



Recycling and recovery UK

Castle Donington Transfer Station

1.7 Fire Prevention Plan

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APPENDICES

Appendix A Waste Storage Details

FIGURES

No.	Drawing	Reference
1	Site Location Plan	CaD-LOC-0225-01
2	Permit Boundary Plan	CaD-PER-0125-01
3	Site Layout Plan	CaD-LAY-0125-01
4	Site Receptor Plan	CaD-REC-1224-01
5	Emergency Access Plan	CaD-EMER-0125-01
6	Drainage Plan	CaD-DRN-0125-01

1 INTRODUCTION

- 1.1 This document details the Fire Prevention Plan (FPP) for Castle Donington Transfer Station (TS) (the site) located at Trent Lane, Castle Donington, Derbyshire, DE74 2NP, at National Grid Reference (NGR) SK 444478, 328362. The site location and permit boundary are shown in Figure 1 and 2 respectively.
- 1.2 The site holds an Environmental Permit (permit) with the reference EPR/FP3898SY. The site is permitted as an RDF Facility. A permit variation is seeking to operate the site as a transfer station (TS) to allow the acceptance, storage, bulking and transfer mixed municipal waste, paper and cardboard to occur without relation to Activity A1 (Refuse Derived Fuel (RDF) Facility) and to allow the acceptance, manual treatment, storage and transfer of other waste not currently authorised by the Environmental Permit (glass, wood, metal, and biodegradable kitchen and canteen waste).
- 1.3 The sites main activities will be the acceptance and transfer of waste. Treatment at the TS will mainly be manual sorting and separation. Mechanical treatment of waste for RDF may be used as necessary with site operations.
- 1.4 The maximum permitted annual tonnage of waste accepted at the site shall not exceed 75,000 tonnes.
- 1.5 The TS provides a facility for the storage and 'bulking up' of non-hazardous waste from SUEZ industrial and commercial customers. Waste streams include mixed municipal waste, mixed packaging, mixed paper and cardboard (MPC), glass and biodegradable kitchen and food waste.
- 1.6 Waste materials for the TS will be delivered in a variety of vehicles and unloaded into distinct areas. The majority of waste is directed to the open fronted TS building and card only is unloaded in the external bay. Biodegradable kitchen and food waste will be unloaded into specially designed leakproof containers. Occasionally, wastes may be deposited on the external bay in front of the relevant storage area, where a loading shovel or suitable plant machinery will be operated to move the materials into bays, stockpiles or containers.
- 1.7 Waste materials inside the TS building will be removed from the site using bulk haulage vehicles. These vehicles will be loaded inside the TS building with a loading shovel. Waste materials outside the TS building will either be loaded into bulk haulage vehicles (with a loading shovel) in the TS yard or onto roll-on/roll-off (RO-RO) vehicles.
- 1.8 The Fire Risk Assessment covering the site operation will be reviewed at regular intervals not exceeding 12 months. The Fire Risk Assessment is included within the SUEZ electronic Risk Assessment database.

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- 1.9 The Site Manager, in consultation with the Environmental and Industrial Risk (EIR) Manager, will review this FPP 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 FPP 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 FPP 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 Accident Prevention & Management Plan (document reference 1.4 of the site-specific management system).

2.1.1 Further detail on the hazard, in terms of the materials received and stored on the site, the volumes of materials received and the potential causes of fires are discussed further in this section of the FPP. 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:

- Mixed municipal waste
- Mixed paper and cardboard (MPC)
- Mixed packaging
- Biodegradable kitchen and food waste

2.2 Waste Storage and Hazardous Materials Storage

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

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

Waste storage

2.3 The TS activity will be undertaken in the open fronted building which covers the north and west areas of the site. Waste accepted for the TS will be stored inside the open fronted TS building or outside in dedicated containers.

2.3.1 An indicative site layout plan showing the proposed location of the waste storage bays, areas and containers are shown in Figure 3.

Hazardous materials storage

2.3.2 Fuel for mobile plant is stored in self-contained containers within a lockable store to the south of the TS building (as shown in Figure 3).

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
- Cooking appliance in welfare facilities
- Self-combustion of received waste materials (e.g. Chemical oxidation, microbial decomposition),
- Plant or equipment failure
- Electrical faults
- Naked lights
- Discarded smoking materials
- Hot works, e.g. Welding, cutting
- Hot exhausts
- Fuel deliveries and refuelling plant
- Build-up of dusts
- Damaged/exposed electrical cables
- Neighbouring sites activities
- Sparks from loading buckets
- Incompatible wastes
- Ignited materials received at the site
- Heat generated by friction on mobile plant

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 summarised below:

- Thermal radiation harming nearby properties and residents leading to fire spread
- Creation of hazardous waste by the fire and impacts of firefighting
- Explosions and projectiles harming sensitive receptors and spreading the fire to unaffected areas
- Fire water run-off transporting pollutants to surface water and groundwater
- Transport disruption resulting from road and rail closures
- Nuisance from smoke, odour and particulates
- Threat to life and property
- Detriment of local amenity

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 FPP.

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 - Sensitive Receptors

No.	Receptor	Category	Distance (m)	Direction from site
1	Sewage Systems	Industrial	5	West
2	Industrial premises near Willow Road	Industrial	50	East
3	Industrial premises near Broad Rushes Road	Industrial	180	North
4	Industrial premises East of Station Road	Industrial	270	East
5	Railway Line	Railway Infrastructure	170	North
6	Station Road	Main road	300	East
7	Business near Maple Road	Industrial/Commercial	120	West
8	Residential housing estate near Orchard Community Primary School	Residential	470	South
9	Residential housing estate near Station Road	Residential	400	Southeast
10	Residential housing estate near Surgery	Residential	750	Southeast
11	Orchard Community Primary School	Educational	750	Southwest
12	Footsteps Nursery	Educational	350	East
13	Playing field Spital Park Pavilion	Recreational	300	Southwest
14	Merchantman Mews Playpark	Recreational	850	Southwest
15	Queensway playground	Recreational	870	Southwest
16	Castle Donnington Surgery	Doctors	800	Southeast

17	Dove Cote Veterinary Hospital	Veterinary Hospital	950	South
18	River Trent	Waterbody	800	Northwest
19	Listed Buildings (5)	Residential/Commercial	600	Southeast
20	Moran Logistics	Commercial	950	Southwest
21	M&S distribution centre	Commercial	990	Southwest
22	Priority habitat- Deciduous Woodland	Priority Woodland	400	Northwest and Southeast
23	Priority habitat- Deciduous Woodland	Priority Woodland	700	Southwest and Southeast
24	Factory	Industrial	200	Southwest
25	Industrial/commercial premises near Maple Road	Industrial/commercial	200	West
26	Industrial/commercial premises near Pond End and Sills Road	Industrial/commercial	200	North
27	Open fields	Open fields	700	North
28	Factory near Trent Lane	Industrial/commercial	100	South
29	Recreational Ground / Castle Donington Rugby Club	Recreation	300	South
30	Residential properties south of the Spittal	Residential	600	South
31	Used Car Dealer	Commercial	550	East
32	Open fields	Open fields	450	Northeast
33	Groundwater (Secondary B – Aquifer) Bedrock – medium/high vulnerability	Groundwater	Beneath site	Beneath site

2.7 Wind Direction

2.7.1 The prevailing wind direction is from the south west and is shown on Figure 4 and will determine which receptors will be affected and at what frequency.

3 PREVENTATIVE MEASURES

3.1 SUEZ Policies and Procedures

3.1.1 SUEZ's Integrated Management System (IMS) includes a procedure titled 'Emergency Preparedness and Response' and 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
- Waste Acceptance
- Rejection of Waste
- Disposal of Site Waste
- 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. 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 contractors are required to wear appropriate Personal Protective Equipment.

3.2 Managing Common Causes of Fire

3.2.1 The following sections detail how SUEZ will manage the common causes of a fire.

Arson or Vandalism

3.2.2 Site security to prevent arson includes security fencing and lockable security gates. The gates are shut and kept locked during non-operational hours to prevent unauthorised access.

3.2.3 The TS building will be locked and secured at the end of the working day.

- 3.2.4 CCTV monitoring systems are installed in various strategic locations around the site. Out of hours security monitoring will be undertaken through the use of the CCTV system. CCTV would also be utilised to detect any early signs of hot spots and/or fire. The system will be linked to a monitoring station operating 24hrs (including weekends and bank holiday) which will alert the relevant employee regarding an emergency in order of priority.

Plant and equipment

- 3.2.5 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.
- 3.2.6 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.
- 3.2.7 All site vehicles are fitted with fire extinguishers and dust filters. Vehicles will have high level exhausts fitted.
- 3.2.8 All vehicles and items of plant are stored at a safe distance (6m) when not in use as indicated on Figure 3.
- 3.2.9 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. Occasionally, may need to use alternative equipment with rubber stripes for instance if we need to hire a machine or use a machine from a different business unit. These occasions will be limited and infrequent.
- 3.2.10 Mobile plant will be maintained in accordance with the Mobile Plant procedures as outlined in SUEZ's 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.
- 3.2.11 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. The loading shovels have an in-cab fire extinguisher.
- 3.2.12 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

- 3.2.13 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.
- 3.2.14 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 five years, or following:
- Any substantial alteration to the electrical installation,
 - Any incident that might cause damage to the electrical installation
 - At periods stipulated by an approved contactor issuing a test reports
- 3.2.15 Following every inspections and testing, defects should be rectified as soon as reasonable practicable.
- 3.2.16 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.
- 3.2.17 Electrical sockets must not be overloaded.

Discarded smoking materials

- 3.2.18 No wastes will be burned within the boundaries of the site.
- 3.2.19 Smoking on site is only permitted in the site designated smoking areas as shown on Figure 3.

Hot works

- 3.2.20 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

- 3.2.21 No industrial heaters will be used on site.

Hot exhausts

- 3.2.22 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. All items of mobile plant will be stored outside the TS building (as shown on Figure 3) when not in use which will minimise the risk of a fire from hot exhausts.

Ignition sources

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

Leaks and spillages

- 3.2.24 Faults within a vehicle or item of plant have potential to cause fire so a regular plant and machinery maintenance program is in place to identify and remedy potential issues at an early stage.
- 3.2.25 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 SUEZ's IMS.

Build-up of loose combustible waste, dust and fluff

- 3.2.26 Regular cleaning will be undertaken by site staff to minimise the generation of dust and litter on site.
- 3.2.27 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.
- 3.2.28 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 at the TS equipment. Waste storage area is cleaned regularly as and when requested by the Site Manager.

Waste acceptance/reactions between wastes

- 3.2.29 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.

- 3.2.30 For waste loads that are destined for the TS, 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.
- 3.2.31 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
- 3.2.32 Staff will carry out ongoing visual inspections of the TS 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.
- 3.2.33 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 a record kept in the site diary and the customer informed.
- 3.2.34 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.
- 3.2.35 If wastes not permitted by the site permit are discovered amongst a load after deposit, where possible the waste will be isolated to prevent the contamination of this waste. If it is not possible to remove on site, arrangements will be made for the disposal of such wastes at a suitably permitted disposal facility as soon as practicably possible.

Deposited hot loads

- 3.2.36 If a hot load is discovered during delivery or deposit of the load to the site, the waste will be isolated and placed in the quarantine area if it is safe to do so. A quarantine area is located in the yard within a 6m separation distance from buildings and site infrastructure (as shown on Figure 3). The site supervisor will cordon off a section of the yard whilst the load is tipped.

- 3.2.37 The waste will be dealt with accordingly (i.e. dampened etc.). The waste will stay in the 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. The incident and time of discovery will be recorded on the company database (as per SUEZ's policy and procedures).

Hot and Dry Weather

- 3.2.38 According to the waste storage arrangements in Appendix A, the majority of combustible waste accepted as part of the TS will be stored inside the open fronted TS building or enclosed containers and will therefore be shaded from direct sunlight for the majority of the day. Wastes may not always be shaded from direct sunlight in the morning/mid-morning due to the open fronted area of the TS building.
- 3.2.39 However, if for any reason the Site Manager identify that the risk of fire at the site has increased due to external conditions (such as dry weather, hot weather) a review of normal operating procedures will be undertaken and additional appropriate measures will be implemented to minimise the risk of a fire.

3.3 Controls to Prevent Self-Combustion of Waste

Manage Storage Times

- 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 Storage of waste will be managed to minimise the volume of waste stored and limit the storage time as far as practicably possible. The majority of combustible waste accepted in the TS building will typically be removed within 48 hours (72 hours on bank holidays).
- 3.3.3 Materials will be removed from site in order of receipt so as to reduce the risk of self-combustion. This is implemented by the 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.
- 3.3.4 Regular working practice includes the emptying of a bay/area in the TS when the product pile reaches the size of a full vehicle load. 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.
- 3.3.5 Stock rotation can be demonstrated via continuous operation and is fully recorded via the use of weighbridge tickets.

- 3.3.6 The quantity and types of materials passing through the TS will be recorded using the weighbridge before deposit in the TS and following the transportation of waste offsite. Weights for each load are recorded on the Materials Manager (MM) Software.
- 3.3.7 MM is used to calculate volumes of waste which are being held on site and to calculate average daily tonnages of waste streams previously received at the facility.
- 3.3.8 Vehicles for export of materials are pre-booked based on the average daily volumes of wastes previously accepted on site as calculated from MM.
- 3.3.9 MM is reviewed daily for daily tonnages of wastes accepted at the site and where they exceed predicted volumes then additional vehicles are booked for the following day for the export of wastes.
- 3.3.10 Combustible waste 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.

Monitoring and controlling of temperature

- 3.3.11 The Environment Agency 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. Based on the waste storage arrangements in Appendix A, the majority of combustible waste types have short residence times. As such temperature monitoring is not required.
- 3.3.12 Mechanical treatment may be used on site as necessary. However, the predominant activities on site will be 'bulking up' of materials which therefore minimises the risk of heat to be generated from waste treatment activities. In addition, this will ensure that the majority of the combustible waste is stored in its largest form and therefore minimises the proportion of fines to be present within the waste.

Waste Bale Storage

- 3.3.13 There is no storage of waste in bales at site.

Waste Stored in Containers

- 3.3.14 Food wastes are the only waste stored in containers on site as shown in Appendix A. The container will be accessible from at least one side so a fire can be extinguished. The Environment Agency guidance provides examples of appropriate containers. As such the storage containers potentially used on site are considered appropriate.

Manage Waste Piles

- 3.3.15 Some combustible waste streams will be stored as piles in dedicated bays as part of the TS as shown in the waste storage table in Appendix A and Figure 3.
- 3.3.16 As mentioned previously, there may be mechanical treatment used on site if necessary, of waste at the site and therefore all waste materials will be stored in their largest form at the site.
- 3.3.17 The stockpiles are considered to be at maximum capacity when they reach 75% of the maximum storage bay dimensions outlined in Appendix A. This is to allow for the slope across the front of the bay which typically take up approximately 25% of the storage bay.
- 3.3.18 The storage bays are constructed to provide a height of 4m however, the maximum height for the mixed municipal waste, mixed packaging, glass, biodegradable kitchen and food waste, mixed paper and cardboard will be no more than 3m. A 1m freeboard will be implemented at the top of each bay wall to prevent cross contamination and fire spreading over the bays. Waste will not be stored above the maximum height ensuring that the maximum stockpile sizes are not exceeded.
- 3.3.19 Based on the waste storage arrangements in Appendix A, there will be no waste piles that exceed the maximum pile volumes specified in Section 9.2 of the FPP guidance.

Measures to prevent fire spread

- 3.3.20 Section 11 of the FPP guidance indicates that the following methods can prevent the spread of a fire:-
- Separation distances; and
 - Fire walls and bays.
- 3.3.21 With reference to the waste storage arrangements in Appendix A, combustible waste received at the TS will be stored inside the TS building or externally in the paper and card bay or in dedicated containers if required. The majority of combustible waste inside the open fronted TS building will be separated by reinforced concrete walls which can provide a minimum fire resistance period of 2 hours or 6m separation distances.
- 3.3.22 In addition to the above, the following measures will be used to mitigate the risk of fire spread:
- Minimise residence time of combustible waste
 - Place non-combustible waste next to combustible waste storage areas where possible.
 - The site has a loading shovel which can be used to move waste in the event of a fire (either burnt or unburnt waste) if safe and possible to do so.

Quarantine area

- 3.3.23 A quarantine area is retained at all times in the TS to allow burning material to be moved into these areas (provided it is safe to do so) to extinguish and control fire spread. It is also used to move piles/containers of non-burning material (adjacent to a fire) to prevent spread.
- 3.3.24 The location and size of the quarantine areas is provided in Appendix A and Figure 3.
- 3.3.25 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.
- 3.3.26 With reference to the pile size dimensions in Appendix A, the largest waste piles at the TS comprise the general waste pile stored inside the TS building. The largest potentially flammable stockpile at the site is considered to be a combination of both piles which provide a total volume of 432m³.
- 3.3.27 The TS yard has sufficient capacity to accommodate a quarantine area that provides a surface area of 108m². The dimensions are provided on Figure 3. Any waste which is stockpiled in the quarantine area will not exceed 2m in height and therefore the quarantine area will provide a storage capacity of 216m³ which is more than that can accommodate 50% of the general waste and bulky piles and provide a minimum separation distance of 6m on all sides.
- 3.3.28 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 the loading shovel which is present at the site.

4 DETECTION AND SUPPRESSION MEASURES

4.1 Fire Alarm System

- 4.1.1 The site has a small footprint and has a Fire Alarm System in the offices, as well as a manually operated alarms.
- 4.1.2 The site allows immediate evacuation of the entire site to the assembly point (located at the main entrance of the site).
- 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. 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 is serviced every 3 months by a competent person 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.
- 4.1.7 The results of the alarm testing and servicing will be held in the Fire Logbook.

4.2 Thermal imaging

- 4.1.1 The TS building is fitted with thermal imaging cameras. The cameras are positioned towards the combustible waste storage areas (as shown in Figure 3) and are set to trigger at 50°C, allowing for identification of hot spots and early response. This system provides a visual indication of a potential fire condition by a dedicated monitor located within the TLS site office. In addition, the system is linked to a monitoring station operating 24hrs (including weekends and bank holiday) which will alert the relevant employee.
- 4.1.2 In addition to thermal imaging cameras, the temperature of combustible waste stockpiles will be monitored on a daily basis with a thermographic camera. This will be undertaken during operational hours by a designated person and by the contracted security guard who will inspect the site outside operating hours.
- 4.2.1 Should a stockpile temperature exceed 50°C during operating hours, the stockpile will be immediately dug out with mobile plant and spread to allow for cooling.
- 4.2.2 In the event that a stockpile temperature exceeds 50°C Celsius outside operating hours, the security guard will report this to the main security lodge immediately who will then contact the duty manager

and arrangements will be made for the on call supervisor to attend the site. Once the on call supervisor arrives to the site they will take appropriate action which could be digging out the waste pile with mobile plant (if safe to do so) to allow for cooling or contacting the emergency services.

4.3 Fire Suppression

4.3.1 The TS building is not equipped with a fire suppression system. However, all combustible waste materials inside the TS building will be stored in their largest form and storage will be limited to 48 hours (72 hours on bank holidays). Storage times will be managed in accordance with the measures outlined in Sections 3.3.1 to 3.3.10.

4.3.2 Fire equipment will be provided at the site consisting of primarily fire extinguishers. These are located key points throughout the site and are designed to facilitate escape. Site staff will be trained in fire safety and awareness and in the use of firefighting equipment.

4.3.3 The following alternative measures are proposed to ensure that a fire can be extinguished within 4 hours:

- The site benefits from CCTV which can be utilised to detect any early signs of hot spots and/or fire. The system will be linked to a monitoring station operating 24hrs (including weekends and bank holiday) which will alert the relevant employee.
- The TS building benefits from thermal imaging cameras to constantly monitor temperatures in combustible stockpiles inside the TS building. In addition, the temperature of combustible waste stockpiles will be monitored on a daily basis with a thermographic camera. This will allow the identification of hot spots and an early response.
- The site has a loading shovel which can be used to move waste if the thermal cameras detect elevated temperatures within a stockpile and therefore prevent the fire from developing.
- There are hydrants located outside of the main site entrance on Trent Lane (as shown in Figure 5) which can be used by the Fire Rescue Service in the event of a fire. Further details of the hydrant are provided in Section 4.5.

4.3.4 In light of the above, the risk of a fire to occur at the site is expected to be low and therefore it is not considered proportionate to install a suppression system at the site.

Fire extinguishers

4.3.5 There are a number of portable extinguishers placed at key strategic locations around the site. 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.

4.3.6 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.

Water hose reels

- 4.3.7 The site has water hose reels, which are linked to the mains water supply.
- 4.3.8 Water hose reels are checked on a monthly basis.
- 4.3.9 Water hose reels are subject to annual testing by an approved accredited supplier.

4.4 Fire Fighting Techniques

- 4.4.1 Managing waste storage is a key factor, not only in preventing fires, but in mitigating the impact, should a fire break out.
- 4.4.2 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.
- 4.4.3 The emergency access routes to waste storage and quarantine areas in the event of a fire are shown in Figures 5.
- 4.4.4 The site has a loading shovel which can be used to move waste in the event of a fire (either burnt or unburnt waste) if safe and possible to do so. Trained operatives are on site permanently during operational hours and can be called upon at short notice to attend in the event of an incident.
- 4.4.5 The fire fighting procedure detailed in Section 5 must be adhered to if a fire should break out on site.

4.5 Water Supply

- 4.5.1 The FPP 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. As mentioned in Section 3.3.26, the largest waste pile at the site is considered to be 462m³ and will be mixed municipal waste within the TS building.
- 4.5.2 Based on the estimation above, it is anticipated that 554m³ (or 554,000 litres) of water would be required to manage the maximum stockpile size of 462m³, calculated via:

$$2,000/300 = 6.6 \times 462\text{m}^3 = 3,080 \text{ litres/min}$$
$$3,080 \text{ litres/min} \times 60 \times 3 = 554,400 \text{ litres}$$
- 4.5.3 In order to reduce the required water supply, alternative measures are proposed. These measures include the use of mobile plant (where safe to do so) to reduce the size of the waste stockpile and therefore the volume of water required.
- 4.5.4 The loading shovel's bucket has a capacity of 3.5m³, and so over the course of 60 minutes could remove 210m³ of unburnt waste to the quarantine area (assuming one bucket movement to the

quarantine area can be carried out every minute). Subsequently, the total maximum stockpile of 432m³ would be reduced to a stockpile of 252m³ (with 210m³ quarantined externally).

- 4.5.5 Based on the estimation above, it is anticipated that 302.4m³ (or 302,400 litres) of water would be required to manage the maximum stockpile size of 252m³, calculated via:

$$2,000/300 = 6.6 \times 252\text{m}^3 = 1,680 \text{ litres/min}$$

$$3,080 \text{ litres/min} \times 60 \times 3 = 302,400 \text{ litres}$$

- 4.5.6 Based on the estimation above, the volume of water that would be required to manage the largest waste pile would be 302.4m³ (or 302,400 litres).
- 4.5.7 A hydrant is located outside of the site entrance on the main road (Trent Lane) as shown on Figure 5. This hydrant is not managed or maintained by SUEZ (and as result the flow rate cannot be determined by SUEZ).

4.6 Fire Water Management

- 4.6.1 Based on the alternative measures provided in Section 4.5, the volume of water that would be required to manage the maximum total volume of materials contained within the largest waste pile would be 252m³ with 210m³ quarantined separately.
- 4.6.2 The site will benefit from an impermeable surface that will prevent the uncontrolled release of any spent fire water. All areas of hardstanding, impermeable pavement, bays and containers are visually inspected at least monthly to ensure continuing integrity and fitness for purpose. The inspection and any necessary maintenance subsequently required will be recorded.
- 4.6.3 Fire water management will depend on the location of a fire on site. The open fronted TS building which services the waste reception and storage areas of all waste apart from paper and cardboard occupies a total area of approximately 920m². Sandbags or polybooms can be deployed to contain fire water around the building to hold a depth of 0.3m of fire water. Assuming a fire water depth of 0.3m, the waste reception and storage areas has the potential to hold 276m³ of water.
- 4.6.4 Any fire water that escapes the TS building may drain into the sites tanks or sealed drainage system (as shown on Figure 6). The drainage system is equipped with a shut off valve/drain mats/sandbags to facilitate the containment of fire water within the site drainage system. The penstock valve is tested on a weekly basis.
- 4.6.5 In addition, the whole TS building and external yard area has an area of approximately 1,920m² which is impermeably surfaced and kerbed. Sand bags or polybooms would be deployed in the site concrete area to ensure that fire water is contained to the impermeably surfaced area on site. Assuming a fire water depth of 0.3m, the site can contain approximately 576m³ of fire water.

5 DURING AND AFTER A FIRE

5.1 Fire Fighting Procedure

- 5.1.1 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.
- 5.1.2 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.
- 5.1.3 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.
- 5.1.4 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.
- 5.1.5 Telephone the Fire and Rescue Service – Dial **999**. Give the exact details including the site address and telephone number.
- 5.1.6 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 the penstock valve where safe to do so, where safe to do so
- 5.1.7 On arrival the FRS should be met by the identified responsible person who must provide them with a copy of the fire grab pack and update them with relevant information that will assist them in dealing with a fire more effectively.

- 5.1.8 The designated assembly point is outside the TS site entrance on Trent Lane. All persons must wait at the assembly point for further instructions. A staff member 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.
- 5.1.9 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.
- 5.1.10 The site management team should notify the EA immediately by telephone on the incident hotline, telephone number: 0800 807060. The EA must also be informed in writing as soon as is practicable.
- 5.1.11 Communication with local businesses and residents identified in the sensitive receptor table (Table 1) will be undertaken in the event of a fire to reduce any environmental damage and risks to human health associated with smoke and dust.
- 5.1.12 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/Advisor should be informed so that in turn, full details of the event can be reported to the EA.
- 5.1.13 Site operations will not be recommenced until deemed safe to do so by the FRS.

5.2 Contingency Plan in the Event of a Fire

- 5.2.1 In the event of a fire, the emergency procedures will be followed which includes notifying the Fire Rescue Service (FRS) and EA. 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.
 - Mobile plant checks may also be required prior to recommencement of operations.

- 5.2.2 Fire damaged wastes will be disposed of at a suitable permitted facility as soon as practicably possible. Operations will only recommence once the Fire Service have advised that it is safe to do so and the EA will be notified of the restart of operation.

5.3 Out of Hours Response

- 5.3.1 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 showing the location of interceptors shut-off valve and run off containment including sand bags
 - Contact details for key holders
- 5.3.2 In the event of an out of hours fire, the external security who monitor CCTV, will be able to follow the procedures in regards to fire and notify the relevant person. The FRS can attend site in less than 10 mins and following a callout, the site personnel would attend site as early as possible but within 30 mins.



Appendices

Appendix A – Waste Storage Details



Castle Donington Transfer Station – Waste Storage Plan

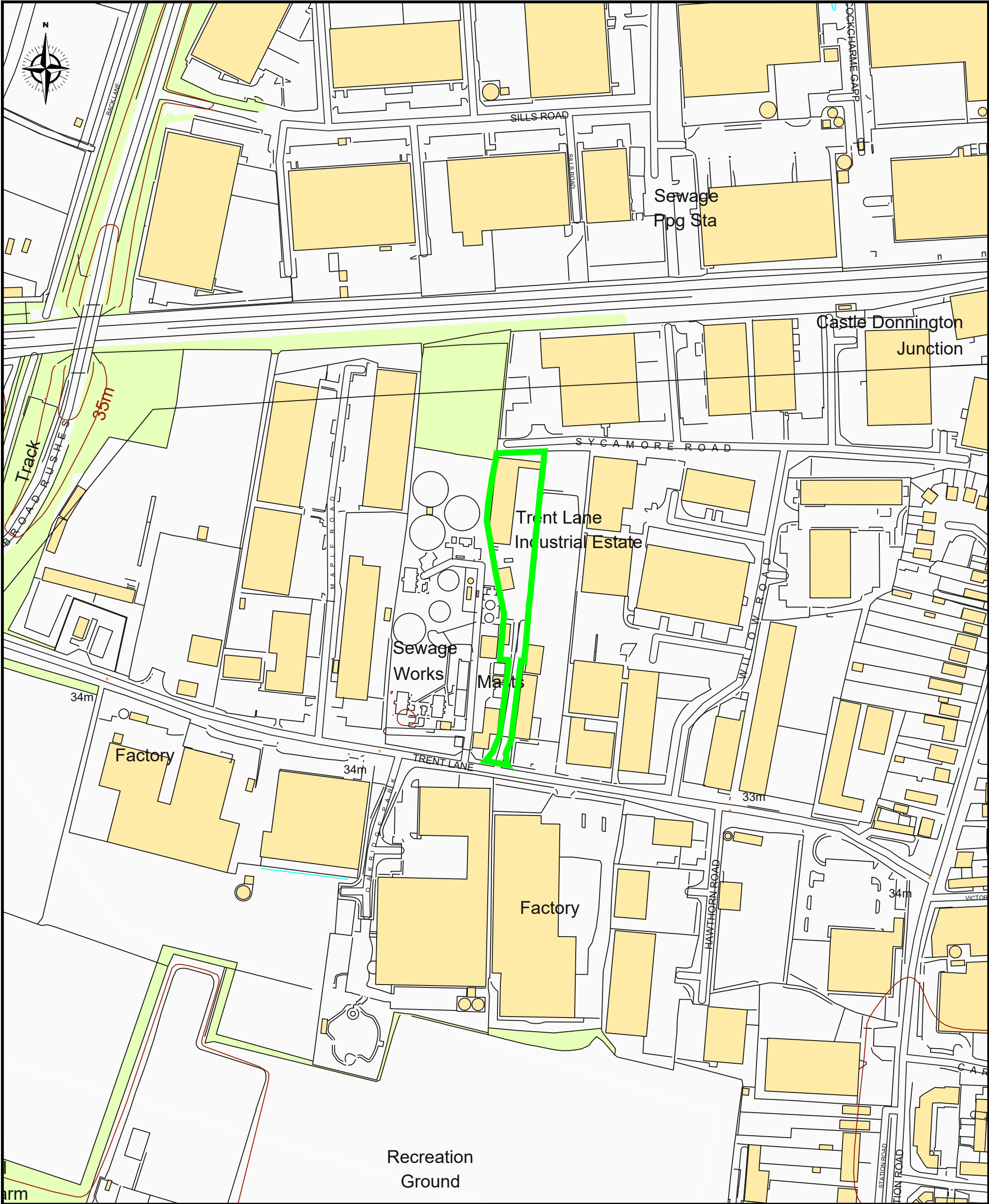
APPENDIX B – WASTE STORAGE DETAILS

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 Calculations / Comments
Transfer Station (TS)						
Mixed municipal waste	Loose	Storage bay within TS building	72 hours	Area 1: In a bay with concrete surfacing and walls	Area 1: 16m(W)x12m(L)x3m(H) Total volume = 432(m³)	There will be 1m freeboard at the front of the bay Stockpile volumes calculated as 75% of the remaining bay volume
Mixed packaging	Loose	Storage bay within TS building	72 hours	Area 2: In a bay with concrete surfacing and walls	Area 2: 16m(W)x12m(L)x3m(H) Total volume = 432(m³)	There will be 1m freeboard at the front of the bay Stockpile volumes calculated as 75% of the remaining bay volume
Glass	Loose	Storage bay within TS building	72 hours	Area 3: In a bay with concrete surfacing and walls	Area 3: 10m(W)x12m(L)x3m(H) Total volume = 270(m³)	There will be 1m freeboard at the front of the bay Stockpile volumes calculated as 75% of the remaining bay volume
Mixed paper and cardboard	Loose	Storage bay within TS building	72 hours	Area 4: In a bay with concrete surfacing and walls	Area 4: 12m(W)10m(L)x3m(H) Total volume = 270(m³)	There will be 1m freeboard at the front of the bay Stockpile volumes calculated as 75% of the remaining bay volume
Biodegradable kitchen and food waste	Loose	Containerised	72 hours	Area 5: In sealed leakproof container	Area 5: 1x container = 2m(W)x6m(L)x2.4m(H) Total volume = 28.8(m³)	These will be specially constructed food waste containers which are sealed and leakproof.



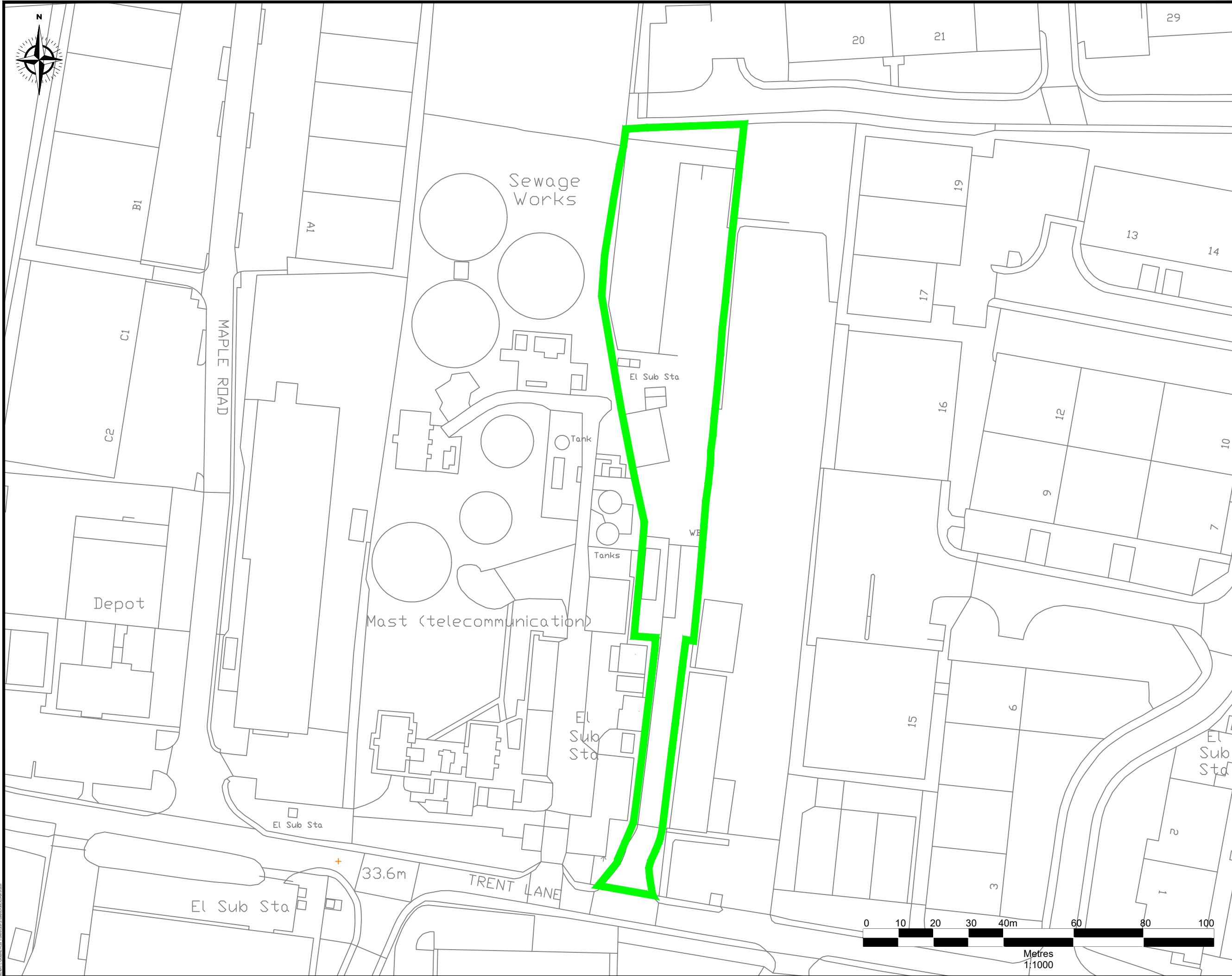
Figures

Figure 1 – Site Location Plan



Notes 1. Reproduced from the Ordnance Survey Map with the permission of the Controller of His Majesty's Stationary Office, Crown Copyright and Database Rights 2024 Ordnance Survey AC0000808122/100004910.	Site Location		080m200 Metres 1:2500						
	 Darwen Resource Recovery Park, Lower Eccleshill Road, Darwen, BB3 0RP Tel:(01254)819700, Fax:(01254)819749, Email: richard.bisset@suez.com	Site	Castle Donnington	Scale	1:2500 @ A3	Drawn by JA	Rev	subject	date
Title		Site Location Plan	Date	February 2025					
			Drawing Ref	CaD-LOC-0225-01	Checked by	EC			

Figure 2 – Permit Boundary Plan



Notes

1. Reproduced from the Ordnance Survey Map with the permission of the Controller of His Majesty's Stationary Office, Crown Copyright and Database Rights 2024
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——— Permit Boundary

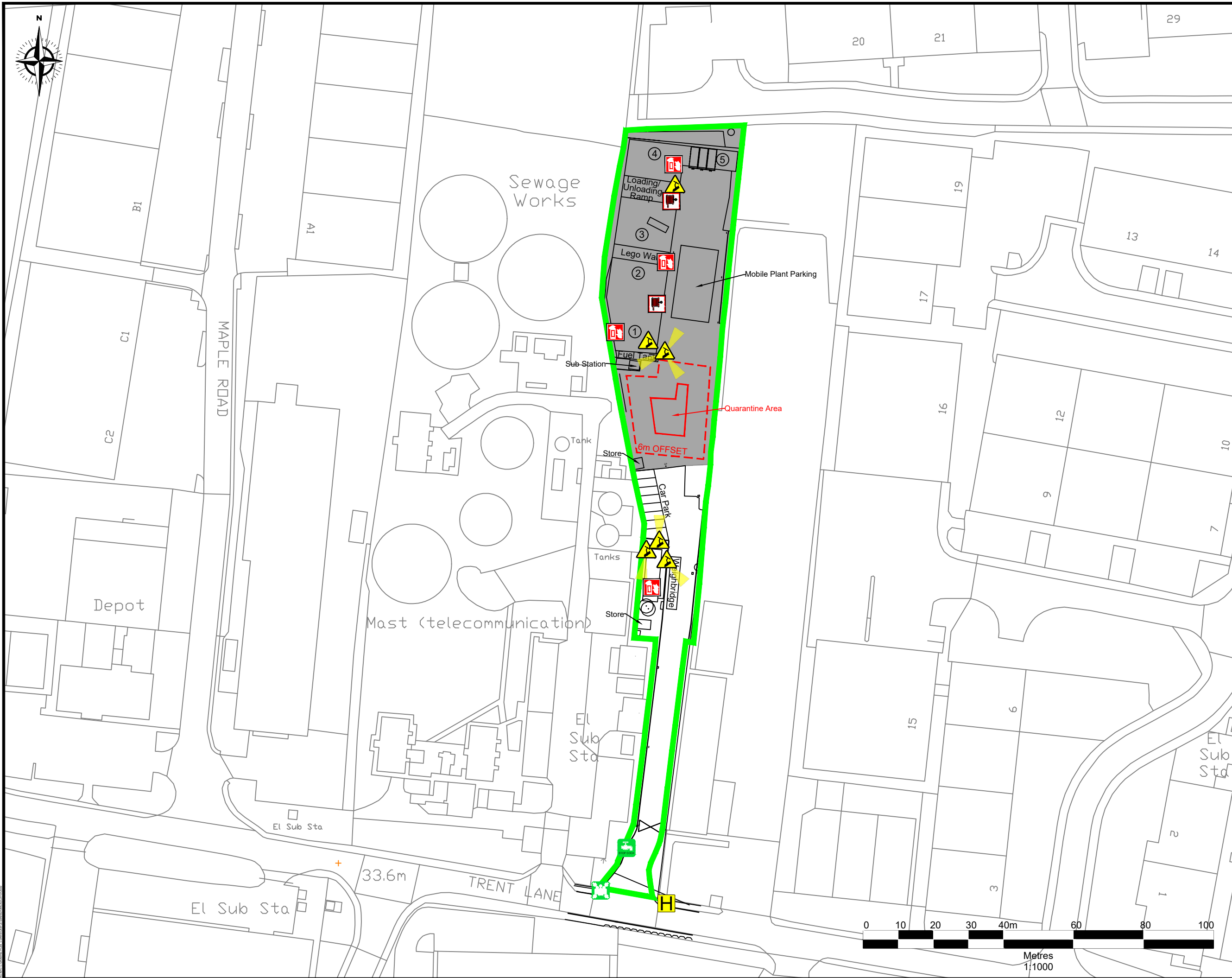
Rev	subject	date



Darwen Resource Recovery Park, Lower Eccleshill Road, Darwen, BB3 0RP
Tel: (01254)819700, Fax: (01254)819749, Email: richard.bisset@suez.com

Site Castle Donington	
Title Permit Boundary Plan	
Scale 1:1000@A3	
Date January 2025	
Drawing Ref CaD-PER-0125-01	Drawn by JA
	Checked by EC

Figure 3 – Site Layout Plan



Notes

1. Reproduced from the Ordnance Survey Map with the permission of the Controller of His Majesty's Stationary Office, Crown Copyright and Database Rights 2024. Ordnance Survey AC0000808122/100004910.

- Permit Boundary
- CCTV
- Quarantine Area (Area: 108m²)
- Concrete Area
- Fire Hydrant
- Fire Hose
- Assembly Point
- Penstock Valve
- Fire Extinguisher
- ① Mixed Municipal Waste
- ② Mixed Packaging
- ③ Glass
- ④ Mixed Paper and Cardboard
- ⑤ Biodegradable Kitchen and Food Waste

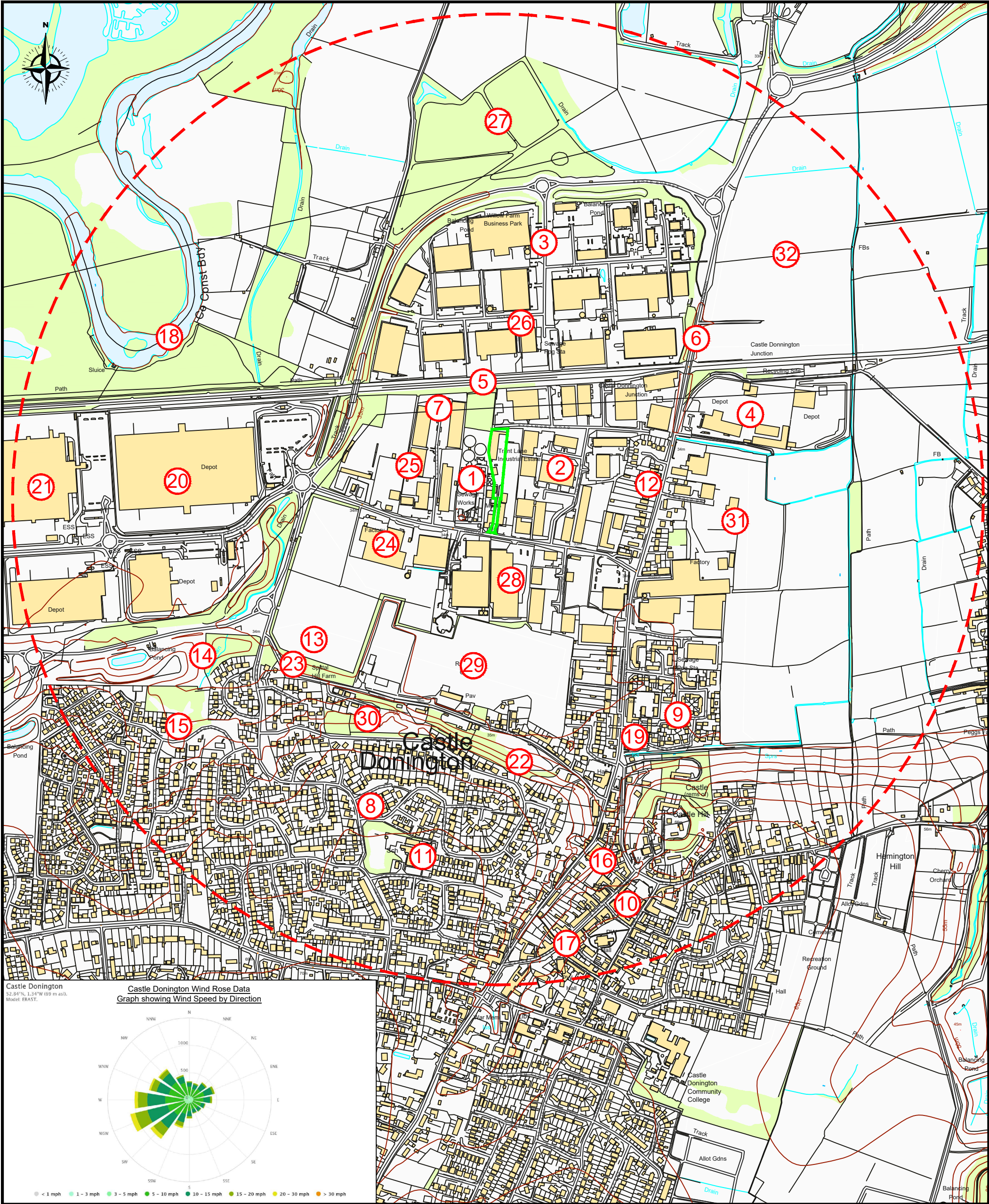
Rev	subject	date



Darwen Resource Recovery Park, Lower Eccleshill Road, Darwen, BB3 0RP
Tel: (01254)819700, Fax: (01254)819749, Email: richard.bisset@suez.com

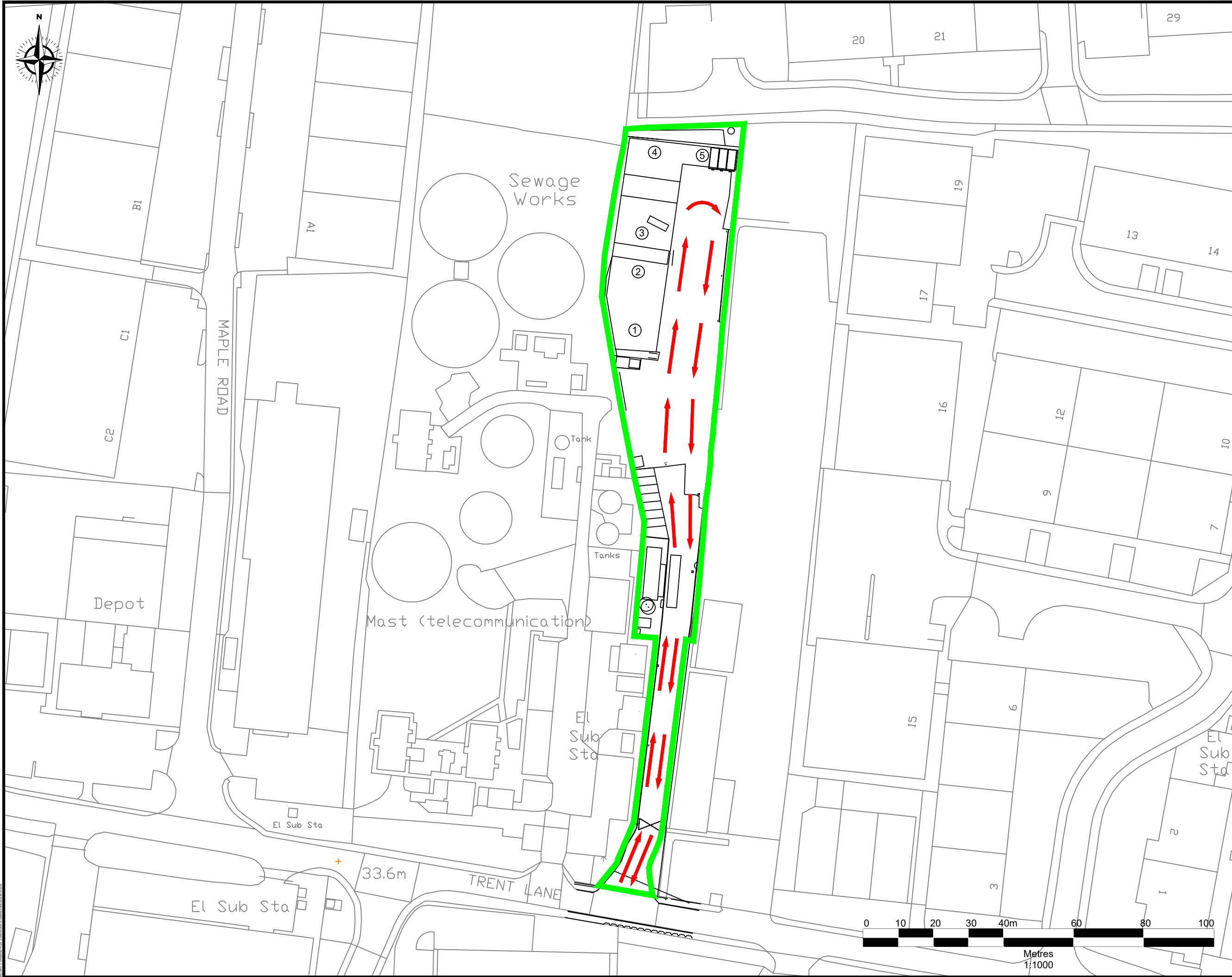
Site Castle Donington	
Title Indicative Site Layout	
Scale 1:1000@A3	
Date January 2025	
Drawing Ref CaD-LAY-0125-02	Drawn by JA
	Checked by EC

Figure 4 – Site Receptor Plan



Notes 1. Reproduced from the Ordnance Survey Map with the permission of the Controller of His Majesty's Stationary Office, Crown Copyright and Database Rights 2024 Ordnance Survey 0100031673/100004910.	Permit Boundary 1km Offset ① Receptors		0 100 200m 300 400 500 Metres 1:7500			
	suez Darwen Resource Recovery Park, Lower Eccleshill Road, Darwen, BB3 0RP Tel:(01254)819700, Fax:(01254)819749, Email: richard.bisset@suez.com	Site Castle Donington	Scale 1:7500 @ A3	Drawn by JA	Rev	subject
Title Site Receptor Plan		Date December 2024				
		Drawing Ref CaD-REC-1224-01	Checked by EC			

Figure 5 – Emergency Access Plan



Notes

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-  Permit Boundary
-  Emergency Access Route

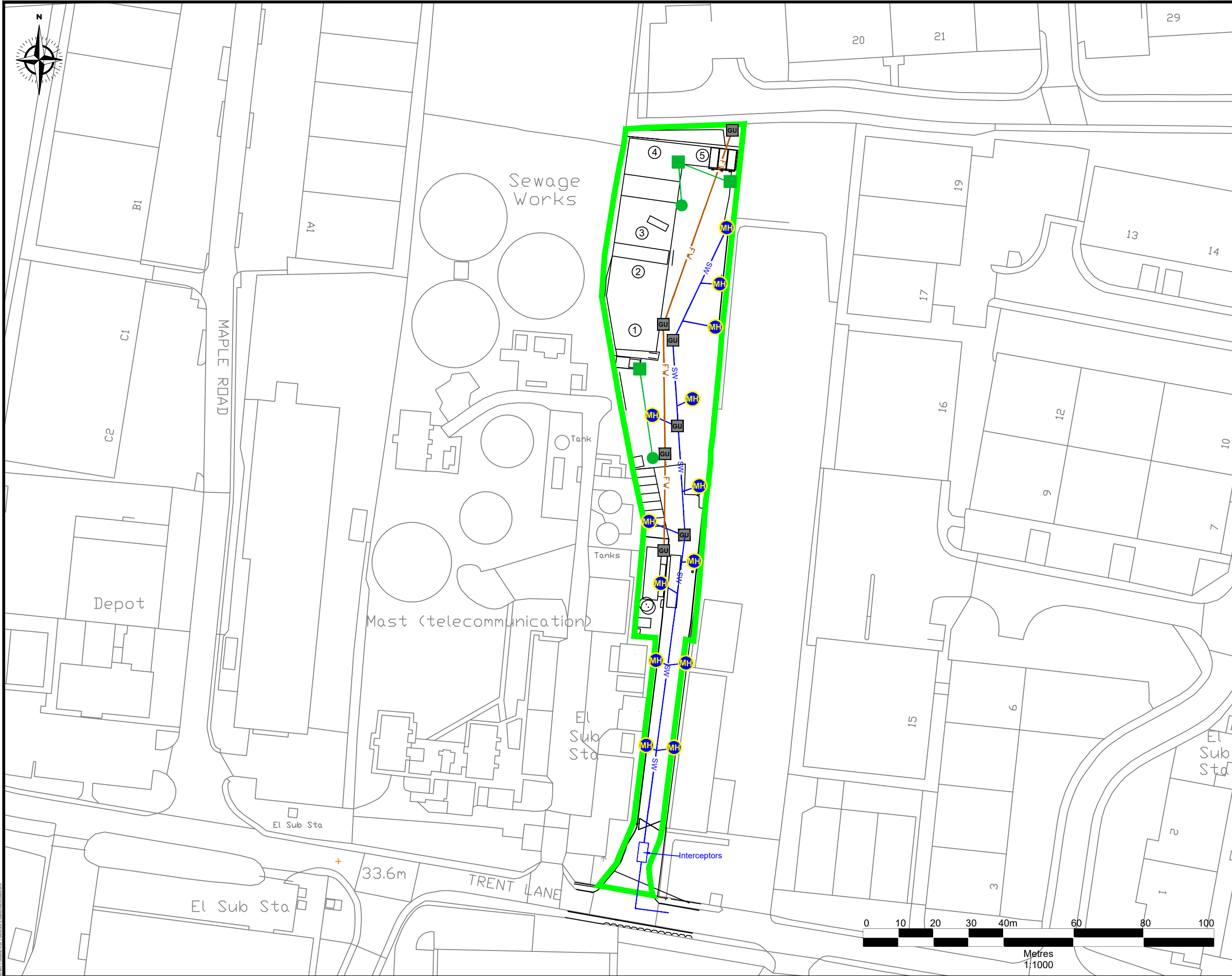
Rev	subject	date



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Site Castle Donington	
Title Emergency Access Route	
Scale 1:1000@A3	
Date January 2025	
Drawing Ref CaD-EAR-0125-01	Drawn by JA
	Checked by EC

Figure 6 – Permit Drainage Plan



Notes

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- Permit Boundary
- Surface Water Manhole
- Gully
- Tank
- Manhole
- Surface Water Drain
- Foul Water Drain

Rev	subject	date



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Tel: (01254)819700, Fax: (01254)819749, Email: richard.bisset@suez.com

Site Castle Donington	
Title Site Drainage Plan	
Scale 1:1000@A3	
Date January 2025	
Drawing Ref CaD-DRN-0125-01	Drawn by JA
	Checked by EC