W Clifford Watts

SERVICING CONSTRUCTION SINCE 1937'

Report No. 2401-001/R/003
12 June 2025
Revision 3

Gransmoor Wet Processing Plant

Permit Application Technical Standards Report

HOOPER-SARGENT LIMITED

Environmental Permitting Consultancy

Document Control

Document: Permit Application Technical Standards Report

Project: Gransmoor Wet Processing Plant

Client: W. CLIFFORD WATTS LTD

Report Number: 2401-001/R/003

Document Checking:

Revision	Revision/ Review Date	Details of Issue	Prepared / Authorised
3	12 June 2025	2nd Response to EA request for pre-Duly Making information	P Roberts
2	24 April 2025	1st Response to EA request for pre-Duly Making information	P Roberts
1	17 June 2024	Issued for application	P Roberts
0	5 April 2024	Issued for Application	P Roberts

This report has been produced by Hooper-Sargent Limited within the terms of the contract with the client and taking account of the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Please note that this report is based on specific information, instructions, and information from our Client and should not be relied upon by third parties. The copyright of this report remains the property of Hooper-Sargent Limited and cannot be reproduced in whole or in part without first obtaining the express consent of Hooper-Sargent Limited.

Contents

1 Introduction

1.1 Regulatory Background

This Technical Standards report addresses the requirements of Question 3a of the Part C4 application form for a bespoke permit variation which requires the Operator (W. Clifford Watts Limited) to list the appropriate measures they are planning to use to control emissions potentially harmful to human health or the environment. The Operator proposes to use the following technical standards where relevant which will be cross-referenced in the report:

- Agency online *Appropriate Measures* guidance[1]
- Agency online *Control and monitor emissions for your environmental permit* guidance[2]
- SR2010No.12 permit[3] and accompanying risk assessment[4]

1.1.1 Appropriate Measures – Technical Standards

This Technical Standards document also addresses key components of the accompanying Management System (MS) as directed by the following Agency online guidance *Develop and maintain management plans*[5] as well as the Appropriate Measures guidance as follows*:*

- Waste Acceptance Procedures (Section 2)
- Site Infrastructure Plan referenced 2401-001/D/005 in Appendix A
- Waste Storage Plan (Section 3)
- Detailed process description of the activity including all relevant infrastructure (Section 4)
- Residual Waste Minimisation (Section 5)
- Contingency Plan and Procedures (Section 7)
- Emissions and monitoring (Section 8)
- Potential influence of Climate Change (Section 9)
- Facility Decommissioning (Section 10)

1.1.2 Appropriate Measures – Environmental Risk Assessment

This Technical Standards Report informs the accompanying Environmental Risk Assessment (ERA) referenced 2401-001/R/004 which addresses the following aspects of the MS and Appropriate Measures guidance:

- Potential impact of any emissions
- Emissions monitoring and limits
- Accident Management Plan

[1] Non-hazardous and inert waste: appropriate measures for permitted facilities - Guidance - GOV.UK (www.gov.uk)
[2] Control and monitor emissions for your environmental permit - GOV.UK (www.gov.uk)
[3] SR2010 No12 - Treatment of waste to produce soil, soil substitutes and aggregate (publishing.service.gov.uk)
[4] https://assets.publishing.service.gov.uk/media/5a7c74ece5274a5255bcec65/geho0612bwqe-e-x.xls
[5] Landfill operators: environmental permits - Develop and maintain management plans - Guidance - GOV.UK (www.gov.uk)

1.1.3 Appropriate Measures – Operator Competence

The MS addresses the following components of the Appropriate Measures guidance:

- Requirement to maintain an MS
- Operator Competence

1.2 Non-Applicable Appropriate Measures

There are 9 sections to the Appropriate Measures Guidance and not all of them apply to the activity. Each section will list the Appropriate Measures that do not apply to the activity. As this site is not an installation Appropriate Measures 8: Process Efficiency does not apply in its entirety.

1.3 Structure of Report

This Technical Standards Report follows the narrative of the waste management activities on site from waste reception to export of products as follows:

- Section 2 – Waste Acceptance Procedures
- Section 3 – Waste Storage Plan
- Section 4 – Waste Treatment Process
- Section 5 – Residual Waste Management
- Section 6 – Product Verification and Storage
- Section 7 – Contingency Plans
- Section 8 – Emissions Management and Monitoring
- Section 9 – Climate Change Considerations
- Section 10 – Facility Decommissioning

2 Waste Acceptance Procedures

2.1 Appropriate Measures

This section addresses Appropriate Measure (AM) 3 which concerns the pre-acceptance, acceptance and tracking of waste received at the site for storage and its subsequent treatment. The Operator maintains a management system that ensures only permitted waste types can be accepted at the site for use in the waste treatment activity (AM3.1.1). This also ensures the waste accepted are also appropriate to meet the requirements of the WRAP Quality Protocol for producing aggregates from inert waste[6] (WRAP Protocol).

2.2 Non-Applicable Appropriate Measures

The following appropriate measures do not apply to this activity

- AM 3.1.4 – household and similar non-household waste is not accepted at the site
- AM 3.2.11 – the material accepted at the site will be non-hazardous, typically inert waste and therefore the offloading area does not require an impermeable surface with sealed drainage

2.3 AM 3.1 - Waste Pre-Acceptance

AM 3.1.2 – Ad-hoc Waste Acceptance

Although the type of waste to be accepted at the site will be largely similar in composition (typically excavated soils and stones), the source and supplier may vary as a consequence of the ad-hoc nature of construction and demolition projects that generates that type of material. As a result potential suppliers may make short-notice enquiries to the Operator to bring their waste arisings to the facility. Potential suppliers are discouraged from attending site without prior notice as this will inhibit the Operators ability to make the requisite checks on the proposed waste.

AM 3.1.3 and AM 3.1.5 – Requisite Information

To counter accidental or deliberate importation of unsuitable, unpermitted waste types at the facility the Operator maintains a strict was acceptance procedures which are applied before any material is brought to site. This includes determining if the waste is non-hazardous as well as inert for use in aggregate manufacture. Material used in soil manufacture will be non-hazardous but may not be subject to the same standards as those used in aggregate manufacture i.e. it may not need to be inert and may have a Total Organic Carbon (TOC) concentration greater than 3 % if it to be used as topsoil. The composition of the material exported from site as soil will be determined by the recipient site acceptance criteria.

The waste enquiry procedure requires the following information, where available and applicable, to be gathered prior to waste acceptance:

- Waste producer details including organisation name, address and contact details;
- Waste European Waste Catalogue Code and description;
- Quantity of waste to be supplied to the site;

[6] LIT_8709_c60600.pdf (publishing.service.gov.uk)

- Source and origin of waste (e.g. site investigation reports, borehole logs);
- Information on the waste production process (description including characteristics of raw materials and products);
- Appearance of the waste (e.g. smell, colour, physical form).
- Description of the waste treatment applied, or a statement of reasons why such treatment is not considered necessary; and,
- Chemical analysis data on the composition of the waste.
- End-use acceptance criteria (for soils)

All relevant information provided by the supplier will be compared against the list of permitted wastes in Table 1 to ensure it can be accepted at the site. The review will also confirm if the coding provided by the supplier is correct.

The list of wastes in Table 1 is based on material that would be acceptable at the site under the WRAP Protocol (the WRAP protocol does not apply to soil manufacture) or soil manufacture. Those wastes used to manufacture aggregate may be subject to sorting, separation, screening, crushing and treatment in the WPP, alone or in combination (Column A). Wastes used in the manufacture of soil may be subject to sorting, separation, screening and crushing (Column B), but will not be put through the wash plant. Outputs from the wash plant e.g. sand may be blended into the soils to improve drainage for example.

The WRAP Protocol includes EWC codes 10 11 13 and 15 01 07 which are not included in the current standard rules for the site. It is not proposed to accept wastes comprising of material described under 10 11 13 and 15 01 07. There are very specific limitations applied to certain EWC codes to comply with the WRAP protocol and this is illustrated with different descriptions for aggregate manufacture and soil manufacture.

Sediment from the Wet Processing Plant will be incorporated into the soil forming materials subject to it being determined by testing to be non-hazardous and compositionally appropriate for the soil specification required (see Section 4.5).

Table 1 - Acceptable Waste Types

EWC Code	Description	A	B
		Aggregate Manufacture	Soil Manufacture
01 04 08	**Waste gravel and crushed rocks other than those mentioned in 01 04 07.** May include excavation from mineral workings.	**Yes**	**No**
01 04 09	**Waste sand and clays.** Waste sand only. Must not include contaminated sand.	**Yes**	**No**
	Waste sand and clays.	**No**	**Yes**
17 01 01	**Concrete.** Must not include concrete slurry.	**Yes**	**No**
17 01 02	**Bricks.**	**Yes**	**No**
17 01 03	**Tiles and ceramics.**	**Yes**	**No**
17 01 07	**Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06.**	**Yes**	**No**
17 02 02	**Glass** Must not include fibreglass or glass fibre.	**Yes**	**No**
17 03 02	**Bituminous mixtures other than those mentioned in 17 03 01.** Allowed only if: Bituminous mixtures from the repair and refurbishment of the asphalt layers of roads and other paved areas (excluding bituminous mixtures containing coal tar and classified as waste code 17 03 01).	**Yes**	**No**

EWC Code	Description	A Aggregate Manufacture	B Soil Manufacture
	Must not include coal tar or tarred products. Must not include freshly mixed bituminous mixtures.		
17 05 04	**Soil and stones other than those mentioned in 17 05 03.** Must not contain any contaminated soil or stone from contaminated sites.	**Yes**	**No**
	Soil and stones other than those mentioned in 17 05 03.	**No**	**Yes**
17 05 06	**Dredging spoil other than those mentioned in 17 05 05.** Allowed only if: Inert aggregate from dredgings. Must not contain contaminated dredgings. Must not contain fines.	**Yes**	**No**
	Dredging spoil other than those mentioned in 17 05 05.	**No**	**Yes**
17 05 08	Track ballast other than those mentioned in 17 05 07 Allowed only if: Does not contain soil and stones from contaminated sites.	**Yes**	**No**
17 09 04	**Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03.** Allowed only if: The waste is generated from utilities trenchings. The waste consists of sub-base aggregates i.e. granular material. The waste contains only materials that would be described by entries 17 01 01, 17 03 02 and 17 05 04 in this appendix if the waste was not mixed.	**Yes**	**No**
17 09 04	**Mixtures of soil, bricks and concrete**	**No**	**Yes**
19 02 06	**Wastes from physico chemical treatment** *(sediment from on-site soil wash plant only)*	**No**	**Yes**
19 12 05	**Glass.** Does not include glass from cathode ray tubes.	**Yes**	**No**
19 12 09	**Minerals (for example sand, stones).** Must not contain contaminated concrete, bricks, tiles, sand, stone or gypsum from recovered plasterboard.	**Yes**	**No**
	Minerals (sand)	**No**	**Yes**
20 01 02	**Glass.** Must not include fibreglass.	**Yes**	**No**
20 02 02	**Garden and park wastes (including cemetery waste) – soil and stones.** Must not contain contaminated stones from garden and parks waste.	**Yes**	**No**
	Garden and park wastes (including cemetery waste) – soil and stones.	**No**	**Yes**

The WRAP Protocol requires all wastes accepted to produce aggregates in accordance with it to be inert. Section 2.1.1 of The Council Decision 2003/33/EC (waste acceptance at landfills) includes a list of wastes in that are assumed to be inert and therefore acceptable as inert waste without testing if:

- they are single stream waste of a single waste type (although different waste types from the list may be accepted together if they are from a single source); and
- there is no suspicion of contamination and they do not contain other material or substances such as metals, asbestos, plastics, chemicals, etc. to an extent which increases the risk associated with the waste sufficiently to justify their classification as non-inert.

If WAC testing is required, the appropriate data will be requested from the waste producer and will be reviewed by a suitably qualified person, using the WAC criteria specified in Section 2.1.2 of the Council Decision 2003/33/EC.

There is no requirement for waste to be used in soil manufacture to be inert under SR2022No1.

2.3.1 AM 3.1.6 to 8 – Waste Classification

In the case of suspicion of contamination, either from visual inspection or from the knowledge of the origin of the waste, suitable analytical data will be required to demonstrate that the waste is acceptable in accordance with Agency guidance document WM3[7].

Ground investigation or waste material testing provided by the supplier will be reviewed to ensure it has been carried out by an appropriately accredited laboratory and it is still valid i.e. the testing matches the material proposed to be brought to site. If site staff have reservations about the description of the waste, the number of samples taken or the quality of the testing itself, they may request additional analysis to be carried out by the waste producer before a decision is taken whether to accept it. Testing of additional samples of the waste may be required and that will be sent to a laboratory that meets the Agency's requirements[8] for compliance with Environmental Permitting (England and Wales) Regulations (2016)(as amended).

Assuming the waste is non-hazardous and inert (for aggregates), it must also be assessed to ensure it is physically suitable for acceptance at the site. This will include criteria such as its physical state. If the moisture content of the waste is too high, it may produce free liquid on deposit that could run off and cause surface water pollution. Excessive moisture could also make it geotechnically unstable leading to stockpile collapse. Conversely certain waste should not be accepted if in their fully dry state they produce dust emissions. This may be unavoidable in periods of hot, dry weather however if the status of the waste is known the Operator can implement appropriate management controls on receipt. No waste will be accepted that has the potential to generate odours or attract pests in any physical state.

2.3.2 AM 3.1.10 to 11– Records and Review

The Operator maintains records of all waste queries associated with material received at the activity for a minimum period of 3 years. A number of suppliers are long-term clients of the Operator which provides material from a regular source or sources. The Operator is in constant contact with these suppliers to ensure the nature of the material remains consistent. If there are any changes to the waste imported, the process that generates it or if it fails the existing waste acceptance criteria, a review of all relevant information provided by the supplier will be required. This will happen on a minimum annual basis regardless.

2.3.3 AM 3.1.12 – Acceptance Parameters

The Operators ability to set qualitative waste acceptance parameters is determined by individuals physical access to the waste brought to site. In most cases it is not practicably possible for the weighbridge operator to make a visual assessment of the suitability of waste when it is still in the delivery vehicle. The most suitable place to carry that out is at point of deposit where the full profile of waste can be viewed. The list of qualitative parameters for waste acceptance therefore applies as follows:

- **Odour** – weighbridge / point of deposit – strong odours from the vehicle may be noticeable from the vehicle prior to deposit at the site. Odours of concern may include hydrocarbons, burning

[7] Waste Classification: Guidance on the classification and assessment of waste (1st Edition v1.2.GB)
[8] Using MCERTS for the chemical testing of soil - GOV.UK (www.gov.uk)

(smoke), organic odours indicating biodegradable materials or hydrogen sulphide (rotten eggs) from waste degrading in anaerobic conditions.

- **Visible plumes** – weighbridge / point of deposit – burning waste may be emitting smoke which could be visible to the weight bridge operator. Plumes of dust may indicate very dry, dusty material unsuitable for deposit.
- **Litter** – weighbridge / point of deposit – the material for deposit would not normally require full enclosure if it consists of granular excavation type waste. If fugitive litter or other materials is seen issuing from the body of the vehicle it could indicate it contains unsuitable material for treatment at the site.
- **Visual appearance of the waste** – point of deposit – although a range of excavation and demolition wastes are suitable for treatment at the site, material at point of deposit that appears different to the description provided may be an indication that it contains other unsuitable materials. For example it is the Operators preference to import primarily granular material and therefore a load that appears to be predominantly soils a) will generate less aggregate and more silts and b) suggests an issue with the pre-acceptance information.
- **Visual presence of contaminants** – point of deposit – visible contaminants could include hydrocarbon staining, free liquids, organic materials, litter, unsuitable construction and demolition materials such as plasterboard, asbestos or wood fragments.

2.4 AM 3.2 - Waste Acceptance

2.4.1 AM 3.2.1 to 4 – Initial Checks

All incoming vehicles will enter the site via the main site entrance and check in at the weighbridge office. The weighbridge is the first checkpoint to verify that the material proposed by the supplier meets the information provided in the pre-acceptance checks. This will include where practicable reference to the qualitative acceptance parameters described in Section 2.3.5 which are informed by the type of waste the Operator requires to run the plant. Prior to arranging delivery of the waste, reference will be made to the Storage Plan (Section 3) to ensure a suitable location of appropriate size is available to receive and store the waste, as well as the correct plant to grade it into a stockpile.

2.4.2 AM 3.2.5 to 10 – Documentation

The documentation accompanying the load will be checked and will include, but not be limited to, the Carriers Certificate of Registration details and Duty of Care Waste Transfer Note. The information to be recorded in respect of each load will be:

i. Waste Type & EWC Code;
ii. Date;
iii. Time;
iv. Customer Name;
v. Vehicle Registration Number and Type;
vi. Ticket Number; and,
vii. Carriers Certificate of Registration.

The weighbridge operator will confirm that the accompanying documentation (i.e. waste description or likely levels of contamination) demonstrates that the waste load is the same waste type described by the customer at the pre-acceptance stage. For wastes produced by the operator at a different site this visual verification may be made at the point of dispatch. In such cases this verification must be documented and the document

be made available at the receiving site. All information including the weight of the load measured by the weighbridge will be stored in paper form or electronically.

If the documentation is not correct and the correct paperwork cannot be provided, the weighbridge operator will inform the Site Manager or nominated technically competent person and the load will be rejected. In those circumstances both the waste carrier and the waste supplier will be contacted to attempt to resolve the situation before the vehicle leaves site or more importantly, more of the same waste is brought to site. The operatives at the deposition area will also undertake a visual inspection of each waste load arriving to site. Should any load look suspicious or unsuitable for deposition, the operatives at the operational area will contact the weighbridge operator to assess the waste load in question.

A record will be made if the load is rejected or is accepted for deposit at the site. If a load is deposited, found to be unsuitable and the delivery vehicle is not immediately available to remove it, the load will be placed in the quarantine area. Arrangement will be made with the supplier to remove the material and until the issue is resolved, no more waste will be accepted from them at the site. It will not be possible to determine visually if the rejected waste is hazardous, however if as a result of testing the waste retained on site is found to have hazardous levels of relevant substances, it will be managed as a hazardous waste in accordance with Agency guidance on rejected loads.[9]

The persons carrying out the pre-acceptance and acceptance checks will be suitably qualified to review pre-acceptance information, compare it against relevant thresholds to determine if it is hazardous or non hazardous, and thresholds or descriptions to determine if it is inert waste. Similarly the weighbridge operator and individuals supervising deposit of the material will be trained in the application of the relevant waste acceptance and rejection procedures.

2.5 AM 3.3 – Quarantine

2.5.1 AM 3.3.1 to 5 – Quarantine Measures

Any waste that is found to be unsuitable for storage and treatment at the site will be placed in the quarantine area prior to its removal from site by the supplier. The risk of contaminated run-off from the type of waste to be accepted at the site is considered to be low, however if appropriate quarantined material may be sheeted if there is a risk of pollutant mobilisation from rainfall or wind. In the unlikely event it is infested or odorous it will be removed from site within 24 hours. The event will be recorded and the Environment Agency will be notified as soon as possible of any rejection of part or all of a waste delivery. A record will be kept of the following:

i. Date and time;
ii. Person rejecting waste;
iii. Haulier /customer name and address including carrier number;
iv. Vehicle registration number;
v. Producer name and address if known;
vi. EWC number;
vii. Transfer note number; and
viii. Waste description.

[9] Hazardous waste: rejected loads guidance - GOV.UK (www.gov.uk)

2.6 Waste Tracking

The Operator maintains an electronic system which tracks waste inputs and exports (waste and non-waste) from the site.

AM 4.8 does not apply to the Site as the wastes imported for treatment are typically inert soils, stones or aggregates and therefore are not a risk of physical degradation or biodegradation which may produce odour, polluting liquids or a fire risk if not managed in a first-in-first-out basis.

2.7 Staff Training

The Operator has implemented a training programme which will support all relevant employees in the correct approach to:

- Classify waste correctly;
- Identify if waste is suitable for the facility;
- Manage loads that are not suitable for acceptance at site; and,
- Determine that products have met the end of waste status in accordance with the WRAP Protocol.

3 Waste Storage Plan

3.1 Appropriate Measures

This section addresses Appropriate Measure (AM) 4.0 which concerns the storage of waste at the site prior to treatment and any relevant waste outputs from the process, specifically AM 4.0.1 which states:

You must have waste storage and handling procedures. You must store and handle waste in a way that makes sure you prevent and minimise pollution risks by using appropriate measures.

3.2 Non-Applicable Appropriate Measures

The following appropriate measures do not apply to this activity

- AM 4.0.9 / 4.0.10 – No Refuse Derived Fuel or Solid Recovered Fuel stored or produced at site
- AM 4.0.11 – waste will not degrade to produce odour or attract vermin
- AM 4.0.12 – waste not stored in containers
- AM 4.1.2 – only excavated soil, stones and aggregates is accepted at the site

3.3 General Principles

3.3.1 Current and Proposed Permitted Activities

Table S1.2 of the SR2022No1 includes R13: *Storage of wastes pending the operations numbered R3 to R5*. The limits to that activity are:

- Secure storage of wastes listed in Tables 2.3a, 2.3b and 2.3c pending treatment
- Storage of wastes listed in table 2.3c shall not exceed 10,000 tonnes in total at any one time
- All other wastes stored shall not exceed 50,000 tonnes in total at any one time

It is not proposed to amend the storage activities at site already permitted under SR2022No1 with the maximum quantity of all wastes stored on site limited to 50,000 tonnes.

3.3.2 AM 4.0.1 – non-inert wastes

At sites accepting waste with a high organic content that can degrade to produce pollution or odours, it may be necessary to follow a first-in, first-out system which ensures the residence time of potentially problematic waste is minimised. Waste accepted for soils manufacture may not be inert i.e. may have a TOC above 3%, however the TOC is likely associated with material that has been in the ground for a long period of time prior to excavation and all readily degradable material has diminished. The risk of odour or other emissions is considered to be low and a first-in, first-out system is not required. For volume management purposes the silt from the Wet Process Plant (WPP) will be tested as soon as it is excavated from the lagoon to determine if it is suitable for inclusion in the soils. If so it will be immediately removed from the pad on receipt of compliant data i.e. if found to be inert or exported from site if it is deemed unsuitable for use in the soils.

3.3.3 AM 4.0.2 – Waste Locations

AM 4.0.7 states that waste must be stored to prevent unnecessary handling, this is to reduce the risk or occurrence of emissions such as noise from plant / material handling, dust or odour from disturbed wastes or vehicle exhaust plumes. Odour is not an issue at this site as the waste is not biodegradable or contains odorous chemicals. The impact of dust, noise and visible plumes are considered in the accompanying ERA.

3.3.4 AM 4.0.3 – Waste Handling

Wastes stored prior to treatment are placed in the immediate vicinity (where practicable) to the WPP where they can be easily transferred using a fixed excavator into the primary feed hopper (see Figure 1). Wastes imported to site for production of soils will be placed in the appropriate stockpile area and excavated for processing by screening or shredding before being placed in windrows to dry as required.

The WPP feed stockpile is topped-up as required from the various reserve stockpiles using a wheeled excavator. There is no manual handling of waste due to the quantity and mass of the material. All plant drivers have the appropriate qualifications and experience to operate the machinery they are allocated. They are also proficient in routine maintenance of that plant (where practicable on site) and responsible for ensuring defects are reported to the site management in a timely manner so they can be addressed as part of the servicing plan or as required.

Any material which is > 40 mm in size is removed from the primary screen for further treatment e.g. crushing of over-sized aggregates. The crusher is located in close proximity to the initial Scalping screen and only used when sufficient material is available.

The output products from the process are stored at point of discharge and either loaded directly onto wagons for export or moved to a larger stockpile pending export on a campaign basis.

3.3.5 AM 4.0.5 / 4.0.6 – Waste Storage Arrangements

Table 2 lists the stockpile reference, type of waste material stored pending treatment and the maximum quantity of waste material stored in it at the site.

Table 2 – Waste Stockpile Locations

Stockpile Reference	Material Type	Maximum Quantity (tonnes)
A	Waste granular	19,000
F2	Imported waste soils and stone	14,500
F1	Materials for production of soils (includes outputs if still waste)	10,000
H	Waste Concrete	1,800
J	Waste brick-based rubble	3,750
L	Waste Bituminous-based aggregate	200
N	Over-flow stockpile for waste soils and stone	450
O	Waste silt from lagoons	280
U	Trash from WPP screens	10
V	Metal recovered from WPP dry inputs	10
	TOTAL	**50,000**

* includes material produced from soil manufacture activity but physically separated from input material.

The quantity of waste stored on site pending treatment will not exceed 50,000 tonnes at any one time in accordance with SR2022No.1 Table S2.1. The largest individual stockpiles will be the granular material awaiting processing in the WPP (23,000 tonnes).

The location of the waste storage stockpiles is identified on Figure 1. The extent and identification of these stockpiles is also identified by appropriately sized, clearly legible signage on site which also includes the date stockpiling of waste was commenced at that location. The Operator maintains a register which contains:

- Stockpile ID
- Waste Type or Product Type and source(s) of material
- Stockpile volume
- Date stockpile started
- Date Stockpile removed

3.3.6 AM 4.0.7 – Waste Retention

AM 4.0.7 states that waste must not be accumulated on site. This is to avoid the potentially significant management issues that can be associated with large accumulations of combustible or biodegradable wastes susceptible to the risk of fire and / or environmentally harmful degradation products (e.g. run-off, odour, pests). Accumulations of non-degradable wastes can be problematic in terms of space, production of dust (when drying out), unsightly stockpile heights and uncontrolled run-off.

The Operator manages their site as a waste recovery activity in accordance with the Article 3 definition in the Waste Framework Directive[10]. They also operate in compliance with Article 2 (g) of the Landfill Directive[11] which states waste stored on site for less than 3 years is not considered to be a landfilling activity.

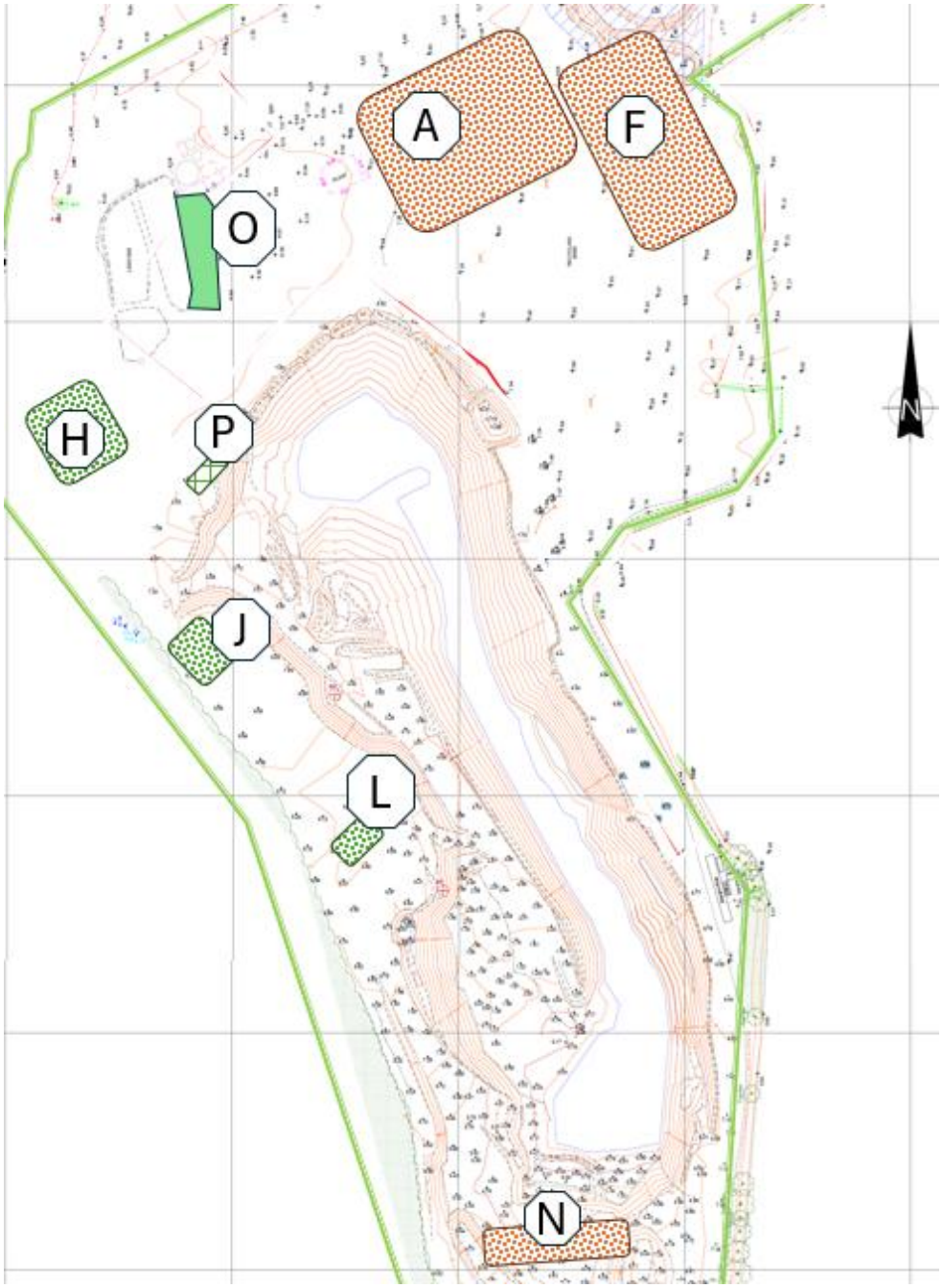
The demand for quality recovered aggregates means that waste stored on site pending recovery as part or consequence of the treatment process unlikely to approach 3 years.

3.3.7 Fire Prevention Considerations

The type of waste imported for processing at the site and the waste / non-waste material outputs from it consist exclusively of soil, stones and aggregates. These materials are not flammable and therefore imposition of firebreaks in accordance with Section 11.1 of Agency guidance on *Fire Prevention Plans: Environmental Permits*[12] does not apply.

[10] Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance) (legislation.gov.uk)
[11] Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (legislation.gov.uk)
[12] Fire prevention plans: environmental permits - GOV.UK (www.gov.uk)

Figure 1 – Locations of Waste Stockpiles



3.4 Operating Technique – Waste Containment

3.4.1 AM 4.0.4 – Waste Storage Pollution Prevention

The entirety of the land within the existing permit boundary and that proposed for inclusion as part of this permit variation is not located within a Source Protection Zone (SPZ) 1 or 2. Waste stored pending processing at the site or materials (waste or product) produced as an output from the process are not stored within 10 m of a watercourse or any borehole used for the supply of potable water or other purposes. There are no potentially sensitive receptors on the immediate boundary with the site and in any case the closest sensitive human receptors are >500 m from the activity (see ERA).

The type of waste accepted for treatment at the site complies with the list of wastes detailed in Table 2.3a and 2.3b of SR2022No.1 but excludes those detailed in Table 2.3c of SR2022No.1. EWC code 19 02 06 represents the silt from the WPP and is not in any tables in SR2022No.1. This is discussed in Section 3.5 below.

Technique 3 of the SR2022No12 states that all permitted wastes types shall be stored and treated on hard-standing or on an impermeable surface with sealed drainage system. As the material imported for treatment is non-hazardous and suitable for processing under SR2022No.1, storage of waste on hard-standing is considered to be the appropriate containment measure for this site (see Section 8).

3.5 Storage of Waste Generated by the WPP

The WPP includes a 'lights' screen which removes incidental quantities of suspended litter or other debris. This material is a) wetted as a result of the wet process and b) produced in sufficiently small quantities that it is stored immediately adjacent to the WPP on a concrete surface with sealed drainage pending removal off site. The non-ferrous metals are removed by an over-band magnet in a dry state prior to the WPP and as such are stored in a dedicated bay / container without an impermeable surface / sealed drainage.

The primary waste generated by the WPP are silt fines removed from granular material. The fines are removed from the process water by a thickening tank which consolidates the fines at its base and then discharges them as a thick slurry into one of two dewatering lagoons. The water drained from this silt is then removed by a pump and discharged back into the thickening tank to remove any residual fines (See Section 4). The desilting lagoons were excavated from in-situ superficial drift deposits comprising silt and clay. This strata is considered to represent a low permeability, natural geological barrier that prevents infiltration of process water from the silt-dewatering lagoons entering the underlying ground. This is examined in more detail in the accompanying ERA. Silt excavated from the lagoons will be placed on a impermeable surface with sealed drainage pending testing for its inclusion in the soil forming materials or export as a controlled waste elsewhere as appropriate.

3.5.1 AM 4.0.13 – Waste Storage Inspection

AP 4.13 requires all waste storage locations to be inspected regularly to ensure there is no loss of containment or spillages of waste. All wastes stored pending treatment do not require additional containment measures, however they will be regularly inspected to check:

- The stockpile has not exceeded its designated boundary and / or height and potentially its volume limit. If so material will be removed or replaced within the designated area.
- The correct material is being stored in that stockpile. If not it will be removed and placed in the correct stockpile and all associated records checked and updated where necessary
- Under dry and windy weather conditions the material is not generating windblown dust. If observed to be the case damping down measures will be employed.
- Under very wet conditions surface water run-off is not occurring and mobilising solids toward a sensitive water course. If observed to be the case temporary earth bunding may be employed to contain or re-direct run-off water.
- The bin containing the light materials is not reaching capacity and will be emptied in good time.

3.5.2 AM 4.1.1 – Waste Segregation

AM 4.1.1 requires wastes to be segregated where if cross-contamination was to occur, this would render one or more of the waste unsuitable for recovery thereafter. None of the wastes imported to site for treatment in the WPP have the potential to cause contamination of others in that manner and additional segregation measures are not required.

4 Waste Treatment Process

4.1 Appropriate Measures

This section addresses Appropriate Measure (AM) 5.0 which concerns the treatment of non-hazardous and inert waste at the site and any relevant waste outputs from the process; specifically AM 5.0.1 which states:

Waste treatment must have a clear and defined benefit. You must fully understand, monitor and optimise your waste treatment process to make sure that you treat waste effectively and efficiently. The treated output material must meet your expectations and be suitable for its intended disposal or recovery route. You must identify and characterise emissions from the process and take appropriate measures to control them at source.

The Operators primary objective at the site is to treat waste to produce a non-waste product in accordance with the WRAP Protocol. They do this in accordance with a Factory Process Control system mandated by the WRAP Protocol which sets standards to ensure the final product meets the specification. Suitable waste soils and aggregates will also be processed to produce soils in accordance with SR2022No.1.

Appropriate Measures 6.0 relates to emissions control from the storage and treatment of non-hazardous and inert waste, which will also be considered in this section. AM 6.0 addresses enclosure within buildings, point source emissions to air and water, fugitive emissions to air, land or water and pests.

4.1.1 AM 6.0.1 – Emission Identification, Characterisation and Control

This section of the report will describe in detail the waste treatment process and where relevant at each stage identifies if an emission from the process is possible, the nature of that emission and the measures taken to control it. The impact of any potential emissions identified is then assessed in the accompanying ERA which assesses the effectiveness of the control measures.

SR2022No1 is supported by risk assessments that consider emissions from storing and treating waste externally subject to meeting distance criteria. It is understood that the activity is still >500 m from the nearest receptor that may be sensitive to noise, dust and odour emissions. It is also understood that there are no recorded pollution events or complaints which may otherwise lead the Operator to consider carry out the activity within a building. As discussed in Section 3, the waste imported to site does not present an odour risk.

4.2 Non-Applicable Appropriate Measures

The following appropriate measures do not apply to this activity

- AM 5.3.1 – waste is not being treated for disposal at landfill
- AM 6.1.1 to 6.1.10 – enclosure within a building is not required as the activities continue to meet the assumptions of the SR2022No.1.
- AM 6.2.1 to 6.2.9 – the activities will not be carried out within a building and there will be no point source emissions to air.
- AM 6.3.9 to 6.3.15 – no waste is accepted to site which has an odour risk
- AM 6.4.1 to 6.4.6 – there are no point source discharge to surface water or sewer
- AM 6.6.1to 6.6.3 – no waste is accepted to site which could attract pests or vermin.

4.3 General Principles

4.3.1 Current and Proposed Permitted Activities

Table S1.2 of the SR2022No1 includes:

- R3: recycling or reclamation of organic substances which are not used as solvents
- R5: Recycling or reclamation of other inorganic materials

The current limits to those activities are:

- Treatment of wastes listed in table 2.3a and 2.3b consisting only of sorting, separation, screening, crushing and blending of waste for recovery as a soil, soil substitute or aggregate.
- No more than 250,000 tonnes of waste shall be treated per year.
- Up to 75,000 tonnes of waste from Table 2.3b may be treated for production of soil, this tonnage limitation does not apply to EWC code 17 05 04.
- Treatment of slags and ashes for disposal shall not exceed 50 tonnes per day, or if for a mix of recovery and disposal shall not exceed 75 tonnes per day

It is not proposed to add any more WFD activity codes to the permit, however to enable the WPP activity it is proposed to include “Physico-Chemical Treatment of waste by wet processing” to the limits of activities in column 2 of Table S1.2 as per AM 5.1.1. Subject to testing confirming it is non-hazardous and appropriate for the intended final use specificaiton, silt excavated from the settlement lagoons may be incorporated with suitable wastes into the soil manufacturing activity at site. It is not the Operators intention to carry out treatment of slags or ashes for disposal or recovery purposes at the site.

4.3.2 AM 5.0.2 – Suitability of Material

To ensure compliance with the WRAP Protocol, the Operator is very selective in the type of waste that is accepted for treatment. Any waste which enters the process that does not meet the requirements of the WRAP Protocol may cross-contaminate qualifying waste and effectively nullify it until purged from the system. The section below addresses the requirements of AM 5.0.2 i.e.:

- Includes a simplified process flow diagrams that shows the origins of emissions (Figure 1)
- Details of the main plant items, the physical processes they carry out and capacity / throughput as applicable (Section 4.4)
- An equipment inventory (Section 4.5)
- Control system philosophy and how it incorporates environmental monitoring information
- Operating and maintenance procedures (see accompanying Management System Report referenced 2401-001/R/005)

Section 2 above details the waste types used subject to the process.

4.3.3 AM 5.0.3 – Accident Management Plan

The Accident Management Plan in the accompanying ERA details the measures taken during abnormal operating conditions such as unexpected releases, start-up, momentary stoppages and shutdown.

4.3.4 AM 6.3.1 – Fugitive Emission Control

The existing and proposed amendments to the activity will not result in an increased risk of fugitive emissions to air. The Operator is not increasing the daily capacity of the existing plant which would present a risk of generating noise, dust or mud emissions beyond the assumptions of the SR2022No1 risk assessments. The risk of odour and litter generation remains negligible.

4.3.5 AM 6.3.2 – Waste Acceptance

The primary type of waste to be accepted at the site i.e. granular non-hazardous, inert (for WRAP Protocol compliant activity) soil and stones will not change from that currently permitted. No issues have arisen from the acceptance of this material in the past and no changes have been required to the waste acceptance procedures as a result.

4.3.6 AM 6.3.3 – Maintenance Programme

The Operator maintains a regular inspection and maintenance programme detailed in Appendix G of the supporting MS.

4.3.7 AM 6.3.4 – Meteorological Monitoring

The Operator monitors publicly available meteorological websites for weather information that may increase the risk of fugitive emissions from their site impacting a distant receptor.

4.3.8 AM 6.3.5 – Dust Abatement

The Operator manages this facility in accordance with the manufacturer's instructions including the abatement measures incorporated into the plant used at site.

4.3.9 AM 6.3.6 – Fugitive Emission Management Plans

The activity is located >500 m from the nearest sensitive receptor therefore meeting the assumptions of the SR2022No1 risk assessments and is unlikely to cause noise or dust pollution at those receptors. There has been no substantiated complaints or incidents associated with fugitive emissions that require them to produce a dust, mud and litter management plan.

4.3.10 AM 6.3.7 – Fugitive Emission Containment

Fugitive litter from the site is not considered to be a risk based on the types of waste accepted for storage and treatment.

4.3.11 AM 6.3.8 – Mist Sprays

The activity does not require additional dust mitigation measures to prevent fugitive dust emissions. The addition of the WPP will not increase the fugitive dust risk. The measures employed on site to prevent mud being tracked onto the public road have been effective.

4.3.12 AM 6.3.16 to 6.3.18 - Odour

No changes have been to the activity which will increase the magnitude of noise emissions beyond the assumptions of SR2022No1.

4.3.13 AM 6.5.1 – Fugitive Emissions to Land and Water

AM 6.5.1 concerns the provision of appropriate containment measures against release of fugitive and point-source emissions. Section 4 identifies all potential sources of fugitive emissions and the accompanying ERA considers the associated risk with them. There are no point-source emissions associated with the WPP i.e. there are no direct discharges of process water to surface water or groundwater, nor are their any point source emissions to air from a stack or similar.

4.3.14 AM 6.5.2 – Impermeable Surfacing

The WPP, water treatment plant and excavated silt storage area are located on a concrete hardstanding with sealed drainage.

4.3.15 AM 6.5.3 - Drainage

No incompatible waste or other material stored or treated on site. The risk of fire at site is negligible and any drainage would not contribute to its spread were it to occur.

4.3.16 AM 6.5.4 – Containment Measures

The waste material stockpiled pending treatment is stored on hardstanding in accordance with SR2022No1. The WPP is used to produce a non-waste aggregate to the WRAP Protocol specification. This material is deposited on hardstanding from the WPP pending export from site. As the material inputs to the plant are inert, the product outputs are also considered to be inert and not controlled waste subject to regulatory control (assuming they are compliant with the WRAP Protocol). The Operator acknowledges that non-waste material can still retain the potential to cause pollution however and therefore conservatively applies the same controls as that afforded to imported waste i.e. > 10 m from a water course, >50 m from a borehole.

The silt dewatering lagoons were excavated into in-situ strata comprising 3.1 m thick silt underlain by 1.5 m of clay. The Operator has advised that the lagoons retain water to the extent that they must be actively pumped out to dewater the silt deposited in them. The silt and particularly the underlying clay is considered to represent a substantial natural geological barrier to any vertical emissions from the lagoons into the sand deposits under the clay. The accompanying ERA considers the suitability of the silt de-watering lagoons.

4.3.17 AM 6.5.5 to 6.5.17 – Polluting Substance Containment

The WPP is powered by a portable diesel powered generator housed in a metal container which is bunded to 110% of the generator fuel tank capacity. The diesel for the generator is refuelled using a portable tanker (along with other site plant) which also has appropriate containment measures.

4.4 Wet Process Description

Figure 2 below is a flowchart of the key waste treatment which includes:

- Process Inputs
- Waste and effluent treatment processes
- Process non-waste and waste outputs

The following sections describe in detail the:

- Type, make and capacity / throughput of each component
- How they function
- What the inputs / outputs are
- Where relevant, any emissions they produce

Table 3 below is a key to the symbols used in the flow chart.

Table 3 – Process Flow Chart Key

Material / Process Water Condition		Material / Process Water Status		Material / Process Water Condition	
	Dry waste requiring further treatment / recovery		Clean Process Water		Flocculent added
	Wet waste requiring further treatment / recovery		Sandy / Silty Process Water	N/A	Waste
	Water recovered from Silt Dewatering Lagoon		Silty Process Water	N/A	Non-Waste
	Silt-rich slurry		Process water carrying lights	N/A	Flocculent

4.4.1 Scalping Screen

Material excavated from the primarily granular feedstock pile (detailed in Section 3.3.5) is placed in the hopper of the Stanvic QE Mk 2 Scalping screen. This has a capacity of up to 10 tonnes with a throughput rate of up to 100 tonnes per hour. The scalping screen sorts the input material into:

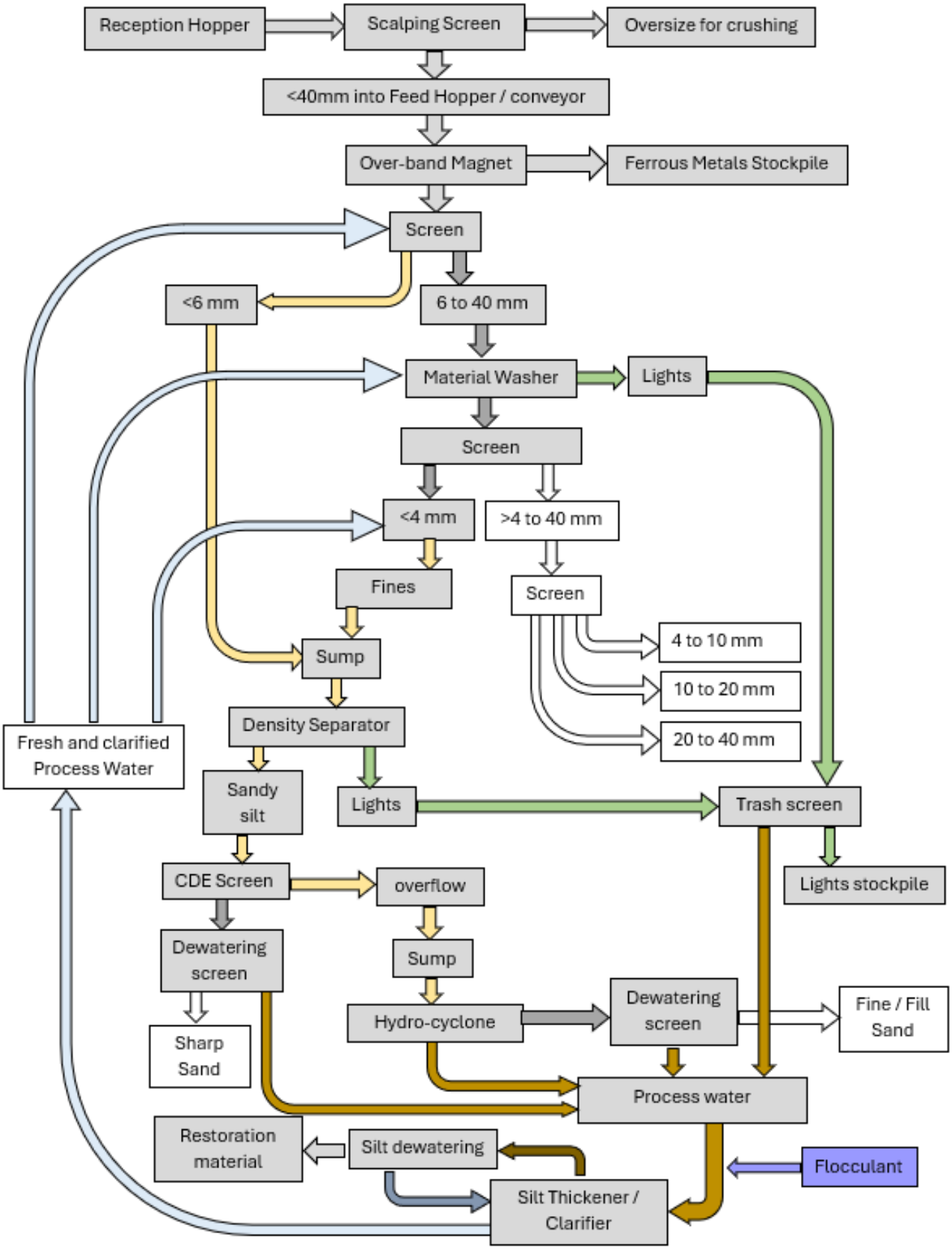
- <40 mm material for onward wet processing
- >40 mm oversized material for crushing and re-processing

Potential Emissions

In addition to deposit of material in the feed stockpile, noise will be generated when it is deposited into the scalping screen hopper and during the screening process. Noise may also be generated when the output material is deposited by conveyor in its respective stockpile or feed hopper for the WPP.

The loading of the scalping screen and subsequent sorting is a dry process and therefore there is potential for dust to be generated during deposit into the scalping screen, during the screening process and deposit in receiving stockpiles / feed hoppers.

Figure 2 – Process Diagram of Wet Process Plant



Screening and crushing of waste is part of the activities listed in the SR2022No1 permit and the risks associated with potential emissions from that will be considered against the SR2022No1 criteria in the accompanying ERA.

4.4.2 Balancing Hopper

The balancing hopper has a capacity of up to 2 tonnes and receives the < 40 mm material from the scalping screen. The balancing hopper does no further treatment of the waste but ensures a consistent feed rate of suitable material into the WPP via conveyor belt.

Potential Emissions

As the feed hopper does not deposit waste into any stockpiles there is limited potential for noise or dust emissions from this part of the process. Noise emissions will be associated with the operation of the plant itself.

4.4.3 Overband Magnet

An Erez Overband magnet is positioned over the conveyor from the Balancing Hopper and removes ferrous metals from the balancing hopper belt. The metal is deposited into a container immediately adjacent to the belt. The size of any metal that it removed from the process is limited by the initial scalping screen and therefore the noise associated with these incidental items being deposited in the container is negligible.

Potential Emissions

The Overband magnet is unlikely to produce significant dust emissions when it pulls incidental quantities of metal from the waste stream. The deposit of the metal in the container does not represent a significant noise emission.

4.4.4 Wet Screen

All remaining material on the conveyor from the Overband magnet is deposited into a wet screen which removes < 6mm material. The remainder is deposited into the Material Washer. The <6 mm material is directed to a sump which also receives < 4mm material from the Material Washer (Section 4.4.7).

Potential Emissions

The screen and water input will generate noise. No other emissions are likely.

4.4.5 Material Washer

The conveyor from the Balancing Hopper deposits <40 mm aggregate into the reception hopper of a Trio Material Washer (also known as a Log Washer). This consists of a single long shaft fitted with angled paddles set at an incline in a water-tight trough of equal length. Wetted granular material is fed into the base of the inclined trough which is filled with water deep enough to submerge the downward end of the paddle shafts. As the shaft turn it creates a turbulent water / aggregate matrix which cuts and abrades the material to remove clays, silts and sands from the feed matrix.

Mid-way along the trough the paddles change to a corkscrew arrangement which gradually drives the material up the length of the shaft and out of the submerged part of the trough. This ensures a suitable retention time to maximise abrasion of the material and remove fines material into the WPP process water.

When the > 6mm aggregate reaches the upper-end of the trough it retains only a minimal moisture content on the surface of the aggregate prior to discharge. Any light material (litter, organic debris etc) in the process water along with any suspended silt is discharged continually via a weir at the downward end of the trough and channelled to a Trash Screen.

Potential Emissions

The Material Washer is a wet process and will not produce dust emissions. Noise emissions are generated from the motor and mechanical action of the paddle shafts acting on the submerged and unsaturated aggregate. The plant is designed not to spill water to maximise water resource efficiency and therefore there are no effluent emissions to ground or surface water.

4.4.6 Trash Screen

Process water containing silt and light material from the washer is directed onto a trash screen to remove litter or organic debris. This wetted light material is removed from the screen and deposited into a stockpile within a bay immediately adjacent to the screen. The bay is on the concrete pad and bunded to prevent any residual liquid draining from the lights leaving the pad. No more than ??? m3 of this material is accumulated within this stockpile prior to its removal for recovery or disposal offs-site at an appropriately permitted facility.

The process water that passes through the Trash Screen is directed into the main process water network which in turn is directed to the process water treatment plant (Section 5.1.5).

Potential Emissions

The trash screen will generate noise to remove the material removed from the process water. The material is wet and will not generate dust or fugitive litter in that state. The quantity of trash retained in the stockpile does not exceed 10 m^3 to reduce the risk of any organic material going anaerobic and producing odours. Any liquid that drains from the material is contained by the concrete slab and bunding and avoiding the risk of emissions to surface water or groundwater.

4.4.7 Aggregate Grading Screens

The unsaturated aggregate discharged from the Material Washer is directed into a screen to separate it into <4 mm and >4 mm to 40 mm aggregate. The >4 mm to 40 mm aggregate is then directed into a further screen that grades it into 4 to 10 mm; 10 to 20 mm; and 20 to 40 mm aggregate. This aggregate is classified by the Operator as non-waste in accordance with the WRAP Protocol.

Clean process water is added to the <4 mm aggregate component to enable it to be channelled into a sump. This sump also receives the process water laden with the <6 mm material removed by the screen prior to the Material Washer.

Potential Emissions

Noise will be generated by the screens and conveyor system that deposits the recovered aggregate into its respective stockpiles. The aggregate is wet but not saturated and therefore does not retain water that could drain from the stockpiles. There is no risk of fugitive emissions to surface water or groundwater (discussed further in Section 7.1.1 and accompanying ERA).

4.4.8 Density Separator

The combined silt and sand laden process water is pumped into a Density Separator which removes any remaining light fraction (litter or organic debris) from the sand / silt laden process water. The light fraction process water is directed to the Trash Screen discussed in Section 4.4.6. The remaining sand / silt laden process water is directed to the CDE Infinity Screen.

Potential Emissions

The Density Separator is a fully enclosed system that relies on fluid dynamics to separate material of different densities. There are no emissions associated with it.

4.4.9 CDE Screen

The input point to the CDE Screen has an overflow pipe that decants-off process water laden with silt and fine grained sand into another sump. The remaining process water is then directed to a dewatering screen which removes coarse or sharp sand. This sand is classified as a non-waste in accordance with the WRAP Protocol. The process water directed through the screen then joins the main flow into the water treatment plant.

Potential Emissions

The CDE Screen and dewatering Screen will produce noise. The process water remains contained in the WPP effluent drainage network and no emissions of this are made to groundwater or surface water.

4.4.10 Hydro-Cyclone

Process water from the CDE Screen overflow sump is directed into a Hydro-Cyclone that acts in a similar way to the Density Separator. Fine silt is removed from Hydro-Cyclone and directed into the main effluent flow form the WPP. The remaining process water contains predominantly fine / fill sand and this is directed to a dewatering screen. The fine / fill sand removed from this is classified as a non-waste in accordance with the WRAP Protocol. The remaining silty process water extracted from the dewatering screen joins the main flow into the water treatment plant.

Potential Emissions

The Hydro-Cyclone is a fully enclosed system that relies on fluid dynamics to separate material of different densities. There are no emissions associated with it. The CDE Screen and dewatering Screen will produce noise. The process water remains contained in the WPP effluent drainage network and no emissions of this are made to groundwater or surface water.

4.4.11 Process Water Thickener / Clarifier

All silt-laden process water derived from the CDE screen, Hydro-Cyclone and Trash Screen is directed to the 9 m diameter Parnaby Silt Thickener Plant located 40 m to the west of the WPP. The pipework carrying the silty process water is buried under the haul road that passes between the two areas of plant.

The silty process water is mixed with a polymer-based flocculent (CLEARFLO NP1846-1) in the inlet pipe just prior to discharge into the thickening tank at a rate of which quickly causes the suspended silt particles in the tank to aggregate and fall out of suspension. This sediment accumulates as a saturated sludge in the bottom of the tank where it is then directed to the underflow outlet in the centre of the tank by two slowly rotating rake arms. The sludge is removed and discharged into the silt dewatering lagoons. The flocculent is a polymer-based liquid and contains no substances harmful to human health or the environment.

The clarified water at the surface of the tank flows over a weir that encircles the circumference of the tank. This minimises the overtopping height of the water and slows the exit velocity, reducing the mobilisation of solids. This over-flow water is directed to a clarified water storage tank located immediately adjacent to the Clarifier Tank. Immediately adjacent to the clarified water storage tank is a freshwater tank filled with mains water / abstracted water from the central quarry dewatering lagoon. Water from both sources is then recirculated back into the WPP, with priority given to the clarified water to minimise water use. The WPP and water treatment process is a net user of water with approximately 10% lost to evaporation or adsorption to process outputs. The addition of fresh water is therefore essential to maintain the process. This also ensures contaminants do not accumulate to unacceptable levels in the WPP process water.

Potential Emissions

The process water treatment system is fully sealed from the WPP through to the discharge from the thickening tank into the silt dewatering lagoons. Low-level noise emissions are associated with the operation of the rotating sludge rakes and water discharge into the tank and the sludge discharge from it. As it is a wet process there are no other associated fugitive emissions.

4.4.12 Silt Dewatering Lagoons

The saturated sludge removed from the underflow of the thickener tank is discharged into the northern-most end of a pair of silt dewatering lagoons. The lagoons are used on an alternating basis to allow time for silt to fully consolidate and release any water. The base of the lagoons are excavated to maintain a slight gradient encouraging the silt to spread slowly along the length of the lagoon liberating process water as it settles. The liberated water flows by gravity into a smaller lagoon where any remaining solids are allowed to settle out prior to the water being pumped back into the thickener tank.

The silt dewatering lagoons are understood to be excavated into the undisturbed, superficial drift geological deposits. Based on the installation log of BH1 which is 20 m to the northwest of the lagoons, the lagoons are enclosed laterally (to a depth of 3.8 m) by sandy / gravelly silt and underlain by 1.5 m of clay. The silt is likely to represent a low-permeability matrix. The underlying clay is likely to have a significantly lower permeability of no greater than $1x10^{-9}$ m/s. There is a 0.5 m thick sand and gravel layer beneath the clay and below that a further 5.7 m thickness of clay which overlies the solid chalk geology. No additional engineered mineral or plastic liner has been placed in the base or sides of the lagoons as the Operator considers the in-situ deposits to be of sufficiently low permeability to prevent vertical or lateral emissions from them.

Testing of the process water from the silt dewatering lagoon and the clarified water from the thickening tank was carried out in March 2024. The data from this sampling is attached to the accompanying ERA and summarised in Table 4 below. Substances concentrations were typically higher (35% on average) in process water from the silt dewatering lagoon than the thickening tank.

With the exception of sulphate, the data indicates that the process water in the silt dewatering lagoons does not contain substances at concentrations above the maximum expected in the eluent for a 10:1 LFD Inert WAC leachability test. Comparison against the more stringent Drinking Water Standard (DWS) thresholds indicates the process water in the silt dewatering lagoons would exceed the sulphate, total Polycyclic Aromatic Hydrocarbon (PAH) and Benzo[a]pyrene (BaP) DWS thresholds.

Table 4 – Comparison of Process Water (PW) Concentrations and Relevant Quality Standards

Substance	Units	Thickener Tank PW	Silt De-watering lagoon PW	LFD Inert WAC 10:1 Max Allowable Eluent Con[c]	Dewatering lagoon PW Above / Below LFD Inert WAC	DWS	Dewatering Lagoon PW Above / Below DWS
Conductivity at 25°C	µS/cm	755	822	N/A	N/A	2500	Below
Dissolved Organic Carbon	mg/l	7.27	9.75	50	Below	N/A	N/A
Nitrate as N	mg/l	4.8	0.6	N/A	N/A	50	Below
Ammoniacal Nitrogen as N	mg/l	0.4	0.09	N/A	N/A	0.39	Below
Chloride as Cl	mg/l	32	42	N/A	N/A	250	Below
Fluoride as F	mg/l	0.4	0.3	1	Below	N/A	N/A
Arsenic as As	mg/l	0.004	0.003	0.05	Below	0.01	Below
Cadmium as Cd	mg/l	<0.00002	<0.00002	0.004	Below	0.005	Below
Total Chromium as Cr	mg/l	<0.001	<0.001	0.05	Below	0.05	Below
Copper as Cu	mg/l	0.006	0.01	0.2	Below	2	Below
Iron as Fe	mg/l	<0.01	<0.01	N/A	N/A	0.2	Below
Lead as Pb	mg/l	<0.001	<0.001	0.05	Below	0.01	Below
Manganese as Mn	mg/l	0.009	0.039	N/A	N/A	0.05	Below
Mercury as Hg	mg/l	<0.00003	<0.00003	0.001	Below	0.001	Below
Nickel as Ni	mg/l	0.002	0.003	0.04	Below	0.02	Below
Sodium as Na	mg/l	24	27	N/A	N/A	200	Below
Total Sulphur as SO4	mg/l	168	318	100	**Above**	250	**Above**
Zinc as Zn	mg/l	0.005	0.003	0.4	Below	N/A	N/A
Benzo[a]pyrene	µg/l	0.29	0.53	N/A	N/A	0.01	**Above**
Total PAH 16	µg/l	2.44	4.51	N/A	N/A	0.1	**Above**
Phenol	mg/l	<0.05	<0.05	0.1	Below	N/A	N/A
Benzene	µg/l	<1	<1	N/A	N/A	1	Below

The silt is left in the lagoons until all water has drained from it. The Operator has advised that in its post-drained state the consolidated silt has clay-like properties with a high angle of repose. This material is then excavated from the lagoons. Testing of this material indicates it is non-hazardous and would meet the Landfill Directive Waste Acceptance Criteria for an inert landfill (the LFD Inert WAC). WAC Test data for the silt is attached in Appendix B.

Potential Emissions

There is potential for process water liberated from the dewatered silt to pass through the base and sides of the lagoons and into potentially sensitive groundwater or surface water receptors. This risk is considered in the accompanying ERA. The potential for process water to contaminate materials passing through the WPP is considered in Section 7.1.1.

4.4.13 Clean Process Water and Fresh Water Storage

The clean process water and imported fresh water from the mains supply / abstracted from the quarry dewatering lagoon is stored in tanks pending re-use in the screens before and after the Material Washer, along with the washer itself. The pipework connecting the tanks back to the WPP follows the same pipe run as the silty process water discharged from the WPP.

Potential Emissions

The process water storage tanks are fully sealed and do not discharge anywhere except the pipework feeding the WPP. The clarified process water is not considered to be sufficiently contaminated that it would present a risk to groundwater or surface water, and therefore the tank does not require secondary containment.

4.5 Soil Manufacture

4.5.1 Typical Sources of Soil

Materials to be used in soils production are received from three primary site types:

- Greenfield sites with no former developments on them
- Sites with previous developments on them, but low levels of contamination certified by desk study or ground investigation
- Sites where otherwise uncontaminated soils have been mixed with inert aggregates or from land with a very high natural stone content

4.5.2 Treatment Options

A range of treatment options are available subject to material condition, source and end specification. Loamy soils don't tend to require further processing on receipt. Clay soils may require the addition of sand to improve drainage with screening to remove clods or oversized material. Silty soils may also require sand to improve drainage, with some light screening to break up the structure. Conversely both peaty and sandy soils my benefit from additional silty material to aid water retention and some screening to break up the soil.

Windrowing

It may be necessary to dry out and aerate soils if they have been excavated during wet conditions. These soils will be placed in stockpiles using a wheeled loading shovel or 360 tracked excavator. The stockpiles may be turned before processing into soils to ensure even drying.

Dry Screening

Imported soils may contain oversized material on receipt. This material will be passed through a mobile tracked screen to break up the soil and remove the oversized materials. The oversized material will either be taken for processing as an aggregate or set aside to dry out further and rescreened accordingly.

Clay soils can become cloddy when wet. Such soils will be subject to windrow drying first. They will then be passed through a dedicated Screen by a wheeled loading shovel or 360 tracked excavator. As per the dry screening, this may separate out oversized materials for recovery as aggregates or setting it aside to dry further pending additional screening.

Blending to achieve the correct rooting medium

The Screened Soils from the above processes will be sampled for organic matter. If required, non-waste PAS-100 certified compost, lime or other minerals can be added to improve the soil by placement into the screener with the soil at the required blend or using a loading shovel to add organic matter at the stockpile.

End Soil Specification

Subject to the intended end use, the following specifications will be followed as appropriate:

- Topsoil: BS3882 : 2015
- Subsoil: BS8601 : 2013
- Soils For Civil Engineering BS 1377-2 : 2022 and the Specification for Highways Works 2016
- Designed Rootzones Mixes
- Engineered Soils for SUDs etc
- High Permeability Soils
- Bespoke Soil Requirements

4.5.3 Equipment Inventory

Table 5 below summarises the plant and equipment used during the WPP / Soil Production process.

Table 5 – Plant / Equipment Inventory

Report Section	Plant Name, Make and Model	Plant Function
4.4.1	Scalping Screen	Grading input material to <40 mm
4.4.2	Balancing Hopper	Controls rate of material input into WPP
4.4.3	Overband Magnet	Removes non-ferrous metal
4.4.4	Wet screen	Grades input material to 6 to 40 mm
4.4.5	Material Washer	Disaggregates granular material and removes silt / sand from matrix
4.4.6	Trash Screen	Removes light fraction from process water
4.4.7	Aggregate Grading Screens,	Grades non-waste outputs to 4 to 10 mm, 10 to 20 mm and 20 to 40 mm
4.4.8	Density Separator	Removes light material from sandy / silty process water
4.4.9	CDE Screen	Removes coarse sand from process water
4.4.10	Hydro-Cyclone	Removes fine / fill sand from process water
4.4.11	Thickener / Clarifier Tank	Removes silt from process water
4.5.1	Keestrak K4 Scalping Screen	Removes oversized material / breaks up consolidated material
4.5.1	McCloskey 123 Viper Sizer Scalping Screen	Removes oversized material / breaks up consolidated material
4.5.1	Sandvik QE341 Scalper	Removes oversized material / breaks up consolidated material
4.5.1	Sandvik QA331 Screen	Breaks up clods formed in cohesive soils such as clays

5 Residual Waste Management

5.1 Non-Product outputs from the Wet and Dry Process Plant

The WPP and dry treatment activities (alone or in combination) generate a range of waste materials which are recovered on-site or exported from site for recovery or disposal elsewhere.

5.1.1 Waste Minimisation

The Operator actively seeks to reduce the quantity of non-recoverable waste from the treatment process by carefully sourcing material that meets the description of non-hazardous, inert waste prescribed by the WRAP Protocol. The prevents treatment of material that cannot be processed under the WRAP Protocol and would retain its controlled waste classification after treatment. The selection of inert waste minimises the presence of non-inert materials such as paper, plastic or organic debris which would need to be removed from the process and managed accordingly. The Operator also selects material that consists primarily of granular material (e.g. stones, aggregates) with a minimised soil / silt content. This is because the WPP removes two non-waste grades of sand particles (fine and sharp), but the silt content is not covered by the WRAP Protocol and requires further management.

Waste soil and stones treated to produce a soil forming material at the site may continue to be classified as waste on export from the site. It's classification as non-waste will be subject to the specification is it produced to, the requirements of its intended end use or the regulatory regime it operates under e.g. use in a permitted waste recovery activity or as a soil material generated in accordance with a CL:AIRE hub-and-cluster Definition of Waste Code of Practice (DoWCoP) scheme. The site may also be used as a location to temporarily store and bulk-up material intended for direct transfer of green-field dig waste soils under an approved DoWCoP scheme. It is possible that discrete quantities of material will be present on site with different intended end-uses. Where this occurs it will be clearly identified and recorded to ensure the correct material is sent to the correct site.

5.1.2 Metals

Oversized (>40 mm) ferrous metals are initially removed from the process stream by the scalping screen. This material is directed along with oversize aggregates to a stockpile for further crushing. The crushing process will not reduce the size of the metal fragments e.g. ReBar and this may need to be handpicked out. The ferrous material that passes through the scalping screen (<40 mm) is removed by the Overband magnet positioned over the feed conveyor. All metal removed from the process is viable for recovery elsewhere and exported from site.

5.1.3 Silty Process Water

The management and treatment and re-use of the process water is discussed in Sections 4.4.11 and 4.4.12 above.

5.1.4 Light Fraction

The removal of light fraction litter and organic debris is discussed in Section 4.4.6 above.

5.1.5 De-watered Silt

The management of silt removed from the process water is described in Sections and 4.4.12 above.

6 Product Verification and Storage

6.1 WRAP Protocol

The Operator will treat waste at the facility in accordance with their Factory Production Control report referenced GQFP03 to produce a non-waste aggregate that meets the requirements of the WRAP Protocol.

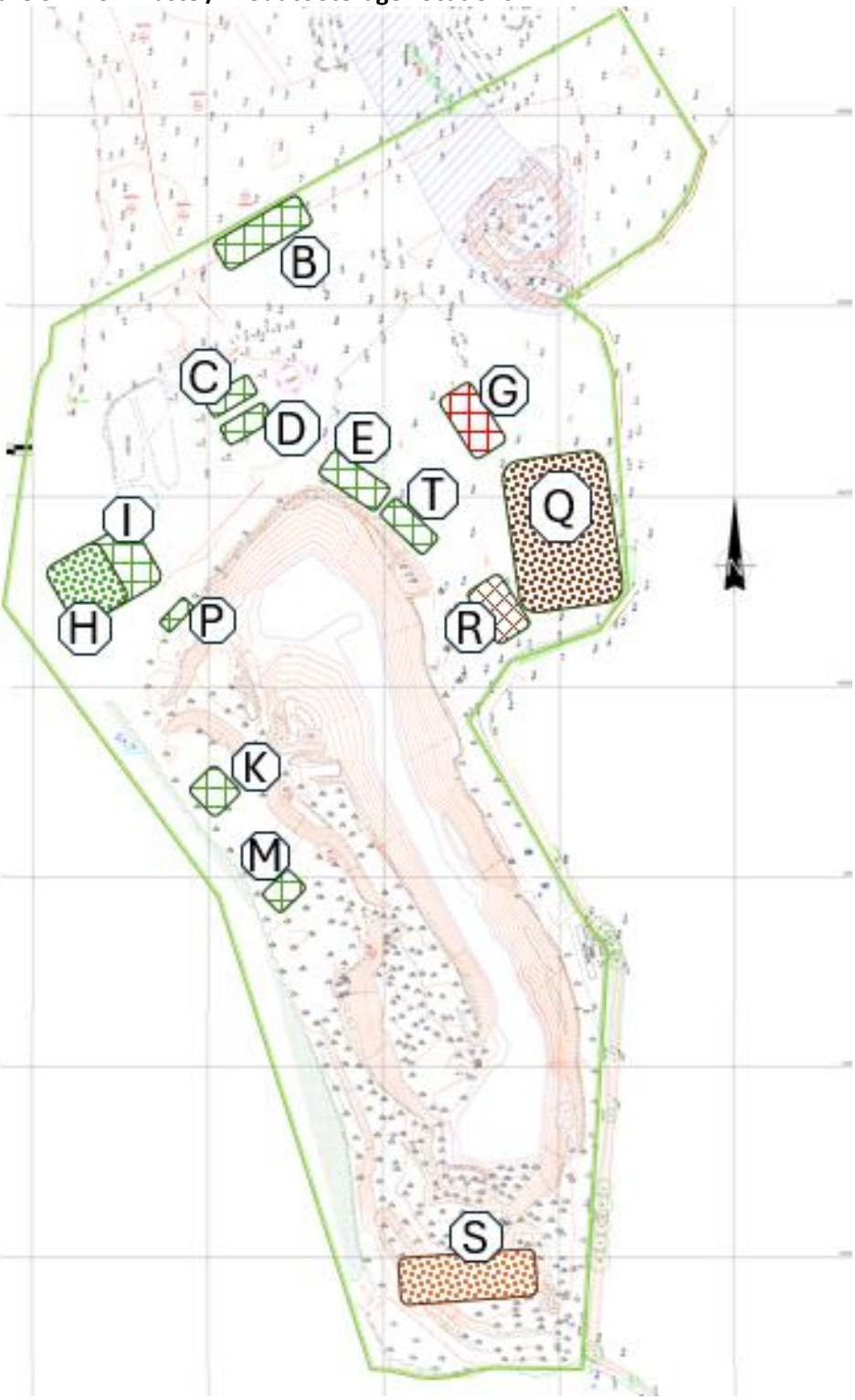
6.2 Storage

Non-waste material processed under the permit in accordance with the WRAP protocol will be stored at the locations in Table 6 and as per Figure 3 below:

Table 6 – Non-Waste Stockpile Descriptions and Quantities

Stockpile Reference	Material Type	Maximum Quantity (tonnes)
B	Fine / Sharp Sand	2,000
C	20 mm Recycled Pipe Bedding	500
D	10 mm Recycled Pipe Bedding	500
E	40 mm Recycled Pipe Bedding	500
G	Recycled Class 4 Fill	1,000
I	Crushed / Screened Concrete	1,000
K	Crushed Brick-Based Aggregate	2,000
M	Tarmac-based Aggregate	200
R	Processed Quarry Soils	1,000
S	Stripped Quarry Soils for restoration	10,000
T	Crushed / Screened Concrete Aggregate	500

Figure 3 – Non-waste / Product Storage Locations



7 Emissions Management and Monitoring

7.1 Process Water and Silt Quality Monitoring

The Operator carries out testing of the process water and silt on a quarterly basis to confirm that re-circulated process water is not cross-contaminating input materials and that the silt is non-hazardous suitable for use as a restoration material.

7.1.1 Process Effluent Testing

The effluent is tested at 2 locations as follows:

1. The dewatering sump in the silt-dewatering lagoons.
2. The discharge point from the overflow of the thickening tank.

There is potential for substances leached from the waste in the process water to accumulate and potentially contaminate material passing through the WPP. This may have implications for the suitability of the material produced by the WPP to meet the requirements of the WRAP Protocol i.e. remain inert.

It is considered very unlikely that the process water will be able to contaminate the solid material progressing through the plant. As discussed in Section 4.4.11 the process water quality in the silt dewatering lagoon is of a higher quality than the maximum allowable eluent quality in a 10:1 test to meet LFD inert WAC and for the majority of substances meets the DWS. The volume of water retained by any material outputs from the process is very low (expected to be <10% based on the field capacity of sand). The quantity of any potentially contaminating substance in that water will also be very low and if converted to a dry weight residue, the material would remain non-hazardous and still meet the LFD Inert WAC for all relevant substances.

As a precaution the process water will continue to be tested for the substances listed in the LFD inert WAC at the locations listed above. The suite of testing may also be refined as the data set builds and confidence in the consistency of process water quality increases.

7.1.2 Process Silt Testing

The de-watered silt removed from the silt lagoons is excavated and used as restoration material. To confirm its suitability, the silt is tested for total metals, banded hydrocarbons, speciated PAHs and the requisite components of a Landfill Directive WAC test.

7.2 Environmental Quality Monitoring

The Operator maintains an environmental monitoring programme at the site in accordance with the requirements of their permit for the inert landfill site. There is currently no requirement to carry out environmental monitoring for the waste treatment permit.

7.2.1 Surface Water

Surface water samples are taken upstream and downstream of the Site on a quarterly basis. The testing regime carried out is detailed below. To ensure the proposed activities do not adversely impact the water quality of the central lagoon in the former quarry void, the Operator proposes to add testing of that lagoon

to the routine monitoring. The rationale of the proposed monitoring regime is discussed further in the accompanying ERA.

7.2.2 Groundwater

The baseline study compiled by Golder Associates in support of the planning application for the quarry extension to the north considered that groundwater flow is locally influenced by abstraction of water from the central lagoon. Due to the location of the lagoon relative to the proposed activity, this is considered to be the closest receptor to the Site and will be monitored as part of the surface water regime. No additional groundwater monitoring is proposed.

8 Climate Change Considerations

Current Agency Management System guidance[13] requires all operators that were issued an environmental permit before April 2023 to have completed a Climate Change Risk Assessment for their site. This is to consider the potential impacts associated with higher temperatures, more heatwaves and hot days, rising sea levels, changes in rainfall patterns and intensity and more storms.

The Climate Change Risk Assessment for this site is included with the accompanying ERA which covers all the potential emission points listed in Section 0 above. This also considers the potential impacts associated with those emission points under current climate conditions and how they may be aggravated by the influences of climate change.

The ERA considers the examples detailed in Agency guidance: *Non-hazardous and inert waste treatment: examples for your adapting to climate change risk assessment*[14]. A review of the relevance of the examples listed is detailed in Table 7 below. That identified the following climate impacts as relevant to the proposed activity:

- Higher summer temperatures may cause equipment to overheat.
- Dust emissions may be more likely under drier temperatures.
- Water supply to WPP and dust mitigation may be restricted under drought conditions.
- Equipment may be vulnerable to lightening strikes.

The measures to be put in place to mitigate against the impacts identified above are discussed in the ERA.

[13] Develop a management system: environmental permits - GOV.UK (www.gov.uk)
[14] Non-hazardous and inert waste treatment: examples for your adapting to climate change risk assessment - GOV.UK (www.gov.uk)

Table 7 – Potential Impacts of Climate Change

Impact	Description	Relevant (Yes / No)	Justification
Summer Daily Maximum temperature			
1	Waste reactions or fire	No	No combustible or reactive waste accepted at site
2	Equipment fire	Yes	Plant used for treatment of waste
3	High temperature expansion / stress	No	Effluent pipework buried.
4	Dust emissions	Yes	Waste / aggregates stored in stockpiles
5	Water supply	Yes	WPP reliant on water for effective operation
6	Pest and scavengers	No	No putrescible wastes that could attract pests
7	Wildfires	No	Processing plant not located near wooded areas, wastes not flammable.
Winter Daily Temperatures			
1	Odour / pests	No	Inert waste not odorous
2	Frozen pipework	No	Main body of pipework buried
Daily Extreme Rainfall			
1	Flooding	No	Site not vulnerable to flooding
2	Overwhelmed drainage	No	Impermeable surface and sealed drainage not required for waste storage / treatment
Average Winter Rainfall			
1	Flooding		Site not vulnerable to flooding
2	Overwhelmed drainage	No	Impermeable surface and sealed drainage not required for waste storage / treatment
Sea Level Rise			
1	Coastal flooding	No	Elevation of site does not make it vulnerable to flooding at hightide + 0.6m [15]
Drier Summers			
1	Water restrictions	Yes	Activity relies on water for wet treatment process
2	Site discharges	No	No discharges to surface water
River Flow			
1	On-site drainage systems	No	No discharge to watercourses susceptible to flooding
Storms			
1	High winds	No	Rain accompanying storm will prevent high winds mobilising dust
2	Above ground tanks	No	No above ground tanks on jacks
3	Lightening strikes	Yes	Potential damage to infrastructure

9 Facility Decommissioning

9.1 Waste Removal

Waste will be stored on site in accordance with Waste Storage Plan detailed in Section 3 above. In the event of a planned cessation of waste treatment activities, no more waste will be imported to the site for

[15] Climate Central | Land below 0.6 meters of water

treatment. Any existing stockpiles of waste will be treated in accordance with the permit. If this is not possible, it will be removed from site for recovery or disposal at a suitably permitted activity elsewhere.

Any residual waste normally generated by the permitted treatment process (recovered metal, trash from the clarifier or silts) will be removed from site for recovery or disposal via the existing off-site outlets.

9.2 Product Removal

Subject to the circumstances of the facility decommissioning, all non-waste material produced in accordance with the WRAP Protocol will be exported to the existing commercial outlets. Some material may be retained on site after cessation of activities / surrender of the permit on the assumption a) it will not be retained indefinitely unless part of a designated development and b) it will not cause a pollution risk i.e. mobilisation of suspended solids.

9.3 Plant Removal

The waste treatment plant will be decommissioned in accordance with the manufacturers instructions once all remaining waste stockpiles have been depleted, unless it is intended that the waste is to be removed from site. Particular care will be taken around plant that contains hydraulic or other fluids that if spilt could cause pollution. As a precaution spill kits will be readily available to prevent the spread of any spillages and absorb the liquids. The Operator will also be prepared to remove any ground for treatment or disposal off site that may be contaminated.

The fuel storage tank will be fully drained by a competent contractor and the contents and the tank itself removed from site. Before removal, the tank will be inspected for any defects that may have resulted in contaminating leaks. After removal the ground underneath the tank and the refuelling area will also be inspected for residual contamination. If there is any doubt samples of the ground will be taken to confirm no contamination has occurred. In the unlikely event of any contamination being identified, the extent will be delineated by further testing and appropriate remedial measures undertaken such as removal of the impacted material.

9.4 Buried Services

It is understood that the only buried services associated with the site is the pipework connecting the WPP to the clarification unit, and the return pipework carrying the clean water back into the process. This pipework is identified on a drawing and on site by appropriate markers to ensure it is not damaged unintentionally during any ground works.

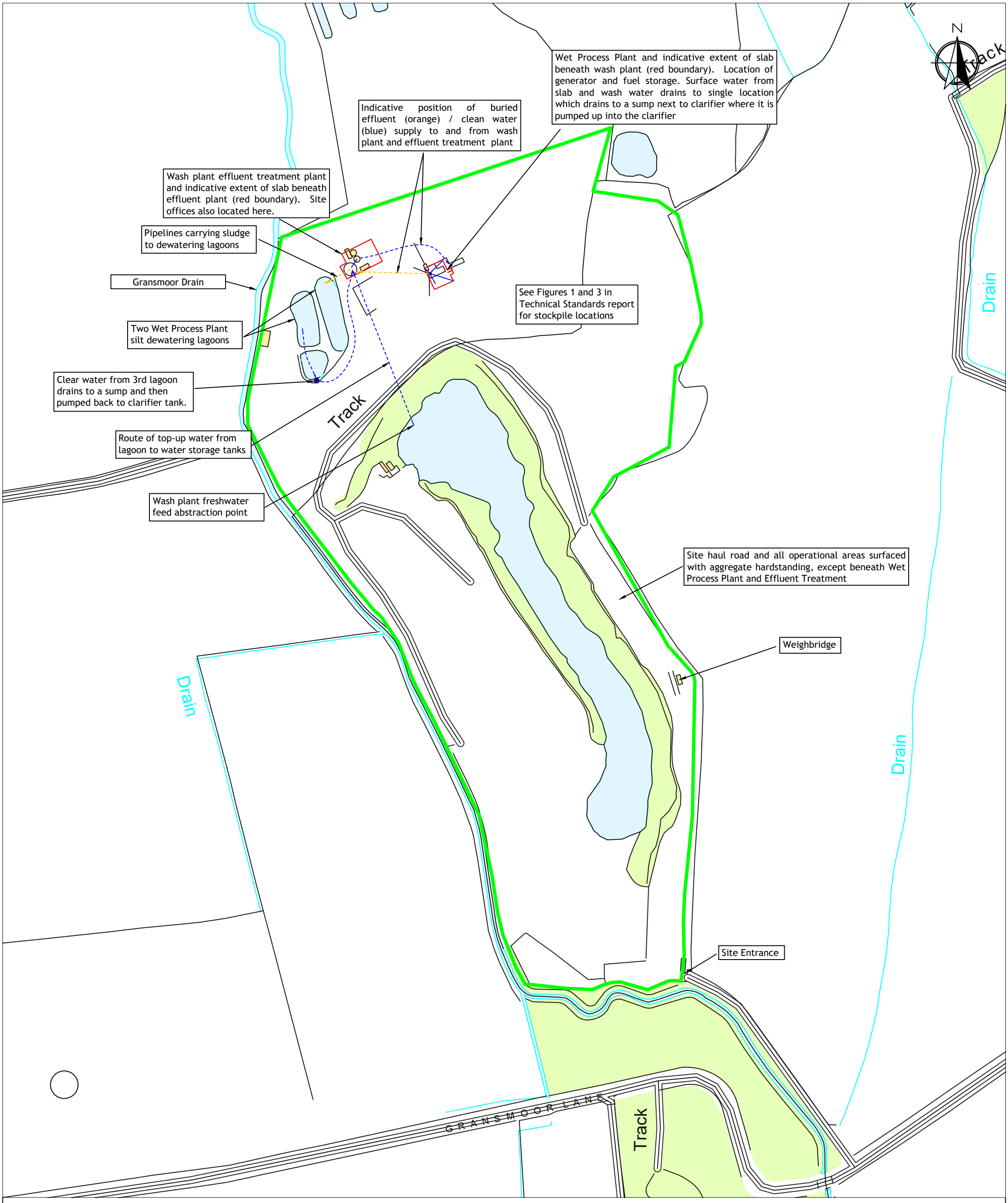
Otherwise it is understood there are no buried services or tanks present across the site that may represent a latent pollution source or pathway for the transit of polluting substances when activities at the site cease.

The drawing and markers will be used to excavate and remove the buried pipework to prevent damage to the lines which may result in contamination of the ground. Upon removal the pipework will be thoroughly inspected / pressure tested to establish if any leaks may have occurred. The location of any leaks will be identified on the ground and testing carried out to confirm if there is any residual contamination. In the unlikely event of any contamination being identified, the extent will be delineated by further testing and appropriate remedial measures undertaken such as removal of the impacted material.

9.5 Site Condition Report

Site Condition Report (SCR) referenced 2401-001/R/003 has been prepared to support the bespoke permit application. The purpose of the SCR is to act as a baseline point of reference in the advent of a future surrender application. This details the condition of the land within the current and proposed permit boundary at the time of permit application, current and future permitted activities and any historical activities which may influence ground condition. This will enable the Operator to identify and remediate any contamination that may have been associated with permitted activities.

APPENDIX A – Drawing Referenced 2401-001/D/005: Operational Site Layout Plan



Title:
Operational Site Layout

Proposed Permit Boundary

Indicative extent of concrete hardstanding under Wet Process Plant and Effluent Treatment Plant

Client:
W Clifford Watts

Project:
Gransmoor Wash Plant

Drawing Ref:
2401-001/D/005

Scale@A3: 1:2500

Date: 10/06/25

HOOPER-SARGENT LIMITED
Environmental Permitting Consultancy

Scale Bar
0m 10 20 30 40 50 100m

© Crown copyright and database rights [2025] Ordance Survey AC0000808122

APPENDIX B – WAC Test of Wet Process Plant Silt

WASTE ACCEPTANCE CRITERIA TESTING (BSEN 12457/2)

Client Name: Clifford Watts Ltd
Lab Sample ID: 24050096-002
Sample ID: GRAP 24-2
Site Name: GRAP 24 - GRANSMOOR

1252

Leachate Preparation Data			
Weight of Sample (kg)	0.104	Moisture content @ 105°C (%)	13.5
Equivalent weight dried @ 105°C (kg)	0.090	Volume of Water required for 10:1 stage (l)	0.886
Fraction of sample above 4mm (%)	0	Fraction of non-crushable material (%)	0

Note: The >4mm fraction is crushed using a disc mill

Solid Sample Results

Method Code	Analysis	Result	Accred.	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-Reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
WSLM59	Total Organic Carbon (% m/m)	1.62	U	3	5	6
LOI(%MM)	Loss on Ignition (% m/m)	5.0	N			10
BTEXHSA	Sum of BTEX (mg/kg) (HS_1D_AR)	<0.068	M	6		
PCBECD	Sum of 7 Congener PCBs (mg/kg)	<0.040	M	1		
TPHFIDUS (Aliphatic)	>C10-C40 Aliphatic (mg/kg) (EH_CU_1D_AL)	<22.8	U	500		
PAHMSUS	Sum of 17 PAHs (mg/kg)	1.73	N	100		
PHSOIL	pH (pH units)	8.6	M		>6	
ANC	Acid Neutralisation Capacity (mol/kg)	2.78	N		To be evaluated	To be evaluated

10:1 Cumulative Leachate Results

Method Code	Analysis	Result	Accred.	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-Reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
PHCONDW	pH (pH units)	8.0	N			
PHCONDW	Conductivity (µS/cm)	126	N			
ICPMSW (Dissolved)	Antimony (mg/kg)	<0.01	N	0.06	0.7	5
ICPMSW (Dissolved)	Arsenic (mg/kg)	0.02	N	0.5	2	25
ICPWATVAR (Dissolv	Barium (mg/kg)	<0.1	N	20	100	300
ICPMSW (Dissolved)	Cadmium (mg/kg)	<0.0002	N	0.04	1	5
ICPMSW (Dissolved)	Chromium (mg/kg)	<0.01	N	0.5	10	70
ICPMSW (Dissolved)	Copper (mg/kg)	0.03	N	2	50	100
ICPMSW (Dissolved)	Lead (mg/kg)	<0.01	N	0.5	10	50
ICPMSW (Dissolved)	Mercury (mg/kg)	<0.0003	N	0.01	0.2	2
ICPMSW (Dissolved)	Molybdenum (mg/kg)	<0.01	N	0.5	10	30
ICPMSW (Dissolved)	Nickel (mg/kg)	<0.01	N	0.4	10	40
ICPMSW (Dissolved)	Selenium (mg/kg)	<0.01	N	0.1	0.5	7
ICPMSW (Dissolved)	Zinc (mg/kg)	0.05	N	4	50	200
KONENS	Chloride (mg/kg)	<10	N	800	15000	25000
ISEF	Fluoride (mg/kg)	8	N	10	150	500
ICPWATVAR (Dissolv	Sulphate as SO4 (mg/kg)	90	N	1000	20000	50000
PHCONDW	Total Dissolved Solids (mg/kg)	858	N	4000	60000	100000
SFAPI	Phenol Index (mg/kg)	<0.5	N	1		
TOCW	Dissolved Organic Carbon (mg/kg)	47.5	N	500	800	1000

Accreditation status of M denotes MCERT, U denotes UKAS, N denotes no accreditation for the specific result
Landfill Waste Acceptance Criteria limit values are taken from 2003/33/EC: Council Decision and are correct as of 8th January 2024
Conductivity and pH results are reported from the leached sample, not calculated into the cumulative solid sample