

NEWPORT CITY COUNCIL HWRC REVIEW-SUMMARY



Review of Docks Lane household waste and recycling centre

Executive summary

This report extracts key information, from the full reports presented by WRAP and Resource Futures, to provide a briefing for the Policy Review Board.

The WRAP Collaborative Change Programme (CCP) is funded by the Welsh Government to support Welsh Authorities to achieve the targets set out in its waste strategy. Resource Futures has been contracted under the CCP to provide technical expertise to review household waste recycling centres (HWRC) and Waste Transfer Stations (WTS).

Newport City Council (NCC) requested support to review the Docks Way HWRC. The Council has previously investigated redevelopment and the plans were reviewed as part of this study. The team also considered the congestion problems the site suffers from and improvements that could help increase the recycling rate performance. This report details the observations and recommendations associated with a review of the Docks Way HWRC and an appraisal of alternative HWRC options.

The recommendations that could be implemented in the short term are listed in the table below. If these improvements are made, Resource Futures predicts the recycling rate could increase to 84.5%, compared to a forecast of 77.5% in 2015/16. This is based on the Resource Futures HWRC recycling rate prediction model which calculates increases in recycling rate associated with statistically significant improvements. Rubble recycling has been assumed to remain constant¹. The best available evidence (detailed statistical analysis of over 300 HWRC sites²) indicates that this can be achieved if improvements suggested are made. Site staff will require an accomplished manager to ensure performance is maximised. This improvement in recycling rate could add an additional 1.75% to the overall Newport recycling rate figure.

Type	Recommendation	Reason for recommendation	Priority
Recycling infrastructure	■ Reduce the number of residual waste skips thus allowing space for additional materials in the split-level section of the site	Increase recycling and reduce residual waste	High
	■ Move residual waste skips to the end of the site prompting the public to consider separating material for recycling beforehand	Increase recycling	High
	■ Improve drainage in the WEEE area and provide a painted pedestrian access zone	Increase recycling	High
	■ Collect dry recyclables in the same area of the site in order to improve clarity for the user	Increase recycling	Low
	■ Move the bulk skips for paper and cardboard into the split-level section of the site thus offering more space for clothes and books where paper is currently collected	Increase recycling	High
Traffic management	■ Install a webcam at the site with a live feed onto the NCC website to allow the public to view how busy the site is and wait until traffic at the site	Health and safety	Medium

¹ The model calculates the recycling rate excluding rubble. As the rate excluding rubble is not a relevant indicator in Wales, only the total recycling rate has been included. For information, the model predicts a recycling rate of 71.3% excluding rubble.

² From an in house model similar to the one used in the WRAP HWRC Toolkit, <http://www.wrap.org.uk/content/household-waste-recycling-centres-guide>

Type	Recommendation	Reason for recommendation	Priority
	reduces before choosing to go there		
	<ul style="list-style-type: none"> Repaint the road markings across the entire site 	Health and safety	Medium
Staffing and opening hours	<ul style="list-style-type: none"> Amend staff numbers to employ more staff during busy periods (at weekends) 	Increase recycling	High
	<ul style="list-style-type: none"> Extend weekday opening hours until at least 6pm in the summer to allow members of the public to use the site during the week after work 	Increase recycling	Medium
Signage	<ul style="list-style-type: none"> Review all signs for consistency, quality and clarity 	Increase recycling	High
	<ul style="list-style-type: none"> Improve signage from the main road 	Increase recycling	High
	<ul style="list-style-type: none"> Consider displaying feedback signs on current recycling rates to residents and encourage even more recycling 	Increase recycling	Medium
Re-use	<ul style="list-style-type: none"> Conduct PAT testing on site 	Increase re-use	High
	<ul style="list-style-type: none"> Improve signage to the re-use shop to make it more prominent and urge site users to consider re-use 	Increase re-use	High
	<ul style="list-style-type: none"> Rebrand the site as a re-use and recycling centre to focus attention higher up the waste hierarchy 	Increase re-use	Medium
Trade waste	<ul style="list-style-type: none"> Install additional CCTV in the WEEE area to deter site users from disposing of items they should not be 	Reduce residual waste	Low

There are other more significant redevelopment improvements that are expected to improve the safety of site users and workers, as well as maximise re-use, such as:

- Reversing the flow of traffic around the site
- Having a separate entrance and exit to the site
- Relocation of the central car park to another part of the site thus allowing for a horseshoe shaped site which would include space for more bulk skips and dedicated areas for dry recycling, WEEE and re-use.

These changes have been discussed with the waste management team and the in-house civil engineer and have been identified as helping to reduce congestion and reduce the risk of accidents in the area. Such changes are not known to be statistically significant and therefore their impact on recycling rate performance cannot be modelled. However, in our opinion, such changes will have a positive impact on performance.

As well as redevelopment of Docks Way, Resource Futures considered the feasibility of constructing a second HWRC or a zero waste site within the city.

An options appraisal has been completed which takes account of factors such as political appetite, capital requirements, environmental improvements and deliverability. The outcome of the appraisal suggests that the best option for NCC is to redevelop the Docks Way site. Plans for redevelopment of Docks Way have previously been developed by in-house civil engineers. It is advisable that these plans are updated to take account of recommendations in this report. Whilst not all recommendations relate to factors that are statistically significant in increasing HWRC recycling rates, Resource Futures believes that they would provide value for money due to the additional benefits the improvements would bring; for example, improved traffic flow in the area, greater focus on re-use and recycling onsite, improved safety of site users and the ability in future to locate additional services in the same area.

The development of a zero waste site was ranked second in the options appraisal. However, when the significant housing growth is considered NCC may therefore wish to redevelop Docks Way to provide an improved service (including improving health and safety and congestion locally) in the short to medium term, with a longer term view of providing a second site in the city which focuses on waste prevention and re-use. The potential for income generation makes this an exciting proposition.

1.0 Introduction

Resource Futures has been contracted to provide technical expertise to review household waste recycling centres (HWRC) and Waste Transfer Stations (WTS) under the WRAP Collaborative Change Programme. The CCP is funded by the Welsh Government to support Welsh Authorities to achieve the targets set out in its waste strategy. This report details the observations and recommendations associated with a review of the Docks Way HWRC in Newport, as well as consideration for the need for an additional site, and an options appraisal to evaluate HWRC network options.

2.0 Background

Newport City Council (NCC) has only one HWRC. The HWRC at Docks Way is a medium-sized purpose-built site, located in the industrial south of the city close to Alexandra Docks and the Docks Way landfill site. As the only site in the city it serves the entire population of Newport (145,700 in the 2011 census). The site experiences congestion on each weekend (usually between 10am and 2pm which can see up to 30 vehicles queuing outside the site and onto the surrounding road, which is a dual carriage way. Stopping is prohibited on this road, as well as dangerous.

Newport HWRC is provided solely for residents of Newport to take materials for recycling, composting, re-use and as a last resort landfilling at the adjacent landfill site. Residents can deposit up to five black bags of unsorted waste per week into the general waste skips, but must sort all remaining waste into the recycling skips. Enforcement is predominantly by encouragement as staff do not believe they have the authority to ban the public from sites. If a site user has more than five black bags, they are asked to split them. If they do not, or become aggressive, they are directed to the site office. Trade customers and residents with vans or pickups can deposit waste intended for landfill at the transfer station for a charge. Ad hoc arrangements are made for traders with residual and recycling who go the weighbridge, weigh off and tip residual then deposit recycling at the HWRC.

2.1 HWRC throughput and recycling rates

The Newport site throughput for 2014/15 was 13,631 tonnes with a recycling rate of 73.2% including rubble. This compared favourably with other authorities in Wales. Table shows the HWRC throughput and recycling rates in 2014/15. Figures from NCC for 2015/16 suggest a site throughput of 15,624 and a recycling rate including rubble of 77.5%

Table: HWRC throughput and recycling rates 2014/15 and forecast 2015/16

Residual tonnes	3,657	3,519
Recycling tonnes (ex rubble)	5,419	5,409
Rubble tonnes	4,554	6,696
Recycling inc rubble, tonnes	9,973	12,105
Throughput ex rubble, tonnes	9,077	7,732
Total throughput, tonnes	13,631	15,624
Recycling rate inc rubble	73.2%	77.5%
Recycling rate ex rubble	59.7%	60.6%

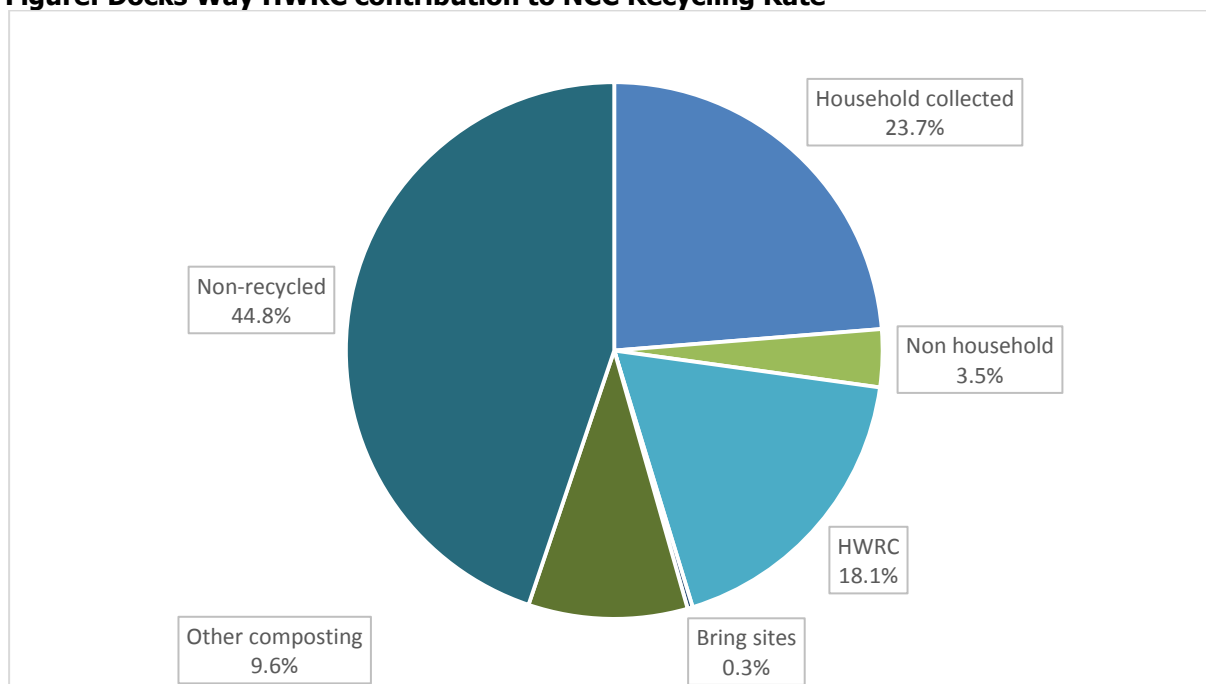
Households in Newport do not use the HWRC to dispose of as much waste and recycling as residents elsewhere in Wales. The table below shows the arising at the HWRC in terms of kilograms per household per year.

Table: Newport HWRC arisings per household

HWRC arisings, kg/hh/yr			
HWRC	All HWRC throughput	HWRC residual	HWRC recycling, excluding rubble
Newport	202	54	80
Wales Average	289	75	155

Figure 1 shows the contribution of approximately 15% that Docks Way HWRC made to the overall NCC recycling rate in 2014/15.

Figure: Docks Way HWRC contribution to NCC Recycling Rate



2.2 HWRC residual waste

Black bag waste is still delivered to the HWRC. The meet & greet system was implemented partially in an attempt to deal with black bag waste, but the authority would like to reduce this further.

As part of a Wales wide waste composition study, a snapshot of NCC HWRC residual waste has been assessed. The waste composition showed that non-clothing textiles such as carpet and furniture are generated in large amounts and could be further targeted for recycling. An example waste management company that could recycle furniture and (dry) carpet is Griffiths Waste Management in Swansea³. There is also a large amount of food, recyclable paper and electrical items that could be extracted for recycling. There are therefore, opportunities to extract value out of the HWRC residual waste stream and improve HWRC recycling rates through greater segregation.

³ <http://griffithsrecycle.co.uk/>

3.0 HWRC options

A number of different options have been considered with regard to improving HWRC provision within Newport. This includes redeveloping the existing site, developing a second site or sharing a site with a neighbouring authority.

3.1 Spatial assessment

The spatial assessment is based on postcode data held by NCC, which was up to date in September 2015. It comprised of 67,437 households within 3,100 postcode areas. Of the total postcodes, 149 were not included within the spatial assessment as they were not recognised by the GIS software, 2,814 households fell within the postcodes not plotted. In total 64,623 households were included in the analysis.

Using a bespoke GIS application, the household and HWRC location data were combined and a matrix of distances and driving times produced. This formed the basis of the distance and drive time analysis; where drive times were calculated using the current road network and not 'as the crow flies' estimates.

Maps have been plotted to illustrate the existing service provision along with maps showing the provision that would be offered in each of two different scenarios with one of two new sites operating alongside the current site. These maps and further detail are included in Appendix 5 of the full report.

3.2 Option 1: Redevelopment of Docks Way HWRC

NCC has considered redeveloping the Docks Way HWRC in the past. NCC civil engineers have developed plans over a number of years to improve the site; however with no capital budget allocated and a number of internal changes, the redevelopment has not proceeded.

In 2013, the civil engineers developed a new plan for the Docks Way HWRC as part of a wider development and consolidation of council operations in the city. Resource Futures discussed the designs with the engineer to identify any potential flaws, and provide a critique of the plan with regard to good practice in the development of HWRCs. The plans for the new site deal with some of the current issues but leave room for improvement in others. The lists below provide a high-level critique of the plans against the recommendations noted during the site assessment.

Positives	Negatives
<ul style="list-style-type: none"> ■ The lead in to the site from the main road has extended significantly, allowing cars to queue to enter the site within the site boundary rather than on the main road. ■ Dry recycling containers are located in the same place rather than distributed across the site. ■ Traffic exits the site in a different location than where it enters thus improving traffic control and alleviating congestion. ■ The Service Areas on the plan could house a WEEE collection facility. ■ There is only one lane for cars to park in whilst using the facility. This removes the need for public to cross the traffic lane thus improving health and safety. 	<ul style="list-style-type: none"> ■ There is no allocated space for a re-use shop on site (we acknowledge that the plans were drawn before re-use was added to the existing facility). ■ The 'meet & greet' location does not allow much space for queuing vehicles and may block access for HGVs entering the transfer station or landfill site. ■ There is space for only 11 bulk skips as opposed to the 16 currently in use. If this site remains the only HWRC in Newport then this configuration may pose a problem at busy times. ■ Public traffic will have to cross a lane dedicated for site traffic to enter the site posing a potential health and safety risk.

During the meeting, Resource Futures pointed out potential problems with the plans and options to avoid these issues were discussed. In summary, they included:

- Reversing the flow of traffic around the site. Members of the public would then enter the new site at the point marked 'A' on the top left of the plan in Annex 4 and exit at the roundabout at the current entrance. The roundabout would be redeveloped into a full roundabout as part of the redevelopment process.
- Relocation of the central car park to another part of the site thus allowing for a horseshoe shaped site which would include space for more bulk skips and dedicated areas for dry recycling, WEEE and re-use.

Addition of a re-use shop with car parking facilities at the entrance to the site would offer additional visibility of re-use at the site and provide the opportunity for the public to consider re-use first as specified in the waste hierarchy.

None of these improvements are likely to have a statistically significant improvement on recycling rates. However, as previously mentioned, failure to introduce changes could hinder the sites potential, as well as health and safety. As the redevelopment would be part of a wider council initiative, it would be a lost opportunity to not improve the site as discussed above as the changes are likely to make the site safer and more efficient.

3.2.1 Spatial assessment of existing provision

The current provision offered by the Docks Way site is good; two thirds of households (62%) are able to drive to an HWRC in less than 10 minutes. Within 15 minutes 92% of the population can drive to the site. Almost 100% of the population are able to drive to the site within 20 minutes. This meets WRAP's recommendation on HWRC provision which states that the great majority of residents, in good traffic conditions, should be able to drive to an HWRC in less than 20 minutes. This does not account for roadworks, peak travel times or queuing to access the site. Households in the centre of the city and to the West are served well by the Docks way site. A small number of households in the far North and East of the authority fall into the 20 minute driving time band, and some in the far east of the authority would have to drive for over 20 minutes. In some cases it is likely that householders go to sites in other counties.

3.3 Option 2: Constructing an additional HWRC

NCC has looked at options for an alternative site in the past, but there has not been political appetite for such a site. NCC has not identified areas of land that could be available for an alternative site.

However, whilst researching the issue, it became apparent that brief consideration had been given to two sites:

- Open Hearth Pub – a closed pub site on the A48 trunk road in the east of the city
- Llanwern – the site of the old steel works where regeneration is occurring including new housing developments.

Therefore these two locations have been considered within the spatial analysis. This will provide a site in the east of the city. The new facility would be a standard HWRC, accepting recycling and residual waste. Regardless of where a second site is located, the issues and comment below are relevant.

Opening a new site in addition to Docks Way would almost certainly reduce the throughput of Docks Way. There is some correlation between lower throughput sites and higher recycling rates; however, there is plenty of scope for improvements to increase the recycling rate at Docks Way at the current or higher throughput that are cost effective.

For the purposes of this analysis, it is assumed that a new site would result in an increase in overall HWRC tonnages in NCC of 5%.

3.4 Spatial assessment of an additional HWRC site

Two scenarios were considered for the development of an additional site. Both scenarios include Docks Way with a second site in the east of the city. In scenario 1, the Docks Way site is joined by a site at Llanwern. In this scenario more people in the east of the city could be better served by the new site. With the two sites 66% of households would be within 10 minutes of an HWRC, a slight improvement on the 62% of households within 10 minutes of the current site at present. 95% of households within 15 minutes of a site (compared to 92% at present). All households are within 20 minutes of a site.

In scenario 2, provision has been assessed based on the present Docks Way site operating alongside a new HWRC at the Open Hearth pub site. Again, more people in the East of the city could be better served by the new site. With the two sites 74% of households would be within 10 minutes from an HWRC, quite an improvement compared to the 62% of households within 10 minutes of the current site. Around 12% of households would be within 5 minutes of the site compared to just 6% at present. Within 15 minutes 99% of households would be able to drive to their nearest site (compared to 92% at present). All households would be within 20 minutes of a site; only 8% of households would have to drive more than 15 minutes.

This scenario offers better provision for householders based on drive time alone and it certainly meets WRAP’s recommendations on HWRC travel time. Unlike scenario 1, more households in the north, far north and east would have a significantly shorter distance to travel. Based on the drive time analysis, the table below shows the number of households closest to each site.

Table: Number of households closest to each site in each proposed scenario

Scenario	Number of households	
	Current site	New site
Scenario 1 (Current site & Llanwern Site)	57,163 (88%)	7,460 (12%)
Scenario 2 (Current site & Open hearth pub site)	37,707 (61%)	24,916 (39%)

The percentage of households that falls into a given time band is shown in the table below. For the current provision and both proposed scenarios the average drive time from the modelled postcodes locations is less than 10 minutes. Scenario 2 offers the best level of provision where more people are served in the shorter time intervals.

3.5 Option 3: Constructing a zero waste site

During the inception meeting for this project, alternatives to redevelopment of Docks Way were identified. This included scoping the potential for constructing a zero waste site (ZWS), which would be an ambitious and innovative approach to household waste management. Of course, such an approach would need the support of Members and the waste team, as well as partners that can ensure re-use is maximised.

We have assumed that if a ZWS is to be constructed, it would be developed at one of the above sites, i.e. Llanwern or the Open Hearth Pub site. NCC could manage the site themselves or contract a private sector or third sector organisation to manage a ZWS on behalf of NCC. Re-use experience is likely to be extremely beneficial as the foundation for the business model for a self-financing ZWS is re-use revenue.

Long term financial viability is difficult to achieve as recycle income and costs fluctuate. The site operator and NCC would need to ensure enough footfall to the site, if the 'benefit' to site users of disposing of waste is not there. The site may focus on re-use in order to generate sufficient income, with recycling almost an afterthought (rather than the other way around). Alternatively, if a large enough site is developed, additional 'green' activities could be initiated. For example space could be rented to micro businesses that use waste as a resource such as furniture upcyclers, bike repair and craft businesses. Rent could be paid to NCC by these businesses.

In order to estimate the site throughput, it is assumed that, as with the scenario of a second site above, that an overall increase of 5% is seen within the network.

If such a site were to be constructed, it would require a large building to house the re-usable material, particularly if it is to be sold on site. An even larger building will be required if repair works are to be carried out for furniture and (large) electrical items.

In order to make a ZWS more financially viable, NCC could consider accepting commercial recycling. NCC could provide a niche service to provide a recycling service to small businesses that do not want a weekly collection service, for example gardeners, builders and other tradesmen. Therefore, there should be a clear financial incentive to segregate waste and any recycling system needs to be convenient.

3.6 Option 4: Shared service and managing cross border usage

HWRCs is only one council service which may be the subject of cross border usage by residents and in general, local authorities recognise that in most cases the public will tend to use the HWRC that is closest to them, this being the most common cause of cross-border HWRC usage.

Welsh Government is considering local council reform. It is possible therefore that NCC will merge with neighbours as part of the Local Government Bill. Therefore, Newport residents may benefit from a larger HWRC network in future without the need for NCC to obtain funding, achieve planning permission, permits and build a new HWRC. Regardless of whether formal boundary mergers occur, all authorities within Wales need to consider how to provide the most cost effective services for residents as budgets tighten. In the short term, and potentially the long term, collaborative working may be the most sensible option. This could mean considering regional HWRC networks as well as regional waste and recycling infrastructure and contracts.

A formal arrangement could involve charging non-Monmouthshire residents for use of the site, or, more likely, a financial settlement between the authorities. One way to administer this is through annual postcode surveys (as part of other customer satisfaction surveying or similar) conducted during a typical week (i.e. not during Christmas or Easter etc). Financial arrangements can be made to ensure that each authority pays for their residents. It is worth bearing in mind that that with lower than average HWRC throughput it is possible that more waste is going to other local authorities and therefore shared arrangements might cost NCC more.

As well as costs, the councils will need to agree which authority benefits from the recycling performance. For example, if one authority incurs all waste and recycling costs that they benefit from any recycling rate increase associated with the additional throughput. If all costs are shared, NCC may wish to add their proportion of recycling at the neighbouring HWRC to the recycling rate for Docks Way.

The arrangements would be subject to any future infrastructure changes.

4.0 Summary of costs

The table below summarises the costs estimated to improve Docks Way HWRC and construct a new HWRC or a ZWS, and expected recycling rates. The capital requirements for the ZWS are considerably more expensive than a traditional HWRC because of the requirement for a larger building to accommodate re-use. The improvement works and operational expenditure for Docks Way would be incurred alongside a second site. The operational expenditure per annum for the improvement works are the costs should the work go ahead e.g. they are not additional costs.

4.1 Budget requirements

It is worth noting that at the present time there is no capital budget for redevelopment of Docks Way or the construction of an additional site. If following the outcome of this study, NCC decide to progress with reform to the HWRC network, consideration will need to be given to where the financial resources will be found. It may be possible to bid for funding within the Collaborative Change Programme or other Welsh Government funds using this report as a basis for a business case

Table: Summary of costs

	Improvement works at Docks Way	Redevelopment of Docks Way	Llanwern HWRC and Docks Way improvement	Llanwern ZWS and Improvement of Docks Way
Recycling rates				
Recycling rate excluding rubble	72.00%	72.00%	72.00%	77.94%
Reuse rate	0.80%	0.80%	0.80%	2.19%
Recycling rate including rubble	84.46%	84.46%	88.10%	88.24%
Capital expenditure				
Site works	£20,417	£247,925	£92,217	£92,217
Building	£0	£0	£90,000	£438,500
Civic Amenity Infrastructure	£13,333	£42,500	£85,833	£65,833
Contingency	£7,087	£60,989	£74,440	£143,425
TOTAL excl VAT	£40,837	£351,414	£342,490	£739,975
Annualised total*	£8,167	£35,141	£38,333	£78,081
Operational Expenditure				
Operating Staff	£200,308	£200,308	£200,308	£200,308
Equipment Hire	£0	£0	£25,000	£25,000
Maintenance and Repairs	£1,021	£8,785	£8,562	£18,499
Periodic Renovations	£2,042	£17,571	£17,125	£36,999
Utilities	£7,500	£7,500	£15,000	£15,000
Contingency	£21,087	£23,416	£26,600	£29,581
Operational Expenditure/Annum	£231,958	£257,580	£292,595	£325,387
Waste and recycling costs				
Residual waste, recycling, reuse and rubble costs	£606,849	£606,849	£627,954	£574,577
Total cost (capex not annualised)	£879,644	£1,215,844	£1,263,039	£1,639,939
TOTAL annual cost estimate	£846,975	£899,571	£958,881	£978,045

	Improvement works at Docks Way	Redevelopment of Docks Way	Llanwern HWRC and Docks Way improvement	Llanwern ZWS and Improvement of Docks Way
Income				
Estimated income recycling	£100,000	£100,000	£100,000	£100,000
Estimated income reuse (£250 per tonne)	£7,750	£7,750	£8,500	£77,250
Estimated income reuse (£500 per tonne)	£15,500	£15,500	£17,000	£154,500
Net cost	£739,225	£791,821	£850,381	£800,795

*annualised figures for 10 years, with exception of improvement works for Docks Way, annualised over 5 years

**net costs assume income for reuse at £250 per tonne)

5.0 Options appraisal

Options appraisals often include a do nothing option however we have assumed that this would not be acceptable under the circumstances. Therefore, the baseline is to improve Docks Way as a minimum. The HWRC network options available to NCC are:

1. Option 1: Improve Docks Way and redevelop Docks Way site
2. Option 2: Improve Docks Way and construct a new HWRC
3. Option 3: Improve Docks Way and construct a new zero waste site
4. Option 4: Improve Docks Way and share a site with a neighbouring authority.

As no alternative site has been identified, for the purposes of the options appraisal we have assumed that the HWRC or ZWS will be located at Llanwern. This is because of the regeneration activity taking place, the building of new homes (and therefore an increased population nearby) and the expected acceptance of a new site (as it is located on the old steel works so residents have been used to industrial activity). If the council decide to pursue Option 3 or 4, a detailed options appraisal would be needed to determine the most appropriate location. Based on the research undertaken for this project, the following criteria have been identified to evaluate the above options:

Table: Options evaluation criteria

Ease of access to the sites and impact on local community	The positioning of a site in an easily accessible location is important. Sites that vehicles have to queue for, travel in built up areas and/or potentially cause environmental (e.g. noise and odour) problems for neighbouring businesses or residents are scored lower. Out of town sites that have a lower impact on the community are rated higher.
Capital investment needed	Building a new site, or developing land to a standard suitable for an industrial site is expensive, particularly if site clearance or infill and earthworks are needed. Options that require less capital investment are scored higher. With regard to the capital investment required, a new site on a green field site would be scored low.
Revenue cost to operate the option	This considers the operational costs relate to staffing, waste, recycling and haulage, utilities, equipment and maintenance costs. Larger sites with greater segregation and throughput will have a higher revenue cost than smaller sites.
Revenue income from re-use	Revenue generation is often a consideration for authorities nowadays. There is potential to generate income from the sale of re-usable items. HWRC shops are becoming very successful, with turnover of tens or hundreds of thousands of pounds.
Future needs	An HWRC network that allows for future changes (e.g. space for additional material segregation) will score more highly than sites that are not flexible to change.
Environmental impact	Larger, purpose built sites have the potential to divert waste higher up the waste hierarchy by having space for greater segregation (when end markets become available) and re-use/ preparation for re-use activities.
Political impact	When locating new sites, there is often a "Not In My Back Yard" attitude. The option(s) likely to achieve the greatest public support are rated more highly.
Deliverability and timescale	A new site will take time to develop, requiring planning permission and licensing. Therefore redevelopment of a site, scores more highly than an unidentified new site.

The matrix below shows the weighted scored for the criteria for each option.

Table: Weighted scores

	Option 1 Redevelop Docks Way	Option 2 Improve Docks Way and construct a new HWRC	Option 3 Improve Docks Way and construct a new ZWS	Option 4 Improve Docks Way and share a site with a neighbouring authority
Capital investment needed	50	50	50	50
Revenue cost to operate the option	45	27	27	27
Revenue income from re-use	24	24	8	40
Political impact	21	21	35	7
Environmental impact (waste & recycling)	18	18	30	6
Environmental impact (new build)	15	25	25	15
Deliverability and timescale	20	20	20	12
Future needs	9	9	9	15
Ease of access to the sites	10	2	2	10
Proximity of site to residents	3	0	0	5
Score out of 275	215	196	215	187
Rank	1	3	1	4

The results of the options appraisal suggests that the most favourable options are either to redevelop the Docks Way HWRC, or improve Docks Way and construct a ZWS. However, all options score well and therefore if the Council had a preference for an alternative option, the detail in the report will help to justify that decision.

Rank Option

- Rank 1 Redevelop Docks Way
- Rank 1 Improve Docks Way and construct a new ZWS
- Rank 3 Improve Docks Way and construct a new HWRC
- Rank 4 Improve Docks Way and share a site with a neighbouring authority

This is because it provides best value for money whilst providing an acceptable level of service for Newport residents.

6.0 Longer term vision

Taking a long term view to 2024/25, NCC may wish to embrace Options 2 or 3 and construct an additional HWRC or a zero waste site. There are only a few examples of zero waste sites in the UK but they are common place elsewhere in Europe and America. Constructing a ZWS is a risk, but it is feasible with good planning. There may be Welsh Government or European funding available to support the capital investment required, but a well-managed site could turnover thousands of pounds of stock; sufficient to cover operating costs once the site is established. Of course a full business case would be needed and a feasibility study to ensure the estimated throughput and quantity of re-usable items is realistically estimated. Any project like a ZWS would need time and financial input to become self-sufficient, especially if including additional waste prevention activities.

7.0 Recommendations and conclusions

The existing HWRC at Docks Way in Newport would benefit from site improvements to help drive up the recycling rate at the site. A number of recommendations have been suggested that will improve traffic flow, recycling infrastructure, re-use infrastructure, site signage and health and safety

The results of the options appraisal and spatial analysis suggests that redevelopment of the Docks Way site is the most effective option to provide an HWRC service for Newport residents that is fit for modern recycling and re-use habits. As budgets are shrinking, the redevelopment may offer the most politically acceptable, environmentally and economically sound option. However, before significant changes are made, NCC could consider formal arrangements with Monmouthshire and/ or Caerphilly councils to allow Newport residents to use their sites: residents may already do so and therefore shared provision is likely to incur a cost to NCC.

NOTE:

It must be noted though that this review did not take into account housing growth and therefore if the chosen option is to redevelop Docksway site, it is recommended that another review on the service provision and number of people being serviced by the existing site is done on the medium term.

The housing growth assumptions that have been taken into account in later stages of the CCP work (using a housing growth rate calculated based on household projections in the Newport Local Development Plan 2011 – 2026, Adopted Plan, January 2015) are the following:

Year	No. of Households
2015/16	66,166
2016/17	67,089
2017/18	68,013
2018/19	68,936
2019/20	69,860
2020/21	70,784
2021/22	71,708
2022/23	72,632
2023/24	73,555
2024/25	74,479
2025/26	75,403
2026/27	76,326
2027/28	77,250
2028/29	78,173
2029/30	79,097

This means a potential increase of up to 7% by 2020 with only one site servicing the whole of Newport, when recommendation is to have at least one site per 143,750 residents, with a maximum throughput for any site of 17,250 tonnes per annum. This housing growth would more than justify the need for an additional site should Newport City Council want to pursue this option.