Fire Prevention Plan (FPP)

Operators Name:	Morris Recycling Limited
Site Name:	Morris Recycling
Address:	Unit 34 Coneygree Industrial Estate, Tipton, DY4 8XP
Grid Reference:	SO 95764 90998
Permit No:	EPR/QP3725SW

Environment Agency Fire prevention objectives

The EA guidance details the fire prevention measures which have been designed to meet these 3 objectives:

- 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

Revision History

Version	Date	Comments	Author	Approved by
1.0	01/11/2023	Fire Prevention Plan created	Vicki Cooper	Andy Morris

Who this plan is for

- All Morris Recycling staff
- Contractors working on site
- Local Fire Service
- Environment Agency staff

Appendix 11 – Penstock Closure Procedure (in preparation for valve to be fitted)

1. EMERGENCY CONTACT DETAILS

Emergency Services	**Emergency**	
Fire and Rescue Services	999	
Ambulance Service	999	
West Midlands Police	999	0121 626 5000
Hospitals	**Telephone Number**	
Russells Hall Hospital A&E	01384 456111	
Sandwell Hospital A&E	0121 553 1831	
Utilities	**Telephone Number**	
Electricity	0800 111 999	
Substation Main ref:	08006783105	
Water	0345 072 6072	
Spillage Cleaning/Tanker	01543 450880	www.burntwoodgroup.com
Health and Safety Executive	**Telephone Number**	
General Enquiries	0121 607 6200	
Local Office (Quinton)	0121 607 6200	
Environment Agency	**Telephone Number**	
General Enquiries	03708 506 506	
Incident Hotline	0800 80 70 60	
24 Hour Emergency Floodline	0845 988 1188	
Internal Emergency Contact	**Telephone Number**	**Position**
Andy Morris	07528 525781	Director
Sheila Salhan	07939100143	Office Manager
Stan Harcan	07722 454297	Production Manager
Liam Jackson	07787 429235	Office Admin
Local Residents/Neighbours	**Telephone Number**	
New Design - Kevin Wright	t. 0121 557 5351 / m.07715 618459	
Charterbrae – Tom Brain	t. 0121 520 5353 / m.07730 562790	
M and J Drilling – Steve Rule	t. 01902 885241	
Cornwallis - Ravi	t. 0121 557 1450 / m.07792 780448	

2. INTRODUCTION

The site only handles PVC and uPVC plastic waste. Unplasticized polyvinyl chloride, sometimes known as uPVC, is a kind of plastic that is frequently used in doors and windows. According to experiments on fire, uPVC is inherently flame-resistant and won't start, sustain, or promote the growth of a fire. This is so that the PVC may operate as a flame retardant due to its chlorine concentration. Additionally, in the case of a fire, uPVC windows do not melt. uPVC windows really self-extinguish after the source of fire is removed because they cease burning. The Fire Prevention Plan has been written and submitted because the Environment Agency view all plastics as a 'combustible waste' and thus an FPP is required.

The Fire Prevention Plan (FPP) is designed to meet the 3 key objectives of the Environment Agency FPP Guidance[1]:

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

The FPP forms part of the site-specific Environmental Management System (EMS). The FPP is a live document within which monitoring procedures, responsibilities and compliance actions are updated as and when required. The FPP sets out the fire prevention measures and procedures which are in place and adhered to on site.

2.1 Overview of the site

The site is located on an existing industrial area on Coneygre Industrial Estate, Tipton, DY4 8XP.

The site is located with easy access to the dual carriageway A4123 New Birmingham Road, connecting to the A4036 Bypass and M5 road networks. It is a self-contained property with office space and rear and side yards. The external space includes designated staff parking spaces at the front and a secure fenced rear yard with gated access.

The core activity of the site is the receipt, storage and treatment of plastic recyclables for the production of plastic granulate and pellet. The site receives PVC & uPVC plastics for recycling, with examples being profile scrap, off cuts, post-consumer window frames, bar lengths and head waste from the production of PVC and uPVC.

The site has applied for a bespoke environmental permit to allow the processing of PVC and uPVC plastics up to 50,000 tonnes per year through further sorting, granulation, and extruding for the main purpose of substituting virgin PVC material with recycled content.

The layout of the site is:

1. Weighbridge and weighbridge office area
2. Inbound waste stored on external yard area or within a separate area of the building
3. Waste treatment area within 3 sided building where waste frames are sorted in preparation for transfer to the main building where waste PVC and uPVC is extruded/recycled into pellets
4. Office block with toilets
5. External storage area for non-waste products, by-products and production waste

[1] https://www.gov.uk/government/publications/fire-prevention-plans-environmental-permits/fire-prevention-plans-environmental-permits

2.2 Types of Combustible Materials

INPUT:

The sites core process is PVC and uPVC plastics.

Unplasticized polyvinyl chloride, sometimes known as uPVC, is a kind of plastic that is frequently used in doors and windows. According to experiments on fire, uPVC is inherently flame-resistant and won't start, sustain, or promote the growth of a fire. This is so that the PVC may operate as a flame retardant due to its chlorine concentration. Additionally, in the case of a fire, uPVC windows do not melt. uPVC windows really self-extinguish after the source of fire is removed because they cease burning.

The site receives, treats and stores the following waste types:

Received =

- uPVC
    - window frames – old window frames complete with handles, screws, glass, rubber etc.
    - profiles – clean single polymer
- PVC – clean single polymer. Post industrial materials may require treatment but it is expected that most of the materials will be presented directly to the extrusion process

Treatment = The following treatment is performed on site:

- uPVC window frames:
    - hand-sort in external yard area
    - Hammermill in partially closed (3 sided) building to sort and separate the plastic, metal, rubber, glass and other contaminants on a window frame
- uPVC and PVC plastics
    - Granulation in building
    - Colour sort/Hamos in building
    - Extruder in building

OUTPUT:

Non-waste
- Pellet

Waste
- Out-throws from the sorting process stored in separate containers i.e metal, glass, rubber, other plastics
- Lump and process waste

2.3 Other Combustible Materials

The following combustible, non-waste materials are held on site:

Plant Sundries
FLT gas cyclinders
Office stationery and electrical items/furnishings
General Waste – external yard area in container
Lubricants – localised containers for maintenance
Aerosols – localised canisters for maintenance
Adblue – IBC held on site in a maintenance storage container, see drawing no.05 for location.
Oil – 25ltr containers held on site in a maintenance storage container, see drawing no.05 for location.

3. USING THIS FIRE PREVENTION PLAN

3.1 Where the plant is kept and how staff know how to use it

The Plan will be kept in 3 locations:

- Internal company network drive
- In the reception area of the main office.
- In the emergency response box at the front of the premises

3.2 Testing the plan and staff training

All staff will be trained on the FPP requirements and are required to read through it.

It is proposed the following training dependant on role will be undertaken:

- Induction training (All staff)
- FPP Awareness training (Key staff)

A record will be kept to show who has read it and been trained on it and the date. There will be annual re-training that will also be recorded.

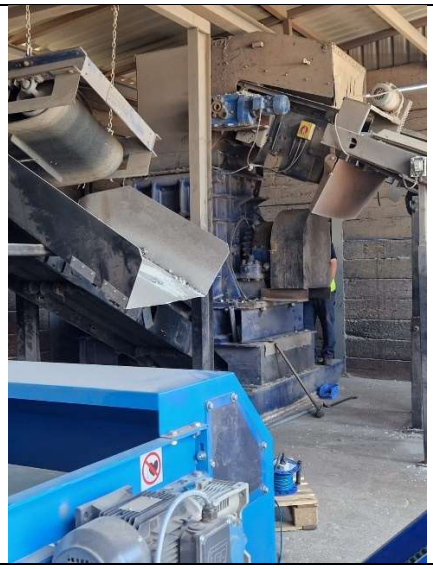
A fire practice will be undertaken every year. This will involve a notional fire occurring in an input waste pile and will require staff to go through the process of warning, risk assessment, removal to quarantine area, isolating equipment, closing of emergency drainage systems and suppression.

Records will be kept of all training and fire practices.

4. FIRE PREVENTION PLAN CONTENTS

4.1 Activities at the site

The following treatments are performed on site:

Treatment	Photograph
Hammermill	
Metal extraction following hammermill	

Granulation		
Colour sort/Hamos		
Extruding		

Additional activities performed on site:

Activity	Risk from fire?	Action to reduce risk
Servicing of Fork Lift Trucks	Low	Fork lift trucks (FLTs) are hired and as part of the lease contract the FLTs are maintained. Fork Lift Truck servicing is completed by an external contractor and is

		performed on the separate area in the yard away from the stored waste.
Unloading and loading of vehicles	Low	Unloading and loading of vehicles is conducted in the external yard area by trained FLT drivers.
Storage of combustible chemicals.	Low	The volume stored of lubricants and aerosols is small as only used for maintenance. The gas cyclinders for FLTs are stored in the gas bottle cage (shown on drawing no.4)
Electrical control panels	Low	All machine control panels fitted with safety breaker and surge protector on main fuse board.

4.2 Site Plans/Drawings

The following drawings support the Fire Prevention Plan:

Drawing Title	Drawing Number
Site Location Plan	01
Environmental Permit Boundary	02
Site Infrastructure Plan	03
Site Storage and Internal Layout Plan	04
Site Drainage Plan	05
Fire Protection Plan and Fire Hydrant Locations	06
Water Pooling Plan	07
Receptor Plan 1km	08
Block Material Flow Diagram	09
Severn Trent Waste Water Map	569353-1

4.3 Plan of sensitive receptors near the site

The sensitive receptor plan 1km – drawing No.08 – is attached at Appendix 8. This has considered all receptors from the FPP Guidance list, those highlighted that are present within 1km.

- 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, airports

5. PROPOSED INFRASTRUCTURE IMPROVEMENTS

5.1 Phased implementation

The site is proposing a number of improvements to fully implement the Fire Prevention Plan Guidance, all of the improvements proposed are detailed below.

Implementing all the site infrastructure measures on the site which is specified in the Fire Prevention Plan Guidance involves an investment of approximately £184,000k [2] by Morris Recycling. This is a large sum for a small family business and as such the improvements have been phased to spread the cost to the business.

The proposed improvements are to be implementation in the following stages:

Phase 1

Deadline: To be completed end of May 2024

Improvement	Est. cost
Purchase clay mats	£1000
Purchase 60cm high boom for across main gate	£2000
Install penstock valve on surface water drainage outlet point	£3500
Purchase emergency storage response box	£2500

Phase 2

Deadline: To be completed end of August 2024.

Improvement	Est. cost
Install thermal cameras - (proposed positions shown on drawing No.3)	£25,000

[2] Not all of the proposed works have been formally quoted for and thus some prices provided are an estimate

Purchase A rated walling for internal bays	£20,000

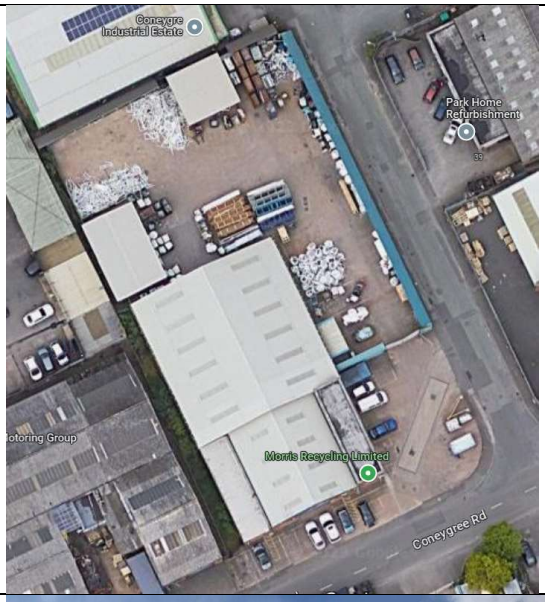
Phase 3

Deadline: To be completed end of November 2024.

Improvement	Est. cost
Replace boundary wall (metal for concrete walls)	£130,000

6. MANAGING COMMON CAUSES OF FIRE

6.1 Arson

• External yard area – the external yard area is fully enclosed with a 16.4ft metal wall to prevent trespass. As explained in section 5.1, it is programmed that the boundary wall is replaced with a concrete wall.	
• Main Entrance to yard area - Entrance to the external storage area is via 1 gated entrance.	

• Roller shutter door at front of building - this door is locked closed at all times.	
• Pedestrian entrances – one pedestrian entrance to office area and two pedestrian entrances to operational building, all locked at all times.	 

CCTV
The boundary to the site is fully enclosed with a combination of 16.4ft walling, wooden railway sleepers and the main building. The site has motion detection CCTV cameras connection to mobile phones with alert system and thermal cameras are being installed and will be connected to the same system. The location of CCTV cameras and proposed location of the thermal cameras are marked on drawing no03.Infrastructure Plan.

The types and models of CCTV cameras are as follows: Hiksvision DS-2TD2637-10/QY

The CCTV system is tested daily to ensure all cameras are fully functional, this is recorded on the Daily Environmental Monitoring Report and are also part of the annual qualified electrician test. It is in the company's interest to have the CCTV system working and thus any failures of equipment will be addressed as quickly as possible.

Visitors
All visitors have to gain access to site via the reception. All visitors are asked to sign in. All visitors are escorted by their host throughout their time on site.

Contractors
All contractors have to gain access to site via the reception. Contractors are asked to sign in. Contractors receive a site induction on first arrival and subsequently re-inducted every 12 months or if sufficient time has lapsed in between visits.

Contractors are required to provide Risk Assessments and Method Statements (RAMS) for each job. They then sign a permit to work on arrival at site. The permit to work highlights if a hot work permit[3] is required which is issued by a competent trained employee.

6.2 Plant and Equipment

Fixed equipment:

- Hammermill with associated metal sort
- Granulator
- Colour sort/Hamos
- Extruder

Mobile equipment:

- Alligator shears
- Fork lift truck – gas
- 360 Grab - Diesel

6.3 Electrics certification

All fixed equipment was installed by the equipment supplier and along with all other equipment, was fully tested and certified by a qualified electrician prior to commencement of operations.

6.4 Electrical equipment maintenance arrangements

All equipment is subject to annual testing and certification by a qualified electrician. All equipment has full maintenance. A maintenance log is completed for servicing, defects and repairs and provides a full maintenance schedule and service history.

Records are kept of all maintenance and testing. From the maintenance log the site is fully aware of the status of each piece of fixed and mobile plant.

All electrical work is required by an external qualified electrician the following company is used:

- Morris Electricals Ltd - https://www.morrisel.co.uk/

All electrical contractors who complete the Fixed Appliance Testing are certified NICEIC[4] approved contractors.

The following checks are completed:

- PAT testing across the operation (annually)
- Thermal survey of all electrical distribution boards and machine control panels (annually)
- Fixed Appliance Testing inspections (External - 3 yearly, office – 2 yearly)

Records from the external registered electrical company are held on site.

6.5 Smoking on site policies

There is a dedicated smoking or vaping area adjacent to the site, outside of the permit boundary. Staff, visitors and contractors are required to either use the dedicated smoking area

[3] SOP - 018 Hot Works Permit
[4] National Inspection Council for Electrical Installation Contracting

which is down the back of the site near the canteen away from the waste storage or treatment area.

6.6 Hot works safe working practices

There are no hot works on site as part of the waste operations. Where hot works may be required for equipment maintenance and repairs, the hot works permit procedure[5] is followed. A fire watch will be completed for 1 hour after hot works.

If the contractor will be undertaking any hot works, a hot works permit would be issued.

6.7 Use of industrial heaters

The building contains a heating system that negates the need for any separate industrial heaters. In the offices, storage heaters are used and fixed to the wall.

6.8 Hot exhausts and engine parts – fire watch procedures (Dust settling on hot exhausts of mobile plant and engines)

- Fork Lift Trucks are gas powered and have exhausts.
- All mobile plant switched off when not in use or stored overnight.
- Mobile plant is stopped an hour before the site may be left unmanned to give exhausts an hour to cool before leaving for the day.

6.9 Ignition sources

The site has the following heat sources in the production and outside storage areas:

Hot works (as required - minimal):

- Gas cutting/Grinding/Welding

Diesel powered mobile plant (360 Grab)

- Dedicated parking bays away from combustible and flammable wastes

Gas powered mobile plant (FLT)

- Dedicated parking bays away from combustible and flammable wastes

Extruders

- No waste is stored near to an extruder

Conveyor friction

- Routine maintenance of conveyors are carried out and logged on the maintenance log

Hydraulic systems

- 360 Grab, FLT and 2 x screen changes.
- Spill granules are available on site.

Hot exhausts (Dust settling on hot exhausts of mobile plant and engines)

- Fork Lift Trucks are gas powered and have exhausts.
- All mobile plant switched off when not in use or stored overnight.
- Mobile plant is stopped an hour before the site may be left unmanned to give exhausts an hour to cool before leaving for the day.

6.10 Leaks and spillages of oils and fuels

[5] SOP - 018 Hot Works Permit

Spill granules are located around the site internally and externally. See Site Drainage Plan – drawing No.05 for details of drainage layout, interceptor and drainage closure. Penstock Valve Closure Procedure (see appendix 11 below) has been written in preparation for the valve to be fitted, once in place the procedure will be trained to key staff.

6.11 Build up of loose combustible waste, dust and fluff

The site has a housekeeping and cleaning program to remove the buildup of loose materials / waste, dust and fluff. Housekeeping schedules are in place and followed. Full time employees employed to clean internal and external areas to keep site tidy.

6.12 Reactions between wastes

The site only receives uPVC window frames, uPVC profiles and PVC plastics, there is no contamination in this material which could have a reaction and PVC plastic does not react with itself.

6.13 Deposited hot loads

The site only receives uPVC window frames, uPVC profiles and PVC plastics, due to the nature of this material the risk of a hot load is very low. Upon delivery the material is inspected before tipping to ensure it is the material required by the site.

7. PREVENT SELF COMBUSTION

7.1 General self-combustion measures

- Waste received is checked upon delivery and stored in dedicated areas
- Waste is uPVC window frames, uPVC profiles and PVC plastics which has an extremely low self combustion risk
- No waste on site is stored for longer than 3 months
- Thermal cameras will cover the waste storage area

7.2 Managing storage time

The tables below summarise the management and storage on inbound and outbound waste.

INBOUND WASTE

Internal Storage

Material	Form	Combustibility Risk	Separation between materials	Storage out of hours	Maximum storage time	Rotation evidence
uPVC profiles	1m metal bins Redundant bar length material and scrap extruded materials	Very Low - uPVC is inherently flame-resistant	Metal 1m^3 bin, accessible from at least one side	External bays only	3 months	Images from internal CCTV to show waste moving through process

External Storage

Material	Form	Combustibility Risk	Separation between materials	Storage out of hours	Maximum storage time	Rotation evidence
uPVC Window frames	Loose in bays	Very Low - uPVC is inherently flame-resistant	A1 rated walls between bays	External bays only	3 months	Photograph (date and time stamped) showing back of bay
uPVC profiles	$1m^3$ metal bins Redundant bar length material and scrap extruded materials	Very Low - uPVC is inherently flame-resistant	Metal $1m^3$ bin, accessible from at least one side	External bays only	3 months	Photograph (date and time stamped) showing back of bay
uPVC offcuts	$1m^3$ metal bins collected offcuts from window manufacturers	Very Low - uPVC is inherently flame-resistant	Metal $1m^3$ bin, accessible from at least one side	External bays only	3 months	Photograph (date and time stamped) showing back of bay
Rigid PVC profiles	Redundant bar length material and scrap extruded materials	Very Low - uPVC is inherently flame-resistant	A1 rated walls between bays	External bays only	3 months	Photograph (date and time stamped) showing back of bay

OUTBOUND WASTE

Internal Storage

Material	Combustibility Risk	Form	Separation	Storage out of hours	Maximum storage time	Rotation evidence
NONE						

External Storage

Material	Combustibility Risk	Form	Separation	Storage out of hours	Maximum storage time	Rotation evidence
uPVC Window frames	Low	Loose in bays	A1 rated walls between bays	External Yard Area	3 months	Photograph (date and time stamped) showing back of bay
General Waste	High	Loose in open skip	accessible from at least one side	External Yard Area	3 months	Photograph (date and time stamped) showing back of bay
Metal separated from window frames	Low	Loose in open skip	accessible from at least one side	External Yard Area	3 months	Photograph (date and time stamped) showing back of bay
Glass	Low	Loose in open skip	accessible from at least one side	External Yard Area	3 months	Photograph (date and time stamped) showing back of bay
Card/Plastic	Low	Loose in open skip	accessible from at least one side	External Yard Area	3 months	Photograph (date and time

						stamped) showing back of bay

Non- waste

- Pellet

7.3 Method used to record and manage the storage of all waste on site

All incoming and outgoing loads are weighed over the weighbridge

Incoming Waste:

All inbound loads are stored in designated areas of the external yard area, as detailed above. Each bay is regularly emptied to ensure waste storage is managed and waste received is processed as quickly as possible.

Outgoing Waste:

Containerised Waste - The last waste collection note from the waste company will show the last collection date and thus we will know how long the waste in that container has been on site.

7.4 Stock rotation policy

The inbound waste window frames and profiles are stored in 3 separate dedicated bays in the external yard area and the outbound whole window frames are stored in 1 dedicated bay in the external yard area. At least every 3 months a photograph (date and time stamped) is taken to show that each bay is cleared out and that waste is stock rotated.

8. MONITOR AND CONTROL TEMPERATURE

8.1 Reduce the exposed metal contact and proportion of fines

The only metal arising on site is the metal fittings, screws etc removed from window frames on site. This is separated and stored in a separate open skip container on site. See drawing no.04 Material Storage Plan for location of container.

The site does not produce or store fines.

8.2 Monitoring temperature

The site will have permanent thermal CCTV camera overlooking the external storage area. This will have a hot spot warning alarm and is monitored by key staff on site.

8.3 Controlling temperature

All received waste is stored within the dedicated bays in the external yard or in $1m^3$ metal bins that the PVC profiles get delivered in. As window frames are generally bulky

when stacked, air is able to circulate around the waste. The external yard area will have thermal CCTV cameras with hot spot warning alarm. Waste will be processed within 3 months.

All waste processed is stored in separated grades and types and removed from site within 3 months.

8.4 Dealing with hot weather and heating from sunlight

uPVC windows are deliberately designed to withstand heat and sunlight as they will be installed for many years in houses etc… The large bulky nature of UPVC window frames means that air is able to circulate the waste.

8.5 Waste bale storage

No waste on site is stored in a baled format.

9. MANAGING WASTE PILES

9.1 Maximum pile sizes for the waste on site

INBOUND WASTE

Waste stream	**Location** (must match site plan)	**How it is stored** For example this may include piles, bays, containers, skips, racks, bales	**Max. length / m**	**Max. width / m**	**Max. height / m**	**Volume / m^3**	**Max. time it will be stored**
uPVC Window frames	External yard area	Bays	11m	9m	3m	297m^3	3 Months
uPVC profiles	External yard area	1m^3 metal bins	1m	1m	1m	1m^3	3 Months
uPVC offcuts	External yard area	1m^3 metal bins	1m	1m	1m	1m^3	3 Months
Rigid PVC profiles	External yard area	Bays	11m	9m	3m	297m^3	3 Months
uPVC profiles	Small building	1m^3 metal bins	1m	1m	1m	1m^3	3 Months

OUTBOUND WASTE

Waste stream	**Location** (must match site plan)	**How it is stored** For example this may include piles, bays, containers, skips, racks, bales	**Max. length / m**	**Max. width / m**	**Max. height / m**	**Volume / m^3**	**Max. time it will be stored**
uPVC Window frames	External yard area	Bay	11m	9m	3m	297m^3	3 Months
General Waste	External yard area	Loose in open skip	Skips accessible from at least one side				1 month
Metal separated from window frames	External yard area	Loose in open skip	Skips accessible from at least one side				1 month
Glass	External yard area	Loose in open skip	Skips accessible from at least one side				1 month
Card/Plastic	External yard area	Loose in open skip	Skips accessible from at least one side				1 month

9.2 Storing waste materials in their largest form

The window frames are kept in their largest form until processed or extruded in pellets. When the other materials have been removed from the window frames, they are kept on site in separate skips for a maximum of 1 month.

9.3 Stacking baled waste

No baled waste on site.

9.4 Waste stored in containers

Separated waste from window frames are stored in separately in containers (see section 8.1 above) prior to collection by waste management company.

9.5 Types of containers you are using

Inbound = Stillages or 1m^3 metal bins
Outbound = Stillages, 1m^3 metal bins or 8m^3, 40yd^3 open skips

9.6 Accessibility of containers

The containers can be moved by equipment on site and each container is accessible from at least one side so a fire could be extinguished.

9.7 Moving containers in a fire

The containers could be moved by FLTs or 360 grab mobile plant equipment on site.

10. PREVENTING FIRE SPREADING

10.1 Separation distances

The bays in the external yard will be constructed with A1 concrete walls between and 1m freeboards at the top and front of the bay so the material can be stored with less than the recommended 6m gap in the FPP guidance.

10.2 Fire walls construction standards

The bay fire walls will be constructed with A1 rated concrete.

10.3 Storing waste in bays

Response to the bullets stated in the Guidance:

- *resist fire (both radiative heat and flaming)* – the storage bays will be enclosed on three sides by fire resistant concrete blocks with 1m freeboard.
- *have a fire resistance period of at least 120 minutes to allow waste to be isolated and to enable a fire to be extinguished within 4 hours* – the concrete blocks will be to A1 rating specification and will be sealed to enable a minimum of 2 hours resistance to fire.
- *you will carry out full and frequent stock rotation, ensuring you have a first in, first out policy, and how this will be monitored and recorded you will check the temperatures of all the waste within the bay so that you carry out representative checks on the entire volume of the pile* – photographs (date and time stamped) will be taken to show bays emptied at least every 3 months
- *you have taken into account the calculation of flame height and radiation in preventing the spread of fire between piles* – there will be 1m freeboard height and from the front of each bay to prevent radiation of fire.
- *you will prevent brands or lighted material moving outside the bay walls and igniting other wastes* – as above.
- *you will keep a 'freeboard' space at the top and sides of the walls clear at all times to prevent fire spreading over the walls – if you store waste at the maximum pile sizes as detailed in section 9.2 then you need a minimum freeboard space of 1m to reduce fire spread* – confirmed as above
- *you'll quickly and effectively remove wastes at risk of ignition to the quarantine area to isolate any bays with burning waste during an incident* – confirmed as previously stated.

11. QUARANTINE AREA

11.1 Quarantine area location and size

The quarantine area is external to the building, shown via a 'Q' on Drawing No 4 Site Storage.

This area is used because:
- it is at least 6m from the storage area
- it is always kept clear
- the area can hold minimum than 50% of the largest pile stored

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

If safe and under the supervision of the Fire Brigade any non-burning material could be moved to the quarantine area with the forklift trucks or 360 Grab equipment on site.

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

Material would be stopped arriving at the site immediately. Any waste on site which could be removed, could be taken to a competitor uPVC recycling site, if safe to do so.

12. DETECTING FIRES

12.1 Detection systems in use

Hiksvision DS-7708NI-12- Thermographic Thermal & Optical Bi-Spectrum Network Bullet cameras will be installed in external yard storage areas.

12.2 Certification for the systems

The CCTV system and thermal cameras have not been installed at the time of writing this FPP, however they will be installed by the time the permit is issued. An installation and commissioning certificate will be provided once available.

13. SUPPRESSING FIRES

13.1 Suppression system in use

No material is stored in the treatment buildings, material is bought to the lines as required for processing. All mixed window frame waste is stored on the external yard area. As no material is stored in the treatment buildings, it is disproportionate to install a suppression system in the building

13.2 Certification for the systems

N/A

13.3 Active Firefighting

The site has the following equipment available for active firefighting:

Fire extinguishers	Site wide: Water, Foam, CO2 fire extinguishers maintained by Bryland Fire (https://brylandfire.com/).
Equipment	Fire extinguishers, fire hydrant external to site on corner of road, CCTV, thermal cameras.
Evacuation	Site procedure
Active Fire Fighting	Trained personnel – Fire Marshalls.
Access to the site	One main access point from external yard and three pedestrian access points from building onto road giving unrestricted access to the site.

14. WATER SUPPLIES

14.1 Available water supply

The site has access to

- 1 public fire hydrant system
- Pooled water within the yard when penstock valves closed will have 366m^3 capacity when full – see Water Pooling Plan Drawing No.07

14.2 Calculation for the required water supply

Show the calculation for your required water supply

Maximum pile volume in cubic metres	Water supply needed in litres per minute	Overall water supply needed over 3 hours in litres	Total water available on site in litres
297m^3	1,980 litres per min	356,400 litres or 356.4m^3	Unlimited from hydrants

15. MANAGING FIRE WATER

15.1 Containing the run off from fire water

The calculation above has been used to determine the maximum volume of water that would need to be retained in the event of a fire.

- The site plan indicates the expected layout of the storage bays. Water will be contained in the site via the drainage system and interceptor. The drainage systems will be fitted with a penstock valve by May 2024 (see section 5.1) that could be closed manually (see Appendix 11 Penstock Valve Closure Procedure). Once closed the drains will fill with water spill onto the yard areas highlighted in the Fire Water Pooling Plan, Drawing no.07.

- The yard areas are designed to store 366m^3 of water. This will give enough storage for 3hrs of firefighting time and to enable 3 hrs for a tanker to arrive at the site.

- Fire water could also be re-circulated by the fire brigade by using the stored water on the

yard area.

- A local tanker company would-be put-on stand-by to be able to attend the site to remove fire water for treatment although this would not be started until the Fire Service had indicated it was safe to do so.

- 60cm high boom would be deployed across the main gate to the external yard to hold as much water as possible in the external yard area

- As a secondary precaution measure, clay drainage mats would be added to the surface water drains on the main road, to prevent any water that may escape from the site entering surface water drains on the surrounding roads (see Drawing No.6 Fire Prevention Plan for positions where clay mats will be placed).

- There are no nearby rivers or watercourses where the water could escape to.

16. DURING AND AFTER AN INCIDENT

16.1 Dealing with issues during a fire

In the event of a fire, all deliveries to the site would be immediately halted and not restarted until the fire was fully extinguished, the Fire Service satisfied that the site could continue operations and Environment Agency approval obtained to commence operations. Part of the fire drill is to immediately **close the access gates** to the site with a member of staff on duty to ensure that only authorised vehicles were able to gain access.

The list of emergency contacts is shown at start of this document.

An agreement from the fire service and Environment Agency that the site can be reopened, a full environmental assessment will be carried out to determine the extent of the damage and the risk related to continued operations.

16.2 Notifying residents and businesses

The following would be notified in the event of a fire, dependent on severity.
Severity 1 – contained by site staff
Severity 2 – fire service called but fire contained in building.
Severity 3 – fire spreading to the building and need for evacuation of local businesses.
Severity 4 – fire out of control with risk of widespread air pollution

Name	Contact details	1	2	3	4
Next door business	New Design - Kevin Wright t. 0121 557 5351 / m. 07715 618459 Charterbrae – Tom Brain t. 0121 520 5353 / m. 07730562790 M and J Drilling – Steve Rule t. 01902 885241 Cornwallis - Ravi t. 0121 557 1450 / m.07792 780448	x	x	x	x

Residents less than 50m from site	No residents within 50m, nearest residents >180m away		x	x	
Environment Agency	General enquiries - 03708 506506 Incident hotline - 0800 807060		x	x	x
Fire and Rescue Service	Emergency - 999		x	x	x
West Midlands Police	Non-emergency - 101 Emergency - 999			x	x
Sandwell Council	Environmental Health – 0121 368 1177 Emergency out of hours – 07889 117913 General enquiries – 0121 569 2200			x	x

16.3 Clearing and decontamination from a fire

The sites response to this will depend on what material was involved in the fire and the scale and size of the fire.
Steps:

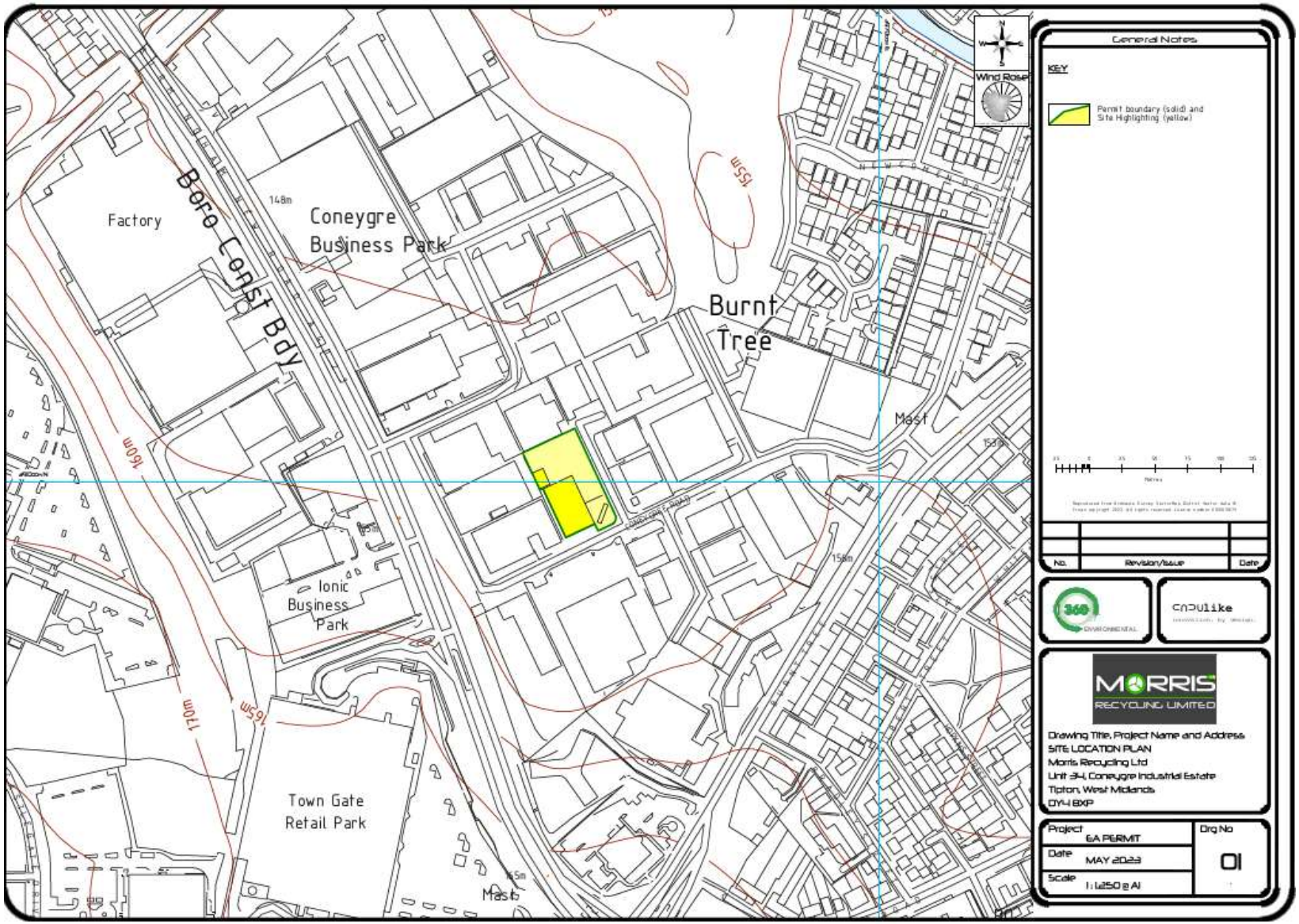
- Assess the volume and polymer type involved
- Assess the degree of fire damage to the waste
- Assess whether the material can still be recycled – if yes whether it can be recycled at Morris Recycling facility
- Assess whether the material can be treated with mechanical equipment to process it for a suitable recovery route
- Send the material for reprocessing at a registered and suitable facility
- If the material is not suitable for recovery, the material will be disposed of at landfill

16.4 Making the site operational after a fire

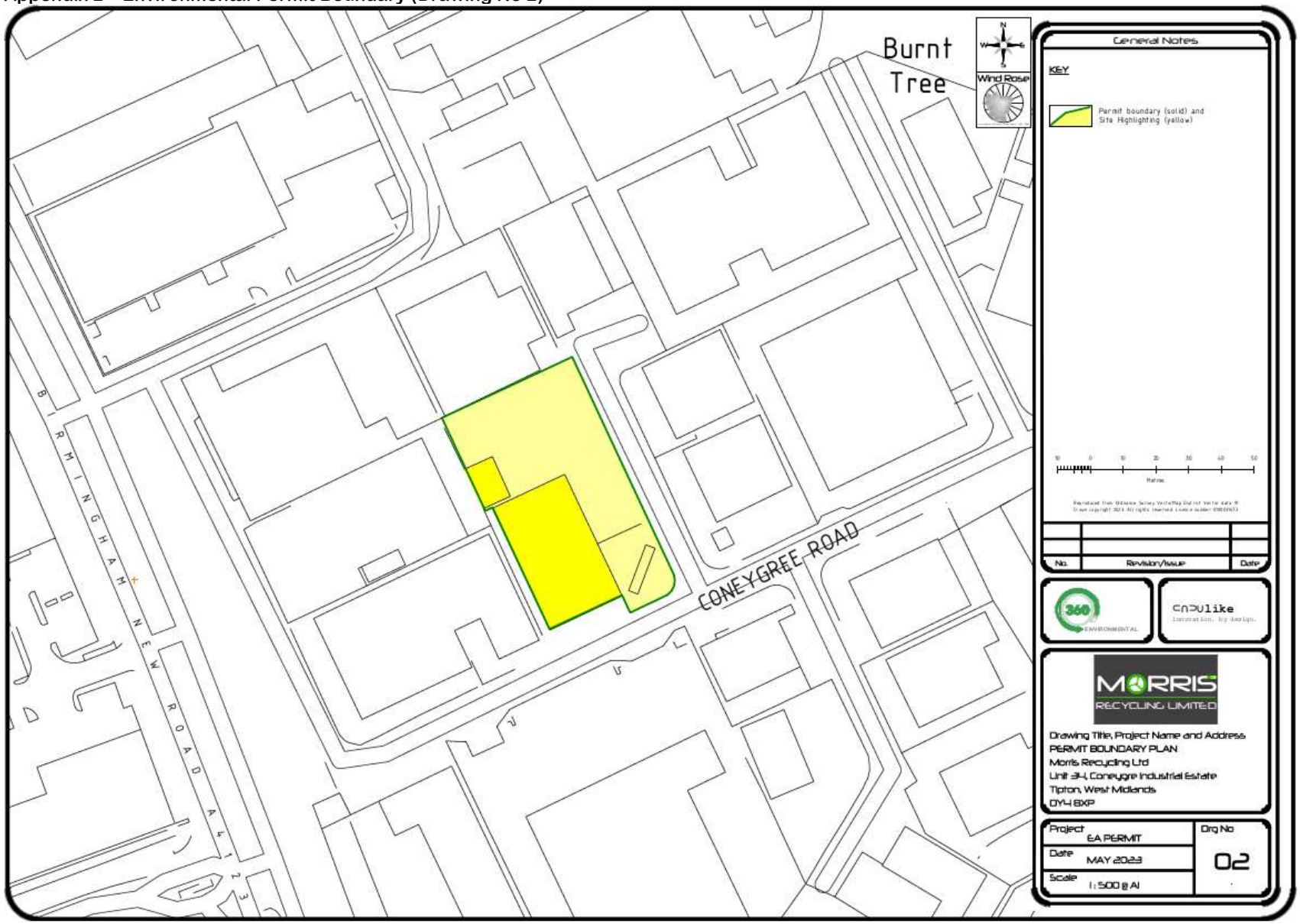
A full report on the cause of the fire would be compiled and action taken where possible to mitigate the possibility of further similar fires.

Once all damaged and contaminated waste had been removed, damage to the building and equipment repaired and the site was considered fit for continued operation, the Environment Agency would be called to visit the site to agree that operations could recommence.

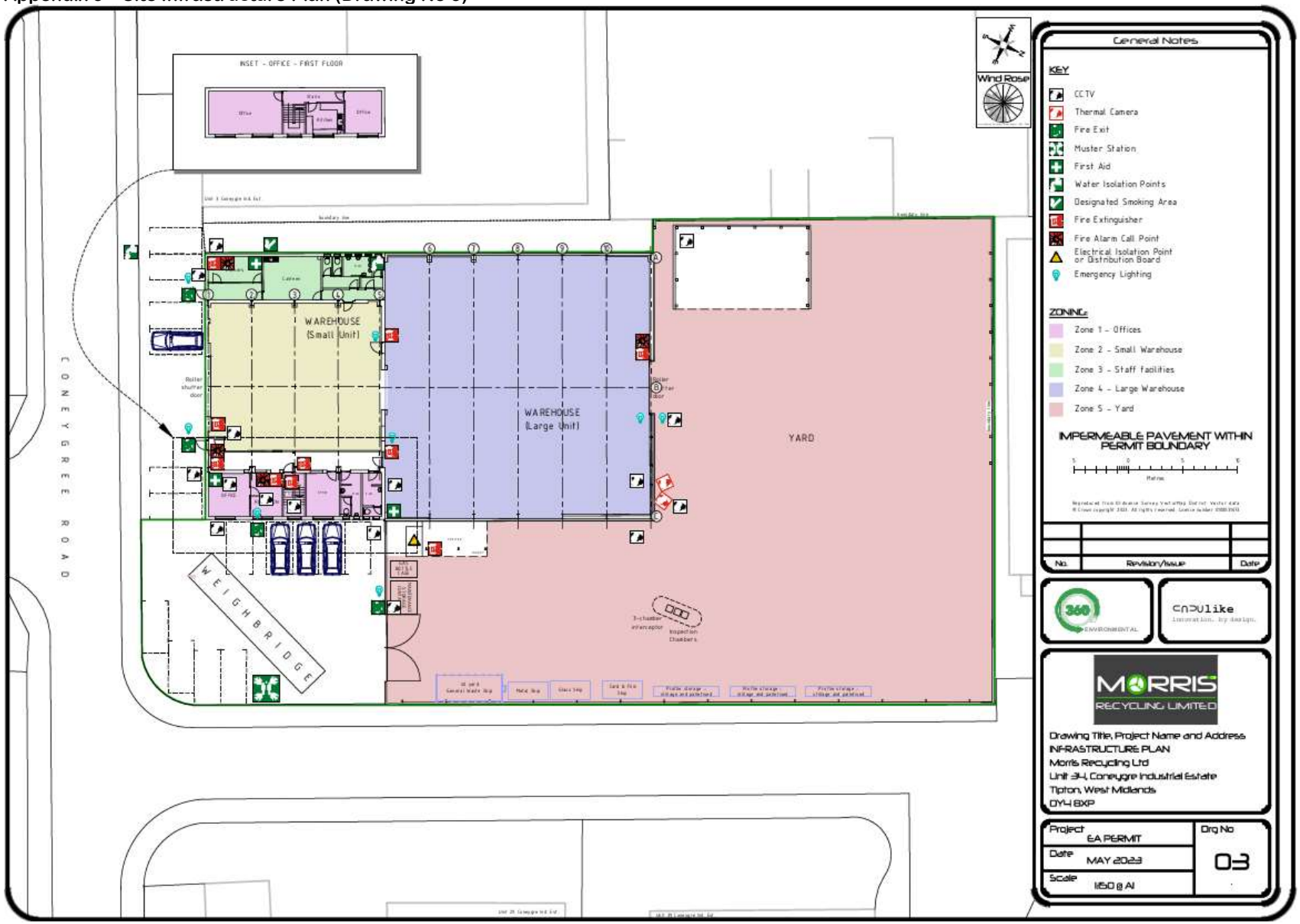
Appendix 1 – Site Location Plan (Drawing No 1)



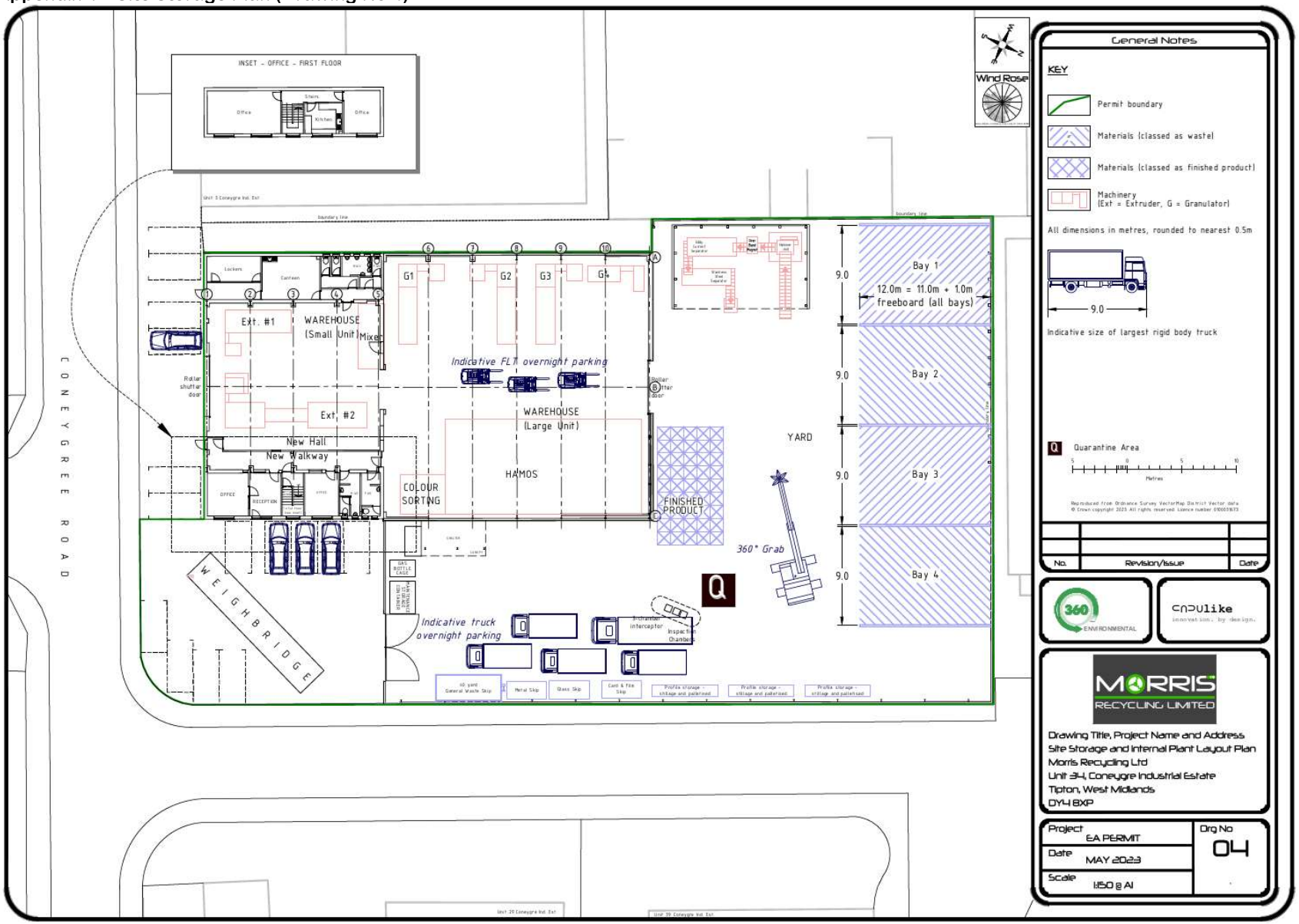
Appendix 2 – Environmental Permit Boundary (Drawing No 2)



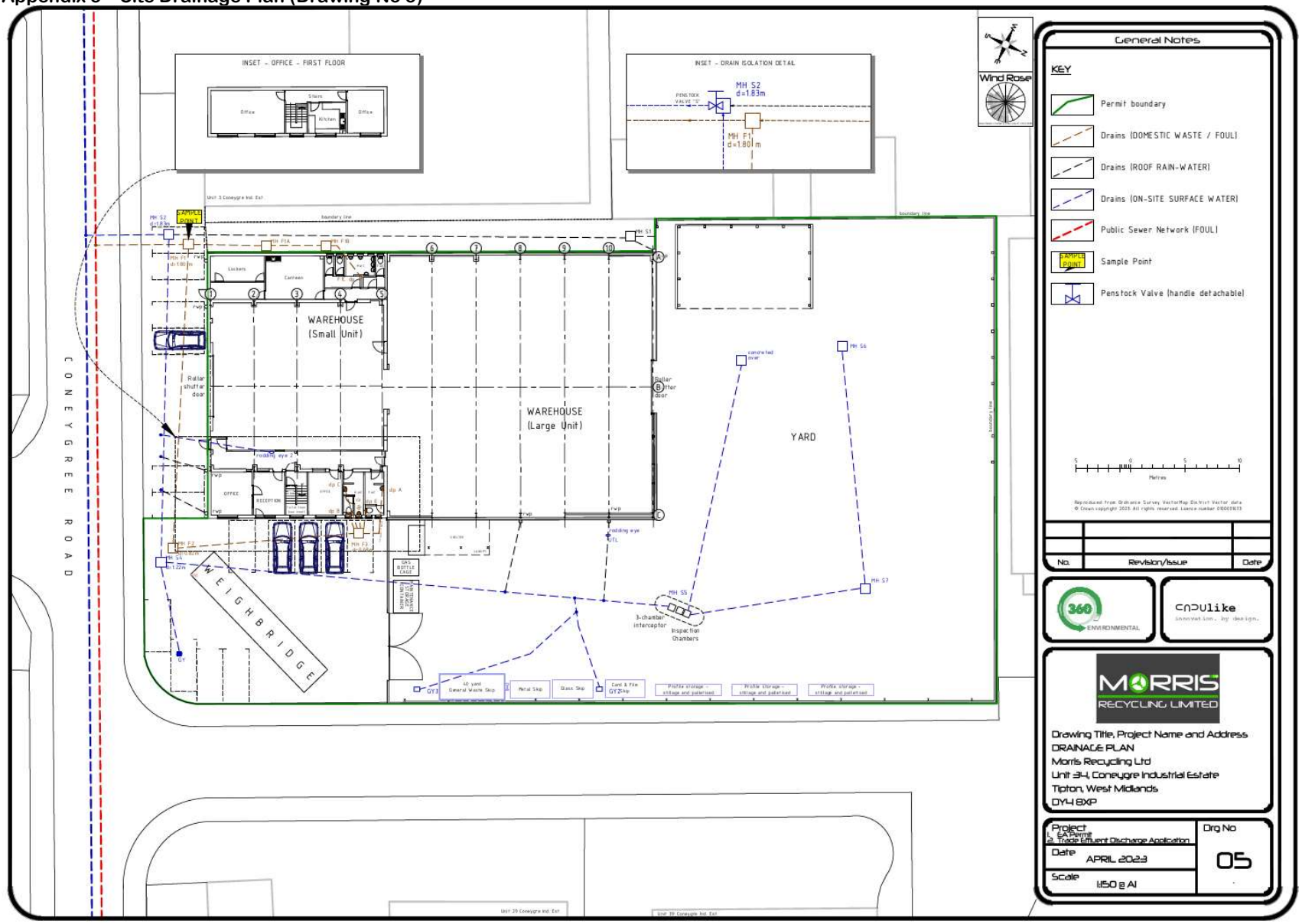
Appendix 3 – Site Infrastructure Plan (Drawing No 3)



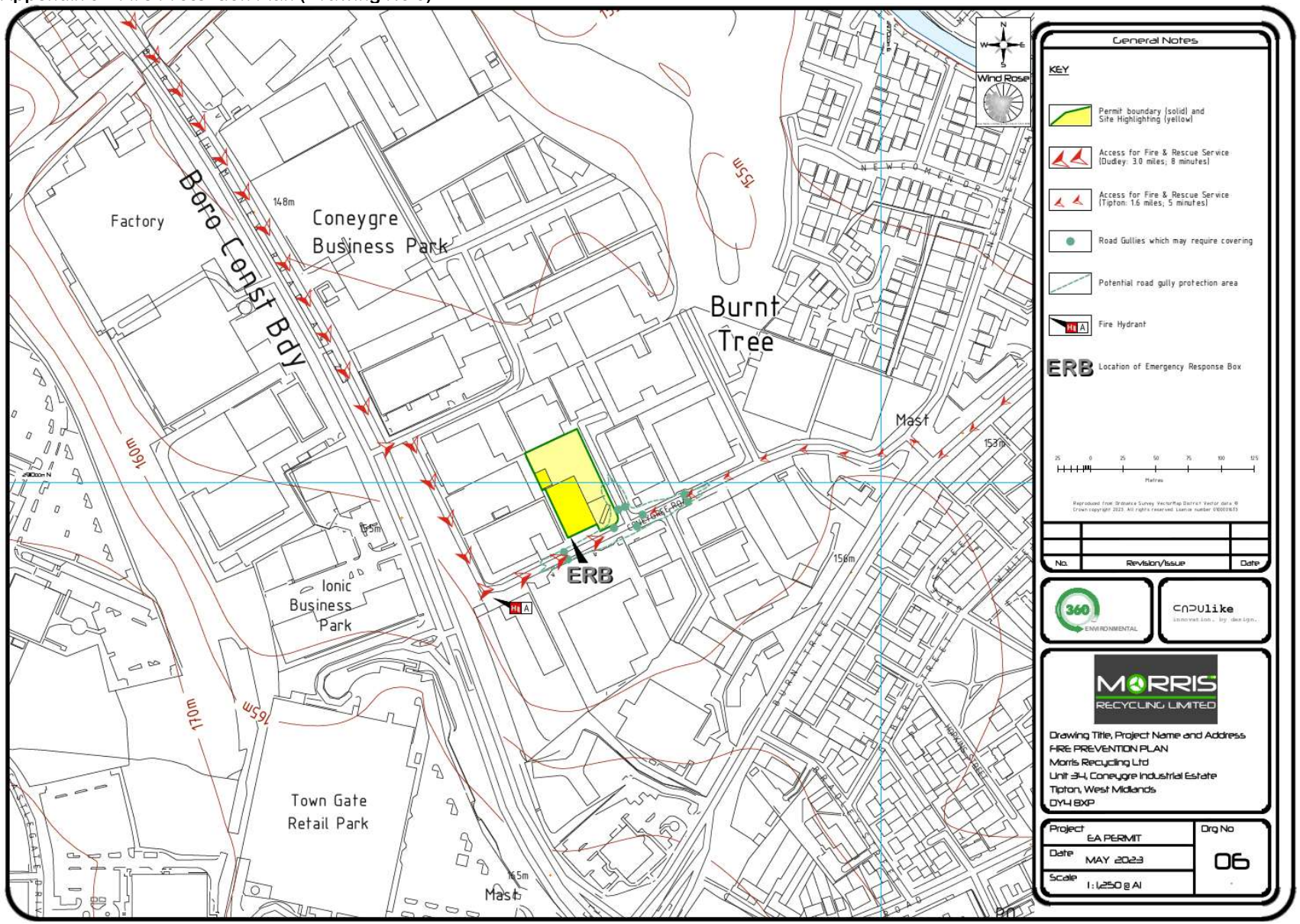
Appendix 4 – Site Storage Plan (Drawing No 4)



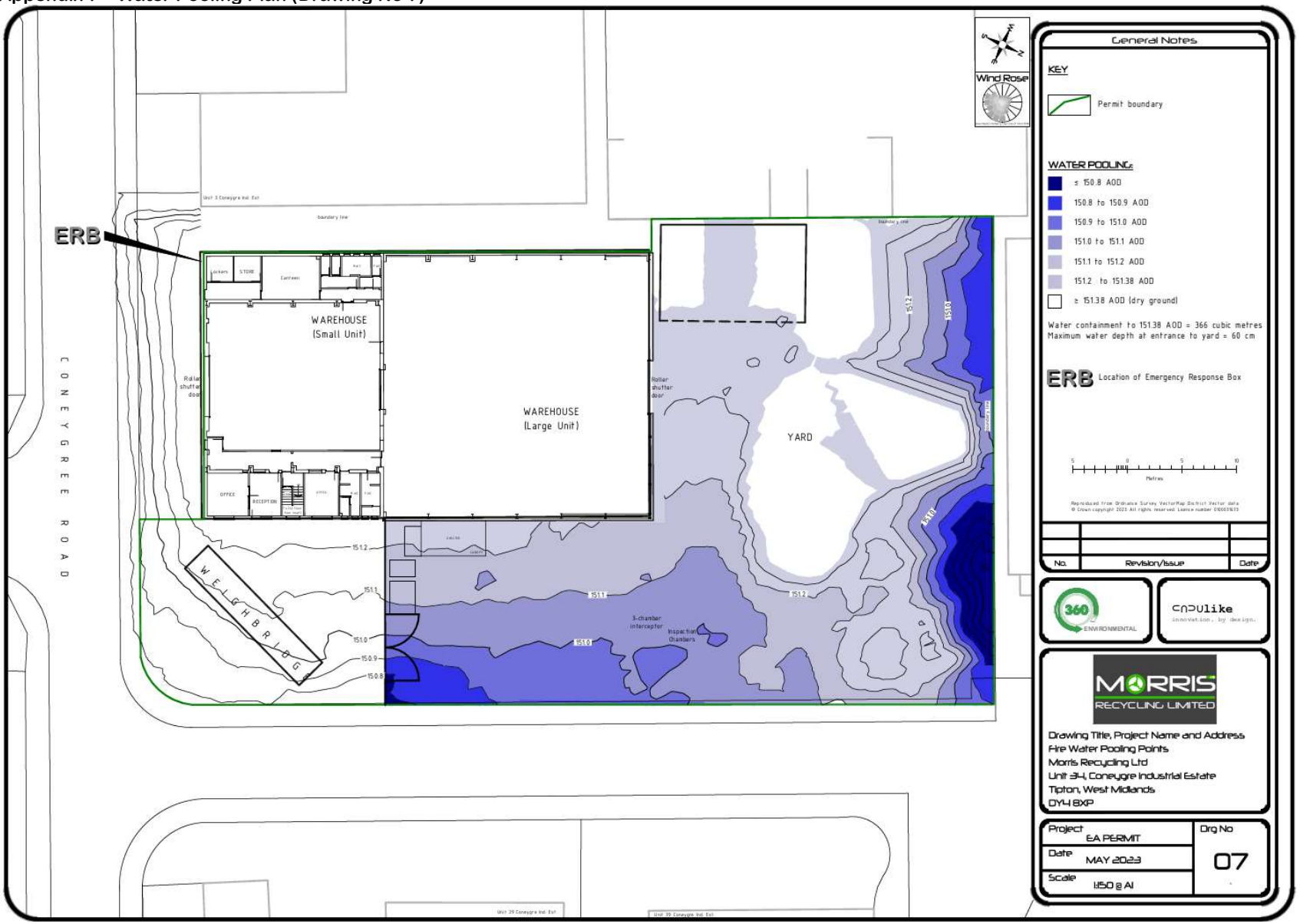
Appendix 5 – Site Drainage Plan (Drawing No 5)



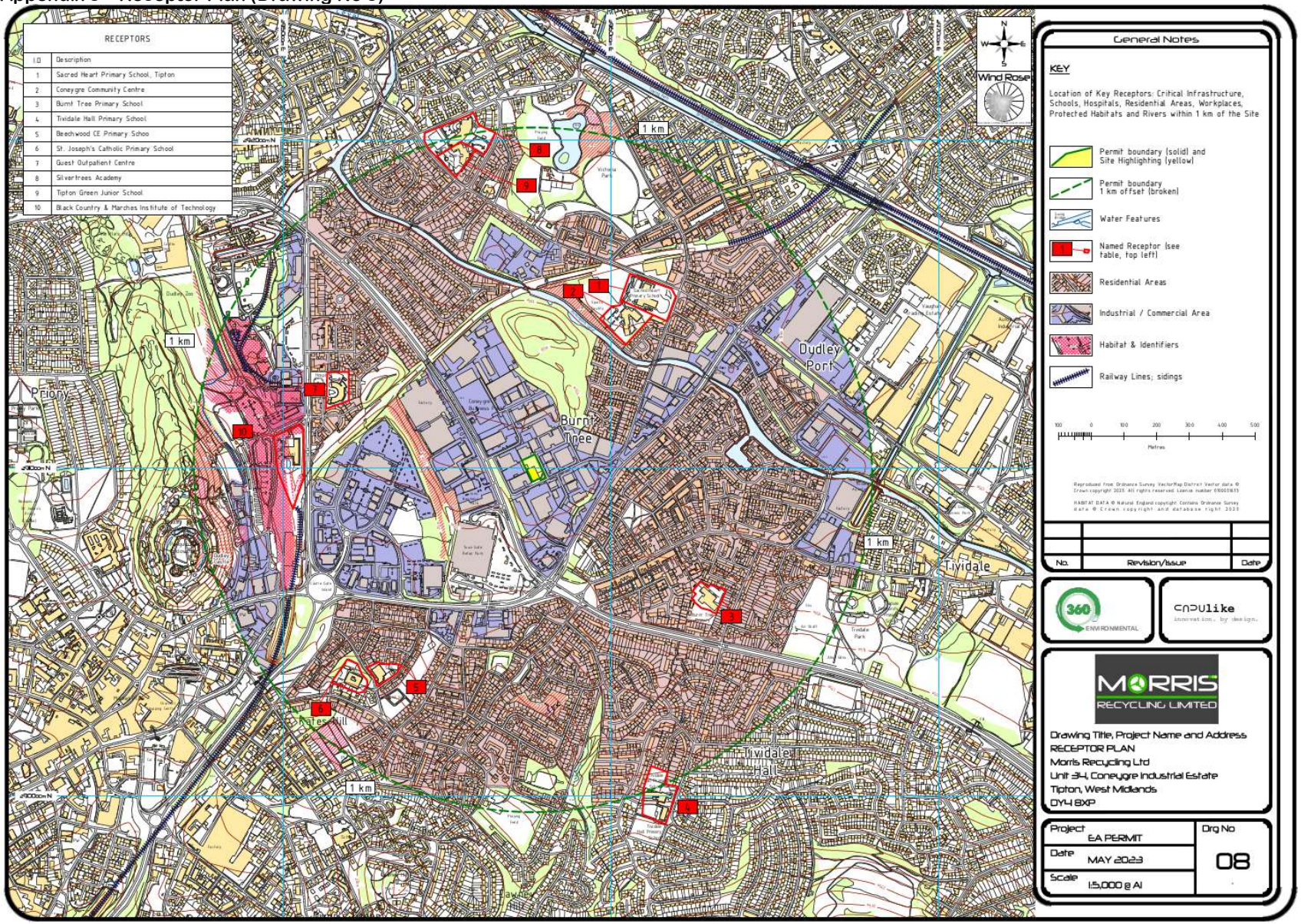
Appendix 6 – Fire Protection Plan (Drawing No 6)



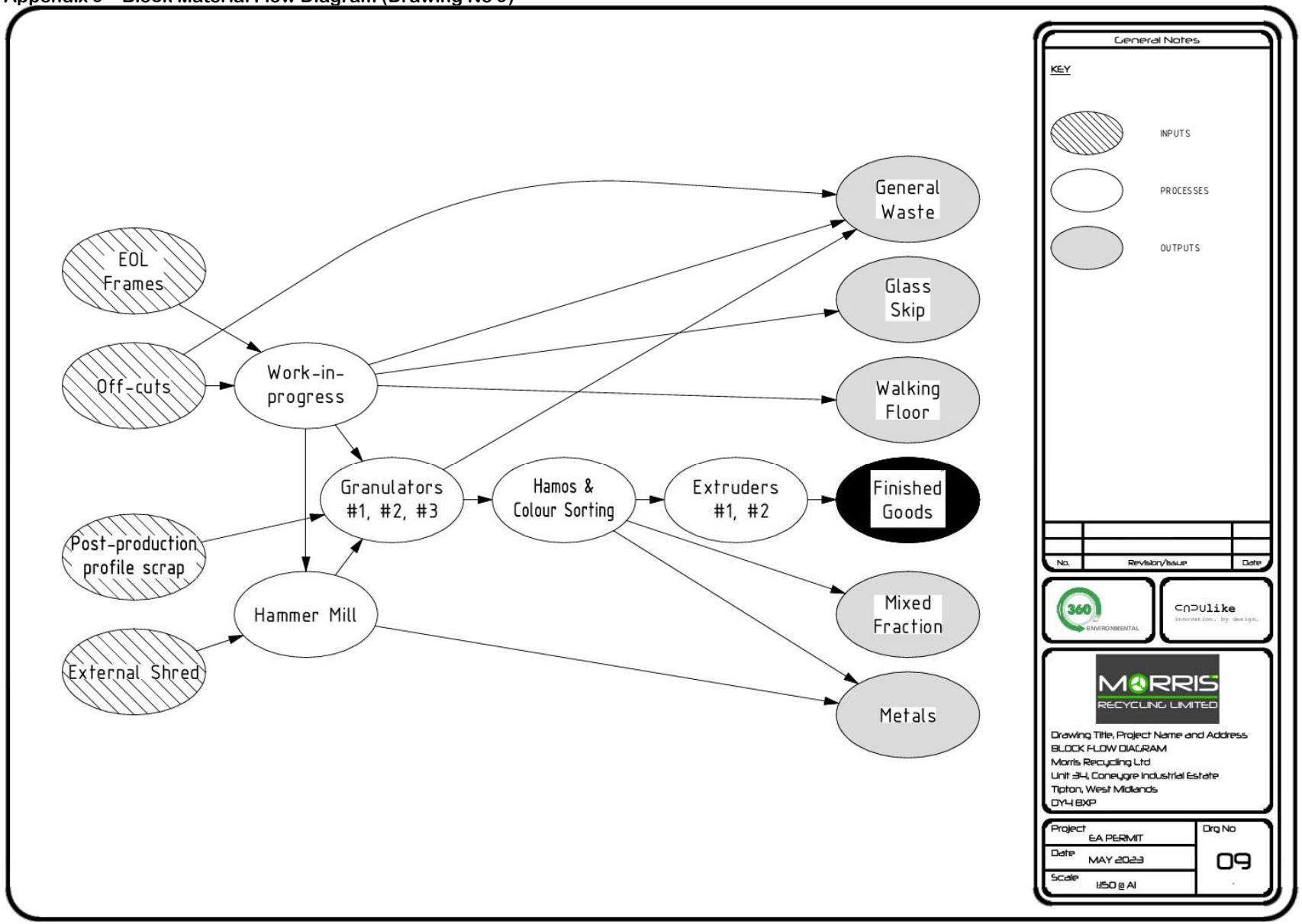
Appendix 7 – Water Pooling Plan (Drawing No 7)



Appendix 8 – Receptor Plan (Drawing No 8)



Appendix 9 – Block Material Flow Diagram (Drawing No 9)



Appendix 10 – Severn Trent Waste Water Map (ST Ref. 569353-1)

Appendix 11 – Penstock Closure Procedure (in preparation for penstock value to be fitted)

MORRIS RECYCLING LIMITED

STANDARD OPERATING PROCEDURE

Department:	Site
SOP No:	019
SOP Title:	Penstock Closure
Issue No:	1
Effective Date:	31st July 2023

Penstock Valve Closure

The Environmental Permitting Regulations require the site to protect the environment. In the unlikely event of leakage, spillage or fire water entering the surface water drainage system that could lead to an environment incident, a penstock valve has been added to the surface water drainage system. The Penstocks should be closed in any such event to protect watercourses external to our boundary.

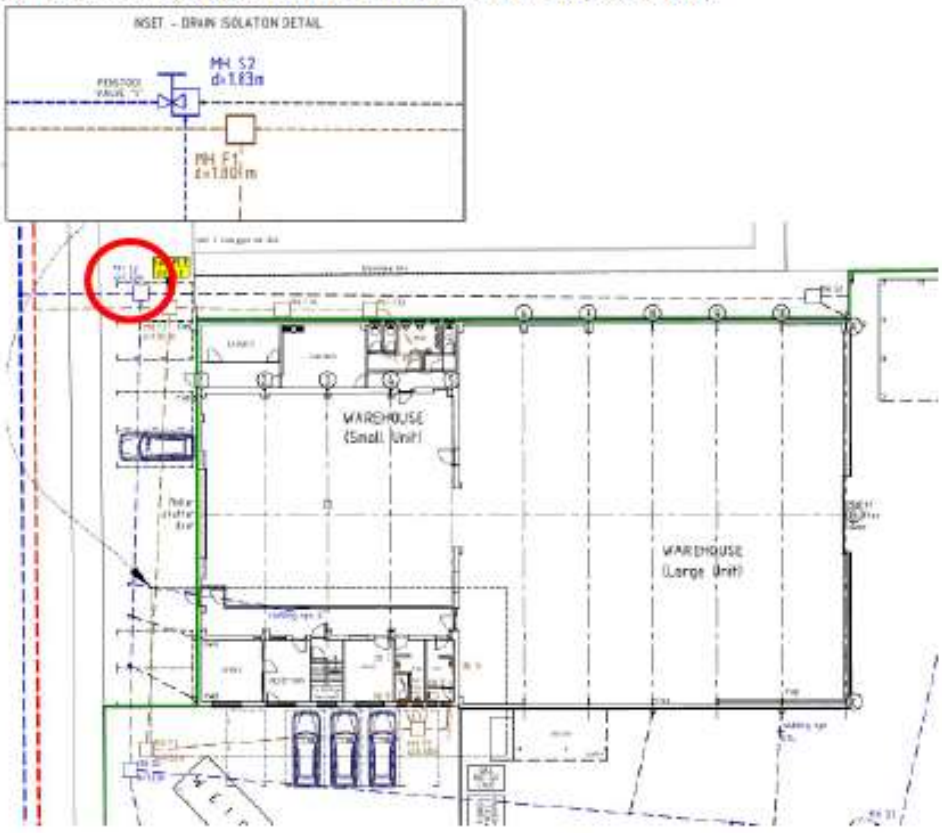
PPE Required; Safety Boots, High Viz Workwear, Gloves

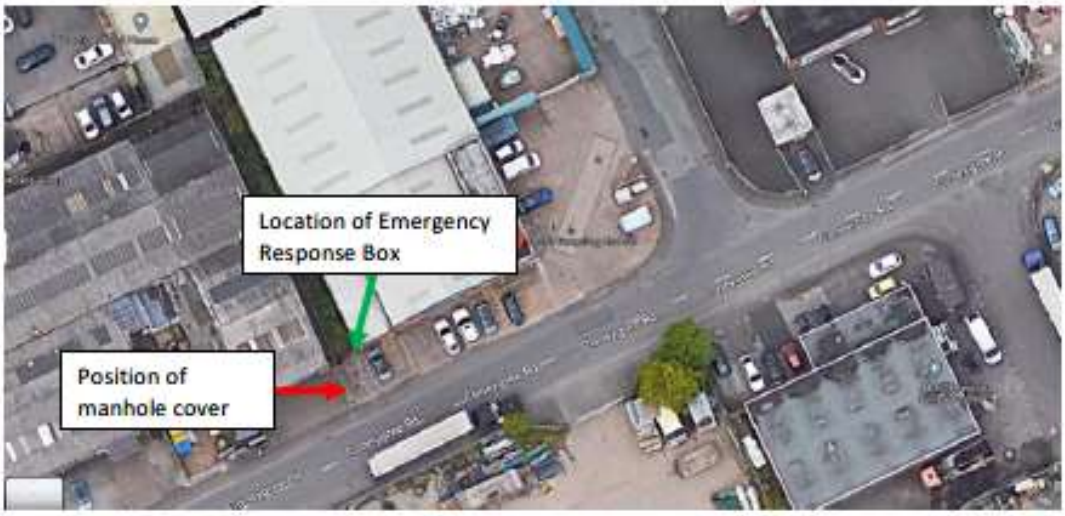
Equipment Required; Manhole Cover Lifting Keys, Penstock Handwheel

The site has one penstock valve.

- Surface Water Drains

The location of the penstock valve is shown on Drainage Plan – drawing No.05. The penstock valve is fitted after drain manhole MH S2 (see below).





The penstock should be used;-

- To prevent fire water leaving the site.
- To prevent spillages such as oils or chemicals leaving the site.
- To prevent any spillages that enter the drainage system from any sources escaping the site.

Manually Opening and Closing the Penstock by Hand.

If the penstock needs to be closed.

- Only trained personnel on this procedure and all relevant specific SOPs should carry out this task if safe to do so.
- Locate the manhole keys and the penstock handle from the Emergency Response Box (Storage bin) sited on the corner of the building (location shown on image above).
- Remove the man-hole cover.
- Fit the penstock handle to the penstock and turn clockwise until fully closed.
- Re-fit the man-hole cover.
- The reverse procedure should be carried out to open the penstock.

In the event of a penstock being closed due to an uncontrolled event on the site the penstock must remain closed until; -

- All drainage systems are cleaned.
- The Interceptors contents is emptied, and the interceptor is cleaned.
- If any Emissions have or may arise from the incident which led to the penstock being closed the Environment Agency must be notified.

Under NO circumstances is the penstock to be opened without authorisation from a Director. It is the Directors responsibility to ensure that above is complied with.