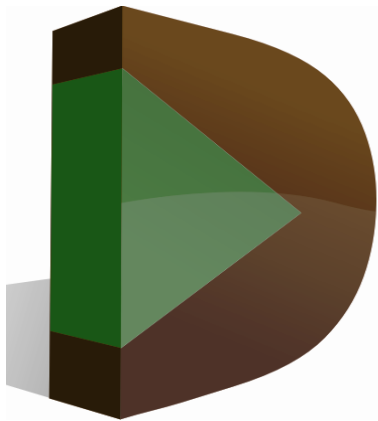




Derwen

FIRE PREVENTION &
MITIGATION PLAN
FOR PERMIT (EPR/ FP3893SF)

September 2017

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1.0 Introduction

This Fire Prevention and Mitigation Plan has been produced in accordance with Natural Resources Wales 'Fire prevention and mitigation plan guidance – Waste'. It covers the activities undertaken by Derwen in accordance with our Environmental Permit (EPR/ FP3893SF), although a standalone document this is a summary of the controls found within Business Management Systems operated by the Company to various national and international standards.

2.0 Fire prevention/detection/alarm/procedures

There are a number of fire prevention approaches, systems and procedures in place to detect and raise the alarm in the event of a fire. The following measures are in place:

- All waste is kept on site for the shortest amount of time possible, as outlined in table 1 (see appendix 1).
- The waste on site is kept to a minimal amount, is non-hazardous and amounts to a daily input circa 250 tonnes.
- A fire risk assessment has been undertaken and this is reviewed at regular intervals.
- All waste materials once sorted are stored in individual concrete internal and external bays which are covered and have a fire break wall. The external storage areas constructed of concrete lego blocks have a fire break wall of 800mm. The internal/external storage areas connected to the building are constructed of a mixture of concrete and steel and have a fire break wall of 160mm.
- There is a single loop Advanced Electronics Fire Alarm Control Panel with manual call points at each Fire Exit and at other strategic areas on the metal walkways to enable staff members to raise the fire alarm.
- There is automatic smoke detection in the control room and canteen areas and heat sensors are fitted to the wood bay.
- Due to the height in the main plant there are aspirating detectors installed with 3 pipe runs that incorporate sampling holes. The aspirating system is capable of discriminating between dust and smoke particles.
- There are weekly checks of the fire alarms, monthly checks of emergency lighting and annual servicing.
- Trained fire marshals are in place to coordinate evacuations etc. and are trained in use of fire extinguishers, all staff have fire awareness training.
- All visitors/contactors receive a site induction detailing procedures with regards to fire and general site rules e.g. no smoking, assembly points etc.
- There are regular timed full site emergency drills to ensure all procedures are working.
- In the event of fire, the alarm is raised and staff are evacuated. A supervisor/manager will assess the fire and decide whether to attempt to fight it and whether the emergency services should be contacted.
- In the event of the emergency services being called firefighting equipment will be utilised, where it is deemed safe to tackle, until the services arrive on site. A senior manager will then hand over to the emergency services and give a full description of the incident including wastes present etc.

- After the event, as part of the management system, an incident investigation will take place using available CCTV, staff interviews and documentation to establish the incident, the underlying causes and root cause. This process will allow any deficiencies to be identified and suitable corrective actions to be raised.

3.0 Fire containment and mitigation

In the event of fire there are a number of steps that will be taken to minimise the spread of fire, including:

- Heavy plant is available to move combustible material away from any fire source.
- In the event of fire any fire spread would be monitored in relation to the other operational areas of the site. However, there is sufficient separation between these areas as the wash plant (a wet process) is over 60 metres from RRF and office/workshop/plant/vehicle storage is over 100 metres away from RRF.
- There are stores of inert materials (soil/sand/stone) on site which can be utilised to contain and smother burning material if necessary.

4.0 Firefighting measures

There are a wide range of measures in place to fight fire, including:

- A wide range of firefighting equipment on site in the form of extinguishers, to ensure there are enough/ suitable extinguishers a fire company was employed to identify and supply the extinguishers required which are under contract/maintenance agreement.
- All extinguishers are replaced/refilled after use and are inspected on a daily basis.
- There is a mobile bowser on site with a capacity of 2000 gallons and a water storage tank with a capacity of 600 gallons with which is pump fed to maintain water levels.
- Fire hose points, with attached hoses, are set up in the building to allow immediate delivery of water, these points are checked regularly to ensure they are in working order.
- Fire fighters will use sprays and mists where possible to reduce the amount of water used.
- Where there are adjacent stores of material that may be affected and cannot be moved they will be sprayed to reduce the chances of combustion.
- Where possible machinery such as grabs will be used to submerge burning material in pools of fire water.

5.0 Combustion materials/emissions

In order to control any issues from combustion materials and reduce the chance of any emissions the following controls are in place:

- In the event of fire surrounding materials will be removed to a distance where they will not be affected by fire/smoke/water.

- All combusted materials will be kept on an impermeable surface with sealed drainage, the material will be tested for hazardous properties and disposed of through the appropriate channels.
- Sandbags are produced on site for sale to third parties, in the event of fire these stocks would be used to create extra firewater bunds if/where necessary.
- There is an equipped spill response team on site who are trained in spill containment and will assist where appropriate.
- Fire water will collect in the 2 on-site interceptors which each have a capacity of 2,000 gallons and where possible will be recirculated for firefighting if it is not hazardous.
- All fire waters will be tested and disposed of through the appropriate channels based on its hazardous/non-hazardous properties.
- There are no residential or commercial properties in the immediate vicinity of the site. The prevailing wind is south westerly which would take any smoke away from the nearest residential area over 300 meters to the north and the A465 which is over 145 metres to the north.

6.0 Access for emergency services

To ensure there is suitable access for emergency services the following steps have been taken:

- The local fire brigade has undertaken numerous OPS45 visits to the site and retain records/plans of the site infrastructure and materials held.
- The emergency services have safe access and egress throughout the site and there is sufficient room to move vehicles around the building.
- The emergency services retain a key for the front gate and they have been instructed to cut locks off if need be.
- Due to the overall size and scope of the site there is potential to move materials/equipment away from any fire and to allow full access to emergency services.
- The potential explosive gas cylinders are kept in a lockable cage in a secure compound 100 metres away from the RRF.
- There is a double skinned diesel (high flashpoint) store of 4,000 litres adjacent to the building. Additional diesel fuel (high flashpoint), Oils (high flashpoint) and COSHH items are stored within the secure compound and workshop building respectively.

7.0 Fire Prevention

There are a number of approaches adopted to reduce the chance of fire on the site, these include:

- The provision of waste acceptance criteria to all users of the site detailing what wastes can/cannot be accepted.
- Where loads are to be picked up by Derwen vehicles, a visual inspection is undertaken before the load is taken from the site.
- All loads are inspected at the weighbridge before entering site where CCTV is present, a further examination is undertaken at tipping and then by the main grab operator.

This series of visual checks helps to identify any burning/smouldering or volatile/ combustible materials before they reach the process/main pile. These series of checks ensure that any situations of hot loads are identified/rejected/contained/extinguished at the earliest opportunity.

There are quarantine areas/containers available on site for any nonconforming items identified in the above process and these are removed from site as soon as possible.

Sources of ignition are minimised as far as is reasonably practicable, in the following ways:

- Smoking is controlled to smoking shelters and banned on other parts of the site, no smoking signs are displayed and the policy is strictly enforced.
- No material of any kind shall be burned within the boundaries of the site.
- Lights in the RRF are on the roof over 6m from any combustible items.
- All electrics are serviced regularly.
- All vehicles are parked away from the combustible piles.
- All hot works are controlled by a permit to work system which includes a minimum of two people with one being a fire watcher trained in the use of firefighting equipment. Housekeeping is undertaken before hot work to ensure that the area is clear from combustible items and sand is laid to catch any sparks/drop off materials, at the completion of hot works there is a 30-minute cool off period during which observations are undertaken to ensure that there are no burning/smouldering items nearby.
- Space heaters are not used in the RRF building or close to areas of combustible material
- All contractors are inducted on to site and briefed on the fire prevention requirements and the permit to work system.
- All visitors are inducted on to site, are accompanied in most circumstance and are informed of fire arrangements.
- There is a preventative maintenance regime in place for all plant and equipment and a maintenance crew is on call to deal with any reactive maintenance.
- There is a strict daily cleaning regime across the site to minimise the build-up of loose fibres/dust & materials. At periodic intervals we also have a full shut down and full site deep clean.
- The site has a number of layers of security in place including fencing, locked gates, secure compound for plant/fuels, 24hr manned CCTV with call out. The RRF has lockable roller shutter doors and exits which are all secured out of hours. No loose combustible material is stored in the outside storage areas.
- All site plant/vehicles have fire extinguishers and have preventative maintenance undertaken on them to replace filters etc.
- At the end of each shift all plant is placed in an area away from the combustible material and allowed to cool down.
- The plant is left to run clean of all waste material at the end of shift and then cleaned. The site is not locked until the supervisor/appointed person undertakes a visual inspection of all areas.
- There is sufficient room on the site to allow for a number of emergency/quarantine areas, with at least 10m around the perimeter, in the event of fire. Within the building there is an area designated is the centre of the building front of the site and one at the rear of the building (marked on site plan appendix 2).
- Fire alarm/burglar alarm linked to security company.

8.0 Self-combustion

Due to the capacity limitations of bays, site infrastructure and market considerations we operate to a business model based on the quick throughput of wastes. The majority of materials (including RDF, wood, paper, cardboard) are in the main received, processed and removed from the site within 3 days of reception.

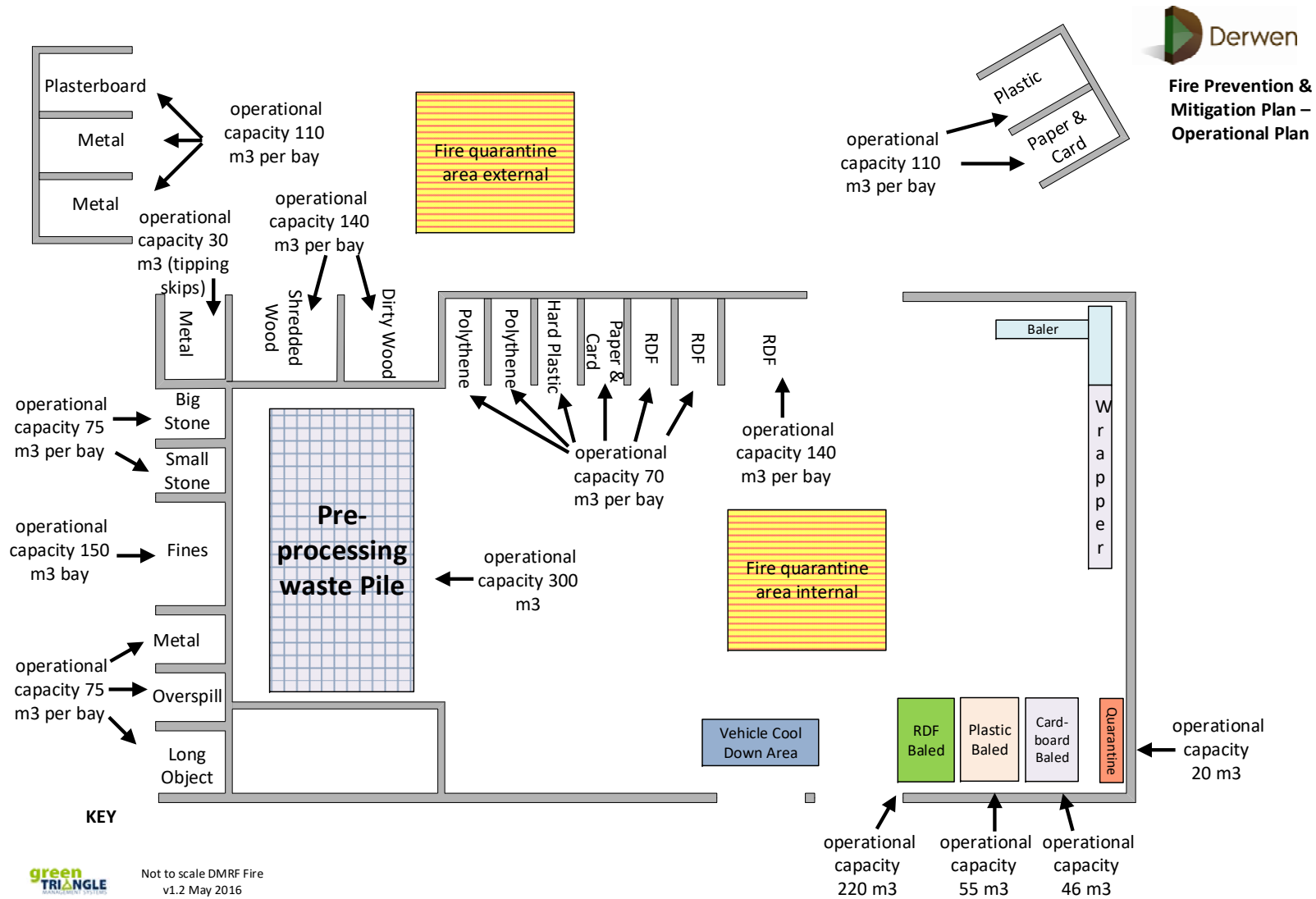
Self-combustion is minimised as far as is reasonably practicable, in the following ways:

- To reduce risk factors combustion/fire we have an automated process that through machines and hand picking divides materials down by type. We separate each product/material into its own storage bay with concrete dividers. Some materials are also stored in external bays which are accessed from the side and rear of the building. This process ensures that fines/metals/rdf etc. are kept separate from each other.
- Stock is rotated and removed from site as soon as is reasonable practicable (see table 1), we have a number of outlets for taking our products/waste this ensures that if there is a problem with an outlet we are able to use another.
- All stockpiles are kept to a minimum due to site infrastructure – limited site pre-processing capacity/storage and size limitation of bays.
- All materials are pushed up into bays to keep materials between the bay walls.
- All bays are emptied routinely and before they reach 75% capacity.
- Moisture levels are controlled as far as is possible by undertaking all reception/processing/storage of waste within covered areas. Our end destinations customers also require materials arrive in the best possible condition i.e. dry/clean, this also helps to drive a dry process.
- There are hand held surface temperature readers in place for monitoring temperature and temperature probes which can be inserted within the stockpile / bales to ascertain internal temperatures.
- All RDF bales are given a date stamp at production which is used to monitor batch rotations for quality control purposes, this ensures that all bales are identifiable along with their time on site and are removed in order of production.
- All wastes entering the site are dropped off, inspected and moved into the bulk pile prior to processing.

Appendix 1 – Site Material Plan

Material	Max amount	Form	Duration on site	Storage	Location	Firebreak
Metals - Non ferrous	30 tonne	Loose	1 week	Bay/40cubic yard bin	Internal RRF	Concrete/steel wall
Metals - Ferrous	30 tonne	Loose	24 hours	Bay/40cubic yard bin	Internal RRF	Concrete/steel wall
Polythene	30 tonne	Loose/baled	1 week	Bay/row	Internal RRF	Concrete/steel wall/Baled
green	10 tonne	Loose (container)	1 week	40cubic yard bin	External RRF	Steel Container
Mixed hard plastic	30 tonne	Loose/baled	1 week	Bay/shed	Internal/external RRF	Concrete/steel wall/Baled
Rdf	150 baled 10 loose	Loose/baled	1-2 days	Bay/shed	Internal RRF	Concrete/steel wall/Baled
WEEE	2 tonne	loose	2 weeks	Secure container	External RRF	Steel Container
Mixed Cardboard & Paper	25 tonne	Loose/baled	1 week	Bay/shed	Internal RRF	Concrete/steel wall/Baled
Plasterboard	30 tonne	loose	1 week	Bay	External RRF	Concrete wall
Wood clean	12 tonne	Loose chipped	2-3 days	Bay	Internal RRF	Concrete/steel wall
Wood dirty	40 tonne	Loose	2-3 days	Bay	Internal RRF	Concrete/steel wall
Carpet	30 tonne	Loose/baled	1 week	Shed	Internal RRF	Concrete/steel wall/Baled
Tyres	100 tyres	loose	1 month	shed	Internal RRF	Loose
general	10 tonne	loose	1 day	40cubic yard bin	Internal RRF	Steel Container

Appendix 2 – Fire Prevention & Mitigation Operational Plan (Not to Scale & for Illustration only)



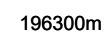
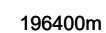
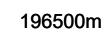
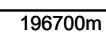
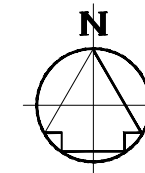
Appendix 3 – Key Receptor Contacts

Key Code	Receptor	Contact No.
C1	Fenestration Recycling	01179 690037
C2	Aggregate Industries UK Limited	01792 812588
C3	McDonalds	01792 817010
C4	Esso Petrol Station	01792 324729
C5	Neath Abbey Business Park	01639 686987
C6	Sims Metals	01792 816040
C7	Morris Metals	01792 905001
C8	Shapes Gym	01792 321212
O1 & O2	Railway Line (Network Rail)	03457 114141
O3 & O8	A465 Dual Carriageway (South Wales Trunk Road Agent)	0300 123 1213
O4 & O5	Public Park (NPT Council)	01639 686868
O6	Coedffranc School	01792 813504
O7	Mynachlog Nedd Junior School	01792 812202
O10	National Cycle Route 47 (Sustrans)	02920 650602
R1 – R9	Residential (Coedffranc & Dyffryn Clydach Community Council)	01792 817754 & 01639 635787
W3	Tennant Canals	01792 6444699

Appendix 4 – Site Plans

LEGEND

OWNERSHIP BOUNDARY



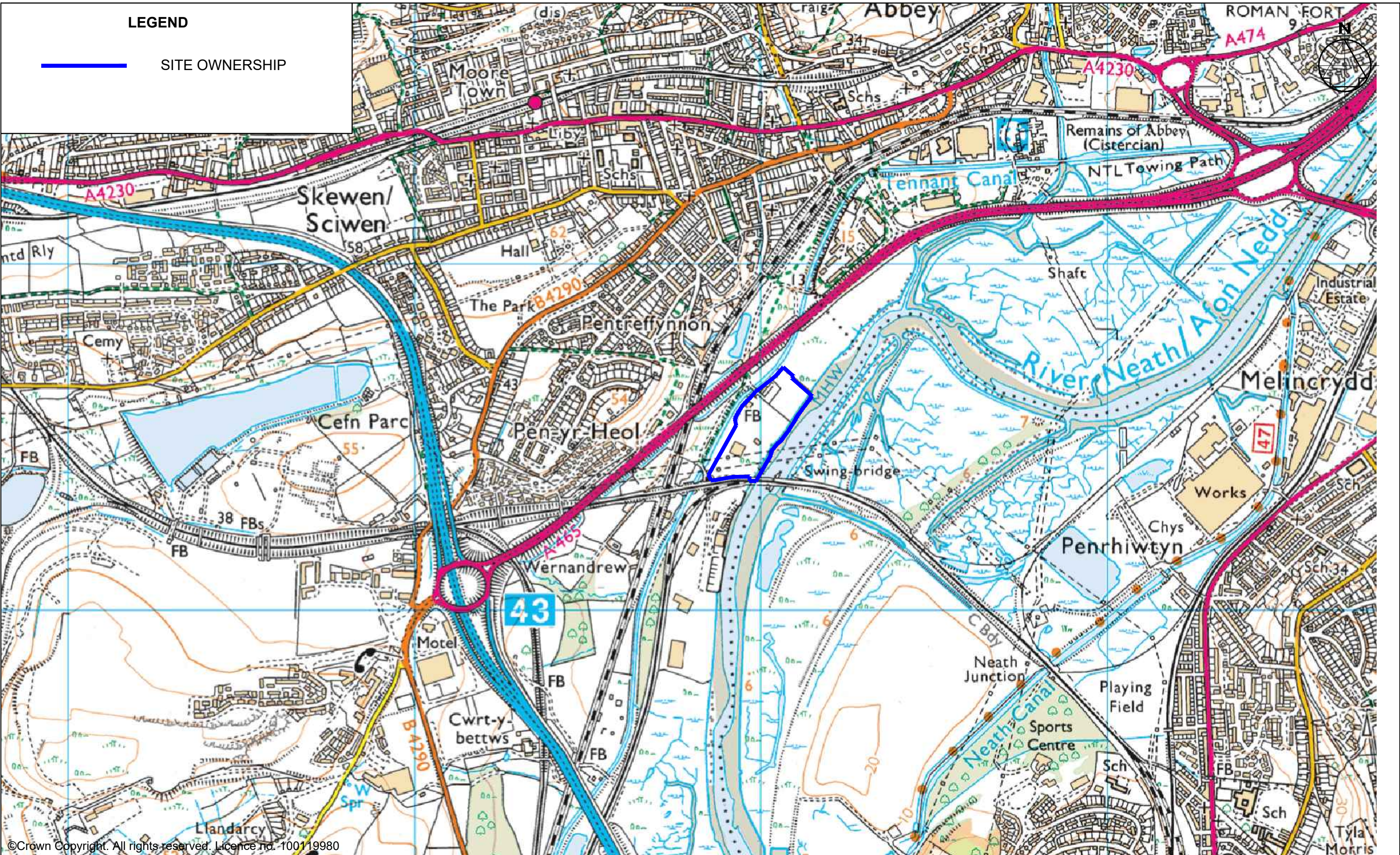
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											Ch'kd	SH		
							OWNERSHIP BOUNDARY				Appr'd	SH	@A3	
											Date	13/07/16		
								Job No.	DR	Drg No.	10944 - 001 - A			

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SITE OWNERSHIP



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EMAIL: PLANNING@TEPL.EU

DERWEN RECYCLING LTD

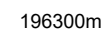
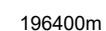
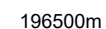
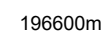
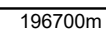
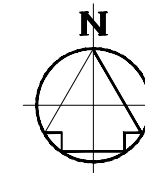
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Job No. DR Drg No. 10944 - 001 - B

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PERMITTED AREA



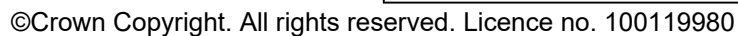
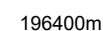
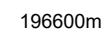
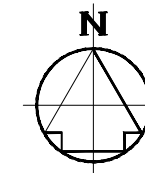
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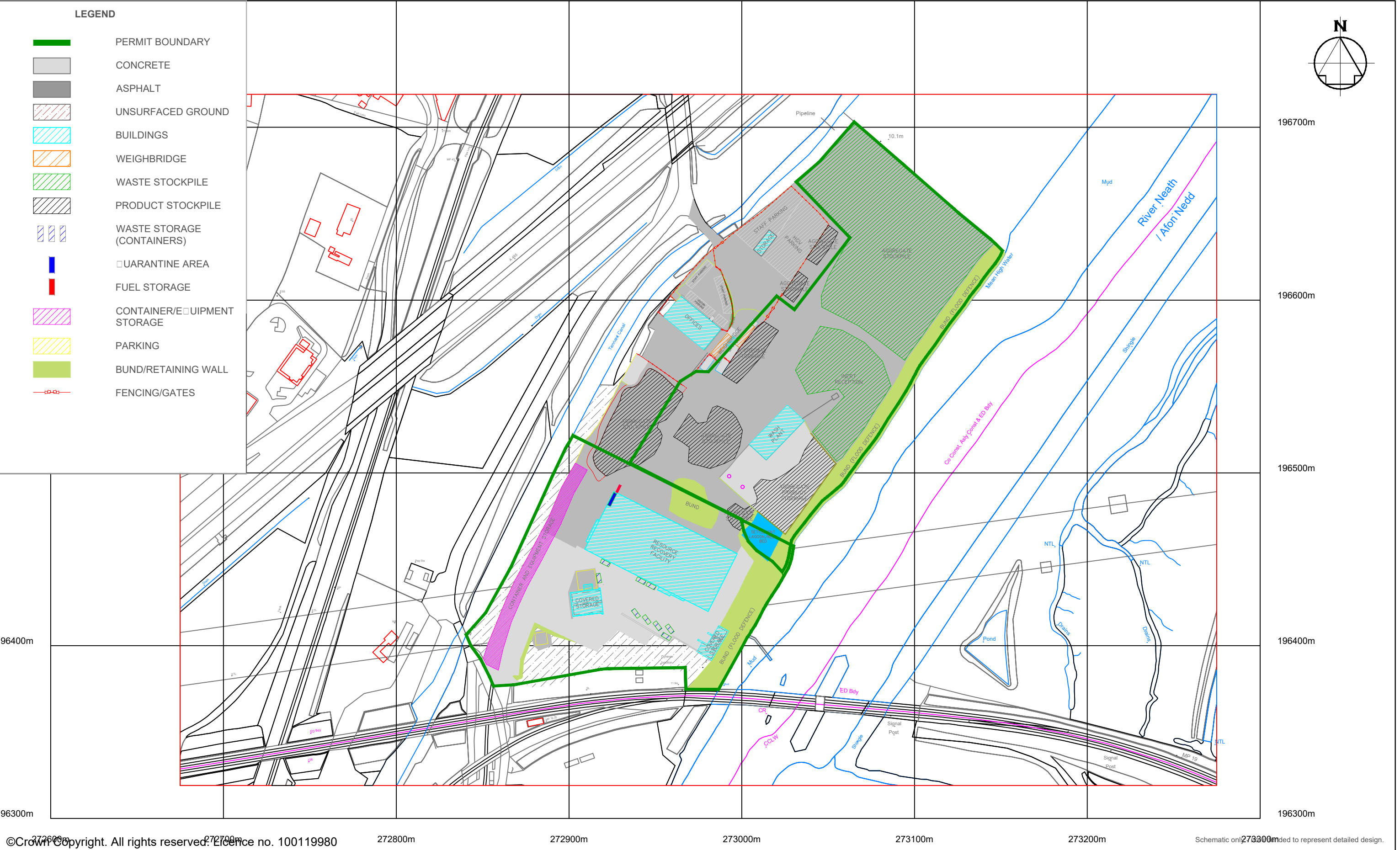
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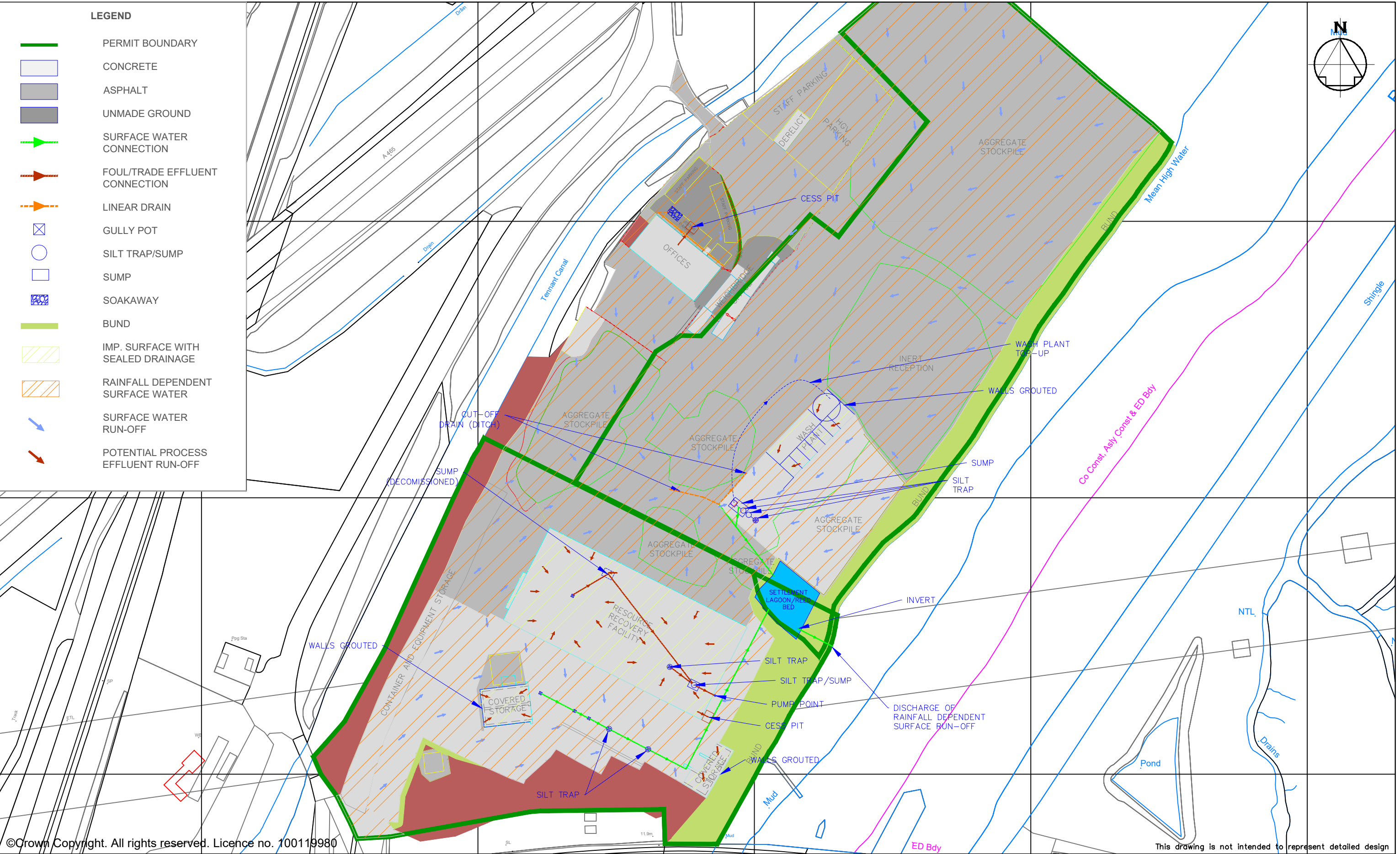
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PERMITTED AREA



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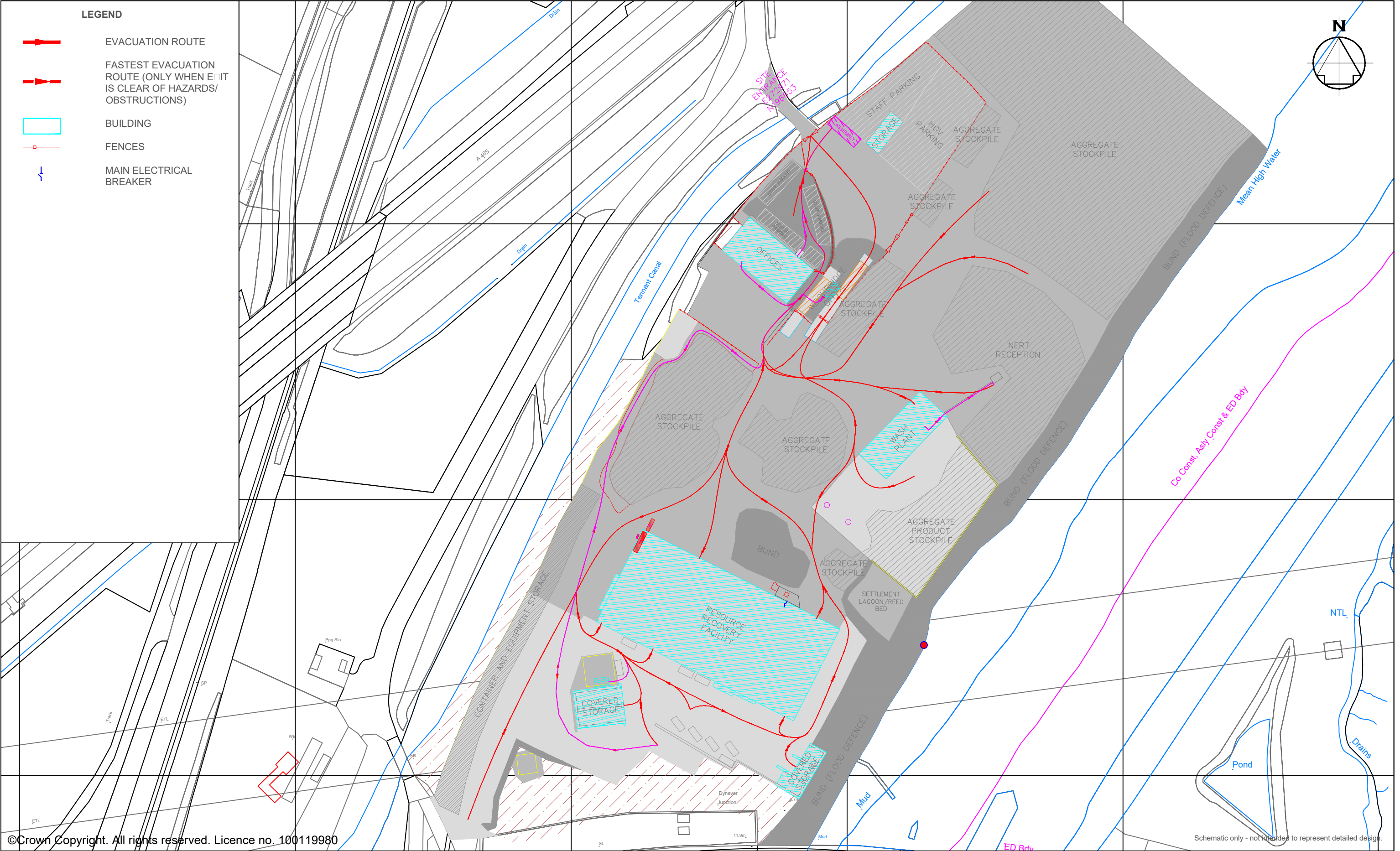
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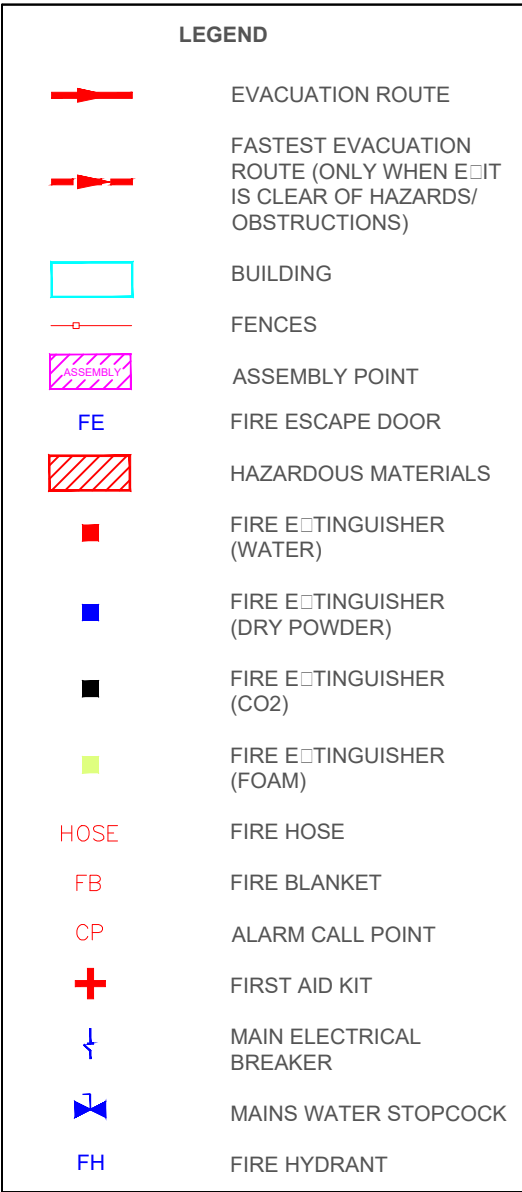
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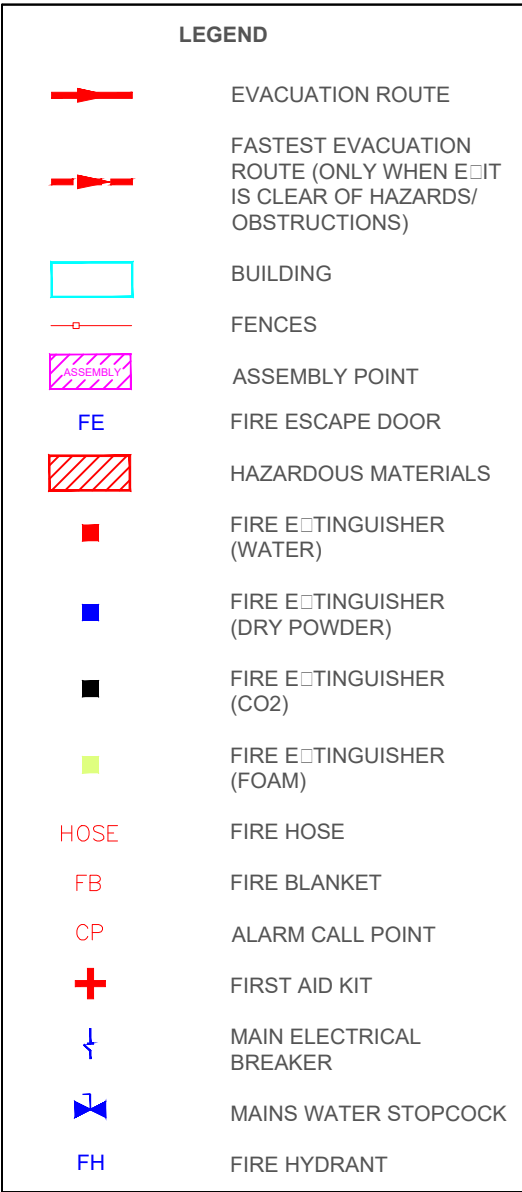
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Job No.	DR	Drg No.	10944 - 001 - I			

LEGEND	
	EVACUATION ROUTE
	FASTEST EVACUATION ROUTE (ONLY WHEN ROUTE IS CLEAR OF HAZARDS/OBSTRUCTIONS)
	BUILDING
	FENCES
	ASSEMBLY POINT
FE	FIRE ESCAPE DOOR
	HAZARDOUS MATERIALS
	FIRE EXTINGUISHER (WATER)
	FIRE EXTINGUISHER (DRY POWDER)
	FIRE EXTINGUISHER (CO2)
	FIRE EXTINGUISHER (FOAM)
HOSE	FIRE HOSE
FB	FIRE BLANKET
CP	ALARM CALL POINT
	FIRST AID KIT
	MAIN ELECTRICAL BREAKER
	MAINS WATER STOPCOCK
FH	FIRE HYDRANT



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Details transferred from Durston Plant Contractors Ltd drawing dated March 1996 provided by client and updated to reflect visible site infrastructure. Full site surveys not undertaken.



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AMENDMENTS	REV REF	DETAILS

LEGEND



EVACUATION ROUTE



FASTEST EVACUATION
ROUTE (ONLY WHEN EXIT
IS CLEAR OF HAZARDS/
OBSTRUCTIONS)



BUILDING



FENCES



ASSEMBLY POINT

FE

FIRE ESCAPE DOOR



HAZARDOUS MATERIALS



FIRE EXTINGUISHER
(WATER)



FIRE EXTINGUISHER
(DRY POWDER)



FIRE EXTINGUISHER (CO2)

FIRE EXTINGUISHER (FOAM)

HOSE

FIRE HOSE

FB

FIRE BLANKET

CP

ALARM CALL POINT



FIRST AID KIT



MAIN ELECTRICAL
BREAKER



MAINS WATER STOPCOCK

FH

FIRE HYDRANT

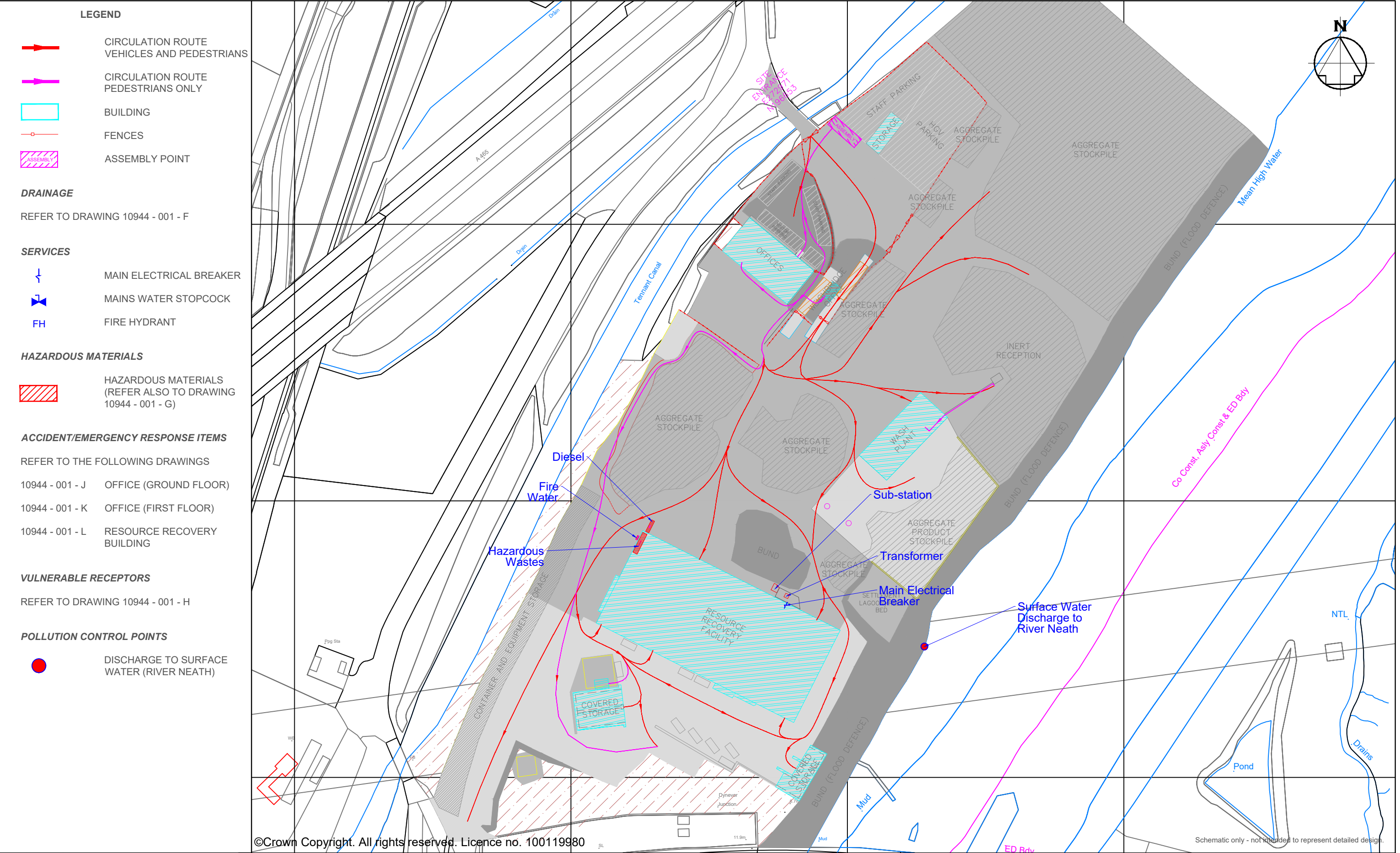
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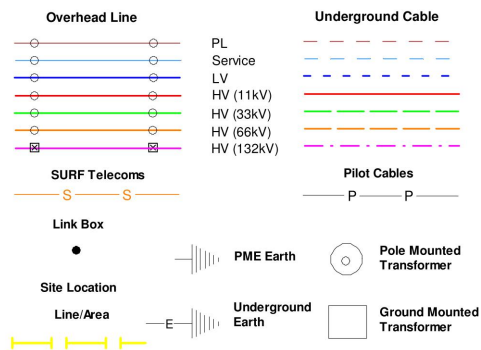
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											Date	13/07/16		
									Job No.	DR	Drg No.	10944 - 001 - L		



AMENDMENTS	REV REF	DETAILS	DATE	MADE BY	CHKD BY	 TECHNIA ENVIRONMENT AND PLANNING SUITE 4, ST. MARGARET'S PARK PENGAM ROAD, ABERBARGOED, CF81 9FW TEL: 01443 821619 EMAIL: PLANNING@TEPL.EU	DERWEN RECYCLING LTD				Drawn	SW	Scale
											Ch'kd	SH	1:1,250
							EMERGENCY PLAN EMERGENCY SERVICES OVERVIEW PLAN				App'r'd	SH	@A3
											Date	25/05/16	
							Job No.	DR	Drg No.	10944 - 001 - M			

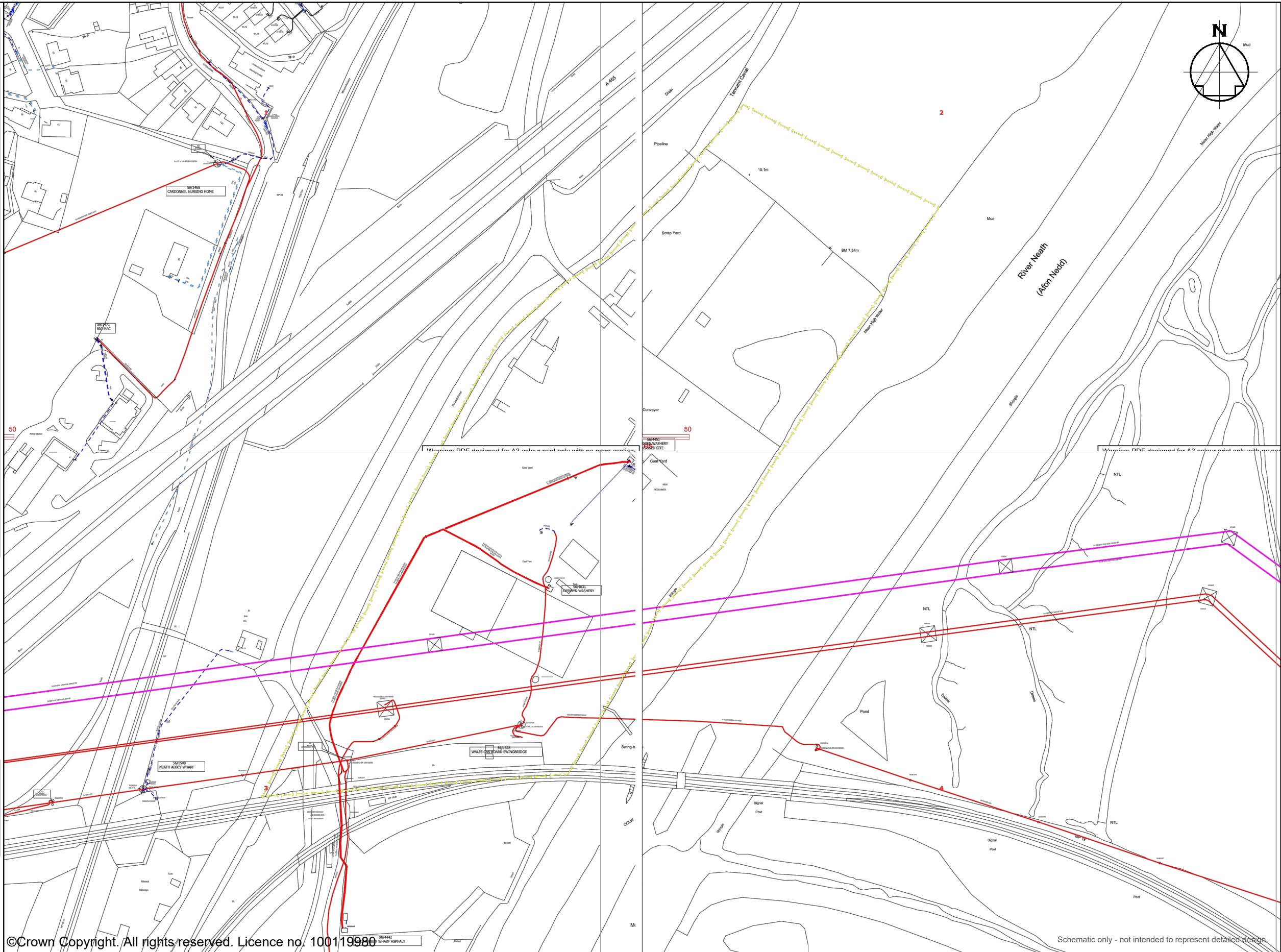
Date Requested: 20/05/2016
Job Reference: 8514727
Site Location: 273000 196544
Requested by: Dr Stuart Watcham
Your Scheme/Reference: Derwen Recycling
Exact Scales:
1:1250 Area or Circle dig site
1:500 Line dig site

- This information is given as a guide only and its accuracy cannot be guaranteed. Services or recent additions to the network may not be shown.
- Cables, overhead lines & substations owned by other electricity network owners or private companies may be present but will not be shown.
- You should always verify exact locations of cables using a cable locator and by careful use of hand tools in accordance with HSE guidance note HSG47.
- When working within 10m of any overhead electric line you should follow the requirements of HSE Guidance Note GS6.
- For further advice on working near our electricity cables or lines, call our Contact Centre on 0800 096 3080.
- Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 66kV or 132kV underground cables and 66kV 132kV overhead lines – 0800 096 3080



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AMENDMENTS	REV REF	DETAILS	DATE	MADE BY	CHKD BY	 TECHNIA ENVIRONMENT AND PLANNING SUITE 4, ST. MARGARET'S PARK PENGAM ROAD, ABERBARGOED, CF81 9FW TEL: 01443 821619 EMAIL: PLANNING@TEPL.EU	DERWEN RECYCLING LTD				Drawn	SW	Scale 1:2,000	
									Ch'kd	SH				
								EMERGENCY PLAN ELECTRICAL SERVICES				Appr'd	SH	@A3
										Date	25/05/16			
									Job No.	DR	Drg No.	10944 - 001 - N		