

Cabinet
July 29th 2024

Subject

Carmarthenshire Waste Strategy – Blueprint Implementation Plan

Purpose:

This report sets out the actions, considerations and decisions required to transition to the WG recycling blueprint collection methodology.

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1. Introduction

- 1.1 In October 2021 Cabinet approved Carmarthenshire's Waste Strategy, targeting 70% recycling by 2025 and zero waste by 2050. This strategy outlined a two-phase plan for a new kerbside collection system, with the first phase launched in January 2023.
- 1.2 The first phase of the Waste Strategy was implemented on 23rd January 2023, this comprised of:
 - Weekly dry recycling [blue bags] collection
 - Three weekly collections of up to three [black] bags of non-recyclable material
 - Introduction of a glass collection service to 95% of properties collected every three weeks,
 - Food waste collection continuing to be collected weekly.
 - Introduction of hygiene & Children nappy fortnightly collection
- 1.3 The second phase of the project aims at implementing the Welsh Government waste collections blueprint of kerbside sort collection methodology across the entire county. This will include separate weekly collections of glass, paper, cardboard, cans and plastic, with new services for textiles and batteries.

2 Background

2.1 Whilst the current interim service model has enabled the Authority to exceed 70% recycling in 2023/2024, it has shown that we have only just managed to exceed 2024/205 statutory recycling target. In addition:

- The interim service is more expensive than planned full rollout but was necessary to meet 2024 target and introduce glass collection.
- 80% recycling target likely by 2030. The current system won't achieve this due to recycling contamination and recycling materials collected.
- Phase 2 will implement the blueprint collection method for higher quality recycling, reduced contamination and greater suite of materials collected.
- Do nothing is not an option there is a need to move to phase 2 for cost-efficiency, higher recycling rates, alignment with WG strategy and our decarbonisation and sustainability objectives.
- A 2021/2022 analysis of our residual waste revealed significant recyclables are still contained within our residual waste stream, including 7.6% textiles, 21.5% food waste, 1.7% electricals, 21.8% nappies/hygiene products and recyclable packaging and 6.4% garden waste. This highlights the need for improved public education alongside increased kerbside materials and separation through the council's planned kerbside sort rollout.

3 Welsh Government Policy

- 3.1 Carmarthenshire County Council must comply with various Welsh Government regulations and emerging legislation impacting recycling performance.
- 3.2 The Council is obligated to meet a 70% recycling target for 2024/2025, with fines imposed for non-compliance. If the Authority does not meet the statutory obligation, there will be fines as per WG policy of £200/ tonne which may equate to £164,000 per 1% below the statutory target.
- 3.3 There is already consultation on increasing the 70% beyond 2024/25 with a potential 80% recycling rate target by 2030 – which would be within the service delivery span of this proposed service change.
- 3.4 Emerging Legislation:
 - Extended Producer Responsibility (EPR): Scheduled for April 2025, this places financial responsibility for packaging collection and recycling on producers. While promoting packaging reduction and transition, it may decrease non-recyclable materials collected by councils. WG and Defra are currently developing payment mechanisms based on the 'polluter pays' principle whereby EPR payments will be paid to Local Authorities funded through levies charged to product and packaging producers. It is unknown at present the level of funding or how this will impact Revenue Support Grant funding.
 - Deposit Return Scheme (DRS): Also launching in 2025, DRS incentivises returning beverage containers for a deposit. While aiming to reduce litter and boost recycling, it may decrease certain recyclable materials in Council collections.

- Emissions Trading Scheme (ETS): Planned for expansion to the waste sector by 2028, ETS aims to reduce emissions of residual waste through applying carbon allowances. While targeting operators, potential fines for exceeding allowances may be passed to councils based on waste composition and the level of residual waste disposed of, potentially increasing residual waste disposal costs significantly.

4 Service Design Considerations

4.1 To progress the second phase of the service change, there are critical decisions that need to be made to guide the direction of travel to achieve the blueprint collection methodology in Carmarthenshire:

- Service Infrastructure and location – Centralised Depot or Current Depots
- Vehicle procurement
- Utilisation of Ultra Low Emission Vehicles (based on cost & operational capabilities)
- Consideration of alternative operational working patterns – (e.g. 4 day working).
- Decision on residual waste collection frequency – (three weekly / four weekly).
- Decision on waste collection streams to be collected as part of the blueprint collection methodology.

5 Depot and Infrastructure Configuration

5.1 As part of the initial development of our Strategy in 2019 a modelling study by WRAP Cymru revealed there was insufficient capacity at our current Waste Transfer Stations (WTS) to handle weekly blueprint recycling collections. Expanding Wern Ddu was costly, and limitations at Trostre meant it couldn't accommodate both recycling and residual waste as well as the existing Household Waste Recycling Centre (HWRC).

As such two main themes were developed:

Option 1 – Invest in current infrastructure	Option 2 – Develop Centralised Depot
<ul style="list-style-type: none"> • Relocate Trostre HWRC, keeping the Waste Transfer Station in the same location <p>Or</p> <ul style="list-style-type: none"> • Relocate Waste Transfer Station and Maintain HWRC <p>And</p> <ul style="list-style-type: none"> • Develop new service configuration for Wern Ddu Waste Transfer Station • Utilise existing Nantycaws infrastructure. 	<ul style="list-style-type: none"> • Relocate all operations to a centralised depot at Nantycaws • development of welfare facilities for staff. • Fleet parking • Utilise existing Nantycaws infrastructure for transfer station/treatment.

5.2 More recently we have developed three options that have been analysed and costed:

	Depot Location	Type of building	Waste Transfer Station [WTS] Location	Cost
Option 1	Centralised depot at Nant Y Caws	Traditional Build & Fleet Workshop	Utilise existing Nantycaws infrastructure for transfer station/treatment.	£22.6m
Option 2	Centralised depot at Nant Y Caws	Modular Build (Fleet workshop remains at current location – Trostre).	Utilise existing Nantycaws infrastructure for transfer station/treatment.	£13.8m
Option 3	Remain at the 4 current depots	Additional Modular Build	Invest in depots and Waste Transfer Stations	£10.43m

5.3 Option 1 - The development of the Nant Y Caws centralised depot model involves integrating with our waste treatment and transfer infrastructure. This centralisation strategy is built upon being the base for the entire waste collection service fleet at the site, serving as the working and fleet maintenance base for all operational waste collection staff, both operational and strategic. To understand the associated capital costs, feasibility and location of the site at Nantycaws, collaboration has been ongoing with WRAP and CWM Environmental in locating the most viable area for a central depot to be developed on the site.

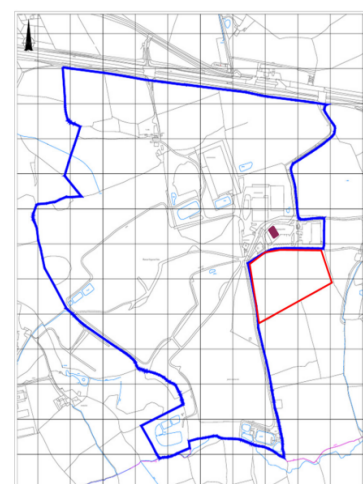
5.4 Option 2 - Proposes a modular building instead of a traditional build for the new depot. Modular buildings are faster to construct (reducing overall program) and can be customised to the service needs. While a modular building is cheaper upfront, it has a shorter lifespan (30 years).

5.5 Option 3 - Utilising our current four depots with improved welfare and parking infrastructure and development of transfer station infrastructure at Wernddu and a new facility at Trostre.

5.6 In conclusion, Option 1 is a costly solution and given the Councils financial position the increased investment compared with Option 2 does not deliver increased benefits. Option 3 will deliver the blueprint but has limited capacity to expand in future and also does not future proof the service or unlock wider decarbonisation ambitions. It is therefore recommended that Option 2 is progressed.

6 Finance

6.1 As previously indicated the costs associated with the interim phase are not sustainable long term and the move to weekly recycling and glass collections were set as a pre-cursor to the implementation of the blueprint service, which will bring the service into a more cost-effective model of service delivery and save significant money on the revenue operating costs – which can be seen in para 6.5 below.



6.2 To assist with the Authority's change to the Blueprint-compliant collection service, and the wider creation of the infrastructure associated with sustainability, the authority has successfully secured funding from Welsh Government of up to £15,546,000.

6.3 Based on the capital figures presented for each of the different options within this report, taking into consideration the £15,546,000 Welsh Government grant and the allocated £4,730,000 funding set aside by CCC as part of the vehicle replacement programme, with an additional £252,055.00 from reserves, the estimated capital costs are as follows:

Options	1. Centralised depot Traditional Build	2. Centralised depot Modular Build (excl TMU)	3. Current Depots (excl TMU)
	£	£	£
Estimated construction costs including charging infrastructure, welfare and parking facilities	22,557,756	13,787,037	3,426,877
Vehicle Procurement based on 23% blueprint recycling fleet ULEV [On estimated Current Market Value]	10,506,035	10,506,035	10,506,035
Recycling Containers [On estimated market value]	1,140,000	1,140,000	1,140,000
Transfer stations (Trostre £2.8m, Wernddu £1.865m)	0	0	6,997,500
Total Option Cost	34,203,791	25,433,072	22,070,412

TOTAL WG FUNDING	15,546,000	15,546,000	9,673,000
CCC fleet replacement programme	4,730,000	4,730,000	4,730,000
CCC reserves	252,055	252,055	252,055
CCC - additional funding required	13,675,736	4,905,017	7,415,357
TOTAL CCC FUNDING	18,657,791	9,887,072	12,397,412
TOTAL FUNDING	34,203,791	25,433,072	22,070,412

6.4 Within Option 3, there is a risk of reduced Welsh Government funding for this option, as the initial Welsh Government allocated funding was predicated on a centralised depot. A full re-submission of a business case would be expected for evaluation by WG and sign off by Minister. In addition, advice received is that anything Business as Usual would not be funded so improvements in our depots would not be deemed feasible and unlikely to be funded. This would increase the capital requirement from CCC and also increase delays to the project whilst a new business case was developed, submitted and considered.

6.5 The revenue implications for each of the service options are as follows:

Options	BAU actuals 23/24 £	Option 1 & 2 - Centralised depot (£)	Option 3 - Current Depots (£)
Pay costs	6,316,411	6,596,399	6,781,929
Vehicles	4,425,827	4,523,203	4,523,203
Transfer/haulage	197,409	-	246,761
Treatment & disposal	10,118,850	8,095,025	8,095,025
Receptacles (cols C&D @ 26/27 - inc vaildation)	884,934	136,886	136,886
Other costs and income	- 359,602	- 359,602	- 359,602
Additional travelling (for 1 year)	-	109,208	-
Total	21,583,830	19,101,120	19,424,204
Saving over BAU		2,482,710	2,159,626

6.6 As can be seen in the revenue costs presented for the services there is a reduction in service delivery costs in both of the future options presented.

6.7 The additional capital requirement for both options 2&3 could be funded through an invest to save proposal with Option 2 taking two years to repay and Option 3 taking three years, this would require the revenue savings to pay back the shortfall in Capital Funding, after the Capital Expenditure has been incurred. After this date of the total repayment (2 or 3 years) the savings identified above would be realised as a budget savings back to the Council's overall budget.

7 Centralisation and Staffing Implications

7.1 Whilst the centralisation of depot operations provides many operational and strategic benefits. Staff and workforce opinion and support is important. As such we have undertaken a comprehensive two-phase programme of staff engagement through Surveys and 1-2-1 meetings across the front-line crew across all four depots, Cillefwr, Trostre, Glanamman and Heol Stanllyd (Cross Hands).

7.2 Key findings of this programme:

- Phase 1: Staff Survey:
 - 70% of frontline staff (120 surveys) across 4 depots prefer not to relocate.
 - Main concern: Increased travel distance and fuel costs.
 - 30% support centralisation for reasons like:
 - Proximity to home (for some)
 - Improved team culture

- Operational efficiency
- Phase 2: 1-on-1 Meetings:
 - 93% of staff participated (154 employees).
 - 62% view the overall blueprint methodology positively.
 - 26% oppose centralisation, while 6% support it.
 - 35 employees prefer staying at current depots (mostly Trostre).
 - Regarding support for relocation:
 - 20 requested transport provided.
 - 13 requested road network improvements.
 - 5 requested fuel contribution.
- 97% responded on a 4-day workweek:
 - 60% support it.
 - 18% oppose it due to childcare/caring responsibilities.
 - 7% oppose it due to physical demands.
 - 12% were neither for nor against the idea

7.3 If centralisation is the preferred option moving forward the service is committed to:

- Regularly meet with Trade Unions to address concerns.
- Develop sustainable transport options for staff (including rapid charging points).
- Subsidise commute expenses for those travelling further for an initial 12 months.
- Invest in a new centralised facility with improved welfare and working conditions.
- Continue to develop plans for centralised fleet maintenance unit

7.4 Environmental Benefits of centralisation:

- Centralisation aligns with Welsh Government's Low Carbon Wales strategy.
- Enables optimised use of Ultra Low Emission Vehicles (ULEVs).
- Long-term plan involves utilising solar energy for electric vehicles, requiring centralisation for implementation.
- Centralisation would cost the authority £109,208 annually for the first year to cover increased commute expenses for 80% of staff. Based on December 2023 data and mileage based on two way travel:
 - 46.2% of staff would be affected in travelling an additional 11miles or more each day to a centralised depot
 - 25.3% would have to travel between 5 and 10miles
 - 9.3% would travel an additional 0.1 – 4 miles
 - 1.1% would have no change and
 - 18.1% of frontline staff would experience a shorter commute to a central depot compared to their current base.
- While staff concerns regarding travel exist, the service is committed to mitigation strategies and sees long-term environmental and operational benefits from centralisation. The decision on proceeding will likely involve further discussions with Trade Unions based on staff feedback.
- An employee's work location forms part of their terms and conditions of employment. In order to make a change to an employee's terms and conditions there is a need to consult, with a view to reaching an agreement on making a change. There will be HR risks if agreement cannot be reached, and this will be set out in a full separate report.

8 Operational Working Pattern

8.1 As Part of the second phase of the service change, and to further mitigate the potential increased travel from a proposed move to a central depot the service has explored the feasibility of delivering collections within a four-day week. This option also delivers potential benefits to staff wellbeing, sickness levels, and recruitment and retention rates.

8.2 To explore this option further research was undertaken of other local authorities who have trialled a 4-day working week.

8.3 The Benefits for Staff Wellbeing and Recruitment:

- **Improved Work-Life Balance:** A 4-day week offers employees an extra day for personal pursuits, potentially leading to reduced stress and burnout. Studies by the University of Reading suggest this can improve overall job satisfaction and well-being.
- **Reduced Sickness Levels:** Increased recovery time due to the extra day off could translate to fewer sick days, improving service reliability.
- **Enhanced Recruitment and Retention:** The attractive work-life balance offered by a 4-day week can attract a wider talent pool and encourage existing staff to stay with the organisation, reducing recruitment and training costs.
- **Reduced Travel Costs:** With one less workday, staff can potentially save on fuel, vehicle maintenance, and commuting time. This benefit could be replicated in our cost allocation for the additional travel costs if combined with a centralised depot location.

8.4 The operational advantages and environmental impact:

- **Increased Operational Reliability:** A dedicated non-working day allows for scheduled vehicle maintenance, inspections, and MOTs, minimising disruptions during regular service times.
- **Potential for a More Diverse Workforce:** A 4-day week can appeal to individuals with childcare or other commitments, potentially leading to a more diverse workforce.
- **Improved Efficiency and Adaptability:** The non-working day provides flexibility to introduce new routes or adjust existing ones when needed, ensuring efficient service delivery.
- **Reduced Reliance on Agency Staff:** Improved staff morale and retention could decrease the need for temporary agency workers, leading to more consistent service quality.
- **Optimised Bank Holiday Scheduling:** A 4-day week eliminates the need for catch-up work after bank holidays, reducing overtime costs and service disruptions.
- **Reduced Missed Collections:** With staff working fewer days but covering the same routes, familiarity could increase, potentially leading to fewer missed collections.
- **Lower Emissions:** Reduced staff commutes translate to lower overall emissions, contributing to the council's carbon reduction goals.

8.5 Challenges and Considerations:

- **Maintaining Service Levels:** Compressing a 37-hour workweek into 4 days requires careful planning to ensure service levels are maintained. Route optimisation and workload distribution will be crucial.
- **Staff Concerns:** While surveys indicate support for a 4-day week, some staff expressed concerns about childcare, physical demands of the job, and potential income loss due to fewer working hours. Addressing these concerns is essential for successful implementation.
- **Cost Analysis:** While potential savings exist through reduced mileage reimbursement and vehicle fleet size, these need to be weighed against potential changes in staff compensation for a compressed workweek.
- **The service recommends considering a 4-day workweek for waste collection due to the potential benefits for staff, operations, and the environment. However, further analysis is needed to address staff concerns and develop solutions. Pilot programs can be conducted to assess the feasibility and impact of a 4-day week on service delivery and staff well-being. Open communication and collaboration with staff unions and representatives will be crucial throughout the decision-making process.**

9 Residual Waste Collection Frequency

9.1 As we move into the second phase of the project there is the potential to change the residual waste collection frequency.

9.2 In the face of increased budgetary pressures and need to capture more recycling from residual waste streams many Authorities are planning residual collection to once every four weeks. This would align with the blueprint collection methodology where residents will be provided with a wider array of recycling services at their doorstep.

9.3 There are 9 Authorities in Wales engaged with Wrap Cymru considering a move to 4 weekly as part of a future service change proposals. Currently there are; 2 operating 4 weekly, 10 – 3-weekly and 10 - fortnightly.

- 9.4 The move to a four weekly collection is a necessity to encourage residents to prioritise recycling and waste reduction practices. With less frequent collections, individuals are incentivised to maximise their use of recycling services and reduce the amount of residual waste generated.
- 9.5 Four weekly residual waste collections have shown to increase Recycling Rates. Evidence from Conwy Council's suggests a significant increase in recycling rates (11.5%) and decrease in residual waste (12%) with a 4-weekly collection system.
- 9.6 Less frequent residual collection incentivises residents to prioritise recycling, aligning with the findings of Carmarthenshire's recent waste composition analysis where 39.2% of our residual waste was recyclable from our suite of recycling services. From our 19,200t of residual waste this means there is currently 7,500t of recycling in our black bags.
- 9.7 This Aligns with Welsh Government's recycling targets (potential 80% by 2030) and avoids potential penalties for recyclable materials in residual waste.
- 9.8 The move to four weekly reduces collection frequency from 17 to 13 times a year, leading to lower operational costs (gate fees) and emission and delivers increased recycling it would allow for the removal of 2 residual waste collection vehicles delivering further saving costs.
- 9.9 Overall transitioning to a 4-weekly residual waste collection system alongside the blueprint methodology holds promise for increased recycling rates, reduced waste, and service efficiency. It aligns with Welsh Government policies and contributes to achieving future environmental targets.
- 9.10 Further detailed modelling on the savings and recycling increase is being undertaken. However, from initial conservative modelling we could expect to see a 5% shift of residual waste to recycling and the reduction in two collection vehicles and associated staff required. This could potentially deliver additional saving. The timing of the implementation of this would be key, and we are currently evaluating and investigating whether this could be implemented prior to Kerbside Sort roll out.

10 Recycling Collection Streams

- 10.1 The Blueprint is the Welsh Government recommended service profile for achieving high recycling rates, cost savings, and improved sustainability and it aligns with Welsh Government's recycling targets (e.g., 80% by 2030). The Current Service of Weekly co-mingled recycling (blue bag) alongside food waste and Glass collection every 3 weeks aligned with residual waste.
- 10.2 While we are meeting short-term recycling targets 70% 2024/25, the current system is financially unsustainable in the long term and we still have significant recycling contained within the residual waste stream. The proposal is for weekly collections of separated recyclables at the kerbside:
- Cans & Plastic including plastic film together in reusable containers.
 - Food waste in separate caddies.
 - Glass in existing black boxes.
 - Paper and Cardboard in separate reusable containers.
 - Textiles and Batteries separate reusable containers.
 - This configuration will reduce our recycling contamination currently standing at circa 30% and improve the quality of recycled materials, fetching better market prices. This service profile would deliver:
 - Increased recycling rates and diversion of recyclables from residual waste.
 - Improved service efficiency and cost-effectiveness compared to the current model.
 - Alignment with other Welsh councils and future waste reduction targets (Zero Waste by 2050).
- 10.3 Some additional considerations for our recycling services to improve cost and resource efficiency would be:
- Ongoing reduction of bring sites due to decreased usage with improved kerbside collections.
 - Consolidation of textile bank provisions before kerbside textile collection is established.
 - Research on the best way to present plastic film, battery, small domestic appliances, vapes and textile collections at the kerbside.
- 10.4 Overall, the Blueprint Collection Methodology offers a sustainable path towards achieving higher recycling rates, reducing waste, and improving service efficiency. It aligns with Welsh Government policies and contributes to a future-proof waste management system for Carmarthenshire.

11 Vehicle configuration and procurement

- 11.1 To understand the required quantity of RRV's/ kerbside sort vehicles to operate the blueprint collection methodology a programme of vehicle collections and routing modelling has been undertaken. Modelling was undertaken by WRAP in January 2024, to understand the number of vehicles that would be required for the core service delivery options.
- 11.2 WRAP modelling in January 2024 assessed the number of vehicles needed for our various scenarios. The modelling considered:
- Interim service results.
 - Latest tonnage data.
 - Vehicle/resource efficiency.
 - While the number of recycling collection vehicles remains the same for a 4-day or 5-day workweek in a centralised depot, a 4-weekly residual collection with a 4-day workweek allows for a reduction of 2 refuse collection vehicles.
- 11.3 The council is committed to integrating ULEVs into the waste fleet to achieve carbon objectives. Modelling in March 2024 assessed the feasibility of ULEVs based on:
- Operational needs.
 - Funding availability.
 - Electric infrastructure.
 - Mileage.
 - Route optimisation.
 - Battery consumption (considering Carmarthenshire's topography).
- 11.4 Both a centralised depot and current depots could potentially support 9 ULEVs combined with the three current ERCVs (25% of the recycling fleet) with potential for future expansion. However, there are increased risks from our current depots might limit ULEVs due to infrastructure limitations and require collaboration with the National Grid for feasibility assessment. A lower number of ULEVs at current depots would increase the carbon footprint and require logistical planning for charging stations.
- 11.5 The capital expenditure for acquiring the blueprint fleet with 23% ULEVs is estimated at:
- 11.6 £10,506,035 for 39 frontline vehicles (including 9 ULEVs) and 8 backup vehicles at a centralised depot.
- 11.7 There is a need to balance environmental responsibility (maximising ULEVs) with financial prudence and operational service delivery. The Centralised depot offers future-proofing for ULEV expansion but requires operational alignment and also allows for the potential development of Green Energy Generation for the powering of the ULEV fleet.
- 11.8 While Welsh Government provides capital funding for vehicles, the amount might be reduced if ULEVs are limited at current depots. A revised application to Welsh Government might be needed if the rollout plan deviates from the original submission (depot location).
- 11.9 One of the driving principles of the project is taking into consideration future generations and environmental impacts, including our commitment to achieving carbon neutrality. In line with this ambition, we initially aimed to maximise the number of electric vehicles to achieve up to 50% of our total recycling fleet.
- 11.10 Following March 2024 route collections modelling it is recommended that 9 ULEV vehicles are procured, which would equate to 23% of the front-line recycling fleet powered by electric. Coupled with the existing 3 x 26t ULEV Refuse Collection Vehicles already in situ, this would increase our percentage of ULEV vehicles in our residual and recycling fleet front line to 26%.
- 11.11 We have arrived at this proposal taking into considerations as outlined below:
- Technical Considerations**
- **Battery Technology:** Current battery technology, while improving, still faces limitations in energy density, charging times, and lifespan. This makes it challenging to ensure that ULEV RRVs can perform equivalently to conventional internal combustion engine (ICE) vehicles, especially for heavy-duty or long-range applications.
 - **Infrastructure:** Adequate charging infrastructure may be unreliable to support a 50% EV fleet at our depots. This includes the availability of chargers, grid capacity, and maintenance of charging stations at our current locations.

- **Vehicle Availability:** There is a limited range of ULEV models that meet the diverse needs of a frontline fleet, which may include RCV and RRVs.

Environmental Considerations

- **Carbon Offsetting:** While ULEV vehicles offer significant environmental advantages, such as reduced emissions and lower carbon footprint, moving to the blueprint collection methodology would offset the carbon impact of utilising diesel vehicles, as there would be carbon saving in the treatment and re use costs compared to our current baseline/collection methodology.
- **Energy Sources:** The environmental benefits of EVs are highly dependent on the energy mix of the electricity grid. In areas where electricity is still largely generated from fossil fuels, the overall carbon footprint reduction may be less significant.

Economic Considerations

- **Upfront Costs:** EVs generally have higher upfront costs compared to ICE vehicles. While total cost of ownership may be lower due to reduced fuel and maintenance costs, the initial investment can be a barrier. This would increase the capital costs to the region of an additional £2.08 million to reach 50% of the fleet.

Practical Considerations

11.12 **Operational Downtime:** The time required to charge ULEV, even with fast chargers, can lead to operational downtime. This is especially problematic for fleets that need high utilisation rates and have tight operational schedules. In addition, although maintenance is reduced, the downtime we have experienced on our current ERCVs has meant vehicle off road time is increased from the ULEV HGVs due to the complexity of repair and the skills availability locally.

11.13 In summary, ultimately, we need to strike a balance between environmental responsibility and financial prudence in making an informed decision that maximises both operational effectiveness and cost-efficiency, so the recommendation of 9 ULEV vehicles strikes that balance.

10.9 Procurement of the fleet is now essential, delaying procurement beyond July 2024 could lead to ULEVs missing the June 2026 rollout due to 18-month lead times.

10.10 It is recommended that we begin vehicle procurement immediately after cabinet approval to avoid delaying the June 2026 rollout. Aim for 23% ULEVs in the initial rollout to minimise operational risks and allow for future ULEV expansion and market development. The final decision on the number of ULEVs should consider operational capabilities and depot infrastructure limitations.

12 Implementation Timeline

12.1 The service has been progressing with both phases of the service change concurrently. However, from recent market research and engagement with vehicle manufacturers we have been advised that vehicle the supply timescales (especially for ULEV vehicles) is greater than initially programmed, initial estimates is that there is presently an 18-month lead in time for electric vehicles.

12.2 In addition, the infrastructure development required for blueprint collections either at a single location or across our current network will require planning and significant civil works. Both factors mean that the second phase of the Waste Strategy in Carmarthenshire isn't feasible to deliver by Autumn of 2025, as per the previous schedule. Due to the need to roll out the service by early 2026, the project team has developed a new detailed timeline.

12.3 The current timeline assumes a smooth project execution with no major setbacks. Constructing a new centralised depot would require a 12-month build period after design and planning approval. Unforeseen delays could push the project beyond the June 2026 target. A modular build option might be less susceptible to delays due to faster construction.

- Employing an infrastructure project manager (especially for a centralised depot) can:
- Oversee multidisciplinary contractors for efficient design and build.
- Facilitate early stakeholder involvement for better cost control.

12.4 The existing project team (Waste Transformation Project Manager and Assistant) will:

- Manage the project and establish governance.
- Collaborate with stakeholders to ensure smooth execution.

- Maintain an updated corporate risk register.
- 12.5 Existing depots offer a lower risk of missing the June 2026 target compared to a new centralised depot due to:
- Potentially less complicated construction and planning requirements.
 - Lower capital expenditure required for the new aspects of the depot. This does not make provision for capital maintenance improvements with respect to the condition of the existing facilities at the depots.
- 12.6 While a centralised depot offers potential benefits, it comes with a higher risk of project delays. Utilising existing depots presents a lower risk but might limit future expansion and ULEV integration.
- 12.7 A suite of contingency options is being further developed to ensure we can deliver service change in 2026 in addition to the scoping of the potential to further phase the delivery of blueprint which could move the changes to residual waste collections being undertaken earlier.
- 12.8 It is therefore recommended that the service change timeline be approved for June 2026.

13 Carbon Benefits

13.1 An assessment of the Carbon emissions related to the Authority’s current collection service and the proposed options was undertaken as part of the overall project. WRAP’s Carbon Waste and Resource Metric (Carbon WARM) factors were used to underpin the assessment.

13.2 Table below sets out the total CO2 equivalent as well as the difference to the baseline for each option. The differences alone are shown in table 1 which is the total of the different activities for each option, which includes the carbon impact of; recycling collections, transfer and recovery, and wider infrastructure.

Table 1

Option	2022 Service	Current Service	Blueprint Central 4 weekly / 5 day working	Blueprint Central 4 weekly / 4 day working
Total tCO ₂ e	-6598	-6961	-9599	-9797
Difference from baseline (tCO ₂ e)	n/a	-364	-3001	-3199

14 Project Risks

14.1 The project has meticulously developed a comprehensive risk register, ensuring a robust framework for risk management to identify, assess, prioritise, and manage potential risks or uncertainties that could affect the successful completion of the project. As part of this at present there are five main risks

14.2 **Financial Risk:** A project of this scope and size with complicated infrastructure development and large-scale vehicle procurement can deliver financial risks. Large-scale infrastructure projects involving building construction and vehicle procurement come with inherent financial risks. Initial cost estimates may be impacted by unforeseen events leading to cost overruns. Delays or reductions due to economic factors or project performance can further strain the budget especially considering the timeline of WG funding being tight. Vehicle procurement itself carries risks like price fluctuations, delivery delays, and unforeseen maintenance costs for new technologies. Other potential threats include contractual disputes, and loan interest. To mitigate these risks, thorough cost estimates with contingencies have been sought, strong project management for early issue identification, and a buffer fund for unexpected expenses. A phased approach allows for adjustments as needed, and open communication with stakeholders keeps everyone informed about financial realities and potential challenges. By proactively managing these financial risks, we can improve the chances of delivering major capital infrastructure projects on budget and on time.

14.3 **Vehicle Procurement:** Delays to vehicle delivery is a project risk combined with the utilisation of ULEV technology. To meet the project deadline, electric vehicle procurement must begin by July 2024. However, due to potential delivery delays, only 9 ULEVs are planned initially. These ULEVs can be used at existing depots if needed, and as a contingency, leasing diesel vehicles from WRAPS is an option until the electric

vehicles arrive. While maximising ULEVs is ideal, current depot limitations restrict their use. To partially address this and contribute to the net-zero strategy, a program will replace future vans (delivery, supervisor, etc.) with electric vehicles as leases or hires expire.

- 14.4 HR – Staff and Trade Unions: Given the potential hesitancy among front-line staff to relocate and the expenses tied to contract changes and the potential impact of centralisation and work location changes on our employees is a critical risk factor. In addition, from the 1-2-1 surveys undertaken in April 2024, 5% of those surveys confirmed they were unable to drive and will have difficulty moving to a new location. To mitigate these risks, we have commenced engagement with both HR, staff and the Trade Unions on future changes. We have also commenced the planning around the potential staff travel plans that we will need to put in place to support any change to work locations if the centralised depot is the preferred option.
- 14.5 Planning Approval: There is a risk factor that planning is either delayed or rejected for our infrastructure requirements at a centralised depot. This would lead to delays and additional costs. We have pre-engaged with planning colleagues, WG and SWTRA to support a timely process. A Transport statement has been finalised to address concerns over the A48 Junction with active involvement from SWTRA & WG and Ecology reports and investigations already being undertaken. Contingency option has been prepared if planning permission at Nantycaws is rejected if this was the preferred option.
- 14.6 Timescale: The timeframe of Spring 2026 has been developed on a compressed timeline with little contingency. Any delays will need to be managed and addressed in timely manner to ensure timely delivery of the project. The employment of a dedicated infrastructure project manager will aid in the co-ordination of works and by co-ordinating specialists of each field working on the project simultaneously, will aid a quicker delivery of the project. Multiple options of contingencies are being looked at but may include increased revenue costs in the short term or the potential to delay roll-out. This will be managed through the Project Board and reported to Cabinet if required.

15 Conclusion and decisions

- 15.1 The initial waste service changes have been successful in boosting recycling rates, paving the way for a sustainable future with the Blueprint collection rollout. This approach aligns with other Welsh authorities and promotes Carmarthenshire's commitment to environmental responsibility. Decisions regarding the project must consider the long-term well-being of the community and environment, as outlined in the Future Generations Act. This includes involving the public, collaborating with relevant parties, and prioritising preventative measures to ensure a sustainable future for all.
- 15.2 Decisions to be made:
- Service location – Centralised Depot or Current Depots. Centralised would provide a sound platform to meet our recycling and carbon reduction needs and ambitions for the future. It is recommended to agree to progress will Centralised Depot (Option 2 Modular Build).
 - Operational shift working - 4 Day Working would provide for more flexibility for the service therefore it is recommended to consider 4 Day Working as an appropriate operational model.
 - Residual waste collection frequency – Four weekly; this would increase recycling and further reduce the volume of residual waste. It is therefore recommended to implement Four weekly residual waste collections.
 - Recycling collection streams – Full blueprint configuration.
 - Vehicle procurement commencement – To agree to proceed with vehicle procurement in July 2024 based on the requirements set out in the report
 - Utilisation of Ultra Low Emission Vehicles - Implementation of 9 ULEV RRVs (circa 25% of the waste fleet).
 - Implementation timeline – To implement changes in June 2026
 - Fleet Maintenance - Continue to develop solution for corporate fleet maintenance unit to be co-located or centralised.
 - Finance - To agree the funding shortfall of £4,905,017 to be funded via the savings that will be produced from the first 2 years of implementing the blueprint.