Fire Prevention & Mitigation Plan - Veolia UK Treforest Transfer Station

Veolia UK Limited
Treforest Transfer Station
Unit G1
Main Avenue
Treforest Industrial Estate
Nr. Pontypridd
CF37 5YL
(01443) 849 460

Licence: **HP3795FS**

1. Waste Storage Details

a) Amounts & types of waste received daily

Waste	Daily Average Received	Management
Cardboard (loose/baled)	7.50 tonnes	Broken up on site and Baled for shipment abroad
Glass (loose)	0.25 tonnes	Stored and sent to recycling plant
General Waste (loose)	100.40 tonnes	Sent for treatment at EfW plant
Paper (loose/baled)	7.50 tonnes	Broken up on site and Baled for shipment abroad
Plastic (pre-baled)	0.67 tonnes	Stored and sent to recycling plant
Council Recyclate (loose)	84.00 tonnes	Stored and sent to recycling plant
Commercial Recyclate (loose)	23.45 tonnes	Processed over picking line
Food waste	5 tonnes	Sent to IVC or EfW plant
WEEE wastes	5 tonnes	Stored and sent to recycling plant
Wood	2 tonnes	Stored and sent to recycling plant
Hardcore	10 tonnes	Stored and sent to recycling plant

b) Maximum Total Amount of waste stored on site at any one time
(All materials unprocessed unless baled)

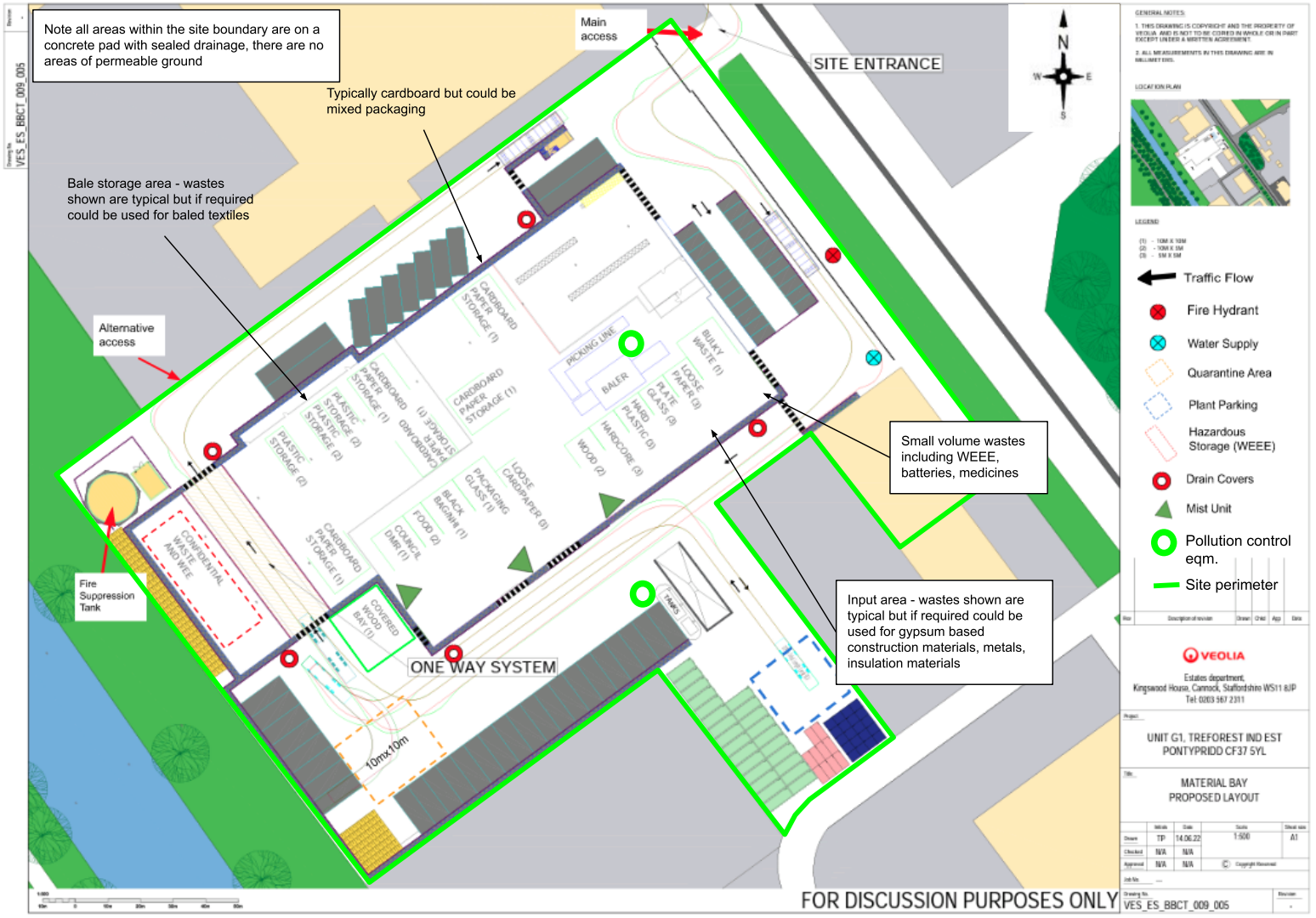
Cardboard (loose)	20 tonnes
Cardboard (baled)	173 tonnes (~288 bales)
Glass (loose)	85 tonnes
General Waste (loose)	240 tonnes
Paper (loose)	20 tonnes
Paper (baled)	173 tonnes (~288 bales)
Plastic (pre-baled)	25 tonnes
Council recyclate (loose)	240 tonnes
Commercial Recyclate (loose)	125 tonnes
WEEE	20 tonnes

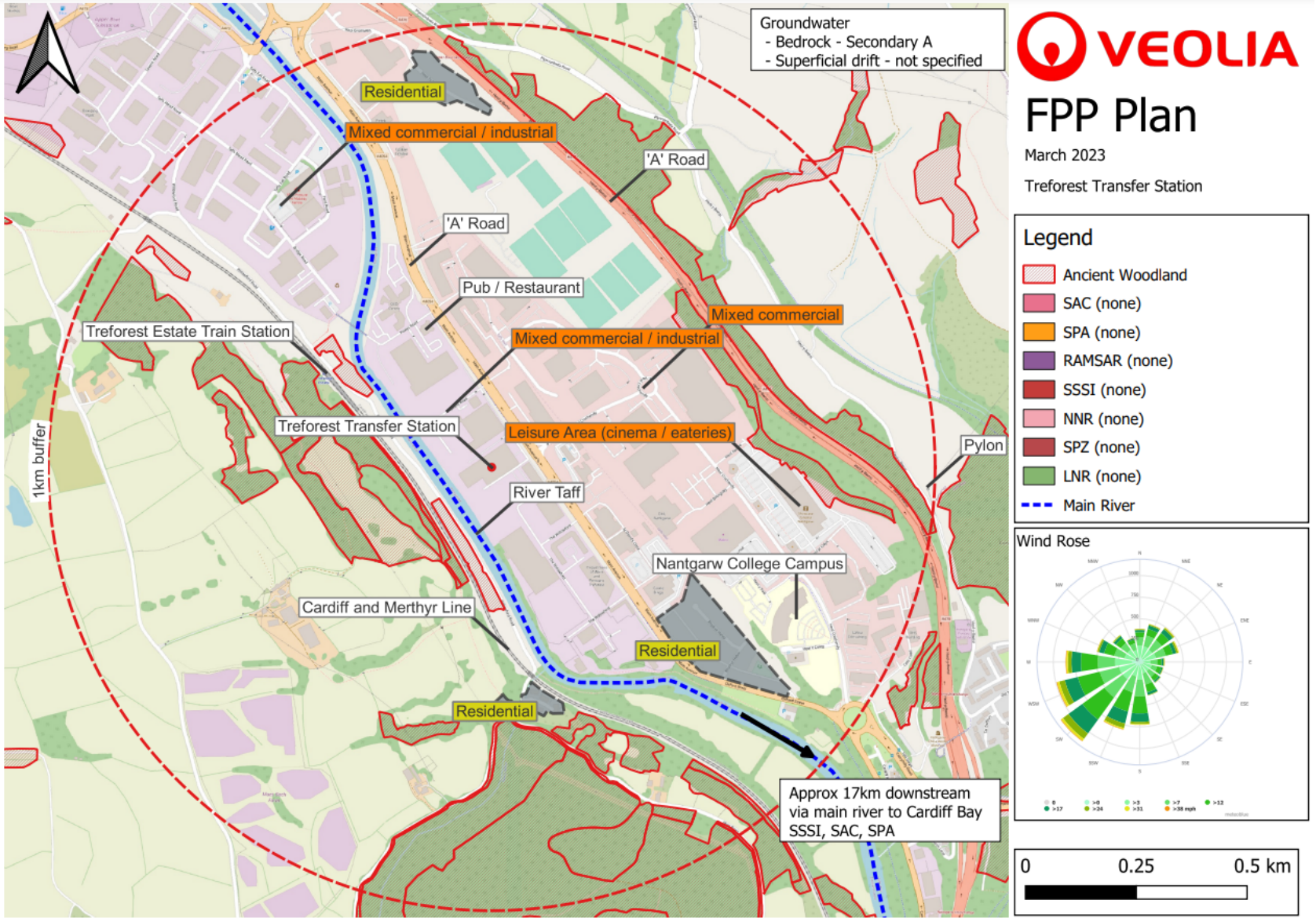
c) Maximum time any material is stored on site & management

Waste	Retention time	Management
Cardboard	Max: 3 months Average: 7 days	Sent abroad for recycling

Glass	Max: 3 months Average: 21 days	Processed locally for recycling
General Waste	Max: 1 months Average: 3 days	Processed locally for EfW
Food waste	Max: 24 hours Average: same day	Sent to IVC or EfW
Paper	Max: 3 months Average: 7 days	Sent abroad for recycling
Plastic	Max: 3 months Average: 45 days	Processed locally for recycling
Recyclate - Council origin	Max: 3 months Average: 3 days	Processed locally for recycling
Recyclate - commercial	Max: 3 months Average: 14 days	Processed at site for creation of paper & cardboard bales, remaining sent locally for EfW
WEEE	Max: 3 months Average: 1 month	Stored and sent for recycling

d) Waste Storage (layout plan) and receptor location plan




Groundwater
- Bedrock - Secondary A
- Superficial drift - not specified
Residential
Mixed commercial / industrial
'A' Road
'A' Road
Pub / Restaurant
Mixed commercial
Mixed commercial / industrial
Treforest Estate Train Station
Treforest Transfer Station
Leisure Area (cinema / eateries)
Pylon
1km buffer
River Taff
Nantgarw College Campus
Cardiff and Merthyr Line
Residential
Residential
Approx 17km downstream
via main river to Cardiff Bay
SSSI, SAC, SPA
VEOLIA
FPP Plan
March 2023
Treforest Transfer Station
Legend
Ancient Woodland
SAC (none)
SPA (none)
RAMSAR (none)
SSSI (none)
NNR (none)
SPZ (none)
LNR (none)
Main River
Wind Rose
0
0.25
0.5 km

e) Maximum volume of each waste pile

Cardboard (loose)	50m^3
Cardboard (baled)	200m^3
Glass (loose)	265m^3
General Waste (loose)	390m^3
Paper (loose)	50m^3
Paper (baled)	200m^3
Plastic (pre-baled)	400m^3
Council recyclate (loose)	590m^3
Commercial recyclate (loose)	336m^3

f) Maximum size of any waste pile, by length, width and depth

Cardboard (loose)	5m x 5m x 2m
Cardboard (baled)	10m x 5m x 4m
Glass (loose)	9.2m x 7.2m x 4m
General Waste (loose)	16m x 6.1m x 4m
Paper (loose)	5m x 5m x 2m
Paper (baled)	5m x 10m x 4m
Plastic (pre-baled)	10m x 10m x 4m
Council recyclate (loose)	15.3m x 9.6m x 4m
Commercial recyclate (loose)	20m x 4.2m x 4m

2. Fire Prevention and Response Measures

a) The minimum separation (fire break) distance between piles or storage areas

<u>Baled materials</u>	
Cardboard	7.2m from equipment, 9m from other stock
Paper	7.2m from equipment, 5m from other stock
Plastic	7.2m from equipment, 5m from other stock
<u>Loose materials</u>	
Cardboard	Stored within bay separated by fire walls
Glass	Stored within bay separated by fire walls
Paper	Stored within bay separated by fire walls
Council recyclate	Stored within bay separated by fire walls
Commercial recyclate	Stored within bay separated by fire walls
Food waste	Stored within bay separated by fire walls
General waste	Stored within bay separated by fire walls
Bulky wood	10m from other wastes (outside of building)

b) Fire prevention techniques

Hot-spot management	Waste piles are checked throughout the working day with a handheld IR sensor for hotspots within the waste;
Waste throughput	Material on site is stored for short retention periods, due to size of site, but also to reduce the likeliness of materials self-combusting
Material rotation	The site operates on a first in first out 'FIFO' basis so no new waste is processed before older material
Stack monitoring	All stack temperatures will be monitored throughout the day using handheld IR sensors. The stacks will be monitored a minimum of 3 times during the operational day. The only waste stored in bale form is sorted dry recyclates that are baled and unwrapped therefore the moisture content of this material is not monitored. The stacks are stored no higher than 4m and removed from site at regular intervals as indicated in the table above.
Contracts management	Veolia is an international resource management company with a dedicated material sales team. Waste will not be accepted to site without guaranteed supply chain and end user outlets. The facility operates with a Business Continuity Plan 'BCP' that provides alternative outlets for waste if needed. Veolia BCP's are certified to ISO 22301.
Seasonality	Minor variability in seasonal demand is not expected to impact waste storage capacity or supply chain / user outlet availability.

c) Techniques for minimising spread

<u>Fire walls and Bays</u>

The site has materials stored in dedicated areas or bays that are designed to minimise the spreading of fire to other waste piles, to machinery and/or to adjacent units. The bays are constructed from interlacing 'Legio' blocks that have a fire resistance rating of over 120 minutes. The building walls are constructed from fire resistant concrete which again has a fire resistance of over 120 minutes. A report detailing the fire resistance of the materials is included in the Appendices.

<u>Fire Detection</u>

The transfer station building will be fitted with an addressable heat tape fire detection system which will be fitted with a 'Redcare' type system connected to an externally monitored control system operated 24/7/365. The detection system will be designed, installed and maintained in accordance with a UKAS accredited scheme, details of the accreditation will be available on site and on request following completion of construction. The maintenance of the system will be covered by a maintenance contract covering maintenance as per manufacturer's recommendations and a UKAS accredited scheme.

In the event of a fire being detected, site management would be contacted and would attend site. A rota system will be in place ensuring that the out of hours monitoring service will always have a minimum of two contacts available on a 24/7 basis 365 days a year. Operatives would also be available out of hours in the event of the need for plant and machinery to be used to assist the Fire Service.

The exterior of the building has CCTV coverage with 24/7 out of hours monitoring.

Fire Suppression

The site is fitted with a full fire suppression system covering all waste storage areas. The fire suppression system will be a dry pipe system in accordance with NFPA 13. A pumped hydrant c/w pressure reducing valve will be provided in the pumphouse which is capable of delivering a minimum of 950 l/min, in addition to the main sprinkler demand. Upon opening the hydrant, the pressure drop will actuate the pumps, allowing water to be fed from the fire tank.

The suppression system is designed around 5 separate activation areas. In the event of a fire the fire detection system will set off the sprinklers in the relevant activation area fed directly from the fixed 770m^3 fire tank. The tank and capacity is designed based on the largest stockpile on the site (590m^3) and using the FPMP guidance on available water calculation (which equates to 708m^3) to ensure there is more than enough water held on site for emergency response.

The fire suppression system is fully automatic, and the installation and maintenance is covered by UKAS accreditation, details will be available on site and on request following completion of construction.

Fire extinguishers will also be located in various locations within the MRF building and around the site to manage small fires that may arise as a result of the operation; in the case of a large fire the evacuation plan will be put in place to exit the site and allow the fire services to intervene. As a minimum fire extinguishers will be located at the site entrance / exits.

Other Water Sources

In addition to the sprinkler system there are fire hoses and fire extinguishers within the warehouse. A minimum of 40% of the facility staff are trained as Fire Marshalls for the handling of situations involving fire. There is also a fire hydrant located within the which will allow connection by fire service appliances, this is fed by the fire water tank. Depending on the length of time the fire is burning should additional water be required the River Taff runs directly adjacent to the site and could be used as a water source.

Use of Plant

Heavy plant is available in the form of a 22-tonne 360° and a large shovel loader should it be needed. These are suitable for use in moving either unburned material from the vicinity of the fire or remove burning material from the area to the safe quarantine area on site (detailed on the site plan) for control by the Fire and Rescue Service (FRS), whichever is

safer and less likely to cause spread of the fire, under guidance from the FRS. Any use of the plant to move material from the building will be carried out under control and direction of the FRS. All plant operators are trained appropriately and this forms part of the Veolia Minimum Requirements (VMR). The plant available have enclosed cabs with air filters.

Bale Control

All baled material is stored within bays that are made with fire resistant walls and in a “castle format” which minimises the airflow between the stacks and chance of “chimney effect” coming into force. Bales are stored away from any potential reaction with other wastes and removed from site on a regular basis for onward recovery.

Quarantine Area

A quarantine area outside of the main building is available for the FRS to use for moving unburnt or burning material to aid in the fighting of any fire. The area measures 10m x 10m and is 6m away from the site boundary, the building and any other waste piles. The quarantine area is capable of holding 400m^3 of waste which is over 50% of the largest waste pile on site (590m^3) as dictated by the FPMP guidance. The whole site is surfaced with concrete and all drainage can be blocked to prevent fire water escape.

d) Steps and Procedures for if a fire occurs

- Raise alarm via radios and/or manual alarm buttons, if alarm is not automatically triggered;
- Site evacuation while FRS are called from the office (as this is separate from the warehouse);
- Once all staff are accounted for an action centre is set up within the main office;
- If fire can be safely attended to by site trained staff this will occur; if not, staff will wait for the arrival of FRS;
- With FRS on site, situation will be discussed and plan for dealing with the fire will be set out;
- All drains and egress points for water from warehouse will be protected to minimise the release of water to the local systems;
- If materials need to be moved then this can be actioned to facilitate minimisation of fire spread;
- Once fire is under control, fire water collection will be monitored until fire is dealt with.

e) Minimisation of impact on local community

If possible, all exits to the building, except those needed by the fire service, will be closed. This will minimise the escape of smoke and ash from the building. All fire water will be collected within the building and within the site curtilage, retaining bund walls, and 100mm kerbs are in place which combined with drain covers to prevent release from the site can hold a maximum of 773m^3 of fire water (the full contents of the suppression tank (750m^3) plus extra. The volume of water required is calculated using the The FPMP guidance)

When safe to do so, closest receptors will be contacted as to the nature of the fire and likely duration until extinguished

f) Contact list of sensitive receptors within vicinity of the site

Human Receptors

Receptor	Address	Contact details
Allied Aerosystems	Main Avenue, Treforest Industrial Estate	(01443) 849970
Days rental	Main Avenue, Treforest Industrial Estate	(01443) 711244
ECL (Environmental Compliance Limited (Wales))	Main Avenue, Treforest Industrial Estate	(01443) 841760
Bolloré Logistics	Main Avenue, Treforest Industrial Estate	(01443) 848400
NHS - Welsh Health Specialised Service Committee	Main Avenue, Treforest Industrial Estate	(01443) 443443
Royal Mail, Treforest Industrial Estate Post Office	Main Avenue, Treforest Industrial Estate	(01443) 842248
Flocon Valves & Fittings	Main Avenue, Treforest Industrial Estate	(01433) 841666
Dectek Ltd	Main Avenue, Treforest Industrial Estate	(01433) 841840
RS Components	Main Avenue, Treforest Industrial Estate	(01433) 841572
Hazelwood Carpentry	Main Avenue, Treforest Industrial Estate	(01433) 841717
Archaeology Wales Ltd	Treforest Industrial Estate	02920020136
Wales & West Utilities	Heol Y Gamlas`	(01433) 823021
The Pottery	Main Avenue, Treforest Industrial Estate	(01433) 843563
Protech Engineering	Main Avenue, Treforest Industrial Estate	08708031435
Castle Bingo	Main Avenue, Treforest Industrial Estate	(01433) 843000
O'Brien & Partners	Main Avenue, Treforest Industrial Estate	(01433) 841184
ARC Plant & Civils training	Main Avenue, Treforest Industrial Estate	(01433) 303006
Gap Personnel	Main Avenue, Treforest Industrial Estate	(01433) 843499
Facet Industrial	Main Avenue, Treforest Industrial Estate	(01433) 844141
Capita Symonds	The Willowford, Treforest Industrial Estate	(01433) 823200
Peacocks Distribution Centre	Cefn Coed Parc, Nantgarw	(01433) 823500
Coleg Y Cymoedd	Heol Y Coleg	(01433) 662800

The residents of Oxford Street, Rhyd-Yr-Helyg	Off of Main Avenue, Treforest Industrial Estate	Physical visit by staff member
Shops, Restaurants and Leisure businesses of the Nantgarw Business Park	Heol Y Odyn	Physical visit by staff member

Environmental Receptors

Receptor	**Description / comments**
River Taff	Located to the Western Edge of the site, there is a bund between the river and the site surface
Ancient Woodland (SINC)	Located to the South west of the site and to the North of the site

g) Safe Access for FRS and other emergency responders

Access to the site is via the main entrance doors and weighbridge

Depending on the location of the fire, these access points can be used by the FRS to gain access to the area that needs their attention.

The site is located off of a dual carriageway main road, with a wide, flat concrete area of the Eastern (or front) area of the site. This is supplemented by the access roads along the Southern edge of the building, that is the normal access road for the vehicles that access the site. At the Western (or rear) end of the site, there is a flat, concrete area that would be suitable for vehicles to park or gain access to the rear of the building if needed.

3. Actions for if fire should occur

Availability of Water

The site benefits from a full fire suppression system which will be automatically triggered in the event of a fire. The system is fed by a dedicated fixed fire tank that holds 770m^3 of water. The volume of water required to fight a fire at the site has been based on the largest stockpile calculation detailed in the FPMP guidance. In this instance the largest pile is 590m^3 requiring 708,000lt of water (2000 / 300= 6.66 x590 x60 x3).

The site has a standard mains water connection with a flow rate of 2 l/s along with fire hoses and extinguishers located in the transfer building.

In addition to the suppression system there is a public fire hydrant connection point for the FRS located at the main entrance of the site.

Use of Fire Water

The Automated sprinkler system will activate following fire detection and douse fire from on site water tank.

With advice of the FRS the right fire fighting water projectile will be used, but where possible the use of sprays or fogs will be undertaken to to reduce the amount of fire water generated, and as such reduce the run-off of water.

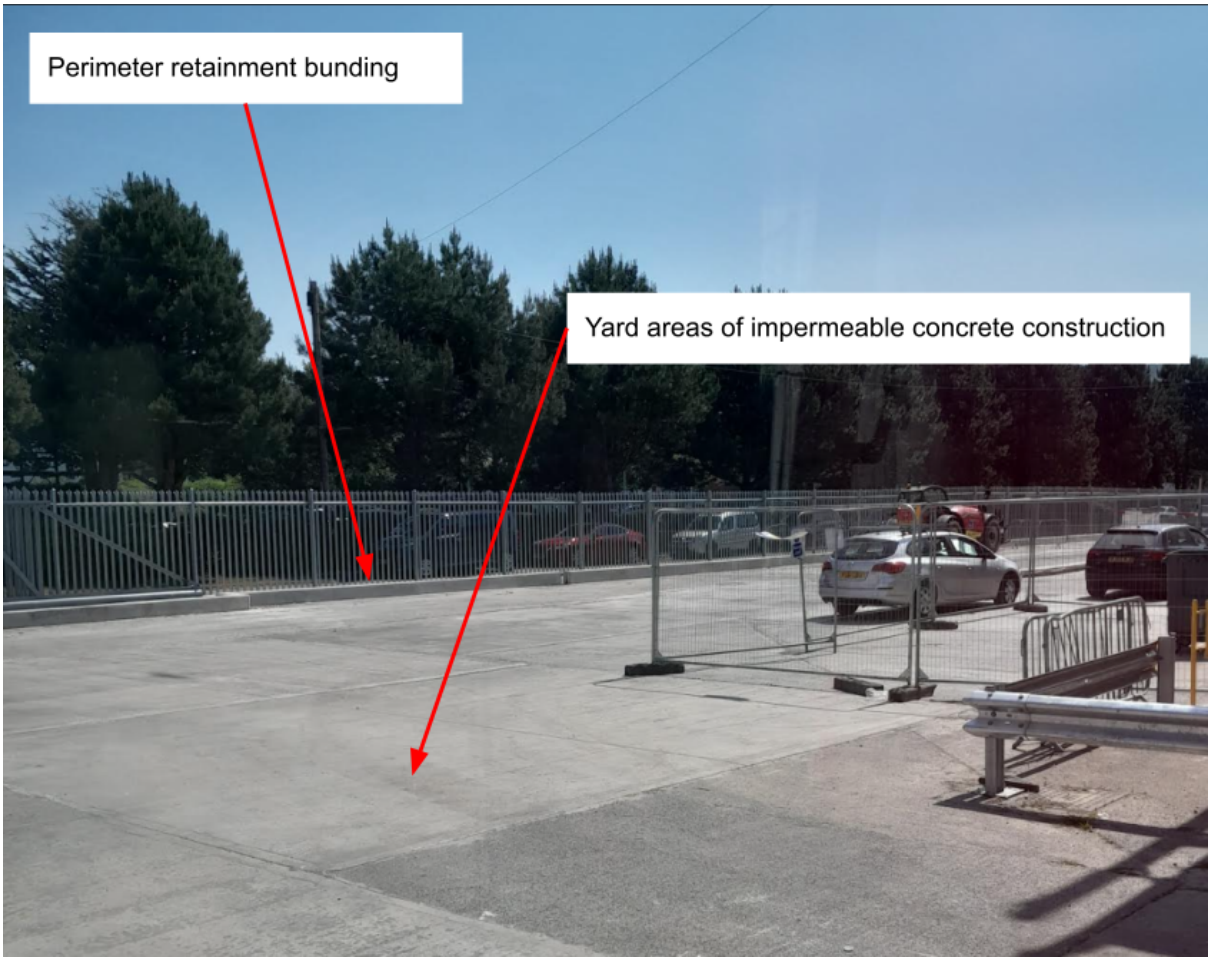
Control of Fire Water

The site building and surrounding surfacing have been constructed of impermeable concrete. The site benefits from a newly installed raised kerb and bunding (see picture below). To the West of the site where the boundary meets the River Taff is a retaining bund. As part of the redevelopment of the site (2023) a series of penstock valves are planned to be installed which can be closed to retain fire water on site. The currently proposed location of these valves is described in the drainage drawing below 'Pollution control valve locations'.

The combined capacity of the transfer building and surface area of the site can contain 773m^3 of water without release to the environment, as indicated in the fire water containment drawing included in the appendices.

The site can also utilise a tanker fleet as part of the wider Veolia business that will be arranged to remove the stored water for suitable disposal at an approved facility off site.

Yard and perimeter bund construction



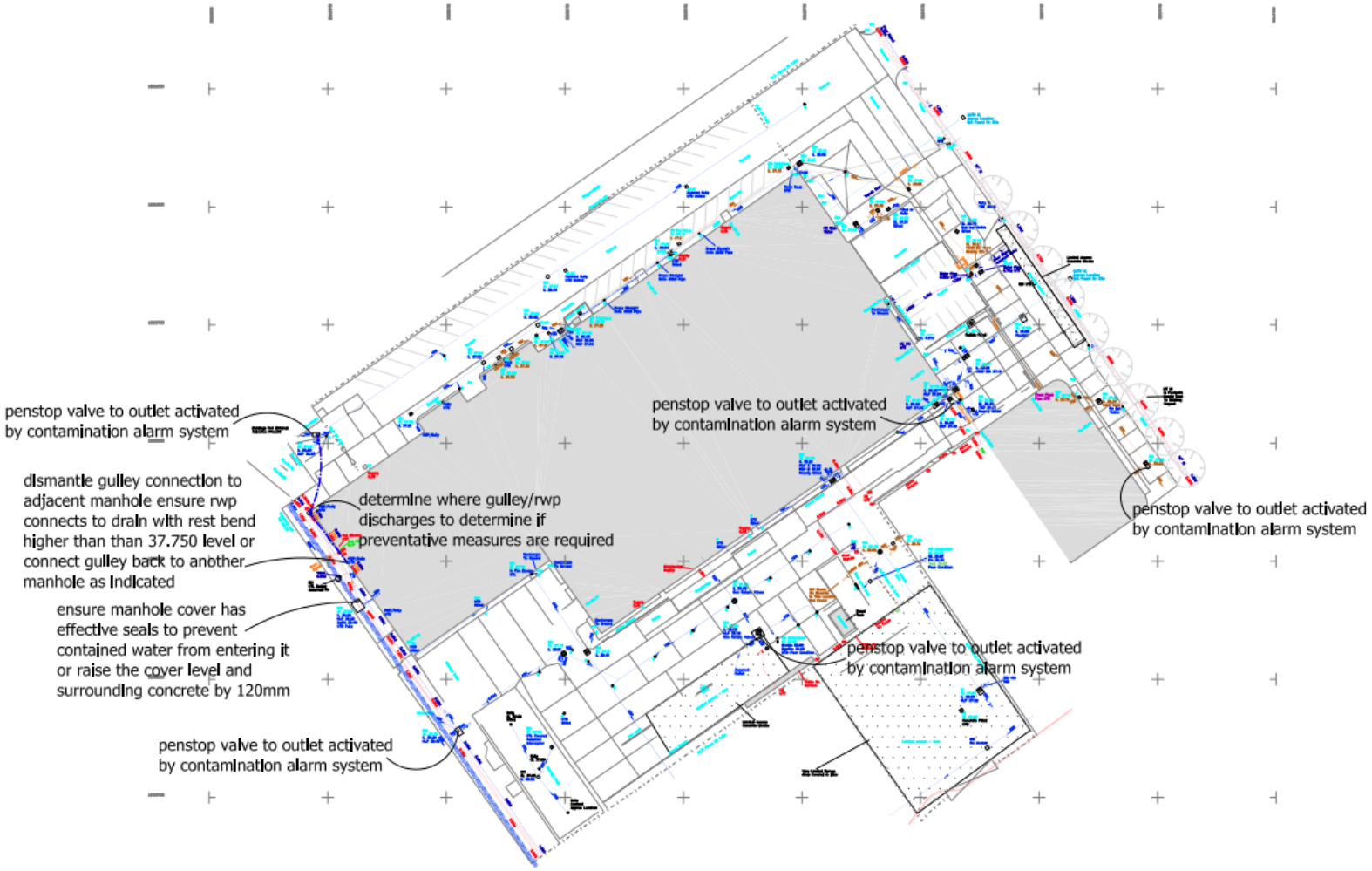
Control of material involved in fire

Any material that is burnt, once extinguished, will be sent for disposal when safe to do so. Also, any material that has become contaminated by water or other fire suppressing mediums, will also be disposed of safely and legally, as soon as it is feasible to do so.

Contingency Planning

During an incident all incoming wastes will be diverted to other suitable waste facilities within the wider Veolia network or to 3rd party facilities. The site will remain closed until safe to reopen as agreed with the FRS and NRW. All burnt and water damaged material will be removed from site to a suitably permitted facility, all fire water removed by tanker and the drains and surfaces cleaned and inspected before the site is able to reopen. Further detail is provided in section 5.

Pollution control valve locations



4. Common Causes of fire and preventative measures

Possible cause	Control measures
Arson or vandalism; measures in place to control arson and vandalism	Site perimeter enclosed with security fencing and locked gates out of hours. CCTV surveillance and call out outside of operation hours.
Visitors & Contractors	All site visitors and contractors are inducted at site, with emergency meeting point, smoking area and control of heat sources (hot works) discussed prior to gaining access to site. Procedure explained for what to do if a fire is discovered and procedures in place with Permit to Work for control and prevention of fire.
Self-Combustion and hot loads; procedures for managing wastes received into site to ensure fire risk is minimised	Inspection of incoming loads for any signs of smoke. Rapid turnaround / low residence time of waste on site. All loose waste removed from site within 72 hours. Baled materials removed within 7 days. Any hot loads entering the site will be immediately deposited in the quarantine area for cooling / extinguishing.
Plant / equipment failure; measures in place to reduce the likelihood of plant and equipment failure and mitigation if this does occur	All Mobile and Fixed Plant is maintained in line with manufacturer recommendations and regular service intervals carried out. This includes the servicing and replacement of all dust filters when needed. All Mobile and Fixed Plant are inspected on a daily basis in line with management procedures including checks and defect reporting. Alternative Mobile Plant will be hired at short notice should it be required. All Large Mobile Plant will be fitted with fire extinguishers. All mobile plant have enclosed cabs with air filters. At the end of the working days all vehicles are parked for 15 minutes prior to the site being vacated to allow them to cool down and their parking areas are away from combustible materials.

Leaks and Spillages of oils and fuels; measures describing how the site deals with any spills of oils, fuels from vehicles. e.g. use and training of spill kits and their locations	Dedicated bunded fueling area for red diesel away from combustible waste. Fuel tank is double skinned and capable of holding 110% of its contents. All vehicles have regular maintenance and are serviced in line manufacturer recommendations in order to prevent leaking of fuel/oils. Any vehicle found to be leaking fuel/oils will be isolated away from waste piles and appropriate repairs carried out. Daily plant checks ensure any leaks are identified and rectified as soon as possible. Any spillages will be contained with absorbent material / spill kits and cleaned up immediately.
Electrical faults; measures in place to prevent electrical faults	All electrics fitted and certified by a qualified electrician and maintained in line with manufacturers recommendations. All electrical systems maintained in accordance with a written procedure.
Naked lights / discarded smoking material; control of naked flames or heat sources	No fires are permitted on site. Smoking is only permitted in a dedicated smoking area as indicated on accompanying plans.
Hot works; control the risks of hot works	A permit to work and hot work permit system in place as part of Veolia Management System.
Use of industrial heaters on site	There is a written procedure in place for the use of industrial heaters including a regular maintenance schedule. No industrial heaters used on site.
Spark detection systems	All Heavy Mobile Plant fitted with fire extinguishers.
Hot Exhausts; control the risk of fire due to hot exhausts from plant and equipment	Mobile plant not parked near waste and maintained in line with manufacturer's warranty. Veolia Fleet replacement policy. Clean down of Mobile Plant and fire watch throughout the day. All Large Mobile Plant will be fitted with fire extinguishers.

Incompatible wastes; ensure wastes do not present a fire hazard	All waste streams have a dedicated bay separated by fire walls. No wastes other than those listed will be accepted on to site. The waste acceptance procedure ensures no incompatible or unstable wastes are brought on to the site. The pre-acceptance procedures ensure all waste types incoming are categorised. Any wastes found not to be within the list of permitted inputs will not be accepted at site and removed from site.
Waste combustible liquids, aerosols, gas cylinders; control the risks from pressurised gasses	Maintenance materials (oils and greases) are stored away from waste piles in dedicated areas at site on bunded storage pallets capable of storing 110% of the largest container's volume. Site stores gas canisters that have come in from RCVs in a dedicated sealed cage that is away from stored wastes and made of a fire resistant material.
Measures in place to control the fire hazard due to depositing of batteries within waste	Any damaged batteries are isolated from other batteries. Damaged lithium and Li-ion batteries are stored in an inert waterproof container filled with sand or a similar inert material.
Build up of loose combustible wastes, dust and fluff; control of loose material build up so it does not create a fire hazard e.g. housekeeping, litter picking frequency, cleaning frequency	Litter picking is carried out every work day, if not more often. A deep clean of all Mobile Plant and Fixed Equipment is carried out every week. Regular internal walkovers are conducted and any areas requiring additional housekeeping are identified and scheduled for cleaning. Fire watch of plant and machinery at regular intervals during the day and at the end of work day.
Actions to be taken to control risk of fire due to hot weather and heating from sunlight (if applicable) If hot weather could increase the risk of a fire the control measures in place	All internally stored wastes are shaded from direct sunlight. Any materials stored outside are temperature checked and monitored for heat retention. Heat to be released from the waste during hot weather. Waste piles are subject to additional rotation by being dragged out and reassembled if evidence of heating is observed. During periods of hot weather temperature monitoring may be increased as appropriate. Where risk is increased due to hot weather, waste storage times are reduced as much as practicable.

“Tramp” Metal - Prevent Metal getting in to moving machinery by pre-sorting/extraction	Metal is not exclusively accepted at site, but any metal that is at site is passed over the site picking line, which has guards in place to prevent material getting into the workings. There is a maintenance and cleaning schedule for the picking line at site and all mobile & fixed plant at site.
Batteries in ELVs - Safe Handling of batteries used in ELVs at site	Site does not use any ELVs for waste processing. Third parties using ELVs would not charge vehicles at site, but if there was a fire involving an ELV the FRS would be informed of the nature of the vehicle to assist in the extinguishing of the fire.

5. During and After Incident

During and after the incident involving the fire at site has been passed to the FRS and they are extinguishing the fire contact will be made with all customers that come to the Treforest site so that they are able to take their materials to an alternative outlet.

A list of customers that use this site can be found in the site Business Continuity Plan, which is reviewed and updated annually.

After this has been completed, anyone in the local area that might be affected by the fire will be informed using the numbers above. But, along with these the following will be contacted with the reason outlined below;

- Dŵr Cymru/Welsh Water - Local Water Supplier (0800 052 0130)
- EDF Energy - Electricity Supplier (0208 186 3642)
- Traffic Wales - Controller of A470 [Major Road] (0300 123 1213)
- Transport for Wales - Controller of local Railway (0333 321 1202)
- Cyfoeth Naturiol Cymru - Permitting Agency (0300 065 3000)

There is another Veolia depot near by to this site (1, Heol Crochendy, CF15 7QT), who would assist in supply of lorries for the removal of any waste materials that are safe to leave site to help the site during and after the incident.

Site would be cleared by means of waste removal of all extinguished waste. We have an option of using a system of sites that Treforest Transfer Station has accounts with and are able to accept the waste once it has been safely extinguished and made safe for transport.

Once all the waste has been removed, water removed and any remedial works have been carried out to make the site safe and suitable for accepting of waste again, the site will reopen.

6. Continuous Improvement

<u>Review/Testing of FPMP</u>
The FPMP will be reviewed annually at a minimum. But, it will also be reviewed if the site should have a fire, any differing or more combustible waste streams are to be accepted to site, if there is a significant increase in waste to be accepted at site, if there is any new infrastructure developed at site or any new Fixed or Heavy Plant is installed at the site.

<u>Staff Training on FPMP</u>
All site staff will have a Tool Box Talk (TBT) on the site FPMP. The document will be available for anyone wishing to see it within the allocated folder at site.

Staff training will be reviewed within the review of the FPMP to make sure that any changes that have occurred can be safely implemented by the staff on site.

All new starters will be inducted at site and will have the full Transfer Station/MRF induction as well as the TBT on the site FPMP.

Through live exercises involving the Emergency Plan and the FPMP staff competency in relation to fire can be assessed and any further training can be arranged for where gaps are discovered.