on land use is considered in the context of the existing land use. The present use of the site will change from agricultural to industrial. The site is located in an area zoned for industrial development.

### **12.3. Mitigating Measures**

The site will be landscaped.

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### 13. MATERIAL ASSETS

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The principal material assets affected by the proposed development is the loss of agricultural (arable) land. The land in question covers approximately 0.5 hectares. This loss however, must be viewed in the light of the re-zoning of the entire area in the 1998 development plan for "Industrial and Related Uses". Adjacent to the proposed site is a similar development of industrial units with the existing Greenogue Industrial site to the south of the proposed facility.

The immediate area of land within which the facility is being developed is not visually attractive as it consists of an existing and expanding industrial estate. The proposed development will not have a negative impact on the visual amenity of the area.

The facility will not impact upon the Griffeen River. This river has been classified by the EPA as being polluted. All foul effluent generated as a result of activities in the waste transfer station will be discharged to foul sewer.

The development will take advantage of the infrastructural facilities (existing site road for example) that have been established in the area to accommodate the existing and developing industrial estate.

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## 14. INTERACTION OF THE FOREGOING

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This capture summarise o the interactions between the various aspects of the environmental impact assessment for the proposed hazardous waste transfer station. It is a requirement of the European Communities (Environmental Impact Assessment) (Amended) Regulations, 1999 that any significant effects, both direct and indirect on the interaction between any of the following media:

- Human beings
- Geology
- Surface Water
- Climate
- Cultural Heritage
- Ecology
- Landscape and Visual Impact
- Landuse
- Material Assets

### 14.1. Negative Cumulative Effects

- Increased traffic movements on the R120

### 14.2. Positive Cumulative Effects

- The development of this waste management facility will address the infrastructural deficit identified in the National Hazardous Waste Management Plan which currently exists for the sorting and bulking of recyclable waste prior to onward transport to suitable markets.
- The site will provide a secure and controlled environment for overnight parking of bulk tankers.
- The waste transfer station will provide a facility for the collection and storage of household hazardous and other waste stream prior the transfer off-site for re-use, recycling or disposal.
- Reduction in the volume of household hazardous waste being landfilled.