Vale of Glamorgan Council

Vale of Glamorgan Resource Recovery Facility: Fire Prevention & Mitigation Plan

Report for Vale of Glamorgan Council

Project code: CCP102-224
Research date: August 2020 – September 2022 **Date:** November 2022

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Front cover photography: Vale of Glamorgan Council Logo, Eunomia Logo

Version Control Table

Version	Date	Author	Description
V0.1	04/08/2020	Audra Brown	First Draft (Internal)
V0.2	18/08/2020	Sophie Crossette	Quality Review
VO.3	19/08/2020	Audra Brown	Second Draft following Quality Review
V0.4	22/10/2020	Audra Brown	Third Draft (Internal)
V1.0	30/11/2020	Laura Williams	First Working Draft Issued to Client
V1.1	25/03/2021	Audra Brown	Amends following further information provided from Client
V1.2	08/04/21	Audra Brown	Amends following QA by Laura Williams
V1.3	08/06/21	Audra Brown	Fourth Draft (Internal)
V1.4	04/08/2021	Audra Brown	Fifth Draft (Internal) following review by WRAP
V1.5	23/08/2021	Audra Brown	Sixth Draft (Internal) added container dimensions
V2.0	11/10/2021	Laura Williams	Second Working Draft submitted as part of the permit application
V2.1 & 2.2	13/07/2022	Audra Jackson	Second Working Draft amended following schedule 5 notices
V3.0	28/09/2022	Rebecca Southall	Third Working Draft issued following schedule 5 notices
V4.0	28/10/2022	Rebecca Southall	Fourth Working Draft issued following schedule 5 notices
V5.0	14/11/2022	Rebecca Southall	Updates to Sensitive Receptor Map

Acknowledgements

Our thanks to WRAP and Vale of Glamorgan Council for providing the necessary information to complete this document.

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1.0 Vale of Glamorgan Resource Recovery Facility

1.1 Introduction

This Fire Prevention and Mitigation Plan (FPMP) is applicable to Vale of Glamorgan Council's (VoG) Resource Recovery Facility (RRF) located in Atlantic Trading Estate (ATE), Atlantic Crescent, Barry, Vale of Glamorgan, CF63 3RF. It supports the application for a bespoke waste permit.

The site operates as a waste transfer facility accepting separately collected dry recyclables, AHP, food waste, small WEEE, textiles, unprocessed green waste, aerosols, batteries and residual waste. The material will arrive from household and commercial premises collected by VoG. Garden waste and dry recyclables such as card, paper and glass from the adjacent HWRC will also be bulked in the RRF ready for onward transport. A permit to accept up to 75,000 tonnes of waste material per year is being sought, although current throughput is estimated to be approximately 64,500 tpa.

It is the objective of this plan to minimise the risk of a fire starting on site and to ensure that, in the event of a fire occurring, it is identified as early as possible and effective measures are implemented to extinguish it, whilst minimising the impacts of the incident.

This plan will support the site's Operating Techniques Document and Environmental Management System. It will be reviewed and updated, if necessary, on an annual basis by the Site Manager, following an incident or more frequently if required.

1.2 Site Layout

The overall layout of the RRF is detailed in Figure 1-1 and Figure 1-2. The site comprises of three servicing areas:

1. The 'upper yard' (southern area of the site) where the main RRF building is located that contains a sorting line for mixed card and Tetrapacks, a sorting line for mixed plastics, cans and aerosols, two balers, material input bays for metals and plastics, paper, card and Tetrapacks, 2x overflow bays for fibres (paper and card), storage bays for baled materials including, plastic, steel, aluminium, Tetrapacks and card. There is also contamination containment in the building, space for night-time parking for the loading shovel, COSHH safety cabinets and a bay for aerosol ventilated container storage. Outside of the main building in the upper yard there is a glass bay and the quarantine bay.
2. The 'middle yard' where there is a storage building containing a material bay for food waste and 3x sealed food waste containers, a pod wash facility and specialised containers for textiles, small WEEE, batteries and spare food pods.
3. The 'lower yard' (northern area of the site) where there is a storage building containing material bays for residual waste and AHP's and external material bays for unprocessed green waste.

There is a weighbridge at the entrance of the site and an office and welfare cabin situated adjacent to the green bays in the lower yard. Staff parking is provided on site as well as a cycle storage area located near the welfare cabin. There is also a drive through vehicle wash near the site exit.

1.3 Site Drainage

The site drainage plan is illustrated in Figure 1-6 and Figure 1-6. All surface water from the operational areas of the site drain to a sealed drainage system. The foul drainage plan shows a connection into an existing foul sewer. This connection will replace the existing connection for the adjacent HWRC, to redirect the flows from both sites to the new connection point. Surface water from the site drains into the 3 below ground Triton attenuation tanks, shown on the drainage plans. Only clean water from roofs, or from areas of the site that are not being used in connection with storing and treating waste, discharge directly to surface waters. Sustainable Urban Drainage Systems (SUDS) including planted rills, green roofs, swales and attenuation tanks are installed on site and the drainage systems are regularly inspected and maintained to ensure their operation.

1.4 Sensitive Receptors

A map of the sensitive receptors within 1km of the site is detailed in Figure 1-7. The sensitive receptors that are most likely to be affected by a site fire have been identified in Table 6-1. Receptors may need to be contacted during a fire incident with updates on the expected duration, where available contact details are listed.

In the event of a site fire, immediate neighbours to the site will be contacted by the Site Manager with an update and VoG officers will visit high risk sensitive receptors (such as healthcare sites) as soon as it is appropriate to do so. VoG will also use their website and social media channels to communicate information with sensitive receptors throughout the borough.

Plan Number Key

Plan Ref.	Description	Plan Ref.	Description
1	Garden waste bay	**18**	Aluminium bales
2	Residual bay	**19**	Tetrapack bales
3	AHP bay	**20**	Aerosol Containment (1100l)
4	Paper bay	**21**	Contamination container (1100l)
5	Card bay	**22**	Food (sealed skip)
6	Fibres bay (overflow 1)	**23**	Trade food bay
7	Fibres bay (overflow 2)	**24**	Textiles banks
8	Plastic and cans bay	**25**	Small WEEE containers
9	Glass bay	**26**	Small batteries containers
10	Tetrapacks bay	**27**	Spare food pods
11	Plastic bay	**28**	CoSHH/safety cabinets
12	Steel cans bay	**29**	FLT/loading shovel night time parking
13	Aluminium bay	**30**	Picking line (4 chutes either side)
14	Quarantine bay	**31**	Baler 1
15	Card bales	**32**	Baler 2
16	Plastic bales	**33**	Food pod washing area
17	Steel bales		

Figure 1-1: VoG RRF Site Layout

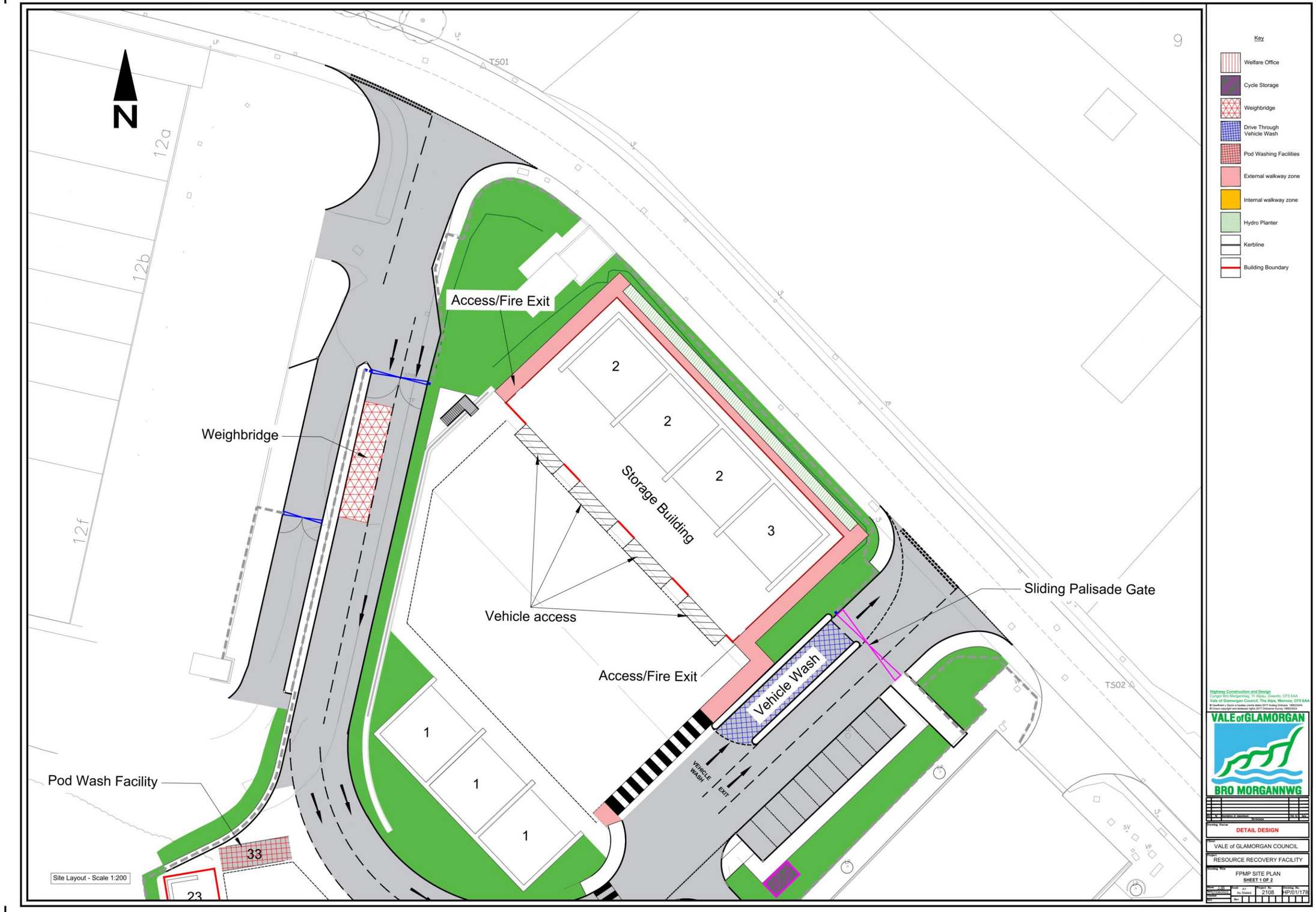


Figure 1-2: VoG RRF Site Layout (Middle and Upper Yard)

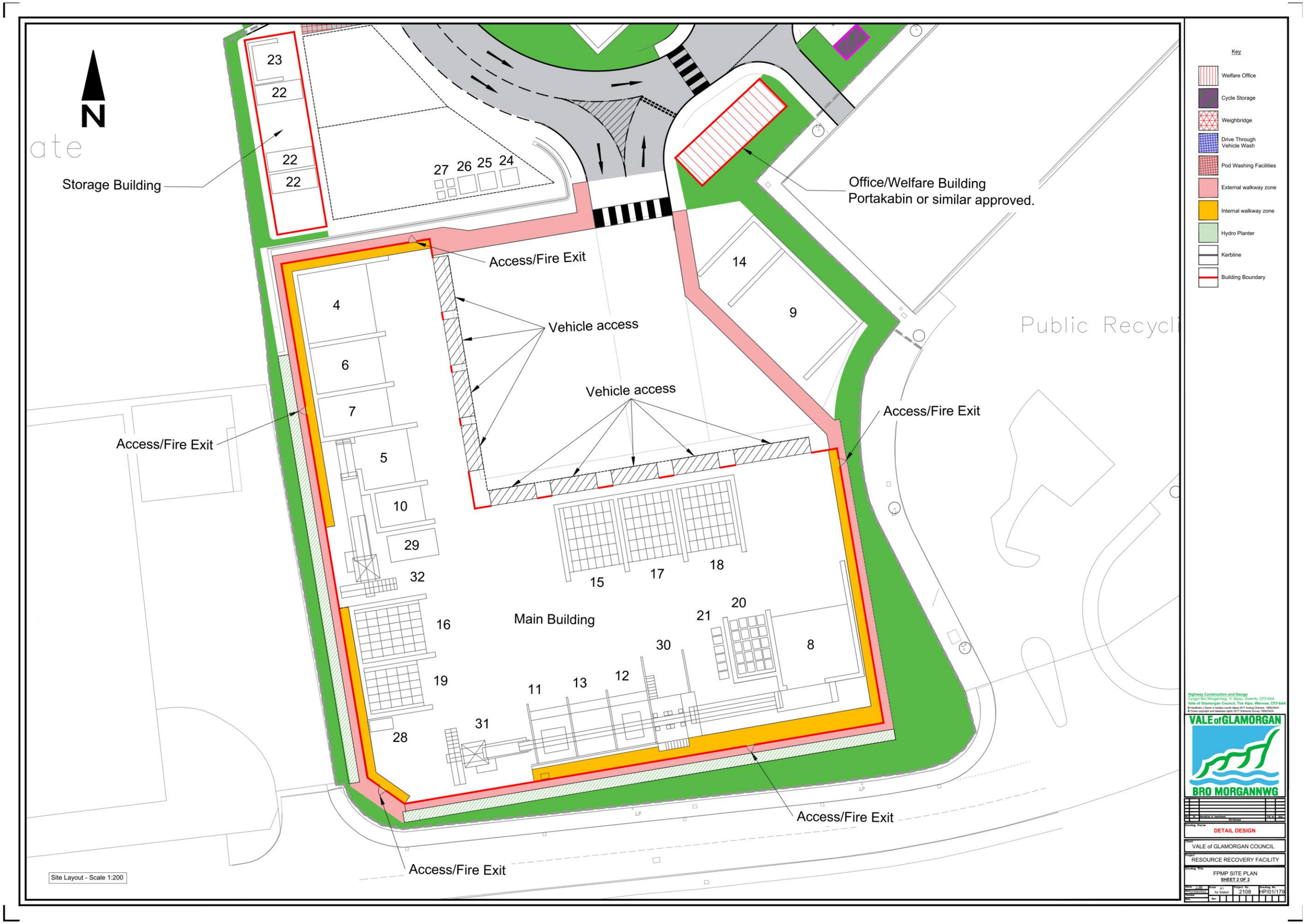


Figure 1-3: Site Emergency Evacuation and Information Plan (Lower Yard)

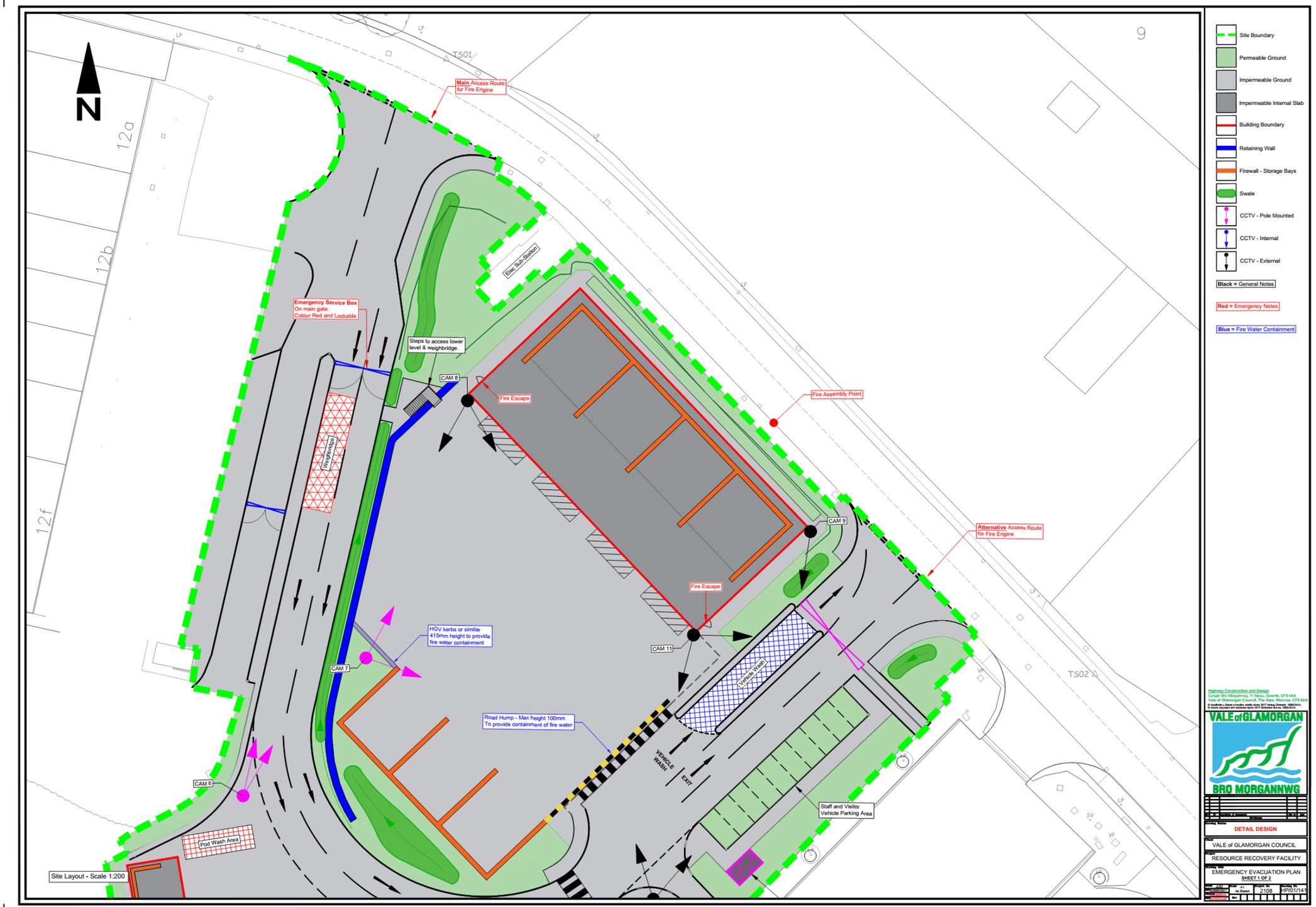


Figure 1-4: Site Emergency Evacuation and Information Plan (Middle and Upper Yard)

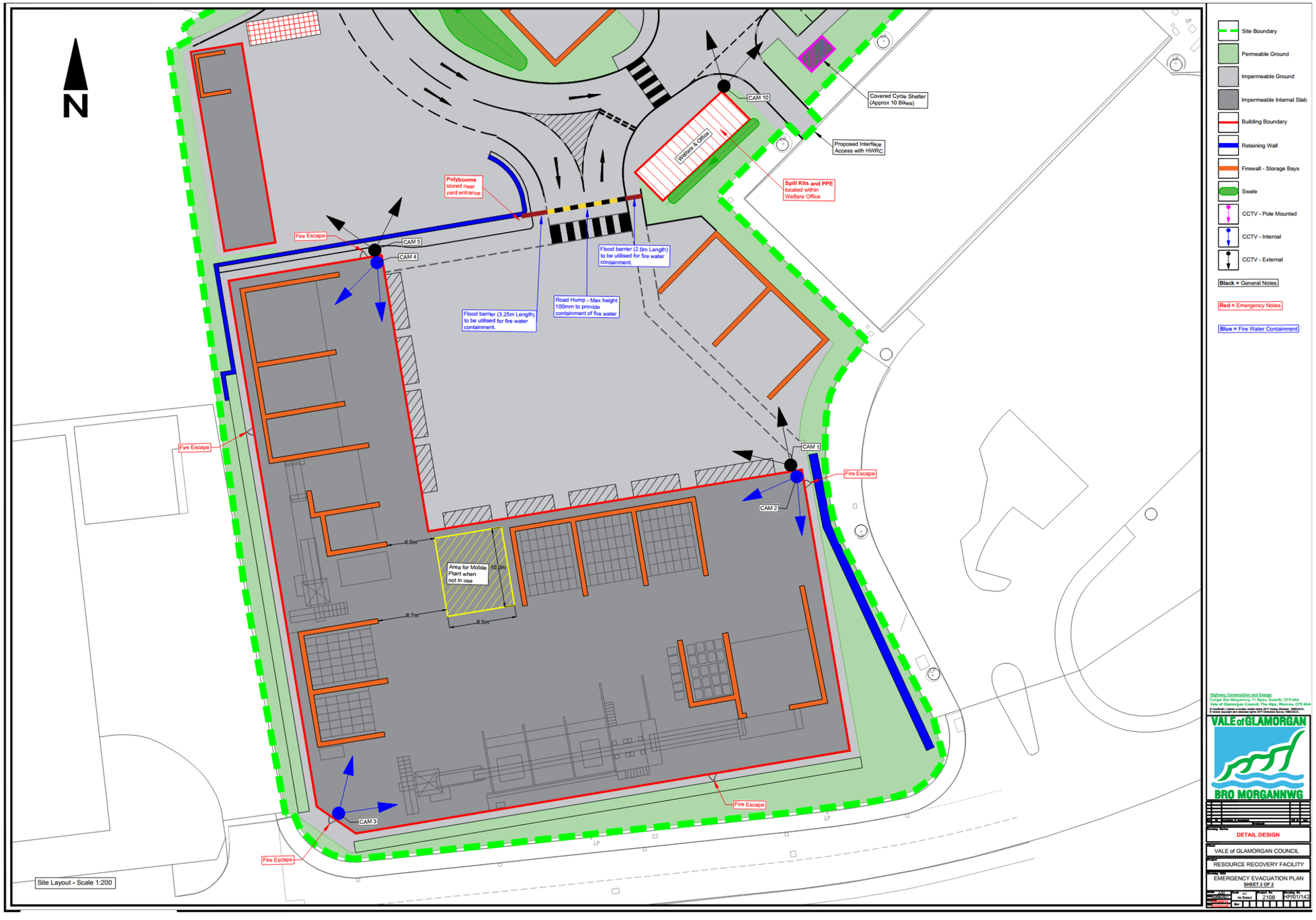
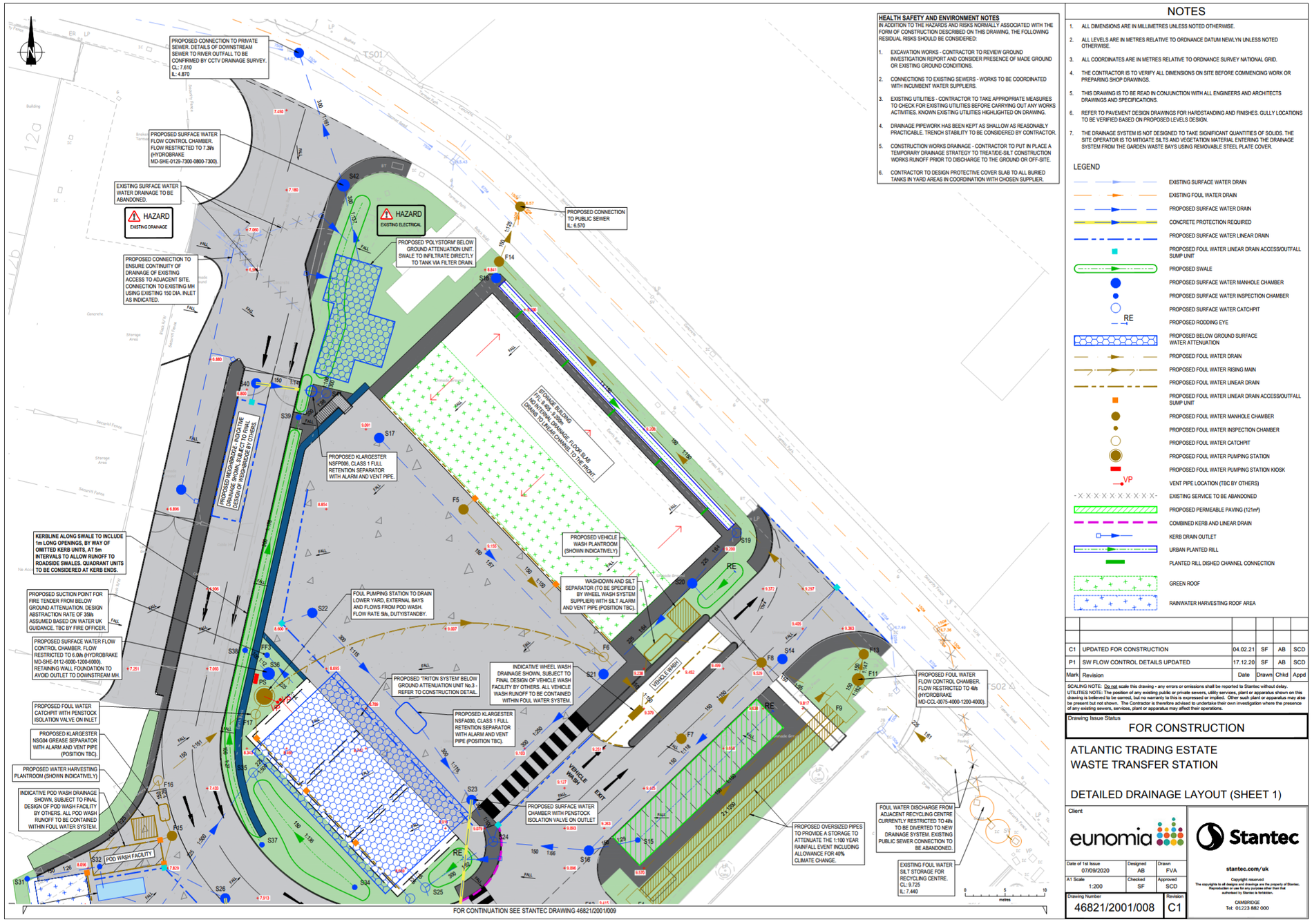


Figure 1-5: VoG RRF Drainage Plan (Lower Yard)



HEALTH SAFETY AND ENVIRONMENT NOTES

IN ADDITION TO THE HAZARDS AND RISKS NORMALLY ASSOCIATED WITH THE FORM OF CONSTRUCTION DESCRIBED ON THIS DRAWING, THE FOLLOWING RESIDUAL RISKS SHOULD BE CONSIDERED:

1. EXCAVATION WORKS - CONTRACTOR TO REVIEW GROUND INVESTIGATION REPORT AND CONSIDER PRESENCE OF MADE GROUND OR EXISTING GROUND CONDITIONS.
2. CONNECTIONS TO EXISTING SEWERS - WORKS TO BE COORDINATED WITH INCUMBENT WATER SUPPLIERS.
3. EXISTING UTILITIES - CONTRACTOR TO TAKE APPROPRIATE MEASURES TO CHECK FOR EXISTING UTILITIES BEFORE CARRYING OUT ANY WORKS ACTIVITIES. KNOWN EXISTING UTILITIES HIGHLIGHTED ON DRAWING.
4. DRAINAGE PIPEWORK HAS BEEN KEPT AS SHALLOW AS REASONABLY PRACTICABLE. TRENCH STABILITY TO BE CONSIDERED BY CONTRACTOR.
5. CONSTRUCTION WORKS DRAINAGE - CONTRACTOR TO PUT IN PLACE A TEMPORARY DRAINAGE STRATEGY TO TREAT/DE-SILT CONSTRUCTION WORKS RUNOFF PRIOR TO DISCHARGE TO THE GROUND OR OFF-SITE.
6. CONTRACTOR TO DESIGN PROTECTIVE COVER SLAB TO ALL BURIED TANKS IN YARD AREAS IN COORDINATION WITH CHOSEN SUPPLIER.

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES RELATIVE TO ORDNANCE DATUM NEWLYN UNLESS NOTED OTHERWISE.
3. ALL COORDINATES ARE IN METRES RELATIVE TO ORDNANCE SURVEY NATIONAL GRID.
4. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK OR PREPARING SHOP DRAWINGS.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS AND ARCHITECTS DRAWINGS AND SPECIFICATIONS.
6. REFER TO PAVEMENT DESIGN DRAWINGS FOR HARDSTANDING AND FINISHES. GULLY LOCATIONS TO BE VERIFIED BASED ON PROPOSED LEVELS DESIGN.
7. THE DRAINAGE SYSTEM IS NOT DESIGNED TO TAKE SIGNIFICANT QUANTITIES OF SOLIDS. THE SITE OPERATOR IS TO MITIGATE SILTS AND VEGETATION MATERIAL ENTERING THE DRAINAGE SYSTEM FROM THE GARDEN WASTE BAYS USING REMOVABLE STEEL PLATE COVER.

LEGEND

- EXISTING SURFACE WATER DRAIN
- EXISTING FOUL WATER DRAIN
- PROPOSED SURFACE WATER DRAIN
- CONCRETE PROTECTION REQUIRED
- PROPOSED SURFACE WATER LINEAR DRAIN
- PROPOSED FOUL WATER LINEAR DRAIN ACCESS/OUTFALL SUMP UNIT
- PROPOSED SWALE
- PROPOSED SURFACE WATER MANHOLE CHAMBER
- PROPOSED SURFACE WATER INSPECTION CHAMBER
- PROPOSED SURFACE WATER CATCHPIT
- PROPOSED RODDING EYE
- PROPOSED BELOW GROUND SURFACE WATER ATTENUATION
- PROPOSED FOUL WATER DRAIN
- PROPOSED FOUL WATER RISING MAIN
- PROPOSED FOUL WATER LINEAR DRAIN
- PROPOSED FOUL WATER LINEAR DRAIN ACCESS/OUTFALL SUMP UNIT
- PROPOSED FOUL WATER MANHOLE CHAMBER
- PROPOSED FOUL WATER INSPECTION CHAMBER
- PROPOSED FOUL WATER CATCHPIT
- PROPOSED FOUL WATER PUMPING STATION
- PROPOSED FOUL WATER PUMPING STATION KIOSK
- VENT PIPE LOCATION (TBC BY OTHERS)
- EXISTING SERVICE TO BE ABANDONED
- PROPOSED PERMEABLE PAVING (121m²)
- COMBINED KERB AND LINEAR DRAIN
- KERB DRAIN OUTLET
- URBAN PLANTED RILL
- PLANTED RILL DISHED CHANNEL CONNECTION
- GREEN ROOF
- RAINWATER HARVESTING ROOF AREA

Mark	Revision	Date	Drawn	Chkd	Appd
C1	UPDATED FOR CONSTRUCTION	04.02.21	SF	AB	SCD
P1	SW FLOW CONTROL DETAILS UPDATED	17.12.20	SF	AB	SCD

SCALING NOTE: Do not scale this drawing - any errors or omissions shall be reported to Stantec without delay.
UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake their own investigation where the presence of any existing sewers, services, plant or apparatus may affect their operations.

Drawing Issue Status: FOR CONSTRUCTION

ATLANTIC TRADING ESTATE
WASTE TRANSFER STATION

DETAILED DRAINAGE LAYOUT (SHEET 1)

Client: eunomia

Stantec
stantec.com/uk

CAMBRIDGE
Tel: 01223 882 000

Date of 1st Issue	Designed	Drawn
07/09/2020	AB	FVA
A1 Scale	Checked	Approved
1:200	SF	SCD

Drawing Number: 46821/2001/008 — Revision: C1

Figure 1-6: VoG RRF Drainage Plan (Middle and Upper Yard)

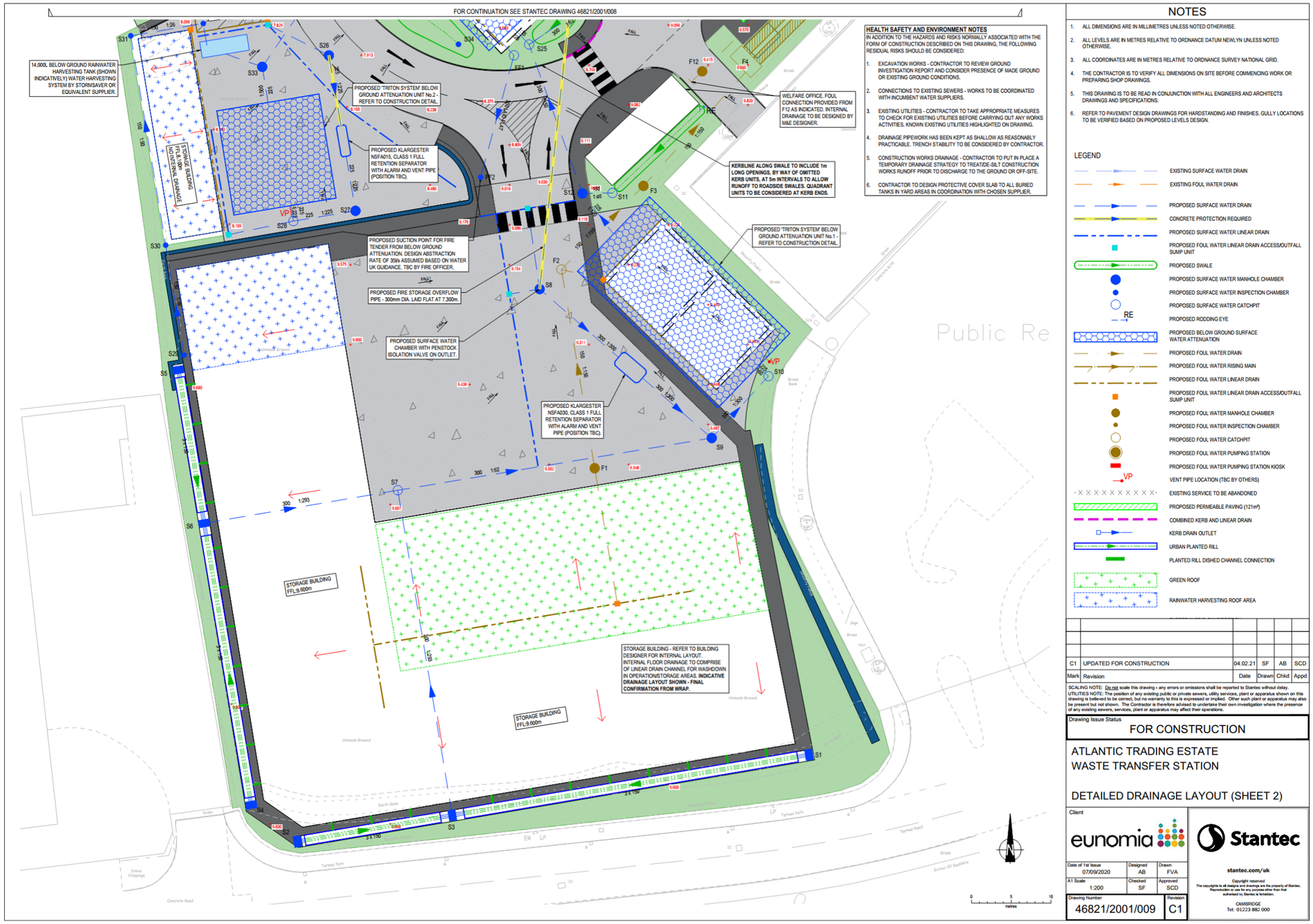


Figure 1-7: Map of Sensitive Receptors within 1km of the Site

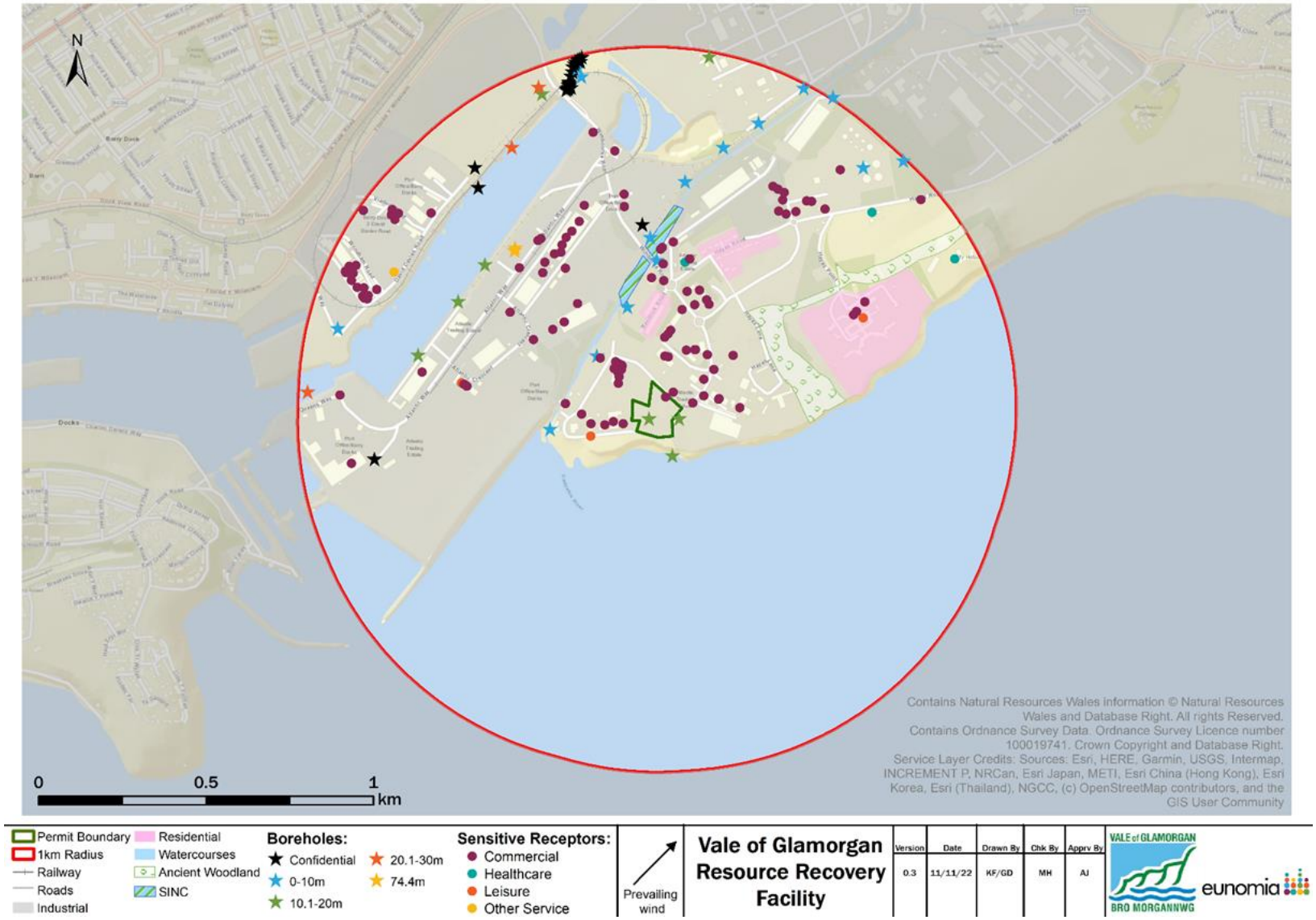


Figure 1-8 Sites of Special Scientific Interest (SSSI) within 2km of the Site

2.0 Daily Operations

2.1 Training

The VoG have a 'Fire Policy & Strategy Plan' in place that sets out the basis on which they intend to manage and control the risk from fire at the RRF. The plan gives priority to life safety and will be formally communicated to staff through the fire safety training programme. It will be tested; practised and reviewed annually (or following the event of evacuation) as a result of evaluation of the outcomes of structured debriefs of fire drills and evacuation exercises.

Fire safety induction including communication of the fire safety rules and the fire evacuation procedure will form part of the reception procedures for all new members of staff, service users, visitors and contractors on taking up an appointment at the premises. Fire safety rules will be reinforced to all employees at periodic intervals through safety briefing and specifically by carrying out fire evacuation drills and safety audits every 6 months. Additionally, staff will receive training in the use of firefighting equipment including how to safely tackle a small fire using the most appropriate fire extinguisher or a fire blanket. Fire safety information will also be made readily available to other occupants including visitors and contractors.

All members of staff will participate in a structured fire safety training programme designed in accordance with the regulations and have the opportunity to participate in at least two practical fire evacuation drills in any 12-month period. Staff with specific roles and responsibilities for managing and implementing the fire safety arrangements will be afforded appropriate training in that role.

Whilst the Site Manager will be designated with the responsibility for the day-to-day management of fire precautions, the emergency action plan focuses on the need to clearly establish the roles and responsibilities of staff on duty within the premises at any particular time. These roles include:

- **The Fire Co-ordinator** – This will be the most senior member of staff on duty with responsibility for co-ordination and overall supervision of the Emergency Action Plan.

- **Area Fire Warden** – This will be a member of staff designated with responsibility for a specific area of the site in the event of a fire emergency. The responsibility areas will separately cover different areas of the site.

The fire fighting action plan is detailed in Section 4.1. Copies of the FPMP and Fire Policy & Strategy Plan will be in two separate locations within the site perimeter; the site office and the RRF building. A copy will also be available off-site in a locked red 'emergency service box' attached to the site's entrance gate (see Figure 1-3). This will ensure that the Fire Service can access this information if a fire incident was to occur out of operational hours. Copies are also kept at The Vale of Glamorgan Council The Alps, Wenvoe CF5 6AA. The location of the FPMP will be communicated with the fire service and site staff regularly, including during induction and refresher training sessions.

2.2 FPMP Review Procedure

This document will be kept up to date and will be reviewed regularly (at least annually) by the Operations Manager. There are a number of circumstances that would warrant a review of the FPMP including;

- Experiencing a fire incident.

    - Following any fire the FPMP (and overall fire management measures) will be reviewed and improved as required to address any issues/concerns
- Additional combustible waste streams accepted on site.
- Increase waste volumes accepted.
- Development of site infrastructure – new buildings.
- Installation of new equipment or plant – baler/loading shovel/sort-line/trommel etc.

The FPMP will also be reviewed the ensure it is in line with the latest NRW guidance and the Operational Manager will review the site's operations and procedures to ensure the site is compliant with the FPMP.

2.3 Acceptance of Waste

Waste accepted on to the site will originate from VoG's domestic and commercial kerbside-sort waste and recycling collection service, as well as some material from the adjacent HWRC.

The following waste materials will be accepted on site:

- Garden Waste
- Residual Waste
- AHP/Nappies
- Paper
- Cardboard
- Mixed Plastics and Cans (containing aerosols)
- Glass
- Tetrapacks
- Food
- Textiles
- Small WEEE; and
- Domestic batteries

All combustible materials accepted on site are detailed in Table 2-1.

2.4 Waste Acceptance Procedure

Refuse Collection Vehicles (RCV's) and Resource Recovery Vehicles (RRV's)

RCV's, RRV's and green waste vehicles will be required to supply the relevant paperwork (waste carriers' licence and permit) electronically prior to arriving on site, and Waste Transfer Notes annually. Once these are complete, the vehicle will be directed to the weighbridge where the load will be weighed. The vehicle weight and material types are recorded in line with the MF Regulations. Site operatives will carry out visual checks on material capacity throughout the day to ensure that suitable storage space is available for all incoming wastes.

If possible, before the waste is unloaded a visual load inspection will take place to ensure consistency with the waste transfer note. If it is not possible to inspect the waste prior to unloading, the waste will be inspected immediately after off-loading in the appropriate waste reception area.

It is likely that RRV waste will contain very little, if any contamination as this waste is sorted at the kerbside. If any non-compliant waste is identified, it will be re-directed to the residual waste bay or the designated quarantine area depending on the type of contamination.

For RCV's, if waste is found to be non-compliant prior to being off-loaded from the vehicle, then details will be recorded and the vehicle directed off site. If wastes are found to be non-compliant after off-loading, waste will either be reloaded onto the delivery vehicle for onward transport to a suitably permitted facility; or removed to the designated quarantine area (as shown on the site plan in Figure 1-2). Arrangements will then be made for safe disposal.

All incidents of non-compliant waste will be recorded in the site diary. NRW will also be notified immediately of any major waste rejection incident.

2.4.1 Material Seasonality and Off-taker Agreements

As the materials to be stored at this site are from households and local businesses, seasonal variation in throughput will be minimum. It is expected that there will be a slight increase in materials over the Christmas holidays, easter and on other bank holidays. Additionally, it is expected that garden waste will increase over the spring and summer period.

The operator has off-taker agreements in place with UK based reprocessors for all material streams and is able to order additional collections if an increase in material volume is expected or received. Contract periods vary by material type, running on average from one to two years with options to extend. The contracts also have the flexibility for material to be collected loose or baled, this means if the baler breaks down, metals, plastics and card can still be moved off site regularly under the standard contract arrangements.

Within standard operating, as soon as a full load is available for collection, a collection will be ordered and the material removed from site. No material from this site is sold on the spot market to ensure reliable material removal from the site.

2.5 Waste Storage

The volume of material received through the facility is low and the site will operate on a high turnover basis. Appropriate loose material bays have been designed to allow storage of material for a maximum of two to three days, with the exception of garden waste which is stored for up 7 days, but is regularly checked and turned. The bale storage bays have been designed to allow one load of material plus a small level of contingency. This is the operational minimum required to support VoG's household collection rounds and HWRC service and therefore material turnover on site will be high.

Materials received on site that do not require sorting or baling will be tipped at the entrance of the relevant material storage bay or into the relevant container. Site operatives will manage the material within each storage bay to ensure material is moved off site on a first in / first out principle. This will be managed through the consolidation of the oldest material to make sure this leaves the site first, preventing the build-up of 'old' material at the back of a bay.

It is not anticipated that the bays will be full to maximum capacity on a regular basis. The max storage capacity is indicated by white lines painted on all waste bays which gives a clear indication to site operatives when the bays are at capacity. If the capacity of the loose material bay is approaching the maximum storage capacity, the metals and plastics will be moved to the sort line or the baler and the card and Tetrapacks will be moved to the second baler. For combustible material which is bulked from the site (paper, garden, residual and AHPs) a collection vehicle will be booked in advance of a bay being full to allow for the continual receipt of material.

Those materials that do require sorting and/or baling (Tetrapacks, card, mixed plastics and cans) will be tipped into the processing bays in the Main Building in the Upper yard. The processing bays comprise of fire-resistant concrete walls, where required with open 'backs' to allow material to be pushed onto the sort line, which is integral to the waste processing operation. The material in these bays will therefore only be stored for two days under standard operating conditions and up to three days in exceptional circumstances. The maximum pile size, area and volume of the storage area for all combustible materials is detailed in Table 2-1.

Non-combustible wastes, such as metals, have been omitted from Table 2-1 as due to the kerbside sorting procedures, described in Section 2.4, the level of contamination will be low and the fire risk therefore minimal.

The length of time combustible materials will be stored on site is detailed in Table 2-2. This has been divided into 'Standard' operational activity and 'Exceptional Circumstances'. Standard storage times will only be exceeded in 'Exceptional Circumstances', e.g. hauliers are unable to remove waste/containers from the site, requiring additional storage time, during which time the Exceptional Circumstances times will be adhered to. The bays/containers will not exceed the maximum storage volumes indicated below as once this limit has been reached then no more waste will be accepted on site. It will instead be diverted to an alternative service provision - Pritchard's, Earthmovers House, Llantrisant Business Park, Llantrisant, CF72 8LF.
The following hazardous materials are stored on site**.** See Figure 1-2 for storage locations:

- Aerosols (8x 1100L ventilated wheelie bins); and
- Domestic Batteries (1x Dolav with secure lid).

Table 2-1: Maximum Dimensions and Volumes of Combustible Waste Piles

Material	Combustible Waste Pile Sizes*					
	Max Height (m)	Max Length (m)	Max Width (m)	Percentage Utilised (%)	Max Volume (m^3)**	Max Area (m^2)
Green Waste	3	9	8.5	81	185	77
Residual Waste	3	9	9	81	196	81
AHP	3	9	9	81	196	81
Small WEEE (1x 1100L containers)	1.4	1.1	1.4	100	1.1	1.5
Textiles (4x 3,500L Igloos)	1.8	1.6	1.5	100	3.5	2.4
Paper	3	9	9	81	196	81
Cardboard	3	7	7	75	110	49
Fibres 1	3	9	6	81	131	54
Fibres 2	3	9	5	81	109	45
Tetrapacks	3	6	4.5	85	69	27
Mixed Plastics and Cans	3	9	10	50	135	90
Sorted Plastics	1.5	7	5	50	26	35
Baled Cardboard ***	3	8.5	7	-	81	60
Baled Plastics	3	8.5	7	-	81	60
Baled Tetra Packaging	3	7	6	-	53	42
Batteries (1x Dolav)	0.74	1.2	1	100	0.6	1.2

*Material bays are larger than the waste pile sizes to allow for freeboard space. Maximum waste pile dimensions will be marked on the bay walls to make sure they do not exceed these limits.
** max material pile volume = max height x max length x max width x percentage utilised
*** Max volume for baled materials was calculated using assumed bale size (H: 0.75m, W: 1m and D: 1.4m) multiplied by the number of bales stored in the bay.

Table 2-2: Details of Combustible Materials to be Stored on Site

Combustible Material	Form	Max. Annual Through put (Tonnes)	Max. Daily Through put (Tonnes)	Standard Max. Storage Time on Site (Days)	Exceptional Circumstances Max. Storage Time on Site (Days)	How Material is Stored	Management Arrangements
Green Waste	Loose	15,412	59	7	14	Loose – Material Bay	1. Material tipped into bay for temporary storage 2. Material moved from bay to bulker for transport using plant on site once full load is available.
Residual Waste	Loose	22,377	86	3	5	Loose – Material Bay	
AHPs	Loose	1,750	7	3	5	Loose – Material Bay	
Small WEEE	Loose/ bagged	490	2	7	28	1x 1,100L container	1. Material is placed in container for storage prior to transportation
Textiles	Bagged	523	3	7	28	4x 3,500L Igloo Container	
Paper	Loose	6,936	27	3	7	Material Bay	1. Material tipped into bay for temporary storage 2. Material moved from bay to bulker for transport using tele-handler with bucket attachment
Tetrapacks	Loose and baled	92	<1	Loose – 2 Baled – 7	Loose – 5 Baled – 14	Loose – Material bay Baled - stacked	1. Tetrapacks manually removed from card bay into separate bay for temporary storage (max storage 72 hours) 2. Material moved to baler using tele-handler with bucket attachment 3. Processed bales will undergo at least one-hour fire/heating watch

Combustible Material	Form	Max. Annual Through put (Tonnes)	Max. Daily Through put (Tonnes)	Standard Max. Storage Time on Site (Days)	Exceptional Circumstances Max. Storage Time on Site (Days)	How Material is Stored	Management Arrangements
							4. Bales moved for storage (stacking) by forklift prior to transportation 5. Material moved from bay to curtain sided vehicle for onward transport using a forklift
Cardboard	Loose and baled	2,963	11	Loose – 2 Baled - 7	Loose – 5 Baled - 14	Loose – Material bay Baled - stacked	1. Card tipped into bay for temporary storage (max storage 72 hours) 2. Material moved to baler using tele-handler with bucket attachment 3. Processed bales will undergo at least one-hour fire/heating watch 4. Bales moved for storage (stacking) by forklift prior to transportation 5. Material moved from bay to curtain sided vehicle for onward transport using a forklift
Fibres (paper and card)	Loose	*Included in paper and cardboard tonnages*		2	5	Material bay	1. Material tipped into bay for temporary storage 2. Material moved from bay to bulker for transport using tele-handler with bucket attachment
Plastics	Loose and baled	2,347	9	Loose – 2 Baled - 7	Loose – 5 Baled - 14	Loose – Material Bay Baled – Stacked	1. Mixed metals and plastics tipped into bay for temporary storage 2. Material transferred to sort line for processing in to separate streams of aluminium, steel, aerosols and plastics. 3. Separated materials stored in designated material bays:

Combustible Material	Form	Max. Annual Through put (Tonnes)	Max. Daily Through put (Tonnes)	Standard Max. Storage Time on Site (Days)	Exceptional Circumstances Max. Storage Time on Site (Days)	How Material is Stored	Management Arrangements
							a. Sorted plastics bay cleared daily under standard operating procedures (2 days in exceptional circumstances) b. Sorted metals may be stored in separated bays overnight. 4. Sorted materials moved to baler plant onsite 5. Processed bales will undergo at least one-hour fire/heating watch. 6. Bales moved for storage (stacking) by forklift prior to transportation 7. Material moved from bay to curtain sider for transport using a forklift
Batteries	Loose	<1	<1	7	28	1 x Dolav	1. Material is placed in container for storage prior to transportation

2.6 Preventative Measures

Visual Checks and Pile Turning

Visual fire checks will be carried out throughout the working day on all loose material piles, baled and containerised materials. This will include looking for the piles 'steaming-off'. If a pile is identified as hot or heating, the material pile will be turned using plant on site to reduce the pile temperature.

Senior staff will oversee the daily operation of the site including monitoring for adherence to the FPMP. Material is managed on a first in, first out principal – any loose material or bales from the weeks' production will be brought to the front of the bay for the next load allocation.

Combustible bales will undergo a Firewatch for one hour following processing, prior to the bale being moved to the bale store area. This will reduce the risk of a 'hot' bale being added to the bale store area. Additionally, combustible bales will be stacked with sufficient overlap between bales to prevent fire vortex forming between bale stacks.

At the end of each working day, a board in the site office is updated to show the number of bales of each material which are stored in the bale building, including the date of the oldest bale to track material storage times.

'Bale Cooling'

If a bale is identified as hot, either steaming off or hot to touch, it will be moved immediately to the quarantine area and allowed to cool. Once cool the bale will be taken to the loose card bay, broken up with any excessively wet material removed to the residual bay and the remaining material re-baled.

Low Tonnage and Quick Turnaround

Under standard operating conditions, loose materials stored in bays in a building will not be kept on site for longer than one week. Garden material stored externally will be stored for up to two weeks under standard operating conditions. The green waste will be unprocessed and stored in its largest form, reducing the risk of self-combustion. All loose material stored in bays will be turned regularly (at least twice a day) if stored in excess of 72 hours to cool the material and minimise the risk of hot spots.

Combustible baled material (plastic, card and Tetrapacks) and containerised textiles and small WEEE will be stored for a maximum of 1 week under standard operating conditions. Combustible baled materials can be stored for a maximum of 2 weeks in exceptional circumstances, whilst textiles and small WEEE can be stored for a maximum of 3 weeks in exceptional circumstances.

Standard operating conditions are the practices the site is operated under as per the EMS, including the maximum timeframes of storage provided and based on the expected and modelled throughput of the site and haulage frequency plus some contingency to accommodate minor fluctuations. Day-to-day operations are the practices the site is operated under as per the EMS, including the average timeframes of storage expected based on operational expertise, modelled throughput of the site and haulage frequency without contingency to accommodate minor fluctuations.

Table 2-2 details the standard maximum storage times for waste on site. These storage times are under standard operating conditions. During day-to-day operations there will be no more than one day's worth of material being processed on site, and typically this will be removed off site at the end of each working day. Off-takers will be booked in advance to ensure that combustible materials bays are emptied at the end of the working day. Only minimal amounts of waste will be stored internally, on site, out of hours.

Exceptional Circumstances

A moisture probe (Checkline RP6 Moisture Meter for Recycling Paper[1]) will be used in exceptional circumstances to measure the levels of moisture within loose piles. An 'exceptional circumstance' would be, for example, a moisture claim from an off taker or if collected material needed to remain on site for longer than expected due to unforeseen circumstances. Only in 'Exceptional Circumstances' will combustible materials be stored for up to four weeks.

If a moisture level of 12-20% is recorded on the moisture probe for loose material the material pile will be turned using plant on site. If monitoring of the pile returns an acceptable reading, the pile will be turned and re-monitored to get a representative sample from inside the pile. This will be repeated until an acceptable reading is recorded for the whole pile.

Baled materials would be broken up to allow accurate readings from the centre of the bale. During each monitoring session at least 10% of bales/material will be sampled. Bales will also be checked if the following occurs:

- If the supervisor needs to confirm visual inspections;
- If there is a challenge from the material outlet of excessive moisture relating to rebate claims. Moisture claims are generally incurred between 12 – 20%.
- If the material is being stored under 'exceptional circumstances.'

Whilst moisture levels are being sampled, temperature readings will also be taken. A temperature meter probe (Wile Temperature Meter Probe[2]) will be used to record the temperature of the bale sample. If the temperature probe reads a temperature above 50°C then it will be moved to the quarantine area and split open to allow the material to be cooled.

To ensure that 10% of bales are sampled correctly, the number of bales will be counted and 10% of the total will be calculated to give a representative number of bales to sample. The results of the sampling will be recorded in the site log.

At the end of each working day, a board in the site office is updated to show the number of bales of each material which are stored in the bale building, including the date of the oldest bale to track the baled material.

2.7 Potential Ignition Sources and Control Measures

Table 2-3 sets out the ignition sources which could be present on site and the control measures in place to mitigate against any potential fire risk. In addition to these actions, fire watches will be undertaken at the start and end of each shift and at regular intervals

[1] *Product specifications can be found here - https://www.checkline-europe.co.uk/prod/paper-moisture-meters/rp6*

[2] *Product specification can be found here - https://www.wile.fi/en/grain-moisture-meters/wile-temp-temperature-meter/*

throughout the day. Signage is provided throughout the site to reinforce the practices required to prevent a fire.

All staff are responsible for reporting new potential onsite ignition sources to senior staff, allowing an assessment of the risk to be made and fire prevention and mitigation plans to be updated.

Table 2-3: RRF Ignition Sources and Control Measures

Potential Ignition Source	Risk	Control Measures / Procedures
Arson or Vandalism	Combustible materials stored on the RRF are potentially at risk from arson. It is possible that a trespasser may enter the site and commit either an act of vandalism leading to an ignition source, or an act of arson.	The site will be manned at all times during operational hours. Palisade fencing, approximately 2m in height is installed around the perimeter of the site and lockable gates at the site access points will be kept closed when the site is not in use. Doors to the buildings on site are lockable and of a secure construction. Staff will check that the site and equipment is secure as part of their daily procedures. Signs are erected at site entrance to discourage trespassers. 11x CCTV cameras are operational around the whole of the site 24/7 (the location of the cameras are indicated in Figure 1-3 and Figure 1-4). The CCTV is monitored by staff during the operational day and CCTV monitoring will take place outside of operational hours by the Vale Security team who have mobile controls to monitor all VoG sites. There will be a security guard on site during operational hours to prevent intruders from entering the site. The site will also be fitted with emergency and intruder lighting, as well as an intruder alarm which will be activated when the site is unmanned.
Plant and Equipment Failure	A fault or electrical failure in the onsite plant including forklifts, balers and sort line provides an ignition source.	All mobile plant will be fitted with suitable extinguishers for fighting vehicle fires. All plant stored on site will be subject to a servicing and maintenance agreement as per the manufacturer's instructions. Inspections will be carried out in line with manufacturer recommendations, with full services being carried out annually. Daily checks will be conducted to ensure that no material is trapped within the equipment or plant, leading to a fault or ignition from friction. Daily checks will be conducted to identify any defaults. Where a default or defaults are identified, senior site staff will be informed and be responsible for isolating the equipment and arranging for the default(s) to be rectified by qualified service agents in accordance with the manufacturer's instructions. Plant /equipment service records will be maintained by senior staff and will be electronically stored by Transport team on '*Tranman*'. Servicing certificates and repair receipts will also be stored. Mobile plant will be stored at least 6m away from combustible materials when not in use.

Potential Ignition Source	Risk	Control Measures / Procedures
Electrical Faults	No electrical equipment is stored within 6m of combustible waste.	N/A
Discarded Smoking Materials	Combustible materials could be ignited through discarded cigarettes or other smoking material.	The whole site is designated as a non-smoking area.
Hot Works	Hot works undertaken on site could provide an ignition source due to sparks or residual heat in the material being treated.	All hot works undertaken on site will be in line with the Permit to Work Procedure (see Section 7.0). Before any hot works are carried out the 'Permit to Work Form' (see Section 8.0) and the 'Hot Work Permit to Work Checklist' (see Section 9.0) will be filled out. No hot works will be carried out within 6m of combustible materials. At least a 30-minute fire watch will follow any hot works. Hot works will not be conducted within 2 hours of the site closing down.
Industrial Heaters	Industrial heaters are not used in the Material Processing or Bale Store buildings.	There are no industrial heaters within the buildings on site. There will be storage heaters in the site office and monitoring them to check for the build-up of dust or any electrical faults will be carried out on a regular basis. The storage heaters will also be serviced as per manufacturer's instruction.
Hot Exhausts	Dust that has settled on exhausts and engine parts could cause an ignition source.	Regular visual checks will be undertaken throughout the day to check for dust build up. Staff will be trained to safely remove the build-up of dust on exhausts and engine parts if a risk is identified.
Ignition Sources	No naked flames, space heaters or furnaces are used on site.	N/A
Batteries in ELV	No end of life vehicles stored on site.	N/A
Batteries in WEEE	Batteries entering waste processing machinery could cause an ignition source.	No WEEE processing or treatment will occur on site. WEEE received on site will be placed in 1100L containers prior to transportation from site for reprocessing.
Electrical Items for Re-use	There is no re-use area at this facility	N/A

Potential Ignition Source	Risk	Control Measures / Procedures
Leaks and Spills of Oil and Fuels	There is the potential for fuel/ oil to leak from site vehicles or storage tanks	Spill control kits and PPE will be located in the welfare office and will be clearly labelled. If staff identify a fuel or oil spill, they will be trained to use the spill kits provided on site to remove the ignition source immediately upon discovery.
Build-up of Loose Combustible Waste, Dust and Fluff	Build-up of loose combustible waste, dust and fluff on site could cause an ignition source.	Staff will inspect the site regularly, conducting housekeeping actions as listed on daily, weekly, monthly and quarterly monitoring forms. When a build-up of material is identified staff will be trained to take appropriate action to clean the site.
Tramp Metals	Tramp metal could find its way into moving machinery and causes localised hot spots.	Only mixed metals and plastics are sorted on site. Metals are extracted from the mixed metals and plastics stream using an over band magnet and eddy current separator. Equipment will be regularly cleaned and maintained to prevent the build-up of tramp metals as part of the daily checklist (See Section 10.0) and the machinery will be serviced quarterly, in line with manufacturer's guidance.
Reaction Between Wastes	A reaction between incompatible or unstable wastes could provide an ignition source.	All material streams are stored in bays segregated by material type. If contamination is identified within a bay, the material will be isolated and moved to the quarantine area to await disposal. Any batteries found in material streams will be removed and stored away from combustible materials in a separate, secure container.
Self-Combustion	Chemical reactions within a single stream waste pile could lead to self-combustion.	No self-combustible material will be stored on site for more than 28 days. Paper, card, Tetrapacks, AHP, garden and residual materials are delivered as separate streams to the site and do not undergo any treatment on site. Household waste is kerbside sort collected which reduces the presence of contamination. Any contamination that is discovered is removed as detailed in reducing the risk of contamination (fines, metal, etc.) as an ignition source. Garden waste is the only self-combustible waste which is not stored undercover. It is not deemed necessary to shade this bay during periods of hot weather to reduce the risk of self-combustion as material turnover is high and the pile is checked once a day as part of the daily check list. Also have the option to direct deliver to off taker. During exceptional circumstances, site staff will be responsible for the management of the materials and pile turning when required. Management will include visual observations of materials at risk of self-combustion and will be undertaken at regular intervals through the day. Section 2.6 provides the procedure for turning and monitoring waste piles.

Potential Ignition Source	Risk	Control Measures / Procedures
Deposited Hot Loads	Hot loads being deposited within a bay or container on site could cause an ignition source.	Staff will undertake visual checks for fire, hot loads smoke and signs of smouldering of each load deposited. Olfactory checks are also in place in line with the OMP. All employees will be trained to take action if a positive identification is made. Details on the approach to be followed is set out in the Firefighting Procedure.
Damaged or Exposed Electrical Cables	Damaged or exposed electrical cables within the building could cause an ignition source.	Prior to occupancy of the site and installation of electrical equipment, the building electrics will have received Building Control Certification. All electrical equipment will be installed and fully certified by a qualified electrician. Portable Appliance Testing (PAT) will also be carried out on all portable equipment prior to the site opening. A permit to work protocol will be used to prevent unauthorised alterations to electrical installations and plant or works by unqualified engineers. Regular checks, maintenance and servicing of electrical equipment will be undertaken and certified by a qualified electrician. The time intervals between the inspection dates will be determined by a qualified electrician and will take into consideration the type of installation and equipment, its use and operation, any known maintenance and the external influences to which it is subjected and manufacturers recommendations. Cabling in areas of high activity will be protected against mechanical damage.
Windblown Material from Green Waste Bay	Ignited material from green waste bay could blow into another pile of combustible waste	Freeboard space of at least one meter will be provided from the top of the material pile to the top of the bay wall, and one meter from the front of the material pile to the entrance of the bay. This freeboard space will be maintained by ensuring material does not exceed the demarcated 1m clearance space painted on the bay walls. Material will also be pushed back from the entrance of the bay. This will reduce the likelihood of windblown material leaving the bay.
Visitors and Contractors	If visitors and contractors don't follow the correct procedures on site then this could be a fire risk.	All visitors and contractors on site will be advised to follow the correct safety and fire prevention procedures upon arrival to the site. Signage and information will be clearly located around the site to further reinforce safety procedures and members of the public will be overseen on site at all times by site operatives. Additionally, all contractors on site and any persons undertaking non-routine work are required to hold a permit to work before undertaking any procedures, further details on this can be found in Section 7.0.

Potential Ignition Source	Risk	Control Measures / Procedures
Batteries within waste deposits	Batteries within waste deposits can cause fires when damaged, especially when entering processing machinery.	Only household batteries are accepted on site, therefore no other types of batteries (i.e. car batteries) will be mixed within the same container. Site operatives will visually check all waste loads coming to site for any batteries. If a battery is identified, and only after determining that it is safe to do so, it will be removed by hand or mechanical plant. Any batteries identified will be moved to the quarantine area or an appropriate container (Full details of the waste acceptance procedures are in Section 2.4). Household waste is kerbside sort collected which reduces the presence of contamination. Staff check all waste piles for contamination at the end of each day.
Cylinders stored on site	Cylinders have the potential to cause or increase the impact of fire on a site.	No cylinders will be stored on site.

3.0 Fire Prevention and Mitigation Infrastructure

3.1 Use and Specification of Fire Walls

Firewalls with at least 120 minutes fire resistance will be used on site to separate combustible material piles and combustible bales (firewall specification can be found in Section 11.0). The firewalls will be installed in line with the manufacturer's recommended installation requirements to meet the required fire resistance thresholds. The firewalls will be lined with Gyproc FireLine MR 12.5m board (specification found in Section 12.0) which will offer a thermal barrier to enable cooling. This board will be installed as indicated in Figure 12-1. Any gaps in the walls will be sealed to maintain the fire-resistant integrity of the bay.

Freeboard clearance of one metre at the top of the maximum material height and one metre in front of the maximum pile length will be provided to restrict brands and lighted material moving outside of the bay. This measure has also been used to reduce heat radiation from the fire and to reduce fire bridging between bays. Maximum pile dimensions will be marked on the bay walls to prevent the proposed material volumes being exceeded and the bays will be kept as empty as possible at the end of each day (as noted in Section 2.6). The freeboard space should also reduce material being blown from the external garden waste material bay.

3.2 Separation Distances

The separation distance from the front of the waste piles to either a building wall or other stored waste is detailed in Table 3-1. Separation distances as well as firewalls (further details on firewalls can be found in Section 3.1) are used to prevent fire spreading from one waste pile to another.

Table 3-1: Separation Distances

Material	Separation Distance from buildings or waste/bales waste stack (m)
Residual	9
AHP	9
Paper	9.5
Fibres	7
Card	7
Tetrapacks	6.5
Plastic Bales	19.5
Tetra Bales	30
Plastics and Cans	20.5
Aerosols	9.5
Steel Cans	17.5
Aluminum cans	17.5
Plastics	28.5
Aluminum bales	9.5
Steel bales	12.5
Card bales	16

3.3 Quarantine area

A quarantine area is located on site in the upper yard, next to the glass bay outside the main RRF building (see Figure 1-2). The bay walls of the dedicated quarantine area will be constructed using concrete firewalls with three containing walls 4m high. The walls will

provide up to 120 minutes fire resistance, reducing the spread of fire and providing time for firefighting to occur (specification of the bay walls are provided in Section 11.0). There is also a separation distance of over 6m from the front of the bay to the nearest wall of the RRF building.

The quarantine area has been designed to accommodate 50% of the largest waste pile. There are 3 material piles on site that have a maximum volume of 196m^3 (residual, paper and AHP). Therefore, the quarantine area can accommodate a minimum of 98m^3 and measures 10m x 5m. The quarantine area is designed to allow a non-burning combustible waste container to be moved away from the fire to reduce the potential spread of the incident. It may also be used for the temporary storage of isolated material; however, this material will be cleared from the area as soon as a fire incident is identified.

3.4 Site Access

Figure 1-3 and Figure 1-4 indicate the access route the Fire and Rescue services (FRS) would take to access the site if there was a fire incident. The main access routes for these vehicles adhere to the dimensions outlined in Table 3-2.

Table 3-2: Minimum Access Route Requirements

Type of FRS appliance	Min Width of road (m)	Min width of gangway (m)	Min Clearance height (m)	Min weight restriction (t)
Water tender	3.7	3.2	3.7	12.5
High reach vehicle	3.7	3.2	4.0	24
Weight of vehicle may need to be confirmed with your local FRS as various types of vehicles are in use.				

3.5 Fire Suppression and Detection

There will be no more than one day's worth of material being processed on site, and typically this will be removed off site at the end of each working day. The size of the site is extremely limited and VoG are unable to procure or re-engineer any adjacent land to enable the installation of dedicated water tanks and pumps on site for an automated suppression system. Therefore, as agreed with the insurers, it was deemed that an automated fire suppression system for the RRF was not mandatory for this site.

The welfare and office building will be fitted with smoke and heat detectors[3] throughout the building covering all areas. Storage buildings 1 and 2 will be fitted with fire beam detection[4] at high level with low level controls. The fire beam detectors are designed by Cranford Controls Ltd and will be installed and maintained by Hochiki Europe (UK) Ltd (Certification provided in Section 13.0). The beam detectors are available in three different ranges, starting at 70mtr standard and then go up to 140mtr in range. They are designed for large areas like warehouses and large open areas. The beams used in the storage buildings will correspond to each building in length and will be fitted high level approx. 300mm from the ceiling.

[3] https://www.hochikieurope.com/guides/HE_Product%20Guide.pdf

[4] https://cranfordcontrols.com/wp-content/uploads/2017/01/Beam_Detector_FireRay_5000_Self_Aligning_Detectors_V.03_-PDS.pdf, and https://www.safelincs.co.uk/templates_safelincs/files/datasheets/845_FireRay-5000-user-guide.pdf

The exits and entrances of all buildings on site will be covered by manual call points. The main fire alarm panels[5] will be located within the building with battery backup and key switch red spur unit. All cabling[6] will be pf200 enhanced as per the regulations.

The fire alarm system[7] will be designed to comply with BS5839 Part 1: 2002, Category L1. The fire alarm will be configured to support the fire and evacuation strategy and will feature main and, where appropriate, repeater control panels strategically located within the building. Fire Zones will be established concurrent with fire compartmentation enabling full alerts within affected areas and pre-alerts in other zones. Warning devices will be provided to suit occupants with potential special needs (hearing and sight impairment). Ancillary functions (automatic gas shut offs, temperature rise alarms, provision of dual function detectors etc) will be utilised where possible to the benefit of the fire precautions arrangements. Minimising potential unwanted alarms will be achieved through quality assured design, installation, commissioning and management of the system. Manual call points, where deemed necessary, will be protected by confusion flaps. To minimise the potential for delays in calling the fire service, the fire alarm system will be linked to a commercial Monitoring Centre responsible for relaying calls to the Local Fire Authority Control Centre.

Maintenance of the fire alarms on site will be carried out by Hochiki Europe (UK) Ltd[8] who are responsible for the design, manufacture, service and maintenance of fire detection and alarm systems. Contracts will also be set up to provide for the maintenance of other fire assets including the emergency lighting, standby electrical generator, evacuation support equipment and firefighting equipment to ensure that fire systems and equipment are periodically tested, inspected and serviced by a competent person(s) in accordance with relevant standards. Details of all mandatory inspection and test of fire precautions assets will be recorded in a Fire Logbook maintained for that purpose, readily available within the site office.

The location of each call point, fire control panel, smoke/heater detection point and wall beacon/sounder are shown in Figure 3-1 and Figure 3-2.

3.6 Water Supply and Fire Water Containment

The volume of the largest waste pile on site is 196m^3 for the paper, AHP and residual waste piles measuring 9m wide x 9m long with a material height of 3m. This will require 1,307 litres of water per minute, or 235,200 litres for three hours.

The Triton tank beneath the lower yard includes a sump to store rainwater below the invert of the outlet. Before operations begin on site the tank will be filled using bowsers or a piped connection. The water level within the tank will be maintain by rainfall. After a period of rainfall the sump will be full and the system will outflow. The lower tank receives in flow from the two upper Triton tanks and therefore capacity should be maintained The tank has an impermeable liner to the base and sides and leakage and evaporation loss should be negligible. The sump should remain full other that when water is pumped from the tank in response to a fire incident.

[5] https://www.discountfiresupplies.co.uk/media/pdfs/Advanced/MX-4404.pdf

[6] http://www.fpcables.co.uk/fp200_gold_multicore.pdf

[7] https://www.hochikieurope.com/guides/HE_Product%20Guide.pdf

[8] https://www.hochikieurope.com/compliancedocs/C164QMS-14%20-%20Hochiki%20Europe%20-%20ISO%209001%202015.pdf

In dry periods where no outflow is observed, the sump water level will be checked weekly by dipping the water level in fire tender suction point FF3. If necessary, the sump can be topped up using mains water. Manholes are provided in each main yard area for the extraction of stored water by pumping from firefighting vehicles. There are three fire services located in close proximity to the site, Barry Emergency Services Station, Penarth Fire Station, and Ely Fire Station.

A retaining wall will be installed around the west side of the lower yard area running from the main storage building to behind the green waste bays to stop firewater from entering the surrounding environment. There will also be a retaining wall installed around the perimeter of the middle yard area, behind the spare food pods and small WEEE and batteries containers and a retaining wall installed in the upper yard area to the eastern side of the main RRF building. The proposed firewater storage areas are shown on the firefighting water storage plans, Figure 4-1 and Figure 4-2. These site plans indicate the direction of flow of the firewater and where it will be stored before it can be tankered off site and propose to use penstock isolation valves (triggered manually) with hydro brakes to prevent firewater entering the foul or surface waters during a fire incident and permanent raised containment features (road hump) to prevent firewater from leaving the specified areas of the site. Outside of operational hours it will be the fire co-ordinators responsibility to manually trigger the penstock isolation valves in the event of a fire on site.

Additional firewater containment features are indicated in Figure 1-3 and Figure 1-4. For the upper yard area there are flood barriers (poly booms) that will be deployed on either side of the road hump for fire water containment purposes. Staff on site will be trained on how to deploy the poly booms as they require the two outer tubes to be filled with water prior to use. When not in use the poly booms can be compactly stored with the spill kits and PPE located in welfare office. Outside of operational hours it will be fire coordinators responsibility to make sure the additional firewater containment features are put in place.

Following the fire incident, the firewater will be tankered off site by licensed hazardous waste carrier, Biffa, who will remove any firewater from site, subject to analysis. The council will arrange for the contractor to come to site following a fire incident for the removal via pumping of fire water from underground storage containment and any surcharge containment provided by kerb line around the site. Subject to analysis, following a fire incident, firewater will be tankered off site and hazardous liquid will be disposed at an appropriately permitted facility by the contractor.

Figure 3-1: Location of Fire Detection Systems within the office/welfare building

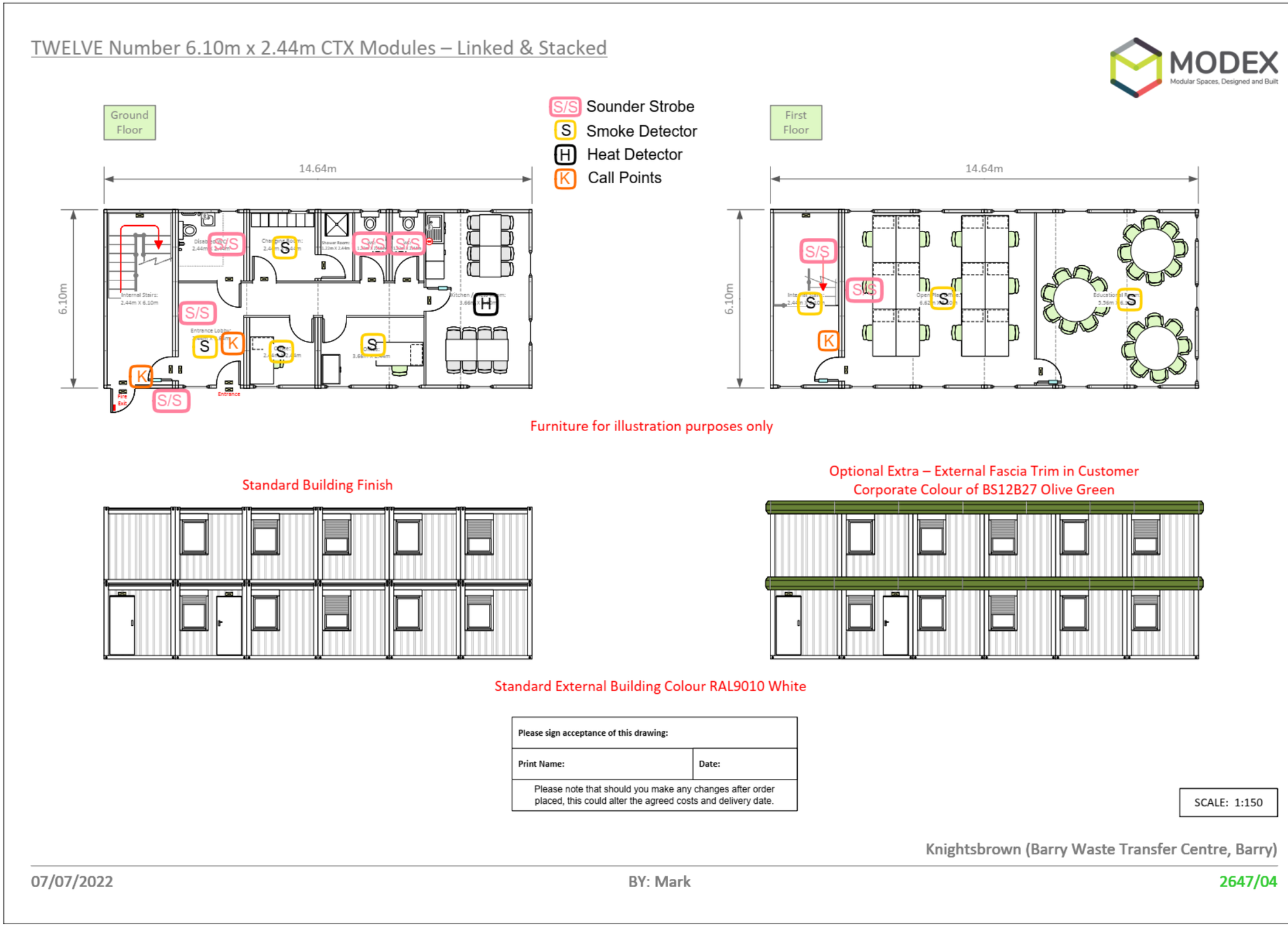


Figure 3-2: Location of Fire Detection Systems at RRF Site

3.7 Outside of Operational Hours

Measures in place to prevent, detect, and fight a fire on site outside of operational hours have been included throughout this document, however, are summarised below. Colin Smith and Bethan Thomas are named as the 'responsible persons' within the Fire Strategy documentation. As they both live less than 15 minutes away from the site they will attend site should there be a fire incident outside of operational hours. They will work in unison to make sure that either one of them is available during periods of sickness or annual leave. They will both be trained to be the 'emergency out-of-hours' member of staff so that they know what to do in the event of the fire and they will both be key holders so that they can access site.

3.7.1 Procedure in the Event of a Fire

If a positive identification of fire is made via CCTV monitoring, then the emergency out-of-hours trained member of staff and key holder will be alerted and will be on site within an hour of being contacted. If a positive identification of fire is made via a member of the public or anyone other than the CCTV operators, then the contact details for the emergency out-of-hours member of staff is displayed on the notice board at the site entrance and in the emergency information pack at the site entrance in which the fire service have access to.

3.7.2 *Training*

A copy of the FPMP and Fire Policy & Strategy Plan is available off-site in a locked red 'emergency service box' attached to the site's entrance gate. This will ensure that the Fire Service can access this information if a fire incident was to occur out of operational hours. Copies are also kept at The Vale of Glamorgan Council, The Alps, Wenvoe CF5 6AA.

3.7.3 Waste Storage

The storage times of the waste streams coming to site are detailed in Table 2-2. Appropriate loose material bays have been designed to allow storage of material for a maximum of two to three days and the bale storage bays to allow one load of material plus a small level of contingency. This is the operational minimum required to support VoG's household collection rounds and HWRC service, and therefore material turnover on site will be high. Additionally, the material being processed on site will usually be removed off site at the end of each working day so that a very minimal amount of waste will be held on site overnight in the main RRF building. The site aims to have bays at no more than 20% fill capacity at closing time and transport is booked accordingly to facilitate this. Further, throughout the day, and at closing time, site employees will conduct temperature and moisture monitoring of the waste remaining in the bay using a monitoring device[9]. This monitoring, combined with the overnight CCTV and fire detection procedures as detailed above, will minimise the risk of a fire.

3.7.4 Water Supply and Firewater Containment

The key for closing the penstock valves is located within the welfare unit, which the emergency out-of-hours trained member of staff with have access to. Shutting the penstock valve is part of the fire drill exercises and is one of the key steps in the firefighting action plan in Section 4.1.

[9] *MOISTURE METER FOR PAPER CARDBOARD RECYCLED PAPER HYGROMETER F18 4260216879852 | eBay*

4.0 Procedure in the Event of a Fire

This section details the procedures to be followed on site in the event of a fire.

4.1 Fire Fighting Action Plan

If a fire is identified on site, an alarm will be raised immediately, the fire service will be called by dialling 999 and the site evacuated and closed to the public.

Trained site staff will assess if the fire is deemed small enough and if they are able to safely tackle the fire with onsite fire extinguishers. If it is deemed safe to do so, staff will extinguish the fire. For a small fire incident (e.g., a fire smaller than a waste paper bin) the following procedure should be followed:

- In accordance with training, extinguish small fires using the appropriate firefighting equipment – fire extinguishers are sign posted in all offices and are for dealing with small fires only, as a guide fires larger than a waste paper bin should be dealt with by the Fire Brigade. Combustible waste on fire that is not considered small will be dealt with by the fire service.

If this is not possible due to the nature or scale of the fire, for a larger fire incident (e.g., fire posing any threat to employees or contractors of the company or requiring the attendance of an emergency service at the premises or vehicle) the following procedure should be followed:

- The person(s) who discovers a fire shall raise the alarm immediately by the appropriate method (such as an operation of a break glass alarm or manual call point).
- The trained fire coordinator is named on the list attached to the site health and safety notice board. The fire coordinator is responsible for the overall supervision of the Emergency Action Plan and will;
    - Summon the fire brigade
    - Carry out roll calls at the assembly point
    - Manage public pedestrian and vehicular traffic leaving the site
    - Prevent all further unauthorised access
    - Liaise with the fire brigade on arrival
    - Close the shutoff valves to store firewater (no recycling of firewater is proposed)
    - If requested by the fire service, dampening down of non-burning waste material

4.1.1 Materials in Containers

All containers on site are easily accessed and will only have adjacent containers on either side of them so can be accessed from the front or rear. If needed, under supervision and instruction of the Fire Brigade, and following the operator undertaking of a risk assessment to identify if it is safe to do so, trained staff could remove material from unburning containers from either side of the burning container.

4.2 Fire Fighting Techniques - equipment

The site is designed to allow site operatives to support the fire service, under strict supervision and only if safe to do so, with active firefighting on-site. Any mobile plant available onsite will be utilised to aid firefighting efforts under the following two conditions:

- firefighting will be directed by the FRS; and
- mobile plant will be used to move unburnt waste and isolate combustible material.

In an event where the FRS requires assistance in the form of specialist vehicles VoG will seek advice from the FRS and VoG's vehicle provider and will lease specialist fire proof plant and machinery in line with the requirements from a local plant hire company.[10]

- This plant must meet criteria that make it suitable for use around fire, including:
    - Enclosed caps;
    - Heat-protected hydraulics;
    - Protected cabling; and
    - Smoke-proof cabin.
- If such plant is available to hire, it will only be used to move non-burning material.
- No mobile plant on site is suitable for proximity to fire or for the movement of burning material.
- Staff (the fire co-ordinator and area fire wardens)) with training enabling them to attempt to tackle small fires, or call the Fire Service; and
- Available fire suppression facilities (on-site fire extinguishers and local fire hydrants);

All mobile plant will be fitted with dry powder or carbon dioxide fire extinguishers (as appropriate) for fighting vehicle/equipment fires. All firefighting equipment will be kept in good condition, unobstructed, and be serviced at least once a year by a competent person.

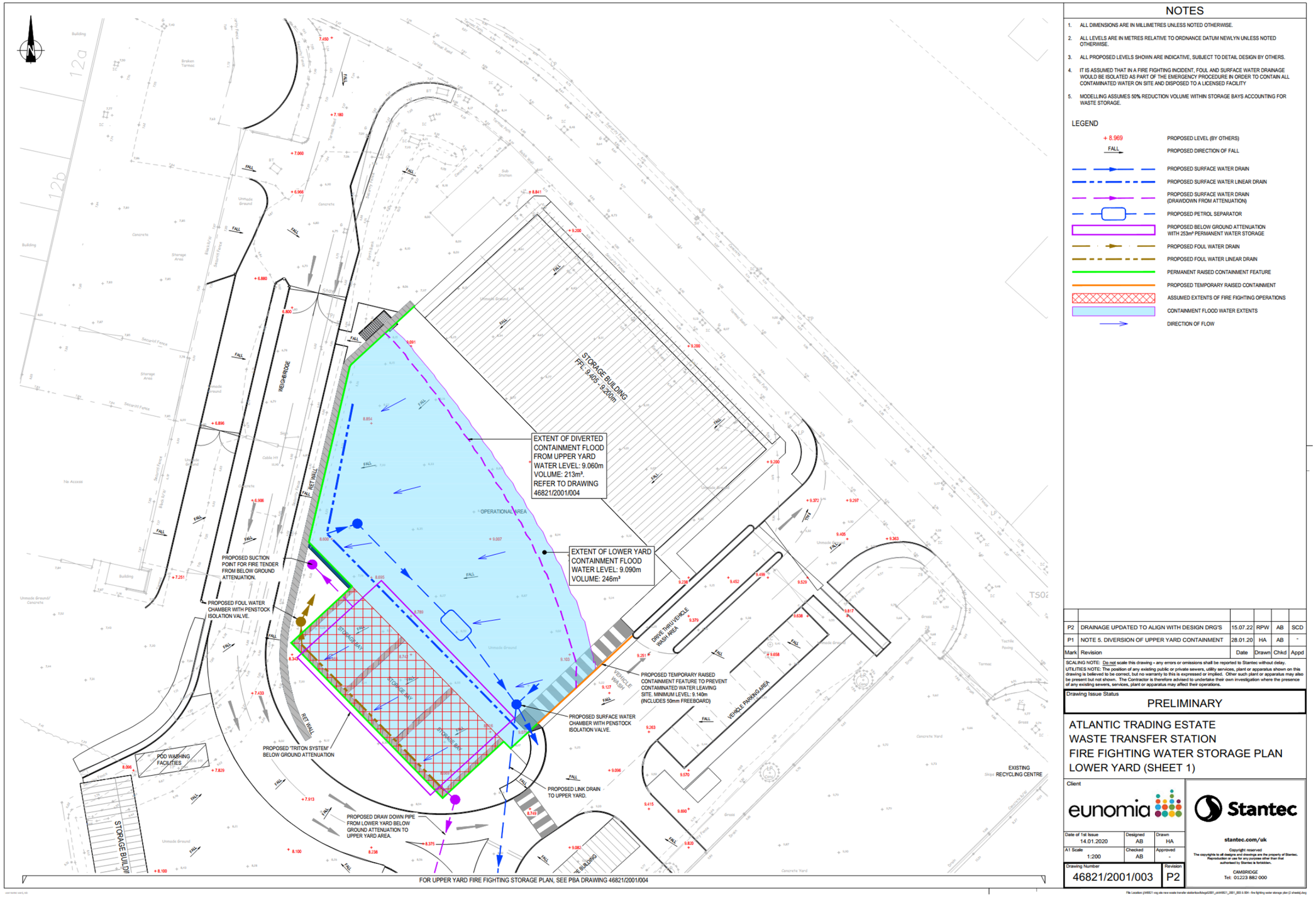
Tackling a small fire using the available firefighting equipment should only be undertaken by trained staff and only following a careful assessment to determine that it is safe to do so. It is the Council's fire safety policy that life safety must always be the priority and that no person, whether an employee or other, should put themselves at personal risk in tackling a fire. This said, with competence and confidence, and following a dynamic risk assessment, members of staff will be trained to be able to tackle a known small fire safely, using the available first aid firefighting equipment.

An emergency out-of-hours contact number for a trained member of staff and key holder will be displayed on the notice board at the site entrance and in the emergency information pack at the site entrance.

In addition, as discussed in Section 3.3, a quarantine area will also be maintained, to be used as an area for the segregating of non-burning waste away from a fire.

[10] *Plant hire company – Sunbelt Rentals, Llandough Industrial Estate, Penarth Road, Cardiff, CF11 8TW - https://www.sunbeltrentals.co.uk/to-rent/plant/the-experts-in-plant-hire/*

Figure 4-1: VoG RRF Firefighting Water Storage Plan (Lower Yard)



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES RELATIVE TO ORDNANCE DATUM NEWLYN UNLESS NOTED OTHERWISE.
3. ALL PROPOSED LEVELS SHOWN ARE INDICATIVE, SUBJECT TO DETAIL DESIGN BY OTHERS.
4. IT IS ASSUMED THAT IN A FIRE FIGHTING INCIDENT, FOUL AND SURFACE WATER DRAINAGE WOULD BE ISOLATED AS PART OF THE EMERGENCY PROCEDURE IN ORDER TO CONTAIN ALL CONTAMINATED WATER ON SITE AND DISPOSED TO A LICENSED FACILITY
5. MODELLING ASSUMES 50% REDUCTION VOLUME WITHIN STORAGE BAYS ACCOUNTING FOR WASTE STORAGE.

LEGEND

+ 8.969 — PROPOSED LEVEL (BY OTHERS)
FALL — PROPOSED DIRECTION OF FALL
PROPOSED SURFACE WATER DRAIN
PROPOSED SURFACE WATER LINEAR DRAIN
PROPOSED SURFACE WATER DRAIN (DRAWDOWN FROM ATTENUATION)
PROPOSED PETROL SEPARATOR
PROPOSED BELOW GROUND ATTENUATION WITH 253m³ PERMANENT WATER STORAGE
PROPOSED FOUL WATER DRAIN
PROPOSED FOUL WATER LINEAR DRAIN
PERMANENT RAISED CONTAINMENT FEATURE
PROPOSED TEMPORARY RAISED CONTAINMENT
ASSUMED EXTENTS OF FIRE FIGHTING OPERATIONS
CONTAINMENT FLOOD WATER EXTENTS
DIRECTION OF FLOW

Mark	Revision	Date	Drawn	Chkd	Appd
P2	DRAINAGE UPDATED TO ALIGN WITH DESIGN DRG'S	15.07.22	RPW	AB	SCD
P1	NOTE 5. DIVERSION OF UPPER YARD CONTAINMENT	28.01.20	HA	AB	-

SCALING NOTE: Do not scale this drawing - any errors or omissions shall be reported to Stantec without delay.
UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake their own investigation where the presence of any existing sewers, services, plant or apparatus may affect their operations.

Drawing Issue Status: PRELIMINARY

ATLANTIC TRADING ESTATE
WASTE TRANSFER STATION
FIRE FIGHTING WATER STORAGE PLAN
LOWER YARD (SHEET 1)

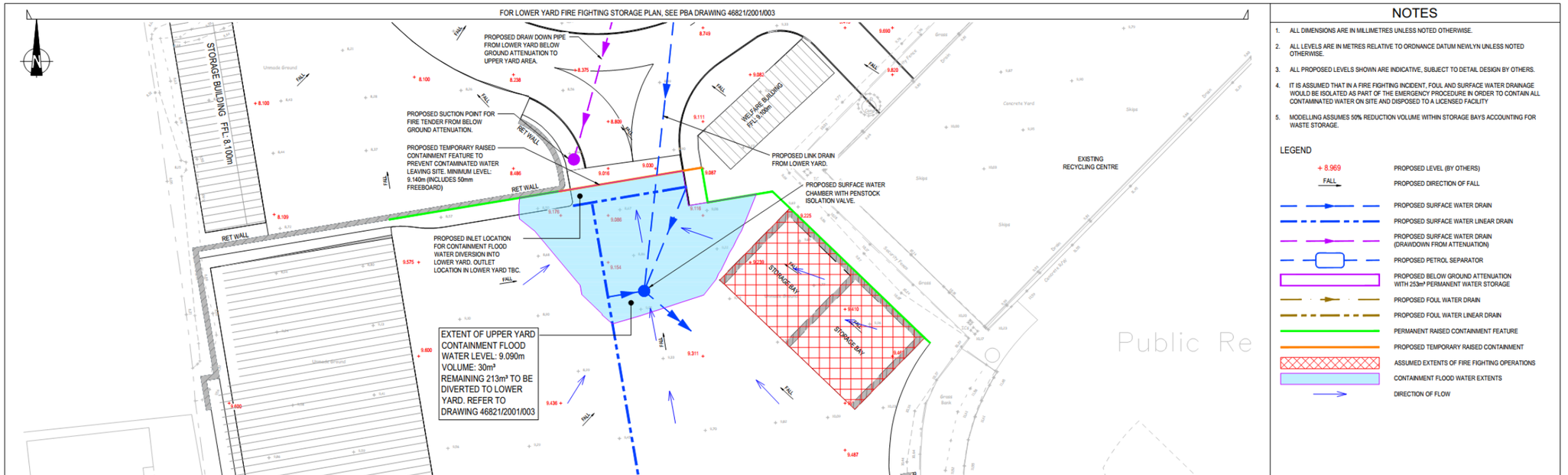
Client: eunomia

Stantec
stantec.com/uk

Date of 1st Issue	Designed	Drawn
14.01.2020	AB	HA
A1 Scale	Checked	Approved
1:200	AB	-
Drawing Number		Revision
46821/2001/003		P2

CAMBRIDGE
Tel: 01223 882 000

Figure 4-2: VoG RRF Firefighting Water Storage Pan (Middle and Upper Yard)



4.3 Contingency Plan

In the event of a fire on site, the RRF will be evacuated and closed to deliveries and collections. All collections from the site will be postponed.

All RRF deliveries will be redirected to Pritchard's, Earthmovers House, Llantrisant Business Park, Llantrisant, CF72 8LF.

This alternative service provision will remain in place until the site has been signed off by Natural Resource Wales to recommence operations.

4.4 Emergency access to site

Emergency access to the site is via the public access A4231 and A4055 (from Barry), and B4267 (from Sully) leading to Haye Road and Hayes Lane. The road that leads directly from the site is a private road that belongs to Atlantic Trading Estate site owner but has 24 hour access.

4.5 Disposal of Contaminated Material

Once the fire has been extinguished and the fire watch period has been completed, senior staff, working alongside the regulatory authorities, will ensure contaminated material and firewater is safely removed from site by registered waste carrier - Biffa (subject to analysis) for disposal of any residual material to an appropriately permitted facility, using vehicles equipped for the safe transportation of flammable waste. Any drainage interceptors that received firewater will be emptied and cleaned. Arrangements will then be made for the treatment of contaminated surfaces and pipeline by jet washing and detergent or other cleaning agent as necessary. Spent water to be collected and retained in foul drainage system and pumped out from underground storage before re-opening penstock on foul line.

4.6 After Fire Incident

Following an incident of fire on site, all relevant bodies will be notified within 24 hours (e.g. VoG Managers, Health and Safety Unit, NRW). A written report identifying causes and corrective measures will be submitted to NRW and Senior VoG management within one week of the incident. 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 FP&MP, as required to ensure ongoing applicability and effectiveness. Reviews of the FP&MP will occur annually, or as stated above following an incident. The updated FP&MP will be submitted to NRW for its approval prior to implementation of the proposed changes at the site.

5.0 Impact Reduction

An assessment has been made of the potential impacts that could occur as a result of a fire incident on site, these are detailed in Table 5-1.

Table 5-1: Approach to Minimising Impacts of Fire

Impact	Who the Impact Affects – Potential Receptors	Affects the impact could have on potential receptors	How Impacts will be Minimised
Air pollution by carbon emissions and toxic chemicals in smoke plume	Local residents, businesses and services	Temporary closure of business. Residents asked to remain indoors for temporary period of time, and effects to human health.	Aim to reduce the spread and duration of fire as swiftly as feasible with the firefighting measures mentioned in Section 4.0.
Contamination of soil and water from items deposited by the smoke plume	Environment	Soil and water in close proximity to the site may not be safe for public and commercial use.	Storing the majority of the material within a building will limit the quantity of material that will leave the site via a smoke plume. If the fire is in an external waste pile or container the dispersion of materials via the smoke plume will be monitored with preventative action taken if it is safe to do so.
Contamination of soil and waste from firefighting water runoff	Environment	Soil and water surrounding the site could be unsafe for public and commercial use.	Firewater will be contained within the hard-standing areas of the site. Drains will be sealed prior to firefighting commencing.
Temporary closure of surrounding roads	Local residents, businesses and services	Temporary loss of business. Residents unable to access or leave homes.	Establish a communication plan with sensitive receptors so they are aware of the situation and can implement contingency plans.
Temporary closure of nearby sites	Local residents, businesses and services	Temporary loss of business.	Establish a communication plan with sensitive receptors so they are aware of the situation and can implement contingency plans.

APPENDICES

6.0 Appendix 1 – Sensitive Receptor Contact Details
Residents & Businesses

In the event of a fire immediate neighbours to the site will be contacted by the Site Manager with an update as soon as it is appropriate to do so. Aldo during a fire incident VoG will use their website, Facebook and Twitter to communicate with local receptors via Vale of Glamorgan Council's Emergency Team. The table below contains the contact details of the businesses located within 1km of the site.

Table 6-1: Sensitive Receptor Contact Details

Sensitive Receptor Type	Name	Contact Number	Website	Location Address
Commercial	Scott Timber Ltd	01446 722145	scottgroupltd.com	Atlantic Trading Estate, Barry CF63 3RF
Healthcare	Allied Healthcare	01446 747777	alliedhealthcare.com	Unit 8, Atlantic Gate, Atlantic Trading Estate, Barry CF63 3RF
Commercial	Welsh Doors	01446 732333	welshdoors.wales	Welsh Doors, Harbour Reach, Atlantic Trading Estate, Barry CF63 3RF
Commercial	Atlantic car sales			3 Atlantic Cres, Barry CF63 3RF
Commercial	D G Window Services Ltd	01446 420287	dgwltd.co.uk	Unit 19/Arcade Workshops/Atlantic Trading Est, Barry CF63 3RF
Commercial	Install Skip Hire	01446 421072	installskips.co.uk	Unit 12F, Atlantic Trading Estate, Vale of Glamorgan, Barry CF63 3RF
Commercial	Movers of Cardiff	029 2035 0076	houseremovalsincardiff.co.uk	Atlantic Trading Estate, Unit 14c, Barry CF63 3RF
Commercial	The Cardiff Window Cleaning Company			Unit B1, Atlantic Trading Estate, Barry CF63 3XA
Commercial	Elec Tec		elec-tec-wales.com	1a, Atlantic Trading Estate, Barry CF63 3RF
Commercial	Principality Motor Company Ltd	029 2267 8010		Cambria House, Office 1, Vale Sports Arena, Penarth Rd, Cardiff CF11 8TW
Healthcare	Fixing Me - Life Coach	07795 578973		Atlantic House, Atlantic Trading Estate, Barry CF63 3RF
Commercial	Espex Batteries	029 2070 5453	espexbatteries.co.uk	Llandough Trading Estate, Unit 13, Penarth Rd, Cardiff CF11 8RR

Sensitive Receptor Type	Name	Contact Number	Website	Location Address
Commercial	United Worldwide Logistics	0845 900 0571	unitedwl.com	15a Atlantic Trading Estate, Atlantic Way, Barry CF63 3RF
Commercial	4 Wheels UK Ltd	07866 874016		Unit 15b, Atlantic Business Park, Barry CF63 3RF
Commercial	Cass	0844 800 0277	cassuk.com	15B, Atlantic Business Park, Barry CF63 3RF
Commercial	A P C Panels Ltd	01446 732333	welshdoors.com	Unit 15c, Atlantic Trading Estate, Barry CF63 3RF
Leisure	Atlantic Way CrossFit	01446 733391	atlanticwaycrossfit.com	Atlantic Trading Estate, 15B, Barry CF63 3RF
Commercial	Barry Recycling Centre	01446 700111	https://www.valeofglamorgan.gov.uk/en/living/Recycling-and-Waste/Household-Waste-Recycling-Centres-HWRCs.aspx	Atlantic Trading Estate, Atlantic Cres, Barry CF63 3RF
Commercial	Lignia Wood Company Ltd	01446 507077	lignia.com	Atlantic Trading Estate, Unit 10, Barry CF63 3RF
Commercial	Champions Lifting and Safety	01446 738897		Atlantic Trading Estate, Barry CF63 3RF
Commercial	Atlantic Secure Self Storage	01446 677648	atlanticselfstorage.co.uk	Atlantic Trading Estate, Barry CF63 3RF
Commercial	Hot Diggidy Dog Ltd	0844 879 3265	doggidy.com	Atlantic Cres, Barry CF63 3RF
Commercial	Vale of Glamorgan Brewery	01446 730757	vogbrewery.co.uk	Atlantic Trading Estate, Barry CF63 3RF
Commercial	Bennett's Removals and Storage	07968 539383	bennetts-removals.com	Atlantic Trading Estate, Atlantic Secure Self Storage Unit 8, Barry CF63 3RF
Commercial	Sixthgear Motorcycles	01446 744929		Atlantic Cres, Barry CF63 3RF
Other Service	HMS Cambria Military Base	01446 744044	https://www.royalnavy.mod.uk/cambria	Hayes Ln, Sully, Barry, Penarth CF64 5XU

Sensitive Receptor Type	Name	Contact Number	Website	Location Address
Commercial	Tike's Atlantic Burger Van			Atlantic Trading Estate, Road, Barry CF64 5XU
Commercial	Rees P M & Sons (2000) Ltd	01446 743131	pmrees.com	Unit 6/Atlantic Business Park, Barry CF63 3RF
Commercial	Lyndon SGB by BrandSafeway	01446 724920	https://www.lyndon-sgb.co.uk/	Atlantic Trading Estate, Barry CF63 3RF
Commercial	The Sausage Revolution	01446 739525	thesausagerevolution.com	Barry CF63 3RF
Commercial	Western Welding & Engineering Co Ltd	01446 733466	westernwelding.co.uk	Unit 9, Atlantic Trading Estate, Barry CF63 3XA
Commercial	Thinkvans.com	01446 724130	thinkvans.com	8, Atlantic Trading Estate, Atlantic Point, Barry CF63 3AA
Commercial	Firebug Lighting	01446 739249	firebuglighting.com	Unit 6, Atlantic Point, Wimbourne Road, Barry CF63 3RF
Commercial	Kits-n-Bits Ltd	01446 334005	kits-n-bits.com	Atlantic Trading Estate, Unit 11, Atlantic Point, Barry CF63 3AA
Commercial	Window Cleaning Warehouse Ltd	01446 749060	windowcleaningwarehouse.co.uk	Unit 3 A2B, Atlantic Trading Estate, Barry CF63 3RF
Commercial	Facelift Cleaning Systems	01446 749061	faceliftcleaning.co.uk	Unit 2, A2B House, Barry CF63 3RF
Commercial	A2B Taxis	01446 747500	a2btaxisbarry.co.uk	1, Atlantic Trading Estate, Barry CF63 3RF
Commercial	Bowsher J S Ltd	01446 722878		Atlantic Trading Estate, Barry CF63 3RF
Commercial	Spartan Motor Factors	01446 732908		D3, Atlantic Gate, Barry CF63 3RF
Commercial	Heinnie Haynes	0330 300 0400	heinnie.com	Unit C, Atlantic Gate, Atlantic Trading Estate, Barry, Penarth CF63 3RF
Commercial	ABC Designs	01446 733104	abcdesignswales.co.uk	Unit B, Atlantic Gate, Atlantic Trading Estate, Barry, Penarth CF63 3RF

Sensitive Receptor Type	Name	Contact Number	Website	Location Address
Commercial	Pipers Wardrobes	01446 736214	piperswardrobes.co.uk	5 Hayes Rd, Sully, Barry CF63 3RF
Commercial	Atlantic Café	01446 735383		1 Wimborne Rd, Barry CF63 3DH
Commercial	TJ Williams Ltd	01446 729200	tjwilliams.co.uk	Wimborne Rd, Barry CF63 3DH
Commercial	Rock N Critters Marine Aquatics	01446 737210	rockncritters.co.uk	1, Windmill Industrial Estate, Wimborne Rd, Barry CF63 3DH
Commercial	Vale Aggregates Ltd	01446 730527	vale-aggregates.co.uk	Wimborne Road, Barry CF63 3DH
Commercial	M&B Hydraulics	029 2077 8582	mbhydraulics.com	Windmill Industrial Estate, unit 8 Wimborne Rd, Barry CF63 3DH
Healthcare	Ambito Sully	01446 733418	ambitocare.co.uk	Day Opportunities, Hayes Rd, Sully CF64 5SE
Commercial	Caffi I Bawb	01446 733418	https://www.facebook.com/scopesully	Hayes Rd, Sully, Barry, Penarth CF64 5SE
Commercial	Tamp&Grind Coffee Co	07500 513801		101 Hayes Rd, Barry, Penarth CF64 5SE
Commercial	Gelluv Factory Shop	01446 734450	gelluv.co.uk	Unit A1, Windmill Parc, Hayes Rd, Sully, Cardiff CF64 5SQ
Commercial	Navigator Terminals Windmill Ltd	01446 736677	navigatorterminals.com	Hayes Ln, Sully, Penarth CF64 5RZ
Healthcare	SHUA - Cat Sanctuary	07831 216170		Hayes House, Hayes Rd, Sully, Penarth CF64 5SE
Healthcare	Ty Hafan Children's Hospice	029 2053 2199	tyhafan.org	Hayes Rd, Sully, Penarth CF64 5XX
Commercial	CJ Contract Travel Services Ltd	01446 722296		Wimborne Rd, Barry CF63 3RA
Commercial	Jewson Tool Hire	01446 720246	jewson.co.uk	Wimborne Rd, Barry CF63 3DH
Commercial	Scafftag	0845 089 4060	scafftag.co.uk	Wimborne Rd, Barry CF63 3DH
Commercial	Alembic	01446 733174		Unit 6 Wimbourne Buildings, Atlantic Way, Barry CF63 3RA
Commercial	Palletways Cardiff	01446 359004	palletways.com	No.2, Atlantic Way, Barry CF63 3RA

Sensitive Receptor Type	Name	Contact Number	Website	Location Address
Commercial	Barry Trade Sales	07825 157689		Barry CF63 3RA
Commercial	Dragon Windscreens	0800 085 2558	dragonwindscreens.com	Unit 12, Wimborne Buildings, Atlantic Way, Barry CF63 3RA
Commercial	Groupe Samat	01446 745500	groupesamat.com	Atlantic Way, Barry CF63 3RA
Commercial	Frazer Metals - Scrap Car Dealer	01446 732222		Wimbourne Buildings, Atlantic Way, Barry, The Vale Of Glamorgan CF63 3RA
Commercial	Wardle Painters Ltd	01446 748620	wardlepainters.co.uk	Unit 5/Wimborne Buildings/Atlantic Way, Barry CF63 3RA
Commercial	Atlantic Salvage	01446 744441		Atlantic Trading Estate, Unit 22, Barry CF63 3RF
Place of Worship	Cardiff Canopy			UK, Barry
Commercial	Custom Classics		https://www.facebook.com/Custom-Classics-301435958328/	Unit 1a, wimbourne building, Atlantic Way, Barry CF63 3RA
Commercial	South Coast Mobile	07875 604499		We Come to You, Vale of Glamorgan, Barry CF63 4JZ
Commercial	Ross Upholstery	07903 822944		A 19 Unit 7 Arcade Workshops Way Atlantic, Atlantic Crescent, Barry CF63 3RF
Commercial	RIOT Entertainment		https://www.facebook.com/RIOTEntertainment6	Unit 6, Arcade Workshops, Barry Docks, CF633RA
Commercial	DG Windows and Doors	0845 597 0083	dgwindowservicesltdbarry.co.uk	Atlantic Cres, Barry CF63 3RA
Commercial	Viv Lewis Caravans	07778 197979	vivlewiscaravans.co.uk	Atlantic Way, Barry CF63 3RA
Commercial	Scott Packaging Ltd	01446 749887		Atlantic Buildings/Atlantic Crescent, Barry CF63 3RG
Leisure	Leisure Solutions	01446 739200		Barry CF63 3RG
Commercial	Scott Pallets Ltd	01446 736595		Atlantic Bldg Atlantic Way, Barry CF63 3RG

Sensitive Receptor Type	Name	Contact Number	Website	Location Address
Commercial	Associated British Ports Barry	0870 609 6699	abports.co.uk	Port Office/Atlantic Way, Barry CF63 3US
Commercial	S M D Services Cardiff Ltd	07780 518900		Woodlands, Hayes Ln, Sully, Penarth CF64 5QF
Commercial	S&K Haulage (Glamorgan) Ltd	01446 422100	skhaulage.net	David Davies Rd, Port of, Barry CF63 4AB
Commercial	Bruno Timber Products	01446 732693	brunotimberproducts.co.uk	2 Viaduct Rd, Barry CF63 4JB
Commercial	Engine Carbon Clean Wales	07867 411153	enginecarbonclean.com	3 Viaduct Rd, Barry CF63 4JB
Commercial	Soltherm E W I Wales Ltd	01446 700936	solthermewiwales.co.uk	2 Viaduct Rd, Barry CF63 4JB
Commercial	Cymraeg Vending	0800 092 3434	cymraegvending.co.uk	11, Woodham Rd, Barry CF63 4JE
Commercial	Cars on Gas	01446 740959	carsongas.com	4 Woodham Rd, Barry CF63 4JE
Commercial	Vale Rentals Ltd			12 Woodham Rd, Barry CF63 4JE
Commercial	Citroen Peugeot Specialists Cardiff Barry	056 0366 4704		5 Woodham Rd, Barry CF63 4JE
Commercial	Premier Site Accommodation	01446 737040		20 Woodham Rd, Barry CF63 4JE
Commercial	DPF Removals	029 2166 0906		5 Woodham Rd, Barry CF63 4JE
Commercial	BMW Cardiff Specialists Servicing, Repairs & Diagnostics	0800 033 7807		5 Woodham Rd, Barry CF63 4JE
Commercial	Diamond Repair Centre Barry Ltd	01446 700780		5 Woodham Rd, Barry CF63 4JE

Sensitive Receptor Type	Name	Contact Number	Website	Location Address
Commercial	Vale Taxi Hire	01446 748604		13 Woodham Rd, Barry CF63 4JE
Commercial	Island Scaffolding Services Ltd			Unit 13 Woodham Rd, Barry CF63 4JE
Commercial	Cardiff Airport Taxi	01446 722296		2 Woodham Rd, Barry CF63 4JE
Commercial	Hawkins Antiques & Reproductions (Barry) Ltd	01446 746561	https://hawkins-antiques-reproductions-barry-ltd.business.site/	22-23, Romily Buildings, Woodham Rd, Barry CF63 4JE
Commercial	Edwards Coaches - Barry	01443 202048	edwardscoaches.co.uk	Wimborne Rd, Barry CF63 3DH
Commercial	Valevac	07963 022104		Viaduct Rd, Barry CF63 4JB
Commercial	SMK Building & Maintenance Ltd	01446 741888	smkbuilding.wordpress.com	Viaduct Rd, Barry CF63 4JB
Residential	Hayes Point Development		http://www.hayes-point.com/	Hayes Point, Hayes Road, Barry CF64 5AA
Residential	Bendrick Road residential area			2-47 Bendrick Rd, Barry CF63 3RE
Residential	Hayes Lane/Road residential area			1-3 Hayes Ln / 1-45 Hayes Rd, Barry CF64 5SE

7.0 Appendix 2 – Permit to Work Procedure

Permit to Work Procedure:

All contractors on site and any persons undertaking non-routine work are required to hold a permit to work before undertaking the procedure.

The permit requires a process to be put in place to ensure the safety of all on site while the work is being undertaken.

Examples of work where permits to work are required are:

- **Non-production work** (e.g. maintenance, repair, inspection, testing, alteration, construction, dismantling, adaptation, modification, cleaning, etc.);
- **Non-routine operations**;
- **Jobs where two or more individuals or groups** need to co-ordinate activities to complete the job safely;
- **Jobs where there is a transfer of work and responsibilities** from one group to another.

The above list is not an exhaustive list. The Supervisor / Manager is to ensure that any non-routine work is undertaken subject to a permit to work.

The permit to work is to be used in **conjunction with other contractor management measures** – shown in **SECTION 8** of this folder.

The procedure for issuing a permit to work is as follows:

- No hot works to be conducted within 2 hours of the site closing down. If hot works required to be undertaken and the timing of this would be within 2 hours of the site closing down then the works need to be re-scheduled to allow for sufficient fire-watch afterwards.
- Before commencement of work, a 'Competent Person' is to be appointed in charge of the works. This is likely to be the contractor's Foreman/Supervisor in charge of the works.
- The site Supervisor is to fill in permit to work form in conjunction with the contractor's competent person
- Both are to pay particular attention to:
    - Risks involved in the works and precautions required.
    - The check lists in this section for specific types of works (e.g. electrical and hot works).
- Both the Supervisor and the person undertaking the work are to sign the form in order for it to be considered to be a permit to work.
- Once issued, active permits are to be displayed in the Site Office.
- Should a work permit be extended or the length of the permit goes over a shift period, the Supervisor of the outgoing shift is to provide a handover regarding the status of all live permits to the incoming Supervisor.
- The incoming Supervisor is to sign Section 3 of the form to confirm they are comfortable for the permit to continue.
- On completion of the work, the Supervisor is to inspect the work and confirm that all persons, tools and plant have been withdrawn from the site and that the site and any equipment has been left in a safe condition.
- Once the above I confirmed, the Competent Person should sign Section 4 – 'The Hand-back' section of the form.
- The site Supervisor should then sign Section 5 of the permit to show that it had been cancelled.
- The site Supervisor is to remove the permit from the Site Office active permit notice board and file it in the permit record folder.

Note: **If it is necessary to suspend a permit** during works (for example in the event of a fire alarm or emergency on site), the permit is considered to still be an 'active permit' during the period of suspension.

8.0 Appendix 3 – Permit to Work Form

Permit to Work Form

Section 1 – Details of Work (to be completed by authorised person)		
1. Permit Title		
2. Permit Ref No.		
3. Job Location (full location)		
4. Plant Identification		
5. Work to commence*:	Date:	Time*:
6. To be completed by:	Date:	Time:
7. Description of work to be done and its limitations:		

8. Specific hazards *(residual and associated with the works):*	**9. Specific precautions to be taken and actions in the event of an emergency:**

9. Protective equipment *(e.g. PPE, harnesses):*
10. Physical controls *(e.g. safety devices / lock off procedures / checks after work complete etc)*

I declare that the above has been made known to the Competent Person in charge of the work.
I consider that the above mentioned location is safe for the Competent Person to commence work activities.

Signature of Authorised Person:		Date:
		Time:

Section 2 – Acceptance of Receipt of Copy by Competent Person

I acknowledge receipt of this permit and understand the special precautions that are to be adopted as described above. Neither I, nor the person under my control, will work on any other activity or location other than those specified in Section 1.

Signature of Competent Person:		Date:
		Time:

Section 3 – Extension / shift handover procedures

I confirm plant remains safe to work on and I am fully aware of the hazards and precautions put in place.

Signature	***Date***	***Time***

Section 4 – Hand-back

I hereby declare that the work described in Section 1 is complete. The area has been inspected and all persons, tools and equipment have been withdrawn.

Signature of Competent Person:		Date:
		Time:

Section 5 – Cancellation

I hereby declare this permit cancelled. I have received the copies of the permit back from the Competent Person. The certifying work has been tested and the plant satisfactorily

Signature of Authorised Person:		Date:
		Time:

*No hot works conducted within 2 hours of the site closing down

9.0 Appendix 4 – Hot Work Permit to Work Checklist

Hot Work Permit to Work Checklist

Linked to Permit No._____
Precautions taken

☒ Needed	☒ Not Needed	Materials that form part of the business operation No hot works conducted within 2 hours of the site closing down.	☒ Precautions taken
☐	☐	Floors clear of any combustible materials.	☐
☐	☐	Combustible floors protected by wetting down and covering with damp sand or sheets of non-combustible material.	☐
☐	☐	Combustible materials and flammable liquids protected (if immovable) or removed from the area. No combustible material will be stored within 6 m of the hot works.	☐
☐	☐	Where work is above floor level non-combustible sheets suspended beneath the work to collect sparks.	☐
☐	☐	Combustible wall panels (eg. Composite cladding) protected from sparks by non-combustible curtain.	☐
☐	☐	Holes / openings in walls, floors, partitions and ceilings protected with non-combustible materials?	☐
☐	☐	Any metals likely to conduct heat taken away.	☐
☐	☐	All other workers protected from glare from welding.	☐
☐	☐	Fire trained employee in attendance during and up to an hour after welding is finished. The appropriate fire extinguishers are available.	☐
☐	☐	Welding fumes need to be contained use either local exhaust ventilation or breathing apparatus.	☐
☐	☐	Proper protective equipment used and worn.	☐
		A fire watch is carried out at least 30 min after the works are completed.	
☐	☐	Any Other Matters:-	☐
		This list is not exhaustive and only a guide for management to apply control.	
Signature of person signing permit_____			
Copy attached to permit to work no._____			

10.0 Appendix 5 - Daily Checklist

Daily Site Monitoring and Environmental Log for Atlantic Waste Transfer Station

Date: _____ Assessor: _____

Inspection Areas	Compliant		Comments
	Yes	No	
Waste piles and operational areas			
Only permitted wastes accepted			
Waste bays/ containers are filled to permitted levels			
Surface drainage- integrity of drains			
Sign of fire (smouldering waste/ smoke/ heat released)			
Fire Extinguishers- in place			
Odour emissions			
Dust emissions (if present see Appendix AQ2 of DEMP)			
Site floor swept (daily)			
Vermin/Birds			
Yard and drainage			
General waste tipping/collection operations			
General site tidiness/ litter			
Vermin/Birds			
Lighting			
Safety Notices			
Availability of site machinery/operatives			
Use and availability of PPE			
PPE provision			
Weighbridge facilities			
Weighbridge maintenance records			
First Aid boxes			
Accident book review			
Surface drainage			
Chemicals/oils stored on site- integrity and bunding			
Spill kits			
Surface drainage- integrity of drains			
Interceptor- integrity			
Internal roads- integrity of surfacing/ potholes/ mud/litter			

Wider site			
Access road- integrity of surfacing/ potholes/ mud/litter			
Site Signage- clearly visible			
Site Gates/Barriers- integrity and damage			
Safety Notices			
Boundary Fencing- integrity and damage			
Site Main Identity Board- clearly visible/ no damage			
Visitors on site (signed in and are accompanied)			
Complaints			
Regulatory communications			
Odours (sniff test to be carried out as per OMP)			
Dust emission			
Noise levels			
Fire Prevention specific checks			
No signs of fire in combustible waste piles (*e.g. burning/ visibly hot/ smouldering/ producing steam or heat*). ***If sign of fire is detected contact site manager immediately!***			
Visible signs of contamination in combustible waste piles (*e.g. batteries; oil containers; lighters; etc.*)			
Waste is contained within designated storage bays/ containers and are within permitted limits *Waste cannot overflow the lines painted in the bays or the storage containers.*			
Heat/smoke detectors in welfare building are in working order			
Heat/smoke detectors in office are in working order			
Escape routes and fire exits are unobstructed			
Manual fire alarm call points are unobstructed			

Foam, carbon dioxide and powder extinguishers are available and unobstructed			
Combustible waste hasn't been stored onsite for more than 5 days			
Fire extinguishers are fitted on all mobile plant			
No naked lights/ smoking onsite			
No hot exhausts before site shuts down. *Prior to closing the site at the end of the day vehicles are given time to cool down (1hr after switch-off).*			
Mobile plant and vehicles are parked a minimum of 6m away from material storage			
No hot works has been carried out 1 hr before site closure			
Rollershutter doors are in working order			
Automated penstock system is in working order			
The Fire Prevention and Mitigation Plan is in the secure container on the exterior wall of the site and unobstructed			

11.0 Appendix 6 – Firewall Specification

Fire Safety of Interlocking Concrete Blocks

Elite
Precast

Concrete's interlocking blocks fall within Class A1 of the Fire Classification EN 13501-1 (see **European Standard Summary** below) – which means they are non-combustible.

They will not burn, crack or give off noxious fumes regardless of the intensity of the fire or time spent being exposed to the fire (see ''Comprehensive fire protection and safety with concrete'' below)

Class A1 fire resistant in accordance with clause 4.3.4.4 of EN 13369.

Product Performance Document

All quality concrete is inherently fire resistant but only if it is made to long recognised and established UK industry standards concerning strength, provenance and traceability and suitability of raw materials, durability etc. (see **Quality Statement** below)

There are some important factors to take into account when considering which products to specify –

Concrete is only Class A1 fire resistant if it does not contain any recycled materials (there must be less than 1% organic content) or steel reinforcing (see below).

Any company claiming their products are Class A1 Fire resistant who use recycled materials in their concrete should not do so.

Steel reinforced concrete panels have fire resistant characteristics too – but they are usually time limited (1 hour – 4 hours) depending on the thickness of concrete covering the steel reinforcing.

Under extreme heat the steel will eventually expand and crack the concrete causing the panel to fail.

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4.3.3.4 Verification by testing

In case of verification by testing, declared values shall be verified by direct load testing made on samples taken following proper statistical criteria.

Relevant information is also found in EN 1990:2002, Annex D.

4.3.3.5 Safety factors

Recommended values for partial safety factors can be found in EN 1990 and EN 1992-1-1. These standards also permit lower values under certain conditions. Annex C provides such information.

4.3.3.6 Transient situations

The following transient situations shall be considered:

— demoulding;

— transport to the storage yards;

— storage (support and load conditions);

— transport to site;

— erection (lifting);

— construction (assembly).

When relevant for the type of element, for transient situations a nominal transverse horizontal force to cover out of plane effects due to dynamic actions or verticality deviations shall be considered. This may be taken as 1,5 % of the self-weight of the element.

4.3.4 Resistance and reaction to fire

4.3.4.1 General

Resistance and reaction to fire shall be declared when relevant to the intended use of the product.

Resistance to fire is normally declared as standard fire resistance by means of classes. Alternatively, it may be declared as resistance to parametric fire.

Recommendations related to the use of EN 1992-1-2 are given in Annex L.

NOTE The required class for standard fire resistance, or alternatively resistance to parametric fire, depends on the national fire regulations.

4.3.4.2 Classification for standard fire resistance

For the verification of standard fire resistance one of the following methods can be chosen.

a) Classification by testing

Tests previously performed in accordance with the requirements of EN 13501-2 (i.e. same product, same or more demanding test method) may be taken into account.

The validity of test results can be extended to other spans, cross-sections and loads by appropriate calculation methods (see e.g. c) below).

b) Classification by tabulated data

Tabulated data can be found in EN 1992-1-2. When applicable complementary rules may be given in product standards.

c) Classification by calculation

For classification based on calculation methods, the relevant clauses of EN 1992-1-2 or the rules valid in the place of use apply. When applicable, complementary rules may be given in product standards

4.3.4.3 Verification of resistance to parametric fire

Actions due to parametric fire shall be as given in EN 1991-1-2. Resistance to parametric fire may be verified either by calculation methods in accordance to EN 1992-1-2, or by testing.

4.3.4.4 Reaction to fire

Concrete products made with maximum 1 % organic materials in the concrete composition (by mass or volume whichever is the more onerous) may be declared as reaction to fire class A1 without the need for testing.

Concrete products which include organic materials in the concrete composition greater than 1 % by mass or volume shall be tested and classified according to EN 13501-1.

NOTE See Commission Decision 96/603/EEC, Materials to be considered as reaction to fire Class A without the need for testing as amended by Commission Decision 2000/605/EC.

4.3.5 Acoustic properties

The acoustic properties are airborne sound insulation and impact sound insulation. These characteristics shall be declared when relevant for the intended use of the product.

The airborne sound insulation of a concrete product may be estimated by calculation following EN 12354-1:2000, Annex B or measured according to EN ISO 140-3. In this case, it shall be expressed in the third octave bands 100 Hz to 3 150 Hz and as a single number quantity with spectrum adaptation terms according to EN ISO 717-1.

The impact sound insulation of a concrete product may be estimated by calculation following EN 12354-2:2000, Annex B or measured according to EN ISO 140-6. In this case, it shall be expressed in the third octave bands 100 Hz to 3 150 Hz and as a single number quantity with spectrum adaptation terms according to EN ISO 717-2.

Complementary information may be found in the relevant product standards.

4.3.6 Thermal properties

Thermal properties shall be declared when relevant for the intended use of the product. The thermal properties of a concrete product shall be expressed in terms of one of the following sets of quantities:

a) the thermal conductivity of the material, together with the geometry of the product;

b) the thermal resistance of the product.

When relevant, the specific heat capacity of the material or the heat capacity of the finished product may be given.

The thermal conductivity of the material may be determined by testing in accordance with EN 12664. Determination of declared thermal values for dry state shall be according to EN ISO 10456, which also gives procedures to convert the declared thermal values into design thermal values.

EUROPEAN STANDARD

European Standard EN 13501-1 provides the reaction to fire classification procedure for all products and building elements. According to this Standard, reaction to fire is the response of a product in contributing by its own decomposition to a fire to which it is exposed, under specified conditions (not to be confused with the fire resistance).

Products are considered in relation to their end use application are divided into three main categories:

- construction products;
- flooring;
- linear pipe thermal insulation products (not considered here).

Construction products are classified according to harmonized test methods in Euroclasses A1, A2, B, C, D, E and F.
Products classified in a given class are deemed to satisfy all the requirements of any lower class.
Products classified in A1 and A2 classes are non-combustible (cement, concrete, minerals, glass, fiberglass, rock wool, ceramic, etc.), materials certified from B to F are combustible in ascending order.
Flooring materials are classified according to the same classes A1, A2, B, C, D, E and F followed by the abbreviation “fl” flooring.

	Classification according to European Standard EN 13501-1				
Definition	Construction products			Floorings	
non-combustible materials	A1			$A1_{fl}$	
	A2 - s1 d0 A2 - s2 d0 A2 - s3 d0	A2 - s1 d1 A2 - s2 d1 A2 - s3 d1	A2 - s1 d2 A2 - s2 d2 A2 - s3 d2	$A2_{fl}$ - s1	$A2_{fl}$ - s2
combustible materials - very limited contribution to fire	B - s1 d0 B - s2 d0 B - s3 d0	B - s1 d1 B - s2 d1 B - s3 d1	B - s1 d2 B - s2 d2 B - s3 d2	B_{fl} - s1	B_{fl} - s2
combustible materials - limited contribution to fire	C - s1 d0 C - s2 d0 C - s3 d0	C - s1 d1 C - s2 d1 C - s3 d1	C - s1 d2 C - s2 d2 C - s3 d2	C_{fl} - s1	C_{fl} - s1
combustible materials - medium contribution to fire	D - s1 d0 D - s2 d0 D - s3 d0	D - s1 d1 D - s2 d1 D - s3 d1	D - s1 d2 D - s2 d2 D - s3 d2	D_{fl} - s1	D_{fl} - s1
combustible materials - highly contribution to fire	E		E - d2	E_{fl}	
combustible materials - easily flammable	F			F_{fl}	

Additional classifications

All the materials classified A2, B, C, D obtain an additional classification regarding the emission of smoke and the production of flaming droplets and/or particles.

- "**s**" Smoke emission level: values range from 1 (absent/weak) to 3 (high)

- "**d**" flaming Droplets and/or particles production: values range from 0 (absent) to 2 (high)

For the E class is provided one single subclass d2. For flooring products is provided the additional classification "s" for smoke emission only.

Additional class			Level definition
smoke emission during combustion	s	1	quantity/speed of emission absent or weak
		2	quantity/speed of emission of average intensity
		3	quantity/speed of emission of high intensity
production of flaming droplets/particles during combustion	d	0	no dripping
		1	slow dripping
		2	high dripping

for technical advice.

NOTE: the text above is a simplification of the current national and European Standards. It exclusively has an informative value and it has the only purpose to facilitate the understanding on the use of flameproof materials for scenography produced by Peroni S.p.a. which is in no case responsible for the accuracy of the information and/or for a misinterpretation.

If in doubt after reading this guide contact 01952 588885

Concrete RC40/50XF Equivalent specification Minimum Cement Content = 360kg/m^3

Maximum w:c ratio = 0.45
Cement type = CEM1 52.5N
Coarse Aggregate = Aggregate Industries
Fine Aggregate = Cemex

Durability The use of an RC40/50XF equivalent concrete ensures suitability for use in XF4 conditions as defined in BS 8500-1:2013

Freeze-thaw attack (XF classes – where concrete is exposed to significant attack from freeze-thaw cycles whilst wet)

Elite Concrete technical specifications

Quality statement

Class designation	Class description	Informative examples applicable in the United Kingdom
XF4	High water saturation with de-icing agent or sea water (G)	Horizontal concrete surfaces, such as roads and pavements, exposed to freezing and to de-icing salts either directly or as spray or run-off. Concrete surfaces subjected to frequent splashing with water containing de-icing agents and exposed to freezing.

The units are unreinforced and have a design working life of 100 years as defined in BS EN1990:2002+A1:2005

ASR – the total alkali content of the concrete is calculated as:
380 x 0.75/100 = 2.7kg/m^3 Na^2O equivalent

Limiting value 3.5kg/m^3 for normal reactivity aggregates (BS EN 8500-2 Annex B)

Lifting points — All units are provided with a central galvanized TERWA Spherical Head Lifting Anchor recessed into the concrete surface

Quality Management — All products are manufactured under a Factory Production Control System equivalent to that required by EN1917, BS5911-3 and BS5911-6

Concrete products made with maximum 1% organic materials in the concrete composition may be declared as being in accordance with fire class A1 without the need for testing. Concrete products which include organic materials in the concrete composition greater than 1% by mass or volume shall be tested and classified according to EN 13501-1

CLASS A1 FIRE RESISTANT

Class A1 fire resistant in accordance with clause 4.3.4.4 of EN 13369

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12.0 Appendix 7 – Gypsum Board Data Sheet

Product Data Sheet

Gyproc® FireLine MR 12.5mm

British Gypsum
SAINT-GOBAIN

Gyproc FireLine MR 12.5mm board with water repellent additives in the core.

Where to use

Use it where both fire and moisture performance are required, such as in integral garages and sheltered areas of soffit and steel encasements.

Certifications

Environmental Product Declaration (EPD) available
Click here.

Product information

Composition
The plasterboard is made of a gypsum core between paper liners. It uses glass fibre reinforcement and other additives for extra fire resistance, and has water repellent additives in its core.

Colour
Face colour: Pink.
Reverse colour: Pink.

DIMENSIONS AND WEIGHTS	
PRODUCT SIZES (mm)	1200 X 3000
Nominal thickness (mm)	12.5
Minimum weight (kg/m²)	9.5
Edge options	Tapered edge
Number of tapered edges	2
Width: maximum tolerance (mm)	+0
Width: minimum tolerance (mm)	-4
Length: maximum tolerance (mm)	+0
Length: minimum tolerance (mm)	-5
Taper: maximum width (mm)	80
Taper: minimum width (mm)	40
Taper: maximum depth (mm)	2.5
Taper: minimum depth (mm)	0.6
Squareness: 1200mm width boards (maximum difference in diagonal measurements, mm)	5

NB: Dimensional tolerances. Quality controls are set to meet customer requirements between these maximum and minimum tolerances.

Product Data Sheet

Gyproc® FireLine MR 12.5mm

Performance

Here we only provide performance information related to the product. Please see the White Book for system-dependent performance.

Standards

EN 520:2004+A1:2009, Type F & H1.

Declarations of Performance (DoP) available Click here.

Reaction to fire	A2-s1, d0
Thermal conductivity (W/mK)	0.24
Water vapour permeability (μ)	10
Water resistance (maximum total water absorption when tested to EN520 clause 5.9.2, %)	5
Maximum continuous temperature exposure (°C)	49

Installation

Effect of condensation

The thermal insulation and ventilation requirements of national Building Regulations aim to reduce the risk of condensation and mould growth in new buildings. However, designers should take care to eliminate all possibility of problems caused by condensation, particularly in refurbishment projects.

Cutting

Either cut the board with a plasterboard saw, or score the front face paper with a sharp knife, snap it over a straightedge, then cut the back face paper. Cut holes for things like socket boxes using a utility saw.

Fixing

Fix the board with the decorative side facing outwards to receive finishes. Install fixings at least 13mm from cut edges and 10mm from bound edges. Position cut edges at internal angles wherever possible. Stagger horizontal and vertical joints between layers by at least 600mm.

Jointing

After fixing the board, start finishing it as soon as you can to limit the risk of damage or UV degradation to the paper liner. You can finish the board using jointing systems that comply with EN13963, including the Gyproc range.

Full-surface finishing

You should normally avoid applying skim plaster to moisture resistant boards.

Where moisture resistant boards are used in shell and core construction to provide temporary moisture resistance, it's best to skim them after the building envelope has been made weather tight. Only apply plaster to the face of moisture resistant boards, and pre-treat them with Thistle Bond-it.

Painting

Decoration should start as soon as practicable after the finishing system is dry. Jointing systems should be finished with Gyproc Drywall Primer before painting.

Wallpapering

Decoration should start as soon as practicable after the finishing system is dry. Jointing systems should be finished with Gyproc Drywall Sealer before application of wallcoverings.

Snagging and minor repairs

For minor damage and dents, check that the board core isn't shattered. If it's intact, fill the damaged area with Gyproc EasiFill 60, allow it to set, then apply a second coat if you need to. When it's dry, sand it to a finish before redecorating the area.

For a damaged core, broken edges or extensive damage, repair and replacement procedures differ depending on the number of board layers and fire resistance of the system; please contact our Technical Support Team for specific advice.

Product Data Sheet

Gyproc® FireLine MR 12.5mm

Sitework

Storage
Keep boards dry, and make sure floor or ground surfaces are flat and strong enough to support them.

Handling
Please refer to the HSE Manual Handling Operations Regulation for best practice guidance when handling or installing this product.

Safety Data Sheet
Safety Data Sheet (SDS) available. Click here.

Packaging overview
Supplied on a reusable wooden pallet.

Environmental

Recyclability
You can recycle this product as long as it has minimal contamination from non-gypsum materials.

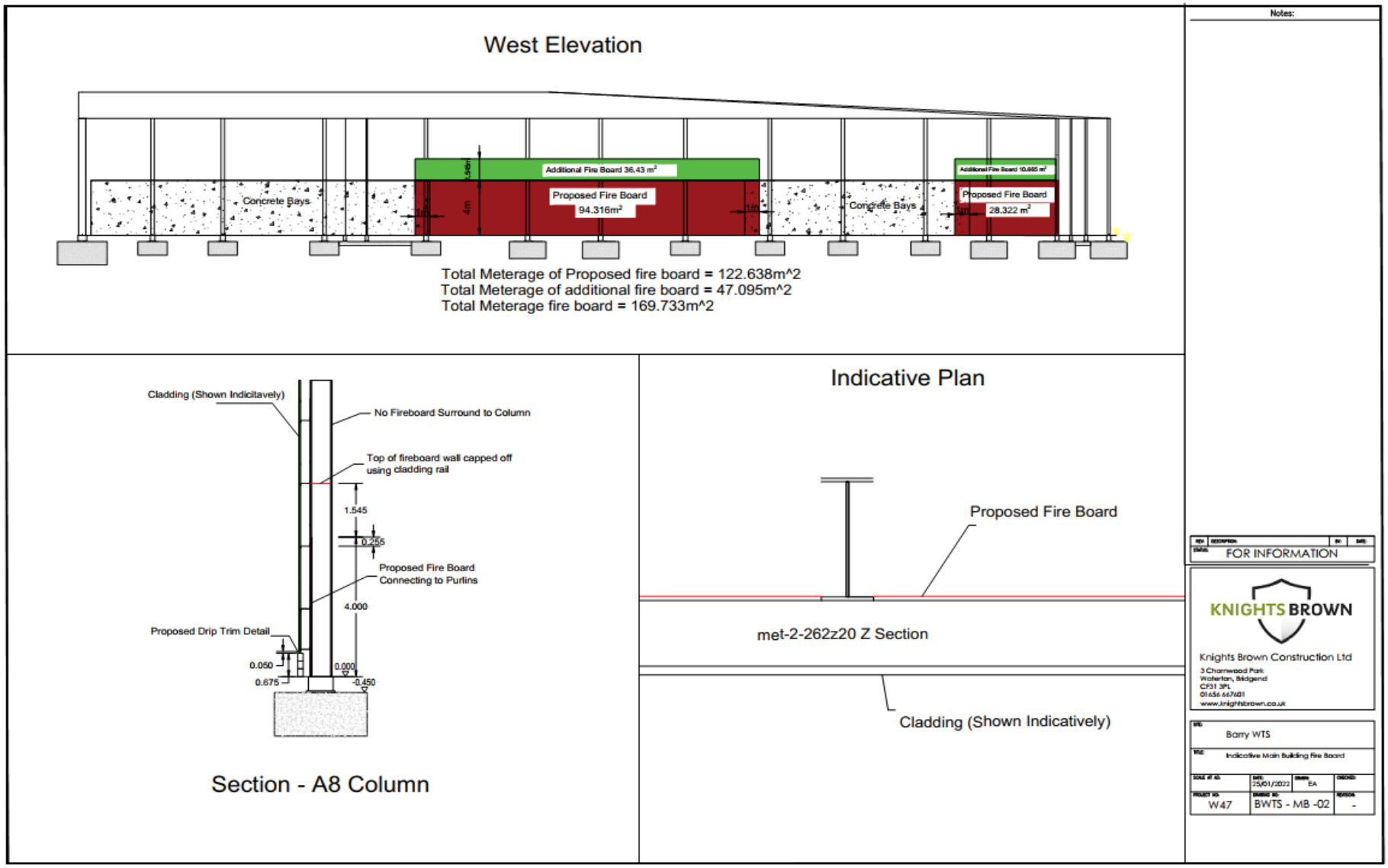
Disposal
Segregate boards from non-gypsum waste for recycling where possible. Dispose of them according to local authority requirements.

BES 6001 classification
Excellent.

SAINT-GOBAIN

British Gypsum
Head Office, East Leake,
Loughborough,
Leicestershire, LE12 6HX
T: 0115 945 1000

Figure 12-1: Indication of how board will be fitted to fire walls



13.0 Appendix 8 – Fire Beam Certification

LPCB®

www.redbooklive.com

Certificate of Management System Registration

Certificate Number: 164 QMS Issue: 15

Hochiki Europe (UK) Limited

having complied with the requirements of:

ISO 9001:2015
Quality Management Systems - Requirements

are certified by BRE Global Ltd. and are authorised to use the LPCB Certification Mark on stationery and publications related to the products and/or services listed in the attached Appendix:

Hochiki Europe (UK) Limited

Grosvenor Road,
Gillingham Business Park,
Gillingham, Kent, ME8 0SA.
UK

Bridgewood House,
8 Laker Road,
Rochester Airport Estate,
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UK.

Scope:

Design, manufacture, service and maintenance of fire detection and alarm and emergency lighting equipment

This certificate and appendix is maintained and held in force through regular surveillance activities.

Signed for BRE Global Ltd.	Phil Clare BGM Assessment Services	11 September 2018 Date of this issue	10 September 2021 Expiry Date	17 January 1993 Date of First Issue

UKAS MANAGEMENT SYSTEMS 0007

To check the validity of this certificate and appendix please visit www.redbooklive.com/check, scan the QR tag or contact us.

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