

# HOUSING AND COMMUNITY SERVICES SCRUTINY PANEL

December 2024



## ITEM: Household Waste and Recycling (to include Reuse and Food Waste)

### 1. RECYCLING PERFORMANCE

The recycling rate for PCC in the year 2023/24 was 34.58% (NI 192). This figure is made up from material collected from 4 main sources;

1. Kerbside mixed recycling collections (57%);
2. Kerbside garden waste collections (15%);
3. HWRC sites (28%), and;
4. Recycling banks (0.5%).

The 2024/25 figure Year to Date (October) is 37.46%. As a comparison with prior years the rate was 33.01% in 2022/23; 35.23% in 2021/22; 29.28% in 2020/21 and 33.89% 2019/20

### 2. MATERIALS RECYCLING FACILITY

All dry recycling collected from the green bin kerbside collection service in Plymouth is delivered to the MRF (Materials Recycling Facility) at Chelson Meadow which is operated under contract by BIFFA. The MRF uses a combination of manual and automated sorting techniques to separate the individual materials from the mixed input so that they can be sold on to re-processors.

The co-mingled input is separated into paper, card, glass, metal and aluminium cans, and different types of plastics. These materials are then baled and sold to re-processors to be made into new products. The materials need to meet strict quality criteria in order to be accepted by the re-processors. In 2023/24 the PCC delivered 18,230t of recyclable waste to the MRF.

Analysis of the material recycled from the green bin collection shows that paper and card makes up the biggest proportion (51.7%), followed by glass (35.4%) and then plastics (8.6%) and metals (4.3%).

### 3. HOUSEHOLD WASTE & RECYCLING CENTRES

The HWRC (Household Waste Recycling Centre) sites at Chelson Meadow and Weston Mill provide facilities for members of the public to recycle a wide variety of materials that cannot be placed in their green bin. They also provide a facility for residents to be able to dispose of difficult and hazardous waste that needs specialist treatment such as asbestos and gas bottles. Over 24 different materials are recycled from the HWRC sites. In the year 2023/24 the recycling rate across both sites was 63%. The top 5 materials contribute 86.2% of the total tonnage recycled.

#### Chelson Meadow

Chelson Meadow recycling centre is open from 8.30am to 5.30pm, 7 days a week and is only closed for 3 days a year; Christmas Day, Boxing Day and New Year's Day.

The site accepts a wide range of materials including:

- General household waste
- Bulky waste items such as sofa's, armchairs, mattresses, and furniture

- Wood
- Garden waste
- Scrap metal
- Fridges, freezers, and fridge/freezers (not commercial)
- Small electrical items, hairdryers, toasters, microwaves etc
- Large electrical items, cookers, washing machines, tumble-dryers.
- TV's, computer monitors
- Recycling 'bring bank' items, clothing, paper, cans, cartons and glass bottles
- Antifreeze
- Household chemicals
- Car and household batteries
- Fluorescent tubes and low energy lamps
- Gas bottles
- Cooking oil
- Engine oil
- Asbestos
- Paint
- Soil and rubble
- Ceramics
- Plasterboard
- Window glass

### **Weston Mill**

Weston Mill recycling centre is open from 8.30am to 5.30pm every Monday to Sunday. Items accepted:

- Garden waste
- Household waste
- Wood waste
- Scrap metal
- Large electrical items (washing machines, cookers, tumble dryers)

### **Re-Use:**

PCC support several local re-use initiatives by either directly contributing materials or support through re-use payments. Little Campden Market have staff situated on site at Chelson Meadow to recover items suitable for re-sale in their shop in Plymouth. PCC receives a revenue for items recovered from the waste. Cathco recover electrical items for repair and resale at their depot at Faraday Mill. Devon and Cornwall Furniture Re-Use Project are based in Stonehouse and collect unwanted items from residents for repair and re-sale at their shop. PCC provides financial support by paying Re-use Credits for items that they have diverted from disposal.

### **Residual Waste Treatment**

Plymouth City Council delivers all residual waste, that is waste that cannot be recycled, to their Energy from Waste plant which is operated by MVV Environment Devonport Ltd.

The South West Devon Waste Partnership (SWDWP) is a collaboration between Plymouth City Council, Devon County Council and Torbay Council. The Partnership was formally established in 2008 under a joint working agreement approved by each of the three councils.

SWDWP Procured a 25 year PFI contract to finance, build and operate an EfW (Energy from Waste) plant at Devonport with an overall aim of reducing waste to landfill. In the year 2023/24 PCC delivered 93,900tonnes of non-recyclable waste to the EfW plant.

The plant generates electricity and heat from burning waste and that energy is supplied directly to the dockyard at Devonport with any excess electricity being exported to the national grid.

In the year 2023/24 the plant generated 200,461 MWh of electricity and 40,961 MWh of steam. The electricity generated per tonne of waste is approximately the equivalent to the amount of electricity used by about 330 homes during one hour.

The calculated carbon saving for this year is 92,547 tCO<sub>2</sub> and the projected 25-year carbon saving for the project is 2.31 MtCO<sub>2</sub>. Incinerator Bottom Ash is collected and processed at a site near Exeter. Metals are recovered and the ash is used to make aggregates which are used in construction.

#### 4. DOMESTIC WASTE COLLECTIONS

The Council provide residential waste collection for approximately 125,000 properties each week, amounting to a monthly average of 525,000 collections for recycling and residual waste. This figure does not include garden waste collection.

##### Collection Rounds

23 rounds for recycling and residual waste, distributed across Alternative Weekly Collections (AWC). 4.5 rounds for garden waste, also split over AWC.

Additionally, we have 1 crew dedicated to missed bin collections and 1 crew for bin deliveries.

##### Waste Tonnage weekly average

Garden Waste: 148 tonnes

Residual Waste: 1171 tonnes

Recycling Waste: 381 tonnes

##### Missed Bin Collections

Yearly Average: 0.12% of collections are reported as missed bins.

**Table 1: Missed bin performance data**

Month	# Collection Days	# Scheduled Collections	Missed Bins Reported	% Missed Bins Reported
Oct 24	19	570,000	702	0.12%
Sept 24	17	510,000	583	0.11%
August 24	17	510,000	581	0.11%
July 24	19	570,000	684	0.12%
June 24	16	480,000	519	0.11%
May 24	18	540,000	536	0.10%
April 24	18	540,000	499	0.09%
March 24	16	480,000	486	0.10%
Feb 24	17	510,000	466	0.09%
Jan 24	19	570,000	707	0.12%
Dec 23	16	480,000	612	0.13%
Nov 23	18	540,000	678	0.13%
<b>Average</b>	<b>18</b>	<b>525,000</b>	<b>588</b>	<b>0.11%</b>

### 5. RECYCLING CAMPAIGN

Over the last 12 months the Council has ran an extensive recycling campaign with the aim of encouraging the volume of recycling and the quality of materials presented as recycling by clarifying our requirements. The Right Stuff. Right Bin campaign was ran across a range of targeted social media postings, a leaflet distributed to all Plymouth households and on newly installed public litter bins. The team worked closely with Biffa who run the Materials Recycling Facility at Chelson to understand the most common forms of contamination to ensure clarity could be given to target these items, such as batteries, nappies and food waste.

Figure 1: Example recycling materials for social media campaign



Figure 2: Recycling leaflet – distributed to citywide households



**Figure 3: New bin design and informative vinyls on New George St and Old Town St.**



## 6. FOOD WASTE

The food waste project is a statutory service. The primary legislation is the Environment Act 2021, but the project also interfaces with the Climate Change 2008 Act and the UK's Net Zero targets on reducing greenhouse gases therein. The service should be delivered by April 2026.

The funding for the project will be provided by the Department for Environment, Food & Rural Affairs (Defra). The Council has received an initial £1,941,574.00 for the procurement of capital assets namely vehicles and containers. The amount of revenue funding for phase 2 is expected to be clarified shortly; this will include transitional funding for 2025/26 and then ongoing new burdens annually recurring funding for 2026/27 onwards.

It will be mandatory for the Council to provide 5 or 7 L internal caddies for residents as well as external 23 L kerbside caddies and communal bins in flats, clusters of flats, estates and HMOs. The Council is obligated to provide caddies to all 123,000 households and shared communal bins to the 29,000 flats and HMOS as shown below.

**Fig 4:** Showing examples of containers for phase I of food waste project (for illustration only).



Internal Caddies

External Caddies

Communal bins

**Fig 5:** An example of a 12-tonne bespoke food waste vehicle designed



Over 50% of Waste Collection Authorities are procuring the same assets from the same suppliers at the same time. Therefore, depending on procurement timelines, the service is realistically expected to launch sometime in the Spring of 2026. Food waste will be treated in an Anaerobic Digestion site to produce slurry for fertilizer and produce renewable energy thus providing a tangible contribution to Plymouth's Net Zero Action Plan.

At the core of the project will be a robust and visible Public Engagement programme to increase participation rates and increase the overall recycling rate. This will include but not limited to regular and targeted press articles, leaflets, posters, social media, roadshows, surveys, door knocking, school talks, presentations and "critical friend" collaborations with community groups.

The project has undertaken extensive benchmarking with other Local Authorities including Cornwall County Council, Portsmouth, Westminster, Oxford, Reading, North Northamptonshire, BCP and Sheffield.

### **Food Waste Timeline**

The Capital purchase of vehicles and containers has now been endorsed by The Capital Officers Programme Group, The Capital Programme Board and signed off as a Key Decision by the leader of the Council. The next steps will be to award contracts for the procurement of vehicles and containers and to prepare a detailed plan in preparation for Phase 2 funding. The vehicles and containers are expected to be at the Prince Rock Depot in December 2025.

The project will undertake a soft market testing exercise in order to understand the Anaerobic Digestion market in order to get the best Value for Money offer for the Council.

Once the Government have announced the revenue funding for service mobilisation and ongoing delivery a further full business case will be produced which will set out all elements of the project delivery. This will include further site preparation works required at our depots, staffing resources required, disposal arrangements and a full behaviour change and communications campaign to encourage residents to take up the scheme.