

CHESHIRE FIRE AUTHORITY

MEETING OF: PERFORMANCE AND OVERVIEW COMMITTEE
DATE: 7TH SEPTEMBER 2022
REPORT OF: HEAD OF SERVICE IMPROVEMENT
AUTHOR: MICHAEL JOHNSON

SUBJECT: ENVIRONMENT AND CLIMATE CHANGE 6
MONTH UPDATE REPORT, SEPTEMBER 2022

Purpose of Report

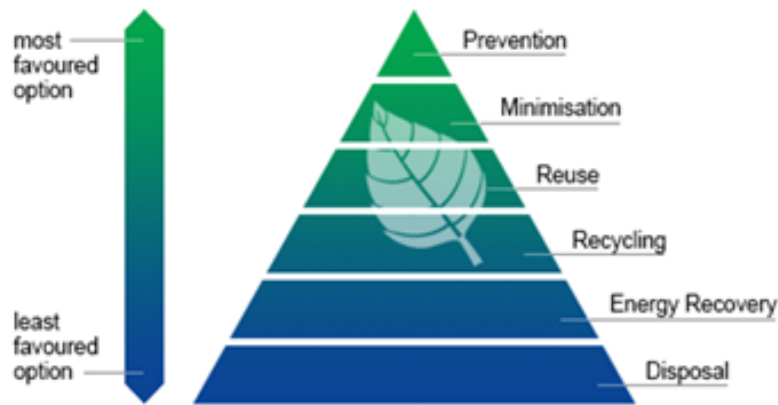
1. To provide Members with an update concerned with the progress that is being made by the Service in relation to the environment and climate change agenda.

Recommended: That Members

- [1] Members note the information contained in the report, seeking further detail, as necessary.

Background

2. The Fire Authority approved the Environment and Climate Change Strategy 2020-25 (the Strategy) in June 2021. It contains six Key Objectives
 - Provide buildings that are energy efficient.
 - Reduce the fuel use by our fleet to cut emissions and costs.
 - Reduce business travel mileage.
 - Reduce waste and improve recycling rates.
 - Use purchasing power to drive environmental and social benefits.
 - Increase carbon literacy to encourage and embed behavioural change.
3. The Strategy takes into account the Government's environmental aspirations and the national objective to achieve net zero carbon emissions by 2050.
4. The Fire Authority approved the Ethical Procurement Strategy and Social Value Policy in December 2021.
5. These documents further enhance our compliance with the Waste (England and Wales) Regulation 2011. The regulations focus on the minimisation of waste to landfill by ensuring that decision making processes at the procurement stage consider the life cycle, re-use, repair, recycling. Waste to landfill is considered only as a last resort. The service's approach to waste falls in line with waste hierarchy, shown over.



Information

6. This progress report focuses on environment performance.
7. **CARBON EMISSIONS REDUCTION:** It was intended to provide details of the latest Carbon Report covering the period April 2021 to March 2022. This has been delayed due to awaiting the certification of our Renewable energy supply. OFGEM carry out this certification and it is usually delivered in July. It has been advised will be early August, but at time of drafting this report is still to arrive
8. This latest report will track our progress on reducing carbon emissions, currently reported at a reduction of 59% from the 2017 baseline.
9. **CARBON LITERACY:** One of the key aspects of environment, climate change and sustainability is the overall understanding, knowledge, and effect of climate change on the organisation, colleagues, and our local community. Following the initial carbon literacy course, there has been consultation with our internal HR Training Team to develop training packages to deliver the training and awareness to a wider group across the service. This has been finalised and a paper has been prepared to be presented to SMT.
10. **WASTE and RESOURCES:** Waste and resources are a key focus of the new Environment Act 2021. There have been changes to the requirements of local authorities and commercial premises to introduce, particularly food waste collection. Following a review, food only waste collection has been added to the Training Centre. The volume of food waste from individual fire stations is insufficient to warrant a food only collection, but this will be kept under review.
11. The Service maintains a 100% landfill free performance.
12. The second quarter environmental performance waste report is included with background papers and highlights that the service has a 76% recycling performance. Our waste has a defined process for all its disposal, which includes Anaerobic Digestion of food waste and Refuse Derived Fuel (RDF).

13. **ENVIRONMENTAL IMPACT ASSESSMENTS:** There is a need for these assessments to be carried out on more, if not all projects in future. There is a requirement to have a mechanism to measure these assessments. The Ethical Procurement Strategy and Social Value Policy also require a process and measurement and the fire service procurement officers have been consulted with to devise a monitoring system. A brief is being prepared to all colleagues to ensure they consider these steps when deciding on purchasing services, materials, equipment or change projects. A statement from the policy is now included in all new tender documents prepared for fire.
14. **ELECTRIC VEHICLE INFRASTRUCTURE:** The further introduction of EV and rationalisation of non-blue light vehicles will further reduce our reliance on fossil fuels. An Environment Initiatives Fund bid was approved by the Environment and Climate Change Working Group, which will see a further four charging units, containing eight charging sockets, installed on the Service's premises.
15. This will see nineteen of the Service's locations equipped with EV charging infrastructure. Whilst the introduction of EV charging points is linked to the ongoing fleet review, it is acknowledged that the uptake of personal electric vehicles amongst fire staff must be taken into consideration when considering future installations.
16. **GENERAL:** The Services Strategic Environment and Sustainability Lead is currently the Chair of the Emergency Services Environment and Sustainability Group, which supports both the NFCC and NPCC. This has undoubtedly had a positive impact on the Service's performance in a number of areas covered by the Strategy.
17. This group brings together colleagues from fire and police services and has representation from Ambulance Services and The Royal National Lifeboat Institute. The group meets bi-monthly to identify best practices, share ideas, presentations from industry and government led initiatives. It has sub-groups working on some of the main environmental topics such as Decarbonisation, Circular Economy, Electric Vehicles and Charging Infrastructure and Behavioural Change. One of the major successes in the last 12 months was delivery of an Emergency Services National Charter, which has received endorsement by both the NFCC and the NPCC/APCC.
18. The Strategic Lead is currently part of two of the task and finish groups working on the National Environment and Sustainability Strategy for Fire Services. The National Charter is playing a key role in this work. Ben Brook, the Chief Fire Officer of Warwickshire Fire Service and the NFCC lead on Environment and Sustainability, is managing this work.
19. The Strategic Lead has supported the Service's Research and Development Manager in the procurement of and compliance to the new fire service foam regulations. Recently this work has been extended and become a multi-service

consultation led by Lancashire Fire Service. The Cheshire Research and Development Manager has provided substantial information on our early investigation into suitable replacements to this group, and Cheshire is also providing the environmental inputs to the wider group. This new foam requirement is directly concerned with the environmental damage of the current products used and will see certain constituents' protein chemicals banned.

Financial Implications

20. Financial investment into environment, sustainable projects and initiatives is key to progression in this area. Longer term return on investment should also be considered as savings in terms of carbon and consumption are imperative to the Service's longer-term goals.

Legal Implications

21. Mandatory and advisory targets are set nationally, and the Service must achieve the mandatory targets.

Equality and Diversity Implications

22. Equality Impact Assessments are required when formulating policy, but this report and its recommendations do not have any equality and diversity implications.

Environmental Implications

23. The Introduction of improved procurement processes, carbon literacy training, expansion of waste collection services, installation of 4 more EV charging points and the wider use of environmental impact assessments will help drive improvements in the Service's environmental performance and reductions in emissions.

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Environmental Report
Customer Group:
Cheshire Fire and Rescue Service

Date: 01/04/2022 to 30/06/2022

TOTAL DIVERSION FROM LANDFILL : 100 %

What happened to your waste?



Of your recycled waste, below shows the materials



Welcome to your environmental report which shows you the breakdown of your waste by type, and what has happened to it once it has been collected. You'll notice the amount of waste which has been diverted from landfill. You'll see the proportion of waste which has been recycled, as well as waste sent for energy recovery at either an Anaerobic Digestion facility (AD, for food waste) or a waste-to-energy facility (Refuse Derived Fuel or RDF from non-recyclable general waste). We'll also show you the breakdown of recycled materials by the type of material. And you'll see how the equivalent energy generated through AD and RDF could be used. You'll see your data across the last 12 months on page 2 and following this, a breakdown of your waste by each individual site.



Total Collected Waste (KG)

Material	Weight	Recycled	RDF	AD	Landfill
Dry Mixed Recyclables	7,966.00	7,966.00	0.00		0.00
Mixed Municipal Waste	8,770.30	2,575.90	6,194.40		0.00
Organic Food Waste	1,080.00	0.00	0.00	1,080.00	0.00
Total	17,816.30	10,541.90	6,194.40	1,080.00	0.00
		59.17%	34.77%	6.06%	0.00%

How your RDF and AD equates to energy

RDF		AD		Energy Equivalent				
RDF kWh/Tonne - AD kWh/Tonne - RDF produces the below kWh (1)	RDF Weight (KG)	AD kWh/Tonne - AD produces the below kWh (2)	AD Weight (KG)	Total kWh Produced	No of Fridges powered for a year (3)	Washing Machine Cycles Complete (4)	No of Office Printers powered for 1 week typical printing cycle (5)	Miles driven in a family car (7)
	575		300	1,080	3,886	61	22	810
	6,194		1,080	3,886				16,320

References

- (1) - Average Net kWh/tonne input for 2017 is 575 kWh/tonne, from Tolvik Consulting report of UK ERW Statistics 2017, Page 6, section 3, Figure 11. URL : <http://www.tolvik.com/wp-content/uploads/Tolvik-UK-ERW-Statistics-2017.pdf>
- (2) - 300 kWh per tonne of food waste generated by AD, as stated by the Official Information Portal on Anaerobic Digestion FAQs, Question 3 "How much energy can you get from waste?". URL : <http://www.biggas-info.co.uk/about/faq/>
- (3) - Based on the stated Annual Energy consumption of a Panasonic 40" full HD Smart LED Television, model TX-40FS500B, of 64kWh/Year. URL : <https://www.panasonic.com/uk/consumer/televisions/hd-tv/tv-40fs500b.html>
- (4) - Based on the stated energy consumption of 1.10 kWh of a Bosch Serie 8 washing machine, model no WAW8235-H0GB. URL : <https://www.bosch-home.co.uk/product-is/washers-dryers/washing-machines/front-load-washing-machines/WAW8235-H0GB?readabout=frontloader#?Tabs=section-technicalspecs?Togglebox=1051994968?Togglebox=285469437?Togglebox=118313654>
- (5) - Based on the annual energy consumption of an LG Fridge Freezer Model No GB8660MCGSF of 178kWh, from the energy label. URL : <https://www.lg.com/uk/fridge-freezers/lg-gb8660m-cg-sf>
- (6) - Based on the typical weekly consumption of a Canon imageRUNNER Advance office printer, model IR-ADV C7570. URL : <https://canon.ssi.com.ssi-media.com/53910.pdf>
- (7) - Based on the WLTP combined cycle range of 168 miles of a 2018 Nissan Leaf with a 40kWh battery. <https://www.nissan.co.uk/vehicles/new-vehicles/leaf/range-charging.html>