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Non-Technical Summary

v2.0

Environmental and sustainability solutions provided to

Newbourne Farm Composting Limited

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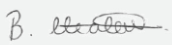
Document Title	Non-Technical Summary
Client	Newbourne Farm Composting Limited
Revision	v2.0
Date	02/10/2025
Document Reference	EPR-A01
Project Reference	1452/J05

Author: Bryanna Heaton	Reviewer: Martin Ropka
	

REVISION LOG

Revision	Details	Date
0.1	Initial draft	04/03/2025
0.2	Update following info request	17/03/2025
0.3	Internal review	31/03/2025
0.4	Update following client review	16/04/2025
1.0	First issue	05/06/2025
1.1	Draft update to Annex A	02/10/2025
2.0	Second issue	03/10/2025

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1.0 INTRODUCTION

1.1 Site Address

Newbourne Farm Composting,
Rockbourne,
Fordingbridge,
SP6 3NT

1.2 Operational Location

Site Grid Reference: Easting 410848, Northing 118613

1.3 Site Description

The site is located approximately 225m off Rockbourne Road, situated in a largely agricultuiral setting. The site is approximately 500m northwest of the village of Rockbourne and approximately 5.2km northwest of Fordingbridgeand the A338 road. The site comprises three areas:

- The reception area where waste is tipped and inspected.
- The operational area where the waste is shredded, continuous turned block formed and aerated, and inert soil waste is blended with compost.
- An area comprising a site office, toilet and wash facilities, a weighbridge, a shed and storage containers.

1.4 Permits and Licenses

Newbourne Farm Composting Limited (hereon referred to as 'Newbourne Farm') currently hold a bespoke installation environmental permit (Reference EPR/ QP3090VL/V006) for the composting of waste under aerobic conditions in open systems at the facility in Fordingbridge, with a throughput of up to 25,000 tonnes per annum. The facility is an Installation activity as it has a capacity greater than 75 tonnes per day. It is therefore listed as the following activity:

Section 5.4 A(1) b) (i) Recovery of non-hazardous waste through biological treatment with a capacity exceeding 75 tonnes per day or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment.

Additionally, Newbourne Farm hold a waste exemption for the screening and blending of waste to produce a soil (T5 waste exemption).

1.5 Planning Permissions

The site operates under full planning permissions for the composting activities. Newbourne Farm are seeking to vary their planning permission to include activities associated with soil blending and an increased throughput.

1.6 Reason for Application

Newbourne Farm are seeking consent to vary their bespoke installation environmental permit to increase the annual throughput of green waste material for the purpose of composting at the site from 25,000 tonnes up to 40,000 tonnes and to accept up to 9,000 tonnes of waste per year for the screening and blending of waste to produce a soil. In order to do this, the site will be accepting additional European Waste Catalogue (EWC) codes which must be added to the site permit. These have been presented in the list of EWC codes presented in Annex A. The treatment of the inert soils will be processed within the existing site boundary, and blended with the 10mm compost, to produce BS 3882 certified topsoil.

2.0 OVERVIEW OF PROPOSED OPERATIONS

2.1 Current Operations

Newbourne Farm currently operates a continuous turned block composting facility comprising the treatment of source separated green wastes. Under their current environmental permit, Newbourne Farm are permitted to treat more than 75 tonnes of waste per day but no more than 25,000 tonnes per year.

Green waste that is accepted onto site is shredded, undergoes moisture evaluation and addition, and may be mixed in order to try and achieve a C:N ratio of 25:1 to 30:1, before being formed into a continuous turned block that is 50m x 48m x 5m (length x width x height). The material is sanitised in the continuous turned block for a minimum of 7 days at 65^{o}C. Following sanitisation, the material is stabilised for a minimum of 8 weeks. During this period, the block is turned a minimum of twice. Once the stabilisation phase is complete, the compost is screened before being stored in the product storage area to the south of the site ready for dispatch. To produce the 0-10mm product selected batches of screened 0-30mm product are held for maturation, which is set at 8 weeks, then screened with a 10mm screen. Each product batch shall be identifiable in its storage location by a marker that displays its unique product batch code. The product batches are stored such that post process contamination does not

occur. Compost is stored on a dedicated pad which is separated from the screening area by a belt of trees 15m wide. The total composting process is 9 weeks.

2.2 Proposed Operation

Newbourne Farm are seeking to vary their bespoke installation environmental permit to increase the annual throughput of material at the site from 25,000 tonnes up to 40,000 tonnes and to allow for the acceptance onto site and subsequent physical treatment of inert soils under the following activity:

- Physical treatment for recovery of Non-Hazardous Waste: conditioning and screening of imported soil wastes.

The inert soils will be processed within the existing site boundary, and blended with 10mm compost produced on site, to produce a topsoil certified to BS 3882. The amount of inert waste soil processed at Newbourne Farm would be a maximum of 9,000 tonnes per annum. The additional waste codes that would need adding to the permit to allow for the acceptance of inert waste soil onto site are:

- 17 05 04 soil and stones other than those mentioned in 17 05 03 (non-hazardous from construction sites)
- 17 05 06 Dewatered dredging spoil and plant tissue waste from inland waters.

2.3 Operational Layout

The operational layout of the facility is shown in the Site Layout Plan. The facility comprises of a weighbridge, a waste reception and shredding area, the composting pad area (for composting in the continuously turned block) and the storage area for final compost and blended soil. There is also an inert waste soil reception area and a soil screening and blending area situated in the northwest portion of the Site.

The site has a drainage system in place. Surface water is directed via a sealed drainage system to a contained underground storage tank. This storage tank is made of 8mm thick steel and has a volume of 54,500 litres. The tank is fitted with a maximum limit level before full capacity is reached. Some of the water that is collected in this tank is recirculated back into the composting process and used to amend the moisture content of process material as necessary. There is a natural fall across the site from the northwest to the southeast of the site. Water that makes its way across site and into the drain is then fed into the swale. On

occasions where the maximum limit level of the underground storage tank is reached such as during extreme rain events, water is discharged off site via the swale.

At the north-eastern edge of the continuous turned block composting activity, a, kerb is present. The kerb is a half-battered road kerb (125 x 255mm) which is set at least 100mm above the impermeable surface and acts as a grip for surface water runoff.

All vehicles carrying waste will enter and exit adhering to the site's traffic routing system. Following visual inspection of the incoming waste, the vehicles will be invited to proceed to the site's reception area, where a site operative shall ensure that the waste carrier takes the material to the input materials storage area to be tipped.

2.4 Wastes to be Processed

A full itemised list of wastes to be processed on site, including EWC codes, is provided in Annex A. The list provided is an expansion of the wastes previously allowed to be accepted on to site and incorporates the EWC codes associated with the treatment of inert waste soils.

2.5 Calculated Capacity

The site has capacity to process more than 75 tonnes of waste per day and as such is classed as a Part A(1) activity requiring an Installation permit. Newbourne Farm is currently permitted to treat up to 25,000 tonnes per year of biodegradable green waste and are seeking consent to be able to accept and process up to 9,000 tonnes per annum of inert soil waste and are also seeking consent to increase the annual throughput of green waste on site from 25,000 tonnes per annum to 40,000 tonnes per annum.

2.6 Directly Associated Activities

The associated activities with the system are:

- Compost and inert waste soils storage (prior to dispatch offsite);
- Physical treatment of waste - R3: Recycling/reclamation of organic substances which are not to be used as solvents (physical treatment includes shredding and screening);
- Water collection and storage; and,
- Storage of contaminants prior to recovery or disposal.

3.0 OPERATING PROCEDURES

Each load of biodegradable waste / material delivered for composting shall enter the site via the weighbridge. Details of the waste carrier, waste type, waste code, client/source, quantity (tonnes) of waste and delivery date shall be recorded on a Waste Transfer Note and a central computer.

The weighbridge operator shall then notify the driver to proceed to the reception where a site operative shall be on hand. Here, the waste carrier will tip the waste so as not to merge / contaminate it with any input materials already being stored.

A site operative will initially inspect the load to accept or reject if the load looks significantly contaminated (1% contamination). If there is evidence of Japanese Knotweed within the load, management will be notified immediately to take control of the matter and reject the load in its entirety, given that Japanese knotweed is an invasive species and non-conforming material under the PAS standard. If the load appears acceptable upon initial visual inspection, then the operative will spread and inspect each load at the storage area. Visible contamination (plastics, metals, stone etc) shall be removed where it is practical and safe to do so.

Following acceptance of the waste onto site, the driver will proceed back to the weighbridge to be weighed out and provided with a copy of the weighbridge ticket for their records.

Once tipped, the waste is pre-treated where appropriate (shredded/mixed/watered) prior to being formed into the continuous turned block that is 50m x 48m x 5m (length x width x height), ready for sanitisation.

The composting process typically lasts 9 weeks with the sanitisation and stabilisation phases being actively managed and turned by a 360 excavator or loader. Monitoring equipment will be used for temperature monitoring and moisture levels will be assessed by grip test to ensure critical limits for composting are being met. The Compost Monitoring System is the primary piece of equipment used to measure temperature and oxygen levels.

At the end of the 9-week composting process, the compost will be screened and sampled. On achieving all of the criteria for the PAS 100, the compost will be moved to the product storage area prior to dispatch.

3.1 Treatment of Inert Soil Waste

The treatment of inert soil waste at Newbourne Farm will follow the same pre-acceptance and waste acceptance process to the organic waste, as described above.

A separate spreadsheet shall be used to record the inert soil received and sold for traceability purposes. A site operative will inspect the waste transfer documentation. When the site operative is satisfied that the documentation is in order the driver will be instructed to enter the weighbridge, where the weights will be documented.

The driver will then be instructed to proceed to the waste reception area. The waste reception area for the inert soil waste materials is situated to the east of the site. Once the inert soil waste has been tipped, a site operative shall undertake a visual inspection of the material to ensure that it conforms to an EWC code listed in Annex A and the description provided in the documentation supplied by the producer and holder. Any waste load not conforming to the above will be rejected from site.

The inert soil will then undergo an initial screening prior to being blended with some of the 0-10mm compost. A batch of 0-10mm compost is moved up when it is 8 weeks old. Some of this 0-10mm compost is then blended with the screened inert soil material to form the final topsoil product (BS 3882 certified).

3.2 Site Operational Hours

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

Week Day	Waste Acceptance	Waste Treatment
Monday to Friday	07:00 - 18:00	08:00 – 18:00
Saturday	07:00 - 18:00	08:00 – 13:00
Sunday	07:00 - 18:00	NIL
Bank Holidays	07:00 - 18:00	NIL

3.3 Technical Standards and Control Measures

Newbourne Farm operate to industry best standards, adopting procedures from PAS100 and BS Standards for the composting of waste. The critical control points governing these technical standards are to be applied to this site and fully incorporated into the site's Standard Operating Procedures.

A documented list of technical standards that the site will be operating to is provided in Annex B.

4.0 ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

All facilities have an impact on the environment around them. An Environmental Risk Assessment has been undertaken to include all operations on site (document reference: Environmental Risk Assessment). Newbourne Farm employ process management and monitoring techniques which will mitigate the environmental impact within the sections listed below:

4.1 Odour

The site has a comprehensive Odour Management Plan (document reference: Odour Management Plan) and Fugitive Emissions Management Plan (document reference: EPR-C02) for details of how odour is managed at site. The site undertakes a number of practical measures to help minimise odour:

- Immediate rejection of incoming waste loads deemed to be excessively odorous upon arrival at site;
- Minimise waste storage time by maintaining volumes at a manageable level; and,
- Regular cleaning of operational areas to prevent accumulation of potentially odorous material.

4.2 Bioaerosols

Please refer to the site's Fugitive Emissions Management Plan (document reference: EPR-C02) for frequency and description of required monitoring as well as mitigation measures. Material in active composting phases, such as block composting, will be controlled in terms of moisture to ensure the material does not dry to present dust and generate a subsequent bio-aerosol issue. Measures are in place to ensure that mud and debris does not track across the site and onto the public road network.

4.3 Noise

Measures to minimise noise and vibration from composting and blending operations are detailed in the Fugitive Emissions Management Plan (document reference: EPR-C02). To limit the incidence of noise and vibration potentially affecting nearby sensitive receptors, all vehicles and plant will be switched off when not in use.

All vehicles, plant and machinery operated at the site will be maintained in accordance with the manufacturer's specification and site's maintenance schedule and are fitted with effective silencers where possible.

4.4 Surface Water

Surface water on site is managed by the site's drainage system, please refer to the site's Fugitive Emissions Management Plan (document reference: EPR-C02). Rainwater falling on the treatment and storage areas is collected in the drainage infrastructure along with washing water and is stored in the 54,500-litre drainage tank to be recirculated into the composting process as required or discharged via the swale.

4.5 Sensitive Receptors

Please refer to the site's Fugitive Emissions Management Plan (document reference: FEMPEPR-C02) for mitigation measures for the effect of fugitive emissions on sensitive receptors. The site is situated within a rural area, and dust, fumes and litter will be particularly noticeable to neighbouring activities. Consequently, good relationships with neighbouring properties and businesses are paramount in helping to anticipate potential problems and avoid them. Newbourne Farm shall ensure:

- That all the neighbouring buildings know how to contact the site if they consider fugitive emissions to be a problem (contact details will be clearly visible on the site sign along with the Environment Agency details); and,
- That any complaints are recorded and that problems, where possible, are dealt with promptly in accordance with the site's complaints procedure as documented in the Environmental Management System Manual.

Additionally, there are no Sites of Special Scientific Interest (SSSIs) within 500m of the site.

ANNEX A – ACCEPTABLE EWC CODES

EWC Codes for the Treatment of waste for open windrow composting and for the Physical treatment for recovery of Non-Hazardous Waste: conditioning and screening of imported soil wastes.

Waste Code	Description (Biodegradable Only)
02 01	**Waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing.**
02 01 03	Plant-tissue waste.
02 01 06	Animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site.
02 01 07	Wastes from forestry.
02 03	**Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation.**
02 03 04	Biodegradable materials unsuitable for consumption or processing.
02 07	**Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa).**
02 07 01	Wastes from washing, cleaning and mechanical reduction of raw materials.
02 07 02	Wastes from spirits distillation.
02 07 04	Materials unsuitable for consumption or processing.
03 01	**Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard.**
03 01 01	Waste bark and cork.
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer.

03 03	**Wastes from pulp, paper, and cardboard production and processing.**
03 03 01	Waste bark and wood.
03 03 10	Fibre rejects.
04 02	**Wastes from the textiles industry.**
04 02 10	Organic matter from natural products (un-dyed and untreated only).
15 01	**Packaging (including separately collected municipal packaging waste).**
15 01 01	Paper and cardboard packaging.
15 01 03	Wooden packaging.
15 01 05	Composite packaging.
15 01 09	Textile packaging.
17 02	**wood, glass and plastic.**
17 02 01	Wood.
17 05	**Soil (including excavated soil from contaminated sites), stones and dredging spoil.**
17 05 04	Soils and Stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05 (from inland waters only)
19 05	**wastes from aerobic treatment of solid wastes.**
19 05 03	off-specification compost from a composting process that accepts waste input types listed in this table, made up of previously sanitised and stabilised batches only.
19 08	**wastes from waste water treatment plants not otherwise specified.**
19 08 05	sludges from treatment of urban waste water.
19 12	**Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified.**

19 12 01	Paper and cardboard (excluding veneers, plastic coatings or laminates) meeting EN 13432 or equivalent certified standard only.
19 12 07	wood other than that mentioned in 19 12 06.
20 02	**Garden and park waste (including cemetery waste).**
20 02 01	Biodegradable waste (plant matter only).
20 02 02	Soil and stones (garden and park waste)
20 03	**Other municipal wastes.**
20 03 02	Waste from markets.

ANNEX B – TECHNICAL STANDARDS SUMMARY

WRM Ltd are acting consultants for Newbourne Farm Composting Limited who have commissioned WRM to produce a list of Technical Standards that the site will be working to during the operational lifetime of the permit.

Newbourne Farm is proposing to accept a number of non-hazardous wastes to process through the onsite waste treatment system as outlined within this document. The table below presents a list of technical documents, with reference, for the process of composting green wastes and the on-site treatment of inert waste soil. These documents have been utilised to fulfil the requirements of the permit variation application and will continue to be in use as a point of reference during the operational lifetime of the permitted site. Documents have been sourced from both regulatory agencies and industry led organisations such as the Organics Recycling Group (ORG).

Composting and Soil Treatment - 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
PAS 100 Standard Operating Procedure	BSi
Quality Protocol for Compost	WRAP/EA
Specification for topsoil	British Standard 3882:2015
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
Best Available Techniques (BAT) Reference Document for Waste	Industrial Emissions Directive 2010/75/EU
Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste	EA SGN IPPC S5.06 (Produced for England and Wales)