FIRE PREVENTION PLAN

J Denham Metals Ltd

Coppycrooks Yard

West Auckland Road

Shildon

County Durham

Olive Compliance Ltd
19 Main Street,Ponteland, Newcastle upon Tyne, NE20 9NH
Company No: 12861220

CONTENTS

DRAWINGS

Drawing 001 Site Location

Drawing 003.2 Site Layout

Drawing 004 Site Receptors

Drawing 005 Site Drainage

Drawing 006 Hydrant Location

APPENDICIES

Annex 1 - Fire Service Liaison

Annex 2 - Waste Acceptance Procedure

Annex 3 – Inspection Checklists

Annex 4 – Thermal Camera Specification

Annex 5 – Concrete Wall /Panels Specification

Issue and Revision Record

Revision	Date	Originator	Company Approver	Description of Changes
V3	22/03/2023	Olive Compliance Ltd	J Denham	EA Approved – Permit issued 2024
V4	22/04/2024	Olive Compliance Ltd	J Denham	Changes added to Sections 8.1.1 and 16 re water management.

Site Contacts and Emergency Information

Name	Contact
Fire Service Emergency	999
Fire Service (Local)	01388 602643
Police Emergency	999
Police (Local)	101
Northumbrian Water	0800 328 7648
Environment Agency	0800 80 70 60
Durham County Council	03000 26 0000 03000 262 195 (Out of Hours)
Health and Safety Executive	0300 003 1747
Operator	Mr. John Denham [redacted]
Security Provider Keepsafe	[redacted] KEEPSAFEGROUP.CO.UK

1.0 Introduction

J Denham Metals Ltd has appointed Olive Compliance Ltd (Olive) to prepare a Fire Prevention Plan (FPP) for their waste facility based at Copycrooks Yard, West Auckland Road, Shildon in respect to their permit variation application.

The variation application seeks to make the following changes to the site's operations to 300,000 tonnes per annum.

This document is primarily to document the onsite control measures in place to reduce the risk of fire occurring and manage the risk of fire should it occur and any resulting environmental impacts.

Activities carried out on site include the sorting, separation and bulking up of ferrous and non-ferrous metals by hand or crane, the processing of suitable metal grades through a shear or by gas cutting, and the depollution of ELVs within the site's Authorised Treatment Facility (ATF). All treatment processes facilitate size reduction to enable efficient onward transport, and to generate the metal grades required for furnaces.

2.0 Fire Prevention Plan

This FPP has been prepared in order to mirror the contents of the EA guidance for FPP to allow for ease of assessment and for users of this document to readily locate the specific information and on-site provisions relating to each particular topic.

2.1 Fire Prevention Objectives

This FPP identifies measures to be employed to reduce the likelihood of fires at the site. In addition, the plan identifies measures to be employed in the event of a fire in order to limit the damage caused to the environment or human health.

As such, and in accordance with EA guidance, the objectives of this FPP are to:

- minimise the likelihood of a fire happening
- aim for a fire to be extinguished within 4 hours
- minimise the spread of fire within the site

3.0 Exclusions

The EA guidance for FPP states that the guidance does not apply to:

- hazardous wastes
- dangerous substances (i.e. those under Control of Major Accident Hazard Regulations)
- combustible liquids

Consideration for the storage of maintenance and operational equipment that may contain hazardous properties is detailed within Section 7.7, 7.8 & 7.10 of this document.

4.0 Types of Combustible Wastes

The site is permitted to receive the following combustible wastes:

- Packaging

- Metal
- End of Life Vehicles
- Lead acid batteries
- Rubber tyres
- Cable
- Incoming mixed metals
- WEEE (waste electrical and electronic equipment)

Section 9 of this document details the associated storage arrangements.

Details of other combustible, non-waste materials on site are detailed within Section 7.10 and storage locations are added to the site plan (Drawing 003.2).

5.0 Use of this Document

This FPP forms part of the environmental management system for the site. It is prepared for use as a standalone document, such that all staff can easily refer to any information or operational requirements that relate to the prevention of fire or the procedures that are in place in the event of a fire.

The existence and location of the FPP is notified to all staff and will be readily accessible, in both hard and electronic copy, at all times, including during an incident. The plan and associated emergency contacts and site plan are stored in the site weighbridge/office (Emergency Pack).

All visitors and contractors to site will be given a Site Induction and a copy of the Site Rules which they will sign to confirm their understanding. The Site Induction will ensure that visitors and contractors know what they must do to prevent a fire occurring and what to do during a fire if one breaks out. The locations of the Emergency Pack will also be confirmed.

5.1 Training

All staff will be trained on the contents and requirements of the FPP (suitable to their role) and site inductions will include a summary of the FPP and notices of its location. A record of any training including any refresher or Toolbox talk will be recorded and signed off by all staff.

All staff are provided with information and training on fire prevention, protection requirements and action to be taken in the event of fire. New members of staff are given information or training on:

Procedures and their personal responsibilities to prevent and protect against outbreaks of fire.

- What action to take if they discover a fire;
- How to raise the alarm, the location of manual call points, and the procedure for contacting the Fire and Rescue Service and the EA;
- What action to take immediately on hearing the fire alarm;
- The location and safe use of portable or other fire extinguishing equipment;

The location of escape routes from their place of work including those routes not used regularly for normal access and egress;

- Their responsibility to direct or escort visitors and contractors in their charge to escape routes (and in the case of disabled persons to the nearest useable escape route or refuge);
- The importance of keeping closed all fire doors to limit the spread of fire, heat or smoke;
- How to safely isolate or shutdown plant or equipment, where appropriate;
- The importance of good housekeeping in preventing the outbreak of fire and limiting its effects.

- Fire safety and emergency information for visitors and contractors will be provided at reception where they are required to sign-in.

5.2 Document Testing and Review

Quarterly exercises will be carried out to test how well the fire prevention plan works.

Exercises will be planned to test specific aspects of the fire prevention plan throughout the year to ensure effectiveness.

Such tests may take the form of physical drills or desk-based assessments as relevant to the element of this FPP that is under test. The nature of each test, the results and appropriate actions (including where no action is required) will be maintained for inspection by the EA, on request.

This fire prevention plan will be kept under regular review with monthly external audits conducted on fire prevention measures on site and review of compliance with this document.

This document will be revised if where necessary for example if:

- there is reason to suspect it no longer meets the objectives of the guidance
- the site has had a fire or identify a near miss of a fire
- changes in site activities
- the environment the site operates in changes, for example if a school or residential development is built nearby
- The EA ask the company to revise it due to some concern over the risk posed by site operations

Any revised document will be sent to the EA for approval.

6.0 The Site

6.1 Site Activities

Waste management activities at the site are currently authorised by the Environmental Permit. The site currently operates a hazardous and non-hazardous metal waste recycling facility and transport business, that collect scrap metal from customers for recovery.

The site is currently authorised to accept the below hazardous and non-hazardous waste.

- R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)
- R4: Recycling/reclamation of metals and metal compounds R5: Recycling/reclamation of other inorganic materials
- R5: Recycling/reclamation of other inorganic compounds

6.1.1 Permitted Wastes

The annual permitted tonnage will be up to 300,000 tonnes.

The current permit states;

- Treatment consisting only of sorting, separation, grading, shearing, baling, compacting, granulating of cables, and cutting using hand-held equipment only, of ferrous metals or alloys and non-ferrous metals into different components for recovery.
- There shall be no treatment of lead acid batteries, other than sorting and separating from other wastes.
- Wastes shall be stored for no longer than 3 years prior to recovery.
- The maximum quantity of hazardous waste stored at the site shall not exceed 50 tonnes at any one time.
- There shall be no treatment including the decanning of catalytic converters, other than sorting and separating from other wastes.
- No more than 10 tonnes of intact waste vehicle catalytic converters (waste code 16 01 21* or 16 01 22) shall be stored at the site at any one time

The acceptance, treatment and storage of WEEE will be controlled as per the below:

Treatment consisting only of sorting, dismantling, separation, shearing; screening, grading, baling, compacting, crushing, granulation, repair or refurbishment, or cutting of waste into different components for recovery.

There shall be no treatment of WEEE containing ozone depleting substances, only storage.

- There shall be no mechanical treatment of cooling equipment or display equipment.
- Treatment of WEEE shall be carried out within a building provided with a weatherproof covering.
- All WEEE, disassembled spare parts, components, materials and residues shall be stored on an impermeable surface with sealed drainage system with provision of spillage collection facilities and, where appropriate, decanters and cleanser degreasers;
- Batteries, PCB/PCT containing capacitors and disassembled parts/components containing liquids or hazardous wastes must be stored in dedicated, labelled, sealed containers. Either the containers

must provide weatherproof covering or the containers must be stored in areas with a weatherproof covering.

- The following shall be stored in areas with a weatherproof covering or in sealed containers providing weatherproof covering: i) WEEE, disassembled spare parts and components that may be re-used or may be used to provide spare parts; ii) Residues from any shredding or granulating operation; iii) Any WEEE containing liquids or hazardous waste which is damaged to the extent that the liquid or hazardous waste could be released.
- The maximum quantity of hazardous waste treated for disposal or recovery shall not exceed 10 tonnes (this does not include the manual sorting, manual dismantling, repair or refurbishment of WEEE);
- Wastes shall be stored for no longer than 1 year prior to disposal or 3 years prior to recovery; and
- The maximum quantity of hazardous waste stored at the site shall not exceed 50 tonnes at any one time of which no more than 10 tonnes shall be stored for disposal. This does not include WEEE awaiting manual sorting, manual dismantling, repair or refurbishment.
- Batteries will be stored by type, segregated with a 6m separation distance to reduce the risk of incompatible materials causing a fire risk. All batteries are stored in acid proof containers, under cover in a dedicated storage building, with an impermeable surface with a sealed drainage system.
- There shall be no treatment of batteries except for sorting.
- WEEE wastes will be treated undercover in a building to prevent the risk of any components or fluids.

6.2 Site Plans

6.2.1 Site Layout

The site layout, in respect of fire prevention, is shown on Drawings 003 (Site layout). This layout highlights the following;

- layout of buildings;
- any areas where hazardous (non-waste) materials are stored on site;
- main access routes for fire engines and any alternative access points around the site perimeter to assist firefighting;
- hydrants and water supplies; storage areas with dimensions and fire walls (where applicable) - includes wastes stored in a building, bunker, or containers.

The site drainage and plant storage location is shown on Drawings 003,005 and 006. These highlight the following;

- the location of fixed plant or where mobile plant is stored when not in use;
- local water hydrants;
- drainage runs, pollution control features such as drain closure valves and fire water containment systems.

6.3 Operational Hours

The site operates according to the hours stated below;

- Monday to Friday 07:00 – 17:00 hrs
- Saturday 07:00 – 12:00 hrs
- Sunday/Bank/Public Holiday Closed

6.4 Site Location and Receptors

The site (centred at NZ2105726271) is located at Copycrooks Yard, West Auckland Road, Shildon.

FPP guidance states that consideration must be given to sensitive receptors such as:

- schools, hospitals, nursing and care homes, residential areas, workplaces
- protected habitats, watercourses, groundwater, boreholes, wells and springs supplying water for human consumption
- roads, railways, bus stations, pylons (on or immediately adjacent to the site only), utilities, airport

6.4.1 Site Location

The site located just off the A6072 between Shildon and Bishop Auckland and, as such, is principally bounded by the A6072 green space (See below image and Table 1).

Image 1 - Site Setting

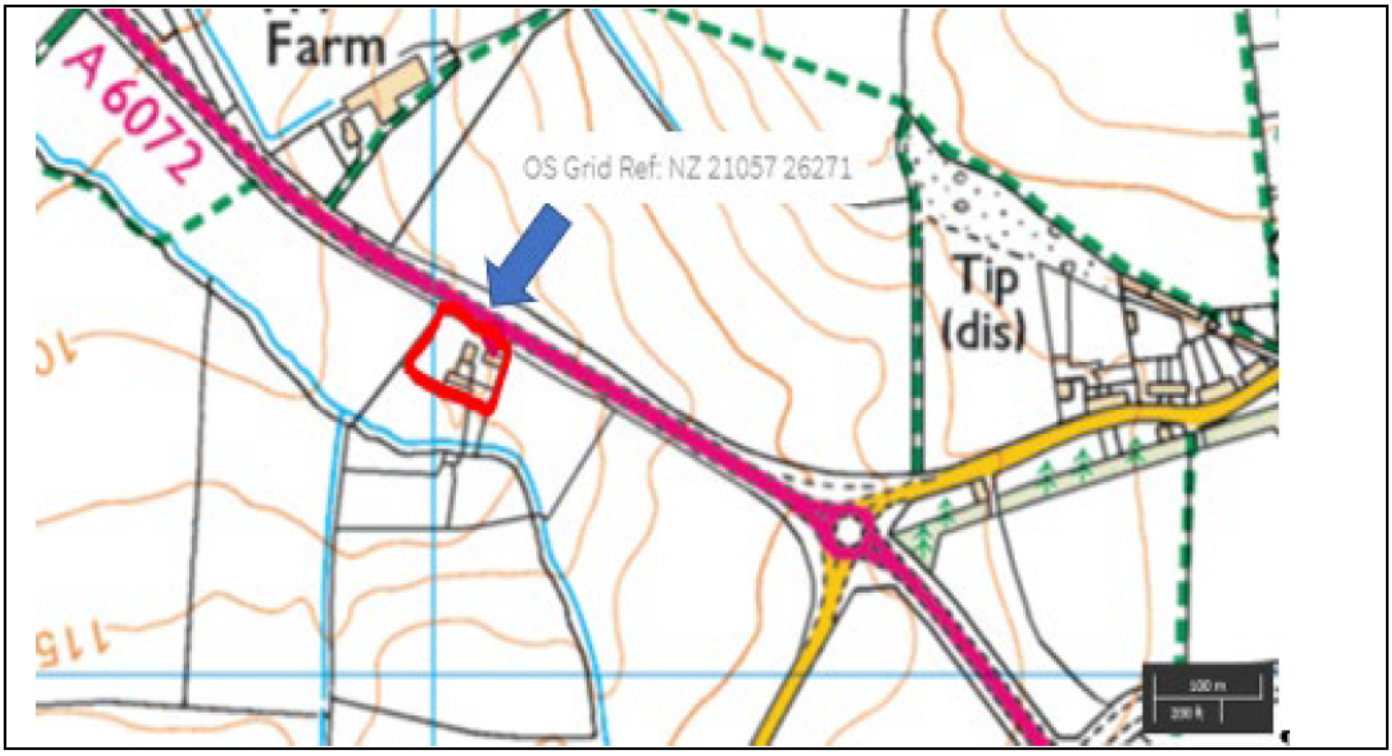


Table 1 – Site Setting

Direction	Use
North	Transport Link A6072 & agricultural land
South	Agricultural land
East	Operator's home/agricultural land
West	Agricultural land

6.4.2 Site Receptors

Table 2 below details the sensitive receptors, distance from the site and contact details.

Mr J Denham lives on site and is not classed as a sensitive receptor due to the operational nature of their position as the Director/Operator on site.

Table 2 – Sensitive Receptors

Receptor Type	Receptor Description	Map Reference Number	Location	Comments
Residential	Properties on West Auckland Road	1	Between 450 – 1000m to the East of site	• Based on prevailing in wind direction, residential properties closer to site are most likely to be impacted by ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • Properties in closer proximity to site have increased risk of short-term property damage from ashfall. • Springtime wind direction reduce the risk of ash settlement and inhalation. • Potential for increased risk if wind direction is unexpected but this is unlikely based on distance from site. • Due to site proximity and the size of fire, West Auckland Road could be difficult to drive in due to short-term poor visibility from smoke and damage to vehicles from ash. • There is increased risk to residents during Summer months when there is more windows/doors are open and outdoor leisure activities. • Only small quantities of wastes are stored on the Eastern boundary of site.
Residential	Residential property off Brusselton Lane	2	Approximately 630m to the South of site	• Due to its upwind location, there is reduced likelihood of residents impacted by ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • There is increased risk of ash settlement and inhalation in Springtime with N-NE wind direction. • Due to site proximity and the size of fire, Brusselton Lane could be difficult to drive in due to long-term poor visibility from smoke and damage to vehicles from ash. • There is increased risk to residents during Summer months when there is more windows/doors are open and outdoor leisure activities. • Potential for increased risk if wind direction is unexpected but this is unlikely.
Residential/Commercial/Industrial	Finch JTF & Jr Farm	3	Approximately 180m to the North of site	• Due to its location, there is a moderate risk of residents impacted by ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • Minimal risk of ash settlement and inhalation due to the receptor's upwind location.

				• Due to site proximity and the size of fire, West Auckland Road could be difficult to drive in due to long-term poor visibility from smoke and damage to vehicles from ash. • Potential for increased risk if wind direction is unexpected but this is unlikely. • There is potential for commercial impact from fire due to ruined crops. • Some inhalation from human receptors manning/cultivating farmland. • There is increased risk to residents and farm staff during Summer (windows/doors are open and outdoor leisure activities) and Autumn (harvesting activities).
Residential/Commercial/Industrial	JR Raine & Sons Farm	4	Approximately 990m to the Southwest of site	• Due to its upwind location, there is reduced likelihood of residents impacted by ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • There is increased risk of ash settlement and inhalation in Springtime with N-NE wind direction. However, this risk remains low due to the receptor's proximity from site. • Depending on location and scale of the fire, Haggs Lane could be difficult to drive in due to short-term poor visibility from smoke and damage to vehicles from ash. • There is low risk of commercial impact from fire due to ruined crops. • Very low risk of inhalation residents and farm staff.
Commercial/Industrial	Wilsonart, Carnival Fun Fairs and Aqua Brite Valeting Services	5	Approximately 1000m to the East of site	• Due to its proximity from site, there is very low risk of impact from ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • There is minimal risk of ash settlement and inhalation from Springtime wind direction. • Potential for increased risk if wind direction is unexpected but this is unlikely due to the distance from site. • Low risk of inhalation from staff and customers due to distance from site. • Reduce risk of staff and customer inhalation in non-commercial hours. • In larger fires, West Auckland Road could be difficult to drive in due to short-term poor visibility from smoke and damage to vehicles from ash which could result in short-term commercial impact.
Commercial/Industrial	Commercial and industrial businesses, including: Imperial Cars, Radiator Specialists, Carline, D	6	Approximately 1000m to the Northwest of site	• Due to its proximity from site, there is very low risk of impact from ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency.

	& E Renewables, Deco Trophies and Engraving, Furness Windows Ltd, International Tyres, Garnetts Coaches, Bishop Auckland Gun Club, Tindle Crossing Brewers Fayre, Premier Inn Bishop Auckland, Cazoo and Enterprise Rent-a-Car			• There is minimal risk of ash settlement and inhalation from prevailing and Springtime wind directions. • Potential for increased risk if wind direction is unexpected but this is unlikely due to the distance from site. • Low risk of inhalation from staff and customers due to distance from site. • Reduce risk of staff and customer inhalation during non-commercial hours. • Low risk of property damage from ashfall, which can affect the businesses opening. Damage to vehicles at automotive businesses can result in moderate commercial impact. • In larger fires, it could be difficult to visit the businesses due to short-term poor visibility from smoke and damage to vehicles from ash. However, based on the receptor's location, the risk of this is very low.
Commercial/Industrial	Kimberley Plastering and Rendering Services Ltd	7	Approximately 1,100m to the Southeast of site	• Due to its proximity to site, there is a moderate risk of impact by ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • The location of the business means there is low risk of impact from prevailing and Springtime wind directions. • Potential for increased risk if wind direction is unexpected but this is unlikely. • Reduced staff and customer exposure of smoke and ash when business is closed (late afternoon and night) or not open (e.g. weekends). • Low risk of property damage from ashfall. • In larger fires, it could be difficult for business operations due to short-term poor visibility from smoke and damage to vehicles from ash. However, based on the receptor's location, the risk of this is very low
Commercial/Industrial	Broom Mill Farm Shop and Deep-N-Clean	8	Approximately 1,200m to the West-Southwest of site	• Due to its upwind location, there is reduced likelihood of residents impacted by ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • Being upwind of site, there is minimal risk of impact under prevailing wind direction. • There is increased risk of ash settlement and inhalation in Springtime with N-NE wind direction. However, this risk remains low due to the receptor's proximity from site. • Potential for increased risk if wind direction is unexpected but this is unlikely.

				• Depending on location and scale of the fire, there could be difficulties in driving in due to short-term poor visibility from smoke and damage to property from ash. However, there is very low risk of this. • Low risk of short-term commercial impact from inability to open shop. • Reduced staff and customer exposure of smoke and ash when business is closed.
Commercial/Industrial	Shildon Football Club	9	Approximately 1,600m to the East of site	• Due to its proximity from site, there is very low risk of impact from ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • There is minimal risk of ash settlement and inhalation from Springtime wind direction. • Potential for increased risk if wind direction is unexpected but this is unlikely due to the distance from site. • Very low risk of ash settlement and ashfall damaging football pitch and associated infrastructure, which prevents the club being used. • Low risk of inhalation from staff and users due to distance from site. • Reduced risk of staff and users inhalation when not in use (i.e. match days). • In larger fires, it could be difficult to drive in due to short-term poor visibility from smoke and damage to vehicles from ash, which could result in short-term commercial impact and disruption to games.
Commercial/Industrial	Solartron ISA (AMETEK) and International Waste Metals Ltd	10	Approximately 1,700m to the East of site	• Due to its proximity from site, there is very low risk of impact from ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • There is minimal risk of ash settlement and inhalation from Springtime wind direction. • Potential for increased risk if wind direction is unexpected but this is unlikely due to the distance from site. • Low risk of property damage from ashfall. • Low risk of inhalation from staff and customers due to distance from site. • Reduced risk of staff and customers inhalation during non-commercial hours. • In larger fires, it could be difficult to drive in due to short-term poor visibility from smoke and damage to vehicles from ash, which could result in short-term commercial impact.

Public Facility	Shildon West Road Cemetery	11	Approximately 800m to the East-Northeast of site	• Due to its proximity from site, there is very low risk of impact from ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • There is minimal risk of ash settlement and inhalation from Springtime wind direction. • Potential for increased risk if wind direction is unexpected but this is unlikely due to the distance from site. • Low risk of property damage from ashfall. • Low risk of inhalation from visitors due to distance from site. • Reduced visitor inhalation when cemetery is closed. • In larger fires, it could be difficult to drive in due to short-term poor visibility from smoke and damage to vehicles from ash.
Public Facility	Household Waste Recycling Centre	12	Approximately 970m to the Northwest of site	• Due to its proximity from site, there is very low risk of impact from ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • There is minimal risk of ash settlement and inhalation from prevailing and Springtime wind directions. • Potential for increased risk if wind direction is unexpected but this is unlikely due to the distance from site. • Low risk of inhalation from staff and customers/suppliers due to distance from site. • Reduce risk of staff and customers/suppliers inhalation during non-operational hours. • Low risk of property damage from ashfall, which can affect the businesses opening. Damage to vehicles and plant can result in moderate commercial impact. • In larger fires, it could be difficult to visit the businesses due to short-term poor visibility from smoke and damage to vehicles from ash. However, based on the receptor's location, the risk of this is very low.
Public Facility	Thornhill Primary School	13	Approximately 1,500m to the Northeast of the site	• Despite within the prevailing wind direction, the distance from site means the risk posed by ash settlement and smoke inhalation is low. • Being upwind of site, there is minimal risk of ash settlement and smoke inhalation from Springwind direction. • Potential for increased risk if wind direction is unexpected but this is unlikely due to the distance from site.

				• Reduced staff and student exposure of smoke and ash when school is closed (late afternoon and night) or not open (e.g. weekends). • Low risk of property damage from ashfall, which can affect school opening. • In larger fires, it could be difficult to attend school due to short-term poor visibility from smoke and damage to vehicles from ash. However, based on the receptor's location, the risk of this is very low.
Public Facility	Jubilee Medical Group	14	Approximately 1,500m to the East of the site	• Due to its proximity from site, there is very low risk of impact from ash settlement and inhalation. However, smoke and ash plume expanse is determined by wind speed and frequency. • There is minimal risk of ash settlement and inhalation from Springtime wind direction. • Potential for increased risk if wind direction is unexpected but this is unlikely due to the distance from site. • Low risk of inhalation from medical staff and patients due to distance from site. • Reduce risk of medical staff and patients inhalation in non-commercial hours (weekday evenings and weekends). • Low risk of property damage from ashfall, which can affect the medical centre opening. • In larger fires, it could be difficult to visit the medical centre due to short-term poor visibility from smoke and damage to vehicles from ash. However, based on the receptor's location, the risk of this is very low.
Public Infrastructure	West Auckland Road	15	Various within 1,000m radius	• Given the site's location on West Auckland Road, there is increased risk of impact in its use. • Increased portion of West Auckland Road impacted in slight variability in prevailing wind direction and unexpected wind direction, however the latter is unlikely. • Reduced use of West Auckland Road from Fire & Rescue Service attendance and pipework for offsite hydrants. • Reduced use of West Auckland Road at night reduces impact. • Due to site proximity and the size of fire, West Auckland Road could be difficult to drive in due to short-term poor visibility from smoke and damage to vehicles from ash. • Only small quantities of wastes are stored on the Eastern boundary of site. • Due to its upwind location, there is minimal risk of ash settlement, vehicle damage and traffic disruption from Springtime winds.

Public Infrastructure	Roads within the 1km radius including: Haggs Lane, Brusselton Lane, Lambton Street, A6072, West Park, West Road, West Close and Vaughan Street	16	Various within 1,000m radius	• Roads closer to site and downwind of prevailing wind direction are most likely to be impacted by fire. • Not being downwind of prevailing and Springtime winds and the proximity of the roads in relation to site means there is very low risk of impact. • Increased risk of impact in slight variability in prevailing wind direction and unexpected wind direction, however the latter is unlikely. • Reduced use of roads at night reduces impact. • There is a very low risk of difficulties in driving in due to short-term poor visibility from smoke and damage to vehicles from ash. • Fire water runoff will be controlled
Water Bodies	Ditch Tributary leading to the River Gaunless	17 17a	Immediately adjacent to Western boundary of site Runs along the southern boundary of the site	• Due to the proximity of site, there is a high risk of ash settlement and ashfall. • Reduced risk of ash settlement and ashfall under prevailing wind direction. • Fire water runoff will be controlled
Water Bodies	River Gaunless	18	Various. Closest point is approximately 540m to the Northwest of site	• Stretches of the River Gaunless closer to site are more likely to be impacted from ash settlement and wildlife impact. However, smoke and ash plume expanse is determined by wind speed and frequency. • As the River Gaunless lies to the West of site, there is reduced risk of ash settlement and wildlife impact from prevailing and Springtime wind directions. • Potential for increased risk if wind direction is unexpected but this is unlikely.
Environments	Brusselton Wood	19	Approximately 1000m to the Southwest of site	• The location of the site in relation to the prevailing wind direction reduces the risk of ash settlement and wildlife impact to low. • While potentially impacted during Springtime wind directions, the distance from site reduces the risk of ash settlement and wildlife impact to low.

				• Potential for increased risk if wind direction is unexpected but this is unlikely. • Reduced human receptors so minimal human inhalation.
Environments	Deciduous woodland	20	Approximately 600m to the North of site	• The location of the woodland and prevailing wind direction means there is a low risk of ash settlement and wildlife impact. • Due to its upwind location, there is minimal risk of ash settlement and wildlife impact from Springtime winds. • Potential for increased risk if wind direction is unexpected but this is unlikely.
Farmland	N/A	21	Various within 1,000m radius	• Farmland in closer proximity and downwind of site has increased risk of impact from ash settlement as well as commercial and environmental impact. • Depending on location, there is potential for commercial impact from fire due to ruined crops. • Some inhalation from staff manning/cultivating farmland. • Potential for increased risk if wind direction is unexpected.
Properties on site Directors Property	Sensitive Receptor	22	Approximately 10m to the East of site	• There is a likelihood of any residents in the property being impacted by ash settlement and inhalation. • Depending on location and scale of the fire, there could be difficulties in exiting the site in due to short-term poor visibility from smoke and damage to property from ash.

6.4.3 European/International Sites

Searches on the Multi Agency Geographical Information for the Countryside (MAGIC) website confirm there are no Sites of Special Scientific Interest (SSSI), a special area of conservation (SAC), special protection areas (SPA) or RAMSAR sites within 1km of the site boundary.

6.4.4 Other receptors

- Deciduous Woodland is recorded 550m to the North of the site.

None of the following receptors have been identified within 1km of the proposed permit boundary.

- National Nature Reserves;
- World Heritage Sites;
- Registered Parks and Gardens;
- Area of Outstanding Natural Beauty;
- Woodland Trust Sites; and
- National Forest.

6.4.5 Major Roads and Transport Links

There are no motorways within 1km of the site boundary.

A major road, the A6072 parallel north of the site.

6.4.6 Public/Tourist Areas

The site is surrounded by open countryside and dogwalkers or horse riders use the greenspace surrounding the site.

6.4.7 Flood Risk

Checks made on the Environment Agency Flood risk website has identified that the site is not in an area flood risk.

6.4.8 Water courses

The nearest water course to the site is the River Gaunless with a tributary running along the southern boundary of the site and a ditch along the western boundary of the site. The ditch discharges into the tributary. The site gradients falls toward an interceptor which discharges to the surface water ditch, however both discharge points benefit from a penstock valve, to close the drainage system, to ensure only clean surface water is discharged in the event of an incident or fire.

Currently both interceptors are closed with no release of any water off site acting as sealed tank.

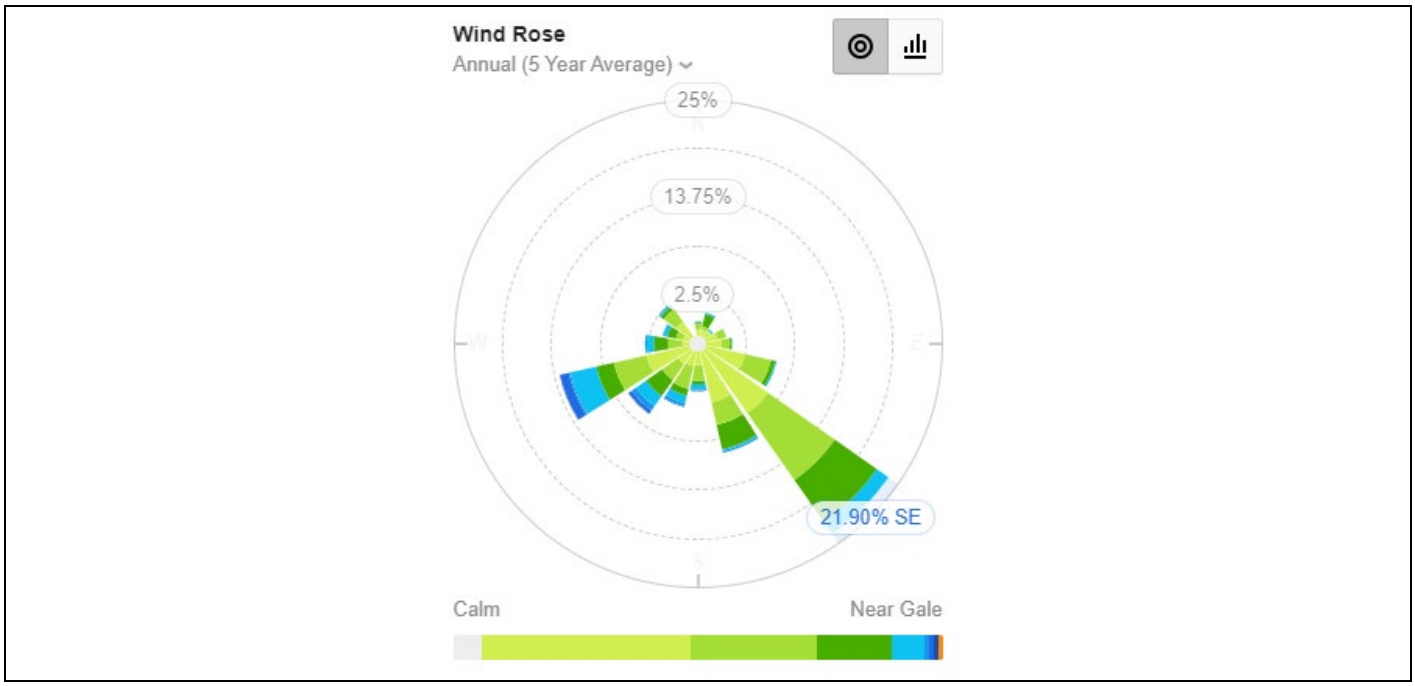
6.4.9 Prevailing Wind Direction

Using the Willy Weather application, meteorological forecast information is available for over 45000 British locations. The available data includes Met Office weather radar, satellite images and synoptic charts. The application also provides current conditions and warnings.

Upon review of historic wind data, the prevailing wind directions are predominately west south westerly in respect of the site.

Given the prevailing wind, the receptors that could principally be affected by fire at the site would be the rural areas situated directly to the east north easterly of the site and would not affect highlighted residential areas or sensitive receptors.

Image 2 – Wind Direction Average 5-year data



Taken from www.willyweather.co.uk - reference Shildon Wind Forecast, Durham DL4 1 - WillyWeather

Live data can be accessed at any time using the Windfinder App (https://www.windfinder.com) searching under Shildon weather station, to make an assessment of current weather conditions, wind direction and speed. This can assist in the event of a fire on site in order to assess impact on local receptors and to make contact with authorities and appropriate persons.

Weather monitoring is assessed throughout the day and formally recorded daily, as part of the daily site checks.

7.0 Managing Common Causes of Fire

7.1 Arson/Security

The site has a number of security measures in place to limit the likelihood of arson or vandalism listed below.

- 2.4m palisade security fencing;
- Lockable site palisade entrance gates (2.4m);
- CCTV and thermal imagining cameras that are externally monitored by the control centre with trigger alarms being sent to site staff; (out of hours trigger levels are set to 50^{o}c)
- Intruder detection systems;
- Inspection and maintenance procedures;
- Visitor sign in system; and
- Remote out of hours monitoring.

Access to the site is via one entrance/exit. The site does not share the entrance or exit with other companies.

Visitors to J DENHAM METALS must sign in and out via the visitors register located in the site office.

The site security system incorporates CCTV cameras covering operational areas on site and thermal imagining cameras located in key locations on both yards.

The site office has a screen with a live feed of site CCTV and thermal camera coverage.

CCTV and thermal imaging cameras are monitored by the weighbridge team (office fully manned) throughout the day with an audible alarms in place to notify the W/B team during the day. (trigger levels are set to 50°c).

The site offices, the main building and the workshop buildings have intruder detection sensors fitted.

During operating hours there is a member of senior management or staff on site at all times.

Site offices and welfare areas have fire alarms. These are checked and maintained on a 6monthly basis.

CCTV cameras cover all operational, buildings and waste storage areas. These are shown on Drawing 003.2.

The site boundary is secured by a mixture of:

- palisade fencing (northern boundary)
- concrete bay walls (western & southern boundary)
- bounded by the Operators home and agricultural land (eastern boundary)

Perimeter inspection is undertaken on a daily basis and any repairs temporarily made good by the end of the working day. Arrangements are made to have permanent repairs, if required, completed within one week. Any defects and repairs are recorded.

Half an hour prior to site closure a fire watch is conducted on all waste storage areas and plant by the Operator or nominated member of staff.

7.1.1 Out of Hours

The site security system including the thermal cameras are remotely monitored by an eternal security company, Keepsafe Security **01642 327 883** from 17:00hrs to 7:00hrs.

The thermal imaging cameras pick up unusual heat signatures and will notify the control room of KEEPSAFE and will automatically send a text notification to the director (or nominated personnel) in the event of a trigger breach of 50^0C.

The control room will notify the director and key management in the event of an alert/alarm activation (see the notification list in Section 12.2).

Security staff will either inform the Fire Service the event of visual smoke detection or fire or inform Police in the event of unauthorised access. This will expediate the response time while the Operator or nominated personal travel to site.

All incidents will be reported to the nominated senior management for review and action as soon as received.

In addition to company has nominated suitably trained staff who will attend site in the event of a fire or security breach (if necessary to attend).

7.1.1 Alarm Activation

In the event of an alarm activation, the Security Company and director (included nominated personnel) will be notified via a mobile phone alert.

They can assess on site activity to either identify any false alarms or carry out further investigation.

Out of hours access can be gained via the steel gates. Only the Operator and nominated Key Holders have keys to allow entry to site.

The Operator/Key holders can attend site within 5 minutes, outside of operational hours.

7.1.2 Security Reviews

Any updates to the above procedure, either as a result of specific incidents or identified during its testing/review, will be submitted to the EA for its approval prior to implementation of the proposed changes at the site.

7.2 Plant and Equipment

Plant and equipment are maintained in accordance with the manufacturer's recommendations and recorded on daily check sheets.

Plant, fixed plant and equipment are operated in accordance with the manufacturer's instruction manuals.

Induction training and refresher training is provided, to all persons engaged at the site, in the safe operation of plant and equipment relevant to their role.

Inspection of plant and equipment is undertaken on a daily basis to check for faults and ensure appropriate safeguards are in place. Designated forms for the checking and defect records for all vehicles and plant are completed and forwarded to the Operator for checking and review.

Regular cleaning is conducted on all operation plant. This is recorded when completed on plant inspection forms.

At the end of the working day, plant and equipment are stored 6m away from stockpiles of combustible materials.

In the event of a failure or suspected fault with an item of plant or piece of equipment, the relevant persons ensure that the equipment is shut-off in a safe manner and not used until the equipment can be repaired or replaced. Defects are reported to senior site management for appropriate action to be taken.

7.3 Electrical Faults

The electrics on-site are certified by a suitably qualified electrician in accordance with the requirements of fixed electrical testing every 2 years and PAT testing of portable equipment will be checked on a yearly basis.

Regular safety checks and daily site inspections are recorded in the site diary. Periodic inspections will be undertaken by a suitably qualified electrician as required.

Any potential ignition sources from suspected electrical faults should be isolated and an electrician should be contacted immediately.

The inspection frequency will be based on recommendations from the electrician or where a potential risk is identified via the daily site inspections.

Section 9.4 (Maintenance of Plant and Equipment) of the company Environmental Management System denotes the written procedures in place that set out the maintenance and management of electrical equipment.

7.4 Discarded Smoking Materials

Smoking is not permitted in operational areas.

There is a designated smoking area located outside of the permitted area.

7.5 Hot Works

The company operates an approved operator permit to work system to undertake cutting works (the staff are referred to as burners) using an oxypropane lance. In the event hot works are required, they are only undertaken by staff who are trained, and by contractors who have the relevant permit to work. Hot cutting works are carried out in the designated area.

Hot works are carried out in Yard 2 in a dedicated are shown on Drawing 003.2.

Hot works are not conducted in Yard 1. In the event they are required in Yard 1 the company will follow the below procedure.

A fire watch is provided continuously during the works, including breaks, and one hour after completion. A IBC containing water is available for damping down as and when required. Once works are complete they will be signed off by the Operator or Nominated person.

Works must be completed within 1 hour prior to the end of the working day.

Once works are complete the area is cleared with all equipment and tanks retuned to the appropriate storage area (See 7.8).

7.6 Industrial Heaters

Electrical heaters are located inside the non-ferrous building.

Combustible wastes are not stored in this location, and at the end of the day all heaters are switched off.

As per Section 7.3 heaters will be maintained in line with company electrical testing procedures.

7.7 Hot Exhausts

Vehicles are turned off when not in use.

Flammable/combustible materials are stored in designated areas away from frequent vehicle movements (as far as is reasonably practicable).

During the working day, inspections are made every of all on-site plant and equipment (including, if appropriate, transport vehicles) for build-up of dust settling on exhausts and engine parts. These are conducted every morning, afternoon and 30minues prior to the end of the working day as part of the fire watch checks.

An end of day inspection form is completed, which includes the details of the time and person conducting the check recorded.

7.8 Ignition Sources

Ignition sources will be kept at least 6m from any combustible waste stockpiles or other potential on-site fire hazards (e.g. diesel storage, oils, chemicals).

Ignition sources such as hot works, smoking, electrical equipment, plant and equipment, heaters and exhausts are detailed within the above sections.

Compressed oxygen tanks are purpose-built enclosures containing the cylinders from damage or accidental release and are not kept near combustible material or other ignition sources. These are located along the southern boundary of Yard 2.

The gas cylinders have not been classified under the requirements of DSEAR, in which an explosive atmosphere is not expected to occur in such quantities as to require special precautions is deemed to be non-hazardous within the meaning of the DSEAR Regulations. Gas cylinders when not in use are stored in a well-ventilated secure compound, located away from combustible materials.

Ignition sources may only be located less than 6m from a potential fire hazard where suitable fire walls/breaks are in place between the ignition source and the combustible material. The 6m buffer zones that will apply, in this respect, across the site are shown on the site layout plan).

7.9 Batteries

Batteries are placed in purpose battery sealed storage boxes and kept in the designated battery storage building located away from the combustible waste storage area.

Damaged batteries are segregated and isolated from other batteries, in acid proof containers stored undercover.

The site is not permitted to accept Lithium batteries and Li-ion batteries or will accept electric vehicles for depollution.

Batteries will be stored by type, segregated with a 6m separation distance to reduce the risk of incompatible materials causing a fire risk. All batteries are stored in acid proof containers, under cover in a dedicated storage building, with an impermeable surface with a sealed drainage system.

If received in error, they are retuned immediately to the carrier, or if left on site they are quarantined. They will be stored in a designated area away from buildings and other combustible materials. The storage container will be a waterproof, covered and filled with sand. This is to prevent them:

- coming into contact with any liquids
- being damaged

These batteries will be removed to a suitable authorised facility for disposal within 5 days.

7.10 Leaks and Spillages of Oils and Fuels

Spillages and leakages of fuels and oils (either from on-site vehicles or where such material is accepted in error) are prevented through maintenance in accordance with the manufacturer's recommendations as recorded in the Environment Management System.

COSHH assessments are carried out by the Operator to inform site staff of the risks of materials on site and control measures required when handling. These are kept in the site office.

Where a delivery vehicle (i.e. not under the control of the site) is found to be leaking, that vehicle will be refused entry to site.

A bunded tank (3000lts White Diesel) are located next to the workshop building. This is locked and secure, accessed only by the management team.

A bunded tanks (3000lts White Diesel) is located next to each shear. It is locked and secure, accessed only by the management team.

The above tanks are shown on Drawing 003.2.

Storage areas for fuels and liquids are located away from daily general vehicle movements and are stored on an impermeable surface within the workshop and ELV processing area. Residual oils and fuels removed from the depollution process are in marked drums to make staff and visitors aware of contents for health and safety reasons.

Any spillage/leak of hazardous materials (including oils/fuels) at the site shall be treated as an emergency and immediate action taken to absorb or contain it using spill kits provided. The absorbent will be cleaned up as soon as possible and disposed of, as hazardous waste, by a suitably licensed contractor.

Spillage procedure within the site EMS supports the management, staff training and treatment of spillages. A non-conformance report is completed with the appropriate actions taken recorded.

Maintenance oils and fluids are stored in the workshop building away from any waste activity.

7.11 Build-up of Loose Combustible Waste, Dust and Fluff

Staff are to remain vigilant for loose material, dust or fluff and should clean up such material on identification, placing such material in the general waste skip or correct stockpile. Daily site inspections and general housekeeping of the site is also undertaken in order to minimise the potential for the build-up of such materials.

Plant, conveyers and equipment are checked daily and cleaned weekly to reduce the risk of trapped debris which reduces the risk fire.

Good housekeeping is practiced on site, keeping site equipment and surfaces clean and clear access free for plant and staff movement on site.

7.12 Reactions between Wastes

All wastes arriving onsite will be checked in accordance with the waste acceptance criteria to ensure no materials of unknown composition are accepted at the site.

Waste oils and fluids collected from vehicles only through repairs or general maintenance are to be stored separately within the designated tanks/vessels.

Unpermitted wastes will be quarantined within a skip/container if necessary and stored over 6metres away from any waste stockpiles.

7.13 Deposited Hot Loads

All wastes are assessed both at the time of the receipt of an enquiry and as the material arrives at site.

On arrival, checks are made to ensure that no hot loads or smouldering materials are accepted by the site.

The quarantine area (fire prevention) will be used in the event that any hot load is received, in error, by the site.

Appropriate action will be taken, either the Fire Service contacted, or the waste will be allowed to cool, or a fire extinguisher used to dose a small fire or smouldering if safe to do so.

7.14 Neighbouring Activities

The site is surrounded by agricultural land and there will be no impact on site from surrounding neighbours.

7.15 Persistent organic pollutants

Persistent organic pollutants (POPs) can be present in waste and can have significant effects on human health and the environment. They are subject to the POPs regulations 2019 – UK SI.2019 No.1099, implementing Regulation (EU) 2019/1021. These regulations specify the appropriate treatment for the recovery and disposal of POPs.

An assessment of the proposed WEEE types using guidance note (Classify different types of waste - Electronic and electrical equipment) has been conducted.

Minimal WEEE wastes are to be accepted, primarily arising through sole traders entering site with these wastes mixed within loads.

Only the wastes have been identified that may contain POPs would be small mixed WEEE, IT equipment, toys and leisure goods, electrical items as garden equipment and tools.

8.0 Prevent Self-Combustion

8.1 Manage storage time

All waste acceptance and removal are recorded using the FRED weighbridge system.

8.1.1 Site Activities

J Denham Metals Limited (JDML) operates a metal recycling facility and End of Life Vehicle (ELV) Authorised Treatment Facility (ATF} off West Auckland Road, Bishop Auckland. The facility accepts a wide range of ferrous and non-ferrous metals as well as undepolluted ELVs and associated wastes. The facility does not accept WEEE. JDML's business model depends on the strict quality control of the aforementioned wastes and the quick turnaround of all metal grades. This results in minimal treatment and high throughput (up to 300,000 tonnes per annum).

JDML is a long-established family business, which has built up a vast wealth of knowledge and experience of the scrap metal industry during its 50 years of trading. JDML has a strong environmental ethos and is constantly striving to improve environmental performance.

Bays are used with signage for various combustible waste streams. However due to customer demands and requirements, wastes types will and can vary at any time.

Waste acceptance and storage is conducted within two designated operational areas as shown in Drawing 003.2 (Yard 1 & Yard 2).

ELVs once processed are stockpiled in accordance with Section 9.4 of this plan.

The site standard operating procedure requires that daily incoming waste is accepted sorted and segregated every day as best practice.

To achieve good stock rotation and ensure the implementation of the “first in-first out” principle.

The site increased the permitted area in March 2024 to allow additional capacity to store wastes safely in line with this Fire Prevention Plan reducing the environmental risk to allow for compliance with the permit and throughput on site.

Wastes are bulked for recovery for reuse in industry or exported via vessels abroad with a constant requirement to supply metals for key agreed contracts.

Waste is tracked electronically to monitor and plan input and output requirements for export with the requirement of approximately 15 containers being removed off site per day (approx. 1100tonnes total) on a regular basis, it is estimated that the site will accept and remove up to 3000 tonnes of waste per week, while meeting the capacities specified in Table 4 and controls in place on site.

Yard 1

Wastes will be accepted onto site and tipped in the designated acceptance and sorting area within the site in Yard 1. The reception bay is cleared at the end of the working day to ensure separation distances and safe access around the site.

In respect to waste stockpiles, wastes are accepted in the temporary acceptance area in Yard 1, with the removal mechanically or manually of any visual contaminates such as plastics. Once validated and inspected, they are processed if required through the shear, then stockpiled within the appropriate stockpile prior removal off site. This ensures that wastes are checked and processed on the day of receipt then, stockpiled and removed off site within FPP timescales.

Yard 2 is principally used for heavy clean uncontaminated metals.

For example, waste materials stored in bays, are bulked up until the bay reaches the approved capacity. Over the week, bays will be monitored, then when nearing capacity are completely emptied to allow cleaning and full stock rotation. This will reduce the potential risk associated with self-heating due to processes within the waste.

No combustible wastes will be stored over 3 months.

Non-combustible wastes will be stored for longer periods of time due to the nature of the material and its low risk.

All movements of waste incoming and outgoing the site will be recorded and available for inspection by the Environment Agency upon request.

8.1.2 Acceptance of Wastes

The company has strict waste acceptance criteria due to the type of waste accepted and quality required for further treatment and processing. All wastes are processed on a first in first out basis. This is to ensure that waste storage timescales are complied with.

Waste is also delivered to site by company vehicles. Drivers are trained to check each incoming waste prior to collection from the customer. This is to check that the material is acceptable under the site Environmental Permit. The material is taken to site and weighed in at the weighbridge.

The load is then visually inspected by the site operative, this is to ensure that the waste descriptions and waste code on the waste transfer note are in order prior to the waste being tipped.

8.1.3 Non-Conforming Waste

However, should the waste not conform with the waste transfer note, the Operator is informed. They will assess the waste and decide whether it can be accepted. The waste must either be rejected or given the appropriate waste description, EWC code with the paperwork updated.

If the waste is deemed unacceptable under the permit or due to contamination the waste must be quarantined prior to removal off site or reloaded immediately. A waste rejection note must be completed at this stage and the customer contacted.

The EMS details the waste acceptance, validation and rejection procedures. The below procedures below cover the waste acceptance and rejection process.

- Waste Acceptance Procedure
- Waste Rejection Procedure
- Waste Rejection Record

8.2 Monitor and control temperature

EA guidance on FPP states that where on-site storage is proposed for longer than three months, additional measures will be required in respect of stockpile monitoring and control.

In respect of additional control, the site uses a Thermal Imaging Camera system to monitor stockpile temperatures. The trigger value is 50^0C.

8.2.1 Routine Daily Monitoring

During the day waste piles are visually monitored during the acceptance procedure and as part of the daily checks by site staff. Stockpile management is listed within the Daily Check sheet with all stockpiles checked to ensure compliance with the stockpiles detailed within this document (Inspection Forms).

Site staff are trained to detect signs of fire and hotspots, with the management of any signs of fire or hotspots carried out under the direction of the Operator.

Staff are to be vigilant for any signs of visual smoke or smouldering of wastes during the working day and should notify the Operator should they detect signs of fire.

Daily weather conditions and temperatures are recorded by the Operator or Nominated Person daily. This is recorded on the Daily Check Sheet. In the event there is a prolonged period of warm weather, additional weather inspections will increase in frequency, every two hours, to ensure the constant monitoring of all stockpiles.

8.2.2 End of Day Monitoring

At the end of each working day a fire watch is conducted on the stockpiles, waste stored in containers and site plant and equipment. This is carried out 30 minutes prior to the end of the working day. Nominated staff will look for any evidence of smoke, heat or smouldering.

Should this be detected, the stockpile or container will be assessed by the Operator whether to maintain visual monitoring or if the waste requires active fire measures such as water suppression. The use of fire extinguishers or water suppression would be implemented, or wastes can be placed into the designated fire quarantine area and separated to allow cooling. These checks are recorded and filed in the site office.

In the event of a fire, if safe to do so, the waste can be broken into, segregated to reduce the fuel source. Unburnt material can be placed in the quarantine area for the purpose of separation.

These end of day checks are recorded. These checks cover a site walk around and site closure measures including waste storage area checks, plant and equipment storage, security measures and the shut off, of electrical equipment.

8.2.3 Bank Holidays/Site Closure

During periods where the site will be closed over bank holiday/holiday periods the site will still be visited on a daily basis to ensure that site is secure and to carry out monitoring and fire watch checks on existing stockpiles.

Security monitoring by the director (or nominated personnel) is also in place during these periods.

This will be recorded in the site diary.

8.2.4 Reduce the exposed metal content and proportion of 'fines'

No fines are produced on site.

8.2.5 Dealing with hot weather, heating from sunlight and monitoring temperature

During periods of warm weather, care will be taken to ensure wastes do not increase in temperature resulting in combustion.

During periods of warm weather care will be taken to monitor external and internal wastes every two hours to ensure these wastes do not increase in temperature resulting in combustion. This is monitored by the assessment of daily weather conditions and temperature recording with internal temperatures supported by the thermal camera facility. Where the ambient temperature is recorded above 24 degrees the site will trigger the implementation of a 2hour formal recorded visual check of all waste storage areas. The site supervisor or nominated person are responsible for weather monitoring and stockpile checks.

Wastes stored in bays, stockpiles and containers can always be accessed to enable site plant to turn, spread or move wastes to cooler/shaded areas if required. This would be actioned in response to daily weather monitoring and visual daily inspections of stockpiles by the Operator (or trained nominated person).

Using the grab, the waste should be broken into, and the waste spread and aerated. Visual inspection of the waste should continue. Once cooled the waste should be turned and returned into the designated storage location.

Monitoring is conducted by the Operator or a nominated trained member of staff. Any findings or responses to fire/smouldering are recorded in the site diary and made available in the site office for information.

8.3 Contingency

In the event of any delay to the removal of material from the site, the Operator will contact the relevant 'waste receiver' to determine the anticipated length of the delay. If deliveries to the site are scheduled, for before the delay to exports is resolved, that would result in an exceedance of the storage capacity, or if such a delay could cause a breach of the limits to the waste storage time on-site, the Operator will contact the EA immediately.

Wastes will not be stored in exceedance of the timescales specified in Table 5.

In addition, in the event of a contract failure with, or closure of, a waste receiver (and its operations) that could result in the storage of material on-site in exceedance of 3months, the Operator will contact the EA immediately.

In the event there is a major breakdown that effects site processing plant or equipment, the Operator take proactive action, consider ceasing waste acceptance and determine the anticipated length of the delay.

The EA will be notified, discussions between the site and the EA regarding actions and timescales in relation to the recommencing of site operations.

9.0 Management of Waste Piles

9.1 Pile Sizes

The EA FPP guidance state that maximum stockpiles for the below wastes must be in line with the below, Table (4), to help prevent the risk of self-combustion and limit the scale of a fire if one breaks out.

Table 4

EA Stockpile Guidance

Waste Type	Loose and more than 150mm
Metal	750m^3
Plastic	750m^3
Rubber	450m^3

The Environmental Permit does not specify specific site waste storage timescales.

EA guidance states that for all waste piles, the maximum height allowed is 4 metres and that all waste piles, the maximum length or width allowed (whichever is the longest) is 20 metres.

Where waste piles contain a mixture of combustible wastes, the maximum stockpile size has been based on the minimum stockpile size (300mm) as a precautionary measure.

The Guidance states that where a deviation is proposed from the maximum stockpile dimensions the additional control measures are required to be documented in order to reduce risk.

The site layout allows for access to all external stockpiles when storing waste so a fire can be extinguished easily.

Wastes are stored by type awaiting segregation and sorting prior to processing or storage pre to removal off site.

Table 5 below details the current stockpile sizes, type and location. These are also referenced in Drawing 003.2.

9.2 Alternative Measures

EA guidance, Fire prevention plans, (case study examples of alternative measures) published in January 2021 has alternative measures for the storage of waste metal in pile sizes larger than the maximum sizes set out in their fire prevention plan guidance.

Alternative measures proposed by operators must show that they could still meet the 3 objectives of EA fire prevention plans guidance.

These are to:

- minimise the likelihood of a fire happening
- aim for a fire to be extinguished within 4 hours
- minimise the spread of fire within the site and to neighbouring sites

J Denham Metals wish to store some combustible stockpiles, in pile sizes outside of the scope of Environment Agency guidance.

This is based on the nature of the business and the throughput of material required to meet manufacturing and export demand.

Alternative measures are in place below are described along with other key controls.

- Good Security
- Detecting stockpile temperatures and setting trigger temperatures
- Reducing risks from hot exhausts
- Robust waste acceptance procedures
- Water supply

J Denham Metals can demonstrate that with the below controls they demonstrate they can meet the 3 objectives.

1. Effective monitoring to detect hotspots within stockpiles that exceed EA guidance. The use of thermal imaging cameras, with trigger temperature alerts in place, 24hrs a day to notify site management of any hot spots, will enable effective early detection and fire action responses. The risk from localised ignition (hotspots) due to contamination is generally less likely in processed metals. This is because contaminants are removed before the processed material is stockpiled pending removal off site. Thermal cameras have a trigger temperature of 50°C. In the event waste material reaches the trigger temperature, trained staff would dismantle the pile and remove it to the quarantine area to allow cooling to take place.
2. Robust waste acceptance which prevents the risk of contaminated wastes entering the stockpile including manual source segregation at the acceptance stage then pre-processing.
3. Increased visual inspections of all stockpiles and bays conducted throughout the day, (every hour).
4. Maximum waste storage timescales are set at 30days for wastes stored in stockpiles that exceed FPP guidance. This will reduce the risk of mass self-heating within stockpiles and bays in that storage time period.
5. No plant or equipment will be stored within 6m of storage areas to reduce the exposure to any hot exhausts, with plant checked and cleaned daily.
6. The site does not have enough firefighting water, as set out in our fire prevention plan guidance to fight a fire within these stockpiles. However, the site has mains water, and the hydrant is within 100m of the waste piles. When the site is closed, there are enough staff on call to come to the site and operate plant and machinery to help the FRS as required.
7. All firefighting water was contained on site due to the site drainage isolation systems in place and emergency firewater response.
8. During out of hours periods, there are 7 nominated members on staff on call in addition to the Operator and immediate family who can come to the site and operate plant and machinery to help the FRS as required. Response time is estimated at 10 - 20minutes. All nominated personnel are trained fire Wardens ,fire emergency response , this FPP and are fully trained plant operators.

Table 5 below details the current stockpile sizes, type and location. These are also referenced in Drawing 003.2.

Table 5 – Current Stockpiles, Location and Sizes

YARD 1							
	Material type	**Storage method**	**Max tonnage stored**	**Max dimensions (Length x Width x Height)**	**Max duration on site**	**Control measures to reduce risk**	**Combustibility and Justification**
YARD 1	Undepolluted ELVs	Single stockpile	2 ELVs	N/A	48 hrs	Turnaround time within 24 hrs Located away from combustible materials with 6m separation CCTV and Thermal Imaging monitoring Daily checks	Combustible
YARD 1 ELV Storage area	Depolluted, baled ELVs	Stockpile	600m³	25m (w) x 5m (6l) x 4m (h)	3 months	N/A	Combustible
YARD 1 B4	Stainless Steel	Bay	162m³	4.5m (9w) x 9m (l) x 4m (h)	3 months	N/A	Non-combustible
YARD 1 B5	Alloys	Bay	162m³	4.5m (9w) x 9m (l) x 4m (h)	3 months	N/A	Non-combustible
YARD 1 B6	Aluminium	Bay	162m³	4.5m (9w) x 9m (l) x 4m (h)	3 months	N/A	Non-combustible
YARD 1 B7	Irony Ally	Bay	162m³	4.5m (9w) x 9m (l) x 4m (h)	3 months	N/A	Non-combustible
YARD 1 B8	Steel	Bay	162m³	4.5m (9w) x 9m (l) x 4m (h)	3 months	N/A	Non-combustible
Bays 4-8 may vary with the type of metals received depending on contracts and customer requirements, only these non-combustible metal types will be stored in this location.							
YARD 1 Building 1	Batteries	Bins (in covered	40m³	Battery Store dimensions: 5m x 6m x 3m	3 months	Located away from combustible	Combustible

		Battery Store)				materials with 6m separation CCTV and Thermal Imaging monitoring Daily checks	
YARD 1	Temporary Acceptance Stockpile (mixed metals)	Stockpile	96m³	6m (w) x 4m (l) x 4m (h)	8hrs	Constant inspection and monitoring throughout the day Area cleared half an hour prior to end of the working day CCTV and Thermal Imaging monitoring Daily checks	Potentially Combustible Low levels of contamination (eg: plastic attached to metals)
YARD 1 S1	Processed (No 1 & No 2)	Stockpile	3200m³	20m (w) x 20m (l) x 8m (h)	1 month	Located away from combustible materials with 6m separation CCTV and Thermal Imaging monitoring during and out of hours Daily checks including stockpile size and height	Potentially Combustible Low levels of contamination (eg: plastic attached to metals)
YARD 1 S2	Mixed metals (ferrous) Clean, uncontaminated metal scrap, including alloys, in bulk finished form (sheet, plate, beams, rods, and so forth)	Stockpile	2400m³	20m (w) x 15m (l) x 8m (h)	1 month	Located away from combustible materials with 6m separation Processed materials have minimal contaminates and incompatible materials	Non Combustible

	No residual contamination oils/cutting fluids **No contamination attached to metal types for example plastics/rubber**					CCTV and Thermal Imaging monitoring during and out of hours Daily checks including stockpile size and height	
YARD 1 S3	Processed Plate, Structural, No 1 and No2 Metals	Stockpile	2400m³	20m (w) x 20m (l) x 8m (h)	1 month	Located away from combustible materials with 6m separation Processed materials have minimal contaminates and incompatible materials CCTV and Thermal Imaging monitoring during and out of hours Daily checks including stockpile size and height	Combustible
YARD 1 Bay 3	Blue Steel	Bay	144m³	6m (w) x 4m (l) x 4m (h)	3 months	N/A	Non-combustible
YARD 1 Bay 2	Brake Disks	Bay	144m³	6m (w) x 4m (l) x 4m (h)	3 months	N/A	Non-combustible
YARD 1 Bay 1	Turnings/swarf	Bay	160m³	10m (w) x 4m (l) x 4m (h)	3 months	Located away from combustible materials with 6m separation bay walls CCTV and Thermal Imaging monitoring during and out of hours	Potentially Combustible

						Daily checks including stockpile size and height	
Buildings Yard 1 – Non-ferrous Building							
YARD 1	Copper	Bin	8m³	Bins: 1m x 1m x 1m	3 months	N/A	Non-combustible
YARD 1	Brass and Copper Radiators	Bin	2m³	Bins: 1m x 1m x 1m	3 months	N/A	Non-combustible
YARD 1	Brass	Bin	6m³	Bins: 1m x 1m x 1m	3 months	N/A	Non-combustible
YARD 1	Lead	Bin	10m³	Bins: 1m x 1m x 1m	3 months	N/A	Non-combustible
YARD 1	Electric Motors	Bin	20m³	Bins: 1m x 1m x 1m	3 months	N/A	Non-combustible
YARD 1	Household Cable	Bin	6m³	Bins: 1m x 1m x 1m	3 months	Located away from combustible materials with 6m separation CCTV and Thermal Imaging monitoring Daily checks	Combustible
YARD 1	Low Grade Cable	Bin	6m³	Bins: 1m x 1m x 1m	3 months	Located away from combustible materials with 6m separation CCTV and Thermal Imaging monitoring Daily checks	Combustible
YARD 1	Plastic	Bin	40 m³	6m x 2.5m x 2.5m	3 months	Located away from combustible materials with 6m separation CCTV and Thermal	Combustible

						Imaging monitoring Daily checks	

YARD 2							
Stockpile ref	**Material type**	**Storage method**	**Max tonnage stored**	**Max dimensions (Length x Width x Height)**	**Max duration on site**	**Control measures to reduce risk**	**Combustibility and Justification**
YARD 2 S1	Plate and Structural	Stockpile	3200 m^3	20m x 20m x 8m	3 months	N/A	Non combustible Mixed metals (ferrous) Clean, uncontaminated metal scrap, including alloys, in bulk finished form (sheet, plate, beams, rods, and so forth) No residual contamination oils/cutting fluids No contamination attached to metal types for example plastics/rubber
YARD 2 S2	Plate and Structural	Stockpile	3200 m^3	20m x 20m x 8m	3 months	N/A	Non combustible Mixed metals (ferrous) Clean, uncontaminated metal scrap, including alloys, in bulk finished form (sheet, plate, beams, rods, and so forth) No residual contamination oils/cutting fluids No contamination attached to metal

							types for example plastics/rubber
YARD 2 S3	Plate and Structural	Stockpile	6400 m^3	20m x 40m x 8m	3 months	N/A	Non combustible Mixed metals (ferrous) Clean, uncontaminated metal scrap, including alloys, in bulk finished form (sheet, plate, beams, rods, and so forth) No residual contamination oils/cutting fluids No contamination attached to metal types for example plastics/rubber
YARD 2 B1	Cable	Bay	120 m^3	6 lx 5w x 4h	3months	CCTV and Thermal Imaging monitoring Daily checks	Combustible
YARD 2 B2	Misc metals	Flexible Bay	120 m^3	6 lx 5w x 4h	3months	CCTV and Thermal Imaging monitoring Daily checks	Non-combustible
YARD 2 B3	Misc metals	Flexible Bay	120 m^3	6 lx 5w x 4h	3months	CCTV and Thermal Imaging monitoring Daily checks	Non-combustible
YARD 2 B4	Misc metals	Flexible Bay	120 m^3	6 lx 5w x 4h	3months	CCTV and Thermal Imaging monitoring Daily checks	Non-combustible
YARD 2	Misc metals	Flexible Bay	120 m^3	6 lx 5w x 4h	3months	CCTV and Thermal	Non-combustible

B5						Imaging monitoring Daily checks	
YARD 2 B6	Millscale (steel works)	Bay	120 m^3	6 lx 5w x 4h	3months	CCTV and Thermal Imaging monitoring Daily checks	Non-combustible
YARD 2 B7	Misc metals Punchings	Flexible Bay	120 m^3	6 lx 5w x 4h	3months	CCTV and Thermal Imaging monitoring Daily checks	Non-combustible

9.3 Storing waste materials in their largest form

Metal wastes are stored in their largest form in the designated acceptance stockpile. Treatment is then conducted, if required using a mechanical shear to cut the waste down to more manageable sections.

No fines materials are produced from this process.

9.4 Where Maximum Pile Sizes Do Not Apply

The below are where within FPP guidance maximum pile sizes do not apply for these types of waste.

9.4.1 Whole end of life vehicles (ELVs)

Unpolluted ELVs are typically delivered to the site by the last owner. Each vehicle is inspected prior to acceptance to ensure no concealed unauthorised items, and to assess the level of damage (E.g. to ensure engine damage does not mean fuel is leaking and blocking any leaks if necessary).

Removal of batteries

The battery is removed from each vehicle as the first stage of treatment to eliminate ignition risk from the battery short circuiting.

The battery will always be removed on the same day that the vehicle is accepted, as soon as possible on receipt.

The vehicle will not be mechanically handled/moved from where it was delivered on acceptance before the battery is disconnected and removed.

The vehicle is then stored outside the ELV and Non-Ferrous Processing Building pending depollution.

Batteries removed from ELVs are stored in the dedicated Battery Store (3-sided covered building).

ELV Storage

Engines are removed and stored for recovery/collection. Fluids are drained in accordance with the ELV Regulations (2003). Other parts and components are removed and sorted for onward recovery.

ELV shells are also accepted already depolluted for further treatment (baling) and onward recovery. Stacking of ELVs is not normally required due to volume, and in any case does not exceed 2 rows of 10 vehicles.

The ELV and Non-Ferrous Processing Building houses the ELV rig and the sorting/processing area for non-ferrous metals, with a small baling machine, a non-ferrous shear and a cable stripper in the building. The building also houses staff amenity facilities. Sorted/processed items are stored in containers bins/skips and bulk bags outside pending collection.

Depolluted vehicle shells are processed through the baler to a uniform size (bales).

Fire Prevention Controls

Batteries are removed as soon as practicable. Vehicles pending depollution waitoutside the shed at a clearance of >7m from the entrance.

All fluids are well drained and stored securely in accordance with the ELV regulations.

Fire extinguishers and water supply are available as an initial mitigation response.

Item/components removed are sorted and stored by type in containers (stillages/bins etc).

The baling machine, small shear and cable stripper are well maintained and not likely to spark.

Water in an IBC/bowser is available, kept beside the buildingentrance/work area.

9.4.2 Containers

FPP guidance states that sites storing waste in containers that can hold more than 1,100 litres, must be accessible so any fire inside it can be put out. In the event of a fire, these containers must be moved as soon as is reasonably practicable to prevent the fire spreading.

Other storage containers for non-combustible wastes are also shown on this drawing.

9.4.3 Non-Ferrous Waste Transfer Building

$3m^3$ containers are used to store waste inside the waste transfer building. They are constructed of heavy-duty steel which are fire resistant. Each container is measured approximately at.1m (l) x 1m (w) x 1m (h) = $3m^3$.

Each container contains non-ferrous metals and are non-combustible.[3].

These wastes are stored at their largest form or physical treatment carried out such as cut/crushed, using hand tools then baled, waste segregation is carried out using the grab or manual sorting only.

Incoming loads are placed onto the scale and weighed then segregated into the appropriate container. The tipping area is clear and free of waste at the end of the working day. This is to allow access to each container and to prevent any fire risk.

WEEE wastes will be treated in this area, with any components removed and placed into specific segregated storage containers and kept under cover.

9.4.4 External Storage

Low level general wastes removed from incoming loads will be stored in a dediacted skip in Yard 2.

Tyres are not actively accepted other than as part of ELV vehicles , if received they will be stored in a roll on off skip located in Yard 2.

Low levels of non combustible metal waste may be stored in continers along the southern border of Yard 2.

Site Layout drawing 003.2 shows the locations of these containers.

9.5 Moving containers in a fire

Access to all containers (that are being loaded for export off site) will be maintained at all times to allow for the extinguishing of any fire within a skip/container or for its removal to the quarantine area (fire prevention) as soon as is reasonably practicable.

Wastes being loaded into containers have a 1-2meter separation distance between each container.

In the event of a fire the use of onsite water suppression (IBC) can be applied using a crane. During working hours this should take 5 minutes.

Out of hours it is estimated that this would take 10-20 minutes to allow travel time for site management and access to site.

10.0 Prevention of the Spread of Fire

10.1 Separation Distances

All stockpiles of potentially combustible wastes are stored with a 6m separation distance from each other, the site boundary and a minimum 6m from potential sources of ignition (i.e. on-site treatment/processing operations, oils, fuels).

10.2 Fire Walls, Bays, Buildings and Stockpiles

The site, stores wastes both internally and externally in continues as detailed in Section 10.

The waste ELV & Non-Ferrous buildings are steel framed structure with steel panels.

Wastes stored inside the structures on an evening are stored in individual hopper skips as an additional fire prevention measure.

The workshop building is not used for the storage of waste.

10.3 Management of wastes stored in bays

Drawing 003.2 shows the bays that are allocated as being suitable for storage of combustible materials.

All bays are constructed of precast concrete walls or legio block walls which are manufactured to join seamlessly. The bay walls at the back border onto the site boundary fence and open fields beyond.

There is no requirement to have a 'freeboard' space of 1m minimum at the top and sides of the walls (throughout the waste pile) as bays containing combustible wates will be stored in between non-combustible metal wastes to prevent fire spread.

Site Management conducts a full site walk over at least 3 times per day. If any material was egressing an operative would be instructed to sweep it back. The materials are carefully segregated, and the area in front of the bays is kept clear for presentation of the site to customers accessing site to deliver loads.

The site deals in metallic wastes, and the fire risk from the materials accepted, handled, treated and stored is minimal. The company has however created bays for storage that not only help with good housekeeping but also to provide firebreaks. The concrete bay walls used on site have been audited by the F&RS, who had no further advice or guidance regarding separation of the walls and bays used.

Trees are pruned regularly by agricultural contractors to prevent overhang around the site perimeter.

The site deals in metallic wastes, and the fire risk from the materials accepted, handled, treated and stored is minimal. The company has however created bays for storage that not only help with good housekeeping but also to provide firebreaks. The concrete bay walls used on site have been audited by the F&RS, who had no further advice or guidance regarding separation of the walls and bays used.

There are two types of bays on site:

- Legioblock walls the walls are 4.5 meters in height. Legioblock walls have excellent fire-resistant properties. Legioblock holds A1 fire-resistant classification in compliance with REI 240 standards and is effective at least 4 hours. Legioblocks prevents fire outbreaks and fire propagation, preventing fire from further spreading.
- Concrete wall bays will only be used for the storage of combustible wastes if they are built from pre- stressed 180mm thick sections with a fire rating of 2 hours.

Using a crane, a bay could be emptied rapidly into a quarantine area (< 20-30 minutes). A fire in an individual bay could be tackled with IBCs of water, and then the F&RS, and is expected to be manageable within the 2 hour period. The crane can be used immediately to move material either to spread and cool, or away from an adjacent bay, although this is not anticipated to be necessary.

11.0 Quarantine Area

11.1 Quarantine Areas Location and size

The quarantine area is somewhere burning wastes can be moved to extinguish them. It can also be used for the storage of unburnt wastes into the quarantine area to isolate and prevent them catching fire if necessary.

The quarantine areas (fire prevention) are located 6m from the site boundary to prevent the risk of heat/fire spreading across the site boundary.

Drawing 003.2 clearly defines each quarantine area, indicating the required minimum 6m separation buffer that will be maintained during a fire event.

The quarantine area (fire prevention) will during normal site operations will be kept clear.

Yard 1 - quarantine area 1 is measured at 20(l) x15(w) x 6 (h) = 1800m^3. This area is measured and marked on the concrete surface to ensure the area is kept clear at all times, in the event a fire occurs.

The quarantine area (fire prevention) is large enough to hold 50% of the largest stockpile measured at 3200(m^3) of combustible waste.

Yard 2 - quarantine area 1 is measured at 20(l) x15(w) x 6 (h) = 1800m^3. This area is measured and marked on the concrete surface to ensure the area is kept clear at all times, in the event a fire occurs.

The quarantine area (fire prevention) for both yards is large enough to hold 50% of the largest stockpile of combustible waste.

11.2 How to use the quarantine area if there is a fire

A quarantine area is located within both operational areas.

11.2.1 Procedure to remove material stored temporarily if there is a fire

If safe to do so nominated trained staff can separate any burning waste from stockpiles into this area for active firefighting using the grab.

If safe to do so staff can also move fire damaged waste after a fire into this area to quarantine it from viable waste.

Access to all on-site skips/containers storing wastes will be maintained at all times to allow for the extinguishing of any fire within a skip/container or for its removal to the quarantine area (fire prevention) as soon as is reasonably practicable.

11.2.2 Waste Quarantine Area

A designated marked container is located in the bottom eastern corner of Yard 2 for the storage of unpermitted or contaminated waste prior to removal.

12.0 Detecting Fires

12.1 Detection systems in use

Identifying fires as quickly as possible makes the suppression of the fire easier and results in lesser damage to the environment and human health.

The below detection systems are in place on site.

12.2 CCTV & Thermal Imaging Cameras

Onsite CCTV cameras provide visual monitoring during operational hours and out of hours. Cameras cover all operational areas on site and all waste storage locations.

Active site monitoring and out of hours detection is as detailed in section 7.1 can detect a fire in its early stages to reduce its impact. The images are linked to the Operators mobile phone, to allow for early detection and notification of the fire service in case of alarm.

Thermal imaging cameras are strategically placed to monitor combustible stockpiles on site with focus on the stockpiles currently proposed to be stored outside of FPP guidance. They are fitted at a height of 7 meters to allow the capacity for active monitoring and focus on operational areas of the site including fixed and mobile plant.

Thermal cameras are located in Yard 1 along the western boundary and the eastern boundary. The eastern boundary has a fixed camera for the depollution area and a 360 degree camera that covers the yard from the ELV storage area, bays 4-8 and across the S1 stockpile.

Thermal cameras are located in Yard 2, two along the norther perimeter to cover stockpiles and the shear. One thermal camera covers the southern boundary, incorporating the hot works area, tyres and the stockpiles facing the southern boundary.

The thermal imaging cameras display temperatures on a monitor located within the site office. They are then further monitored during non-operational times by the Operator.

The thermal cameras target and detect temperature increases from the stockpiles. A trigger temperature of 50(°C) set, with a notification alert sent to the site and the escalation procedure will be implemented.

Where an increase of temperature is recorded over the trigger level, immediate action must be taken, all operations must cease, with waste either separated to allow the reduction in temperature or cooling using water suppression. Once the temperature of the waste has reduced to 40°C operations may commence.

Appendix 5 details the spec and features of the thermal camera systems. Cameras have the capacity to detect temperatures at a distance of 66m, which provide a full range of the larger stockpiles on site.

12.3 Fire Alarms

Fire alarms are installed in site offices and welfare areas. The alarm will detect smoke/fire within these locations and would audibly alert staff on site.

As previously detailed in Section 7.1, the fire alarms are also monitored 24/7 by the Operator. The Operator and key holders will alert the fire service out of hours in the event a fire alarm is activated.

The design, installation and maintenance of this detection system is covered by a UKAS-accredited third-party certification scheme.

12.4 Waste Storage Buildings

Within the nonferrous, WEEE and ELV transfer building there are CCTV and thermal cameras installed for visual fire and smoke detection with intruder detection sensors fitted.

Drawing 003.2 details the locations and layout of the detection/extinguisher equipment on the plant.

12.5 Fire Alarm Tests and Drills

Tests and drills are an important mechanism to ensure that the site is prepared for a fire. As such:

- Weekly fire alarm tests are carried out in the site offices;
- Fire drills take place six monthly to identify any weakness in the evacuation strategy on site; and
- Fire alarms are to be tested regularly in accordance with the manufacturer's recommendation.

13.0 Suppressing Fires

EA guidance states “If you store waste in a building, you must install a fire suppression system. This system should be proportionate to the nature and scale of waste management activities you carry out and the associated risks”.

No combustible wastes other than batteries and low levels of pre-processed WEEE are stored within a building.

Therefore, it is not proportionate to fit a specific suppression system into these buildings.

The site as the below equipment to suppress small fires or smouldering wastes on site.

13.1 Handheld Fire Extinguishers

Handheld firefighting equipment is provided in the building and will also be provided within mobile plant.

A 9kg or 6kg powder extinguisher is placed in each building and external storage areas as shown on drawing 003.2.

All mobile plant is fitted with 2kg dry powder fire extinguishers for fighting vehicle/equipment fires.

All fire extinguisher locations and types are shown on site maps located in these areas ,the site office, fitters building, and staff welfare area.

13.2 IBC,s

In Yard 1 IBC,s will be located in locations next to the ELV storage area and the storage bays long the western boundary to allow safe access to apply 1100lts of water to a small fire to act as a firefighting measure.

In Yard 2 IBC,s will be located next to the hot works area to allow safe access to apply 1100lts of water to a small fire to act as a firefighting measure.

This can be lifted using the forklift or the crane should application be required at height.

13.3 Mains Water Supply

The site is equipped with a mains water supply and a mains water connection is provided outside of the main workshop building.

The site is equipped with a standard 32mm mains water pipe supplying the site with mains water. A dedicated firefighting hose (100m) will be provided and maintained, allowing for water to be available and within reach of all waste storage locations in the event of a fire.

14.0 Firefighting techniques

The site must always have the resources available to fight a fire. These include:

- Plant to move waste around the site such as the 360 grab and forklift;
- Nominated staff (on-call for out of hours events);
- Available water supply;
- Fire Extinguishers; and
- Finances for the removal of fire damaged waste or water and any remediation costs.

In the event of a fire at the site, the class of fire will determine the action to be taken by the fire authorities.

14.1 Site information

To assist the authorities is managing a fire outbreak at the site, a copy of this FPP should be provided to the authorities as possible including the site layout plan and quantities and types of stored materials.

This document will be provided to the Emergency Services and site staff to access in an emergency. A copy of this document and drawings are located inside the office reception area.

14.2 Emergency Service Response

The local Fire and Rescue Service will assume full control for the approach to suppression/extinguishing of any fire once it is in attendance at the site.

The nearest fire station is located 4 miles from the site (Green Lane, Bishop Auckland, DL14 6RS). Attendance to site is estimated at approximately 5 minutes.

14.3 Onsite firefighting equipment

Fire extinguishers are situated around the site in key locations, they are also located at the entrance of the ELV and battery storage building for easy access, and next to the fuel storage areas.

14.3.1 Plant and Equipment Fires

All mobile plant is fitted with 2kg dry powder fire extinguishers for fighting vehicle, fixed and mobile equipment fires, so that trained staff can use to extinguish a small fire if safe to do so.

14.3.2 Separation and Segregation of Waste

Out of hours, site plant is stored externally. This is for security purposes and allows for safe access of equipment in the event of a fire.

If safe to do so, trained staff can separate unburned material from the fire using heavy plant using the 360 grab, or at the direction of FRS if used as an active firefighting measure.

14.3.3 Water

There is onsite water supply. A system of hose reels is located around the site, to apply water to any stockpiles. This can cool smouldering wastes or cool unburned material near this area if safe to access in the event of a fire.

If safe to do so, trained staff can separate unburned material from the fire using heavy plant using the 360 grab, or at the direction of FRS if used as an active firefighting measure.

14.3.4 IBCs

This area located in key locations around the site. Water can be applied from height using the cranes or lifted via the forklift to apply 1100 lts of water direct to the required burning material.

14.3.5 Quarantine Area

In addition, as discussed in Section 12 the quarantine area (fire prevention) will also be maintained and kept free of obstruction, to be used as either:

- An area for extinguishing burning materials
- An area for the segregating of unburnt materials away from a fire

14.4 Staff resources and training

All staff are fully trained in the use of the above firefighting equipment with regular toolbox talks and practical drill training. However, the company priorities the health and safety of all site staff, this equipment will not be used should a risk be posed to site staff.

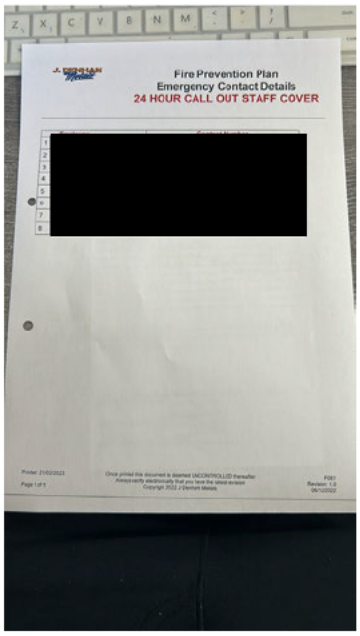
The site has trained Fire Marshalls on site who are responsible for the management of persons and site activities in the event of a fire. Certification expires after 3 years then re-certification is required.

Regular training as detailed in Section 2.5 ensures that staff are prepared and can respond safely when a fire occurs on site.

The site has 7 nominated staff on a rota basis who are able to attend site within 20 minutes in the event of an out of hours call.

See below call list. (Image 3)

Image 3 – Emergency Call List



All nominated personnel are trained in fire response, water suppression systems , this FPP and are fully trained plant operators.

14.5 Fire Fighting Techniques

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

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.

The emergency access routes to waste storage and quarantine areas in the event of a fire are shown in Drawing 003.2.

The firefighting procedure detailed below must be adhered to if a fire should break out on site.

14.6 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 manager as soon as possible.

1. In the event of an 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.

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.

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.

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

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

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

15.0 Water Supplies

15.1 On Site Supply

Main's supply is available on site, with hoses located next to the main building, with connecting reels located around key waste storage areas.

15.2 External Supply

The EA guidance for FPP requires that, for a 300m^3 stockpile, a total of 360,000 litres (360m^3) of water would be required in order to extinguish the fire.

One active fire hydrant is available directly inside of the site within 100m of all waste stockpiles.

The presence of the hydrant was confirmed by Durham Fire and Rescue Service in September 2021 and NWL (See Drawing 006).

15.3 Water supply required

Table 8 below details the largest stockpile on site and water supply required for a minimum of 3 hours.

As specified below and in Section 9 only combustible waste stored in stockpiles S1 & S3 are stored outside of EA guidance.

There is sufficient water supply from the nearest hydrant to fight a fire in respect to all other combustible stockpiles onsite with exception of Stockpile 3 (Yard 2).

Table 8 – Required water supplies

Maximum pile volume in cubic metres	Water supply needed in litres per minute Pile volumes x 6.67	Overall water supply needed over 3 hours in Litres Water supply x 180	Total water available on site in litres
2400m^3	16,008	2,881,440	360,000 (hydrant supply) x 3 1,080,000ltrs

The active hydrant nearest the site would provide 360,000ltrs water supply which is not sufficient currently to supply enough water for the overall firefighting of the largest stockpile. This hydrant would be used for the immediate water supply, with the below measures proposed as supported by the EA FPP Alternative Measures guidance detailed in Section 10.

In addition, the fire service has confirmed that, there are hydrants located approximately 700m to the east on West Auckland Road Grid Ref 421743,526250 and 1km Northwest on West Auckland Road grid ref 420350,527078.

Discussions with the Durham Fire Service confirmed on the 10th September that their response to fire on site would be to use the immediate hydrant located outside of the site, with the action taken to separate non burning material from the stockpile to reduce the pile. In the event the site is closed, there are sufficient staff on call to come to the site and operate plant and machinery to help the FRS as required, and to use plant to isolate burning material to reduce the requiring for water.

Durham Fire Service are fully trained to undertake a fire response and would implement additional hoses to hydrants or relay water via appliances to apply to burning wastes.

In addition to the immediate hydrant supply, FRS have updated the ORI to include the use of the appliance which carries an additional 500lts firefighting water.

In April 2021 an ORI (Operational Risk Information) was completed by Durham Fire and Rescue Service. This has been retained on their system with the request that this document and supporting drawings are provided to be included within this Risk Assessment.

15.4 Additional Water Supply

There is a wash out approx. 60m away ref 421259, 526196 that potentially could be used for FF purposes, but this is situated in the road so may unsuitable. The washout would give a peak flow of 900l/m, with the potential to increase this to 1500l/m at around 3 bar.

16.0 Managing Fire Water

All areas of the site area made up of concrete providing an impermeable surface.

Areas of made ground are kerbed. This acts as a bund to prevent contaminated fire water entering this area which could cause pollution.

16.1 Yard 1

The boundary of the site is fully bunded with concrete kerbing (120mm) to contain any fire water not contained within the drainage system. The site does have a gradual fall of approximately 25cm towards the Northwest boundary leading to collection drains. The collection drains run directly into the closed interceptor.

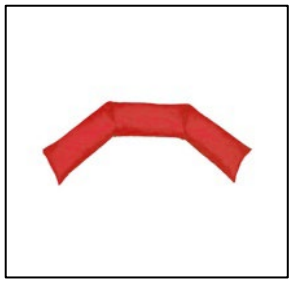
The boundary of the site is fully bunded with concrete kerbing (120mm) to contain any fire water not contained within the drainage system. The site does have a gradual fall of approximately 25cm towards the Northwest boundary leading to collection drains. This interceptor is closed off and retains all water on site.

An additional sealed tank and drains are also located along the southern boundary of Yard 1 which can store approximately 5000lts.

Any surface water accumulating on site, for example fire water used during a significant fire, is directed to the western portion of the site by a combination of the gradient of the impermeable concrete surface, concrete panel walls (sealed with the concrete surface) along the southern and western boundaries of the site.

Mobile Hydro Snakes will be implemented from the interceptor along to the weighbridge site entrance to act as a barrier to allow firewater to be contained on site (18m l x 4m w). This temporary wall will direct fire water into the drainage system and act as a temporary collection point. In conjunction with the bunds and kerbing of the site entrances this will prevent any contaminated fire water leaving site that may result in pollution to the external drainage system.

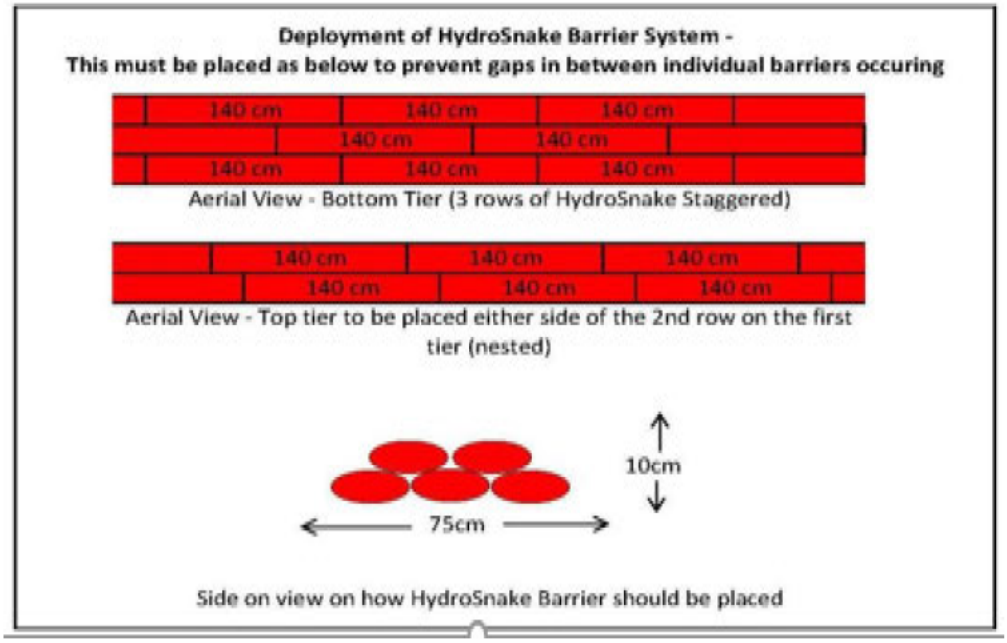
Image 5 - Hydro snakes



The Hydro snake system is a non-toxic and environmentally friendly alternative to sandbags, is provided around the site boundary to increase the height of the kerb and will allow additional firewater to be contained on site. The Hydro Snake systems are good at water absorption and can easily be stacked on top of each other depending on the volume of water required as shown in Image 6 below.

Access via either entrance point of the site is still accessible for emergency services using this control system.

Image 6 – Hydro Snake System



In the event of a fire where the Fire and Rescue Service attend, they will manage firewater that is produced. However, subject to staff safety, site personnel will already have deployed surface water drains covers to prevent firewater entering the external surface water system and will arrange for the below fire water response.

Total Recycling are contracted to attend site upon an incident to provide support to recover fire water from the site. The Hydrosnake bund will be installed across the location of the interceptor chambers. The interceptor will be closed off (outside of the site) , and the marked manhole (M1) will be opened to direct water into the three available 25ft chambers. Total recycling will then attend site on a 24hr call out to then pump fire water safely from the open chamber (M1) to tanker all water to prevent the escape of water off site.

Wastewater is then taken to Total Recycling for further recovery.

Total Recycling – Emergency Contacts

CONTACT 1 - [redacted]

CONTACT 2 - [redacted]

CONTACT 3 - [redacted]

Image 7 – Chamber (M1)

Drain covers and Hydro Snakes will be deployed by a person/s nominated by the site management in and outside of working hours. The equipment will be removed from the dedicated storage location and placed in the relevant locations as quickly as possible to prevent firewater from escaping the site. Full training, testing and a formal procedure will be produced in respect to this system.

The site surface area of Yard 1 is measured at approximately 840m^3.

Volume of Firewater Contained within Yard 1 is calculated as per the below.

Average Site Length (m) 100 x Average Site Width (m) 70 x Water Depth (m)* 0.12

= Site Volume (litres) 840,000lts plus tank 5000lts = 845,000lts.

Combined with the measures of the tertiary containment of water in Yard 1 by modifying the site boundary to make a temporary containment area to divert water to be tankered off, with internal the drainage system and site surface area, there is sufficient water storage capacity and control to manage the risk of fire water from leaving site.

16.2 Yard 2

The boundary of Yard 2 is fully bunded with concrete walls to contain any fire water not contained within the drainage system. The site does have a gradual fall of approximately 25cm into the centre of the site to the collection drains. Site surfaces will be kept clean and clear to allow the drains to remove clear and free from obstruction to allow effective water collection in the event of a fire.

The drainage system in Yard 2, is considered to be the optimum system solution with surface water containing oily deposits collected by an impermeable pavement and transported by an impermeable pipeline network to an Oil Bypass Separator which is currently closed off and does not release any water off site.

The site surface area of Yard 2 is measured at approximately 820m^3.

Volume of Firewater Contained within Yard 2 is calculated as per the below.

Average Site Length (m) 114 x Average Site Width (m) 60 x Water Depth (m)* 0.12

= Site Volume (litres) 820,000lts plus 5000lts litre storage within the closed interceptor tank = 825,000lts.

One section of the yard has an opening where vehicles, empty skips and plant are stored. This area is made up of hardstanding. In the event of a fire, sandbags will be implemented to prevent the escape of any fire water.

16.2.1 Remediation

Each Hydro Snake measures up to 1.45m in length when activated. They are safe and easy to dispose of; and the super-absorbent polymer and pulp are both environmentally friendly. After use, the contents can be dispersed into a sealed container to allow for sampling to identify the suitable disposal route, if contaminated. Hydro snakes are widely used for water redirection & pollution control.

As part of the monthly FPP checks, the sandbags and hydro snakes will be checked for damage and integrity to ensure they are in good condition to provide effective pollution prevention.

Any damaged sandbags will be replaced within 24hrs, with the waste sandbags sent to a suitable permitted facility for recovery.

16.3 External Drainage

To retain water within the system and on site form Yard 1, a bund consisting of concrete (120mm) is installed across both the site exit point (lowest point), with kerbing along the northern boundary to protect unmade surfaces and additional hydra snakes to cover the gate area which cannot be kerbed.

Kerbing is shown on Drawing 005. In addition, the hydro snake wall will be installed inside the northern boundary of Yard 1 (Shown in Image 8 below). This is to address the fall at the site entrance to reduce the risk of any contaminated fire water leaving site and to continue water for removal by Total Recycling Ltd.

Image 8 – Pollution control

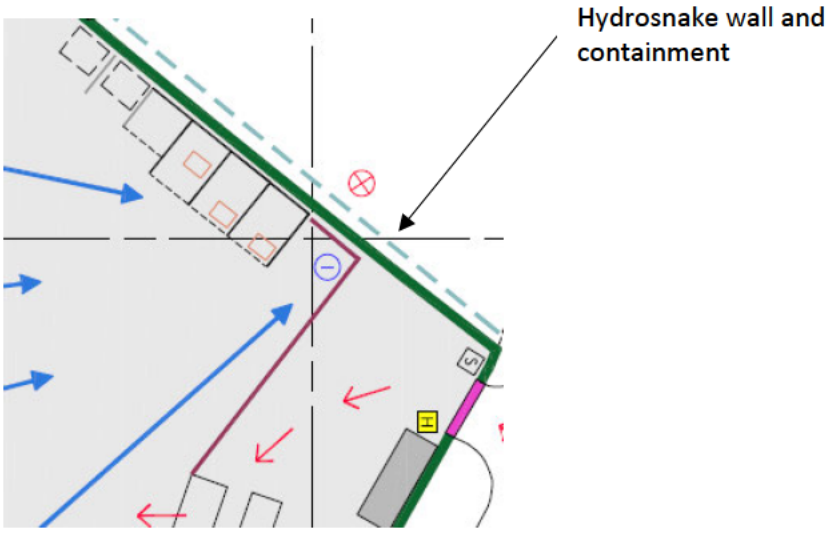
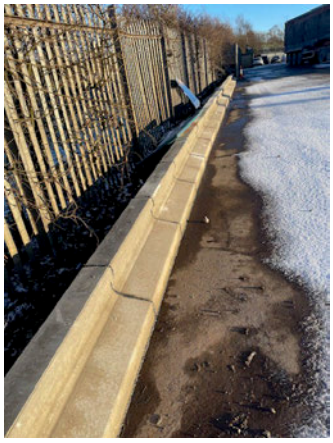


Image 9 – Kerbing (Northern Boundary)



As a preventative measure external drains located outside of the main entrance of Yard 1 along the main road, will be covered with a dammit mat to further reduce the risk of any contaminated fire water entering the external system. Dammit mats are stored at the site entrance in a dedicated container.

Yard 2 has vehicle access route to an additional area of land which is used for plant parking. Although there is limited waste stored near to this opening and the yard falls to the middle of the yard to the internal drains, to prevent the risk of any fire water a sandbag wall will also be implemented should fire occur along the southern boundary.

16.4 Drainage Management

Total Waste Recycling currently provide support for the drainage system if required and can provide an emergency response in the event contaminated water is to be removed off site to a suitably permitted facility.

Regular maintenance of drainage system must be carried out to ensure the effectiveness of the above system.

Aside from Site Management inspecting the site a minimum of three times during operational hours, impermeable concrete paving, gullies and sealed drainage system are inspected for gully blockages, paving imperfections and drainage issues in accordance with the Daily Site Inspection Report. This also includes the inspection of the site's two interceptor holding tanks by checking the depth of accumulated water/oils within the system as well as ensuring no oil carry through is occurring. This also ensures the management of interceptor capacity to ensure they do not over top and can cope in the event of a fire.

Each interceptor holding tank is marked at a 50cm depth from the top of each inspection chamber to act as a capacity indicator, this will then trigger water removal from the relevant tank.

The holding tank in Yard 1 is also inspected monthly to ensure capacity is not breached and the drains and water storage remain effective.

Drains and gulley's will be kept free of debris to prevent blockages which also would impact the effectiveness of the system.

17.0 During and after an incident

On the discovery or suspicion of a fire:

- Activate the nearest fire alarm;
- Initiate evacuation of staff and visitors on site to the muster point and instruct delegated person(s) to conduct a rollcall to ensure all site users are accounted for;
- If trained and safe to do so, attempt to tackle the fire using one of the site's fire extinguishers or segregate smouldering/burning waste;
- Where attendance of the local Fire and Rescue Service is required, dial 999 to call the Fire Brigade;
- A nominated staff member will close the interceptor off to prevent the release of any potential fire water;
- The Operator (or other responsible person) will make an assessment of the prevailing wind direction, contacting the critical receptors shown on Drawing 004 dependant on the receptors that may be affected;
- Operator contacts the EA on 0800 80 70 60.

17.1 Active fire fighting

If safe to do so staff may try to suppress a small fire using fire extinguishers or by using site plant to segregate and separate burning waste.

Fire extinguishers are located and maintained at the fire action points around the site and within the cabs of site plant/vehicles.

Instruction signs on the use of extinguishers and suitability of each type of extinguisher are kept adjacent to the extinguishers.

17.2 Visitors/Staff

On hearing the fire alarm:

- Leave the site quickly and calmly via the site's or office main entrance, closing all doors behind you;
- Report to the Operator/Fire Warden at the assembly point located outside of the main entrance;
- Do not take risks;
- Do not stop to collect personal belongings; and
- Do not re-enter the site for any reason unless authorised to do so.

Fire action notices are located and maintained at various points around the site to remind staff of the actions to be taken in the event of discovering a fire or hearing the fire alarm.

17.3 Receptors

Local receptors must be notified via telephone or verbally, if staff are able to attend local businesses or properties as described in Section 6.4.2.

17.4 Deliveries to site

Contact will be made with customers to stop incoming collections for the next 24hrs or until site management have cleared the site as operational.

17.5 Making the site operational after a fire

After a fire event, the following procedure will be implemented depending on the severity of the fire.

17.5.1 After a small fire

A fire dealt with in-house using suitably trained staff and firefighting equipment located on site is classed as a small fire.

The fire will be recorded in the site diary and an Incident Record produced which will include the causes of the fire and methods used to manage the fire. An assessment will be carried out to determine whether further mitigation measures could have prevented the fire. Any outcomes to be implemented on-site will be incorporated within updates to this FPP, as required.

The incident and the results of the above assessment will be forwarded to the EA, with any updates to the FPP and the site's EMS made if required.

17.5.2 After a large fire

A fire that requires the presence of the Fire and Rescue Service is classed as a large fire.

If the site has been told to evacuate or cease operations by the EA and/or Fire and Rescue Service, site management and staff will wait until instructed that it is safe to re-enter the site and resume operations. The fire will be recorded in the site daily check sheet and an Incident Record Form with details of the cause of the fire and methods used to manage the fire. An assessment will be carried out to determine whether further mitigation measures could have prevented the fire. Any outcomes to be implemented on-site will be incorporated within updates to the FPP and the site's EMS as required.

Should damage be sufficient to prevent permitted operations at the site, the site will cease accepting waste and will divert deliveries to a suitably licensed facility, in accordance with the contingency planning provisions.

The Operator will liaise with the EA to determine a plan-of-action to recommence permitted operations at the site, and the timescales involved to achieve this.

17.6 Contaminated Fire Water

Total Waste Recycling will provide support in an emergency. In the event contaminated water is to be removed off site the company can provide an emergency response and remove any contaminated water to a suitably permitted disposal site.

17.7 Fire Damaged Waste

A visual assessment will be carried out by the Operator to determine whether the waste can continue to be stored on-site. Wherever possible, unburnt wastes will be separated from fire damaged piles. If waste piles have become mixed, then it is likely that the waste will be removed from the site for disposal.

Any fire damaged waste will be removed from the site within 24 - 48 hours to a suitably permitted facility.

Any quarantined waste, waiting for removal from site, is stored in the quarantine area to prevent the contamination of unburnt wastes on-site.

18.0 Conclusion

This Fire Prevention Plan is considered to be a 'working' document that will be reviewed and updated annually or as required should any of the following occur:

- a fire on site;
- the results of any testing of this FPP indicate that changes are required;
- a change or review of legislation; or
- if the site is instructed to do so by the EA.

It will be the responsibility of the Operator or nominated person to maintain this Fire Prevention Plan and to ensure it is adhered to both to limit the risk of a fire occurring on-site and in the event of a fire on- site.

Any updates to this FPP, either as a result of specific incidents or identified during its testing/review, will be submitted to the EA for its approval prior to implementation of the proposed changes at the site.

Drawings

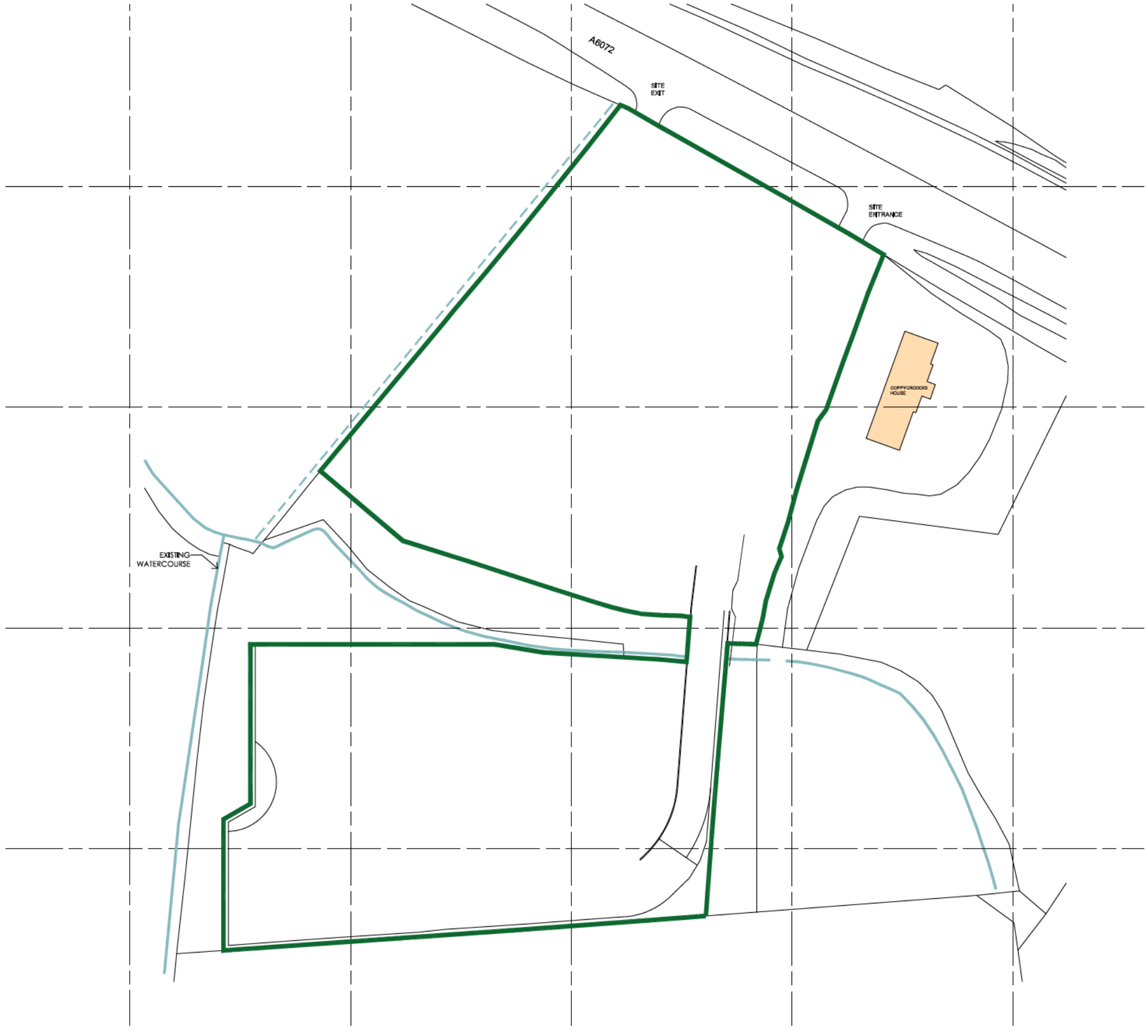
Drawing 001 Site Location

Drawing 003.2 Fire Prevention layout plan

Drawing 004 Site Receptors

Drawing 005 Site drainage and plant location plan

Drawing 006 Hydrant Locations



0m 10m 20m 30m 40m 50m

NOTES

DRAWING IS A SITE SCHEMATIC

LEGEND

SITE BOUNDARY

N
W E
S

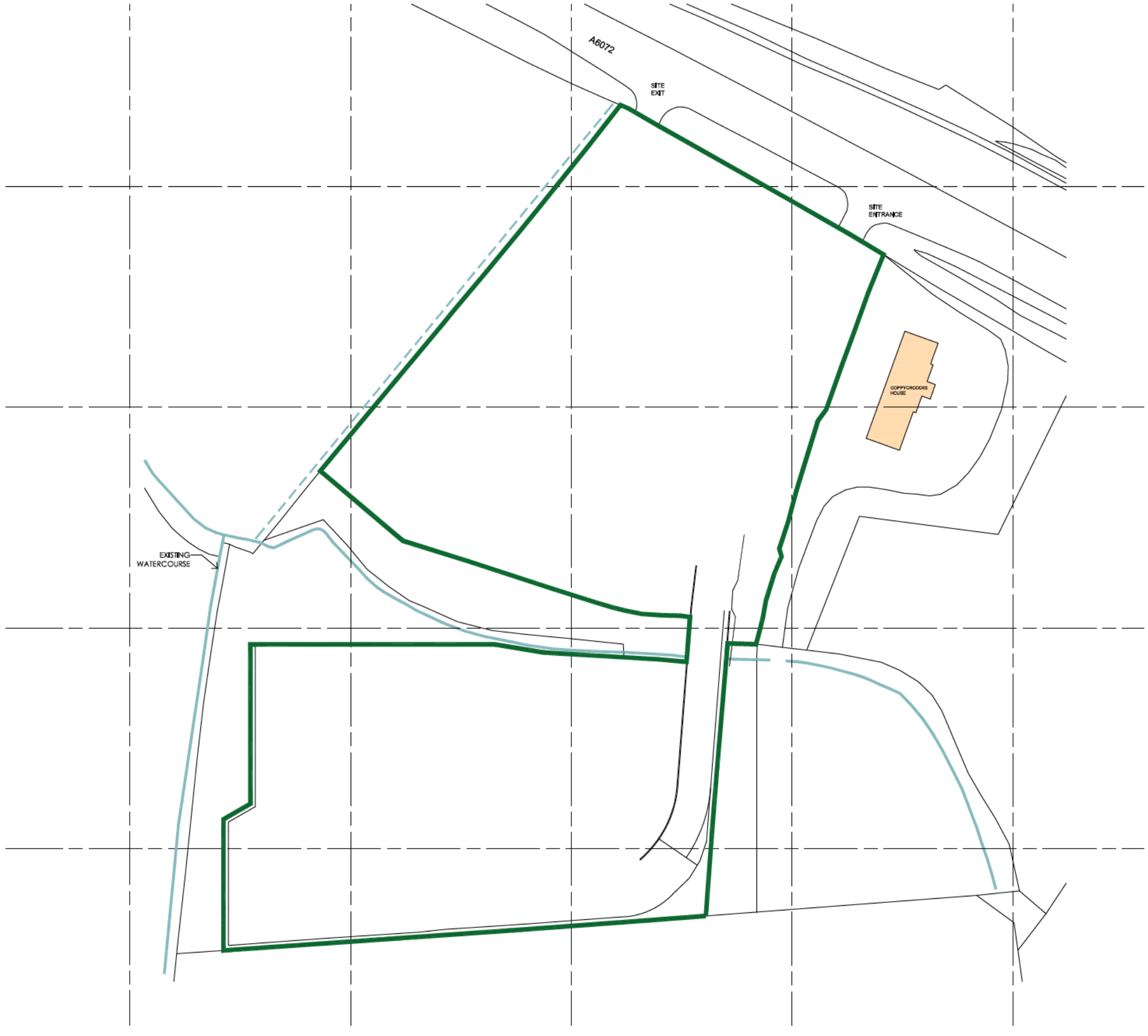
SITE
J DENHAM METALS LTD.
WEST AUCKLAND ROAD, BISHOP AUCKLAND, DL14 9PN

PROJECT
EA Permit Application

DRAWING TITLE
PROPOSED PERMITTED AREA PLAN

DRAWING NUMBER	REVISION
002A	**1**
SCALE	DATE
1:1000 @ A3	**12.10.21**

OLIVE Compliance



0m 10m 20m 30m 40m 50m

NOTES

DRAWING IS A SITE SCHEMATIC

LEGEND

SITE BOUNDARY

N
W E
S

SITE
J DENHAM METALS LTD.
WEST AUCKLAND ROAD, BISHOP AUCKLAND, DL14 9PN

PROJECT
EA Permit Application

DRAWING TITLE
SITE LOCATION PLAN

DRAWING NUMBER	REVISION
001	**1**
SCALE	DATE
1:1000 @ A3	**12.10.21**

OLIVE Compliance

NOTES

DRAWING IS A SITE SCHEMATIC

ANY ANOMALIES ON THIS DRAWING SHOULD BE BROUGHT TO THE ATTENTION OF OLIVE COMPLIANCE

LEGEND

- PERMIT BOUNDARY
- BUILDING
- CONCRETE SURFACE
- QUARANTINE AREA
- STORE
- SKIP / BIN
- EQUIPMENT
- CONCRETE BLOCK WALLS
- 1.2M HIGH MILD STEEL SEPARATION FENCE
- H — FIRE HYDRANT
- I — INTERCEPTOR SHUT OFF VALVE
- F — DOUBLE SKINNED FUEL TANK
- SITE DISCHARGE POINT
- RECEIVING SURFACE WATER DITCH
- SURFACE WATER BODY
- THERMAL IMAGINING CAMERA
- DRAIN
- COMBUSTIBLE STORAGE
- SPILL KITS
- Q — QUARANTINE SKIP
- DIESEL TANK
- M — MOBILE PLANT STORAGE OUT OF HOURS
- CONTAINER LIFT
- CONCRETE WALLS AND BAYS

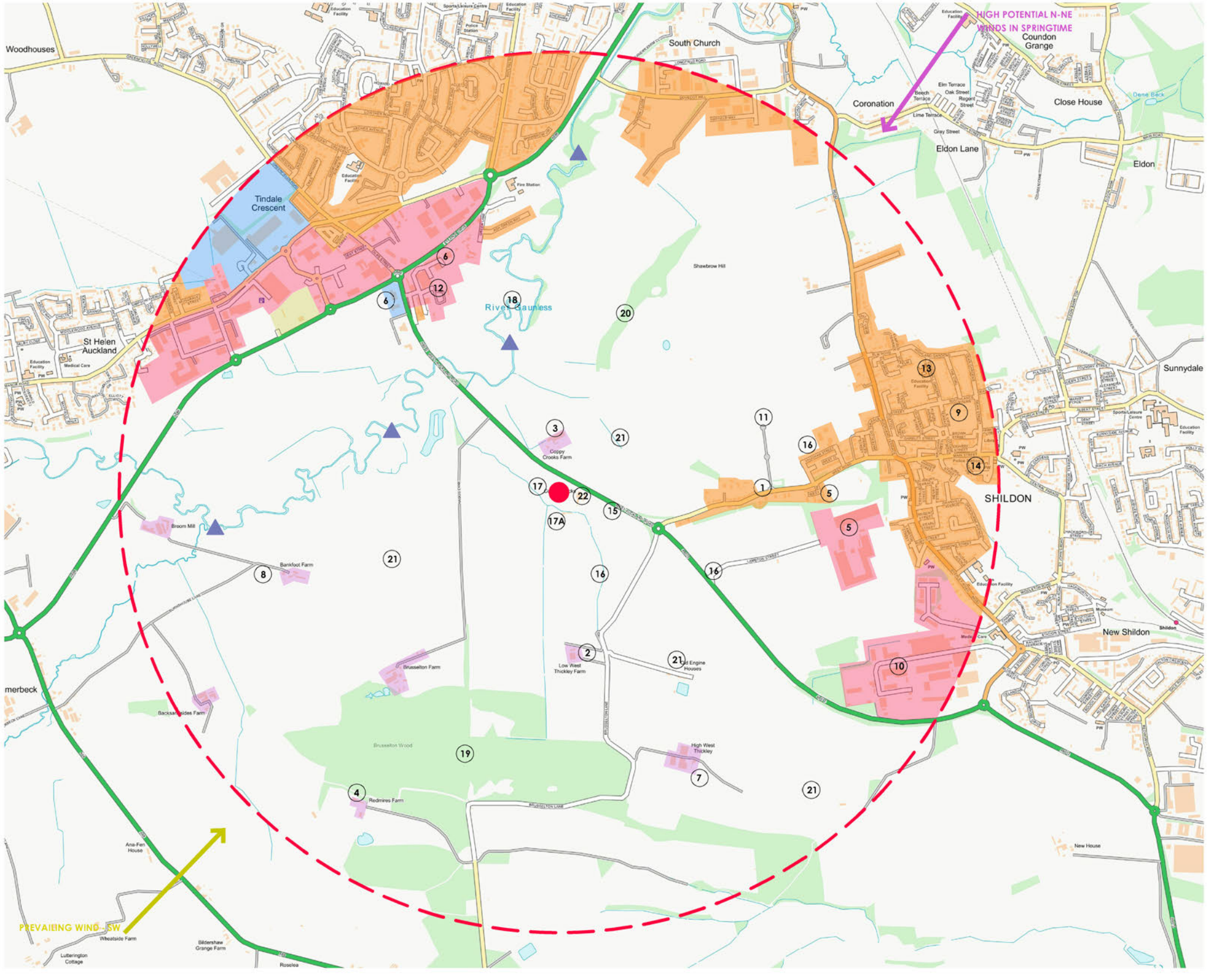
SITE
J DENHAM METALS LTD.
WEST AUCKLAND ROAD, BISHOP AUCKLAND, DL14 9PN

PROJECT
EA Permit Application

DRAWING TITLE
SITE LAYOUT PLAN V2

DRAWING NUMBER	REVISION
003	**3**
SCALE	DATE
1:1000 @ A3	**08.03.22**

OLIVE Compliance



NOTES

LEGEND

- SITE / SITE BOUNDARY
- 1KM OFF SET BOUNDARY
- RIVER GAWNLESS
- RESIDENTIAL AREAS
- INDUSTRIAL / INDUSTRIAL PARK
- SPORTS FACILITIES / RECREATIONAL
- RETAIL PARK / SUPERMARKETS / FOOD OUTLET
- FARM BUILDINGS
- (1) MAP REFERENACE

N
W E
S

SITE
J DENHAM METALS LTD.
WEST AUCKLAND ROAD, BISHOP AUCKLAND, COUNTY DURHAM
DL14 9PN

PROJECT
EA Permit Application

DRAWING TITLE
Site Receptor Plan

DRAWING NUMBER	REVISION
004	**1**
SCALE	DATE
1:10000 @ A3	**12.10.21**

OLIVE Compliance

NOTES

DRAWING IS A SITE SCHEMATIC

LEGEND

- PERMIT BOUNDARY
- BUILDING
- 1.2M HIGH MILD STEEL SEPARATION FENCE
- FIRE HYDRANT
- CONCRETE SURFACE
- INTERCEPTOR SHUT OFF VALVE
- SITE DISCHARGE POINT
- RECEIVING SURFACE WATER DITCH
- SURFACE WATER BODY
- SURFACE DRAINAGE FLOW
- UNDERGROUND DRAIN RUN
- INTERCEPTOR
- INSPECTION CHAMBER
- DRAINS / GULLYS
- KERBING

N
W
E
S

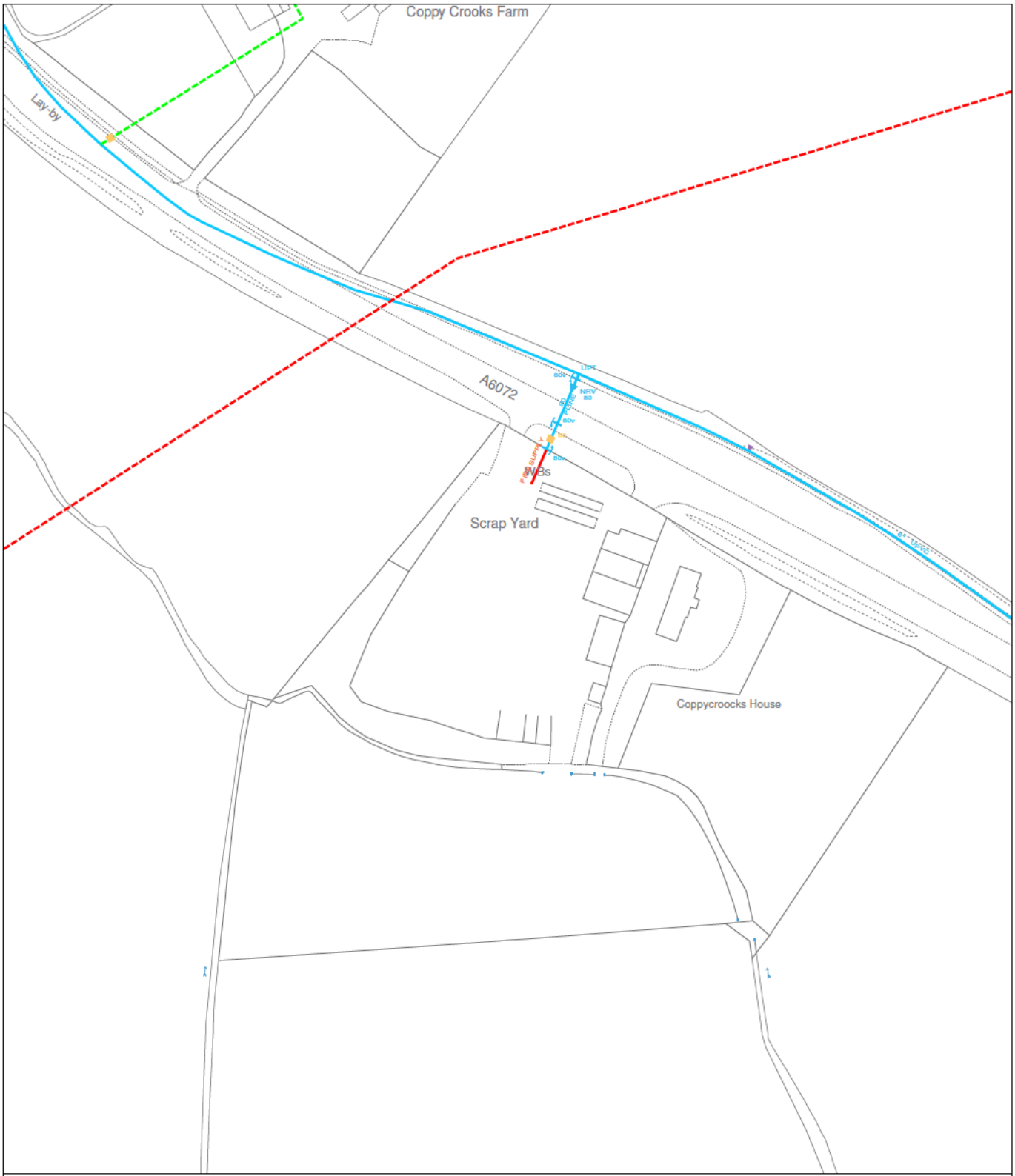
SITE
J DENHAM METALS LTD.
WEST AUCKLAND ROAD, BISHOP AUCKLAND, DL14 9PN

PROJECT
EA Permit Application

DRAWING TITLE
SITE DRAINAGE AND MOBILE PLANT STORE PLAN

DRAWING NUMBER	REVISION
005	**4**
SCALE **1:1000 @ A3**	DATE **20.12.2023**

OLIVE Compliance



Valves/Regulators | Fittings/Symbols | Storage/Operations

Network Types: Distribution, Treated, Raw, Fire, Supply

Specific Main Types: Abandoned Asbestos, Abandoned, Out of Commission, Private, Proposed

Area Types: Water Quality, District Metering, Easement

NORTHUMBRIAN WATER *living water*

User : [redacted]

Date : 27/09/2021

Title : 0000

Centre Point : 421014,526259

Map Sheet : NZ2126SW

20 m

Annex 1

Vehicle Recycling Fire Water Position Statement

[redacted]

From: [redacted]@ddfire.gov.uk>
Sent: 12 February 2021 12:03
To: [redacted]
Subject: RE: J Denham Metals - West Auckland Road - Fire & Rescue Service Information

Hi [redacted]

As the regulatory body, the EA would be best placed to comment on the legal obligations of the business owner, and whether they must inform the EA of any fire.

However, at an incident, we would inform and liaise with the EA as a matter of course to assess the environmental impact and identify sources, pathways and receptors. We would then all work collaboratively to ensure those affected are suitable warned and informed.

Thanks

[redacted]

From: [redacted]@Mayer-Enviro.com>
Sent: 12 February 2021 10:52
To: [redacted]@ddfire.gov.uk>
Subject: RE: J Denham Metals - West Auckland Road - Fire & Rescue Service Information

Thanks [redacted],

One final question… in the event of a fire where the Fire Service deployed, who would be responsibility for calling nearby receptors and key stakeholders (e.g. police, council)? Would this fall under the remit of the Fire Service or J Denham Metals?

I have assumed that it is J Denham Metals' responsibility to contact the Environment Agency.

Thanks

Kind Regards

[redacted] **Environmental Consultant**
BSc (Hons), Chartered Resource and Waste Manager (MCIWM), Technical Competent Manager (TCM)

T: [redacted]
M: [redacted]
E: [redacted]@mayer-enviro.com
A: **Transport Avenue, Brentford, Middlesex, TW8 9HA**
W: **www.mayer-enviro.com**

From: [redacted]@ddfire.gov.uk>
Sent: 12 February 2021 10:33
To: [redacted]@Mayer-Enviro.com>
Subject: RE: J Denham Metals - West Auckland Road - Fire & Rescue Service Information

ALERT: This message originated outside of EMR's network. BE CAUTIOUS before clicking any link or attachment.

Hi [redacted]

At present we don not have a specific risk assessment for Denham Metals.

All our appliances carry environmental protection packs and we also have a hazardous materials and environmental protection vehicle that will attend if required.

Thanks

[redacted]

From: [redacted]@Mayer-Enviro.com>
Sent: 12 February 2021 09:55
To: [redacted]@ddfire.gov.uk>
Cc: [redacted]@ddfire.gov.uk>
Subject: RE: J Denham Metals - West Auckland Road - Fire & Rescue Service Information

CAUTION: This email originated from outside of CDDFRS. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Morning [redacted]

Thanks for the confirming.

Couple additional questions:

- Do you have a risk assessment for attending/suppressing fires at J Denham Metals? If so, can I have a copy of this?
- How frequently do you attend site to review the risk assessment?
- If attending site to suppress a fire, would you bring pollution control measures (e.g. polybooms, drain mats) to site?

Thank you

Kind Regards

[redacted] **Environmental Consultant**
BSc (Hons), Chartered Resource and Waste Manager (MCIWM), Technical Competent Manager (TCM)

T: [redacted]
M: [redacted]
E: [redacted]@mayer-enviro.com
A: Transport Avenue, Brentford, Middlesex, TW8 9HA
W: www.mayer-enviro.com

mayer environmental

CERTIFIED ISO 9001 · ISO 14001 ISO 45001 UKAS MANAGEMENT SYSTEMS 001

CIWM Affiliated Organisation 2021

From: [redacted]@ddfire.gov.uk>
Sent: 11 February 2021 14:28
To: [redacted]@Mayer-Enviro.com>
Subject: RE: J Denham Metals - West Auckland Road - Fire & Rescue Service Information

ALERT: This message originated outside of EMR's network. BE CAUTIOUS before clicking any link or attachment.

Hi,

It's an outlet on the main that Northumbria Water can use to flush the main.

Thanks

[redacted]

From: [redacted]@Mayer-Enviro.com>
Sent: 11 February 2021 13:03
To: [redacted]@ddfire.gov.uk>
Cc: [redacted]@ddfire.gov.uk>
Subject: RE: J Denham Metals - West Auckland Road - Fire & Rescue Service Information

CAUTION: This email originated from outside of CDDFRS. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi [redacted]

Thanks for this information.

Apologies for my ignorance, but what is a washout?

Thank you

Kind Regards

[redacted] **Environmental Consultant**
BSc (Hons), Chartered Resource and Waste Manager (MCIWM), Technical Competent Manager (TCM)

T: [redacted]
M: [redacted]
E: [redacted]@mayer-enviro.com
A: **Transport Avenue, Brentford, Middlesex, TW8 9HA**
W: **www.mayer-enviro.com**

mayer environmental

CERTIFIED ISO 9001 · ISO 14001 ISO 45001 UKAS MANAGEMENT SYSTEMS 001

CIWM Affiliated Organisation 2021

From: [redacted]@ddfire.gov.uk>
Sent: 11 February 2021 12:53
To: [redacted]@Mayer-Enviro.com>
Cc: [redacted]@ddfire.gov.uk>
Subject: RE: J Denham Metals - West Auckland Road - Fire & Rescue Service Information

---

Hi [redacted]

Please responses below:

- Are there any hydrants onsite which you would use to suppress fires on site?
- If so, approximately how far away are they located?
- What are the water pressures?

We are unaware of any hydrants on site, there are hydrants approximately 700m to the east on West Auckland Road Grid Ref 421743,526250 or 1km North West on west Auckland Road grid ref 420350,527078. The pressures at these hydrants would be dependant on usage elsewhere and can fluctuate.
There is a wash out approx. 6om away ref 421259, 526196 that potentially could be used for FF purposes but this is situated in the road so may unsuitable. The washout would give a peak flow of 900l/m, with the potential to increase this to 1500l/m at around 3 bar.

- Would you propose completing a controlled burn or full suppression?

This would be dependant on what is involved, what is at risk, wind direction and the severity of the fire.

- Would you recirculate the firewater generated on site?

This is an option to reduce run off, however would not be an immediate action.

Hope this helps

[redacted]

From: [redacted]@ddfire.gov.uk>
Sent: 09 February 2021 10:00
To: [redacted]@ddfire.gov.uk>; [redacted]@ddfire.gov.uk>
Subject: FW: J Denham Metals - West Auckland Road - Fire & Rescue Service Information

Hi [redacted], I meant to mention this earlier this morning, I know you have loads on but can you please have a look at this and respond to [redacted].

Just basic info for each of the points would suffice,

Thanks,

[redacted]

From: [redacted]@Mayer-Enviro.com>
Sent: 08 February 2021 14:50
To: [redacted]@ddfire.gov.uk>; [redacted]@ddfire.gov.uk>; [redacted]@ddfire.gov.uk>; [redacted]@ddfire.gov.uk>; [redacted]@ddfire.gov.uk>
Subject: J Denham Metals - West Auckland Road - Fire & Rescue Service Information

Good afternoon

I spoke to a colleague earlier this afternoon about work I am completing for J Denham Metals.

As discussed, I am working on behalf of J Denham Metals (located on West Auckland Road) in updating their Fire Prevention Plan at the request of the Environment Agency.

Please can I have the following information regarding the Fire & Rescue Service approach in suppressing a fire on site:

- Are there any hydrants onsite which you would use to suppress fires on site?
- If so, approximately how far away are they located?
- What are the water pressures?
- Would you propose completing a controlled burn or full suppression?
- Would you recirculate the firewater generated on site?

Also, as I'm taking over this work from an ex-colleague of mine (who wasn't particularly good at saving things from emails!), if you have any correspondence/risk assessment/visit report for J Denham Metals Ltd, I'd really appreciate you sending this over too.

Thanks in advance

Thank you

Kind Regards

[redacted] **Environmental Consultant**
BSc (Hons), Chartered Resource and Waste Manager (MCIWM), Technical Competent Manager (TCM)

T: [redacted]
M: [redacted]
E: [redacted]@mayer-enviro.com
A: **Transport Avenue, Brentford, Middlesex, TW8 9HA**
W: **www.mayer-enviro.com**

The contents of this message are confidential intended for the named addressee. If you are not the named addressee you should not disseminate or copy this e-mail. Please notify the sender immediately if you have received this e-mail by mistake and delete the e-mail from your system. Any views or opinions presented in this message are solely those of the author and do not necessarily represent those of County Durham and Darlington Fire and Rescue Service.

E-mail transmission cannot be guaranteed to be secure or error free as information could be intercepted, corrupted, lost or destroyed, arrive late or incomplete, or contain viruses. County Durham and Darlington Fire and Rescue Service nor the sender accepts liability for any errors or omissions in the content of this message or any viruses it may contain, it is the recipient's responsibility to scan the message and attachments (if any). If verification is required please request a hard-copy version.

The contents of this message are confidential intended for the named addressee. If you are not the named addressee you should not disseminate or copy this e-mail. Please notify the sender immediately if you have received this e-mail by mistake and delete the e-mail from your system. Any views or opinions presented in this message are solely those of the author and do not necessarily represent those of County Durham and Darlington Fire and Rescue Service.

E-mail transmission cannot be guaranteed to be secure or error free as information could be intercepted, corrupted, lost or destroyed, arrive late or incomplete, or contain viruses. County Durham and Darlington Fire and Rescue Service nor the sender accepts liability for any errors or omissions in the content of this message or any viruses it may contain, it is the recipient's responsibility to scan the message and attachments (if any). If verification is required please request a hard-copy version.

ANNEX 2

Waste Acceptance Procedures

Waste Acceptance Procedure

Environmental Permit EPR/CB3403MU

Version 1: February 2021

J Denham Metals Ltd
Coppycrooks Yard
West Auckland Road
Shildon
County Durham
DL14 9PN

Tel: 01388 772892

Introduction

This standalone Waste Acceptance Procedure document is an expanded version of that detailed in the Working Plan (June 2020) which was submitted to the Environment Agency on 30th June 2020. This Waste Acceptance Procedure applies to all operations outlined in Table S1.1 in the Environmental Permit (EPR/CB3404MU).

Review of Document

This standalone Waste Acceptance Procedure will be reviewed in line with the Working Plan and wider environmental management system (EMS) due to the intrinsic link between the documents. As such, any amendments within the EMS will also be reflected in this standalone document.

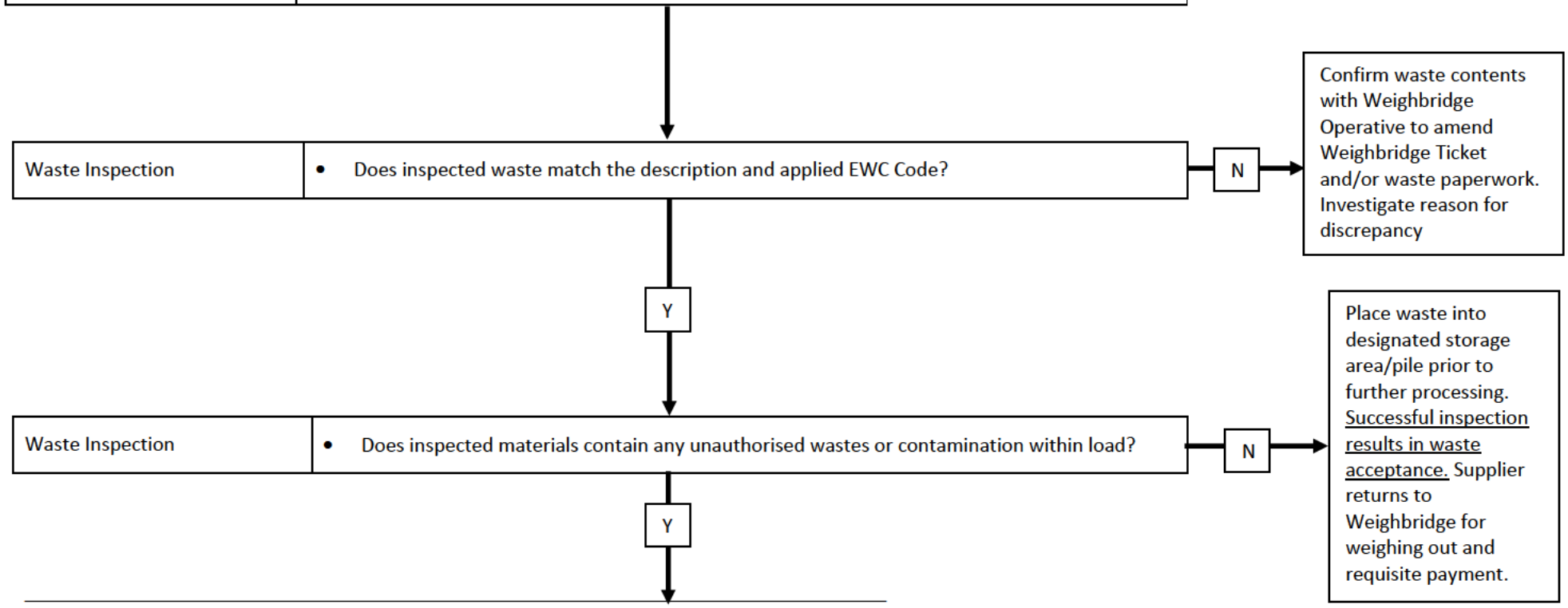
Supplier Arrives at Weighbridge	• Most Suppliers are 'Business to Business' (B2B) with minimal 'gate trade' • Complete due diligence checks on the Supplier using photographic ID. • New B2B Suppliers are subject to due diligence checks by JDML prior to accepting waste onto site. New Suppliers must provide company/individual ID (in the form of photographic ID/driving licence/passport and current utility bill), relevant Duty of Care licences and banking information to be set up on FRED (JDML's bespoke, electronic weighbridge database system). Without providing such information, a B2B Supplier cannot be set up on FRED and JDML will not accept waste from this Supplier. • For 'gate trade', JMDL requires Suppliers to provide individual ID (in the form of photographic ID/driving licence/passport and current utility bill) and vehicle registration number. 'Gate trade' Suppliers are informed of limited payment options under the Scrap Metal Dealers Act 2013.

Waste Receipt on the Weighbridge	• Determine that the waste is authorised for acceptance by the Environmental Permit by completing a visual and CCTV inspection of the waste (and compare to any accompanying waste paperwork) • Ensure incoming waste has been appropriately described (e.g. Producer, Carrier name and licence number, waste description, applicable EWC Code, SIC Code) on a Weighbridge Ticket and/or waste paperwork as required by the Waste Regulations 2011 and Scrap Metal Dealer Act 2013. Waste details are entered onto FRED. • Ensure that ELVs are accompanied by Weighbridge Ticket and/or waste paperwork **AND** V5 registration document. ELV details (including registration number and Vehicle Identification Number) are entered onto FRED. • Weigh the incoming waste on fully calibrated weighbridge scales to ensure J Denham Metals Ltd has sufficient operational capacity to accept waste (including Environmental Permit limits)

Waste Receipt on the Weighbridge	• Is waste authorised for acceptance under Environmental Permit? • Is waste accurately described? • Does ELV have accompanying V5 registration document? • Does J Denham Metals Ltd have sufficient operational capacity?	N	**Reject Unauthorised Waste:** Supplier to remove from site with Weighbridge Ticket and/or waste paperwork reflecting this rejection.

Y

Waste Inspection	• Unload waste in designated unloading area. This allows for more effective segregation and minimises double handling of waste. • Spread the unloaded waste, using mobile plant if needed (i.e. if baled waste is received), to allow for waste to be effectively inspected. • Trained Operative inspects the waste to identify any unauthorised wastes, including hazardous waste, canisters, asbestos and lithium-ion batteries. • Trained Operative ensures that unloaded waste matches description and EWC Code noted on the Weighbridge Ticket and/or Waste Paperwork.



Waste Inspection	• Is the Supplier still present on site?

Y → **Reject Unauthorised Waste:** Supplier to remove from site with Weighbridge Ticket and/or waste paperwork reflecting this rejection.

N

Waste Inspection	• Segregate unauthorised waste and place in Quarantine Area (locked cage if canisters) as the procedures outlined in the Working Plan and Accident Management Plan. This prevents such wastes being treated onsite. • Quarantined, unauthorised wastes remain more than 6m from other wastes.
Waste Inspection	• Site Management notifies relevant Supplier and Environment Agency of the acceptance of unauthorised waste
Dispatch of Unauthorised Waste	• Based on EWC Code, unauthorised waste is dispatched to a suitably licenced facility accompanied with the appropriate Waste Paperwork. • Waste Classification Analysis may be completed to determine applicable EWC Code.

ANNEX 3

Site Inspection Forms

Key 0: Satisfactory (No Action)
1: Satisfactory (Action Required)
2: Unsatisfactory (Minor Action)
3: Unsatisfactory (Major Action)

WEEKLY SITE INSPECTION REPORT

Site:		Inspector:		Date:	

Health and Safety		Operations and Environmental Compliance			
A Information		**G Site Details**		**L Amenity Management**	
A1 Safety Signs Displayed		G1 Permitted Wastes		L1 Dust, Fibres & Particulates	
A2 H&S Notice Board Information		G2 Hours of Operation		L2 Odours	
B Emergency Arrangements		G3 Site Staffing		L3 Noise	
B1 Control of Flammable Materials		G4 Technical Competence		L4 Pest Infestation	
B2 Exit Routes / Signs / Instructions		**H Site Engineering**		L5 Birds	
B3 Fire Alarms and Appliances		H1 Surface Drainage Systems		L6 Litter	
B4 Accident Investigation & reporting				**M Site Records**	
B5 First Aid Provision (Equip/Trained)		**I Site Infrastructure**		M1 Working Plan	
C Visitors & Contractors		I1 Site Identification Board		M2 Licence / Permit / Consent	
C1 Booking In and Out		I2 Site Security		M3 Planning Permission	
C2 Risk Assessment/Method statement		**J Site Operations**		M4 Site Diary	
		J1 Control of Mud & Debris		M5 Waste Transfer Notes	
D Work Equipment		J2 Leaks, Spillages, Bunds etc		M6 Hazardous Waste Notes	
D1 Conditions and Servicing		J3 Fire Control		**N Operations**	
D2 Guards and Equipment Stops		J4 Waste Acceptance		N1 Plant Maintenance	
D3 Warning Horns, Lights & Radios		J5 Waste Sampling			
D4 Lifting Equipment		J6 Waste Quantities			
E Personal Protective Equipment		J7 Waste Storage		**O Miscellaneous**	
E1 Wearing of PPE		J8 Waste Treatment / Disposal		O1 Waste Production Records	
F Miscellaneous		**K Pollution Control**			
F1 Housekeeping		K1 Surface Water Management			
F2 Electrical Safety		K2 Groundwater Management			
F3 Training and Competence		K3 Weather Recording			
F4 Hazardous Substances (COSHH)					
F5 Environment (noise,dust,heat,light)					
F8 Internal Water System (Watersafe)					

Health and Safety Total Score		Environment Total Score		Overall Score	

Code	Comments	Action Taken	Completed

Name:		Signature:		Date:	

J Denham Metals Ltd	**Daily Site Monitoring**	**Form 1** Version: 2 Effective: Feb 2023

SITE: ..... WEEK COMMENCING:.....

ITEM		SUN	MON	TUE	WED	THUR	FRI	SAT
1.	Staffing levels (agency staff req)							
2.	Security and fencing (damage/faults)							
3.	Signage							
4.	Building integrity (roller doors/structural damage to walls bays)							
5.	Runoff and Drainage including Surfacing (cracks/defects/blockages)							
6.	Site Diary (Weather Conditions, Site Issues)							
7.	Storage Areas (capacity/containment issues)							
8.	Records Updated (eg, Site Diary)							
9.	Housekeeping / Tidiness of Site							
10.	Plant and Equipment (Breakdowns/Equipment Repairs)							
11.	Dust							
12.	Odour							
13.	Noise							
14.	Insects/Vermin/Flies							
15.	Litter							
16.	PPE (stock levels/first aid/replacements)							
17.	Integrity of containers/skips							
18.	Condition of fuel & storage tanks							
19.	Spill Kit (stock/equipment required?)							
20.	Fire Prevention (stockpile heights and separation distance) Distometer							
Stockpile 1 (20x20x8)								
Stockpile 2 (20x15x8)								
Stockpile 3 (20x20x8)								
Bay 3 Turnings (4m h)								
ELV Bales (4m)								
21.	Fire Alarms/Security Alarm Checks							
22.	TCM (Attendance & Hours)							

J Denham Metals Ltd	Daily Site Monitoring	Form 1 Version: 2 Effective: Feb 2023

COMMENTS BELOW (*Please insert number*)

No	DAY	COMMENT	ACTION TAKEN/REPAIR	DATE COMPLETED

INSPECTED BY: ..... **DATE:** .....

Notes:

1. *Tick box to indicate check conducted and all in order.*
2. *Insert N/A if not applicable or not inspected.*
3. *Cross in box to indicate check conducted and action needed. Note number and action taken or needed in Comments box with remedial/actions taken and date of completion.*

J Denham Metal – Monthly FPP Checklist

ITEM		CHECKED	ACTIONS/COMMENTS	COMPLETED & SIGNED OFF
1.	Storage capacity bay markings, compliant and markings visible?			
2.	Separation distances maintained?			
3.	Quarantine area clear and available?			
4.	Water supply, IBC,s and hoses in place and in good condition ?			
5.	Internal drains clear of debris/waste?			
6.	Shut off valve checked and area accessible?			
7.	Battery storage capacity and containment suitable?			
8.	ELV building bund check (Evidence of spillages/damage to bund/surfacing/)			
9.	Site signage in good condition and unobstructed			
10.	Condition of fencing and entrance gates			
11.	Fire doors – clear and unobstructed			
12.	Rollers shutter doors in good condition and operational			
13.	Fire Extinguishers in good condition & maintenance date			
14.	Fire drills/procedure reviews completed?			
15.	Oil/Fuel/Liquid Bunds capacity			
16.	Site storage in line with site drawings?			
17.	Sandbag/Hydrosnake checks ?			
18.	Does the FPP need updating (eg: changes to layout, site activities?)			
Comments:				

Date: _____ Checked by:_____

J DENHAM METALS ESTABLISHED SINCE 1964	**FORMS** **End of Day Checks**	Version: 3 Effective: Feb 2023

Hot Watch End of Day Procedure

Week Commencing Date: _____

WASTE PILES	MON	TUE	WED	THUR	FRI	SAT	SUN	CHECKED BY	TIME COMPLETED
Workshop (walk around)									
Bays 1 - 8									
Battery Storage Area									
Stockpile 1									
Stockpile 2									
Stockpile 3									
Temp stockpile area clear ?									
ELV Storage Area									
Plant and Equipment									
Misc									

Comments/Findings

ANNEX 4

Thermal Camera System Information

DS-2TD2617-6/PA
Thermal & Optical Network Bullet Camera

Hikvision DS-2TD2617-6/PA Thermal Bi-spectrum Network Bullet Camera, equipped with built-in GPU which supports intelligent behavior analysis algorithm, can realize high-precision VCA detection and real-time alarm. It is applied to perimeter defense and fire-prevention purposes in critical infrastructures such as community, villa, construction site, factory, 4S stores, and so on. The pre-alarm system helps you discover unexpected events immediately and protects your property.

Smart Function (Thermal Imaging)

- Image processing technology: adaptive AGC, DDE, 3D DNR, NETD ≤ 40 mk (@25 °C, F# = 1.1)
- Behavior analysis function, based on deep learning algorithm: line crossing, intrusion, region entrance & exit
- Temperature exception alarm
- Fire detection algorithm
- Bi-spectrum image fusion, picture in picture preview
- Strobe light and audio alarm

Thermal Imaging Module Function

- 160 × 120 (the resolution of output image is 320 × 240) resolution sensor, and high sensitivity sensor
- 3D DNR, 15 palettes of color adjustable, image detail enhancement, and contrast adjustment
- Mirror image, digital zoom ×2, ×4, ×8

Specification

Thermal Module	
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays
Max. Resolution	160 × 120 (the resolution of output image is 320 × 240)
Pixel Interval	17μm
Response Waveband	8 μm to 14 μm
NETD (Noise Equivalent Temperature Difference)	≤ 40 mk (@25 °C, F# = 1.1)
Lens (Focal Length)	6.2 mm
IFOV	2.74 mrad
Field of View	25° × 18.7° (H × V)
Min. Focusing Distance	0.6 m
Aperture	F 1.1
Optical Module	
Max. Image Resolution	2688 × 1520
Image Sensor	1/2.7" Progressive Scan CMOS
Min. Illumination	Color: 0.0089 Lux @(F1.6, AGC ON), B/W: 0.0018 Lux @(F1.6, AGC ON)
Shutter Speed	1 s to 1/100,000 s
Lens (Focal Length)	8 mm
Field of View	39.42° × 22.14° (H × V)
WDR	120 dB
Day & Night	IR cut filter with auto switch
Image Function	
Bi-spectrum Image Fusion	Fusion view of thermal view and overlaid details of the optical channel
Picture in Picture	Combines details of thermal and optical image PIP, overlay thermal image on optical image
Smart Function	
VCA (Video Content Analysis)	4 VCA rule types (line crossing, intrusion, region entrance, and region exiting), up to 8 VCA rules in total.
Temperature Measurement	3 temperature measurement rule types, 21 rules in total (10 points, 10 areas, and 1 line).
Temperature Range	-20 °C to + 150 °C (-4 °F to + 302°F)
Temperature Accuracy	± 8 °C (± 14.4 °F)
Fire Detection	Dynamic fire point detection, up to 10 fire points detectable.
Infrared	
IR Distance	Up to 40 m
IR Intensity and Angle	Automatically adjusted

Network	
Main Stream	Visible Light: 50Hz: 25fps (2688 × 1520), 25fps (1920 × 1080), 25fps (1280 × 720) Visible Light: 60Hz: 30fps (2688 × 1520), 30fps (1920 × 1080), 30fps (1280 × 720) Thermal: 1280 × 720, 704 × 576, 640 × 480, 352 × 288, 320 × 240
Sub-stream	Visible Light: 50Hz: 25fps (704 × 576), 25fps (352 × 288), 25fps (176 × 144) Visible Light: 60Hz: 30fps (704 × 480), 30fps (352 × 240), 30fps (176 × 120) Thermal: 704 × 576, 352 × 288, 320 × 240
Video Compression	H.265/H.264/MJPEG
Audio Compression	G.711u/G.711a/G.722.1/MP2L2/G.726/PCM
Protocols	IPv4/IPv6, HTTP, HTTPS, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, PPPoE
Simultaneous Live View	Up to 20
User/Host Level	Up to 32 users, 3 levels: Administrator, Operator, User
Security Measures	User authentication (ID and PW), MAC address binding, HTTPS encryption, IEEE 802.1x access control, IP address filtering
Integration	
Alarm Input	2-ch inputs (0-5 VDC)
Alarm Output	2-ch relay outputs, alarm response actions configurable
Alarm Action	SD recording/relay output/smart capture/FTP upload/email linkage/audio alarm/white light alarm
Audio Input	1, 3.5 mm Mic in/Line in interface. Line input: 2 to 2.4 V [p-p], output impedance: 1 KΩ ± 10%
Audio Output	Linear level, impedance: 600 Ω
Reset	1, Reset Button
Communication Interface	1, RJ45 10M/100M self-adaptive Ethernet interface. 1, RS-485 interface
SD Memory Card	Built-in micro SD card slot, support Micro SD/SDHC/SDXC card (up to 128 GB) Supports manual/alarm recording
Analog Video Output	1.0 V [p-p]/75 Ω, PAL/NTSC
Application Programming	Open-ended API, support ISAPI, HIKVISION SDK and third-party management platform
Client	iVMS-4200, Hik-Connect
Web Browser	IE9+, Chrome 31-44, Firefox 30-51, Safari 5.02+(mac)
General	
Menu language	32 languages English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil)
Power	12 VDC ± 20%, two-core terminal block PoE (802.3af, class 3)
Power Consumption	12 VDC ± 20%: 0.65 A, max. 7.5 W PoE (802.3af, class 3): 42.5 V to 57 V, 0.14 A to 0.22 A, max. 8 W
Working Temperature/Humidity	Temperature: -40 °C to 65 °C (-40 °F to 149 °F) Humidity: 95% or less

Protection Level	IP66 Standard TVS 6000V lightning protection, surge protection, voltage transient protection
Dimensions	358.3 mm × 113.5 mm × 115.2 mm (14.10" × 4.47" × 4.53")
Weight	Approx. 1.76 kg (3.88 lb)

Detection Range Table

** The table is only for reference and the performance may vary from camera to camera.*

Smart Functions Range

Different targets trigger the VCA events within different range limits.

VCA Range (Vehicles: 1.4 × 4.0 m)	VCA Range (Humans: 1.8 × 0.5 m)	Temperature Measurement (Object: 2 × 2 m)	Temperature Measurement (Object: 1 × 1 m)	Fire Detection (Object: 2 × 2 m)	Fire Detection (Object: 1 × 1 m)
126 m	42 m	132 m	66 m	360 m	180 m

Wide Range Coverage

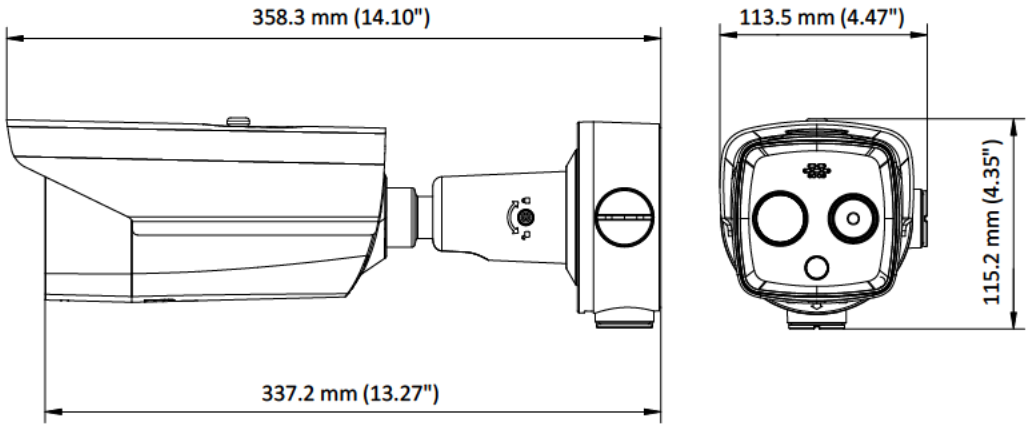
There is range limit for detecting, recognizing, and identifying human/vehicle targets.

Detection Range (Vehicles: 1.4 × 4.0 m)	Detection Range (Humans: 1.8 × 0.5 m)	Recognition Range (Vehicles: 1.4 × 4.0 m)	Recognition Range (Humans: 1.8 × 0.5 m)	Identification Range (Vehicles: 1.4 × 4.0 m)	Identification Range (Humans: 1.8 × 0.5 m)
559 m	182 m	140 m	46 m	70 m	23 m

Available Model

DS-2TD2617-6/PA

Dimension



Distributed by

Headquarters
No.555 Qianmo Road, Binjiang District,
Hangzhou 310051, China
T +86-571-8807-5998
overseasbusiness@hikvision.com

Hikvision USA
T +1-909-895-0400
sales.usa@hikvision.com

Hikvision Europe
T +31-23-5542770
sales.eu@hikvision.com

Hikvision UK & Ireland
T +01628-902140
sales.uk@hikvision.com

Hikvision UAE
T +971-4-4432090
salesme@hikvision.com

Hikvision Russia
T +7-495-669-67-99
saleru@hikvision.com

Hikvision Australia
T +61-2-8599-4233
salesau@hikvision.com

Hikvision Italy
T +39-0438-6902
info.it@hikvision.com

Hikvision South Africa
Tel: +27 (10) 0351172
sale.africa@hikvision.com

Hikvision Singapore
T +65-6684-4718
sg@hikvision.com

Hikvision Korea
T +82-(0)31-731-8817
sales.korea@hikvision.com

Hikvision India
T +91-22-28469900
sales@pramahikvision.com

Hikvision Brazil
T +55 11 3318-0050
Latam.support@hikvision.com

Hikvision France
T +33(0)1-85-330-450
info.fr@hikvision.com

Hikvision Spain
T +34-91-737-16-55
info.es@hikvision.com

Hikvision Poland
T +48-22-460-01-50
info.pl@hikvision.com

Hikvision Canada
T +1-866-200-6690
sales.canada@hikvision.com

Hikvision Turkey
T +90 (216)521 7070- 7074
sales.tr@hikvision.com

Hikvision Kazakhstan
T +7-727-9730667
nikia.panfilov@hikvision.ru

Hikvision Tashkent
T +99-87-1238-9438
uzb@hikvision.ru

Hikvision Indonesia
T +62-21-2933759
Sales.Indonesia@hikvision.com

Hikvision Thailand
T +662-275-9949
sales.thailand@hikvision.com

Hikvision Malaysia
T +601-7652-2413
sales.my@hikvision.com

Hikvision Vietnam
T +84-974270888
sales.vt@hikvision.com

Hikvision Hong Kong
T +852-2151-1761
info.hk@hikvision.com

Hikvision Colombia
sales.colombia@hikvision.com

ANNEX 5

Legioblock Spec Sheet

Concrete Wall Spec Sheet

Certificate of Conformity of the Factory Production Control

This is to certify that:

Low Grange Quarry Ltd
Low Grange
Melsonby
Richmond
DL10 5PN
United Kingdom

Holds Certificate No: **0086-CPR-608976**

In respect of:

EN 14992:2007+ A1:2012 - Precast concrete products. Wall elements.

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the above construction product.

This certificate attests that all the provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the above standard under system 2+ are applied and that the factory production control fulfils all the prescribed requirements set out above.

For and on behalf of BSI,
a Notified Body for the above Regulation
(Notified Body Number 0086):

[redacted]
[redacted] Global Assurance Director

This certificate remains valid as long as the test methods and/or factory production control requirements included in the harmonised standard(s), used to assess the performance of the declared characteristics, do not change and the product(s), and the manufacturing conditions in the plant(s) are not modified significantly.

First Issued: 08 May 2014

Latest Issue: 08 May 2014

Certificate of Conformity of the Factory Production Control

No. 0086-CPR-608976

Manufacturing Plant:

Low Grange Quarry Ltd
Low Grange
Melsonby
Richmond
DL10 5PN
United Kingdom

Declaration Method(s)

EN 14992:2007 - Precast concrete products. Wall elements.

Method 1 = declaration of geometrical data and material properties.

First Issued: 08 May 2014

Latest Issue: 08 May 2014

Declaration of Performance

CE

Low Grange Quarry Ltd,
Low Grange, Melsonby, Richmond, North Yorks DL10 5PN

14

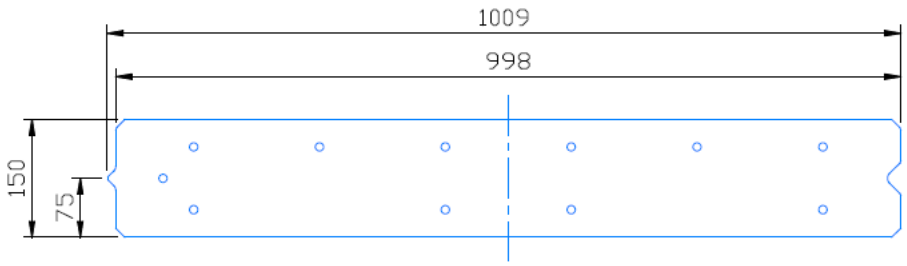
0086-CPR-608976

EN 14992:2007 + A1:2012
Precast Concrete Products
Wall Elements

Concrete:
Compressive strength..... f_{ck} = 60N/mm²

Prestressing Steel:
Ultimate tensile strength..... f_{pk} = 1700N/mm²
Tensile 0,1% proof-stress..... $f_{p0,1}$ = 81.0kn

Dimensions in mm as below:



Reaction to fire.....Class A

Durability exposure class..... XC4

Strands – 9.3mm.....11 No.

End protrusion of strands.....=0

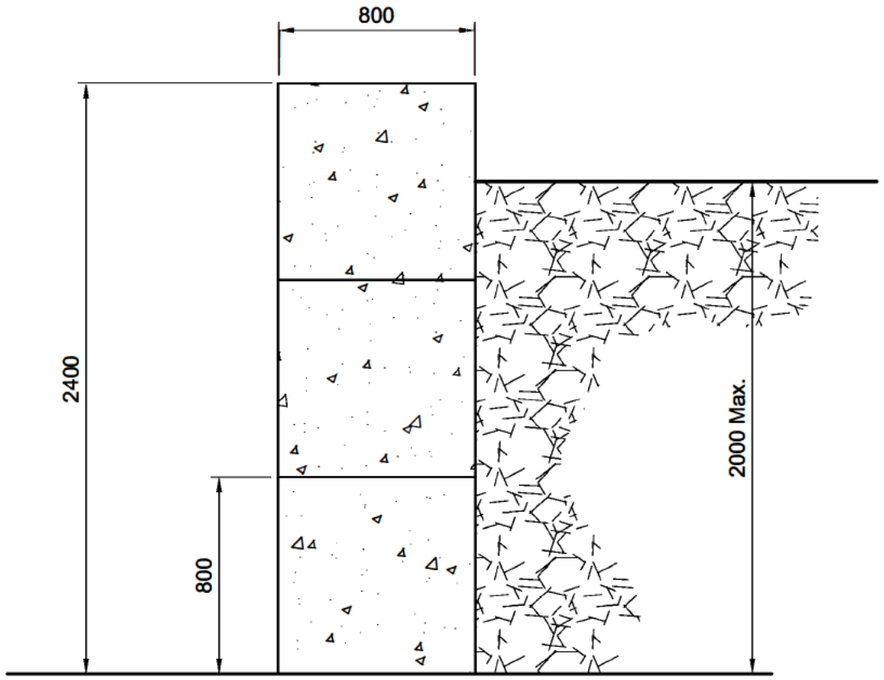
150mm thick x 1000mm high pre-stressed panel

The performance of this product complies with the Design and Harmonised Codes applicable to that product. The relevant code, performance criteria and factory identifier are shown. The design drawings and calculation detail the design codes and physical dimensions of the product.

The initial factory inspection has been completed by BSI (Notifying Body 0086) and the continuous surveillance, assessment and evaluation of the Factory Production control is declared as compliant for all products of this type.

[redacted]

Director



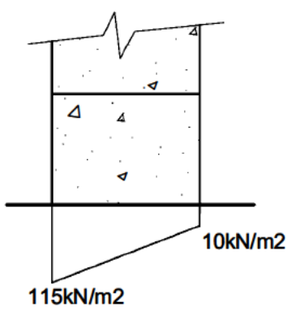
Allowable Loads - Bay 2 (2.4m High)

(1:25)

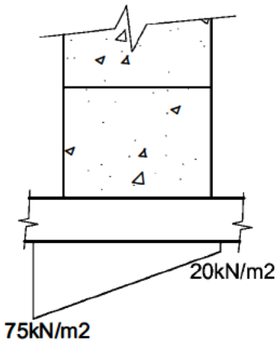
Important Note - The retained material should be allowed to naturally fall against the wall as it is stacked. Do not allow the retained material to stand up on its own as this could lead to a catastrophic failure of the material and the wall.
The wall has not been designed to withstand the impact of the retained material suddenly falling against the wall due to incorrect loading.

Retained Material:-
ASR and Scrap Metal
AoR - 25 degrees
Maximum Density - 11 kN/m3 (11000 kgs/m3)
Maximum height of material - 2.0m
Maximum material slope - 0 Degrees (Level fill)

It is up to the client to advise if these parameters are not correct.



Bearing Pressure
Directly Beneath Wall



Bearing Pressure
Beneath 150mm slab

Bearing Pressures

(1:25)

NOTE:-
The bearing pressure beneath the wall is shown below. **It is up to the client to ensure the ground and slab is adequate**, alternatively a foundation may be designed to suit allowable ground bearing pressures if required.

NOTES:-
1. The contractor should take all necessary measurements on site.
2. All dimensions shown on this drawing are approximate and for structural calculation purposes only.
3. Dimensions on this drawing should not be used for fabrication purposes.
4. Do not scale this drawing.
5. This drawing should be read in conjunction with the calculations.

IMPORTANT NOTE
The existing slab and ground have not been investigated by CLP structures, the pressures exerted on the ground and slab are shown on this drawing, however **it is up to the client to satisfy himself that the existing ground and slab are adequate to support these loads.**

IMPORTANT NOTE
The wall has been designed to retain a specific material with a specific density and angle of repose. It is up to the client to ensure that the material retained on site does not exceed these designed parameters, failure to do so may result in the collapse of the wall.

Rev	Description	By	Date	Chk'd

	Purpose of Issue	Rev	Date	Auth

CLP Structures
STRUCTURAL ENGINEERING CONSULTANTS
EMAIL: mail@CLP-Structures.co.uk
TEL: 0117 3706357

Client
Elite Precast Concrete Ltd.

Project
Elite Legato Block Retaining Wall – 2.4m High

Title
Wall Design
Loading Guidelines

Original Scale	Drawn	Rev – Checked
As noted	Date Nov 18	

Drawing Number
704–01–005

A3