

REVENUE BUSINESS CASE*(Food Waste Collection Project)***EXECUTIVE SUMMARY**

The Executive Summary is a short summary of the Business Case and should be the last section you complete; this will enable you to extract or only the key facts from relevant sections i.e. 'project on a page'.

The summary is a 'snapshot' of the business case which will need to tell the story and sell the proposal.

Plymouth City Council is actively preparing to commence the implementation of a brand-new, citywide, weekly food waste collection service in the Spring of 2026. Introducing a separate food waste collection service in Plymouth has the potential to be the transformative catalyst that significantly boost the city's household recycling rates. The Council has already successfully procured and obtained Value for Money for 10 bespoke food waste vehicles, 7-litre kitchen and 23-litre kerbside caddies. This document sets out the business case for the next stage of the project, implementation and roll out to all Plymouth households. The food waste collection service is mandatory for all Waste Collection Authorities in England and is legislatively driven by the Environment Act (2021) which is overseen by the Department for Environment, Food & Rural affairs (Defra).

Defra has committed to providing funding in 3 stages. Stage 1 is Capital funding of £1,941,574.00 for the procurement of vehicles and food waste containers. Stage 2 transitional revenue funding of £570,158.95. The stage 2 has been allocated for the distribution of containers to households £323,013.52, communications £173,145.43, procurement £2,000.00 and project staff £72,000.00. The Council has now received stages 1 and 2 of the funding which in total is £2,511,732.95. Stage 3 New Burdens funding is yet to be confirmed. The Government has committed to provide New Burdens funding for the ongoing costs of this new Service, but this is yet to be confirmed. For the purposes of finalising this Business Case and in order to secure approval to commence the Service, the yet to be agreed funding has been shown as a balancing amount between the forecasted cost and existing budget. Once the actual Government funding is announced the appropriate budgets can be readjusted.

The Business Case sets out the case to use various funding streams made up of Stages 2 and 3 funding from the Government alongside existing Council budget provisions to roll out a citywide food waste collection service for every household in Plymouth throughout 2026.

The full Business Case is for net revenue costs of £4,256,333 between 2025 and 2029 and recurring in future years. The breakdown for forecasted net revenue expenditure is £271,864 (2025/26), £1,430,387 (2026/27), £1,271,684 (2027/28) and £1,282,398 (2028/29).

- Staff Costs (Project Delivery): Senior Project Manager, Project Manager, 2 Recycling Officers
- Staff Costs (Operations): (10 drivers, 20 Collectors, 2 Team Leaders
- Vehicles: Ongoing costs associated with vehicle maintenance and fuel costs
- Disposal: Collection, transfer & processing of food waste in an Anaerobic Digestion plant

The proposed funding will be covered by both PCC Revenue Budget and Defra funding totalling: £437,603 (2025/26), £1,482,556 (2026/27), £1,300,000 (2027/28) and £1,300,000 (2028/29).

Key Risks

There is a risk of a shortfall in the New Burdens funding, a risk of negative public perception due to misinformation/disinformation and low participation rates by residents.

SECTION 1: PROJECT DETAIL

Project Value (indicate capital or revenue)	(£4,256,333 Net Revenue excluding Defra Transitional grant spend) (2025/26), £271,864 (2026/27), £1,430,387 (2027/28), £1,271,684 (2028/29), £1,282,398	Contingency (show as £ and % of project value)	0
Portfolio Holder	Cllr Tom Briars-Delve, Environment and Climate Change	Directorate Service Director	Growth Directorate Andy Sharp (Interim Service Director- Street Services)
Senior Responsible Officer (client)	Martin Hoar (Interim Head of Environmental Operations-Street Services)	Project Manager	Rachel Hawadi (Senior Project Manager)
Address and Post Code	Prince Rock Depot Macadam Road Plymouth PL4 0RZ	Ward	Citywide

Current Situation: *(Provide a brief, concise paragraph outlining the current situation and explain the current business need, problem, opportunity or change of circumstances that needs to be resolved)*

The Council has a mandatory obligation to deliver a weekly food waste collection service in the Spring of 2026, in line with the Environment Act 2021. Defra has assigned £295 million to the 50% of Waste Collection Authorities (WCA) who did not have a food waste collection service at the time the legislation was brought in. The grant determination and allocation was based on several factors including number and type of properties (kerbside, flattened, rural), food waste yields, vehicle and container unit costs, levels of deprivation and rurality.

Legislation and Strategic Alignment

In November 2021, The Environment Act 2021 became law with “Simpler Recycling” being one of its core outcomes.¹ The need for simpler recycling was the result of several factors including the rise in waste going to landfill during the pandemic, the focus on climate change, the declining recycling rates and the commitment to the UK’s Net Zero Strategy. This meant an intentional move towards reformative measures underpinned by regulations. One of those measures was the introduction of a mandatory weekly domestic food waste collection by 1st of April 2026 for all WCAs in England.

The national costs associated with this food waste is £19 billion and has associated emissions of 36 million tonnes of carbon dioxide equivalent.² Plymouth’s domestic food waste ends up in the household residual waste with a small percentage contributing to the contaminants in the recycling waste stream. The latest internal waste figures show that the total tonnage of kerbside collected residual waste is 53,867 tonnes per annum at an estimated cost of £5,225,099.³ The gate fees for

¹ [Simpler recycling collections and tougher regulation to reform waste system - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/simpler-recycling-collections-and-tougher-regulation-to-reform-waste-system)

² https://consult.defra.gov.uk/environmental-quality/improved-reporting-of-foodwaste/supporting_documents/Impact%20Assessment_Improved%20Food%20Waste%20Reporting%202022.pdf

³ Source Phil Rudin Head of Strategic Contracts and Disposal • Street Services

Food Waste Collection Project Revenue Business Case

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processing food waste in an Anaerobic Digestion plant are significantly less than the cost of processing food waste in an Energy for Waste facility.

Plymouth City Council has stated in the Corporate Plan that creating a “green sustainable city that cares about the environment” is one of its priorities. On 18 March 2019, at a meeting of the City Council, councillors unanimously voted to declare a Climate Emergency, making a pledge to make Plymouth carbon neutral by 2030.

To tackle waste in general the government launched the Waste & Resources Action Programme (WRAP) in 2000 which created numerous solutions and research campaigns to not only reduce waste but to create consistent frameworks that could be followed by organisations.

Between November 2021 and March 2022 WRAP were commissioned to conduct a detailed study of Plymouth City Council’s future waste and recycling service which included food waste. The report noted (at the time of the study) that the city of Plymouth provided waste and recycling collections to over 123,000 households of around 250,000 people on a fortnightly basis and recommended the implementation of a food waste service. The Council commissioned various studies into looking at implementing food waste which stem back from 2019 when the Environment Act was a bill. At the time many of the solutions offered were cost prohibitive and therefore not implemented.

Stage 1: Capital Funding

In January 2024, Defra provided the Council with funding of £1,941,574.00 to procure internal caddies, external kerbside caddies and communal bins. In November 2024 the Food Waste Collection project submitted a Capital Business Case for the procurement of vehicles and containers only.

The approved Capital Business Case was for £2,296,779.95 based on market estimates and an uplift based on estimated supply and demand increases. The Capital Business case expenditure would be from the Defra grant and from service borrowing totalling £355,205.95 (£807.64 in 2024/25, £352,326.25 in 2025/26, £1,879.33 in 2026/27 and £192.73 in 2027/28). The service borrowing was for vehicles and the vehicles decal/livery.

The phase I Business Case had noted two critical financial risks because of long procurement timelines for vehicles influencing supply and demand cost indexing. In addition, escalating costs due to market saturation since round 50% of WCAs buying assets at same time from the same suppliers.

The project sought to mitigate that risk by early supplier engagement, benchmarking with peer group local authorities and a robust market intelligence exercise of the vehicle and container market in order to get value for money for the Council. This resulted in a variance of £264,778.01 which will allow the Council expenditure for some elements of the capital costs which will be submitted as a Change Request with the Capital Programme Officers Board.

The Business Case for vehicles and containers was strictly confined to the exact budget lines in the Defra grant although there were other known *potential* capital costs for:

- A supply of indoor kitchen caddy liners to incentivise resident participation
- 3 sealed tipping containers for Chelson Meadow transfer site
- Site preparation and parking space optimisation works at Prince Rock depot for the additional 10 x 12 tonne bespoke food waste vehicles.
- Food waste bulker vehicles.

The Phase I Business Case was therefore produced with the understanding that there would be a further Business Case to align with the additional funding that was unknown at the time of writing.

Stage 2: Transitional Funding

Stage 2 Transitional funding of £570,158.95 for the distribution of containers, project management costs, procurement fees and communications was received in March 2025.

Defra Transitional Funding Budget Line	£
Bin Distribution	£323,013.52
Project Management	£72,000.00
Procurement Fees	£2,000.00
Communications	£173,145.43
	£570,158.95

Table 1: Breakdown of stage 2 Defra Transitional (Revenue) Funding.

Stage 3: The New Burdens Funding

The funding was expected in August 2025 but to date has neither been announced on received. The financial model underpinning this business case is based on a series of well-defined assumptions across staffing, vehicle operations, and waste processing. Salary costs have been calculated using PCC pay scales, inclusive of projected annual uplifts. Vehicle maintenance and fuel costs have been estimated using current market rates and operational data, while haulage and disposal costs reflect estimated ranges of tonnage projections and known gate fees.

The Government has committed to provide New Burdens funding for the ongoing costs of this new Service, but this is yet to be confirmed. For the purposes of finalising this Business Case and in order to secure approval to commence the Service, the yet to be agreed funding has been shown as a balancing amount between the forecasted cost and existing budget. Once the actual Government funding is announced the appropriate budgets can be readjusted.

Assumptions:

PCC Salary Costs and Annual Uplift

- **Base Salary Rates:** Assume average salary bands for relevant roles (e.g. drivers, collectors, supervisors) based on PCC pay scales.
- **Annual Uplift:** Apply a standard annual inflationary uplift in line with PCC HR or finance guidance.
- **On-Costs:** Include employer pension contributions, National Insurance, and other statutory costs.
- **FTE Assumptions:** An estimate number of full-time equivalents (FTEs) required based on service model (number of rounds, estimated time for each round based on estimated participation rates).
- **Training & Induction:** Includes one-off costs for onboarding and health & safety training.

Maintenance and Fuel Costs for Vehicles

- **Vehicle Type:** Base assumptions on the type of vehicle used (i.e. 12 tonne food waste collection vehicle).
- **Fuel Consumption:** Estimate average miles per gallon (MPG) and route mileage per day.
- **Fuel Price:** Use current diesel rates.
- **Maintenance Schedule:** Assume manufacturers routine servicing every x miles or months, plus annual MOT and inspections.

Haulage and Disposal

1. Tonnages were estimated using average figures derived from WRAP (6,736 tonnes per annum) and the Project's Waste Consultants Frith RM conducted in 2024 (4,483 tonnes per annum)
2. Number of collections during phased roll out in 2025/26.

3. Distance to Processing Site: Estimate average round-trip mileage.
4. Gate Fee: Initial estimation was done using gate fees of £35.

Food Waste and Recycling Rates:

Introducing a separate food waste collection service in Plymouth has the potential to significantly boost the city's household recycling rates. Plymouth's Recycling rate has shown a gradual decline of over the decade. Introducing a food waste collection service could help reverse this trend, as seen in other councils.

Wales, which has had mandatory food waste collection since 2016, now leads the UK with a recycling rate of 65%. Evidence from other UK local authorities shows that recycling rates can increase by 5 to 8 percentage points following the rollout of food waste services, with some areas achieving even greater improvements through strong public engagement and infrastructure investment.

Local Authority	Before (%)	After (%)	Positive Change	Additional Notes
Wales (national)	~43%	65%	22%	Mandatory food waste collection since 2016.
Norwich City CC	~30%	~38%	8%	WRAP interventions: caddy liners, bin stickers, leaflets.
Eastleigh	~35%	~42%	7%	WRAP support.
Derbyshire Dales	~32%	~39%	7%	WRAP-supported rollout;
Wokingham	~45%	~50%	5%	education campaign.
Essex County Council	~50%	~55%	5%	Pilot and comms strategy.
South Oxfordshire	~65%	~70%	5%	High participation
Stroud	~58%	~63%	5%	Strong community engagement.
Mole Valley District	~52%	~58%	5%	WRAP-supported service redesign.

Table 2: Sample of WCAs that have improved recycling rates by introducing a food waste collection service.

For Plymouth, where current rates are below national targets, the implementation of food waste recycling could be a transformative step toward meeting statutory obligations, reducing greenhouse gas emissions, and fostering more sustainable consumption habits across the city.

Proposal: (Provide a brief, concise paragraph outlining your scheme and explain how the business proposal will address the current situation above or take advantage of the business opportunity) **and** (What would happen if we didn't proceed with this scheme?)

This business case is a proposal for the progression to the next stage of a new citywide Food Waste Collection which will commence in.

I. The Scheme: The Food Waste Collection Service Definition

I.1 Food Waste

The new food waste collection service will enable the residents of Plymouth to discard food waste in their internal food waste caddies. The following list is of food waste that can be collected:

- All uneaten food and plate scrapings
- Tea bags – biodegradable and non-biodegradable accepted
- Coffee grounds
- Out of date or mouldy food
- Raw and cooked meat, including bones

- Raw and cooked fish, including skin and bones
- Shellfish and seafood shells
- Dairy products such as cheese
- Eggs and eggshells
- Rice, pasta and beans
- Baked goods such as bread, cakes and pastries
- Fruit and vegetables, including raw and cooked vegetables and peelings
- Cut flowers
- Pet food waste

1.2 Food Waste Caddies

As part of Plymouth City Council's food waste collection service, two types of caddies have been procured from IPL Plastics (UK) Ltd: a 7-litre internal kitchen caddy and a 23-litre kerbside caddy. These containers have been selected for their durability, usability, and value for money. They are made from 100% recyclable material and can be recycled at the end of life. The caddies are light grey in colour, designed for daily kitchen use and is dishwasher safe and resistant to chemical and biochemical degradation. The external kerbside caddy features a secure, lockable hinged lid to prevent spillage and access by animals. The external caddies have been tested by collectors in a blind test and were unanimously chosen for their ergonomic design that supports safe manual handling for the Council's Street Services team. Plymouth City Council has procured IPL Plastics (UK) Ltd which supplied the same caddies to Cornwall Council, South Ham District Council and West Devon Borough Council. A roll of caddy liner bags will be issued along with the delivery of the caddies to each household. WRAP research evidence points to a link between the use of liners and higher participation, and an initial supply will hopefully help remove any barriers to initial use. Residents will then have the choice of purchasing liners in future or presenting food waste loose within the caddies if preferred.



Fig 1. Plymouth City Council's 7 litre (internal) kitchen caddy and 23 litre kerbside caddy supplied by IPL Plastics (UK) Ltd (as featured on Plymouth Live).

1.3 Communal bins in flatted properties and Houses in Multiple Occupation

Communal waste facilities will be provided for flats, clusters of flats, housing estates, and houses in multiple occupation. Each designated collection point will include a 140-litre communal bin positioned alongside existing residual and recycling containers to ensure consistent and accessible waste management



Fig 2: 140 litre food waste communal bins.

The project is expecting 20-30% lower participation rates in flatted properties. Therefore, creating visually compelling and community-authored artwork for communal food waste bins in flats will play a powerful role in encouraging recycling and shifting behaviours. Acting as both an educational tool and an emotional prompt. Thoughtfully designed art transforms otherwise overlooked infrastructure into engaging landmarks that foster pride, awareness, and action.

1.4 Food Waste Vehicles

To support the operational delivery of Plymouth's statutory food waste collection service, the Council has procured 10 x 12-tonne food waste collection vehicles from Terberg Matec, a specialist manufacturer of municipal waste handling equipment⁴. These vehicles are engineered to meet WRAP technical specifications and are optimised for the collection of organic waste in urban environments. Each unit features a fully sealed, leak-proof body to prevent leachate discharge and odour, and is equipped with a slave bin lift mechanism compatible with 23-litre kerbside caddies and communal bins. The vehicles are designed for low payload, high-frequency collection, with a typical daily capacity of up to 3 tonnes and are fitted with hydraulic compaction systems to maximise load efficiency. Additional features include onboard weighing, telematics integration, and side guard protection systems, ensuring compliance with safety and environmental standards. The fleet will be based at Prince Rock Depot, with infrastructure upgrades underway to accommodate secure parking and maintenance.



Fig 3: An example of a bespoke Terberg Matec food waste truck (for illustration only).⁵

⁴ An example of a food waste vehicle can be viewed at "[Food & Bio Waste \(terbergmatec.co.uk\)](https://www.terbergmatec.co.uk)"

1.5. Prince Rock Depot Site Preparation

To accommodate the new fleet of 10 12-tonne food waste vehicles, Prince Rock Depot will undergo essential site preparation and infrastructure upgrades. This includes the demolition of a redundant training suite, resurfacing of the yard, and reconfiguration of the space to enable secure parking, manoeuvrability, and maintenance access for the vehicles. These works are critical to ensuring operational readiness ahead of the phased rollout in early 2026. The estimated cost of the site preparation is £150,000-£200,000 and has been included in the Change Control Request for the virement of funds from the phase 1 Business Case which will be presented to CPOG in October 2025.



Fig 4: Drone schematic site plan showing proposed site optimisation at Prince Rock depot.

2. The Business Proposal:

This business proposal aims to provide a food waste collection service by using the stage 2 revenue funding to create a food waste collection service. The revenue elements include:

- **Public Engagement and Behavioural Change Programme:** A robust community engagement and behavioural change programme to drive participation.
- **Resourcing for the service:** collectors, drivers and team leaders
- **Vehicle Maintenance:** The ongoing costs associated with vehicle maintenance and fuel.
- **Disposal:** Onward disposal costs.
- **Capital borrowing repayment.**

1.1 Public Engagement & Behavioural Change Strategy

As part of stage 2 funding Defra has provided £173,145.43 for Communications. The success of the food waste collection service depends not only on operational readiness but also on public understanding, participation, and sustained behavioural change.

The campaign will use multi-channel communications including printed materials, social media, and community events to inform residents about the new service and its environmental benefits. Recycling Officers will play a key role in face-to-face engagement, roadshows, briefings, school talks, attending local events and providing practical guidance.



Fig 5: An AI generated image to demonstrate a public facing food waste collection roadshow in a mall.

Behavioural change will be supported through nudges such as bin stickers, reminder cards, and positive reinforcement. Messaging will be tailored to different housing types and communities, with accessibility and inclusion at the forefront.

Early engagement with councils who have been successful in increasing their food waste participation rates has shown that face to face engagement and door knocking were very effective in getting the public to participate in food waste recycling.⁶

Plymouth is a community centred city and fertile ground for engaging with groups, volunteers and communities who are invested in community issues in general but also specifically climate change related issues. A significant amount of public engagement intelligence exists internally, the project has included an early engagement exercise Natural Infrastructure Projects and Partnership colleagues, Community Empowerment Programme, Net Zero Team, the volunteer teams, Green Champions, Wellbeing Hubs and Family hubs. As a result, an extensive stakeholder database. Stakeholder workshops have taken place and will continue in the 6 months prior to launch.

Feedback mechanisms and Key Performance Indicators (KPIs) will be built in to monitor participation and adapt the strategy as needed. The goal is to achieve high initial uptake, reduce contamination, and embed food waste recycling as a routine behaviour across Plymouth. Measurement of the efficacy of the public engagement will be critical throughout the engagement programme. A soft launch of the public engagement commenced in 2024 and will commence in earnest from November 2025.

1.2 Route Design & Route Risk Assessment

The new food waste collection service in Plymouth will operate across 9 rounds, carefully overlaid onto the existing residual and recycling routes to ensure consistency and ease for residents. This means households will continue to present either their brown bins (residual waste) or green bins (recycling) on their usual collection day, with food waste collected alongside. To support this rollout, the Street Services team conducted an extensive route risk assessment, evaluating each round for safety, accessibility, and operational efficiency. This included analysing road layouts, traffic flow, bin placement, and crew safety to ensure the incoming food waste collection software is accurately configured for reliable service delivery. In addition, the project team is launching Bartech Municipal Technologies route mapping software, which will use the food waste project as a foundation for route optimisation. The software enables real-time tracking, data-driven scheduling, and efficient resource deployment, helping the council streamline operations and improve service quality across waste collection rounds.

⁶ Oxford Council saw a 72% better engagement by door knocking to get users to participate in a food waste survey compared to 2 percent in an online survey at a Larac Food Waste Southern Conference held of 4 September 2024. In contrast, in a Teams meeting with Portsmouth council on *remaining residents*. 12 September 2024 the council did not undertake public engagement, and their participation rate has not changed significantly.

In addition, the service is working to implement BARTEC’s Domestic Waste Management system, with the food waste collection service being among the first to benefit from new in-cab technology, enhanced communication mechanisms and in-depth reporting solutions to provide business insights. BARTEC’s system will help drive operational efficiencies, streamline reporting, improve staff feedback mechanisms and enable data-driven service improvements across all waste streams.

1.3 Phased Roll out

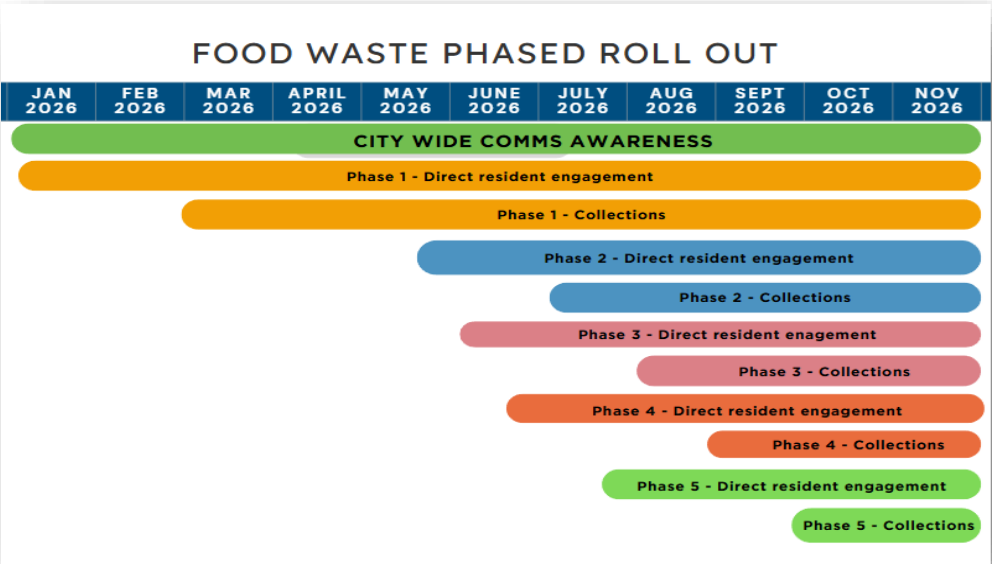


Fig 6: Food waste collection service phased roll out proposal.

To ensure a smooth and effective implementation, the food waste collection service will be introduced through a phased rollout. Phase 1 will begin early in 2026 with direct engagement with residents, followed by the distribution of food waste caddies. Collections will commence in early March 2026. This will be followed by a reflective period, allowing the Council to manage operational complexities and refine processes. Phase 2 will launch in mid-May 2026, again starting with resident engagement and caddy distribution, with collections beginning in July 2026.

Phases 3 to 5 will follow the same structure as the earlier phases, with a continued focus on infrastructure, staffing, communications, and community engagement. This phased approach will enable the service to scale up in a controlled and responsive manner.

Phase 1 of the roll out is a carefully selected cluster of areas which has been chosen to represent a diverse mix of property types, including varying levels of accessibility, socioeconomic conditions, flatted properties, and Houses in Multiple Occupation (HMO). The food waste collection service has been designed to align with existing collection days to avoid disruption to current waste services. In designing the service, it was essential that the introduction of food waste collections did not require changes to established schedules and routes. During phase 1 the project team and collection crew will have a dedicated period to address any collection anomalies, resident feedback, analyse trends and other emerging factors in a controlled environment. This approach will enable the project team to gather valuable insights before progressing to subsequent phases.

During the phased roll out the Operations team will build up the number of drivers and crews focussing on recruiting, onboarding, and training crews and then building up to a full roll-out of the throughout the summer of 2026. The funding of the food waste collection crew will be financed by the New Burdens Funding.

1.4 Food Waste Container Operations

The current rate of missed bins vs scheduled collections is roughly 0.13% across residual, recycling, and optional garden waste collections. This amounts to around 700 missed collections per month across all waste streams.

Given the weekly frequency of food waste collections and the average time taken by residents to report a missed bin, providing this service drastically reduces the benefit to residents that comes from providing a missed bin service. Instead, residents will be encouraged to present their bins on the next scheduled collection day if they believe a collection has been missed and missed bin reports will be used to drive crew behaviour and service improvements.

The service is also in the process of introducing a new domestic waste management system, including more modernised in-cab software and links with our on-board CCTV systems. Coupled with more robust reporting and better insights into crew performance this will help make reviewing reported service failures easier and more efficient. This new system will give Crews the ability to log more detailed premise-level events regarding non-compliance, giving us detailed insights into resident behaviour. This intelligence will help drive direct, efficient public engagement and communications to inform residents what's gone wrong and how they can rectify this in future, driving behavioural change.

1.5 Resourcing

To support the successful delivery of the project, additional resources have been allocated, and further recruitment is underway to strengthen both operational and engagement efforts. A Project Manager has been appointed to coordinate bin distribution logistics and assist with public engagement and communications, while 2 Recycling Officers have been recruited specifically to support public engagement activities. 2 Team Leaders will also be hired to oversee operational delivery and support crews across nine service rounds, each staffed by one driver and two loaders. For Phase 1 rollout, 2 drivers and 4 loaders will be recruited, scaling up to 9 drivers and 18 loaders once the full service is operational. Since the nine rounds run from Monday to Thursday, a full team of nine drivers and eighteen loaders is required to maintain service delivery.

The resourcing for project delivery will be:

- Senior Project Manager
- Project Manager
- Recycling Officers

The Resourcing for Operations will be

- 2 x Team Leaders
- 10 x Drivers
- 20 x Collectors
- Business Support Officer

1.6 Waste Transfer Site (Chelson Meadow)

After collection, food waste will need to be transported to a waste transfer site to be kept in a sealed container. Early analysis and comparison of Prince Rock Depot and Chelson Meadow as potential sites favoured the usage of Chelson Meadow. Prince Rock had the disadvantage of not having a working weighbridge, vehicle congestion with current refuse fleet and the relative amount of work required to make the site fit for purpose. The Change Control Request to CPOG has made a

provision for small works like re-enforcing and sealing the floor to protect it from food waste leachate which has the potential to be acidic and corrosive.

1.7 Anaerobic Digestion Site

From the waste transfer site, the food waste will be transported to an anaerobic digestion site where food waste is broken down into renewable energy.

Anaerobic digestion is bio-renewable energy process through which bacteria break down organic matter such as animal manure, wastewater biosolids, and food waste in the absence of oxygen. Anaerobic digestion takes place in a sealed vessel called a reactor. These reactors contain complex microbial communities that break down the waste and produce resultant biogas and digestate. Digestate is the residual material left after the digestion process which can be made into nutrient rich fertilizers, compost and as foundation material for bio-based products (e.g., bioplastics).

The process releases biogas, (mainly a mixture of around 60% methane and 40% carbon dioxide) which can be used directly to provide heat, power or transport fuel. Biogas can also be purified by removal of the carbon dioxide to produce biomethane, which can be fed directly into the public natural gas grid in the same way as natural gas or used as a vehicle fuel. These gases when not treated in an AD site become part of the Greenhouse Gases contributing to climate change.

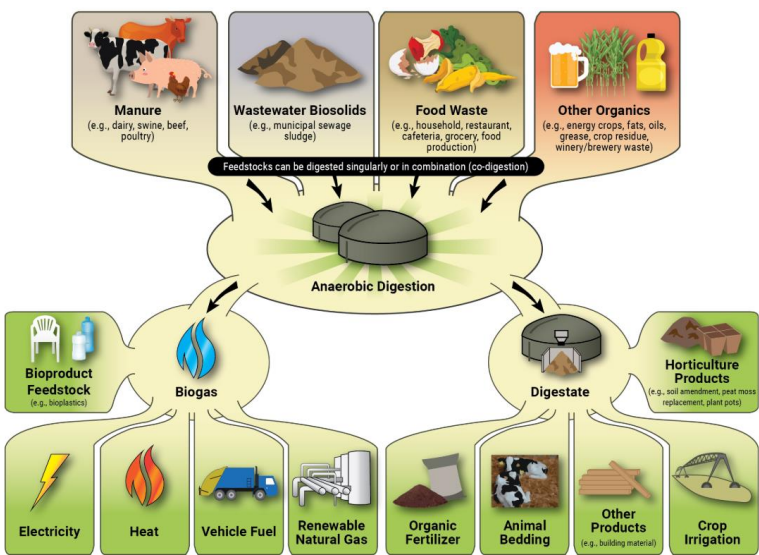


Fig 7: The Anaerobic Digestion process used to produce nutrient rich slurry (fertilizer for plants), biogas, heat and electricity from food waste.

Why is this your preferred option: (Provide a brief explanation why this option is preferred) and (Explain why this is a good capital investment and how this would be an advantage for the Council) and (explain how the preferred option is the right balance between the risks and benefits identified below).

This option aligns with government priorities and legislation. Furthermore, this option is preferred because it supports the delivery of the Council’s Corporate Priorities and Net Zero Action Plan.

Option Analysis: (Provide an analysis of ‘other’ options which were considered and discounted, the options considered must be a ‘do Nothing’ and ‘do minimum’ and ‘viable alternative’ options. A SWOT – Strength, Benefit, Opportunity, Threat analysis could be attached as an appendix).

Do Nothing Option	Do not deliver a Citywide Domestic Food Waste Collection Service
List Benefits:	Maintain status quo To not have disruption to current services and routes To not have to re-configure space to allow for additional vehicles at Prince Rock Depot. Not commit to further service borrowing

List Risk / Issues:	Inadequate funds in service borrowing to cover shortfall in estimated capital expenditure. Reputational risk of non-compliance Potential fines from central Government Public outrage and noncompliance from Environmental groups Negative Media coverage.
Cost:	Potential fines
Why did you discount this option	The “Do-Nothing” option is discarded because it would expose the council to significant reputational risk. Recycling food waste is also aligned with the Plymouth Net Zero Action Plan.
Do Minimum Option	To implement a food waste service that allows residents to “opt-in” if they want to participate.
List Benefits:	The Council would not be providing caddies and bins which would be unused. The Council would not have excess food waste drivers and loaders. The Council would not be in danger of over procuring vehicles. The Council would not have staff doing rounds with little or no collections. The Council would not have to recruit excess staff or staff with very little to do.
List Risk / Issues:	Reputational risk of non-compliance. Potential fines from central Government Public outrage from environmental groups. Negative media coverage.
Cost:	Lower cost but may result in fines
Why did you discount this option	The option was discounted because it is not aligned with Defra’s expectations, lacks integrity and is not aligned with Plymouth Net Zero Action plan. It would expose the council to a reputational risk of being challenged by the media and The Green communities for lacking integrity.

Strategic Case:	
Which Corporate Plan priorities does this project deliver?	Fewer potholes, cleaner, greener streets and transport
	Green investment, jobs, skills and better education

Milestones and Date:		
Contract Award Date	Start On Site Date	Completion Date
10 Food Waste Collection Vehicles (Terberg-Matec) 7 March 2025	31 December 2025	Ongoing
126,000 internal kitchen caddies (7-litre) IPL Plastics (UK) Ltd 13 August 2025	19 th January 2026	August 2026

103,000 external kerbside caddies (23-litre) IPL Plastics (UK) Ltd 13 August 2025	19 th January 2026	August 2026
Distribution of container IPL Plastics (UK) Ltd 13 August 2025	19 th January 2026	August 2026
Supply of food waste kitchen caddy liners. (Planned date December 2025)	January 2026	August 2026
Supply of communal bin vinyl wraps (Planned date December 2025)	January 2026	August 2026
Treatment of food waste in an Anaerobic Digestion Plant. (Planned Date March 2026)	March 2026	March 2027

SECTION 2: PROJECT RISK, OUTCOMES AND BENEFITS

Risk Register: *The Risk Register/Risk Log is a master document created during the early stages of a project. It includes information about each identified risk, level of risk, who owns it and what measures are in place to mitigate the risks (cut and paste more boxes if required).*

Potential Risks Identified		Likelihood	Impact	Overall Rating
Risk	A negative public reaction to a food waste service which could be deemed as a “waste of money” and or unnecessary.	High	High	High
Mitigation	A targeted public education and engagement programme to dispel myths by having roadshows, social media posts, school talks, workplace talks, posters, outdoor and indoor stands	Medium	Medium	Medium
Calculated risk value in £ (Extent of financial risk)	£25,000	Risk Owner	Andy Sharp (Interim Service Director-Street Services)	
Risk	Lack of space to accommodate a waste transfer site and food waste vehicles and containers at Prince Rock Depot.	Medium	High	Medium
Mitigation	To undertake early site planning to accommodate other projects, departments and assets currently in the Depot or planned.	Medium	Low	Medium
Calculated risk value in £ (Extent of financial risk)	£60,000	Risk Owner	Martin Hoar (Interim Head of Environmental Operations-Street Services)	
Risk	There is a risk of a shortfall from the New Burdens Funding.	Medium	Medium	Medium
Mitigation	Through the Medium-Term Financial Plan, a case was made to allow for a forecast that the Defra Stage 3	Low	Low	Low

	funding would be insufficient and to avoid a situation whereby delivering the statutory service was under funded a budget of £500k was allocated. At this stage, with no indication as to what the Stage 3 monies will be, it has been assumed that the amount we will receive will match the gap between pre-approved budgets and the forecast cost of operation.		
Calculated risk value in £ (Extent of financial risk)	£600K 2026/27, £800K 2027/28. £800 K 2028/29	Risk Owner	Andy Sharp (Interim Service Director-Street Services)
Risk	There is a risk of low participation rates.	Medium	Medium
Mitigation	Robust Public Engagement programme covering social media, schools, community engagement, engagement with third party sector.	Low	Low
Calculated risk value in £ (Extent of financial risk)	£47,000	Risk Owner	Chris Parsons (Communications and Engagement Advisor Public and Partner Relations)

Risk	There is a risk of issues with manual handling of the food waste containers.	Medium	Medium	Medium
Mitigation	Manual handling risk assessments, implementation of control measures	Low	Low	Low
Calculated risk value in £ (Extent of financial risk)	£55,000 per annum	Risk Owner	Nick Hewett (Health, Safety & Wellbeing Advisor-Street Services)	

Outcomes and Benefits

List the outcomes and benefits expected from this project.

(An **outcome** is the result of the change derived from using the project's deliverables. This section should describe the anticipated outcome)

(A **benefit** is the measurable improvement resulting from an outcome that is perceived as an advantage. Benefits are the expected value to be delivered by the project, measurable whenever possible)

Financial outcomes and benefits:

- 1.Reducing the cost of waste going to Energy for Waste streams.
2. Reducing the cost of residual waste due to food contamination.
- 3.Potential to create a revenue stream from renewable energy going back into the National Grid.

Non-financial outcomes and benefits:

- 1.Compliance with section s45A of the Environmental Protection Act 1990 introduced by the Environment Act 2021.
- 2.To Align with the Plymouth Net Zero Action Plan.
- 3.To Align with the Council's Corporate Plan's priorities "to be a green sustainable city that cares about the environment"
4. Creating awareness of general household food waste to residents which can assist "cost of living crisis" issues management.

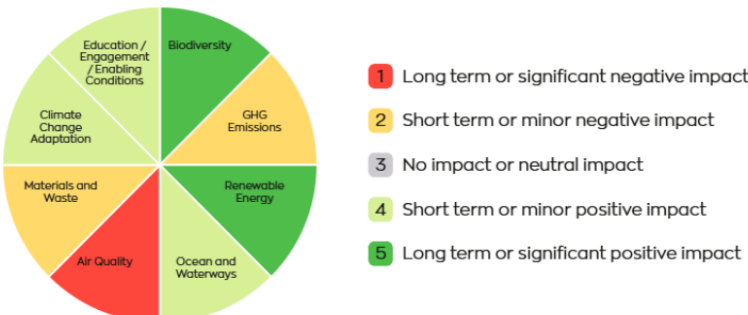
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SECTION 3: CONSULTATION

Does this business case need to go to CMT	Yes	Date business case approved by CMT (if required)	14 October 2025
Did a mandate go via CPOG/CPB	No	Date Capital Mandate approved by CPB	N/A

Does this project involve a corporately maintained property	Yes/No
Details of impact of this project ie cost saving from this project or additional requirements	Prince Rock Depot: Parking space optimisation to enable the food waste vehicles to park at the depot.

Climate Impact Assessment

Upload Climate Impact Wheel	<p>Summary of assessment</p>  <p>Fig 8: Climate Impact Assessment Wheel for the Food Waste Collection Project.</p>
Summary of the anticipated impact of the proposal on the climate (including any proposed mitigations and impacts beyond 2030)	<p>The Plymouth Food Waste Collection Service represents a pivotal step in the city’s commitment to climate resilience and sustainability. Mandated by the Environment Act 2021, this initiative is designed not only to meet legislative requirements but also to deliver substantial environmental benefits across multiple domains.</p> <p>By transitioning food waste away from incineration and toward anaerobic digestion, the project significantly reduces greenhouse gas emissions. Incineration contributes to over 14 million tonnes of CO₂e annually in the UK, whereas anaerobic digestion has the potential to cut emissions by up to 30 million tonnes per year if scaled nationally. Although the introduction of diesel-powered collection vehicles will temporarily increase emissions, the plan includes transitioning to electric or hydrogen vehicles in future procurement cycles.</p> <p>The project also enhances biodiversity by transforming food waste into nutrient-rich compost and biogas, which support soil health and pollinator habitats. This approach mitigates the environmental degradation associated with unmanaged food waste, including habitat destruction and water pollution. Compared to incineration, anaerobic digestion produces fewer hazardous by-products and significantly reduces the risk of toxic runoff into aquatic ecosystems.</p> <p>In terms of air quality, the short-term reliance on diesel vehicles may lead to increased NO_x and particulate emissions. However, this impact is being actively</p>

	<p>mitigated through strategic planning, including the selection of a local anaerobic digestion site and future investment in cleaner vehicle technologies.</p> <p>The allocated DEFRA funding for vehicle procurement was not sufficient for the operational requirement within Plymouth to purchase Electric vehicles at the time of purchase deadlines, the requirement for suitable infrastructure was not a consideration within the funding, which to convert the current depot was considerable. Current high costs of these vehicles would be prohibitive to budgets and not bring value for money to the Council. Future consideration once infrastructure and suitable alternatives are available can be reviewed with future procurement.</p> <p>The materials and waste strategy includes the use of 100% recycled plastic caddies, which have a lower carbon footprint than virgin plastics. While the distribution of over 200,000 containers presents a plastic footprint risk, this is being addressed through a robust public engagement campaign aimed at maximising participation and proper usage.</p> <p>Renewable energy generation is a core benefit of the anaerobic digestion process. The biogas produced will be converted into electricity and fed into the national grid, contributing to a closed-loop sustainability cycle and reducing reliance on fossil fuels. Public education and engagement are central to the success of this initiative. The project includes roadshows, school programmes, collaboration with green communities, and targeted media campaigns. These efforts aim to foster climate awareness and encourage behavioural change across Plymouth's diverse communities.</p> <p>Leadership support is essential to ensure the success of this initiative. Investment in infrastructure, strategic procurement, and sustained public engagement will be key to maximising the climate benefits and securing long-term sustainability for Plymouth.</p>
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Confirm you have engaged with Procurement <i>(All business cases must be discussed with Procurement prior to submission to CPOG. If Procurement have not been consulted on the procurement route, CPOG may not endorse your project to CPB for approval)</i>		Yes
Who have you consulted with in Procurement/ who is your Procurement lead?		Gosia Anthony (Procurement Lead)
Where an existing contract is to be used could you include the contract title and reference number		27160
Procurement route options considered <i>(Procurement Officer to complete this section only)</i>	The project will procure communication artefacts using DELT Shared Service.	
Recommended Procurement route <i>(Procurement Officer to complete this section only)</i>	No further procurement activity required.	
Which Members have you engaged with and how have they been consulted <i>(including the Leader, Portfolio Holders and Ward Members)</i>	<ul style="list-style-type: none"> • Cllr. Tom Briars Delve: Regular engagement at portfolio meetings throughout the process. • Cllr. Jemima Laing: -a meeting at the Council House to explain the project and to furthermore get advice on 	

	<p>guidance on which communities to engage with and the approach the project should take.</p> <ul style="list-style-type: none"> • Cllr Sally Haydon: a Teams meeting with Cllr Sally Haydon to seek advice and guidance on engaging with Plymouth Community Homes and to share the tenets of the Food Waste Project's Public Engagement Strategy. • All ward Councillors will be engaged in the future before the phased roll out commences and throughout the process.
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Confirm you have taken necessary Legal advice, is this proposal State Aid compliant, if yes please explain why.	Yes, at the beginning of the project with the approval of the phase I Business Case.
Who is your Legal advisor you have consulted with?	Alison Critchfield (Assistant Head of Legal Services)

Equalities Impact Assessment completed <i>(This is a working document which should inform the project throughout its development. The final version will need to be submitted with your Executive Decision)</i>	Yes
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SECTION 4: FINANCIAL ASSESSMENT

FINANCIAL ASSESSMENT: *In this section the robustness of the proposals should be set out in financial terms. The Project Manager will need to work closely with the capital and revenue finance teams to ensure that these sections demonstrate the affordability of the proposals to the Council as a whole.*

CAPITAL COSTS AND FINANCING

Breakdown of project costs including fees surveys and contingency	Prev. Yr. £	25/26 £	26/27 £	27/28 £	28/29 £	29/30 £	Future Yrs. £	Total £
Total capital spend	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Breakdown of proposed funding	25/26 £	26/27 £	27/28 £	28/29 £	Future £	Total £
Total funding	0.00	0.00	0.00	0.00	0.00	£0.00

S106 or CIL (Provide Planning App or site numbers)	S106 for the costs associated with demolishing outbuildings in Prince Rock Depot and creating a parking area for vehicles but was informed that this was not appropriate.
Which alternative external funding sources been explored	N/A
Are there any bidding constraints and/or any restrictions or conditions attached to your funding	N/A
Tax and VAT implications	N/A
Tax and VAT reviewed by	N/A
Will this project deliver capital receipts? (If so please provide details)	N/A

REVENUE COSTS AND IMPLICATIONS

Cost of Developing the Capital Project (To be incurred at risk to Service area)

Total Cost of developing the project	£0
Revenue cost code for the development costs	4055
Revenue costs incurred for developing the project are to be included in the capital total, some of the expenditure could be capitalised if it meets the criteria	N
Budget Managers Name	Andy Sharp (Interim Service Director-Street Services)

	25/26 £	26/27 £	27/28 £	28/29 (Ongoing) £	Total £
Service area revenue cost					
Bin Distribution	64,603	258,411	0	0	323,014
Communication	50,000	123,145	0	0	173,145
Procurement	1,000	1,000	0	0	2,000
Project Management	72,000	98,338	0	0	170,338
Staff Costs	74,102	959,683	1,384,487	1,408,821	3,827,093
Vehicle Op. Costs	13,092	148,283	185,329	190,870	537,574
Haulage & Disposal Costs	1,766	137,755	216,852	227,695	584,068
Service Borrowing	196	85,550	86,006	86,052	257,804
Total Revenue Cost (A)	276,759	1,812,165	1,872,674	1,913,438	5,875,036

	25/26 £	26/27 £	27/28 £	28/29 (Ongoing) £	Total £
Service area revenue benefits/savings					
Revenue saving (Removal of food waste from residual waste)	4,895	381,778	600,990	631,040	1,618,703
Total Revenue Saving (B)	4,895	381,778	600,990	631,040	1,618,703
Service Area net (benefit) cost (A-B)	271,864	1,430,387	1,271,684	1,282,398	4,256,333
Funding					
DEFRA Funding - Transitional Grant	187,603	382,556	0	0	570,159
DEFRA Funding - New Burdens	0	600,000	800,000	800,000	2,200,000
Revenue budget	250,000	500,000	500,000	500,000	1,750,000
Total Funding	437,603	1,482,556	1,300,000	1,300,000	4,250,159
Service area net (benefit) cost	(165,739)	(52,169)	(28,316)	(17,602)	(263,826)

(H)				
Author of Business Case	Date	Document Version	Reviewed By	Date
Rachel Hawadi	21/8/2025	v 1.0		
			Martin Hoar (Interim Head of Environmental Operations-Street Services)	28/10/2025
		v 2.0	Alison Critchfield (Head of Legal Services)	29/10/2025
		v 3.0	Oliver Woodhams (Head of Finance)	29/10/2025
		v 4.0	Andy Sharp (Interim Service Director-Street Services)	30/10/2025

SECTION 5: RECOMMENDATION AND ENDORSEMENT

Recommended Decision

It is recommended that the Council's Cabinet:

Approves the Revenue Business Case and associated phased roll out of for Plymouth City Council's Household Food Waste Collection service.

Reasons:

- a) Statutory Compliance: The Food Waste Collection Project is a legislatively driven initiative and aligns with national legislation and Defra requirements for separate food waste collections in England by 1st of April 2026.*
- b) Supports the Council's Climate Emergency Action Plan and Net Zero targets.*
- c) Empowers residents to reduce waste and improve recycling habits which will increase Plymouth's recycling rate*
- d) Diverts food waste from residual waste streams, reducing disposal costs over time.*

Cllr Briars Delve		Glenn Caplin-Grey, Strategic Director	
Either email dated:	Date: 30/10/2025	Either email dated:	Date: 30/10/2025
Or signed:		Signed:	
Date:		Date:	