

NEW HOUSEHOLD WASTE RECYCLING CENTRE AND RE USE FACILITY

REPORT OF DIRECTOR OF CITY OPERATIONS

AGENDA ITEM: 9

PORTFOLIO: ENVIRONMENT (COUNCILLOR BOB DERBYSHIRE)

Reason for this Report

1. To seek approval of the report recommendations on the future of the re-organisation of the Household Waste Recycling Centres and a Re Use Facility in Cardiff.

Background

2. Cardiff Council has a statutory responsibility to the residents of Cardiff to provide Household Waste Recycling Centres (HWRC's). The Welsh Governments (WG) collection and infrastructure blueprints state that HWRCs should achieve 80% recycling performance. To 2013/14 the HWRCs performance was 61% and this improved to 66% 2014/15. The approved Recycling and Waste Management Strategy 2015 (approved by Cabinet April 2015) identified further steps that the Council should take to achieve the required performance.
3. Phase 2 of that strategy makes clear that new markets and reuse options must be found to deliver an additional 5000 tonnes of recycle, by:
 - a. Implementing the two larger HWRCs sites; with stronger controls for cross boundary visitors, van users and to reallocate resource to provide assistance to the public to recycle more.
 - b. Increasing the reuse potential at the HWRCs and across the service.
 - c. Securing new recycling markets such as carpets, mattresses and hygiene waste to recycling.
4. This Cabinet report explains the options and proposals for the future of Cardiff's Household Waste Recycling Centres and a Re-Use Facility, these include:
 - Details of the final stage of implementing the decision of the 2014/15 Budget Report that approved that the number of

Household Waste Recycling Centres would reduce from four sites to two larger sites, by the Spring of 2016.

- Details of the consultation and decision making process around deciding on the location of the second larger Household Waste Recycling Centre for Cardiff, i.e. reviewing the options around the potential Wedal Road and Lamby Way sites.
- Proposals around the implementation of seasonal opening hours as approved during the 2015/16 budget report February 2015. The current HWRC sites operate twelve hours per day, 363 days per year. The actual hours proposed to operate these sites are: twelve hours a day in the Summer and eight hours a day in the Winter, when demand is lower. Implementing these opening hours would mirror the approach taken by most of the other Welsh local authorities and assist in achieving the planned 2015/16 savings.
- Plans to reduce treatment and disposal costs whilst expanding income and commercial options for Household Waste Recycling Centres in Cardiff, may be implemented.
- Proposals to implement further recycling improvements, including the provision of a re-use facility, whilst considering how Cardiff residents and those from outside the Cardiff area are able to access the Household Waste Recycling Centres and the Commercial waste transfer stations.

Issues

Site Location

5. A capital budget has been approved for the construction of the new larger HWRC site. The potential new larger site was initially assessed for viability at the current Parks operational site at Wedal Road.
6. Following the required environmental assessments and pre-planning consultation for the new larger site, a number of resident concerns were raised around the proposed increased numbers of site users, the associated additional volumes of traffic inside and outside of the site, operational noise and why the new site is not located in a non-residential area like the Bessemer close HWRC. Some concerns have been raised not only during the recent assessments, but also over the years regarding the current smaller HWRC at Wedal Road site.
7. Although mitigations to these issues could be designed and managed within the new larger site, a review of an alternative location at the Recycling Waste Management Services main depot at Lamby Way, Rumney, was undertaken to re-explore whether a viable alternative was feasible.

8. Therefore, an alternative site solution, at Lamby Way has been appraised on engineering, environmental, planning and waste permitting matters as follows:
9. The new Wedal Road HWRC Pros's and Cons:
 - a) The site footprint is large enough to accommodate the site design requirements. Site operations would have 20 recycling waste and large skips plus other smaller recycling containers.
 - b) The sites location is 100 metres east of the current Wedal Road HWRC and so impact of location for the existing site users is minimal to the current site.
 - c) A new planning application would be required for a change of use for the new site for waste management activities.
 - d) As part of the new planning application requirement, the environmental impacts of the new site proposal were assessed for Air Quality Assessment, Bat Survey, Ecological Survey, Landscape Review, Noise Acoustic Assessment and Traffic Assessment.
 - e) It is clear that local residents would resist a new larger facility based on the historic noise and traffic complaints of the current smaller site. This would lead to a delay in the planning process and delay the project completion date and subsequent savings.
 - f) A new full waste management permit application would be required.
 - g) The current and new site at Wedal Road would require the waste and recycling arising to be collected and transported to Lamby Way. When skips are full, site closures result and residents are directed to other facilities.
10. A new Lamby Way HWRC Pro's and Con's
 - a) The site footprint is large enough to accommodate the site design requirements. Site operations would have 20 recycling and waste large skips plus other smaller recycling containers.
 - b) The site's location is adjacent to the current Lamby Way HWRC and so impact of location for the current site users is nil.
 - c) A Traffic Assessment was completed with no further action required to the current infrastructure; traffic impact is therefore negligible on current flows.
 - d) The new HWRC would replace an existing HWRC and form part of the existing larger waste and recycling facilities at Lamby Way, a planning amendment to the current planning permission would be required, rather than a full new planning permit.

- e) In line with d) above, a waste management permit variation would be required rather than a full new permit, which would be a shorter timeframe and lower cost.
 - f) Site operations based at Lamby Way would result in the waste and recycling being brought to the main treatment depot directly and would reduce operational costs and eliminate the risks of site closures due to skips being full. Operational continuity and efficiency is greatest in this location.
 - g) There are no adjacent residents - the nearest residents are Brachdy Lane and Pengam green who are a kilometer or more away and there are no identified traffic impacts to business' in the area.
 - h) The site is further away from some users of Wedal Road. However, the travel time addition is approximately 10 minutes, depending upon time of day, this could compare to previous experience by site users of long queues at Wedal Road.
 - i) Developing this location as opposed to Wedal Road Parks depot would offer some relief to the traffic and noise issues experienced around Wedal Road and Fair oak Road junctions.
11. On the basis of overall project deliverability and risk and ease of access, it is proposed that the Lamby Way site is the preferred site location for the new HWRC that would be operational Spring 2016. The existing Parks depot will continue to be evaluated for its longer term future use as part of a wider asset rationalisation programme assessing all operational depots across City Operations and taking account of potential strategic uses for infrastructure needs of the City.
12. Subject to the agreement of the recommendations of this report, detailed communications on the implementation plans for the changes would commence with Ward Members and residents leading up to the closures of the Old Wedal Road and Lamby Way facilities once the new site completes construction. The communications plan will include:
- Route plans including travel distances and travel times from Wards to the North, North East and East of Cardiff to the current Bessemer Close HWRC in Grangetown and the Lamby Way site in Rumney. See attached Appendix A1 and A2.
 - Site closure date for the Wedal Road HWRC, Spring 2016
 - Site signage information to be placed at Wedal Road 1 month ahead of the planned closure date
 - Site opening date for the new Lamby Way HWRC
 - Staff engagement on the designs at Lamby Way
 - Contact names and telephone numbers for any further enquiries
 - Website and literature to be updated and all relevant information including the nearest site information.

Budget

13. The Council's 2014/15 Budget Report approved that the number of Household Waste Recycling Centres will reduce from four to two. The Waungron Road HWRC site was closed as planned on 27 April 2014 reducing the number of sites from 4 to 3. Residents were directed to the remaining 3 sites at Bessemer Close, Lamby Way and Wedal Road. Data shows that there were no adverse affects to fly tipping demand and that total volumes of recycling and waste received at the remaining sites increased. This was noted at Environmental Scrutiny on 9 June 2015.
14. The Council's 2015/16 Budget Report approved a capital budget of £1.6 million for Household Waste Recycling Centres to enable two large sites to be completed and upgraded. Money in 2014/15 has been invested in site design and evaluations of construction contracts. The Budget also approved a revenue saving of £42,000 as a result of the reduction of the sites opening hours in line with 12 hours per day in the Summer and Winter opening for 8 hours. The savings would be generated from the deletion of two vacant posts and operational reductions. This would be implemented by November 2015.

Subsequent Closure of Existing HWRC Sites

15. On completion and operational opening of the new HWRC at Lamby Way in spring 2016, the smaller HWRC site at Wedal Road site will close.
16. The existing Wedal Road site will return to Strategic Estates for the site to be considered in line with the Council's Corporate Asset Management Plan and future strategic infrastructure needs for the City.
17. The existing HWRC land at Lamby Way will be utilised for alternative waste management smaller operations.
18. It is very clear that a comprehensive communications plan to residents is essential and must be implemented before, during and after the closure of the Wedal Road site. This will be managed through a comprehensive communications plan as outlined in paragraph 12 above that will include routes from locations across Cardiff to the two larger facilities at Bessemer Close and Lamby Way. A post code tool will be available for residents to use to identify their nearest improved HWRC site.
19. In terms of risks to fly tipping tonnage and HWRC site usage, this was closely monitored after other site closures. Despite concerns of residents regarding potential fly-tipping, no significant changes in fly-tipping were recorded and the overall tonnages handled by the three remaining sites actually increased by 7%, as did recycling performance, increasing from 61% in 2013/14 to 66% in 2014/15.

Implementation of Seasonal Opening Hours

20. The current sites operate 12 hours per day, 7 per week only closing on Christmas Day and New Years Day.

21. It is proposed that the sites operate 12 hours per day, seven days per week during British Summer Time and 8 hours per day, seven days per week in British Winter Time when demand is lower. The summer opening hours would start earlier in the years that the Easter Holidays fall within March, to accommodate busy bank holiday periods. These operating times mirror the approach taken by most of the Welsh local authorities.
22. The operational savings will assist in achieving the service area saving in 2015/16 and onwards.
23. Consultation with trade unions and operational staff will be undertaken in respect of staff implications.

Commercial Charging for Non Cardiff Residents

24. Through a number of site surveys, it is clear that non-Cardiff residents are using the HWRC free of charge. At Bessemer Close alone, 17% of the site users have been identified as from a neighbouring Local Authority. Overall an independent cross boundary survey (Regional HWRC Use Assessment, Appendix B) identified 11% of all site users were not from Cardiff. The report suggested that such cross border movements could be costing the Council in excess of £430,000 a year. Surrounding authorities experienced between 2%-5% cross boarder movements.
25. Equally, public consultation conducted in December 2014 shows support for providing facilities for Cardiff only residents. Only 25% of those surveyed said the HWRCS should be free for all people to access regardless of whether they live in Cardiff or not.
26. It is proposed therefore that residents from outside of Cardiff are directed to the chargeable commercial weighbridge on site and provided guidance on their own Council's recycling waste facilities. In order to establish residency, an existing Cardiff identification of residence would be requested, such as an active leisure card, library card or utility bill. All sites are fitted with the Automatic Vehicle Number Plate Recognition (ANPR) system (the same as those used at petrol stations and car parks) which will periodically be used to confirm addresses and potentially identify commercially registered vehicles.
27. If the restriction enabled circa 3,000 tonnes of material per year to be relocated to the appropriate authorities, then a minimum of c£150,000 per year could be saved on recycling and treatment costs. An income of £5,000 per year could be achieved by those residents choosing to use the weighbridge that has affordable waste and some of the recycling charges.
28. The introduction of a commercial waste recycling centre in March 2014 has generated in its first year, an income of £120,000 and managed 2,298 tonnes, with a significant proportion being recycled.

income increases are expected from this approach of generating higher commercial use. It is proposed to implement these changes with immediate effect.

Reuse Facility through Third Party Operator

29. Within the waste recycling and items that are received at the HWRC's, a significant amount of these items could be reused if they were segregated, electrically tested, kept in dry storage where appropriate, cleaned and made available back to residents at an affordable charge. The up-cycling of items can also promote employment and many social benefits.
30. Across the country, the numbers of reuse facilities are increasing and are very popular with residents. In the Recycling Waste Strategy consultation 77% of those surveyed supported the idea of a reuse shop and said they would use such a facility. It is proposed that a solution is sought from the market and self funded through a third sector operator, with the necessary skills, experience and community connections. As part of the process to select an operator it is also intended that the operator would contribute to the City's waste minimisation and reuse activities as well as delivering clear community and social benefits.
31. It is therefore proposed that the strategy to ensure best value and social benefit to the Council and proposed selection process (including the strategy and evaluation criteria) of the third party contractor and all ancillary matters be delegated to the Director of City Operations and the Corporate Director Resources in consultation with the Cabinet Members for Environment and Corporate Services and Performance.
32. Significant savings on waste, recycling, waste treatment and disposal with increased reuse would be achieved as well as providing a supply of quality affordable household items for communities.
33. The location of this facility is to be determined as part of the strategy and all options would be explored including assets which may be offered to and by the market for use.

Engagement with Environmental Scrutiny

34. The progress of the HWRC strategy to deliver two supersites has been the subject of a number of Environmental Scrutiny meetings as part of the Recycling Waste Strategy consultations, the Budget pre-decision Scrutiny for Environment and as a pre-decision scrutiny for this report. All engagement has been welcomed and has helped shape the proposals of this report. The most recent letter from the Chair of Environmental Scrutiny and the Cabinet Member for Environment's response are attached as Appendices C and D.
35. The proposals of the two options were considered by the Committee and it was noted that proximity of Wedal Road to users in the North was an advantage, but proximity to immediate housing was a concern and that

Lamby Way had benefits of improved deliverability and being away from immediate housing. The Chair requested that officers check the travel data, in order that the travel distances and times may be confirmed as correct or corrected. This exercise has been completed and is reflected in the response in the letter at Appendix D from the Cabinet Member for Environment to the Chair and on the maps contained in Appendix A.

Local Member consultation

36. Local Ward Members in Rumney and Cathays have been initially consulted on the recommendations regarding location. Detailed consultation with Ward Members will be required and will continue throughout the project delivery, subject to the Cabinet decision.

Reason for Recommendations

37. To progress with the construction of the new larger HWRC and complete the reduction of the number of sites from 3 to 2.
38. To progress the required changes to increase recycling, reduce the residual waste arising, reduce treatment and disposal costs, increase income opportunities, achieve the required operational savings and introduce a new re-use solution for good quality unwanted items for communities.

Financial Implications

39. The 2015/16 Budget included a saving of £42,000 from reduced operating hours at the two remaining HWRCs. Any delay in moving to the two HWRC site arrangements may compromise the Directorate's ability to make this saving. If approved by Cabinet, restricting waste from non-Cardiff residents will reduce recycling, treatment and disposal costs which based on the tonnage projections in this report should offset any saving shortfall from the delay in moving to the new HWRC.
40. The assumption with the Re-use solution is that it will be self-funding. The operator has not yet been procured and consequentially the risk remain that self-funding may not be a viable option. The Business case for this facility will need to be reviewed during its procurement to ensure it remains achievable from the Council's perspective.
41. The Capital Programme allocation for 2014/15 was £1.712 million but due to spend of £125,000 being incurred in 2014/15 the remaining allocation is £1.587 million. The Directorate has confirmed that this is sufficient to cover all fees, infrastructure works, alternative car parking provision, signage and emptying of former HWRC and creation of new HWRC but this will be subject to the outcome of the tender exercise.
42. The proposal includes the closure of Wedal Road and its transfer to Strategic Estates so best use of the land can be identified. Any proceeds from the disposal of the site will be used to support the affordability of the

Capital Programme. Any disposal should be undertaken promptly to avoid ongoing revenue implications of holding costs in relation to the site.

43. The report indicates that the longer term future use of the parks depot will be evaluated for its longer term use. Proceeds from the disposal of the site were initially assumed to pay towards the construction cost of the new Central Transport Depot at Coleridge Road.

Legal Implications

44. As set out in the report, the Council has a statutory duty (under the Environmental protection Act 1990) to provide places for residents in its area to dispose their household waste. Any such place must be situated in its area or be reasonably accessible and must be open at all reasonable times.
45. The Act also allows the Council to charge those not resident in its area to deposit household or controlled waste.
46. With regards the procurement of the re-use facility, further legal advice should be sought prior to commencement, in particular on the process and method of procurement. It is possible to include social and community benefits either within the procurement or contract provided they are relevant to the contract.
47. The Council has to satisfy its public sector duties under the Equalities Act 2010 (including specific Welsh public sector duties). Pursuant to these legal duties Councils must in making decisions have due regard to the need to (1) eliminate unlawful discrimination, (2) advance equality of opportunity and (3) foster good relations on the basis of protected characteristics
48. Protected characteristics are:
 - Age
 - Gender reassignment
 - Sex
 - Race - including ethnic or national origin, colour or nationality
 - Disability
 - Pregnancy and maternity
 - Marriage and civil partnership
 - Sexual orientation
 - Religion or belief - including lack of belief
49. As such decisions have to be made in the context of the Council's equality act public sector duties.
50. The report identifies that an Equality Impact Assessment has been carried out and is appended to this report. The purpose of the Equality Impact Assessment is to ensure that the Council has understood the potential impacts of the proposal in terms of equality so that it can ensure that it is making proportionate and rational decisions having due regard to its public sector equality duty.

51. The decision maker must have due regard to the Equality Impact Assessment in Appendix E in making its decision.
52. The report also sets out the consultation undertaken with the public. Any consultation must be adequate and fair. The decision maker should also have regard to such consultation when making its decision.

HR Implications

53. Initial consultation has taken place with Employees and Trade Unions and this will continue once a formal decision has been made. Corporately agreed policies will be followed during the implementation of the decision to ensure that employees are treated fairly and equitably.

RECOMMENDATIONS

Cabinet is recommended to:

1. Approve the location of the new larger HWRC at the Lamby Way Depot in Rumney.
2. Note that the closure of the existing Wedal Road HWRC's will take place up on completion of the new HWRC at Lamby Way and that the delivery timescales for recommendations 1 and 2 will be April 2016.
3. Approve the implementation of seasonal hours by November 2015 and the immediate implementation of the proof of residency for resident access to the Household Waste Recycling Centres.
4. Approve the charging approach to non Cardiff residents and identified commercial operators to reduce treatment and disposal costs.
5. Agree that a third party operator be sought for the delivery of a Re Use Facility an delegate authority to the Director City Operations and Corporate Director Resources in consultation with the Members for Environment and Corporate Services & Performance to deal with all matters (including all ancillary matters) associated with the process (including the strategy, evaluation and weightings) up to and including award of contract.

ANDREW GREGORY

Director

10 July 2015

The following appendices are attached:

Appendix A1 and A2 - Route times and route distances for North Wards to Bessemer Close HWRC and Lamby Way HWRC
Appendix B - Regional HWRC Use Assessment

Appendix C - Environmental Scrutiny Chair Letter on the proposed HWRC changes

Appendix D - Cabinet Member for Environment response to Environmental Scrutiny Chair Letter

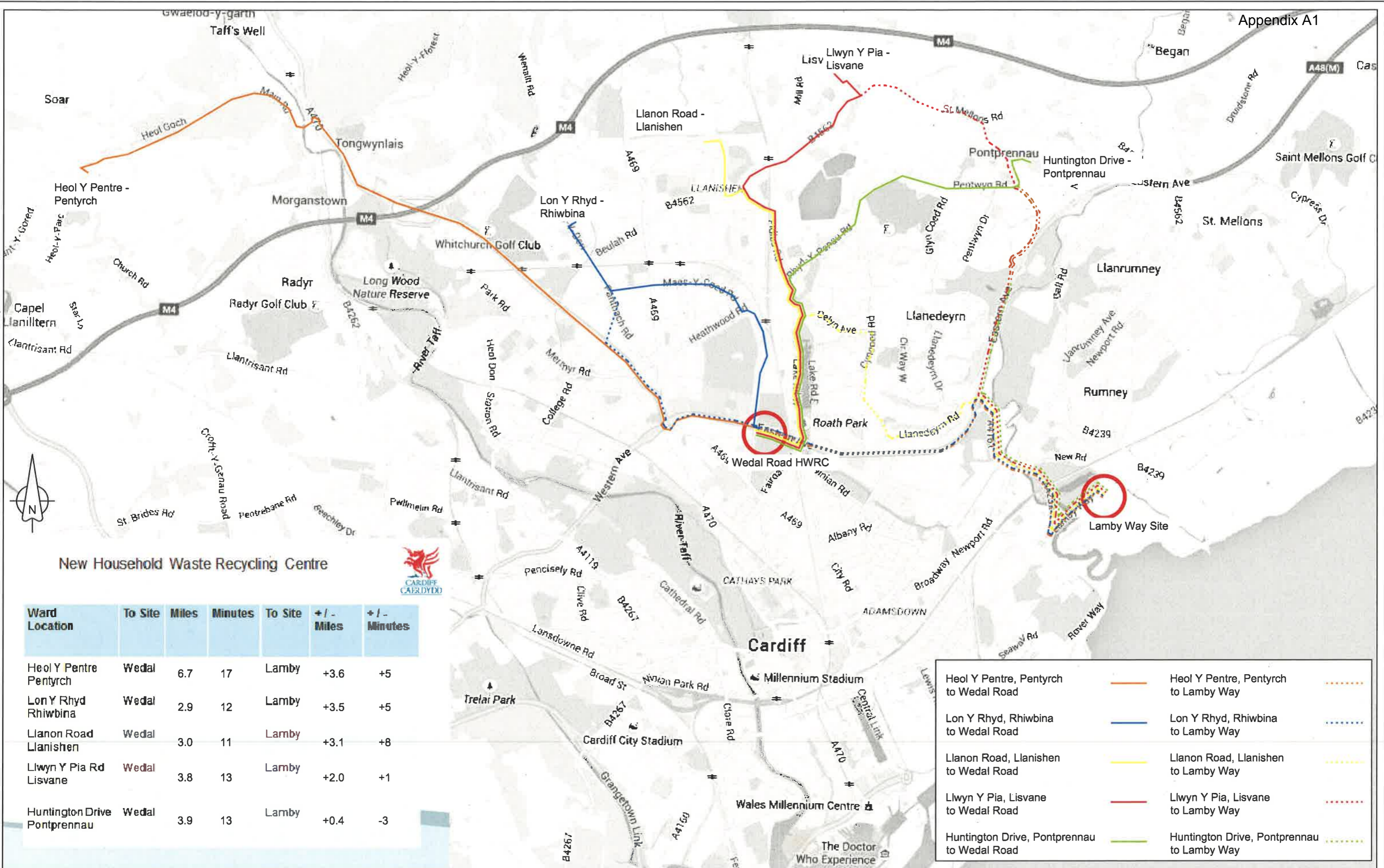
Appendix E- Equality Impact Assessment

The following background papers have been taken into account

Outline Waste Management Strategy 2015-2018 consultation report

Recycling & Waste Management Strategy 2015

Council Budget 2014/15

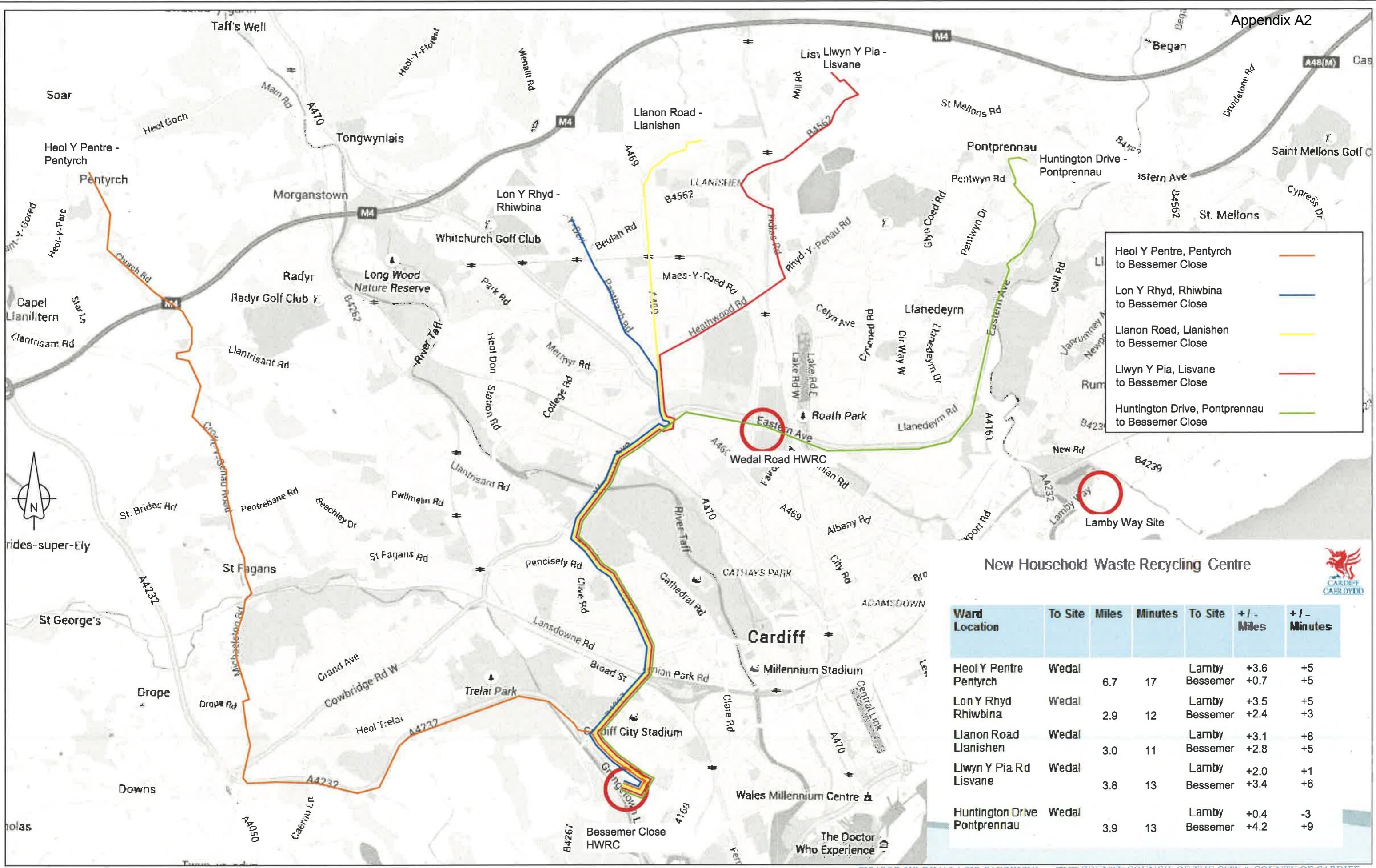


New Household Waste Recycling Centre



Ward Location	To Site	Miles	Minutes	To Site	+/- Miles	+/- Minutes
Heol Y Pentre - Pentyrch	Wedal	6.7	17	Lamby	+3.6	+5
Lon Y Rhyd - Rhiwbina	Wedal	2.9	12	Lamby	+3.5	+5
Llanon Road - Llanishen	Wedal	3.0	11	Lamby	+3.1	+8
Llwyn Y Pia - Lisvane	Wedal	3.8	13	Lamby	+2.0	+1
Huntington Drive - Pontprennau	Wedal	3.9	13	Lamby	+0.4	-3

Heol Y Pentre, Pentyrch to Wedal Road		Heol Y Pentre, Pentyrch to Lamby Way	
Lon Y Rhyd, Rhiwbina to Wedal Road		Lon Y Rhyd, Rhiwbina to Lamby Way	
Llanon Road, Llanishen to Wedal Road		Llanon Road, Llanishen to Lamby Way	
Llwyn Y Pia, Lisvane to Wedal Road		Llwyn Y Pia, Lisvane to Lamby Way	
Huntington Drive, Pontprennau to Wedal Road		Huntington Drive, Pontprennau to Lamby Way	



Heol Y Pentre, Pentyrch to Bessemer Close	
Lon Y Rhyd, Rhiwbina to Bessemer Close	
Llanon Road, Llanishen to Bessemer Close	
Llwyn Y Pia, Lisvane to Bessemer Close	
Huntington Drive, Pontprennau to Bessemer Close	

New Household Waste Recycling Centre



Ward Location	To Site	Miles	Minutes	To Site	+/- Miles	+/- Minutes
Heol Y Pentre Pentyrch	Wedal	6.7	17	Lamby	+3.6	+5
	Bessemer			+0.7	+5	
Lon Y Rhyd Rhiwbina	Wedal	2.9	12	Lamby	+3.5	+5
	Bessemer			+2.4	+3	
Llanon Road Llanishen	Wedal	3.0	11	Lamby	+3.1	+8
	Bessemer			+2.8	+5	
Llwyn Y Pia Rd Lisvane	Wedal	3.8	13	Lamby	+2.0	+1
	Bessemer			+3.4	+6	
Huntington Drive Pontprennau	Wedal	3.9	13	Lamby	+0.4	-3
	Bessemer			+4.2	+9	

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Andrew Gregory
 Director for Strategic Planning, Highways, Traffic & Transportation
 CYMRUDDWR CYLLUNIO STRATEGOL, PRIFYRDD, TRAFFIC & THRAFFIDIARTH

Rev	By	Date	Description of Amendment	Chk by	Date

Project: Bessemer Close HWRC Investigation
 Checked: TJH
 Drawn: RE
 Scale: N.T.S.
 Date: Jun 2015
 Title: Journey Length and Time Analysis
 County Hall, Atlantic Wharf, Cardiff CF10 4UW
 Telephone 029 2287 2456

Final Report

Regional HWRC Use Assessment



Regional HWRC use assessment of five local authorities in South Wales

Project code: BHC003-022

Research date: May 2014

ISBN: [Add reference]

Date: July 2014

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Written by: Stuart Clouth and Alice Maxwell-Lyte, Resource Futures



Front cover photography: Bessemer Close HWRC, Cardiff

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Executive summary

In April 2014, WRAP Cymru commissioned Resource Futures to carry out a Regional Household Waste Recycling Centre (HWRC) Use Assessment across five local authorities in South Wales. This study focussed on cross border usage of HWRCs - i.e. when residents dispose of their waste at a neighbouring local authorities' HWRC – and potential trade waste abuse. The study aims to provide an evidence base for local authorities to refer to regarding implementing shared payment or other such schemes for managing cross border / trade waste inputs, and will enable the local authorities to begin discussions regarding a future solution.

The study involved a fieldwork stage whereby Resource Futures staff interviewed 5,923 users of the 17 HWRCs across the five authorities to identify where they came from, what (and how much) waste they were bringing, whether or not they were a trader, and for what reason they were using the particular site.

Cross border usage was not found to be significantly high overall. Cardiff was most affected by this, with 11.0% of users coming from outside the authority area. On closer analysis it is the site at Bessemer Close (17.3% cross border use) in the south west of the authority that is the primary cause for the comparatively high cross-border use in Cardiff. The mapping analysis shows that this is primarily caused by residents from Penarth in Vale of Glamorgan and surrounding area having a greater accessibility to this site, as it is nearer and easier for them to get to than travel to the Barry Recycling Centre within their own authority. Many residents from this area commute into Cardiff and pass this site on their way into the city. Lamby Way in Cardiff and Full Moon in Caerphilly also receive high volumes of cross border usage from residents of RCT and Newport residents respectively likely due to their proximity to either the authority border or main commuter/visitor thoroughfares.

User Origin	Caerphilly	Cardiff	Newport	RCT	Vale of Glamorgan	Total
Within the LA	95.0%	89.0%	96.8%	97.5%	97.9%	94.4%
Outside the LA	5.0%	11.0%	3.2%	2.5%	2.1%	5.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

It is also worth noting that the low amount of cross border usage in the counties of Caerphilly and particularly RCT (along with Merthyr Tydfil, although not within the study) could be due to the physical topography of these counties, with residents unlikely to travel into a neighbouring valley.

Although the cross-border use in terms of site use and tonnage is not significantly high, the additional costs are substantial. Cardiff is the most affected authority bearing additional costs of approximately £430,000 per annum as a result of cross-border use. Newport is the least affected authority bearing approximately £35,000 in additional costs as a result of cross-border use. When savings from outflow of material is taken into account, Cardiff experiences a net cost per annum of approximately £350,000 whereas the Vale of Glamorgan realises net savings of over £200,000 per annum.

The data suggests that Cardiff could make significant financial savings and increase recycling rates if it were to restrict access of its sites to only residents of Cardiff or at the very least charge non-residents a nominal fee to deposit waste in the authority. Furthermore, Cardiff could make increase recycling rates and reduce the mixed waste disposal costs by undertaking a secondary sort similar to the way HWRCs in Caerphilly operate. Caerphilly is

the only other authority to experience net costs as a result of cross-border HWRC use. In contrast to Cardiff it is less the material costs that impact the overall costs but more the additional operational costs from increased use. Similarly to Cardiff, Caerphilly CBC could introduce nominal charges for non-residents to use their facilities in order to make savings.

The report also scrutinises data collected on trade waste entering the five HWRCs. Certain sites are shown to have a greater degree of trade abuse than others, which raises the question as to whether charging traders is being enforced at HWRC sites. In particular, significant amounts of trade waste are seen across Caerphilly Council sites at Aberbargoed, Penallta, and Rhymney as well as Rhondda Cynon Taff's Ty Amgen site. One of the only sites where trade waste is accepted and charged for (Bessemer Close in Cardiff) receives a lower than expected proportion of trade waste at 2.6% (mixed waste). To put this into perspective, for Lamby Way HWRC in Cardiff - where the policy is for trade waste to not be accepted -13.4% of mixed waste is estimated to be of trade origin. There are a number of reasons why this might be the case including: a perceived sense of immunity where traders feel they will not be prosecuted if even caught at all, a lack of knowledge in that traders do not know that they are able to deposit waste at the relatively new Bessemer Close site, or that traders are purposefully choosing to avoid Bessemer Close to save money. Furthermore it has been noted that staff at some sites do not enforce the rules.

Although site staff should be enforcing the rules as part of their job description, it is possible to incentivise or train staff to ensure that they identify traders and uphold the rules. This could come in the form of security guard or door supervisor training, which may include physical intervention and self defence training. The results indicate that barring traders from the Lamby Way and Weddal Road HWRCs in Cardiff could save the authority up to £127,000 pa. In order to reduce the misuse of all local authorities' HWRC site, we would also recommend that councils add a message via public communications through the council website or press release. Alternatively, a disclaimer system, where residents with vans or trailers apply for a tipping permit or by registering their vehicle registration through the council switchboard could be introduced.

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1.0 Introduction

Resource Futures were commissioned by WRAP Cymru to carry out an assessment of cross border use at Household Waste and Recycling Centre (HWRC) sites for five neighbouring local authorities across South Wales. Cross border usage can be defined as the use of an HWRC by householders (or traders) outside of the local authority area of that HWRC. This activity tends to occur where a site is located close to the border of another local authority or lies close to a main commuter route between authorities. This assessment also looks to examine the quantity of trade waste entering sites in the project area. The project area consists of the following local authorities:

- The City of Cardiff Council
- Caerphilly County Borough Council
- Newport City Council
- The Vale of Glamorgan Council
- Rhondda Cynon Taff County Borough Council

Figure 1 provides the HWRCs in the project area.

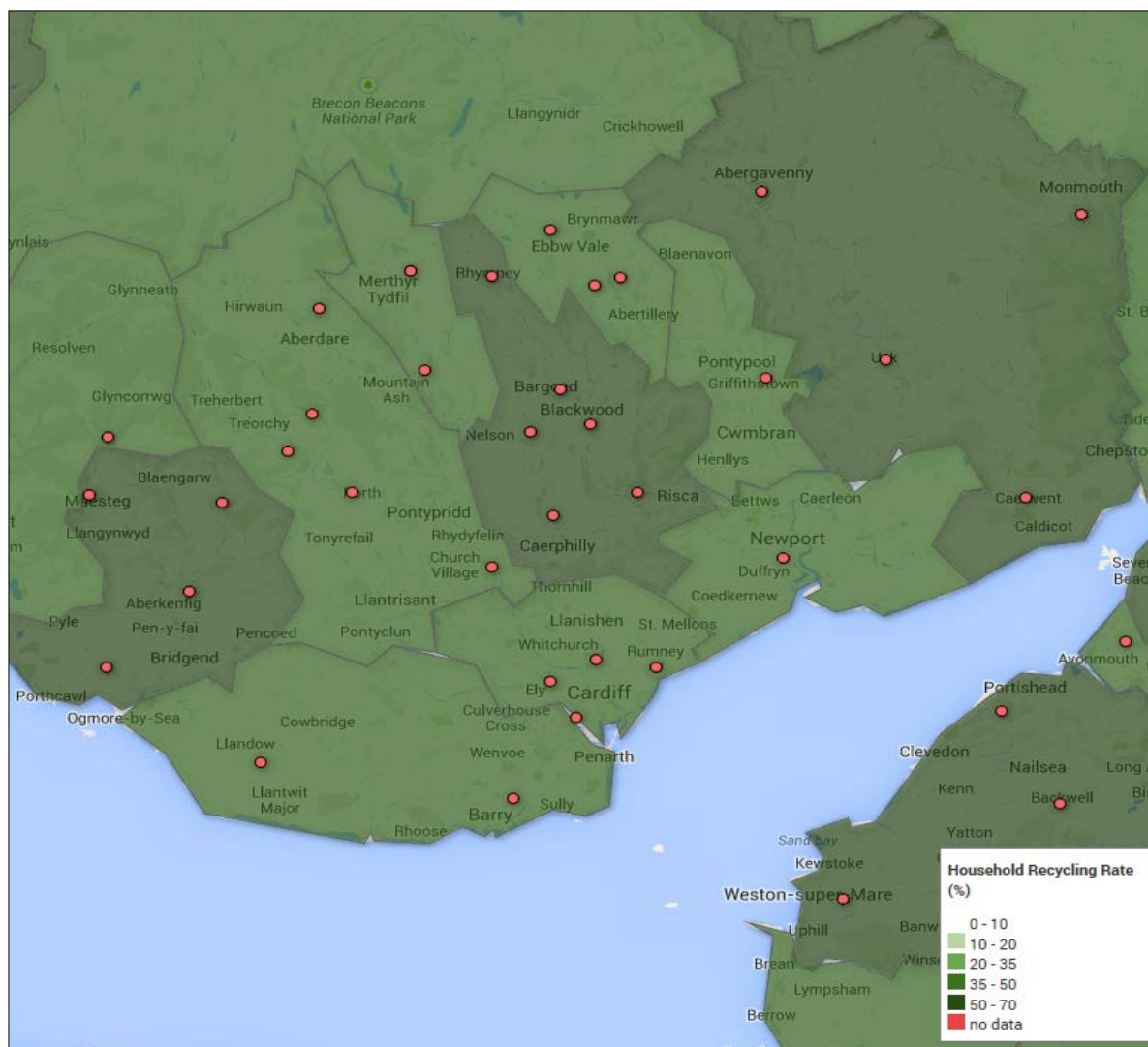
Figure 1 HWRCs in the project area



Figure 2 (taken from our in-house ResourceData¹ application) shows the HWRC sites within the local authorities surveyed as well as the nearby sites which may influence waste deposit habits.

¹ www.resourcedata.co.uk

Figure 2 HWRCs in and in close proximity to the project area



The main aim of the project is to understand the extent and type of cross border waste flows between the five local authority areas in South Wales. The objectives of the project can be summarised as:

- Identifying where site users are travelling from.
- Mapping site catchment areas.
- Identifying the types of wastes residents are disposing of within and outside of their home authority.
- Estimating the quantity of wastes flowing into and out of the counties.
- Developing an understanding of how the waste flows impact on operational costs and recycling performance at each site.

This study was primarily aimed at mapping cross-border movements of waste, and therefore postcode data was collected from site users. It also assesses the amounts of materials delivered by site users. However, during the study it became apparent that the quantities of trade waste being deposited at HWRCs across all five local authorities was a significant issue in many sites and so the study gained an additional objective to identify and analyse the quantities of trade waste abuse amongst the sites. Trade abuse was recorded by making a visual assessment of the type and volume of waste deposited as well as the vehicle type of the 'user'.

2.0 Methodology

The following provides an overview of the methodology used to meet the aims and objectives of the project including sampling, questionnaire development, fieldwork and analysis.

2.1 Sampling

Survey staff discussed with site staff the most suitable location to stand on site at each HWRC and conducted the survey with any users that were willing to take part. At the sites with fewer users, this usually meant approaching all users to ask them to participate in the survey but at larger and busier sites, staff were asked to randomise the users asked to take part.

2.2 Survey

The content of the questionnaire was developed with WRAP and the participating local authorities to gather data on the type of vehicle, suspected trade use, postcode, estimation of amount of waste, type of waste (material), site use frequency and reason for visiting the site. The questionnaire was converted into a survey database (Snap software) and tested on handheld devices before the fieldwork commenced. From testing it was estimated that each face-to-face survey would take no longer than 5 minutes. The questionnaire is included in Appendix 1 for reference.

A suitable preamble introducing the survey was provided to encourage site users to provide the information required, particularly as the postcode was the key response and only question that will be asked during busy periods.

In order to measure the volume of the load of waste in each vehicle, a visual assessment of loads delivered was carried out for as many surveyed site users as possible, with the aim of collecting data for all site users (except approximately 3% at peak times due to the need to get visitors through the site).

The visual assessment method to define materials in terms of their volumes was as follows:

- **Low:** up to a car boot full
- **Medium:** up to a full estate car, packed to the roof
- **High:** anything above medium (i.e. van loads, trailer loads).

The main types of materials delivered with a Low, Medium or High loads were then recorded.

For the waste type a reasonably concise list was used:

- Mixed waste, likely to be deposited as general waste
- Garden waste
- Rubble
- Other materials likely to be deposited as recyclables (i.e. WEEE, metal, wood, dense plastics, dry recyclables – depending on the range of materials accepted at the site being surveyed).

By limiting the amount of data recommended for collection in terms of volumes and types, surveyors were able, for each user visiting the site, to introduce the survey, ask for the site user's postcode, assess whether the site user is a trader, and obtain the above mentioned data on volume and material type. This allowed for optimum collection of key variables during busier times.

From experience we have seen that there are generally no significant differences in material amounts and types between site users of different local authority area origins. In the main, site users across different areas tend to bring broadly similar amounts and types of materials

to HWRCs. However the collection of material volume and type of waste information provides a further opportunity to compare waste types from different regions. The material type and volume data that has been collected in the study is key to the understanding of HWRC use.

The surveyors were trained in the methodology of this research on the 8th May 2014 at Resource Futures' office in Bristol. Training topics included the survey method, introducing themselves and the survey in order to gain compliance of the maximum number of site users, use of the hand held devices, quality control and risk assessment. As part of the training, surveyors were also given training on identifying suspected traders. As our members of staff had previously carried out similar HWRC surveillance, they were experienced in covertly noting down suspected commercial vehicles, without hindering their ability to obtain the required data of postcode and information about the waste that was being brought to the HWRC. Encouraging our survey staff to work alongside and cooperatively with site staff helped to share information on who may or may not be a trader. This included staff notifying site operatives on suspected traders and vice versa. Following the field work, survey staff stated that in a few cases site operatives were aware of traders from previous experience but in general they were not. The extent to which site operatives questioned suspected traders also varied between sites.

2.3 Fieldwork

Figure 3 Fieldwork schedule

Site	09/05/2014	10/05/2014	11/05/2014	12/05/2014	13/05/2014	14/05/2014	15/05/2014	16/05/2014	17/05/2014	18/05/2014	19/05/2014	20/05/2014	21/05/2014	22/05/2014	23/05/2014	24/05/2014	Person/days
	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
Caerphilly																	
Aberbargoed					1				1								2
Full Moon									1					1			2
Penallta								1	1								2
Penmaen					1				1								2
Trehir		1											1				2
Rhymney				1						1							2
Newport																	
Docksway			1								1	1					3
Vale of Glamorgan																	
Barry								1		1							2
Llandow						1				1							2
Cardiff																	
Bessemer Close	1					1										1	3
Lamby Way	1	1					1										3
Weddal Road		1												1			2
RCT																	
Dinas										1			1				2
Ferndale							1				1						2
Gelli			1												1		2
Treforest			1									1					2
Ty Amgen			1	1													2
Person/days	2	3	4	2	2	2	2	2	4	4	2	2	2	2	1	1	37

The fieldwork took place between the 9th and 24th May 2014, as illustrated in the survey schedule provided in Figure 3. Surveyors were at each site for 8.5 hours a day (taking a 30 minute lunch break) to ensure data from site users throughout the day was captured.

The schedule was organised in such a way to obtain two day visits at each site, with the exception of Docksway in Newport and Lamby Way and Bessemer Close in Cardiff which had three individual day visits each. Furthermore the schedule was arranged so as to ensure that each site was visited at least once on a weekend, deemed to be the busiest days of the week.

Assessment of site user origin was recognised as the most important data and was asked of all users entering sites, in preference over collecting other types of data (such as types of materials brought or assessing whether the site user was a trader). The survey was designed so that all data types could be collected for all site users under most circumstances; however, during peak times this was occasionally challenging, and in these instances the surveyors were instructed to prioritise obtaining data on site user origin.

There were no real issues whilst undertaking the fieldwork stage. The only thing to note was the use of paper copies of the survey during rainy periods when point the touchscreen devices become unusable. The hard copies were then input into the software on return to the office. A total of 5,923 people were interviewed over the course of the fieldwork with the busiest sites receiving the most respondents as expected, as shown in Table 1.

Table 1 Number of survey respondents per site

Authority	Site (no. of days)	Number of respondents
Cardiff	Bessemer Close (3)	589
	Lamby Way (3)	614
	Weddal Road (2)	425
	All (8)	1,628
Caerphilly	Aberbargoed (2)	284
	Full Moon (2)	224
	Penallta (2)	141
	Penmaen (2)	544
	Trehir (2)	230
	Rhymney (2)	180
	All (12)	1,603
Newport	Docksway (3)	903
Vale of Glamorgan	Barry (2)	376
	Llandow (2)	283
	All (4)	659
RCT	Dinas (2)	236
	Ferndale (2)	212
	Gelli (2)	197
	Treforest (2)	333
	Ty Amgen (2)	152
	All (10)	1,130
Total		5,923

2.4 Analysis

Resource Futures compiled all data from each site once the fieldwork element of the project was complete. All data entered manually (from paper backups) was quality checked by the Project Manager as per Resource Futures' Quality Management System policy.

Once all the data was input, the results were exported to MS Excel and MS MapPoint for analysis. The spatial analysis required the use of a lookup table to identify the authority of origin from just the postcodes. After cleaning or removing errant or non-existent postcodes, the results were cross-tabulated to provide the desired results. Approximately 5% of given postcodes were not recognised by the GIS software.

In terms of classification of trade three categories were defined; household, suspected trader and definite trader. For the analysis, half of the suspected traders were then classified as traders, along with all definite traders, to arrive at an overall estimate of the proportion of surveyed site users that are traders.

Operational costs of HWRCs in the study area were calculated using the mean cost per tonne of operating HWRCs based upon total throughput. Table 2 below gives the costs of tonnage throughput for material received.

Table 2 HWRC operational costs per tonne in Wales

Cost per tonne (based on total throughput)	
Median	£112
Mean	£117
Maximum	£280
Minimum	£68

Source: WasteDataFlow

Certain sections of the analysis required an indication of the split of material received at HWRCs across the five authorities. Table 3 presents this information calculated using local authority returns of HWRC data on WasteDataFlow and used to calculate the cross-border and trade waste tonnages of the four material categories. It is worth noting that the results assume the same material split across each HWRC in the authority areas. Caerphilly's high proportion of recycling and low residual is a result of a secondary sort of mixed waste at the sites themselves. Cardiff's high proportion of residual could be a result of relatively low engagement between staff and resident.

Table 3 Breakdown of material received at HWRCs in the five authority areas in 2012/13

Authority	Recycling	Green	Soil & Rubble	Residual
Caerphilly	64%	8%	23%	5%
Cardiff	24%	7%	18%	51%
Newport	41%	11%	22%	26%
RCT	47%	6%	32%	15%
Vale of Glamorgan	30%	13%	21%	36%

Table 4 below gives the market values for the different types of wastes focussed on in this study calculated using approximate gate fees/revenues per tonne obtained from credible sources such as the Let's Recycle website, the Materials Recycling Weekly publication and the WRAP Materials Pricing Report. Landfilled waste incurs the highest charge at £100 per

tonne which includes landfill tax at the higher rate. Green waste and soil and rubble also incur charges for tonnage throughput, this is set at £23 per tonne for each. The negative value for recyclables indicates that an approximate revenue of £123 can be obtained per tonne from the sale of recyclables. This figure is calculated separately using an average of recycle revenues weighted by UK waste composition. The values imply that local authorities who are receiving mixed waste intended for landfill from people resident outside the local authority have to pay significant charges without additional financial resources available. Conversely, authorities may benefit from the deposit of recyclables at their sites, providing that haulage fees are not too high.

Table 4 Gate fees / revenues for the material categories

Material	Value (Gate fee)
Landfilled waste (mixed waste)	£100
Green	£23
Soil & Rubble	£23
Recyclables	-£123

Source: Let's Recycle, MRW, WRAP

The data in Table 5 and Table 6 was used in conjunction to obtain estimates of the weight of the material being deposited by site users. Additionally, interviewers were asked to note the proportions of material if users were to bring more than one type. As this had to be estimated quickly, a ranking system was developed whereby if a user had only one type of material, the interviewer would note just '1' in the appropriate category. If the user brought two types of material, the interviewer would note '1' in the category with the highest proportion and '2' in the other category. If the user brought three types, then the system was the same albeit using '1', '2' and '3'. The weights were then apportioned by category according to the proportions in Table 7.

Table 5 Density in kg/m³ of the four material categories

Type	Density kg/m ³
Commingled	84
Food and Garden	157
DIY	200
Household	120

Source: WRAP Bulk Density studies

Table 6 Volume of the vehicle types

Type	Volume m ³
Low (i.e. up to a car boot full)	0.5
Medium (i.e. up to a full estate car packed to the roof)	1.6
High (i.e. anything above medium: van lads, trailers etc)	3

Source: Parkers

Table 7 Proportions of material ranking estimations

Rank Estimations of Proportion	Proportion 1	Proportion 2	Proportion 3
1	100%		
1,2	67%	33%	
1, 2, 3	50%	30%	20%

3.0 Cross-border analysis

3.1 Overall cross-border usage

Table 8 shows that the local authority most affected by cross border usage is Cardiff, with 11% of visitors to the sites coming from outside the authority. Cross border usage in the authorities of Caerphilly, Newport, RCT and Vale of Glamorgan was lower but still significant especially in Caerphilly where approximately 1 in 20 visitors are not resident in the authority.

Table 8 Proportion of cross-border use in the five authorities

User Origin	Caerphilly	Cardiff	Newport	RCT	Vale of Glamorgan	Total
Within the LA	95.0%	89.0%	96.8%	97.5%	97.9%	94.4%
Outside the LA	5.0%	11.0%	3.2%	2.5%	2.1%	5.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

During the fieldwork phase of the project, the surveyors took information from visitors about their reasons for visiting the HWRC that day. Surveyors were trained and reminded not to prompt interviewees to reply to a list of options initially, unless they could not give an unprompted reply. Our surveyors asked: "Is there any particular reason why you use this site rather than any other sites?" Table 9 presents the results.

Table 9 Reasons for which users use the particular site

Reason	Internal	External	Total
More facilities at this site (i.e. recycling of particular materials)	1.0%	1.3%	1.0%
Not aware of any other sites locally	2.9%	9.4%	3.2%
This site is the closest to where I live	96.1%	89.3%	95.8%
Total	100.0%	100.0%	100.0%

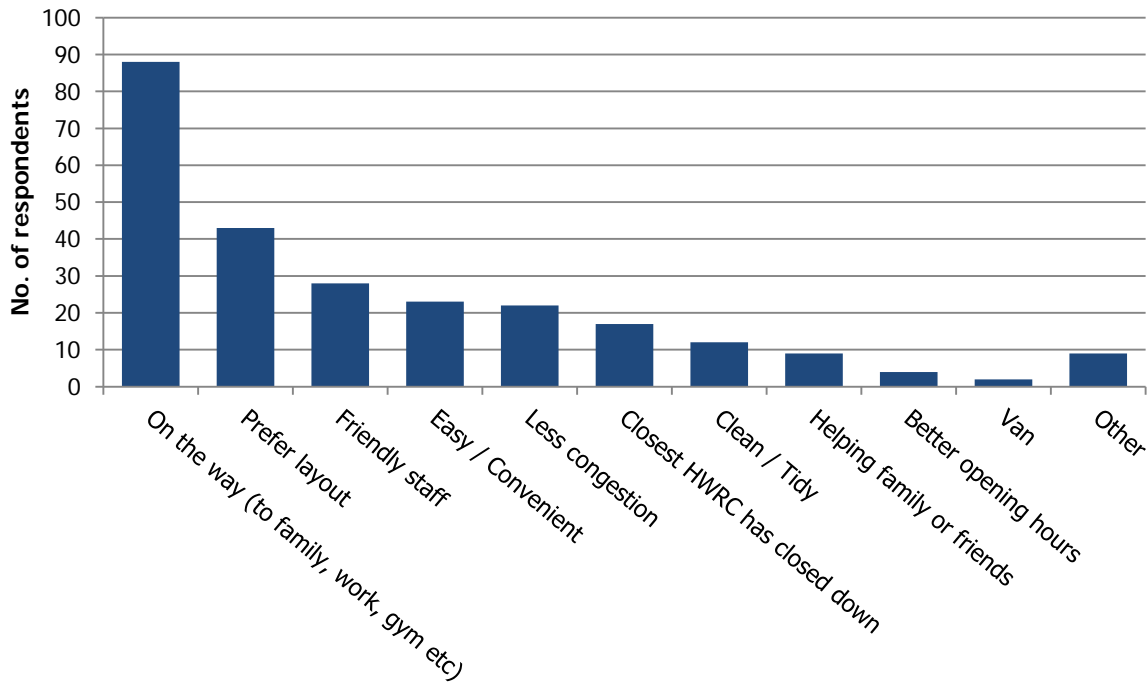
The vast majority of visitors to the HWRCs, both external (those resident outside the authority of the site) and internal (those resident within the authority), gave the reason for choosing that site was because it is the closest to where they lived. External visitors tended to be less aware of other sites locally, with 9.4% visiting a site for this reason. This reason would perhaps account for cross border usage.

The other reasons given for visiting a site could broadly fit into ten other categories as shown in Figure 4, with the remaining reasons being a one-off or very specific responses.

Of the 221 "Other" responses, most visitors to the HWRCs gave the response that the site was on the way to another destination. Many respondents gave more than one response to this question, giving reasons such as "no congestion and helpful staff". These responses

mostly included visiting friends and family and going to work, shops, and other leisure activities. A popular response included in the “on the way” category was “en route” without giving a destination. This reason was a significant contributor to cross border use of HWRC sites, particularly for Cardiff where many from surrounding authorities commute to and the sites are located in close proximity to main routes of the city. There were a notable number of responses categorised as “closest to work”.

Figure 4 "Other" Responses for Visiting a HWRC



The second most popular reason for visiting a site was that the respondents preferred the layout of the site visited, as opposed to the HWRC that may have been closer to their home location. Reasons within this category included that the person felt it was easier to access the skips, more organised, well laid out, larger and more space for parking their cars near to skips.

The convenience of a site therefore contributes to cross border use, as this suggests that it is used en route to other destinations over a site that is perhaps closer and within their home county. The response “easy” could be interpreted as “easy to use” in terms of layout or “easy to get to”, meaning more convenient and accessible.

People questioned during the cross border use study also valued the members of staff at the HWRCs. The response of “friendly staff” or similar was often in conjunction with another response, such as “helpful staff, site kept clean”. Some respondents specifically commented that they were visiting that particular site as they felt that the “staff were friendlier than at other site”. Feeling that the site was “professionally run” and “well managed” was given, this could be a comment that refers directly to the members of staff, or to the wider organisation and management of the site. Friendly and helpful staff at HWRCs encourages users to revisit, making it feel like a more accessible environment and promoting inclusion for all members of the community.

Cleanliness was cited as a reason for visiting a particular site that was not the closest to the respondents’ home. This was often given alongside another reason for visiting. As the most popular response was that many were on their way to somewhere else, many seemed to value a clean and tidy site in order to incorporate a visit to an HWRC practically into their lives.

Congestion of some sites caused 22 residents to go out of their way to avoid queuing. They would either choose a second site, slightly further away from their home, which may be en route to another destination. This may well result in some cross border use of HWRCs.

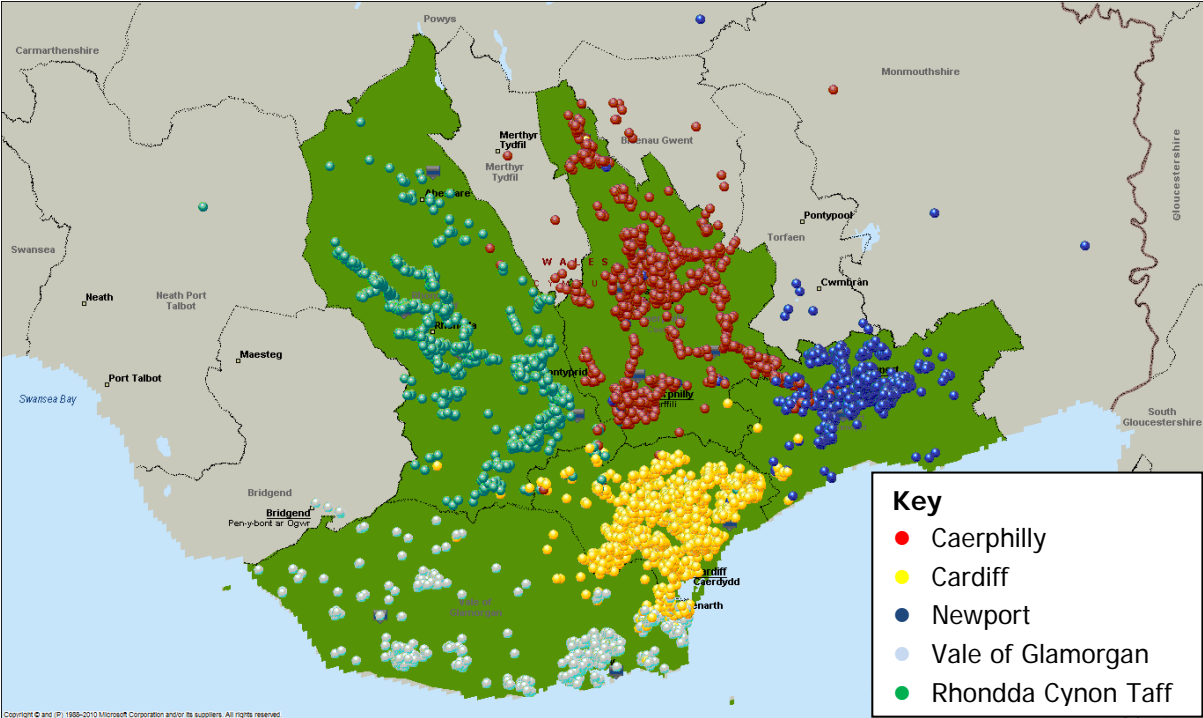
The majority of residents who gave the reason that the “closest HWRC had closed down” were from Cardiff, as they had been affected by the closure of the Waungron site in Fairwater. There were some specific responses from residents that included preferring to visit a site due to charges for vans, or for the disposal of carpets, at certain HWRCs. One resident chose to visit a HWRC site because they had been recommended it by a friend.

Across all people questioned during the survey, there was only one response which referred to having problems with their recycling collection. This response was that there “was not enough room in the bin” and was the reason for visiting the HWRC.

The map in Figure 5 gives an overall graphic representation of each of the cases collected during the fieldwork stage of the study. This gives us a visual snapshot of how the different local authorities have been affected by their neighbouring authorities’ residents’ cross border usage. The coloured dots represent the postcodes given by the users at sites in each local authority. For example, the yellow dots represent the origin of users depositing waste at sites in Cardiff.

The main areas of interest are the border between the authorities of Cardiff and Vale of Glamorgan and the border between the authorities of Caerphilly and Newport, each affected by cross border flows. More detailed images of each individual authority are included in authority specific sections of the report (section 3.5 onwards).

Figure 5 Map showing origin of users for HWRCs in each local authority area



3.2 Type and Origin of Wastes

The type of waste brought to the HWRCs was recorded during the fieldwork stage of the project. Waste was grouped as Mixed, Garden, DIY and Recyclables, shown separately in the following sections. WasteDataFlow is used to provide absolute tonnages of each waste type

for the authorities which are then used in conjunction with the cross-border proportions calculated in the analysis to estimate the incoming cross-border flows.

Mixed waste

Table 10 shows a breakdown by authority of WasteDataFlow tonnage throughput for each local authority and with the percentage of waste that has been deposited from internal and external residents. Generally speaking, most local authorities in this study receive a low percentage of waste originating from outside of their borders, between 1-4% correlating with the proportion of site users from within and from outside the authority. Cardiff's HWRCs receive 10.54% of mixed waste from external sources. As the mixed waste throughput tonnage for Cardiff is much larger than the other authorities to begin with, the incoming cross-border mixed waste is significantly higher (~1,500 tonnes compared to 50-75 tonnes for the other authorities) as a result of the relatively high proportion of cross-border users at Cardiff's sites.

Table 10 Origin of mixed waste by local authority Part 1 – tonnes per annum

Local Authority	Mixed waste Throughput (tonnes)	Originating within LA	Originating outside LA	Incoming cross-border mixed waste tonnage
Caerphilly	1,447	95.9%	4.2%	60
Cardiff	13,914	89.5%	10.5%	1,467
Newport	2,588	97.8%	2.2%	56
RCT	2,587	97.5%	2.6%	66
The Vale of Glamorgan	5,333	98.7%	1.4%	72

Table 11 gives a breakdown of incoming cross-border mixed waste tonnage for each authority and from which authority the incoming waste has originated in. Cardiff Council has the highest amount of incoming cross-border mixed waste at almost 1,500 tonnes per annum, whereas the other four local authorities in this study receive between 56-72 tonnes from outside the local authority. A potential reason for such a high intake is that users may bring mixed waste into the authority because they know it is more difficult to deposit in their own authorities. Better operative engagement may help to reduce the large proportion of mixed waste and therefore increase recycling rates in the authority. Of the 60 tonnes that originates from outside of Caerphilly, 20 tonnes come from the residents of Newport. Small amounts of mixed waste are received from Cardiff and RCT, but 36 tonnes still originates from other neighbouring authorities, likely to be Cwmbran, Ebbw Vale and Merthyr Tydfil.

Of the 1,467 tonnes of mixed waste that originates outside of Cardiff, the majority of this comes from the Vale of Glamorgan, at over 827 tonnes. This is due to the Bessemer Road site's proximity to the county. The other three local authorities contribute to Cardiff's mixed waste tonnage, but waste from other authorities is unlikely as residents from RCT, Newport and Caerphilly make up the remaining of outside arisings.

Newport, with just one HWRC site has the lowest tonnage of incoming mixed waste, 15 tonnes of the total 56 tonnes comes from Caerphilly and 2 tonnes from Cardiff, with the remaining amount originating outside the study area. Rhondda Cynon Taff receives most of its mixed waste originating from outside the county from Cardiff and the Vale of Glamorgan, but is affected by surrounding authority's cross-border use. The Vale of Glamorgan receives 72 tonnes from outside the authority, with 12 tonnes originating in Cardiff.

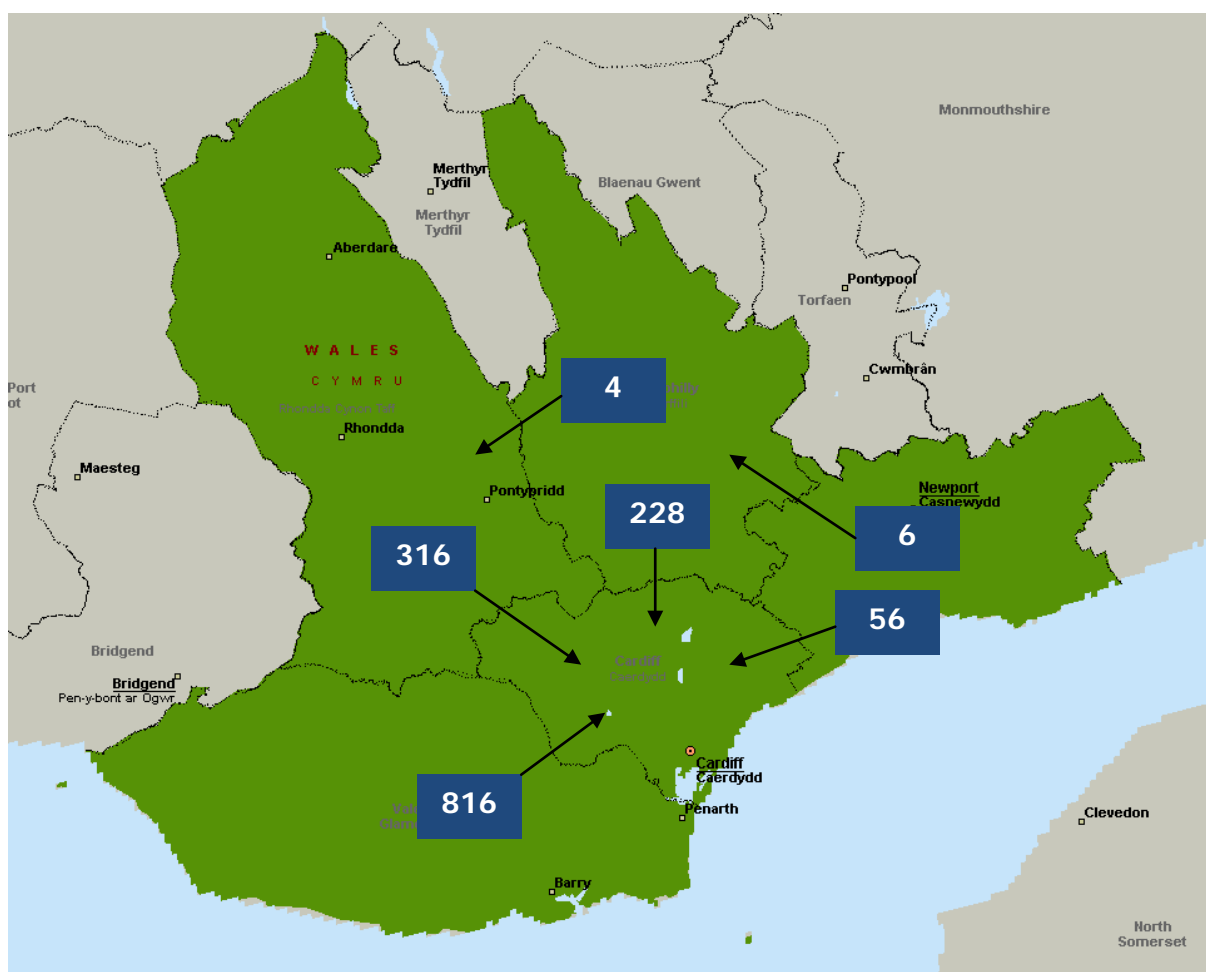
Table 11 Origin of mixed waste in tonnes per annum by local authority Part 2 – tonnes per annum*

Local Authority	Incoming cross-border mixed waste tonnage	Originating in:				
		Caerphilly	Cardiff	Newport	RCT	VoG
Caerphilly	60	-	3	20	1	0
Cardiff	1,467	231	-	59	341	828
Newport	56	15	2	-	0	0
RCT	66	5	25	0	-	20
The Vale of Glamorgan	72	0	12	0	0	-

* where the sum of the authority's values does not equal the total incoming tonnage, the remainder originates in authorities excluded in the study. This is the same for all other material categories.

Figure 6, correlates with Table 11, depicting the net flow annual tonnage of mixed waste that originates from cross-border use into the local authorities included in this study. The image clearly shows that the majority of mixed waste is passed from the counties surrounding Cardiff into this local authority, with the most part of this originating in the Vale of Glamorgan. Very low tonnages of mixed waste goes from Newport to Caerphilly and from Caerphilly to RCT.

Figure 6 Net flow of mixed waste in tonnes pa between the five authorities



Green Waste

Table 12 indicates that Caerphilly, Cardiff and the Vale of Glamorgan each receive around 2,000 tonnes of green waste; double the amount of green waste that Newport and RCT receive. Interestingly, all green waste that the HWRCs in RCT received originated internally. The counties of Caerphilly, Newport and the Vale of Glamorgan were little affected by cross border usage of green waste. Cardiff received almost 11% of its green waste from external origins.

Table 12 Origin of green waste by local authority

Local Authority	Green waste Throughput (tonnes)	Originating within LA	Originating outside LA	Incoming cross-border green waste tonnage
Caerphilly	2,199	95.7%	4.3%	95
Cardiff	1,840	89.0%	11.0%	202
Newport	1,076	93.5%	6.5%	70
RCT	1,047	100.0%	0.0%	-
The Vale of Glamorgan	1,866	98.9%	1.1%	21

Table 13 shows the origins of green waste in tonnes per annum by local authority. Cardiff receives the highest tonnage of waste from outside the local authority, compared to the other authorities in this cross-border study. RCT did not receive any green waste from outside the local authority. Of the 95 tonnes per annum of green waste that enters Caerphilly from outside the authority, 38 tonnes comes from Newport and 11 tonnes from Cardiff. The remaining tonnage would come from cross-border use from other nearby local authorities.

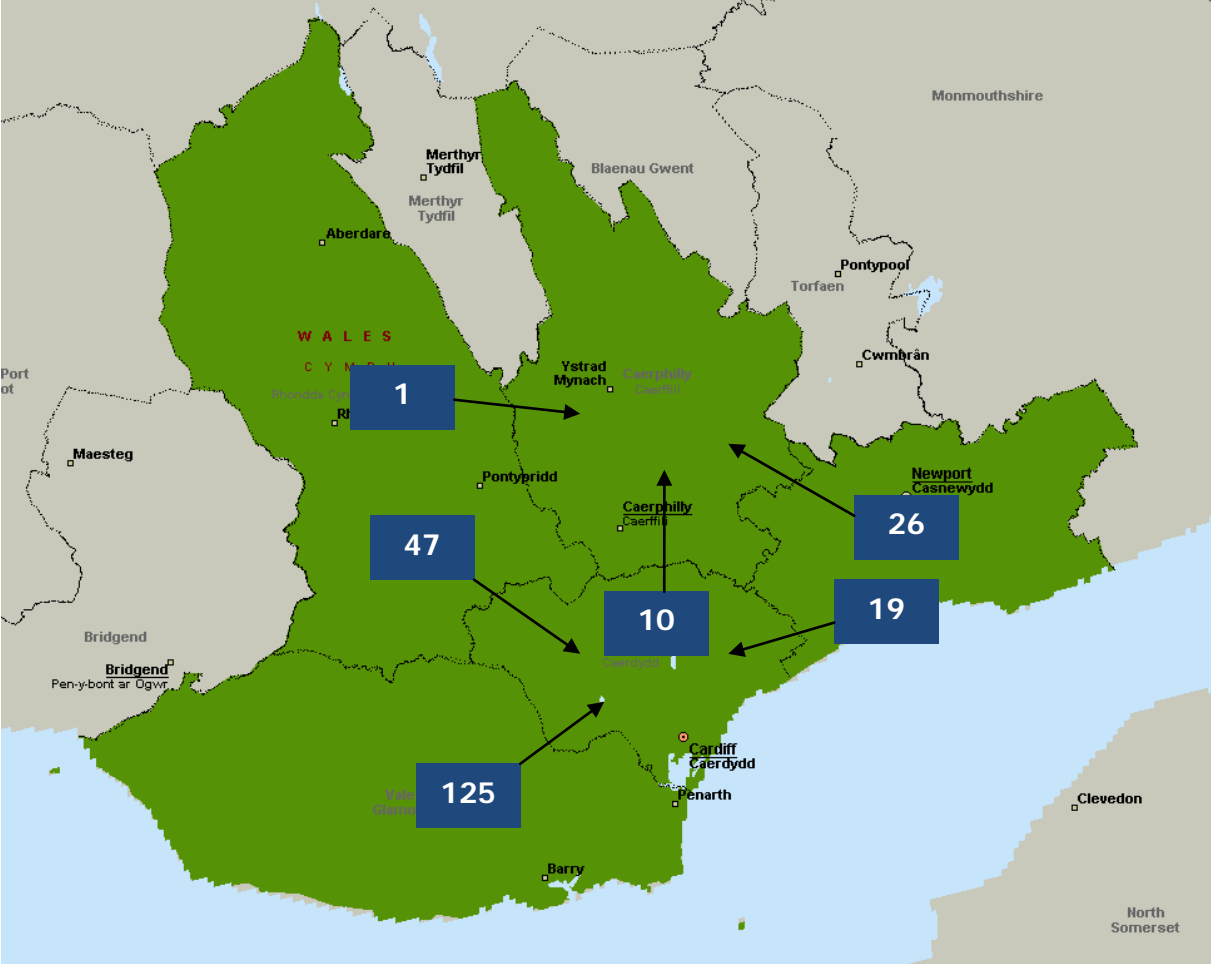
Of the 202 tonnes of green waste crossing into Cardiff, 133 originated in the Vale of Glamorgan; this is the highest proportion of cross-border use for green waste. No other local authorities, apart from those in this study really contribute to green waste coming into Cardiff. For Newport, 12 tonnes of green waste originates in Caerphilly; the rest of the 70 tonnes would originate elsewhere. About 8 tonnes of green waste entering the Vale of Glamorgan comes in from Cardiff residents, the remaining 13 tonnes of the total 21 tonnes of green waste would originate from other authorities.

Table 13 Origin of green waste in tonnes per annum by local authority Part 2

Local Authority	Incoming cross-border green waste tonnage	Originating in:				
		Caerphilly	Cardiff	Newport	RCT	VoG
Caerphilly	95	-	11	38	1	0
Cardiff	202	1	-	19	47	133
Newport	70	12	0	-	0	0
RCT	-	-	-	-	-	-
The Vale of Glamorgan	21	0	8	0	0	-

Figure 7 shows the cross-border movement of green waste between the South Wales local authorities in this study, corresponding with the data shown in Table 13. The 125 tonnes of green waste going into Cardiff from the Vale of Glamorgan is the most notable result. This figure shows a different result for cross-border use for green waste than for that of mixed waste, as Caerphilly seems to receive more green waste from surrounding local authorities than it does mixed waste.

Figure 7 Net flow of green waste in tonnes pa between the five authorities



DIY Waste

As shown in Table 14 the authority that receives the highest amount of DIY waste through their HWRCs is Caerphilly, the great majority of this originates internally, with only 2.1 % coming from external sources. RCT and Cardiff both receive a notable amount of DIY waste compared with the Vale of Glamorgan and Newport counties. Again, the most affected local authority for cross-border DIY waste is Cardiff with 9.3% originating from outside the LA. This accounts for approximately 470 tonnes, almost four times higher than the next highest authority (Caerphilly).

Table 14 Origin of DIY waste by local authority

Local Authority	DIY waste Throughput (tonnes)	Originating within LA	Originating outside LA	Incoming cross-border DIY waste tonnage
Caerphilly	6,311	97.9%	2.1%	131

Cardiff	5,063	90.7%	9.3%	469
Newport	2,196	98.5%	1.5%	32
RCT	5,364	98.4%	1.6%	84
The Vale of Glamorgan	3,128	97.4%	2.6%	82

Table 15 shows the annual data for the origin of DIY waste in tonnes entering local authorities from the other counties covered in this project. In keeping with the trend for mixed waste and green waste, Caerphilly receives most of its incoming DIY waste from Newport; 95 of the 131 tonnes the authority receives from outside sources.

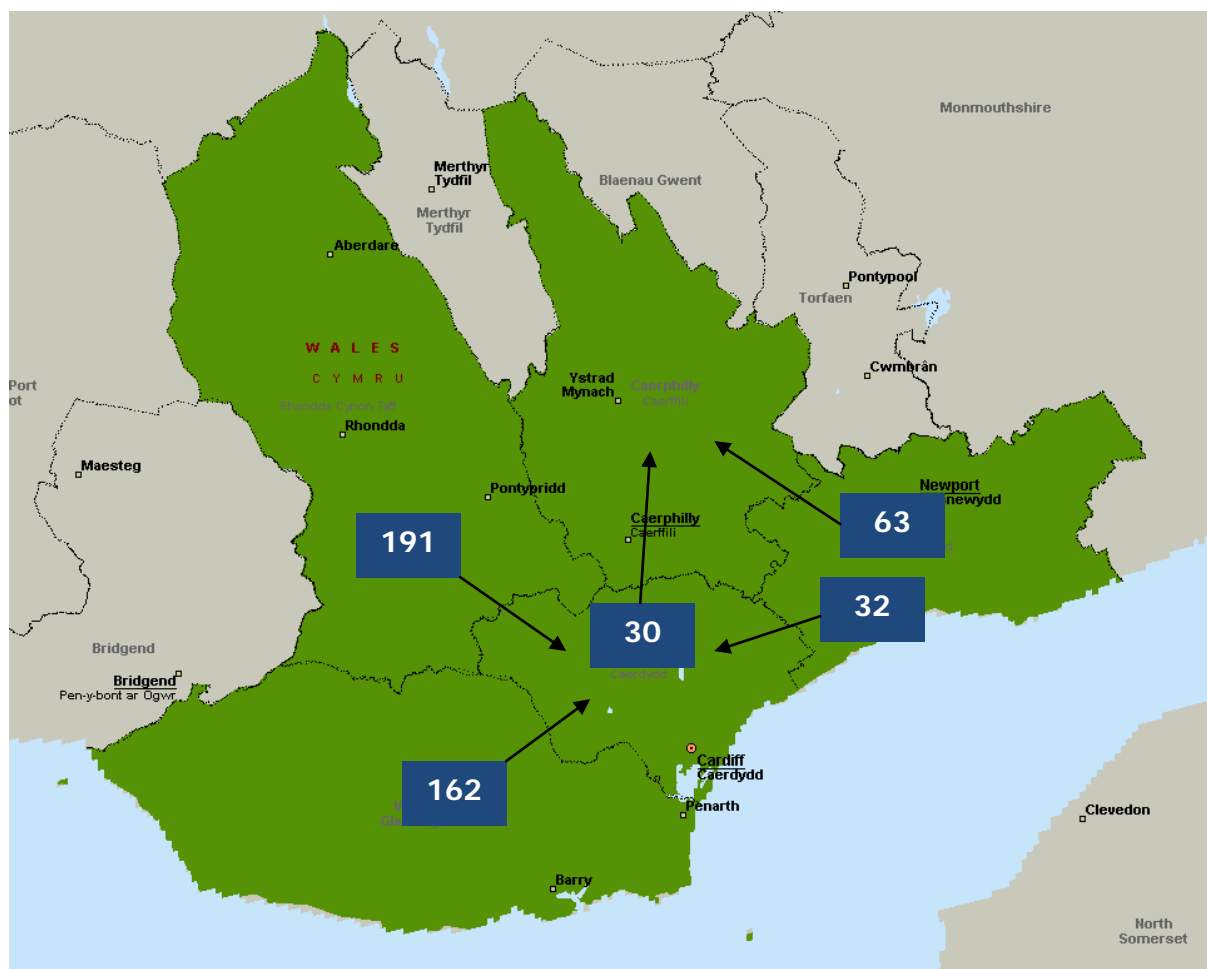
Interestingly, the trend does not follow for Cardiff where we see that the bulk of the DIY waste received from outside of Cardiff comes from the RCT and not Vale of Glamorgan. Of the 469 tonnes of DIY waste received from outside the authority, 275 tonnes is from RCT. This may be linked with suspected trade waste. All 32 tonnes DIY waste entering Newport from outside of the county is from Caerphilly. Similarly, all DIY waste originating from outside of RCT is from Cardiff. The Vale of Glamorgan receives 82 tonnes of DIY waste from outside the authority, but none of this is from any of the other four local authorities in this cross-border use study.

Table 15 Origin of DIY waste in tonnes per annum by local authority Part 2

Local Authority	Incoming cross-border DIY waste tonnage	Originating in:				
		Caerphilly	Cardiff	Newport	RCT	VoG
Caerphilly	131	-	30	95	0	0
Cardiff	469	0	-	32	275	162
Newport	32	32	0	-	0	0
RCT	84	0	84	0	-	0
The Vale of Glamorgan	82	0	0	0	0	-

Figure 8 depicts the net flow in tonnes of DIY waste between the five authorities every year. We can see that for Cardiff, most of the DIY waste entering the authority is from RCT, which is almost matched by the Vale of Glamorgan. Cardiff also receives some DIY waste from Newport, who's residents also take double this amount to Caerphilly. Some residents of Cardiff take DIY waste to Caerphilly.

Figure 8 Net flow of DIY waste in tonnes pa between the five authorities



Recyclables

According to WasteDataFlow and indicated in Table 16, Caerphilly County Borough Council records the highest amount of recyclables in total, recovering 17,429 tonnes of recyclable material from its HWRCs, a result of the secondary sort of residual skips in Caerphilly. This is over four times the amount that Newport receives (the local authority with the lowest amount of recyclable material received amongst those included in the study). As seen in the previous tables, Cardiff Council receives the highest percentage of recyclables originating outside the authority, at 10.7%. Caerphilly, Newport, RCT and the Vale of Glamorgan receive much lower proportions ranging from 1.1% in the Vale of Glamorgan to 2.9% in Caerphilly. Although Caerphilly receives only 2.9% of recyclables from outside its borders compared to Cardiff's 10.7%, its higher throughput of recyclables mean that the incoming cross-border tonnage is not far off that of Cardiff.

Table 16 Origin of recyclables by local authority Part 1

Local Authority	Recyclables Throughput (tonnes)	Originating within LA	Originating outside LA	Incoming cross-border recyclables tonnage
Caerphilly	17,429	97.1%	2.9%	512
Cardiff	6,666	89.3%	10.7%	711
Newport	4,157	97.8%	2.2%	91

RCT	7,837	98.5%	1.5%	119
The Vale of Glamorgan	4,493	98.9%	1.1%	49

Table 17 gives data on the origins of recyclables in tonnes per annum. The tonnages for recyclables is high as these are all the materials that are not classed as mixed waste for landfill, garden waste and DIY waste. As with the previous trends for the other forms of waste, Caerphilly receives 186 tonnes of its incoming 512 tonnes of recyclables from Newport county residents, the same amount originates from other local authorities and smaller amounts from Cardiff and RCT.

Cardiff has received 463 tonnes of recyclables from the Vale of Glamorgan, this is a substantial proportion of the recyclables that are received from outside the authority. It should be noted that with stronger enforcement of separation, this figure would be expected to be higher. Cardiff receives over 137 tonnes of recyclables from Caerphilly and lesser amounts from Newport and RCT. Newport has 91 tonnes of recyclables coming into the authority from outside residents, 58 tonnes of this is from Caerphilly. The remaining amount is from other authorities not covered in this study.

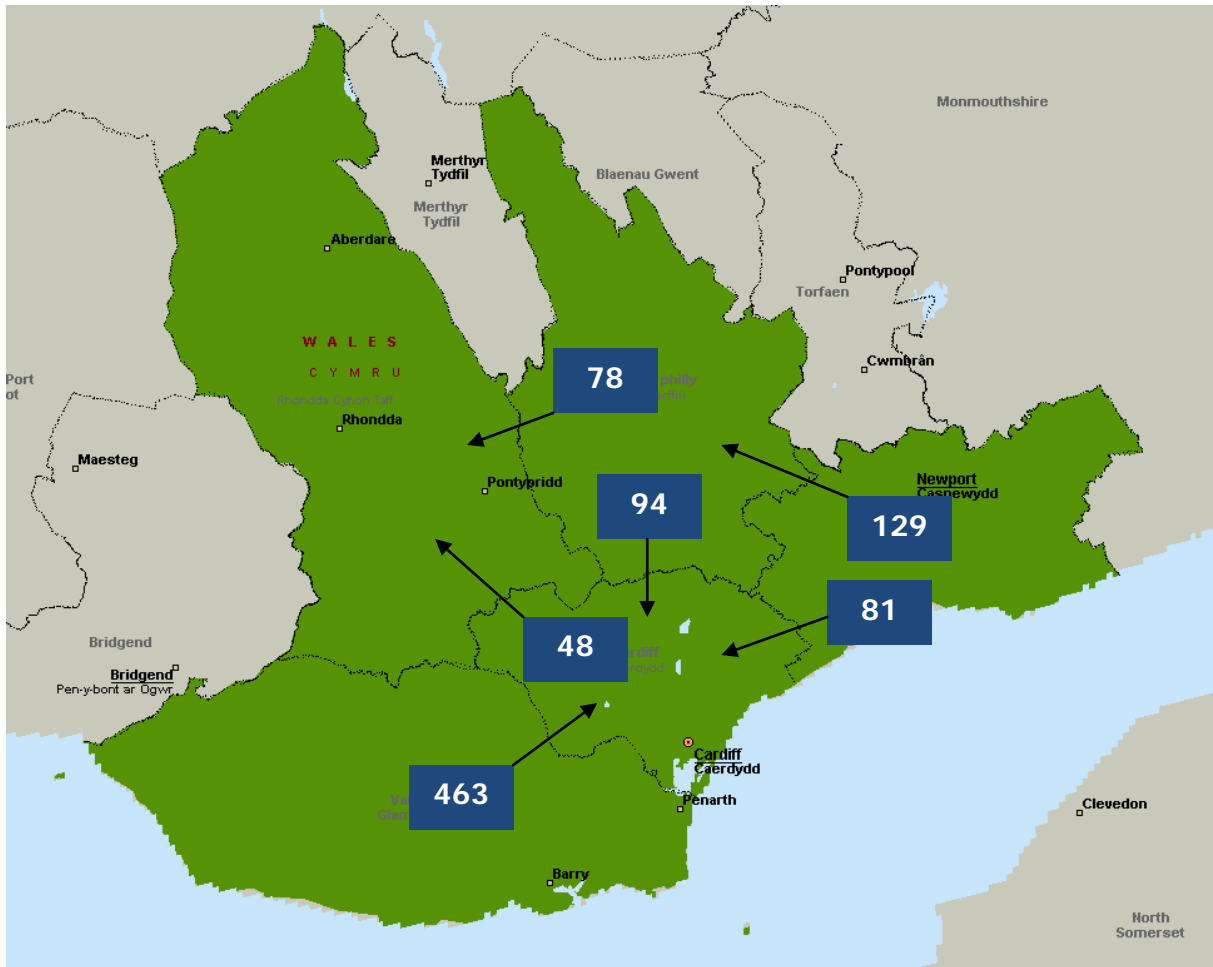
Rhondda Cynon Taff receives 119 tonnes of recyclables from outside the authority; 70 tonnes of this is from Cardiff, nearly 24 tonnes from Caerphilly and the remaining amount from residents from other councils. The Vale of Glamorgan takes just 49 tonnes of recyclables from outside sources, but none of this originates in the other four local authorities in this cross-border use study.

Table 17 Origin of recyclables in tonnes per annum by local authority Part 2

Local Authority	Incoming cross-border recyclables tonnage	Originating in:				
		Caerphilly	Cardiff	Newport	RCT	VoG
Caerphilly	512	-	44	186	102	0
Cardiff	711	138	-	81	22	463
Newport	91	58	0	-	0	0
RCT	119	24	71	0	-	0
The Vale of Glamorgan	49	0	0	0	0	-

Figure 9 shows the net flow of recyclables in tonnes per annum between the five local authorities. Once again, we can see that a significant amount of recyclables moves from the Vale of Glamorgan to Cardiff. Cardiff also receives recyclables from Newport and Caerphilly. Some residents from Cardiff have chosen to use HWRCs in RCT to dispose of their recyclables. We can also see cross-border use of recycling facilities from Caerphilly to RCT.

Figure 9 Net flow of recyclables in tonnes pa between the five authorities



3.3 Financial implications

Cross-border flows of material clearly have the potential to impact upon costs at HWRCs. Table 18 indicates the additional costs per annum associated with the increase in waste in each of the material categories. In addition, there is a column indicating the additional operational costs brought about by the increased proportion of people using the sites. As expected with the relatively high proportion of visitors residing outside the LA, Cardiff bears the largest total additional costs per annum at approximately £430,000 (with mixed waste disposal costs accounting for over a third), almost four times the amount of the next highest authority, Caerphilly and twelve times that of Newport. Therefore although the cross-border usage observed in this study was not great in magnitude, the estimated additional cost of managing the material delivered through cross-border usage is in fact considerable. This is due primarily to the mean operating costs per tonne of £117 across HWRCs in Wales calculated using local authority WasteDataFlow returns and explained in more detail in Table 2.

Table 18 Implications of additional waste on HWRC operational costs

Authority	Additional costs per annum by material				Additional Operating Costs pa	Total Additional Costs pa
	Mixed waste	Green waste	DIY waste	Recyclable*		
Caerphilly	£6,005	£2,185	£2,954	£-63,027	£160,214	£108,331
Cardiff	£146,654	£4,647	£10,560	£-87,485	£353,719	£428,094

Newport	£5,642	£1,614	£721	-£11,198	£37,500	£34,279
RCT	£6,597	£0	£1,895	-£14,652	£49,245	£43,085
Vale of Glamorgan	£7,200	£476	£1,844	-£6,024	£36,413	£39,909

* negative indicates a revenue

Table 19 presents information in the same format as the previous table but shows the savings realised by exporting waste and recycling out of the authority area.

Table 19 Implications of outgoing waste on HWRC operational savings

Authority	Savings per annum by material				Operating Cost savings pa	Total Savings pa
	Mixed waste	Green waste	DIY waste	Recyclable*		
Caerphilly	£2,474	£369	£838	-£73,317	£45,558	-£24,077
Cardiff	£17,114	£597	£3,315	-£10,577	£61,013	£71,462
Newport	£7,868	£1,057	£2,268	-£24,952	£70,285	£56,525
RCT	£9,287	£1,483	£5,190	-£7,808	£97,570	£105,723
Vale of Glamorgan	£68,049	£2,253	£3,195	-£56,867	£234,316	£250,947

* negative indicates a revenue

Summing Table 19 and Table 20 provides an indication of the net costs for each authority of the material flowing in and out of the borders as well as the additional or lower operational costs as a result of increased or reduced use of the sites due to cross-border use. As might be expected, Cardiff bears the largest net cost largely due to the increased operational costs resulting from more than expected numbers as well as a higher mixed waste disposal cost due to an inflow of mixed waste. The Vale of Glamorgan, largely down to the effect of Penarth residents using the Cardiff sites experiences a net saving of approximately £200,000 per annum.

Table 20 Implications of additional waste on net HWRC operational costs

Authority	Net costs per annum by material				Net Operating Costs pa	Net Costs pa
	Mixed waste	Green waste	DIY waste	Recyclable*		
Caerphilly	£3,531	£1,816	£2,116	£10,290	£114,655	£132,408
Cardiff	£129,539	£4,050	£7,245	-£76,908	£292,706	£356,632
Newport	-£2,226	£557	-£1,547	£13,754	-£32,785	-£22,247
RCT	-£2,690	-£1,483	-£3,295	-£6,844	-£48,325	-£62,638
Vale of Glamorgan	-£60,850	-£1,777	-£1,351	£50,843	-£197,903	-£211,038

* negative indicates a revenue

3.4 Implications for recycling rates

Similarly to the preceding section, cross-border flows have implications for recycling rates across the authorities. Table 21 summarises this by calculating the effect that the additional or loss of material has on recycling rates. Interestingly, it is the more urban authorities that

would have higher HWRC recycling rates if there was no cross-border usage. Specifically, Cardiff would see a 0.3% rise to 38.2% and Newport a rise of 1% to 67.9%. The largest fall in recycling rates would be in RCT that would have a rate of 75.2% should cross-border use not exist. Although all authorities experience a change of recycling rate, the magnitude is not high, which is to be expected given the limited cross-border flows observed.

Table 21 Implications of additional waste on HWRC recycling rates

Authority	Net tonnage per annum by material				Reported Recycling rate*	Recalculated Recycling rate
	Mixed waste	Green waste	DIY waste	Recyclable		
Caerphilly	- 226	37	93	- 43	93.1%	92.1%
Cardiff	1,416	181	355	590	37.9%	38.2%
Newport	- 6	- 45	- 95	- 210	66.9%	67.9%
RCT	- 312	- 48	- 191	126	77.4%	75.2%
Vale of Glamorgan	- 816	- 125	- 162	- 463	54.4%	53.0%

* HWRC recycling rate excluding rubble

3.5 Cardiff cross-border use findings

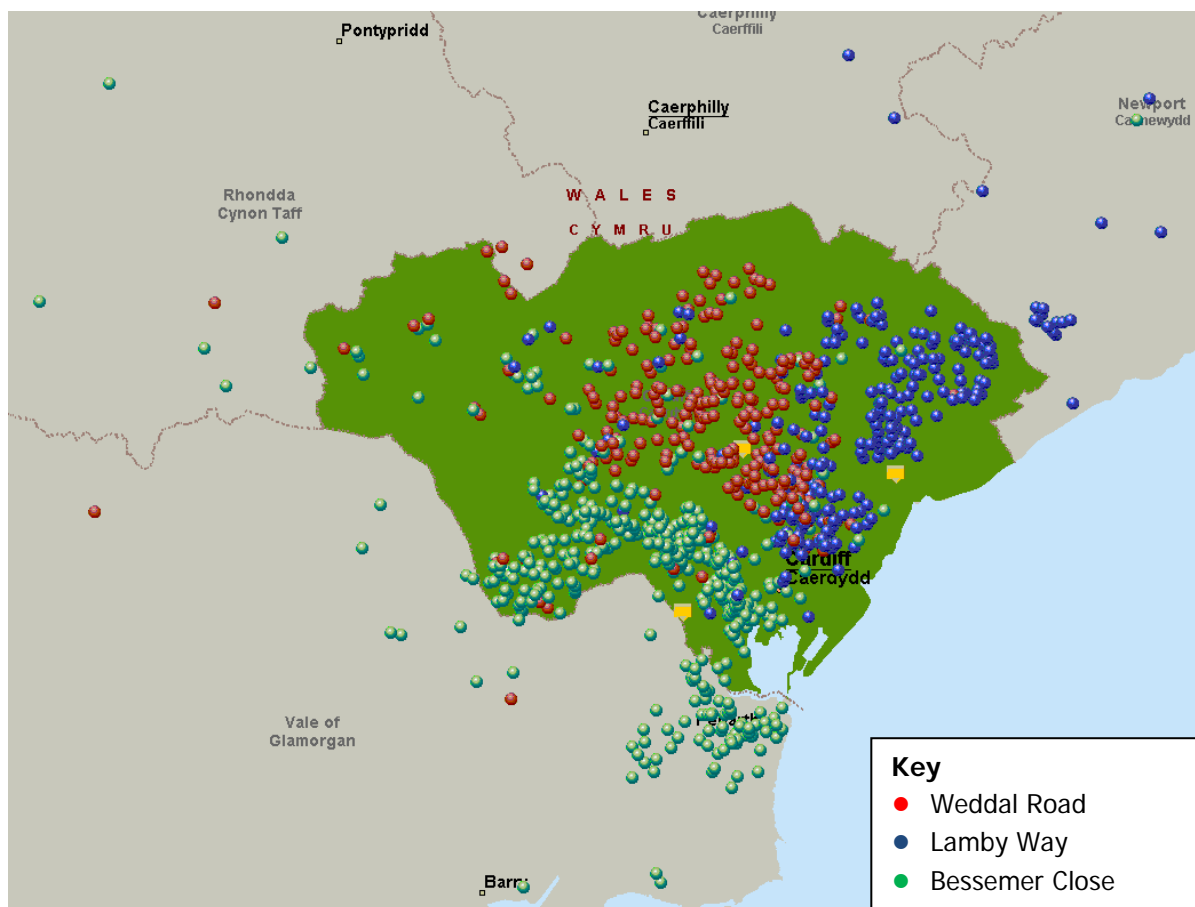
Table 22 below gives the statistics for Cardiff Council's HWRCs. In looking at the figures for the authority, it is worth bearing in mind that Cardiff is the most affected by cross border use, with 10.6% of the total HWRC tonnage throughput material estimated to arise from external origins.

Table 22 General statistics for Cardiff HWRCs 2012/13

No. of HWRCs	3
Total HWRC tonnage throughput	27,484
HWRC arisings, kg/hh/yr	195
HWRC Recycling Rate ex. rubble	37.9%
WDF Residual waste tonnage	13,914

The map in Figure 10 is a visual representation of the field data collected in May. Each coloured dot on the map shows the location that the resident travelled from, by using their postcode data, and which HWRC they visited.

Figure 10 Map of the origin of users at Cardiff HWRCs



The image above shows where residents have travelled from to visit the HWRC sites within the county. Residents on the East side of the authority tend to use the Lamby Way site. Those living in the North and central areas would visit the Weddal Road HWRC and the majority of the Bessemer Close material originates from the South Westerly region of the county. At a glance it can be seen that many residents from Penarth, just South of Cardiff Bay, use the Bessemer Road HWRC. This makes up the bulk of the cross border use for Cardiff Council. The reason for the high use from Penarth is that this site is the nearest site for residents as it is located very close to the border between Cardiff and the Vale of Glamorgan. It is easier for residents of Penarth to visit the Bessemer Road HWRC rather than the Vale of Glamorgan Council's HWRC in Barry.

Table 23 shows the origin of waste received at each of Cardiff's HWRC sites and how much of the waste came from internal or external sources. Bessemer Close HWRC is the site affected most by cross border use. The quantities of waste from external sources are the highest for this site for all types of waste. Of the garden waste that Bessemer Close receives, 29.6% of it is from external origins. Due to its close proximity to Penarth, Bessemer Road receives between 11-15% for mixed waste, DIY waste and recyclable material. Weddal Road HWRC is the least affected by cross border use. All DIY waste tonnage throughputs originates internally, while mixed waste, garden waste and recyclables are all around 95% internal origins. Lamby Way is affected by cross border external sources from Newport and Caerphilly, with 11.6% of its mixed waste coming from other counties.

Table 23 Proportion of different waste types by weight originating inside/outside Cardiff

Site	Mixed waste		Garden		DIY		Recyclables	
	Internal	External	Internal	External	Internal	External	Internal	External
Weddal Road	95%	5%	95%	5%	100%	0%	95%	5%
Lamby Way	88.4%	11.6%	95%	5%	100%	0%	95%	5%
Bessemer Close	65%	35%	70.4%	29.6%	95%	5%	95%	5%

Bessemer Close	86.7%	13.3%	70.4%	29.6%	89.0%	11.0%	84.9%	15.1%
Lamby Way	88.4%	11.6%	94.7%	5.3%	90.0%	10.0%	91.2%	8.9%
Weddal Road	95.2%	4.8%	95.5%	4.5%	100.0%	0.0%	94.8%	5.3%

Table 24 presents the results of the catchment area analysis for the HWRCs in Cardiff and shows that Weddal Road HWRC has a much tighter catchment area with almost a third of visitors living within a one mile radius of the site. The other two sites show very similar catchment areas in that approximately 16% of visitors live within one mile and 87% live within three miles. All three sites show similar catchment at the five-mile radius level (~96%).

Table 24 Catchment area analysis for Cardiff HWRCs

Site	Within 1 mile	Within 3 miles	Within 5 miles
Bessemer Close	16.9%	87.2%	95.9%
Lamby Way	16.6%	87.0%	96.8%
Weddal Road	31.4%	91.0%	96.6%

3.6 Caerphilly cross-border use findings

Table 25 shows the data for the HWRC sites that Caerphilly Council operates. Caerphilly Council receives a similar amount on total HWRC tonnage throughput to Cardiff Council, but only receives 4.8% of waste from cross border use. It has a high recycling rate of 93.1%.

Table 25 General statistics for Caerphilly HWRCs 2012/13

No. of HWRCs	6
Total HWRC tonnage throughput	27,387
HWRC arisings, kg/hh/yr	349
HWRC Recycling Rate ex. rubble	93.1%
WDF Residual waste tonnage	1,447

Figure 11 Map of the origin of users at Caerphilly HWRCs

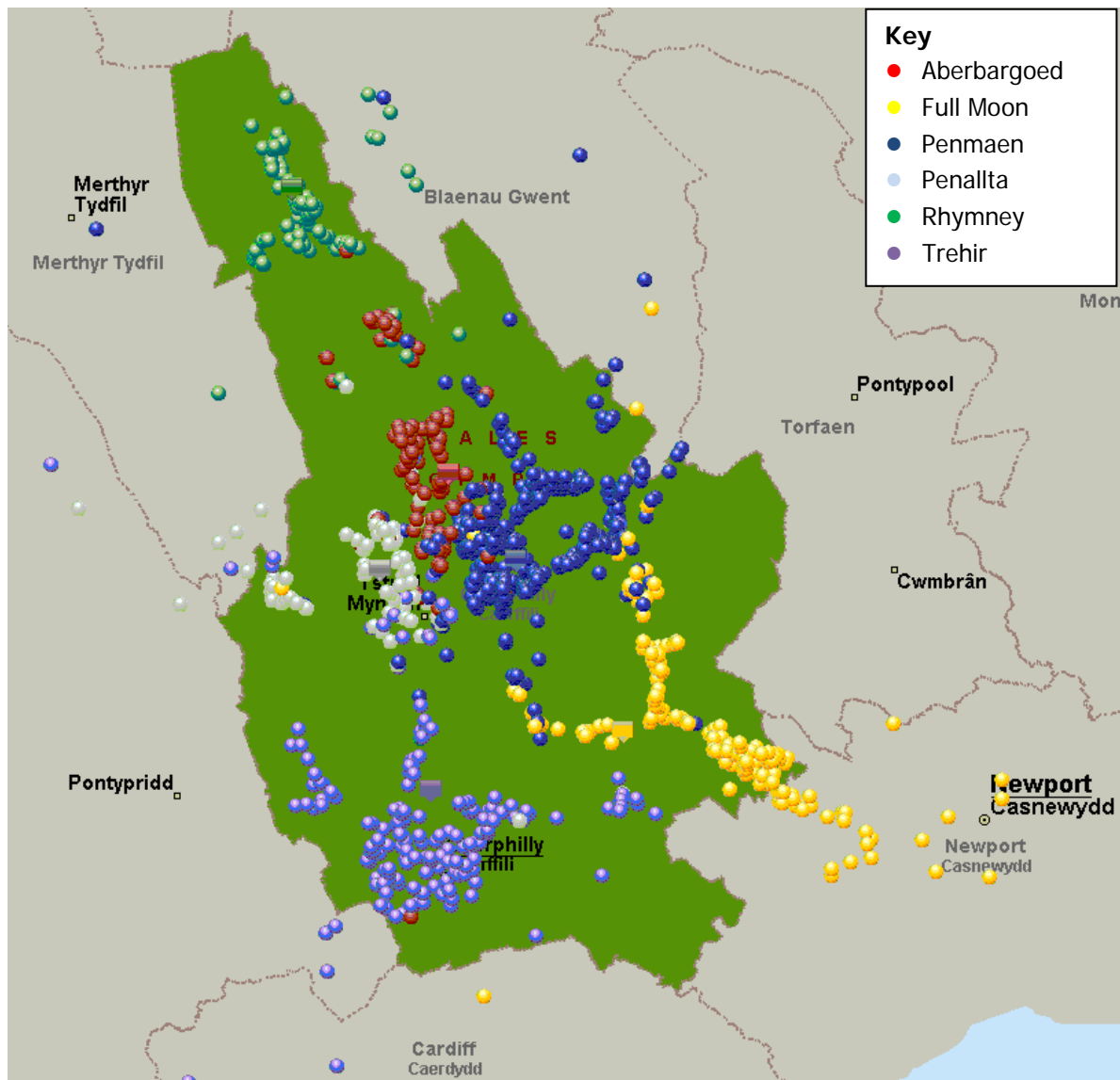


Figure 11 represents the visitors to HWRCs in Caerphilly. The image clearly indicates that the site most affected by cross border use is the Full Moon site, as there are a large number of yellow dots within the county of Newport, which have used the Caerphilly site. The other five sites are little affected by cross border use as we see there are very few cases originating in the neighbouring authorities. The Aberbargoed site receives comparatively little waste from outside the county. Once again we see the trend that most visitors to the sites are visiting the HWRC closest to their home postcode, as the clusters of dots of the same colour suggest.

Residents of Caerphilly tend to dispose of their waste within their home county. All categories of waste have around 96-99% originating with Caerphilly. The highest rate of waste going to a different authority is 2.4% of recyclables being taken to Cardiff council. This may be residents who find it easier to visit the Weddal Road HWRC, due to proximity or due to commuting to Cardiff.

The trend in Table 26 shows that most of the waste generated and brought to HWRCs in Caerphilly has come from internal sources, with most proportions falling in the upper 90s or indeed 100%. The Full Moon site is the site that is most affected by cross border use with around 11-13% of all wastes originating externally.

Table 26 Proportion of different waste types by weight originating inside/outside Caerphilly

Site	Mixed waste		Garden		DIY		Recyclables	
	Internal	External	Internal	External	Internal	External	Internal	External
Aberbargoed	99.9%	0.2%	98.4%	1.6%	98.5%	1.5%	98.9%	1.2%
Full Moon	87.9%	12.1%	88.1%	11.9%	86.4%	13.6%	88.6%	11.4%
Penallta	97.7%	2.3%	97.0%	3.0%	100.0%	0.0%	90.6%	9.4%
Penmaen	95.8%	4.2%	96.1%	3.9%	99.6%	0.4%	97.5%	2.5%
Rhymney	96.9%	3.1%	93.7%	6.3%	100.0%	0.0%	99.6%	0.4%
Treher	92.5%	7.5%	99.3%	0.7%	97.9%	2.1%	99.2%	0.8%

Table 27 indicates that the Full Moon and Rhymney HWRCs in Caerphilly have comparatively sparse catchment proportions at the one and three mile radii. However, the differences flatten out at the five-mile radius at which point at least 94% of visitors are covered for all sites. Of all the sites, Treher HWRC has the tightest catchment distribution with almost two thirds of visitors living with one mile of the site.

Table 27 Catchment area analysis for Caerphilly HWRCs

Site	Within 1 mile	Within 3 miles	Within 5 miles
Aberbargoed	40.1%	89.4%	95.8%
Full Moon	12.7%	76.1%	94.4%
Penallta	53.1%	92.7%	95.8%
Penmaen	42.9%	92.7%	98.6%
Rhymney	18.1%	84.3%	96.7%
Treher	63.6%	93.9%	99.4%

3.7 Newport cross-border use findings

The general statistics of Newport Council's HWRCs presented in Table 28 shows that the total tonnage throughput is much lower than that of Cardiff and Caerphilly, at 10,016 tonnes. The recycling rate is 66.9%; this is significantly lower than that of Caerphilly Council. Similarly to the other dense urban area of the study (Cardiff), Newport shows a low HWRC arisings per household per year figure.

Table 28 General statistics for Newport HWRCs 2012/13

No. of HWRCs	1
Total HWRC tonnage throughput	10,016
HWRC arisings, kg/hh/yr	158
HWRC Recycling Rate ex. rubble	66.9%
WDF Residual waste tonnage	2,588

Figure 12 Map of the origin of users at Newport HWRCs

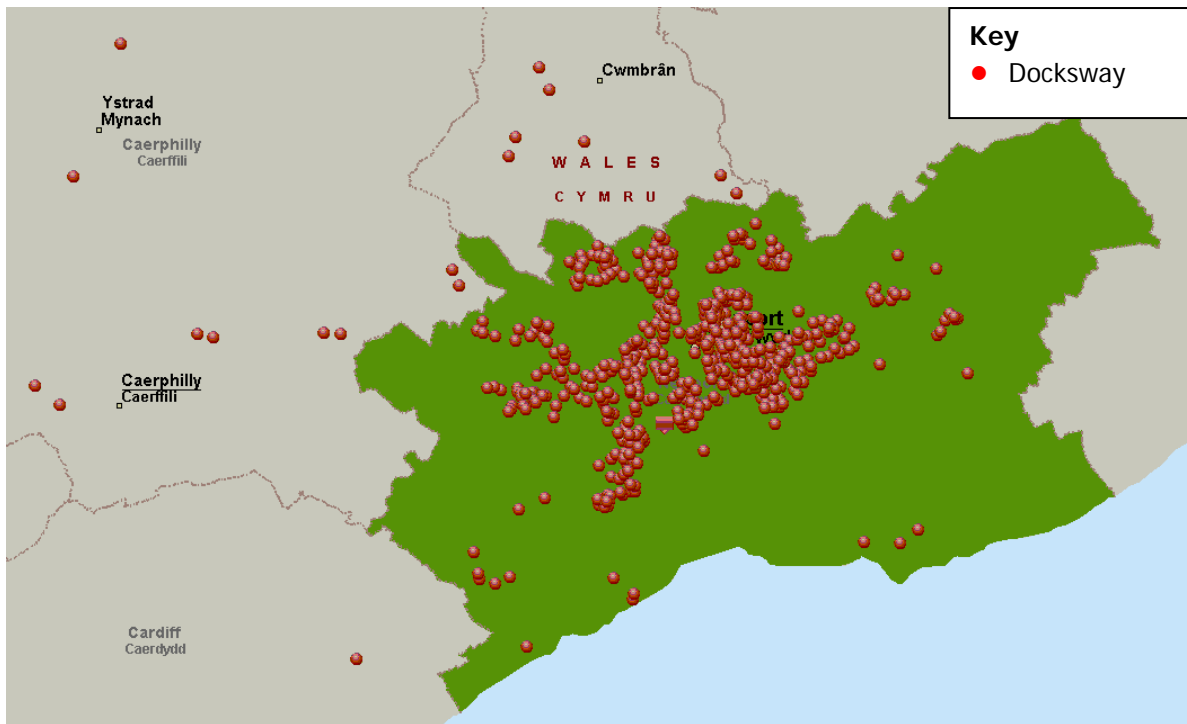


Figure 12 shows that there are some instances where waste material to the HWRC in Newport originate in other authorities. The majority of these are from Caerphilly and Torfaen (the latter not covered in this study).

Regarding cross border use of HWRCs, the waste that originates from within Newport but goes elsewhere, tends to be taken to Caerphilly Council's sites. These are very low levels as Newport's overall cross border use is just 3%. The largest proportion of waste type that originates from outside of the county is garden waste, at 6.5%. Other wastes originating from across the border are relatively low, around 2%.

Table 29 Proportion of different waste types by weight originating inside/outside Newport

Site	Mixed waste		Garden		DIY		Recyclables	
	Internal	External	Internal	External	Internal	External	Internal	External
Docksway	97.8%	2.2%	93.5%	6.5%	98.5%	1.5%	97.8%	2.2%

The catchment area analysis for Docksway HWRC in Newport presented in Table 30 shows a similar pattern to that of Bessemer Close and Lamby Way in Cardiff in that about 1 in 7 people live within one mile raising to about 4 in 5 at the three mile level. Like most of the other urban or suburban sites, over 95% of visitors live within five miles.

Table 30 Catchment area analysis for Newport HWRC

Site	Within 1 mile	Within 3 miles	Within 5 miles
Docksway	15.3%	80.2%	96.2%

3.8 Vale of Glamorgan cross-border use findings

Table 31 shows that the two sites receive 14,820 between them. On average, this is comparatively less per site than Newport. The Vale of Glamorgan's HWRC sites have a

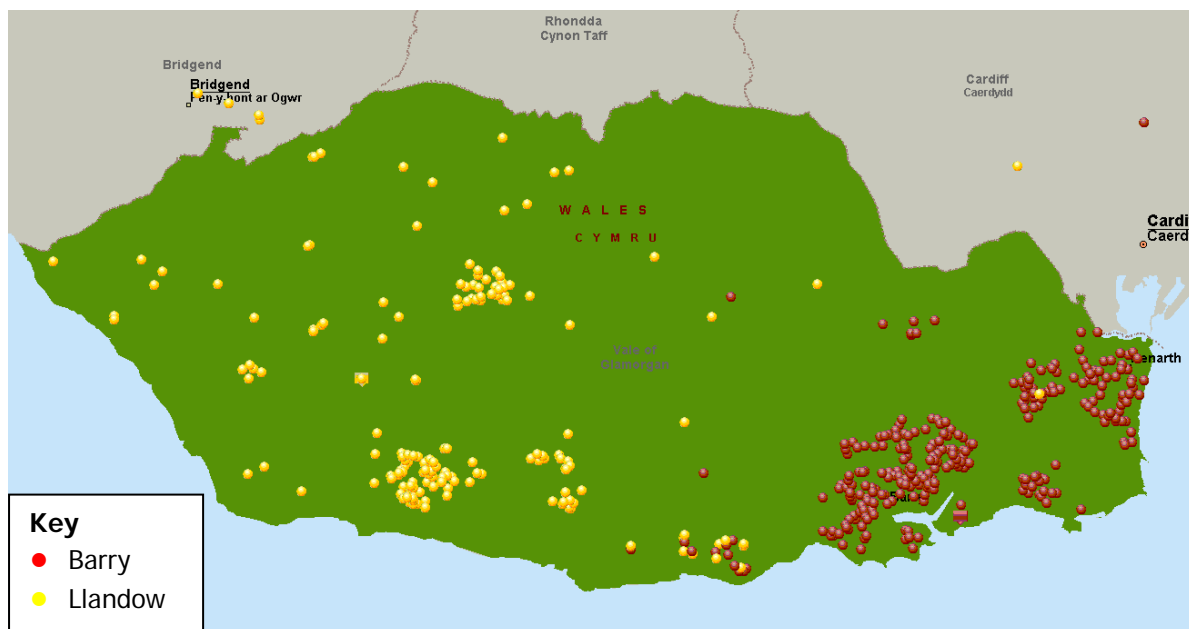
recycling rate of 54.4%; this is lower than the other local authorities in this study, apart from Cardiff. Of the five counties studied in this project, the Vale of Glamorgan is the local authority least affected by cross border use. Just 2.1% of the waste collected at the three sites originates from external origins.

Table 31 General statistics for Vale of Glamorgan HWRCs 2012/13

No. of HWRCs	2
Total HWRC tonnage throughput	14,820
HWRC arisings, kg/hh/yr	260
HWRC Recycling Rate ex. rubble	54.4%
WDF Residual waste tonnage	5,333

Figure 13 indicates which HWRC residents within the Vale of Glamorgan have visited. There is a clear East-West divide within the county, with a split within the village of Rhoose on choice of HWRC.

Figure 13 Map of the origin of users at Vale of Glamorgan HWRCs



Of the cross border use, the Vale of Glamorgan is the county that loses the lowest proportion of waste to neighbouring authorities. Most of this goes to Cardiff Council, with only 1.1% of all mixed waste going to RCT, compared with 11.7% to Cardiff. The county also loses 10.3% of its recyclables to Cardiff.

The Llandow HWRC is the site that is more affected by cross border use (Table 32), as it receives on average 3.9% of its waste from external origins. The main waste type that comes into the county from neighbouring areas is DIY was at 5.9%. The HWRC at Barry is little affected by cross border use. All garden and DIY waste originate from within the county, for residents questioned within our survey. An average of 0.6% of mixed waste and recyclables come from outside the county.

Table 32 Proportion of different waste types by weight originating inside/outside Vale of Glamorgan

Site	Mixed waste		Garden		DIY		Recyclables	
	Internal	External	Internal	External	Internal	External	Internal	External
Barry	99.4%	0.6%	100.0%	0.0%	100.0%	0.0%	99.4%	0.6%
Llandow	97.3%	2.7%	96.7%	3.3%	94.1%	5.9%	98.2%	1.8%

Table 33 indicates that of all the HWRCs in the study area, Llandow in Vale of Glamorgan has the lowest proportion (0.8%) of visitors living within one mile of the site, unsurprising given its rural location between Llandow and Llantwit Major. However, the proportion of visitors living within three miles of the site increases to almost 64%. A relatively low proportion of site users live within one mile of the Barry HWRC as well, again unsurprising given its industrial location in the Atlantic Trading Estate. Within five miles both sites possess high catchment proportions.

Table 33 Catchment area analysis for Vale of Glamorgan HWRCs

Site	Within 1 mile	Within 3 miles	Within 5 miles
Barry	8.9%	70.2%	97.9%
Llandow	0.8%	63.9%	88.5%

3.9 Rhondda Cynon Taff cross-border use findings

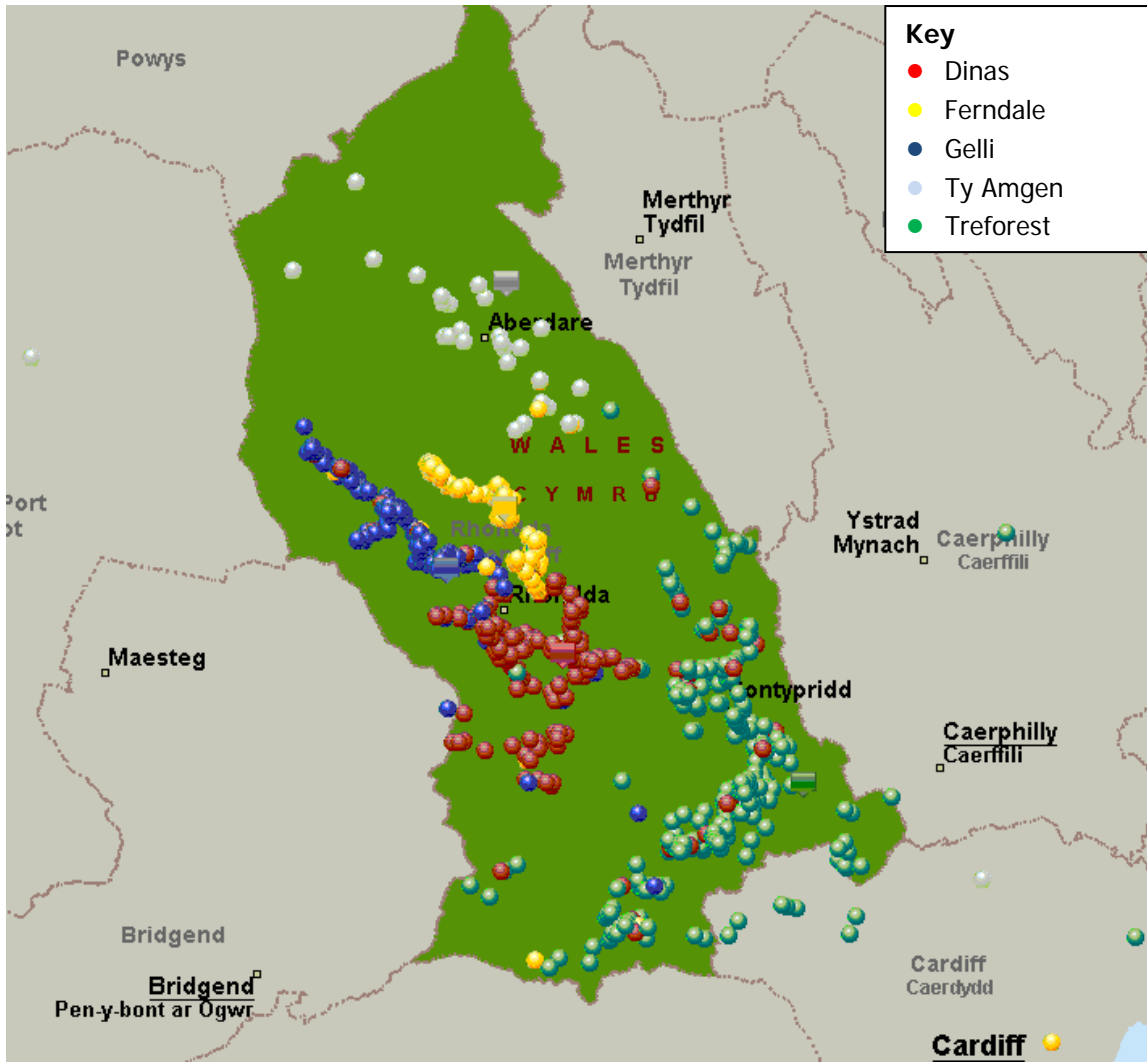
Rhondda Cynon Taff operates five HWRC sites within the local authority. The total tonnage throughput of the sites, at 16,836, is a similar amount to that of the Vale of Glamorgan presented in Table 34. It's throughput is just 2,000 tonnes more but has a higher HWRC recycling rate of 77.4%.

Table 34 General statistics for RCT HWRCs 2012/13

No. of HWRCs	5
Total HWRC tonnage throughput	16,836
HWRC arisings, kg/hh/yr	156
HWRC Recycling Rate ex. rubble	77.4%
WDF Residual waste tonnage	2,587

Residents in the north of the county seem to keep to the HWRC nearest to their home as shown in Figure 14. The natural topography of the county is a contributing factor to this, as the valley formations mean that residents are unlikely to travel the long distances up one valley and down another if it can be avoided. In the South of the county, we can see that some residents seem to choose to visit sites that are not necessarily the closest to their homes. Many residents who live near the Treforest site chose to visit the HWRCs in either the Dinas or Gelli. Reasons for this could be that they may prefer the facilities at another site and that they are not aware of the other facilities. The map also shows that there are some residents living in Cardiff that use the Treforest HWRC.

Figure 14 Map of the origin of users at RCT HWRCs



It is evident that some residents from RCT visit HWRCs outside of their local authority. This is minimal though, as across all waste types 93-99% originates from within the county. A minimal amount of RCT’s waste goes to Caerphilly council.

Table 35 shows that mixed waste, garden waste and DIY waste deposited at Dinas HWRC all originate within the county. Only 0.3% of recyclables originate from outside of RCT. The Ferndale HWRC has similar results to Dinas, where 100% of recyclables, garden and DIY waste originate from internal residents of the county. The HWRCs at Gelli and Ty Amgen, again, have very high figures for waste originating within RCT. The site most affected by cross border use in RCT is Treforest, due to its proximity to Cardiff; it receives 6.6% of mixed waste from external sources. All garden waste, within this study, originated from within RCT. Mixed waste and recyclables were the most affected types by cross border use.

Table 35 Proportion of different waste types by weight originating inside/outside RCT

Site	Mixed waste		Garden		DIY		Recyclables	
	Internal	External	Internal	External	Internal	External	Internal	External
Dinas	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	99.8%	0.3%
Ferndale	99.2%	0.8%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%
Gelli	95.9%	4.1%	100.0%	0.0%	100.0%	0.0%	99.8%	0.2%

Treforest	93.4%	6.6%	100.0%	0.0%	93.3%	6.7%	96.5%	3.5%
Ty Amgen	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	95.3%	4.7%

Table 36 presents the results of the catchment area analysis for HWRCs in RCT and shows that Treforest and Ty Amgen have the lowest concentration of site users within the one mile and three mile radii but - similarly to the HWRCs in Caerphilly – almost 9 in 10 people live within the five mile radius. Of the remaining HWRCs, the Ferndale site has the tightest catchment area with over 96% of users living within three miles of the site.

Table 36 Catchment area analysis for RCT HWRCs

Site	Within 1 mile	Within 3 miles	Within 5 miles
Dinas	24.0%	80.1%	89.6%
Ferndale	41.5%	96.4%	97.4%
Gelli	34.9%	82.2%	97.0%
Treforest	8.4%	53.4%	84.8%
Ty Amgen	6.1%	63.6%	90.9%

4.0 Trade waste analysis

This section includes analysis of household and trade waste flows within and across local authority borders to understand the effect that trade waste has on operational costs. Furthermore, the sites in each authority are studied in detail to identify the approximate additional material that is present as a result of trade waste. The cost of managing this material at each site and for the local authority as a whole is also calculated using up-to-date market values.

Table 37 Household and suspected trade waste proportions by authority and origin

Authority	Total Cross-border Use	Cross-border		Non cross-border		Overall	
		HH	Trade	HH	Trade	HH	Trade
Caerphilly	5.0%	98.7%	1.3%	95.9%	4.1%	96.0%	4.0%
Cardiff	11.0%	96.5%	3.5%	97.3%	2.7%	97.1%	2.9%
Newport	3.2%	98.1%	1.9%	98.9%	1.1%	98.9%	1.1%
RCT	2.5%	94.2%	5.8%	95.8%	4.2%	95.4%	4.6%
Vale of Glamorgan	2.1%	85.7%	14.3%	96.3%	3.8%	96.0%	4.0%
Total	5.6%	96.5%	3.5%	96.7%	3.3%	96.7%	3.3%

HH = Household

Overall, RCT has the highest proportion of traders depositing waste at sites within the authority at 4.6%, as indicated in Table 37. Considering that traders are forbidden to use any site in RCT this is a concern for the authority and it may want to consider charging traders to recover some of the costs arising from the additional material. At the opposite end of the scale, Newport shows the lowest proportion of traders using the site at 1.1%. It is worth bearing in mind that these figures represent the proportion of users not the proportion

by weight and so in the case that traders deposit more waste than the average resident, the proportion of trade waste by weight will be proportionally higher.

In terms of cross-border trade waste deposits, Caerphilly is the only authority whereby the cross-border trade usage is lower than the trade usage within its own borders. In all other authorities, especially Vale of Glamorgan (14.3% compared to 3.8%), the proportion of trade use is higher amongst cross-border users. It is possible that this may be the result of traders feeling that they are more likely to face consequences of trade waste abuse if they deposit waste at sites within their own authority. It is worth noting that the cross-border figures in Table 37 are proportions of the total cross-border use column (e.g. Caerphilly experiences 5% cross-border use of which 1.3% is trade).

Table 38 provides an indication of the additional operational costs associated with the extra burden of trade waste. There is a large range of additional operational costs with Caerphilly bearing the largest brunt, at approximately £128,000 and Newport with only 1.1% trade use bearing just £13,000 of costs due to trade abuse Cardiff and RCT bear approximately £90,000 each and Vale of Glamorgan £70,000. It has been noted that these figures are only estimates based upon the mean operating cost per tonne of all HWRCs in Wales. The table also includes estimated material costs associated with trade waste abuse (detailed in the following authority specific sections) to provide an approximate total additional cost of trade waste abuse for each authority. Similarly to the pattern shown in Table 18 Cardiff is shown to bear the largest cost of trade waste at approximately £127,000 and Newport the least at approximately £15,000.

Table 38 Operational cost implications per annum for trade waste abuse

Authority	Tonnage Throughput	Proportion of traders	Additional Operational Costs*	Additional Material Costs	Total Additional Costs
Caerphilly	27,387	4.0%	£128,171	-£53,495	£74,676
Cardiff	27,484	2.9%	£93,253	£34,149	£127,402
Newport	10,016	1.1%	£12,891	£2,405	£15,296
RCT	16,836	4.6%	£90,611	£3,850	£94,461
Vale of Glamorgan	14,820	4.0%	£69,358	£10,880	£80,238

* £117 per tonne (based on mean total throughput from local authority WasteDataFlow returns)

4.1 Cardiff trade waste use

Comparing the map of trade in Figure 15 and suspected trade use of Cardiff HWRCs with the map of general use in Section 3, it appears that traders using sites in Cardiff appear to originate from the more urbanised areas. There are two reasons why this might be the case; either traders are using their home postcodes and represent a different socio-economic strata than the general population – one that represents a more urbanised population, or that traders used their registered business address, more likely to be in the urban areas. The exact reason is likely to be a combination of the two.

Figure 15 Map of trade and suspected trade use of Cardiff HWRCs



As a whole, the results show that 2.9% of users of HWRCs in Cardiff are traders bringing additional operational costs of approximately £90,000. Considering that the relatively new HWRC Bessemer Close in Cardiff is the only HWRC at which traders are allowed to deposit waste, it is interesting to breakdown the figures by individual site. Table 39 below presents the proportion of Household/Trade waste by weight based on estimated annual tonnages at the individual sites in Cardiff. The results are broken down by the four categories used in the survey – mixed waste, green waste, DIY waste and recyclables. As compositional figures were not available at individual site level, the analysis assumed that each site receives the same material composition (that of Cardiff as a whole) across all sites.

The Lamby Way site is shown in the table to receive a higher proportion of trade waste than Bessemer Close. In fact, Bessemer Close receives the lowest proportion of green and DIY waste amongst the three sites in Cardiff. Cardiff's proportion of trade waste would be far lower if the proportion at Lamby Way was more in line with the other sites. The high proportion at this particular site could indicate that traders are purposefully avoiding Bessemer Close, on recognition that they have to pay to deposit waste there, and choosing to use Lamby Way as a means to reduce costs. We would recommend that Cardiff City Council conduct further research to identify the extent of trade waste abuse at the Lamby Way facility.

Table 39 Proportion of household/trade waste by material category for sites in Cardiff

Site	Tonnage Through put	Mixed waste		Green waste		DIY waste		Recyclables	
		HH	Trade	HH	Trade	HH	Trade	HH	Trade
Bessemer Close	5,437	97.4%	2.6%	99.1%	0.9%	98.7%	1.3%	98.4%	1.6%
Lamby Way	7,116	86.6%	13.4%	88.6%	11.4%	89.0%	11.0%	85.5%	14.5%
Weddal Road	8,389	98.5%	1.5%	97.1%	2.9%	95.0%	5.0%	99.5%	0.5%

Table 40 presents the additional costs associated with managing the waste arising as a result of trade waste use at the Cardiff HWRCs. It should be noted that the table indicates gate fees and revenues only. Haulage fees and other operational costs (presented in Table 38) are not included. Furthermore, all mixed waste is assumed to go to landfill and the landfill tax is apportioned appropriately.

Excluding the additional operational costs, it is clear that Lamby Way HWRC bears the largest material cost of trade waste abuse calculated at approximately £20,000 per annum. This figure includes nearly £50,000 in additional mixed waste management gate fees (including landfill tax at the higher rate) but is reduced thanks to approximately £30,000 in revenue from the sale of recyclables. In reality, the revenue received from the sale of recyclables is expected to be lower due to haulage fees and that of mixed waste to be higher for similar reasons. These figures feed into an overall table (Table 38) placing them alongside other additional operating costs.

Table 40 Additional material costs pa of trade waste by material type for sites in Cardiff

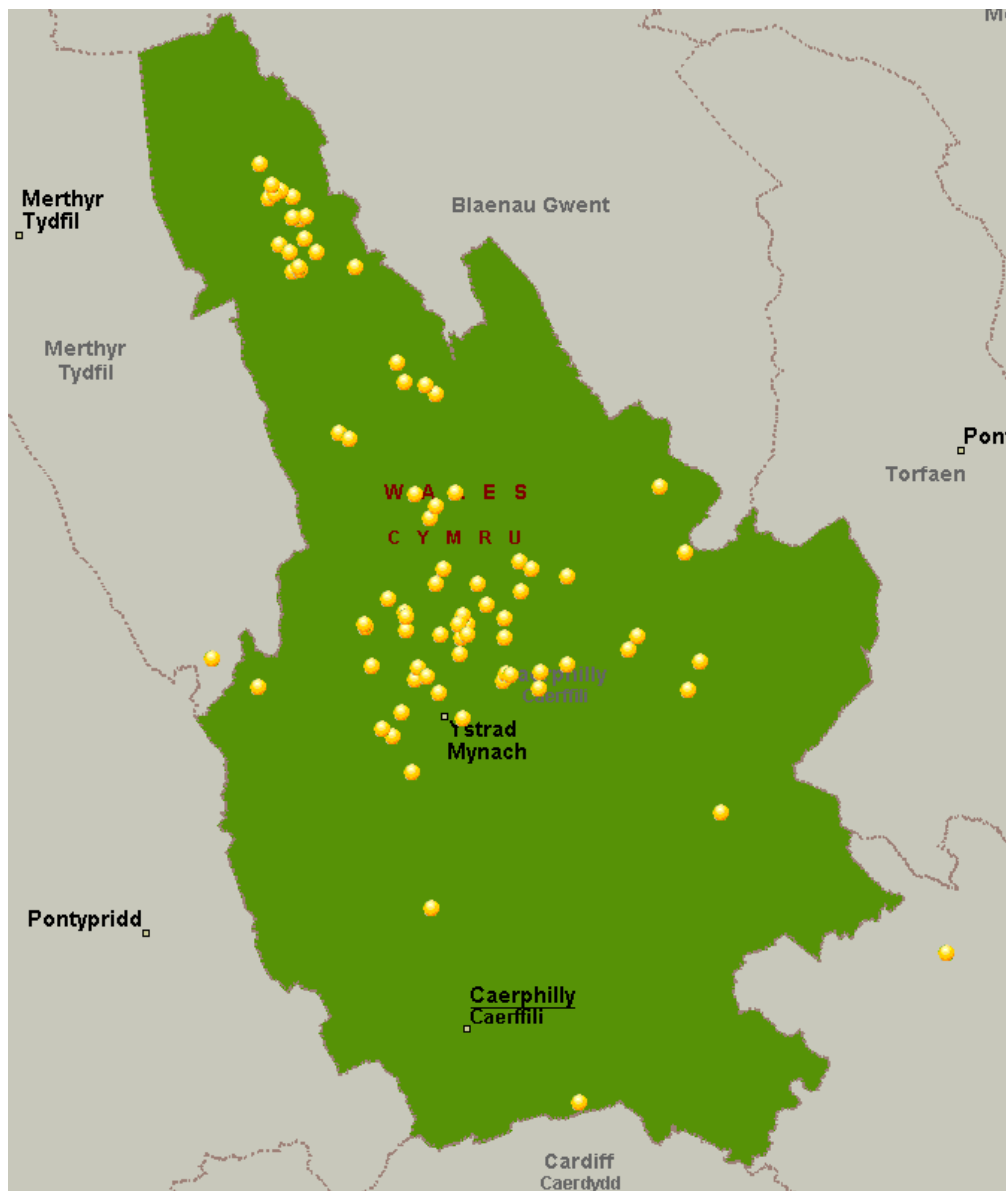
Site	Additional Costs by material from trade waste				Total Material Cost
	Mixed waste	Green waste	DIY waste	Recyclables*	
Bessemer Close	£7,157	£75	£293	-£2,595	£4,930
Lamby Way	£48,275	£1,249	£3,245	-£30,782	£21,986
Weddal Road	£6,371	£375	£1,739	-£1,251	£7,233
Total	£61,802	£1,699	£5,276	-£34,629	£34,149

* negative values indicate revenues

4.2 Caerphilly trade waste use

Figure 16 identifies that traders in Caerphilly are more densely located in the northern half of the authority in comparison to the equivalent map of the general population which is more evenly spread. Similarly to Cardiff, this may be the result of a lower proportion of traders basing themselves around the town of Caerphilly in comparison to the population at large. Furthermore, there are relatively few cases of cross-border trade abuse in the authority (1.3%).

Figure 16 Map of trade and suspected trade use of Caerphilly HWRCs



As might be expected by reviewing the above map in relation to the location of the individual sites in Caerphilly, Trehir and Full Moon (shown in Table 41), those located in the south of the authority receive lower proportions of trade waste than those in the north with the exception of Penmaen. Penallta, located near Ystrad Mynach in Caerphilly, receives a comparatively large proportion of trade waste with over 11% of mixed waste and over 15% of DIY waste coming from traders. Likewise, Aberbargoed experiences a high proportion of trade waste abuse with over a quarter of its DIY waste arising from traders. Of the centrally located sites in Caerphilly (Aberbargoed, Penmaen and Penallta), traders appear to use Aberbargoed and Penallta and refrain from using the Penmaen site. We would recommend further researching why this might be the case.

Table 41 Proportion of household/trade waste by material category for sites in Caerphilly

Site	Tonnage Through put	Mixed waste		Green waste		DIY waste		Recyclables	
		HH	Trade	HH	Trade	HH	Trade	HH	Trade
Aberbargoed	4,189	92.0%	8.0%	92.3%	7.7%	73.2%	26.7%	88.9%	11.1%
Full Moon	3,483	97.2%	2.8%	99.1%	0.9%	97.9%	2.1%	100%	0.0%
Penallta	5,221	88.7%	11.3%	92.2%	7.8%	84.6%	15.4%	95.8%	4.2%
Penmaen	4,346	99.2%	0.8%	98.1%	1.9%	95.5%	4.5%	97.7%	2.3%
Rhymney	2,724	90.9%	9.1%	90.2%	9.8%	59.9%	40.1%	91.5%	8.5%
Treher	6,330	96.9%	3.1%	100%	0.0%	100%	0.0%	99.8%	0.2%

Table 42 below presents the results of the financial analysis of trade waste abuse at the individual sites in Caerphilly. Bearing in mind the same assumptions apply as per the Cardiff analysis, all sites (with the exception of Full Moon and Treher) appear to benefit from the large quantities of recyclables that traders deposit. Again, this income must be balanced with the haulage fees and the additional operational costs to determine whether or not trade waste abuse has a significant financial impact. Considering that the additional operational costs as a result of trade abuse are in the order of £130,000 and the material revenues are in the order of £50,000, we estimate that trade abuse does cost Caerphilly local authority approximately £80,000 per annum. However the material revenues are expected to be lower than this value when haulage costs are included, so the cost is likely to be significantly more than £80,000. Similarly to the previous section for Cardiff, these figures feed into an overall table (Table 38) placing them alongside other additional operating costs.

Table 42 Additional material costs pa of trade waste by material type for sites in Caerphilly

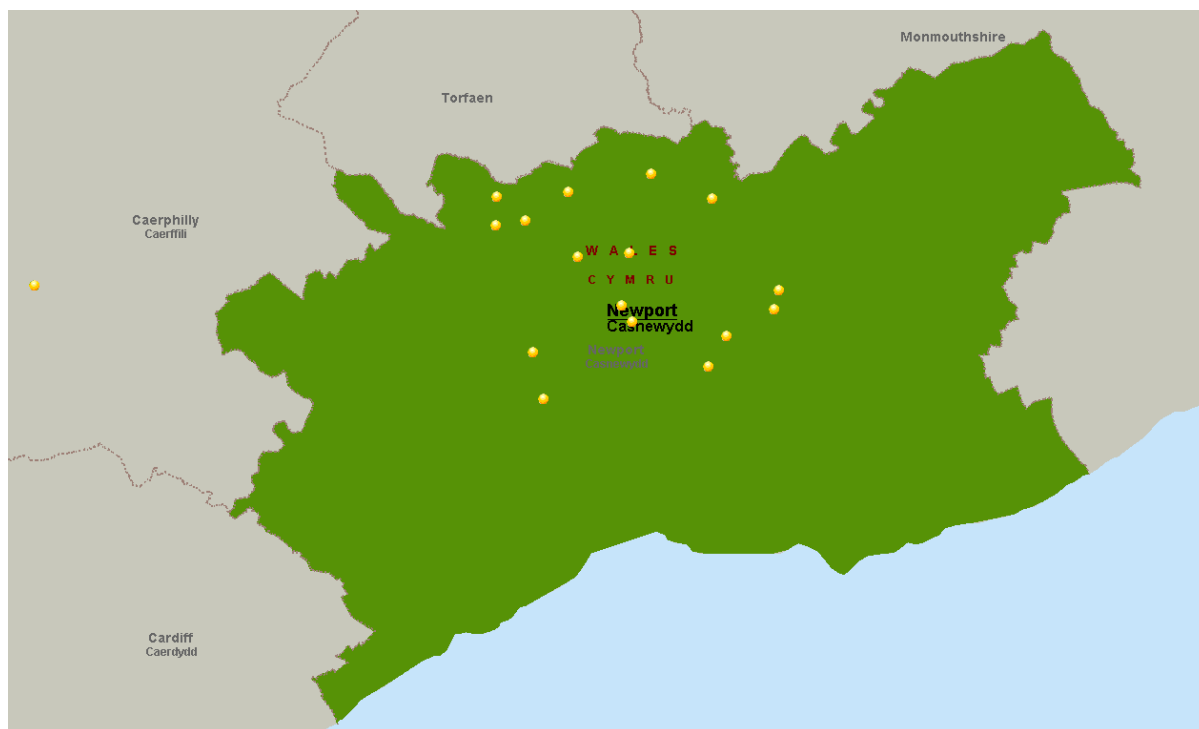
Site	Additional Costs by material from trade waste				Total Material Cost
	Mixed waste	Green waste	DIY waste	Recyclables*	
Aberbargoed	£1,770	£596	£5,799	£-36,398	£-28,233
Full Moon	£515	£58	£379	£0	£952
Penallta	£3,117	£752	£4,169	£-17,165	£-9,127
Penmaen	£184	£153	£1,014	£-7,825	£-6,474
Rhymney	£1,310	£493	£5,664	£-18,125	£-10,658
Treher	£1,037	£0	£0	£-991	£46
Total	£7,932	£2,052	£17,025	£-80,504	£-53,495

* negative values indicate revenues

4.3 Newport trade waste use

Figure 17 presents a map of Newport local authority with the location of traders marked using their postcodes. Newport experiences only 1.1% trade waste abuse and so there are relatively few postcodes to plot. In terms of spread across the authority, traders appear to be relatively evenly spread across the city of Newport with a lower density in the rural fringes.

Figure 17 Map of trade and suspected trade use of the Newport HWRC



The Docksway site in Newport receives less than 1% trade waste abuse of mixed waste and just 0.5% recyclables. The only significant proportion of trade waste abuse in Newport relates to DIY waste where approximately 4.7% arises from traders.

Table 43 Proportion of household/trade waste by material category for sites in Newport

Site	Tonnage Throughput	Mixed waste		Green waste		DIY waste		Recyclables	
		HH	Trade	HH	Trade	HH	Trade	HH	Trade
Docksway	10,016	99.2%	0.8%	97.7%	2.3%	95.3%	4.7%	99.5%	0.5%

The total additional cost of trade waste abuse at Newport arising from material gate fees/revenues is approximately £2,400 although in a similar vein to the other authorities, this figure is likely to be higher as a result of haulage fees being excluded. Adding this total to the additional operational costs of approximately £13,000, Newport spends over £15,000 per annum managing illegal trade waste. This figure, although less significant than the equivalent figure in Caerphilly local authority, is worth investigating further. These figures feed into an overall table (Table 38) placing them alongside other additional operating costs.

Table 44 Additional material costs pa of trade waste by material type for sites in Newport

Site	Additional Costs by material from trade waste				Total Material Cost
	Mixed waste	Green waste	DIY waste	Recyclables*	
Docksway	£2,071	£569	£2,322	-£2,556	£2,405

* negative values indicate revenues

4.4 Vale of Glamorgan trade waste use

Traders using the Barry and Llandow sites in Vale of Glamorgan are concentrated in Barry itself as well as the road between Barry and Penarth. The remaining few traders are spread sporadically across the remainder of the authority.

Figure 18 Map of trade and suspected trade use of Vale of Glamorgan HWRCs



Table 45 indicates that Barry HWRC receives a higher proportion of traders than Llandow in all material categories except recyclables, substantiating the results of the mapping exercise. Approximately a fifth of all the DIY waste passing through the Barry and Llandow sites arise from traders. Just 2.4% of mixed waste in the Barry facility arises as a result of trade abuse.

Table 45 Proportion of household/trade waste by material category for sites in Vale of Glamorgan

Site	Tonnage Throughput	Mixed waste		Green waste		DIY waste		Recyclables	
		HH	Trade	HH	Trade	HH	Trade	HH	Trade
Barry	11,300	97.6%	2.4%	92.7%	7.3%	77.3%	22.7%	95.7%	4.3%
Llandow	3,900	98.7%	1.3%	93.7%	6.3%	80.1%	19.9%	94.1%	5.9%

The below table provides an indication of the additional costs of managing wastes arising from traders at the Barry and Llandow sites in the Vale of Glamorgan. Similarly to the

previous section for Cardiff, the figures feed into an overall table (Table 38) placing them alongside other additional operating costs.

Table 46 Additional material costs pa of trade waste by material type for sites in Vale of Glamorgan

Site	Additional Costs by material from trade waste				Total Material Cost
	Mixed waste	Green waste	DIY waste	Recyclables*	
Barry	£9,759	£2,389	£12,182	-£18,120	£6,209
Llandow	£1,824	£712	£3,686	-£8,581	-£2,359
Total	£11,583	£3,101	£15,867	-£26,701	£3,850

* negative values indicate revenues

4.5 Rhondda Cynon Taff trade waste use

As shown on the map below, traders using sites across RCT to deposit waste are more evenly distributed across the authority than in others. Again there are relatively few cases of cross-border trade abuse (2.5%). Of all the individual sites in the authority, Gelli receives the lowest proportion of mixed waste and recyclables from traders at 0.7% and 0.4% respectively. All sites with the exception of Treforest experience high levels of DIY waste from traders up to as much as 40% at Ty Amgen. Furthermore Ty Amgen receives a lot of green waste from traders potentially a result of its rural location in the north of the authority. It is recommended that the significantly high levels of trade waste, especially at Ty Amgen, is further researched as this could be a potential source of revenue for the authority.

Figure 19 Map of trade and suspected trade use of RCT HWRCs

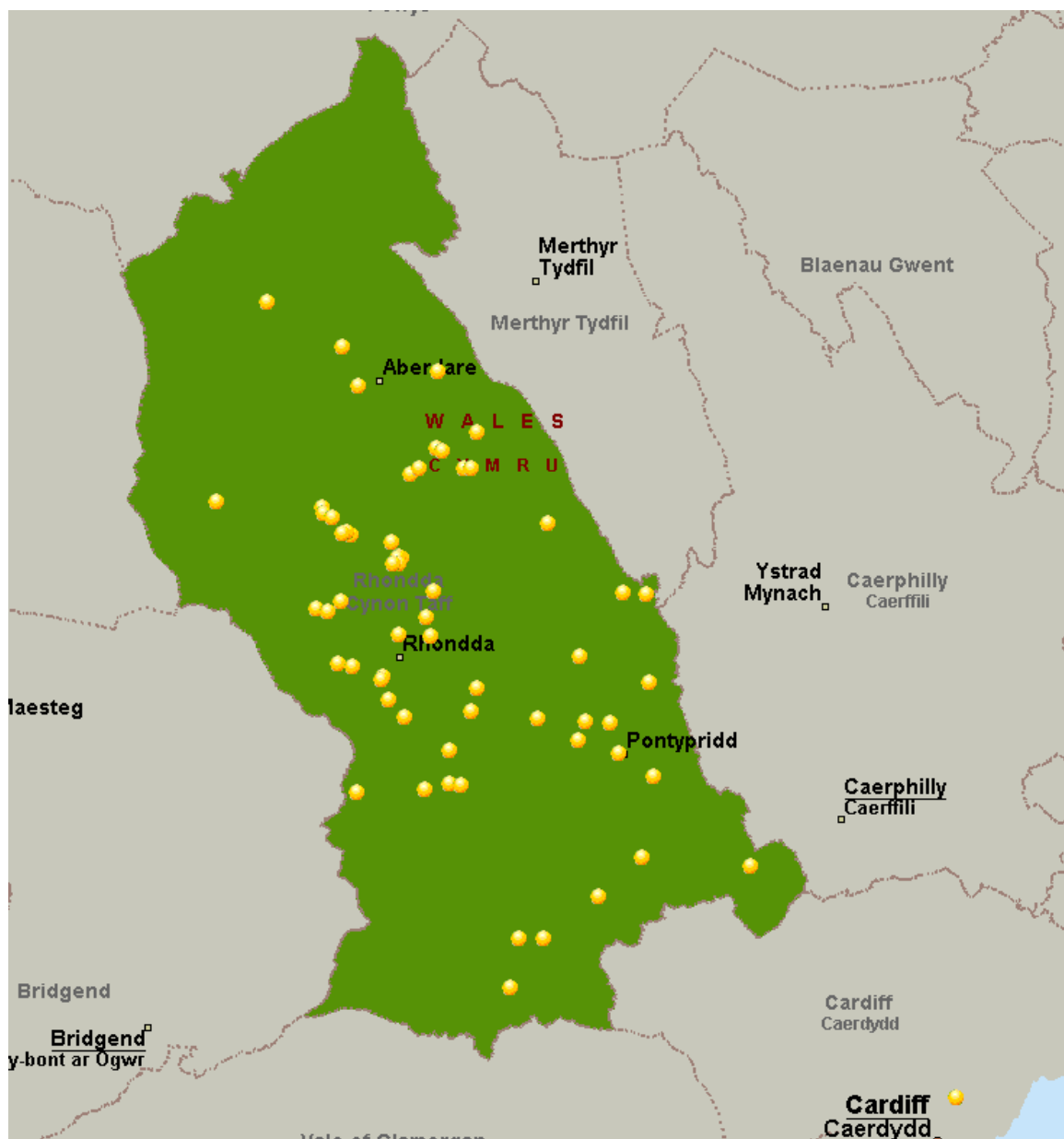


Table 47 Proportion of household/trade waste by material category for sites in Rhondda Cynon Taff

Site	Tonnage Throughput	Mixed waste		Green waste		DIY waste		Recyclables	
		HH	Trade	HH	Trade	HH	Trade	HH	Trade
Dinas	7,229	96.2%	3.8%	90.4%	9.6%	85.7%	14.3%	96.1%	3.9%
Ferndale	1,560	96.5%	3.6%	99.6%	0.4%	63.4%	36.6%	98.4%	1.6%
Gelli	2,828	99.3%	0.7%	92.2%	7.8%	70.5%	29.5%	99.6%	0.4%
Treforest	5,056	97.6%	2.4%	93.5%	6.5%	91.0%	9.0%	96.3%	3.7%
Ty Amgen	3,051	93.2%	6.8%	67.9%	32.1%	60.8%	39.2%	98.2%	1.8%

Of all the sites in RCT, Ty Amgen costs the authority the greatest amount at approximately £10,000 in material costs. Other sites in Treforest and Dinas with larger revenue from recyclables reduce the effect of Ty Amgen on RCT as a whole however the total additional cost is almost £11,000 which includes the effect of landfill tax but excludes haulage fees. Incorporating the additional operational costs of accommodating traders results in a total additional cost of approximately £100,000 per annum. The figures feed into an overall table (Table 38) placing them alongside other additional operating costs.

Table 48 Additional material costs pa of trade waste by material type for sites in Rhondda Cynon Taff

Site	Additional Costs by material from trade waste				Total Material Cost
	Mixed waste	Green waste	DIY waste	Recyclables*	
Dinas	£4,222	£993	£7,411	-£16,142	-£3,516
Ferndale	£863	£9	£4,093	-£1,429	£3,536
Gelli	£304	£316	£5,981	-£648	£5,953
Treforest	£1,865	£470	£3,262	-£10,711	-£5,113
Ty Amgen	£3,188	£1,401	£8,574	-£3,144	£10,020
Total	£10,442	£3,189	£29,322	-£32,073	£10,880

* negative values indicate revenues

5.0 Conclusions and recommendations

The collection of material volume, type of waste and user origin provides an opportunity to compare waste types from different regions as well as the cross-border flow of materials amongst authorities. The following section summarises the salient point emerging from the study and provides some recommendations on ways to counter cross-border flows and trade waste abuse in the five authorities.

5.1 Cross border

User Origin	Caerphilly	Cardiff	Newport	RCT	Vale of Glamorgan	Total
Within the LA	95.0%	89.0%	96.8%	97.5%	97.9%	94.4%
Outside the LA	5.0%	11.0%	3.2%	2.5%	2.1%	5.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The vast majority of visitors to the HWRCs, both external and internal, gave the reason for choosing that site was because it is the closest to where they lived. External visitors tended to be less aware of other sites locally, with 9.4% visiting a site for this reason. This reason would perhaps account for cross border usage.

As Cardiff is home to large employers such as Cardiff Council, the Welsh Government, universities, hospitals and numerous private companies and firms it is expected that this would be the local authority to be most affected by cross border use. The three HWRC sites at Bessemer Close, Lamby Way and Weddal Road are all located close to the main routes of the city (A470, A4232 and A48). People from neighbouring authorities visit the city on a regular basis to make use of the shops and leisure amenities, sometimes incorporating a visit to the HWRC due to their convenience. Cardiff's HWRC at Bessemer Road is the most affected site across all sites in the study, due to its close proximity to Penarth, where for residents it is the closest household recycling centre to their home and place of employment.

The reason for the high use from Penarth is that this site is the nearest site for residents as it is located very close to the border between Cardiff and the Vale of Glamorgan. It is easier for residents of Penarth to visit the Bessemer Road HWRC rather than the Vale of Glamorgan Council's HWRC in Barry.

Cardiff's HWRCs receive 10.5% of mixed waste from external sources. As the mixed waste throughput tonnage for Cardiff is much larger than the other authorities to begin with, the incoming cross-border mixed waste is significantly higher (~1,500 tonnes compared to 50-75 tonnes for the other authorities) as a result of the high cross-border proportion. An important consequence of this is that it also equates to an additional financial cost associated with dealing with the additional material. Cardiff was found to bear the largest additional cost at approximately £430,000 per annum (£350,000 net costs per annum).

5.2 Trade waste

Overall, RCT has the highest proportion of traders depositing waste at sites within the authority at 4.6% as indicated in Table 37. Considering that traders are forbidden to use any site in RCT this is a concern for the authority and it may want to consider charging traders to recover some of the costs arising from the additional material. At the opposite end of the scale, Newport shows the lowest proportion of traders using the site at 1.1%. It is worth bearing in mind that these figures represent the proportion of users not the proportion by weight and so in the case that traders deposit more waste than the average resident, the proportion of trade waste by weight will be proportionally higher.

In terms of cross-border trade waste deposits, Caerphilly is the only authority whereby the cross-border trade usage is lower than the trade usage within its own borders. In all other authorities, especially Vale of Glamorgan (14.3% compared to 3.8%), the proportion of trade use is higher amongst cross-border users. It is possible that this may be the result of traders feeling that they are more likely to face consequences of trade waste abuse if they deposit waste at sites within their own authority. The Docksway site in Newport receives less than 1% trade waste abuse of mixed waste and just 0.5% recyclables. The only significant proportion of trade waste abuse in Newport relates to DIY waste where approximately 4.7% arises from traders.

There is a large range of additional operational costs with Caerphilly bearing the largest brunt at approximately £128,000 and Newport with only 1.1% trade use bearing just £13,000. Cardiff and RCT bear approximately £90,000 each and Vale of Glamorgan £70,000. It has been noted that these figures are only estimates based upon the mean operating cost per tonne of all HWRCs in Wales. Adding the operational costs to the material costs associated with trade waste, Cardiff is shown to bear the largest total cost of trade waste at approximately £127,000 and Newport the least at approximately £15,000.

Aberbargoed experiences a high proportion of trade waste abuse with over a quarter of its DIY waste arising from traders. Of the centrally located sites in Caerphilly (Aberbargoed, Penmaen and Penallta), traders appear to use Aberbargoed and Penallta and refrain from using the Penmaen site. We would recommend further researching why this might be the case.

As trade waste has been a contributing factor to cross border use, this highlights the abuse of the sites from suspected traders. In order to reduce the misuse of all local authorities' HWRC site, we would recommend that councils add a message via public communications. This may be through the council website or press release. Residents need to be given a clear message to ensure that any waste produced through the employment of tradesmen or builders should be disposed of properly and should not be taken to an HWRC. Local authorities which do not currently have a restriction on vans and commercial vehicles entering their HWRC sites should introduce this.

Alternatively, a disclaimer system, where residents with vans or trailers apply for a tipping permit or by registering their vehicle registration through the council switchboard should be introduced. This would not alienate van owners whilst deterring tradesmen.

A further recommendation for local authorities to consider would be to provide training to staff in order for them to feel like they can challenge suspected traders. This could come in the form of security guard or door supervisor training, which may include physical intervention and self defence training. Of course, the safety of HWRC site staff is paramount but this additional training could allow staff to confidently approach suspected traders. This would help to reduce suspected trade abuse over time.

Appendix 1 Questionnaire

Researcher:	Site:	Date:	Time:
Weather conditions:		Level of congestion:	

"Hello. Do you mind if I ask you a few questions? It should not take longer than about 2-3 minutes."

"We are looking at where the public come from and how they use this site." ("This survey is being carried out on behalf of WRAP and the local authority.")

Type of vehicle:

Commercial	
Non-commercial	

Type of waste:

H	
T?	
T	

Where H is Household, T? Is suspected trade waste and T is trade waste

Q1. Please could you tell us your home postcode?

	<i>(If not willing to give full postcode, ask for first part of postcode)</i>
--	---

Interviewer to make an assessment of the volume of the load.

<input type="checkbox"/>	Low <i>(i.e. up to a car boot full)</i>
<input type="checkbox"/>	Medium <i>(i.e. up to a full estate car packed to the roof)</i>
<input type="checkbox"/>	High <i>(i.e. anything above medium: van loads, trailers etc.)</i>

Q2. What types of material have you brought to the site today?

<input type="checkbox"/>	Mixed waste	
<input type="checkbox"/>	Garden waste	
<input type="checkbox"/>	DIY waste (e.g. tiles, rubble etc.)	
<input type="checkbox"/>	Recyclables	
<input type="checkbox"/>	Other	

Where possible, ask interviewees to list the top three materials in order of priority. Mark the largest denomination as "1", the next as "2", and the third as "3".

Q3. How many times do you visit this site over a whole year?

<input type="checkbox"/>	1 - 3	<i>up to 3 times a year</i>
<input type="checkbox"/>	4 - 12	<i>up to once a month</i>
<input type="checkbox"/>	13 - 24	<i>up to once a fortnight</i>
<input type="checkbox"/>	25 - 52	<i>up to once a week</i>
<input type="checkbox"/>	53+	<i>more than once a week</i>

If enough time:

Q4. Is there any particular reason why you use this site rather than any other sites?

DO NOT PROMPT interviewees to reply to a list of options initially, unless they cannot give an unprompted reply.

<input type="checkbox"/>	This site is closest to where I live	
<input type="checkbox"/>	Not aware of any other sites locally	
<input type="checkbox"/>	More facilities at this site (i.e. recycling of particular materials), Specify which facilities:	
<input type="checkbox"/>	Other reason, specify:	

End of questionnaire

"Thank you for your time."

Appendix 2 Local Authority HWRC Details

The following provides an overview of each HWRC site including opening times and trade waste measures currently in place.

Cardiff

Table 49 Details of HWRCs in Cardiff

HWRC	Opening hours	Trade waste accepted?	Permit system in place?	Height barrier?
Bessemer Way, CF11 8XH	Seven days a week, 07:00-18:45	Yes	No, trade waste is charged by weight	No
Lamby Way, CF3 2HP	Seven days a week, 07:00-18:45	No	No	No
Wedal Road, CF14 3QX	Monday – Friday, 07:00-18:45 Saturday and Sunday, 10:00-18:45	No	No	No

Caerphilly

Table 50 Details of HWRCs in Caerphilly

HWRC	Opening hours	Trade waste accepted?	Permit system in place?	Height barrier?
Aberbargoed, CF81 9EP	Summer (1 April to 30 September), seven days a week, 09:00-18:00 Winter (1 October to 31 March), seven days a week, 09:00-16:30	No	From 1 st July 2014 – permit system in place for small vans and small trailers. Permit required for larger vans. Vans larger than Ford Transit size are not permitted on the site.	No
Full Moon, NP11 7BD				No
Penallta, CF82 7ST				No
Penmaen, NP12 2XZ				No
Trehir, CF83 3RP				No
Rhymney, NP22 5PW				No

Newport

Table 51 Details of HWRCs in Newport

HWRC	Opening hours	Trade waste accepted?	Permit system in place?	Height barrier?
Docks Way, NP20 2NS	Monday – Friday, 07:30-16:30 Saturday, 09:00-16:30 Sunday, 10:00-14:00	Yes	No, waste charged by weight	Yes, 1.8 metres at approach ramp. Another barrier (1.8 metres) in place at main gate a certain times of the day.

Vale of Glamorgan

Table 52 Details of HWRCs in Vale of Glamorgan

HWRC	Opening hours	Trade waste accepted?	Permit system in place?	Height barrier?
Barry, CF63 3RF	Summer (April to October) Seven days a week, 08:00-18:00 Winter (November to March) Seven days a week, 10:00-16:00	No	Yes – users with vans/trailers to apply for permit online	Yes
Llandow, CF71 7PB	Summer (April to October) Seven days a week, 10:00-17:00 Winter (November to March) Seven days a week, 10:00-16:00	No	Yes – users with vans/trailers to apply for permit online	No

Rhondda Cynon Taff

Table 53 Details of HWRCs in Rhondda Cynon Taff

HWRC	Opening hours	Trade waste accepted?	Permit system in place?	Height barrier?
Ty Amgen, CF44 OBX	Summer (April to September) Seven days a week, 08:00-19:30 Winter (October to March) Seven days a week, 08:00-17:30	No	N/A	No
Dinas, CF39 9BL		No	N/A	Yes
Nantygwyddon Road, CF41 7TL		No	N/A	No

North Road, CF43 4RS		No	N/A	Yes
Ty Glan Taff, CF37 5TT		No	N/A	Yes

**Waste & Resources
Action Programme**

The Old Academy
21 Horse Fair
Banbury, Oxon
OX16 0AH

Tel: 01295 819 900
Fax: 01295 819 911
E-mail: info@wrap.org.uk

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Ref: RDB/RC/BD/09.06.15

17th June 2015

Councillor Bob Derbyshire,
Cabinet Member for the Environment,
County Hall,
Atlantic Wharf,
Cardiff,
CF10 4UW.



Dear Councillor Derbyshire,

Environmental Scrutiny Committee – 9th June 2015

On behalf of the Environmental Scrutiny Committee I would like to thank the officers for attending the Committee meeting on Tuesday 9th June 2015. As you are aware the meeting considered items titled 'Draft City Operations Directorate Delivery Plan' and 'Household Waste Recycling Centres – Proposed Changes'. The comments and observations made by Members following these items are set out in this letter.

Draft City Operations Directorate Delivery Plan

- Members noted that the presentation delivered by the Assistant Director for the Environment cited a spend of £73 million per annum for the services to be included within the new Alternative Delivery Model. The figure quoted during the recent task & finish exercise was £55 million, i.e. a difference of £18 million. I'd be grateful if you could provide an explanation for this variation; a breakdown of all the services to be included in the new Alternative Delivery Model; the budget for each of these and the number of FTE staff working in each of these services. The information should be based on the outturn figures for 2014/15.

Household Waste Recycling Centres – Proposed Changes

- The Committee noted the proposals put forward during your presentation on the 'Household Waste Recycling Centres – Proposed Changes'. Opinions were mixed on the two main options, i.e. to build a new site at Lamby Way or instead focus on the development of the Wedal Road site.

It was acknowledged that the Lamby Way site was based in an industrial area and, therefore, presented less of an immediate impact on local residents. At the same time the Wedal Road site appears to be a more convenient site for many parts of the north of the city.

- The presentation provided a list of distances from various parts of the north of the city to the Lamby Way and Wedal Road sites. Members were not convinced by the distances stated and in particular the travelling times quoted. For the benefit of any future consultation I would be grateful if you could ask officers to review this information and provide the Committee with a set of revised figures, if it proves to be the case that those quoted are inaccurate or unrealistic.

Draft Infrastructure Business Model & Alternative Delivery Options Task & Finish Report

- At the meeting the Committee reviewed the 'Draft Infrastructure Business Model & Alternative Delivery Options Task & Finish Report'. After reviewing the content of the document Members accepted the draft report without the need to make any alterations. The Policy Review & Performance Scrutiny Committee will have the opportunity to consider the draft report on the 7th July. It is hoped that after this meeting (and subject to any required changes) the report will be finalised and provided to Cabinet for consideration at their next available meeting.

As a final comment and for future reference I would ask that all future Environmental Scrutiny Committee presentations are kept to a maximum of ten minutes. This in my view will ensure that adequate time is always allocated for Member questions.

I would be grateful if you would consider the above comments and provide a response to the requests made in this letter.

Regards,

A handwritten signature in black ink, appearing to read 'R Cook', with a stylized, cursive script.

Councillor Ralph Cook
Chairperson Environmental Scrutiny Committee

Cc to:

Jane Forshaw, Director for the Environment
Andrew Gregory, Director for Strategic Planning, Highways, Traffic &
Transport
Tara King, Assistant Director for the Environment
Jane Cherrington, Operational Manager – Strategy & Enforcement
Pat McGrath, Operational Manager, Infrastructure & Projects
Paul Keeping, Operational Manager, Scrutiny Services
Joanne Watkins, Cabinet Office Manager
Members of the Environmental Scrutiny Committee

**CABINET SUPPORT OFFICE
SWYDDFA CYMORTH Y CABINET**

My Ref: CM31299
Your Ref: RDB/RC/BD/09.06.15
Date: 10th July 2015



County Hall
Cardiff,
CF10 4UW
Tel: (029) 2087 2087

Neuadd y Sir
Caerdydd,
CF10 4UW
Ffôn: (029) 2087 2088

Chair of Environmental Scrutiny Committee
c/o Scrutiny Services
Room 263D
County Hall
Atlantic Wharf
Cardiff
CF10 4UW

Annwyl / Dear Chair

Environmental Scrutiny Committee 9 June 2015

I refer to your correspondence dated 17 June 2015 regarding the Environmental Scrutiny held 9 June 2015.

Draft City Operations Directorate Delivery Plan

I am sure you can appreciate that the scoping work carried out on the alternative delivery model has meant changes and firming of the project scope. The current areas in scope are:-

Directorate	Service Area(s)
Environment	<ul style="list-style-type: none"> • Waste Collections (Commercial and Residential) • Street Cleansing • Waste Treatment and Disposal • Waste Education and Enforcement • Pest Control
Culture, Leisure and Parks	<ul style="list-style-type: none"> • Parks Management and Development
Strategic Planning, Highways, Traffic and Transport	<ul style="list-style-type: none"> • Highways Operations • Highways Asset Management • Infrastructure Design and Construction Management
Resources	<ul style="list-style-type: none"> • Central Transport Services • Hard Facilities Management • Soft Facilities Management Cleaning • Soft Facilities Management Security
Economic Development	<ul style="list-style-type: none"> • Projects, Design and Development

As the in-house improvements continue in parallel to the ADM work we are currently updating the FTE and budget costs with the changes from 14/15 to 15/16. Once this revised data set has been fully validated it can be shared.

PLEASE REPLY TO: Cabinet Support Office, Room 514, County Hall, Atlantic Wharf,
Cardiff CF10 4UW
Tel (029) 2087 2631 Fax (029) 20872691



Household Waste Recycling Centres – Proposed Changes

The route tracking information to the two sites have been checked for the time of day they were assessed as completed through Google Live Traffic. This work was carried out at 2pm on Friday 5 June 2015. However, it is acknowledged that this will vary at peak and off peak traffic times, therefore travel times will inevitably vary. To further qualify the data that will be used in due course on the website traffic officers will be running these routes at different times to have additional information and also carrying out live car journeys to complete the validation.

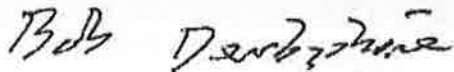
Draft Infrastructure Business Model & Alternative Delivery Options Task & Finish Report

I can confirm that it is intended that the report of the Task and Finish Group will be considered at its meeting on 16 July 2015 where a response to the report will also be agreed.

I also note your comments about the length of presentations and will feed this back to officers. I am sure you can appreciate some of these discussions points are complex, but we will do our best to ensure we limit the presentation length in future.

I trust this is of some assistance. If you have any further enquiries, please do not hesitate to contact me.

Yn gwyir,
Yours sincerely,



Councillor / Y Cynghorydd Bob Derbyshire
Cabinet Member Environment
Aelod Cabinet Dros Yr Amgylchedd

Cardiff Council

Statutory Screening Tool Guidance

Appendix E



If you are developing a strategy, policy or activity that is likely to impact people, communities or land use in any way then there are a number of statutory requirements that apply. Failure to comply with these requirements, or demonstrate due regard, can expose the Council to legal challenge or other forms of reproach.

For instance, this will apply to strategies (i.e. Housing Strategy or Disabled Play Strategy), policies (i.e. Procurement Policy) or activity (i.e. developing new play area).

Completing the Statutory Screening Tool will ensure that all Cardiff Council strategies, policies and activities comply with relevant statutory obligations and responsibilities. Where a more detailed consideration of an issue is required, the Screening Tool will identify if there is a need for a full impact assessment, as relevant.

The main statutory requirements that strategies, policies or activities must reflect include:

- **Equality Act 2010 - Equality Impact Assessment**
- **Welsh Government's Sustainable Development Bill**
- **Welsh Government's Statutory Guidance - Shared Purpose Shared Delivery**
- **United Nations Convention on the Rights of the Child**
- **United Nations Principles for Older Persons**
- **Welsh Language Measure 2011**
- **Health Impact Assessment**
- **Habitats Regulations Assessment**
- **Strategic Environmental Assessment**

This Statutory Screening Tool allows us to meet all the requirements of all these pieces of legislation as part of an integrated screening method that usually taken no longer than an hour.

The Screening Tool can be completed as a self assessment or as part of a facilitated session, should further support be needed. For further information or if you require a facilitated session please contact the Policy, Partnerships and Citizen Focus Team on 02920 72685 e-mail: nwood@cardiff.gov.uk. Please note:

- **The completed Screening Tool must be submitted as an appendix with the Cabinet report.**
- **The completed screening tool will be published on the intranet.**

2.C.PPCF.002	Issue 2	Aug 13	Process Owner: Rachel Jones (OM)	Authorisation: Chief Officer Communities, Housing	Page 1 of 10
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Statutory Screening Tool

Name of Activity: Household Waste Recycling Centres and Re Use Facility	Date of Screening: 15.06.15
Service Area/Section: City Operations – Waste Treatment & Disposal	Lead Officer: Pat McGrath – Operational Manager, Waste Projects
Attendees: Screening completed by Tara King, Pat McGrath	

What are the objectives of the Project	Please provide background information on the Policy/Strategy/Project/Procedure/Service/Function and any research done [e.g. service users data against demographic statistics, similar EIAs done etc.]
<p>Following Council budget setting in 2013/14 and 2014/15, the 4 household recycling centres were to be reduced from 4 to 2. This was proposed to be implemented through the closure of the Waungron Road site 27th April 2014, keeping the larger Bessemer Close site and following the construction of a new larger, the closure of the current smaller recycling sites at Wedal Road. Following pre planning consultation, a review of the new Wedal Road site location was compared to a new potential location at Lamby Way. In a Cabinet Report on 16th July 2015, it is a recommendation that the new HWRC site location is at Lamby Way.</p> <p>This project will also look at improving and introducing operational processes at the recycling sites with regard to:</p> <ul style="list-style-type: none"> • The introduction of seasonal opening hours of 12 hours per day in the Summer and 8 hours per day in the Winter • The use of vehicle automatic number plate recognition systems to monitor and record site usage and frequency • A review of the current Van Policy and the number of times they can use the sites free of charge • The introduction of the Commercial waste transfer station at the Bessemer Close site • The commercial charging of non Cardiff residents for their waste 	<p>A Rapid Improvement Event (Lean Management) was carried out in August 2013, that identified that the four recycling centres were significantly underutilised at an overall rate of 69% compared to their available operational capacities.</p> <p>Waste Resources Action Programme (WRAP) Guidance on HWRC's agrees with the proposed future state of 2 recycling centres.</p>

recycling and disposal

- **Increasing waste diversion from disposal to recycling to 80%**

This project will also plan to provide a new Re Use facility that through a Third Party service provider, would receive household items and inspect, electrically test where appropriate, repair and sell back to Cardiff residents at an affordable rate.

Part 1: Impact on outcomes and due regard to Sustainable Development

Please use the following scale when considering what contribution the activity makes:		
+	Positive	Positive contribution to the outcome
-	Negative	Negative contribution to the outcome
ntrl	Neutral	Neutral contribution to the outcome
Uncertain	Not Sure	Uncertain if any contribution is made to the outcome

	Has the Strategy/Policy/Activity considered how it will impact one or more of Cardiff's 7 Citizen focused Outcomes?	Please Tick				Evidence or suggestion for improvement/mitigation
		+	-	Ntrl	Un-Crtn	
1.1	People in Cardiff are healthy; <i>Consider the potential impact on</i> <ul style="list-style-type: none"> the promotion of good health, prevention of damaging behaviour, promote healthy eating/active lifestyles etc, vulnerable citizens and areas of multiple deprivation Addressing instances of inequality in health 			X		
1.2	People in Cardiff have a clean, attractive and sustainable environment; <i>Consider the potential impact on</i> <ul style="list-style-type: none"> the causes and consequences of Climate Change and creating a carbon lite city 				x	
	<ul style="list-style-type: none"> encouraging walking, cycling, and use of public transport and improving access to countryside and open space 			x		Only vehicular site access is permitted to the recycling centres
	<ul style="list-style-type: none"> reducing environmental pollution (land, air, noise and water) 			x		The amount of waste received at the previous four sites, will still need to managed by the remaining two. Travel distances are being reviewed as part of the Environmental Impact Assessment required for the planning application process
	<ul style="list-style-type: none"> reducing consumption and encouraging waste reduction, reuse, recycling and recovery 	X				Reuse and upcycling of goods is a key outcomes desired form these changes, encouraging waste reduction and recovery
	<ul style="list-style-type: none"> encouraging biodiversity 				x	Planning application will require an Environmental Impact Assessment that will include a Habitats Assessment and Ecological Assessment. The new sites design can incorporate the potential output recommendations from these assessments

	Has the Strategy/Policy/Activity considered how it will impact one or more of Cardiff's 7 Citizen focused Outcomes?	Please Tick				Evidence or suggestion for improvement/mitigation
		+	-	Ntrl	Un-Crtn	
1.3	People in Cardiff are safe and feel safe; <i>Consider the potential impact on</i> <ul style="list-style-type: none"> reducing crime, fear of crime and increasing safety of individuals addressing anti-social behaviour protecting vulnerable adults and children in Cardiff from harm or abuse 				x	There is a risk that waste fly tipping will increase with the closure of the two recycling sites with perceived further travelling compared to the current site locations. Travel checks are being calculated and additional travelling distances are not significant <10 miles.
1.4	Cardiff has a thriving and prosperous economy; <i>Consider the potential impact on</i> <ul style="list-style-type: none"> economic competitiveness (enterprise activity, social enterprises, average earnings, improve productivity) Assisting those Not in Education, Employment or Training attracting and retaining workers (new employment and training opportunities, increase the value of employment,) promoting local procurement opportunities or enhancing the capacity of local companies to compete 	x				<p>The construction works for the new HWRC will create an opportunity for local construction companies and long term maintenance through the Council's Facility Management Frameworks.</p> <p>The HWRC operations will provide ongoing staff retention opportunities.</p> <p>The Re Use facility will be provided by a Third Party service provider creating jobs and producing products at affordable rates to Cardiff residents.</p>
1.5	People in Cardiff achieve their full potential; <i>Consider the potential impact on</i> <ul style="list-style-type: none"> promoting and improving access to life-long learning in Cardiff raising levels of skills and qualifications giving children the best start improving the understanding of sustainability addressing child poverty (financial poverty, access poverty, participation poverty) the United Nations Convention on the Rights of a Child and Principles for Older persons 	x				<p>There will be opportunities for ongoing training for HWRC site staff and Re Use staff.</p> <p>Site users will have the opportunity to understand how and why waste items are reused, recycled and where needed safely treated and disposed of.</p> <p>The HWRC sites and Re Use can be used for education and learning experiences through planned site visits.</p>

	Has the Strategy/Policy/Activity considered how it will impact one or more of Cardiff's 7 Citizen focused Outcomes?	Please Tick				Evidence or suggestion for improvement/mitigation
		+	-	Ntrl	Un-Crtn	
1.6	Cardiff is a Great Place to Live, Work and Play <i>Consider the potential impact on</i> <ul style="list-style-type: none"> promoting the cultural diversity of Cardiff encouraging participation and access for all to physical activity, leisure & culture play opportunities for Children and Young People protecting and enhancing the landscape and historic heritage of Cardiff promoting the City's international links 				X	
1.7	Cardiff is a fair, just and inclusive society. <i>Consider the potential impact on</i> <ul style="list-style-type: none"> the elimination of discrimination, harassment or victimisation for equality groups 		x			The reduction from 3 sites to 2 will have a negative impact on travel distance on some residents however these are not excessive in distance terms and plans for the site closures will clearly identify the alternate site locations and travel routes.
	<ul style="list-style-type: none"> has the community or stakeholders been engaged in developing the strategy/policy/activity? how will citizen participation be encouraged (encouraging actions that consider different forms of consultation, through more in depth engagement to full participation in service development and delivery)? 				x	A two week questionnaire assessment has been carried out at the current 3 sites and information from the 8,500 respondents is being compiled.
	<i>Will this Policy/Strategy/Project have a differential impact on any of the following:</i>					<i>Please give details/consequences of the differential impact (positive and negative), and what action(s) can you take to address any negative implications?</i>
	<ul style="list-style-type: none"> Age (including children and young people aged 0-25 and older people over 65 in line with the United Nations Conventions) 					Access remains unchanged
	<ul style="list-style-type: none"> Disability 			x		Access remains unchanged
	<ul style="list-style-type: none"> Gender Reassignment 			x		Access remains unchanged
	<ul style="list-style-type: none"> Marriage & Civil Partnership 			x		Access remains unchanged
	<ul style="list-style-type: none"> Pregnancy & Maternity 			x		Access remains unchanged
	<ul style="list-style-type: none"> Race 			x		Access remains unchanged
	<ul style="list-style-type: none"> Religion/Belief 			x		Access remains unchanged

	Has the Strategy/Policy/Activity considered how it will impact one or more of Cardiff's 7 Citizen focused Outcomes?	Please Tick				Evidence or suggestion for improvement/mitigation
		+	-	Ntrl	Un-Crtn	
	<ul style="list-style-type: none"> • Sex 			X		Access remains unchanged
	<ul style="list-style-type: none"> • Sexual Orientation 			X		Access remains unchanged
	<ul style="list-style-type: none"> • Welsh Language 			X		Access remains unchanged
			Yes	No		
	Is a Full Equality Impact Assessment Required?			X		
	Is a Full Child Rights Impact Assessment Required			X		
1.8	<p>The Council delivers positive outcomes for the city and its citizens through strong partnerships</p> <p><i>Consider the potential impact on</i></p> <ul style="list-style-type: none"> • <i>strengthening partnerships with business and voluntary sectors</i> • <i>the collaboration agenda and the potential for shared services, cross-boundary working and efficiency savings</i> 					<p>The HWRC's have waste contracts with external companies, most of which are within Cardiff or surrounding South East and South West Wales area.</p> <p>The Re Use facility will be operated by a Third Party service provider that could be through the voluntary sectors</p> <p>Discussions with the neighbouring local authorities has been unfruitful with regard to sharing access to facilities and operational costs.</p>

SUMMARY OF APPRAISAL (highlight positive and negative effects of the policy / plan / project being assessed, demonstrating how it contributes to the economic, social and environmental sustainability of the city):

The reduction from 4 to 3 has already taken place in April 2014 with the closure of the Waungron Road recycling centre, it is planned that the new larger HWRC at Lamby Way will be completed April 2016. The reduction in the number of sites will be offset by providing better facilities at the remaining two larger sites for all the same site users and the waste tonnage they deliver.

The operational opening hours of the HWRC's will remain as current during the Summer when demand is at its peak. The reduction in hours during the Winter mirrors, what other Welsh local authority's already do.

The

WHAT ACTIONS HAVE BEEN IDENTIFIED OR CHANGES BEEN MADE TO THE POLICY / PLAN / PROJECT AS A RESULT OF THIS APPRAISAL:

Part 2: Strategic Environmental Assessment Screening

		Yes	No
2.1	Does the plan or programme set the framework for future development consent?		
2.2	Is the plan or programme likely to have significant, positive or negative, environmental effects?		

Is a Full Strategic Environmental Assessment Screening Needed?	Yes	No
<ul style="list-style-type: none"> ▪ If yes has been ticked to both questions 2.1 and 2.2 then the answer is yes ▪ If a full SEA Screening is required then please contact the Sustainable Development Unit to arrange (details below) 		

If you have any doubt on your answers to the above questions regarding SEA then please consult with the Sustainable Development Unit on 2087 3228
sustainabledevelopment@cardiff.gov.uk

Part 3: Habitat Regulation Assessment (HRA)

		Yes	No	Unsure
3.1	Will the plan, project or programme results in an activity which is known to affect a European site, such as the Severn Estuary or the Cardiff Beech Woods?			
3.2	Will the plan, project or programme which steers development towards an area that includes a European site, such as the Severn Estuary or the Cardiff Beech Woods or may indirectly affect a European site?			
3.3	Is a full HRA needed?			

Details of the strategy will be sent to the County Ecologist on completion of the process to determine if a Habitat Regulation Assessment is needed. For further information please phone 2087 3215 or email biodiversity@cardiff.gov.uk

Appendix 1 – Statutory Requirements

It is possible that the Impact Screening Tool will identify the need to undertake specific statutory assessments:

- **Equality Impact Assessment:** *This assessment is required by the Equality Act 2010 and Welsh Government’s Equality Regulations 2011.*
- **Sustainable Development Bill:** *The Bill, when it comes into effect, will require sustainable development (SD) to be a central organising principle for the organisation. This means that there is a duty to consider SD in the strategic decision making processes.*
- **Shared Purpose Shared Delivery-** *The Welsh Government requires local authorities to produce a single integrated plan to meet statutory requirements under a range of legislation. Cardiff Council must therefore demonstrate its contribution towards Cardiff’s own integrated plan; “What Matters”.*
- **United Nations Convention on the Rights of the Child:** *The Children Act 2004 guidance for Wales requires local authorities and their partners to have regard to the United Nations Convention on the Rights of a Child.*
- **United Nations Principles for Older Persons:** *The principles require a consideration of independence, participation, care, self-fulfillment and dignity.*
- **The Welsh Language Measure 2011:** *The measure sets out official status for the Welsh language, a Welsh language Commissioner, and the freedom to speak Welsh.*
- **Health Impact Assessment:** *(HIA) considers policies, programmes or projects for their potential effects on the health of a population*
- **Strategic Environmental Impact Assessment:** *A Strategic Environmental Assessment (SEA) is an European Directive for plans, programmes and policies with land use implications and significant environmental effects.*
- **Habitats Regulations Assessment:** *The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 provides a requirement to undertake Habitats Regulations Assessment (HRA) of land use plans.*