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NON-TECHNICAL SUMMARY

Environmental solutions provided to
RESOURCE RECYCLING SOLUTIONS LTD

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Author: Alex Holley	Reviewer: Martin Ropka

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1.3	Internal review	18/03/2024
1.4	Amendments following review	21/03/2024
2.0	Second Issue	28/03/2024

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1.0 INTRODUCTION

1.1 Site Address

Iron House Farm,
Lancaster Road,
Out Rawcliffe,
Preston,
Lancashire,
PR3 6BP

Grid Reference: Easting 341162, Northing 444756

1.2 Site Description

Iron House Farm is located off Lancaster Road. The farm is located in Out Rawcliffe which is 17km south of Lancaster and 9km west of the M6. The main village of Out Rawcliffe is situated to the southwest at a distance of 3km. The site is situated within an area that is of agricultural use with some residential.

1.3 Plans

Reference drawings: RRS02 (Site Location Plan)
RRS03 (Site Layout Plan)

1.4 Planning Permissions

The site has full planning permission for the facility: 02/08/1116 from Lancashire County Council dated 14th November 2008.

1.5 Permits and Licences

Resource Recycling Solutions Ltd (hereon 'RRS') operate a composting facility under an installation permit, reference number EPR/ QB3036RB. This permits the facility to undertake composting of up to 75,000 tonnes per annum of green waste in open windrows.

RRS also has a registered waste exemption on the site. This is a T5 waste exemption for screening and blending waste. This allows RRS to temporarily treat waste on a small scale to produce aggregate or soil at their particular site. RRS can store up to 50,000 tonnes of bituminous mixtures for making roadstone or 5,000 tonnes of other waste allowed under this exemption over a 3-year period. Waste cannot be stored for longer than 12 months.

1.6 Reason for Application

RRS are seeking consent to operate a closed In-Vessel Composting (IVC) system at the Iron House Farm site in addition to the existing open windrow composting (OWC) system. The IVC system would process non-hazardous food waste or comingled food and green waste primarily from kerbside collected, civic amenity and commercial waste streams. The OWC system would continue to process green waste material only.

It is proposed that the facility continues to process up to 75,000 tonnes of biodegradable waste per year. The green waste only element of this will be processed through the OWC and the closed IVC system and the comingled food and green waste or food waste will be processed through the closed IVC system. An extension to the site boundary is required to facilitate the addition of the closed IVC system. It is proposed that the site is extended to the south by 50m, on which windrows would be located.

RRS are also seeking consent to screen and blend waste to produce aggregate or soil as an activity on the environmental permit. This is currently carried out as a registered waste exemption at the site but with changes expected imminently to the waste exemption regime, the opportunity has been taken to seek permission to add this activity to the environmental permit. In addition to this, RRS are seeking permission to add the activities associated with the previously registered waste exemptions for treating waste wood and plant matter by chipping, shredding, cutting or pulverising (T6) and the use of waste in construction (U1) to the environmental permit. It is proposed that up to 1,000 tonnes of waste material associated with each of the above activity be processed or stored on site at any one time. This would form part of the annual throughput of 75,000 tonnes of waste material at the site.

2.0 PROPOSED OPERATIONS

2.1 Current Operations

The facility is currently a long and thin site which runs in an east to west direction. There are effectively 3 sections to the site. In the east, at the site entrance, are the site offices, car park and weighbridge. The central part of the site is where waste reception, shredding and screening takes place. The western portion of the site is where the open windrow composting of biodegradable green waste takes place. The site to the west of the weighbridge is covered by an impermeable concrete surface which was constructed with a base of 40mm clean stone and with a 150mm concrete top layer. The concrete has been installed with a fall from west to east and with sufficient gradient to allow the flow of surface water / leachate from the pad to the collection system. There are a number of surface water drains across the site which flow to a pump chamber and then into a leachate storage tank. This leachate storage tank is above ground and has a capacity of 545m^3. It is located to the east of the fixed raised rotating trommel. The tank is an agricultural style tank of sectional corrugated steel construction. It is bounded on 3 sides by steel uprights and precast concrete panels. There is a retaining wall which runs along the northern perimeter of the pad formed from steel uprights and precast concrete panels, extending to approximately 2m in height.

There is also an open barn located in the southern central portion of the site where any rejected material is stored.

Green waste material that is brought to site enters through the site entrance in the northeast corner of the site before being weighed on the weighbridge. The vehicle is then directed to the central portion of the site where it is tipped before being shredded and screened. The shredded green waste, oversize and biomass material are stored in separate piles in this central portion of the site. Once there is sufficient shredded green waste, the material is formed into a windrow in the western portion of the site. The material remains in the windrow for 8 weeks, undergoing first sanitisation and then stabilisation. At the end of the composting period, the compost is then screened and picked before being transferred to a compost storage pile or off site as a PAS 100 product.

2.2 Proposed Operation

RRS propose to extend the concrete composting pad to the west and south of the Site to enable an IVC building to be constructed and to allow more space for open windrow composting.

RRS intends to construct a new building at the western side of the site which will act as a waste reception hall for the IVC feedstock and in which 4No. IVC tunnels will be constructed. This building shall be 50m by 45m and up to 8.5m high. The building shall have negative aeration and all air removed from the waste reception hall and IVC tunnels shall be treated via a biofilter prior to release to atmosphere. The building shall be fitted with roller shutter doors which shall be kept closed at all times other than to allow vehicles to enter and exit the building which will limit the release of odour. The impermeable concrete floor of the building shall be constructed with a sealed drainage system which shall collect all leachate produced within the building and transfer it to a new leachate storage tank located in the far northwest corner of the site. Each of the 4No. IVC tunnels shall be 34m long by 6m wide by 4m high. The green waste, comingled food and green waste or food only waste material shall be sanitised in the IVC tunnels. Before being removed from the tunnels and formed into windrows for maturation in the proposed extended southern portion of the site. To the east of the IVC building there shall be a 15m wide yard to enable vehicles to turn around. The proposed new external compost pad shall be served by a sealed drainage system which will feed surface water / leachate into a new leachate storage tank located next to the present leachate storage tank.

All waste material that is brought to site shall enter the site via the existing site entrance and shall be weighed on the existing weighbridge. From here, the material will be directed to the appropriate location. All comingled food and green waste or food only waste will be directed to the new IVC building via a new through road which will run along the northern edge of the site boundary. The green waste will either be directed to the same waste reception area as currently for tipping, where the green waste treatment will follow the existing OWC process, or, it will be directed to the new IVC building.

The green waste, comingled food and green waste or food only waste will enter the IVC building via one of two roller shutter doors located at the northern end of the eastern side of the building. Once inside the building, the waste will be tipped. The vehicles will then leave the site via the same route that they entered on. The waste that has been tipped will be piled up prior to being shredded and loaded into one of the 4 IVC tunnels. Once the conditions of sanitisation have been met for the required amount of time, which is likely to take place over 7 days, the waste will be removed from the IVC tunnels and formed into windrows on the composting pad for maturation, which will take place over a period of 8 weeks. At the end of this period, the compost will be screened and picked before being transferred to a compost storage pile or off site as a PAS 100 product.

Any waste wood that is brought to site for chipping, shredding, cutting or pulverising will be treated in the same location as the green waste before being transferred to an area for

storage. This is located in the southeast portion of the newly extended site on an impermeable concrete surface with sealed drainage system. Any waste aggregates brought onto site for use in construction on site will be crushed and screened. This shall again take place in the southeast portion of the site. This area shall also be used to store waste soil that will be blended with compost and the finer aggregates produced during crushing to produce an off-specification bespoke topsoil.

2.3 Operational Layout

The proposed variation does alter the existing site boundary. The composting pad will be extended by approximately 30m to the south across the entire length of the site to accommodate additional windrows, a new leachate storage tank and the area used for non-composting waste activities. A road shall be installed along the northern boundary to enable vehicular access to the new IVC building which shall be built in the far western portion of the site which is currently within the existing site boundary but not used for waste treatment. It is also within the western portion of the site that a new biofilter and leachate storage tank serving the IVC building shall be installed. The central portion of the site shall house the windrows which will be of 3 different lengths depending on the location (45m, 27m or 24m).

2.4 Recycling Operations

The proposed activities and directly associated activity operations to be undertaken on site following the permit variation will differ from the currently permitted activity:

Open Windrow:

- R13 – Storage of waste pending R3 operation
- R3 – Recycling / reclamation of organic substances which are not used as solvents

In-Vessel:

- R13 – Storage of waste pending R3 operation
- R3 – Recycling / reclamation of organic substances which are not used as solvents

Aggregates:

- R13 – Storage of waste pending R3 operation
- R5 – Recycling / reclamation of other inorganic materials

Soils:

- R13 – Storage of waste pending R3 operation
- R5 – Recycling / reclamation of other inorganic materials

Wood:

- R13 – Storage of waste pending R3 operation
- R1 – Use principally as a fuel or other means to generate energy
- R3 - Recycling / reclamation of organic substances which are not used as solvents

2.5 Materials to be Processed

A full itemised list of wastes to be processed on site is listed within the Environmental Management System.

2.6 Operational Hours

Site operational hours for the facility will be as identified below:

Monday to Friday:	08:00 - 18:00
Saturday:	08:00 - 12:30
Sunday:	NIL

2.7 Technical Standards and Control Measures

A documented list of technical standards that the site will be operating to is provided in Section 4.0. The critical control points governing these technical standards are to be applied to this site.

3.0 ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

All facilities have a potential impact on the environment around them. RRS will be employing process management and monitoring techniques which will mitigate the environmental impact of the proposed variation within the following areas:

3.1 Odour

Odour is considered a potential issue that is addressed within a comprehensive Odour Management Plan (OMP) which is based on the Environment Agency's Horizontal Guidance – H4 Odour Management Guidance. The proposed biofilter is an additional process which will reduce the likely release of odour from the IVC process.

3.2 Bioaerosols

The site has undertaken a full bioaerosol risk assessment which is supported by monitoring surveys following the Environment Agency's technical guidance on bioaerosol monitoring (M9). There are buildings within 250 metres (sensitive receptors) of this facility and is considered an issue.

3.3 Flora and Fauna

The site is not within 2km of any designated site.

3.4 Groundwater

The site is outside Groundwater Protection Zone I (inner) or II (outer). The site is however situated within a Groundwater Protection Zone III (total catchment). There are no groundwater abstraction points within 1km of the site. The site is underlain by an impermeable concrete surface and the groundwater is protected further by the presence of negligible permeable drift deposits.

3.5 Surface Water

Surface water will be managed on site through the sealed drainage system and above ground leachate storage tanks. Leachate captured within the tank system is pumped out and re-applied to the compost as required. There are no environmentally sensitive surface waters (monitored by the EA) within 250m of the site boundary. The extended operational concrete area will be impermeable and designed for correct drainage into the existing drainage system.

3.6 Flood Risk and Drainage

The site is at very low risk of flooding from rivers and the sea which means that the site has a chance of flooding of less than 0.1% each year. The site is also at very low risk of surface water flooding which again means the site has a less than 0.1% chance of flooding.

3.7 Sensitive Receptors

There are residential properties within 250m of the site boundary. The proposed biofilters filters are additional processes which will freduce the likely release of odour from the site activities. It should be noted that there are no sensitive receptors within 250m of the proposed new IVC building or biofilter.

4.0 TECHNICAL STANDARDS SUMMARY

The table below presents a list of technical documents, with reference, for the process of anaerobic digestion. These documents will continue to be in use as point of reference during the operational life of the permitted site. Documents have been sourced from both regulatory agencies and industry led organisations.

Composting and Wood Recycling – Technical Standards	
Technical Guidance Note	**Document Reference**
How to comply with your environmental permit	EA Guidance
The composting industry code of practice	REAL
Industry guide for prevention and control of odours at biowaste processing facilities	REAL
Best Available Techniques (BAT) Reference Document for Waste Treatment	EC JRC Science for Policy Report
PAS 100 Standard Operating Procedure	BSi
Quality Protocol for Compost	WRAP/EA
Health & Safety at Biowaste Processing Sites	REAL
Guidance on the evaluation of bioaerosol risk assessments for composting facilities	EA Guidance
General guide to pollution prevention	EA Pollution Prevention Guidance
Managing fire water and major spillages	EA Pollution Prevention Guidance
H1 EA overview of Environmental Risk Assessments for Permits	EA Pollution Prevention Guidance
H1 annex A- Amenity and accident risks from installations and waste operations	EA Pollution Prevention Guidance
H4 Odour Management Guidance	EA Pollution Prevention Guidance
Guidance for the monitoring of bioaerosols at open composting facilities	EA