


Document Amendment Record

Client: RILTA Environmental Ltd.

Project: 3684 –Integrated Waste Management Facility

Title: Environmental Impact Statement

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			 <small>Patrick J. Tobin & Co. Ltd.</small>		

RILTA Environmental Ltd.

Integrated Waste Management Facility

ENVIRONMENTAL IMPACT STATEMENT

VOLUME II

April 2007

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1 INTRODUCTION

1.1 General

RILTA Environmental Ltd. (hereafter referred to as RILTA -formerly known as SITA Environmental Ltd.) operates an existing Integrated Waste Management Facility at Block 402, Grant's Drive, Greenogue Business Park, Rathcoole, Co. Dublin.

The facility located in south west County Dublin is adjacent to Newcastle, approximately 1.5km north of the village of Rathcoole. Access to the facility is from the south from the R120 that joins the N7 (Dublin-Limerick road). An overview of the regional site location is contained in Figure 1.1.

Planning Permission was granted by An Bord Pleanála for this facility in 2003- Planning Register Reference Number: SD 02A/0313 and An Bord Pleanála Reference Number: PL 06S.201534. The area referred to as "Zone A" in the original Planning Application is the current operational area of RILTA Environmental Ltd. The facility also operates in accordance with a Waste Licence granted by the Environmental Protection Agency (EPA) –Waste Licence No.192-1.

Construction on the facility began in 2003 and RILTA began accepting waste in December 2004.

TOBIN Consulting Engineers (hereafter referred to as TOBIN) have been commissioned by RILTA to undertake an EIS in order to apply for an increase in the annual volume of contaminated soil that is stored at RILTA prior to transfer off-site.

Based on the terms of the current Planning Permission for the site at Greenogue, the threshold of waste accepted on site shall not exceed 62,500 tonnes save with a prior grant of Planning Permission. TOBIN wish to submit an application, on behalf of RILTA, for an increase in the annual throughput of waste at the site from 62,500 tonnes per annum to 111,000 tonnes per annum. The increase in annual tonnage will be due to an increase in the quantity of soil accepted and transferred from the site.

The continued use of the RILTA facility will not lead to any change in infrastructure or processing within the site.

The site covers 1.1 hectares and is covered in made ground. Information presented in the original EIS for this facility included baseline environmental studies of the site and the area was described as unmanaged grassland that has been disturbed in the past. The site is bounded to the north by the Griffeen River. A 3m wide pathway is adjacent to the Griffeen River north of the RILTA site. A two metre strip of landscaping has also been left inside the site boundary around the perimeter of the

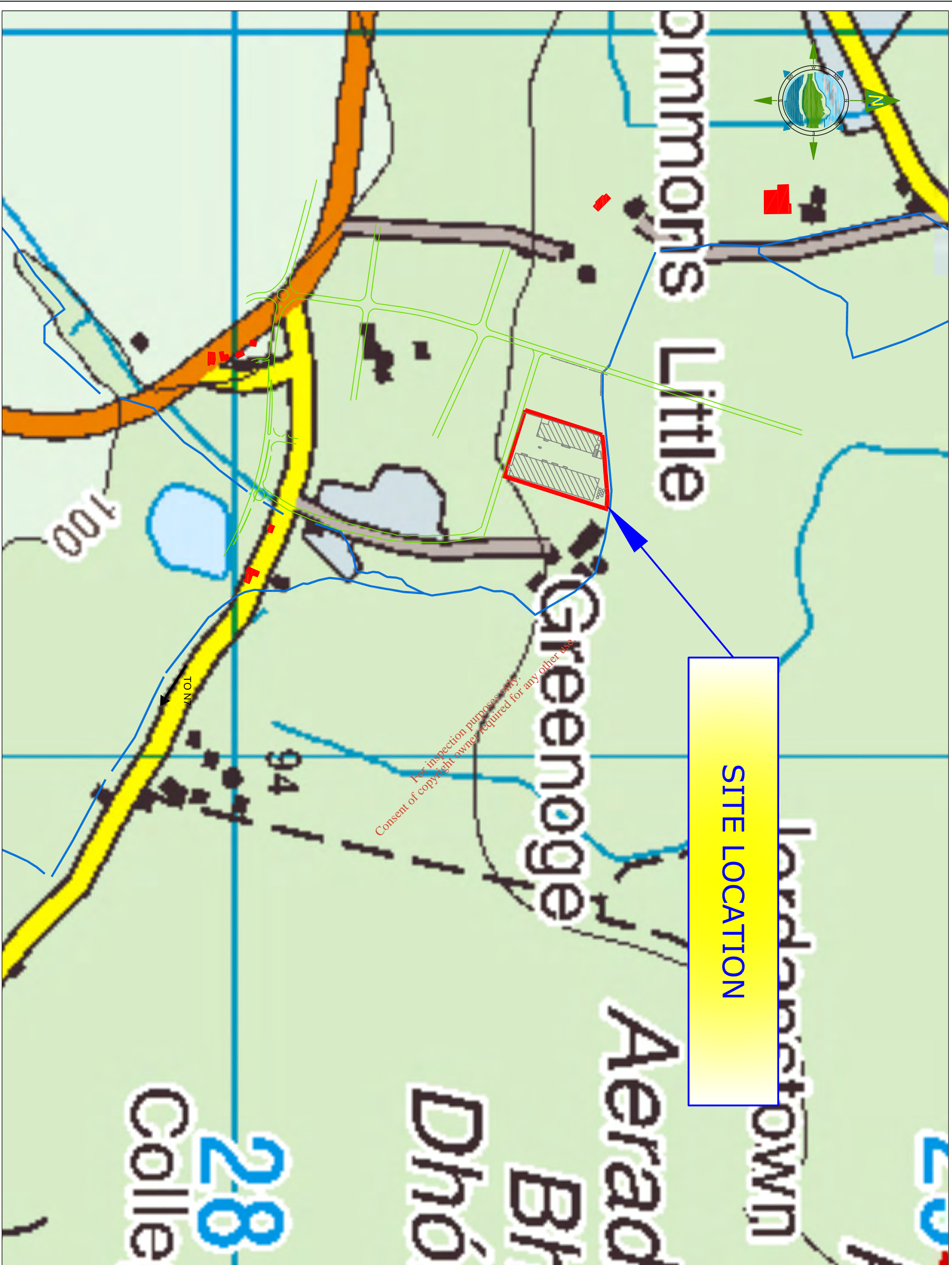
site.




The elevation of the site, which gently slopes in a northerly direction, is approximately 87.5mOD (Ordnance Datum-OD).

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Figure 1-1 Regional Site Location Map

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- Legend:
-  SITE BOUNDARY
 -  NEW ROAD LAYOUT
 -  HOUSE

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEERS TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Issue	Date	Description	MAN	ST	By	Chkd.
A	11-04-07	ISSUED FOR PLANNING				

Client:



Project:
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Title:
REGIONAL SITE LOCATION MAP

Scale @ A1: **1:2,500**

Prepared by: **M. Nolan** Checked: **S. Trinnelly** Date: **April 2007**

Project Director: **D. Grehan**



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Drawing No.: **FIGURE 1.1** Issue: **A**

1.2 Facility Location and Background

The facility located in south west County Dublin is adjacent to Newcastle, approximately 1.5km north of the village of Rathcoole. Access to the site is from the south from the R120 that joins the N7 (Dublin-Limerick road). An overview of the site location is contained in Figure 1.1.

The site covers 1.1 hectares and is covered in made ground. The site is bounded to the north by the Griffeen River. A 3m wide pathway is adjacent to the Griffeen River north of the RILTA site. A two metre strip of landscaping has also been left inside the site boundary around the perimeter of the site.

The site layout as shown in Drawing No. 3684/01/205 is located in the Greenogue Business Park, which is at present undergoing further development. The business park currently contains both light industrial and warehousing units. In 2001 a total of 50,310m² was given permission to be constructed.

The land immediately surrounding the facility is industrial in nature. To the south an internal industrial estate road bounds the site. A new internal road and entrance has also been developed to the east of the facility.

The land outside the boundaries of the Greenogue Business Park is agricultural in nature with small pockets of industrial land. The Casement Aerodrome, which is a military airfield, is located approximately 2.1km north-east of the site (measured to the centre of the aerodrome). One off residential developments are located in the vicinity of the site along the R120 and College Lane. The nearest dwelling house is located approximately 250m from the site and shown on Drawing No. 3684/01/201.

1.3 Infrastructure

The facility is located in the existing Greenogue Business Park, which is adjacent to the R120/College lane roundabout junction. The R120 runs from Newcastle to the N7, which is the national route that connects Dublin to Limerick. College Lane accesses the N7 via the Rathcoole Interchange, as shown in Figure 1.2.

The Greenogue Business Park is accessed from the R120/College Lane Roundabout junction. College Lane has now been upgraded to a 7.5m carriage way in order to provide additional capacity for traffic and to prevent queuing and delays along the route.

The site is presently served by a privately operated bus service connecting Tallaght Town centre and Newcastle via the N7 Rathcoole Interchange. The service is run by Dual-ways Coaches based in Rathcoole and operates on an hourly basis. Dublin Bus

also provide services to the surrounding area. The Number 68 routes runs from Aston Quay via Clondalkin to Newcastle Village. The Number 69 that serves Rathcoole, also departs from Aston Quay and runs via Clondalkin (timetables for the above are contained in Appendix 1.1).

The Suburban Rail Service to Kildare has a stop in Celbridge, which is approximately 6km from Newcastle. Timetables for this service are contained in Appendix 1.1.

The site is located approximately 19km from Dublin Port which handles bulk cargo, roll on roll off freight and has a roll on /roll off ferry port. The site is located 30 km from Dun Laoghaire Ferry Port, 115 km from Greenore Port, 180Km from Rosslare Port and 220 Km from Larne.

Dublin airport is approximately 25km from the site, with motorway available for approximately 80% of the journey.

The M50 motorway is approximately 10km from the site and provides access to all the major routes leaving Dublin including the M1, N2, N3 and N4.

1.4 Company Background

The Mission Statement of RILTA Environmental Ltd. reads as follows: - ‘Our mission is to be the best in our industry. The one that sets the standards that others follow’

1.5 Environmental Policy

A copy of the Environmental Management System for RILTA Environmental is included in the AER in Appendix 2.1. The Environmental Management Manual is also included in this report. The following are some of the more relevant aspects, which are covered in the EMS for the site: -

Environmental Monitoring

Appropriate monitoring procedures have been established to provide a check on compliance with guidelines, thresholds and procedures.

Environmental Reviews

As part of the Environmental Management System, regular internal assessments of all aspects of the effectiveness of environmental measures have been carried out and used in assessing the success or otherwise of the environmental measures.

Reporting

As part of the Environmental Management System, internal environmental records are

maintained to provide documentary evidence of the reviews and operational achievements. Quarterly and Annual Reports are also forwarded to the EPA as part of the Waste Licence for the facility – Waste Licence No. 192-1, Appendix 1.2.

Management Awareness And Training

Management and employees of RILTA participate in awareness and training programmes, which reflect the long-term commitment of the industry to the environment and its neighbours.

General Note

As stated in its Environmental Policy, when addressing environmental issues RILTA adheres to the BAT (Best Available Techniques) principle.

Good Housekeeping

Plant and buildings are kept in a good state of repair. Plant and buildings are kept painted and in this respect suitable colours have been chosen to minimise visual intrusion.

RILTA uses, as standard, good practice methods and ensures that soundproofing for plant and machinery and covers to conveyors are examined and maintained.

Inspections will relate specifically to protective measures, which have been incorporated to ameliorate dust, noise, litter and visual impact.

RILTA recognise the planning permission procedure as an important regulatory requirement.

1.6 Planning and Environmental Impact Assessment

The RILTA facility is situated at Block 402, Grant's Drive, Greenogue Business Park, Rathcoole, County Dublin and is within the functional area of SDCC, and as such is subject to the planning regulations of that authority. The original Greenogue Industrial Estate was set up as a mushroom farm in 1959. In the 1970's the site was developed as an enterprise centre, with a number of small storage/workshop units. The current site is home to about 70 small to medium sized businesses, employing about 500 people.

The site was zoned for agricultural use until 1998 when the 1998 South Dublin County Development Plan changed the zoning to industrial. In the 2004-2010 South Dublin County Development Plan the land has been given a specific local zoning objective 'LZ 011-Greenogue, Newcastle', which is zoning for Office Use. It has also been given a general Zoning Objective 'E' which is an objective to provide for enterprise, employment and related uses.

Planning was granted for the development of the RILTA Integrated Waste Management Facility at Greenogue Business Park, Greenogue, Rathcoole, County Dublin under the Planning and Development Acts, 2000 to 2002 (South Dublin County Council Planning Register Reference Number : SD02A/0313 and An Bord Pleanála Reference Number: PL 06S.201534).

Under Article 93, Schedule 5, Development for the Purposes of Part 10 (Environmental Impact Statement of Regulations, 2001), Part 2, No. 13. (a) (ii) “Changes, extensions, development and testing” it is stated that an EIS is required for “Any change or extension of development which would result in an increase in size greater than 25 per cent, or an amount equal to 50 per cent of the appropriate threshold, whichever is greater”.

Therefore, although the facility has already received planning permission, an additional EIS is required as RILTA propose to increase the volume of soil to be stored and subsequently transferred off site. The volume of material accepted at the site is proposed to increase from 62,500 tonnes per annum to 111,000 tonnes per annum. This increase will comprise entirely of soil which is stored temporarily at the site for subsequent transfer to recovery/ disposal facilities and is not processed in any way at the facility.

1.7 Procedure and Structure of EIS

The consequences of any major development project are generally presented in the form of an Environmental Impact Statement. The EIS contains information on the scale and nature of the proposed development, a description of the existing environment, impact assessment of the proposed development and mitigation measures to mitigate and/or reduce the impact on the receiving environment.

The structure and content of the Environmental Impact Statement has been based on the following documents, as published by the Environmental Protection Agency.

- Advice Notes on Current Practice in the preparation of Environmental Impact Statements (2003).
- Guidelines on the information to be contained in Environmental Impact Statements. (2002).

The minimum information that must be contained in an EIS is specified in Part X of the Planning and Development Act, 2000 and Schedule 6 of the Planning and Development Regulations, 2001. The structure and content of this EIS has been based on the legislative requirements as set out in Part X of the Planning and Development Act, 2000 and Part 10 of the Planning and Development Regulations, 2001 and the

guidance documents by the Environmental Protection Agency as outlined above. The overall EIS is arranged in three volumes, as follows:

- Volume I: Non-Technical Summary;
- Volume II: Environmental Impact Statement;
- Volume III: Appendices.

Volume I: Non-Technical Summary

This document provides an overview and summary of the main EIS using non technical terminology and detail. It is a means for non-professionals to review the information included in the main EIS document. It is a stand-alone document and should offer a clear and concise summary of the existing environment, characteristics of the development and mitigation measures for the development.

Volume II: Main EIS

To allow for ease of presentation and consistency when considering the various elements of the environment, a systematic structure will be adopted for the main body of the statement. This structure is known as a “Grouped Format”. The structure is used for each particular environmental aspect, as given below.

Chapter I of the Main EIS will provide an introduction and a brief background of the project, the legislative requirements under which the document is prepared, EIS consultation and scoping the layout of the EIS, and the examination of alternatives to the development taking into account the planning context and the existing development.

Chapter II will provide a detailed description of the site and the development, methodology and the programme of the operation.

Chapter III provides details of the planning and development context of the proposed development.

Chapters IV to Chapter XIII inclusive will deal with the following: -

- Chapter IV - Human Beings/Socio-Economic
- Chapter V - Ecology
- Chapter VI - Geology
- Chapter VII - Water
- Chapter VIII - Air Quality and Climate
- Chapter IX - Noise & Vibration
- Chapter X - Traffic
- Chapter XI - Landscape and Visual Impact
- Chapter XII - Cultural Heritage & Archaeology

Chapter XIII - Interactions of the Foregoing

Each of the environmental criteria will be prepared using the following headings: -

Introduction

This section will include background to the assessment and will describe the study methodology in carrying out the assessment.

Existing Environment

In describing the receiving environment, an assessment is made of the context into which the proposed development will be located. This takes account of any other proposed and existing developments.

Significant Impacts

This section allows for a description of the specific, direct and indirect impacts, which the proposed development may have and taking into account mitigation measures. This is done with reference to Receiving Environment and Characteristics of the Development, while also referring to the magnitude, duration, consequences and significance of the development during the operational phases.

Mitigation Measures

This includes a description of any remedial or mitigation measures that are either practicable or reasonable having regard to the potential impacts.

Volume III: Appendices

All supporting documentation and references, referred to in the EIS text body (Volume II) are included in this volume.

1.8 Scoping of the EIA

As part of the EIA process, RILTA Environmental Ltd. and TOBIN Consulting Engineers corresponded with the Planning Authority of South Dublin County Council to discuss the scope of the EIS. Contact was also made with South Dublin County Council in March 2007 by TOBIN Consulting Engineers to outline the scope of the Traffic Assessment, which forms part of the EIS. A meeting to discuss the proposed change of use at the facility was held with the EPA in March 2007.

1.9 Consultation

The purpose of this section is to provide an overview of the consultation process followed to date in respect of the proposed change at the facility. In accordance with Section 4 of the Advice Notes on Current Practice in the preparation of Environmental Impact Statements (EPA, 2003), the consultation process consisted of consultation with competent bodies, statutory bodies and interested parties. The

primary objective of involving competent bodies, statutory bodies and interested parties at an early stage in the Environmental Impact Assessment process is to aid scoping of the Environmental Impact Assessment. A copy of Correspondence sent to and received from Consultees is included in Appendix 1.3.

The following Table 1.1 lists the various parties consulted to date: -

Table 1-1 List of Consultees contacted during EIA

Consultee	Date of Written Correspondence	Date & Response
South Dublin County Council – Director of Services- - Environment	2 nd March 2007	-
South Dublin County Council – Director of Services- - Planning	2 nd March 2007	-
South Dublin County Council – Director of Services-Economic Development	2 nd March 2007	-
Department of Agriculture	2 nd March 2007	12 th March 2007
The Geological Survey of Ireland	2 nd March 2007	-
Faillte Ireland	2 nd March 2007	-
Coillte Teoranta	2 nd March 2007	-
The National Roads Authority	2 nd March 2007	12 th March 2007 (acknowledgement of letter)
Irish Wildlife Trust	2 nd March 2007	-
BirdWatch Ireland	2 nd March 2007	-
The Heritage Council	2 nd March 2007	-
Eastern Regional Fisheries Board	2 nd March 2007	-
District Conservation Officer - Dublin	2 nd March 2007	-
An Taisce	2 nd March 2007	-
Teagasc	2 nd March 2007	-
Electricity Supply Board	2 nd March 2007	-
Bord Gais	2 nd March 2007	9 th March 2007 (Email)
Health and Safety Authority	2 nd March 2007	-
Environmental Protection Agency	2 nd March 2007	-
DoEHLG- Development Applications Unit	2 nd March 2007	-

1.10 Technical difficulties and availability of data

No significant technical difficulties or lack of data were experienced in preparing the Environmental Impact Statement for the development.

1.11 Alternatives

As part of the scoping process relating to this EIS, alternatives to the existing site were considered. The change in use at the facility will not necessitate any infrastructural changes to the existing buildings and no change in processing will be required. Therefore, in terms of environmental, technical and financial impacts, the current site location and facility is favourable for the increase in tonnage allowance at RILTA.

1.12 Study Team and Contributors to the EIA

This EIS has been prepared by a team of Consultants co-ordinated by TOBIN Consulting Engineers. The relevant inputs of the various members of the Study Team are listed in Table 1.2. (The EIS was completed in partnership with RILTA Environmental Ltd.). Considering that RILTA has been an established facility since 2004, over two years of data has been generated and this data has been used in the EIS.

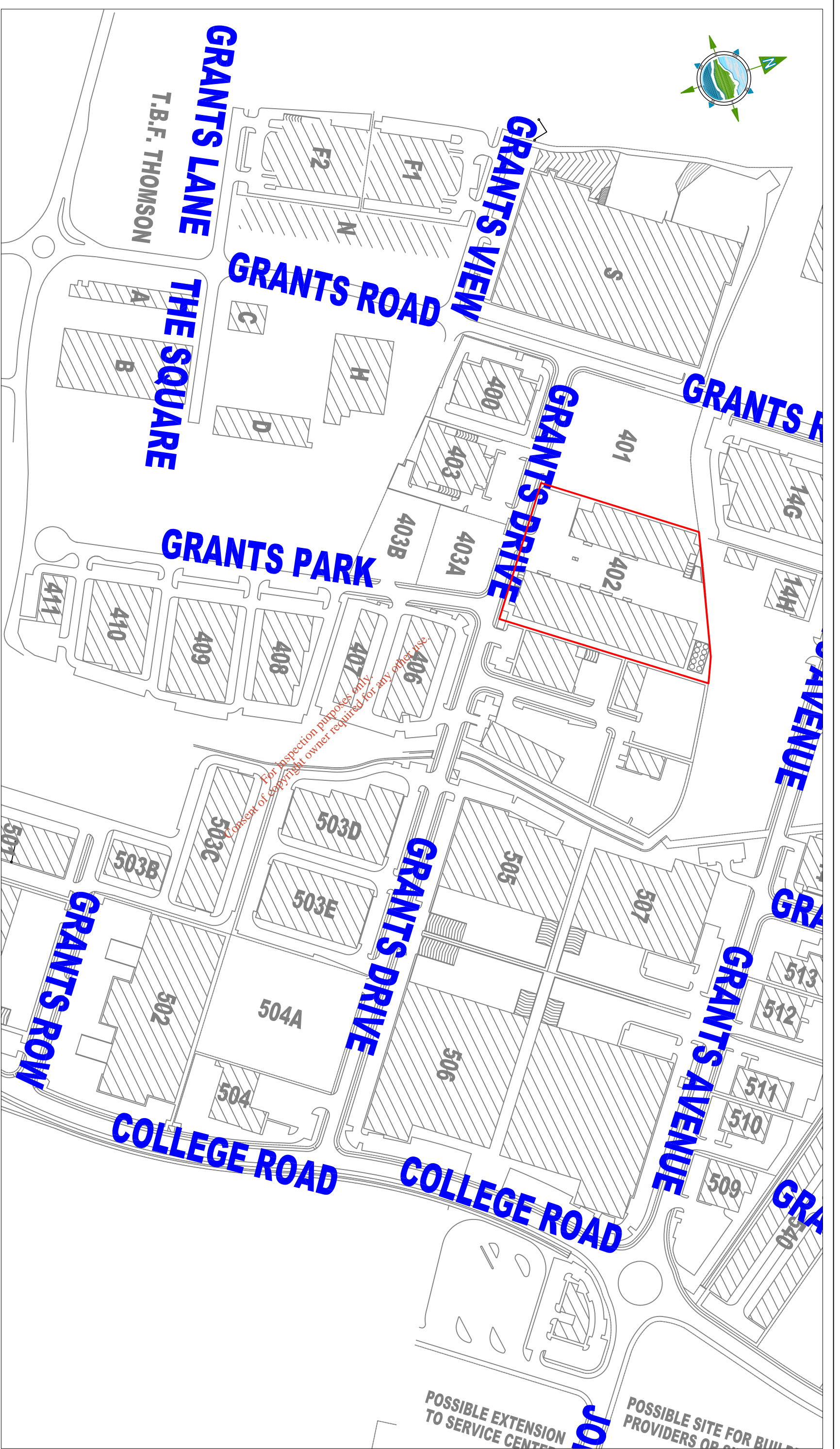
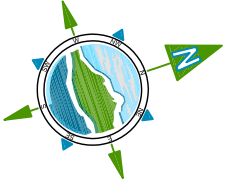
Table 1-2 List of Bodies involved in Preparation of the EIS

Team Member	Inputs
Tobin Consulting Engineers	Project Direction, Project Management, Production, Evaluation and Reporting. Introduction, Description of Development, Planning Context, Alternatives, Human Beings / Socio Economic, Flora & Fauna, Geology, Water/Hydrogeology, Climate, Dust and Noise, Traffic, Cultural Heritage & Archaeology, Landscape and Visual Assessment, Interaction of the Foregoing.
Team Member	Inputs
Odour Monitoring Ireland	Air Emission Monitoring

The Description of the Development was prepared in consultation with RILTA Environmental Ltd.

Figure 1-2 Location of Facility within Greenogue Business Park

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NOTES

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2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Issue	Date	Description	By	Chkd.
A	11-04-07	LOCATION	R.K	S.T

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Project: INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO.DUBLIN	Checked: S.TINNELLY	
Title: LOCATION WITHIN GREENOGUE BUSINESS PARK	Date: APRIL 2007	No part of this document may be reproduced or transmitted in any form or stored in any retrieval systems of any nature without the written permission of TOBIN Consulting Engineers as copyright holder except as agreed for use on the project for which the document was originally issued.
	Project Director: D. GREHAN	
	Scale @ A3: 1:2500	Drawing No.: FIGURE 1.2
		Issue: A

2 DESCRIPTION OF THE EXISTING SITE AND PROPOSED CHANGES

2.1 Characteristics of the Current Development

2.1.1 Introduction

This section of the EIS provides a detailed description of the activities currently carried out at the Integrated Waste Management Facility at Greenogue. It sets out in detail the dimensions and operational layouts of the various structures that have been built, the actual processes/treatments carried out therein, their operational characteristics and the historical tonnage throughputs.

In order to provide a full understanding of the plant and the processes in operation at this facility, the mode of operation has been presented.

2.1.2 General Description of the Facility

The current development consists of four discrete operations namely:

1. Drum Recovery Centre;
2. Hydrocarbon Waste Treatment Centre;
3. Hazardous Waste Transfer Station
4. Contaminated Soil

These four operations are each housed individually in five distinct buildings. The current development also includes additional ancillary infrastructure including site administrative building, weighbridges, reception kiosks etc. The general layout of the site is as shown on Drawing No. 3684/01/205.

2.2 Nature and Quantity of Wastes Accepted

The nature and quantities of waste handled at the facility over the period 1st January 2006 to 31st December 2006, at RILTA's facility, are included in the AER, Appendix 2.1.

Condition 1.4 of Waste Licence No: 192-1 allows RILTA to accept up to 62,500 tonnes/year of waste consisting of hazardous waste, commercial waste, construction and demolition waste, industrial sludges and industrial waste at the facility. The table included in the AER shows that the total volume of waste accepted by RILTA from January 1st 2006 to December 31st 2006 was 70,257 tonnes/year. 42,725.81 tonnes of this total is classified as Contaminated Soil. Therefore, RILTA Environmental Ltd. is currently requesting an increase in this limit to reflect an increase in the quantity of soil that is being stored and transferred from the site. It should be noted that this soil is not processed in any form while on site.

In summary, the following quantities and nature of waste will be proposed for acceptance at RILTA Environmental Ltd., as shown in Table 2.1. below.

Table 2-1 Proposed Nature and Quantities of Wastes to be Accepted

Facility	Waste Type (TPA*)				Total (TPA)
	Non Hazardous Commercial Waste	Non Hazardous Industrial Waste	Construction & Demolition Waste	Hazardous Waste	
Hydrocarbon Waste Treatment Centre	-	-	-	30,000	30,000
Drum Recovery Centre	-	-	-	7,000	7,000
Hazardous Waste Transfer Station	-	-	-	72,500	72,500
Non-Haz Small Arisings	1,000	-	-		1,500
Total (TPA)	1,500			109,500	111,000

*TPA – Tonnes Per Annum

2.3 Operation of the Facility

The following section will outline in detail the current operations for the site at Greenogue. The operations will be described separately for the 4 distinct sections of the development namely:

1. Drum Recovery Centre;
2. Hydrocarbon Waste Treatment Centre;
3. Hazardous Waste Transfer Station
4. Contaminated Soil

2.3.1 Drum Recovery Centre

The Drum Recovery Centre is operated by RILTA and entails a drum and industrial packaging reconditioning and recycling facility.

The following drawings and figures should be consulted:

Drawing No. 3684/01/205	Site Layout Plan
Drawing No. 3684/01/206	Drum Recovery Centre Floor Plan
Drawing No. 3684/01/207	Drum Recovery Centre Sections & Details
Drawing No. 3684/01/208	Drum Recovery Centre Elevations
Figure 2.1	Drum Recovery Process Flow Schematic
Figure 2.2	Intermediate Bulk Container Recovery Process Flow Schematic

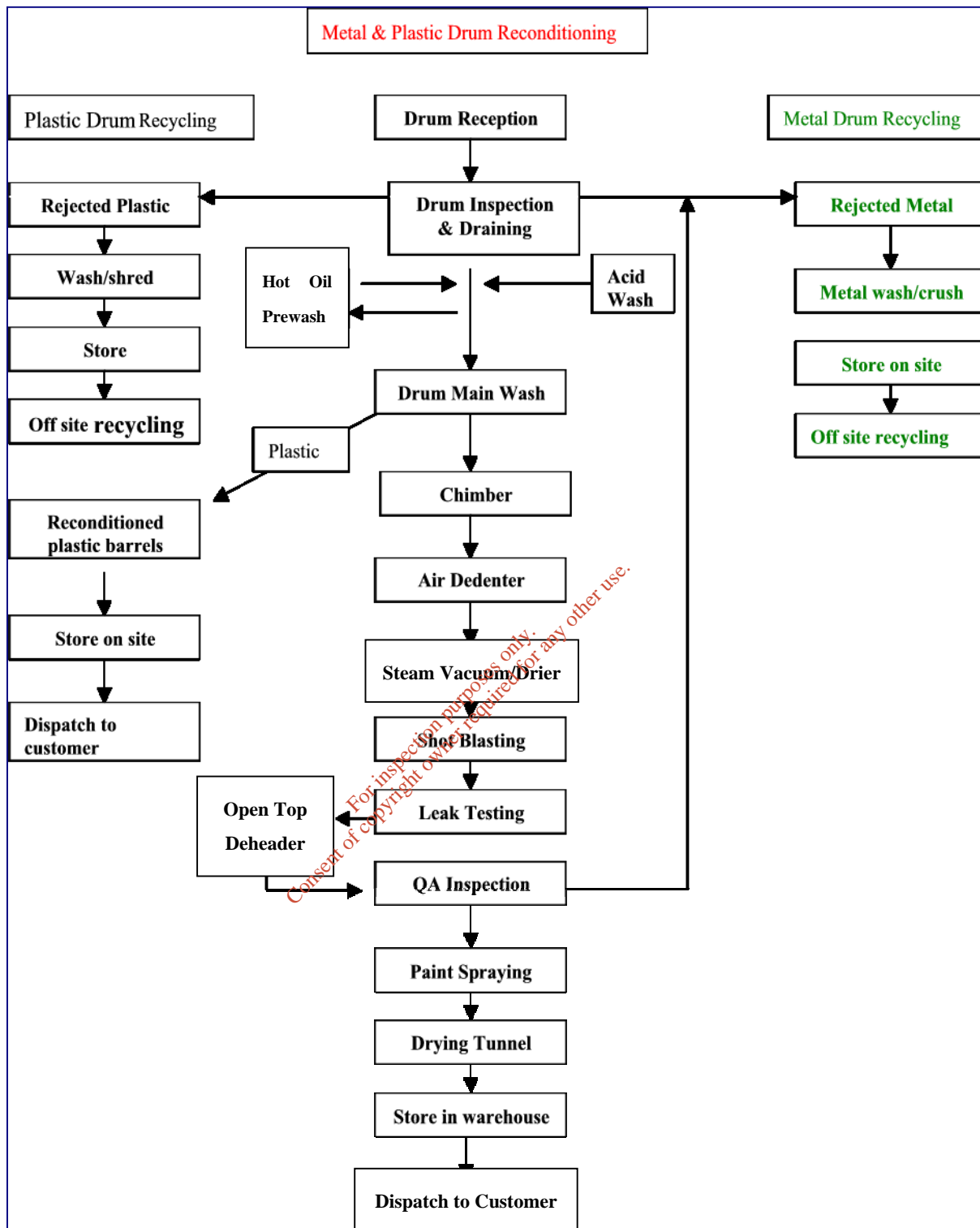


Figure 2-1 Drum Recovery Process Flow Schematic

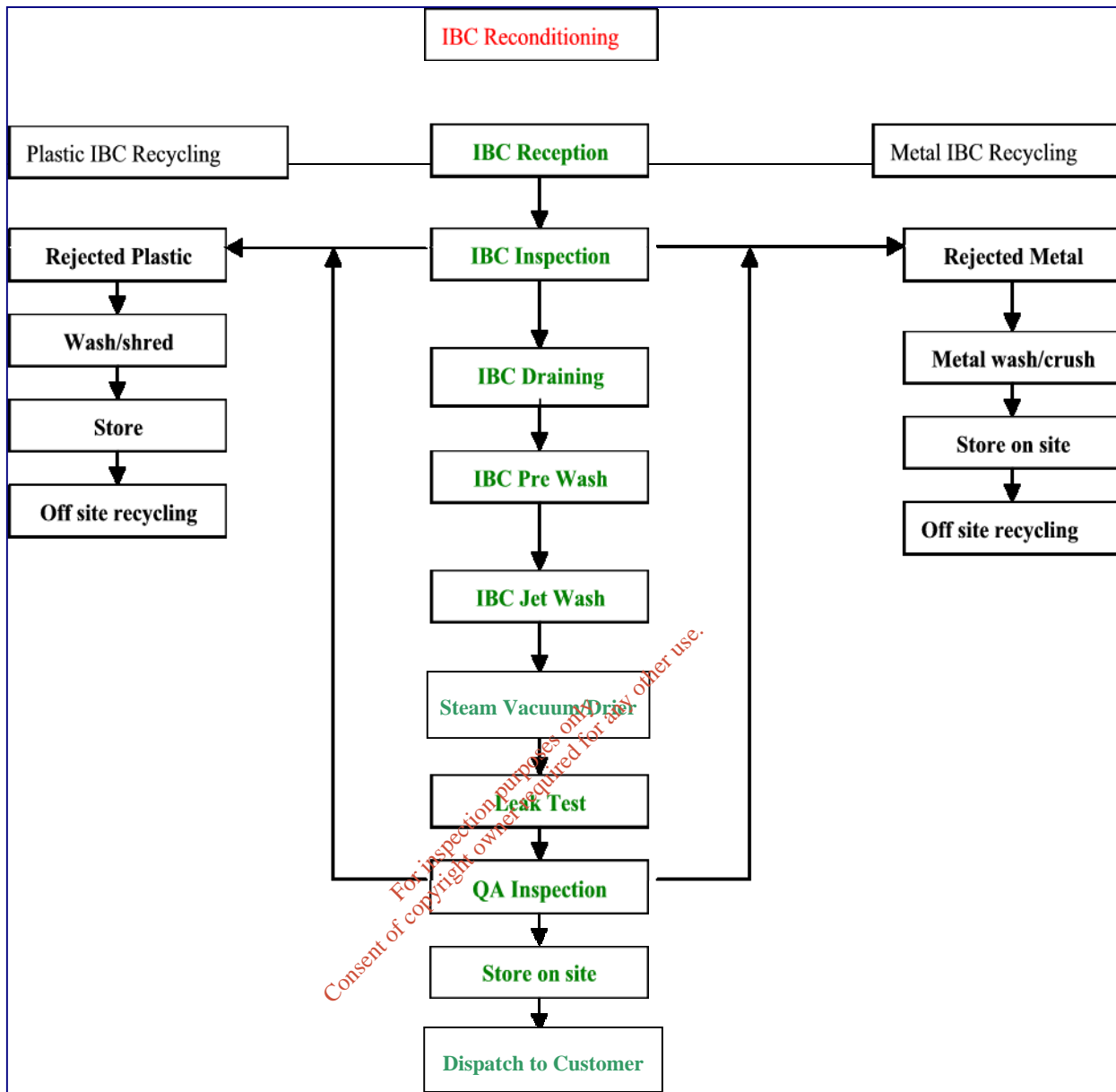


Figure 2-2 Intermediate Bulk Container Recovery Process Flow Schematic

As shown on Drawing No. 3684/01/205 the Drum Recovery Centre is located to the south of and adjacent to the Hydrocarbon Waste Treatment Centre within the site.

At present, the range of nominally empty industrial packaging to be reconditioned or recycled includes steel drums, plastic drums and intermediate bulk containers (IBCs). Approximately 1,500+ steel drums are reconditioned for reuse each week. A further 1,000+ of steel drums per week are washed, crushed and sent to an authorised metal reprocessor for further recovery. An additional 1,000+ of plastic drums per week are

washed and shredded with the plastics sent for further disposal or recovery. Approximately 500+ IBCs are reconditioned for reuse each week.

RILTA also buy and sell new steel and plastics drums, IBCs and specialist packaging. This enterprise is operated through the Drum Recovery Centre.

Reconditioning involves collecting nominally empty used drums and IBCs from customers and transporting them to the site. RILTA requires that all containers are as empty as possible before they leave the customers site. Upon arrival at the Drum Recovery Centre, all drums/IBCs are drained and any residues (usually oil) are emptied into storage tanks prior to off site disposal/recycling.

As shown on Figure 2.1 and on Drawing No. 3684/01/206 steel drums are passed through a prewash and then a main drum-washing unit. Each drum is washed an average of 14 times using caustic soda and hot water solution and rinse water. After the washer, the top and bottom of the drums are reformed using a chimber and the edges sealed. An air dedenter then blows the dents out of the drums. A steam vacuum and a hot air dryer is used to dry the drums and remove any old labels. External paint is removed from the drums by shot blasting. Following shot blasting the drums are QA tested for leaks, inspected internally, graded and painted in a automatic spray booth. Finally, the drums pass through a drying/cooling tunnel to dry the paint. The drums are then labelled including the date and stored, awaiting dispatch to the customer.

An IBC reconditioning line has also been installed at the site, which washes and reconditions used IBCs as shown in Figure 2.2. This process comprises draining, pre-wash, main internal and external wash, vacuum drying, leak testing and QA inspection, before storage and dispatch.

Steel drums and plastic barrels, which are not suitable for reconditioning, are passed through the recycling line. This automated system involves the washing and crushing of the metal containers prior to off site recycling. The plastic drums are also washed and then shredded and fed into a skip prior to dispatch off-site to an approved plastics recovery/disposal facility.

As part of the reconditioning/recycling process, the Drum Recovery Centre generates drum residues and drum washing effluent. Waste liquids are stored in an on-site bulk bunded holding tank. When the tank is full, it is emptied by waste disposal contractors and taken off site for recycling or disposal. Waste solvents and/or solids/sludges are decanted into steel drums and returned to suppliers or stored in a bunded area awaiting disposal by waste contractors.

Waste shotblast and dry paint powder from drum shotblasting and spray painting

operations are also generated. The waste is currently stored on-site in steel drums, prior to dispatch to a licensed facility.

2.3.2 Hydrocarbon Waste Treatment Centre

The principal process carried out at the facility is the treatment/recovery of hydrocarbon contaminated wastes. The Hydrocarbon Waste Treatment Centre is designed to handle waste hydrocarbon sludges. These wastes comprise oil/water mixtures with a range of contaminants present in smaller quantities depending on the origin of the waste. The facility handles waste from sources such as the bilge tanks of ships, petrol stations and from oil spills. Waste is delivered to the site primarily by tanker but also in oil drums and IBCs.

For the facility the majority of incoming hydrocarbon waste is transported to the facility by road tanker, the remainder in 1,000 litre IBCs and 200 litre metal or plastic drums. All incoming wastes, which do not come from traditional established sources, are sampled and examined in the on-site laboratory. This includes new waste streams, once off consignments and any waste consigned to the facility by third parties. This analysis, together with the supplier's documentation, gives the company a clear knowledge of the make-up of all incoming shipments. Once a waste load has been accepted and enters the process stream its treatment can be sub-divided into four distinct stages; Primary Settlement, Sludge Processing Water Treatment and Oil Recovery. (These reference names will be used through-out this document). Each stage is described below.

The following drawings and figures should be consulted:

Drawing No. 3684/01/205	Site Layout Plan
Drawing No. 3684/01/209	Hydrocarbon Waste Treatment Centre Floor Plan
Drawing No. 3684/01/210	Hydrocarbon Waste Treatment Centre Sections & Details
Drawing No. 3684/01/211	Hydrocarbon Waste Treatment Centre Elevations
Drawing No. 3684/01/212	Hydrocarbon Waste Treatment Centre Primary Settlement Tank Details and Flocculation Tank Details

A. Primary Settlement

This section should be read in conjunction with the process flow diagram Figure No. 2.2 and the internal floor plan of the building as shown on Drawing No. 3684/01/209. The first stage in the treatment process consists of three parallel primary settlement tanks protected by a pair of coarse bar screens with a 20mm aperture. These screens remove large solid objects from the liquid thus providing protection for pumps etc. The primary settlement tanks shown on Drawing No. 3684/01/212 are operated on a batch process such that while one tank is being filled, the other two tanks are allowed to settle.

In the settlement tanks the waste stream divides into three separate components namely; sludge and suspended solids settle to the bottom of the tanks, water forms the middle layer and the oil floats to the top.

B. Sludge Processing

High Pressure Water moves the sludge towards a collection sump, from where it is pumped to the sludge processing unit which centrifuge and dewater the sludge thereby significantly reducing the quantity of residue sent to disposal off site.

Water from the primary settlement tanks flows to a forward feed pumping chamber, which serves the settlement tanks. Three penstock valves control the movement of water from the settlement tanks to the pumping chamber.

Oil is removed from the settlement tanks by the use of an oil vacuum pump and tank.

C. Water Treatment

The water removed from the primary settlement tanks is pumped to one of six flocculation tanks (Shown on Drawing No. 3684/01/210). As with the settlement tanks the flocculation tanks operate on a batch basis.

Each batch is injected with polyelectrolyte and ferric aluminium sulphate, which are the flocculants and which allow for the removal of small suspended solids from the water. The polyelectrolyte solution is made up on site by the addition of 1kg of grade A24 to 1,000 litres of water. This solution is stored in 1 of 2 No. 2,000 litre mixing tanks. The ferric aluminium sulphate solution, which contains less than 2% free sulphur and is slightly acidic, is delivered to site in 2,000 litre quantities. Material Safety Data Sheets for all chemicals used on site is stored in the office building.

As shown on Drawing No. 3684/01/212 each flocculation tank is fitted with a large stirring unit to ensure solid mixing and is fitted with an automatic pH monitoring system. The pH of each tank is monitored from the control panel. Sodium hydroxide is introduced into the tanks to ensure the optimum pH for floc formation. The pH is

kept between 6 and 10 to protect the piping system. The sodium hydroxide (30% solution) is delivered to the site in 2,000 litre quantities, and stored in 2 No. 2,000 litre mixing tanks.

All sludge collected in the flocculation tanks is returned to the primary settlement tanks, from where it is co-processed with the primary sludge.

The clarified effluent leaving the flocculation tanks passes through a flowmeter which allows the operations manager to monitor effluent discharge flow rate and total throughput on the control panel.

The wastewater is discharged to the main sewer under the terms of the waste licence.

D. Oil Treatment

The oil conditioning process area is shown on Drawing No. 3684/01/212. The oil skimmed from the top of the primary settlement tank is pumped through a fine screen to the oil cleaning process. The primary recovered oil is stored in either one of two 60m³ tanks, which are fitted with steam pipes that heat the oil for the cleaning process. One gas-oil boiler supplies the steam. The oil is re-filtered by passing it through a fine mesh screen; the warm oil passes easily through the filter and any particles greater than 25° microns are retained. The oil is then stored in one of the three clean storage tanks prior to collection. Analyses for solids, water contents and solvents are carried out by the oil company. The final product typically is composed of 85% Light Fuel Oil and 15% Gas Oil.

The recovered oil from the hydrocarbon waste treatment process is removed from the site for further treatment at an authorised facility.

In a situation where Rilta are requested to deal with a waste with characteristics which make it unsuitable for treatment at the facility, such a substance may be accepted onto the site for short term storage prior to consignment to an appropriately licensed facility. The period of storage is dependent on arrangement of consignment to an appropriate operator and may involve the preparation of documentation pertaining to the Trans-Frontier Shipment of waste (TFS forms). Such wastes are temporarily stored in the waste quarantine area as marked on Drawing No. 3684/01/212.

2.3.3 Hazardous Waste Transfer Station

The Hazardous Waste Transfer Station is also operated by RILTA Environmental Ltd. (IRL) and allows for the bulking up and transfer of hazardous waste for recovery/disposal generally to facilities in Europe.

The following drawings should be consulted:

Drawing No. 3684/01/205	Site Layout
Drawing No. 3684/01/213	Hazardous Waste Transfer Station Floor Plan
Drawing No. 3684/01/214	Hazardous Waste Transfer Station Sections & Details
Drawing No. 3684/01/215	Hazardous Waste Transfer Station Elevations

As shown on Drawing No. 3684/01/205 the Hazardous Waste Transfer Station is located to the west of and opposite to the Hydrocarbon Waste Treatment and Drum Recovery Centres in the site.

As shown on Drawing No. 3684/01/213 this specifically designed warehouse is sub divided into two main storage areas for the storage of flammable/non-flammable waste. There is also a Decant Unit in this facility in which waste is blended, mixed and/or bulked into larger containers.

The overall operation is serviced by a number of RILTA vehicles that collect waste from various sources including industrial, commercial, contractors and local authority sources. The waste is then held in storage until an economically viable load is generated for onward transportation.

On-site there are a number of distinct processes, which take place, namely:

1. Repackaging of Hazardous Solid Wastes; and
2. Mixing/Blending of Drums/IBCs.

Each of these processes will be outlined in the following sections.

(1) Repackaging of Hazardous Solid Wastes

This process relates specifically to small hazardous solid wastes such as fluorescent tubes, paint tins, batteries, laboratory smalls etc. On arrival to the site these loads are directed to the appropriate storage area of the Hazardous Waste Transfer Station where each container is labelled. Subsequently individual waste types are brought to the Decant Unit where the wastes are repackaged into UN approved open lid containers. These containers are labelled and returned to the storage racks prior to transfer when an economical load is available.

(2) Mixing/Blending of Drums/IBCs

This process relates specifically to hazardous wastes contained in drums/IBCs. On arrival to the site these loads are directed to the appropriate racked storage area of the

Hazardous Waste Transfer Station where each drum/IBC is labelled. When a number of potentially compatible drums/IBCs are available these containers are carried by forklift to the Decant Unit where a composite sample from each container is taken. A compatibility test of the proposed mix/blend is then carried out in the on site laboratory which is located in the Hazardous Waste Transfer Station. If compatibility is determined then the wastes from the containers are mixed/blended, under the direction of the laboratory technician, into a new drum. The new drum is then labelled and returned to the storage racks prior to transfer when an economical load is available. The old empty drums are sent to the Drum Recovery Centre for reconditioning/recycling.

2.3.4 Contaminated Soil

RILTA Environmental Ltd. currently accept contaminated soil at its facility at Greenogue Business Park. The contaminated soil bay is included in Hazardous Waste Transfer Station, as shown in Drawing 3684/01/205 and Drawing 3684/01/213.

This is, quite simply, a bulking-up process where waste is transported to the facility almost exclusively in articulated tipper trucks. However, small amounts are transported in suitable drums and fibrous intermediate bulk containers (FIBCs). Waste on arrival to the facility is directed to the tipping floor. This is a bunded reinforced concrete area, which has been previously tested and certified as leak proof. Waste is inspected on arrival to ensure its suitability for storage.

Waste is stacked using an earth-moving machine on tracks. This allows for storage of up to 5,000 tonnes of waste at any one time. When enough waste has accumulated for export (~1,500 – 3,000 tonnes) and a Trans-frontier Shipment notification is in place, waste is re-loaded onto tipper trucks and transported to port where the waste is tipped on to a specialised bulk storage tray on a ship.

Although the original planning drawings describe a proposed drainage system within this area, the drains were not constructed during the building of the facility. Due to the 'made ground' nature of most of the contaminated soil product, very little leachate is produced while it is being stored on site, therefore the soil storage building does not include a drainage system. Any leachate which is produced will be disposed of in the on-site waste water treatment plant, using the waste vacuum tankers for facilitating transfer to the waste water treatment plant.

2.4 General Operations

It is the aim of RILTA Environmental Ltd to employ Best Available Technology (BAT) in all aspects of the management of the site.

2.4.1 Acceptance of waste streams and process operations

All waste upon arrival at site is weighed in and relevant information regarding content/ source/ weight etc., is logged by the materials handling supervisor on site in the weighbridge office. Depending on content the waste is then transferred to one of four separate buildings on site namely:

1. Drum Recovery Centre;
2. Hydrocarbon Waste Treatment Centre;
3. Hazardous Waste Transfer Station inc. Asbestos
4. Contaminated Soil

The operational details of each of these separate facilities are described in detail in Section 2.3 of this document.

2.4.2 Hours of Operation

The Integrated Waste Management Facility operates between the hours of 07:30 and 18:00 Monday to Friday and 07:30 and 14:00 hours on Saturdays. The facility shall remain closed on Sundays, Bank Holidays and Public Holidays. The facilities operate outside these hours only when they are required to cater for the later arrival of waste haulage vehicles due to breakdown or other circumstances. Maintenance may be carried out outside operating hours.

2.4.3 Raw Materials and Energy

The quantities given in Table 2-2, are the current quantities for the Integrated Waste Management Facility. For the laboratory analyses, currently on site, very small limited amounts of chemicals are used. Residues of these chemicals are separated for subsequent transfer through the Hazardous Waste Transfer Station to an appropriate recovery/disposal facility.

Table 2-2 Raw Materials and Energy Usage

Material/Resource	Annual Usage per Annum	Amount Stored On-Site
Hydraulic Oil	3,000 litres	500 litres
Electricity	400,000 kWh per annum	Not stored
Diesel	200,000 litres	10,000
Water	6,000m ³	15.7m ³

Paint	25,000 litres	5,000 litres
Shot	3,500 kg	1,000 kg
Caustic	1,750 kg	500 kg
Kerosene	12,500 litres	5,000 litres
Salt for boiler water	400 kg	150 kg
Gas	800,000KwH	Not Stored
Zetag Polymer (Conc.)	15,000 litres	2,000 litres
Ferrous Acid	5,000 litres	2,000 litres
Caustic (Aqueous)	5,000 litres	2,000 litres

2.4.4 Mobile Plant

The mobile plant and machinery used on site consists of:

- 1 No. Front-end loaders;
- 1 No. 360 Degree, front hoe excavators with grab arm; and
- 5 No. Forklifts.

2.4.5 Staffing Levels

RILTA employs up to 65 personnel, full time at the current integrated waste management facility. Staffing numbers include operations managers, general managers, accountant, yard managers, maintenance engineer, vehicle drivers, general operatives and office staff.

2.4.6 Site Drainage and Waste Water Management

The site drainage network is illustrated on Drawing No. 3684/01/222. The main types of wastewater generated by the facility are:

1. Domestic wastewater from the site accommodation, generated by the 65 people employed at the facility (toilets, showers, sinks, etc.);
2. Internal Run-off from the site buildings;
3. Runoff from the truck wash-bay.
4. Clarified effluent from the Hydrocarbon Treatment Centre; and

5. Fire water from potential fire fighting activities.

The composition of this runoff and wash water typically has a significant level of ammoniacal nitrogen and suspended solids, as well as Biochemical and Chemical Oxygen Demand (BOD/COD). The total hydraulic loading volume entering the foul sewer is in the order of 140 m³/day. The total BOD₅ loading, is in the order of 55 kg/day. The calculated mean Organic Loading BOD₅ is in the order of 735 mg/l. (Ref.: 2006 AER).

Table 2-3 Foul Water Loading

Foul Water Sources	Typical Hydraulic Loading Volume (m ³ /day)	Typical Organic Loading BOD ₅ (mg/l)	Total BOD ₅ Loading (kg/day)
1. Site Accommodation	7.74 ¹	300	2.322
2. Internal Runoff - Cleansing, Tipping Floors, Residue Bins	1.50	70	0.105
3. Clarified effluent from the Hydrocarbon Waste Treatment Centre	110	700	77
4. Vehicle Wash	1.50	70	0.105
Total	120.74		79.53

1. This value assumes a hydraulic loading of 0.18 m³/person/day with 43 operatives on site. This value represents the hydraulic loading for a domestic residence and therefore a worst-case scenario (working day is 10hr). This value should adequately cover usage of the on-site sanitation system by site operatives.

2.4.6.1 Site Accommodation

All domestic wastewater is collected in the effluent sewer which is connected to the main sewer which services the Greenogue Industrial Site. The connection to the sewer is at the location indicated in Drawing No. 3684/01/222.

The foul water hydraulic and organic loadings arising from the Facility are presented in Table 2.3 above.

2.4.6.2 *Internal Runoff*

Inside all of the facility buildings surface runoff from tipping floors and storage areas, waste water from cleaning activities and fire water from fire fighting activities is collected by the effluent collection sewers and gullies. These effluent collection sewers direct the effluent to a collection sump in each building from which it discharges to the main sewer. The individual foul water collection sumps in each building are provided with cut-off valves to allow for the separate containment of any spillage within each of the buildings.

2.4.6.3 *Clarified Effluent from the Hydrocarbon Waste Treatment Centre*

The most significant foul water to be generated at the site is the clarified effluent generated as part of the Hydrocarbon Waste Treatment Process. The handling of this effluent is as outlined in Section 2.3.2 herein. This effluent is sampled prior to discharge to sewer and is discharged in accordance with the conditions of the waste licence as issued by the EPA.

2.4.6.4 *Vehicle Wash*

Washwater from the vehicle wash pass through an oil interceptor prior to discharge to the main sewer.

2.4.7 *Surface water*

The main types of surface water generated at the facility:

Surface runoff from all external concrete hardstand areas. The composition of this runoff is generally the same as surface water runoff from roads.

Stormwater from the roofs of the facility buildings.

Surface water run-off is managed within the facility. The surface water is discharged to the river at the northern boundary of the site. As outlined on Drawing No. 3684/01/205 and 222 a Grit Trap, Oil Interceptor and Water Attenuation Tank is provided on-site.

The discharge point to the river, SD1, is shown on Drawing No. 3684/01/205.

The Water Attenuation Tank for the site has a retention capacity of 600,000 litres, allowing for an attenuation rate of 6 litres/second/hectare (l/s/ha.) from the facility.

The water attenuation tank is fitted with a cut-off valve which may be operated both manually and remotely. This allows for the retention of all surface water on site in the unlikely event of an accidental spillage on site. In the event of such a spillage all contaminated surface water will firstly be diverted to the fire retention tank on site. If the capacity of the fire retention tank proves insufficient for the spill the capacity of the attenuation tank can then be used. This procedure ensures that any water that is in the attenuation tank will not be mixed with contaminated water and unnecessarily increase the volume of water that has to be discharged to the foul sewer. The same procedure applies to any fire-water used for fire-fighting in the unlikely event of a fire on-site.

2.5 Site Layout and Infrastructure

2.5.1 General Site Layout

The current development consists of four discrete operations namely:

Drum Recovery Centre;
Hydrocarbon Waste Treatment Centre;
Hazardous Waste Transfer Station inc. Asbestos
Contaminated Soil.

These four operations are each housed individually in five distinct buildings. The site infrastructure constructed at the site also includes a weighbridge, site security arrangements, bunded waste inspection and quarantine areas, bunded fuel storage, site accommodation, site roads, surface and foul water drainage, storm water attenuation tanks, firewater retention tanks, car and truck parking areas. The general layout of the site is as shown on Drawing No. 3684/01/205.

The overall site is divided into an area comprising the Drum Recovery Centre, Hydrocarbon Waste Treatment Centre, Hazardous Waste Transfer Station and Contaminated Soil Bay operated by RILTA Environmental Ltd. as shown on Drawing No. 3684/01/205 as follows:

In designing this layout, the following criteria have been used.

- Containment of each facility in order to prevent pollution to either soil or water;
- All operations take place within fully enclosed buildings. This mitigates potential noise, odour and dust impacts;
- The separate control of foul and surface waters on site;
- Sufficient road areas within the site to accommodate queuing and the free flow

- of vehicles on site
- Provide for on site administration facilities for site staff; and
- Sufficient room for landscaping of the site.

2.5.2 Security and Entry Control Facilities

The following facilities for security and entry control are provided at the Integrated Waste Management Facility:

The site, as marked on Drawing No. 3684/01/205 is surrounded to the south, west and north by a galvanised steel railing fence set into a parapet block wall. The eastern boundary of the site is surrounded by palisade fence in keeping with the scheme of the industrial estate. Details of both fence types, are shown on Drawing No. 3684/01/226. The entrance gates, located as shown on Drawing No. 3684/01/205 are also of galvanised railing type contraction, as detailed on Drawing No. 3684/01/226.

During operating hours the site entrance is supervised by the weighbridge operators and site operatives. Outside operating hours the main gates are locked and buildings are alarmed.

At the entrance, an information and identification board is erected, displaying the following information:

- Name and type of the facility;
- Name of the owner and/or operator;
- Licence information;
- Types of waste accepted and not accepted;
- Operating times;
- Contact and emergency telephone numbers; and
- Authority responsible for the operating permit and control of the site.

2.5.3 Layout of Buildings

The site layout is shown on Drawing No. 3684/01/205. As illustrated the site is divided into a number of buildings. The following sections will outline the various structures constructed on-site.

The facility comprises the Drum Recovery Centre, Hydrocarbon Waste Treatment Centre, Hazardous Waste Transfer Station and Contaminated Soil Bay.

Drum Recovery Centre

The location of the Drum Recovery Centre is as shown on Drawing No. 3684/01/205. Floor Plans for this building are provided on Drawing No. 3684/01/206. Sections and

elevations for this building are as illustrated on Drawing No. 3684/01/207 and Drawing No. 3684/01/208 respectively.

As illustrated on these drawings the Drum Recovery Centre comprises 1,858m² of gross floor area and is approximately 30m wide by 62m long. The building is 10.7m above ground level.

The principal internal elements within this building are as follows

- Drum reception area;
- Drum reconditioning line;
- Drum recycling line;
- IBC reconditioning line;
- Separately bunded waste quarantine and inspection area;
- Maintenance shed/area;
- Site accommodation consisting of:
 - Office;
 - Control Room;
 - Toilets/Shower/Changing Rooms;
 - Canteen.
- New and reconditioned drum storage area.

The building is fully enclosed with electronically operated roller shutter doors, which are opened only as required to allow for the delivery of drums or raw material or the collection of the reconditioned drums. A proprietary cladding design is used to provide a fully sealed environment for the Hydrocarbon Waste Treatment Centre. The roof consists of a plasticol coated composite panel with insulation and white soffit on multibeam purline or similar on a steel portal frame. The sides of the building consist of a plasticol coated pressed metal composite insulated cladding.

The construction details for the Drum Recovery Centre are illustrated on Drawing No. 3684/01/207. The building is independently bunded from the rest of the site with the foul water collected in a sump. The internal floors have 1/60 gradients and drain into internal collection drains which direct any foul water to a collection sump located in the building. It should be noted however that only foul water due to the washing of the floor is generated in this building. This water is directed into the foul water sewer. A cut-off valve is provided at the outlet from the sump to the sewer, which can be either remotely or manually activated in the event of any accidental spillages in the building, thereby preventing any discharge above emission limit values.

The current operations for this building have been described previously in Section 2.3 herein.

Hydrocarbon Waste Treatment Centre

The location of the Hydrocarbon Waste Treatment Centre is as shown on Drawing No. 3684/01/205. Floor Plans for the Hydrocarbon Waste Treatment Centre are provided on Drawing No. 3684/01/209. Sections and elevations for this building are as illustrated on Drawing No. 3684/01/210 and 3684/01/211 respectively.

As illustrated on these drawings the Hydrocarbon Waste Treatment Centre consists of 1,858m² of gross floor area and is approximately 30m wide by 62m long. The building is 10.7m above ground level.

The principal internal elements within this building are as follows

- Waste reception area;
- Primary settlement tanks (3No.);
- Separately bunded area for the recovered oil storage tanks;
- Separately bunded waste quarantine and inspection area;
- Separately bunded area for dosing tanks;
- Chemicals storage room;
- Boiler room; and
- Site accommodation consisting of:
 - Office;
 - Control Room;
 - Toilets/Shower/Changing Rooms
 - Canteen.

The building is fully enclosed with electronically operated roller shutter doors. These doors will be opened only as required to allow for the delivery of waste or raw material or the collection of the filter press sludge or the recovered oil. A proprietary cladding design is used to provide a fully sealed environment for the Hydrocarbon Waste Treatment Centre. The roof will consist of a plasticol coated composite panel with insulation and white soffit on multibeam purline or similar on a steel portal frame. The sides of the building will consist of a plasticol coated pressed metal composite insulated cladding.

As illustrated on Drawing No. 3684/01/210 the building is independently bunded from the rest of the site. As detailed on Drawing No. 3684/01/210 this bunding arrangement consists of a 200mm reinforced concrete hardstanding floor and a 300mm high, 200mm thick reinforced concrete kerb wall which was cast on-site.

The internal floors have 1/60 gradients and drain into internal collection drains which direct any foul water to a collection sump located in the building. It should be noted, however that only foul water due to the washing of the floor is generated in this building. Again this water will be directed into the foul water sewer. All foul sewer

drainage directed into main settlement tanks for further treatment.

The current operations for this building have been described previously in Section 2.3 herein.

Hazardous Waste Transfer Station

The specially designed warehouse is subdivided into two main storage areas for the storage of hazardous waste. The location of the Hazardous Waste Transfer Station is as shown on Drawing No. 3684/01/205. Floor Plans for the Hazardous Waste Transfer Station are provided on Drawing No. 3684/01/213. Sections and elevations of this building are as illustrated on Drawing No. 3684/01/214 and Drawing No. 3684/01/215 respectively.

As illustrated on these drawings the Hazardous Waste Transfer Station is a warehouse type structure with a gross floor area of 1859m² and is approximately 71.5m long by 26m wide. The building is 10.7m above ground level.

The principal internal elements within this building are as follows

- 2 No. waste reception areas hazardous wastes;
- 2 No separately banded waste inspection and quarantine areas for hazardous wastes;
- 2 No storage areas for hazardous wastes;
- Decant unit;
- Site accommodation consisting of:
 - Office;
 - Control Room;
 - Toilets/Shower/Changing Rooms
 - Canteen and
- External sumped containers for the storage of hazardous waste.

The contaminated soil storage area is contained within this building. The building is fully enclosed with electronically operated roller shutter doors. Again these doors are opened only as required to allow for the delivery of waste or raw material or the collection of hazardous waste for transfer to off-site waste recovery/disposal facilities.

The construction details for this building are as outlined for the Hydrocarbon Waste Treatment Centre herein and are illustrated on Drawing No. 3684/01/214. Again the building is independently banded from the rest of the site.

Although the original planning drawings describe a proposed drainage system within this area, the drains were not constructed during the building of the facility. Due to the 'made ground' nature of most of the contaminated soil product, very little leachate

is produced while being stored on site. Any leachate which is produced will be disposed of in the on-site waste water treatment plant, using the waste vacuum tankers for transport.

The current operations for this building have been described previously in Section 2.3 herein.

2.5.4 Weighbridge

A weighbridge is provided at the site at the location outlined on Drawing No. 3684/01/205. Details of the weighbridge at the site are presented on Drawing No. 3684/01/225. The weighbridge is capable of weighing vehicles with a gross weight of up to 60 tonnes and is linked to staff in reception located as shown on Drawing No. 3684/01/205, where proprietary customised software allows for the recording of details of each waste movement to the site including the following:

- haulier name;
- vehicle registration;
- waste source;
- waste type (EWC Code);
- laden weight ;
- empty weight;
- tare weight; and
- area of deposition on-site.

Surface water entering the weighbridge is passed through the storm water drainage system including grit trap and oil interceptor and water attenuation tanks before being discharged to the river at the northern boundary of the site.

2.5.5 Waste Quarantine/Inspection Areas

As outlined above there are a number of individually bunded waste inspection and quarantine areas in each of the buildings on-site. The locations of each of the quarantine/inspection areas are shown on the floor plans for the various buildings. Construction details for these bunds are provided on Drawing Nos. 3684/01/207 and 3684/01/210.

2.5.6 Laboratory facilities

One laboratory is provided within the site accommodation building. In the laboratory, analyses that are required as part of the day-to-day running of the Integrated Waste Management Facility, particularly to determine the compatibility of various waste streams are carried out. Compliance monitoring is also carried out at the laboratory.

Additional detailed analyses when required, which require dedicated analysing equipment is carried out by certified external laboratories.

2.5.7 Fuel storage areas

Fuel storage is provided for the diesel fuel utilised on site for the following mobile plant and equipment:

- Front-end loader;
- Forklifts;
- 360 Degree, front hoe excavators with grab arm.

The fuel storage is located adjacent to the Drum Recovery Centre as shown on Drawing No. 3684/01/205. This bunded area consists of 2 No. 10,000 litre (10m³) tanks located in a bund with a total capacity of 15m³. The bund is of concrete structure designed in accordance with BS 8007. Rain-water removed from the bund is pumped to the primary settlement tanks in the Hydrocarbon Waste Treatment Centre for treatment.

2.5.8 Plant sheds, garages

A maintenance area is provided at the site within the curtilage of the Hydrocarbon Waste Treatment Centre as shown on Drawing No. 3684/01/206. This maintenance area is retrofitted with secure storage areas to accommodate power tools, other small plant and equipment. A secure storage area is also provided outside of this building for the secure night-time storage of the oxy-acetylene tanks used in welding. A spill pallet provides bunded storage for the hydraulic oil in the maintenance building.

2.5.9 Site accommodation

In addition to the separate site accommodation units provided in each of the buildings on site a separate administration building is also provided on site as shown on Drawing No. 3684/01/205.

The site administration building provides primarily for the administration of the RILTA Environmental operations, which are located at the Greenogue site. The building includes the following elements, namely:

- General Managers office;
- Accountants office;
- Yard Managers office;
- 4 No. offices;
- Archive/Store room;
- Conference/meeting room;

- Canteen;
- Ladies, gents and disabled persons toilet facilities;
- Changing rooms;
- Laboratory; and
- Store.

The store provides for safety equipment used on site and also in the long term acts as an archive for documentation relating to the Waste Licence which is retained on-site.

2.5.10 Lighting

The lighting provided at the site is designed as appropriate for operational and security purposes. The administrative building, weighbridge and the waste tipping areas of the facility in particular are provided with lighting poles and lights mounted in each building. These lights are operational during gloomy parts of the working day and during the winter months. An element of security lighting is maintained throughout the night. Light spillage was minimised both through judicious selection of lighting specification and its subsequent positioning.

2.5.11 Traffic control

All waste vehicles entering the site are directed to the weighbridge located as shown on Drawing No. 3684/01/205. The weighbridge operator stationed in the operations office adjacent to the incoming weighbridge, records the weight, source, type, etc. of waste and instructions are given as to where to proceed with the waste.

Adequate site signage is positioned strategically on the site to direct users to the appropriate reception area in each of the separate buildings.

Access to the weighbridge and unloading areas is carried out in a queued formation, controlled by site operatives.

The traffic routing around the site also ensures that persons visiting the administration office, for instance for deliveries, are kept away from the working areas of the facility and from any heavy vehicles using the site. Also the site entrance is used for access to staff/ visitor car-parking for up to 32 No. cars. These parking areas are used at night to provide night time parking for up to 5 No. trucks thus avoiding congestion on the entrance roads to the site.

2.5.12 Fire control and Safety Issues

It is considered that the nature of the operation does not pose a major risk of fire although the following steps have been taken to ensure an acceptable level of fire

safety:

- Training of all site operatives and employees in fire prevention and control by a fire prevention company;
- Prominent posting of emergency response contact numbers (fire service, police, ambulance and other agencies);
- The provision of on-site water supply;
- The provision of fire fighting equipment including fire extinguishers in all buildings, fire hydrants and fire hoses adjacent to all buildings;
- Fire alarm and detection system in all buildings;
- There is no long term storage of waste on-site;
- A fire assembly point is posted on-site at the site entrances;
- The designation of smoking and non/smoking areas.
- A secure storage area is provided externally for the secure night-time storage of the oxy-acetylene tanks used in welding.

The site is serviced by 3 No. on the 100mm (dia) fire water-main, the locations of which are shown on Drawing No. 3684/01/222 and which are serviced by the on site water-main. The adjoining river and water attenuation tanks can be also used by the Fire Brigade to provide a large supply of water for fire fighting.

In addition the buildings constructed on site are certified for fire safety.

A firewater retention tank has been constructed within the site to collect any contaminated fire fighting water which may be collected in the storm water collection system external to the buildings. A diversion valve has been provided which allows for the diversion of any firewater to the firewater retention tank and not to the storm water attenuation tank as generally would be the case. The diversion valve can be activated remotely from the administration building or manually should the remote system fail.

2.5.13 Other services

Other services provided at the site include:

- Mobile telephones for staff; and
- Internal telephones.

2.5.14 Potential Construction Impacts

As there will be no additional construction relating to the increase in tonnage of soil at the facility, there are no construction impacts envisaged at the site.

2.6 Nuisance Controls

2.6.1 General

The operation of the Integrated Waste Management Facility at Greenogue has been undertaken under licence issued by the EPA (WL 192-1). The conditions of the licence include measures to minimise or prevent nuisance to the public occurring as a result of the operation of the facility. A complaints register detailing any complaint received from the general public in respect of the operation on the facility is maintained at the site. The following sections detail the nuisance control measures undertaken at the site.

2.6.2 Bird Control

There is no nuisance associated with birds at the facility for the following reasons:

- There is no external storage of putrescible waste;
- All residual waste is stored internally in skips covered with industrial tarpaulins;
- There is no long term storage of waste on the site; and
- Any tipping of waste is onto designated tipping areas, which are contained within the site buildings.

2.6.3 Litter Control

There is no nuisance associated with litter at the facility for the following reasons:

There is no external storage of waste;

All residual waste is stored internally in skips covered with industrial tarpaulins;

There is no long term storage of waste on the site;

Any tipping of waste is onto designated tipping areas, which are contained within the site buildings, and so are not exposed to the wind;

Regular inspection and litter collection is undertaken at the site and adjoining land if and when necessary;

All waste entering the facility is in covered vehicles or road tankers. RILTA will exclude any contractor failing to comply with this requirement from entering the site;

The approach roads to the site are monitored on at least a daily basis and in the event of litter being found on these roads, site staff promptly remove it and deposit it in the appropriate manner; and

A general clean-up and attendance work is carried out on a weekly basis by site staff around external areas of the site and on approach roads.

2.6.4 Vermin Control

The following procedures ensure that the Integrated Waste Management Facility is not an attraction to vermin:

There is no storage of putrescible waste on the site;
All tipping of waste is indoors and onto the hardstand tipping floor area or, in the case where inspection is required, onto a designated inspection area. These areas are contained within the facility buildings and so do not serve as an attraction for vermin;
There are daily site inspections for litter; and
All plant equipment and tipping areas are cleaned regularly.

A firm of professional vermin control experts are contracted to control vermin using standard methods. Baiting with rodenticides is undertaken on a regular basis as required.

2.6.5 Fire Control

A number of fire control measures have been put in place at the site as detailed in Section 2.5.12 herein.

2.6.6 Traffic Control

The traffic control measures currently at the site and proposed for the site are outlined in Sections 10 herein.

2.7 Contingency Arrangements

2.7.1 Contingency Plans for any Emergency On-Site.

Accidents and other emergencies are handled by calling in the relevant authorities including the Fire Service, Gardaí, or Ambulance Services. Emergency response contact numbers for all these services have been prominently posted on-site. All site operatives and other relevant employees of RILTA have been trained in emergency response procedures and in fire prevention and control.

Site safety procedures have been adopted to protect any persons from injury on-site. Should injury occur, the site operative is the first to administer assistance. Emergency and first-aid materials are available in all the site buildings. Emergency and first-aid procedures are also prominently displayed in the site buildings adjacent to the waste inspection and quarantine areas.

The primary contingency for the facility relates to fire control, which is dealt with in some detail in Section 2.5.12 herein. An Environmental Management System (EMS) has been implemented for the site and is included in the AER in Appendix 2.1 herein.

2.7.2 Contingency Plans for any Breakdowns On-Site

The regular maintenance of all plant and equipment utilised on-site is undertaken in

accordance with the manufacturers guidelines. This maintenance programme helps to minimise occurrences of breakdowns on-site. In the event of any breakdown the item of plant or equipment is promptly repaired or replaced. A full time maintenance engineer is employed on site to undertake these tasks. As outlined a maintenance area is provided on site in the Waste Treatment Area to facilitate this maintenance programme. All plant and equipment are checked on a daily basis.

2.7.3 Contingency Plans in Respect of Absentee Staff

Fully trained part time staff employed directly or on contract by RILTA are deployed to the site if necessary in the event of sickness of key personnel. With approximately 65 persons on site staff can be deployed in order to cover for absentee staff.

2.7.4 Contingency Procedures Outside Normal Operating Hours

The site is unattended by RILTA staff during the night, Sundays and Bank Holidays. However site personnel and other employees of RILTA will be available in the event of any emergency at the site outside of normal working hours. An emergency contact number has been prominently posted at the site entrance.

Local emergency services have been informed of contact numbers for key RILTA personnel. In addition during periods outside normal working hours a security firm are employed to monitor the site. Security personnel also have the relevant contact numbers.

These security arrangements are in place in order to guard against unlawful trespass and vandalism. Basic routines exist whereby any cash, records and equipment are either taken off-site daily or secured in the site buildings. These procedures are carried out in the interest of overall security.

2.7.5 Contingency Plans in the Event of Environmental Contamination

The site infrastructure encompassing a fully bunded site and all operations taking place within separately bunded buildings prevents the possibility of a significant groundwater contamination incident. In the unlikely event of the need to contain the dispersion of groundwater, extraction wells have been installed downgradient of the site.

The discharge from the surface water attenuation tank to the Griffeen River is monitored on a regular basis. In the unlikely event that deterioration in the surface water quality being discharged is detected or if there is an external spillage on site, a cut-off valve at the discharge from the attenuation tank will activate either remotely or manually and all surface water will be contained in the attenuation tank preferably

or diverted to the fire retention tank. This system allows for the retention of all surface water on-site until the spill event is investigated and remediated. It is also possible to provide emergency pumping from the attenuation tank to the foul water sewer in the event of a continued spillage. In addition to the above and in the unlikely event of fire at the site, all firewater collected in the surface water drainage system can be directed to the firewater retention tank. This retention tank can be pumped for discharge off-site depending on the degree of contamination of the firewater.

2.8 Monitoring Programme

The following sections describe the current monitoring programmes established at the Greenogue site.

All environmental monitoring is carried out under the conditions of the waste licence for the facility issued by the EPA –Waste Licence 192-1, as shown in Appendix 1.2. Emission Limit Values (ELV) have been set by the EPA for the parameters to be monitored in Schedule C of the licence. Exceeding these values will be judged by the EPA or SDCC to be a non-compliance with the Waste Licence.

The monitoring programme outlined below has been developed on the basis of the Waste Licence 192-1 issued by the EPA in 2004. Routine monitoring at the site commenced following acceptance of waste to the facility in December 2004. Monthly, quarterly and annual monitoring is carried out at the facility in accordance with the licence. In addition, quarterly and annual reports are issued to the EPA detailing all of the monitoring on site as required under Schedule E of the waste licence.

As part of the Waste Licence an Annual Environmental Report (AER) is formulated that collates and reports all monitoring data each year. A comparative assessment is made with data from previous years. This report is also to be submitted to the EPA. This AER for the period January 2006 to December 2006 is included in Appendix 2.1.

The primary aims of this monitoring programme are to comply with legislation and the requirements of the EPA and to monitor the quality of the environment in the vicinity of the Integrated Waste Management Facility site and identify any adverse impacts from the development of the facility.

2.8.1 Dust Monitoring Programme

Dust is monitored using Bergerhoff gauges, as specified in the German Engineering Institute VDI 2119 document “Measurement of Dustfall Using the Bergerhoff Instrument (Standard Method)”. The gauges are installed around the site at the locations shown on Drawing No. 3684/01/204 with the grid references tabulated

below.

Table 2-4 Dust Monitoring Locations

Reference No.	Grid Reference
D1	E301536 N228449
D2	E301567 N228562
D3	E301664 N228566
D4	E301639 N228427

According to the licence, dust monitoring takes place three times per annum, including twice between the months of May and September during which period dust generation can be most problematic.

In addition to the above the site and adjoining roads are inspected on a daily basis for evidence of excessive generation of airborne dust.

2.8.2 Ecological Monitoring Programme

Kick samples from KS1 and KS2 were taken and analysed in 2005, in accordance with EPA guidelines, to determine the invertebrate colony of the surface water environment on an annual basis. The locations at which these samples were obtained are shown on Drawing No 3684/01/204, with grid references tabulated below.

Table 2-5 Invertebrate Sampling Locations

Reference No.	Grid Reference
KS1	E 301664 N228566
KS2	E 301567 N228562

2.8.3 Noise

Noise monitoring is carried out on an annual basis. In line with licensing conditions imposed by the EPA there are 4 No. noise monitoring locations. The locations for noise monitoring are as outlined in Drawing No. 3684/01/204 and tabulated below in Table 2.6.

Table 2-6 Noise Monitoring Points

Reference No.	Grid Reference
N1	E301536 N228449
N2	E301567 N228562
N3	E301664 N228566
N4	E301639 N228427

All noise monitoring has been and will continue to be undertaken by suitably qualified persons.

The results of the noise monitoring undertaken at the facility and an interpretation of these results is reported in the AER to be submitted to the EPA.

2.8.4 Surface Water

Surface water quality is monitored both upstream and downstream of the facility during the operational life and as agreed by any subsequent closing licence.

All surface water sampling to date has been carried out by trained personnel from RILTA staff or by a suitable firm of consultants retained by RILTA. All analyses, with the exception of on-site readings, have been carried out by an accredited laboratory and will continue to be carried out as such.

A visual inspection of all surface water streams on and adjacent to the site is also carried out by site personnel on a weekly basis.

Surface Water Monitoring Sites

For the location and reference numbers for the monitoring points refer to Drawing No. 3684/01/204. These reference points and respective grid references are tabulated below in Table 2.7.

Table 2-7 Surface Water Monitoring Points

Location	Reference No.	Grid Reference
Upstream	SW1	E 301664 N228566
Mid-point	SW3	E 301603 N228563
Downstream	SW2	E 301567 N228562

The elements of the surface water monitoring programme are similar to the groundwater programme and are as follows:

- Surface water sampling locations are identified with a permanent marker;
- The surface water sampling locations are sampled in accordance with industry standard protocols and guidelines prepared by the EPA. Samples are handled and transported in accordance with the same accepted protocols;
- The surface water sampling locations have been sampled at quarterly intervals in 2005 and 2006 and will continue to be so unless otherwise agreed with the Agency, to establish any potential effects on surface water quality.
- In the event of the facility closing down, surface water monitoring will continue at six month intervals until a closure license has been issued by the EPA. After care and monitoring of the facility once it has closed down would be agreed as part of the closing licence.
- The samples recovered from surface water sampling locations are analysed for the list of parameters given in Schedule D.5 of the waste licence. These parameters include pH, Chemical Oxygen Demand, Suspended Solids and Mineral Oils.

The results of the analysis are collated, tabulated and reported including interpretation and comparison with the previous monitoring event's data. This information is presented in the AER, which is also submitted to the EPA.

2.8.5 Groundwater Monitoring Programme

Groundwater quality is monitored at both upgradient (BH1) and downgradient (BH2 & BH3) sampling locations.

All groundwater sampling to date has been carried out by trained personnel from RILTA or a suitable firm of consultants and all analyses have been carried out by an accredited laboratory and will continue to be carried out as such.

Groundwater Monitoring Sites

For the location and reference points for the monitoring points refer to Drawing No. 3684/01/204. These reference numbers and grid references are tabulated below in Table 2.8.

Table 2-8 Groundwater Monitoring Points

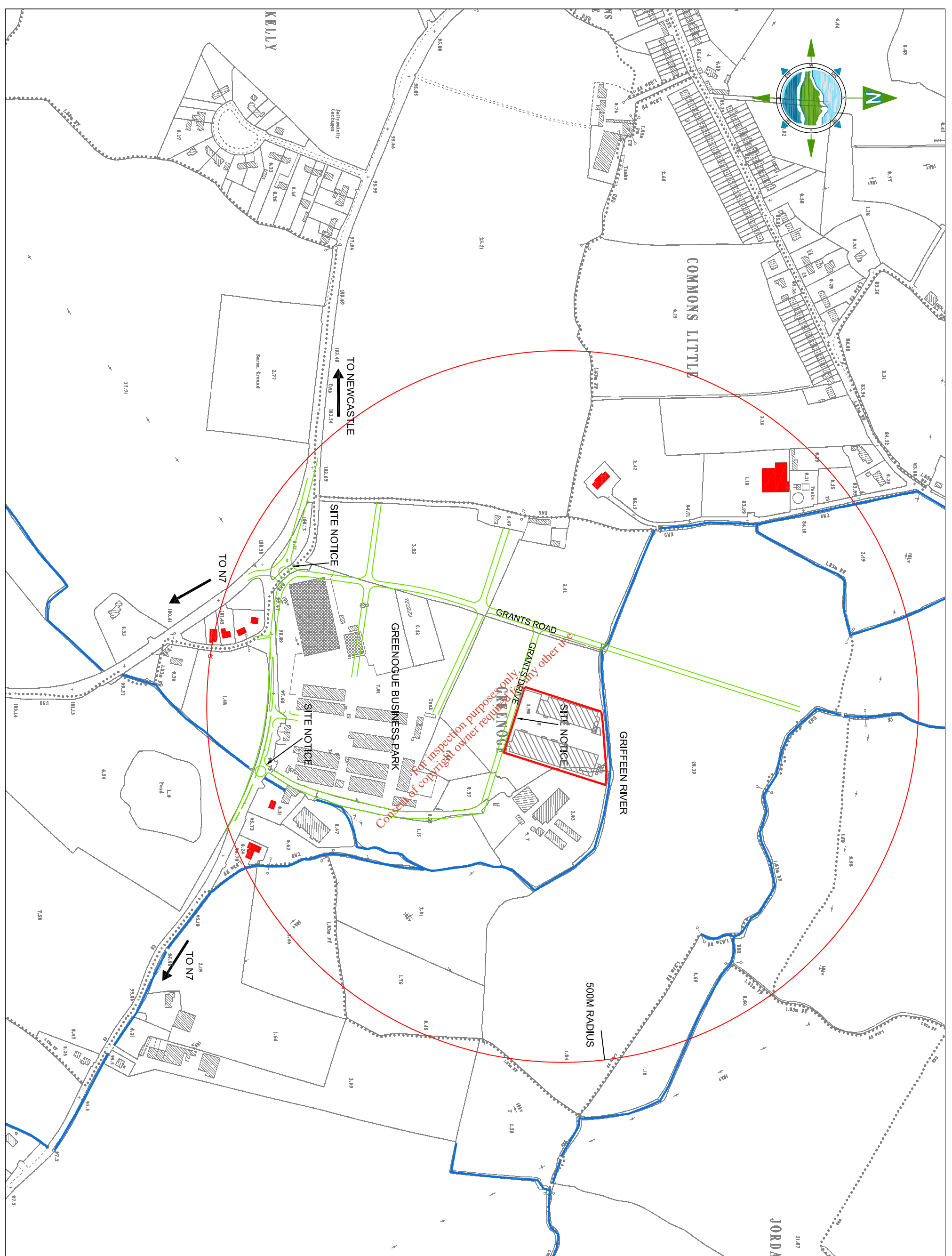
Location	Reference No.	Grid Reference
Upgradient	BH1	E301566 N228562
Downgradient	BH2	E301607 N228557
Downgradient	BH3	E301633 N228562

Operational Phase

The main elements of the programme during the operational phase are as follows:

- Water levels in the monitoring wells are measured on a monthly basis;
- The monitoring wells are sampled in accordance with industry standard protocols and guidelines prepared by the EPA. Samples are handled and transported in accordance with the same accepted protocols;
- The groundwater sampling locations have been sampled at quarterly intervals in 2005 and 2006 and will continue to be so unless otherwise agreed with the Agency, to establish any potential effects on groundwater quality.
- In the event of the facility closing down, monitoring will continue at six month intervals until a closure license has been issued by the EPA. After care and monitoring of the facility once it has closed down would be agreed as part of the closing licence;
- The samples recovered from groundwater sampling locations are analysed for the list of parameters given in Schedule D.7 of the waste licence. These parameters include Dissolved Oxygen, Electrical Conductivity, pH, Temperature, Total Alkalinity, Metals/non metals, Sulphate, Cyanide (Total), Chloride, List1/11 Organic Substances, Mineral Oil, BTEX, Arsenic and Mercury.

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- Legend:
- SITE BOUNDARY
 - NEW ROAD LAYOUT
 - RIVER
 - HOUSE

- NOTES
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 2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
 3. ENGINEERS TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
 4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Issue	Date	Description	By	CHKD.
A	11-04-07	ISSUED FOR PLANNING	MAN	ST

Client:

RILTA Environmental Limited

Project:
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Title:
SITE LOCATION

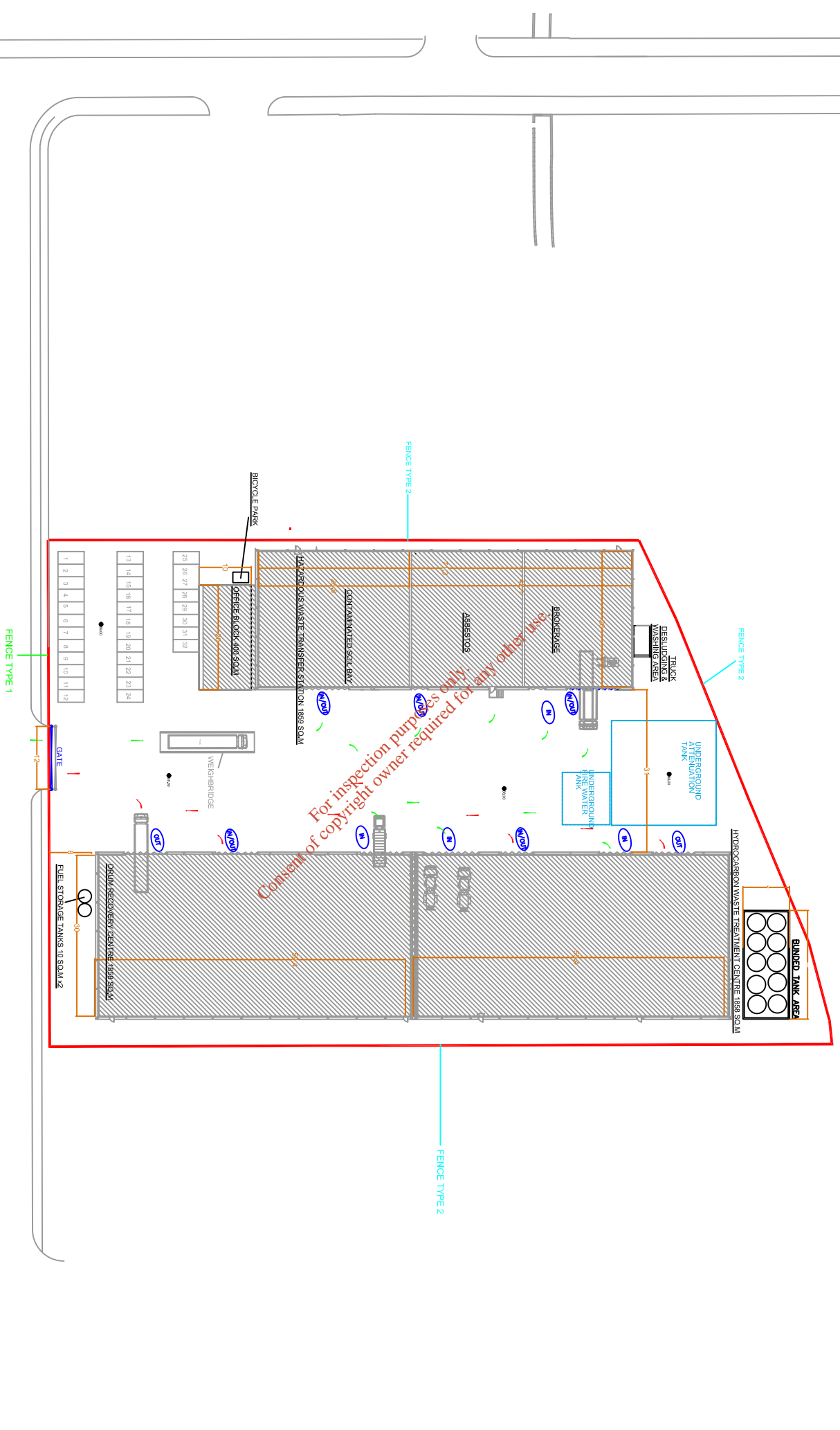
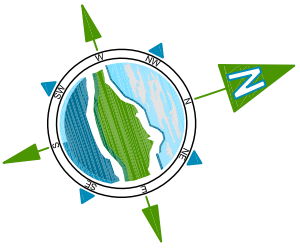
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Prepared by: **M. Nolan** Checked: **S. Trinnelly** Date: **April 2007**

Project Director: **D. Grehan**

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Drawing No.: **3684-01-201** Issue: **A**



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Issue	Date	Description	MAN	ST	By	CHKd.
A	11-04-07	ISSUED FOR PLANNING				

Client: **RILTA Environmental Limited**

Project: **INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN**

Title: **CURRENT SITE LAYOUT**

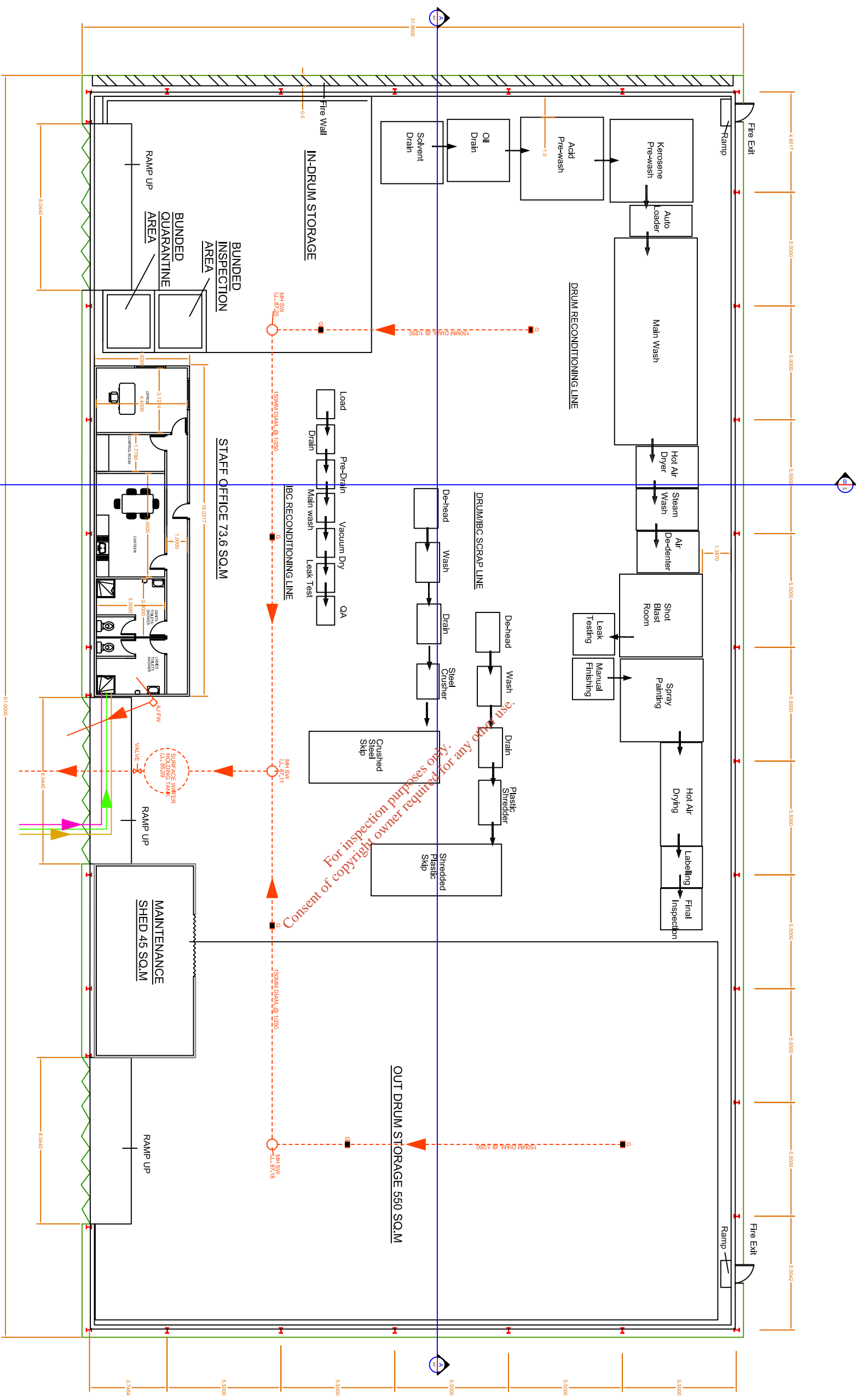
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Prepared by: **M. Nolan** Checked: **S. Tinnelly** Date: **April 2007**

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Drawing No.: **3684-01-205** Issue: **A**



- Legend:
- 225MM EFFLUENT SEWER
 - EFFLUENT MANHOLE
 - 150MM SURFACE WATER SEWER
 - ACCESS JUNCTION
 - 180MM WATER MAIN
 - TELECOM CABLE
 - ELECTRICITY CABLE
 - GULLY TRAP

- NOTES
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Issue	Date	Description	MAN	ST	CHKD.
A	11-04-07	ISSUED FOR PLANNING			

Client:
 RILTA Environmental Limited

Project:
 INTEGRATED WASTE MANAGEMENT FACILITY, GREENOQUE, CO. DUBLIN

Title:
 DRUM RECOVERY CENTRE FLOOR PLAN

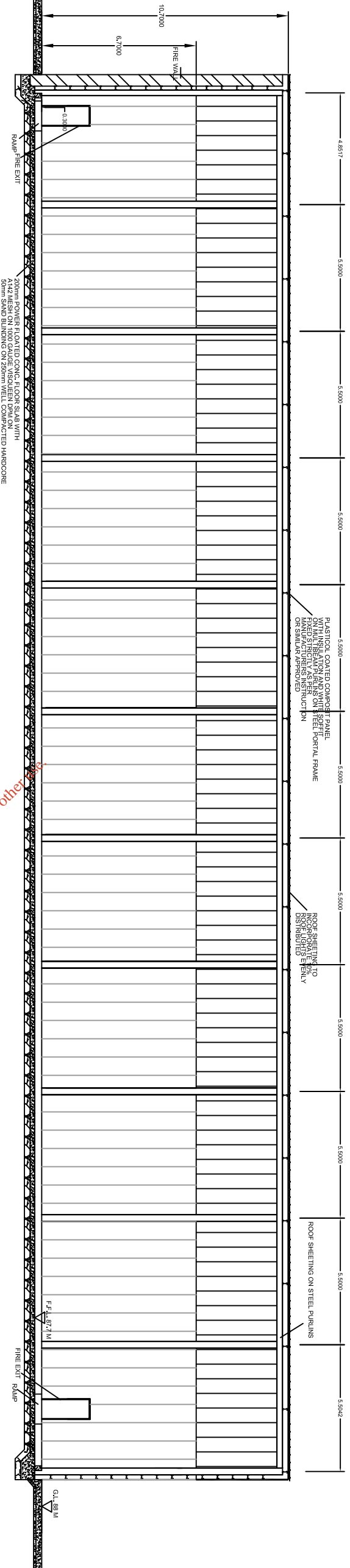
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Prepared by: M. Nolan
 Checked: S. Trinnelly
 Date: April 2007

Project Director: D. Grehan

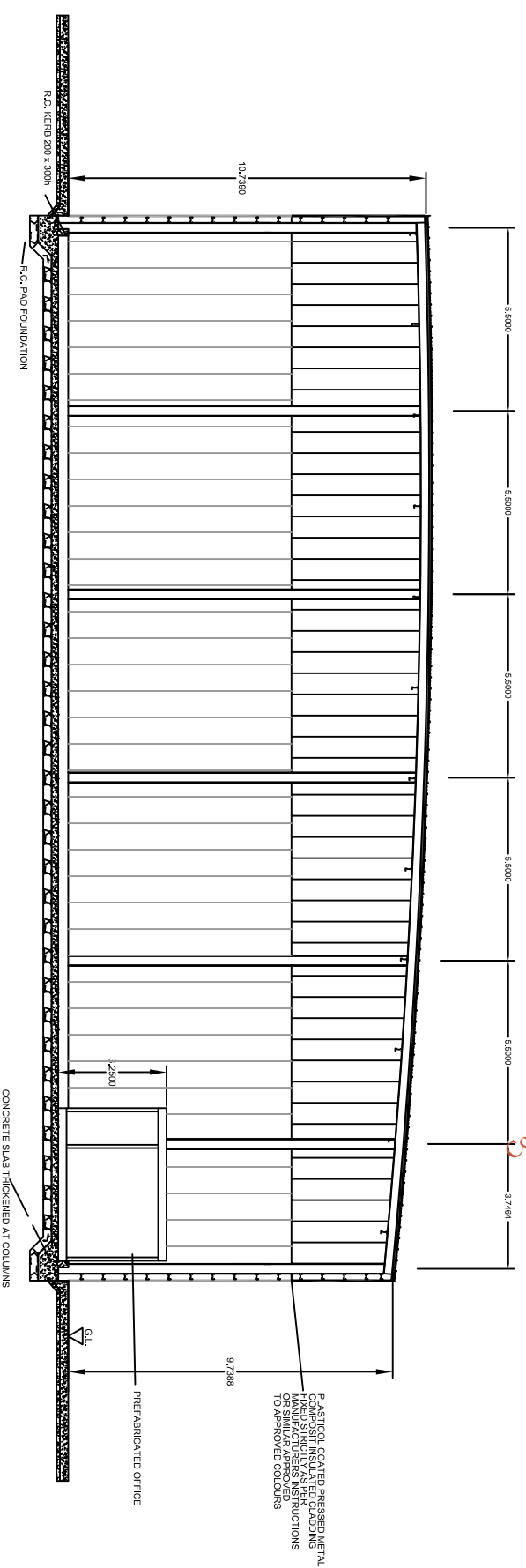
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 Issue: A



SECTION AA

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SECTION AAA

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Issue	Date	Description	By	Chkd.
A	11-04-07	ISSUED FOR PLANNING	MAN	ST

Client: **RILTA Environmental Limited**

Project: **INTEGRATED WASTE MANAGEMENT FACILITY, GREENOUGE, CO. DUBLIN**

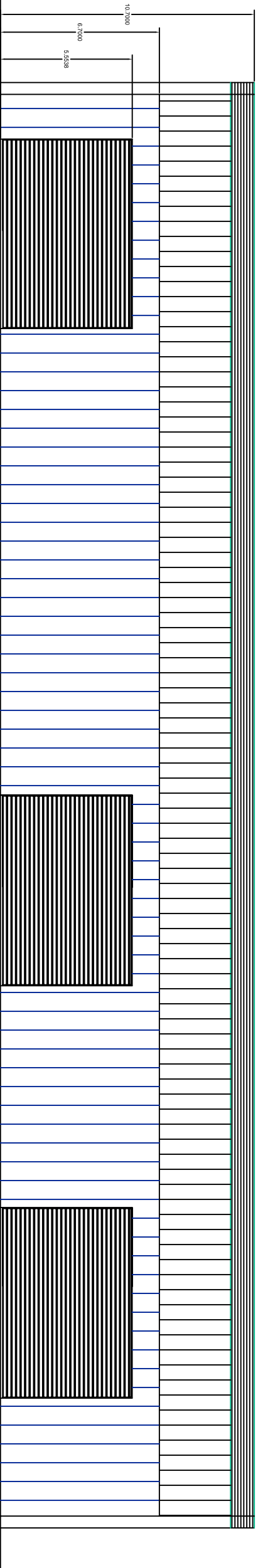
Title: **DRUM RECOVERY CENTRE SECTIONS**

Scale @ A1: **1:100**

Prepared by: M. Nolan	Checked: S. Tinnelly	Date: April 2007
Project Director: D. Grehan		

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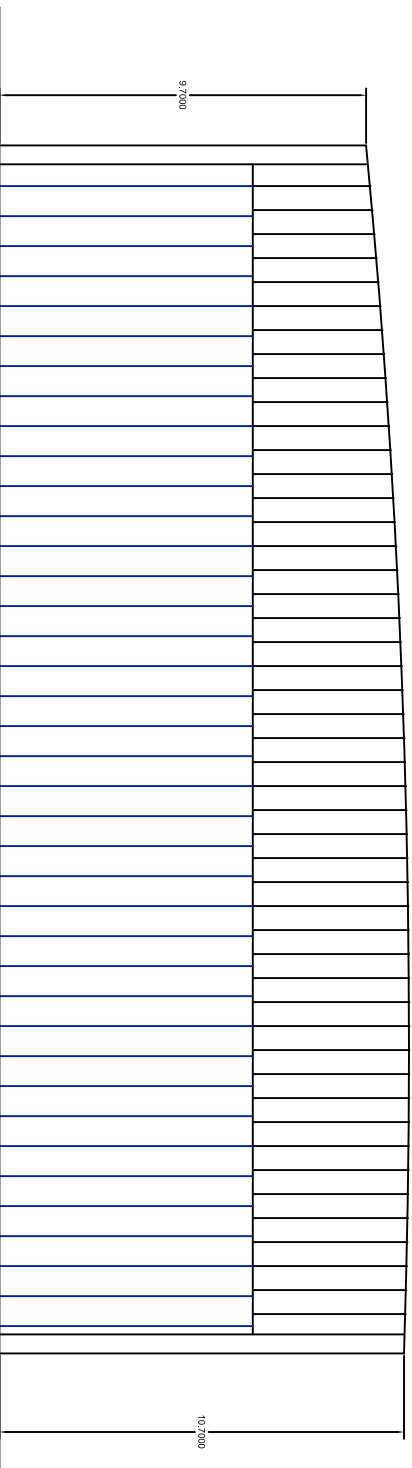
Drawing No.: **3684-01-207** Issue: **A**



FRONT ELEVATION



REAR ELEVATION



SIDE ELEVATION

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4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Issue	Date	Description	MAN	ST	By	Chkd.
A	11-04-07	ISSUED FOR PLANNING				

Client:



Project:
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Title:
DRUM RECOVERY CENTRE ELEVATIONS

Scale @ A1: **1:100**

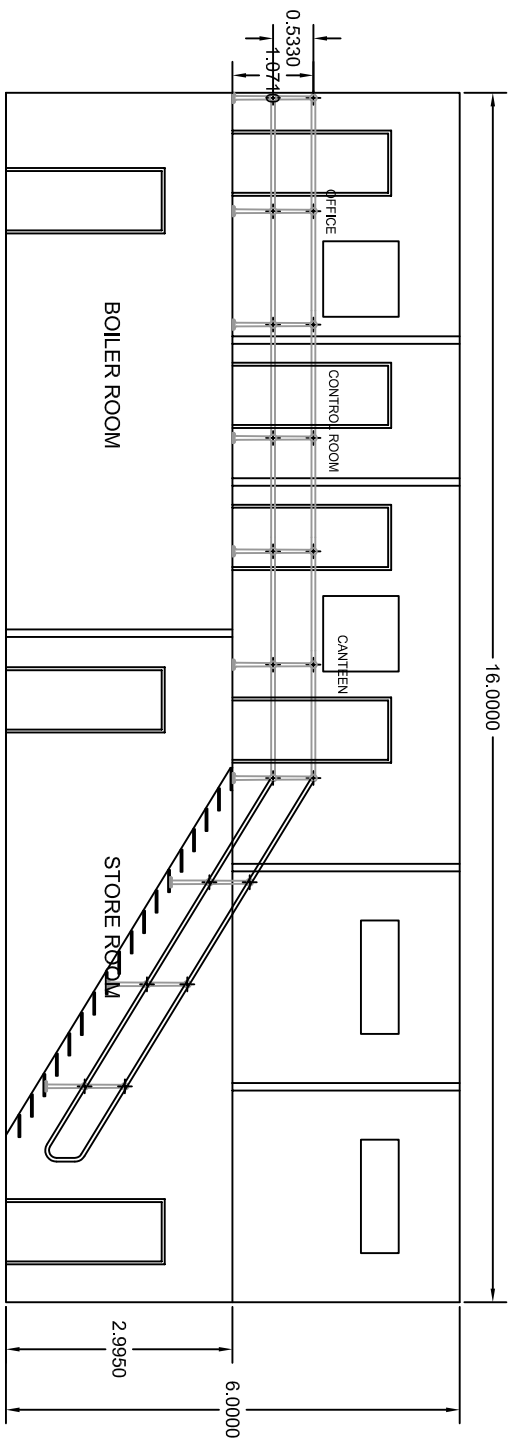
Prepared by: **M. Nolan** Checked: **S. Tinnelly** Date: **April 2007**

Project Director: **D. Grehan**

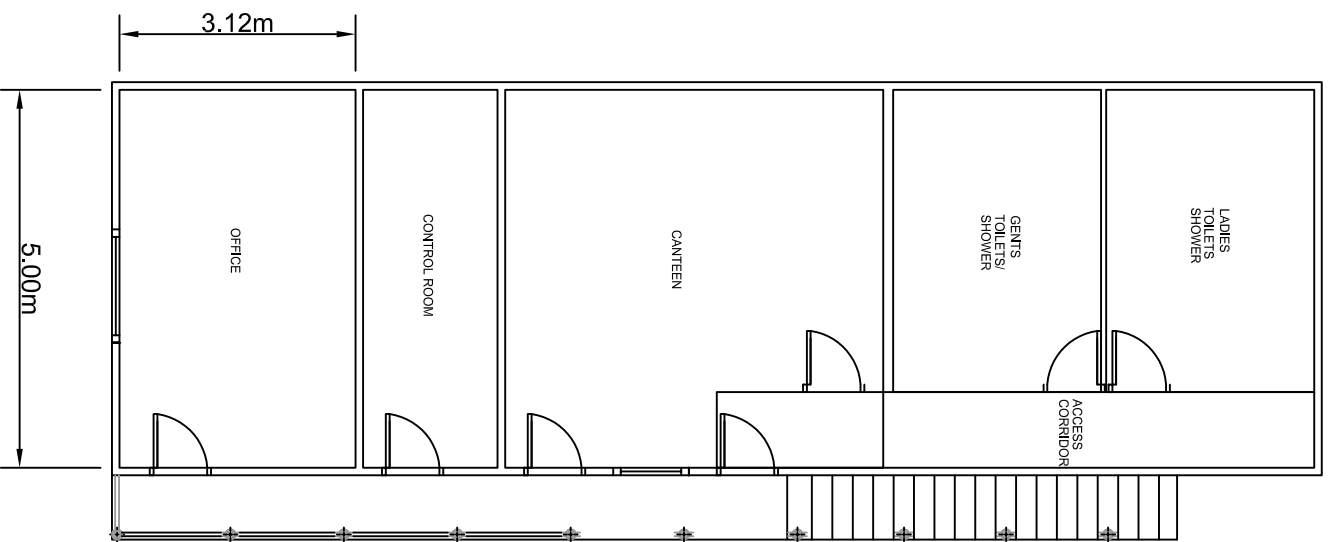


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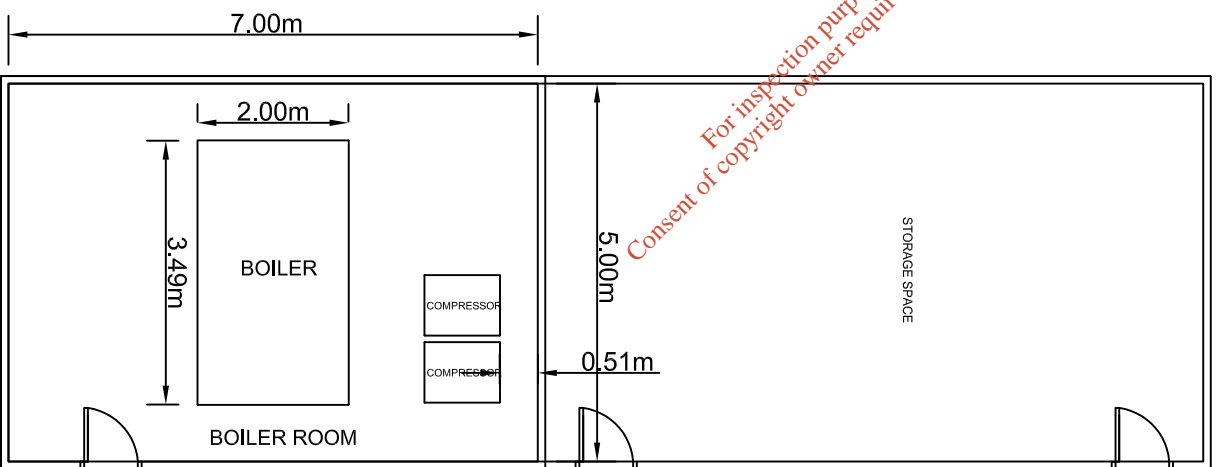
Drawing No.: **36884-01-208** Issue: **A**



ELEVATION A



FIRST FLOOR



GROUND FLOOR

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Issue	Date	Description	MAN	ST	CHKD.
A	11-04-07	ISSUED FOR PLANNING			

Client: **RILTA Environmental Limited**

Project: **INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN**

Title: **HYDROCARBON WASTE TREATMENT CENTRE FLOOR PLAN**

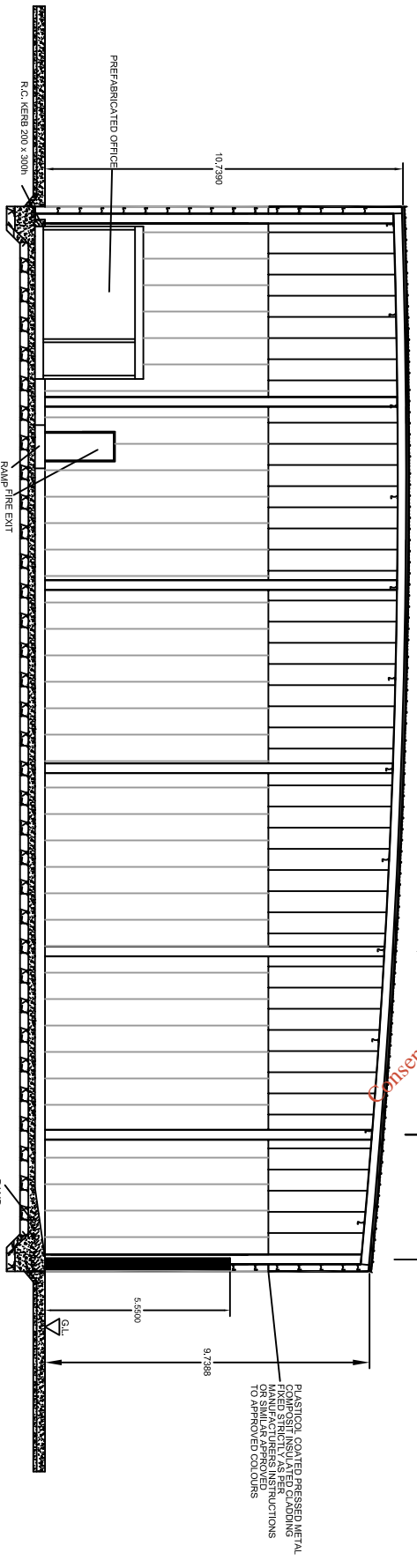
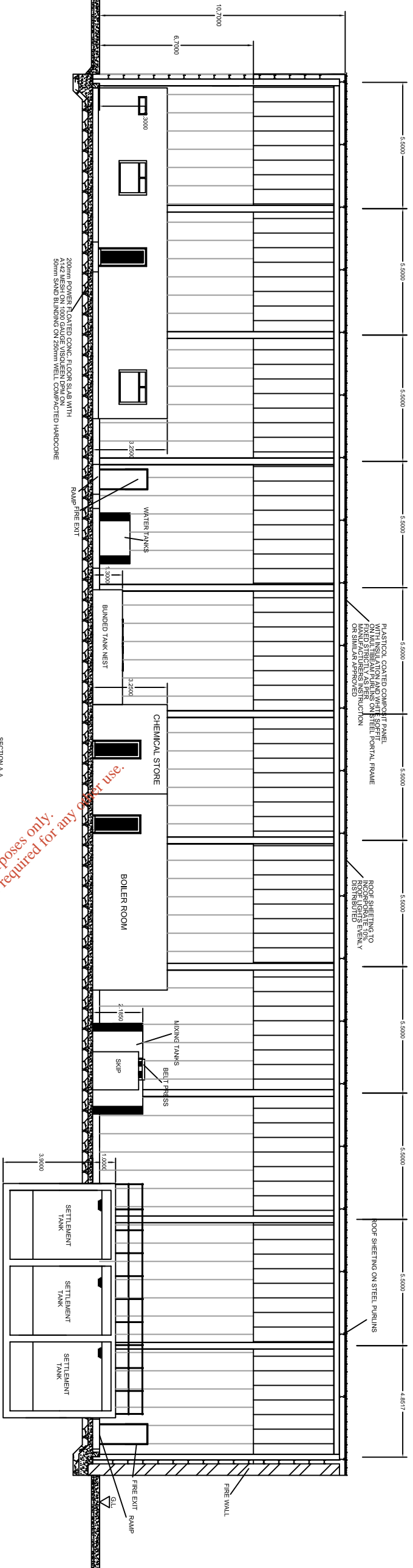
Scale @ A1: **1:50**

Prepared by: **M. Nolan** Checked: **S. Tinnelly** Date: **April 2007**

Project Director: **D. Grehan**

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Drawing No.: **3684-01-209** Issue: **A**



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Issue	Date	Description	MAN	ST	CHKD.
A	11-04-07	ISSUED FOR PLANNING			

Client: **RILTA Environmental Limited**

Project: **INTEGRATED WASTE MANAGEMENT FACILITY, GREENOUGE, CO. DUBLIN**

Title: **HYDROCARBON WASTE TREATMENT CENTRE SECTIONS AND DETAILS**

Scale @ A1: **1:100**

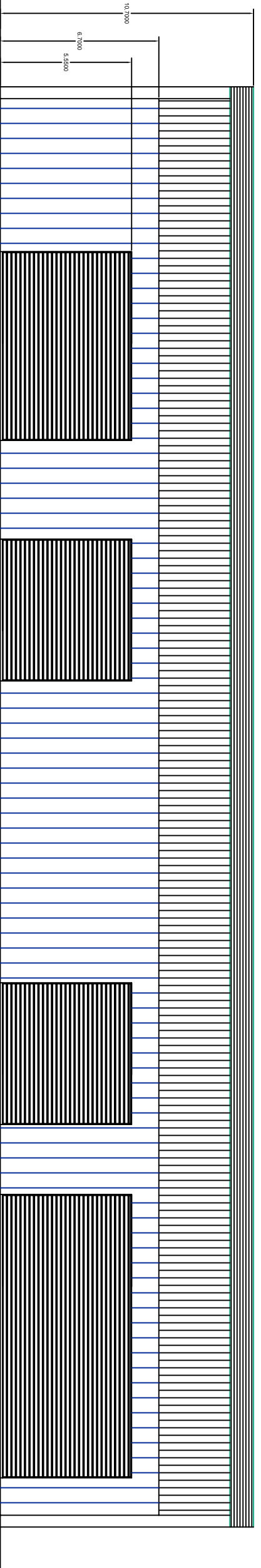
Prepared by: **M. Nolan** Checked: **S. Trinnelly** Date: **April 2007**

Project Director: **D. Grehan**

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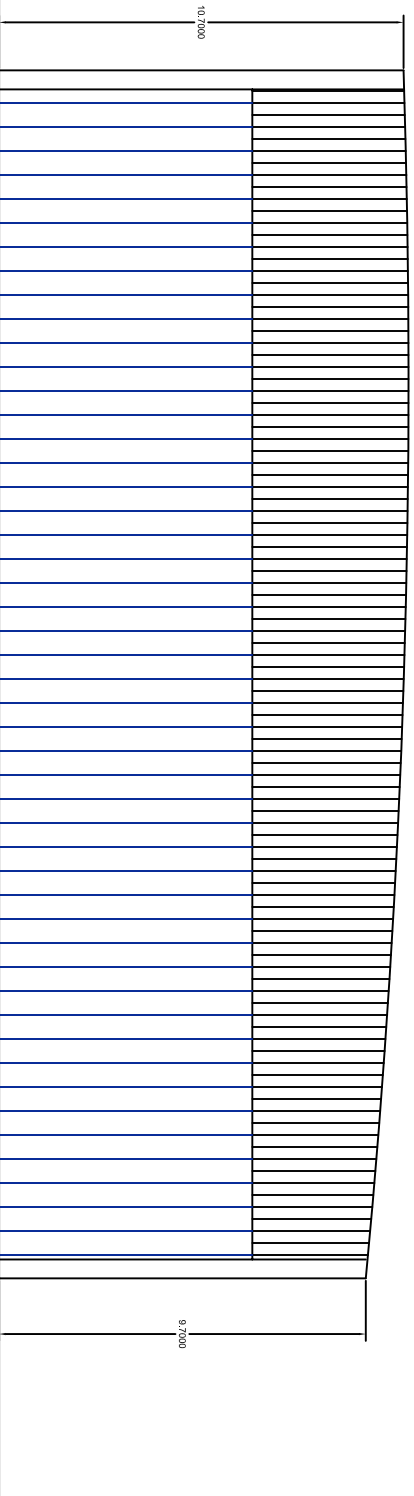
Drawing No.: **36884-01-210** Issue: **A**



FRONT ELEVATION



REAR ELEVATION



SIDE ELEVATION

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Issue	Date	Description	MAN	ST	By	Chkd.
A	11-04-07	ISSUED FOR PLANNING				

Client:



Project:
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Title:
HYDROCARBON WASTE TREATMENT CENTRE ELEVATIONS

Scale @ A1: **1:100**

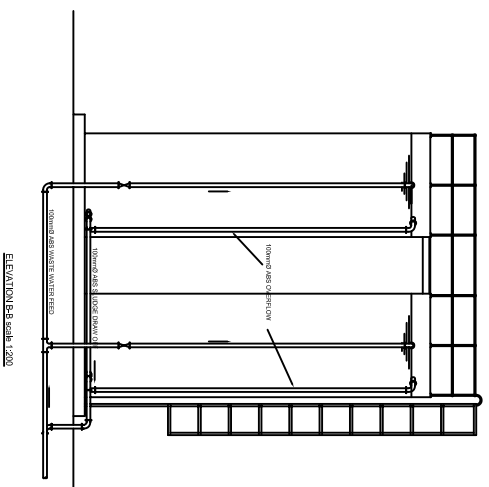
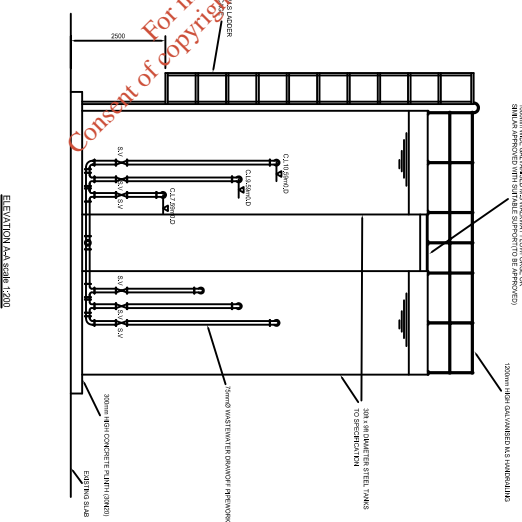
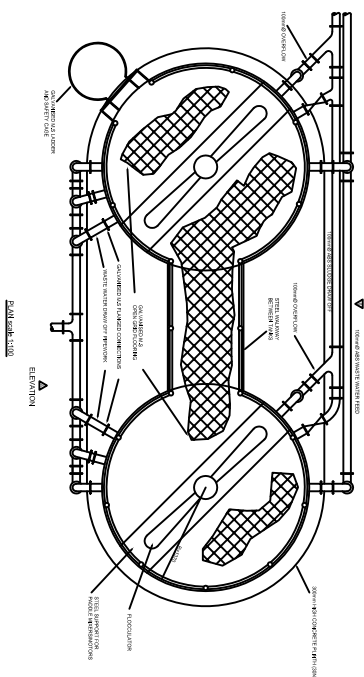
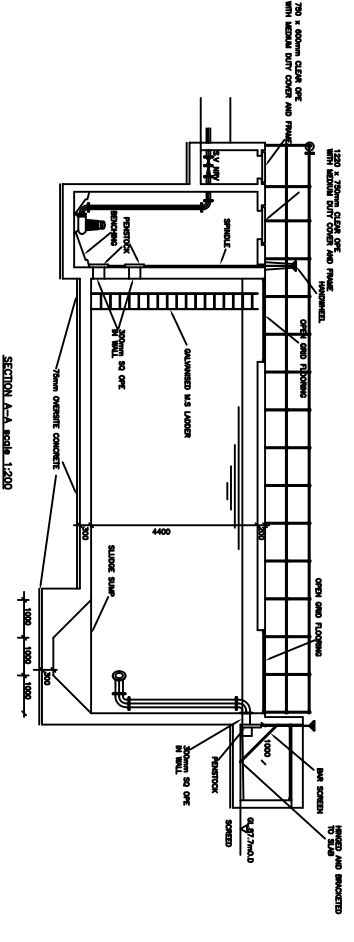
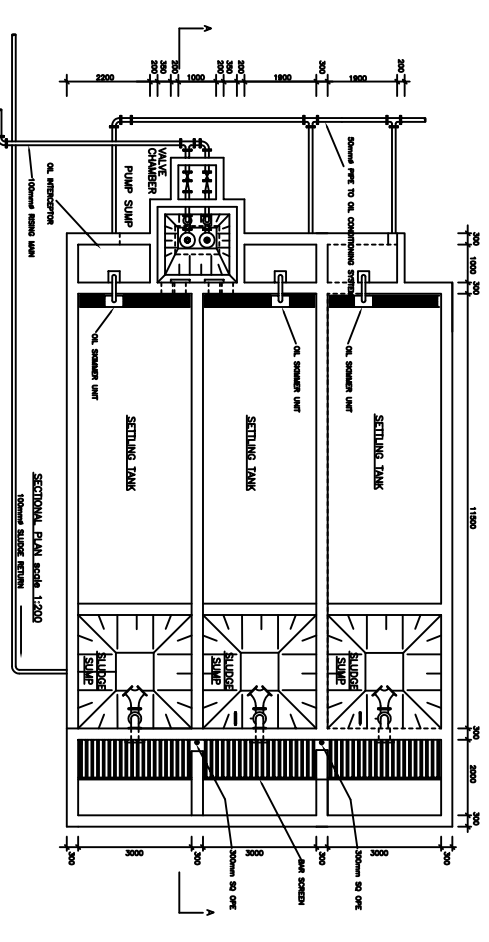
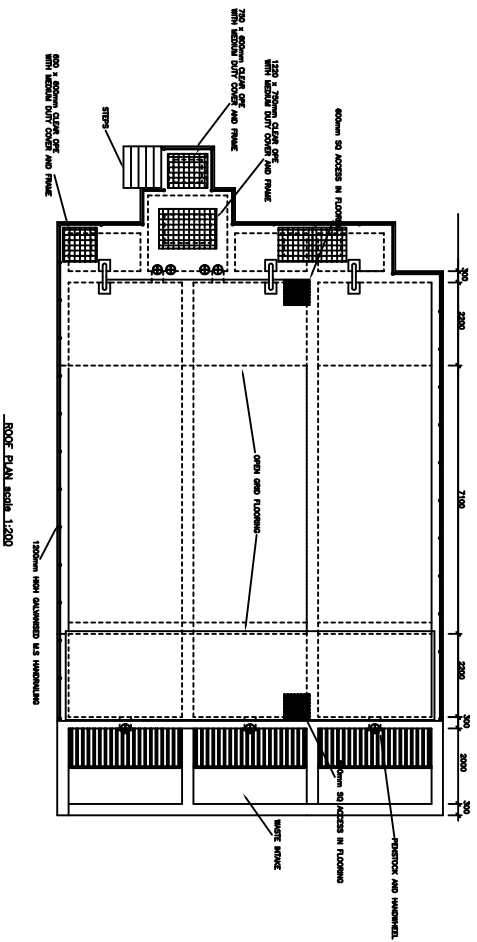
Prepared by: **M. Nolan** Checked: **S. Trinnelly** Date: **April 2007**

Project Director: **D. Grehan**



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Drawing No.: **3684-01-211** Issue: **A**



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Issue	Date	Description	By	Checked
A	11-04-07	ISSUED FOR PLANNING	MAN	ST

Client: **RILTA Environmental Limited**

Project: INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Title: HYDROCARBON WASTE TREATMENT CENTRE SETTLEMENT AND FLOCCULATION TANK DETAILS

Scale @ A1: AS SHOWN

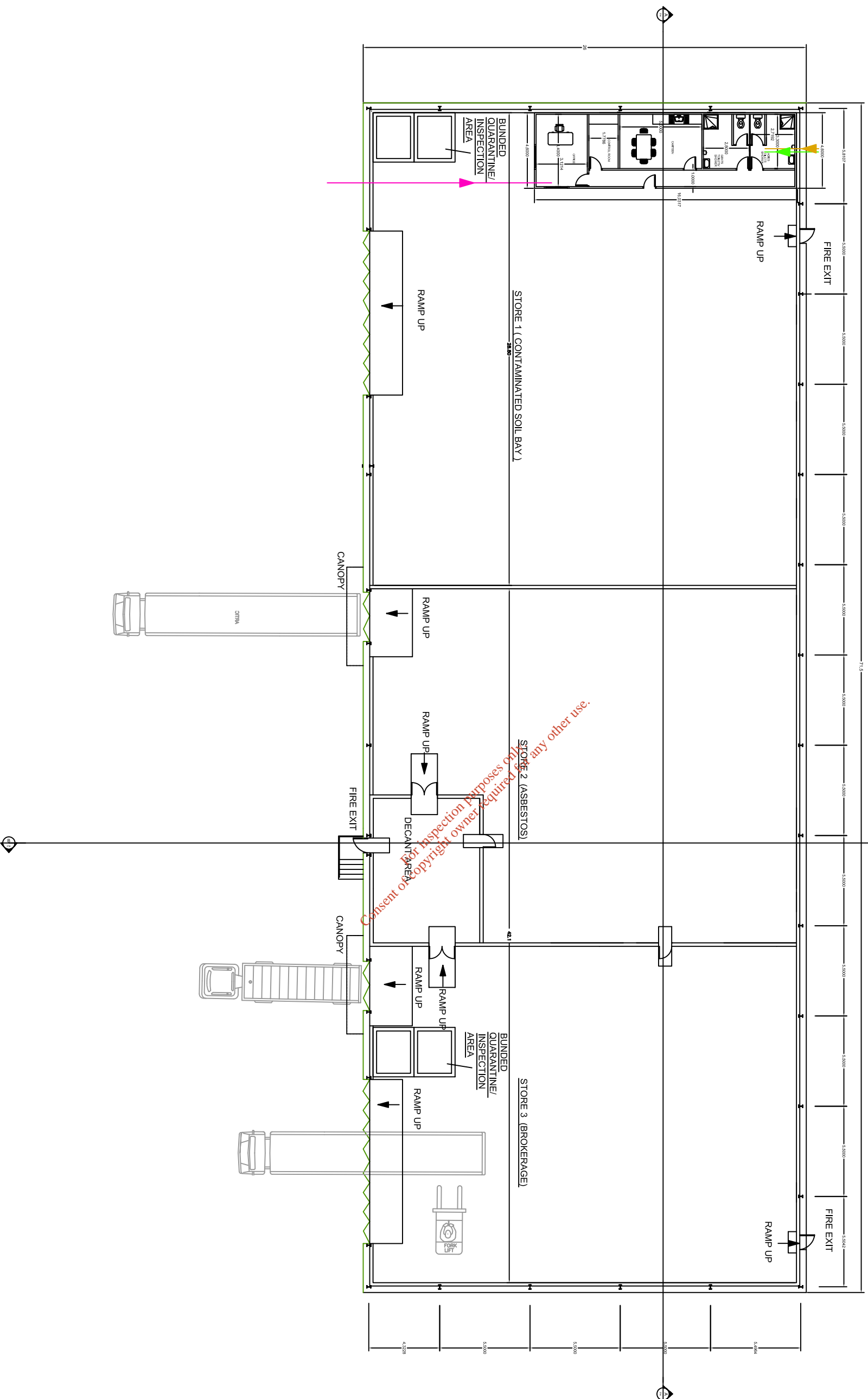
Prepared by: M. Nolan
 Checked: S. Trinnelly
 Date: April 2007

Project Director: D. Grehan

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Drawing No.: 36884-01-212 Issue: A

Legend:
 18MM WATER MAIN
 TELECOM CABLE
 ELECTRICITY CABLE



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4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MAIN HEAD

Issue	Date	Description	By	Chkd.
A	11-04-07	ISSUED FOR PLANNING	MAN	ST

Client:
RILTA Environmental Limited

Project:
 INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Title:
 HAZARDOUS WASTE TRANSFER STATION FLOOR PLAN

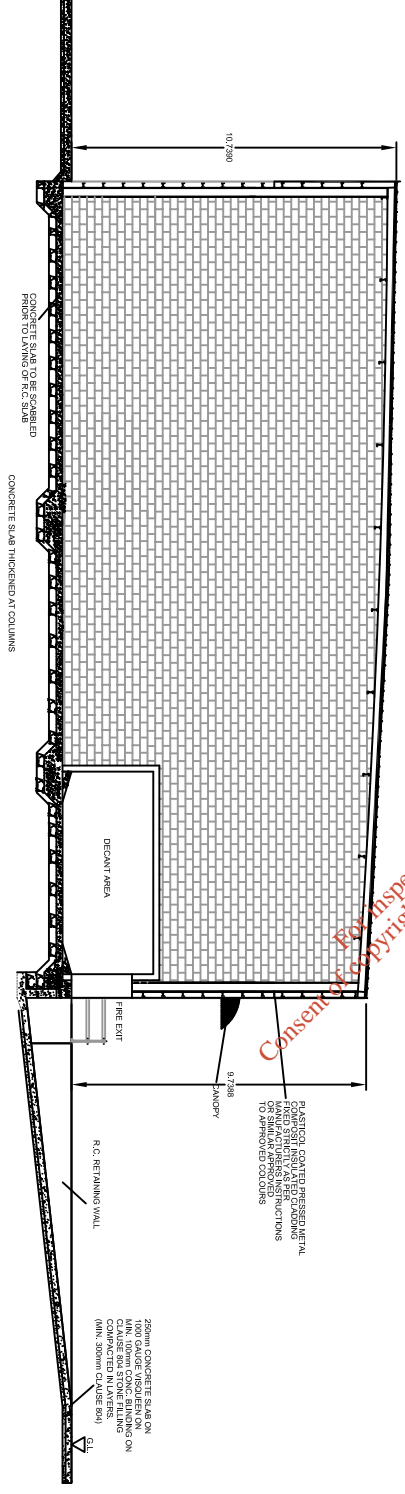
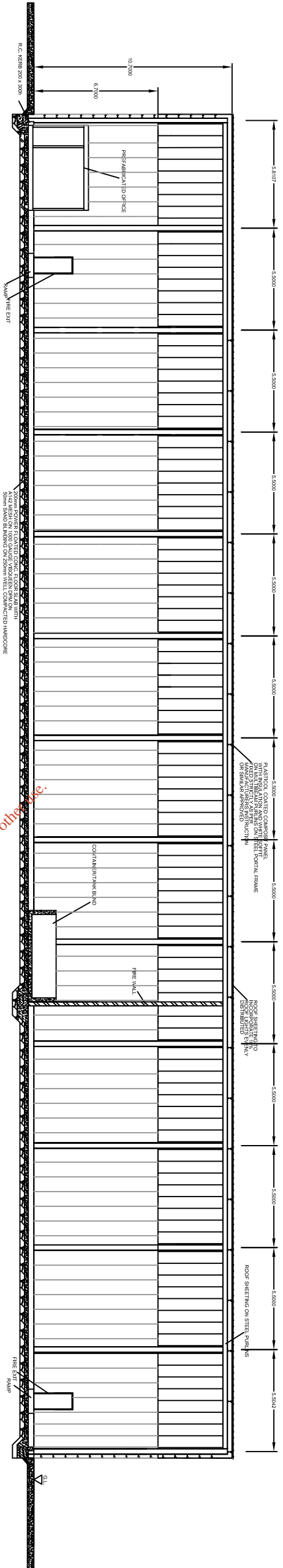
Scale @ A1: 1:125

Prepared by: M. Nolan
 Checked: S. Tinnelly
 Date: April 2007

Project Director: D. Grehan

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Drawing No.: 3684-01-213
 Issue: A



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Issue	Date	Description	By	Chkd.
A	11-04-07	ISSUED FOR PLANNING	MAN	ST

Client:

RILTA Environmental Limited

Project:
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Title:
HAZARDOUS WASTE TRANSFER STATION SECTIONS

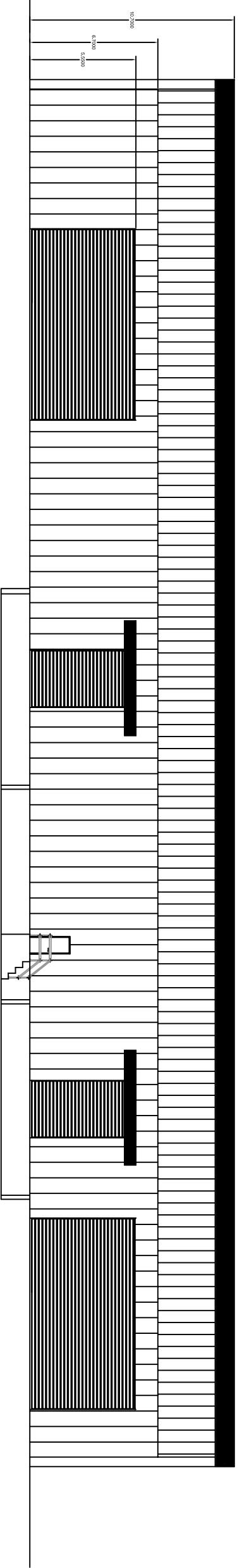
Scale @ A1: **1:125**

Prepared by: **M. Nolan** Checked: **S. Tinnelly** Date: **April 2007**

Project Director: **D. Grehan**


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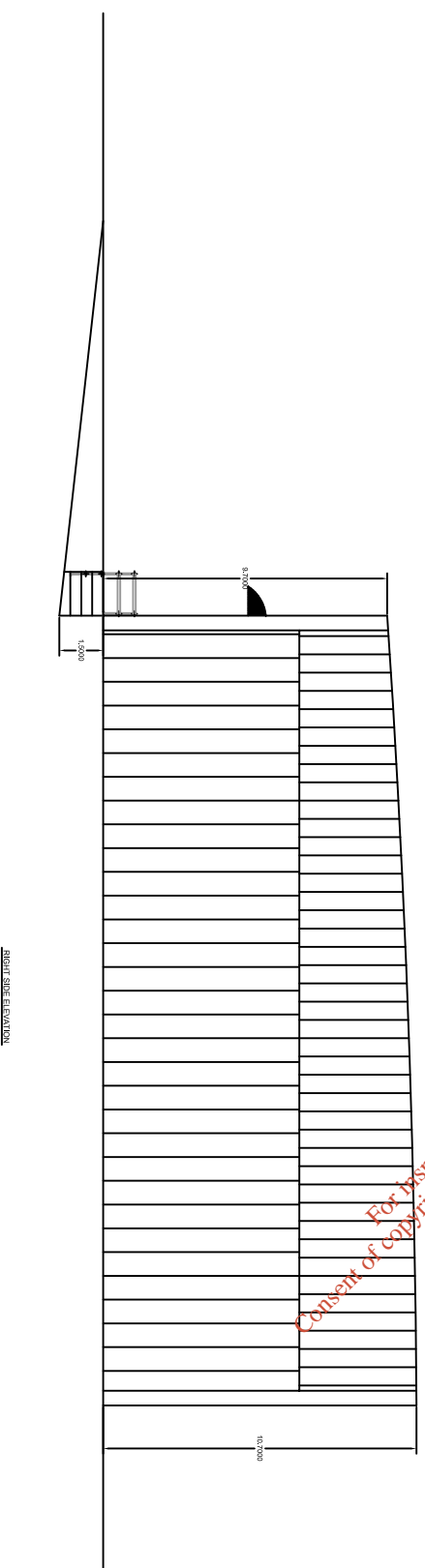
Drawing No.: **3684-01-214** Issue: **A**



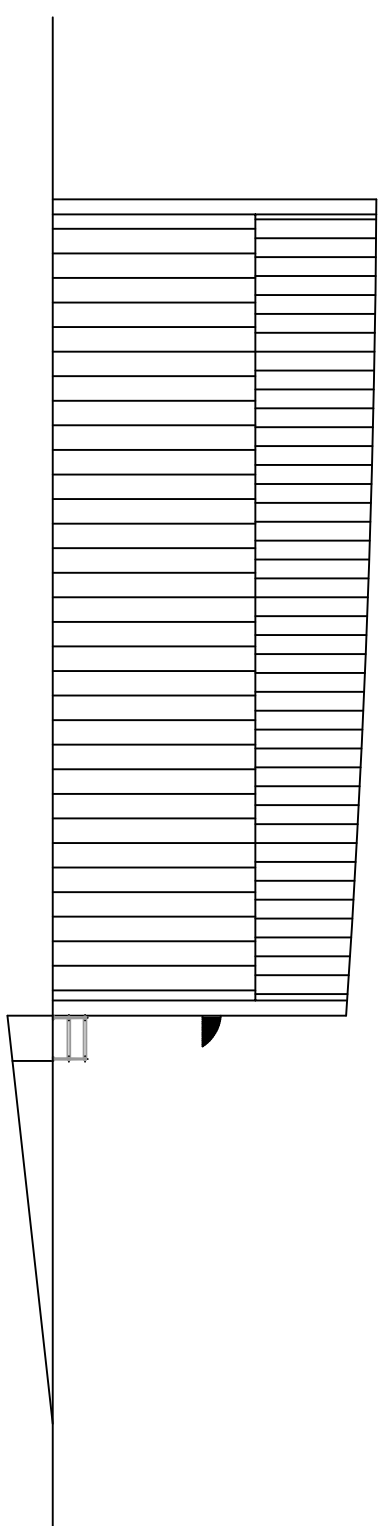
FRONT ELEVATION



REAR ELEVATION



RIGHT SIDE ELEVATION



LEFT SIDE ELEVATION

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Issue	Date	Description	MAN	ST	CHKD.
A	11-04-07	ISSUED FOR PLANNING			

Client: **RILTA Environmental Limited**

Project: **INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN**

Title: **HAZARDOUS WASTE TRANSFER STATION ELEVATIONS**

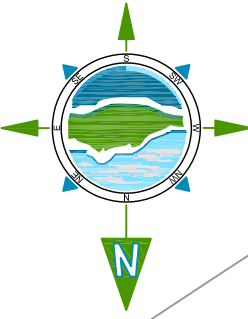
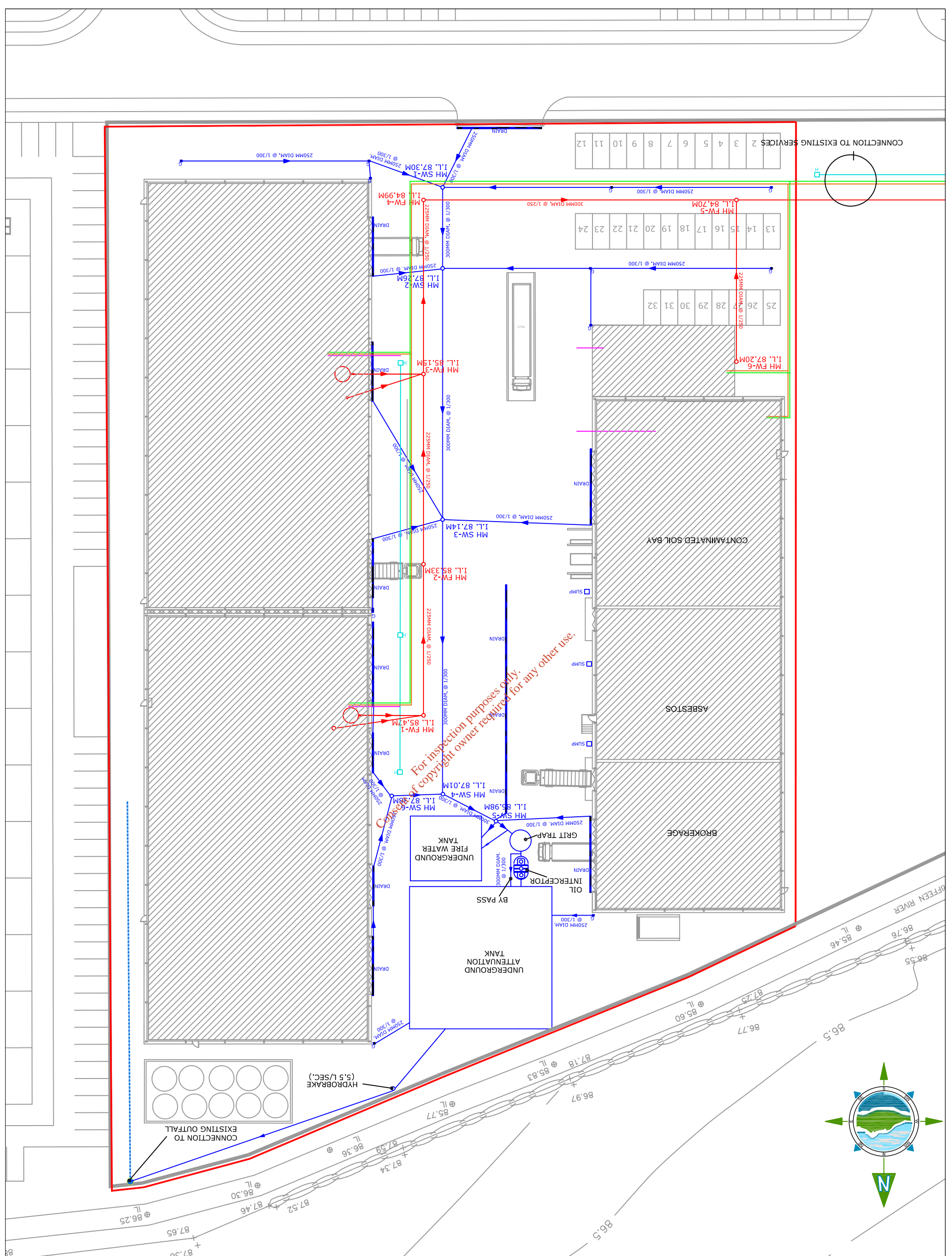
Scale @ A1: **1:125**

Prepared by: **M. Nolan** Checked: **S. Trinnelly** Date: **April 2007**

Project Director: **D. Grehan**

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Drawing No.: **3684-01-215** Issue: **A**



- Legend:
- EFFLUENT SEWER
 - 150MM SURFACE WATER SEWER
 - 150MM ACCESS JUNCTION
 - SURFACE WATER SEWER
 - SURFACE WATER MANHOLE
 - 180MM WATER MAIN
 - 100MM WATER MAIN
 - ELECTRICITY CABLE
 - TELECON CABLE
 - S GILLY TRAP
 - H HYDRANT & AIR VALVE

NOTES

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Issue	Date	Description	MAN	ST	CHKD.
A	11-04-07	ISSUED FOR PLANNING			

Client:

RILTA Environmental Limited

Project:
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Title:
DRAINAGE LAYOUT

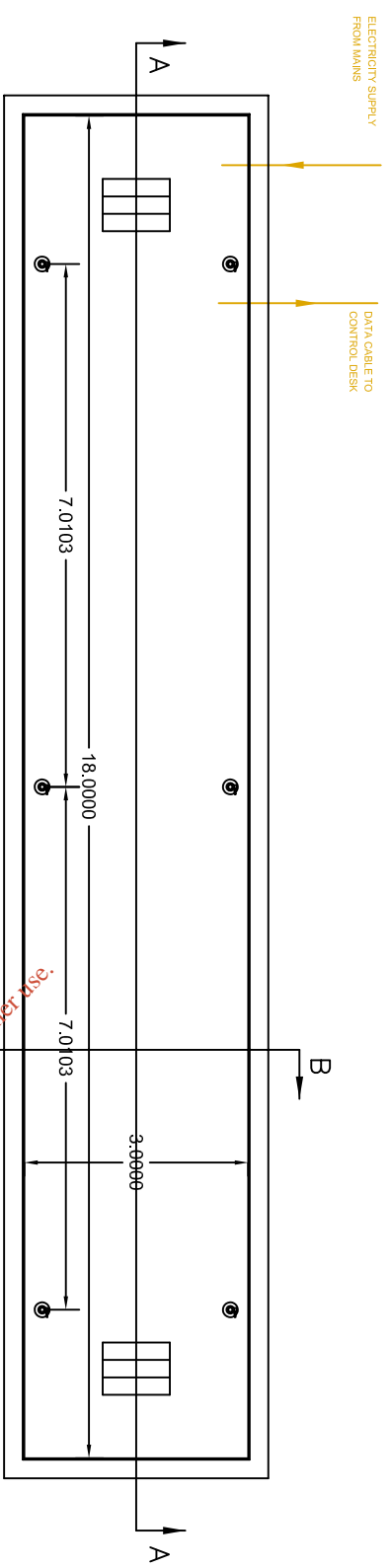
Scale @ A1: **1:250**

Prepared by: **M. Nolan** Checked: **S. Trinnelly** Date: **April 2007**

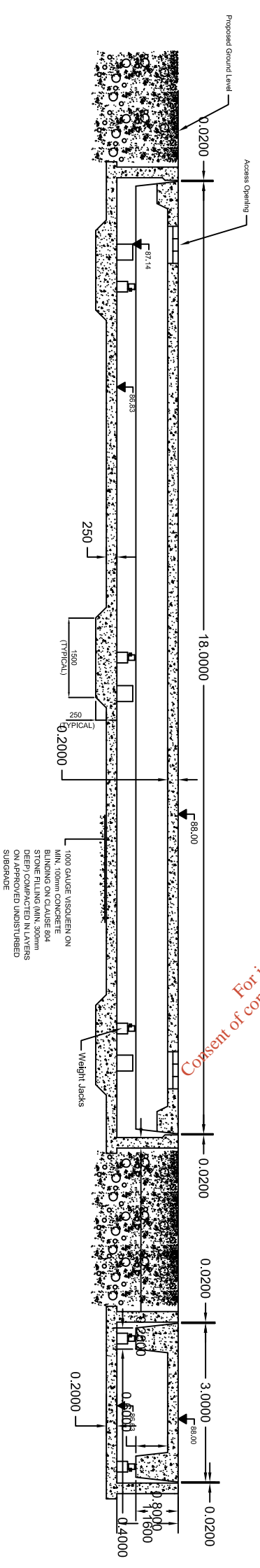
Project Director: **D. Grehan**

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Drawing No.: **3684-01-222** Issue: **A**



PLAN



SECTION A-A

SECTION B-B

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Issue	Date	Description	By	Chkd.
A	11-04-07	ISSUED FOR PLANNING	MAN	ST

Client: **RILTA Environmental Limited**

Project: **INTEGRATED WASTE MANAGEMENT FACILITY, GREENOQUE, CO. DUBLIN**

Title: **WEIGHBRIDGE DETAILS**

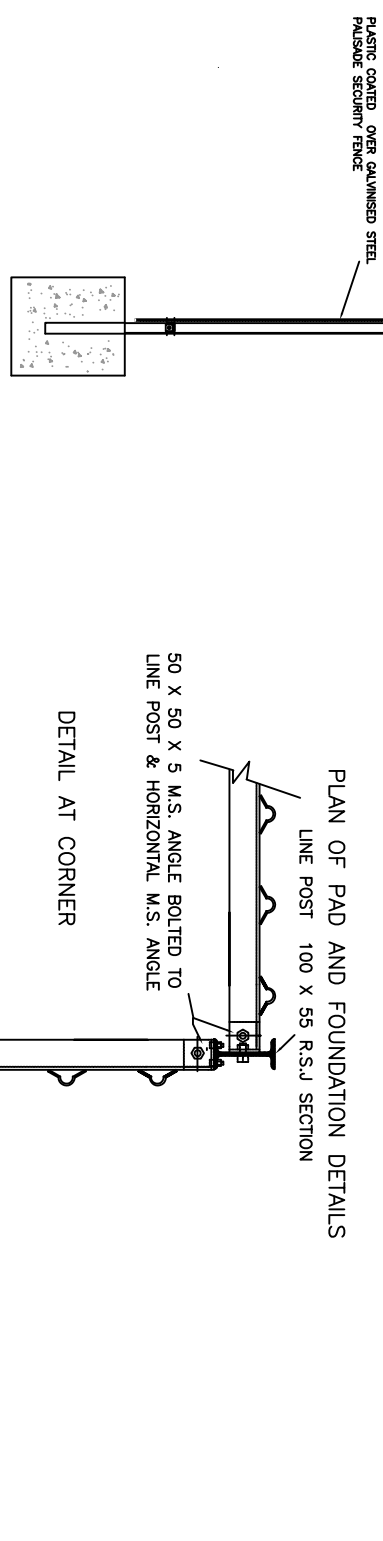
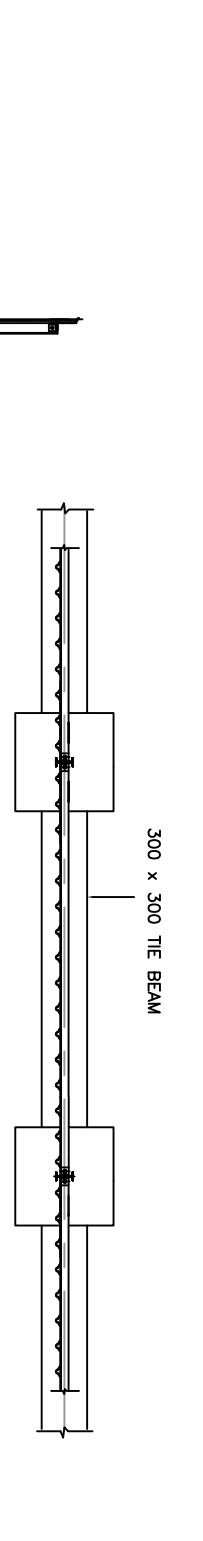
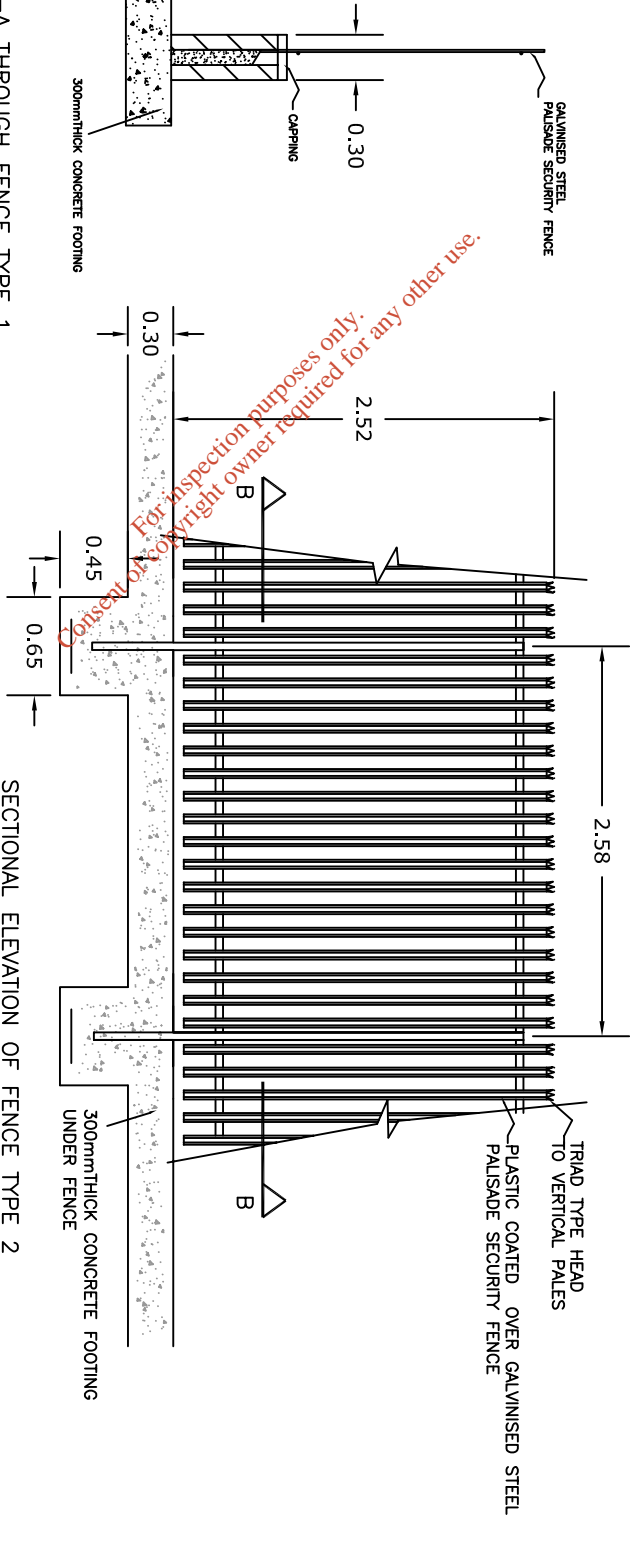
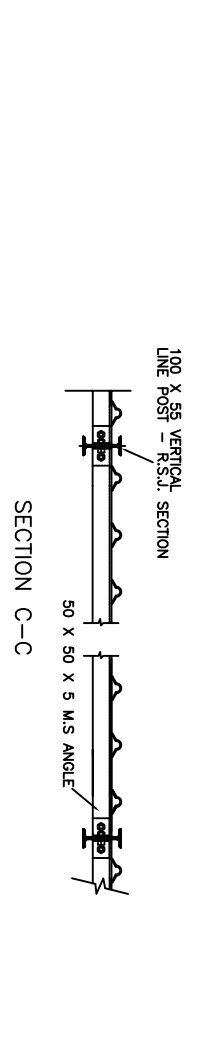
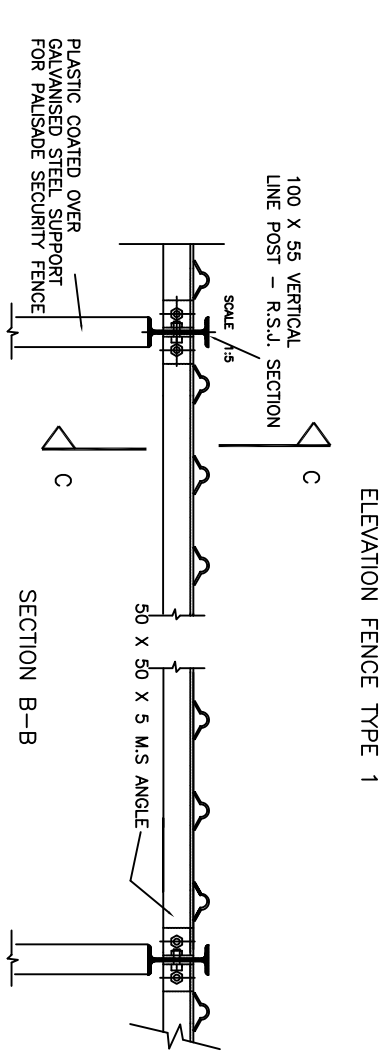
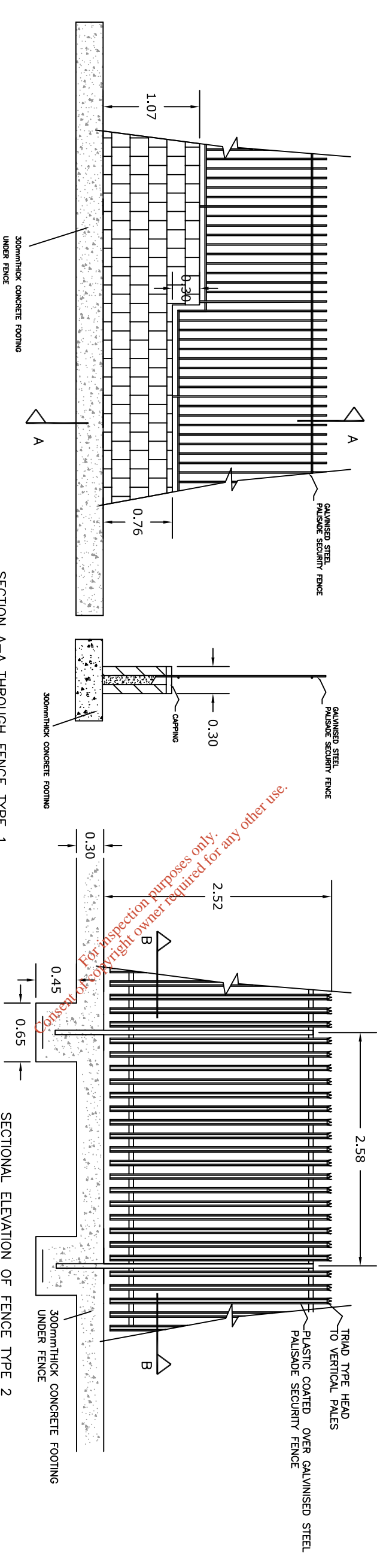
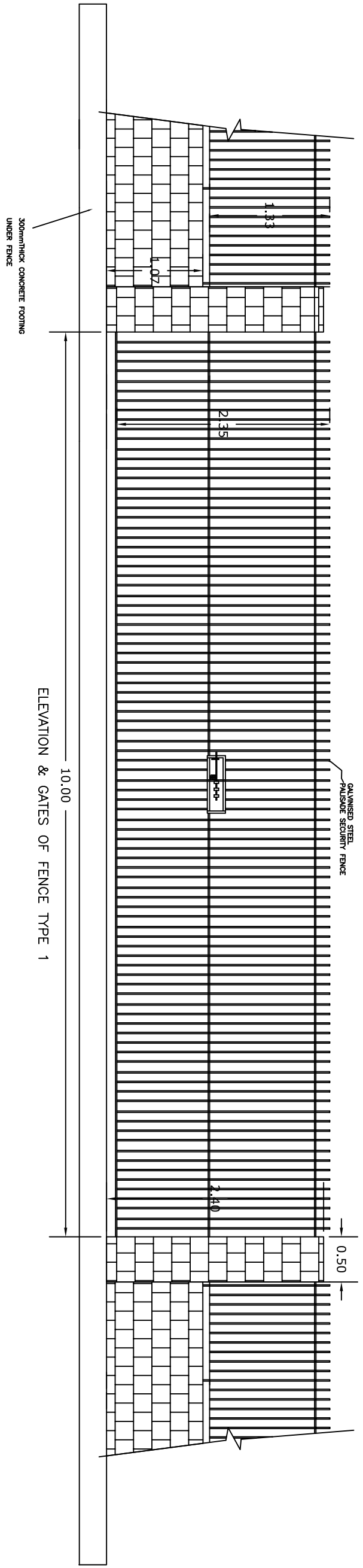
Scale @ A1: **1:50**

Prepared by: **M. Nolan** Checked: **S. Tinnelly** Date: **April 2007**

Project Director: **D. Grehan**

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Drawing No.: **3684-01-225** Issue: **A**



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Issue	Date	Description	By	Checked
A	11-04-07	ISSUED FOR PLANNING	MAN	ST

Client:
RILTA Environmental Limited

Project:
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Title:
DETAILS OF FENCING AND SIDE GATEWAYS

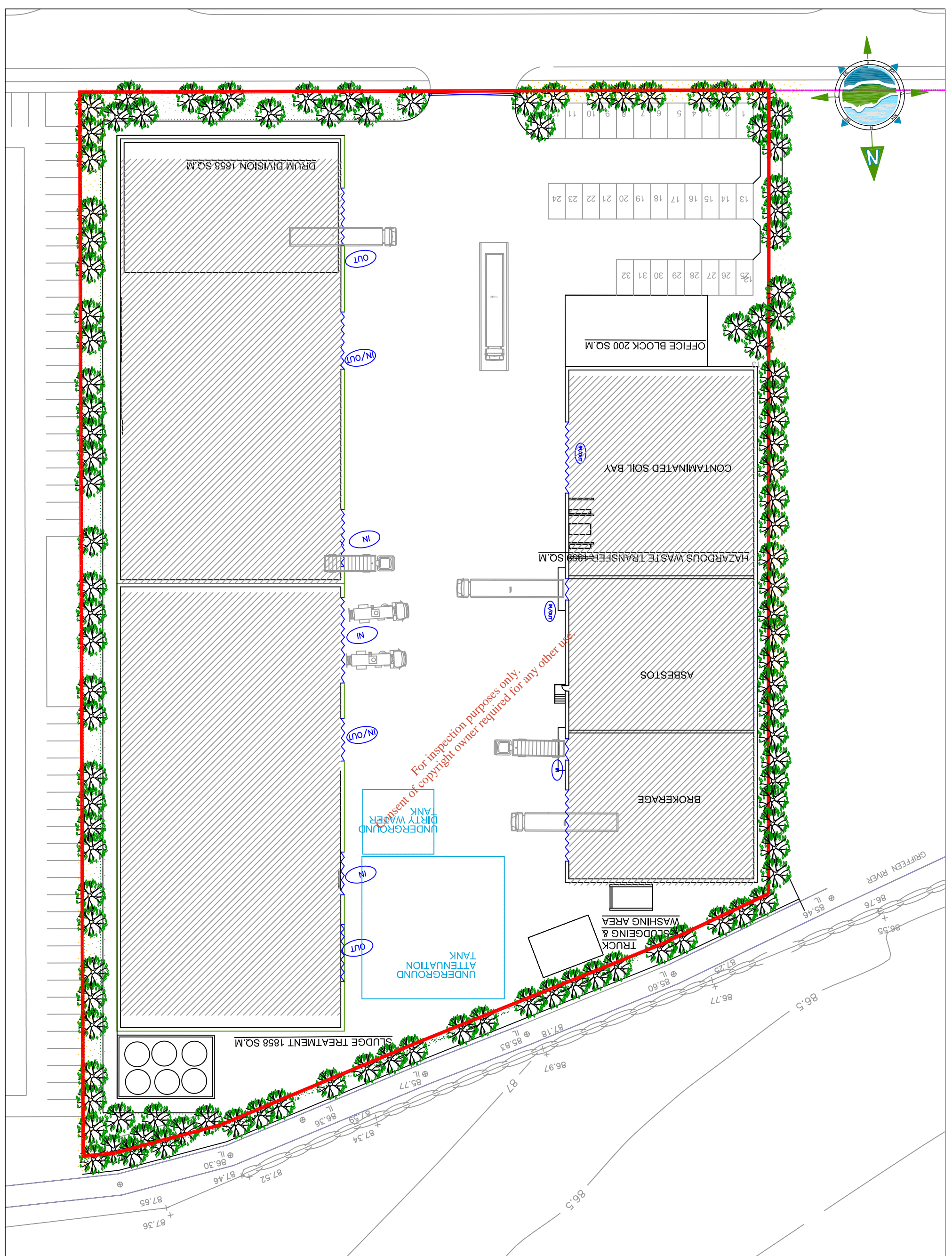
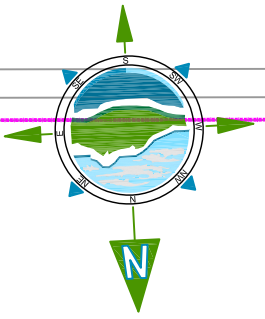
Scale @A1: 1:25

Prepared by: M. Nolan
Checked: S. Tinnelly
Date: April 2007

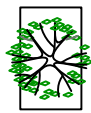
Project Director: D. Glehan

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Drawing No.: 3684-01-226
Issue: A



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Specimen trees

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Issue	Date	Description	By	Chkd.
A	11-04-07	ISSUED FOR PLANNING	MAN	ST

Client:
RILTA Environmental Limited

Project:
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Title:
LANDSCAPING LAYOUT PLAN

Scale @ A1: **1:200**

Prepared by: **M. Nolan** Checked: **S. Trinnally** Date: **April 2007**

Project Director: **D. Grehan**

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Drawing No.: **3684-01-227** Issue: **A**