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## ENVIRONMENTAL IMPACT ASSESSMENT REPORT

**RILTA ENVIRONMENTAL LTD**

**UNIT 14 A**

**GREENOGUE BUSINESS PARK**

**RATHCOOLE**

**COUNTY DUBLIN**

### Prepared For:

Rilta Environmental Ltd

Unit 14 A

Greenogue Business Park

Rathcoole

County Dublin



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Project	Environmental Impact Assessment Report			
Client	Rilta Environmental Ltd			
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## NON-TECHNICAL SUMMARY

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### 1.0 Introduction

#### 1.1 The Applicant

RILTA Environmental Limited (Rilta) is now part of the Enva Group and operates two licensed waste management facilities in Greenogue Business Park, from where it provides hazardous waste management services to commercial and industrial customers.

#### 1.2 Facility Overview

The Business Park was initially developed in 2003. Prior to development, the land was used for agricultural purposes. The facility was constructed and started operations under an EPA Waste Licence in December 2004. In 2014 the EPA amended the licence to bring it into compliance with the Industrial Emission Directive. In 2016 Rilta applied for a licence amendment to allow the acceptance and bagging of air pollution control residue. The EPA considered this change could not be accommodated by an amendment and subsequently Rilta submitted a licence review application.

It is proposed to accept an additional 33,000 tonnes of Air Pollution Control Residue (APCR). The APCR, which will be produced at non-hazardous waste incinerators and cement plants that use waste as a fuel, will be classified as hazardous waste.

### 2.0 Planning and Development Context

The facility is located in the Greenogue Business Park, approximately 1.5km east of Newcastle. It encompasses 0.5ha and is occupied by a main warehouse, a small warehouse, waste storage pods and an office and weighbridge.

The area is zoned for enterprise and employment related use, which includes appropriate waste management facilities. Planning permission for the original development was granted in 2002 and the proposed change does not require a new permission.

### 3 Assessment of Need

The foundation policy statement on waste management “*Changing Our Ways*” bases national policy on the EU Waste Management Hierarchy, which in descending order is:

- Prevention,
- Preparing for Reuse,
- Recycling,
- Other Recovery (including energy recovery); and
- Disposal.

The most recent Policy Statement ‘*A Resource Opportunity Waste Management Policy In Ireland 2012*’ is also based on the EU Waste Management Hierarchy and sets out how the higher tiers can reduce Ireland’s reliance on finite resources, virtually eliminate reliance on landfill, and minimise the impact of

waste management on the environment. It is a policy objective that when waste is generated, the maximum value must be extracted from it by ensuring that it is reused, recycled, or recovered.

The Dublin Waste to Energy (WtE) Facility is now operational. This is a critical infrastructure project, and has been clearly outlined in Waste Management Plans for the Region for some time. There is currently no recovery/disposal outlet for the APCR in Ireland. The proposed development is to accommodate the export of the material for recovery/disposal pending the development of indigenous recovery/disposal outlets.

#### **4. Alternatives Examined**

The facility already has an EPA licence, has the capacity to accommodate the proposed development and is located in an area with excellent transport connections. The only alternative would be to acquire a new site, apply for planning permission and an IE licence and provide the required infrastructure. This offers no environmental and economic benefits compared to the use of the existing facility.

#### **5. Description of Existing Site and the Proposed Development**

##### *5.1 Site Location & Layout*

The facility is located in the Greenogue Business Park, approximately 1.5km east of Newcastle. The site encompasses 0.5ha and there are three adjoining buildings - Main Warehouse, a smaller external warehouse and three no. waste storage pods and the Offices. There is a weighbridge at the site entrance. There is a redundant backup generator in a bund in the north-eastern corner of the site. The open yards (2,760m<sup>2</sup>) are paved with a 120mm reinforced concrete slab.

##### *5.2 Surrounding Land Use*

The land use in the vicinity of the site is a mix of commercial and industrial. Casement Aerodrome is approximately 350m to the north of the site. The closest private house is approximately 400m to the west.

##### *5.3 Waste Activities*

Current waste processing activities are confined to the acceptance and processing of electrical transformers in the main warehouse and storage of asbestos waste in the waste storage pods and the small warehouse. Refrigerators collected at WEEE drop off centres arrive in articulated trailers, which are temporarily parked pending the completion of the appropriate documentation, before they are sent to Northern Ireland for processing.

To facilitate the bagging and storage of the APCR the processing of the transformers will be moved to the small warehouse. A bagging plant and pallet racking will be installed in the main warehouse.

##### *5.4 Waste Types & Quantities*

The current licence authorises the acceptance of 60,000 tonnes, of waste of which 33,000 tonnes is hazardous. The APCR will comprise the majority, while smaller amounts of boiler ash and fly ash arising at IE licensed installations may be accepted.



## 5.6 *Environmental Monitoring*

The licence requires routine surface water, groundwater, dust deposition and noise monitoring at specified monitoring locations

## 5.7 *Accidents*

Rilta has prepared and adopted an Accident Prevention Policy and an Emergency Response Procedure that specifies roles, responsibilities and actions required to deal quickly and efficiently with all foreseeable major incidents and to minimise environmental impacts. Rilta has completed an Environmental Liability Risk Assessment (ELRA) that has identified the plausible accidents/incidents that may occur and evaluated the associated environmental effects. Based on the types of waste that are and will be accepted and the activities carried out, the only accident that presents a significant risk of environmental pollution is a fire. Rilta has completed a Firewater Retention Assessment.

# 6 **AIR**

## 6.1 *Receiving Environment*

The ambient air quality in the vicinity of the site is good and the dust deposition monitoring carried out by Rilta has established that dust emissions from waste operations are not a problem.

## 6.2 *Impacts*

The potential emissions to air from the waste activities that are and will be carried out include dust and vehicle exhausts.

## 6.3 *Baseline Scenario*

If the proposed development does not proceed there will be no new point and fugitive emission sources, the facility will continue to operate as is, and there will be no change to the potential impacts on air quality.

## 6.4 *Prevention & Mitigation Measures*

Rilta implements the control measures specified in the current licence that are designed to ensure waste activities do not give rise to negative impacts on air quality and these will continue to be applied. The trucks that transport the wastes are typically fitted with Selective Catalytic Reduction (SCR) systems.

The transfer of the APCR will be managed by a silo control system that will also control the safety system which will include a top air vent jet filter, pressure sensor, level sensors and pinch valves on the delivery hoses. Fast acting doors will be fitted on the building and these will only be opened and closed when the APCR is being delivered and the bagged APCR is being transferred.

In the unlikely event of a failure in the powder transfer resulting in the release of the contents on the building floor, the APCR will be collected using a dedicated industrial cleaning unit which will vacuum up the material.

## 6.5 *Assessment of Impacts*

The proposed development will not give rise to any new point emissions to air. There will be no additional traffic movements and therefore no change in the nature and volume of vehicle exhausts. There is the potential for fugitive emissions from the APCR processing and appropriate mitigation measures will be implemented.

## 6.6 *Residual Impacts*

The proposed development will have an ongoing imperceptible, negative impact on air quality, but will have no permanent impact.

# 7 **Population & Human Health**

## 7.1 *Receiving Environment*

Newcastle is approximately 1.5km to the west, while Rathcoole is 2km to the south. In the 2016 census, South Dublin had a population of 278,767. The population in Newcastle was 3,093 and in Rathcoole was 4,351.

## 7.2 *Impacts*

Vehicle exhaust gases can affect air quality with consequent implications for human health. While odours, noise and dusts do not present a direct risk to health, they can be a significant nuisance and cause of discomfort that may indirectly affect human health. Traffic movements can, depending on the size, location and capacity of the local road network, be a cause of congestion that affects local residents.

The site is not in an area susceptible to natural disasters (earthquake, landslide, major flood events); however accidents with the potential to impact on the health of site staff and neighbours could occur. Rilta has completed an environmental risk assessment that identifies the plausible accidents that could occur and assess the likely effects.

## 7.3 *Baseline Scenario*

If the development does not proceed, the facility will continue to operate in its current configuration with no change to the potential impacts on population and human health

## 7.4 *Prevention & Mitigation Measures*

Rilta implements the control measures specified in the licence to ensure waste activities do not give rise to noise and dust emissions that will be a cause of nuisance or impairment outside the facility boundary. The licence conditions also require the provision of mitigation measures, both infrastructural and procedural, that effectively minimise the risk of environmental liabilities associated with major accidents.

## 7.5 *Assessment of Impacts*

The ambient air quality in the vicinity of the site is good and the routine dust monitoring carried out confirms dust is not an issue. Odours from the existing waste activities are not a cause of nuisance and

the APCR is not significantly odorous. The most recent noise survey was completed in February 2018 and confirmed noise emissions from the site complied with the limits set in the licence.

The acceptance of the APCR will not result in additional traffic movements and will not contribute to increased traffic congestion in the vicinity of the Business Park. The remedial measures that may be required in response to a major accident include spill containment; demolition and removal of damaged buildings, cleaning of the foul sewer, excavation and removal of contaminated soils and reinstatement and groundwater clean-up.

#### 7.6 *Residual Impacts*

The proposed development will have an on-going, imperceptible, negative impact on human beings,

### **8. Land and Soil**

#### 8.1 *Receiving Environment*

The subsoils beneath the site are between 3 and 5 m thick and comprise grey silty clay and are underlain by limestone bedrock.

#### 8.2 *Impacts*

The development does not involve any ground disturbance and will not result in any new emission to ground.

#### 8.3 *Baseline Scenario*

If the proposed development does not proceed current operations will continue, with no change to the potential impact on land and geology.

#### 8.4 *Prevention & Mitigation Measures*

The current prevention and mitigation measures include; the routine inspection and survey of the surface water and foul water drainage systems; the adoption of an emergency response procedure and staff training on appropriate spill response actions.

#### 8.5 *Assessment of Impacts*

At present there are no direct or indirect emissions to ground and the proposed change will not give rise to any new emissions. The entire site is either paved with concrete, or occupied by buildings that prevent accidental seepages to the soils.

#### 8.6 *Residual Impacts*

The proposed development will have no impact on land and soil.

## 9. Water

### 9.1 Receiving Environment

The site is in the catchment of the Griffeen River, whose main channel flows in a broad south-west to north-east direction approximately 300 m east of the site, eventually joining the River Liffey near Lucan. The Griffeen River is part of the IE\_EA\_Liffey Water Management Unit.

The Griffeen Lower Water Body Status Report states that the overall status is 'Bad', and is considered 'At Risk' of not achieving its restoration objective of at least 'Good' status by 2027.

The bedrock is a locally important (LI) aquifer that is productive in local zones. Groundwater yields in the formation range from 5.45 - 9 cubic meters per hour. The aquifer vulnerability to pollution from the ground surface is High. The aquifer is part of the Dublin Area Groundwater Body, which is categorised as being of 'Good' status, but is 'At Risk' of achieving its objective of protecting the existing status.

### 9.2 Impacts

Sanitary wastewater and rainwater run-off from the building roof and paved open areas discharges to the foul sewer that serves the Business Park. The proposed development will not result in any change to the volume and quality of the rainwater run-off. The proposed development does not require any alteration to the existing foul and surface water drainage layout, and will not result in any change to either the quality or quantity of the discharge.

There is the potential for accidental releases of the APCR, oil leaks from the mobile plant and firewater run-off in the event of a fire. The potential pathway to surface waters is overland flow to road side gullies on the access road. The pathways to groundwater are infiltration through damaged paving and leaks from the storm drains.

### 9.3 Baseline Scenario

If the proposed development does not proceed current operations will continue, with no change to the potential impact on water from the on-going operations.

### 9.4 Prevention & Mitigation Measures

The current mitigation measures include the provision of an oil interceptor on the surface water drains that collects run-off from the yard and weighbridge; the inspection and repair of the paved areas; impermeable paving across the operational areas; the routine inspection and survey of the surface water and foul water drains; the adoption of an emergency response procedure, and staff training on appropriate spill response actions.

There is one gate valve on the foul sewer and three drains on the surface water network that can be closed in the event of an incident at the site that has the potential to contaminate surface water.

### 9.5 Assessment of Impacts

The proposed development will not result in any changes to the volume and quality of the rainwater run-off, will not give rise to any new emission to ground and ground water and will have no impact on groundwater.

## 9.6 *Residual Impacts*

The proposed development will have no impact on water.

## **10 Climate**

### 10.1 *Receiving Environment*

The climate in the area is mild and wet, with the prevailing wind direction from the south-west, with occasional winds from the east. The likelihood of a unique specific microclimate is very low.

### 10.2 *Impacts*

There is a link between greenhouse gas emissions and climate change. Direct emissions from waste management facilities are associated with on-site processing and off-site electricity power generation, while indirect emissions are linked to the vehicles transferring wastes to and from the site and staff transport.

### 10.3 *Baseline Scenario*

If the development does not proceed the current waste activities will continue with no changes to the potential for impact on climate.

### 10.4 *Prevention & Mitigation Measures*

Rilta has completed an assessment of energy usage and potential measures to improve efficiency. The controls on the air compressor used to transfer the APCR will include airflow and air pressure diagnostics to maximize efficiency. The fans on the reverse jet filters plant will be designed to give high-energy efficiency.

### 10.5 *Assessment of Impacts*

All greenhouse gas emissions contribute to a cumulative negative climate change effect unless offset by mitigation or compensatory measures. The proposed development will result in additional greenhouse gas emissions associated with the increased electricity consumption. There will be no addition traffic movements and therefore no change in the nature and volume of vehicle exhausts.

### 10.6 *Residual Impacts*

The proposed development will have an ongoing imperceptible, negative impact on air quality.

## **11 Cultural Heritage**

### 11.1 *Receiving Environment*

There is no record of any cultural heritage feature within the site boundary and it is not in a designated Architectural Conservation Area.

## 11.2 *Impacts*

The proposed development will not involve any ground disturbance and therefore there will be no risk of affecting unidentified archaeological features.

## 11.3 *Baseline Scenario*

If the development does not proceed the facility will continue to operate and the potential for impacts on the cultural heritage will remain unchanged.

## 11.4 *Prevention & Mitigation Measures*

As the proposed development will not have any impact on any cultural heritage feature, prevention and mitigation measures are not required.

## 11.5 *Assessment of Impact*

The development will have no impact on any known/unknown cultural heritage feature.

## 11.6 *Residual Impacts*

The development will no impact on any known/unknown cultural heritage feature.

# 12 **Biodiversity**

## 12.1 *Receiving Environment*

The buildings and yards on the site and in the surrounding lots are 'BL3 Buildings and artificial surfaces'. 'BL3' includes all buildings (domestic, agricultural, industrial and community) other than derelict stone buildings and ruins, and areas are covered with artificial surfaces (e.g. roads, car parks, pavements, runways, yards). These habitats are typically not species diverse and the likelihood of protected species within the site boundary is very low.

The site is not in either a Special Area of Conservation, or a Special Protection Area and the closest site is the Rye Water Valley/Carton SAC, which is 7km to the north.

## 12.2 *Impacts*

The proposed development will not result in the loss of any habitats either inside, or outside the site boundary. There is no pathway between the site and the nearest Natura 2000 sites and the proposed development will have no impact on the designated sites.

## 12.3 *Baseline Scenario*

If the proposed development does not proceed the current activities will continue with no change to the risk presented to biodiversity.

#### 12.4 *Prevention & Mitigation Measures*

As the development will not have any impact on biodiversity either inside or outside the site boundaries and will have no impact on any designated sites, specific prevention and mitigation measures are not required.

#### 12.5 *Assessment of Impacts*

The proposed development will not result in the loss of or damage to any habitats either in or outside the site boundary. The development site is not in or adjacent to any Natura 2000 Sites. There are no viable pathways between the development site and Natura 2000 Sites.

#### 12.6 *Residual Impacts*

The proposed development will have no residual impact on biodiversity.

### **13 Landscape**

#### 13.1 *Receiving Environment*

The facility is an area where the land cover use is industrial/commercial in an established and extensively developed industrial zone. It is not in an area designated as highly sensitive and is not overlooked by any designated views or prospect areas. The shape and mass of the existing buildings are similar to those of other commercial and industrial operators in the estate.

#### 13.2 *Impacts*

The proposed development does not involve any change to the appearance of the buildings or the site layout.

#### 13.3 *Baseline Scenario*

If the development does not proceed, the facility will continue to operate in its current layout, with no change to the external appearance of the facility.

#### 13.4 *Prevention & Mitigation Measures*

As there will be no change to the external appearance of the site prevention and mitigation measures are not required.

#### 13.5 *Assessment of Impacts*

The proposed development will have no impact on the landscape.

#### 13.6 *Residual Impacts*

The proposed development will no residual impacts on the landscape.

## **14 Material Assets**

### *14.1 Receiving Environment*

The site is surrounded on all sides by commercial/industrial lots. The Business Park does not have any significant amenity value for members of the general public. The nearest amenity to the site is a football pitch, approximately 220m away. Current activities involve the use of diesel fuelled transport vehicles and mobile plant and electricity. There is a mains water supply to the staff welfare facilities

### *14.2 Impacts*

The development will not result in any impairment of either amenity value, or agricultural use. The development will contribute to sustaining employment levels at site. The APCR bagging will increase electricity consumption.

### *14.3 Baseline Scenario*

If the proposed development does not proceed, there will be no socio-economic benefit and no increase in natural resource consumption.

### *14.4 Prevention & Mitigation Measures*

Rilta implements the nuisance control measures specified in the licence to prevent impacts on local amenities and also applies resource consumption control measures to minimise usage.

### *14.5 Impact Assessment*

The current operations are not a source of adverse environmental nuisance or impairment of amenities outside the site boundary. There will be an increase in resource consumption (electricity). The proposed development will have a slight socio-economic benefit associated with maintaining local employment levels.

### *14.6 Residual Impacts*

The development will have no adverse impact on amenity values and socio-economic activities in the locality. It will have a slight negative impact in relation to the consumption of electricity, but will have a slight positive local economic benefit.

## **15 Interaction of the Foregoing**

There are actual and potential direct, indirect and cumulative effects of the changes due to interaction between relevant receptors, which are Population & Health/Air and Climate/Material Assets

### *15.1 Population & Health / Air / Noise*

The proposed development has the potential to impact on human beings from noise and dust. The proposed method of operation has taken account of these emissions and effective mitigation measures have been identified.



### 15.2 *Climate / Material Assets*

The development will result in an increase in greenhouse gas emissions associated with an increase in electricity consumption.

### 15.3 *Cumulative Effects*

The assessment of the impacts of the proposed development took into consideration the impacts of the existing facility. The noise and ambient air quality surveys were conducted during typical operational hours and the predictive assessments include the impacts of both the existing emissions and those associated with the proposed development.

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## PREAMBLE

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Rilta Environmental Ltd (Rilta) operates its waste management facility at Unit 14 A Greenogue Business Park under an Industrial Emissions licence granted by the Environmental Protection Agency (Agency) in 2003.

In July 2017 Rilta applied to the Agency for a review of the licence to allow the acceptance and processing of air pollution control residues.

In accordance with Section 83(2A) of the EPA Act 1992, as amended, the Agency has determined that the application should be made subject to an Environmental Impact Assessment (EIA) as respects the matters that come within the functions of the Agency, as the proposed development exceeds the following threshold in Schedule 5, Part 2 of the Planning and Development Regulations 2001, as amended, and is likely to give rise to significant effects on the environment by virtue of its nature, size and location:

*11.(b) Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule*

Having regard to the above advice, the Agency requested the provision of an updated Environmental Impact Assessment Report (EIAR) that meets the requirements of Directive 2011/92/EU, as amended by 2014/52/EU (EIA Directive).

An Environmental Impact Assessment was completed in 2002 in support of an application for planning permission and the current Waste licence, and an Environmental Impact Statement (EIS) accompanied the licence application.

The 2002 EIS was reviewed and compared to the requirements of Article 5 (1)(a) to (e), Article 3(1)(a) to (e) and Annex IV of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive) on the following:

- (i) human beings (population and human health), flora and fauna (biodiversity);
- (ii) soil (land & soil), water, air, climate and the landscape;
- (iii) material assets and the cultural heritage;
- (iv) the interaction between the factors referred to in paragraphs (i), (ii) and (iii).

The 2002 EIS was then revised and updated taking into consideration the European Commission's Guidance on the preparation of the Environmental Impact Assessment Report and the Environmental Protection Agency's Guidelines on the Information to be contained in Environmental Impact Assessment Reports (Draft August 2017).

The assessment of the effects on climate includes the implications for climate change. The assessment of impacts on biodiversity incorporated an evaluation of the significance of effects on Natura 2000 Sites. The assessment of the impacts on Land and Soils addressed the implications for land take and land use requirements. The effects on population and human health into consideration the likely effects of major accidents and/or natural disasters.

Impacts were assessed in terms of the likely natural or physical changes to the environment resulting either directly, or indirectly from the proposed development taking into consideration a 'baseline' scenario, cumulative effects and accidents.

The evaluation of the significance of an impact was based on current knowledge and method of assessment.

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# 1 INTRODUCTION

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## 1.1 The Applicant

RILTA Environmental Limited (Rilta) is now part of the Enva Group and operates two licensed waste management facilities in Greenogue Business Park, from where it provides hazardous waste management services to commercial and industrial customers.

## 1.2 Facility Overview

### 1.2.1 Site History

The part of the Business Park occupied by the Rilta facility in Unit 14 A facility was initially developed in around 2003. Prior to development the land was used for agricultural purposes. The facility was constructed and started operations under a Waste Licence issued by the Agency (W0185-01) in December 2004. The licence approved the acceptance of 60,000 tonnes per annum of a combination of hazardous waste, commercial waste, construction and demolition waste, industrial sludges and industrial waste.

In 2014 the Agency amended the licence to bring it into compliance with the Industrial Emission Directive. In 2016 Rilta applied for a Technical Amendment to allow the acceptance and bagging of up to 33,000 tonnes of air pollution control residue (APCR), which is classified as hazardous waste. The Agency considered this change could not be accommodated by a Technical Amendment and subsequently Rilta submitted a licence review application.

### 1.2.2 Proposed Development

It is proposed to accept, bag and store up to 33,000 tonnes per annum of hazardous APCR and boiler ash from the Dublin Waste to Energy Ltd waste recovery plant at Poolbeg at the facility.

A bagging plant and pallet racking for the storage and transfer of the APCR will be installed. The bagging plant will comprise

- Three storage silos, with a combined capacity of 525m<sup>3</sup>;
- A pressure transfer system;
- Two bulk bag loading systems (one duty and one stand-by), and a
- Pallet racking system

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## 2 PLANNING & DEVELOPMENT CONTEXT

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### 2.1 Site Location & Description

The facility is located in the Greenogue Business Park, approximately 1.5km east of Newcastle. It encompasses 0.5ha and there are three adjoining buildings - Main Warehouse, a Small Warehouse, formerly called the Tanker Bay, Waste Storage Pods formerly called the Chemical Stores and the Offices. There is a weighbridge at the site entrance. There is a redundant backup generator in a bund in the north-eastern corner of the site. The open yards (2,760m<sup>2</sup>) are paved with a 120mm reinforced concrete slab.

### 2.2 South Dublin County Council Development Plan 2016-2022

Section 7.5.0 of the Plan states that the Planning and Development Act 2000 (as amended) requires a Development Plan to include objectives for waste recovery and disposal facilities and that the objectives of the relevant Waste Management Plan are deemed to be included in the Development Plan.

The Development Plan assigns Zoning Objectives to all lands in the County. These, in conjunction with the corresponding Land Use Zoning Tables, identify the classes of development and uses that are permitted in principle, open for consideration or not permitted within each land use zone.

Land uses that are listed as 'permitted in principle' are considered to be generally acceptable, subject to further assessment against the relevant policies, objectives and standards set out under the Plan. The development site is in Zoning Objective EE, which is 'to provide for enterprise and employment related uses'. Those activities 'permitted in principle' include recycling facility and refuse transfer station.

### 2.3 Planning Permission

Planning permission (Ref SD02A/0301) was granted for the development as a waste transfer station for the handling of hazardous and non-hazardous wastes in November 2002. In 2017, South Dublin County Council confirmed that the proposal to accept and bag the APCR did not require planning permission. A copy of the Declaration of Exemption is in Appendix 1.

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## 3 ASSESSMENT OF NEED

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### 3.1 National Waste Management Policy

The foundation statement on national waste management policy “Changing Our Ways” was issued by the Department of the Environment and Local Government in September 1998. The statement firmly based national policy on the EU Waste Management Hierarchy, which in descending order of preference is:

- Prevention;
- Preparing for Reuse;
- Recycling;
- Other Recovery (including energy recovery), and
- Disposal.

The statement was based on and supported by EU legislation that required the reduction in the volume of biodegradable waste disposed to landfill. EU Landfill Directive 99/31/EC set out the following reduction targets, which are based on 1995 figures:

- Minimum 25% reduction by 2010 (includes 4 year derogation);
- Minimum 50% reduction by 2013 (includes 4 year derogation);
- Minimum 65% reduction by 2016 (derogation available but not taken).

The 2002 government policy statement ‘Preventing and Recycling Waste - Delivering Change’ identified initiatives to achieve progress at the top of the Waste Hierarchy to prevent waste arising and increase recycling rates.

In 2004 ‘Waste Management – Taking Stock and Moving Forward’, the significant improvement in recycling rates achieved since 1998 was recognised, but the need for further expansion was emphasised. The Statement confirmed that Ireland’s national policy approach remained ‘grounded in the concept of integrated waste management, based on the internationally recognised waste hierarchy, designed to achieve by 2013 the ambitious targets set out in Changing Our Ways’.

The EU Waste Framework Directive 2008/98/EC was introduced to coordinate waste management in the Member States so as to limit the generation of waste and optimise the organisation of waste treatment and disposal.

The Directive, which also established the first EU wide recycling targets, was transposed into Irish Law by the European Communities (Waste Directive) Regulations 2011 (S. I. No.126 of 2011). By 2020, Member States must reuse or recycle 50% of certain categories of household waste and reuse, recycle or recover 70% of non-hazardous C&D waste.

The most recent Policy Statement ‘A Resource Opportunity Waste Management Policy In Ireland 2012’ is also predicated on the EU Waste Management Hierarchy and encompasses a range of measures across all tiers namely, prevention, preparation for reuse, recycling, other recovery and disposal.

The Statement sets out how the higher tiers can reduce Ireland's reliance on finite resources, virtually eliminate reliance on landfill and minimise the impact of waste management on the environment. It is a policy objective that when waste is generated, the maximum value must be extracted from it by ensuring that it is reused, recycled or recovered.

The current Waste Management Plan for the Eastern Midlands Region 2015-2021 was published in May 2015 and remains in place until a new Regional Plan is made. The Plan recognises the significant advances in the development of thermal recovery capacity in Ireland, where the principal use of the waste is as a fuel to generate energy.

It is policy of the Plan to aim to improve regional and national self-sufficiency of waste management infrastructure for the reprocessing and recovery of particular waste streams in accordance with the proximity principal.

The National Hazardous Waste Management Plan (2014-2020), which was prepared by the EPA, sets out the priority actions that should be undertaken within its lifetime in relation to the prevention of hazardous waste; improved collection rates for certain categories of hazardous waste; steps that are required to improve Ireland's self-sufficiency in hazardous waste management, and the continued identification and regulation of legacy issues.

The Plan acknowledges that the export of hazardous waste has become the established outlet for approximately half of all Irish hazardous waste. Section 6.2 of the Plan discusses the export of hazardous waste for treatment to other European countries and notes that that Article 16 (1) of the Waste Framework Directive (2008/98/EC) states that:

"Member States shall take appropriate measures, in cooperation with other Member States where this is necessary or advisable, to establish an integrated and adequate network of waste disposal installations taking into account best available techniques."

Given this principle established in European law the Plan recommends that Ireland should strive for greater self-sufficiency in hazardous waste management where it is strategically advisable and where it is technically and economically feasible.

However the Plan recognises that hazardous waste destined for recovery is subject to an open and competitive waste market in the EU, and that Ireland is also unlikely to achieve complete self-sufficiency given the range of specialist treatments that are required for certain hazardous waste streams.

### **3.2 Need for the Proposed Development**

The Dublin Waste to Energy (WtE) Facility is now operational. This is a critical infrastructure project, and has been clearly outlined in Waste Management Plans for the Region for some time. There is currently no recovery/disposal outlet for the APCR in Ireland. The proposed development is to accommodate the export of the material for recovery/disposal pending the development of indigenous recovery/disposal outlets.

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## 4 ALTERNATIVES EXAMINED

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The original EPA inspector's report for the WtE facility (Ref. No. W0232-01, 21 June 2007) states that the Flue Gas Treatment Residues are expected to be classed as hazardous and will be sent off site for disposal in an approved hazardous waste facility. It further states that if suitable landfill is not available in Ireland for the unrecoverable residues, then export of the residues will be necessary.

While the disposal of the APCR nationally is considered the preferred option, following the decision to refuse the Murphy Hollywood application for a hazardous waste landfill, the option for disposal nationally is not currently available in Ireland.

The facility location is well suited for the recovery and recycling of waste for the following reasons:

- IE licence already authorises the acceptance and packaging of hazardous wastes;
- Located off the M7 National Primary Route that facilitates easy access to the Dublin Port via the M50 and Dublin Port Tunnel, and easy access from the Poolbeg Waste to Energy (WtE) facility;
- Existing infrastructure can accommodate the acceptance, bagging and storage of the APCR
- The waste recovery activities are compatible with the Land Zoning and the current land use in the surrounding area, and
- Existing ground conditions (soil type/geology/hydrology) and distances from sensitive environmental receptors minimise the risk of unexpected emissions given rise to pollution

The only alternative would be to acquire a new site, apply for planning permission and an IE licence and provide the required infrastructure. This offers no environmental and economic benefits compared to the use of the existing facility.



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## 5 DESCRIPTION OF THE EXISTING SITE AND THE PROPOSED DEVELOPMENT

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### 5.1 Site Location & Layout

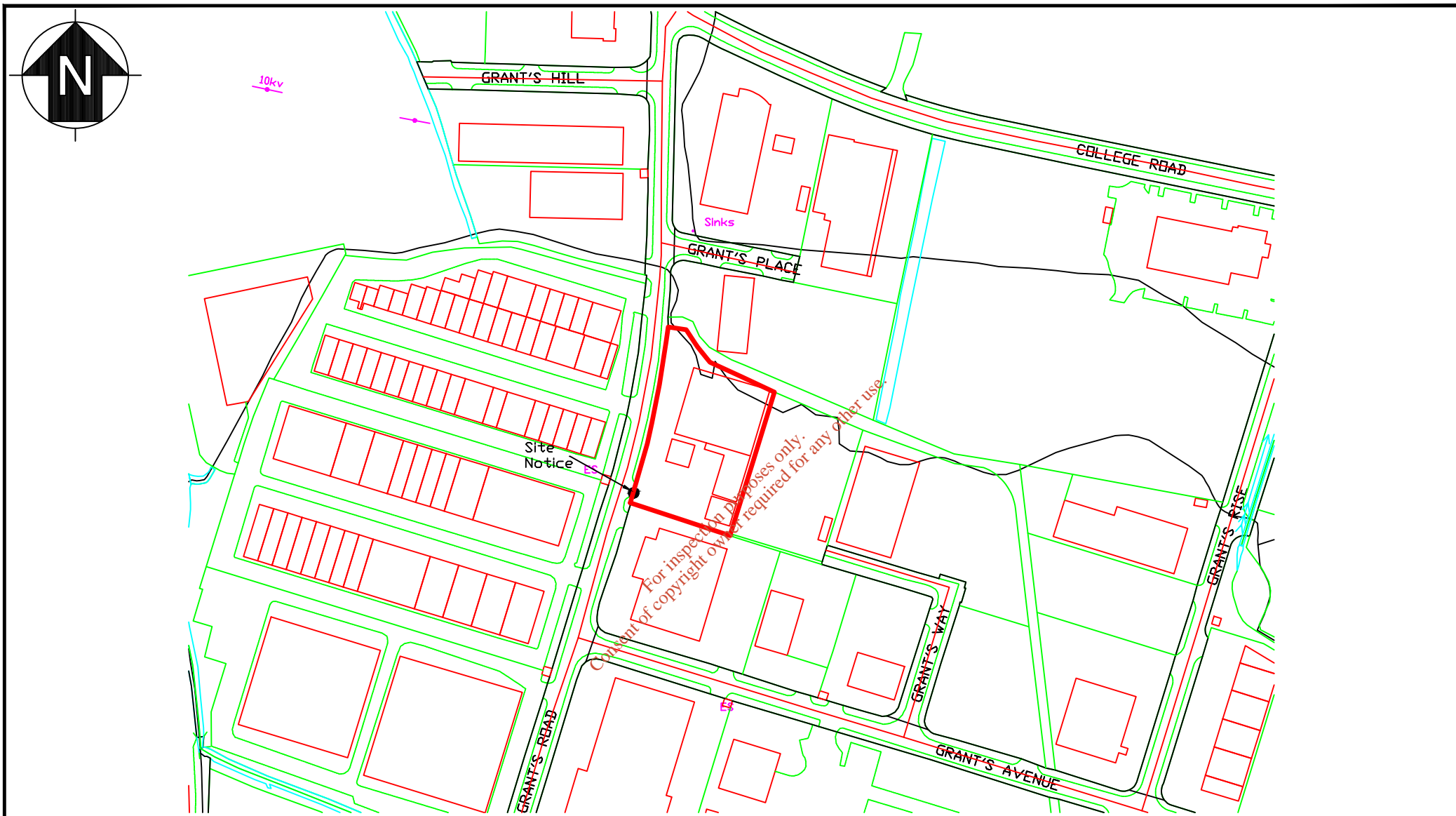
The facility is located in the Greenogue Business Park, approximately 1.5km east of Newcastle (Figure No. B2). The site layout is shown on Drawing No. 2.1. It encompasses 0.5ha and there are three adjoining buildings-Main Warehouse, a smaller external warehouse and three no. waste storage pods and the Offices. There is a weighbridge at the site entrance. There is a redundant backup generator in a bund in the north-eastern corner of the site. The open yards (2,760m<sup>2</sup>) are paved with a 120mm reinforced concrete slab.

**Table 5.1 Site Infrastructure**

Infrastructure	Details
Office	Three storey (432m <sup>2</sup> ), houses reception, office, canteen, toilet, showers
Main Warehouse	Portal frame with metal cladding side walls and roof (1,560m <sup>2</sup> )
Chemical Stores	Occupies 219m <sup>2</sup> and contains three separate compartments
Small Warehouse	Fully enclosed and occupies 168m <sup>2</sup>
Yard	Paved with 120mm concrete slab (2,760m <sup>2</sup> ).
Storm Water Attenuation Tank	158m <sup>3</sup> with shut off valve

### 5.2 Surrounding Land Use

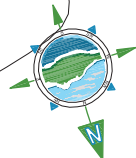
The lands immediately surrounding the facility are commercial in nature, comprising a mix of, light industrial and commercial activities, including waste treatment and transfer facilities. The boundary of Casement Aerodrome is approximately 350m to the north of the site. The closest private dwelling is approximately 400m to the west.



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CLIENT	RILTA Environmental LTD.		FIGURE No.
TITLE	Site Location		B2
		SCALE	REV.
		1: 2500	A

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- LEGEND**
- SURFACE WATER DISCHARGE POINT
  - NOISE MONITORING POINT
  - DUST MONITORING POINT
  - GROUNDWATER MONITORING WELL
  - FOULED WATER MONITORING POINT

Rev	Date	Description	By	Check
001	20.04.11	GRS4715587-ENVIRONMENTAL	MM	ST

Client: **RILTA Environmental Limited**

Project: **RILTA WASTE FACILITY AT GREENGOUGE BUSINESS PARK**

Title: **ENVIRONMENTAL MONITORING LOCATIONS**

Scale @ A1: **1:125**

Prepared By: **M. Nolan**      Checked: **April 2011**      Date: **April 2011**

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## 5.3 On-Site Activities

### 5.3.1 Current

Current waste processing activities are confined to the acceptance and processing of electrical transformers in the main warehouse and storage of asbestos waste in the waste storage pods and the small warehouse.

Refrigerators collected at WEEE drop off centres arrive in articulated trailers, which are temporarily parked pending the completion of the appropriate documentation, before they are sent to Northern Ireland for processing.

The transformers, where practicable, are stored in steel spill containment trays pending the removal of the coolant oil. The transformer oils do not contain polychlorinated biphenyls (PCB). Where the producer of the transformers considers it possible due to the age of the unit that it contain PCB, the oil is tested and if PCBs are detected the unit is exported directly to overseas treatment and not sent to the Rilta facility.

The transformers are then placed on a steel platform that has integral spill containment where an angle grinder is used to remove the copper components. The metals are stored inside the warehouse pending shipment to metal recyclers in Ireland.

Refrigerators collected at WEEE drop off centres arrive in articulated trailers, which are temporarily parked at the facility pending the completion of the appropriate documentation, before they are sent to Northern Ireland for processing.

### 5.3.2 Additional

The bagging plant will comprise:

- Three storage silos, with a combined capacity of 525m<sup>3</sup>;
- A pressure transfer system;
- Two bulk bag loading systems (one duty and one stand-by).

Approximately 30,000 tonnes of APCR and boiler ash will be accepted, bagged in Flexible Intermediate Bulk Container (FIBC) and temporarily stored at the installation annually. The APCR will be delivered in road tankers that will drive into the main warehouse where the materials will be pneumatically transferred into the storage silos located in the south-west corner of the building.

The APCR will be discharged from the silos into the duty bagging unit where bulk bags will be filled. The bags will then be stored on the pallet racking until they are transferred from the installation by articulated trailer.

The bagging unit will comprise a steel frame, a loading cell and a stainless steel fill head. The APCR will be fed from the silo to unit. A clamping cone will seal the bag opening to the fill head during filling. The clamping cone has two connections. The first is to a fan that will inflate the bag and the second is a dust extraction vent that connects to a cartridge filter.

After the bag has been filled it will be sealed and placed in the pallet racking and stored pending consignment from the site in road containers. The bags will be loaded directly containers inside the building.

The transfer of the APCR will be managed by a silo control system, which will also control the safety system that includes a top air vent jet filter, pressure sensor, level sensors and pinch valves on the delivery hoses.

#### 5.4 Waste Types & Quantities

The current licence authorises the acceptance of 60,000 tonnes, of waste of which 33,000 tonnes is hazardous. The waste types currently accepted and those associated with the proposed change are listed in Table 5.1, which includes the relevant List of Waste (LoW) codes.

Of the new waste types the APCR will comprise the majority, while smaller amounts of boiler ash and fly ash arising at IE licensed installations may be accepted. The proposed annual tonnages are indicative only and the actual amount of a particular waste type accepted may vary, but the overall limit of 33,000 tonnes of hazardous waste will not be exceeded.

**Table 5.1 Waste Types & Quantities**

LoW Code	Waste description	Tonnes annum (existing)	per	Tonnes per annum (proposed)
16 02 11*	WEEE	380		380
16 02 13*	Transformers	1270		1270
16 02 14	Redundant equipment	23		23
16 06 01*	Vehicle lead acid batteries	2850		2850
16 06 02*	Electronic equipment - Ni-Cd batteries	20		20
16 06 04	Electronic equipment - alkaline batteries	6		6
16 06 05	Miscellaneous batteries and accumulators	2		2
19 01 07*	APCR	0		28,000
19 01 13*	Fly ash	0		240
19 01 15*	Boiler dust	0		240

While the medium term plan is to operate the APCR bagging plant, which will take up the majority of the hazardous waste tonnage, Rilta intends to retain approval for the current authorised LoW codes and activities to provide commercial flexibility in the future, should it be decided to move the bagging operation to another installation. i.e. to allow reversion to the current authorised activities without the need for a licence review.

#### 5.5 Site Management

Rilta has implemented an Integrated Management System (IMS) in accordance with the requirements of Occupational Health and Safety Assessment Series (OHSAS) 18001:2007 and International Standard Organisation (ISO) 14001:2004 in order to manage the Health, Safety and Environmental performance of their business and to control health and safety risk and to minimise their environmental aspects and impacts.

The IMS has been developed for the achievement of continual improvement taking into account the requirements of the Waste Licence Conditions. Rilta has prepared and effectively implement documented procedures and instructions in accordance with the requirements of both the OHSAS 18001:2007 and ISO 14001:2004.

## 5.6 Drainage Systems

Sanitary wastewater discharge to the foul sewer serving the Business Park which connects to the Irish Water foul sewer.

There are two separate internal surface water drainage systems. The first collects the rainwater run-off from the building roof and this is directed to a 180m<sup>3</sup> flow attenuation tank. The second collects rainwater run-off from paved areas and weighbridge and this is passed through a Class 1 oil interceptor before entering the attenuation tank.

The outflow from the attenuation tank is regulated by a 'hydrobrake' and there is an electrically and manually activated shut-off valve between the 'hydrobrake' and the connection to the sewer. The outfall from the tank connects to the site's foul sewer and the combined flow enters the foul sewer that serves the Business Park sewer.

## 5.7 Environmental Monitoring

The licence requires surface water, groundwater, dust deposition and noise monitoring at the monitoring locations shown on Drawing No. 17-19S-03-01. The scope is described below and the results are discussed in the relevant Chapters.

Surface water monitoring is carried out quarterly at one location (SW1) for pH, electrical conductivity and Chemical Oxygen Demand (COD). There are no emission limit values (ELVs) set in the Licence, but trigger (warning and action) levels have been developed.

There are two groundwater monitoring wells on site (GW1 and GW2). GW1 is in the southern section of the site and is upgradient of GW2, which is in the northern end of the site. Monitoring is carried out quarterly for electrical conductivity, temperature, dissolved oxygen, chloride, sulphate, while Total Organic Carbon and monitoring of List I/II Organic Substances and dissolved metals is carried out annually. Groundwater trigger levels have been developed.

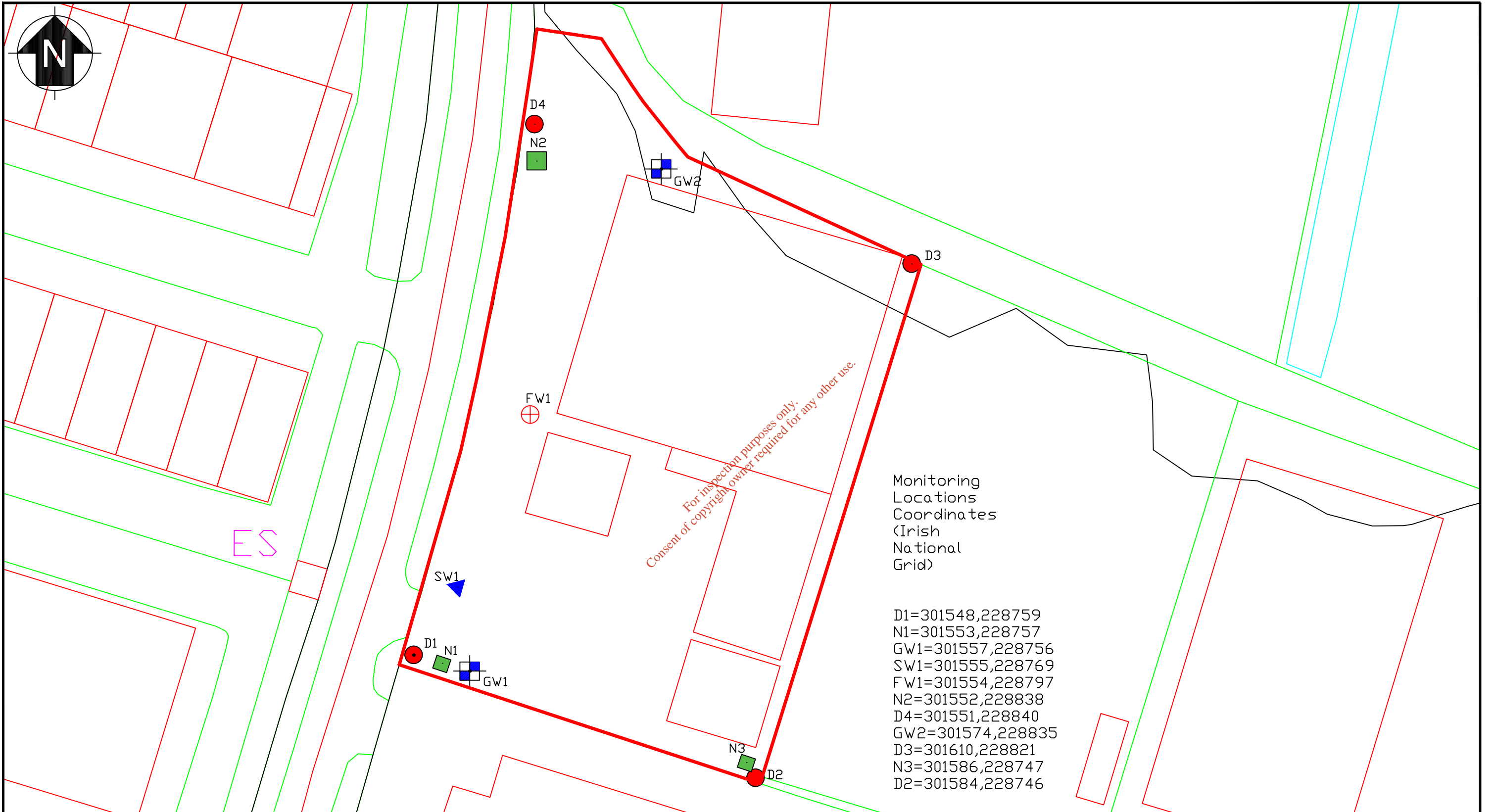
An annual noise survey is carried out at three on-site monitoring locations. Dust deposition monitoring is carried out three times a year at four on-site monitoring locations.

## 5.8 Accidents

Rilta has prepared and adopted an Accident Prevention Policy and an Emergency Response Procedure (ERP) as specified in Condition 9.2 of the current licence that specifies roles, responsibilities and actions required to deal quickly and efficiently with all foreseeable major incidents and to minimise environmental impacts. A copy of the ERP is in Appendix 3.

The buildings are fitted with audible fire alarms. Fixed fire-fighting facilities e.g. fire hydrants and fire hose-reels are provided. Fire water is supplied from the mains supply and there are 2 No. hydrants located around the site.

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CLIENT RILTA Environmental Ltd.

Drawing No. 17-195-03-01

TITLE Monitoring Locations

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In the unlikely event of a failure in the powder transfer resulting in the release of the contents on the building floor, the APCR will be collected using a dedicated industrial cleaning unit which will vacuum up the material and fill it into a Flexible Intermediate Bulk Container (FIBC). The key operational features are:

- A high performance rate of vacuum efficiency using side channel exhauster, enabling long suction distances and fast recovery rates.
- An integral hopper of 0.5 m3 capacity fitted with a 250 mm chute for discharge into an FIBC.
- Easily manoeuvrable using a standard forklift or crane.

Rilta has completed an Environmental Liability Risk Assessment (ELRA) that has identified the plausible accidents/incidents that may occur and evaluated the associated environmental effects. A copy of the ELRA is in Appendix 4.

Based on the types of waste that are and will be accepted and the activities carried out, the only accident that present a significant risk of environmental pollution are a fire. Rilta has completed a Firewater Retention Assessment and a copy of the report is in Appendix 5.

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## 6 AIR

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### 6.1 Introduction

This Chapter describes the ambient air quality and the impacts the proposed development will have on the receiving environment within and outside the site boundary, including a 'baseline' scenario. It identifies the prevention and mitigation measures that are and will be implemented to reduce the significance of the impacts and assesses the residual impacts.

### 6.2 Methodology

The assessment was based on information derived from ambient air quality databases maintained by the EPA and the dust monitoring carried out by Rilta in compliance with the licence conditions.

### 6.3 Receiving Environment

The EU Air Quality Framework Directive (96/62/EC) requires Member States to identify 'Zones' and 'Agglomerations' for air quality assessment purposes. In Ireland, four zones, A, B, C and D are defined in the Air Quality Standards (AQS) Regulations (S.I. No. 180 of 2011).

- Zone A – Dublin Conurbation
- Zone B – Cork Conurbation
- Zone C – Large Towns with a Population > 15,000
- Zone D – Remaining Area of Ireland

Greenogue Business Park is in Zone A. The EPA implements an air quality monitoring programme at a number of stations in Dublin, including one at Tallaght which is considered representative of air quality at the site. The Tallaght station conducts continuous monitoring for Sulphur dioxide and PM10, and the results indicate the air quality is good<sup>1</sup>. Dust monitoring was carried out in May/June, August/September and October/November. The results are in Table 6.1.

**Table 6.1 Dust Monitoring Results 2018**

Location	May / June mg/m <sup>2</sup> /day	August / September mg/m <sup>2</sup> /day	October / November mg/m <sup>2</sup> /day	Deposition Limit mg/m <sup>2</sup> /day
D-1	276	90	139	350
D-2	75	148	158	350
D-3	197	227	300	350
D-4	340	143	277	350

<sup>1</sup> <https://www.epa.ie/air/quality/data/ta/>

There were no exceedances of the dust deposition limit (350 mg/m<sup>2</sup>/day) set in the Licence.

#### 6.4 Impacts

There are no point emissions to atmosphere at the installation. The potential emissions to air from the waste activities that are and will be carried out include dust and vehicle exhausts.

Dusts are associated with the location and type of waste processing and vehicle movements. The primary source of dust emissions will be the bagging of the APCR, which will be carried out inside the Warehouse. Secondary sources are vehicle movements on the paved yards during dry periods. Vehicle exhausts contain a range of compounds that affect air quality, for example nitrous oxide, carbon monoxide, methane, carbon dioxide, benzene and particulates.

#### 6.5 Baseline Scenario

If the proposed development does not proceed there will be no new point and fugitive emission sources, the facility will continue to operate as is, and there will be no change to the potential impacts on air quality.

#### 6.6 Prevention & Mitigation Measures

Rilta implements the control measures specified in the current licence that are designed to ensure waste activities do not give rise to negative impacts on air quality and these will continue to be applied. The HGVs that transport the wastes are typically fitted with Selective Catalytic Reduction (SCR) systems. A diesel exhaust fuel additive (AdBlue) is used in the SCR to reduce the nitrous oxide levels in the exhaust gases and it is Rilta policy not to allow engine idling.

The transfer of the APCR will be managed by a silo control system that will also control the safety system which will include a top air vent jet filter, pressure sensor, level sensors and pinch valves on the delivery hoses.

Fast acting doors will be fitted on the building and these will only be opened and closed when the APCR is being delivered and the bagged APCR is being transported from the site.

In the unlikely event of a failure in the powder transfer resulting in the release of the contents on the building floor, the APCR will be collected using a dedicated industrial cleaning unit which will vacuum up the material and fill it into an FIBC. The key operational features are:

- A high performance rate of vacuum efficiency using side channel exhauster, enabling long suction distances and fast recovery rates.
- An integral hopper of 0.5 m<sup>3</sup> capacity fitted with a 250 mm chute for discharge into an FIBC.
- Easily manoeuvrable using a standard forklift or crane.

Trained staff wearing the appropriate PPE will respond to the incident

## 6.7 Assessment of Impacts

The proposed development will not result will not give rise to any new point emissions to air. There will be no addition traffic movements and therefore no change in the nature and volume of vehicle exhausts. There is the potential for fugitive emissions from the APCR processing and appropriate mitigation measures will be implemented.

## 6.8 Residual Impacts

The proposed development will have an ongoing imperceptible, negative impact on air quality, but will have no permanent impact.

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## 7 POPULATION & HUMAN HEALTH

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### 7.1 Introduction

This Chapter describes the population distribution in the vicinity of the proposed development and assesses the impacts of the proposed development on the population and human health. The assessment considered a 'baseline' scenario and identifies the prevention and mitigation measures that are and will be implemented to reduce the significance of the impacts and assesses the residual impacts.

### 7.2 Methodology

The assessment was based on the planning zoning status, the land use in the vicinity of the facility, population density and employment sectors. The information was derived from data bases maintained by the Central Statistics Office (CSO) and the South Dublin County Council Development Plan 2016-2022.

### 7.3 Receiving Environment

Newcastle is approximately 1.5km to the west, while Rathcoole is 2km to the south. In the 2016 census, South Dublin had a population of 278,767. The population in Newcastle was 3,093 and in Rathcoole was 4,351.

### 7.4 Impacts

Vehicle exhaust gases can affect air quality with a consequent implications for human health. While odours, noise and dusts do not present a direct risk to health, they can be a significant nuisance and cause of discomfort that may indirectly affect human health. Traffic movements to and from waste management facilities can, depending on the size, location and capacity of the local road network be a cause of congestion that affects local residents.

The proposed APCR bagging plant will be a source of noise emissions associated with the air compressor used to transfer the APCR from the bulk tankers to the silos and the reverse jet air filters fitted to each silo.

The site is not in an area susceptible to natural disasters (earthquake, landslide, major flood events). The current operations and the proposed activities do not come under the EC (Control of Major Accident Hazards involving Dangerous Substances) Regulations, 2006.; however accidents with the potential to impact on the health of site staff and neighbours can occur at waste management operations. As described in Section 5.7, Rilta has completed an environmental risk assessment that identifies the plausible accidents that could occur and assess the likely effects.

The plausible accident risks identified at the site are presented in Table 7.1. These take into account the facility history, the controls and mitigating measures that are already in place, with due regard for those controls to contain incidents and for the potential failure of the controls.

**Table 7.2 Accident Risks**

Risk ID	Process	Potential Hazards/Risks
1	Waste Oil Storage	Accidental spill when emptying the transformers and filling IBCs inside the Small Warehouse.
2		Accidental spill when loading the IBCs onto articulated trailer.
3	Fire in Building	Emissions to air.
4		Firewater run-off to surface water and foul water drains and impact on municipal WWTP.
5		Firewater infiltration to ground-soil, groundwater and surface water contamination
6	APCR Bagging and Storage	Emissions to air
7		Accidental spill when filling and emptying the silos and handling the bags inside the warehouse.
8		Accidental spill when bagging the APCR.

The potential impacts are on human health, groundwater, soils and the Irish Water WWTP.

### 7.5 Baseline Scenario

If the development does not proceed, the facility will continue to operate in its current configuration with no change to the potential impacts on population and human health.

### 7.6 Prevention & Mitigation Measures

#### 7.6.1 Emissions to Air

The prevention and mitigation measures to eliminate/minimise impacts associated with emissions to air (vehicle exhaust gases and dusts) are described in Section 6.6.

#### 7.6.2 Noise

Rilta implements the control measures specified in the licence that are designed to ensure waste activities do not give rise to noise emissions that will be a cause of nuisance or impairment outside the facility boundary. All waste processing and storage is carried out inside the buildings. The doors are only opened to allow vehicles to enter and exit the buildings.

Vehicle movements in and out of the site are sources of noise; however these activities are part of the normal activities in the Business Park and prevention and mitigation measures are not required. Rilta has a policy not to allow engine idling within the site boundary.

### 7.6.3 Traffic

The proposed development will not generate any additional traffic movements and therefore prevention and mitigation measures are not required.

### 7.6.4 Accidents

The current licence conditions require the provision of mitigation measures, both infrastructural and procedural, that effectively minimise the risk of environmental liabilities associated with major accidents. Such measures, which are subject to regular review by Rilta include:

- The building construction incorporates fire prevention and containment measures and all have Fire Safety Certificates issued by South Dublin County Council. The warehouse is fitted with a fire detection and alarm system, with smoke detectors fitted in the offices. There are firewalls between the three compartments in the Waste Storage Pods. There are two (2 No.) fire hydrants and one (1 No.) hose reels and appropriate fire extinguishers are provided at strategic locations in the buildings.
- The Main Warehouse is provided with a reinforced containment kerb around the entire building with ramps at the entrances providing a retention capacity of 235m<sup>3</sup>. The floor of each compartment in the Waste Storage Pods drains into gullies that connect to an underground 300m<sup>3</sup> tank. The Small Warehouse is contained by retaining kerb and floors slope to a sump providing a retention capacity of 31m<sup>3</sup>.
- Separation of foul and surface water drainage system. Surface run-off from areas where there is the potential for contamination to occur (weighbridge) area passes through a Class 1 oil interceptor. Provision of flow attenuation tank for all surface water run-off and an automatically activated shut-off valve between the outflow from the attenuation tank and the connection to the storm sewer serving the Business Park.
- Implementation of a site specific Environmental Management System, including an Environmental Management Programme and Emergency Response Procedure (ERP) Procedures.
- Provision of an appropriately experienced facility management team and training of site staff in safe handling and emergency response actions.
- Completion of a Firewater Retention Assessment.
- Provision and maintenance of appropriate spill clean-up materials inside the warehouse.
- Routine integrity testing of the bunds and underground tanks and pipework to ensure that they are and remain fit for purpose.
- Implementation of environmental monitoring programme to confirm site activities are not having a significant adverse environmental impact.

## 7.7 Assessment of Impact

### 7.7.1 Emissions to Air

The ambient air quality in the vicinity of the site is good (Refer to Section 6.3) and the routine dust monitoring carried out in accordance with the current licence confirms dust is not an issue. Odours from the existing waste activities are not a cause of nuisance and the APCR is not significantly odorous.

### 7.7.2 Noise

Current waste activities involve the use of plant and equipment that are sources of noise emissions. Annual noise surveys are carried out in accordance with the licence conditions. The most recent survey was completed in February 2018. Daytime noise monitoring was carried out at approved noise monitoring locations as shown on Drawing No. 17-195-03-01 and the results are summarised in Table 7.1. Site operations were not audible at any of the stations and were therefore lower than the 55dB daytime limit specified in the licence.

**Table 7.1 2018 Noise Survey Results**

Station	N1	N2	N3
Period	Daytime	Daytime	Daytime
Ambient L <sub>Aeq 30 min</sub> (dB)	70	63	53
Facility specific L <sub>Aeq 30 min</sub> (dB)	69	<45	<52
Tone objectively detected	x	x	x
Tone attributable to facility	X	x	x
Facility audibly tonal	X	x	x
Facility audibly impulsive	X	x	x
Facility rated L <sub>Req 30 min</sub> (dB)	69	<45	<52
Limit (dB)	55	55	55
Compliance	✓	✓	✓

### 7.7.3 Traffic

The acceptance of the APCR will not result in additional traffic movements and will not contribute to increased traffic congestion in the vicinity of the Business Park.

### 7.7.4 Accidents

The potential remedial measures that may be required in response to a major accident include spill containment; demolition and removal of damaged buildings, cleaning of the foul sewer, excavation and removal of contaminated soils and reinstatement, monitoring and possible installation and monitoring



of groundwater quality and/or possibly groundwater remediation. Rilta has put a Financial Provision in place to cover the costs of the remedial works.

## 7.8 Residual Impacts

The proposed development will have an on-going an imperceptible, negative impact on human beings.

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## 8 LAND & SOIL

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### 8.1 Introduction

This Chapter describes the land and geology conditions at the facility and the impacts the proposed development will have on the receiving environment within the site boundary, including a 'baseline' scenario. It identifies the prevention and mitigation measures that are and will be implemented to reduce the significance of the impacts and assesses the residual impacts.

### 8.2 Methodology

The assessment was based on information on the land and soils derived from the original EIS. As the proposed development will not involve any ground disturbance or any new emissions to ground, intrusive investigations were not required.

### 8.3 Receiving Environment

The site is entirely covered with buildings and paving. The subsoils beneath the site are between 3 and 5 m thick and comprise grey silty CLAY with cobbles and boulders. The site is underlain by Calp limestone, which comprises dark, grey fine-grained argillaceous limestone.

Prior to the construction of the facility a baseline soils assessment was carried out. It comprised the excavation of two trial pits and the collection of four soil samples. The samples were field screened for Volatile Organic Compounds (VOC) and then sent to the laboratory for analysis a range of organic and inorganic parameters that included pH, metals, fluoride, cyanide, petroleum hydrocarbons, benzene, ethylbenzene, toluene, xylene, polyaromatic hydrocarbons (PAH), VOC and organochlorine pesticides. The results are included in the Baseline Assessment report is in Appendix 6.

### 8.4 Impacts

The development does not require any land take, ground disturbance, or emissions to ground.

### 8.5 Baseline Scenario

If the proposed development does not proceed current operations will continue, with no change to the potential impact on land and geology from the on-going operations.

### 8.6 Prevention & Mitigation Measures

The current licence requires the routine inspection all underground pipes and tanks to ensure they continues to be fit for purpose and do not leak, the adoption of an emergency response procedure, and staff training on appropriate spill response actions.

## 8.7 Assessment of Impacts

At present there are no direct or indirect emissions to ground and the proposed change will not give rise to any new emissions. The entire site is either be paved with concrete, or occupied by buildings that prevent accidental seepages to the soils.

## 8.8 Residual Impacts

The proposed development will have no impact on land and soil.

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## 9 WATER

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### 9.1 Introduction

This Chapter describes the surface water and the groundwater conditions at the site and the impacts that the proposed development will have on the receiving environment within and outside the site boundary, including a 'baseline' scenario. It identifies the prevention and mitigation measures that are and will be implemented to reduce the significance of the impacts and assesses the residual impacts.

### 9.2 Methodology

The assessment was based on information on water derived from the original EIS, a review of the Eastern Region River Basin District (ERBD) Management Plan and the results of surface water and groundwater monitoring carried out by Rilta in compliance with the licence conditions. As the proposed development will not involve any ground disturbance or any new emissions to ground or surface water additional monitoring was not required.

### 9.3 Receiving Environment

#### 9.3.1 Hydrology

The site lies within the catchment of the Griffeen River, whose main channel flows in a broad south-west to north-east direction approximately 300 m east of the site, eventually joining the River Liffey near Lucan.

The Griffeen River is part of the IE\_EA\_Liffey Water Management Unit (WMU) designated in the ERBD Management Plan prepared under the EU Water Framework Directive (WFD). The WMU comprises various Water Bodies and the site is in the Griffeen Lower River Water Body.

Reports have been prepared on the 'Status' of each water body. Status means the condition of the water in a watercourse and is defined by its ecological and chemical status, whichever is worse. Water bodies are ranked in one of five classes, High, Good, Moderate, Poor and Bad. The WFD requires measures to ensure waters achieve at least 'Good Status' by 2015 and that their current status does not deteriorate. Where necessary, for example in heavily impacted or modified watercourses, extended deadlines (2021 and 2027) can be set for achieving the following objectives:

- Prevent Deterioration
- Restore Good Status
- Reduce Chemical Pollution
- Achieve Protected Areas Objectives

The objectives for particular watercourses are based on Pressure and Impact Assessments of human activity, including point and diffuse emissions, land use and morphological conditions on surface waters to identify those water bodies that are 'At Risk' of failing to meet the WFD objectives.

The Griffeen Lower Water Body Status Report states that the overall status is 'Bad', and is considered 'At Risk' of not achieving its restoration objective of at least 'Good' status by 2027.

Surface water monitoring is carried out quarterly at one location (SW1). There are no emission limit values (ELVs) or trigger levels set in the Licence. Following a request from the Agency, trigger levels were developed in September 2015 in accordance with the Agency's guidance on setting of trigger levels for storm water discharges to off-site surface waters at EPA licensed IPPC & Waste facilities based on data from Q-1 2009 to Q-3 2015.

Table 9.1 presents the surface water monitoring results in 2018. Due to the prolonged period of dry weather from May 2018 to October 2018 there was no surface water run-off from the site during this period and it was not possible to obtain a surface water sample for analysis in Q3 2018. The COD result in Q2 marginally exceeded the Action level. All other results are within their relevant EQs and trigger levels. However the surface water actually discharges to the foul sewer and the emission limit value for COD for the emission to the foul sewer is 6,000 mg/l. Therefore there was no exceedance and no action was required.

**Table 9.1 Surface water Monitoring Results 2018: SW1**

Parameter	Units	Q1	Q2	Q3	Q4	Warning Level	Action Level
pH	pH units	6.51	6.11	-	6.33	8.78	9.34
Conductivity	mS/cm	167	262	-	161	573	715
COD	mg/l	11	78	-	<7	57	76

### 9.1.2 Hydrogeology

The bedrock geology of the site comprises dark grey, fine grained, graded limestones with interbedded black, poorly fossiliferous shales of the Lucan Formation. Based on data obtained from the GSI the bedrock aquifer is a locally important (LI) aquifer that is productive in local zones. Groundwater yields in the formation range from 5.45 - 9 cubic meters per hour (m<sup>3</sup>/hr) based on reported yields from wells in the formation. The aquifer vulnerability to pollution from the ground surface is High.

The aquifer is part of the Dublin Area Groundwater Body (IE\_EA\_G\_005). The condition of a groundwater Water Body is defined by its chemical and quantitative status, whichever is worse, and groundwater quality is ranked in one of two status classes: Good or Poor. The Dublin Area Water Body is categorised as being of 'Good' status, but is 'At Risk' of achieving its objective of protecting the existing status.

There are two groundwater monitoring wells on site (GW-1 and GW-2). The locations are shown on the Drawing No. 17-195-03-01. GW-1 is in the southern section of the site and is upgradient of GW-2, which is in the northern end of the site. Monitoring is carried out quarterly. The parameters analysed quarterly are pH, electrical conductivity, temperature, dissolved oxygen, chloride, sulphate, Total Organic Carbon. Annual monitoring of List I/II Organic Substances and dissolved metals are carried out annually.

Tables 9.2 to Table 9.5 include the groundwater analytical results for GW-1 and GW-2 for each quarter in 2018. The tables included for comparison purposes the Interim Guideline Values (IGV) prepared by the Agency and the groundwater Threshold Values (TV) from the Groundwater Regulations 2010.

All parameters were within the proposed trigger levels and below the IGTV and TV with the exception of the upgradient well (GW-1) where the manganese marginally exceeded the IGTV and chloride exceeded the IGTV but did not exceed the TV in Q4. The chloride concentration in GW-1 exceeded the IGTV in Q2, Q3 and Q4 and in GW-2 in Q1 and Q2. The cause of the elevated chloride and manganese is unknown, but it is not associated with waste activities.

There were no further exceedances of the IGTV or TV throughout the year. There is no significant change in water quality between the upgradient and downgradient wells.

**Table 9.2 Q1 Groundwater Monitoring Results**

Parameter	Unit	GW-1 Up Gradient	GW-2 Down Gradient	IGV	TV
pH	pH Units	7.40	7.21	6.5-9.5	-
EC	µS/cm	548	775	1,000	875 – 1,875
Dissolved Oxygen	mg/l	7	7	NAC	-
Chloride	mg/l	26.9	36.5	30	187.5
Sulphate	mg/l	71.3	113.2	200	187.5
Total Organic Carbon	mg/l	<2	<2	NAC	-

**Table 9.3 Q2 Groundwater Monitoring Results**

Parameter	Unit	GW-1 Up Gradient	GW-2 Down Gradient	IGV	TV
pH	pH Units	7.22	6.86	6.5-9.5	-
EC	µS/cm	607	878	1,000	875 – 1,875
Dissolved Oxygen	mg/l	4	7	NAC	-
Chloride	mg/l	31.3	41.5	30	187.5
Sulphate	mg/l	67.2	108.7	200	187.5
Total Organic Carbon	mg/l	<2	<2	NAC	-

NAC – no abnormal change

**Table 9.4 Q3 Groundwater Monitoring Results**

Parameter	Unit	GW-1 Up Gradient	GW-2 Down Gradient	IGV	TV
pH	pH Units	7.68	6.71	6.5-9.5	-
EC	µS/cm	755	859	1,000	875 – 1,875
Dissolved Oxygen	mg/l	4	5	NAC	-
Chloride	mg/l	38.2	28.6	30	187.5
Sulphate	mg/l	73.1	69.6	200	187.5
Total Organic Carbon	mg/l	3	8	NAC	-

NAC – no abnormal change

**Table 9.5 Q4 Groundwater Monitoring Results (Annual Parameters)**

Parameter	Unit	GW-1 Up Gradient	GW-2 Down Gradient	IGV	TV
Boron	µg/l	<12	27	1,000	750
Cadmium	µg/l	<0.5	<0.5	5	3.75
Calcium	mg/l	66.0	143.8	200	-
Copper	µg/l	<7	<7	30	1,500
Iron	µg/l	<20	<20	200	-
Lead	µg/l	<5	<5	10	18.75
Magnesium	mg/l	4.4	9.4	50	-
Manganese	µg/l	53	<2	50	-
Nickel	µg/l	<2	<2	20	15
Potassium	mg/l	1.4	2.7	5	-
Zinc	µg/l	<3	<3	100	-
Sulphate	mg/l	39.5	68.1	200	187.5
Chloride	mg/l	42.7	36.2	30	187.5
Dissolved Oxygen	mg/l	8	8	NAC	-
Electrical Conductivity	µS/cm	487	860	1,000	875 – 1,875
pH	pH units	7.52	7.19	6.5-9.5	-
Total Organic Carbon	mg/l	<2	<2	NAC	-
VOC	µg/l	ND	ND	-	-
sVOC	µg/l	ND	ND	-	-

NAC – no abnormal change

ND – None Detected

#### 9.4 Impacts

Sanitary wastewater from the facility discharges to the foul sewer that serves the Business Park. The warehouse is designed to collect floor wash downs in a 5m<sup>3</sup> sealed sump from where it can be pumped to the foul sewer that serves the industrial estate. However, as putrescible wastes are not accepted at the facility, floor wash downs are not required and the sump is not used.

Rainwater run-off from the building roof and paved open yards discharges to the foul sewer serving the Business Park. The proposed development will not result in any change to the volume and quality of the rainwater run-off.

The proposed development does not require any alteration to the existing foul and surface water drainage systems, and will not result in any change to either the quality or quantity of the discharge to the foul sewer and ultimately the Irish Water wastewater treatment plant. There are no current direct or indirect emissions to groundwater and the proposed development will not result in any new emissions.

There is the potential for accidental releases of the APCR, oil leaks from the mobile plant, and firewater run-off in the event of a fire. The potential pathway to surface waters is overland flow onto the industrial estate access road that could enter surface water gullies. The pathways to groundwater are infiltration through damaged paving and leaks from the storm drains.

## 9.5 Baseline Scenario

If the proposed development does not proceed current operations will continue, with no change to the potential impact on water.

## 9.6 Prevention & Mitigation Measures

The current mitigation measures specified in the licence include the provision of an oil interceptor on the surface water drains that collect run-off from the yard and weighbridge. the inspection and repair of the paved areas; impermeable paving across the operational areas; the routine inspection and survey of the surface water and foul water drains; the adoption of an emergency response procedure, and staff training on appropriate spill response actions.

There is a drain gate valve on the foul sewer that can be manually activated to stop the flow in the event of an incident inside the warehouse.

There are three drain gate valves on the surface water network, one in the yard west of the office, one at the outlet from the attenuation tank and one in the loading docks. The valves in the yard and at the attenuation tank are activated remotely by the use of emergency stop buttons located in the Comms Room in the office and on the external wall of the warehouse. The valve at the delivery dock is manually operated. The valves can be closed in the event of an incident at the site that has the potential to contaminate surface water.

## 9.7 Assessment of Impacts

The proposed development will not increase the volume of surface water run-off and will not will not affect the quality of the run-off to the Irish Water storm sewer. It will not present an increased risk of flooding either within, or outside the site boundary, will have no impact on the rainfall recharge to groundwater and, as there will be no new emissions to ground, there will be no impact on groundwater.

## 9.8 Residual Impacts

The proposed development will have no impact on water.



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## 10 CLIMATE

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### 10.1 Introduction

This Chapter describes the climate at the site and the effects the proposed development will have on it, including a 'baseline' scenario. It identifies the prevention and mitigation measures that are and will be implemented to reduce the significance of the impacts and assesses the residual impacts.

### 10.2 Methodology

The assessment was based on Met Eireann data for monitoring station at Casement Aerodrome, which is 600m to the north of the site at an elevation of 94mOD, which is approximately the same as the site. The assessment took into consideration A Strategy for Climate Change Action Plans for the Dublin Local Authorities (2015).

### 10.3 Receiving Environment

The climate in the area is mild and wet, with the prevailing wind direction from the south-west, with occasional winds from the east. The average annual rainfall is 754.3mm and the average temperature is 9.6°C.

A microclimate is a localised set of atmospheric conditions that differs from those in the surrounding areas, usually with a slight difference but occasionally with a substantial one. In urban areas the primary influencing factors are buildings and paving, but aspect and slope are also important. The site itself is generally level and entirely covered by buildings and paved yards, as are the surrounding lots, so the likelihood of a unique specific microclimate is very low.

### 10.4 Impacts

It is internationally accepted there is a link between greenhouse gas emissions and climate change. Direct emissions from waste management facilities are associated with on-site processing and off-site electricity power generation, while indirect emissions are linked to the vehicles transferring wastes to and from the site and staff transport.

Table 10.1 contains details of the resource and energy consumption in 2018 and a comparison with the consumption in 2017.

**Table 10.1 Energy Consumption in 2017 & 2018**

Resources	2017	2018
Road Diesel	1,540 litres	6,296 Litres
Electricity	77,000 kWh	61,235kWh

The bagging of the APCR will result in increased electricity consumption, but there will be no additional emissions from transport vehicles.

### **10.5 Baseline Scenario**

If the development does not proceed the current waste activities will continue with no changes to the potential for impact on climate.

### **10.6 Prevention & Mitigation Measures**

Rilta completed an assessment of energy usage and potential measures to improve efficiency at the installation in 2015 as part of an energy audit of Rilta's other installation in Greenogue Business Park (W0192-03). A copy of the audit report is in Appendix 7.

The control designs on the air compressor used to transfer the APCR from the bulk tankers to the silos will include airflow and air pressure diagnostics monitoring to maximize the efficiency and reliability the compressed air systems.

The fans on the reverse jet filters on the APCR bagging plant will be designed to give high-energy efficiency for the volume being handled while still delivering the required external pressure.

Rilta has a 'no idling' policy for all HGVs that deliver and transfer wastes from the site.

### **10.7 Assessment of Impacts**

All greenhouse gas emissions contribute to a cumulative negative climate change effect unless offset by mitigation or compensatory measures. There will be no addition traffic movements and therefore no change in the nature and volume of vehicle exhausts. The proposed development will result in additional greenhouse gas emissions associated with the increased electricity consumption.

### **10.8 Residual Impacts**

The proposed development will have an on-going imperceptible, negative, impact on climate.

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## 11 CULTURAL HERITAGE

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### 11.1 Introduction

This Chapter describes the archaeological, architectural and cultural heritage significance of the facility and its environs and assesses the impact of the proposed development including a 'baseline' scenario and the residual impacts.

### 11.2 Methodology

As the proposed development does not involve any ground disturbance the assessment was based on information in the original EIS, which included a desk study of Records of Monuments and Places published by the Department of Arts, Heritage & Gaeltacht, and information contained in the South Dublin County Development Plan (2016-2022).

### 11.3 Receiving Environment

The Sites and Monuments Records Map and the Registered Monuments Manual do not contain any record of any archaeological feature within the site and there are no listed monuments within 1 km of the site.

There is no record of any protected structure (e.g. medieval structure, church) within the site boundary. There is no record of any ritual and religious associations, riverine and estuarine sites, find spots of archaeological or heritage objects, designed landscapes, natural landscapes with cultural heritage associations, relic landscapes and folklore associations within the site boundary.

### 11.4 Impacts

The proposed development will not involve any ground disturbance and therefore there will be no risk of affecting unidentified archaeological features.

### 11.5 Baseline Scenario

If the development does not proceed the facility will continue to operate and the potential for impacts on the cultural heritage will remain unchanged.

### 11.6 Prevention and Mitigation Measures

As the proposed development will not have any impact on any cultural feature, prevention and mitigation measures are not required.

### **11.7 Assessment of Impact**

The development will have no impact on any known/unknown cultural heritage feature.

### **11.8 Residual Impacts**

The development will have no residual impact on any known/unknown cultural heritage features.

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## 12 BIODIVERSITY

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### 12.1 Introduction

This Chapter describes the biodiversity of the site and the impacts the proposed development will have on the receiving environment within and outside the site boundary, including a 'baseline' scenario. It assesses the need for prevention and mitigation measures to reduce the significance of the impacts and evaluates the residual impacts.

### 12.2 Methodology

The Convention on Biological Diversity (CBD) defines 'biological diversity' or biodiversity as 'the variability among living organisms from all sources, including *inter alia* terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems'. In this context, the assessment took into consideration ecosystems (habitats and organisms) inside and outside the facility boundary.

The site is completely covered by concrete paving and buildings and the existing biodiversity value is low. The current site condition and the nature of the proposed development, which involves no disturbance of on-site habitats and no disturbance of any off-site ecosystems, meant that an ecological survey was not required.

The assessment was based on information derived from the original EIS and from Appropriate Assessment Screening Report prepared by Tobin Consulting Engineers in 2016 in support of the Technical Amendment request. The screening concluded that the development would not have any likely significant effects on any Natura 2000 Site and therefore a Natura Impact Statement was not required. A copy of the screening report is in Appendix 8.

Habitats were classified using the descriptions and codes in the Heritage Council's 'A Guide to Habitats in Ireland' (Fossitt, 2000) and 'Best Practice Guidance for Habitat Survey and Mapping' (2011).

### 12.3 Receiving Environment

#### 12.3.1 Habitats

The buildings and yards are classified as BL3 Buildings and artificial surfaces. BL3 includes all buildings (domestic, agricultural, industrial and community) other than derelict stone buildings and ruins. It also includes areas of land that are covered with artificial surfaces (e.g. roads, car parks, pavements, runways, yards, and some tracks, paths, driveways and sports grounds. These habitats are typically not species diverse.

Before the Business Park was developed the land was used primarily for arable agriculture. Since then the site and surrounding lands have been extensively developed and the area is dominated by BL3 Buildings and artificial surfaces.

Given the layout of the existing facility and the surrounding land use the likelihood of the presence of protected species within the site is very low. There are no invasive species within the site boundaries.

### 12.3.2 Natura 2000 Sites

The European Union (EU) Habitats Directive (92/43/EC) and the EU Birds Directive (2009/147/EC) identify designated areas (Special Areas of Conservation (SAC) and Special Protection Areas (SPA) respectively) that are collectively known as Natura 2000 Sites.

The site is not in either an SAC, or an SPA and the closest sites are the Rye Water Valley / Carton SAC which is 7km to the north and the Glenasmole Valley SAC, Red Bog SAC and the Wicklow Mountains SAC, which are 8.4 km, 11.8 and 13.1 km respectively to the south-east and south-west.

## 12.4 Impacts

The proposed development will not result in the loss of any habitats either inside, or outside the site boundary. There is no pathway between the site and the nearest Natura 2000 sites and the proposed development will have no impact on the designated sites.

## 12.5 Baseline Scenario

If the proposed development does not proceed the current activities will continue, with no change to the potential impact on biodiversity.

## 12.6 Prevention & Mitigation Measures

As the development will not have any impact on biodiversity either inside or outside the site boundaries and will have no impact on any designated sites, specific prevention and mitigation measures are not required.

## 12.7 Assessment of Impacts

The proposed development will not result in the loss of or damage to any habitats either in or outside the site boundary. The development site is not in or adjacent to any Natura 2000 Sites. There are no surface water and groundwater pathways between the development site and Natura 2000 Sites and given the separation distances (minimum 7km) there is no pathway for air borne contaminants from the site to reach the SACs.

## 12.8 Residual Impacts

The proposed development will have no residual impact on biodiversity.

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## 13 LANDSCAPE

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### 13.1 Introduction

This Chapter provides an assessment of the impact of the proposed development on the landscape and visual amenity, which includes a 'baseline' scenario. It identifies the prevention and mitigation measures that are and will be implemented to reduce the significance of the impacts and assesses the residual impacts.

### 13.2 Methodology

The assessment was carried out in accordance with the guidelines in the document '*Landscape and Landscape Assessment, Consultation Draft of Guidelines for Planning Authorities*' published by the Department of the Environment and Local Government (June 2000). It took into consideration the Landscape Character Assessment of South Dublin (2015).

The objective of the assessment was to determine the magnitude and significance of the proposed development to the landscape character and visual setting. Significance depends on the sensitivity of the affected landscape and visual receptor and the magnitude of change that is judged to have resulted from the proposed development. In considering the magnitude and significance, the following were taken into account:

- The sensitivity of the view taking into account both the public accessibility of the land where views are possible and the likely sensitivity of that view given the distance, travelling speed (if relevant), intervening vegetation and land usage;
- The quality and value of the existing landscape;
- The degree to which the development will be visible within the surrounding area, and
- Any other changes in the existing landscape e.g. new road junctions.

### 13.3 Receiving Environment

The landscapes of South Dublin County comprise a dynamic mix of living elements that respond to history, culture, natural cycles, weather events, water, climatic and economic factors including those that relate to agriculture, industry, energy, transport, settlement and tourism. The Landscape Character Assessment defines five Landscape Character Areas (LCA) for South Dublin:

- Urban
- Dodder and Glenasmole
- Athgoe and Saggart Hills

- Newcastle Lowlands
- Liffey Valley

The site is in the Newcastle Lowlands, whose key characteristics include;

- Low-lying and gently undulating agricultural lands over limestone.
- Established communication corridors include the Grand Canal and railway corridor traverse east to west and two aerodromes at Weston and Baldonnel.
- Agricultural land use primarily pasture and tillage.
- Increasing influence of urban activities closer to the motorways, national roads and regional roads.
- Long history of historic settlement and human activity with medieval landscape complex associated with Newcastle village and surrounds, and
- Number of demesnes associated with former country houses and institutions including reuse of older country houses at sites such as Peamount and Baldonnel.

Each LCA is assessed against a set of criteria to determine the capacity of the landscape to accommodate change based on landscape sensitivity and landscape value. The overall landscape sensitivity of the Newcastle Lowlands is medium and the overall landscape value is medium/high meaning that the capacity assessment is low.

A 'low capacity assessment' indicates that key characteristics of the landscape are vulnerable to change and there may be limited opportunity to accommodate development without changing the landscape character.

At site specific level the facility is an area where the land cover use is industrial/commercial in an established and extensively developed industrial zone. It is not in an area designated as highly sensitive and is not overlooked by any designated views or prospect areas. The shape and mass of the existing buildings are similar to those of other commercial and industrial operators in the estate.

#### 13.4 Impacts

The proposed development does not involve any change to the appearance of the buildings or the site layout.

#### 13.5 Baseline Scenario

If the development does not proceed, the facility will continue to operate in its current layout, with no change to the external appearance of the building and yards.



### **13.6 Prevention & Mitigation Measures**

As there will be no change to the external appearance of the site prevention and mitigation measures are not required.

### **13.7 Assessment of Impacts**

The proposed development will have no impact on the landscape.

### **13.8 Residual Impacts**

The proposed development will have no residual impacts.

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## 14 MATERIAL ASSETS

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### 14.1 Introduction

This Chapter describes the material assets on and in the environs of the site. It identifies the potential impacts, describes the proposed prevention and mitigation measures and assesses the impacts, including residual impacts. It also addresses a 'baseline' scenario.

### 14.2 Methodology

The assessment was based on information derived from the current South Dublin County Council Development Plan 2016-2022, the CSO databases and Rilta's records of natural resource consumption.

### 14.3 Receiving Environment

#### 14.3.1 Surrounding Land Use and Amenity Value

The site is in the north of the Greenogue Business Park and is surrounded on all sides by commercial and industrial facilities. The Business Park has been extensively developed and the overall the amenity value is low. Land use to the south and east of the Business Park is a mix of agricultural and residential, with Casement Aerodrome to the north.

The nearest amenity to the site is the Pearmount Football Club grounds 220m to the north. Newcastle is the closest village, located approximately 1.5km to the west. Rathcoole is approximately 2km to the south.

#### 14.3.3 Socio-Economic Activity

The unemployment rate for South Dublin in 2016 was 6.5 per cent compared with a national average rate of 6.1 per cent. The Greenogue Industrial Estate and adjoining Aerodrome Business Park are important local employment centres.

#### 14.3.4 Natural Resource

Current activities involve the use of diesel fuelled waste transport vehicles and mobile plant and electricity for lighting and heating of the buildings and yard lighting. Mains water is used to supply the staff welfare facilities. Table 14.1 is a summary of the resource and energy consumption during the reporting period and a comparison with the consumption in 2017.

**Table 14.1 Resources Consumption 2017 & 2018**

<b>Resources</b>	<b>2017</b>	<b>2018</b>
Road Diesel	1,540 litres	6,296 Litres
Electricity	77,000 kWh	61,235 kWh
Water	1,016 m <sup>3</sup>	1,000 m <sup>3</sup>

#### **14.4 Impacts**

##### *14.4.1 Socio-Economic Activity*

The proposed development will contribute to in securing the long term commercial viability of the facility to maintaining local employment levels.

##### *14.4.2 Resource Consumption*

The development will result in increased resource consumption associated with increased electricity usage.

#### **14.5 Baseline Scenario**

If the proposed development does not proceed the facility will continue to operate as is, with no change to the potential impacts on material assets.

#### **14.6 Prevention & Mitigation Measures**

Rilta implements the nuisance control measures specified in the licence to prevent impacts on local amenities and also applies resource consumption control measures to minimise usage. These are described in Chapters 6 and 7.

#### **14.7 Assessment of Impacts**

The current operations are not a source of adverse environmental nuisance or impairment of amenities outside the site boundary. Rilta operations have not adversely affected the existing economic activities in the surrounding area, nor have they reduced the potential for the future expansion of such activities. The proposed development will have a slight socio-economic benefit associated with maintaining local employment levels, but will result in an increase in natural resource consumption.

#### **14.8 Residual Impact**

The proposed development will have no adverse impact on amenity values and socio-economic activities in the locality. It will have a slight negative impact in relation to increased electricity consumption, but will have a slight positive local economic benefit.

---

## 15 INTERACTION OF THE FOREGOING

---

### 15.1 Introduction

Earlier Chapters describe the impacts associated with the proposed development and the proposed mitigation measures. This Chapter discusses the significance of the actual and potential direct, indirect and cumulative effects of the changes due to interaction between relevant receptors, which are Population & Health/Air and Climate/Material Assets. It is based on the physical and environmental impacts of the existing facility and the proposed development on the receiving environment.

### 15.2 Population & Health / Air / Noise

The proposed development has the potential to impact on human beings from noise and dust. The proposed method of operation has taken account of these emissions and effective mitigation measures have been identified and are described in Chapters 6 and 10. These measures are described in detail in Chapters 6 and 7.

### 15.3 Climate / Material Assets

The development will result in an increase in greenhouse gas emissions associated with an increase in electricity consumption.

### 15.4 Cumulative Effects

The assessment of the impacts of the proposed development took into consideration the impacts of the existing facility. The noise and ambient air quality surveys were conducted during typical operational hours and the predictive assessments include the impacts of both the existing emissions and those associated with the proposed development.

**APPENDIX 1**

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An Rannóg Talamhúsáide, Pleanála agus Iompair  
Land Use, Planning & Transportation Department  
Telephone: 01 4149000 Fax: 01 4149104

Email: [planning.dept@sdblincoco.ie](mailto:planning.dept@sdblincoco.ie)

**Rilta Environmental Ltd.**  
**Site 14 A1**  
**Greenogue Business Park**  
**Rathcoole**  
**Co. Dublin.**

19-Jul-2017

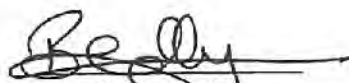
Dear Sir/ Madam,

**Our Ref: ED17/0034**  
**Re: Site 14 A1, Greenogue Business Park, Rathcoole, Co. Dublin.**

I wish to inform you that the proposed development of ; Rilta Environmental Ltd. operates a waste transfer station for the handling of hazardous and non-hazardous wastes at Site 14A Greenogue Business Park under planning permission SD02A/0301. The site encompasses 0.5ha and comprises a main warehouse, hazardous chemical store, offices, three covered tanker bays, a covered dispatch area and a weighbridge. The current permission authorises the acceptance, storage and packaging of 60,000 tonnes of waste comprising 27,000 tonnes of non-hazardous, commercial and industrial, construction and demolition wastes, sewage and industrial sludges, and 33,000 tonnes of hazardous waste. Rilta intends to accept, package and temporarily store air pollution control residue (APCR), before exporting it for disposal. This material will be classified as hazardous and the annual acceptance rate will be 30,000 tonnes. APCR will make up the bulk of the 33,000 of the currently authorised hazardous waste, and it is not proposed to increase either the quantity of hazardous waste (33,000) or the overall quantity of waste (60,000 tonnes) that is currently approved. There will be no change to the waste acceptance and handling procedures. All wastes will continue to be off-loaded, packaged and stored inside the main warehouse and will not be visible from any public road contiguous or adjacent to the curtilage of the building. It is not proposed to change the operational hours and, as the APCR will replace the other hazardous wastes already approved, there will be no increase in traffic movements to and from the facility at the above address and is, by Chief Executive's Order PR/0790 dated 18-Jul-2017, DECLARED EXEMPT and therefore **WILL NOT** require planning permission.

A copy of the Planner's report is enclosed.

Yours faithfully,



*For Senior Planner*

# Comhairle Chontae Atha Cliath Theas

PR/0790/17

## Record of Executive Business and Chief Executive's Order

<b>Register Reference:</b>	ED17/0034
<b>Correspondence Name &amp; Address:</b>	Rilta Environmental Ltd. Site 14 A1, Greenogue Business Park, Rathcoole, Co. Dublin.
<b>Development:</b>	<p>Rilta Environmental Ltd. operates a waste transfer station for the handling of hazardous and non-hazardous wastes at Site 14A Geenogue Business Park under planning permission SD02A/0301. The site encompasses 0.5ha and comprises a main warehouse, hazardous chemical store, offices, three covered tanker bays, a covered dispatch area and a weighbridge. The current permission authorises the acceptance, storage and packaging of 60,000 tonnes of waste comprising 27,000 tonnes of non-hazardous, commercial and industrial, construction and demolition wastes, sewage and industrial sludges, and 33,000 tonnes of hazardous waste. Rilta intends to accept, package and temporarily store air pollution control residue (APCR), before exporting it for disposal. This material will be classified as hazardous and the annual acceptance rate will be 30,000 tonnes. APCR will make up the bulk of the 33,000 of the currently authorised hazardous waste, and it is not proposed to increase either the quantity of hazardous waste (33,000) or the overall quantity of waste (60,000 tonnes) that is currently approved. There will be no change to the waste acceptance and handling procedures. All wastes will continue to be off-loaded, packaged and stored inside the main warehouse and will not be visible from any public road contiguous or adjacent to the curtilage of the building. It is not proposed to change the operational hours and, as the APCR will replace the other hazardous wastes already approved, there will be no increase in traffic movements to and from the facility.</p>
<b>Location:</b>	Site 14 A1, Greenogue Business Park, Rathcoole, Co. Dublin.
<b>Applicant:</b>	Rilta Environmental Ltd.

### Description of Site and Surroundings

The site relates to Unit 14A Greenogue Business Park, Rathcoole, County Dublin. The site comprises a large warehouse, and smaller ancillary structures on site of approximately 0.5 hectares on Grant's Road in Greenogue Business Park.

# Comhairle Chontae Atha Cliath Theas

## Record of Executive Business and Chief Executive's Order

### Proposal

This is an application requesting a Section 5 Declaration on whether or not the below constitutes exempted development:

Rilta Environmental Ltd. operates a waste transfer station for the handling of hazardous and non-hazardous wastes at Site 14A Geeenogue Business Park under planning permission SD02A/0301. The site encompasses 0.5ha and comprises a main warehouse, hazardous chemical store, offices, three covered tanker bays, a covered dispatch area and a weighbridge. The current permission authorises the acceptance, storage and packaging of 60,000 tonnes of waste comprising 27,000 tonnes of non-hazardous, commercial and industrial, construction and demolition wastes, sewage and industrial sludges, and 33,000 tonnes of hazardous waste. Rilta intends to accept, package and temporarily store air pollution control residue (APCR), before exporting it for disposal. This material will be classified as hazardous and the annual acceptance rate will be 30,000 tonnes. APCR will make up the bulk of the 33,000 of the currently authorised hazardous waste, and it is not proposed to increase either the quantity of hazardous waste (33,000) or the overall quantity of waste (60,000 tonnes) that is currently approved. There will be no change to the waste acceptance and handling procedures. All wastes will continue to be off-loaded, packaged and stored inside the main warehouse and will not be visible from any public road contiguous or adjacent to the curtilage of the building. It is not proposed to change the operational hours and, as the APCR will replace the other hazardous wastes already approved, there will be no increase in traffic movements to and from the facility.

The applicant suggests that the proposal is exempt under Schedule 2 Part 1 Class 22 of the Planning and Development Regulations 2001 (as amended)

*Storage within the curtilage of an industrial building, in connection with the industrial process carried on in the building, of raw materials, products, packing materials or fuel, or the deposit of waste arising from the industrial process.*

This Section 5 Declaration application includes:-

- Completed application form
- Plans and elevations of the buildings, as submitted with SD02A/0301
- Site Location Map

### Relevant Planning History

#### SD09A/0220

Proposal to accept dismantled waste pipes and ducting at the RILTA Environmental Facility. The material will be imported from one specific Dismantle and re-build project in the Dublin West region. The incoming material consisting of air ducting, steel and plastic pipes will be handled and sorted within the main warehouse. There will be no change to the existing structures which have planning under Planning Ref.



## Record of Executive Business and Chief Executive's Order

SD02A/0301. The proposed activity will be an extension of the existing permitted activities at the site for a period of 12 months with the intention of returning to the activities granted under the original planning application SD02A/0301 thereafter i.e. a waste transfer station for the handling of hazardous and non-hazardous waste with an annual throughput that shall not exceed 60,000 tonnes. It is proposed to operate the facility on a 24-hour basis. The facility has an existing EPA Waste Licence (No. 185-1) which allow for the acceptance of up to 60,000 tonnes of waste per annum. The proposed activity will not exceed this permitted volume of waste per annum.

Permission granted, subject to 15 conditions, including the below:

2. Notwithstanding the above, the proposed development shall comply with the relevant conditions of previous grant of permission on this site under Register Reference SD02A/0301, save as may be required by other conditions attached hereto.

REASON: In the interest of clarity and the proper planning and sustainable development of the area.

3. The proposed development shall be limited to a period of one year from the date of final grant unless previously granted permission to continue either by this Planning Authority or An Bord Pleanála on appeal

REASON: To fully assess the impact of the proposed development and in the interests of the proper planning and sustainable development of the area.

### SD06A/0593

Provision of an ESB sub-station & switch room for waste transfer station at Greenogue Business Park. The proposed sub-station & switch room will have an area of approx. 28sq.m. & overall height of 3m. The application relates to a development, which comprises and is for the purposes of an activity requiring a waste license in accordance with the Waste Management Act 1996.

Permission granted subject to four conditions.

### Parent Permission SD02A/0301

Development of a waste transfer station for the handling of hazardous and nonhazardous wastes at Greenogue Ind. Est.. The development provides for buildings and structures with gross floor area of 2183sq.m and comprising the following floor areas and heights; a main warehouse building (1560sq.m with a height of 14.5m), ancillary offices on three floors (160sq.m. with a height of 11.8m), a hazardous chemical store (219sq.m. with a height of 11.4m) with an underground water retention tank, three covered tanker bays (overall floor area of 160sq.m. with a height of 6 metres) and a covered dispatch area (84sq.m. with a height of 4.5m) along with a weighbridge, parking and associated landscaping and site development works including a surface water attenuation tank and bunding to the buildings structures and the site. The application relates to development which comprises and is for the purposes of an activity requiring a waste license in accordance with the Waste Management Act 1996. The Planning application is accompanied by an Environmental Impact Statement and the Environmental Impact Statement will be

# Comhairle Chontae Atha Cliath Theas

## Record of Executive Business and Chief Executive's Order

available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy during office hours at the offices of the planning authority.

Permission granted, subject to 18 conditions, including the below:

2. The annual throughput of waste shall not exceed 60000 tonnes and any proposed increase in throughput shall be the subject of a separate application for planning permission

REASON:

To clarify the extent of the planning permission granted.

An extract from the planner's report on the file is included below:

*The proposal is for a waste transfer facility capable of handling both hazardous and non hazardous waste, estimated volume 30,000 tonnes hazardous (15, 000 tonnes of which will be contained in sealed containers) and 27 tonnes non hazardous. No explosive or radioactive waste will be handled at the facility*

*It should be noted that the types of hazardous waste to be catered for includes:*

*Paints/solvents*

*Pesticides*

*Waste pharmaceuticals*

*Batteries*

*Inks*

*Flouorescent tubes*

*Contaminated Soils*

*Contaminated Soils*

*Waste Electronics*

*White Goods*

Relevant extracts from the EIS submitted as part of that planning application are included below:

### **2.2. Proposed Development**

*The proposed development comprises a main warehousing unit to be used for the handling, sorting and repackaging of waste materials, including hazardous waste, a hazardous waste store, a three bay tanker parking area, ancillary office and site works on a site which extends to 0.5 hectares (refer to Figure I .2).*

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

### **4.4. Nature and Sources of Waste**

*Using the definition and format adopted in the EPA Waste Licence Application Form, the transfer station is expected to receive the following types and quantities of waste:*

# Comhairle Chontae Atha Cliath Theas

## Record of Executive Business and Chief Executive's Order

Table 4.1: Types and Quantities of Waste

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

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

It is proposed that 53% of the waste throughput is classified as hazardous waste while the remaining 47% of the throughput is classified as non-hazardous. Of the hazardous waste accepted at the facility, 50% will be repackaged on site, the remaining 50% will be contained in sealed containers using the overnight parking facilities.

### Recent Relevant Enforcement History

No recent relevant enforcement history found.

### Pre-Planning Consultation

No pre-planning recorded.

### Assessment

Consideration as to what constitutes development and/or exempted development is governed by Sections 3, 4 and 5 of the Planning and Development Act 2000 (as amended) and Articles 5, 6, 7, 8, 9, 10, 11 of the Planning and Development Regulations 2001 (as amended).

# Comhairle Chontae Atha Cliath Theas

## Record of Executive Business and Chief Executive's Order

The issue in question here is whether the proposal described constitutes a change of use; whether that change of use is material, and constitutes development; and whether such a material change of use constitutes exempted development.

### Is the proposal development?

Section 3(1) of the Planning and Development Act 2000, defines 'development' as 'the carrying out of any works on, in, over or under land or the making of any material change in the use of any structures or other land'. The term 'works' is defined in Section 2(1) of the 2000 Act as 'any act or operation of construction, excavation, demolition, extension, alteration, repair or renewal'.

There are no works proposed.


The existing permitted use is the handling of hazardous and non-hazardous wastes of no more than 60,000 tonnes per year, with a 53:47 split between hazardous and non-hazardous wastes.


The proposal to accept, package and temporarily store 30,000 tonnes of Air Pollution Control Residue, with no increase to the overall permitted amount of hazardous wastes, would constitute a change of use from that originally permitted, as the original permission did not anticipate the acceptance of Air Pollution Control Residue. However, only changes of use that are material (significant in some way, or likely to have an impact from a planning point of view) constitute development. The change is not considered to constitute a material change of use from the use permitted.

It is considered, therefore, that the proposed activity as outlined above would not constitute 'development', as defined in Section 3(1) of the Planning and Development Act 2000.

### Conclusion

Having regard to the provisions of sections 3 and 4 of the Planning and Development Act 2000 (as amended) and Articles 5,6,7,8,9,10 and 11 of the Planning and Development Regulations 2001 (as amended) it is considered that the activity as detailed in the documentation submitted, is not development, and does not require planning permission.

  
\_\_\_\_\_  
R E Jim Johnston,  
Senior Executive Planner

Endorsed:   
\_\_\_\_\_  
Mairead Fitzgerald,  
Administrative Officer

# Comhairle Chontae Atha Cliath Theas

## Record of Executive Business and Chief Executive's Order

**ORDER:** That the applicant be informed that the proposed development of :

Rilta Environmental Ltd. operates a waste transfer station for the handling of hazardous and non-hazardous wastes at Site 14A Geccenogue Business Park under planning permission SD02A/0301. The site encompasses 0.5ha and comprises a main warehouse, hazardous chemical store, offices, three covered tanker bays, a covered dispatch area and a weighbridge. The current permission authorises the acceptance, storage and packaging of 60,000 tonnes of waste comprising 27,000 tonnes of non-hazardous, commercial and industrial, construction and demolition wastes, sewage and industrial sludges, and 33,000 tonnes of hazardous waste. Rilta intends to accept, package and temporarily store air pollution control residue (APCR), before exporting it for disposal. This material will be classified as hazardous and the annual acceptance rate will be 30,000 tonnes. APCR will make up the bulk of the 33,000 of the currently authorised hazardous waste, and it is not proposed to increase either the quantity of hazardous waste (33,000) or the overall quantity of waste (60,000 tonnes) that is currently approved. There will be no change to the waste acceptance and handling procedures. All wastes will continue to be off-loaded, packaged and stored inside the main warehouse and will not be visible from any public road contiguous or adjacent to the curtilage of the building. It is not proposed to change the operational hours and, as the APCR will replace the other hazardous wastes already approved, there will be no increase in traffic movements to and from the facility at Site 14 A1, Greenogue Business Park, Rathcoole, Co. Dublin.

is considered to be exempted development under the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations, 2001 (as amended) and therefore **does not** require planning permission.

Date:

18/7/17

  
Neil O'Byrne,  
Senior Planner

**APPENDIX 2**

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October 2016

RILTA ENVIRONMENTAL LTD.

# Detailed Report on Requested Changes to W0185-01

DETAILED OF CHANGES TO W0185-01



**Submitted to:**  
 Environmental Protection Agency  
 on behalf of  
 RILTA Environmental Limited  
 Block 14A1, Grants Road  
 Greenogue Business Park  
 Rathcoole  
 Co. Dublin

Report Number 1650556.R01.A2

**Distribution:**

- EPA - 1 copy
- RILTA - 1 Copy
- Golder Associates - 1 copy





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**APPENDICES**

**APPENDIX A**

Drawings

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### 1.0 INTRODUCTION

RILTA Environmental Limited (the 'Licensee') operates a Waste Facility under Waste Licence No. W0185-01 for the handling of hazardous and non-hazardous waste at Block 14A1, Greenogue Industrial Estate in Co. Dublin (the 'Facility').

The Licensee submitted a Specified Engineering Report for the handling and transfer of ash waste residue for the Agency's consideration on 28 July 2016. On 8 September 2016, the Agency responded with the following request:

*To determine if the proposed change can be accommodated by Technical Amendment, you should submit the following information:*

1. *Details of request change(s);*
2. *Reasons for the change(s) requested;*
3. *Details of any increase or changes in emissions resulting from the change(s); and*
4. *An assessment of the likely impacts of any increase/changes in emissions.*

In order to fulfil the Agency's request, in particular Point 1 above, Golder Associates (Golder) has prepared this report which provides details on the requested changes that the Licensee is seeking by way of Technical Amendment.

The current Facility layout is shown in **Drawing 01** provided in Appendix A.

### 2.0 INSTALLATION WORKS

The waste material for bagging and racking, pending transfer, will consist of both flue gas residue and boiler ash (herein referred to as 'waste residue'), produced by the Dublin Waste to Energy (DWtE) Covanta Plant located in Poolbeg, Co. Dublin.

The proposed installation works will comprise of:

- Installation of three storage silos (Total Usable Volume / Tonnage = 525 m<sup>3</sup> / 262 tonnes);
- Installation of a pressure transfer system;
- Installation of two bulk bag loading systems (for main use and one for back-up/redundancy);
- Installation of a pallet racking system for the warehouse; and
- Control measures to prevent fugitive emissions.



### 3.0 LIST OF DRAWINGS

Table 1: List of Drawings

Drawing Number	Title
1	Existing Site Layout
2	Proposed Site Layout
3	Proposed Bagging Plant
4	Proposed Pallet Racking System
5	Proposed Pallet Racking System – Elevations 1 to 4
6	Proposed Dust Emission Management

### 4.0 DETAILS OF WASTE RESIDUE

The DWtE Covanta Plant will be operated under Waste Licence No. W0232-01. There will be three solid residues produced during operation of the DWtE Plant:

- Bottom ash (not part of this TA submission);
- Boiler ash (included in this TA submission); and
- Flue gas treatment residues (included in this TA submission).

Table 2 below estimates the approximate quantities of waste residue (boiler ash and flue gas residues) which are expected to be bagged at the Rilta Greenogue facility.

Table 2: Estimated waste residue quantity and type

Waste Residue Type	Approximate tonnes / annum
Boiler Ash	3,000
Flue Gas Treatment Residues	25,000
<b>Total</b>	<b>28,000</b>

The Licensee proposes to aid in the recovery of these waste residues at their Greenogue Facility. The waste residues will be transported from the DWtE Site to the Greenogue Facility in sealed tankers by licensed / permitted waste contractors under the control of the Licensee, for bagging, storage and onward transfer.

#### 4.1 List of Waste (LoW) Codes

It is proposed to add the following LoW Codes to Schedule A1 of Waste Licence No. W0185-01:

- List of Waste Code **19 01 07\*** - 'solid waste from gas treatment'
- List of Waste Code **19 01 13\*** - 'fly ash containing dangerous substances'



## 5.0 DETAILS OF INSTALLATION WORKS

### 5.1 General Facility Layout

Drawing 02 depicts the proposed layout plan of the installation works and the extent of the Facility area which will receive and store the waste residues; silos, residue transfer area and the pallet racking system.

Sealed tanker trucks will enter the facility through the main gate access off Grants Road, and will proceed to the weighbridge and report to reception / security. Trucks will then enter the warehouse where they will reverse up the ramp through the highlighted Entrance 1 and stop at the demarcated unloading area. Figure 1 below shows the Entrance 1 to the warehouse.

The truck will then transfer the waste residues pneumatically into the storage silos. Details of this transfer activity, and associated measures to reduce potential fugitive emissions are provided in Section 7.0 below.

Waste residues will be delivered in a relatively dry state, at approximately 3% moisture content. The three silos shall be located in the south-west corner of the warehouse. This designated transfer area will include a compressor, transfer fittings and hoses, and two bagging units (main and backup / redundancy).



Figure 1: Warehouse/transfer station entrance for designated waste residue transfer area (external view)

### 5.2 Warehouse

The location of the three waste residue storage silos in the warehouse is currently obstructed by three portable containers, these will be relocated prior to commencement of installation works. A general clearance of the warehouse will also be undertaken to remove any items obstructing the installation of the silos and pallet racking bays. Figure 2 shows the proposed location of the silos and the pallet racking system.



Figure 2: Proposed location for three storage silos

### 5.3 Services

There are existing services within the footprint of the installation works that will require relocation. Electrical fuse boards and fire water ducting are located in the vicinity of the position of the silos and waste residue transfer area. Services are also located along the south wall of the warehouse in the west corner. Access and seclusion zones will have to be catered for to these services prior to installation.

Additional service installations will be required for the waste residue transfer system which will include the installation of a compressor and ancillary equipment.

### 5.4 Silos and filling mechanism

A suitable experienced contractor shall be employed to supply and install the silos and filling mechanism. There will be three silos located in the south west corner of the warehouse providing a usable waste residue storage volume of 525 m<sup>3</sup>. **Drawing 03** depicts the dimensions and details for the proposed silos. Figure 3 below shows a schematic of the waste residue transfer process.

The waste residues will be transferred pneumatically using an in-situ compressor and associated pipework, which will connect from the bulk tankers to the enclosed silos, all located indoors.

The filling pipe attachment will be located circa 1 m above ground level for easy access by the operator. Filling pipes shall be arranged such that excessive horizontal runs and tight bends of less than 1m radius are avoided. The filling pipe will enter the top of the silo at a tangent. If horizontal runs are necessary, they will be kept as close to ground level as possible where air pressures are highest. A pressure relief valve is necessary should excessive air pressure build up in the silo.

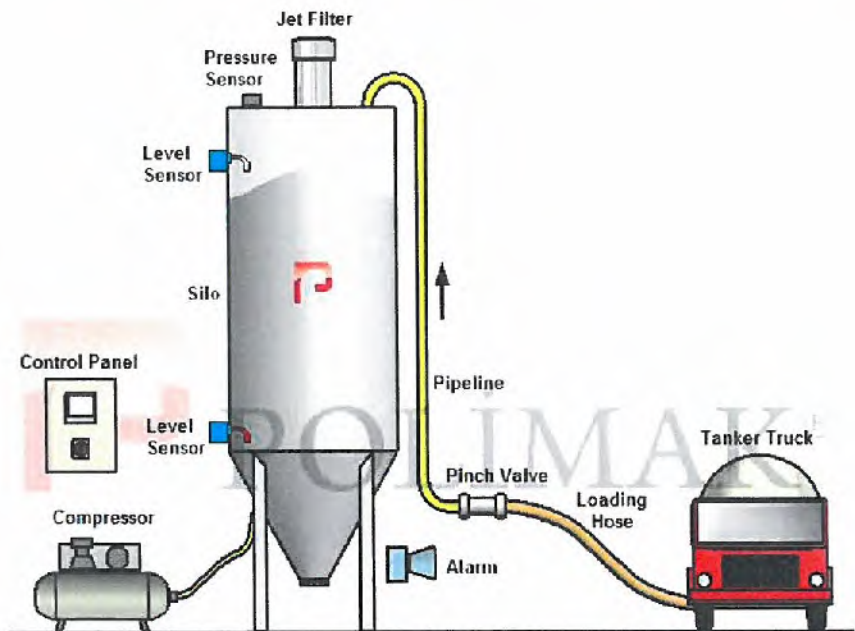


Figure 3: Schematic of the proposed waste residue delivery system

## 5.5 Bulk bag system

The waste residue will be discharged into flexible intermediate bulk container (FIBC) or bulk bags. The compact bulk bag filling system is dust free and designed for use with pallet and fork trucks. The unit is installed indoors with a framework to support the FIBC from its two handle loops during the filling process. The framework incorporates two arms, over which the loops fit, and allows the filled bulk bag to be picked up by fork lift truck, such as that the loops slide off the arms as the bulk bag is removed. The bag inlet spigot is connected to the filler by a clamping cone arrangement to ensure dust-free filling. Details of the bagging system are depicted in Figure 4 and Figure 5 below.



Figure 4: Details of components of bagging system



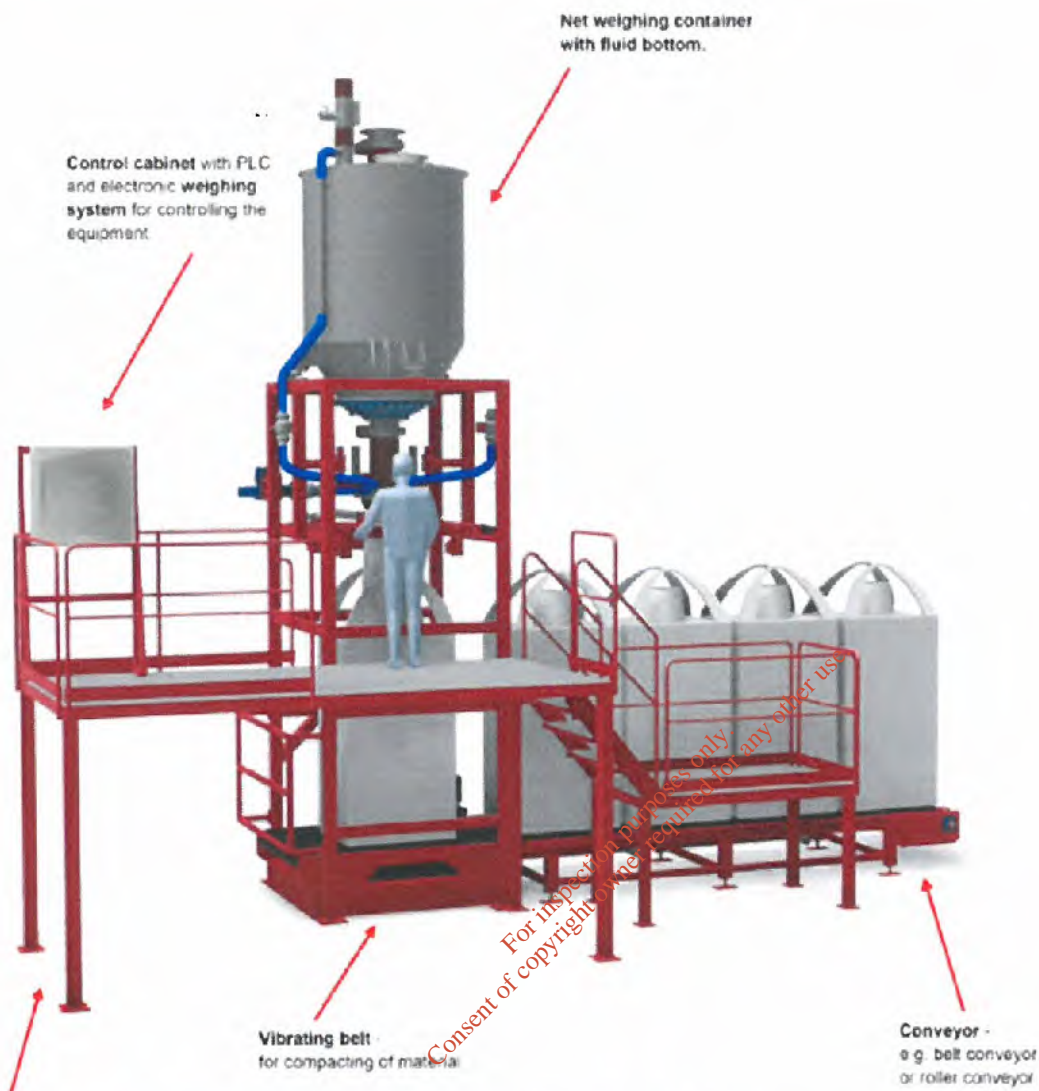


Figure 5: Details of bulk bagging system, conveyor and operator platform

### 5.6 Back up/in-built redundancy measures

It is proposed to install two bagging stations. One bagging station would be sufficient to manage the total tonnage involved within normal working hours. However, as a backup / in-built redundancy in order to meet Condition 3.10.1 of Licence W0185-01, it is proposed to install two bagging plants so that filling activities can continue in the event of a malfunction in one machine. Details of the two bagging stations are depicted in **Drawing 03**, Appendix A.

### 5.7 Pallet Racking

Filled bulk bags will then be transported by fork truck and stored on a racking system also contained within the purpose built waste transfer building. **Drawings 04 and 05** show the proposed footprint and elevations for the proposed pallet racking system. The approximate height of the pallet system will be 9 m. Bulk bags will be stored until transported from the facility. Figure 6 below shows a typical FIBC pallet racking system.



Figure 6: Typical FIBC pallet racking system

## 6.0 MEASURES TO PREVENT FUGITIVE EMISSIONS

In keeping with the original waste licence application in 2002, all loading and bagging will be undertaken indoors to ensure no external fugitive emissions occur at the Facility once bagging activities commence. The process has been designed to effectively operate as a closed process from the point of view of air and water releases. In order to further address the potential for fugitive/diffuse emissions, and meet the requirements of the existing Condition 7.4.2 (W0185-01), namely:

*'Prior to the date of commencement of the waste activities at the facility, the licensee shall install and provide adequate measures for the control of odours and dust emissions, including fugitive dust emissions, from the facility'...*

...the following additional measures are proposed to be incorporated into the design of the process to meet this Condition.

### 6.1 Compressor from bulk tanker

A compressor will be located on-site to connect to the bulk tankers for unloading. This will be equipped with an automatic shut-off mechanism which will be activated when there is a drop in pressure due to hose failure for example (Section 6.7 below).

### 6.2 Storage Silos

Each storage silo will be fitted with a high level probe which will shut down the compressor when it comes in to contact with any waste residues, which is designed to prevent overfilling.

A cylindrically shaped dust collector (reverse jet air filter) for venting of the pneumatically filled silos will be fitted to each silo to contain any dust fines which may be present during loading (Figure 7). The dust collector contains vertically mounted filter elements. This is a standard fitting for bulk storage silos, which are considered the best available technology (BAT, 2006 Emissions from storage) for the storage of ash residues to minimise dust releases.

Dust separated from the air flow by the special filter elements drops back into the silo after the reverse air jet cleaning system has removed it from the filter elements. Filters are then changed as and when required. There is no emission point from the silo filters.



Figure 7: Details of silo venting filter

### 6.3 Sealed Bag Filling System

This bagging operation has been selected as it is both hygienic and dust free due to the sealed filling system. A clamping cone is lowered pneumatically to seal the bag inlet, which is pulled up around a ring in the yoke. In addition to a connection for inflating the bag, the clamping cone has dust extraction which passes through a venting filter (Figure 8). The cone features a valve to prevent dust from the material to leak out when it is the upper position. This further demonstrated the closed nature of the process design.



Figure 8: Close-up view of the clamping cone



After filling is complete, the bag is closed automatically through stretching of the inlet spout. Two welding electrodes weld the inlet together. The welding time is adjusted in accordance with the quality of the bag. The unit is controlled with one or two pneumatic cylinders mounted on solid linear guides. Details of the welding arrangement are depicted in Figure 9 below.

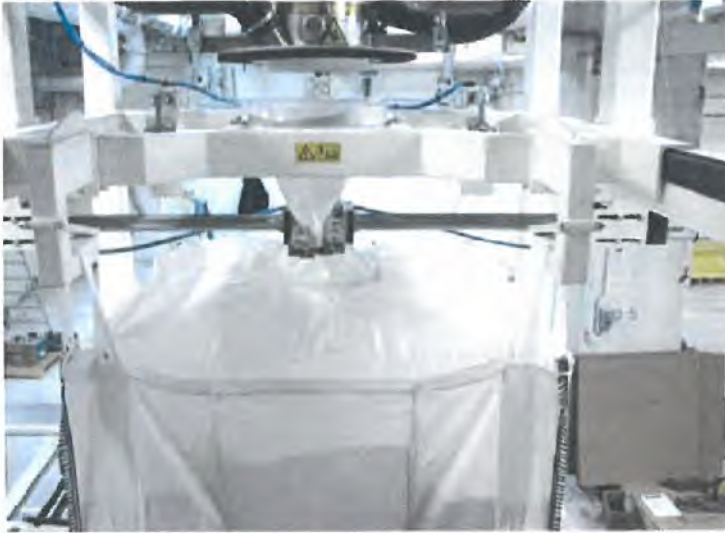


Figure 9: Automatic bag welder with welding in progress

This system is specifically designed to mitigate any potential fugitive emissions of dust during the filling process. By employing a bag inlet and clamping cone further ensures a dust free environment.

### 6.4 FIBC Bags

The Flexible Intermediate Bulk Containers (FIBCs) will have a two loop system, and will be made of UV stabilised polypropylene which will be 100% recyclable. The fabric proposed will include a coating or laminate on the outside of the FIBC which will be non-permeable to air. This will protect the contents against air humidity and prevent the outflow of very fine materials, in this case ash residue. Furthermore the laminate provides the FIBC with additional protection in the event of unforeseen events such as the striking of the bag with pallet racking, or other bags/pallets when loading.

### 6.5 Fast shutting doors and loading bay seals

In accordance with Condition 7.4.2.1 of Licence W0185-01, all doors in the waste transfer building will be kept closed where possible. This will be achieved with the installation of fast shutting roller doors at all locations. To further meet the existing requirements of Condition 7.4.2.1, an inflatable loading bay seal (Figure 10) will be installed to ensure that a tight seal will exist between the truck being filled with FIBCs for onward transfer, and the building. This is an additional measure to control the potential for fugitive releases from the transfer building.



Figure 10: Loading bay seal for safe loading

## 6.6 Dust curtain

In accordance with the existing Condition 7.4.2.1 of Licence W0185-01, dust curtains will be maintained on the entry/exit points from the waste transfer building.

## 6.7 Contingency/backup arrangements

### 6.7.1 Hose failure – prevention

A wire armoured hose will be used to connect the bulk tanker to the manifold. To reduce the risk of the hose/coupling failure, the manifold will be placed in the optimum position. This will mean that the hose will not be kinked and subjected to tight radius, therefore reducing the chance of a stress concentration in the hose and failure.

### 6.7.2 Hose failure – reaction

In the event of a hose failure, the following system has been designed to address this scenario. A safety system of pipework incorporating an actuated check valve, a pressure sensor and a flexible pipe section will be employed. Details of this hose unloading system is depicted in **Drawing 06**, Appendix A. One end of the system will connect to the bulk tanker, the other to the manifold, and will operate as follows:

- 1) If the inner hose fails, air pressure will escape into a cavity. This cavity is formed by the inner typical blower pipe and the high pressure outer hose;
- 2) The air entering the cavity will trigger a pressure sensor;
- 3) The sensor will then send a signal back to the check valve to close. Flow of waste residue through the system stops;
- 4) Simultaneously, the pressure sensor will send a signal to a beacon and siren to indicate the hose has failed;
- 5) The waste residue will be contained by the outer high pressure hose;
- 6) The operator stops the blower;
- 7) The operator then removes the flexible hose section and replaces with a spare unit; and
- 8) Unloading then continues.



### 6.7.3 Clamping Cone Failure

In the event of a connection failure in the clamping cone, the Licensee will have an industrial vacuum on-Site to clear up any fugitive emissions. This vacuum will have the following features:

- High vacuum pump;
- Ability to vacuum both dry & wet material;
- On board storage of hoses, pipes and tools for all clean-up situations;
- Hydraulically operated tailgate, tailgate lock and tipping; and
- Tool box.

Figure 11 below provides an example of such an industrial vacuum which will be available in the event of a bag connection failure.



Figure 11: Example of an industrial vacuum

## 7.0 ENVIRONMENTAL CONSIDERATIONS

### 7.1 Measures to deal with fugitive emissions

Section 6.0 of this Report provides details on the measures to be employed at the Facility to prevent the potential for internal fugitive dust emissions. Such measures are intended to meet the requirements of existing Condition 7.4.2 of Licence No. W0185-01.

In the event of an unforeseen action / failure, further measures are in place for hose failure, clamping cone failures and impact (Section 6.7). Should the bagging process have to be taken off-line, a backup / redundancy bagging machine will be in place to ensure that bagging can continue with no downtime regarding throughput. This is intended to meet existing Condition 3.10.1.

### 7.2 Odour/Dust

The waste residue is odourless, and as a result there is little potential for increased odour emissions from the proposed bagging activities. It is further noted that operations have been undertaken at the Facility since 2004 and have not led to any complaints relating to odour.

As a failsafe, all doors and bays will be kept closed in accordance with Condition 7.4.2.1 of W0185-01. Good housekeeping in the vicinity of the waste transfer station will also keep dust levels to a minimum. All vehicles



servicing the transfer station will be adequately covered/sealed (loading bay seals) and all deliveries of waste residue will be by dedicated enclosed bulk vehicles, which were detailed in the original waste licence submission. In addition, all bags once filled are sealed using a bag welding mechanism (See Section 6.3 above). For shipment, the bags will be loaded onto curtain-siders, which will be loaded from the bay within loading bay seals.

Figure 12 below provides details of such a bulk transport vehicle used for delivery of the ash residue.



Figure 12: Typical sealed tankers to transport waste residue from Dublin Waste to Energy Plant.

Such measures will mitigate any potential nuisance associated with dust during transport / unloading and reloading for onward transfer.

### 7.2.1 Dust/Air monitoring

As part of the Licence W0185-01, the Facility will continue to carry out monitoring at four locations (D1, D2, D3 and D4) three times per year, in accordance with *Schedules C.2 Dust deposition limits, D.1.1 Monitoring locations and D.2 Dust Monitoring Frequency and Technique*.

In addition to the above external dust monitoring, it is proposed to carry out the following internal monitoring to provide additional safeguards with regard to the health and safety of our workers:

- a) Baseline monitoring prior to the acceptance of ash waste residues, locations to be agreed with the Agency;
- b) Personnel air monitoring quarterly once operations commence;
- c) Parameters to be monitored are the same as those as set out in the Dublin WtE Facility Licence Ref. W0232-01;
- d) Method used shall meet the requirements of the "Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001" and associated 2016 Approved Code of Practice published by the Health Safety Authority. Monitoring shall be carried out by an independent laboratory agreed by the Agency; and
- e) Copies of all data gathered will be provided to the Agency within 10 days of receipt.



### 7.3 Ground Water

There are no direct emissions to groundwater. All activities will be undertaken indoors, in the purpose built waste transfer building which is previously licensed for the bulking and storage of hazardous materials for onward transfer.

### 7.4 Surface water

The Facility will not handle any liquid materials in the off-loading and bagging activities, which will be undertaken indoors. All surface water runoff from tanker bays, vehicle parking and marshalling areas are currently directed through a Class 1 interceptor before discharging to surface water sewer. There will be no change to this configuration as a result of the requested changes in this document. Rainwater from buildings and offices is also directed to the surface water sewer. Wastewater drains to a 5 m<sup>3</sup> self-contained monitoring tank prior to discharge. Wastewater is only discharged to the sewer following confirmation that the discharge has met the requirements of *Schedule C.3: Emissions Limits for Foul Water Emissions to Sewer, D.1.1 Monitoring locations, and D.4.1 monitoring and frequency technique*.

The waste residue transfer and bagging activity will not result in fugitive emissions to water. The main plant buildings are reinforced concrete with a sealant coating. No water or liquids, other than for plant and machinery maintenance, are used in the process. In any event, spill kits are available at the Facility. In addition, and as highlighted in Section 6.7.3 above, a vacuum tanker will be on-Site should quantities of waste residue be required for clean up in the event of equipment failure / unforeseen spillage.

### 7.5 Noise

The waste residue storage and bagging system will be situated in an enclosed and purpose build waste transfer building and therefore there will be no significant impact on the local environment. The 2002 Waste Licence Application had envisaged plant with noise emissions in excess of 100dB(A). The proposed bagging plant will not exceed 80dB(A). In addition, traffic movements (and resulting noise emissions) associated with the proposed changes are estimated to be 75% less than the original traffic movements submitted for grant of the waste licence.

In any event, as part of the existing license, the facility will continue to carry out monitoring in accordance with *Schedule C.1 noise emission, D.1.1. Monitoring locations, and D.3 Noise monitoring frequency and technique* to ensure there is no impact on the noise environment as a result of the requested changes.

## 8.0 SUSTAINABLE REUSE OF WASTE RESIDUE

Following the bagging of the waste residue at the Rilta Greenogue facility, the material will be shipped to a treatment facility in Norway for sustainable re-use. The waste residue will be used to neutralise sulphuric acid at the Langoya facility in Norway. Langoya is a small island dominated by a worked out limestone quarry which is being reinstated as a nature reserve under licence from the Norwegian government (Figure 13).





Figure 13: Proposed location for reuse of waste residue – Langoya Island, Norway

The neutralised residue / acid mixture is being used as part of this reinstatement, and the facility has an approved R treatment code for this purpose. In addition, the facility has the following permits/licences/approvals:

- Operating/emission permit from Norwegian Pollution Control Authority, 4 June 2003, renewed May 2009;
- EMAS registered 1998-2004;
- ISO 14001 certification from Feb 2004; and

Figure 14 below depicts the island once rehabilitated in c. 2040.



Figure 14: Rehabilitated Langoya Island in 2040



## **9.0 REFERENCES**

- 1) Waste Licence Register Number W0185-01
- 2) Section 76A(11) Amendment to Industrial Emissions Licence

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## Report Signature Page

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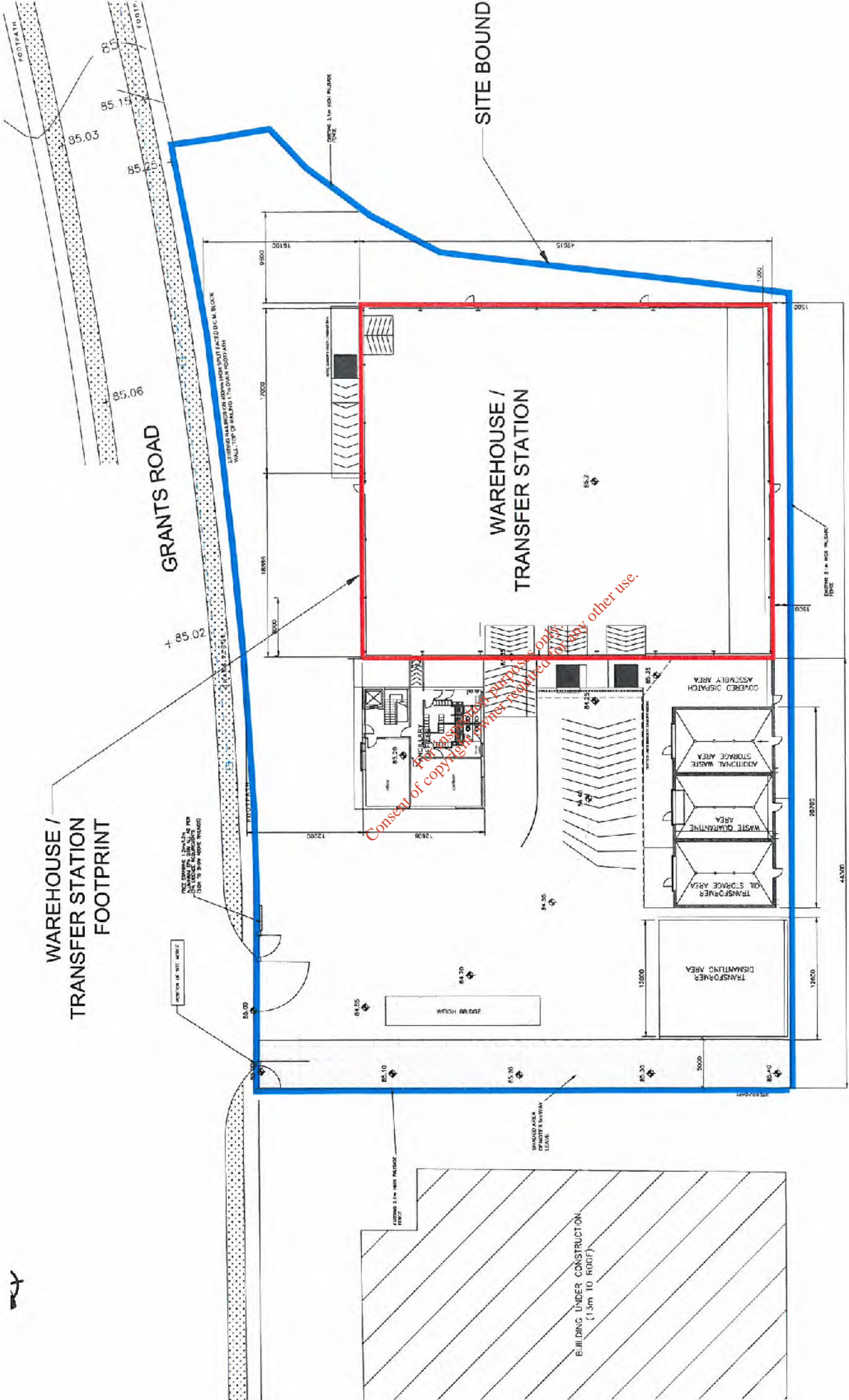
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# APPENDIX A

## Drawings

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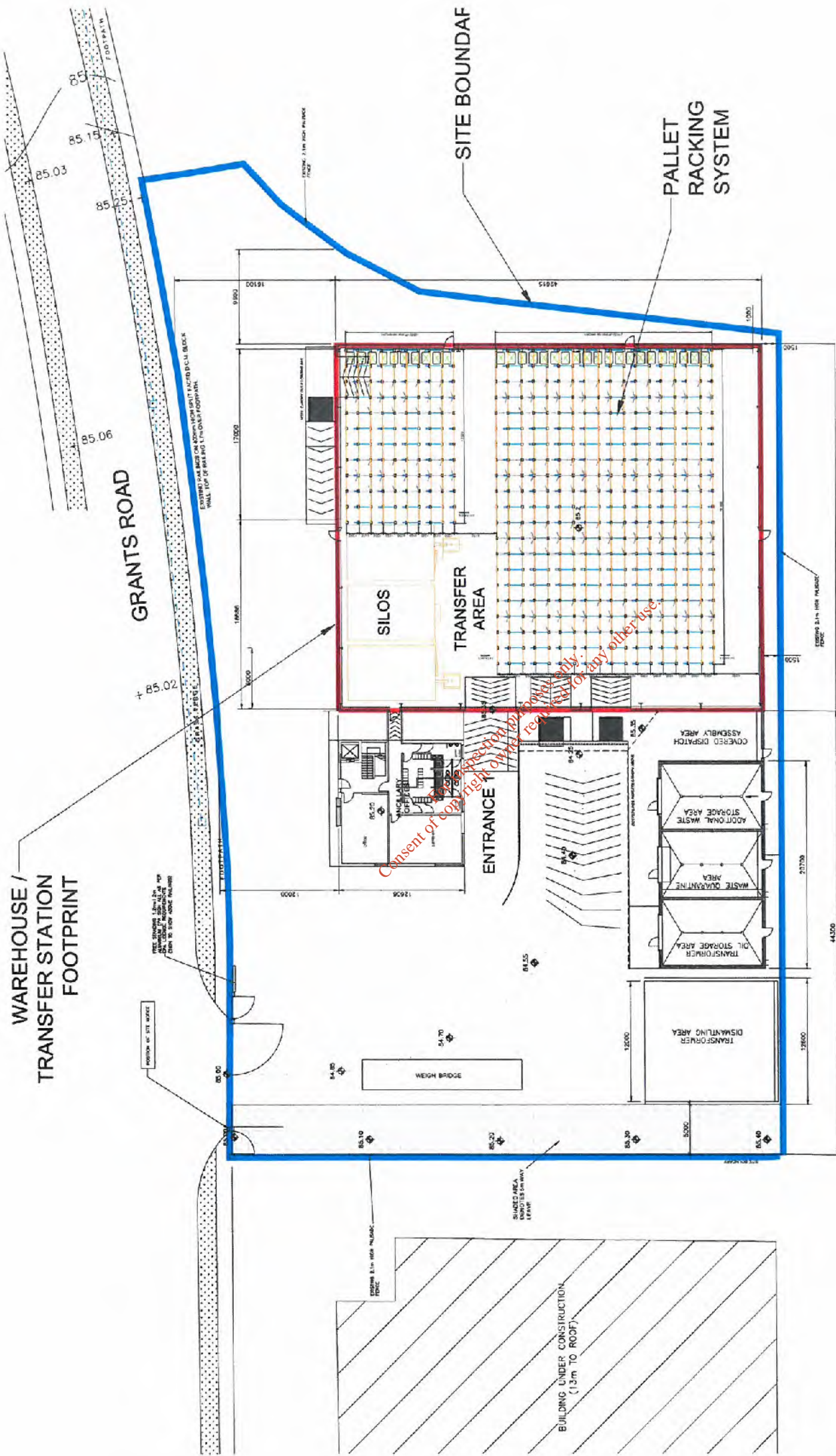
WAREHOUSE /  
TRANSFER STATION  
FOOTPRINT

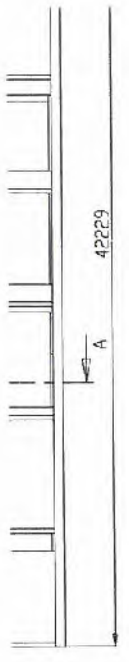
GRANTS ROAD

SITE BOUNDARY

PALLET  
RACKING  
SYSTEM

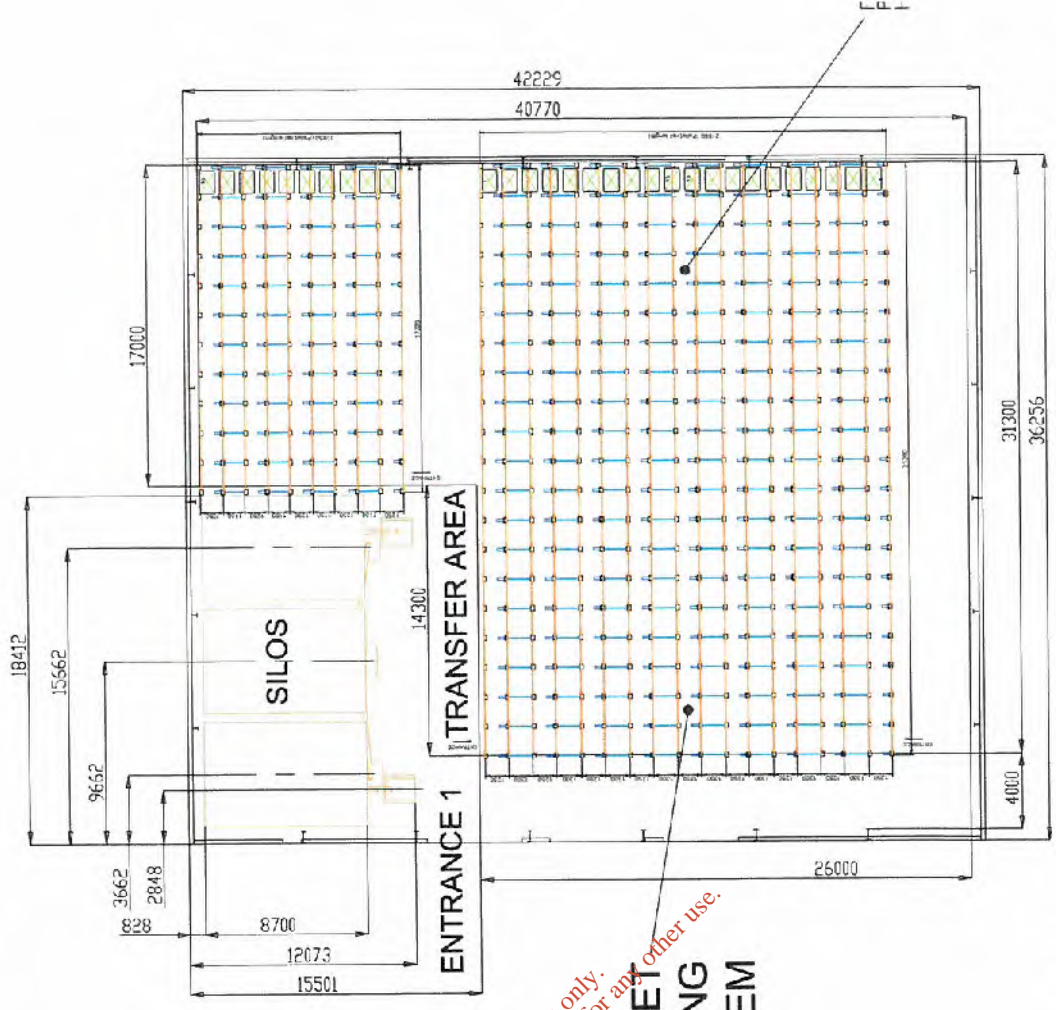
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SECTION A-A

**ELEVATION VIEWS OF PROPOSED BAGGING PLANT**

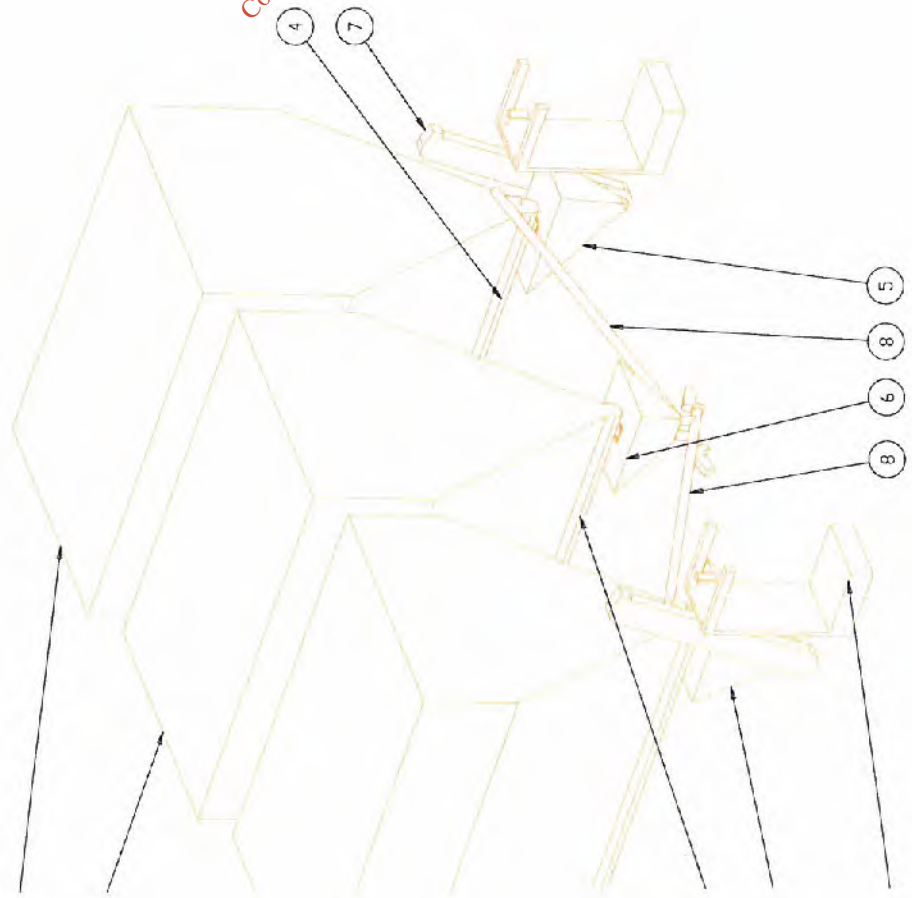


**PLAN VIEW OF PROPOSED BAGGING PLANT AND PALLET RACKING L**

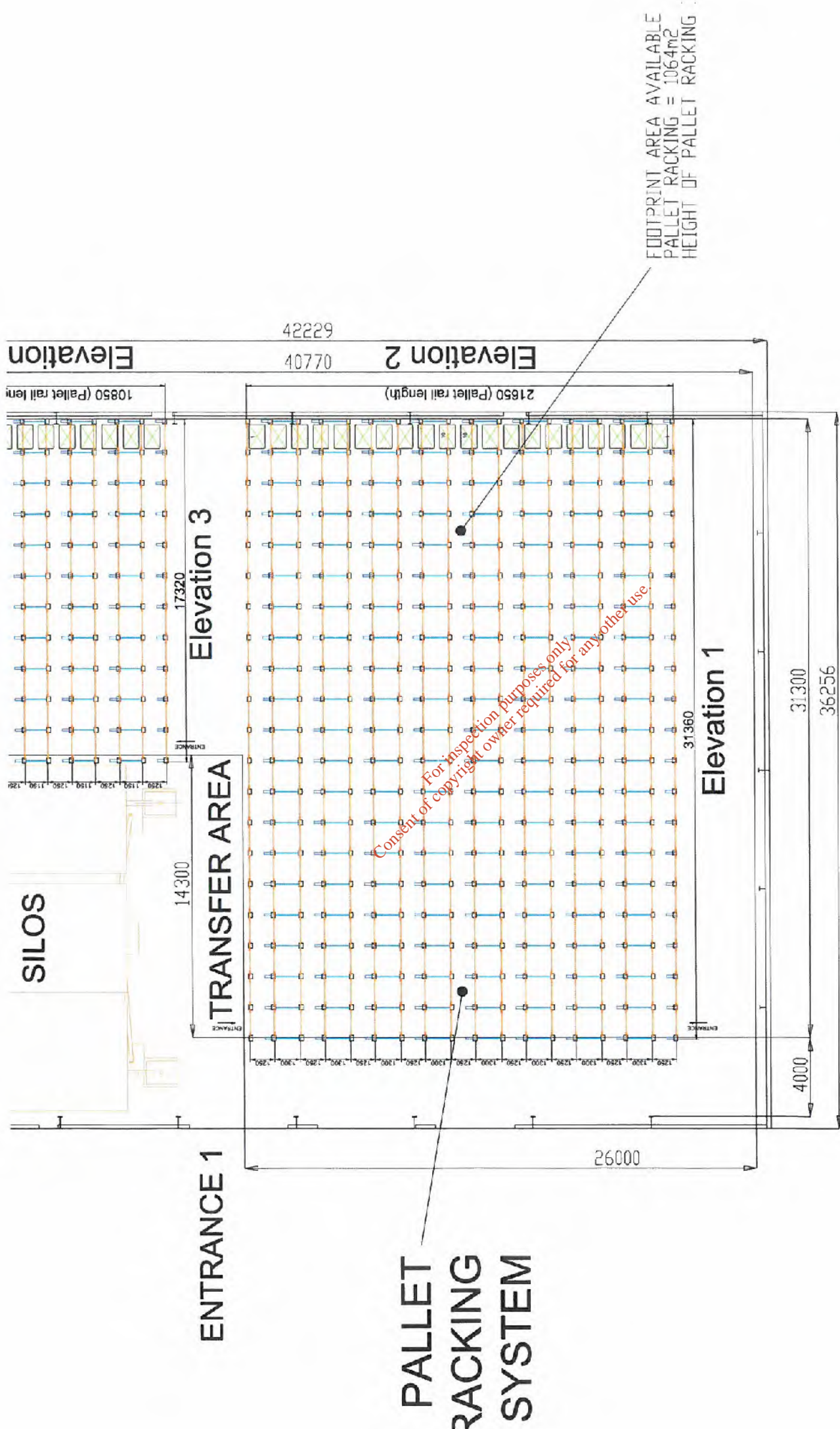


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IS AS FOLLOWS:  
 0 = 722m<sup>3</sup>  
 SILO = 525m<sup>3</sup>  
 = 0.5 T/m<sup>3</sup>  
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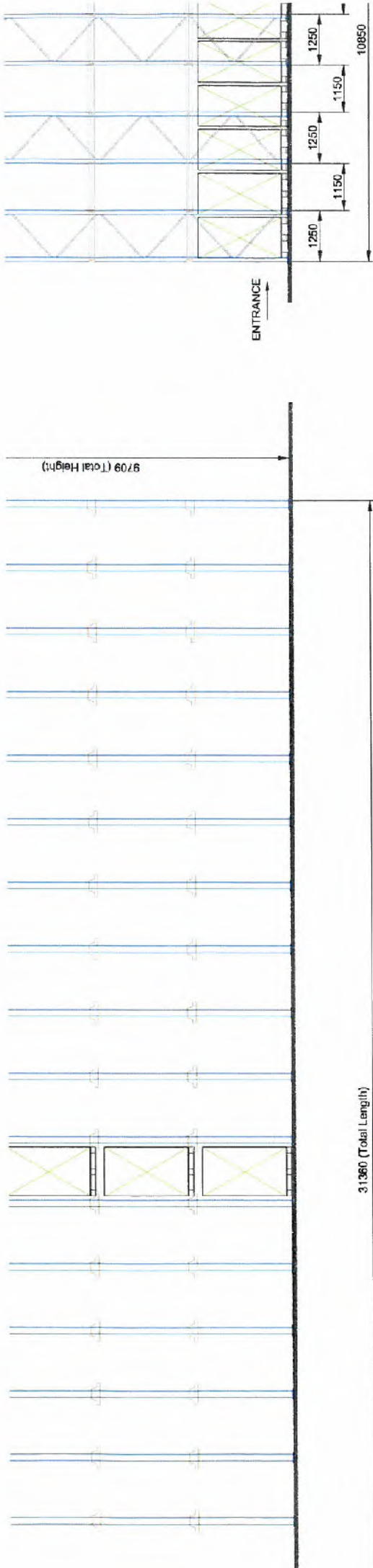


**3D PERSPECTIVE VIEW OF PROPOSED BAGGING PLANT**



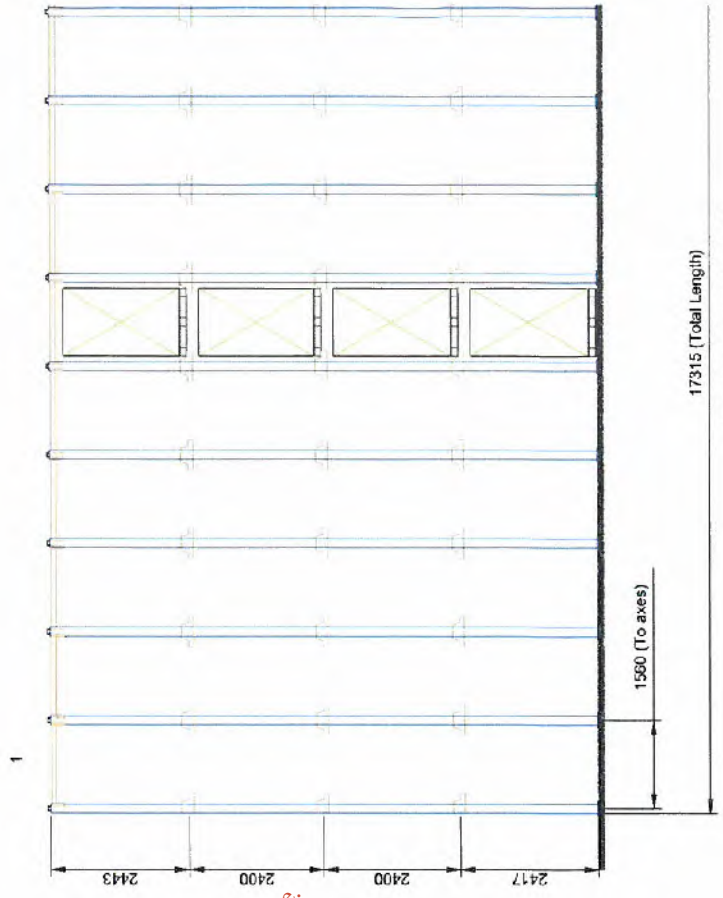
PLAN VIEW OF PROPOSED BAGGING PLANT AND PALLET RACKING LAYOUT



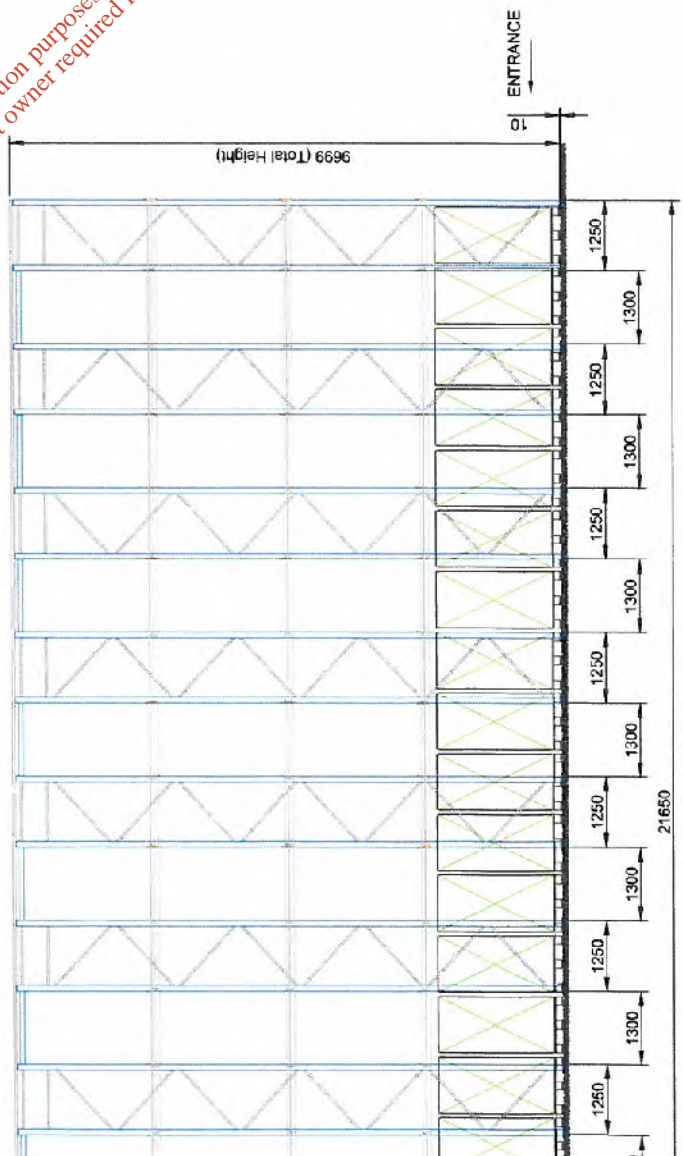


**ELEVATION 1**

**ELEVATION**



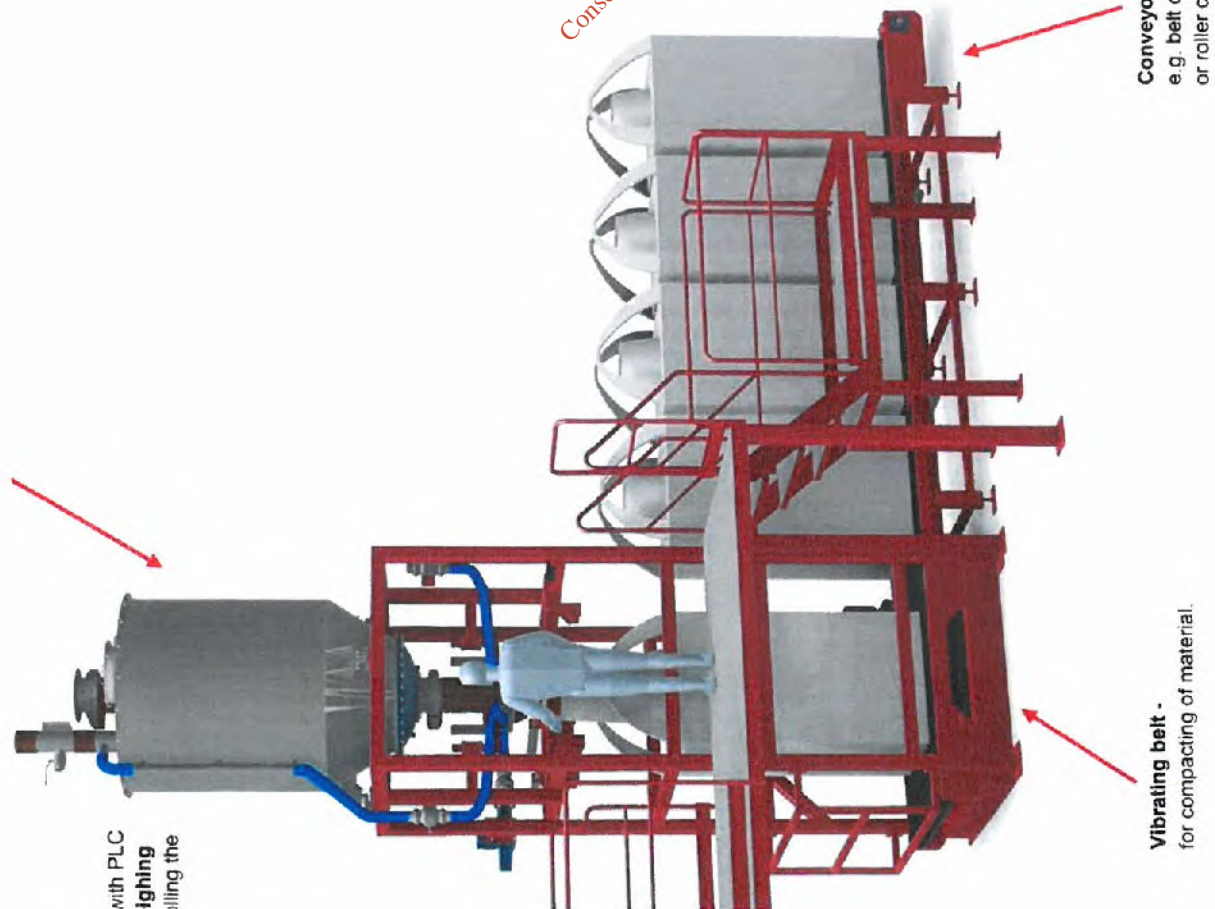
**ELEVATION 3**



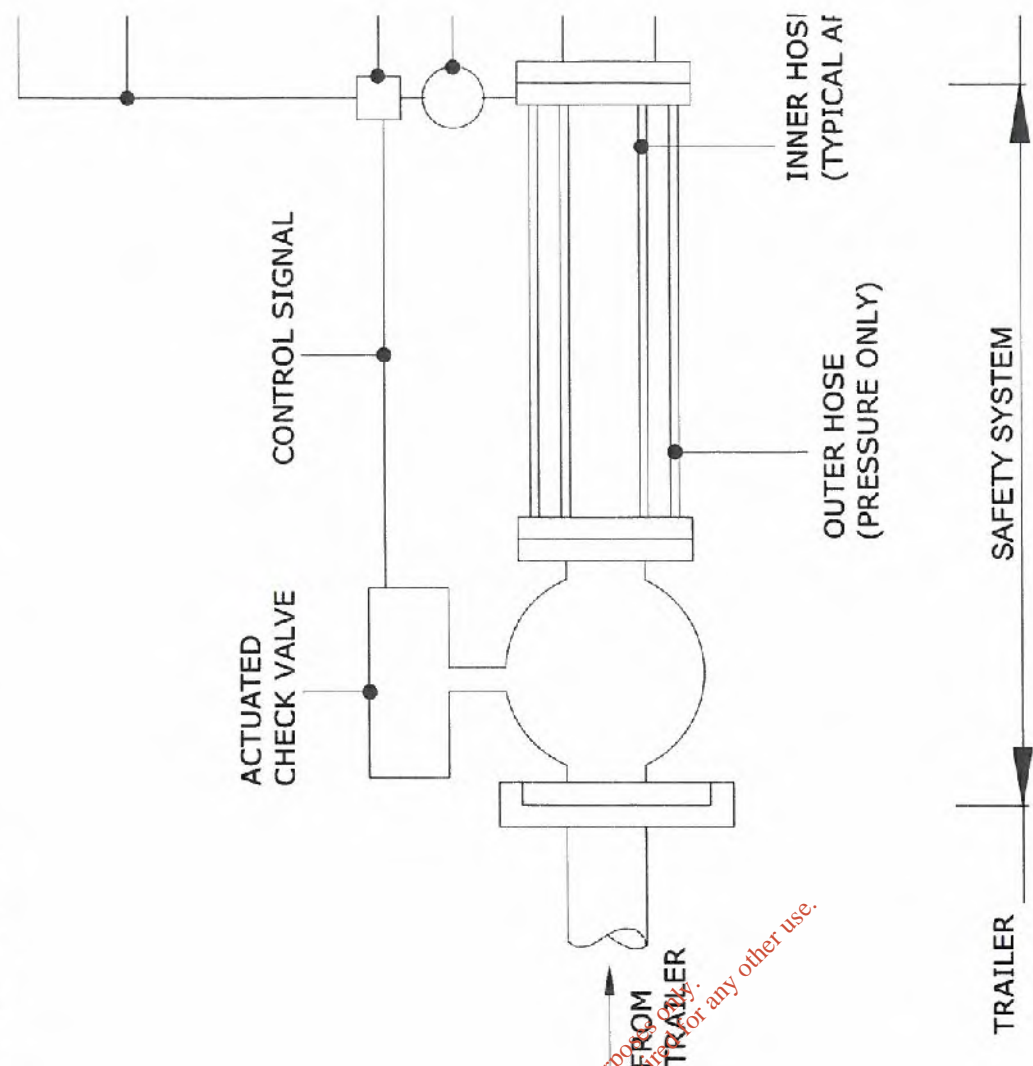
**ELEVATION 2**

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4. Simultaneously, the pressure sensor will send a signal to a beacon and siren to indicate the hose has failed.
5. The ash will be contained by the outer high pressure hose.
6. The operator stops the blower.
7. Removes the flexible hose section and replaces with a spare unit.
8. Unloading continues.



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