



Bodmin MRF
Fire Prevention Plan

January 2021

Document Details

Document title	Bodmin MRF Fire Prevention Plan
Version	2.0
Date	January 2021
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Distribution	SUEZ – Site Copy SUEZ– EIR Department Environment Agency

Document Review History

Date	Version	Description
March 2016	Version 1.0	New document
June 2017	Version 1.1	Oil IBC added to site plan
July 2019	Version 1.2	Update following EA comments on v1.1
January 2021	Version 2.0	Fire Prevention Plan produced as part of permit variation

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Appendices

Appendix A	Waste Storage Details
Appendix B	Business Continuity Plan

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No.	Drawing	Reference
1	Site Location	Bdm-LOC-1220-01
2	Permit Boundary	Bdm-PER-1220-01
3	Indicative Site Layout Plan	Bdm-LAY-1220-01
4	Indicative Site Layout Plan (2)	Bdm-LAY-1220-02
5	Drainage Plan	BOD-CB-XX-XX-DR-C-960
6	Sensitive Receptor Location Plan	Bdm-REC-1220-01
7	Fire Hydrant Location and Emergency Access	Bdm-FPP-1220-01

1 INTRODUCTION

- 1.1 This document details the Fire Management Plan for Bodmin Material Recycling Facility (the site) located at Bodmin Business Park, Launceston Road, Bodmin, Cornwall, PL31 2RJ at National Grid Reference (NGR) SX 08457 67535. The site location and permit boundary are presented in Figure 1 and 2 respectively. The document should be read in conjunction with Bodmin MRF Site Management Plan.
- 1.2 The site will be permitted as a Material Recycling Facility (MRF), accepting primarily domestic dry recyclables and smaller quantities of commercial dry recyclables with an annual acceptance limit of <75,000 tonnes.
- 1.3 Materials will be delivered to the site via either Kerbloader, Terberg vehicles or stillage vehicles. Kerbloader, Terberg vehicle have separated “pods” for different collected recyclable materials. The vehicles will enter the main building and the pods containing recyclable materials (mixed plastics and cans, paper and cardboard) will be tipped on the floor in each bay. Stillage vehicle will be unloaded using forklift trucks and the materials will be tipped on the floor in each bay. Cardboard and paper could also be delivered on Ro-Ro or articulated vehicles. The materials will then be transferred onto the conveyor system for processing and will be bailed prior to storage on site. Bales of recyclables materials will be stored within the external covered bays as shown in Figure 4.
- 1.4 Food waste will be delivered to the site using Kerbloader, Terberg vehicles. The food pods will be removed by a forklift and moved into the food bays and rotated and tipped directly into a RoRo container. Food waste will be stored in a RoRo container placed in each of the 3 food bays (Figure 4) located to the south east of the MRF building prior further transport to another site for further processing. The food bays will have fast acting roller shutting doors.
- 1.5 The glass materials will be delivered to the site using Kerbloader, Terberg vehicles. The glass will be tipped within the glass bays (Figure 4) located to the north east of the MRF building.
- 1.6 Textile will be stored in Ro-Ro outside.
- 1.7 A Fire Risk Assessment covering existing operations is in place and will be updated prior to the proposed activities commencing. It will also be reviewed at regular intervals not exceeding 12 months. The Fire Assessment is included within the SUEZ electronic Risk Assessment database, however, the electronic version should always be referred to in the first instance.
- 1.8 An appropriate person will review this Fire Management Plan at regular intervals or prior to a change in activity on site.
- 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 at site is included in the Environmental Risk Assessment (Appendix E of the Site Management Plan). 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 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 and stored at the site include:
- Paper
 - cardboard
 - Plastics
 - Steel/Aluminium Cans
 - Textile

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.
- 2.3.2 Appendix A details the volume, storage time and storage method for each waste type at site.

Waste storage

- 2.3.3 The MRF activity will be undertaken inside the main MRF building. Bales materials will be stored within the covered bays located to the east of the main MRF building. Food wastes will be stored in the fully enclosed bays located to the south-east of the site while glass will be stored in the bays located to the north-east of the site. Textile will be stored in Ro-Ro outside.
- 2.3.4 An indicative site layout plan showing the waste storage areas is provided in Figure 3 and 4.

Hazardous materials storage

- 2.3.5 Two Fuel Storage tanks are located on site as indicated on the indicative site layout drawing provided in Figure 4. A sealed container is located next to the main fuel tank for storage of contaminated oil spill equipment prior to removal from site.
- 2.3.6 Gas containers are not routinely accepted at the site, however gas containers might be present as part of a waste load and will be segregated and stored on site.
- 2.3.7 WEEE materials are not accepted at the site. However WEEE materials might come as part of a load and this materials will be segregated and stored on site.
- 2.3.8 Engine Oil and hydraulic oils are stored in sealed bunded containers within the MRF building as shown in Figure 3 and 4.
- 2.3.9 No additional hazardous materials will be stored within the site.

2.4 Cause 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), although recent WISH data suggest that this takes far longer than the storage durations proposed in this document
 - 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 upon the 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 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 general management actions to mitigate the impact of a fire on sensitive receptors are detailed in Sections 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 6.

Table 1 – Bodmin MRF Sensitive Receptors

No.	Receptor	Category	Distance (m)	Direction from site
1	Callywith Gate Industrial Estate	Commercial and Industrial	135	West
2	Bodmin Business Park	Commercial and Industrial	100	North, West, South
3	Cooksland Industrial Estate	Commercial and Industrial	210	South
4	Retail Park	Commercial and Industrial	250	South West
5	Bodmin Retail Park	Commercial and Industrial	580	South
6	Newton Margate Industrial Estate	Commercial and Industrial	520	South

7	Private House	Residential	740	North
8	Residential Area (Bodmin)	Residential	550 -1000+	South West
9	Callywith bungalow	Residential	550	North
10	Callybarrett Farm	Residential/ Agriculture	770	North, West
11	Callywith College	Education	290	West
12	Belmont House Nursing Home	Care Home	850	South West
13	White House Care Home	Care Home	1000	South West
14	Castle Hill House Nursing Home	Care Home	760	South West
15	Cromarty House	Residential Care	1000	South West
16	Callywith Quarry	Quarry	800	North
17	Bodmin Law Court	Court	920	South West
18	ESS Wind Turbine	Energy	300	South East
19	Solar Farm / Wind Turbine	Energy	660	South East
20	Wind Turbine	Energy	480	North East
21	Agricultural Land	Agriculture	450 – 1000+	East
22	Agricultural Land	Agriculture	600 -1000+	West
23	Major Road A30	Public Highway	75	East
24	Cardinham Wood	Deciduous woodland	270 – 1000+	South East

25	Woods North of Callywith Quarry	Deciduous woodland	725	North East
26	Woods North of Old Callywith Road	Deciduous woodland	960	East
27	Cardinham Wood	Ancient Woodland	900	South East
28	Stream (in Cardinham Woods)	Surface Water	260	East, South East
29	Spring	Surface Water	725	North West
30	Spring	Surface Water	630	West
31	Groundwater (Secondary Aquifer)	Groundwater	Beneath site	Beneath site

2.7 Wind Direction

2.7.1 The data was obtained for Bodmin. The prevailing wind direction is from the west- south west. A compass rose from metroblue.com, with the prevailing wind direction, is included in **Figure 6**.

3 PREVENTATIVE MEASURES

3.1 SUEZ Policies and Procedures

- 3.1.1 Section 3.8 of SUEZ Integrated Management System (IMS) relates to Emergency Preparedness and Response and will be followed in the event of a fire or explosion.
- 3.1.2 In addition to Section 3.8, the following policies and procedures, as detailed in the IMS, are also relevant:
- IMS 2.11 Accident Investigation and Reporting
 - IMS 2.12 Site Inspection, Audit and Reporting
 - IMS 2.13 Managing Non-Conformance, Corrective & Preventive Action
 - IMS 2.14 Control of Records
 - IMS 2.15 Audits
 - IMS 3.1 Duty of Care
 - IMS 3.6 Surface Water Management
 - IMS 3.7 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.

3.2 Controls to Manage Common Causes of Fire

Arson

- 3.2.1 Site security to prevent arson includes security fencing and monitored CCTV. CCTV monitoring systems are installed in various strategic locations around the site as indicated on Figure 3 and 4

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

- 3.2.4 All vehicles and items of plant are stored at a safe distance (6m) from waste stockpiles when not in use as indicated on Figure 3 and 4.
- 3.2.5 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.
- 3.2.6 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.
- 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 details 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.
- 3.2.8 Mobile plant will be maintained in accordance with manufacturer's guidance and weekly cleaning will be undertaken by the operator. In addition daily vehicle inspections will be carried out prior to using the equipment.

Electrical Equipment

- 3.2.9 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.
- 3.2.10 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 Contracting (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 reports
- 3.2.11 Following every inspections and testing, defects should be rectified as soon as reasonable practicable.
- 3.2.12 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.
- 3.2.13 Electrical sockets must not be overloaded.

Discarded smoking materials

- 3.2.14 No wastes will be burned within the boundaries of the site.
- 3.2.15 Smoking on site is only permitted in the site designated smoking areas that will be located at strategic location during the redevelopment.

Hot works

- 3.2.16 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

- 3.2.17 No industrial heaters will be used on site.

Hot exhausts

- 3.2.18 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.

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 Section 3.8 of the SUEZ IMS.

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 is 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 site 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
 - 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 Waste deposition will generally be undertaken by site staff using forklift trucks. Site staff will direct and assist drivers as necessary.
- 3.2.29 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.
- 3.2.30 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

- 3.2.31 A quarantine area 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.

3.2.32 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 Checks 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 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 a bay 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 “5S” system will be implemented on site using a traffic light system to aid stock management and ensure compliance with the maximum storage time on site identified within Appendix A. This entails the use of green, amber and red colours marked on bay walls as 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 the “5S” system and is fully recorded via the use of weighbridge tickets.

- 3.3.9 Materials received at the site for processing are normally stored for a maximum of 72 hours. Materials stored on site after processing before onward transport are stored usually between 1 week to 2 weeks with the exception of Aluminium Cans stored for 1 month. WEEE could be stored on site for a maximum of 2 months as the container needs to be full before it is taken away from site. The short residency time of majority of the waste will reduce the potential risk associated with self-heating due to processes within the waste.
- 3.3.10 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 site manager.
- 3.3.11 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 and it is considered that the area within the bays that can be used for storage will only be half full. The processed baled materials are stored outside within the external covered bays. Food and glass will also be stored in the designated food and glass bays located to the north-east and south-east of the MRF building. Therefore all materials on site are stored under covered area shaded from any direct sunlight reducing the risk of self-heating.

Monitoring and controlling of temperature

- 3.3.12 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 around 2 weeks with the exception of baled aluminium cans that will be stored for a maximum of 1 month. 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.

Waste bale storage

- 3.3.13 Bales are stored on site in the outside covered baled area to the east of the MRF building as detailed in Appendix A and shown in Figure 4.

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 4.

Storage within input and output bays.

- 3.3.15 Unprocessed materials is unloaded within the input bays within the MRF building as shown in Figure 3. 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 and it is considered that the area within the bays that can be used for storage

will only be half full. Processed materials (Steel, Aluminium and plastics) are stored within the output bays. The location of these bays are shown in Figure 4 and detailed of the storage volume included in Appendix A.

- 3.3.16 The input and output bays within the MRF building are separated by a 2 hours fire rated partition walls.

Storage within bays in the outside covered baled area.

- 3.3.17 The baled processed materials (as identified above and within Appendix A) are stored within covered bays separated by a 2 hours fire rated partition walls. The bays will be fully sealed to act as a thermal barrier.

Storage within containers

- 3.3.18 Food wastes is stored in a Ro-Ro container within designated food bays located to the south-east of the MRF building. Food wastes is not considered as combustible due to its moisture content. However food materials stored within containers are fully accessible to allow any potential ignition to be extinguished. Containers are accessible to enable rapid segregation. Containers will be moved using the existing mobile plant at the site following instruction by site manager.

- 3.3.19 The Ro-Ro containers are also stored within covered bays made of reinforced concrete walls which will provide in excess of 2 hours fire resistance.

Storage within covered bays

- 3.3.20 Glass is stored in dedicated covered bays located to the north-east of the MRF building. Glass is not considered as combustibles however the covered bays are separated by reinforced concrete walls which will provide in excess of 2 hours fire resistance.

Quarantine area

- 3.3.21 A 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.

- 3.3.22 The location and size of the quarantine area is provided in Figure 4.

- 3.3.23 As set out in 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.

- 3.3.24 With reference to the pile size dimensions in Appendix A, it is considered that 246m³ will comprise the largest potentially flammable stockpile and therefore the quarantine area size is deemed suitable to accommodate 50% of this.

- 3.3.25 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 plants operational at the site.

- 3.3.26 The quarantine area is located in the middle of the yard area in front of the glass bays and as such will be clear of other material. However, to avoid confusion it 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.

4 DETECTION AND SUPPRESSION MEASURES

4.1 Fire Detection

Fire Alarm System

- 4.1.1 The site is 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. 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 and notify the local fire brigade in the event of a fire. 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.
- 4.1.2 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 on the site Daily Checklist. Any fault must be reported immediately.
- 4.1.3 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.
- 4.1.4 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.
- 4.1.5 Fire alarm points must be kept clear, visible and correctly labelled at all times.
- 4.1.6 The results of the alarm testing and servicing will be held in the Fire Logbook.

Flame detection and thermal imaging

- 4.1.7 The site currently has an operating detection system installed throughout the MRF building. The location and type of detectors are as shown in Figures 4.
- 4.1.8 The MRF building is also fitted with thermal imaging cameras as shown in Figure 4.
- 4.1.9 The fire detection system includes a detection system which is fully integrated to the fire suppression system (fire sprinkler). This will be expanded as part of the development works and the new bays and the existing bale storage area will be covered with suitable fire detection equipment.



4.1.10 The detection system will be linked to the alarm fire panel system which has an automatic dial out system to a remote monitoring station operating 24hrs (including week end and bank holiday). The remote monitoring station will contact the local fire brigade and also alert relevant employees who will take appropriate action.

4.1.11 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 Fire fighting equipment will be provided on site and will consist of fire extinguishers along with the presence of a fire hydrant outside of the site boundary, close to the entrance gates. The site has its own water tank supply and pumping system. A fire suppression system including roof sprinklers is also installed on site.
- 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 portable extinguishers needed at the site and their locations will be assessed by a competent contractor prior to 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 One fire hydrant is located immediately outside our main entrance gate as shown on Figure 4.

Sprinkler System

- 4.2.6 The MRF building is equipped with a sprinkler system. The system also includes diesel fire pump sets and a fire water storage tank. The sprinkler system installed has been designed in accordance with industry/insurance standards e.g. the requirements of the ACE Technical Guidance for Waste Processing Facilities. The principal system is at roof level though, in addition, it comprises the installation of sprinklers underneath items of plant that are in excess of 1m wide for further protection of covered areas.
- 4.2.7 The sprinkler installation system and water supply systems comply with NFPA 13 and 20 respectively and the fire detection system has been 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 ACE project performance specification referenced above.
- 4.2.8 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.

4.2.9 A weekly test is carried out by maintenance of the two pumps that supply the MRF sprinkler system.

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 7.

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 plant is equipped with a high volume sprinkler system and flame detectors throughout. The water supply is in the form of a water tank which will hold more water than the required 295m³. The exact volume will be subject to detailed design and approval from the insurance company. 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.

4.4.2 There is also a 100mm diameter fire hydrant located outside the site entrance as indicated in Figure 4 and 7. The Hydrant has been inspected by Southwest Water and is in a satisfactory working order. Southwest Water has tested the hydrant and confirmed that the flow provided is 1050 litres per minute.

4.5 Fire Water Management

Fire water volume

4.5.1 The Environment Agency Fire Prevention Plan guidance indicates that a 300m³ 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 246m³.

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 295m³.

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 246m³ of combustible materials located at the site it is estimated that we will need to store in the worst case scenario 295m³ of fire water.
- 4.5.6 Fire Water will be retained on site. A surface water drainage network is present on site, as shown on Figure 5. The surface water network contains 1 attenuation tank for surface water. This system has a capacity of being able to retain 255m³ in the tanks alone. The remaining fire water will be retained within the surface water and foul drains. A Shutoff valve will be located before the water discharge outfall to the sewer. In the event of a fire the manual shut off valve would be closed to ensure that contaminated fire water did not discharge to surface water. Fire water run off collected within the surface water drainage system will then be tankered off site for suitable disposal.
- 4.5.7 The site also benefit from a foul water drainage system as shown on Figure 5. A Shutoff valve will be located on the system before fire water can discharge to sewer. In the event of a fire the manual shut off valve would be closed to ensure that contaminated fire water did not discharge. Fire water collected within the foul system will be discharged only with prior authorisation from the water company. Otherwise it will be pumped and tankered off site for suitable disposal.

4.6 Contingency Plan in the Event of a Fire

- 4.6.1 In the event of a major fire, the emergency procedures will be followed which includes notifying the Fire Rescue Service (FRS) and Environment Agency. 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 in Appendix B. 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 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 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 once the Fire Service have advised that it is safe to do so and the Environment Agency will be notified of the restart of operation.

4.7 Out of hours Response

4.7.1 A fire pack will be located in a box 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.

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 It is considered very unlikely that a fire will occur but if this should happen then 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 fire water 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 points are located in various area 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 daybook 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 and the Environment Agency.



Appendices



Appendix A – Waste Storage Details

Bodmin MRF - Fire Prevention Plan

APPENDIX A – WASTE STORAGE DETAILS

Waste type	Form	Storage detail	Maximum storage time on site	Location within site	Bay Size and volume of waste pile	Assumptions for Waste Volume Calculation
Cardboard (Input Materials)	Loose	In separate bays with concrete surfacing and 2 hours fire rated separation	48 hrs or 72hrs over bank holiday	Bay 1, 2 and 3 inside the MRF building as shown on site plan	<p>Bay 1 size: 4.9m (min) 6.6m max (W) x 14m (min) 14.7m (max) (D) x 3.9m (H) (Approximate stockpile volume 66m³)</p> <p>Bay 2 size: 6.5m (W) x 14m (D) x 3.9m (H) (Approximate stockpile volume 85m³)</p> <p>Bay 3 size: 6.5m (W) x 14m (D) x 3.9m (H) (Approximate stockpile volume 85m³)</p>	<ul style="list-style-type: none"> 1 meter free board at the top of the bays Materials will only be stored up to a depth of 8m as delivery vehicle needs to reverse within bays Stockpile volume calculated as 50% of total usable bay volume
Cardboard (Input Materials)	Loose	On concrete surface floor	Continuous process (Nothing will be left overnight)	Area 4 inside the MRF Building to the west of the MRF equipment	Area 4 size: 5m (W) x 5m (D) x 2m (H) (Approximate stockpile volume 50m³)	<ul style="list-style-type: none"> Materials will be unloaded on the floor before getting processed. Maximum area of 25m² with max height of 2m.
Paper (Input Materials)	Loose	In separate bays with concrete surfacing and 2 hours fire rated separation	48 hrs with 72hrs over bank holiday	Bay 5, 6 and 7 inside the MRF building as shown on site plan	<p>Bay 5 size: 6.5m (W) x 14m (D) x 3.9m (H) (Approximate stockpile volume 85m³)</p> <p>Bay 6 size: 6.5m (W) x 14m (D) x 3.9m (H) (Approximate stockpile volume 85m³)</p> <p>Bay 7 size: 6.5m (W) x 14m (D) x 3.9m (H) (Approximate stockpile volume 85m³)</p>	<ul style="list-style-type: none"> 1 meter free board at the top of the bays Materials will only be stored up to a depth of 8m as delivery vehicle needs to reverse within bays Stockpile volume calculated as 50% of total usable bay volume
Mixed plastics and cans (Input Materials)	Loose	In separate bays with concrete surfacing and 2 hours fire rated separation	48 hrs with 72hrs over bank holiday	Bay 8 inside the MRF building as shown on site plan	Bay 8 size: 15.6m (W) x 16.4m (min) 18.7m (max) (D) x 3.9m (H) (Approximate stockpile volume 246m³)	<ul style="list-style-type: none"> 1 meter free board at the top of the bay Materials will only be stored up to a depth of 9.7m as delivery vehicle needs to reverse within bay Stockpile volume calculated as 50% of total usable bay volume

Steel Cans (after processing)	Loose	In separate bunker with 2 hours fire rated separation	Continuous process. 48 hrs or 72hrs over bank holiday	Bay 9 inside the MRF building as shown on site plan	Area 9 size: 1m (W) x 15m (D) x 3m (H) (Approximate stockpile volume 22.5 m³)	<ul style="list-style-type: none"> 1 meter free board at the top of the bunker Stockpile volume calculated as 75% of total volume
Aluminium Cans (after processing)	Loose	In separate bunker with 2 hours fire rated separation	Continuous process. 48 hrs or 72hrs over bank holiday	Bay 10 inside the MRF building as shown on site plan	Area 10 size: 1m (W) x 15m (D) x 3m (H) (Approximate stockpile volume 22.5 m³)	<ul style="list-style-type: none"> 1 meter free board at the top of the bunker Stockpile volume calculated as 75% of total volume
Plastics (after processing)	Loose	In separate bunker with 2 hours fire rated separation	Continuous process. 24hrs maximum. 48 hrs or 72hrs over bank holiday	Bay 11 inside the MRF building as shown on site plan	Area 11 size: 5m (W) x 15m (D) x 3m (H) (Approximate stockpile volume 112.5 m³)	<ul style="list-style-type: none"> 1 meter free board at the top of the bunker Stockpile volume calculated as 75% of total volume
Residues	Loose	In 1,100 litres wheeled bins	1 week	Area 12,13 and 14 as shown on site plan	Area 12, 13 and 14 3 x 1,100 litres bins . (Approximate volume 1.1m³ each)	N/A
Residues	Loose	Closed Ro-Ro compactor	2 weeks	Area 15 as shown on site plan	Area 15 Ro-Ro Compactor 2.5m (W) x 5m (D) x 2.5m (H) (Approximate volume 31m³)	N/A
Textile	Loose	40yd Ro-Ro Skip	4 weeks	Area 16 as shown on site plan	Area 16 Ro- Ro size 2.4m (W) x 6.2m (L) x 2.9m (H) (Approximate volume 30m³)	N/A
WEEE (segregated from incoming materials)	Loose		2 months	Area 17 as shown on site plan	Area 17. 3 Dolav type bins 1.1m (W) x 0.9m (L) x 0.6m (H) (Approximate volume 0.6m³ x 3)	
Cardboard (baled after processing)	In bale form	In separate bays with concrete surfacing and 2 hours fire rated separation	1 week	Bays 18, 19, 20, 21, 22, 23, 24 within External covered bays to the East of the MRF building as shown on site plan	Bay 18 size: 10m (W) x 7m (D) x 5.5m (H) (Approximate stockpile volume 202m³)	<ul style="list-style-type: none"> 1 meter free board at the top of the bay 1 meter freeboard at front of bay Stockpile volume calculated as 75% of total volume
Paper (baled after processing)	In bale form	In separate bays with concrete surfacing and 2 hours fire rated separation	1 week		Bay 19 size: 10m (W) x 7m (D) x 5.5m (H) (Approximate stockpile volume 202m³)	
Mixed plastics (baled after processing)	In bale form	In separate bays with concrete surfacing and 2 hours fire rated separation	1 week		Bay 20 size: 10m (W) x 7m (D) x 5.5m (H) (Approximate stockpile volume 202m³)	
					Bay 21 size: 10m (W) x 7m (D) x 5.5m (H) (Approximate stockpile volume 202m³)	
					Bay 22 size: 10m (W) x 7m (D) x 5.5m (H) (Approximate stockpile volume 202m³)	

Steel Cans (baled after processing)	In bale form	In separate bays with concrete surfacing and 2 hours fire rated separation	2 weeks		<p>Bay 23 size: 10m (W) x 7m (D) x 5.5m (H) (Approximate stockpile volume 202m³)</p> <p>Bay 24 size: 5m (W) x 7m (D) x 5.5m (H) (Approximate stockpile volume 101m³)</p>	
Aluminium Cans (baled after processing)	In bale form	In separate bays with concrete surfacing and 2 hours fire rated separation	1 month			
Food	Loose	In Roro containers in separate bays with concrete surfacing and walls, located south of MRF building	24 hours or 72 hours over a bank holiday	Enclosed storage bay 25, 26, 27 as shown on site plan	<p>Ro-Ro Size: 2.5m (W) x 5.5m (L) x 2.5m (H) (Approximate volume 30m³)</p>	
Glass	Loose	In separate bays with concrete surfacing and walls, located north of the MRF building	24 hours or 72 hours over a bank holiday	Enclosed storage bay number 28, 29 and 30	<p>Bay size 28: 8.75m (W) x 8m (L) x 5m (H) (Approximate stockpile volume 122.5m³)</p> <p>Bay size 29: 8.75m (W) x 8m (L) x 5m (H) (Approximate stockpile volume 122.5m³)</p> <p>Bay size 30: 8.75m (W) x 12m (L) x 5m (H) (Approximate stockpile volume 192.5m³)</p>	<ul style="list-style-type: none"> • 1 meter free board at the top of the bay • 1 meter freeboard at front of bay • Stockpile volume calculated as 50% of total bay volume



Appendix B – Business Continuity Plan

Emergency Procedure

Redirection Information

Site emergency procedure for Bodmin MRF:

In the event that emergency procedures are in place and the site has to close the following redirection will take place:

-WCA Vehicles – Pool MRF

- Materials at the RTSs & HWRCs will be diverted to Pool MRF

Signs should be placed at the gates advising users of alternative sites to be used. If possible and safe to do so, please provide directions.

Please make sure that Operations Manager is informed, phoned through to the help desk and a note made in the site diary.

Emergency Procedures

Toolbox Talk for MRF's

There are 3 different types of emergency that may arise that would instigate site emergency procedures:

- 1. If someone has been seriously injured.**
- 2. If an incident occurs on site such as a fire or pollution incident.**
- 3. If site capacity has been reached or for any other reason you are unable to accept materials onto the site.**

Emergency procedures documented in your site working procedures file include:

- Site evacuation including preventing people from entering the site according to your fire evacuation procedure,**
- Informing the emergency services, the Operations Manager and the Authority,**
- Carrying out any emergency response procedures,**
- Logging the information in the diary, and calling the help desk,**

- Redirection of visitors to the nearest site with both signs and verbal directions.

Familiarise yourself with emergency response procedures for each type of incident.

- Emergency fire response procedures including where the fire extinguishers are and how to use them. Are your fire drills up to date?
- Emergency spill response procedures including PPE to be worn and where the spill granules are kept. The difference between type 1 and type 2 incidents, cleaning up spills swiftly and safely, site drainage plans.
- Emergency contact details.
- If you have had an incident and have used materials/PPE that needs servicing or replenishing, let your area supervisor know.

If you don't have access to any of this information or would like further training, please ask!!

Contact Numbers

Site Manager – 07972 004833

Operations Manager – 07971 147404

Queries SUEZ Helpdesk – 08456 300 300

Site Capacity

Site capacity being reached is an emergency that is *not* **Health and Safety** or **Environmental**, but one that has **financial** consequences and affects the **Contract**.

Whilst this is an emergency event, it is one that can be foreseen and hopefully avoided.

If the situation arises where capacity is reached, then it must be documented that we have done *everything* possible to prevent it happening and that includes keeping accurate records in your diary and through the weighbridge reports.

If the Operations Manager has agreed for the site to be closed, ensure:

- Emergency redirection signs are in place.
- A note is made in the site diary.
- Site staff are available to redirect visitors until normal site closing time.

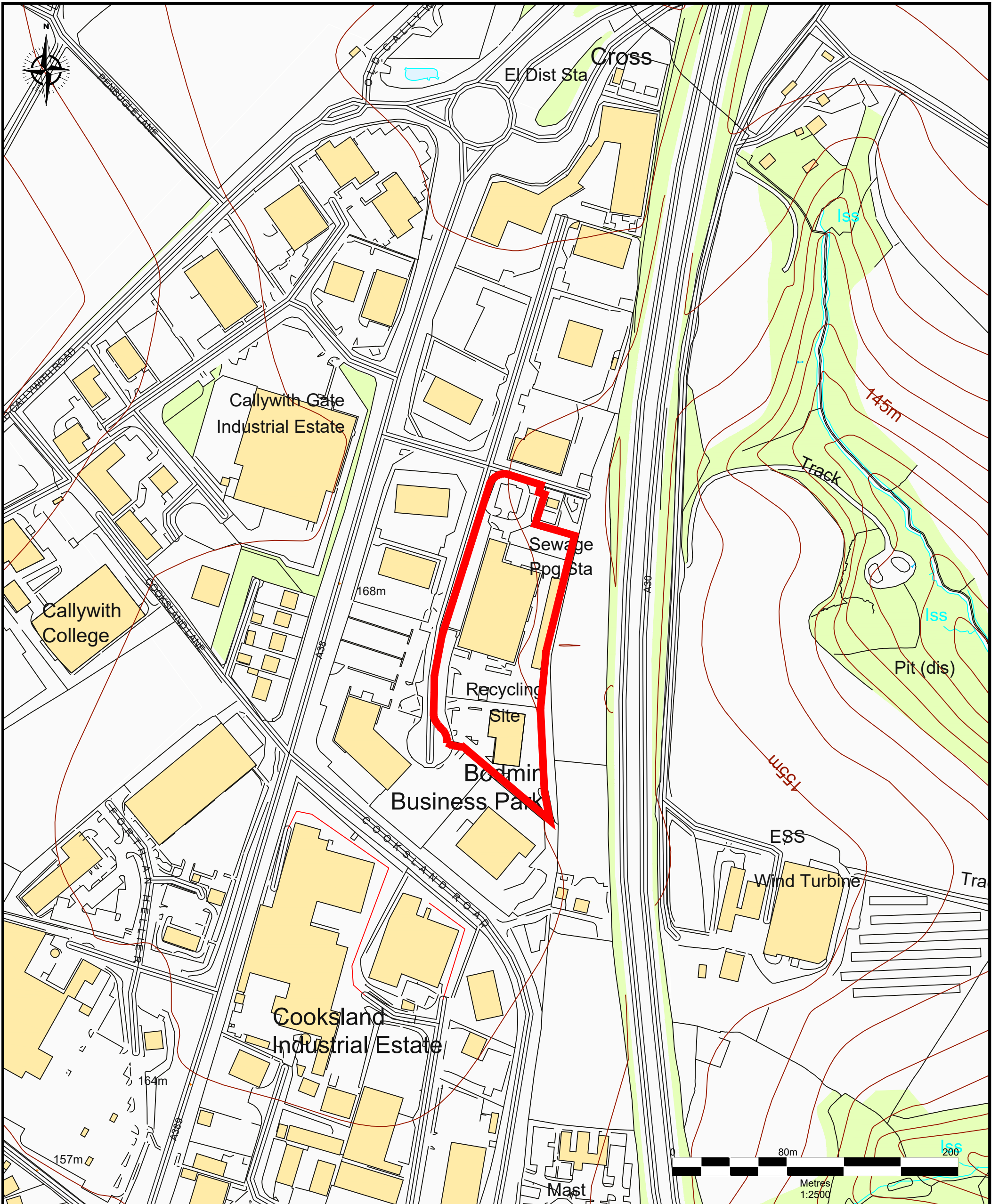
Ensure you have copies of complaint forms available and offer them to visitors along with helpdesk contact details if they have complaints about the redirection.



Figures



Figure 1 – Site Location Plan



Notes

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— Site Boundary


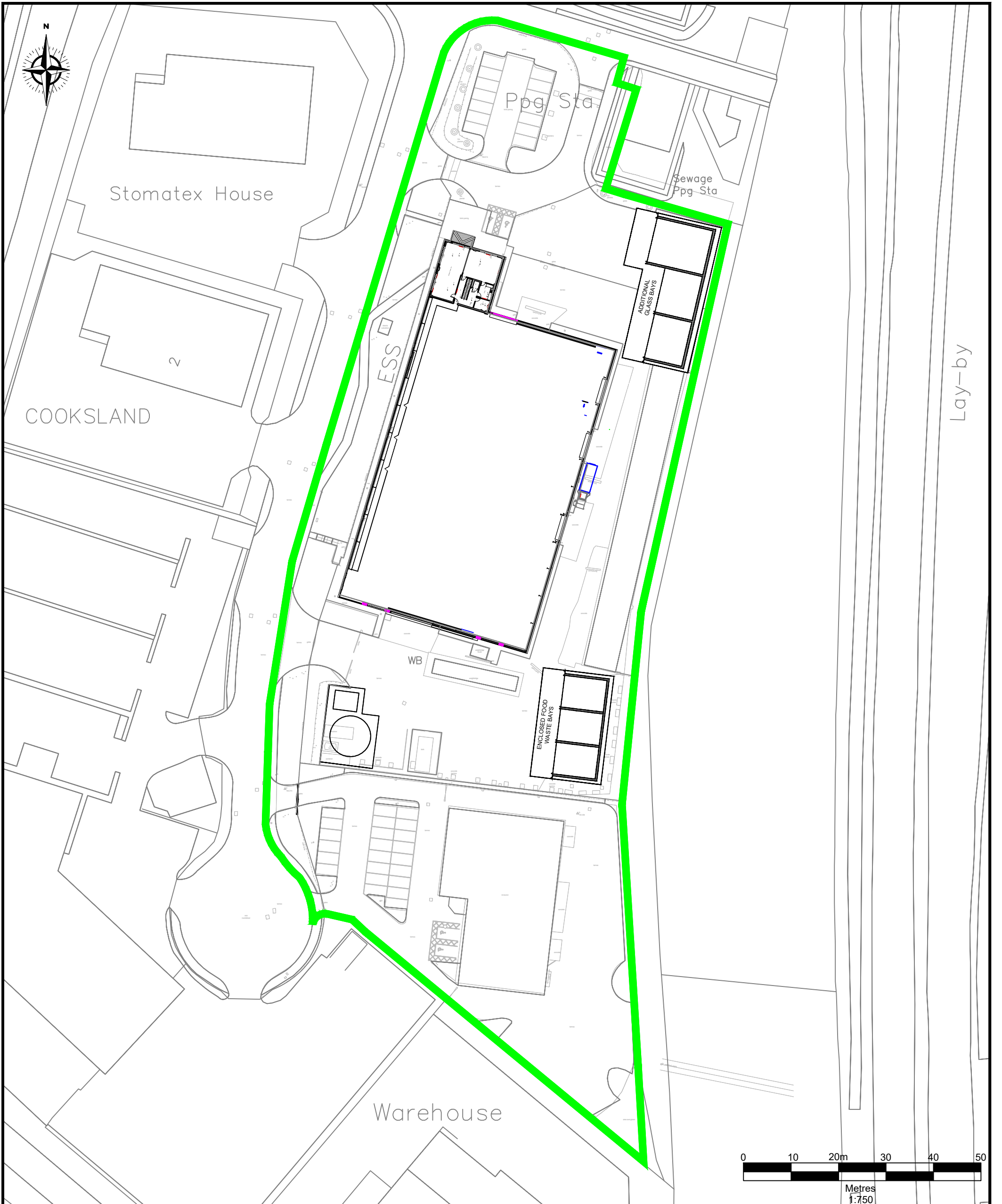
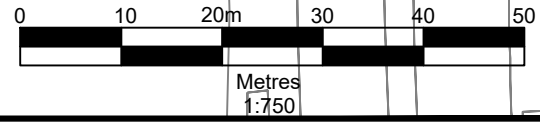
 <p>Darwin Resource Recovery Park, Lower Eccleshill Road, Darwin, BS3 0RP Tel: 01254 819700, Fax: 01254 819749, Email: richard.brissett@sita.co.uk</p>	<p>Site</p> <p>Bodmin MRF</p>	<p>Scale</p> <p>1:2500 @ A3</p>	<p>Drawn by</p> <p>RB</p>	<p>Rev</p> <p>subject</p> <p>date</p>
	<p>Title</p> <p>Site Location Plan</p>	<p>Date</p> <p>December 2020</p>	<p>Checked by</p> <p>GGD</p>	



Figure 2 – Site Permit Boundary Plan



Lay-by



Notes

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— Permit Boundary


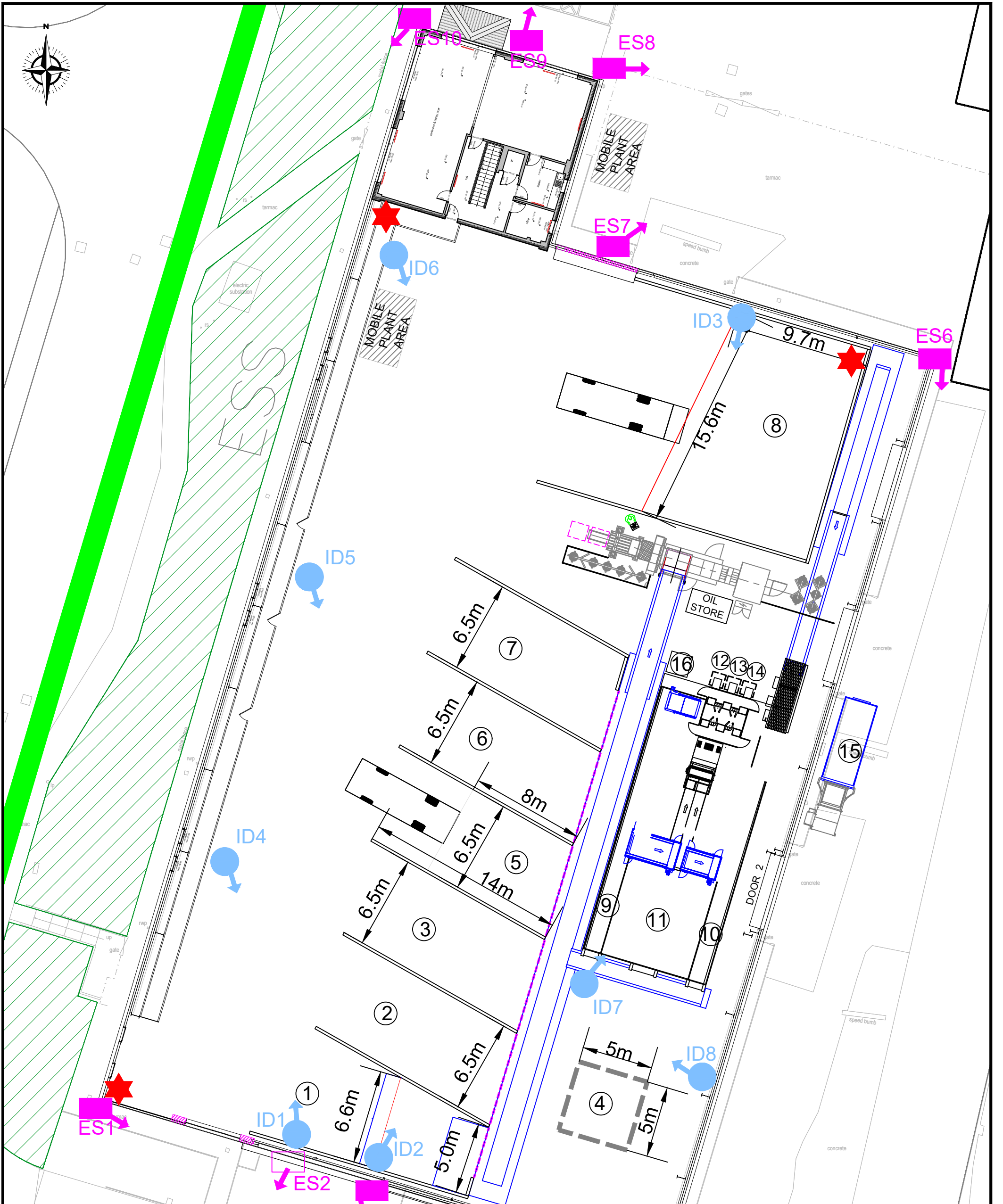
 <small>Darwen Resource Recovery Park, Lower Eccleshill Road, Darwen, BB3 0RP Tel: 01254 819700, Fax: 01254 819749, Email: richard.brissett@sita.co.uk</small>	Site Bodmin MRF	Scale 1:750 @ A3	Drawn by RB	Rev subject date
	Title Environmental Permit Boundary Plan	Date December 2020	Checked by GGD	
		Drawing Ref Bdm-PER-1220-01		



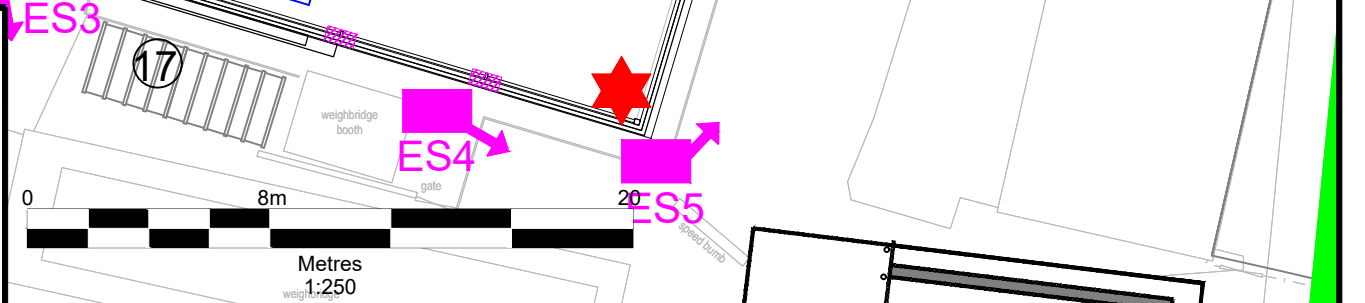
Figure 3 – Indicative Proposed Site Layout Plan



Notes

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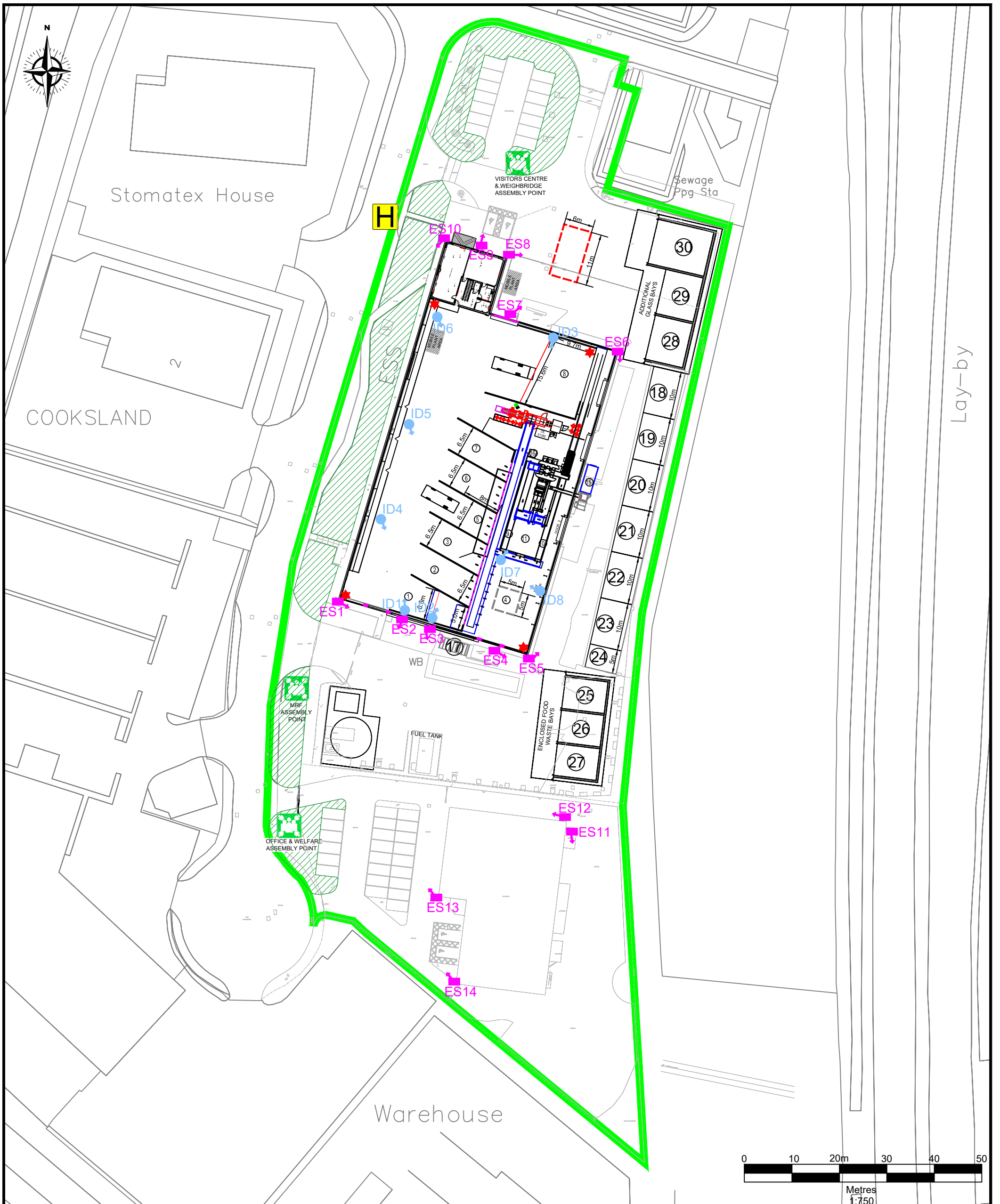
- Key**
- Permit Boundary
 - Quarantine Area
 - Assembly Point
 - Fire Hydrant
 - Internal Dome Camera
 - External Static Camera
 - Flame Detectors
 - Unmade Ground/Landscape



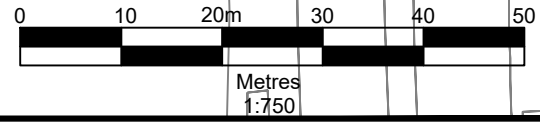
<p>Darwen Resource Recovery Park, Lower Eccleshill Road, Darwen, BB3 0RP Tel: 01254 819700, Fax: 01254 819749, Email: richard.bisset@slita.co.uk</p>	Site Bodmin MRF	Scale 1:250 @ A3	Drawn by RB	Rev subject date
	Title Indicative Site Layout Plan	Date December 2020	Drawing Ref Bdm-LAY-1220-01	Checked by GGD



Figure 4 – Indicative Proposed Site Layout Plan



Lay-by



Notes
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- Key**
- Permit Boundary
 - - - Quarantine Area
 - Assembly Point
 - Fire Hydrant
 - Internal Dome Camera
 - External Static Camera
 - Flame Detectors
 - Unmade Ground/Landscape

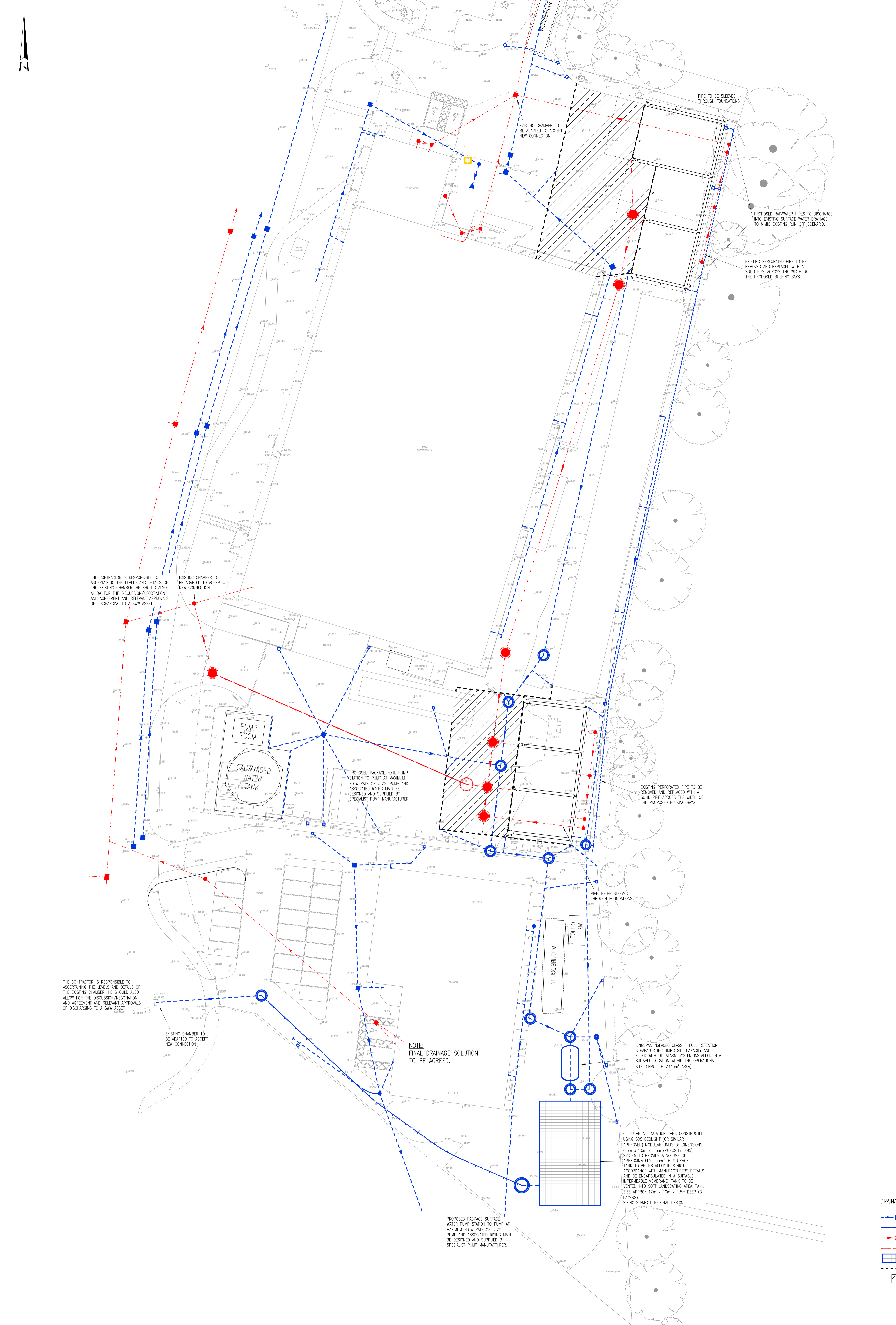
 <small>Darwen Resource Recovery Park, Lower Eccleshill Road, Darwen, BB3 0RP Tel: 01254 819700, Fax: 01254 819749, Email: richard.brissett@sita.co.uk</small>	Site Bodmin MRF	Scale 1:750 @ A3	Drawn by RB		
	Title Indicative Site Layout Plan	Date December 2020	Checked by GGD	Rev subject date	
		Drawing Ref Bdm-LAY-1220-02			



Figure 5 – Drainage Plan

- NOTES:**
- DO NOT SCALE THIS DRAWING FOR CONSTRUCTION PURPOSES.
 - CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE ENGINEER.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS, SPECIFICATIONS AND REPORTS.
 - SURVEY AND SITE INFORMATION SHOWN IS TAKEN FROM QUADRANT SURVEY DRAWING NO 113 - 07/04 1982 SEC 2. CONTRACTOR TO VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER. CONTRACTOR TO TAKE NO RESPONSIBILITY FOR ITS CONTENT OR ACCURACY.
 - ALL WORKS ARE TO BE UNDERTAKEN IN STRICT ACCORDANCE WITH MANUAL OF CONTRACT DOCUMENTS FOR SEWERAGE WORKS. DESIGNER FOR SEWERAGE WORKS DESIGN AND ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7TH EDITION AND CURRENT BUILDING REGULATIONS AND CODES OF PRACTICE WHERE APPLICABLE AND RELEVANT.
 - CONTRACTOR TO LOCATE AND IDENTIFY ALL EXISTING SERVICES WITHIN THE WORKS AREA. THESE SERVICES ARE TO BE PROTECTED DURING THE COURSE OF THE WORKS AND ADJUSTED AS REQUIRED TO SUIT THE PROPOSED DEVELOPMENT IN ACCORDANCE WITH THE RELEVANT STATUTORY AUTHORITY.
 - THE LEVEL AND ALIGNMENT OF ALL EXISTING SERVICES INCLUDING THE DETAILS OF ALL EXISTING MANHOLES ARE TO BE VERIFIED PRIOR TO THE COMMENCEMENT OF WORKS.
 - NEW SERVICES ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT STATUTORY AUTHORITY AND LOCAL AUTHORITY WHERE APPLICABLE.
 - ALL LEVELS SHOWN ARE TO ORDNANCE DATUM.
 - ALL DESIGN WORKS UNDERTAKEN BY MAIN CONTRACTOR TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION REPORT. REFERENCE SHOULD BE MADE TO GEOTECHNICAL GEO-ENVIRONMENTAL PHASE 2 INVESTIGATION REPORT AN ALLOWANCE SHOULD BE MADE FOR ANY ADDITIONAL GEO-ENVIRONMENTAL TESTING AND INVESTIGATION FEEL NECESSARY TO COMPLETE THE SCHEME DESIGN.
 - FOUNDATIONS AND SUPERSTRUCTURES TO ALL BUILDINGS TO BE DESIGNED BY MAIN CONTRACTOR. TENDERING DESIGN AND MAIN CONTRACTOR ARE TO UNDERTAKE A FULL DESIGN OF ALL STRUCTURES TO COVER ALL ASPECTS OF DESIGN INCLUDING IN ORDER TO MAKE DUE COST ALLOWANCE IN THEIR TENDER SUBMISSION.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RELEASE OF ANY RELEVANT PLANNING CONDITIONS RELATING TO THE SITE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSENTS AND APPROVALS REQUIRED IN RELATION TO THE PROPOSED SURFACE WATER AND FOUL DRAINAGE SYSTEMS.
 - THE CONTRACTOR SHALL CHECK ALL LEVEL TIE-IN LOCATIONS WITH EXISTING SURFACES.
 - ALL EXISTING, CUTTER AND FILL TO BE UNDERTAKEN IN STRICT ACCORDANCE WITH SPECIFICATION FOR HIGHWAY WORKS.
 - FOR SERVICE REQUIREMENTS INCLUDING ELECTRICAL SUPPLY, GAS SUPPLY, FIBRE OPTIC, TELECOMMUNICATIONS, CLOTHING, FIRE ALARM SYSTEM AND SECURITY SYSTEM REFER TO SIZE SPECIFICATION AND DETAILS.
 - THE DESIGN AND BUILD CONTRACTOR IS TO BE RESPONSIBLE FOR THE FULL DESIGN AND CONSTRUCTION OF ALL ELEMENTS OF THE PROJECT AND MUST TAKE ACCOUNT OF ALL THE CLIENT'S REQUIREMENTS WHERE SHOWN ON THE DRAWINGS AND IN THE CONTRACT DOCUMENTS.
 - ALL DESIGN AND CONSTRUCTION TO COMPLY WITH SUIT SPECIFICATION MUST FULLY COMPLY WITH ALL RELEVANT BUILDING REGULATIONS, CODES OF PRACTICE, LOCAL AUTHORITY BUILDING PRACTICE ETC. THESE INCLUDE BUT ARE NOT LIMITED TO BUILDING REGULATIONS, BRITISH STANDARDS, CDM REGULATIONS, ETC.
 - THE CONTRACTOR MUST FULLY DEVELOP THE PRELIMINARY INDICATIVE LOCATIONS SHOWN ON THESE DRAWINGS AND MAKE DUE ALLOWANCE IN HIS TENDER TO COVER THE FULL DESIGN AND CONSTRUCTION OF ALL PROJECT ELEMENTS.
 - UNLESS STATED OTHERWISE IN A CLIENTS ACCESS STATEMENT, ALL WORKS TO COMPLY FULLY WITH THE DESIGN REQUIREMENTS AND PROVISION TO BE MADE FOR ALL DISABLED FACILITIES.
 - CONTRACTOR TO PAY PARTICULAR ATTENTION TO ENSURING THE DESIGN AND CONSTRUCTION COMPLIES FULLY WITH BUILDING REGULATIONS APPROVED DOCUMENT PART 6 INCLUDING MEANS OF ESCAPE AND ESCAPE, INTERNAL AND EXTERNAL FIRE SPREAD AND ACCESS AND FACILITIES FOR THE SERVICE ETC.
 - CONTRACTOR TO DESIGN AND PROVIDE ALL APPROPRIATE SAFETY SIGNAGE, PROTECTION, BARRIERS, ETC.
 - CONTRACTOR TO DESIGN ALL CUTTERS AND PROVIDE SUFFICIENT COMPARTS TO SUIT ADDITIONAL UNDERGROUND DRAINAGE TO BE ALLOWED FOR AS NECESSARY TO SUIT THE LOCATIONS ALLOWANCE TO BE MADE FOR THE MANAGEMENT OF EXISTING SERVICES DURING CONSTRUCTION PHASE.

THIS DRAWING IS FOR DESIGN AND BUILD PROCESS ONLY. DESIGN TO BE DEVELOPED AND COMPLETED BY SUCCESSFUL TENDERING CONTRACTOR IN CONJUNCTION WITH SUEZ.



THE CONTRACTOR IS RESPONSIBLE TO ASCERTAINING THE LEVELS AND DETAILS OF THE EXISTING CHAMBER. HE SHOULD ALSO ALLOW FOR THE DISCUSSION/NEGOTIATION AND AGREEMENT AND RELEVANT APPROVALS OF DISCHARGING TO A SWM ASSET.

EXISTING CHAMBER TO BE ADAPTED TO ACCEPT NEW CONNECTION

PROPOSED PACKAGE FOUL PUMP STATION TO PUMP AT MAXIMUM FLOW RATE OF 20L/S. PUMP AND ASSOCIATED RISING MAIN BE DESIGNED AND SUPPLIED BY SPECIALIST PUMP MANUFACTURER.

EXISTING PERFORATED PIPE TO BE REMOVED AND REPLACED WITH A SOLID PIPE ACROSS THE WIDTH OF THE PROPOSED BULKING BAYS

THE CONTRACTOR IS RESPONSIBLE TO ASCERTAINING THE LEVELS AND DETAILS OF THE EXISTING CHAMBER. HE SHOULD ALSO ALLOW FOR THE DISCUSSION/NEGOTIATION AND AGREEMENT AND RELEVANT APPROVALS OF DISCHARGING TO A SWM ASSET.

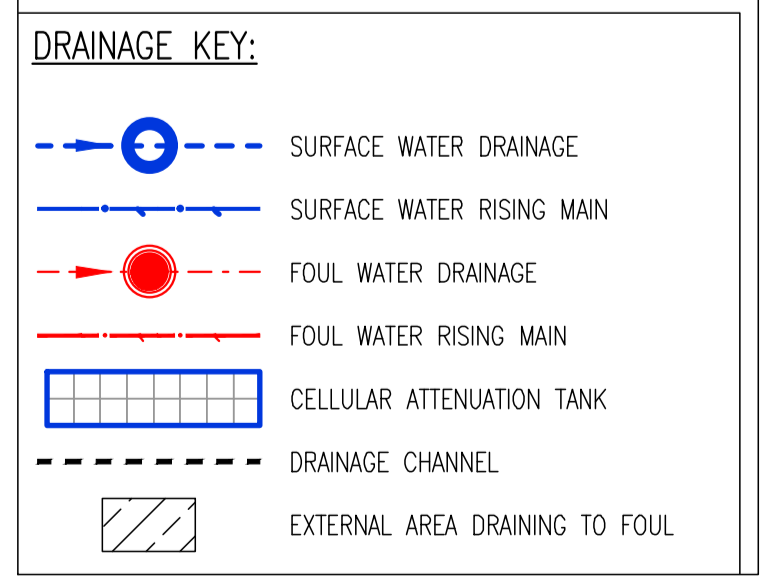
EXISTING CHAMBER TO BE ADAPTED TO ACCEPT NEW CONNECTION

NOTE: FINAL DRAINAGE SOLUTION TO BE AGREED.

KINGSPAN NSFA80 CLASS 1 FULL RETENTION SEPARATOR INCLUDING SILET CAPACITY AND FITTED WITH OIL ALARM SYSTEM INSTALLED IN A SUITABLE LOCATION WITHIN THE OPERATIONAL SITE. (INPUT OF 3445m³ AREA)

CELLULAR ATTENUATION TANK CONSTRUCTED USING SDS GEOLIGHT (OR SIMILAR APPROVED) MODULAR UNITS OF DIMENSIONS 0.5m x 1.0m x 0.5m (POROSITY 0.95). SYSTEM TO PROVIDE A VOLUME OF APPROXIMATELY 250m³ OF STORAGE. TANK TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS DETAILS AND BE ENCAPSULATED IN A SUITABLE IMPERMEABLE MEMBRANE. TANK TO BE VENTED INTO SOFT LANDSCAPING AREA. TANK SIZE APPROX 17m x 10m x 1.5m DEEP (3 LAYERS). SIZING SUBJECT TO FINAL DESIGN.

PROPOSED PACKAGE SURFACE WATER PUMP STATION TO PUMP AT MAXIMUM FLOW RATE OF 20L/S. PUMP AND ASSOCIATED RISING MAIN BE DESIGNED AND SUPPLIED BY SPECIALIST PUMP MANUFACTURER.

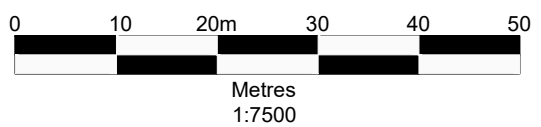
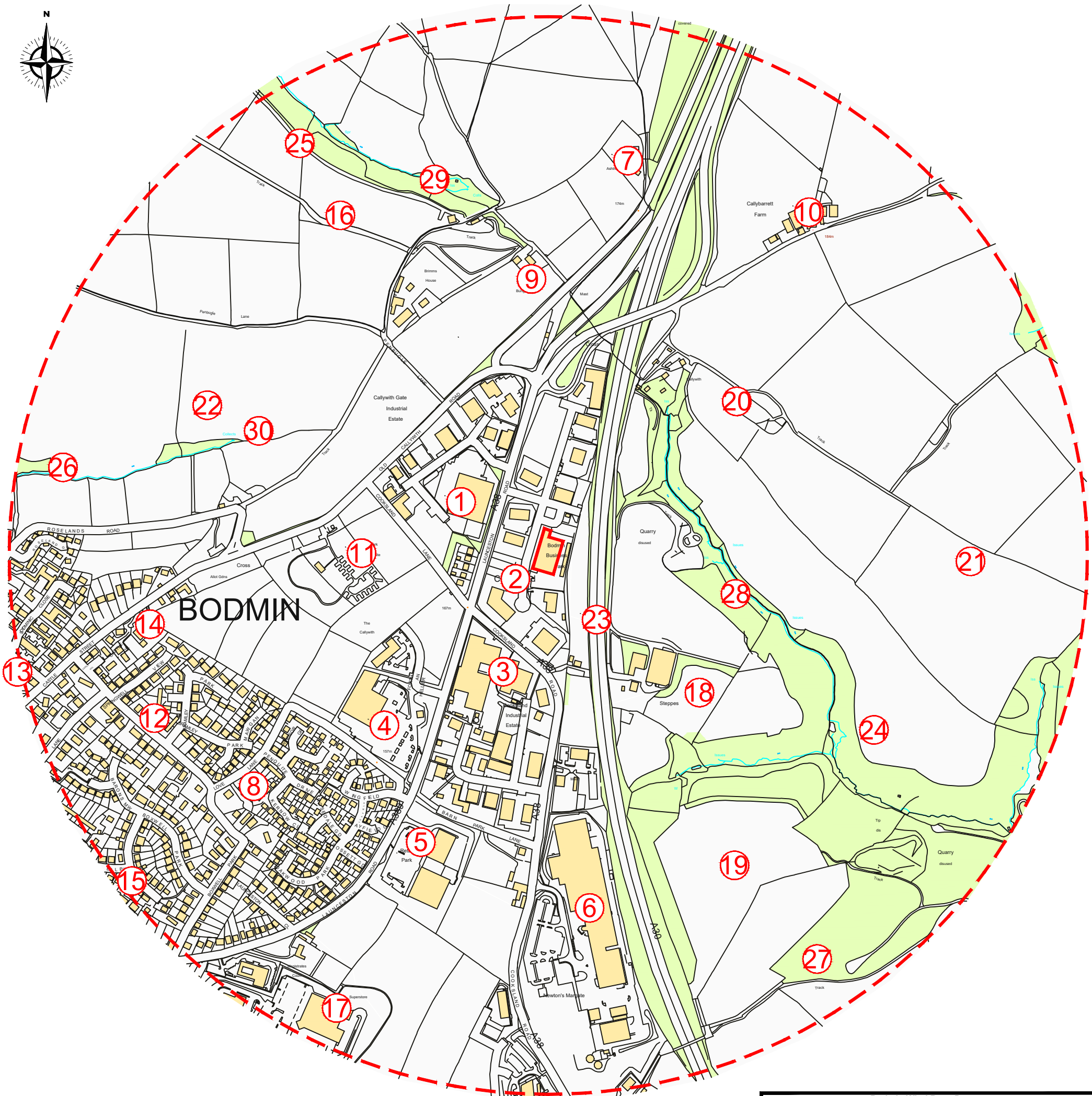


		PROPOSED DRAINAGE STRATEGY PLAN FOR EA LICENSE	
		Project: BODMIN MRF BODMIN BUSINESS PARK BODMIN CORNWALL	Drawing No: E05253 Scale: S2 Project Code: BOD/CB/XX/XX/DR Drawing Code: DC 960 Date: 1/200 @ AD Sheet No: 01/21 Author: JH Checker: MJR Approver: AD Title: P02
Project: BODMIN MRF BODMIN BUSINESS PARK BODMIN CORNWALL		G/F Suite, Bickhigh House, Park Five Business Centre, Souton, Exeter EX2 7HU tel: +44 (0) 1392 369098 fax: +44 (0) 1392 369100 email: enxter@clarkebond.com web: www.clarkebond.com Bristol Exeter London	
Project: BODMIN MRF BODMIN BUSINESS PARK BODMIN CORNWALL		Drawing Title: INFORMATION	

01/200 @ AD
 1/200 @ AD
 01/21
 JH
 MJR
 AD
 P02



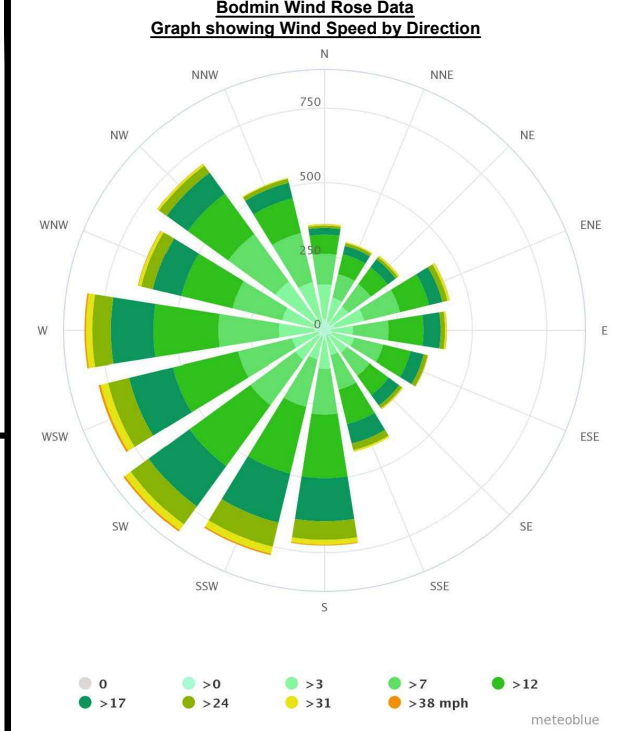
Figure 6 – Sensitive Receptor Location Plan



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.

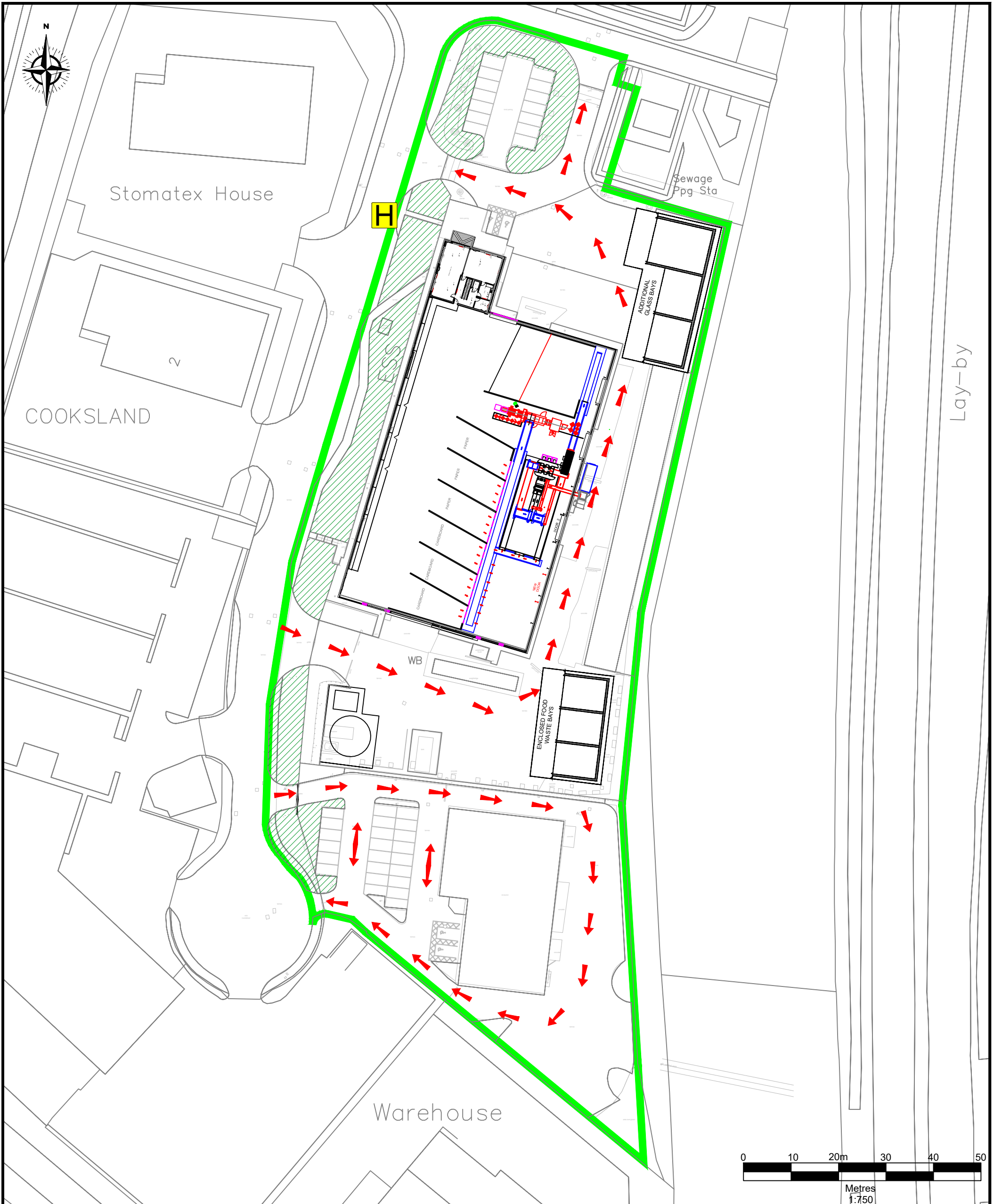
- Site Boundary
- 1km Offset
- Receptors



Site Bodmin MRF	Scale 1:7,500 @ A3	Drawn by RB	Rev	subject	date
	Date December 2020				
Title Receptor Plan	Drawing Ref Bdm-REC-1220-01	Checked by GGD			



Figure 7 – Fire Hydrant Location and Emergency Access



Lay-by

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.

- Permit Boundary
- Fire Appliance Route
- Quarantine Area
- - - Quarantine Area Offset



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Site Bodmin MRF	Scale 1:750 @ A3	Drawn by RB	Rev	subject	date
	Date December 2020	Checked by GGD			
Title Emergency Access Route Plan	Drawing Ref Bdm-FPP-1220-01				