Sustainable Resource Recovery Facility at Crag Avenue, Clondalkin Industrial Estate, Clondalkin.

ENVIRONMENTAL IMPACT STATEMENT

VOLUME 1

Non-Technical Summary

South Dublin County Council

October 2003

RPS MCOS

TABLE OF CONTENTS

1 INTRODUCTION

1.1 BACKGROUND

This Environmental Impact Statement (EIS) is part of the planning application submitted by Reduce Reuse & Recycle Ltd. to South Dublin County Council seeking planning permission to develop a Sustainable Resource Recovery Centre on a 4.5Ha (11.1 acres) at Crag Avenue, Clondalkin Co. Dublin. The site is located in Clondalkin Industrial Estate two kilometres north of Clondalkin village. The property is currently used as a car warehouse and distribution centre (Transcar Warehousing and Car Distribution).

RPS-MCOS were commissioned by Reduce Recycle & Recycle Ltd. to prepare an Environmental Impact Statement (EIS) for the proposed development.

The Environmental Impact Statement assesses the potential environmental impacts associated with the construction and operation of the proposed development. Where the potential exists for significant impacts to occur, ameliorative measures to prevent or minimise the impact are given. The EIS provides information which the competent authority uses in determining whether or not to grant consent. This information is also used by affected parties to evaluate the acceptability of the development and its impacts.

2 REDUCE REUSE & RECYCLE (RRR) LTD.

RRR is an established recycling company with over 30 years experience in the waste management industry providing a nationwide service to customers. Waste collection is carried out under a separate name "Greyhound Recycling & Recovery". In 2002 RRR was Ireland's most successful recycler of packaging waste according to REPAK, the nationwide packaging waste controllers. In 2003 RRR were awarded the "Recycler of the Year" award by Repak.

The company is based in Dublin and operates two authorised waste recovery and transfer facilities in Dublin and Limerick and holds all necessary waste collection permits for its haulage fleet.

The principle materials collected by Greyhound include commercial cardboard, paper, plastic, and other types of packaging waste. Since the company does not have a landfill facility, they work closely with their clients to channel as much waste as possible away from landfill.

Greyhound has established itself as a market leader through constant innovation and improvement. This is reflected by achieving the following recognitions:

- **ISO 9002** (being the first waste company to achieve accreditation in March 1998).
- **EPA Waste Licence** (Reg. No. 95-2; operating under the name of Reuse, Reuse & Recycle Ltd.)
- The company are currently working towards achieving **1SO 14001** environmental standard and expects to be awarded the ISO14001 after the final audit in November 2003.
- **2003 Repak Recycler of the year**
- Paper recycler for the **2003 Special Olympics**

3 THE NEED FOR THE DEVELOPMENT

The RRR business has been expanding rapidly in recent years in tandem with national recycling growth. The company requires additional capacity to accept, sort and transfer a growing volume of waste. The proposed facility is in keeping with the following national and local policies:

- Changing Our Ways (1998)- The Government Policy Statement on waste management aims to reduce dependence on landfill, increase recycling and recovery of used materials and to increase private sector action.
- Delivering change (2002)- emphasis on source separation, expanding recycling infrastructure.
- Dublin Waste Management Plan (1998)- looks to commercial collection companies to establish additional capacity to sort and recover commercial waste. Adopted by all four Dublin Local Authorities, the Plan sets an ambitious recycling & recovery target of 59% for the region.
- The new proposed new materials recycling and recovery facility is line with the South Dublin County Council Development Plan policies.

4 ALTERNATIVES

A number of developments were pursued by RRR Ltd. in the development of their additional capacity.

A planning application was lodged by RRR Ltd. for an extension to their existing facility at Knockmitten Lane which sought to increase the recovery capacity of their operations. However, despite been granted permission by South Dublin County Council, the decision was subsequently overturned by Bord Pleanala in 2003.

It was then decided to seek an alternative and much bigger site suitable to expand the company's operations on a sustainable medium-long term basis.

The site selection process began with the examination of a number of sites including a 9.5 acre site at Turnpike, Dublin 12 that was deemed unsuitable due to the close proximity to residents. RRR Ltd. sought further sites in suitably zoned areas. This process identified the Crosbie Transcar site as being particularly suitable.

RRR Ltd. believes that the site of the proposed development, which is currently used as a car storage and distribution compound, is the most suitable and logical location for the proposed development for the following reasons:

- The site is zoned for the proposed use (Light Industrial Use)
- The location is well separated from residential areas, located in the centre of an industrial estate.
- The size of the site allows for future expansion and improvement.
- The proposed development will make use of some of the existing infrastructure on the site.

In the event of the "do nothing" scenario there will be a deficit in the waste management infrastructure in the Dublin region and will lead to more waste going to landfill. It may also pose a serious treat to the future viability of the company.

4.1 PUBLIC CONSULTATION

In accordance with the Environmental Protection Agency's guidelines on compiling an Environmental Impact Statement, consultation forms an integral part of the EIS process.

During the pre-planning stage of this development contact was made with a number of relevant statutory bodies outlining details of the proposed new facility and inviting written submissions from them. Scoping meetings were held with South Dublin County Council, including the Planning, Environment and Traffic departments.

A public information day was held to inform members of the local community about the proposed development and to invite comments from them. Local businesses in the areas received brochures detailing the proposals, as did local political representatives. Among the primary issues and concerns expressed between the local authority and local public consultation were noise and traffic impacts, odour, employment opportunities and recycling infrastructure for local businesses. Comments and feedback from all consultation measures has been taken into account in the EIS and where relevant in the design of the facility.

5 SITE AND PROPOSED DEVELOPMENT DESCRIPTION

5.1 SITE DESCRIPTION

The site of the proposed development measures 4.5Ha (11.1acres) and is currently utilised as a car storage and distribution compound. It is located on Crag Avenue in Clondalkin Industrial Estate, Dublin 22, north of Clondalkin village, and is show on **Figure 1.1**. The estate is bounded to the west by the M50 Motorway, to the south by the Grand Canal, to the east by Cloverhill Road and to the north by the Dublin-Kildare railway line and Cloverhill Industrial Estate, an industrial estate managed by the IDA.

5.2 DEVELOPMENT DESCRIPTION

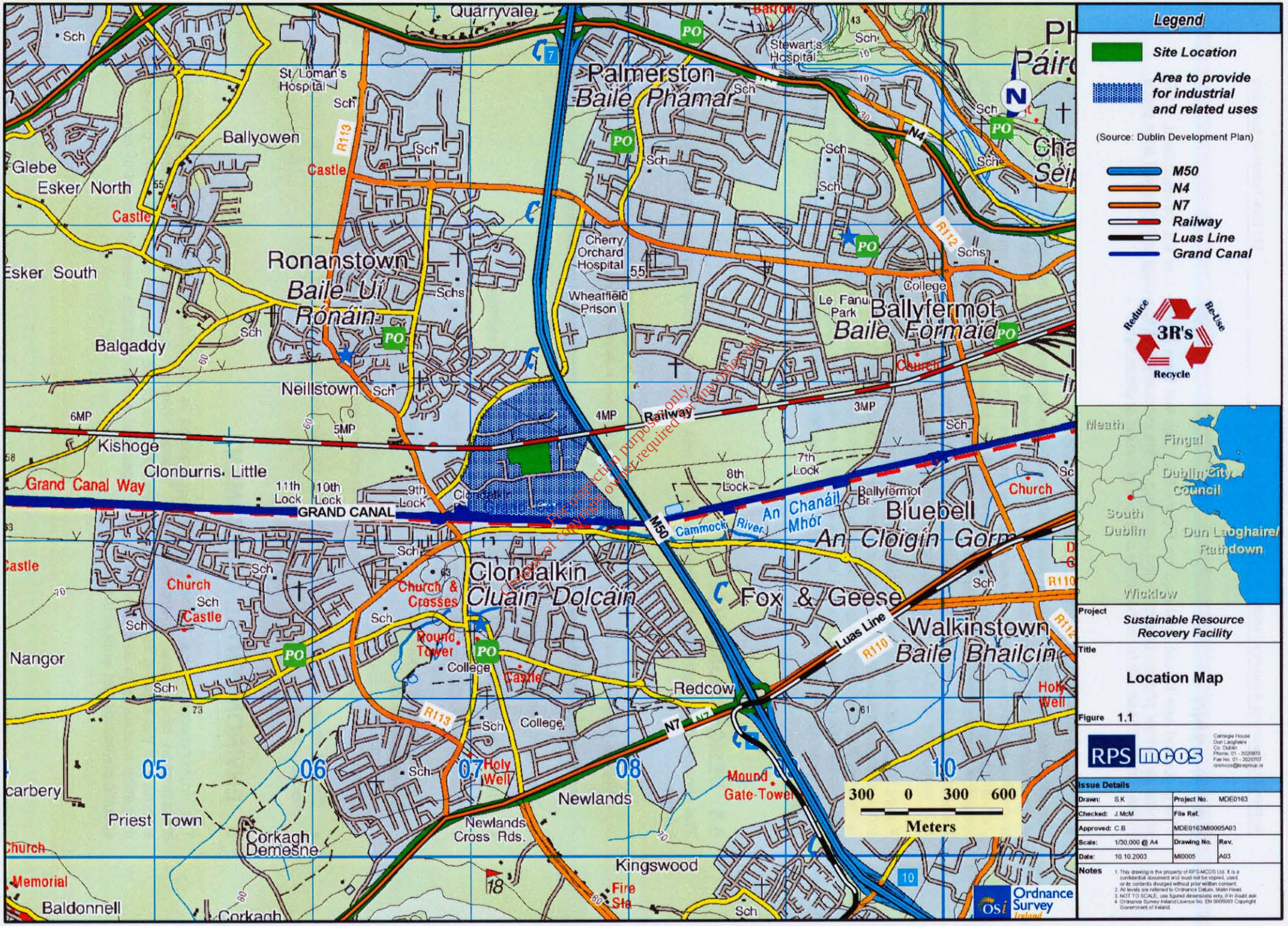
The proposed development will consist of the following elements:

- New waste recycling and transfer building (4 909 sq. m).
- New administrative office building (606 sq. m).
- Traffic control building (60 sq. m) and weighbridges.
- Skip storage area.
- Truck parking area.
- Ancillary features including roads, sewerage and surface water drainage.
- Improved site entrance.
- Landscaping measures.
- Small wind turbine adjacent to the office, 13m in height and approx. 2.5m in diameter.
- Underground rainwater storage tank.

The primary function of the new recycling and transfer building will be to segregate greater quantities of waste for recycling purposes. The maximum proposed tonnage is 250,000 tonnes per annum to be reached after approximately two years of operation. The building will also be used to bulk up the residual waste that is unsuitable for recycling. The facility design will support the principle of sustainable development utilising solar panels, wind turbine, reuse of rain water within the site infrastructure.

Some of the existing buildings and structures on the existing site will be retained by the new development. The existing hard standing surface will be retained in most areas. Service infrastructure that will serve the new site will include three-phase electricity, telecommunications infrastructure, water mains, storm water drains and foul sewerage.

Provisions will be made in the planning application for the improvement of the existing services and for the expansion to bring each of these services to the new buildings at the site.



5.3 PHASING

The proposed site layout is shown on Figure **5.2**. This will form Phase 1 of the development. RRR envisage further phases of expansion including waste recovery and recycling activities will take place in the future. These will form the basis of future planning applications.

5.4 SUSTAINABLE RESOURCE RECOVERY

The proposed new state of the art sustainable resource recovery facility has been designed to be as environmentally friendly as possible. This aim was followed in the design of both the main processing and office buildings. Some sustainable design features include a small wind turbine and solar panels that will generate energy, reducing the overall power requirement for the offices, and a rainwater collection system that will allow for the reuse of collected rainwater in the main facility building. These features along with others help promote the sustainable aspect of the facility whose ultimate purpose is to reduce the amount of materials sent to landfill for final disposal.

Future phases of development at the facility are likely to revolve around research and development in terms of converting waste materials to resources – for example further reprocessing of the materials recovered into new products and raw materials. RRR are committed to implementing opportunities for sustainable use of resources at all stages in their operation. The company intends to take advantage of any new technology that will emerge which could increase recycling and recovery of waste materials.

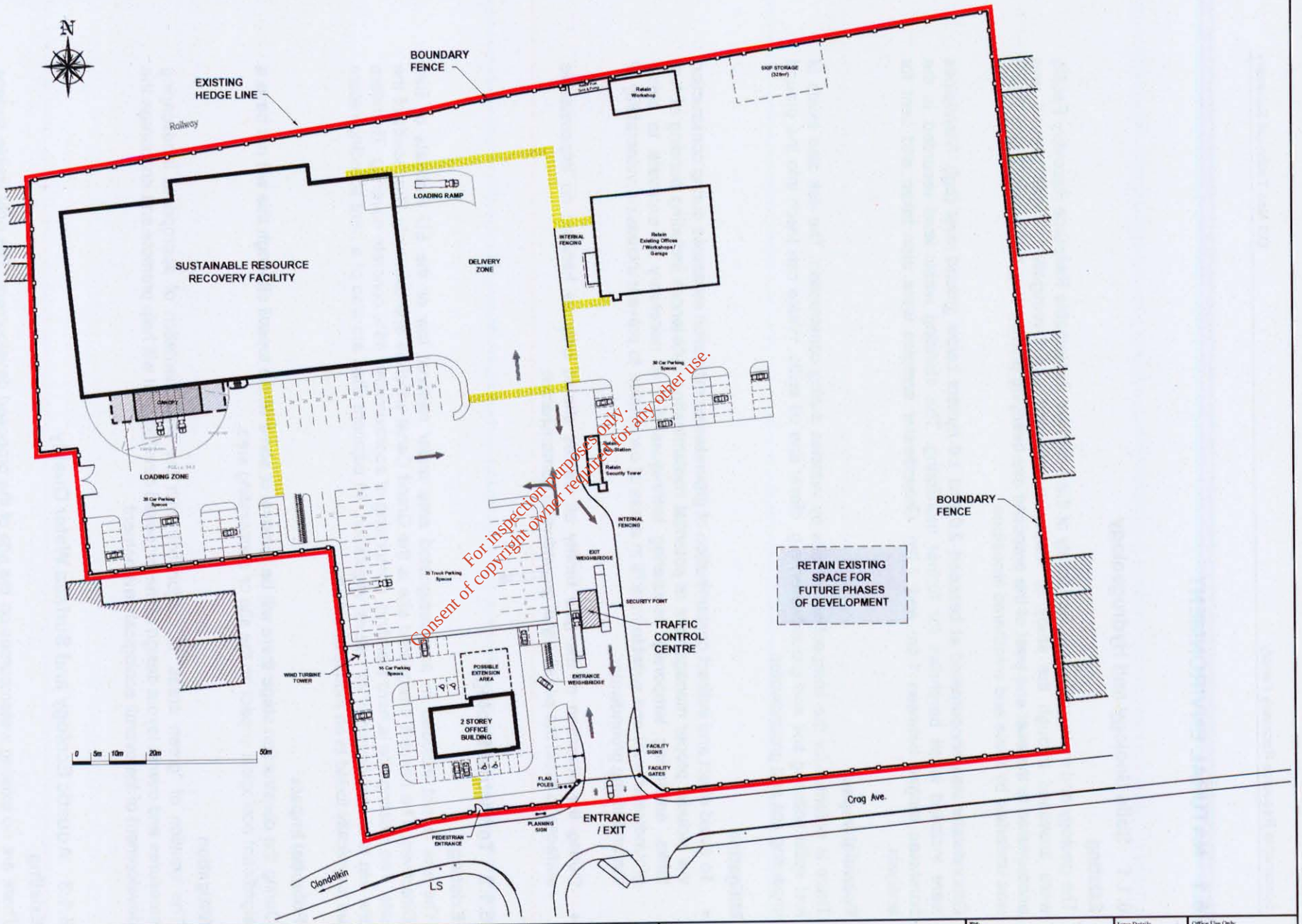
5.5 DESIGN OBJECTIVES

The principle design objectives associated with the new proposed development can be summarised as follows:

- The provision of a simple yet functional and safe means of receiving, sorting, baling, pelletising, chipping, recycling, compaction and off-loading of various waste streams.
- The minimisation of the potential impacts from spillages, contamination or otherwise.
- The minimisation of any fugitive emissions.
- The design and construction of a facility that meets high safety standards.
- The new facilities should be accommodated within the available area of the site.
- The warehouse should be large enough to accommodate the loading and unloading of trucks and the separation of waste.
- Careful integration with the environment and minimisation of potential environmental impacts.
- Careful design of new buildings in order to minimise any cut and full requirements during construction.

6 ENVIRONMENTAL ASSESSMENT

The environmental topics of the EIS are summarised in the following section under the general classification of "Natural Environment" and "Human Beings". Each section commences with a summary of the existing environment, predicated impacts of the proposed development and planned mitigation measures to deal with the impacts. Specialist sub-consultants were employed to carry out specific environmental work at the site.



Reduce Re-Use 3R's Recycle

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Notes.
1 This drawing is the property of M.C.O'Sullivan & Co. Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2 All levels are referred to Ordnance Survey Datum, Malin Head.
3 DO NOT SCALE, use figured dimensions only, if in doubt ask.

No.	Date	By	Amendment
A01	Oct'03	RH	Issue for Approval

Job: SUSTAINABLE RESOURCE RECOVERY FACILITY

Title: SITE LAYOUT

Issue Details	
Drawn	RH
Checked	WP
Approved	CB
Scale	1:1000
Date	Oct'03

Office Use Only
File Ref: mde0163F05.2A01.dwg
Job No. mde0163
Drawing No. FIG 5.2
Rev. A01

6.1 NATURAL ENVIRONMENT

6.1.1 Soils Geology and Hydrogeology

Existing

The geology and hydrogeology in the vicinity of the proposed Sustainable Resource Recovery Facility were assessed through the study of maps, reports and site investigation. Made ground was encountered to the east and west of the proposed site overlying gravely clay and gravel, which in turn was underlain by shale and weathered limestone.

Groundwater was encountered at between 2.0 and 3.0 meters below ground level (bgl). Standpipes were installed in all boreholes for further monitoring. The standing water level recorded in the boreholes ranged between 1.6m and 2.0m. Groundwater samples were also taken and sent for analysis.

Potential Impact

There is potential for the compaction of soils by vehicles during construction. The risk also exists of fuel spills polluting soil and groundwater, e.g. diesel and oil spills. Waste can leach into the ground impacting soil and groundwater.

Mitigation

- To avoid direct and indirect contamination of groundwater mitigation measures during construction will include: proper management of potential contaminating substances including bunding of fuel tanks, employing temporary dewatering techniques if it is necessary to excavate to below groundwater level and suitable backfill in areas of excavation to prevent increasing vulnerability of the underlying groundwater.

- During the operation of the new facility all wastes should only be handled on impermeable surfaces to avoid the possibility of groundwater contamination.

6.1.2 Terrestrial Ecology

Existing

The site is not included in any designated area under national law or the EU Habitats or Bird Directives. The nearest designated site is the Grand Canal which is approximately 2km south of the site. The existing site is hard standing, comprising of approximately 85% concrete covering. Therefore the site is almost devoid of all natural vegetation. All adjacent sites are also of a hard standing nature as is typically found in an industrial estate.

Potential Impact

During the construction stage there will be removal of some of the topsoil although this will not have a significant ecological impact on the site or surrounding area.

Mitigation

The creation of "green areas" in conjunction with the implementation of appropriate landscaping measures and overall layout design of the proposed development will help promote and encourage the development of the overall ecological environment.

6.1.3 Aquatic Ecology and Surface Water Quality

Existing

There are no existing watercourses on the site of the proposed development. The only visible surface water close to the site is a small feeder stream that receives the drainage discharge from Crag Avenue. This stream runs down to and along the Grand Canal before it discharges into the River Camac at Blue Bell Avenue.

Potential Impact

There are potential negative impacts on the stream which receives surface water drainage from the site and which flows in to the River Camac, due to sedimentation from the construction phase, and from possible run-off from waste from fuels, spillages etc., or other processed wet wastes during the operation of the proposed development.

Mitigation

In order to prevent or reduce the potential risk of contamination of water quality in adjacent watercourses a number of steps will be incorporated into the design and construction phase as well as during the operation of the new facility:

- Surface water runoff generated on-site will be collected and conveyed off-site via a specially designed surface water network system. The network will consist of drains, gullies, manholes and pipes and will reduce the possibility of surface water ponding occurring on-site. The runoff will be channelled through an oil-interceptor which will remove any pollutants from the surface water before connecting into the local area surface water system.

- Surface water management will be implemented during the construction stage to minimise discharge of sediment.

- The main warehouse, when operational, will not release any leachate since the accepted waste ill be predominately dry packaging. There will be no drainage on the waste processing area. Any spills will be collected by on-site suction sweeper and disposed of off-site.

- Capacity of rainwater for reuse will reduce the volume of surface run-off from the site.

6.1.4 Air Quality, Odours & Climate

Air Quality & Odours

Existing

A baseline ambient air quality survey was carried out in the vicinity of the proposed development. Currently the air quality is moderate with levels of indicators for traffic-derived pollution (benzene, particulate matter and nitrogen dioxide) below the relevant European Union limits. The main source of air pollution in the area is from motor vehicle exhausts and the concentrations of pollutants decreases with distance from major roads.

Potential Impact

The storage on site of any organic wastes for long periods of time may give rise to offensive odours, particularly in spells of dry and warm weather. The processing of waste outdoors could generate dust.

During construction air borne particles may give rise to the generation of dust. Construction vehicles may also give rise to petrol and diesel exhaust emissions. Trucks and vehicles travelling to and from the new facility could give rise to dust generation particularly in spells of dry weather.

Mitigation

Good working practices and the following mitigation measures will help minimise any negative impacts to air quality:

Construction Phase:

The contractor will be required to produce a dust minimisation plan which will incorporate the following measures:

- Regular cleaning of site roads (once a week to increase to once a day if heavy rain with a road sweeper)

- Regular watering of roads which have the potential to give rise to fugitive dust during dry and or windy weather conditions (once a week with a road sweeper)
- 15 mph speed restrictions applied to site roads
- Material handling systems and site stockpiling of materials shall be designed and laid out to minimise exposure to wind during construction. Any stockpiles of materials likely to create nuisance dust will be kept covered.

Operational Phase:

- Use of fast acting roller-shutter doors when waste delivery trucks are delivering waste to the enclosed building
- Ensuring residual wastes and any organic wastes are moved off-site promptly
- Use of odour and dust suppression systems (mist sprays) at relevant door openings
- All waste handling operations will be undertaken in a fully enclosed building.

Climate

Existing

A study was conducted on the potential climatic impacts of the proposed scheme taking into consideration both long-term weather patterns (macro-climate) and localised atmospheric conditions (micro-climate).

Motor vehicles are a major source of atmospheric emissions thought to contribute to climate change. Smooth inflow and outflow of traffic incorporated into the site design and future improvements to existing road will result in free flowing traffic which will reduce the impact arising from vehicle emissions, compared to the emission pattern associated with congested driving conditions. It is considered that in general the proposed scheme will not have a significant impact on the macroclimate in Dublin.

Potential Impact

With regard to microclimate there may be slight changes in shelter, the spatial distribution of temperature, light, shade and rainwater runoff. There are no plants on the site of the proposed development that will be affected by this slight change in the microclimate. There are also no particularly sensitive life forms that will suffer.

The new development will not have a significant effect on shading or temperature profiles at the nearest residential properties therefore mitigation measures are not required.

6.1.5 Noise & Vibration

Existing

Background day time and night time noise levels are typical of an industrial zone and are influenced by traffic and industrial activity as well as passing trains on the Dublin to Kildare line.

Potential Impact

There will be short-term temporary elevated noise levels associated with construction works during the construction of the new recycling facility.

Once fully operational, the new development will utilise industrial type processes and equipment that will generate noise. The vehicles transporting materials to and from the new facility will also give rise to traffic noise.

Mitigation

Construction Phase:

- Limiting working hours on site
- Sitting of noisy/vibratory plant as far away from sensitive properties as permitted by site constraints.
- Communication line open to neighbours to answer and deal with suggestions or complaints when they arise.

Operational Phase:

- Keep doors of waste building closed at all times when not in use.
- Keep fleet and machinery on site well serviced to reduce noise. A strict 6 monthly service regimes with documented records will be maintained by RRR.

Once operational the waste recovery process will be totally enclosed and will be governed by a waste licence issued by the EPA. There will also be regular noise monitoring carried out, both on site and off site.

It is not expected that the new development will give rise to significant negative noise levels once the mitigation measures outlined above are in place.

6.1.6 Landscape & Visual Study

Existing

The site of the proposed development lies within Clondalkin Industrial Estate and this landscape is best described as flat and typical of mixed industrial/commercial/residential/open space suburban character.

Potential Impact

The proposed development will include a new 15.4m high building, an 9.3m high office building and a 13m high wind turbine. Visual impacts will be most pronounced during the construction stage while general construction and visual disturbance will be at its greatest.

Mitigation

During the construction stage contracts will be drawn up in accordance with this report to ensure good working practices are outlined and adhered to which will help reduce negative impacts arising during the construction period.

Storage areas will be put in place to avoid impacting on surrounding properties with such areas fully re-instated when construction is fully completed.

The design of the proposed development and the overall site layout plan have been sympathetic to the landscape character of the area including the height of the surrounding buildings and as a result the completed development will not result in any negative landscape or visual impacts.

It is anticipated that when the landscaping measures proposed in the Landscaping Master-Plan for the site are fully implemented the new development will enhance and improve the visual aesthetics of the current site.

6.1.7 Archaeology & Cultural Heritage

No known archaeology sites, as identified in the Sites and Monuments Record (SMR) are affected by the proposed development, as there are none in the vicinity of the site.

No additional areas of archaeological potential have been identified and the proposed development is not expected to impact on items of architectural heritage or other cultural heritage items. As a result no mitigation measures are necessary.

6.2 HUMAN BEINGS

6.2.1 Traffic

Existing

The proposed development site is located in Clondalkin Industrial Estate off Station Road. The existing road network has been designed to cater for relatively large volumes of traffic.

Traffic assessments have been undertaken at a number of major junctions in and around the site of the proposed development on Crag Avenue.

Potential Impact

In terms of the overall impact of the proposed development on the road network, there will be an increase of 6 PCU (passenger carrying units) movements per day after two years once the new facility is fully operational. This is not considered to be significant and the traffic can be accommodated satisfactorily within the road network. Traffic assessments have been undertaken at a number of major junctions close to the proposed development.

Mitigation

The layout and design of the access and the internal roads and car park have been designed for ease of access and egress and to minimise the likelihood of accidents.

Careful consideration has been afforded to the needs of pedestrians and cyclists, the more vulnerable road users. The proposed layout incorporates a separate pedestrian/cyclist entrance to the facility and sheltered bike racks for bicycles. Pedestrian walkways will be clearly marked throughout the site to ensure staff/visitors and vehicles can move around the site safely.

The signalised junction between Coldcut Road and Cloverhill Road would benefit from additional capacity which could be created by provision of a left turn flare on Cloverhill Road. This would be subject to further investigation by SDCC, in terms of land acquisition and overall feasibility.

The implementation of a number of strategic road improvement schemes including the Dublin Port Tunnel, the Second Westlink Bridge, the Outer Ring Road, the widening of the humpback bridges and the widening of the N4 to 3 lanes in either direction will result in significant improvements for traffic patterns in Clondalkin in the future.

6.2.2 Nuisances

The term "nuisance" covers a wide range of environmental parameters including as scavenging birds, litter and rodents can all serve as a form of nuisance.

The waste licence deals with all these specific issues individually. They are also addressed in the EIS and suitable mitigation measures are proposed for each topic. It is not anticipated that there will be a significant impact caused by any of these issues, either individually or collectively.

Potential Impacts & Mitigation

Litter

Litter can become dislodged or blown off vehicles transporting materials to and from the new facility. However, the implementation of the following control measures will minimise the potential of litter problems:

receive 250,000 tonnes/annum of material when fully operational- will not have an adverse impact on the environment.

The future landscaping proposals will lead to a significant improvement on the current industrial appearance of the site. In terms of impacting on the local community, potential effects have been examined and mitigation measures advised to eliminate any potential serious environmental risks. Once regard is had to the EPA's Waste Licence for the proposed facility, negative environmental impacts will be minimised.

The ultimate result of the operation of this proposed development would be the diversion of waste material from landfill, which is no longer a viable and sustainable option, while helping Dublin achieve its recycling targets. It will also lead to the creation of employment in the area which would have beneficial knock-on economic effects for Clondalkin which currently suffers from levels of high unemployment.

Therefore, it is recommended that this development should proceed, provided recommended mitigation measures are implemented.

- Carrying out all waste handling indoors
- Ensuring incoming and outgoing vehicles are covered
- Daily litter patrols
- Erecting windbreaks
- Good house keeping measures

Pests

The new facility may attract rodents and scavenging birds to the proposed facility to seek alternative food sources. However, the implementation of the following control measures will minimise the potential of such an unwelcome attraction.

- The removal of all waste delivered on a daily basis
- Regular washing of the tipping floor
- Ensuring all operations involving handling of materials is done indoors
- Installation of bird-deterrent measures
- Covering of all materials which is to be transported
- Routine visual inspections of pest habitats
- Hiring of professional licensed pest control specialists with expertise in controlling specific pest populations, when needed, and using rodent baits/poison and insect sprays.

As the site will be unsuitable for rodent habitation and given the mitigation measures as outlined in the EIS, it is unlikely that this will be an issue of likely concern.

6.2.3 Employment

The proposed development is expected to create up to an additional 60 jobs when fully operational.

6.3 INTERACTION OF EFFECTS

The EIS has examined the potential for separate environmental effects to interact or combine to create further or amplified environmental effects.

Potential interactions identified mainly relate to a reduction in residential quality, where potential slight impacts related to traffic, noise and air quality could interact. However, as suitable mitigation measures will eliminated/reduce the possibility of potential effects, the above interactions will be avoided. There is also a possible positive impact on community and human beings through enhanced employment opportunities. Further potential positive impacts on visual appearance of the site and flora and fauna (through improved landscaping and vegetation) are also outlined.

As the potential negative interactions between factors associated with the operation of the proposed sustainable resource recovery facility will be mitigated appropriately, it is anticipated the overall new facility will result in a net slight positive impact to the local environment.

7 CONCLUSION

The EIS has examined in detail the impacts, both positive and negative, that the proposed new facility will have on the environment. A number of potential impacts on both the natural and socio-economic environments have been identified and where necessary suitable mitigation measures to reduce negative impacts have been recommended.

Having regard to National Waste Policies, the Dublin Waste Management Plan, the South Dublin County Development Plan and the details outlined within this EIS, it can be concluded that the proposal to develop a new state of the art sustainable resource recovery & recycling facility- which will