FEHILY TIMONEY & COMPANY

CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES

CORK DUBLIN

Our Ref: Q:CE08/011/06/Let001/COC/LY

Administration
Licensing Unit
Office of Climate, Licensing and Resource Use
Environmental Protection Agency
EPA Headquarters
P.O. Box 3000
Johnstown Castle Estate
Co. Wexford

15 January 2009

RE: Further Information Request for Waste Licence Application (Register No: W0141-02) in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations

Dear Mr. Motherway

Please find enclosed further information requested for the application of a waste licence relating to Beaumont Quarry, Churchyard Lane, Ballinlough/Ballintemple, Cork City.

Article 12 and Article 13 Compliance Requirements

1. The proposed inert landfill at Beaumont Quarry will generate foul water and surface water which will be discharged to the nearest public sewer. Foul water generated will be domestic grade effluent and it is not proposed to monitor this emission.

   Surface water runoff from the site, during the landfilling phases will be collected in a temporary settlement pond to allow suspended solids to settle out before being discharged to the sewer. This surface water run-off will also pass through an oil/petrol interceptor which will remove any hydrocarbons from the runoff.

   Following restoration of the landfill, a permanent attenuation facility (underground tank or proprietary cell configuration) will be designed to attenuate peak flow and will discharge to the sewer via a silt trap and oil/petrol interceptor.

   Suspended solids and hydrocarbon emissions will be monitored quarterly from both the temporary settlement pond and permanent attenuation facility. A visual/odour inspection will also be undertaken on the outflow on a daily basis.

Cont'd.../

CORE HOUSE, POULADUFF ROAD, CORK, IRELAND
T: +353 21 4964133 F: + 353 21 4964464 E: info@ftco.ie W: www.fehilytimoney.ie

Directors: Eamon Timoney Declan O'Sullivan Gerry O'Sullivan Walter Quirke Oliver Tierney
Associates: Declan Egan Clodagh O'Donovan Adrian Duffy Bernadette Guinan
Paul Kelly Stephen Byrne Sarah Toal Tony Ambrose Company Secretary: Declan O'Sullivan

Registered in Ireland, Fehily Timoney & Company Ltd. Number 180497
Registered Office: Core House, Pouladuff Road, Cork VAT Registration Number: IE6580497D

ENGINEERS IRELAND cpd ACCREDITED COMPANY

nsai ISO 9001:2000 QUALITY

Following discussions with Cork City Council Drainage Section, it was agreed that the maximum surface water run-off from the development will be 2 l/s. This corresponds to a maximum flow per day of 173 m^3.

Tables E.3(i), E.3(ii) and F.2 to F.8 is included details the maximum volume and characteristics of the surface water emission and the monitoring parameters and frequency of monitoring for this emission.

2. The emission point to the sewer is illustrated as SE1 on Drawing CE08-001-006-001 enclosed. This will be the emission point for both the temporary settlement pond and permanent attenuation facility.

   The monitoring point for the sewer is also illustrated as SD1 on Drawing CE08-001-006-001. This monitoring point will be at the outflow of the temporary settlement pond during landfilling and permanent attenuation facility following restoration. This will allow easier access to the sampling location as it will be located onsite and also will allow for the control or shut off of the outflow if parameters exceed emission limit values.

3. Proposed sampling arrangements and parameters to be monitored:

   Suspended solids and hydrocarbon emissions will be monitored quarterly from both the temporary settlement pond and permanent attenuation facility. A visual/odour inspection will also be undertaken on the outflow on a daily basis.

   A specific sampling point will be designed with appropriate access in order to safely sample the emissions to sewer.

The Non Technical Summary for both the EIS and the Waste Licence Application has been revised and is enclosed with this documentation. In these Non Technical Summaries, Figure 2.8 Proposed Environmental Monitoring Points as been revised to show the sewer monitoring point onsite.

Table1: List of Revised Drawings

Drawing Title	Drawing Number	Revision Number	Superseded Versions
Proposed Environmental Monitoring Location Map	2006-011-09-Fig 2.8	Rev B	Proposed Environmental Monitoring Location Map 2006-011-09-Fig 2.8 Rev A

One original and one copy of the following documentation have been included:

- Cover letter
- Tables E.3(i), E.3(ii) and Table F.2 to F.8
- Drawing CE08-001-006-001: Sewer Emission Point and Monitoring Location Map
- Non Technical Summary of the EIS
- Non Technical Summary of the Waste Licence Application

Cont'd.../

16 electronic pdf copies of the above information are also included. The content of the electronic files on the accompanying CD-ROMs are true copies of the original application form and EIS.

Please forward any further correspondence in relation to this application to Mr. Michael O'Brien, Environment Section, Cork City Council, City Hall, Cork.

Yours sincerely

Caroline O'Connell

Ms. Caroline O'Connell
for and on behalf of **Fehily Timoney & Company**

Encl.

TABLE E.3(i): EMISSIONS TO SEWER(One page for each emission)

Emission Point:

Emission Point Ref. Nº:	SE1
Location of connection to sewer :	Located to the north-east of the proposed inert landfill
Grid Ref. (10 digit, 5E,5N):	170435 E, 711246 N
Name of sewage undertaker:	Water Services Division, Cork City Council, City Hall, Cork

Emission Details:

(i) Volume to be emitted			
Normal/day	41 m^3	Maximum/day	173 m^3
Maximum rate/hour	7.2 m^3		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	60 min/hr 24 hr/day 365 day/yr

TABLE E.3(ii): EMISSIONS TO SEWER - Characteristics of the emission (1 table per emission point)

Emission point reference number: ***SE1***

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day [1]	kg/year	
Total Suspended Solids	2000	2000	346,000	126,290,000	60	60	10,380	3,788,700	97
Hydrocarbons	N/A	N/A	N/A	N/A	100[2]	100[2]	17,280	6,307,200	N/A

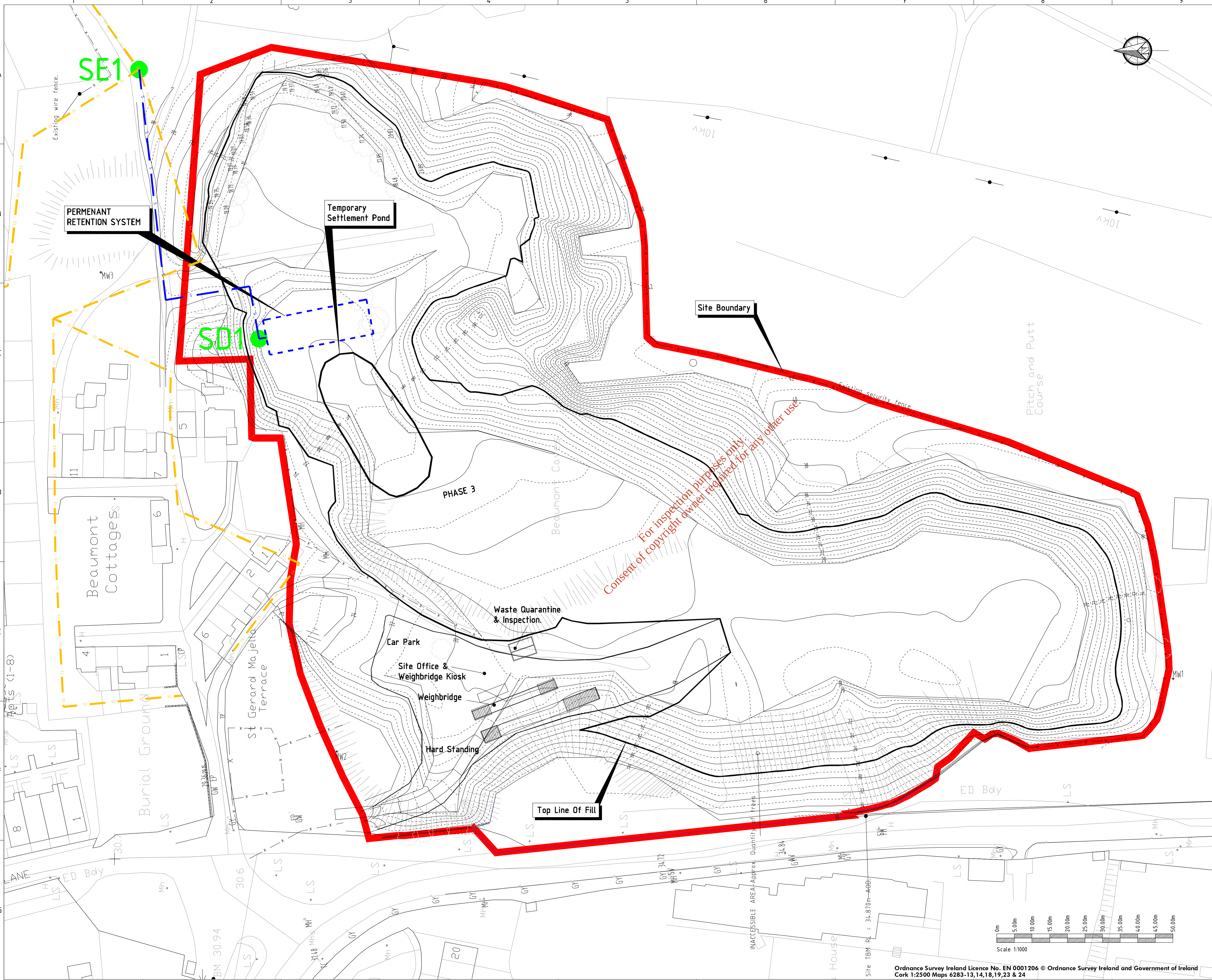
1 Mass emission calculated on maximum flow per day – 173 m^3

2 100 mg/l emission from a Class 2 interceptor – Source: Scottish Environmental Protection Agency (SEPA) Pollution Prevent Guidelines PPG 3 April 2006.

TABLE F.2 to F.8 : EMISSIONS MONITORING AND SAMPLING POINTS - (1 table per media)

Emission Point Reference No(s). : SE1

Parameter	Monitoring frequency	Accessibility of Sampling Points
Visual inspection/odour	Daily	Specific sampling point will be designed with appropriate access.
Total Suspended Solids	Quarterly	Specific sampling point will be designed with appropriate access.
Hydrocarbons	Quarterly	Specific sampling point will be designed with appropriate access.



NOT FOR CONSTRUCTION UNLESS SPECIFICALLY STATED OTHERWISE

Do not scale. Use figured dimensions only. If in doubt - Ask!

LEGEND

SITE BOUNDARY

Water: Combined Sewer

SE1 - Sewer Emission Point (E 170435376 N 71124691)

SD1 - Sewer Monitoring Point (E 170358906 N 71090649)

Rev.	Drawn	Chk'd	App'd	Rev Origin / Date	Description
A	CS	COC	ME	Cork 07.01.09	Issue For Further Information For Waste Licence Application

Revision History

Name of Client

CORK CITY COUNCIL

Name of Job

BEAUMONT QUARRY

Title of Drawing

SEWER EMISSION POINT & MONITORING LOCATION MAP

Scales Used
Scale 1:1000

Dwg. No. CE08-011-06-001 Rev. A

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FEHILY TIMONEY & COMPANY
CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES
Core House, Pouladuff Rd, Cork, Ireland.
T:+353-21-4964133, F:+353-21-4964464
Mill House, Ashtown Gate, Navan Rd, Dublin 15, Ireland.
T:+353-1-6583500, F:+353-1-6583501
W: www.fehilytimoney.ie, E: info@ftco.ie

ENVIRONMENTAL IMPACT STATEMENT FOR AN INERT LANDFILL AT BEAUMONT QUARRY CORK

Non - Technical Summary

Volume 1 of 3

Prepared for:

Cork City Council,
City Hall,
Cork

Prepared by:

Fehily Timoney & Co.,
Core House,
Pouladuff Road,
Cork

January 2009

ENVIRONMENTAL IMPACT STATEMENT FOR AN INERT LANDFILL AT BEAUMONT QUARRY CORK

Non - Technical Summary

Volume 1 of 3

DOCUMENT CONTROL SHEET

User is Responsible for the Revision Status of this Document

Rev. Nr.	Description of Changes:	Prepared by:	Checked by:	Approved by:	Date:
1	Issue to Client	JCS/ME/COC	ME	ME	15/01/09

Client: Cork City Council

Keywords: Waste management infrastructure, Environmental Impact Statement, air quality, ecology, water quality, noise, traffic, inert waste.

Abstract: This document summarises the main body of the EIS prepared for the proposed development of Beaumont Quarry as an inert landfill at Ballintemple/Ballinlough, in Cork City.

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LIST OF FIGURES

PREAMBLE

The Proposed Development

The subject of this Environmental Impact Statement (EIS) is a 3.5 hectare site located between the townlands of Ballinlough and Ballintemple on the south east side of Cork City. The site in question was last used in the 1960's as a limestone quarry and is still commonly referred to as Beaumont Quarry. The site is now predominantly waste land and is largely covered in scrub and hedgerows.

Cork City Council now wishes to restore this site to create a much needed public amenity. Restoration of the site will require the importation of 250,000 tonnes of inert waste to backfill the void created by quarrying activities. The waste will be sourced where possible from large developments within Cork City and will be imported to the site over a 2-3 year period.

Inert waste is non-reactive waste i.e. it does not biodegrade or breakdown over time. Wastes that are classified as an inert include soils, stone, rubble, brick etc. Typically Construction and Demolition (C&D) waste is classified as inert waste.

Cork City Council is submitting this EIS to An Bord Pleanála for approval of this development. In addition, the Council are applying for a waste licence to the Environmental Protection Agency (EPA).

The location of the proposed site is shown on Figure 1.1.

The Applicant

The applicant for this proposal is Cork City Council.

The Consultants

The EIS and waste licence application has been prepared by Fehily Timoney and Company (FTC), Cork.

Abacus Transportation Surveys Ltd carried out the traffic monitoring survey in the area.

John Ketch and Associates compiled Section 9 of the EIS – Landscape and Visual assessment.

SITE LOCATION

Rev.	Drawn	Chk'd	App'd	Date	Description
A	KL	ME	CM	Cork 14.05.07	ISSUE FOR PLANNING
Revision History: A				Rev Origin / Date	

Name of Client

CORK CITY COUNCIL

Name of Job

EIS FOR
BEAUMONT QUARRY

Title of Drawing

LAND OWNERSHIP
PLAN

Scales Used
A3-1:10000, A4-1:20000

Dwg. No.	Rev.
2006-011-09-FIG1.1	A

O:\ACAD\2006\011\09\beaumont_Fig1.1

FEHILY TIMONEY & COMPANY
CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES
Core House, Pouladuff Rd, Cork, Ireland.
T:+353-21-4964133, F:+353-21-4964464
Mill House, Ashtown Gate, Navan Rd, Dublin 15, Ireland.
T:+353-1-6583500, F:+353-1-6583501
W: www.fehilytimoney.ie, E: info@ftco.ie

Scale 1:10000

ORIGINAL DRAWING SIZE A1 - (841 x 594)

NATURAL SCALE

1. INTRODUCTION

1.1. Planning and Waste Licence History

Cork Corporation (now Cork City Council) was granted a waste licence by the EPA to operate an inert landfill (C&D waste) at the Beaumont site in November 2001. This licence allowed the Corporation to fill the site with 250,000 tonnes of inert waste over a 3 year period.

Cork City Council did not proceed with the project as there was inadequate tonnage for the facility at that time. In 2006, the City Council contacted the EPA with the hope of activating the licence. However, the EPA advised the Council that the licence had expired as the site had not been developed within 3 years of the granting of the licence.

In accordance with the legislation in force at that time, the original waste licence for Beaumont Quarry incorporated planning permission for the site. Accordingly, the planning permission for the site expired with the waste licence. Therefore, Cork City Council is now required to submit a new application for approval to An Bord Pleanála. This application also requires the preparation of an Environmental Impact Statement (EIS) to assess the existing environment, potential impacts and propose measures to eliminate or minimise any potential negative impacts.

A new Waste Licence Application must also be submitted to the EPA for approval.

1.2. Waste Management Policy and Legislation

There are numerous legislative and policy documents for the waste management sector which set targets for waste prevention, recycling, recovery, establishment etc and which are relevant to the proposed development at Beaumont. The main ones are summarised below:

Waste Management: Changing Our Ways

Government policy in relation to waste management is set out in the policy statement entitled '*Waste Management: Changing Our Ways'* published by the Department of the Environment and Local Government (DoELG) in September 1998.

In relation to the proposed development at Beaumont Quarry, '*Changing Our Ways'* calls for an increase in the recycling of C&D waste. The restoration of Beaumont Quarry for the creation of a public amenity will require the beneficial re-use of over 250,000 tonnes of inert waste.

Cork City Waste Management Plan 2004 – 2009

The Cork City Waste Management Plan 2004 - 2009 sets out the waste management strategy for Cork City. With reference to construction and demolition (C&D) waste, the Plan estimates that C&D waste arisings for the Cork Region are approximately 500,000 tonnes per year. However, the Plan also states that this amount varies enormously from year to year depending on the number of construction and demolition developments within the City.

In Section 5.4.3 of the Plan, Beaumont Quarry is listed as a facility which has been licensed for the acceptance of 250,000 tonnes of C&D waste. The development of Beaumont Quarry will result in a much needed outlet for the beneficial re-use of C&D waste generated within Cork City.

1.3. Development Policy

1.3.1. Cork City Development Plan 2004

Section 10 of the 2004 – 2009 Development Plan for Cork City specifically calls for the re-development of Beaumont Quarry into a public amenity:

"*Beaumont Quarry located in the heart of the South East area provides a good opportunity to create a valuable amenity area that could serve the wider area. Proposals for the site include partially filling the quarry to create a safe and attractive park linked to the recreational facilities to the west*".

1.4. Alternatives to the Proposed Development

The principal objective of developing Beaumont quarry is to restore the site to a public amenity. Historic quarrying at the site has left a void in the landscape which is now covered in dense scrubland. This site is now associated with anti-social behaviour by night. Re-development of this area into a public park should encourage greater use of the area by the local community and make it a safer and more pleasant place to visit. Therefore, an alternative site was not looked at for this application.

2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1. The Site

The site is located in the densely populated townlands of Ballinlough and Ballintemple in Cork City (refer to Figure 1.1) and occupies an area of approximately 3.5 ha of which 2.5 ha will be filled with inert waste. It is proposed that the remaining area will be retained as buffer zones and for the location of the temporary site offices, weighbridge etc.

The quarry is bound on three sides by vertical or near vertical rock faces. Access to the quarry is obtained along its northern boundary. The quarry is currently overgrown with trees, shrubs and briars. At present, it is used occasionally by local residents for walks but will not realise its full potential as a public amenity until it has been properly developed and re-instated.

Access to the site at present, is via a laneway off Churchyard Lane close to the junction of Churchyard Lane and Boreenmanna Road. The site may be accessed by pedestrians from a footpath running between Churchyard Lane and Beaumont Drive.

2.2. Description of the Proposed Development

It is proposed to accept a maximum of 125,000 tonnes per year of construction and demolition type wastes (inert waste) to the site. The types of waste that will be acceptable on site include: concrete, bricks, tiles, ceramics, soils, stones and other construction and demolition waste. The waste for filling the site will be sourced from various developments around the city centre.

The proposed facility will accept construction and demolition type waste between 08:00 and 18.00 hours Monday to Friday inclusive. The facility will be closed on Saturdays, Sundays and Bank Holidays. Staff will be on site a half an hour prior to opening and an hour after closing for set up and clean up works each day.

During the proposed site development phase of the development (i.e. the works to put the required infrastructure in place to accept the waste material), works at the site will be from 08:00 to 19:00 Monday to Saturday (inclusive).

Figure 2.1 shows the proposed layout of the facility. The main elements of the development will be:

- A contained filling area with an area of approximately 2.5 ha.
- A surface water management system
- Site infrastructure comprising of a temporary site office, temporary weighbridge, wheelwash, car parking facilities, access roads and haul roads
- Perimeter fence (where possible) including a secure entrance at the top of Churchyard Lane

2.3. Design Principles of the Landfill

The proposed inert landfill at Beaumont Quarry will be a fully contained site i.e. the floor and side walls of the quarry where waste is being placed will be lined with low permeability clay in accordance with the specification set out in the EU Landfill Directive 99/31/EC. This design of the facility facilitates the control and management of potentially negative environmental impacts from activities at the site.

The landfill area will be developed in three phases over a two to three year period.

Once filling of the site is complete, the site will be capped and landscaped to create a public amenity.

2.4. Waste Licence

The facility will be required to operate under a waste licence issued by the EPA. This licence will specify conditions relating to site design and operations that have regard to the protection of the environment.

The licence will clearly detail the monitoring requirements and frequencies for the various environmental media including air, groundwater and noise.

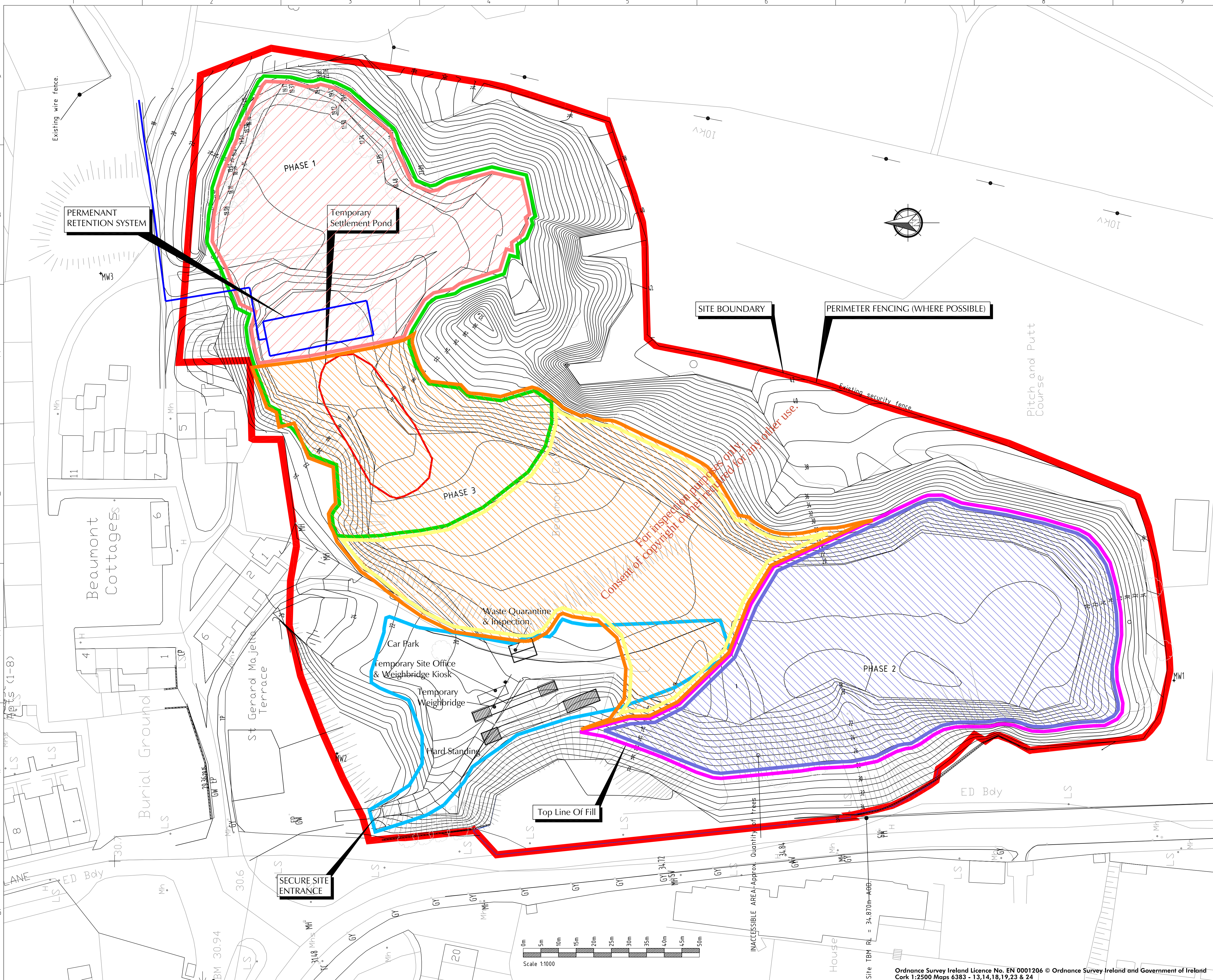
All environmental records of activities at the facility will be maintained at the site office and will be available for inspection. These records will contain details of:

- environmental monitoring results
- external complaints forms
- daily report forms
- weekly report forms

2.5. Environmental Monitoring Programme

Cork City Council intends to implement an environmental monitoring programme on-site to monitor and control all elements of the process and emissions. This programme will be dependent on and in accordance with the conditions of the Waste Licence granted by the EPA. At a minimum the Council proposes the establishment of the monitoring locations shown on Figure 2.8.

Sheet FTC-A1-2006 rev. B (template filed in O:Acad\Templates\Autocad) (July 2006) - template externally referenced



LEGEND

- PHASE 1 LINER
- SITE COMPOUND AREA (PHASE 1 DEVELOPMENT)
- TEMPORARY SETTLEMENT POND (PHASE 1 DEVELOPMENT)
- PHASE 1 FILL
- PHASE 2 LINER
- PHASE 2 FILL
- PHASE 3 LINER
- PHASE 3 FILL
- PERMENANT SURFACE WATER ATTENUATION (PHASE 3 DEVELOPMENT)

Rev.	Drawn	Chk'd	App'd	Rev Origin / Date	Description
A	KL	ME	CM	Cork 14.05.07	ISSUE FOR PLANNING

Revision History A

Name of Client

CORK CITY COUNCIL

Name of Job

EIS
BEAUMONT QUARRY

Title of Drawing

PROPOSED
SITE LAYOUT PLAN
AND FILLING PHASES

Scales Used
A3-1:1000

Dwg. No. 2006-011-09-FIG2.1 Rev. A

FEHILY TIMONEY & COMPANY

CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES

Core House, Pouladuff Rd, Cork, Ireland.
T:+353-21-4964133, F:+353-21-4964464
Mill House, Ashtown Gate, Navan Rd, Dublin 15, Ireland.
T:+353-1-6583500, F:+353-1-6583501
W: www.fehilytimoney.ie, E: info@ftco.ie

ORIGINAL DRAWING SIZE A1 - (841 x 594)

Legend

Air Monitoring

Point	Easting	Northing
A2-1	170,316	70,999
A2-2	170,256	71,028
A2-3	170,267	70,910
A2-4	170,400	71,082
A3-1	170,394	71,075
A3-2	170,248	70,886

Ground Water Monitoring

Point	Easting	Northing
GW1	170,262	70,833
GW2	170,272	71,042
GW3	170,371	71,134
GW4	170,473	71,060

Noise Monitoring

Point	Easting	Northing
N1	170,286	71,120
N2	170,522	71,259
N3	170,520	70,886
N4	170,281	70,830
N5	170,218	70,997

Sewer Point

	Easting	Northing
SD1	170358906	7109064

Rev.	Drawn	Chkd	Appd	Rev Origin	Description
B	CS	COC	ME	Cork 12.01.09	Issue For Further Information For Waste Licence Application
Revision History	A	B		Date	

Name of Client

CORK CITY COUNCIL

Name of Job

EIS
BEAUMONT QUARRY

Title of Drawing

PROPOSED ENVIRONMENTAL MONITORING LOCATION MAP

Scales Used
A3-1:2000

Dwg. No.
2006-011-09-FIG2.8

Rev.
B

O:\ACAD\2006\011\09\Jeanu-wk_Fig28

Scale 1:2000

FEHILY TIMONEY & COMPANY
CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES
Core House, Pouladuff Rd, Cork, Ireland.
T: +353-21-4964133, F: +353-21-4964464
Mill House, Ashtown Gate, Navan Rd, Dublin 15, Ireland.
T: +353-1-6583500, F: +353-1-6583501
W: www.fehilytimoney.ie, E: info@ftco.ie

ORIGINAL DRAWING SIZE A1 - (841 x 594)

NATURAL SCALE

3. ENVIRONMENTAL IMPACTS

3.1. Human Beings

As previously mentioned, the site is located in a densely populated area.

Housing estates are located to the north and south of the site. There are various sporting facilities around the site including, the Ballinlough pitch and putt course on the south-eastern boundary, the Cork Constitution Rugby Football Club to the west across Churchyard Lane and Pairc Criostoir Ui Rinn G.A.A. sports ground, located approximately 175 m to the west.

To the east lie a large open green public amenity and two national schools. Further to the east is the busy road of Beaumont Drive.

The remainder of the areas within the vicinity of the site is made up of open green areas and industries such as the Eircom Area Engineering Headquarters office.

The main areas examined in this section with respect to the potential effects of the proposed development on humans are:

- noise
- traffic
- Air and climate

3.1.1. Noise

The noise assessment covers the potential noise impacts of the site infill operations.

The impact assessment has shown that, with the use of noise barriers during the fill operations, the proposed development will not have a significant impact on the noise environment. Good site management practices as well as the use of mitigation measures will ensure that noise levels will be within the standard EPA guidelines for day-time (55 dB(A)) and night-time (45dB(A))noise levels.

Noise emission control techniques that will be used on site include:

- Provision of a temporary screening berm along the northern site boundary
- A maintenance programme for all mobile plant and equipment used at the site
- Site haul roads will be well constructed and maintained to reduce noise levels on the site
- Speed restrictions will be imposed on internal site roads
- The site will be closed during night-time
- Noise monitoring will be carried out during the construction and operation of the landfill.

The noise associated with the increase in trucks and other traffic associated with the proposed development will be imperceptible in the context of the existing traffic levels on the Boreenmanna/Churchyard Road.

3.1.2. Traffic

It is estimated that the proposed operation of Beaumont Quarry as an inert landfill will generate an additional 40 vehicles to and from the site per day, comprised of an estimated 33 trucks and 7 cars. The results of the analyses carried out indicate that this likely increase in traffic on the receiving roads will not be significant.

Beaumont quarry will only be operational as a landfill for a period of 2 – 3 years. Following this, the site will be developed and landscaped for use as a public amenity park. It is not anticipated that traffic levels will increase significantly over existing levels when the park is opened to the public.

Several mitigation measures have been proposed, the principle of which is to effect an improvement in road safety on the receiving roads environment. Proposed mitigation measures include:

- Upgrading of the junction of the Boreenmanna Road and Churchyard Lane to include a right hand turning lane
- Advanced warning signs along all roads in the vicinity of the site for the duration of the site development and landfilling operations
- Establishment of a stop sign at the top of the entrance road to Beaumont Cottage (St. Gerard Majellas Terrace).
- HGVs will not be allowed to access/exit the site via the junction of Blackrock Road/Churchyard Lane

3.1.3. Health and Safety

Cork City Council and its Contractors shall operate the site construction and day-to-day activities in accordance with all relevant Health and Safety legislation.

3.2. Air and Climate

The proposed development will not impact on local climate in the area as the proposed development at Beaumont Quarry consists of the short-term landfilling of inert waste only. Therefore there will be no significant production of landfill gas which could impact on climate.

During construction activities, best practice will be implemented at the site to ensure dust emissions are controlled and minimised. The sheltered aspect of Beaumont Quarry will help minimise windblown dust generation from the proposed development.

An air monitoring programme will be put in place to ensure compliance with the relevant standards.

3.3. Geology, Hydrogeology and Hydrology

3.3.1. Geology and Hydrogeology

The existing site was formerly a limestone quarry. There is currently 3 m - 5 m of clay overlying the limestone bedrock. This was confirmed during a site investigation in 2000.

Three groundwater monitoring wells have been installed at the site. Results of two rounds of monitoring of these wells indicate that the groundwater quality in the bedrock beneath the site is generally good.

As part of the proposed development, an estimated 53,000 m^3 of material will be imported to the site to line the base and walls of the quarry. This will mean that the site will be fully contained thus minimising the potential negative impacts on the underlying groundwater.

No material will be excavated from the site. The filling area within the quarry will be lined in accordance with the Landfill Directive 99/31/EEC.

There will be no direct discharges to the groundwater. Run-off generated from the site compound (i.e. office and weighbridge area) will be discharged to the nearby sewer.

3.3.2. Hydrology

There are no surface water bodies within 500 m of the site. The proposed development will not discharge directly to any water bodies and will therefore have no significant impact on the water quality or hydrology of the surrounding area.

The proposed development will impact on the existing run-off drainage of the site. All surface water generated on-site during construction and landfill of the site will be directed to a temporary surface water retention pond and discharged to the nearby sewer for treatment at Carrigrennan Waste Water Treatment Plant.

Once the site has been developed for use as a public amenity, a permanent surface water collection system will be established at the site which will discharge to the nearby sewer.

Emission parameters such as suspended solids and hydrocarbons will also be monitored at the facility under the facilities waste licence.

3.4. Cultural Heritage

There are no known archaeological features, architectural, or other features of cultural heritage, within the site boundary. As there will be no excavation of material from the site, no further mitigation measures are proposed.

The site will positively enhance the cultural heritage of the area when it has been restored to a public amenity. An open landscaped space with walking paths and playing fields will encourage members of the public to explore the natural beauty of the area.

3.5. Ecology

An ecology survey of the site and surrounding area was conducted as part of this EIS.

The area that is proposed to be infilled is dominated by scrub and grasses. These areas were not found to be of any particular ecological importance. In addition, it is proposed that the upper slopes of the quarry which are currently well vegetated will be conserved where possible.

The caves at the site are potentially the most important feature for local ecology as they are sometimes used as roosts for bats.

The impacts from the construction and operational phases of the proposed inert landfill will be highly-localised. With mitigation, the impact is likely to be negligible in terms of losses of species of any elevated conservation importance.

A number of mitigation measures will be implemented to offset the minor potential negative impacts on overall biodiversity at the site. These measures are designed to reduce the disturbance effects of light and noise on the local plants and animals and to maximise the biodiversity at the site by appropriate design of future landscaping of the public amenity. Additional ecological surveys that would aid the offset of any potential negative effects e.g. a winter bat survey are also proposed.

The development of a public amenity will include landscaping features that will benefit the ecological environment in the long term.

3.6. Landscape

The site covers an area of approximately 3.5 ha and was formerly used as a limestone quarry.

The quarry floor is currently overgrown. The rock outcrops remaining from the working of the quarry are still visible and are a striking visual amenity. The upper slopes of the quarry along the south-eastern boundary are well vegetated.

The infilling process will raise the final ground level of the quarry between 7 and 10 metres. The development will give rise to a temporary intrusion during the period of construction, causing a short-term negative impact upon the existing character of the site. This impact will be significant in the immediate vicinity, from adjacent houses and pedestrians along the boundary of the site. The long-term impact on views from nearby residents will be positive.

It is not intended to raise the final restoration levels of the restored park above the surrounding areas. Therefore the visual obstruction of the restored park will not impact on the wider landscape.

The main objectives of this proposed development is to create a park, for public use. This is seen as a positive impact on the site and surrounding areas.

The proposed landscape plan for the restoration of the quarry includes the following:

- The creation of a park offering both passive and active recreation facilities that will have no negative visual impact on the local residential population. Organisations and leisure groups shall be actively encouraged to make use of the park's facilities for their sport or activity
- The restoration and improvement of the flora species diversity of the site
- The provision of a constructed wetland area that will enhance the biodiversity of the area
- The provision of a safe and pleasant environment for visitors to view the unique geology of the quarry
- The encouragement of the use of pedestrian circular paths in the lower open areas of the amenity park
- The use of local limestone rock in the park furnishings where possible (e.g. paved footpaths, stone circles, seating etc).
- The retention of protection of trees on the upper slopes where possible
- Retention of the existing cave network

The overall long-term impact that the restoration of the quarry will have on the site and on its environs can be described as positive and seen as an improvement in an area that for decades has been largely neglected and underutilised.

3.7. Material Assets and Land Use

The site is not contained within any of the following designations:

- Natural Heritage Areas (NHA)
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)

As the proposed landfill will have environmental controls and will operate in accordance with best practice, it will not have a significant impact on any of the existing land uses. The proposed final development of Beaumont Quarry into a landscaped public amenity will have a positive impact on the local community residing in the Blackrock, Ballintemple and Ballinlough areas of Cork City.

3.8. Interactive Impacts and Conclusions

Beaumont Quarry is owned by Cork City Council. The site is currently overgrown and is underutilised as a public amenity.

The proposed project is to restore the quarry over a 2 – 3 year period through the importation of 250,000 tonnes of inert waste. Once filled, the site will be landscaped to create a valuable public amenity for local residents and the surrounding area.

Each section of the EIS deals with potential impacts that may occur as a result of the operation of the landfill. Where these impacts could be negative, specific mitigation measures as well as good housekeeping practices will be implemented at the site to minimise or neutralise these impacts on the receiving environment. There will be no significant negative long-term impacts from the interactions as a result of the development of Beaumont Quarry.

ATTACHMENT A IN SUPPORT OF

AN APPLICATION FOR A WASTE LICENCE

FOR AN

INERT LANDFIIL AT

BEAUMONT QUARRY

ORIGINAL

Prepared for:

Cork City Council
City Hall
Cork

Prepared by:

Fehily Timoney & Company
Core House
Pouladuff raod
Cork

January 2009

ATTACHMENT A IN SUPPORT OF

AN APPLICATION FOR A WASTE LICENCE

FOR AN

INERT LANDFIIL AT

BEAUMONT QUARRY

DUPLICATE

Prepared for:

Cork City Council
City Hall
Cork

Prepared by:

Fehily Timoney & Company
Core House
Pouladuff raod
Cork

January 2009

ATTACHMENT A IN SUPPORT OF

AN APPLICATION FOR A WASTE LICENCE

FOR AN

INERT LANDFIIL AT

BEAUMONT QUARRY

User is Responsible for Checking The Revision Status Of This Document

Rev. Nr.	Description of Changes	Prepared by:	Checked by:	Approved by:	Date:
1	Issue to Client	ME/COC	ME	ME	15.01.09

Client: Cork City Council.

Keywords: Waste licence application, inert landfill, noise, traffic, lining, surface water management.

Abstract: This document contains attachment A to the application for a waste licence to the EPA for the development of an inert landfill at the disused quarry at Beaumont. The applicant is Cork City Council. Approximately 250,000 tonnes of material will be imported to the site over a 2-3 year period. Once filling has ceased, the site will be restored and landscaped into a public amenity.

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LIST OF DRAWINGS

ATTACHMENT A - NON TECHNICAL SUMMARY

This Non-Technical Summary has been prepared in accordance with Article 12(1)(u) of the Waste Management (Licensing) Regulations S.I. 395 of 2004. Sub-articles (a) to (t) of Article 12 are addressed below.

For clarity, the paragraph numbering is in accordance with the numbering of Article 12(1) (a) to (t).

Article 12(1)

(a) General Details

Cork City Council
City Hall
Cork

Tel: 021 4966222
Fax: 021 4414238

(b) Planning Authority

The proposed development is in the functional area of Cork City Council. However, in accordance with the relevant planning legislation, Cork City Council is applying to An Bord Pleanála for approval.

(c) Sanitary Authority

The proposed development will discharge to a combined sewer which is under the control of:

Water Services Section
Cork City Council
City Hall
Cork

Tel: 021 4966222
Fax: 021 4414238

(d) Location

The proposed facility is located in the townlands of Ballintemple and Ballinlough, within Cork City. The National Grid reference for the site is:

E 1703 N 0710

(e) Nature of the Development

The proposed layout of the facility is illustrated on Drawing 2006-011-09-005.

This waste licence application is for establishment of an inert landfill at Beaumont Quarry for the importation of 250,000 tonnes of inert waste (construction and demolition type materials) over a 2-3 year period. A maximum of 125,000 tonnes of material will be imported to the site per annum.

The proposed waste for landfilling at the Beaumont site will be sourced from various developments around the city centre. If contractors wish to landfill inert waste at Beaumont Quarry, in-situ sampling (i.e. at the site where the material is being excavated) will be required (by the Contractor) prior to its removal from the source location. This will determine its suitability for disposal at Beaumont Quarry. Proof of sampling by an independent laboratory will be required by the landfill Site Manager prior to the waste being accepted at the Beaumont site.

The proposed site covers a total area of approximately 3.5 ha. This site was quarried during the 1960's for limestone rock. There has been no restoration of the site and consequently the quarrying activities have left a void in the landscape. The quarry could be described as waste ground. It is currently overgrown with trees, shrubs and briars.

The purpose of the short-term landfill is to restore the site to create a public amenity park. At present, the site is used occasionally by local residents for walks but will not realise its full potential as a public amenity until it is properly re-instated. The end–use of the facility will be a public amenity consisting of walk ways and open spaces.

Only 2.5 ha of the site will be used for the deposition of inert waste. The remainder will be used for the establishment of the temporary site offices, weighbridge etc. and buffer zones.

The main elements of the proposed development as illustrated on Drawing 2006-011-09-005 and will comprise of the following:

- Temporary site office
- Weighbridge
- Wheelwash
- Services, including, surface and foul drainage systems, electricity supply, lighting, telecoms and security fencing

The site will accept waste from Monday to Friday inclusive between the hours of 08:00 and 18:00. It is expected that between 3 -5 persons will be employed at the site.

It is estimated that the proposed development will generate a total of 40 vehicles per day of which 33 will be truck movements.

The site will be designed and operated in accordance with the licence issued by the Environmental Protection Agency.

The site will be designed and operated in accordance with the EU Landfill Directive (99/31/EEC) and the EPA Manual on Landfill Design.

Each phase of the site will be lined will a 1m thick layer of low permeability clay which will control any potential emissions to the underlying groundwater.

There are no surface water features within 500 m of the site. Therefore clean water running of areas where inert waste has been deposited will be collected and diverted to a temporary surface water pond before being discharged to the nearby sewer via an oil/petrol interceptor. Foul-water from the site office will also be diverted to the sewer via an oil/petrol interceptor.

(f) Class of Activity

In accordance with the Third and Fourth Schedules of the Waste management Acts, 1996 to 2003, it is proposed to carry out the following classes of activity at the facility:

Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts 1996 to 2003

Class 1.	Deposit on, in or under land (including landfill).
Class 4.	Surface impoundment, including placement of liquid or sludge into pit, ponds or lagoon.
Class 5	Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment

Class 5 will be the principal activity at the site.

(g) Quantity of Nature of Waste (EWC Code)

A total of *c*.250,000 tonnes of inert waste will be deposited at the site. The proposed quantities and relevant EWC codes are given below in tonnes per annum.

Waste Type	Maximum tpa	EWC Code & Description
C& D	125,000 tonnes	17 01 01 - concrete 17 01 02 - bricks 17 01 03 – tiles and ceramics 17 01 07 – mixture of concrete, bricks, tiles & ceramics other than those mentioned in 17 01 06 17 05 04 – soil & stones other than those mentioned in 17 05 03 17 09 04 – mixed construction & demolition wastes other than those mentioned in 17 09 01, 17 09 02 & 17 09 03

(h) Raw Materials

The facility will use materials, substances, fuels and energy during construction and operation. During construction materials will be used to build all the components of the facility e.g. quarantine area. The facility will use diesel fuel, electricity, and water during construction and operation. Electricity will be used on site for lighting and general office equipment including the weighbridge. A contractor will supply and deliver fuel for site plant as required. There will be no storage of fuel on site.

The following are estimates for the annual consumption of material and energy on-site:

Soils for lining	*c*30,000 m^3
Soils for capping	*c*25,000 m^3
Diesel oil	100,000 litres per annum
Electricity	15,000 kW hours per annum
Water	150,000 litres

(i) Plant, Processes and Operating Procedures

Only inert waste from permitted haulers will be accepted at the site. Details of all wastes accepted (type, nature, weight, origin etc) at the site will be recorded by the weighbridge operator and directed to the appropriate location on site. The waste will be inspected at the weighbridge and again at the tipping area. All waste deemed unsuitable or not in compliance with the waste licence for the site will be sent off-site to an appropriate facility.

The site will be developed in three phases:

- Phase 1 will consist of the construction of the site entrance, access road and the installation of the site office, weighbridge etc. In addition the most northern portion of the site will be backfilled
- Phase 2 – will consist of backfilling activities in the southern portion of the site and capping of Phase 1
- Phase 3 – will consist of backfilling activities in the centre of the site and capping of Phases 2 and 3.

Material being placed will be subject to the following controls:

- Inspection/documentation verification
- Weighing
- Placement in the lined phases in layers with immediate compaction
- Collection of clean water run-off and discharge to sewer
- Environmental monitoring in accordance with the provisions of the Waste Licence
- Capping and closure of all landfill areas when full, in accordance with the provisions of the licence and the EU Directive on the Landfill of Waste, to create a public amenity.

(j) Regarding Paragraphs (a) to (g) of section 40 (4) of the Waste Management Act

The information contained within the waste licence application form and its attachments including the enclosed Environmental Impact Statement demonstrates that the proposed facility meets the above requirements of the Act.

(k) Emissions from the Site

Air

Dust control measures will be implemented to ensure dust does not give rise to nuisance. These include:

- A dry shake out wheelwash system will operate at the proposed facility to prevent vehicles exiting the site depositing dust and mud on the surrounding roads. After passing through the shakeout, all vehicles will travel along a section of paved internal road before reaching the public road network. This road will be regularly cleaned of mud and dust.

- Dust emissions will result at the site due to the nature for the material to be accepted. Good housekeeping practices will be deployed at the site to ensure that these emissions are minimised.

- Areas of the landfill will be finally capped and seeded with grass as soon as practicable after completion of filling operations in order to control erosion and prevent the generation of sediment, which may give rise to dust.

Noise

Importation of the soil for the lining of the base and sides of the quarry will generate a number of truck movements. This impact however, will be short-term. Noise emissions will be from site plant and delivery vehicles. All construction operations will be carried out in accordance with BS5228: Part 1:1997: Noise & Vibration Control on Construction and Open Sites.

During the operation of the facility, site machinery and trucks entering and leaving the site will be the primary source of noise.

The loudest noise and the noise with the most potential for nuisance at the site will be the reversing sirens located on the landfill machinery and truck entering the landfill. These are however required for safety.

The facility will only accept waste during the hours 08:00 – 18:00 Monday to Friday and will close on Saturday, Sundays and Bank Holidays.

The noise modelling carried out as part of the Environmental Impact Statement has predicted that the noise levels at noise sensitive locations i.e. nearby residents will not increase significantly as a result of the development. A noise barrier may be installed along the north western boundary of the site. It must be noted that any increases in noise will be short-term i.e. 2-3 years.

Surface Water

There will be no direct emissions to surface water from the proposed operations at Beaumont Quarry site. Foul water generated in the administration buildings will also be discharged to the sewer system.

Surface-water run-off during the landfilling phases will be collected in a temporary settlement pond to allow the settlement of suspended solids and will be discharged into the nearby sewer via an oil/petrol interceptor.

A permanent surface water system will be installed at the site which will continue to control surface water run-off from the site once it is restored. This will also be discharged to the sewer.

It was agreed with Cork City Council Drainage Section, that the maximum surface water run-off from the development will be 2 l/s. This corresponds to a maximum flow per day of 173 m^3. Suspended solids and hydrocarbon emissions will be monitored from both the temporary settlement pond and permanent surface water system in accordance with the facilities waste licence.

Groundwater

There will be no direct discharge from the site to groundwater.

The base of the quarry will be lined with a 1 m thick layer of soil which will have an extremely low permeability i.e. it will take a long time for water to pass through the soil to the underlying groundwater. This design is in accordance with the Environmental Protection Agency Manual on Landfill design. Only inert material i.e. construction and

demolition type waste will be deposited at the site. Therefore, there will be no significant impact on groundwater from the development.

(l) Effects of Emissions

An assessment of the effects of the above listed potential emissions on the environment has been carried out and it has been concluded that the proposed site management practices of the facility, will ensure the effects of emissions on the environment will not be significant.

Further details on emissions can be found in Attachment E of the Waste Licence Application. The facility has been designed to minimise the emission of pollutants and operational procedures will be implemented to reinforce these design features.

(m) Monitoring and Sampling Points

A complete and comprehensive regime of regular environmental monitoring will be implemented at the site in accordance with the licence issued by the Environmental Protection Agency (EPA). At a minimum, the Applicant proposes the establishment of the monitoring locations shown on Figure 2.8. These include air, groundwater, sewer and noise monitoring locations. Further details on monitoring are provided in Section 2 of the EIS and Attachment F of the Waste Licence Application.

All environmental monitoring will be carried out by qualified persons and any laboratory analysis that is required will be carried out at an approved off-site laboratory.

All monitoring will be carried out according to established procedures, approved by the EPA.

Quarterly and annual environmental reports containing details of environmental monitoring will be prepared and presented to the Agency.

(n) Arrangements for Waste Arising from Activity

A small quantity of waste will be generated on-site from the use of the site office and from the maintenance of plant and machinery. Source segregation of this waste will be carried out to recover as many recyclable materials as possible. Waste collected on-site will be collected in appropriate receptacles and removed off-site to an appropriate facility.

Wastewater from the administration area and welfare facilities will be discharged to the existing sewer system.

(o) Arrangements for Off-Site Treatment or Disposal of Wastes

Off-site treatment or disposal of solid or liquid wastes will not be required.

(p) Unauthorised or Unexpected Emissions

The material delivered to the site will be pre-screened for approval and inspected at the active area before being placed and compacted. Any unsuitable material will be rejected.

Surface water discharge will be via the stormwater pond. The water will be pumped from here to the foul sewer via an oil/petrol interceptor and therefore can be controlled to prevent unauthorised emissions.

Staff will be present on site at all times during opening hours to supervise and carry out operations and to deal with any emergencies. Key staff will be on-call to respond to any emergency situation outside of normal working hours e.g. night-time, weekends and Public Holidays.

Emergency Procedures will be developed prior to facility operation and will deal with unexpected emissions such as dust emissions to air, noise or emission to water and other eventualities e.g. fire or plant breakdown. These procedures will include details of persons to contact, emergency services numbers and actions to be taken.

(q) Closure and Restoration

Each of the phases will be permanently capped as soon as it is practicably feasible. It is expected that filling activities will be completed within 2-3 years of commencing. Once the entire site has been fully capped, the site will be landscaped to create a public open space in accordance with the Cork City Development Plan 2004. A landscape plan has been prepared for the site to include open grassed areas, enhancing rock outcrop features and walk ways.

(r) Financial Provisions

The EPA is assured that Cork City Council will endeavour to fully finance any requirements or obligations emanating from the new waste licence for the Beaumont Quarry development in accordance with all relevant legislation. Requirements under present legislation require that a landfill operator makes adequate financial provision for the development, operation, closure and post-closure environmental protection obligations which arise from the operation of a landfill site.

(s) European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulation 2000

The above Regulations do not apply to the proposed development.

(t) Geological and Hydrogeological Nature of the Lands

The entire site will be lined with low permeability clay. This will be extended up the walls of the site where waste is being placed. The site will be designed and operated in accordance with the Landfill Directive and EPA Manuals on Landfill Design.

Only inert materials, i.e. soils will be deposited at the site. Therefore, there will be no significant impact on the underlying groundwater.

SITE LOCATION

Rev.	Drawn	Chk'd	App'd		
A	KL	ME	CM	Cork 14.05.07	ISSUE FOR PLANNING
Revision History A				Rev Origin / Date	Description

Name of Client

CORK CITY COUNCIL

Name of Job

EIS FOR
BEAUMONT QUARRY

Title of Drawing

LAND OWNERSHIP
PLAN

Scales Used
A3-1:10000, A4-1:20000

Dwg. No. 2006-011-09-FIG1.1 — Rev. A

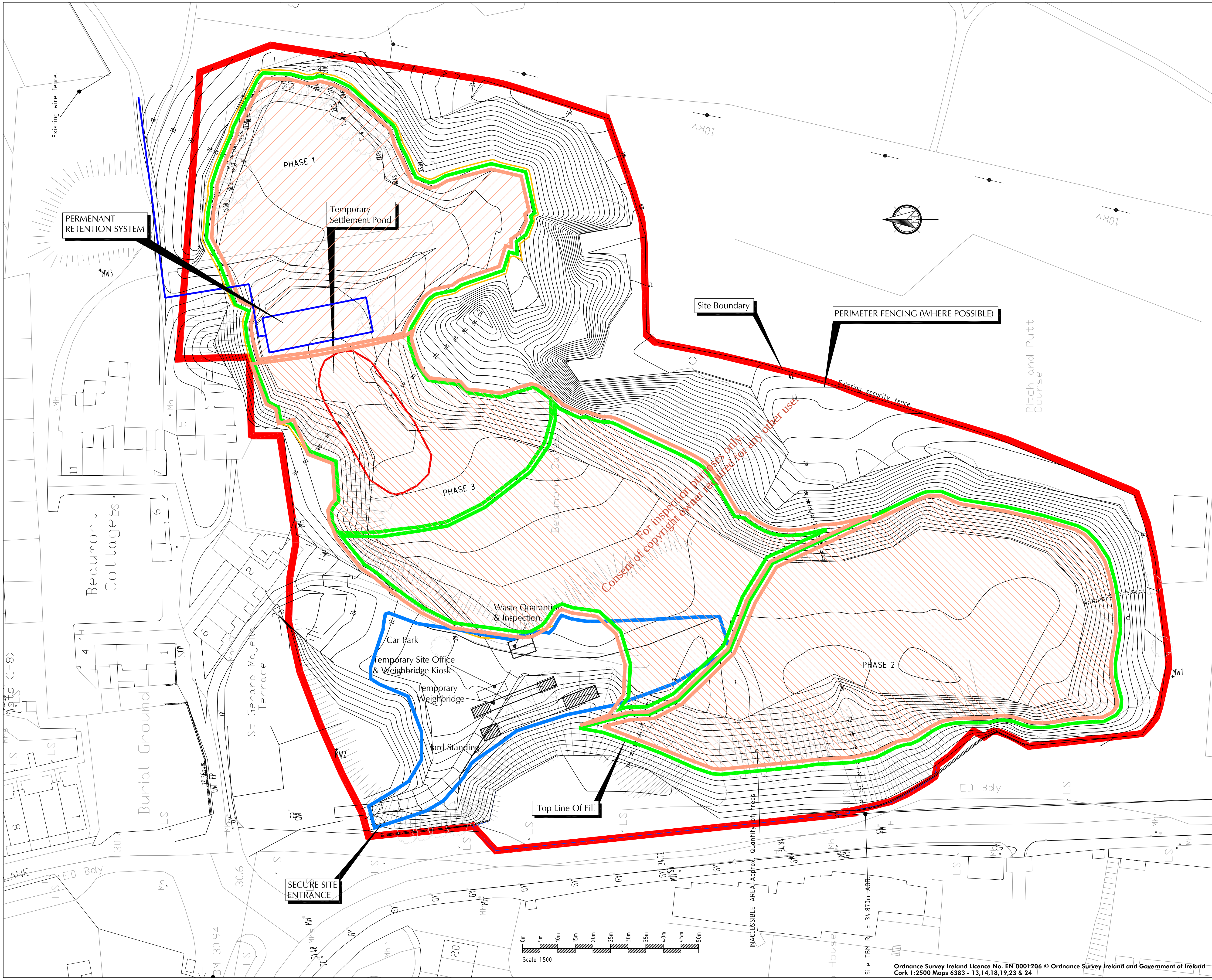
O:\ACAD\2006\011\09\[dwg-ref]_Fig1.1

FEHILY TIMONEY & COMPANY
CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES
Core House, Pouladuff Rd, Cork, Ireland.
T:+353-21-4964133, F:+353-21-4964464
Mill House, Ashtown Gate, Navan Rd, Dublin 15, Ireland.
T:+353-1-6583500, F:+353-1-6583501
W: www.fehilytimoney.ie, E: info@ftco.ie

Scale 1:10000 (0m 50m 100m 150m 200m 250m 300m 350m 400m 450m 500m)

ORIGINAL DRAWING SIZE A1 - (841 x 594)

NATURAL SCALE 10mm 0 10 20 50 100mm



LEGEND

PHASE 1 -3 LANDFILL CELLS

EXTENT OF FILLING AREA

Rev.	Drawn	Chk'd	App'd	Rev Origin / Date	Description
A	KL	ME	CM	Cork 14.05.07	ISSUE FOR WASTE LICENCE

Revision History A

Name of Client

CORK CITY COUNCIL

Name of Job

WASTE LICENCE APPLICATION FOR BEAUMONT QUARRY

Title of Drawing

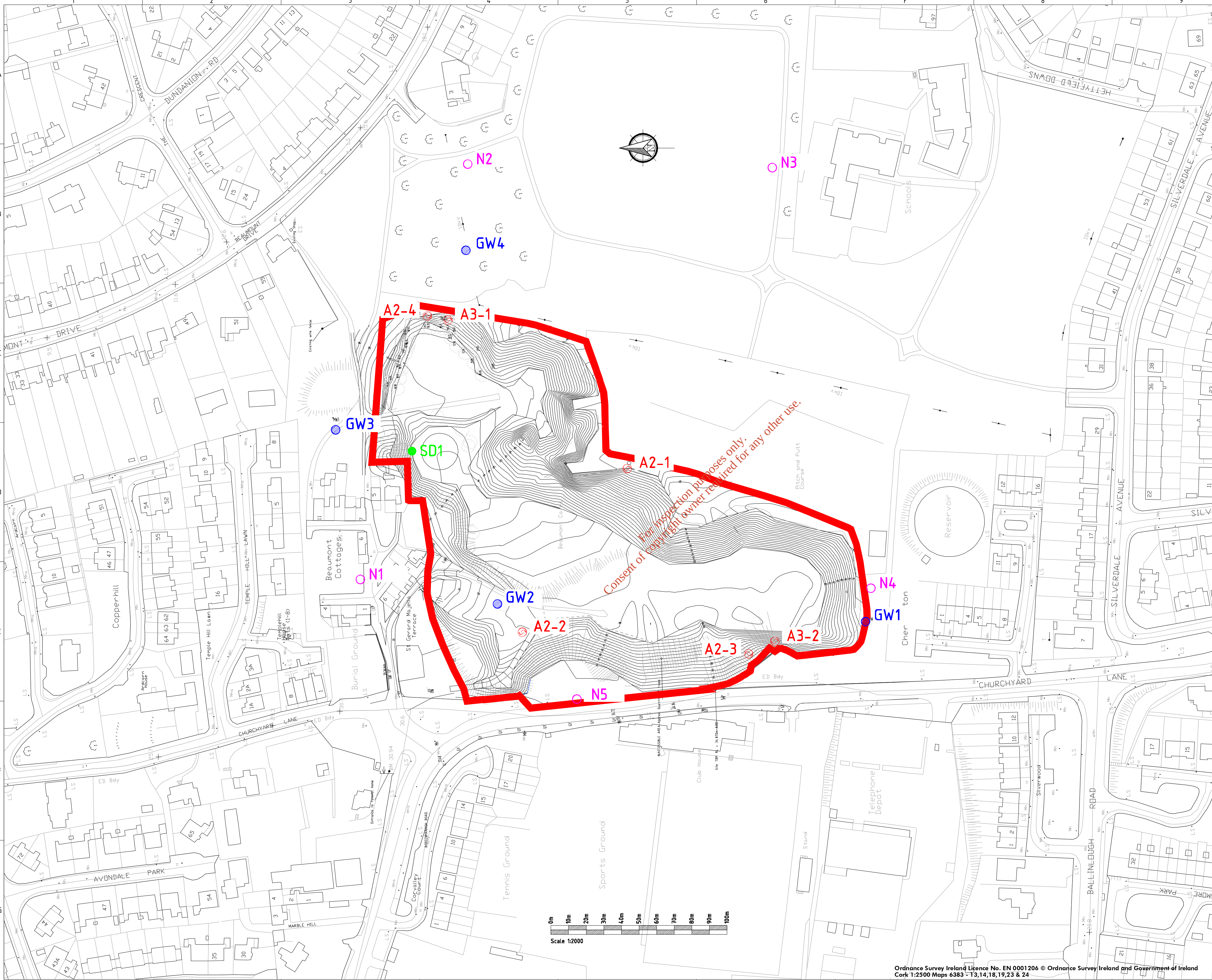
PROPOSED SITE LAYOUT PLAN

Scales Used 1:1000 A3

Dwg. No. 2006-011-09-005

Rev. A

CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES
FEHILY TIMONEY & COMPANY
Core House, Pouladuff Rd, Cork, Ireland.
T:+353-21-4964133, F:+353-21-4964464
Mill House, Ashtown Gate, Navan Rd, Dublin 15, Ireland.
T:+353-1-6583500, F:+353-1-6583501
W: www.fehilytimoney.ie, E: info@ftco.ie



NOT FOR CONSTRUCTION UNLESS SPECIFICALLY STATED OTHERWISE

Do not scale. Use figured dimensions only. If in doubt - Ask!

Legend

Air Monitoring

Point	Easting	Northing
A2-1	170,316	70,999
A2-2	170,256	71,028
A2-3	170,267	70,910
A2-4	170,400	71,082
A3-1	170,394	71,075
A3-2	170,248	70,886

Ground Water Monitoring

Point	Easting	Northing
GW1	170,262	70,833
GW2	170,272	71,042
GW3	170,371	71,134
GW4	170,473	71,060

Noise Monitoring

Point	Easting	Northing
N1	170,286	71,120
N2	170,522	71,259
N3	170,520	70,886
N4	170,281	70,830
N5	170,218	70,997

Sewer Point

	Easting	Northing
SD1	170358906	7109064'

Rev.	Drawn	Chk'd	App'd	Rev Origin / Date	Description
B	CS	COC	ME	Cork 12.01.09	Issue For Further Information For Waste Licence Application

Revision History A B

Name of Client

CORK CITY COUNCIL

Name of Job

EIS

BEAUMONT QUARRY

Title of Drawing

PROPOSED ENVIRONMENTAL MONITORING LOCATION MAP

Scales Used
A3-1:2000

Dwg. No. 2006-011-09-FIG2.8 Rev. B

O:\ACAD\2006\011\09\beau-wlr_Fig28

FEHILY TIMONEY & COMPANY
CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES
Core House, Pouladuff Rd, Cork, Ireland.
T:+353-21-4964133, F:+353-21-4964464
Mill House, Ashtown Gate, Navan Rd, Dublin 15, Ireland.
T:+353-1-6583500, F:+353-1-6583501
W: www.fehilytimoney.ie, E: info@ftco.ie

ORIGINAL DRAWING SIZE A1 - (841 x 594)