

Monmouthshire HWRC Compliance and Health & Safety Review



A high-level review of the HWRC network across Monmouthshire, with recommendations on measures that could be adopted to improve health & safety and permit compliance.

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Front cover photography: Usk HWRC Site, January 2019

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Contents

1.0	Introduction.....	6
2.0	Background	7
2.1	Objective.....	7
2.2	Overall Structure of the Report.....	7
3.0	Five Lanes HWRC.....	8
3.1	Methodology.....	8
3.1.1	Site Visit.....	8
3.1.2	Data Gathering	8
3.1.3	Report	9
3.2	Traffic Assessment	9
3.2.1	Access to the Site	9
3.2.2	Site Description.....	10
3.2.3	Vehicle Movements	12
3.3	Operational H&S Review	15
3.3.1	Location	15
3.3.2	Access Road	15
3.3.3	Opening Times	15
3.3.4	Staffing	15
3.3.5	Site Activities.....	15
3.3.6	Tonnage throughput	15
3.3.7	Neighbours.....	16
3.3.8	Traffic Separation	16
3.3.9	Dust, Noise & Odour	16
3.3.10	Site Surface.....	16
3.3.11	Site Drainage.....	16
3.3.12	User Pedestrian and Vehicle Movements	16
3.3.13	General Site House Keeping	17
3.3.14	Site Signage	17
3.3.15	Containers and Storage Areas	17
3.4	Conclusions	17
3.5	Recommendations.....	17
4.0	Llanfoist HWRC	18
4.1	Methodology.....	18
4.1.1	Site Visit.....	18
4.1.2	Data Gathering	18
4.1.3	Report	19
4.2	Traffic Assessment	19
4.2.1	Access to the Site	19
4.2.2	Site Description.....	21
4.2.3	Vehicle Movements	23
4.3	Operational H&S Review	26
4.3.1	Location	26
4.3.2	Access Road	27
4.3.3	Opening Times	27
4.3.4	Staffing	27
4.3.5	Site Activities.....	27
4.3.6	Tonnage throughput	27
4.3.7	Neighbours.....	28
4.3.8	Traffic Separation	28
4.3.9	Dust, Noise & Odour	28

4.3.10	Site Surface	28
4.3.11	Site Drainage.....	28
4.3.12	User Pedestrian and Vehicle Movements	28
4.3.13	General Site House Keeping	29
4.3.14	Site Signage	29
4.3.15	Containers and Storage Areas	29
4.4	Conclusions	29
4.5	Recommendations.....	29
5.0	Mitchel Troy HWRC	30
5.1.1	Site Visit.....	30
5.1.2	Data Gathering	30
5.1.3	Report	31
5.2	Traffic Assessment	31
5.2.1	Access to the Site	31
5.2.2	Site Description.....	32
5.2.3	Vehicle Movements	32
5.3	Operational H&S Review	36
5.3.1	Location	36
5.3.2	Access Road	36
5.3.3	Opening Times	36
5.3.4	Staffing	36
5.3.5	Site Activities.....	37
5.3.6	Tonnage throughput	37
5.3.7	Neighbours.....	38
5.3.8	Traffic Separation	38
5.3.9	Dust, Noise & Odour	38
5.3.10	Site Surface.....	38
5.3.11	Site Drainage.....	38
5.3.12	User Pedestrian and Vehicle Movements	38
5.3.13	General Site House Keeping	39
5.3.14	Site Signage	39
5.3.15	Containers and Storage Areas	39
5.4	Conclusions	39
5.5	Recommendations.....	39
6.0	Usk HWRC	40
6.1.1	Site Visit.....	40
6.1.2	Data Gathering	40
6.1.3	Report	41
6.2	Traffic Assessment	41
6.2.1	Access to the Site	41
6.2.2	Site Description.....	43
6.2.3	Vehicle Movements	44
6.3	Operational H&S Review	45
6.3.1	Location	45
6.3.2	Access Road	46
6.3.3	Opening Times	46
6.3.4	Staffing	46
6.3.5	Site Activities.....	46
6.3.6	Tonnage throughput	46
6.3.7	Neighbours.....	47
6.3.8	Traffic Separation	47
6.3.9	Dust, Noise & Odour	48
6.3.10	Site Surface.....	48
6.3.11	Site Drainage.....	49

6.3.12 User Pedestrian and Vehicle Movements	50
6.3.13 General Site House Keeping	50
6.3.14 Site Signage	50
6.3.15 Containers and Storage Areas	50
6.4 Conclusions	50
6.5 Recommendations.....	50

Figures

Figure 1: Locations of HWRC Sites across Monmouthshire	6
Figure 2: Overview of Five Lane HWRC and WTS Site showing site access road (Google Maps 08/02/2019)	9
Figure 3: Five Lanes Site Entrance Gate and Site Information Boards (E.How 31/02/2019) .	10
Figure 4: Five Lanes HWRC Site Safety Plan (Viridor, FLN 2000).....	11
Figure 5: Main site entrance, site office, staff parking and HWRC entry/exit (E. How 31/02/2019)	12
Figure 6: Staff Only Area.....	13
Figure 7: Raised Section of The HWRC Public Area showing parallel parking bays and one way system. (E. How 31/02/2019).....	14
Figure 8: Lower Section of The HWRC Public Area showing parallel parking bays and one way system. (E. How 31/02/2019).....	14
Figure 9: Overview of Llanfoist HWRC and WTS Site showing site access road (Google Maps 08/02/2019)	19
Figure 10: Llanfoist HWRC Public Entrance showing Site Sign and Traffic Information (E.How 31/02/2019)	20
Figure 11: Public Exit from the Llanfoist HWRC (E.How 31/02/2019).....	20
Figure 12: Separate Llanfoist WTS and HWRC Service Entrance / Exit (E.How 31/02/2019)	21
Figure 13: Llanfoist Site Survey Plan (LLA001) (Viridor)	22
Figure 14: WTS Area (Free Map Tools).....	23
Figure 15: Main User Area Showing Parking Bays (E.How 31/02/2019)	24
Figure 16: User Parking and Pedestrian Walkway (E.How 31/02/2019)	24
Figure 17: Disabled User Parking (E.How 31/02/2019).....	25
Figure 18: Pedestrian Access to Recycling Containers (E.How 31/02/2019)	25
Figure 19: Central Covered Area	26
Figure 20: Overview of Mitchel Troy HWRC showing site access road (Google Maps 11/02/2019)	31
Figure 21; Top Entrance Gate (E.How 31/01/2019).....	32
Figure 22: Mitchel Troy HWRC Site Safety Plan (Viridor TRO 2000).....	34
Figure 23: User vehicles Parked in front of the Roller-Packer machine (to the right) (E.How 31/01/2019)	35
Figure 24: Roller-packer Machine Located in the Centre Service Area (E.How 31/01/2019) .	35
Figure 25: User Vehicles Parked in Parallel Bays and Dedicated Pedestrian Walkway (E.How 31/01/2019)	36
Figure 26: Location of Usk HWRC (Blue star)	41
Figure 27: External Site Gates looking towards the public car-park. (E.How 31/01/2019)....	42
Figure 28: Usk Site Pedestrian Access to the Permitted Area	42
Figure 29: Usk HWRC Site Plan.....	43
Figure 30: Containers Accessed via Stepped Metal Gantries (E.How 31/01/2019).....	44
Figure 31: Marked Parking Bays in the Additional Operational Area.....	45
Figure 32: Usk Site Viridor Plan (USK 2000).....	48
Figure 33: Area within the Designated Parking Area that require Resurfacing	49

Tables

Table 1: Tonnage Throughput 2017/18	15
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Table 2: Tonnage Throughput 2017/18	27
Table 3: Tonnage Throughput 2017/18	37
Table 4: Tonnage Throughput 2017/18	46

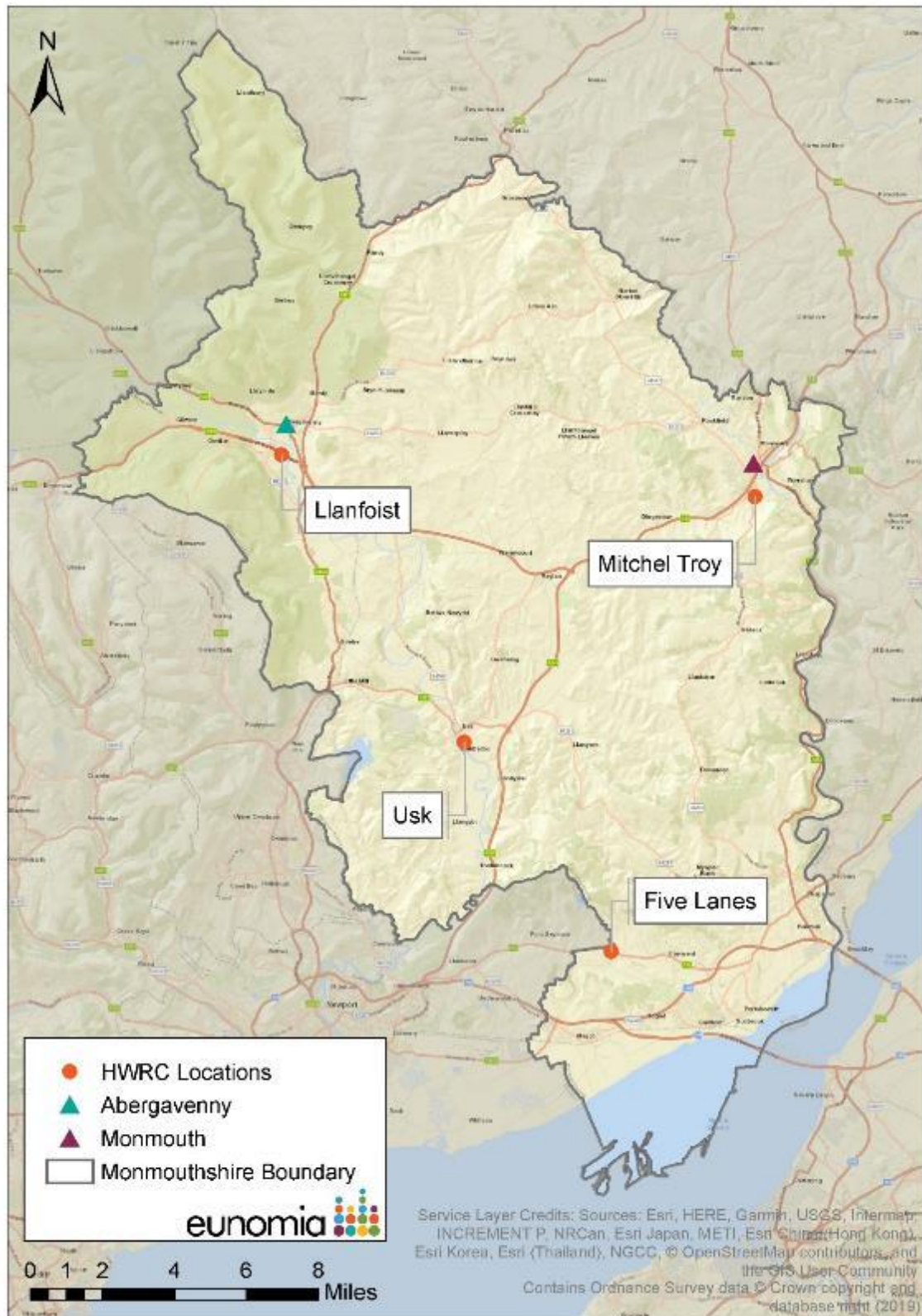
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1.0 Introduction

Eunomia was commissioned in January 2019 by WRAP Cymru to undertake a compliance and health and safety review of the two Household Waste & Recycling Centres (HWRCs) in Monmouthshire at Usk and Mitchell Troy with a high-level review of the remaining two HWRC sites at Five Lanes and Llanfoist to provide context to the work. Figure 1 shows the locations of the four HWRC within the County.

Figure 1: Locations of HWRC Sites across Monmouthshire



2.0 Background

The HWRC sites at Mitchel Troy and Usk are both small and operationally difficult with the site at Usk raising particular concerns regarding the use of gantries to access the larger waste containers and waste containers being changed over using the adjacent public car park.

The site at Usk is well used by the local population but has the smallest through-put at 8% of the total HWRC throughput for the County and has the lowest recycling rate at below 50%; many householders use the site for the deposit of small amounts of residual waste. The site at Troy is larger (throughput of 17% of total HWRC tonnage) and has adjacent land which may be suitable for expansion/relocation. All sites are run by Dragon Waste a co-owned Viridor and Monmouthshire Borough Council organisation.

In addition, and in order to provide context to the reviews at the Usk and Mitchel Troy HWRCs, a review of the remaining HWRC sites at Five Lanes and Llanfoist was also undertaken.

2.1 Objective

The objective of the work is to provide Monmouthshire CC with a report which contains:

High-level compliance and Health & Safety reviews of the HWRC sites at:

- Five Lanes, Llanvaches, NP6 4AY; and
- Llanfoist, Heads of the Valleys Road (access via Merthyr Road), Llanfoist, Abergavenny, NP7 9AQ.

And more in depth compliance and Health & Safety reviews for the HWRC sites at:

- Mitchel Troy – Off the B4293, Mitchel Troy, Monmouth, NP25 4HX; and
- Usk – Maryport Street Car Park, NP15 1A

2.2 Overall Structure of the Report

The report is structured such that the review of each site can be read as a standalone document.

The report presented here consists of four standalone sections, one for each HWRC site. Each section provides a Health and Safety review of the current operation of the site commenting on site practices, the general operation of the site including the layout, signage, staffing levels and the interaction between the public, contractors, and trade users (where present) of the site.

Included is a basic appraisal of the traffic flows and current routing of vehicles within the public areas of the site, and an appraisal of the general layout of the site paying particular attention to the arrangement of the recycling, reuse and residual waste areas. The general conditions on the site are also commented on.

Together with the observations made during each site visit, each assessment provides a number of potential learning points and recommendations which the council should take into account as it considers the future options for HWRC provision across the county.

3.0 Five Lanes HWRC

3.1 Methodology

3.1.1 Site Visit

A site visit was conducted on the 31st of January 2019 between 9:30am and 11:00am by Emma How, Specialist Technical Advisor, Eunomia Research & Consulting to assess the site in terms of site Operational Health and Safety (OH&S) systems and practices. Emma was accompanied by Anne Tucker (Waste Data Flow Manager, Monmouthshire County Council); and Rhys Lloyd (HWRC Supervisor, Viridor).

As a part of the site visit conversations were conducted with relevant staff to understand issues relevant to the site, and to understand what operational changes might already be being considered going forwards.

Observations were made which, where possible, included:

- how householders use the site;
- material deposit, storage and dispatch;
- use of plant and equipment;
- how traffic and plant movements are managed.

The site visit also took into account site related activities outside of the permitted boundary such as:

- traffic/pedestrian movements;
- site access (user and service vehicles); and
- how traffic / pedestrian movements are managed.

3.1.2 Data Gathering

The observational information gathered during the site visit was assessed alongside a desktop review of the information provided by the Council and Viridor. Based on initial discussions with the Council at the project inception meeting, the information provided for the Five Lanes HWRC site included:

- Five Lanes HWRC Site Environmental and Emergency Plan (FLN 2999);
- Five Lanes HWRC Site Safety Plan (FLN 2000);
- Five Lanes Transfer Station Site Lease Plan (FLNTS001);
- Five Lanes Quarry, Caerwent – Revised plans incl. gate;
- Five Lanes TS Site Drainage & Ducts (FL/01/016);
- Five Lanes Transfer Station Risk Assessment (which includes assessment of HWRC provisions); and
- Five Lanes TS Setting Out and Contractor's Area (FL/01/08);
- Five Lanes Environmental Permit:
 - Transfer Station Waste Disposal Licence, Five Lanes Quarry, Caerwent (PHD/JLR/10th December, 1992. TS/WDL/5LANE);
 - WP3599FY V002 Variation Notice; and
 - WP3599FY V008

On-site observations made during the site visit were considered in the light of current best practise on HWRC operations and safety and in the context of the site characteristics (physical and operational constraints)¹. Best practice characteristics of other sites were compared to the notes and photographs taken during the site visit.

¹ WASTE 26 – Managing Health & Safety at Civic Amenity Sites – Issue 1 2015; <https://wishforum.org.uk/wp-content/uploads/2017/02/WASTE-26-.pdf>

A key element of site safety is the management of the pedestrian movements and traffic flows in relation to site patrons both public and commercial, along with the movement of large vehicles and site plant. The interaction between all of these was observed and reviewed, and has been commented upon.

All of the on-site operations including the handling of materials by the public and site staff, plant and equipment operation, and arrangements for the removal of materials were assessed for their operational health & safety implications. Where possible this was done by direct observation however time constraints meant that much of the information relating to plant and equipment operation was obtained via interviews with staff.

3.1.3 Report

The intention of this report is to provide a document which draws together the elements of the project - the site visit and review of available documents – to provide a number of potential learning points and recommendations which the council should take into account as it considers the future options for HWRC provision across the county.

3.2 Traffic Assessment

3.2.1 Access to the Site

The HWRC has good access from the highway (A48), Figure 2 shows the site and its access road in relation to the A48. Access is via a dedicated private gated access road which also serves the WTS (Figure 3). The access road is shared between traffic using the HWRC (cars, trailers and light vans) and that using the WTS (HGVs). During the time of the site assessment the site was quiet with no traffic queuing to enter the site. However, it is understood that at times when the HWRC is most busy site staff are deployed to manage HWRC user traffic on the access road to enable traffic to access the site safely. The access road is sufficiently long that traffic accessing the site has not queued onto the A48.

Figure 2: Overview of Five Lane HWRC and WTS Site showing site access road (Google Maps 08/02/2019)



Figure 3: Five Lanes Site Entrance Gate and Site Information Boards (E.How 31/02/2019)

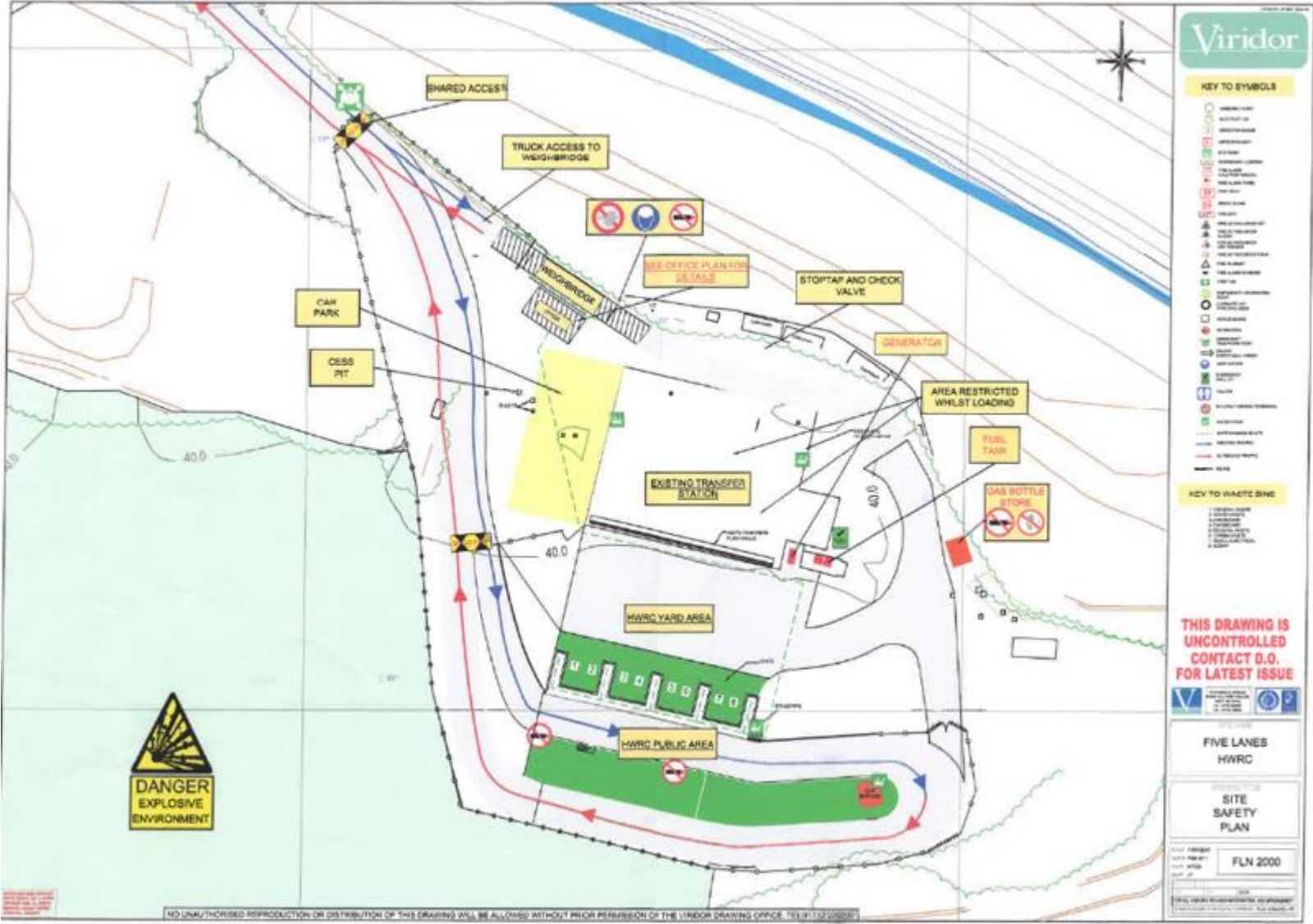


3.2.2 Site Description

Figure 4 (Viridor Site Safety Plan FLN 2000) shows the current layout and path of traffic on the site.

The site consists of a Waste Transfer Station area which includes site office and weighbridge, waste storage shed, staff parking, and loading yard located in the northern side of the site and the Household Waste Recycling Centre which consists of a HWRC Yard Area and HWRC Public Area and is located to the south of the site. A former landfill is located at the west of the site whilst an area of unmade ground on the eastern side of the site is currently used for empty container storage. The HWRC is of split-level design.

Figure 4: Five Lanes HWRC Site Safety Plan (Viridor, FLN 2000)



3.2.3 Vehicle Movements

The most hazardous activity on HWRC sites is the movement of vehicles in the proximity of pedestrians. Of all vehicle movements, reversing is the most hazardous. During the visit HWRC traffic flows were observed at first hand.

The HWRC benefits from a dedicated one-way system. Figure 4Figure 5 shows in-bound traffic flows in blue whilst out-bound traffic flows are shown in red.

HWRC and WTS traffic enter the site via a share access then separate by the site office and weighbridge with WTS traffic continuing to the left of the building across the weighbridge and HWRC traffic passing to the right-hand side of the building, past the staff parking area and HWRC Yard Area before continuing up a access ramp to the HWRC Public Area. Figure 5 shows the main site entrance (left of the picture), the site office (green cabin), staff parking and entry/exit roads to/from the HWRC Public Area from the bottom of the access ramp to the HWRC Public Area.

Figure 5: Main site entrance, site office, staff parking and HWRC entry/exit (E. How 31/02/2019)



The HWRC is of split-level design with separate public and operational areas. On entry to the HWRC Public Area users are able to park to unload their vehicles into eight roll-on roll-off 40 cubic yard open top containers. These containers are provided for the deposit of wood (x2), small electricals, general waste (x2), garden waste, cardboard and scrap metal. Public access to these containers is by gated walkways of integrated construction with asphalt surfacing. Once a container is full a member of site staff closes and locks the walkway gate and directs site users to alternative containers whilst the container is changed over from within the HWRC Yard Area.

A designated crossing point is provided for to enable access to a small cordoned off area of the lower part of the site which is accessed via a flight of concrete steps. This area is marked by suitable signage as Staff Only. Site staff take smaller items such as waste oils, batteries and textiles from site users and separate them into appropriate containers within this area (Figure 6). This area of the site is cordoned off using movable plastic barriers along its lower boundary to prevent users from accessing the area themselves however the cordon is not sufficient to prevent users accessing the area.

Figure 6: Staff Only Area



Continuing down the ramp past the Scrap Metal container users turn right on to the lower area of the HWRC Public Area where a range of site level bins and containers are provided for users to deposit materials.

Suitable specialist containers are provided for the storage of gas bottles; TVs and monitors; oils; automotive batteries; plasterboard; water-based paints and fluorescent lamps. It is understood from interview with the site supervisor that in order to service these containers site staff deploy temporary traffic management (cones and a chain) at the top of the out-going ramp to prevent site users from accessing the lower area of the site until the operation has been completed.

Designated parallel parking bays of sufficient length are provided on both the raised (Figure 7) and lower sections (Figure 8) of the site to enable users to park and unload their materials into the designated containers. The use of parallel parking bays reduces the need for site users to reverse their vehicles as they travel around the site.

Figure 7: Raised Section of The HWRC Public Area showing parallel parking bays and one way system. (E. How 31/02/2019)



Figure 8: Lower Section of The HWRC Public Area showing parallel parking bays and one way system. (E. How 31/02/2019)



Users exit the HWRC via the one-way system and re-join the shared access with the WTS traffic just to the left of the site office/weighbridge before exiting the site via the access road

on to the A48. A 5mph speed limit is in force on the site with signs located at strategic points on site and at the site entrance and are located at a height that ensures that they are not obscured by traffic.

3.3 Operational H&S Review

3.3.1 Location

The HWRC is co-located with the Five Lanes Waste Transfer Station (WTS). The site (HWRC and WTS) is located to the north west of Caldicot on the A48. The total area of the site is 0.76 hectares.

3.3.2 Access Road

Metalled roadway with good drainage on approach to site. The road is quiet road leading to site entrance road is quiet as it only serves the Five Lanes HWRC and WTS. There is good allowance for vehicles to enter site without impeding A48 main road.

3.3.3 Opening Times

Five Lanes HWRC is currently operational between 0800 and 1800 7 days a week and closed on Christmas Day, Boxing Day and New Year's Day.

3.3.4 Staffing

The HWRC public area is staffed by two operatives at all times. These staff members assist the public in using the HWRC and control user traffic movements. Additional staff are deployed in the WTS (plant operator) and Site Office (weighbridge operator and admin); there is a Site Supervisor who has overall responsibility for the site.

3.3.5 Site Activities

There is separation and bulking of materials but no processing. The site accepts trade waste and trade recyclables at the WTS only. There is an operational weighbridge on the site and all site activities are carried out within the permit boundary.

3.3.6 Tonnage throughput

The current HWRC tonnage throughput for the year 2017/18 is provided in Table 1.

Table 1: Tonnage Throughput 2017/18

Stream	Tonnes
Recycling	
Automotive batteries	9
Card	109
Mixed cans	2
Mixed glass	39
Other Scrap metal	247
Paper	46
Plastics	2
Textiles & footwear	
Mineral Oil	1
Mixed tyres	
Paint	2
Plasterboard	80
Vegetable Oil	1

Stream	Tonnes
WEEE - TVs & Monitors	30
WEEE - Fluorescent tubes and other light bulbs	0
WEEE - Fridges & Freezers	51
WEEE - Large Domestic App	42
WEEE - Small Domestic App	125
Wood	760
Green garden waste only	1,421
Rubble	1,001
Sub Total	3,967
Re-Use	
Gas bottles	4
Textiles & footwear	41
Books	6
Sub Total	51
Residual	
Civic amenity sites waste : Household	1,921
Sub Total	1,921
Total	5,939
Re-use & Recycling Rate (Including plasterboard & rubble)	68%
% residual	32%

3.3.7 Neighbours

The site is in a rural location with no immediate neighbours.

3.3.8 Traffic Separation

Traffic separation is currently in place on the site. There is segregation of HWRC user vehicle from HWRC service vehicles via the split-level design and also via traffic management procedures currently in operation to enable container servicing on the lower public area of the site.

3.3.9 Dust, Noise & Odour

No dust or odour problems were observed.

3.3.10 Site Surface

The vehicular and pedestrian areas of the site are either laid to asphalt (road way and lower public area) or concrete (container access walk ways in the upper public area). No pot-holes or areas of concern were noted.

3.3.11 Site Drainage

Drainage was not observed to be an issue on the site. Review of the site drainage plan indicates that suitable and sufficient drainage is in place on the site.

3.3.12 User Pedestrian and Vehicle Movements

Road markings including directional arrows, no-entry, exit and parking bays are well defined meaning that users are able to easily navigate the site safely.

Pedestrians and users vehicles were not adequately separated in the two main areas of the site – there were no barriers between pedestrians and users vehicles. **Consideration**

should be given to the installation of barriers or bollard to separate the pedestrian walk-way from the parking bays as is provided at the Llanfoist HWRC.

3.3.13 General Site House Keeping

The site was clean and tidy with no windblown litter observed on verges, boundary fencing or under/behind containers.

3.3.14 Site Signage

Both off-site and on-site signage was observed to be clear, in good condition and at an appropriate height so that it was not obscured by traffic.

3.3.15 Containers and Storage Areas

Various containers are provided for the deposit of a range of materials. All containers were observed to be in good serviceable condition.

A storage area for large domestic appliances was provided which was observed to be in a tidy state.

3.4 Conclusions

The site is a well-managed modern HWRC site which was observed to be serving the needs of users whilst providing a safe environment for both users and site staff.

The aspects of the site that have the potential to have a negative impact on the Health and Safety on-site are:

- Site users gaining access to the Staff Only restricted area of the site – more likely at busy times when the site operatives may be busy with other site users;
- Site users gaining access, either on foot or driving, to the lower section of the site, by circumventing the traffic management arrangements (cones and chain) whilst containers in that area are being serviced; and
- Users of the HWRC being required to sharing access to the site with large vehicles using the WTS.

3.5 Recommendations

- Although no reports of users circumventing the traffic management system were recorded during the site visit interview the author feels that the site and the site staff would benefit from having a more permanent gate or barrier installed at the point where staff currently deploy the temporary traffic management (cones and chain) to ensure that site users do not enter the lower portion of the site whilst containers are being serviced in the area. This additional security would provide site staff with additional flexibility if they were required to attend another area of the site whilst a container was being changed and it reinforces to users that the area is closed for use.
- The Staff Only area would benefit from barriers of a more permanent nature to stop users from accessing it from the lower area of the site. However, this must be balanced against the operational requirements in servicing this area.

4.0 Llanfoist HWRC

4.1 Methodology

4.1.1 Site Visit

A site visit was conducted on the 31st of January 2019 between 12:35 and 13:40 by Emma How, Specialist Technical Advisor, Eunomia Research & Consulting to assess the site in terms of site Operational Health and Safety (OH&S) systems and practices. Emma was accompanied Anne Tucker (Waste Data Flow Manager, Monmouthshire County Council); Pete Somer (Operations Manager, Viridor) and Jason Edwards (Area Charge Hand, Viridor).

As a part of the site visit conversations were conducted with relevant staff to understand issues relevant to the site, and to understand what operational changes might already be being considered going forwards.

Observations were made which, where possible, included:

- how householders use the site;
- material deposit, storage and dispatch;
- use of plant and equipment;
- how traffic and plant movements are managed.

The site visit also took into account site related activities outside of the permitted boundary such as:

- traffic/pedestrian movements;
- site access (user and service vehicles); and
- how traffic / pedestrian movements are managed.

4.1.2 Data Gathering

The observational information gathered during the site visit was assessed alongside a review of the information provided by the Council and Viridor. Based on initial discussions with the Council at the project inception meeting, the information provided for the Llanfoist HWRC site included:

- Safe Operating Procedure: Handling & Disposal of Helium Balloon Cylinders (140529) as an example of a Safe Operating Procedure document
- Optional Scheme Layout (200807)
- Site Survey Plan (201001)
- Site Lease Plan (201302)
- Site Drainage Plan (20080924)
- Fire Risk Assessment (20140530)
- Llanfoist Site Plan (20141128)

On-site observations made during the site visit were considered in the light of current best practise on HWRC operations and safety and in the context of the site characteristics (physical and operational constraints)². Best practice characteristics of other sites were compared to the notes and photographs taken during the site visit.

A key element of site safety is the management of the pedestrian movements and traffic flows in relation to site patrons both public and commercial, along with the movement of large vehicles and site plant. The interaction between all of these was observed and reviewed, and has been commented upon.

² WASTE 26 – Managing Health & Safety at Civic Amenity Sites – Issue 1 2015; <https://wishforum.org.uk/wp-content/uploads/2017/02/WASTE-26-.pdf>

All of the on-site operations including the handling of materials by the public and site staff, plant and equipment operation, and arrangements for the removal of materials were assessed for their operational health & safety implications. Where possible this was done by direct observation however time constraints meant that much of the information relating to plant and equipment operation was obtained via interviews with staff.

4.1.3 Report

The intention of this report is to provide a document which draws together the elements of the project - the site visit and review of available documents – to provide a number of potential learning points and recommendations which the council should take into account as it considers the future options for HWRC provision across the county.

4.2 Traffic Assessment

4.2.1 Access to the Site

Figure 9 shows the site and its access road in relation to the surrounding road infrastructure. The HWRC has good access from the highway; the Heads of the Valleys Road (A465) via Merthyr Road; and has a separate entrance and exit from the Llanfoist WTS (Figure 10 and Figure 11). A separate entry and exit is provided for traffic accessing the WTS, weighbridge and HWRC service yard (Figure 12).

During the time of the site assessment the site was quiet with no traffic queuing to enter the site. It is understood that the access road is sufficiently long that traffic accessing the site has not queued beyond the roundabout by the adjacent McDonalds outlet and certainly not as far at the Heads of the Valleys Road.

Figure 9: Overview of Llanfoist HWRC and WTS Site showing site access road (Google Maps 08/02/2019)



Figure 10: Llanfoist HWRC Public Entrance showing Site Sign and Traffic Information (E.How 31/02/2019)



Figure 11: Public Exit from the Llanfoist HWRC (E.How 31/02/2019)

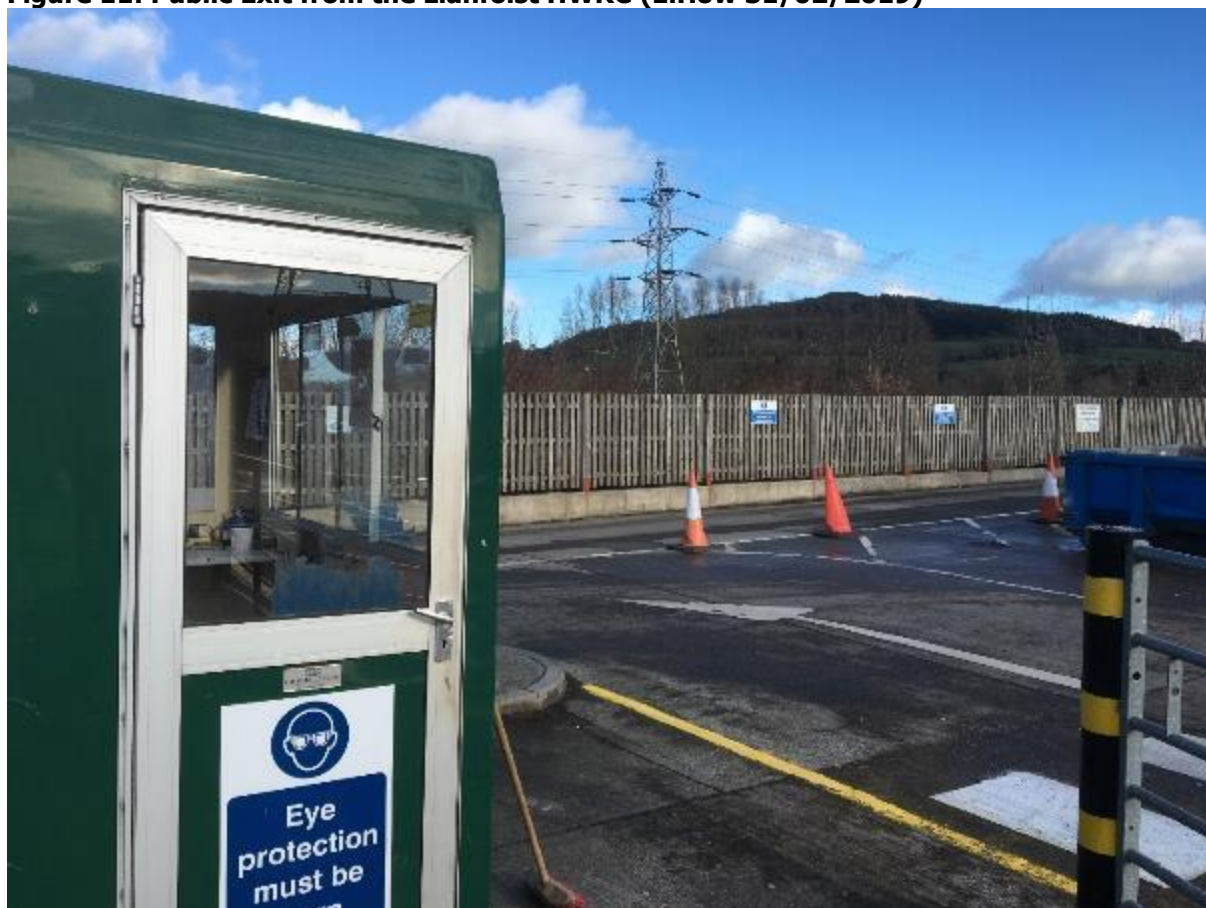


Figure 12: Separate Llanfoist WTS and HWRC Service Entrance / Exit (E.How 31/02/2019)



4.2.2 Site Description

Figure 13 (Viridor Site Survey Plan LLA 001) shows the current layout on the site. The dimensions of the site were not available however the site area (WTS and HWRC) is estimated at 0.97ha.

Figure 14 shows the site consists of an administration area which includes site office and weighbridge, public education centre buildings and staff parking in the north western portion of the site. The Household Waste Recycling Centre public area is located in the north-eastern portion of the site whilst the HWRC service area and WTS materials storage shed and container storage area is located within the red boundary line. The HWRC is of split level design.

[illegible]

Figure 14: WTS Area (Free Map Tools³)



4.2.3 Vehicle Movements

The most hazardous activity on HWRC sites is the movement of vehicles in the proximity of pedestrians. Of all vehicle movements, reversing is the most hazardous. During the visit HWRC traffic flows were observed at first hand.

The HWRC benefits from a dedicated one-way system and separate entry/exit from the WTS. The HWRC is of split-level design and is separated in to public and operational areas.

On entry to the HWRC public area users are able to park to unload their vehicles into a variety of roll-on roll-off 40 cubic yard open top containers (Figure 15).

Dedicated walk ways with protective bollards (Figure 16) and a dedicated disabled parking bay (Figure 17) are provided for HWRC users. Users must reverse either into or out of the parking bays; best practice is to reduce reversing therefore **consideration should be given to providing parallel parking bays. In considering this option it should be recognised that while parallel parking mitigates the risks associated with reversing, their installation will reduce the number of parking spaces which will reduce user throughput. This is likely to increase the risks associated with queuing traffic - especially at peak times, users rushing and being less safe, as well as being less engaged to separate recyclates.**

Containers are provided for the deposit of wood, small electricals, general waste, garden waste, cardboard, plastic, paper (closed ro-ro), bulky waste and scrap metal. Public access to these containers is by walkways of integrated construction with reinforced concrete surfacing (Figure 18). Once a container is full a member of site staff closes the access to the container by placing a temporary barrier across the entrance and directs site users to alternative containers whilst the container is changed over from within the HWRC Yard Area.

³ Free Map Tools, accessed 6th December 2017. <https://www.freemaptools.com/area-calculator.htm>

The site would benefit from the use of lockable gates at the container access points as is in operation at the Five Lanes HWRC.

Figure 15: Main User Area Showing Parking Bays (E.How 31/02/2019)



Figure 16: User Parking and Pedestrian Walkway (E.How 31/02/2019)



Figure 17: Disabled User Parking (E.How 31/02/2019)

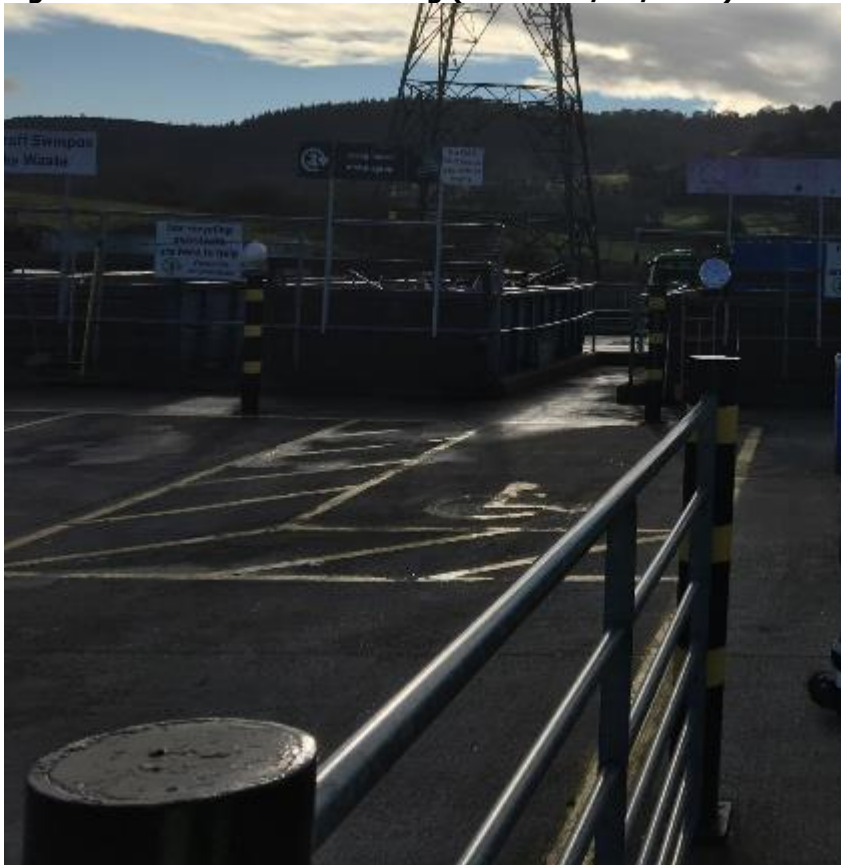


Figure 18: Pedestrian Access to Recycling Containers (E.How 31/02/2019)



A central covered area is provided opposite the roll-on-roll-off containers for users to deposit a range of smaller materials such as textiles, batteries and also plasterboard and large WEEE (Figure 19). Currently there is no dedicated pedestrian route from the parking bays to this area and this combined with the need for users to either reverse in to or out of the parking bays increases the risk to pedestrian from reversing vehicles. **As already noted, consideration should be given to remarking the parking bays to enable parallel parking. Again, as previously noted, in considering this option the risks associated with lower user throughput including those associated with queuing traffic, users rushing and being less safe, should be considered.**

Figure 19: Central Covered Area



It is understood from interview with the operations manager that in order to service these containers site staff close the site at the entrance and allow users already on site to complete their visit before service vehicles enter the site to service this area. Users are not permitted to enter the site until the operation has been completed.

Users exit the HWRC via the one-way system. A 5mph speed limit is in force on the site with signs located at strategic points on site and at the site entrance at a height that ensures that they are not obscured by traffic.

4.3 Operational H&S Review

4.3.1 Location

The HWRC is co-located with the Llanfoist Waste Transfer Station (WTS). The site (HWRC and WTS) is located on a new mixed-use development just south of Abergavenny, off the Heads of the Valleys Road (access via Merthyr Road), Llanfoist, Abergavenny, NP7 9AQ.

4.3.2 Access Road

Metalled roadway with good drainage on approach to site. The road leading to site entrance road also serves a number of other premises. The road terminates at the site. There is a good allowance for vehicles to enter site without impeding the Heads of the Valleys Road.

4.3.3 Opening Times

Llanfoist HWRC is currently operational between 0800 and 1800 7 days a week and closed on Christmas Day, Boxing Day and New Year's Day.

4.3.4 Staffing

The HWRC public area is staffed by two operatives at all times. These staff members assist the public in using the HWRC and control user traffic movements. Additional staff are deployed in the WTS (plant operator) and Site Office (weighbridge operator and admin); there is a Site Supervisor who has overall responsibility for the site.

4.3.5 Site Activities

There is separation and bulking of materials but no processing. The site accepts trade waste and trade recyclables at the WTS only. There is an operational weighbridge on the site and all site activities are carried out within the permit boundary.

4.3.6 Tonnage throughput

The current HWRC tonnage throughput for the year 2017/18 is provided in Table 2.

Table 2: Tonnage Throughput 2017/18

Stream	Tonnes
Recycling	
Automotive batteries	11
Card	120
Mixed cans	5
Mixed glass	34
Other Scrap metal	232
Paper	38
Plastics	1
Textiles & footwear	35
Mineral Oil	5
Mixed tyres	
Paint	2
Plasterboard	147
Vegetable Oil	
WEEE - TVs & Monitors	30
WEEE - Fluorescent tubes and other light bulbs	0
WEEE - Fridges & Freezers	48
WEEE - Large Domestic App	33
WEEE - Small Domestic App	113
Wood	774
Green garden waste only	1,289

Stream	Tonnes
Rubble	1,358
Sub Total	4,456
Re-Use	
Gas bottles	4
Textiles & footwear	
Books	4
Sub Total	8
Residual	
Civic amenity sites waste : Household	1,946
Sub Total	1,946
Total	6,411
Re-use & Recycling Rate (Including plasterboard & rubble)	70%
% residual	30%

4.3.7 Neighbours

The site is in an edge of town location with a number of immediate neighbours including a residential home for the elderly, hotel, commercial properties and retail outlets.

4.3.8 Traffic Separation

Traffic separation is currently in place on the site. There is segregation of HWRC user vehicle from HWRC service vehicles via site design (split level) and via the deployment of a traffic management system and traffic bollards.

4.3.9 Dust, Noise & Odour

No dust or odour problems were observed.

4.3.10 Site Surface

The vehicular and pedestrian areas and areas of waste storage are laid to asphalt and reinforced concrete hard standing. No pot-holes or areas of concern were noted.

4.3.11 Site Drainage

Drainage was not observed to be an issue on the site. Review of the site draining plan indicates that suitable and sufficient draining is in place on the site.

4.3.12 User Pedestrian and Vehicle Movements

Clear signage at the site entrance together with road markings including directional arrows and parking bays are provided. **The markings for the parking bays were worn in places and would benefit from being repainted.**

Pedestrian and vehicles were adequately separated in the main area of the site by prominent black and yellow bollards which were located at the end of each parking bay.

The arrangement of the parking bays means that site users must either reverse into or out of a parking bay. **Consideration should be given to providing parallel parking bays instead. In considering this option the risks associated with lower user throughput including those associated with queuing traffic, users rushing and being less safe, should be considered**

4.3.13 General Site House Keeping

The site was clean and tidy with no windblown litter observed on verges, boundary fencing or under/behind containers.

4.3.14 Site Signage

With the exception of the sign for the small electricals container, in general, both off-site and on-site signage was observed to be clear, in good condition and at an appropriate height so that it was not obscured by traffic. **The sign for the small electricals container should be replaced.**

4.3.15 Containers and Storage Areas

Various containers are provided for the deposit of a range of materials. All containers were observed to be in good serviceable condition.

A covered storage area for large domestic appliances and containers for smaller containers such as textile banks was provided which was observed to be in a tidy state.

4.4 Conclusions

The site is a well-managed modern HWRC site which was observed to be serving the needs of users whilst providing a safe environment for both users and site staff.

The aspects of the site that have the potential to have a negative impact on the Health and Safety on-site are:

- Site users reversing into/out of the parking bays.
- Site users gaining access to the rollon-rolloff containers when they are being changed over.

4.5 Recommendations

- The site would benefit from having the current parking bays repainted, ideally to enable parallel parking. However, in considering this option the risks associated with lower user throughput including those associated with queuing traffic, users rushing and being less safe, should be considered.
- The site would benefit from the installation of gates on the entrances to the rollon-rolloff container walkways as is the case at the Five Lanes HWRC. This additional security would provide site staff with additional flexibility if they were required to attend another area of the site whilst a container was being changed and it reinforces to users that the container is closed for use.

5.0 Mitchel Troy HWRC

5.1.1 Site Visit

A site visit was conducted on the 31st of January 2019 between 14:15 and 15:00 by Emma How, Specialist Technical Advisor, Eunomia Research & Consulting to assess the site in terms of site Operational Health and Safety (OH&S) systems and practices. Emma was accompanied Anne Tucker (Waste Data Flow Manager, Monmouthshire County Council); and Pete Somer (Operations Manager, Viridor).

As a part of the site visit conversations were conducted with relevant staff to understand issues relevant to the site, and to understand what operational changes might already be being considered going forwards.

Observations were made which where possible which included:

- how householders use the site;
- material deposit, storage and dispatch;
- use of plant and equipment;
- how traffic and plant movements are managed.

The site visit also took into account site related activities outside of the permitted boundary such as:

- traffic/pedestrian movements;
- site access (user and service vehicles); and
- how traffic / pedestrian movements are managed.

5.1.2 Data Gathering

The observational information gathered during the site visit was assessed alongside a review of the information provided by the Council and Viridor. Based on initial discussions with the Council at the project inception meeting, the information provided for the Mitchel Troy HWRC site included:

- Site Survey – Mitchel Troy (Site Survey of 13/06/2011);
- LRS Site Survey – Mitchel Troy (Mitchel Troy HWRC, Site Report 23/01/2014);
- Mitchel Troy HWRC Operations, Development and Management Plan (Viridor Permitting Team, November 2012);
- Site Emergency & Safety Plan (Viridor TRO 2000);
- Mitchel Troy HWRC site permit and variation notice (EPR/DP3099FV/V005); and
- Mitchel Troy HWRC Traffic Management Plan (Viridor, 08/09/2017).

On-site observations made during the site visit were considered in the light of current best practise on HWRC operations and safety and in the context of the site characteristics (physical and operational constraints)⁴. Best practice characteristics of other sites were compared to the notes and photographs taken during the site visit.

A key element of site safety is the management of the pedestrian movements and traffic flows in relation to site patrons both public and commercial, along with the movement of large vehicles and site plant. The interaction between all of these was observed and reviewed, and has been commented upon.

All of the on-site operations including the handling of materials by the public and site staff, plant and equipment operation, and arrangements for the removal of materials were assessed for their operational health & safety implications. Where possible this was done by

⁴ WASTE 26 – Managing Health & Safety at Civic Amenity Sites – Issue 1 2015; <https://wishforum.org.uk/wp-content/uploads/2017/02/WASTE-26-.pdf>

direct observation however times constraints meant that much of the information relating to plant and equipment operation was obtained via interviews with staff.

5.1.3 Report

The intention of this report is to provide a document which draws together the elements of the project - the site visit and review of available documents – to provide a number of potential learning points and recommendations which the council should take into account as it considers the future options for HWRC provision across the county.

5.2 Traffic Assessment

5.2.1 Access to the Site

Figure 20 shows the site and its access road in relation to the surrounding road infrastructure.

The HWRC has adequate access from the highway, the B4293, and has a separate entrance and exit from the adjacent Highways Depot.

During the time of the site assessment the site was quiet with no traffic queuing to enter the site. It is understood that the access road is not sufficiently long to allow traffic accessing the site to queue and that during site operations such as container servicing and compaction (using the roller-packer) users are turned away from the site.

Figure 21 shows the top set of access gates to the site; a further set of gates are located at the beginning of the access road. These gates enable the site to be closed to users when site operations are being undertaken during opening hours.

Figure 20: Overview of Mitchel Troy HWRC showing site access road (Google Maps 11/02/2019)



Figure 21; Top Entrance Gate (E.How 31/01/2019)



5.2.2 Site Description

Figure 22 (Viridor Site Safety Plan TRO 2000) shows the current layout and path of traffic on the site. The site is arranged in a horse-shoe shape with a central operational area which houses a rail operated roller-packer machine.

The site is of split level design which enables users to access the six rollon-rolloff containers from the top section of the site. There is a Highways Depot to the west and below the site.

5.2.3 Vehicle Movements

The most hazardous activity on HWRC sites is the movement of vehicles in the proximity of pedestrians. Of all vehicle movements, reversing is the most hazardous. During the visit HWRC traffic flows were observed at first hand.

The HWRC benefits from a dedicated one way system. Figure 22 shows in-bound traffic flows in blue whilst out-bound traffic flows are shown in red.

Users enter the site via the dedicated access road and continue past the plasterboard and rubble containers are the roller-packer machine before continuing up the ramp to upper level of the site where roll-on roll-off 40 cubic yard open top containers are provided for the deposit of scrap metal, wood, cardboard, general waste and garden waste (Figure 25).

Users may also park on the lower area of the site, in the area in front of the roller-packer machine (Figure 23) to access containers in the pedestrian area of the site which is located to the west of the one-way system.

Parking bays are marked out for users in both the lower and upper sections of the site. The configuration of parking bays in the lower parking area require users to reverse either into or out of the parking bay. Users are encouraged to reverse park to reduce the risks associated in reversing out into the flow of traffic. Parking bays in the upper area of the site are marked out parallel to the traffic flow.

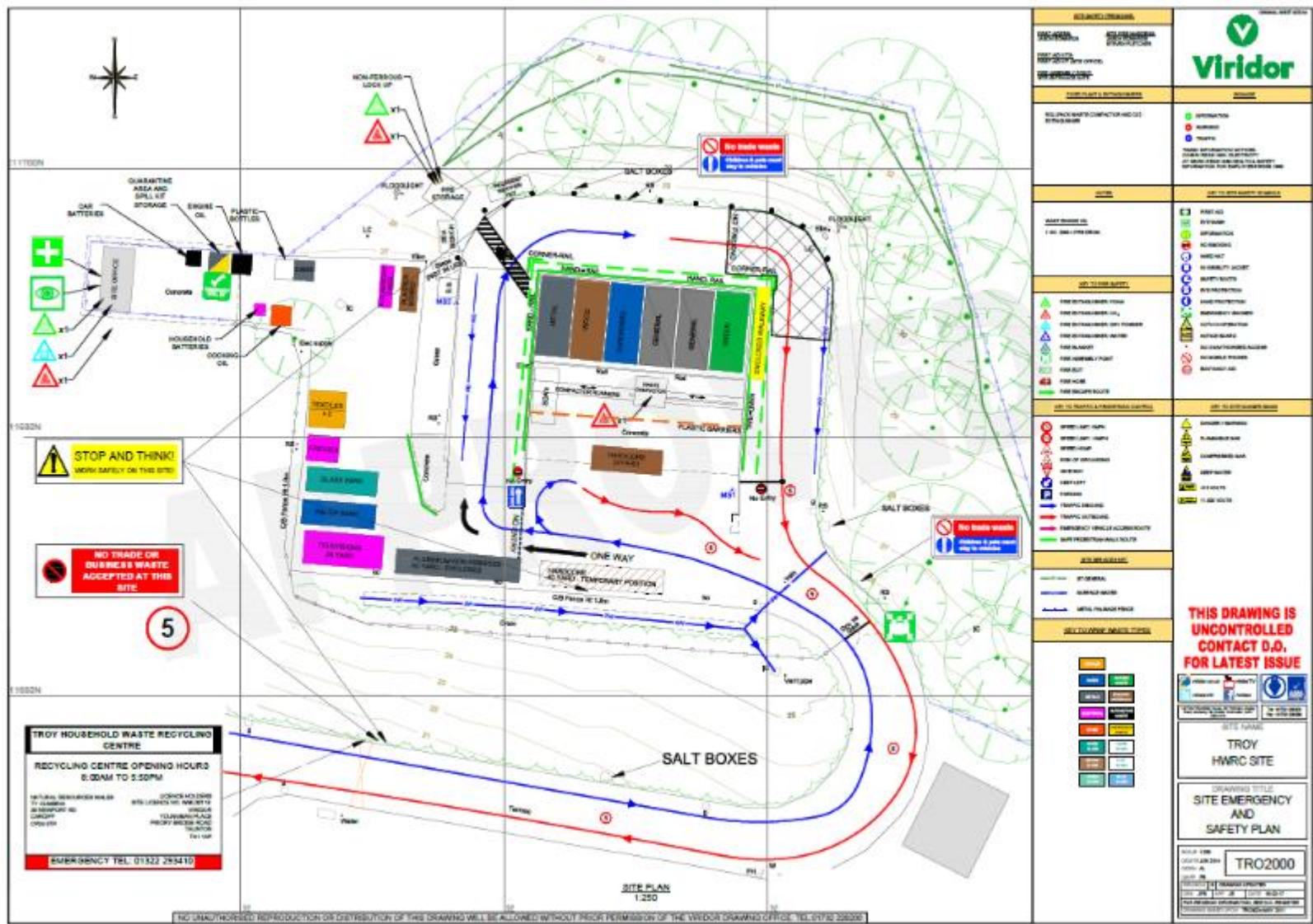
Public access to all containers is either within the pedestrian area (western area of the site) or mainly via marked walkways. Some areas of the site such as the plasterboard and rubble containers have no segregated marked walkways. However, the risk to users is considered to be low because it is likely that they will be shielded by the vehicle they are unloading.

Once a container is full or the roller-packer (Figure 24) is required to compact materials in one or more of the rollon-rolloff containers, a member of site staff prevents further users from accessing the site. Once the site is empty the gates are closed and the required operation undertaken.

It is understood that the site is closed between four and five times per day at peak times for compaction to take place. This operation can take up to 45 minutes to complete as the roller-packer machine, which was installed in 1993, operates slowly. In addition, between three and four container changes per day can be required at peak times; taking between 25 and 30 minutes to complete each time. Where possible these two operations are undertaken at the same time to reduce down-time however there can still be a considerable amount of site down time during peak times. This causes frustration for users as the nature of the surrounding road infrastructure means that it is unsafe for traffic to queue leading to staff turning users away from the site. Downtime therefore needs to be minimised as much as possible.

Users exit the HWRC via the one-way system. A 5mph speed limit is in force on the site with signs located at strategic points on site and at the site entrance at a height that ensures that they are not obscured by traffic.

Figure 22: Mitchel Troy HWRC Site Safety Plan (Viridor TRO 2000)



**Figure 23: User vehicles Parked in front of the Roller-Packer machine (to the right)
(E.How 31/01/2019)**



Figure 24: Roller-packer Machine Located in the Centre Service Area (E.How 31/01/2019)



Figure 25: User Vehicles Parked in Parallel Bays and Dedicated Pedestrian Walkway (E.How 31/01/2019)



5.3 Operational H&S Review

5.3.1 Location

The HWRC is located on land at Mitchel Troy (national grid reference SO 50764 11682). The site lies to the north east of the village of Mitchel Troy and to the south-east of the town of Monmouth along the B4293 road.

5.3.2 Access Road

Metalled roadway (B4293) with adequate drainage. The road to the site rises steeply from the B4293 and takes the user up into the site via a sharp left-hand bend. The road provides access for both users and service vehicles; the road terminates at the site.

The allowance for vehicles to enter the site without impeding the B4293 is insufficient. There is a bend on the B4293 at the point where the site access road leaves/joins it and this together with the current speed limit of 60mph means that turning right into the access road when travelling from the direction of Monmouth can be challenging.

5.3.3 Opening Times

Mitchel Troy HWRC is currently operational between 0800 and 1800 7 days a week and closed on Christmas Day, Boxing Day and New Year's Day.

5.3.4 Staffing

The HWRC is staffed by two operatives who are on site during operating hours. The Area Charge Hand who looks after both Mitchel Troy and Usk HWRCs is on hand throughout the day. The staff members assist the public in using the HWRC and control user traffic movements.

5.3.5 Site Activities

There is separation and bulking of materials but no processing. Trade waste is not accepted on the site and there is no weighbridge. All site activities are carried out within the permit boundary.

5.3.6 Tonnage throughput

The current HWRC tonnage throughput for the year 2017/18 is provided in Table 3.

Table 3: Tonnage Throughput 2017/18

Stream	Tonnes
Recycling	
Automotive batteries	11
Card	110
Mixed cans	0
Mixed glass	42
Other Scrap metal	153
Paper	25
Plastics	2
Textiles & footwear	
Mineral Oil	1
Mixed tyres	
Paint	1
Plasterboard	60
Vegetable Oil	
WEEE - TVs & Monitors	21
WEEE - Fluorescent tubes and other light bulbs	1
WEEE - Fridges & Freezers	42
WEEE - Large Domestic App	33
WEEE - Small Domestic App	97
Wood	455
Green garden waste only	698
Rubble	282
Sub Total	2,033
Re-Use	
Gas bottles	3
Textiles & footwear	21
Books	3
Sub Total	27
Residual	
Civic amenity sites waste : Household	1,859
Sub Total	1,859
Total	3,919
Re-use & Recycling Rate (Including plasterboard & rubble)	53%

Stream	Tonnes
% residual	47%

5.3.7 Neighbours

The site is in a rural location with no immediate neighbours except for the adjacent Monmouthshire Council Highways Depot.

5.3.8 Traffic Separation

Traffic separation is currently in place on the site. There is segregation of HWRC user vehicle from HWRC service vehicles via site design (split level area) and via the deployment of a traffic management system.

5.3.9 Dust, Noise & Odour

No dust or odour problems were observed.

5.3.10 Site Surface

The vehicular and pedestrian areas and areas of waste storage are laid to asphalt and reinforced concrete hard standing. No pot-holes or areas of concern were noted.

5.3.11 Site Drainage

Drainage was not observed to be an issue on the site. A drainage plan for the site was not available however the Viridor Operations Manager believes that suitable and sufficient drainage is in place on the site.

5.3.12 User Pedestrian and Vehicle Movements

Clear signage at the site entrance together with road markings including directional arrows, parallel parking bays (along the top section of the site) and pedestrian walkways. **These markings are worn in places and would benefit from being repainted.**

Pedestrian and vehicles were not adequately separated in the main areas of the site – there were no traffic barriers between pedestrians and user vehicles. **Consideration should be given to installing traffic barriers or bollards to separate pedestrians from user vehicles.**

There is limited separation between site users and the roller-packer machine which is located in the central service area of the site. This service area is cordoned off by movable traffic barriers but it is difficult to see how an alternative solution could be installed without impeding the timely changeover of the rollon-rolloff containers. In addition the configuration of the rollon-rolloff containers for user loading means that the roller-packer is required to redistribute the contents to allow the containers to be filled evenly. Consideration should be given to alternative arrangements with regards to how these containers are filled. Clearly the current container configuration makes the best use of the available space, however to minimise down-time associated with the use of the roller-packer (up to 5 x 45 minutes per day at peak times) and to reduce the need to turn users away from the site **consideration should be given to replacing the roller-packer machine with compaction units and closed rollon-rolloff containers for general waste, cardboard, garden waste and wood and locating the scrap metal container to the last container position, currently the garden waste container, where its long side can be accessed by the yellow metal walkway already provided.**

An alternative option would be for a modern roller-packer machine to be installed that is capable of operating at a quicker speed however there would still be down time associated with its use.

5.3.13 General Site House Keeping

The site was clean and tidy with no windblown litter observed on verges, boundary fencing or under/behind containers.

5.3.14 Site Signage

In general, both off-site and on-site signage was observed to be clear, in good condition and at an appropriate height so that it was not obscured by traffic.

5.3.15 Containers and Storage Areas

Various containers are provided for the deposit of a range of materials. All containers were observed to be in either reasonable or good serviceable condition.

5.4 Conclusions

The site is a well-managed but suffers from space constraints that mean that at peak times it is failing to meet the needs of users.

The aspects of the site that have the potential to have a negative impact on the Health and Safety on-site are:

- The potential for site users to park and or queue up at the bottom gate or along the B4293 whilst the site is closed for operational reasons; and
- Site users reversing into the flow of traffic from the parking bays in front of the roller-packer.

5.5 Recommendations

- The site would benefit from having compaction units on the general waste, cardboard, garden waste and wood containers and the relocation of the scrap-metal container to the current location of the garden waste container. Although an alternative option would be for a modern roller-packer machine to be installed that is capable of operating at a quicker speed there would still be down time associated with its use.
- In addition, the site would benefit from having the road markings refreshed especially at the lower section of the site where they are most worn.

6.0 Usk HWRC

6.1.1 Site Visit

A site visit was conducted on the 31st of January 2019 between 11:45 and 15:30 by Emma How, Specialist Technical Advisor, Eunomia Research & Consulting to assess the site in terms of site Operational Health and Safety (OH&S) systems and practices. Emma was accompanied Anne Tucker (Waste Data Flow Manager, Monmouthshire County Council); Pete Somer (Operations Manager, Viridor) and Jason Edwards (Site Supervisor, Viridor).

As a part of the site visit conversations were conducted with relevant staff to understand issues relevant to the site, and to understand what operational changes might already be being considered going forwards.

Observations were made which where possible, which included:

- how householders use the site;
- material deposit, storage and dispatch;
- use of plant and equipment;
- how traffic and plant movements are managed.

The site visit also took into account site related activities outside of the permitted boundary such as:

- traffic/pedestrian movements;
- site access (user and service vehicles); and
- how traffic / pedestrian movements are managed.

6.1.2 Data Gathering

The observational information gathered during the site visit was assessed alongside a review of the information provided by the Council and Viridor. Based on initial discussions with the Council at the project inception meeting, the information provided for the Usk HWRC site included:

- Usk Site Boundary Plan (USK TS 14000);
- LRS Site Survey – Usk (Usk HWRC, Site Report 23/01/2014);
- Usk HWRC Operations, Development and Management Plan (Viridor Permitting Team, August 2014);
- Site Emergency & Safety Plan (Viridor USK 2000); and
- Usk HWRC site permit and variation notices (various)

On-site observations made during the site visit were considered in the light of current best practise on HWRC operations and safety and in the context of the site characteristics (physical and operational constraints)⁵. Best practice characteristics of other sites were compared to the notes and photographs taken during the site visit.

A key element of site safety is the management of the pedestrian movements and traffic flows in relation to site patrons both public and commercial, along with the movement of large vehicles and site plant. The interaction between all of these was observed and reviewed, and has been commented upon.

All of the on-site operations including the handling of materials by the public and site staff, plant and equipment operation, and arrangements for the removal of materials were assessed for their operational health & safety implications. Where possible this was done by

⁵ WASTE 26 – Managing Health & Safety at Civic Amenity Sites – Issue 1 2015; <https://wishforum.org.uk/wp-content/uploads/2017/02/WASTE-26-.pdf>

direct observation however times constraints meant that much of the information relating to plant and equipment operation was obtained via interviews with staff.

6.1.3 Report

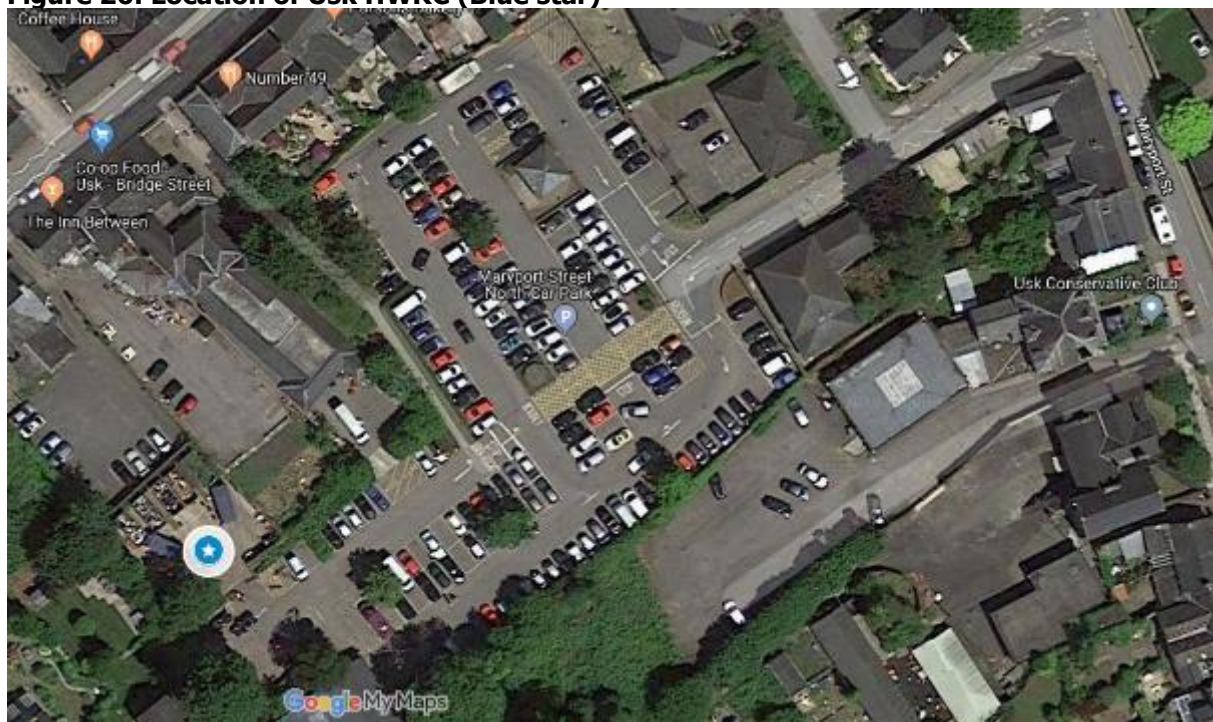
The intention of this report is to provide a document which draws together the elements of the project - the site visit and review of available documents – to provide a number of potential learning points and recommendations which the council should take into account as it considers the future options for HWRC provision across the county.

6.2 Traffic Assessment

6.2.1 Access to the Site

Figure 26 shows the site and its access road via the car-park in relation to the surrounding road infrastructure. The yellow area of hatching has been provided to enable HGVs servicing the site to leave through the car park using a more direct and safer route than following the car-park one-way system.

Figure 26: Location of Usk HWRC (Blue star)



The HWRC has adequate access from the highway; Maryport Street; although this is through the public carpark using its one –way system.

During the time of the site assessment the site was quiet with no traffic queuing to enter the site. It is understood that the car-park one-way system is sufficient to accommodate queues from the HWRC at peak times without users queuing back out on to Maryport Street.

Figure 27 shows the new access gates to the additional operational area within which users can park their vehicles to unload before entering the site on foot.

These gates also enable the site to be closed to users when site operations are being undertaken during opening hours; the additional area enables HGVs to manoeuvre more easily.

Figure 28 shows the original site entry/exit which is now a pedestrian access only.

Figure 27: External Site Gates looking towards the public car-park. (E.How 31/01/2019)



Figure 28: Usk Site Pedestrian Access to the Permitted Area



6.2.2 Site Description

Figure 29 (Viridor Site Safety Plan USK 2000) shows the current layout and path of service traffic on the site.

Users enter the site on foot carrying their materials. An additional member of staff has been deployed to assisted users with their materials so that there are now two staff members available at all times.

Containers are arranged around the edges of the site with access to the roll-on roll-off 40 cubic yard open top containers for garden waste, wood, general waste and scrap metal all accessed via stepped metal gantries (Figure 30). The surface of the steps and walk ways of these gantries have recently been upgraded from perforated metal treads to solid checker-plate treads to reduce the risk of users slipping, tripping or falling. Whilst this is an obvious improvement over the previous material **consideration should be given to incorporating metal risers into the gaps between the treads** to prevent feet being caught between them when ascending the stairway.

Due to space constraints the site is unable to accommodate materials such as rubble or plasterboard and this material is currently not accepted.

Figure 29: Usk HWRC Site Plan

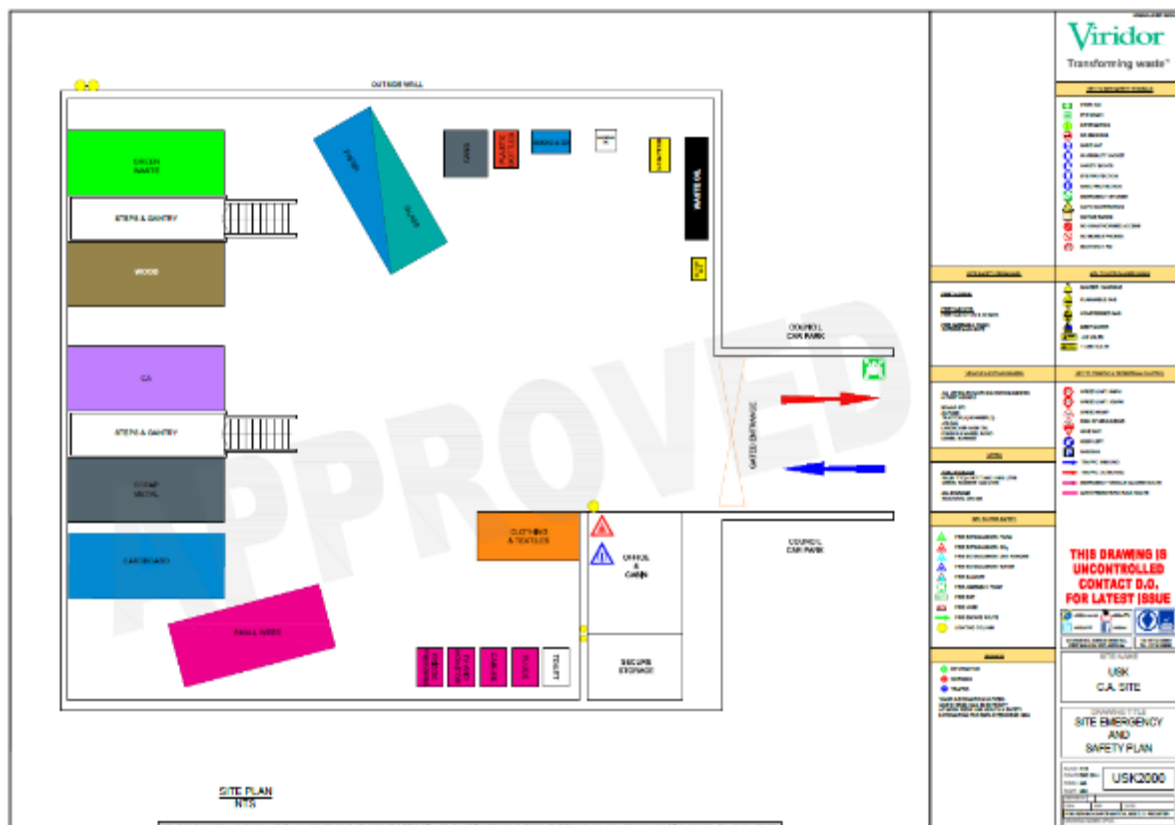


Figure 30: Containers Accessed via Stepped Metal Gantries (E.How 31/01/2019)



6.2.3 Vehicle Movements

The most hazardous activity on HWRC sites is the movement of vehicles in the proximity of pedestrians. Of all vehicle movements, reversing is the most hazardous. During the visit HWRC traffic flows were observed at first hand.

The HWRC is a pedestrian only site with users parking in the newly designated parking area just outside of the permitted boundary. Marked parking bays are provided in the additional operational area however they are now faded and require refreshing (Figure 31).

Figure 31: Marked Parking Bays in the Additional Operational Area



Once a container is full a member of site staff prevents further users from accessing both the additional operational area of the site and the site itself. Once the site and the additional operational area are empty the service vehicle enters the additional operational area and the gates are closed and locked and the required operation undertaken.

It is understood that the site is closed between two and three times per day at peak times for container exchanges to take place. This operation can take up to 20 minutes for rollon-rolloff containers. There can be a considerable amount of site down time during peak times which causes queuing in the public carpark. It is understood from conversation with the Site Supervisor and Operations Manager that only empty containers are manoeuvred outside of the permitted area and that all waste movements are contained within the permitted area.

Once the operation has been completed the service vehicle leaves the site and travels across the carpark via the designated HGV exit lane.

A 5mph speed limit is in force in the public car park and in the additional operational area with signs located at strategic points and at a height that ensures that they are not obscured by traffic.

6.3 Operational H&S Review

6.3.1 Location

The HWRC is located on land at Usk (national grid reference SO 37557 00738). The site lies to the rear of the Maryport Street (North) Carpark.

6.3.2 Access Road

Access to the site is directly through the Maryport Street (North) car park which has a metalled surface. User traffic uses the carpark's one-way system to enter and exit the site. A dedicated exit route for site service vehicles has been installed within the carpark. Drainage details for the carpark are not available although surface drains were observed during the site visit.

The allowance for vehicles to enter the site without impeding the flow of the carpark is insufficient. User traffic queues back into the car-park at peak times. However, traffic queues do not reach Maryport Street.

6.3.3 Opening Times

Usk HWRC is currently operational between 0800 and 1800 7 days a week and closed on Christmas Day, Boxing Day and New Year's Day.

6.3.4 Staffing

The HWRC is staffed by two operatives who are on site during operating hours. The Area Charge Hand who looks after both Mitchel Troy and Usk HWRCs is on hand throughout the day. The staff members assist the public in using the HWRC and control user traffic movements.

6.3.5 Site Activities

There is separation and bulking of materials but no processing. Trade waste is not accepted on the site and there is no weighbridge on site.

All site activities are carried out within the permit boundary including changing of roll-on-roll-off containers.

6.3.6 Tonnage throughput

The current HWRC tonnage throughput for the year 2017/18 is provided in Table 4.

Table 4: Tonnage Throughput 2017/18

Stream	Tonnes
Recycling	
Automotive batteries	2
Card	118
Mixed cans	
Mixed glass	47
Other Scrap metal	164
Paper	54
Plastics	2
Textiles & footwear	
Mineral Oil	5
Mixed tyres	20
Paint	7
Plasterboard	
Vegetable Oil	
WEEE - TVs & Monitors	37
WEEE - fluorescent tubes and other light bulbs	1
WEEE - Fridges & Freezers	45

Stream	Tonnes
WEEE - Large Domestic App	43
WEEE - Small Domestic App	86
Wood	467
Green garden waste only	366
Rubble	
Sub Total	1,465
Re-Use	
Gas bottles	2
Textiles & footwear	16
Books	5
Sub Total	22
Residual	
Civic amenity sites waste : Household	1,608
Sub Total	1,608
Total	3,095
Re-use & Recycling Rate (Including plasterboard & rubble)	48%
% residual	52%

6.3.7 Neighbours

The site is the centre of the town of Usk. Private car parking for adjacent businesses is situated to the north of the site; the Maryport (North) public car park which is owned and operated by Monmouthshire Council is situated to the east of the site; domestic and commercial premises are located to the west of the site; and an area formerly designated as part of the Maryport (North) car park is located to the south of the site.

6.3.8 Traffic Separation

During 2017 traffic separation was improved on the site with the designation of the car parking area directly to the south of the site re-designated as parking for HWRC site users only and gates installed to delineate the new area from the rest of the public car-park. Site users may park in one of six designated user spaces and carry their items onto the site. Figure 32 shows the current permitted area of the site in red whilst the extended area of operation (additional operational area) is shown in green.

Figure 32: Usk Site Viridor Plan (USK 2000)



6.3.9 Dust, Noise & Odour

No dust or odour problems were observed.

6.3.10 Site Surface

The vehicular and pedestrian areas and areas of waste storage are laid to asphalt and reinforced concrete hard standing. A number of areas of concern were noted in the additional operational area which accommodates the parking bays for users to park whilst they off load their materials and walk them into the site. Consideration should therefore be given to resurfacing the additional operational area.

Figure 33: Area within the Designated Parking Area that require Resurfacing



6.3.11 Site Drainage

Drainage is understood to be of concern. A drainage plan for the site was not available. In addition it is understood that the drainage channel in the designated user carpark, which is currently blocked, will be filled in by the council thus reducing drainage capacity.

The Viridor Operations Manager believes that there is an interceptor which drains into the car-park drainage system however the car-park drainage system is likely to drain to a surface water drainage system and not to a foul sewer system (i.e. public sewer). Schedule C. 6 of the site permit states that:

All drainage from surfaced areas shall discharge via a trapped gulley system to an appropriately sized oil/petrol interceptor. Discharge from the interceptor shall be either to a public sewer or via a sub-soil irrigation system laid as shallow a depth as possible. The design of the soakaway must conform to B.S.6297 and no part of the soakaway system is to be sited within 10 meters of any watercourse. The oil / petrol phase of the discharge shall be disposed of at a waste disposal site, licenced to receive such waste⁶.

Drainage of surface water from the HWRC directly into the surface water drainage system would not conform to the requirements as set out in the site permit and provided above.

Therefore, further investigation to determine the status of the drainage arrangement should be undertaken.

⁶ Usk CA Site, Waste Management Licence 4/93

6.3.12 User Pedestrian and Vehicle Movements

Clear signage at the site entrance to the site indicate that the site accepts foot traffic only. On arrival users are directed by signs to the adjacent designated parking area.

6.3.13 General Site House Keeping

The site was clean and tidy with no windblown litter observed on verges, boundary fencing or under/behind containers.

6.3.14 Site Signage

In general, both off-site and on site signage was observed to be clear, in good condition and at an appropriate height so that it was not obscured by traffic.

6.3.15 Containers and Storage Areas

Various containers are provided for the deposit of a range of materials. All containers were observed to be in either reasonable or good serviceable condition.

6.4 Conclusions

The site is a well-managed but suffers from space constraints that mean that at peak times it is failing to meet the needs of users.

The aspects of the site that have the potential to have a negative impact on the Health and Safety on-site are:

- Users having to queue around the public car-park at peak times when containers are being serviced;
- The risks associated with the use of stepped metal gantries to access waste containers remains although it has been reduced with the upgrading of the gantry surface and deployment of an additional staff member to assist users;
- Risk associated by users reversing into/out of the parking bays in the additional operational area;
- The uneven surface of part of the additional operational area; and
- Although not a Health & Safety issue per se the status of the drainage arrangements for the site is a concern with regards to compliance with the site permit.

6.5 Recommendations

- The constraints of the site mean that it will not be possible to remove the stepped gantries if the site continues to use the current complement of containers and, deploying smaller containers that are accessible from ground level will necessitate an increase in the number of container changes required which increase the risks associated with HGV movements through the public car-park and users queuing. However, it is noted that 52% of waste deposited at the site is residual waste therefore by removing the option for users to deposit this material at the site the tonnage throughput and therefore the number of users will be reduced thus reducing the overall risks associated with the site.
- Resurfacing and remarking the parking area in the additional operational area.
- Determining the arrangements for drainage on site and the potential for improving these to ensure compliance with the site permit.

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