Hallenbeagle Transfer Station and Material Recycling Facility

Fire Prevention Plan

October 2023

Recycling and recovery UK
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Document Details

Document title	Hallenbeagle Refuse Transfer Station and Material Recycling Facility Fire Prevention Plan
Version	1.0
Date	October 2023
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Distribution	SUEZ – Site Copy SUEZ – EIR Department Environment Agency

Document Review History

Date	Description	Summary of Changes
October 2023	Version 1.0	Fire Prevention Plan to support environmental permit application for a Refuse Transfer Station and Material Recycling Facility

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1	Site Location Plan	Hbg-LOC-1123-01
2	Permit Boundary Plan	Hbg-PER-1123-01
3	Indicative proposed Site Layout Plan	Hbg-LAY-1123-01
4	Sensitive Receptor Plan	Hbg-REC-1123-01
5	Site Drainage Plan	HLB-CB-XX-XX-DR-C-0014
		HLB-CB-XX-XX-DR-C-0015
		HLB-CB-XX-XX-DR-C-0016
6	Emergency Access Plan	Hbg-EAR-1123-01

1 INTRODUCTION

1.1 This document details the Fire Prevention Plan for Hallenbeagle Refuse Transfer Station and Material Recycling Facility (the site) located at Cornwall Business Park, Hallenbeagle, Scorrier, Redruth, TR16 5EN at National Grid Reference (NGR) SW 72700 44778. The site location and permit boundary are presented in Figure 1 and 2 respectively.

1.2 The site will be permitted as a Refuse Transfer Station (RTS) with physical treatment, Clinical Waste Transfer Station (CWTS) and Material Recycling Facility (MRF) with a combined annual waste acceptance limit of 140,000 tonnes. The maximum combined annual tonnage limit will be 100,000 tonnes at the RTS and CWTS and 40,000 tonnes at the MRF.

1.3 The RTS will provide a facility for the storage and 'bulking up' of household residual waste (general waste), food waste, bulky waste, street sweepings and fly tipped waste collected by Waste Collection Authorities (WCAs), plus residual waste from SUEZ's network of Household Waste and Recycling Centres (HWRCs). The RTS will also accept waste from third party trade customers.

1.4 Non-hazardous and inert waste will be treated as part of the RTS. Treatment activities within the RTS will consist of manual sorting and separation. Street Sweeping will also naturally dewater. To allow flexibility treatment within the RTS could also consist of screening, baling, shredding or compaction of non-hazardous waste for disposal or recovery.

1.5 The Clinical Waste Transfer Station will provide a facility for the storage and 'bulking up' of offensive healthcare and clinical waste. There will be no physical treatment of waste as part of this activity.

1.6 The MRF will provide a facility for the physical treatment of recyclable materials for onward transport to re-processing facilities. Recyclable materials will derive from kerbside collections, third party trade customers and SUEZ's network of HWRCs and Transfer Stations. The treatment includes manual and mechanical sorting/separation, screening, baling, shredding, compaction or 'bulking up' of waste.

1.7 In addition, there is a covered bale storage area to store waste bales and loose recyclable materials from the MRF.

1.8 A Fire Risk Assessment covering the operations will be undertaken and in place prior to the proposed activities commencing. It will also be reviewed at regular intervals not exceeding 12 months. The Fire Risk Assessment is included within the SUEZ electronic Risk Assessment database and a hard copy kept on site; however, the electronic version should always be referred to in the first instance.

1.9 An appropriate person will review this Fire Prevention Plan at regular intervals and on at least an annual basis, following any of the events below:

- testing of the plan to ensure the plan works and staff understand the procedures to be undertaken to prevent a fire occurring and the procedure to be undertaken in the event of a fire

- an incident
- change in legislation or formal guidance
- prior to a change in activity on site.

1.10 In addition, the requirements of the Fire Prevention Plan will be communicated to site operational staff on at least an annual basis via toolbox talks. Yearly refresher toolbox talks will ensure that the requirements of the Fire Prevention Plan are reinforced.

2 RISK OF FIRE

2.1 Assessing the Risk of Fire

2.1.1 The risk assessment to identify potential events or failures that may lead to an environmental impact as a result of a waste related fire is included in the Environmental Risk Assessment (Section 1.1 of the Site Specific Management System). The risk assessment provides details of the following: the hazard, the pathways and receptors, the probability of occurrence, the consequences or impacts and the measures that will be taken to manage the risk, and an evaluation of the mitigated risk.

2.1.2 Further detail on the hazard, in terms of the materials that will be received stored and/or treated on the site, the volumes of materials received, and the potential causes of fires are discussed further in this section of the Fire Prevention Plan. The sensitive receptors and the consequence of a fire on those receptors are also discussed below.

2.2 Combustible Materials on Site

2.2.1 The combustible materials which may be received at the site are as follows:

- General, Residual Wastes
- Bulky Waste
- Food Waste
- Offensive Health Care Waste & Clinical Waste
- Paper
- Cardboard
- News and Pams
- Plastics
- Steel/Aluminium Cans
- Large and small WEEE including Fridges/ Freezers, TV.
- Plasterboard
- Textiles
- Gas canisters
- Ad-Hoc Wastes such as Wood, UPVC, Green Waste, Tyres and chemicals

2.3 Waste Storage and Hazardous Materials Storage

2.3.1 Managing waste storage is a key factor, not only in preventing fires, but in mitigating the impact, should a fire break out.

Waste Storage

2.3.1 Majority of the waste transfer activity will be undertaken inside the Transfer Station building. Wastes will be accepted and stored inside the building with the exception of gas canisters and textile being stored outside as identified on Figure 3. The MRF activity will be undertaken inside the main MRF

building. Baled materials will be stored within the covered bays located to the North of the MRF building as identified on Figure 3.

2.3.2 An indicative site layout plan showing the proposed waste storage areas is provided in Figure 3.

2.3.3 Further detail relating to the volume, storage time and storage method of each waste type is provided in Appendix A.

Hazardous Materials Storage

2.3.6 An approximately 20,000 litres diesel tank and 2,500 litres adblue tank will be located on site as indicated on the indicative site layout drawing provided in Figure 3

2.3.7 Hazardous (High Grade) Clinical waste is stored in a sealed wheelie bin which are located within the Transfer Station building as shown on Figure 3.

2.3.8 Chemical wastes discovered in the accepted waste stream will be segregated and stored in a dedicated hazardous waste container. Any chemicals will be stored within the containers that they arrived in and not emptied directly into the hazardous waste container.

2.3.9 Gas cylinders accepted will be placed into and stored upright within a lockable steel cage. The cage will be clearly marked with a “flammable gas” warning sign and will be kept locked when cylinders are not being delivered or removed.

2.3.10 Oil drums and Hydraulic fluids are stored on dedicated bunded pallets within storage containers as indicated on the indicative site layout drawing provided in Figure 3.

2.3.11 Any hazardous waste delivered to the site which are not permitted by the environmental permit will be segregated and consigned appropriately for disposal at a suitably permitted facility.

2.4 Causes of Fire

2.4.1 The potential causes of fire on the site have been considered and include the following:

- arson or vandalism
- self-combustion of received and processed waste materials (e.g. chemical oxidation, microbial decomposition)
    - Cooking appliances in the welfare facilities
    - electrical faults
    - discarded smoking materials
    - naked lights

- hot works, e.g. welding, cutting (will be included within contractor's risk assessments as this type of work is not undertaken by site staff)
- fuel deliveries and refuelling plant
- build-up of dusts
- Neighbouring site activity
- Mechanical heat from sparks and friction
- Plant and equipment failure
- Hot exhausts
- Incompatible wastes
- Ignited material received on site.

2.4.2 Any of the causes detailed above has the potential to ignite waste materials on site. The consequences of a fire are discussed below with mitigation measures detailed in a further section.

2.5 Impacts of a Fire

2.5.1 The effects of a fire may be both immediate and long term. The potential impacts of a fire have been considered and are summarized below:

- Fire water run-off transporting pollutants to surface water and groundwater
- nuisance from smoke, odour and particulates
- threat to life and property
- transport disruption resulting from road and rail closures
- creation of hazardous waste by the fire and impacts of firefighting
- detriment of local amenity
- thermal radiation harming nearby properties and residents leading to fire spread
- explosions and projectiles harming sensitive receptors and spreading the fire to unaffected areas

2.5.2 The management actions to mitigate the impact of a fire on sensitive receptors are detailed in Section 3 and 4 of this Fire Prevention Plan.

2.6 Sensitive Receptors

2.6.1 Sensitive receptors within 1km of the site that may potentially be at risk from a fire have been identified within Table 1 and are shown in drawing in Figure 4.

Table 1 - Hallenbeagle RTS and MRF Sensitive Receptors

No.	Receptor	Category	Distance (m)	Direction from site
1	Cormac Solutions Depot	Commercial/Industrial	15	East
2	Cornwall Business Park West	Commercial/Industrial	25	South West
3	Cornwall Business Park	Commercial/Industrial	315	South West
4	Commercial units in Wheal Rose	Commercial/Industrial	175	West
5	Radnor Industrial Park	Commercial/Industrial	740	South West
6	Roddas's Cornish Clotted Cream Creamery	Commercial/Industrial	600	South West
7	Businesses at the old saw mills	Commercial	530	South West
8	Logan Electronics	Commercial	85	South
9	The Fuel Depot	Commercial	100	North West
10	Conway Bailey Transport	Commercial	340	North West
11	Residential property off Hallenbeagle Bridge Road	Residential	25	North
12	Caravan Park off Sawmills Lane	Residential	75	North East

13	Hallenbeagle Farm	Residential/Agricultural	140	South East
14	Residential properties off Sawmills Lane	Residential	180	South West
15	Residential properties east of Sawmills Lane	Residential	325	South East
16	Residential properties west of Sawmills Lane	Residential	485	South West
17	Residential properties in Scorrier	Residential	525	South West
18	Killifreth Farm	Residential/Agricultural	760	South East
19	Kirbartley Farm	Residential/Agricultural	400	South East
20	Pitslewren Farm	Residential/Agricultural	900	South East
21	Primrose Farm	Residential/Agricultural	600	East
22	Part Pitslewren Farm	Residential	845	South East
23	Residential properties in Wheal Rose	Residential	600	South West
24	Boscawen Farm	Residential/Agricultural	540	North East
25	Glencoe Farm	Residential/Agricultural	540	North West
26	Residential properties south of Blackwater	Residential	665	North West

27	Green Acres Farm	Residential/Agricultural	780	North
28	Boscawen Cottage	Residential	675	North East
29	Fays Touring Park	Recreational	660	South East
30	Blackwater Bypass (A30)	Public Highway	100	West
31	Railway Line	Railway Infrastructure	15	West
32	Central Cornwall Allotments	Allotments	975	East
33	Deciduous Woodland	Priority Habitat	370	East
34	Deciduous Woodland	Priority Habitat	350	South West
35	Deciduous Woodland	Priority Habitat	765	East
36	Deciduous Woodland	Priority Habitat	800	South East
37	Deciduous Woodland	Priority Habitat	485	South East
38	Deciduous Woodland	Priority Habitat	490	South East
39	Deciduous Woodland	Priority Habitat	551	South East
40	Deciduous Woodland (Unity Wood)	Priority Habitat	870	South East

41	Deciduous Woodland	Priority Habitat	525	South West
42	Deciduous Woodland	Priority Habitat	600	South West
43	Deciduous Woodland	Priority Habitat	605	South West
44	Deciduous Woodland	Priority Habitat	670	South West
45	Deciduous Woodland	Priority Habitat	720	South East
46	Groundwater (Secondary A)	Groundwater	-	Beneath Site

2.7 Wind Direction

2.7.1 The data was obtained for Hallenbeagle. The prevailing wind direction is from the south west. A compass rose from meteoblue.com, with the prevailing wind direction, is included in Figure 4.

3 PREVENTATIVE MEASURES

3.1 SUEZ Policies and Procedures

3.1.1 SUEZ's Integrated Management System relating to Emergency Preparedness and Response will be followed in the event of a fire or explosion.

3.1.2 In addition the following policies and procedures, as detailed in the IMS, are also relevant:

- Accident Investigation and Reporting
- Site Inspection, Audit and Reporting
- Managing Non-Conformance, Corrective & Preventive Action
- Control of Records
- Audits
- Duty of Care
- Surface Water Management
- Oil and Fuel Storage

3.1.3 One of the principle objectives of the IMS is to ensure the efficient and safe operation of the site through the implementation of procedures that ensure defined staff roles and responsibilities supported by provision of appropriate training.

3.1.4 Key procedures that apply to all SUEZ sites include training all staff, contractors and visitors in correct health and safety and fire prevention procedures and the implementation of a regular maintenance and inspection programme for all areas of site and equipment to ensure good housekeeping and effective operation of machinery.

3.1.5 All site staff along with site visitors and contractors are required to wear appropriate Personal Protective Equipment.

3.2 Site Procedures to Prevent Fires

Arson

3.2.1 Site security to prevent arson includes security fencing and monitored CCTV. CCTV monitoring systems will be installed in various strategic locations inside and around the site. The location of these CCTV will be decided during detailed design. The TS and MRF buildings are kept locked outside of operational hours, preventing unauthorised access. The site is in an area of low population density and is considered to be at low risk of arson.

Plant and equipment

3.2.2 Faults within a vehicle or item of plant have potential to cause fire so a regular plant and machinery preventative maintenance programme is in place to identify and remedy potential issues at an early stage.

3.2.3 All machinery/equipment is subject to routine cleaning, servicing in line with manufacturers guidance and daily checks/defect reporting. The daily check includes identification of leaks.

3.2.4 All site diesel vehicles are fitted with fire extinguishers and dust filters. Vehicles will have high level exhausts fitted.

3.2.5 It is anticipated that vehicles and mobile plants will be stored outside in the yard at a safe distance (6m) from the fuel tank and the quarantine area when not in use. However, it is possible that mobile plants might be parked inside the building overnight and this will be at a minimum of 6m away from any combustible materials.

3.2.6 The use of rubber strips on equipment featuring steel buckets, loading arms or grabs will be considered where appropriate to prevent sparks being generated when steel comes into contact with concrete.

3.1.6 Mobile plant will be maintained in accordance with the Mobile Plant procedures as outlined in SUEZ Policies and Procedures. This includes daily vehicle pre-use inspection checks, reporting of all defects to site management and regular clearing of detritus from around the machine. The machine will be subject to regular service inspections in accordance with manufacturer's recommendations which will include maintenance of the exhaust and cleaning if required. Daily inspections of the exhaust will check for blockages or excess build-up of material. Site cleaning regimes to reduce litter will be directed through Standard Operating Procedures detailing the duration and frequency of cleaning activities, the equipment required to clean and visual aids depicting how areas should look following cleaning activity.

3.2.7 Plant and machinery will not be fitted with an infra-red detection system as it is not deemed as required due to the low risk. However, the mobile plant on site will conform to the SUEZ essential safety requirements as outlined in Policies and Procedures. This detail loading shovels to have a fire suppression system using a twin agent with engine isolation and in cab fire extinguisher. In addition, the mobile plant will be parked away from the bays when not in use.

Electrical Equipment

3.2.8 All portable items of electrical equipment are listed in a register and tested by a competent person at least annually. Items must not be connected to the electrical supply that cannot be shown to have been tested within the previous 12 months.

3.2.9 Fixed electrical installations are installed, inspected, tested and maintained by a suitably trained and qualified persons. Contractors undertaking the work must be enrolled on the National Inspection Council for Electrical Installation Contacting (NICEIC) register of Approved Contractors or similar contractor from SUEZ Approved supplier list. Inspection and testing shall be carried out at minimum periods of three years, or following:

- any substantial alteration to the electrical installation,
- any incident that might have cause damage to the electrical installation
- At periods stipulated by an approved contactor issuing a test report

3.2.10 Following every inspection and testing, defects should be rectified as soon as reasonable practicable.

3.2.11 In addition, fixed electrical equipment will only be installed if it is fit for purpose and compatible with the electrical installation and its capacity. All fixed electrical equipment will be used, inspected, tested and serviced in line with manufacturers' recommendations.

3.2.12 Electrical sockets must not be overloaded.

Discarded smoking materials

3.2.13 No wastes will be burned within the boundaries of the site.

3.2.14 Smoking on site is only permitted in the site designated smoking areas that will be located at strategic location during the development.

Hot works

3.2.15 Contractors required to undertake hot works will be required to provide risk assessments and follow approved safe working procedures. Any hot works will be subject to the Permit to Work procedure and will be adequately supervised. In the event of hot works on site the initial fire watch will be undertaken two hours after hot works have been completed. Following the completion of hot works, the end of the day fire watch will pay particular attention to the area where hot works were undertaken.

Industrial heaters

3.2.16 No industrial heaters will be used on site.

Hot exhausts

3.2.17 SUEZ employees are constantly present within the site during operational hours and so a fire watch will be ongoing during the working day. A fire watch will be implemented at the end of the working day to reduce the risk of combustion as dust can settle onto hot exhaust and engine parts.

3.2.18 The fire watch is a visual check to detect any signs of fire in particular caused by dust settling on hot exhausts and engine/machinery parts.

Ignition sources

3.2.19 Any sources of ignition including for example heating pipes, naked flames, light bulbs, spaces heaters etc. will be kept 6 metres away or will be separated by a fire wall from any combustible and flammable waste on site.

Leaks and spillages of oils and fuels

3.2.20 All machinery/equipment is subject to routine cleaning, servicing in line with manufacturers guidance and daily checks/defect reporting. The daily check includes identification of leaks, and where identified, is cleaned up according to spillage procedure as detailed in the SUEZ IMS - Emergency Preparedness and Response.

Build up of loose combustible waste, dust and fluff

3.2.21 Regular cleaning will be undertaken by site staff to minimise the generation of dust and litter on site.

3.2.22 Daily check sheets include a requirement for site staff to undertake visual dust qualitative monitoring; if perceived to be excessive the action causing the emission will be halted and remedial measures implemented.

3.2.23 Site cleaning regimes to reduce dust and litter will be directed through Standard Operating Procedures detailing the duration and frequency of cleaning activities, the equipment required to clean and visual aids depicting how areas should look following cleaning activity. In general, ongoing inspection and cleaning is undertaken on site. Daily inspection and cleaning are undertaken on MRF equipment. Waste storage area is cleaned regularly when storage area is emptied as per the site and materials turnaround and as and when requested by the Location Manager.

Waste acceptance/reactions between wastes

3.2.24 Waste acceptance procedures will comply with the site permit and associated environmental legislation. Only waste types detailed in the permit will be accepted at the site.

3.2.25 The documentation accompanying the load shall be checked at the weighbridge, and shall include, but not be limited to the Carriers Certificate of Registration and Duty of Care Waste Transfer Note.

3.2.26 The information recorded in respect of each load as provided by the Waste Transfer Note will be:

- Ticket Number
- Vehicle Registration Number and Type
- Time and date (or date range) of transfer
- Waste description and quantities including all EWC codes
- Container type
- Where the transfer(s) took place
- Category of Transferor and Transferee (i.e. producer, WDA, registered carrier, permit holder, EPR etc)
- Names and addresses of all parties involved in the transfer and their roles (i.e. producer, carrier, disposer)
- Details of relevant permit/exemptions and Waste Carrier Licence.
- Signatures of all parties involved

3.2.27 Staff will carry out ongoing visual inspections of the wastes at the weighbridge where possible. All loads will be visually inspected on site as the waste is discharged or unloaded from the delivering vehicle.

3.2.28 Should any load, either upon entry to the site, or upon tipping, be discovered to contain waste types not permitted at the site or contain incompatible wastes the load will be rejected and removed from site by the delivering vehicle. A load rejection form will be completed in all cases and the customer informed.

3.2.29 If wastes not permitted by the site permit are discovered amongst a load after deposit, the waste will be isolated to prevent the processing of this waste.

Deposited hot loads

3.2.30 A quarantine area as detailed in section 3.3.24 is available in the event that a hot or burning load is received on site. This area may also be used in the event of a fire on site.

3.2.31 If a hot load is discovered during delivery or deposit of the load, the waste will be isolated and placed in the quarantine area. The waste will be dealt with accordingly (i.e. dampened etc.). The incident and time of discovery will be recorded in the site diary. The waste will be placed in a quarantine area until the fire is extinguished and then loaded into a suitable container. Arrangements will be made for the disposal of such wastes at a suitably permitted disposal facility as soon as practicably possible.

3.3 Controls to Prevent Self-Combustion of Waste

Waste storage procedures and waste piles sizes

3.3.1 Managing storage at the site is a key consideration in reducing the risk of fire. The waste types, storage detail, maximum volumes/stockpile size, storage duration and location on site are detailed in Appendix A.

3.3.2 All waste entering the site will be logged in at the weighbridge, records will include weight, EWC codes, date and time. Waste accepted at the site is inspected whilst being unloaded. The Site Manager will be able to review the weighbridge reports to understand the materials that have been imported and exported from site.

3.3.3 Check are routinely made on each waste load being delivered to identify any potential issues that have potential to cause a fire. Two loads are randomly selected and are recorded each day.

3.3.4 Clear signage reinforces the safe storage of materials and use of ignition sources.

3.3.5 Storage of waste will be managed to minimise the volume of waste stored and limit the storage time as far as practicably possible.

3.3.6 Materials will be stored, treated and removed from site in order of receipt so as to reduce the risk of self-combustion. This is implemented by our frequent turnover of material and the bays being emptied

regularly. In addition, the site manager can forecast production enabling the dispatch of the oldest materials first.

3.3.7 Regular working practice includes the emptying of bay/area when the product pile reaches the size of a full vehicle load or removing full containers when they reach maximum capacity. As the outputs of the process are a valued commodity, SUEZ seek to remove the material off site as soon as possible in order to release its commercial value. Bays will be marked showing the maximum height of waste storage. A 1m freeboard will be implemented at the top of each bay wall to prevent fire spreading over the bays. Waste will not be stored above the maximum height ensuring that the maximum stockpile sizes are not exceeded. In line with other similar facilities within the SUEZ portfolio, a visual system will be implemented on site to aid stock management and ensure compliance with the maximum storage time on site identified within Appendix A. This entails the use of a visual indicative markers to inform operators on the maximum storage limit of the bay.

3.3.8 Stock rotation can be demonstrated via continuous operation and the implementation of a visual system and is fully recorded via the use of weighbridge tickets.

3.3.9 The majority of the materials received at the TS are stored on site for a maximum of 72 hours. WEEE items are expected to be low volumes and stored for up to 2 months. Clinical Waste is normally stored for a maximum of a week. Road sweepings which is not classified as combustible waste due to its wet nature will be stored for a maximum of 2 weeks. The Inert Non-biodegradable general waste segregated from the other waste piles is stored for less than 3 months maximum in Ro-Ro. Stockpiles will be managed so that all materials in a stockpile will be removed from site in accordance with the details contained in Appendix A. This will reduce the potential risk associated with self-heating due to processes within the waste.

3.3.10 Waste materials (Plastics, Cans, paper and cardboard) will be stored within the MRF building prior being processed. The process is continuous and therefore it is not expected that a large quantity of materials will be kept within the receiving bays during the day. At the end of the working day unprocessed materials will be stored within the bays in accordance with the details contained in Appendix A. The processed baled materials are stored within the covered bale storage area as detailed in Appendix A. Glass will also be stored in the designated glass bay located inside the MRF building. Therefore all materials on site are stored under covered areas shaded from any direct sunlight reducing the risk of heating.

3.3.11 Combustible waste stockpiles will be stored for a minimum of 6 metres away from other sources of ignition including heating pipes, naked flames, space heaters and other combustible wastes etc, unless they are separated by either Legio Block or pre cast in situ concrete separation walls.

3.3.12 Combustible materials stored within containers are fully accessible to allow any fire inside the containers to be extinguished. Containers are accessible to enable rapid segregation if necessary of

burning materials from non-burning materials and vice versa. Containers will be moved using the existing mobile plant at the site following instruction by Location Manager.

Monitoring and controlling of temperature

3.3.13 Waste temperature monitoring at site is not proposed due to the short maximum residence time of the majority of waste type at the site of 72 hours with the exception of some waste streams as detailed in Appendix A. Environment Agency guidance requires temperature monitoring to be in place if combustible waste is stored on site for longer than 3 months, which is not the case at this site.

Measures to prevent fire spread

3.3.14 All waste will be stored on an impermeable surface. The non-flammable nature of the impermeable surface will act as a firebreak, which should significantly reduce the risk of a fire spreading. Areas of un-made ground around the site are shown in Figure 3.

Storage within the TS building

3.3.15 Various combustible materials (as identified above) will be stored in TS building within bays separated by in situ precast concrete wall as detailed in Figure 3. The concrete wall within TS will be over 120mm thickness. These are constructed in line with BS EN 1992-1-2:2004. Part 5.4 of BS EN 1992-1-2:2004 which states that for a non-load bearing compartment wall to provide a 2 hours fire resistance the wall must be 120mm thick.

3.3.16 Clinical waste stored in wheelie bins will be located within the bay separated by the in situ Precast concrete wall. The wheelie bin will be fully accessible to enable rapid segregation.

3.3.17 Some Combustibles materials will be stored in each of the 7 RoRo containers located inside the TS building as detailed in Figure 3. Combustibles waste stored in a RoRo container within The RoRo containers area will be located 6 metres away from other sources of ignition and other combustibles waste.

Storage within the MRF building

3.3.18 Unprocessed materials is unloaded within the input bays within the MRF building as shown in Figure 3 with storage volume details included in Appendix A.

3.3.19 The process is continuous and therefore it is not expected that a large quantity of materials will be kept within the receiving bays during the day. At the end of the working day unprocessed materials will be stored within the bays in accordance with the details contained in Appendix A.

3.3.20 The input bays within the MRF building are separated by reinforced concrete walls of over 120mm thickness. These are constructed in line with BS EN 1992-1-2:2004. Part 5.4 of BS EN 1992-1-2:2004

which states that for a non-load bearing compartment wall to provide a 2 hours fire resistance the wall must be 120mm thick.

3.3.21 Processed materials (Steel, Aluminium, plastics, Paper, News and Pams and residuals) are stored within separate bunkers. The location of these bunkers are shown in Figure 3 and detailed of the storage volume included in Appendix A.

3.3.22 These bunkers will have a 2 hours fire rated separation. It is worth noting that these bunkers are for the outputs where the materials will stay for a minimal time during the week day as it will be constantly removed to be baled before getting stored in the bale storage area.

Storage within the bale storage Area

3.3.23 The baled processed materials (as identified above and within Appendix A) are stored within bays within the covered storage area. Bays will be either separated by Legio Block or pre cast in situ concrete separation walls of over 120mm thickness. The legio blocks hold an A1 fire-resistant classification in accordance with REI 240 standards and are fire-resistant for up to at least 4 hours. The bays will be fully sealed to act as a thermal barrier. The pre cast in situ concrete wall are constructed in line with BS EN 1992-1-2:2004. Part 5.4 of BS EN 1992-1-2:2004 which states that for a non-load bearing compartment wall to provide a 2 hours fire resistance the wall must be 120mm thick.

Quarantine area

3.3.24 The main quarantine area is located within the Transfer Station in front of the storage bays. Additional quarantine areas could be used on site. One could be located within the spare bay in the bale storage area. The quarantine area will not be marked upon the ground but will be identified to site operatives at the beginning of each shift and emphasise will be made to the need of a 6m fire break from the nearest combustible waste. Site manager will also ensure that no materials is stored within this area and this will be fully communicated at the start of each shift and will be reinforced during yearly toolbox talks on Fire Prevention Plan.

3.3.25 The main quarantine area is retained at all times to allow burning material to be moved into this area (provided it is safe to do so) to extinguish and control fire spread. It is also used to move piles of non-burning material (adjacent to a fire) to prevent spread.

3.3.26 The location and size of the quarantine area is provided in Figure 3.

3.3.27 As set out in the EA guidance, the size of the quarantine area should be sufficient to accommodate 50% of the volume of the largest waste pile and provide a minimum separation distance of 6m on all sides to the nearest pile, building or site boundary.

3.3.28 With reference to the pile size dimensions in Appendix A, it is considered that 432m^3 will comprise the largest potentially flammable stockpile at the site and this is located within the MRF building and

therefore the quarantine area size (40.5m x 11.8 m which will give a volume of 478m^3 if we were to stockpile materials at 1m height) is deemed suitable to accommodate 50% of this.

3.3.29 In the event of a fire being detected on site, the material would be dealt with in the most appropriate manner, including either segregation of burning material into the quarantine area or the remaining non burning waste will be segregated to ensure the separation distance from the burning waste. The site has capability to move loose materials and containers quickly, with a number of the mobile plant items operational at the site.

4 DETECTION AND SUPPRESSION MEASURES

4.1 Fire Detection

Fire Alarm System

4.1.1 The site will be equipped with a fire detection and alarm control panel system that has been designed in general accordance with BS 5839-1: 2013. The fire detection system will be connected to the appropriate number of sounders and beacons to notify site staff should the detection system trigger during operational hours.

4.1.2 The fire detection system will also have the ability for it to be linked to a remote monitoring station who will monitor the system out of hours The exact details are still to be confirmed but it is envisaged that the remote monitoring station will have all of the site details in advance (such as full address) and they will call the fire brigade out of hours should the fire detection system trigger. They will also alert the relevant employees.

4.1.3 The fire alarm system will be regularly checked by the Technically Competent Manager (or other designated person) via a visual inspection of the control panel. Visual checks will be recorded. Any fault must be reported immediately.

4.1.4 The fire alarm system will be tested weekly from a different alarm point – on the same day and time – or at a frequency in line with the manufacturer's recommendations, by a designated person. This will be recorded in the Fire Logbook.

4.1.5 The fire alarm system will be inspected and maintained by a competent person every year in line with the service contract. Inspection and maintenance records will be kept in the Fire Logbook.

4.1.6 Fire alarm points must be kept clear, visible and correctly labelled at all times.

Flame detection and thermal imaging

4.1.7 A fire detection and suppression system are proposed to be installed at the site and will cover the TS and MRF buildings along with the covered bale storage area. The system will be designed and installed by suitably competent parties who will be suitable certified for the installation of detection and suppression systems. The final design will be confirmed at detailed design stage to ensure that the density of sprinklers, coverage of cameras and detection etc are correct to meet the requirements.

4.1.8 It is understood that the fire detection system will include thermal imaging camera and Flame detectors. The thermal camera will linked to a third party out-of hours alarm service, set to trigger at 60^0C, allowing for identification of hot spots and early response. The detection system will be linked to the alarm fire panel system which has an automatic dial out system to a remote monitoring station or out of hours security company operating 24hrs (including week end and bank holiday). In the event of a temperature alarm, the remote monitoring station will contact the contracted local security patrol who will attend site and complete monitoring of waste pile temperatures. They will contact the fire

brigade and also alert relevant employees who will take appropriate action when temperatures exceed normal levels. Th flame detectors will generate the response and activate the installed fire suppression system.

4.1.9 The Fire detection system will be backed up by batteries in the event of electrical failure.

4.2 Fire Suppression

Extinguishers/ fire fighting equipment

4.2.1 Firefighting equipment will be provided on site and will consist of fire extinguishers along with the presence of fire hydrants and a fire suppression system. Three fire hydrants are located outside of the site boundary. The site will also have its own water tank supply and pumping system. A fire suppression system including roof sprinklers will also be installed on site. It is also proposed to have two private hydrants located within the vicinity of the buildings. The exact location will be confirmed during detailed design. This will be fed from the new fire water tanks.

4.2.2 Site staff will be trained in fire safety awareness and in the use of site fire fighting equipment.

Fire extinguishers

4.2.3 There will be a number of portable extinguishers placed at key strategic locations around the site. The number of potable extinguishers needed at the site and their locations will be assessed by a competent contractor prior operation starting. A check of the fire extinguishers (discharged/full, service in date etc) is undertaken as part of the site weekly checks. All fire extinguishers are subject to annual testing by an approved accredited supplier.

4.2.4 All fire extinguishers conform to British Standard EN 3 and are located on wall brackets with the base of the extinguisher at a suitable height, or they are sited in permanent fire points. The extinguishers are of a suitable size and weight for use by site staff.

Fire hose reels and fire hydrants

4.2.5 Three Fire Hydrants to provide water for firefighting is located on the public highway. These hydrants are located on the 110mm water main. In addition, two private Fire Hydrants will be located on site. The private hydrants will be fed from fire water tanks and their location will be decided during detailed design. The approximate location of the fire hydrants on the public highway is referred to on Figure 3.

Sprinkler System

4.2.6 The site (TS and MRF buildings along with bale storage area) will be equipped with a sprinkler system. The system will also include diesel fire pump sets and fire water storage tanks. The sprinkler system installed will be designed in accordance with industry/insurance standards e.g. the requirements of the CHUBB Technical Guidance for Waste Processing Facilities. The principal system will be at roof level, in addition, it comprises the installation of sprinklers underneath items of plant that are in excess of 1.2m wide for further protection of covered areas *(Sprinklers to cover all areas under conveyors and other fixed obstructions over 1.2 m wide in accordance with NFPA 13)*. The sprinkler system is subject to detailed design.

4.2.7 The sprinkler installation system and water supply systems will comply with NFPA 13 and 20 respectively and the fire detection system will be designed in general accordance with BS 5839-1: 2013, Code of practice for the design, installation, commissioning and maintenance of systems in non-domestic premises, all relevant technical bulletins issued to date and specifically the CHUBB project performance specification referenced above.

4.2.8 The system will also include a detection system. Please note the final sprinkler system time is to be confirmed at detailed design but will be suitable for the environment in which it is to be installed.

4.2.9 Once the sprinkler system has been fully fitted, commissioned and tested, a completion/handover certificates will be issued. A copy of the certificates will be kept on site.

4.2.10 Pumps will be tested and maintained as per manufacturer guidance and any test and maintenance will be recorded.

4.3 Fire Fighting Techniques

4.3.1 Managing waste storage is a key factor, not only in preventing fires, but in mitigating the impact, should a fire break out.

4.3.2 Providing access to the site in the event of a fire is a key consideration in containing a fire. Contact details in the event of an emergency are clearly displayed on site.

4.3.3 The emergency access routes to waste storage and quarantine area in the event of a fire are shown in Figure 6 and 3.

4.3.4 The fire fighting procedure detailed in Section 5 must be adhered to if a fire should break out on site.

4.4 Water Supply

4.4.1 The site will equipped with a high volume sprinkler system and flame detectors throughout. The water supply is in the form of large water tanks which will hold as a minimum 518.4m^3 as required. This is topped up with mains supplied water. It is in good working order maintained by a contractor specialising in fire safety. The water storage tank on site is tested and checked weekly or immediately after being used following an incident on site. This will be undertaken by the site operation and maintenance team and the findings will be recorded within our maintenance system. Maintenance and inspections will be undertaken in accordance with good industry practice.

4.4.2 In addition, 3 fire hydrants are located outside the site on the highway. South West Water has advised us that in general they are unable to guarantee any flow rates or pressures from fire hydrants. However South West Water can confirm that the main at which the hydrants are located has a 110mm bore.

4.4.3 It is also proposed to have two private hydrants located within the vicinity of the buildings. The exact location will be confirmed during detailed design. This will be fed from the new fire water tanks.

4.5 Fire Water Management

Fire Water Volume

4.5.1 The Environment Agency Fire Prevention Plan guidance indicates that a 300m^3 of combustible material will require a water supply of at least 2000 litres a minute for a minimum of 3 hours. The maximum total volume of combustible wastes stored within the largest bays at the site will be 432m^3 (within the MRF building)

4.5.2 Based on the estimation above, the volume of water that would be required to manage the maximum total volume of materials contained within the largest bay would be 518.4m^3.

Fire Water Management

4.5.3 The site will benefit from an impermeable surface that will prevent infiltration of any spent fire water.

4.5.4 All areas of hardstanding, impermeable pavement, bays and containers are visually inspected at least weekly to ensure continuing integrity and fitness for purpose. The inspection and any necessary maintenance subsequently required will be recorded.

4.5.5 Based on the largest stockpile of 432m^3 of combustible materials located at the site it is estimated that we will need to store in the worst case scenario 518.4m^3 of fire water.

4.5.6 Fire water is proposed to be retained on site. The TS and MRF buildings are capable of retaining 1407m^3 of Fire Water. This is based on the TS and MRF having an internal area of circa 7037m^2 with an internal slab of 200mm below the surrounding yard levels. The bale storage area is capable of retaining 240m^3 of Fire Water. The bale storage area has a dimension of 43m by 28m with an internal slab of 200mm below the surrounding yard levels.

4.5.7 In addition the TS and MRF building along with the bale storage area benefit from a sealed drainage system. Any water within the building and storage area will drain to two underground tanks located within the site yard area. The final volume is to be confirmed during detailed design. Fire water collected within the sealed system will be pumped out and tankered off site for suitable disposal or can be stored within the TS floor and pumped off site directly.

4.5.8 A Surface water drainage system serves the site. Surface water flows into 3 ground infiltration features one serving the southern section of the site and the other two serving the northern sections of the site. The system is equipped with penstock valves to allow any contamination to be contained in the event of an incident.

4.5.9 There are 2 separate foul drainage systems at the site that take domestic effluent from the weighbridge offices and main office building. The southern system will take domestic effluent from the southern weighbridges. The effluent will be processed by a waste water treatment plant prior to discharge into a standard drainage field. The northern system will take domestic effluent from the northern weighbridges and site office. The effluent will be processed by a waste water treatment plant prior to discharge into a foul soakaway.

4.5.10 Drainage Plan for the site is included in Figure 5.

4.6 Contingency Plan in the Event of a Fire

4.6.1 In the event of a fire, the emergency procedures will be followed which may include notifying the Fire Rescue Service (FRS) and Environment Agency as necessary. A Business Continuity Plan is in place as part of our contract with Cornwall Council and this includes contingency planning in the event of a fire. The Business Continuity Plan is included as Section 1.5 of the Site Specific Management System. In the event of a fire, the following contingency action plan will be implemented:

- Remove all staff off site to a safe place.
- Depending upon the scale of the fire, operations on site will be suspended whilst the fire is extinguished.
- Close site and await further instruction from the authorities.
- During this period, SUEZ haulage team will be notified.
- Inform nearby residents and businesses. This will be done via SUEZ's communications team and in consultation with the local authority.
- Direct waste deliveries/commercial customer to alternative facilities.
- Any burnt waste or material will be segregated and contained on site, either directly on site or within containers. This will then be assessed, classified and described in accordance with EA guidance and disposed of at a suitably permitted facility.
- Any fire water produced as a result of fighting a fire would be contained on site. This would then be removed from site via tanker for subsequent processing at a suitably permitted facility.
- The site will be cleaned or cordoned off preventing operational access prior to operations recommencing.
- Internal plant checks may also be required prior to recommencement of operations.

4.6.2 Fire damaged wastes will be disposed off at a suitable permitted disposal facility as soon as practicably possible.

4.6.3 Operations will only recommence after a major fire once the Fire Service have advised that it is safe to do so.

4.7 Out of hours Response

4.7.1 A fire pack will be located in a box or suitable container at the entrance of the site clearly marked for the FRS to access in the event of attending site in the absence of personnel on site. The pack will contain

- Site drawings showing the location of hydrants
- Information relating to hazardous materials and their location
- Drainage plans and location of interceptor shut-off valve and run off.
- Contact details for key holders
- Instructions on how to manually override the roller shutter door mechanism.

4.7.2 In the event of an out of hours fire when there was no SUEZ presence at site, the FRS would force their entry into the site and will gain access to the site via the normal site access. The FRS would follow the instructions to manually override the roller shutter door mechanism. The FRS can attend site in less than 10 min, and following a callout, site personnel would attend site as early as possible but within 30 min of receipt and acknowledgment of notification.

5 Fire Fighting Procedure

The following procedure must be adhered to if a fire should break out on the site.

ALL FIRES ON SITE MUST BE TREATED AS SERIOUS AND MUST BE REPORTED TO THE SITE SUPERVISOR AND/OR MANAGER AS SOON AS POSSIBLE.

5.1 Any outbreak of fire will be regarded as an emergency and immediate action will be taken to extinguish the fire. No one should attempt to fight a fire unless they have received training in the use of fire extinguishers and then only if this can be done without risk.

5.2 If it is safe to do so, attempts should be made to extinguish a fire. This can be done by using site machinery to move any non-burnt material away from the smoulder or source of fire or using water, working from the edge of the fire inwards. Plant and machinery must never be driven into the centre of any fire; this will place both the driver and the machine in danger. If possible, extinguish the fire with a portable extinguisher or water.

5.3 Should the fire be successfully extinguished by this action; a check should be kept of the area to ensure that the fire does not re-ignite. The area should be vacated until it is obvious that there is no further danger of the fire restarting.

5.4 If the above action FAILS to extinguish the fire, prohibit all entry to the area, then summon emergency services immediately. Close the site to all members of the public. Any persons already on the site should leave. The Fire Service will be contacted to deal with major fire incidents. Site staff will not be deployed to deal with major fires.

5.5 Telephone the Fire and Rescue Service – Dial 999. Give the exact details including the site address and telephone number.

5.6 Before the Fire and Rescue Service arrives staff will:

- ensure operators of appropriate machinery are standing by in a safe location to help create fire breaks, under the direction of the FRS when they arrive
- Appoint a clearly identified person to liaise with the emergency services on site. They should identify themselves to the FRS as soon as they arrive
- ensure access routes are clear
- use pollution control equipment to block drains and/or divert firewater to a containment area and/or operate any pollution control facilities, such as drain closure valves/or penstocks where safe to do so

5.7 On arrival the FRS should be met by the identified responsible person who must provide them with a copy of your accident plan and update them with relevant information that will assist them in dealing with a fire more effectively.

5.8 The designated assembly point is located on site as indicated on Figure 3. All persons must wait at the assembly point for further instructions. A Fire Warden will ensure that unauthorised persons do not enter the premises and that no one re-enters the site until given permission by a Fire Warden.

5.9 Upon the outbreak of fire, the receipt of waste at the site is to be suspended and not resumed until authorised by the Site Manager.

5.10 In the event of a major Fire, the Site Manager should notify the Environment Agency immediately by telephone on the incident hotline, telephone number: 0800 807060. The Agency must also be informed in writing as soon as is practicable.

5.11 Communication with local businesses and residents identified in the sensitive receptor table in Section 2.6 will be undertaken in the event of a fire to reduce any environmental damage and risks to human health associated with smoke and dust.

5.12 All incidents must be reported in the site diary and on the SUEZ Incident Reporting and Investigation System (IRIS). The Environment and Industrial Risk (EIR) manager should be informed so that in turn, full details of the event can be reported to the Environment Agency.

5.13 Site operations will not be recommenced until deemed safe to do so by the Local Fire Authority.

Appendix

Appendix A – Waste Storage Details

Hallenbeagle Transfer Station and Material Recycling Facility- Fire Prevention Plan

APPENDIX A – WASTE STORAGE DETAILS

Waste type	Form	Storage detail	Maximum storage time on site	Location within site	Bay Size, Volume of waste pile and Storage capacity	Assumptions for Waste Volume Calculation / Comments
Transfer Station						
Bulky Waste	Loose from household kerbside collections and HWRC	In separate bays with concrete surfacing and cast in situ concrete walls with minimum of 2 hours fire rated	72 hours	Bay 3 and 6 - Located in Transfer Station Building as shown on Figure 3.	**Bay 3 and 6 size:** 6.7m (W) x 18m (D) x 5m (H) (Approximate stockpile volume **341.7 m^3 in each bay**)	• 1 metre freeboard at the top of the bay • 1 metre freeboard at front of bay • Stockpile volume calculated as 75% of remaining bay volume
Residual Waste (General waste)	Loose from household kerbside collections and HWRC	In separate bays with concrete surfacing and cast in situ concrete walls with minimum of 2 hours fire rated	48 hours during weekdays or 72 hours over the weekend and bank holiday	Bay 4 and 5 - Located in Transfer Station Building as shown on Figure 3.	**Bay 4 and 5 size**: 6.7m (W) x 18m (D) x 5m (H) (Approximate stockpile volume **341.7 m^3 in each bay**)	• 1 metre freeboard at the top of the bay • 1 metre freeboard at front of bay • Stockpile volume calculated as 75% of remaining bay volume
Road Sweepings	Loose from street cleaning vehicles	In separate bays with concrete surfacing and cast in situ concrete walls with minimum of 2 hours fire rated	2 weeks	Bay 7 - Located in Transfer Station Building as shown on Figure 3.	**Bay 7 size:** 8.1m (W) x 11.5m and 18m (D) x 5m (H) (Approximate stockpile volume **222.75 m^3)**	• 1 metre freeboard at the top of the bay • 1 metre freeboard at front of bay • Stockpile volume calculated as 50% of remaining bay volume
Food waste	Loose from household kerbside collections	In separate bays with concrete surfacing and cast in situ concrete walls with minimum of 2 hours fire rated	24 hours during weekdays or 72 hours over the weekend and bank holiday	Bay 8 and 9 - Located in Transfer Station Building as shown on Figure 3.	**Bay 8 size:** 9.8m (W) x 11.5m (D) x 5m (H) (Approximate stockpile volume **205.8 m^3)** **Bay 9 size:** 7.5m (W) x .5.5m (D) x 5m (H) (Approximate stockpile volume **67.5 m^3)**	• 1 metre freeboard at the top of the bay • 1 metre freeboard at front of bay • Stockpile volume calculated as 50% of remaining bay volume

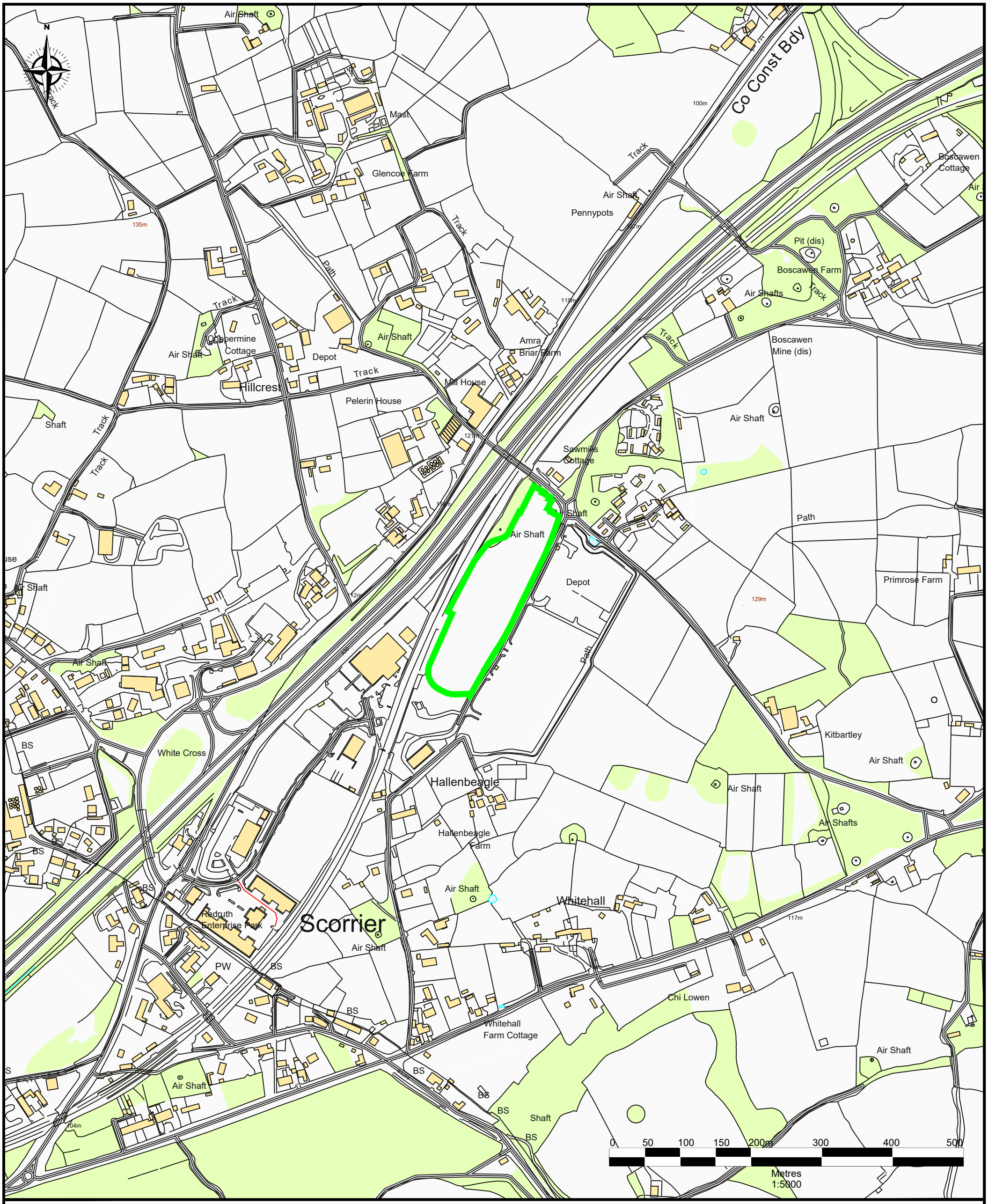
Offensive (Low grade) Clinical	In bags	In separate bays with concrete surfacing and cast in situ concrete walls with minimum of 2 hours fire rated	48 hours during weekdays or 72 hours over the weekend and bank holiday	Bay 2 - Located in Transfer Station Building as shown on Figure 3	**Bay 2 size** – 6.7m (W) x 13m and 18m (D) x 5m (H) (Approximate stockpile volume of **107.2m^3** based on waste stored on area of 6.7m x 8m x 2m)	• Waste stored on area of 6.7m x 8m x 2m
Hazardous (High grade) Clinical Waste	In bags in sealed containers	Inside sealed wheelie bins within separate bays with concrete surfacing and cast in situ concrete walls with minimum of 2 hours fire rated	1 week	Inside sealed wheelie bins within bay 2 Located in Transfer Station Building as shown on Figure 3	In 6 sealed wheelie bins of 1.1m^3 each within bay 2. **Total volume of 6x 1.1m3 = 6.6m^3**	
Contingency Bays for storage of Ad Hoc waste coming to site such as Rubble/soil Wood UPVC Green Garden Waste Tyres Large WEEE	Loose from household kerbside collections and HWRC	In Ro-Ro container or in separate stockpiles within separate bays with concrete surfacing and cast in situ concrete walls with minimum of 2 hours fire rated	Up to 3 months	In Ro-Ro container or separate stockpiles within Bay 1 Located in Transfer Station Building as shown on Figure 3	**Bay 1 size:** 12.55m (W) x 13m and 18m (D) x 5m (H) Total storage volume of **120m^3 in either RoRo or individual stockpiles**	
Fridges/Freezers	Loose	Ro-Ro Container	2 months	Area 10 to 16- Located in Transfer Station Building as shown on Figure 3.	**Area 10 to 16:** Ro-Ro Container size: 2.4m (W) x6.2m (L)x2.4m (H) **7 x 30m^3 = 210m^3**	
TV	Loose	Ro-Ro Container	2 months			
Small WEEE	Loose	Ro-Ro Container	2 months			
Scrap metals	Loose	Ro-Ro Container	2 months			
Asbestos	Loose	Ro-Ro Container	2 months			
Plasterboard	Loose	Ro-Ro Container	2 months			
Spare Roro for waste	Loose	Ro-Ro Container	Dependant on waste stream			
Chemical (Ad hoc)	In individual container	Inside lockable chemical storage unit	Up to 3 months	Area 18 - Located in Transfer Station Building as shown on Figure 3	**Area 18** – 1.5 (W) x 0.5 (W) x 2m (H) **Total Volume 0.75m^3**	Secure lockable chemical storage unit

Material Recycling Facility Building						
Hard Mixed Paper and Cardboard (Input materials)	Loose	In separate bays with concrete surfacing with cast in situ concrete walls with minimum of 2 hours fire rated	24 hrs on weekdays and 72 hrs over Weekends.	Bay 19 – Located in MRF Building as shown on Figure 3.	**Bay 19 size**: 21.1m (W) x 28.2 and 32.1m (D) x 5m (H) Assume 4 individual stockpiles stored within the bay. Stockpiles of approximately 6m (W) x 10m (D) x 2m (H) (Approximate maximum stockpile volume **360m^3 calculated as 4x90m^3**)	• 1 metre freeboard at front of bay • Stockpile to a maximum height of 2m • Stockpile volume calculated as 75% of stockpile volume
Mixed plastics and cans (Input materials)	Loose	In separate bays with concrete surfacing with cast in situ concrete walls with minimum of 2 hours fire rated	24 hrs on weekdays and 72 hrs over Weekends.	Bay 20 – Located in MRF Building as shown on Figure 3.	**Bay 20 size**: 18.3m (W) x 28.2m (D) x 5m (H) Assume stockpile stored within area of 15.6m (W) x 4.5m and 20m (D) x 3m (H) (Approximate maximum stockpile volume **of 432m^3**)	• Stockpile to a maximum height of 3m Stockpile volume calculated as 75% of stockpile volume
News and Pams (Input materials)	Loose	In separate bays with concrete surfacing with cast in situ concrete walls with minimum of 2 hours fire rated	24 hrs on weekdays and 72 hrs over Weekends.	Bay 21 – Located in MRF Building as shown on Figure 3.	**Bay 21 size:** 18.3m and 8.75m (W) x 14.3m (D) x 5m (H) (Approximate stockpile volume **310 m^3** calculated as 7.75x 13.3 x 4 x 0.75)	• 1 metre freeboard at the top of the bay • Stockpile to a maximum height of 4m • 1 metre freeboard at front of bay • Storage along the 8.75m width • Stockpile volume calculated as 75% of remaining bay volume
Glass	Loose	In separate bays with concrete surfacing with cast in situ concrete walls with minimum of 2 hours fire rated	24 hrs on weekdays and 72 hrs over Weekends.	Bay 22 – Located in MRF Building as shown on Figure 3.	**Bay 22 size:** 14.2m (W) x 14.3m (D) x 5m (H) **(**Approximate stockpile volume **425 m^3**)	• 1 metre freeboard at front of bay • Store to a maximum height of 3m • Stockpile volume calculated as 75% of remaining bay volume
Residuals (after processing)	Loose	In separate bunker with 2 hours fire rated separation	1 Week	Area 23 inside the MRF building as shown on Figure 3	**Area 23 size :** 2.5m (W) x 9m (D) x 2.9m (H) (Approximate stockpile volume **42.75 m^3)**	• 1 metre freeboard at the top of the bunker
Steel Cans (after processing)	Loose	In separate bunker with 2 hours fire rated separation	24 hrs on weekdays and 72 hrs over Weekends.	Area 24 inside the MRF building as shown on Figure 3	**Area 24 size :** 2.5m (W) x 9m (D) x 2.9m (H) (Approximate stockpile volume **42.75 m^3)**	• 1 metre freeboard at the top of the bunker
Aluminium cans (after processing)	Loose	In separate bunker with 2 hours fire rated separation	24 hrs on weekdays and 72 hrs over Weekends.	Area 25 inside the MRF building as shown on Figure 3	**Area 25 size :** 2.5m (W) x 9m (D) x 2.9m (H) (Approximate stockpile volume **42.75 m^3)**	• 1 metre freeboard at the top of the bunker

Mixed Plastics (after processing)	Loose	In separate bunker with 2 hours fire rated separation	24 hrs on weekdays and 72 hrs over Weekends.	Area 26 inside the MRF building as shown on Figure 3	**Area 26 size :** 2.5m (W) x 12m (D) x 2.9m (H) (Approximate stockpile volume **57 m^3)**	• 1 metre freeboard at the top of the bunker
Plastics (after processing)	Loose	In separate bunker with 2 hours fire rated separation	24 hrs on weekdays and 72 hrs over Weekends.	Area 27 inside the MRF building as shown on Figure 3	**Area 27 size :** 2.5m (W) x 12m (D) x 2.9m (H) (Approximate stockpile volume **57 m^3)**	• 1 metre freeboard at the top of the bunker
Mixed paper	Loose	In separate bunker with 2 hours fire rated separation	24 hrs on weekdays and 72 hrs over Weekends.	Area 28 inside the MRF building as shown on Figure 3	**Area 28 size :** 2.5m (W) x 12m (D) x 2.9m (H) (Approximate stockpile volume **57 m^3)**	• 1 metre freeboard at the top of the bunker
News and Pams	Loose	In separate bunker with 2 hours fire rated separation	24 hrs on weekdays and 72 hrs over Weekends.	Area 29 inside the MRF building as shown on Figure 3	**Area 29 size :** 2.5m (W) x 12m (D) x 2.9m (H) (Approximate stockpile volume **57 m^3)**	• 1 metre free board at the top of the bunker
Bales Storage Area Building						
Plastics (Baled after processing)	In bale form	In separate bays with concrete surfacing with cast in situ concrete walls with minimum of 2 hours fire rated (Bays 30 to 37) In separate bays with concrete surfacing and legio block separation (Bays 38 to 40)	1 Week	Bays 30 to 40 within the bales storage building as shown in Figure 3	**Bays 30 to 37 size:** 6m (W) x 6m (D) x 5m (H) (Approximate stockpile volume **120m^3**) **Bays 38 to 40 size:** 6m (W) x 6m (D) x 3.2m (H) (Approximate stockpile volume **66m^3**) **All storage bays within the Bales Storage Area will be interchangeable (eg any bale types can be stored within the bays)**	• 1 metre freeboard at the top of the bay • 1 metre freeboard at front of bay
News and Pams (Baled after processing)	In bale form		1 Week			
Hard Mixed paper and Cardboard (Baled after processing)	In bale form		1 Week			
Aluminium (Baled after processing)	In bale form		1 Month			
Steel (Baled after processing)	In bale form		2 Weeks			
External storage						
Gas cylinder/bottles in cage	Bottle cylinders from household	Roofed cage mesh	3 Months	Area 17- external area as shown on Figure 3	**Area 17** – 2m (W) x 1.5m (D) x 2m (H) x 2 cages (one for RTS and one for MRF) **Total Volume 2 x1.5 = 3m^3**	• Roof gas storage cage
Textiles	Loose	10’ ISO shipping container	1 Month	Area 41 external north side of Bale Storage area	**Area 41 size:** 2.35 (W) x 2.85 (D) x 2.4 (H) (Approximate stockpile volume **12m^3**)	• Stockpile volume calculated as 75% of total container volume

Figures

Figure 1 – Site Location Plan



Notes

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Hallenbeagle TS and MRF permit boundary

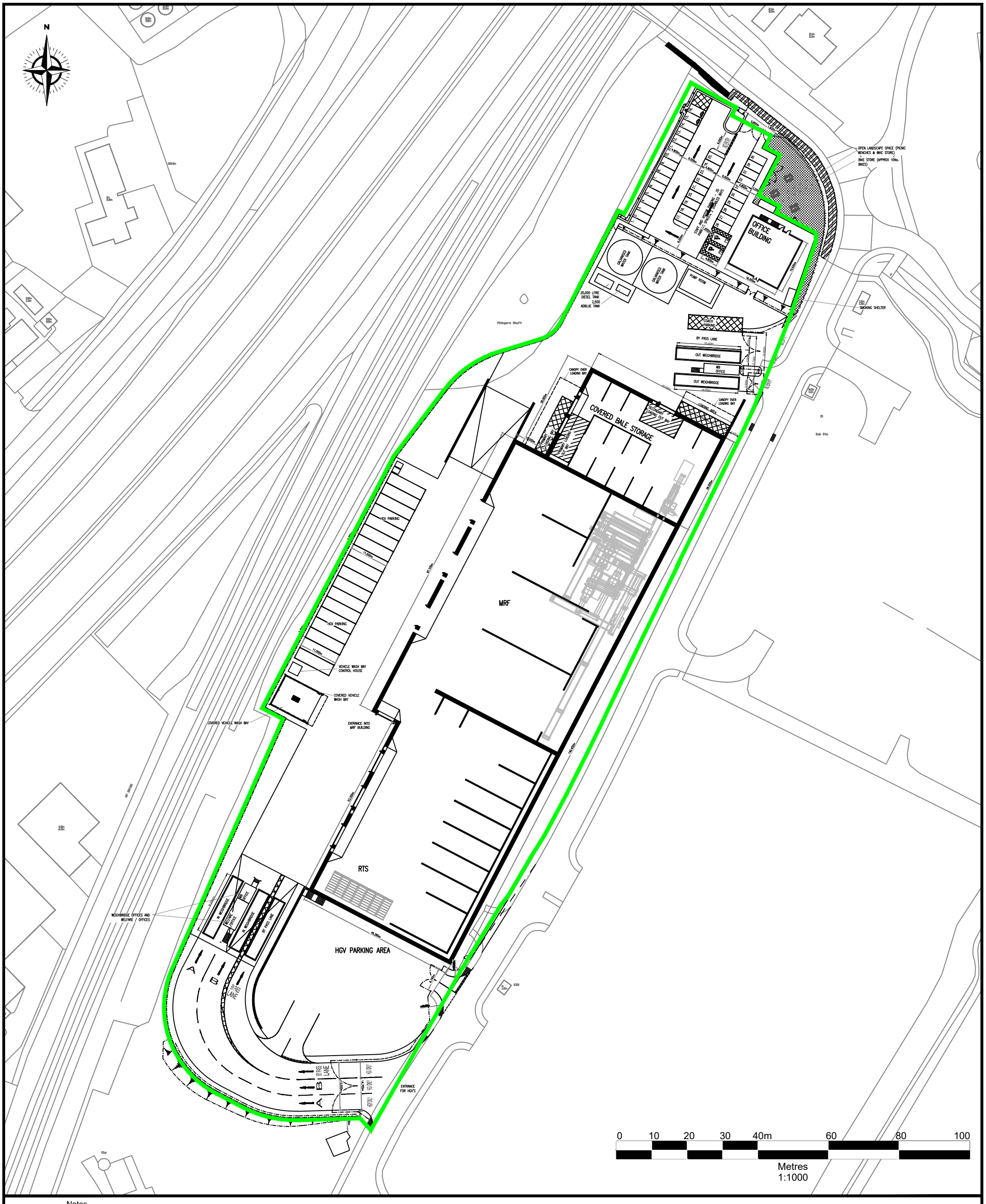
suez

Darwen Resource Recovey Park, Lower Eccleshill Road, Darwen, BB3 0RP
Tel:(01254)819700, Fax:(01254)819749, Email: richard.bisset@sita.co.uk

Site	Hallenbeagle Transfer Station and Material Recycling Facility
Title	Site Location Plan
Scale	1:5000 @ A3
Date	November 2023
Drawing Ref	Hbg-LOC-1123-01
Drawn by	JA
Checked by	GGD

Rev	subject	date

Figure 2 – Permit Boundary Plan



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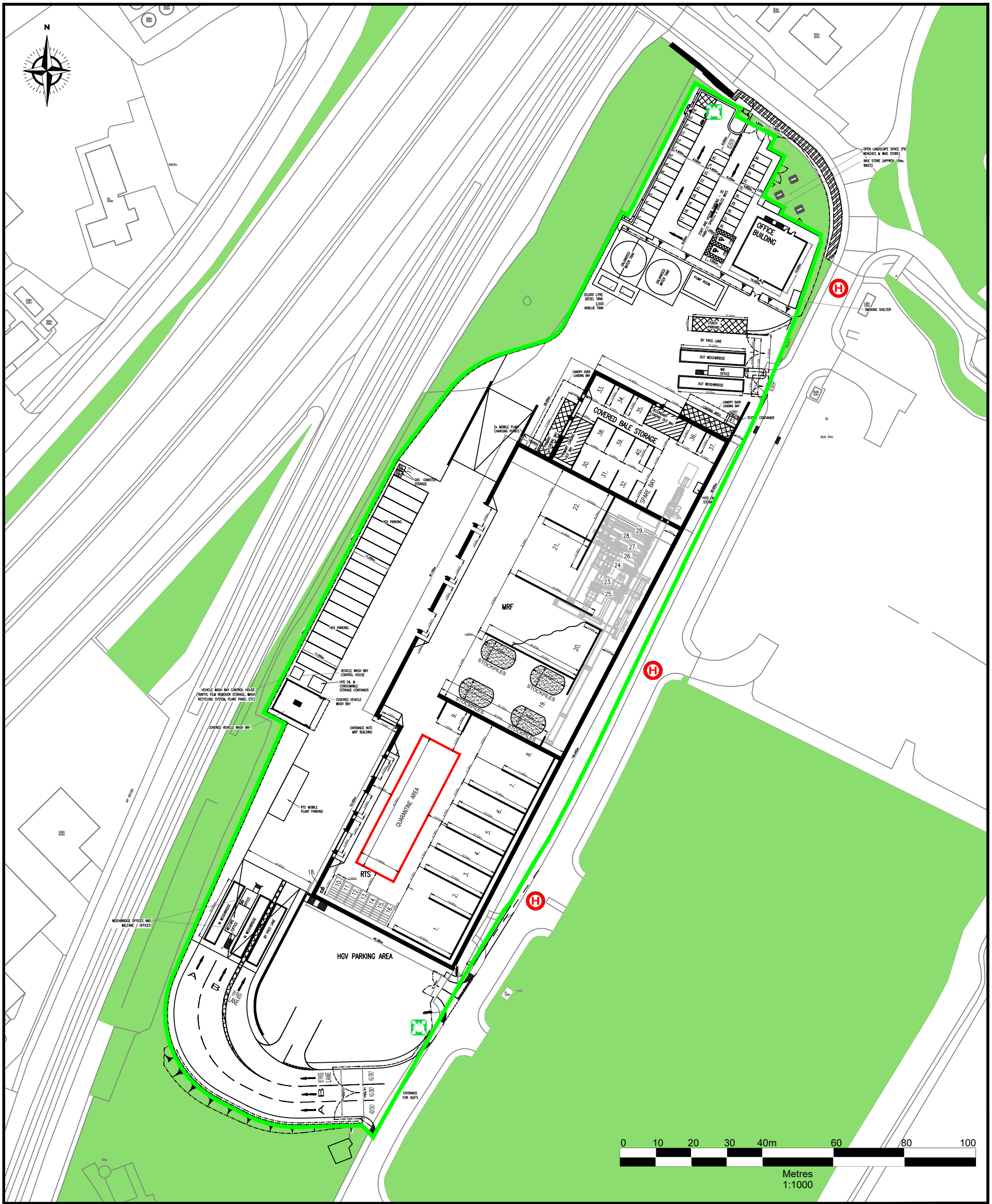
Hallenbeagle TS and MRF permit boundary

Darwen Resource Recovey Park, Lower Eccleshill Road, Darwen, BB3 0RP
Tel:(01254)819700, Fax:(01254)819749, Email: richard.bissel@sita.co.uk

Site	Hallenbeagle Transfer Station and Material Recycling Facility
Title	Permit Boundary Plan
Scale	1:1000 @ A3
Date	November 2023
Drawing Ref	Hbg-PER-1123-01
Drawn by	JA
Checked by	GGD

Rev	subject	date

Figure 3 – Indicative proposed Site Layout Plan



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Hallenbeagle TS and MRF permit boundary

Assembly points

Quarantine area

Unmade Ground

Fire Hydrant

suez

Darwen Resource Recovey Park, Lower Eccleshill Road, Darwen, BB3 0RP
Tel:(01254)819700, Fax:(01254)819749, Email: richard.bisset@sita.co.uk

Site: Hallenbeagle Transfer Station and Material Recycling Facility

Title: Indicative Site Layout Plan

Scale: 1:1000 @ A3

Date: November 2023

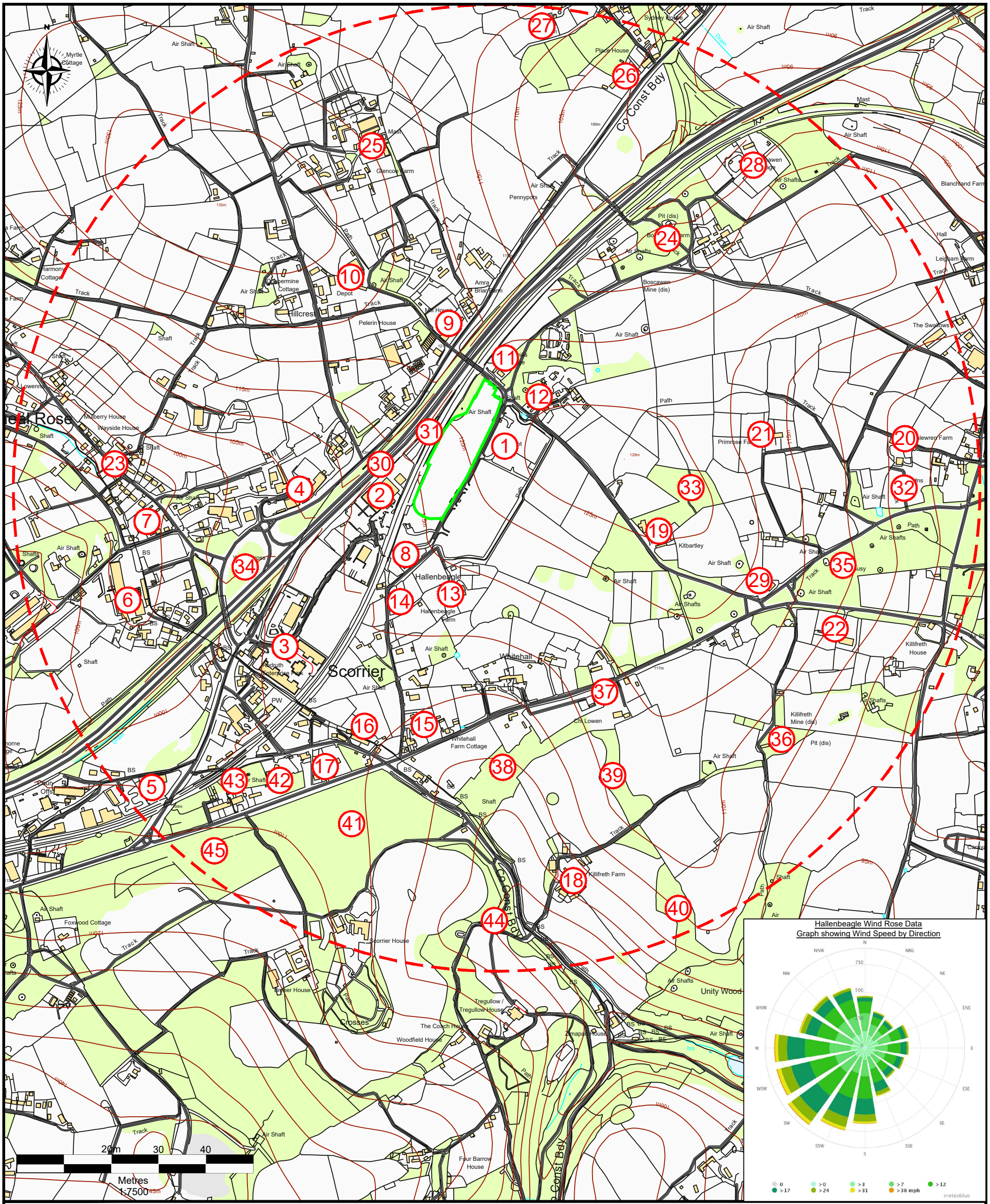
Drawing Ref: Hbg-LAY-1123-01

Drawn by: JA

Checked by: GGD

Rev	subject	date

Figure 4 – Sensitive Receptor Location Plan



Notes

1. Reproduced from the Ordnance Survey Map with the permission of the Controller of Her Majesty's Stationary Office, Crown Copyright, Licence Number 100004910.

Hallenbeagle TS and MRF permit boundary

1km Offset

① Receptors

Darwen Resource Recovey Park, Lower Eccleshill Road, Darwen, BB3 0RP
Tel:(01254)819700, Fax:(01254)819749, Email: richard.bisset@sita.co.uk

Site	Hallenbeagle Transfer Station and Material Recycling Facility
Title	Receptor Plan
Scale	1:7,500 @ A3
Date	November 2023
Drawing Ref	Hbg-REC-1123-01
Drawn by	JA
Checked by	GGD

Rev	subject	date

Figure 5 – Drainage plan

PRIVATE DRAINAGE KEY:

- PROPOSED PRIVATE FOIL WATER DRAINAGE AND INSPECTION CHAMBER/MANHOLE
- PROPOSED PRIVATE SURFACE WATER DRAINAGE AND INSPECTION CHAMBER/MANHOLE – YARD
- PROPOSED PRIVATE SURFACE WATER DRAINAGE AND INSPECTION CHAMBER/MANHOLE – ROOF
- PROPOSED PRIVATE SURFACE WATER MANHOLE WITH AUTOMATIC PENSTOCK TO PREVENT FIRE WATER INGRESS
- PROPOSED PRIVATE DRAINAGE CHANNEL OR DISHED CHANNEL WITH GULLY (LOCATION SUBJECT TO CONFIRMATION OF LEVELS)
- PROPOSED PRIVATE SURFACE WATER RISING MAIN
- PROPOSED PRIVATE SURFACE WATER INFILTRATION FEATURE
- PROPOSED PRIVATE FOUL WASTE SOAKAWAY
- PROPOSED PRIVATE FOUL WASTE TREATMENT PLANT
- CP – 450mm DEEP CATCHPIT
- G – PROPOSED PRIVATE GULLY
- RE – PROPOSED PRIVATE RODDING EYE
- OVERLAND FLOW ROUTING

HIGHWAY DRAINAGE KEY:

- G – PROPOSED ADOPTABLE HIGHWAY GULLY WITH 150ø VITRIFIED CLAY CONNECTION. COVER CLASS D400. MAX LENGTH OF CONNECTION 13m (CC APPROVAL REQUIRED PRIOR TO CONSTRUCTION)
- PROPOSED RELOCATION OF EXISTING HIGHWAY DRAINAGE SYSTEM TO SUIT SCHEME PROPOSAL (APPROVAL FROM CORNWALL COUNCIL REQUIRED) – REFER TO DRG 101 & 102
- EASEMENT TO RELOCATED HIGHWAY DRAINAGE – TO BE CONFIRMED BY CORNWALL COUNCIL

DRAINAGE EASEMENT KEY:

- 5m EASEMENT FROM BUILDING TO INFILTRATION FEATURE
- 20m EASEMENT FROM NETWORK RAIL BOUNDARY TO INFILTRATION FEATURE

KEY:

PLANNING BOUNDARY – HALLENBEAGLE

NOTE: PLANNING BOUNDARY BASED UPON LAND REGISTRY BOUNDARY FROM KEMP SURVEY DRAWING '21–0034–001 & 002 REV A DATED 20/08/2021 OVERLAID WITH LAND REGISTRY BOUNDARY'. CLARKEBOND TAKES NO RESPONSIBILITY FOR THE ACCURACY OF BOUNDARIES SHOWN.

CDM RESIDUAL RISKS

The work shown on this drawing is both familiar to the designers and routinely safely built in similar circumstances by competent contractors.

Risks are not considered significant.

~~Relevant data is included in the Pre-Construction Information Pack~~

Signed: ... Date: ...

NOTES:

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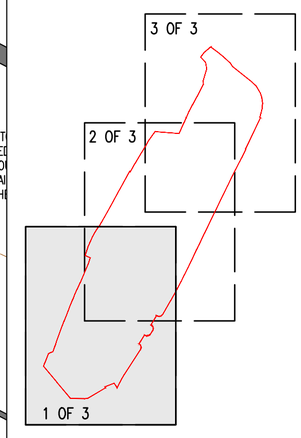
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS, SPECIFICATIONS AND REPORTS.
4. SURVEY TAKEN FROM KEMP SURVEY DRAWING 21–0034–001 & 002 REV B DATED 20/08/2021. CLARKEBOND TAKES NO RESPONSIBILITY FOR ITS CONTENT OR ACCURACY.
5. ALL LEVELS SHOWN ARE TO ORDNANCE DATUM.



SHEET INDEX

20m OFFSET FROM BOUNDARY (NETWORK RAIL LAND) NO INFILTRATION IN THIS AREA

WASTE WATER HOLDING TANK. SIZE AND EMPTYING ACCESS REQUIREMENTS TO BE CONFIRMED

WEIGHBRIDGE OFFICES AND WELFARE / OFFICES

TREATMENT PLANT FOR FOUL. WPL DIAMOND DMS 2 OR SIMILAR

DRAINAGE FIELD FOR FOUL WASTE
APPROX. 25m² x 0.5m DEEP BASED UPON INSITU Vp RATES TO BE CONFIRMED SUEZ M&E CONSULTANT TO CONFIRM FOUL FLOWS.

GREEN SPACE INFILTRATION TANK
INFILTRATION TANK
112.5m² x 1m DEEP
CL: 115.0 – 114.0 m
IL: 112.0 m
INFILTRATION RATE: 0.0526 m/hr FROM REMADA TEST SA07 ($1.46x10^{-5}$m/s)
SAFETY FACTOR: 5.0

SOUTHERN AREA ATTENUATION TANK
1345.5m² x 1.0m DEEP
CL 117.25–115.80mAOD
IL 113.8mAOD

CLASS 1 FULL RETENTION SEPARATOR INCLUDING SILT CAPACITY AND FITTED WITH OIL ALARM SYSTEM KINGSPAN AQUAOIL NSFA150 OR SIMILAR (INPUT OF 7000m² AREA)

CLASS 1 FULL RETENTION SEPARATOR INCLUDING SILT CAPACITY AND FITTED WITH OIL ALARM SYSTEM KINGSPAN AQUAOIL NSFA020 OR SIMILAR (INPUT OF 800m² AREA)

SWMH18 HYDROBRAKE FLOW CONTROL ON SOUTHERN PIPE FLOW RATE: 0.7l/s HEAD 1.0m

RTS

HGV PARKING AREA

THIS DRAWING IS FOR PLANNING APPLICATION USE ONLY. SCHEME INFORMATION SHOWN IS SUBJECT TO FINAL DESIGN AND APPROVALS

0 5 10 15 20

SCALE 1:250 (A1) METRES

Rev	Detail	By	Chk	Date
P05	PSTP AND SURFACE WATER PUMP INFORMATION UPDATED	BG	AMR	20/12/22
P04	UPDATED TO SUIT ADDITIONAL INFILLTRATION TESTING	BG	AMR	05/12/22
P03	UPDATED TO SUIT CLIENT COMMENTS	GR	AMR	12/09/22
P02	STRATEGY UPDATED TO SUIT DESIGN DEVELOPMENT	BG	AMR	02/09/22

Revisions

Client: suez

Project: PROPOSED WASTE FACILITY AT HALLENBEAGLE AND PROPOSED BIODIVERSITY GAIN WORKS AT WHEAL PEEVOR, CORNWALL

Drawing Status: PLANNING APPROVAL

clarkebond
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Sowton, Exeter EX2 7HU
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Bristol Exeter London

Drawing Title: PROPOSED DRAINAGE STRATEGY PLAN – HALLENBEAGLE SHEET 1 OF 3

ClarkeBond Project No.	Status
E05385	S2

Project	Originator	Zone	Level	Type	Role	Drg No.
HLB	CB	XX	XX	DR	C	0014

Scale	Date	
1/250@A1 1/500@A3	05/2022	P05
Drawn: GG	Checked: AMR	Sheet Size: A1

DWG INFO: N:\BS1192\E05385 – HALLENBEAGLE, SUEZ\01_WIP\DR_DRAWINGS\STAGE 2 DESIGN\E05385_HLB_CLK_XX_XX_DR_C_014_016 – PROPOSED DRAINAGE STRATEGY

NORTHERN YARD INFILTRATION TANK
INFILTRATION TANK
315m² x 1m DEEP
CL: 121.8 – 121.4 m
IL: 119.4 m
INFILTRATION RATE: 0.5256 m/hr FROM REMADA TEST SA02 (1.46x10⁻⁴m/s)
SAFETY FACTOR: 5.0

S15.001 225ø
S15.000 225ø
SWMH51
CP
SWMH50

THIS DRAWING IS FOR PLANNING APPLICATION USE ONLY. SCHEME INFORMATION SHOWN IS SUBJECT TO FINAL DESIGN AND APPROVALS

CANOPY OVER LOADING BAY
SWMH23
S5.001 225ø
SWMH6
CP
S2.000 225ø
S5.002 225ø
SWMH21
COVERED BAY STORAGE
CLASS 1 FULL RETENTION SEPARATOR INCLUDING SILT CAPACITY AND FITTED WITH OIL ALARM SYSTEM KINGSPAN AQUAOIL NSFA030 OR SIMILAR (INPUT OF 1650m² AREA)
CP
SWMH49
S14.002 225ø
S14.001 225ø

CP
SWMH17
SWMH24
S6.000 225ø
SWMH22
WASTE WATER HOLDING TANK. SIZE AND EMPTYING REQUIREMENTS TO BE CONFIRMED
FWMH18
S2.001 300ø
F4.000 150ø
FWMH17 TO INCLUDE AUTOMATED PENSTOCK TO ISOLATE OUTGOING PIPE AND RETAIN FIREWATER WITHIN THE BUILDING
FWMH17
S5.003 300ø
WASHDOWN GULLY
MRF
SWMH8
CP
20m OFFSET FROM BOUNDARY (NETWORK RAIL LAND) NO INFILTRATION IN THIS AREA
WASTE WATER HOLDING TANK. SIZE AND EMPTYING ACCESS REQUIREMENTS TO BE CONFIRMED
SWMH1
S2.002 300ø
S5.004 300ø
SWMH27
S6.000 225ø
SWMH26
F3.001 150ø
FWMH15 TO INCLUDE AUTOMATED PENSTOCK TO ISOLATE OUTGOING PIPE AND RETAIN FIREWATER WITHIN THE BUILDING
FWMH15
WASHDOWN GULLY
SWMH2
S1.000 225ø
SWMH9
CP
S2.003 375ø
S5.005 375ø
SWMH10
CP
S2.004 375ø
SWMH28
S5.006 375ø
RTS
FWMH14
SWMH3
S1.001 225ø
SWMH11
CP
SWMH29
OFFICE
NW WEIGHBRIDGE
BP PASS LANE
SW PUMPING STATION
UNITY POINT TG15.450.2P.BOP.GR02 OR SIMILAR APPROVED
1.5m DIAMETER, 4.5m DEEP
12l/s PUMP RATE, 11.3m DESIGN HEAD
CP
SWMH
HGV PARKING AREA
SWMH4
S1.002 300ø
F3.000 150ø
S1.001 225ø

KEY:

PLANNING BOUNDARY – HALLENBEAGLE

NOTE: PLANNING BOUNDARY BASED UPON LAND REGISTRY BOUNDARY FROM KEMP SURVEY DRAWING '21–0034–001 & 002 REV A DATED 20/08/2021 OVERLAID WITH LAND REGISTRY BOUNDARY'. CLARKEBOND TAKES NO RESPONSIBILITY FOR THE ACCURACY OF BOUNDARIES SHOWN.

CDM RESIDUAL RISKS

The work shown on this drawing is both familiar to the designers and routinely safely built in similar circumstances by competent contractors.

Risks are not considered significant.

~~Relevant data is included in the Pre-Construction Information Pack~~

Signed: ... Date: ...

NOTES:

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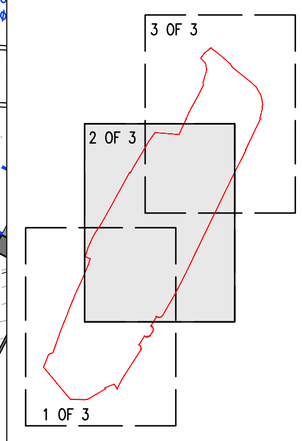

SHEET INDEX

0 5 10 15 20
SCALE 1:250 (A1) METRES

PRIVATE DRAINAGE KEY:

- PROPOSED PRIVATE FOIL WATER DRAINAGE AND INSPECTION CHAMBER/MANHOLE
- PROPOSED PRIVATE SURFACE WATER DRAINAGE AND INSPECTION CHAMBER/MANHOLE – YARD
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- PROPOSED PRIVATE FOUL WASTE TREATMENT PLANT
- CP – 450mm DEEP CATCHPIT
- G – PROPOSED PRIVATE GULLY
- RE – PROPOSED PRIVATE RODDING EYE
- OVERLAND FLOW ROUTING

HIGHWAY DRAINAGE KEY:

- G – PROPOSED ADOPTABLE HIGHWAY GULLY WITH 150ø VITRIFIED CLAY CONNECTION. COVER CLASS D400. MAX LENGTH OF CONNECTION 13m (CC APPROVAL REQUIRED PRIOR TO CONSTRUCTION)
- PROPOSED RELOCATION OF EXISTING HIGHWAY DRAINAGE SYSTEM TO SUIT SCHEME PROPOSAL (APPROVAL FROM CORNWALL COUNCIL REQUIRED) – REFER TO DRG 101 & 102
- EASEMENT TO RELOCATED HIGHWAY DRAINAGE – TO BE CONFIRMED BY CORNWALL COUNCIL

DRAINAGE EASEMENT KEY:

- 5m EASEMENT FROM BUILDING TO INFILTRATION FEATURE
- 20m EASEMENT FROM NETWORK RAIL BOUNDARY TO INFILTRATION FEATURE

Rev	Detail	By	Chk	Date
P05	PSTP AND SURFACE WATER PUMP INFORMATION UPDATED	BG	AMR	20/12/22
P04	UPDATED TO SUIT ADDITIONAL INFILLTRATION TESTING	BG	AMR	05/12/22
P03	UPDATED TO SUIT CLIENT COMMENTS	GR	AMR	12/09/22
P02	STRATEGY UPDATED TO SUIT DESIGN DEVELOPMENT	BG	AMR	02/09/22

Revisions

Client: suez

Project: PROPOSED WASTE FACILITY AT HALLENBEAGLE AND PROPOSED BIODIVERSITY GAIN WORKS AT WHEAL PEEVOR, CORNWALL

Drawing Status: PLANNING APPROVAL

clarkebond
MULTIDISCIPLINARY ENGINEERING CONSULTANTS
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Drawing Title: PROPOSED DRAINAGE STRATEGY PLAN – HALLENBEAGLE SHEET 2 OF 3

ClarkeBond Project No.: E05385 | Status: S2

Project	Originator	Zone	Level	Type	Role	Drg No.
HLB	CB	XX	XX	DR	C	0015

Scale: 1/250@A1 1:500@A3 | Date: 05/2022 | Drawn: GG | Checked: AMR | Sheet Size: A1 | P05

PRIVATE DRAINAGE KEY:

- PROPOSED PRIVATE FOIL WATER DRAINAGE AND INSPECTION CHAMBER/MANHOLE
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- PROPOSED PRIVATE SURFACE WATER RISING MAIN
- PROPOSED PRIVATE SURFACE WATER INFILTRATION FEATURE
- PROPOSED PRIVATE FOUL WASTE SOAKAWAY
- PROPOSED PRIVATE FOUL WASTE TREATMENT PLANT
- CP – 450mm DEEP CATCHPIT
- G – PROPOSED PRIVATE GULLY
- RE – PROPOSED PRIVATE RODDING EYE
- OVERLAND FLOW ROUTING

HIGHWAY DRAINAGE KEY:

- G – PROPOSED ADOPTABLE HIGHWAY GULLY WITH 150ø VITRIFIED CLAY CONNECTION. COVER CLASS D400. MAX LENGTH OF CONNECTION 13m (CC APPROVAL REQUIRED PRIOR TO CONSTRUCTION)
- PROPOSED RELOCATION OF EXISTING HIGHWAY DRAINAGE SYSTEM TO SUIT SCHEME PROPOSAL (APPROVAL FROM CORNWALL COUNCIL REQUIRED) – REFER TO DRG 101 & 102
- EASEMENT TO RELOCATED HIGHWAY DRAINAGE – TO BE CONFIRMED BY CORNWALL COUNCIL

DRAINAGE EASEMENT KEY:

- 5m EASEMENT FROM BUILDING TO INFILTRATION FEATURE
- 20m EASEMENT FROM NETWORK RAIL BOUNDARY TO INFILTRATION FEATURE

KEY:

PLANNING BOUNDARY – HALLENBEAGLE

NOTE: PLANNING BOUNDARY BASED UPON LAND REGISTRY BOUNDARY FROM KEMP SURVEY DRAWING '21–0034–001 & 002 REV A DATED 20/08/2021 OVERLAID WITH LAND REGISTRY BOUNDARY'. CLARKEBOND TAKES NO RESPONSIBILITY FOR THE ACCURACY OF BOUNDARIES SHOWN.

NOTE: ASSESSMENT OF EXISTING GULLY CATCHMENT / HIGHWAY DRAINAGE SYSTEM TO BE UNDERTAKEN TO ENSURE ADEQUATE GULLY SPACING AND REVIEW IMPACTS OF INCREASED IMPERMEABLE CATCHMENT AREA

NOTE: NO ADJUSTMENT TO EXISTING ADOPTABLE HIGHWAY/ EXISTING DRAINAGE TO BE UNDERTAKEN WITHOUT CORNWALL COUNCIL APPROVAL

NOTE: HIGHWAY BOUNDARIES (HIGHWAYS MAINTAINABLE AT PUBLIC EXPENSES) AND HIGHWAY DRAINAGE RECORDS/DETAILS REQUIRED TO CONFIRM PROPOSAL

CDM RESIDUAL RISKS

The work shown on this drawing is both familiar to the designers and routinely safely built in similar circumstances by competent contractors.

Risks are not considered significant.

~~Relevant data is included in the Pre-Construction Information Pack~~

Signed: ... Date: ...

NOTES:

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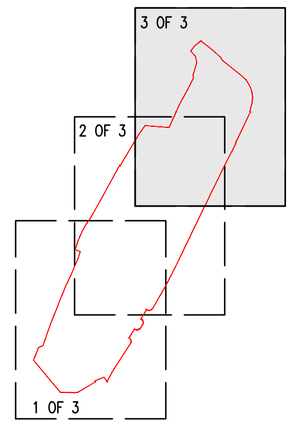

SHEET INDEX

EXISTING HIGHWAY DRAINAGE TO BE REMOVED, REFER TO DRAWING 102 FOR ADDITIONAL DETAILS.

EXISTING HIGHWAY DRAINAGE TO REMAIN, REFER TO DRAWING 102 FOR ADDITIONAL DETAILS.

SOAKAWAY FOR FOUL WASTE
SUBJECT TO PERMITTING ALLOWING DISCHARGE TO GROUND WITHOUT A DRAINAGE FIELD. CONFIRMATION FROM EA REQUIRED.
APPROX. 42m² x 0.5m DEEP BASED UPON 0.15 l/s – BRITISH WATER FLOWS AND LOADS–4 (2013) WITH PEAKING OF 3 (TO GIVE PEAK FLOWS OF 0.45 l/s)
SUEZ M&E CONSULTANT TO CONFIRM FOUL FLOWS.

TREATMENT PLANT FOR FOUL
WPL DIAMOND DMC 8 OR SIMILAR

NORTHERN AREA INFILTRATION TANK
INFILTRATION TANK
228m² x 1m DEEP
CL: 122.6 – 122.0 m
IL: 119.9 m
INFILTRATION RATE: 0.28188 m/hr FROM RSK–TP01 TEST 1 (7.83x10⁻⁵m/s)
SAFETY FACTOR: 5.0

NORTHERN YARD INFILTRATION TANK
INFILTRATION TANK
315m² x 1m DEEP
CL: 121.8 – 121.4 m
IL: 119.4 m
INFILTRATION RATE: 0.5256 m/hr FROM REMADA TEST SA02 (1.46x10⁻⁴m/s)
SAFETY FACTOR: 5.0

INFILTRATION RATE: 0.0060 m/hr FROM REMADA TEST SA01 (1.66x10⁻⁶m/s)
SAFETY FACTOR: 5.0

CLASS 1 BYPASS RETENTION SEPARATOR INCLUDING SILT CAPACITY AND FITTED WITH OIL ALARM SYSTEM KINGSPAN AQUAOIL NSBE010 OR SIMILAR (INPUT OF 3710m² AREA)

CLASS 1 FULL RETENTION SEPARATOR INCLUDING SILT CAPACITY AND FITTED WITH OIL ALARM SYSTEM KINGSPAN AQUAOIL NSFA030 OR SIMILAR (INPUT OF 1650m² AREA)

FWMH17 TO INCLUDE AUTOMATED PENSTOCK TO ISOLATE OUTGOING PIPE AND RETAIN FIREWATER WITHIN THE BUILDING

OFFICE BUILDING
COVERED BAY STORAGE
CANOPY OVER LOADING BAY
MRF
WASHDOWN GULLY
NO ENTRY

0 5 10 15 20 METRES
SCALE 1:250 (A1)

THIS DRAWING IS FOR PLANNING APPLICATION USE ONLY. SCHEME INFORMATION SHOWN IS SUBJECT TO FINAL DESIGN AND APPROVALS

Rev	Detail	By	Chk	Date
P05	PSTP AND SURFACE WATER PUMP INFORMATION UPDATED	BG	AMR	20/12/22
P04	UPDATED TO SUIT ADDITIONAL INFILLTRATION TESTING	BG	AMR	05/12/22
P03	UPDATED TO SUIT CLIENT COMMENTS	GR	AMR	12/09/22
P02	STRATEGY UPDATED TO SUIT DESIGN DEVELOPMENT	BG	AMR	02/09/22

Revisions

Client: suez

Project: PROPOSED WASTE FACILITY AT HALLENBEAGLE AND PROPOSED BIODIVERSITY GAIN WORKS AT WHEAL PEEVOR, CORNWALL

Drawing Status: PLANNING APPROVAL

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web www.clarkebond.com
Bristol Exeter London

Drawing Title: PROPOSED DRAINAGE STRATEGY PLAN – HALLENBEAGLE SHEET 3 OF 3

ClarkeBond Project No.	Status
E05385	S2

Project	Originator	Zone	Level	Type	Role	Drg No.
HLB	CB	XX	XX	DR	C	0016

Scale	Date	
1/250@A1 1:500@A3	05/2022	P05
Drawn: GG	Checked: AMR	Sheet Size: A1

DWG INFO: N:\BS1192\E05385 – HALLENBEAGLE, SUEZ\01_WIP\DR_DRAWING\STAGE 2 DESIGN\E05385_HLB_CLK_XX_XX_DR_C_014_016 – PROPOSED DRAINAGE STRATEGY

Figure 6 – Emergency Access Route

N

OFFICE BUILDING

GALVANISED WATER TANK

GALVANISED WATER TANK

PUMP ROOM

20,000 LITRE DIESEL TANK
2,500 ADBLUE TANK

STAFF AND VISITOR PARKING - 36 PARKING SPACES INCLUDING 2 DISABLED BAYS

OPEN LANDSCAPE SPACE (PICNIC BENCHES & BIKE STORE)

BIKE STORE (APPROX 10No. BIKES)

SMOKING SHELTER

COACH PARKING

IN

OUT

WB OFFICE

OUT

CANOPY OVER LOADING BAY

COVERED BALE STORAGE

SECONDARY LOADING OUT BAY

PRIMARY LOADING OUT BAY

CANOPY OVER LOADING BAY

LOADING AREA

HGV PARKING

HGV PARKING

MRF

VEHICLE WASH BAY CONTROL HOUSE

VEHICLE WASH BAY CONTROL HOUSE (TRAFFIC FILM REMOVER STORAGE, WASH RECYCLING SYSTEM, PLANT PANEL ETC)

COVERED VEHICLE WASH BAY

COVERED VEHICLE WASH BAY

ENTRANCE INTO MRF BUILDING

RTS

WEIGHBRIDGE OFFICES AND WELFARE / OFFICES

WEIGHBRIDGE

WEIGHBRIDGE

OFFICE

OFFICE

BY PASS LANE

HGV PARKING AREA

A

B

BY PASS LANE

B

A

ENTRANCE FOR HGV'S

0 10 20 30 40m 60 80 100

Metres
1:1000

Notes

1. Reproduced from the Ordnance Survey Map with the permission of the Controller of Her Majesty's Stationary Office, Crown Copyright, Licence Number 100004910.

Hallenbeagle TS and MRF permit boundary

Emergency Vehicle Access Route

Unmade Ground

Fire Hydrant

suez

Darwen Resource Recovey Park, Lower Eccleshill Road, Darwen, BB3 0RP
Tel:(01254)819700, Fax:(01254)819749, Email: richard.bisset@sita.co.uk

Site: Hallenbeagle Transfer Station and Material Recycling Facility

Title: Emergency Access Plan

Scale: 1:1000 @ A3

Date: November 2023

Drawing Ref: Hbg-EAR-1123-01

Drawn by: JA

Checked by: GGD

Rev	subject	date