Fire Prevention & Mitigation Plan - Veolia UK Treforest Transfer Station

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Treforest Transfer Station
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Licence: **HP3795FS**

Document control

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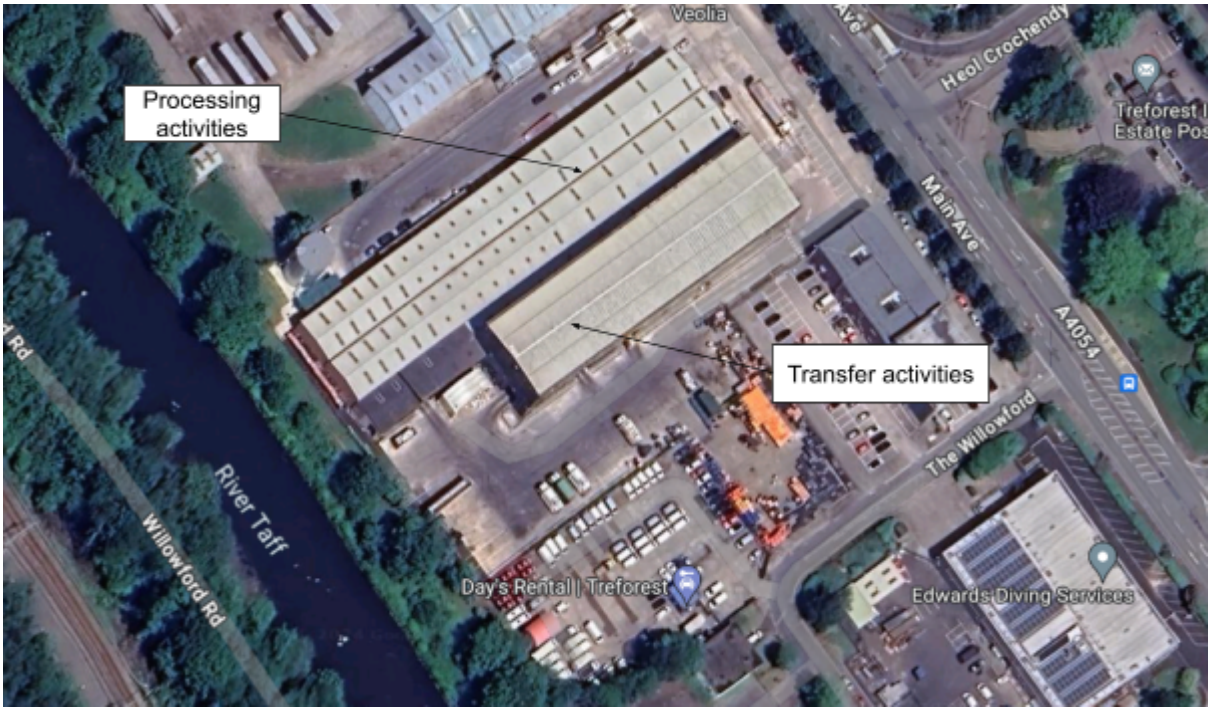
Contents

Introduction and site overview

Treforest Transfer Station accepts wastes from both commercial and municipal sources either for bulking, sorting, and transfer, or for processing via a picking / baling line to produce segregated plastic or paper and card stock which is sent to reprocessing facilities. The site footprint is formed by combining two formerly separate building and yard areas. Internally there remains a dividing wall through the building which is opened around the location of a shredder and baler to allow movement of waste through both spaces where required. The operation is effectively split into two halves, the southern taller building is a waste transfer station with activities comprising bulking and limited treatment, and the northern building which is a processing facility for segregating mixed recyclable inputs via a picking and baling operation to produce plastic card and metal in a format to meet quality and purity requirements to be reprocessed into new products returning the material to the circular economy.

The site is situated in a predominantly mixed commercial / industrial setting at the southwestern edge of the Treforest Industrial Estate approximately 20m from the River Taff and adjacent to a designated Ancient Woodland. Main Avenue (A4054) is the main access route into the site connecting the site to the wider road network including the A470. Approximately 80m to the south west beyond the Taff the Merthyr Line runs north east to south west. The closest residential properties to the site are 410m to the south on Crib y Lan and 450m south west on Oxford Street.



Transfer station: The transfer station receives both commercial waste from collections in the Bristol and Cardiff area and municipal waste streams from Rhondda Cynon Taf County Borough Council. Commercial waste streams include bulky waste which is offloaded into legato block bulky bay (bay 2). Waste tipped into this bay undergoes some limited sorting

with segregation of materials into RORO containers (bay 1 a-d and 4 a-c and 8) comprising plastic, glass, hardcore, metal and wood. Separation also includes removal of Waste Upholstered Domestic Seating 'WUDS' (contamination) into a designated RORO (1c). WUDS waste is segregated as it may contain Persistent Organic Pollutant 'POPs' which are subject to the POPs regulations 2019 – UK SI.2019 No.1099, implementing Regulation (EU) 2019/1021. These regulations specify the appropriate treatment for the recovery and disposal of POPs. It is good practice to identify POPs containing wastes within a fire management plan so the potential for contamination can be considered following an incident. There is another designated RORO (bay 8) for non recyclables which are deemed likely to cause logistical problems during off site reprocessing such as large items or metal cables which may foul off site third party shredding equipment. The transfer station also accepts commercial residual 'black bag' waste and glass (bay 7 and 8) for bulking and transfer only. Municipal waste streams include food and domestic dry mixed recyclate 'DMR' (bay 9 and 10) for bulking and transfer only.

Several waste types may only be taken in smaller quantities or on an ad hoc basis including non hazardous insulation materials, WEEE, batteries and textiles. These are allocated to two storage areas (bay 11 and 17) the latter of which is a RORO. Bay 11 is principally for plastics and small amounts of metals but is designated as multi-use. While RORO storage is principally for processed outputs there is no restriction on these being also used for waste inputs of the same or similar type if required by the business.

Processing facility: The processing facility accepts commercial dry mixed recyclate 'DMR' streams which is material consisting principally of plastic, card and paper but including metal cans (bay 15). These mixed streams are processed manually via a picking line to produce single stream plastics (food grade e.g. milk bottles, clear drinks bottles and other non food grade containers) cardboard and mixed fibre (paper and card) which are bailed in a format suitable for the secondary plastics and paper sector (bays 11 to 14) and a smaller amount of metal e.g. aluminium cans. The residual material from this process is segregated and stored initially loose (bay 16) and is then also bailed and is stored ready for off site processing (bays 3).

The facility may accept other waste types for bulking on an ad hoc basis including textiles which are allocated to two storage areas (bay 11 and 17).

1. Waste Storage Details

a) Amounts & types of waste received daily

Input / Output designations are intended as a guide for the regulator in relation to the operation of the site to represent waste flow through the business. However to allow the business to respond to service requests and ad hoc loads, provided the waste type and storage location is suitable these designations are not absolute. Similarly EWC assignments should be considered indicative with the first code stated in each list being the principal input. The source municipal / commercial is based on current inputs but could be subject to change.

Bay no.	Material	EWC	Average amount received daily	Input = I Output = O Principally output but could also receive inputs = Oi	Waste description
1a	Hard plastics / PVC	170203	250kg	Oi	Hard plastic and PVC material.
1b	Hardcore	170107, 170101, 170102, 170103, 170904	300kg	Oi	Hardcore / rubble.
1c	POPS	200307	50kg	O	Waste which could contain Persistent Organic Pollutants 'POPS' which are occasionally received as a non conforming inclusion in other waste streams. This could include items such as upholstered office chairs. These are disposed of such that the POPS content is irreversibly transformed.
1d	Glass	170202, 150107, 170202, 191205, 200102	250kg	Oi	Usually plate glass separated from PVC window and door frames received in bulky bay 2, Also available for inputs of a similar type.
2	Bulky waste	200307	600kg	I	Bulky waste inputs of any type. The material undergoes some limited separation on site. This is a small bay akin to a sorting area and is therefore labelled as 'in process' material.
3	Residual	191212	9T	Oi	Baled residual waste from the DMR processing operation coming from bay 16. The material comprises a mixture of paper card and plastic but can contain up to 70% plastic films. Also available for inputs of a similar type.
4a	Metal	191202, 170401, 170402, 170403, 170404, 170405, 170406, 170407, 191202, 191203	80kg	Oi	Metal waste separated from bulky inputs. Also available for inputs of a similar type.
4b	Plastic	170203	250kg	Oi	Plastic waste separated from bulky inputs. Also available for inputs of a similar type.
4c	Wood	191207, 150103, 170201, 200138	750kg	Oi	Wood waste separated from bulk inputs. Also available for inputs of a similar type.
5	Wood (covered bay)	191207, 150103, 170201, 200138	7.5T	I	Wood inputs, from municipal or commercial sources. Some waste is transferred into the bay from RORO 4c.
6	Non recyclable waste	200307	250kg	Oi	Wastes which does not meet reprocessor acceptance criteria, i.e.

	or a limited number 5-10 'in process' paper / card bales				material which could damage a third party shredder such as cables and straps or oversize material. This area could also be used for a limited number of 'in process' paper / card bales.
7	Residual 'Black bag' Municipal and commercial	200301	200T	I	A mixture of commercial and municipal residual waste inputs. This is source segregated non recyclable waste from household wheelie bins.
8	Glass Commercial	200102, 150107, 170202, 191205	8T	I	Glass inputs from a commercial source.
9	Food Municipal	200108	25T	I	Municipal food waste from Rhondda Cynon Taf County Borough Council.
10	DMR Municipal	200301	85T	I	Dry mixed recyclate from Rhondda Cynon Taf County Borough Council. This is source segregated recyclable waste from household wheelie bins. This material is not processed on site.
11	Mixed plastic	191204, 150105, 200139	1T	Oi	Plastic bales produced from the DMR processing facility from the inputs to bay 15. Also available for inputs of a similar type.
	Metal	150104, 200140		Oi	Metal bales produced on site from the DMR processing facility. The quantities of metal produced are typically lower than plastics and paper / card. Also available for inputs of a similar type.
	Textiles	191208, 200110, 200111		I	Textile material which could be received on an ad hoc basis.
12	Mixed plastic	191204		O	Plastic bales produced on site from the DMR processing facility from the inputs to bay 15.
13	Mixed paper and card	191201, 150101, 150102	40T	Oi	Mixed paper and card bales produced on site from the DMR processing facility from the inputs to bay 15. Also available for inputs of a similar type.
14	Mixed paper and card			Oi	Mixed paper and card bales produced on site from the DMR processing facility from the inputs to bay 15. Also available for inputs of a similar type.
15	DMR Commercial	150106, 150101, 150102, 150104, 150105 170203, 191201, 200101	25T	I	Inputs into the processing facility on site. This would be material suitable for picking to produce segregated material suitable for baling into plastic, paper and card, and metal suitable for reprocessing.
16	DMR Residual (pre bailed)	191212	Material is baled daily and moved to bay 3	O	The residual waste from the DMR inputs into the processing facility once the material recoverable by the site has been removed for baling. The residual material is baled and sent to bay 3..
17	Plastic and rubber	160211*, 160213*, 160214, 160215*, 160216, 160602*, 160603*, 160604, 160605, 170604, 170802, 191204, 200110, 200111, 200133*, 200134, 200135*, 200136, 200302	< 1T	I	Waste types not routinely taken at the Facility but which may be required on a temporary or ad hoc basis.
	Textiles			I	
	Insulating materials (non haz)			I	
	Gypsum			I	
	Flo tubes			I	
	WEEE			I	

b) Maximum total amount of waste stored on site at any one time

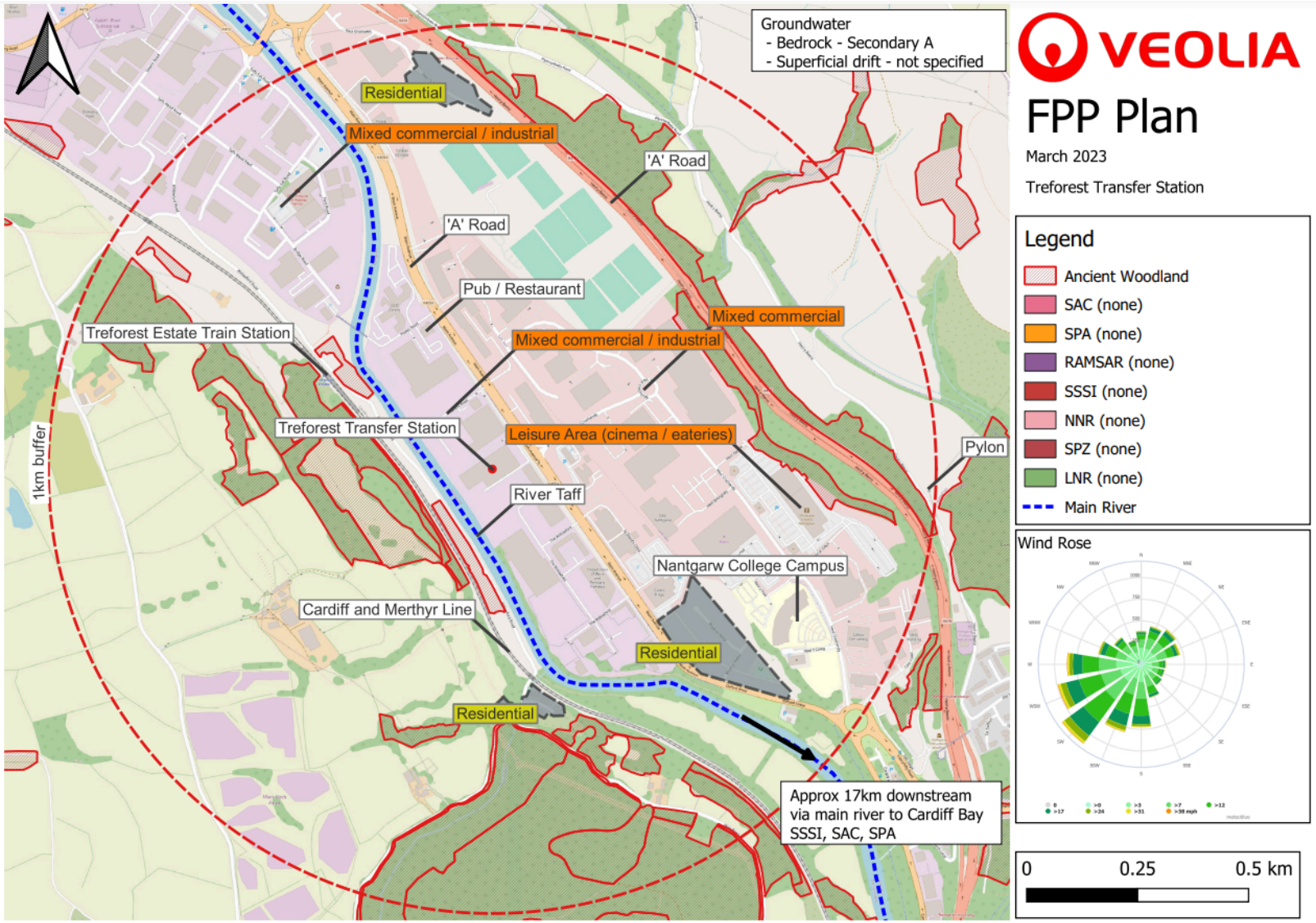
The maximum amount of waste stored at any time is listed below. These figures may include multiple individual piles. Disaggregated maximum waste pile sizes by location are provided in the table 'Waste type, format, bay sizes, storage quantities, residence times and separation distances'

Bay no.	Material	Maximum storage capacity on site (m^3)
1a	Hard plastics / PVC	36
1b	Hardcore	36
1c	POPS	11
1d, 10	Glass	111
2, 6	Bulky waste Commercial [in process]	146
3	DMR Residual (baled)	90 (75 bales)
4a, 13	Metal	111
4b	Plastic (loose)	36
4c, 5	Wood	136
7	Residual 'Black bag' Municipal and commercial	225
9	Food Municipal	95
10, 15	DMR Municipal and commercial	280
11	Textiles	111
11, 12	Mixed plastic	325 (260 bales)
13, 14	Mixed paper and card	800 (550 bales)
16	DMR Residual (pre bailed)	80
17	Plastic and rubber	36
	Insulating materials (non haz)	
	Gypsum	
	Flo tubes	
	WEEE	

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

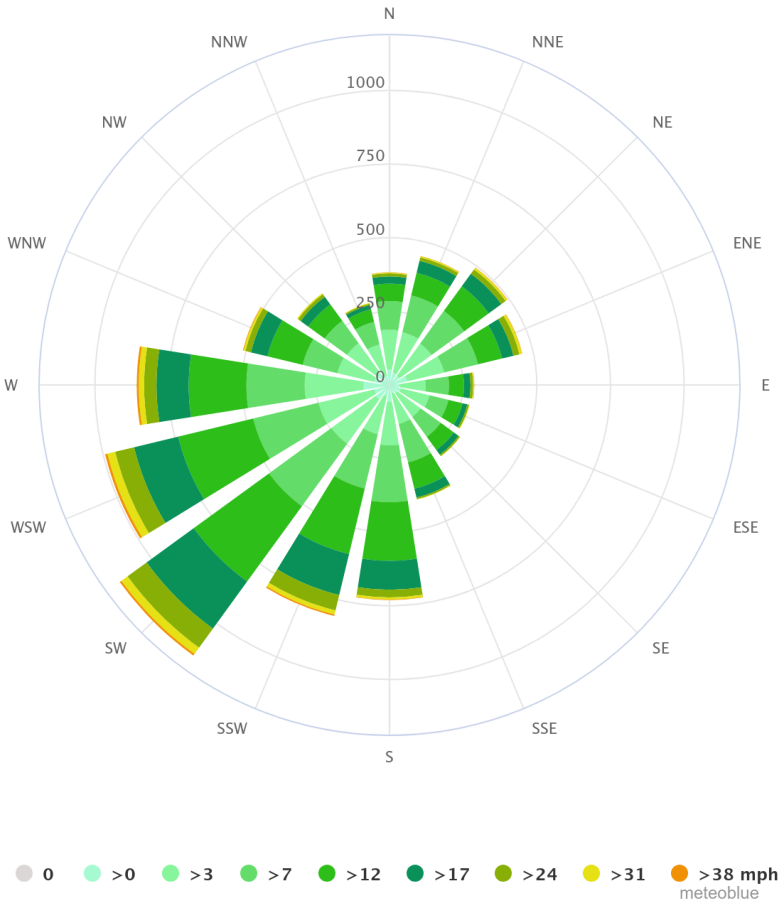
Bay no	Material	Residence time in days (typical - max)
1a	Hard plastics / PVC	14 - 28
1b	Hardcore	14 - 28
1c	POPS	28 - 84
1d	Glass	14 - 42
2	Bulky waste	1 - 2
3	DMR Residual (baled)	7 - 14
4a	Metal	14 - 28
4b	Plastic	7 - 14
4c	Wood	7 - 14
5	Wood (covered bay)	14 - 28
6	Non recyclable bulky waste / in process paper /card bales	14 - 28
7	Residual ‘Black bag’ Municipal and commercial	1 - 3
1d, 10	Glass Commercial	7 - 14
9	Food Municipal	1 - 2
10	DMR Municipal	1 - 3
13	Mixed plastic	56 - 70
	Metal	56 - 70
	Textiles	56 - 70
11, 12	Mixed plastic	56 - 70
13, 14	Mixed paper and card	28 - 42
15	DMR Commercial	1 - 2
16	DMR Residual (pre bailed)	1 - 2
17	Plastic and rubber	14 - 28
	Textiles	
	Insulating materials (non haz)	
	Gypsum	
	Flo tubes	
	WEEE	

d) Local receptors

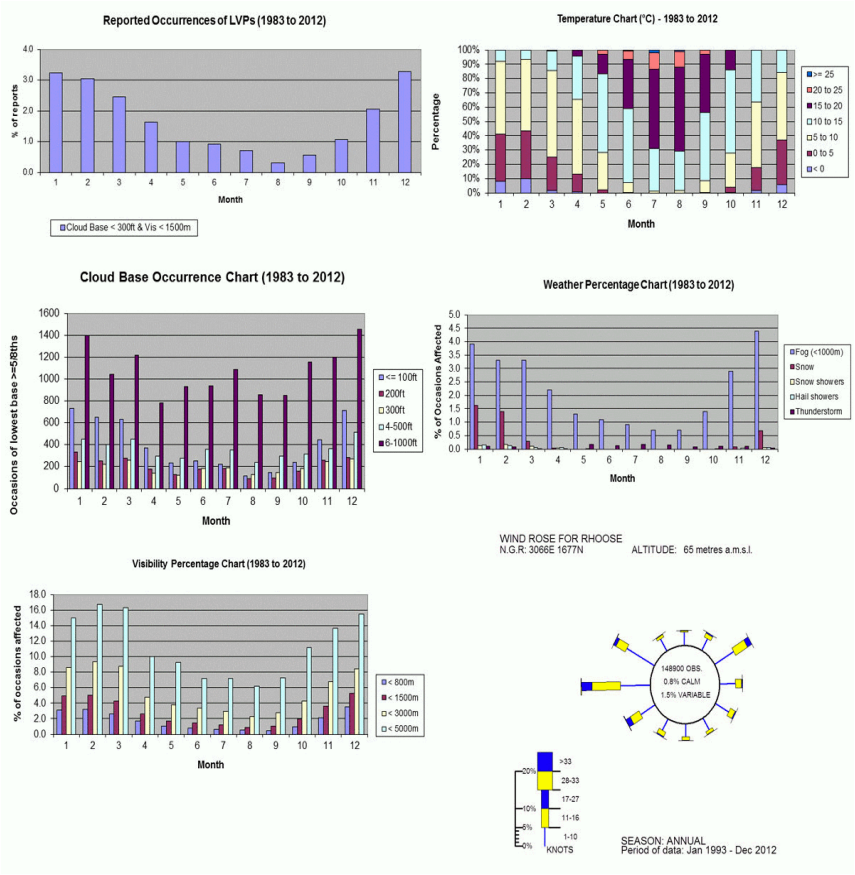


e) Prevailing wind direction

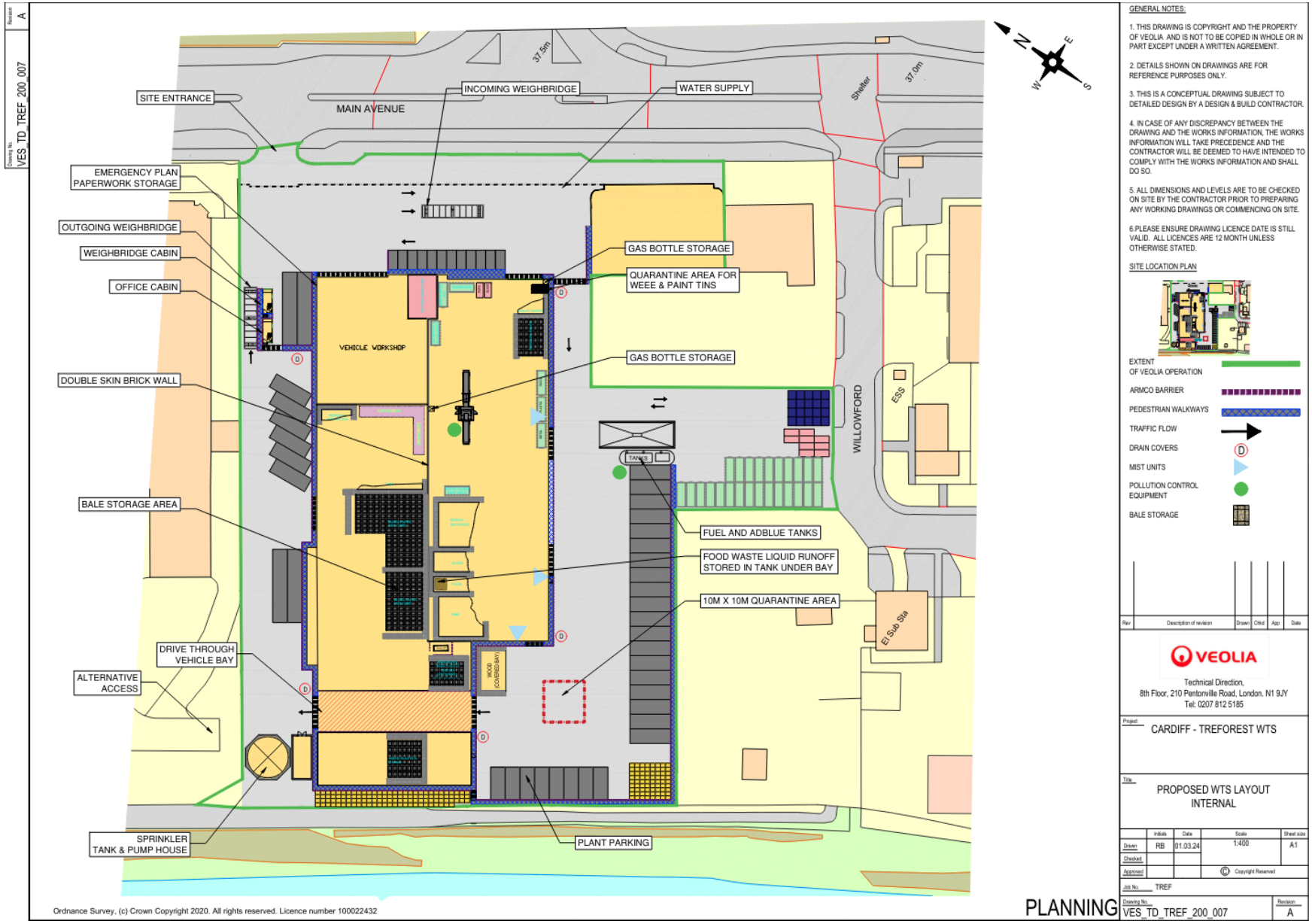
Simulated climate statistics (Meteoblue)



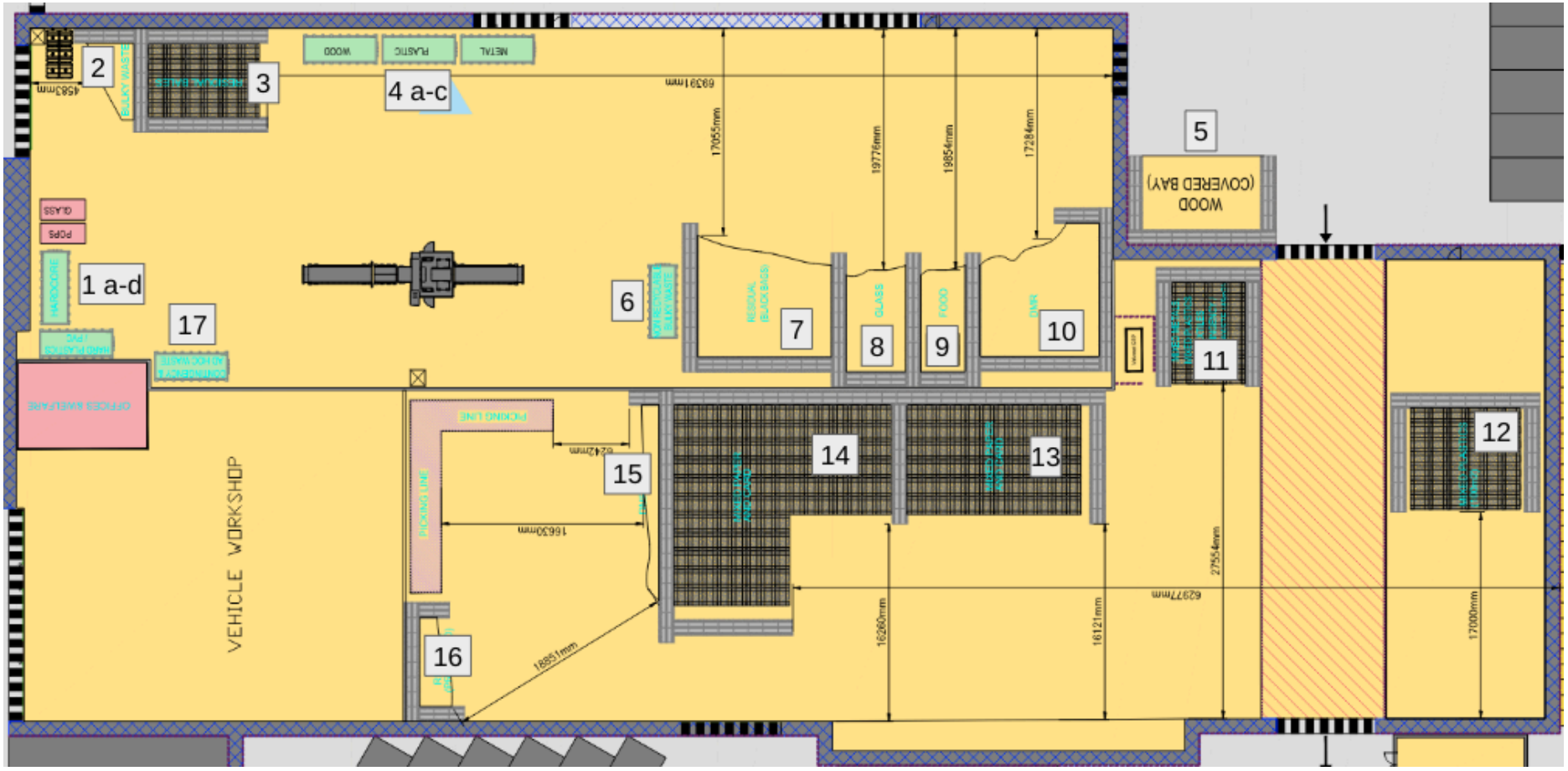
Met Office Climate Statistics (Cardiff Airport)



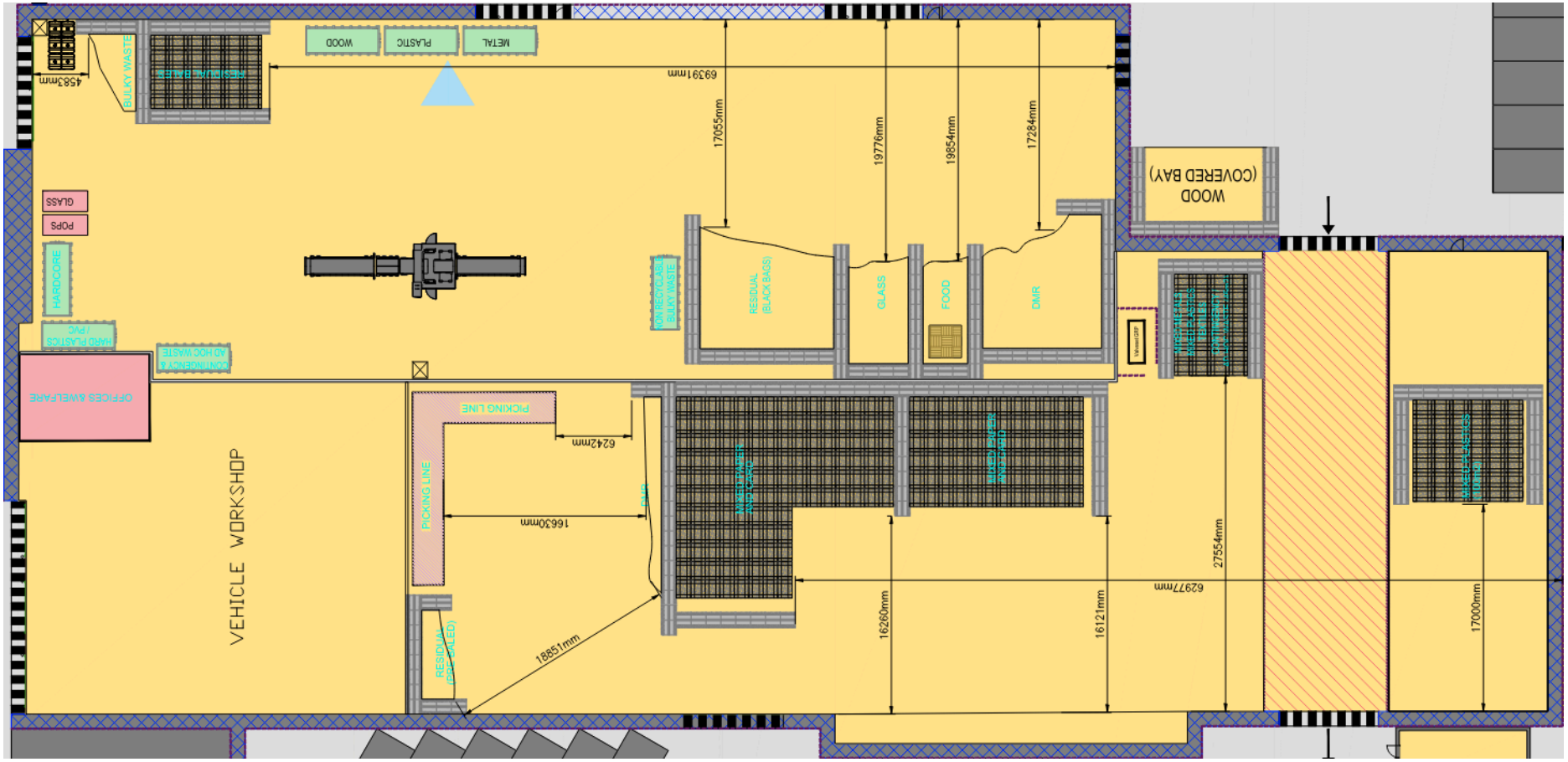
f) Waste Storage (layout plan)



g) Treforest Transfer Station - Internal building layout and bay designations



h) Selected dimensions / separation distances

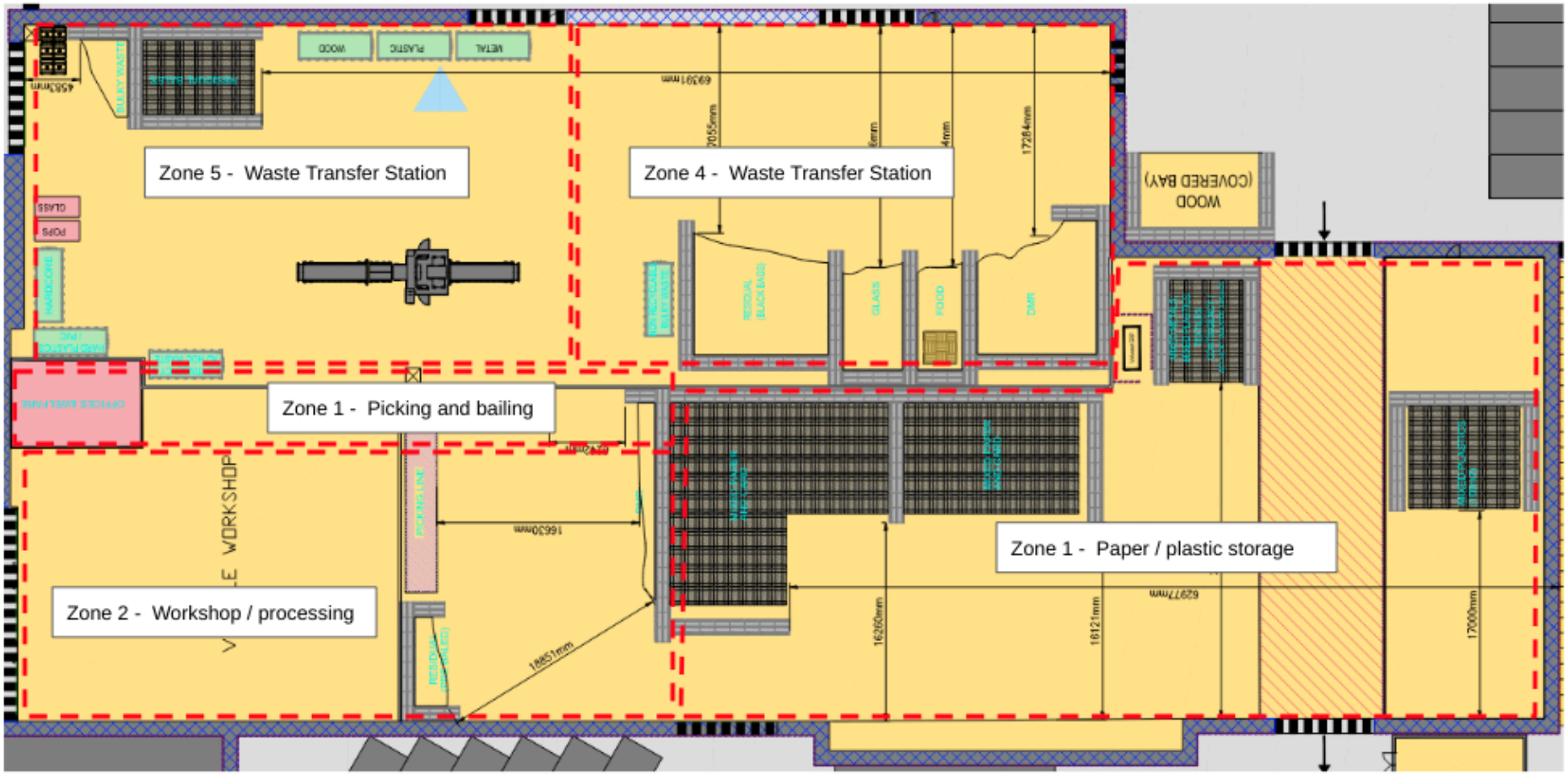


i) Waste type, format, bay sizes, storage quantities, residence times and separation distances (all waste is stored internally unless otherwise indicated.

Bay no	Material I = INPUT O = OUTPUT	Storage format	Format (fraction size)	Storage location size (l x w x h)	Waste pile size	Capacity m3 (bales)	Residence time in days (typical - max)	Separation distance
1a	Hard plastics / PVC	RORO	Loose (30 to 150mm)	6 x 2.5 x 2.4	6 x 2.5 x 2.4	36	14 - 28	N/A moveable container
1b	Hardcore	RORO	Loose (30 to 150mm)	6 x 2.5 x 2.4	6 x 2.5 x 2.4	36	14 - 28	N/A moveable container
1c	POPS	Skip	Loose (30 to 150mm)	3.8 x 1.6 x 1.8	3.8 x 1.6 x 1.8	11	28 - 84	N/A moveable container
1d	Glass	Skip	Loose (> 150mm)	3.8 x 1.6 x 1.8	3.8 x 1.6 x 1.8	11	14 - 42	N/A non combustible
2	Bulky waste	Legato Bay	Loose (> 150mm)	4.880 x 7.315 x 1.6	4.880 x 7.315 x 1	20	1 - 2	4.58m to external building wall / roller shutter
3	DMR Residual (bales)	Legato Bay	Bales	6.090 x 9.760 x x 3.2	9.760 x 6.090 x 2.2	90	7 - 14	69.39m to opposing brick wall
4a	Metal	RORO	Loose (30 to 150mm)	6 x 2.5 x 2.4	6 x 2.5 x 2.4	36	14 - 28	N/A moveable container
4b	Plastic	RORO	Loose (30 to 150mm)	6 x 2.5 x 2.4	6 x 2.5 x 2.4	36	7 - 14	N/A moveable container
4c	Wood	RORO	Loose (30 to 150mm)	6 x 2.5 x 4	6 x 2.5 x 2.4	36	7 - 14	N/A moveable container
5	Wood (covered bay)	Legato Bay	Loose (30 to 150mm)	6.100 x 9.740 x 4	5.100 x 9.740 x 3	100	14 - 28	15m to opposing plant parking
6	Non recyclable bulky waste / in process paper / card bales	RORO / bales	Loose (30 to 150mm)	6 x 2.5 x 2.4	6 x 2.5 x 2.4	36	14 - 28	N/A moveable container, bales are in process
7	Residual ‘Black bag’ Municipal and commercial	Legato Bay	Loose (30 to 150mm)	10.980 x 10.975 x 4	9.980 x 10.975 x 3	225	1 - 3	17.06m to opposing brick wall
8	Glass Commercial	Legato Bay	Loose (30 to 150mm)	9.755 x 4.880 x 4	8.755 x 4.880 x 3	100	7 - 14	N/A non combustible
9	Food Municipal	Legato Bay	Loose (30 to 150mm)	9.755 x 3.660 x 4	8.755 x 3.660 x 3	95	1 - 2	N/A non combustible
10	DMR Municipal	Legato Bay	Loose (> 150mm)	9.760 x 11.000 x 4	8.760 x 11.000 x 3	230	1 - 3	17.28m to opposing brick wall
11	Mixed plastic	Legato Bay	Bales or loose	8.540 x 4.880 x 4	7.540 x 4.880 x 3	75 (60 bales)	56 - 70	27.55m to opposing external brick wall
	Metal		Bales			75	56 - 70	
	Textiles		Loose or bales			75	56 - 70	
12	Mixed plastic	Legato Bay	Bales	10.980 x 9.750 x 4	8.750 x 10.980 x 3	125 (100 bales)	56 - 70	17.00m to opposing brick wall
13	Mixed paper and card	Legato Bay	Bales	10.000 x 15.000 x 4	9.000 x 15.000 x 3	300 (200 bales)	28 - 42	16.12m to opposing brick wall
14	Mixed paper and card	Legato Bay	Bales	17.6 x 17.9 x 4	17.6 x 17.9 x 3	525 (350 bales)	28 - 42	Note the maximum depth of waste is 10m6.7m to building
15	DMR	Legato Bay	Loose (> 150mm)	2.440 x 17.080	3 x 9 x 2.2	50	1 - 2	16.26m to opposing brick wall (north south).

	Commercial			x 3.2				62.98m to opposing brick wall (east west).
16	DMR Residual (pre bailed)	Legato Bay	Loose (30 to 150mm)	3.660 x 7.310 x 3.2	3 x 18 x 2.2	80	1 - 2	18.85 m to opposing loose waste
17	Plastic and rubber Textiles Insulating materials (non haz) Gypsum Flo tubes WEEE	RORO or skips	Loose	Skip 3.8 x 1.6 x 1.8 RORO 6 x 2.5 x 2.4	6 x 2.5 x 2.4	36	14 - 28	N/A moveable containers

j) Sprinkler zoning plan



2. Fire Prevention and Response Measures

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

Fire breaks and separation distances are described in the table above 'Waste type, format, bay sizes, storage quantities, residence times and separation distances'. The only waste stored externally is wood which is contained in a 120 min fire rated 'Legato' block bay with 1m vertical and lateral freeboard and at least a 15m buffer to the adjacent vehicle parking area. There is no other waste stored against the side of the building. There is an empty bin storage area to the west between the building and the river and vehicle parking at several locations in the yard area. There is additional empty container storage in the southern peninsular. There is no other waste stored externally allowing for a clear area around the perimeter of the site (see site plan). All other waste is stored internally to the transfer station. All separation distances either meet or exceed the FPMP guidance requirements.

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.
Building heating systems	There is no space heating in the waste storage areas.
Office areas	There is a 30m x 3m row of single offices along adjoining the north western perimeter of the transfer station. These are not fire compartmented from the transfer station storage areas however access is directly to the outside so there is no risk of occupiers having a restricted escape route in the event of a fire. Fire detection systems are in place to provide early warning signal.
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. For baled waste this is an operational as well as risk management requirement because the bales can begin to break apart if stored for in excess of quoted residence times making loading and transport problematic.
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

Fire walls and Bays

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 ‘Legato’ blocks which have an individual width and height of 800mm and are 1600mm long. These blocks are constructed from precast concrete and are used routinely on waste sites for fire breaks and are Class A1 fire resistant having 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.

Freeboard

The legato block walls will be designed to provide a freeboard of 1m both laterally and vertically to reduce the risk of fire spreading between storage locations. Freeboard can be maintained because the bays have been designed based on maximum waste inputs. While pile height will vary throughout the day due to interaction with the push walls as waste is introduced into bays loading equipment will be used to reformat waste before the end of the shift ensuring the required freeboard is present during non operational periods. The site stores standard waste types and operational experience shows this is sufficient to prevent the spread of fire between piles. Where possible low / non combustible wastes have been used to increase separation distances between higher risk wastes e.g. food and glass bays are in between residual and DMR piles.

Fire Detection

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 system design incorporates optical smoke detection sensors, heat detectors and flame detectors. Flame detectors are orientated towards waste storage locations. 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. The system is designed to give the earliest warning possible in the event of an emerging incident prior to sprinkler system activation. This will ensure that in the event of an emerging incident the FRS are alerted to an incident early.

All escape routes, fire exits, alarm call points and fire extinguishers are kept clear and free from waste at all times.

In the event of a fire being detected, site management would also 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 ‘Standard for the

Installation of Sprinkler Systems', which is the industry benchmark for design and installation of automatic fire sprinkler systems and utilises FM approved sprinklers and components. The Automatic Sprinkler System is in accordance with Factory Mutual Global. 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. T pipework is charged with compressed air and the water is held in check by an air valve. This valve is of the differential type which ensures that a low air pressure will hold back a much greater water pressure. When a sprinkler opens, the air pressure is reduced to the point where the air valve trips, allowing water through the pipework to the opened sprinkler. The roof systems consist of an array of pipework designed in a terminal configuration and will deliver a minimum discharge density of 10.2mm/min or 24mm/min depending on the zone of activation via a network of approximately 900 sprinklers.

The suppression system is designed around 5 separate activation areas comprising (see also drawing j) :

1. Paper / plastic storage - 24 mm/min density
2. Workshop / processing - 10.2 mm/min density
3. Picking and bailing - 10.2 mm/min density
4. Waste transfer station (area 1) - 24 mm/min density
5. Waste transfer station (area 2) - 24 mm/min density

The differential heights of the roof between the transfer station (higher roof) and processing (lower roof) sections of the building are accounted for in the design of the suppression system. The densities and operating areas of operation are increased to compensate for buildings with higher roofs. The density in the transfer station is designed 24mm/min over 306m^2.

The sprinkler heads in the transfer station have a K factor of 160 (11.2), as opposed to K115 in the processing area. They also have an extra large orifice thus increasing the droplet size, which helps to penetrate a fire at floor level where the roof is particularly high. The temperature rating of the sprinkler heads installed are 93 deg C as increasing the temperature can reduce the area of operation for dry systems i.e. reducing the number of sprinklers that will operate. In addition, the ambient temperature at the roof could get close to 38 deg C. Temperature rating of heads usually starts at 68 degrees and then the next temperature rating is 93 deg C. Sprinkler heads are required to be at least 30 deg C above the maximum expected ambient temperature. The density of the sprinkler system in the paper plastic storage area has been set across the entire area on the most conservative assumption that this area contains baled plastic.

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 773m^3 fire tank and associated diesel pumps. The capacity of the tank would allow for a maximum pile size of 644m^3 which is well in excess of the maximum stockpile held on site. This ensures 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.

Operational experience shows that In the event of a fire it is initially advisable to keep roller shutter doors closed to prevent influx of air into the combustion zone allowing optimal operation of the automatic suppression system. However where third party intervention is required there are six full building height roller shutter doors which will allow for clearance of smoke and prevent accumulation in the building headspace.

Fire extinguishers will also be located in various locations within the 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.

The system has been designed based on best practice with sprinkler water density based on waste types and underpinned by a hydraulic calculation report. The Fire system has been designed and installed by Pyro Protection who are a firm of fire detection suppression specialists - https://www.pyroprotection.co.uk/. Veolia's insurers are key stakeholders in the final design and have been consulted as part of the process.

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. If a fire occurs in one of the RORO containers the heavy plant on site is capable of relocating the whole container either inside or outside the transfer station building.

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. Height is restricted to a maximum of 4 bales high (c.3.2m). 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 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 773m^3 of water. The capacity of the tank would allow for a maximum pile size of 644m^3 which is well in excess of the maximum stockpile held on site.

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.

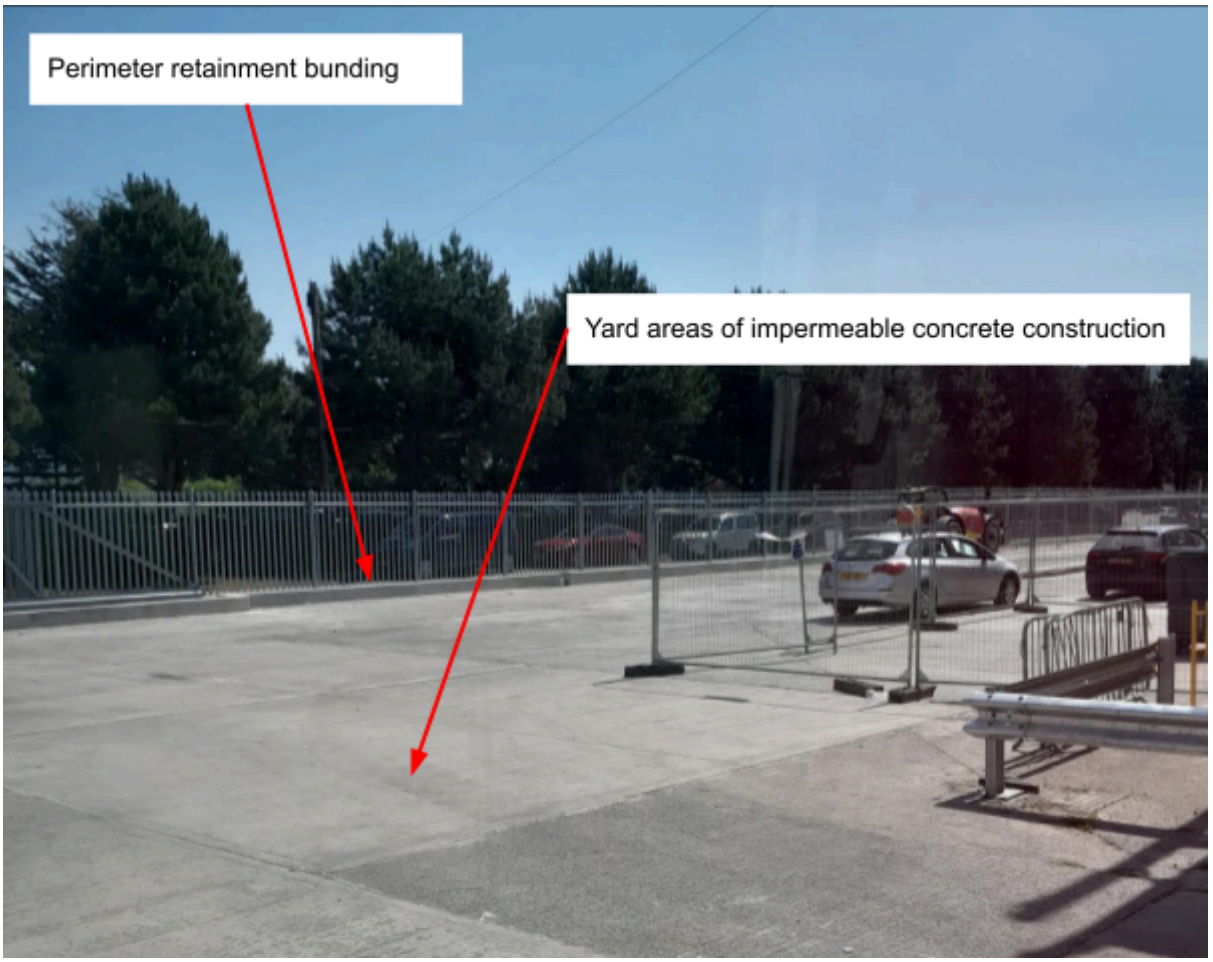
Control of Fire Water

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 (2023/2024) 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



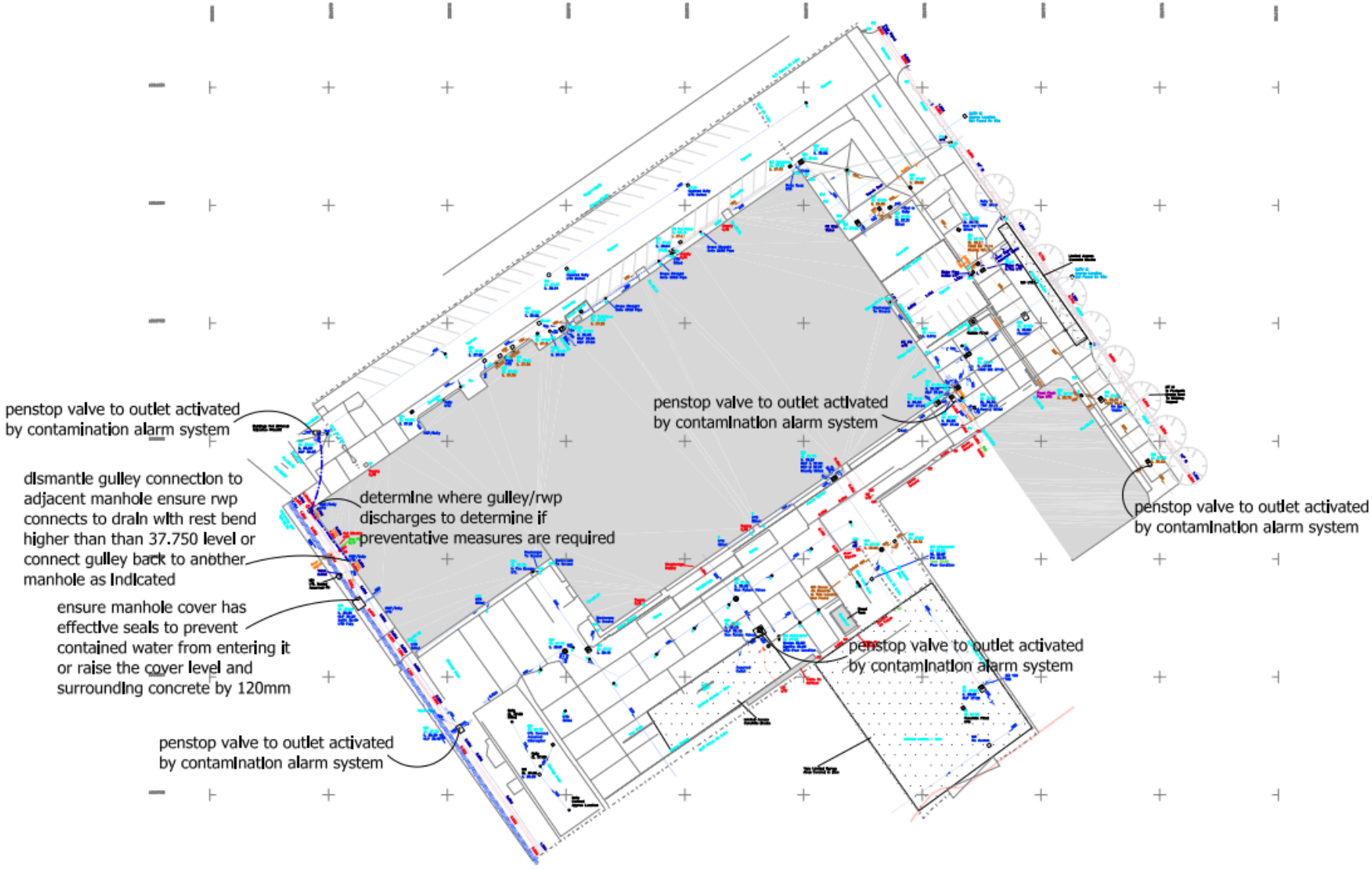
Control of material involved in fire

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

Review/Testing of FPMP

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.

Staff Training on FPMP

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.