



Gwasanaeth Tân ac Achub
Canolbarth a Gorllewin Cymru

Mid and West Wales
Fire and Rescue Service



A Sustainability & Environmental Annual Report

2018 / 2019

www.mawwfire.gov.uk

Contents



Foreword – the Chief Fire Officer	1
Executive Summary	2

Section 1

Introduction	3
The Well-Being of Future Generations (Wales) Act 2015	4
Green Dragon 2016 EMS Standard	5
Environmental Management Review	5
Environmental Sustainability in the Service	6

Section 2

Environmental Performance – Statistics and Projects	9
Measuring and Monitoring: Environmental Data	22
Environmental Training and Legal Compliance	22

Section 3

Environmental Objectives and Targets for 2017/18	25
Environmental Objectives – 2018/19	27
Environmental Statement	28
Appendix: Relevant Environmental Statistics	30
Environmental Policy and Statement of Intent	32



Foreword by the Chief Fire Officer



Mid and West Wales Fire and Rescue Service is committed to embracing environmental sustainability in the delivery of Service excellence. We continue to strive to this goal by reducing energy demand, working towards zero waste sent to landfill and reducing our Service Wide Carbon Footprint year on year.

Our vision remains to be a Fire and Rescue Service where the sustainable use of resources and environmental issues are embedded in all our decision-making processes and enhancing the economic, social and environmental well-being of our communities.

We are fully aware that our operations influence the global and local environment and therefore we are committed to minimising any adverse impacts wherever finances, operations and resources allow.

The Well-being of Future Generations (Wales) Act 2015 sets a requirement for the Fire Service, as a Statutory Members of each Public Service Board (PSB), to collaborate and work towards improving the economic, social, environmental and cultural well-being in our area by strengthening joint working across all public services in Wales. We attend PSBs in all 6 counties which ensures we support and set objectives to maximise the PSBs contribution to the well-being goals.

Our Sustainability and Environmental Strategy 2015-2020 sets out the main principles, proposals and required actions to reduce the environmental impacts of the Service's activities and operations. Maintaining certification to the highest level of the Green Dragon 2016 Environmental Management Standard year on year ensures that we continue to challenge ourselves and stimulate sustainable and environmental improvements each year.

Looking towards the future, we continue to have even greater challenges to meet on our journey to minimise our impact on the environment. We have made great strides forward in the last year, including installing a large array of solar photovoltaic panels to the roof of our Service Headquarters and our training and workshop facility building in Earlswood which will significantly offset our demand for grid-sourced electricity. We have also begun our exciting journey into the use non-response Electric vehicles and charging points on our sites.

I believe we are providing a leading role in environmental issues for others in the Public Sector in Wales. I would like to take this opportunity to thank all employees and other stakeholders for their continued support and valued contributions in helping to achieve our sustainability aims. I look forward to the year ahead as we continue our sustainability journey.

Chris Davies QSFM MBA
Chief Fire Officer



Executive Summary



This is the sixth Annual Environmental Report produced by Mid and West Wales Fire Service. It covers the 2018/19 financial period and summarises achievements made in terms of our environmental performance in the last year and outlines the progress towards our Environmental Objectives.

The report discusses our key areas of performance and monitoring in areas where we have the biggest impact on the environment. It outlines our consumption of energy and emissions as well as our production of waste which result from our activities. It highlights the environmental achievements and projects undertaken which reduces our carbon footprint, in particular, in terms of our ever-growing green fleet.

Sustainability is about improving the quality of life in a way that does not cause irreversible damage to the environment or prevent future generations from being able to benefit from the good things we have become accustomed to.

To help us achieve our environmental objectives, **we work towards the Green Dragon Environmental Standard 2016** throughout the Service. The standard aids and compliments our decision making and ensures continual environmental improvements year on year. The Standard is aligned with ISO 14001:2015, which ensures we incorporate and consider interested parties in the context of the organisation in terms of internal, external and social pressures that relate to its activities.

As a Fire and Rescue Service, we try to ensure that **all our operations and activities help reduce the impact fires have on the environment** as well as help the impact fires could have on the local economy and society. As such, all staff have a responsibility to ensure that environmental awareness and objectives are worked towards, helping improve the Service and creating a sustainable future.



Mid and West Wales Fire and Rescue Service (MAWWFRS) is **committed to excellence** with a vision to become a world class organisation.

We recognise the increasing importance of the need to protect the environment and conserve its precious resources.

As a Service, **we cover 4,500 square miles** of predominantly rural countryside which makes up **two-thirds of the area of Wales**. Within this area, we cover Special Sites of Scientific Interest (SSSI), National Parks and Areas of Outstanding Natural Beauty (AONBs). We employ **approximately 1,300 staff** who provide administration and operational support across **58 Fire Stations**.

The Service is committed through its Environmental Policy, environmental guidance, strategies and certifications to **reduce its negative environmental impact**. Our existing sustainability and environment aims and objectives are designed to work towards sustainable development in our activities and operations with support from a wide variety of environmental procedures and guidance.

As a Service, we have made a **commitment to be an environmentally responsible Service**, as such, for the last 6 years we have maintained **Level 5 in the Green Dragon Environmental Management System (EMS)**. We report annually on our environmental performance, objectives and targets to ensure continual environmental improvement. It also highlights the Services environmental achievements and our objectives for the year ahead.



Our Environment

As part of the Service's Corporate Plan 2019, the Service have developed six Strategic Aims which set our direction for the next five years. These aims help ensure we continue to deliver the best possible service to our communities.

One of the Strategic Aims is 'Our Environment'. The Services aim is to continually improve our working practices and activities with consideration to our short and long term environmental impact. We will continue to strive to reduce our carbon footprint and continue with our research into green sustainable renewable technology for our fleet and buildings, while looking for collaboration opportunities to improve our impact on the environment.

This is one of the Service's aims to help reach meet the Well-being goals.



The Well-Being of Future Generations (Wales) Act 2015

The Service has aligned itself with the Well-Being of Future Generations (Wales) Act 2015, which places legal responsibilities on Statutory Organisations to actively consider the effect of their activities and how they could impact on future residents of the planet.

The Service reports annually on our 6 Strategic Aims: Our Environment, Our Partnerships, Our Future, Our Communities, Our People and Our Resources. The Service Improvement and Wellbeing Objective Annual Assessment identifies how we have contributed to the Well-being goals for the previous year as set out within the Well-being of Future Generations (Wales) Act 2015.

Green Dragon 2016 EMS Standard

The Green Dragon Environmental Standard is a voluntary obligation which awards accreditation to Organisation's that are taking action to understand, monitor and control their impacts on the environment. In 2014, the Service achieved Level 5, which is the highest level of Green Dragon EMS available.

In February 2019, the Service successfully maintained its Level 5, Green Dragon accreditation for the 6th year in a row. The Green Dragon Standard Level 5 is comparable to ISO 14001: 2015 and EMAS.

The Standard shows the Service is committed to managing the impact our activities have on the environment and shows we are aware and actively working towards reducing this impact. We understand and work within our environmental responsibilities and are committed to continually improving our footprint on the environment.

It provides externally verified assurance to our stakeholders and interested parties that our environment practices, processes and procedures are effective and that compliance with all relevant legislation is satisfactory.

For further information on the Green Dragon certification, please visit the Green Dragon Website [here](#).



Environmental Management Review

The responsibility for overseeing the process of the Environmental Management System lies with the S & E Manager. Within that system there are several duties required to ensure the systems effectiveness and thereby achieve environmental objectives.

A review of MAWWFRS EMS was undertaken in January 2019 to ensure its continuing suitability, adequacy and effectiveness.

Performance against objectives and targets as well as any problems associated with the EMS are discussed during the review as well as the following issues:

- Actions outstanding from previous meetings;
- A review of performance;
- Non-conformity reports and Audit finding reports;
- A review of the achievements against current objectives and targets;
- Setting of objectives and targets;
- A review of the Environmental Policy, Procedures and Guidance;
- A review of environmental training needs;
- A review of the effectiveness of the environmental projects undertaken by the Service.

The Management Review addresses the possible need for changes to the environmental documents and ensured continued commitment and progress towards environmental improvement.

Environmental Sustainability in the Service

In 2015, the Service published our second 5-year Sustainability and Environmental Strategy 2015 – 2020 which lays out the commitment to sustainable practices.

Over the past year, **the Service has not recorded any contravention of environmental legislation nor has been responsible for any pollution incidents.**

RE-USE AND REFURBISHMENT OF MATERIALS

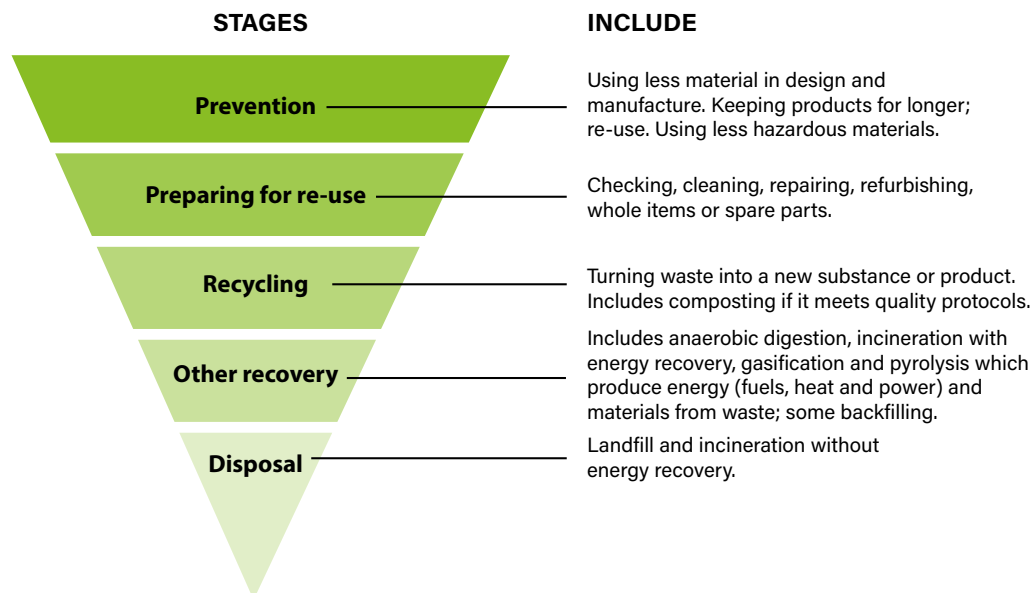
The Service utilises supported business frameworks such as the Value Wales Furniture framework and are currently working with Ministry of Furniture to utilise recycled furniture and as an example the T2020 office at Service Headquarters was kitted out with recycled furniture, as was the Llanfair Caereinion Fire Station internal refurbishment project.

As well as the sustainable procurement conditions, **our suppliers and contractors are requested to declare their own environmental credentials** and to confirm their understanding of our expectations of the Service as an organisation compliant with stringent environmental and sustainability commitments and objectives.



The Waste Hierarchy

MAWWFRS has a legal obligation to consider the waste hierarchy when handling waste. The hierarchy set out, in order of priority, the waste management options to consider. It ranks the waste management options according to what is best for the environment and places emphasis on waste prevention before reuse and recycling and only after these options are considered should waste be disposed of through landfill.



The Service re-purpose and re-use surplus materials internally and externally where possible and in particular to the below organisations:

- The Service has donated a large amount of surplus used office furniture to Enfys Foundation (furniture upcycling for disadvantaged persons);
- All worn Large Good Vehicle (LGV) tyres are sent back to ATS who inspect and then recycle the tyres as pitches and area coverings on children's play grounds.

Sustainable Procurement

The Service has been working with Business Wales and their predecessors for around 14 years in terms of breaking down the barriers to enable small to medium enterprises (SME's) to tender for public sector work. This includes 'Meet the Buyer' events for large projects to allow SME's to bid for sub-contracting opportunities: e.g. the Llandrindod Wells and Aberystwyth construction Projects.

The Service is signed up to the Welsh Government's Opening Doors Charter which includes several commitments in terms of making tendering easier for SME's.

The Service includes contract clauses that encourage suppliers to develop a proactive approach to equalities, ethical and environmental issues and procurement personnel receive sustainability training.

The Service stipulates environmentally friendly products within specifications where possible e.g. stationery and janitorial supplies frameworks.

In late 2018, MAWWFRS signed up to the Welsh Government, Cymru Copier Scheme through Lyreco. We were the first public sector body in Wales to commit to the scheme which signed us up to purchase 100% recyclable Steinbeis eco paper through Lyreco and then use Elite Paper Solutions to dispose of all our confidential waste across the 6 Command areas.

Elite Paper Solutions is a supported business that has been set up to assist people with disabilities to obtain and maintain paid employment opportunities within their local community in Merthyr.

Aspects and Impacts

MAWWFRS has a number of Environmental aspects and impacts relating to our everyday operations. Environmental aspects are the elements of MAWWFRS activities that could cause an impact on the environment. A Register was developed from the Initial Environmental Review and from consideration of the Service's activities and operations. Those with significant impacts are addressed in the Register of Environmental Aspects document.

An overview of the significant aspects is reviewed annually to ensure they are still relevant and to ensure no new significant aspects or impacts need to be included.

There is a mixture of aspects within the Register which are considered to have a Service wide impact including areas of Air Pollution, Water Pollution, Waste Management and Energy. MAWWFRS has 5 significant aspects which are considered to be high risk:

- Waste to Landfill;
- Water Pollution and Site Drainage;
- Energy consumption and CO2 production;
- Fleet Vehicles and business travel;
- Potential pollution during Firefighting.

The criteria used for evaluation are described in more detail within our EMS. The criteria for the significant environmental aspects and impacts are determined by the following:

- assessing the scale of the aspect and impact;
- determining if the aspects are controlled by any legislation;
- determining if the aspect poses a threat to corporate reputation and
- determining if the aspect effect the carbon emissions or the organisation.

The Aspects and Impacts Register is included within the remit of the Annual External Green Dragon verification which ensures compliance.

Environmental Performance – Statistics and Projects

MAWWFRS is continually trying to improve our Environmental impact and performance in relation to community engagement for arson reduction, reducing carbon emissions from our fleet and ensuring our buildings are as efficient as possible, reducing energy consumption. We monitor and document a wide range of activities which enables us to scrutinise our progress on a monthly basis. We have made excellent progress on the objectives in our Services 5 Year Sustainability Strategy 2015-2020.

In the years ahead, we aim to reduce our Service Carbon Footprint, build on the number of Solar PVs installed onto our Fire Stations, use greener technology to heat and control our Fire Stations, continue to incorporate Ultra Low Emission or Electric Vehicles into our Fleet, and continue to work towards a zero waste to landfill target.

The Service aim to reduce our carbon emissions year on year in line with our Environmental Objectives as well as to align with the target set out in the Environment (Wales) Act 2016.

Display Energy Certificates

In line with the Energy Performance of Buildings Regulations, we have placed Display Energy Certificates (DECs) in 23 of our buildings which qualify.

DECs are clearly displayed in any of the Service buildings which are accessed by members of the public with a floor area over 250m². These Certificates provide the public with the energy performance of a building and assist us in identifying the least efficient buildings and prioritise improvement measures accordingly.



DECs are displayed in the following Service locations:

- Aberystwyth Fire Station;
- Brecon Fire Station;
- Builth Wells Fire Station;
- Carmarthen Fire Station;
- Cartref-Y-Gelli Headquarters;
- Conference Centre Headquarters;
- Earlswood Accommodation Block
- Earlswood Training Facility;
- Fire Service Headquarters, Carmarthen;
- Haverfordwest Fire Station;
- Llandrindod Wells Fire Station;
- Llanelli Fire Station;
- Milford Haven Fire Station;
- Morriston Administration Block;
- Morriston Fire Station;
- Neath Fire Station;
- Newtown Fire Station;
- Pembroke Dock Fire Station;
- Pembrokeshire Command;
- Pontardawe Fire Station;
- Port Talbot Fire Station;
- Swansea Central Fire Station;
- Swansea West Fire Station.

Energy Consumption

MAWWFRS use a significant amount of energy to power the network of offices and Fire Stations. We recognise that the generation and consumption of energy has a significant impact on the environment, through the use of finite resources and the emission of greenhouse gases.

At the end of August 2018, MAWWFRS changed electricity supplier to a company who generate electricity from sustainable and renewable sources.

Electricity and gas consumption is monitored on a monthly basis via both F25 forms, completed by personnel from all Service locations as well as Automatic Meter Readers (AMRs) for all Gas sites. The consumption is recorded and used to monitor performance and to highlight any significant increase or decrease in usage per Command.

ENERGY	2017/18 (KWH)	2018/19 (KWH)	ANNUAL % CHANGE
Electricity	2,444,689.7	2,626,677.6	7.4% increase
Gas	374,940.77	356,854.00	4.8% decrease

There is an increase in our electricity consumption which could be explained due to the increase of building works and installations over the previous year and improved reporting from Stations resulting in a higher and more accurate figure.

There is a decrease in the consumption of gas over the previous year which could be due to the milder weather and an improvement in monitoring through the AMRs.

As well as gas and electric consumption, MAWWFRS also has 7 heating oil tanks over 5 sites. These are monitored by the use of Watchman technology transmitter units which are fitted to the tank and warns when stocks are running low or if there may be an issue with the tank, such as a leak.

	2017/18	2018/19
Oil Consumption (Litres)	41,188	45,052

The increase in Oil consumption could be explained by the schedule of ordering heating oil for the Stations overlapping the financial year.

All of the oil tanks are either double skinned or are held within a suitable bund, the integrity of which are checked annually during internal Environmental Station Audits or by external qualified engineers. Emergency procedures are in place in case of any spills by either Stations or delivery drivers carrying out refills. Each oil tank location also has a spill kit on site to deal with any leaks or problems.

The Water Resources (Control of Pollution) (Oil Storage) Regulations 2016, also ensures further measures are in place to guarantee no oil is leaked to the surrounding environment.

Carbon Emissions

Carbon emissions produced by the Service is measured annually to monitor our overall impact on the environment. As a Service we try to reduce our carbon emissions each year by raising awareness on energy consumption, carrying out environmental campaigns to reduce Station emissions, installing solar panels on Service buildings and using green technology in Stations where possible.

The figures used to calculate carbon emissions are taken from the DEFRA conversion factors published on their website. These carbon conversion factors change each year which is reflected in our monitoring.

The energy related Carbon emissions (in tonnes) are recorded below.

ENERGY	2017/18	2018/19
Electricity	859.4	743.5
Gas	69	65.6
Oil	10.1	11.1

ELECTRICITY CONVERSION factors used for 2017/18 was 0.35156 and for 2018/19 is 0.28307

GAS CONVERSION factors used for 2017/18 was 0.18416 and for 2018/19 is 0.18396

OIL CONVERSION factors used for 2017/18 was 0.24659 and for 2018/19 is 0.24665

The purpose of separating the Greenhouse Gas emissions in to Scopes is aimed at avoiding double counting of the Service's emissions and can help organisations see what they can control directly compared to what emissions they can influence. (Scope 3)

Of the 3 types of carbon emissions, 2 are recorded by MAWWFRS – Scope 1, Direct emissions and Scope 2, Indirect emissions. Currently MAWWFRS do not record Scope 3 emissions.

SCOPE 1 ALL DIRECT GHG EMISSIONS FROM SOURCES THAT ARE OWNED OR CONTROLLED BY THE ORGANISATION.	SCOPE 2 INDIRECT GHG EMISSIONS FROM CONSUMPTION OF PURCHASED ELECTRICITY, HEAT OR STEAM.
<ul style="list-style-type: none"> Combustion of fossil fuels for heating – gas or heavy oil Combustion of diesel used in the operation of fleet vehicles Fugitive emissions 	<ul style="list-style-type: none"> Purchased electricity, heat and steam generated up-stream from the organisation

The table below shows our emissions in tonnes CO₂e per year (tonnes).

	SCOPE 1	SCOPE 2
2018/19	953.75	743.53
2017/18	1313.5	859.4

Renewable Energy

The Service currently has 7 locations with Solar PV Panels installed, with the most recent being fitted to our Service Headquarters and Earlswood Training sites in March 2019.

- Aberystwyth Fire Station;
- Amman Valley Fire Station;
- Earlswood Training Facility;
- Fire Service Headquarters, Carmarthen;
- Llanelli Fire Station;
- Morriston Fire Station;
- Whitland Fire Station.

To date, the Solar PVs have generated the following figures since they were installed:

	PAYMENT RECEIVED UP TO MARCH 2019
Total payment generated	£15,311.04



Service Fleet

MAWWFRS has approximately 330 vehicles in our fleet including both operational and non-operational pool vehicles. Due to the vast rural landscape of the area of Wales in which we operate, and the nature of the Service as an emergency responder, this can limit our options when it comes to transport for Operational requirements.

Despite this, we have introduced a number of improvements to our fleet which are discussed in further detail below. We continue to consider further green alternatives and research into sustainable technology.

The table below shows the comparison of the previous 2 financial years of diesel used and the carbon emissions from this. The following figures have been provided by the Fleet Engineering and Logistics Department.

	2017/18	2018/19
Diesel (Litres)	465,800	338,086.47
tCO ² e	1244.5	888.1

DIESEL (LITRES) CONVERSION factor used for 2017/18 is 2.67193 and for 2018/19 is 2.62694

There has been a decrease in the diesel consumption on the previous year. This could be due to the removal of vehicles for the Hydrogen vehicles and the increased use of car sharing and alternative forms of travel.

Government funding opportunities and funding from the Office for Low Emission Vehicles (OLEV) has meant that sustainable improvements to our fleet can be achieved and we will continue to work towards building a sustainable Green Fleet for the Service.





ULEV Corporate Project

As the Service's **Zero Emission Green Fleet** gradually increases, a Corporate Project was approved to centralise the reporting on the Zero Emission vehicles within the Service Fleet. The Project Group for this will hold its initial meeting in April 2019 and will report regularly to our Executive Board.

All new Ultra Low Emission Vehicles (ULEV) now play a big part towards our Green Travel Plan objectives, reducing our direct emissions to air and showing our commitment to continual environmental improvement.

Over the next few years, end of life fossil fuelled vehicles will be replaced with zero emission, electric alternatives. Working groups will be set up to make decisions on types of vehicles, strategic locations of charging points and allocation of vehicles, all of which will be captured and reported on under the ULEV Corporate Project. This project is expected to run for at least a year to establish a strategic plan and schedule of works, where after that it is expected vehicles will be replaced with ULEV alternatives and the charging infrastructure will continue to expand as standard.

Hydrogen Vehicle Project

The Service currently have 2 Hydrogen fuelled, Hyundai ix35 FECVs within our fleet for use in the Community Risk Reduction and Business Fire Safety Departments. These were purchased with



help from OLEV funding and are now coming to the end of their 2nd year of a 3-year Project.

These vehicles are part of a Low Emission Vehicle trial within the Service and will help pave the way for a future greener fleet including Hybrid and Electric Vehicles.

These vehicles are based in an area renowned for high air pollution, and although only playing a small part, every little helps in reducing air pollution from road traffic sources and these vehicles will help reduce our carbon emissions as a Service. The hydrogen its self is produced onsite in the Baglan Energy Centre and the only emission from the vehicle is water.

Since incorporating the vehicles into our fleet, combined, the vehicles have covered the following:

	UP TO MARCH 2019
Mileage	15,757
CO²e offset	4.62 tonnes

According to the Carbonfootprint.com website, the Service has offset 4.62 tonnes of CO²e by driving our 2 Hydrogen Vehicles for 15,757 miles.

Electric Bikes

In July 2017, the Service purchased electric bikes to use in the Swansea and Carmarthen Command areas for Community Risk Reduction (CRR) duties. Feedback from the use of the e-bikes has been very positive and they are getting a popular choice of travel for CRR duties. The bikes are currently based around Llanelli, Carmarthen and Swansea Stations.

These bikes are helping the Service to work towards our Green Travel Plan and Environmental objectives of carbon reduction, encourage more sustainable travel choices and will improve the health and wellbeing of Staff members. There is a cost saving in terms of wear and tear on vehicles, diesel and parking costs.

To date, one of the e-bikes has logged 418 miles, with the shortest trip being 1.9 miles and the furthest round trip being 30 miles.

There has also been a positive response from members of the public when personnel arrive for an inspection on a bike instead of in a vehicle.

Fire Fighters Charity



Since 2010, the Fire Service has been assisting the National Fire fighters Charity raise money through textile recycling banks located on 32 of our Stations yards. The amount of textiles donated from members of the public has been increasing year on year and for the Financial year 2018/2019 compared to the previous period, the income generated by the Service donations has increased by 8.4%:

YEAR	KG OF CLOTHING	INCOME GENERATED
2018/19	87,388	£19,225.36
2017/18	75,091	£16,502.02
2016/17	69,835	£15,231.70

To date, the charity bins have collected a total of 394,691kgs of clothes and textiles which has generated an impressive total of £86,322.22. Donations from the Banks are collected on either a weekly or bi-weekly basis and resold or recycled which means diversion from landfill.

Salary Sacrifice Schemes

The Service run a number of Salary Sacrifice Schemes for its staff to help reduce the environmental impact of both vehicles and technology. This helps give employees access to modern, safer and more fuel-efficient vehicles as a reduced cost from nominal forecourt prices. The scheme assists in reducing the Service's carbon footprint by encouraging employees to purchase new cars which emit lower carbon emissions or by purchasing cycle bikes.

To date, the Car Salary Sacrifice Scheme has signed up 37 new vehicles where the bike scheme has had 84 new bike contracts. Figures from the last 2 years can be seen in the table below.

	2016/17	2017/18
Vehicle Salary Sacrifice Scheme	28	31
Bike Salary Sacrifice Scheme	37	56

Workshop Waste

The Service has 3 designated workshops to carry out vehicle maintenance and repairs. All these workshops have recycling facilities for the segregation of waste, including paper, plastic, aluminium, glass, contaminated waste, vehicle batteries and scrap metal. This ensures the safe transfer and disposal of all contaminated and hazardous waste such as engine oil, used oil filters and absorbent waste.

All scrap metal produced in our workshops is recycled through a formal contract arrangement. The Service's main workshop at Earlswood is included in the external Green Dragon re-assessment Audit which is undertaken annually.

Statistics for workshop waste vary year on year due to the frequency of the collection and servicing schedule.

	2017/18	2018/19
Scrap Metal (Tonnes)	3.6	10.18
Absorbent Waste (Kgs)	264	323
Oil Filters (Kgs)	342	685
Mixed Fuels (Litres)	200	610
Engine Oil (Litres)	2225	5603
Hazardous Components eg Vehicle Parts (Kgs)	400	450

More servicing within 2018/19 schedule compared to 2017/18 would result in higher quantity of waste being produced by the workshops.

Waste from Workshops is managed centrally and, where possible, has been streamlined so one main contractor is set up to manage the collection and disposal of the majority of hazardous waste making it easier to monitor.

Scrap metal produced in our workshops is recycled through a separate contract with the Disposal Service Authority (DSA). The DSA offer a collection-to-disposal service for a wide variety of items such as:

- Operational Equipment;
- General Miscellaneous Equipment including tools, telephones electrical equipment;
- Plant;
- Redundant Vehicles Parts;
- Scrap Metal;
- Tyres and Portable batteries.

Waste and Recycling

As a large organisation, MAWWFRS produce a lot of general and recyclable waste, as such, waste monitoring is vital so we can improve our facilities and help divert as much waste as possible from landfill. Contracts are in place locally for each waste stream and waste compliance tables are completed and updated as and when required.

Recycling facilities have been installed at several locations throughout the Service and food waste and recycling collections have been established where appropriate. Currently the range of materials that are recycled depends on the waste streams on that Fire Station, but generally this consists of:

- **White paper**
- **Cardboard**
- **Plastic**
- **Aluminium**
- **Batteries**
- **Confidential Waste**
- **Metals**
- **Food**
- **Books, journals and pamphlets**
- **Waste Electrical and electronic equipment**
- **Oils and soiled absorbent materials**
- **Toners and cartridges**

As standard, general waste is collected from all the Service locations. The breakdown of waste is shown in the table below. The contracts are reviewed every 2 years and figures are gathered by the number of lifts outlined in the initial contract with the Waste contractors.

GENERAL WASTE & RECYCLING	
Mixed Recycling	36%
General Waste	64%

To assist in reducing waste from our Service Headquarters site, steps have been taken to remove individual waste bins from beneath desks and replace them with central office waste receptacles. To date, 152 individual waste bins have been removed to encourage Staff to increase recycling at a central office bin.

Single Use Plastic Reduction



In 2019, the Service took the decision to reduce the amount of single use water bottles purchased. A trial to implement personal issue reusable drinkable bottles will take place during the Summer/ Autumn of 2019 and will be reported on in the next Annual Report. If the trial is deemed successful and sustainable within everyday activities a further roll out will take place.

Over the last 5 years, there has been an increase of nearly 25,000 water bottles purchased. It is anticipated that this initiative will hugely reduce the number of bottles used and disposed of throughout the Service.

The Mess Room at Service Headquarters, Carmarthen and the Community Café in Aberystwyth Fire Station have eliminated their plastic use by adopting biodegradable food packaging and drinking cups instead of the single use plastic. With local Councils and Environmental Forums pushing the reduction in single use plastic this is the first step in reducing our impact.

Battery Recycling

The Service has a contract in place with BatteryBack for the collection and recycling of portable dry cell batteries. There are currently 13 locations across the Service where batteries can be stored and collected by BatteryBack. There were 4 collections for the period 1st April 2018 to 31st March 2019, compared with 8 for the year before, with the breakdown of recycled batteries shown below:

PERIOD	BATTERIES	CARBON SAVINGS
2018-19	150kg	84kg
2017-18	273kg	152.88kg



Biodiversity and Conservation

There are 58 locations within the Service which include Fire Stations, Mechanic Workshops and Administration Buildings. Along with a Grounds Maintenance contractor, we manage and maintain our grounds in a way that protects and enhances existing habits.

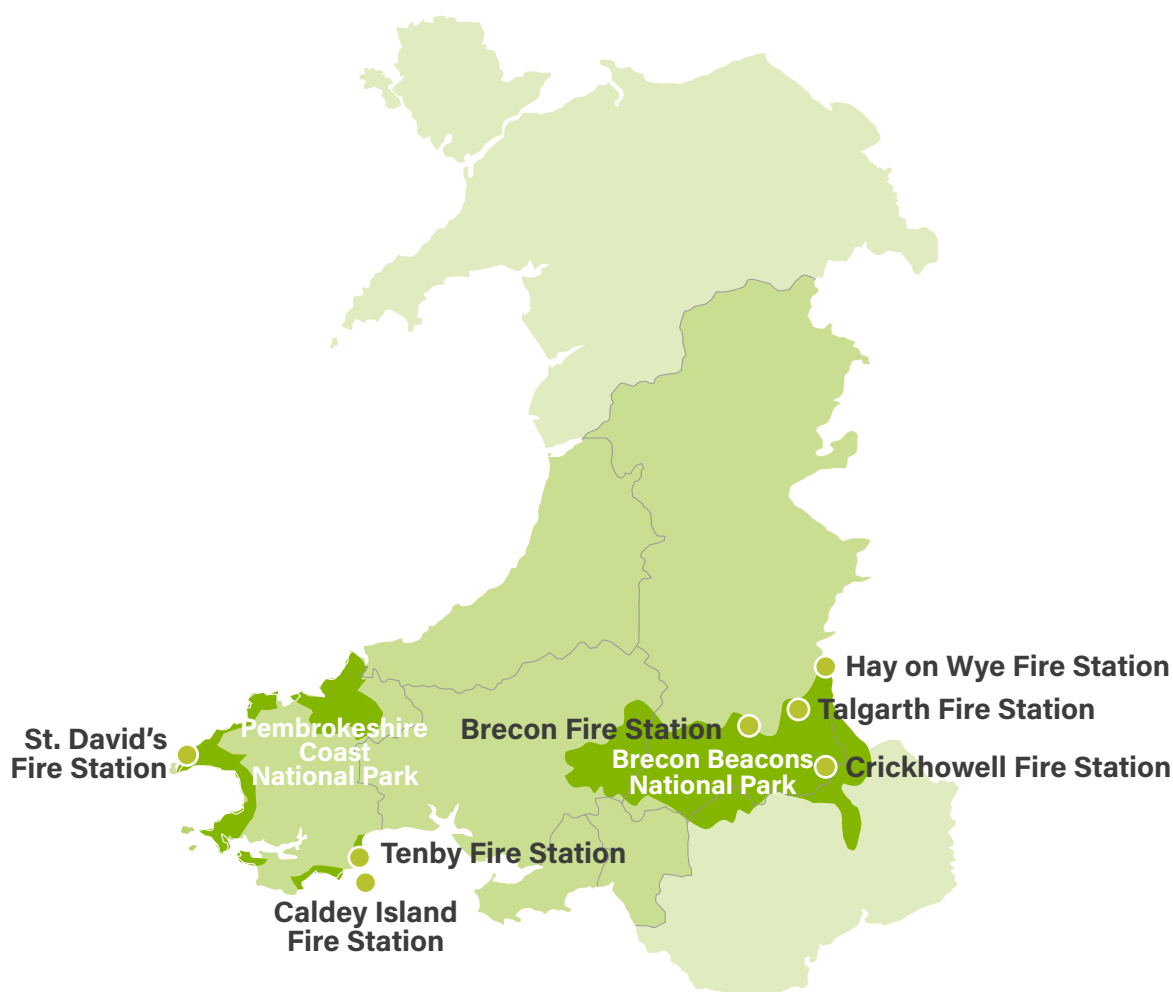
All our sites are managed to encourage, enhance and protect the flora and fauna on that site and adjacent land. As a result, some of the sites now attract an increasing number and diversity of birds and insects.

To encourage an increase in biodiversity, Ground Maintenance on sites includes:

- **Control of Knotweed**
- **Tree Maintenance**
- **Grass Cutting**
- **Leaf picking**
- **Hedge / Shrub pruning**
- **Shrub / Flowerbed maintenance**

MAWWFRS serve within a number of designated sites. We hold Incident Response Plans for Sites of Special Scientific Interest (SSSI) and Areas of Outstanding Natural Beauty (AONB) Sites which consider the value of the site appropriately and sensitively and review the process on a regular basis.

We have a number of Stations which sit on the borders of designated sites but the Stations which sit directly within one of the designated sites are included in the list below:



All of our fire appliances hold environmental 'Grab Packs' for the prevention of environmental pollution which contain absorbent pads, clay sealing putty and drain sealing mats. These are used to contain the pollution at the sources prior to the removal by specialist contractors.

Service Response – Environmental Protection Units

The Service has three specialist Environmental Protection Units (EPU) based strategically at Newtown, Llanelli and Pembroke Dock Fire Stations. These vehicles are used for the storage and carriage of equipment specifically for prevention of environmental pollution. This equipment held on the Units help to minimise or mitigate impacts of incidents attended by the Service. The equipment is maintained by Natural Resources Wales (NRW). The Environmental Units can also be used for fire fighter decontamination purposes, with the facility for containment of contaminated run off to reduce environmental damage.

The EPU's consist of chemical and oil absorbents utilised to prevent the substance entering water courses and reducing the impact on the environment. There are also various other pieces of equipment utilised to resolve operational incidents where chemicals are involved: vetter leak sealing bags, numatic hazardous dust machine, over-sized drums, drain mats etc.

The main purpose of the unit is to respond to environmental emergencies in the MAWWFRS area. The Service also works closely with NRW. This collaboration aims to minimise the hazards to the environment as far as practically possible from both thirds parties, flooding and fire service activities dealing with incidents and encourages greater liaison, planning and training.

The call out statistics for the EPU in the last financial years are as follows:

	2017/18	2018/19
EPU Call outs	27	44

MAWWFRS works closely with NRW at incidents with a high risk to the environment to seek guidance. In addition to the joint working at emergency incidents, NRW supply MAWWFRS with consumable items to use at incidents, and all costs are recovered from the 'responsible person' following an incident where the equipment has been used.

At our Swansea West Fire Station, we hold a site sharing agreement with NRW to store air monitoring equipment and one of their vehicles.

Regular meetings are held both nationally and locally to continue the positive work. NRW support the Service in our training and exercising, building on the relationships already in place.



Business and Community Fire Safety

Fire prevention is a key aim of these Service Departments. Though direct environmental benefits are impossible to determine accurately, the more fires that can be prevented, the resulting contamination and pollution to the environment will also be prevented. The Service's dedicated Community Safety and Business Fire Safety teams ensure that our communities, premises and their environments are better protected from the unwitting fire risks and/or the impacts of arson.

The Service does this by delivering many business and community fire risk minimisation initiatives which provide key messages on the damage that incidents of fire and arson cause to Businesses, the Community at large and the environment.

	2016/17	2017/18	2018/19
Property / Vehicle / Education Fires (Primary Fires)	1414	1360	1424
Grass Fires / Rubbish Fires (Secondary Fires)	1526	1840	2305

Grassland, woodland and crop fires which were started deliberately have been included within these statistics as these fires would have an immediate and devastating impact on the environment and the biodiversity that may be nesting there.



Measuring and Monitoring: Environmental data

Access to reliable environmental data means that changes in resource demand patterns can be mapped as a means of evidencing demand control (or lack of) and can then be used to confirm environmental improvements and subsequent cost savings. This active monitoring is considered vital in justifying reported environmental improvements.

Performance Management

Programmes are in place to measure and report on the following aspect at either monthly or quarterly frequencies.

- Gas & Electricity;
- Potable water;
- Heating fuel oil & diesel for transport;
- Wastes (plastic, paper, cardboard, glass, aluminium cans, tins, other metals, wood & food waste);
- Re-use of materials & re-cycling;
- Utilisation rates of selected materials procured.

Waste data availability is variable depending on contractors facilities. Improving the frequency and reliability of environmental data provision will provide more opportunity to intervene quickly when environmental objectives slip. Work has been carried out to improve back office systems to be able to obtain accurate data as and when it is needed.

Environmental Training and Legal Compliance

Environmental Training

Sustainability and Environmental training within the Service includes Environmental Awareness Training as part of the induction process for all Service employees. The induction program raises awareness of key environmental and sustainable issues and procedures taken by the Service to reduce environmental impact.

Internal training takes the form of raising environmental awareness via:

- Internal communications and environmental campaigns;
- Environmental Awareness Presentations;
- Circulating training fact sheets and attachments by internal email on issues such as energy data and updates on environmental performance.

Compliance with Environmental Legislation

As required by the Green Dragon EMS, the Service holds a register of Compliance Obligations which is applicable to the activities and operations of the Service and to ensure compliance with all relevant legislation. The register records the most common requirements of our organisation including: Air, Noise, Water, Waste, Land, Flora and Fauna.

To aid in ensuring this register is always up to date with all relevant environmental legislation and applicable voluntary obligations, the Service uses the Legal Compliance Manager System which is an environmental update service which enables us to identify and categorise applicable legislation easily and efficiently.

To ensure all legislation is covered, this is supplemented by regular cross-referencing with information via the Institute of Environmental Management and Assessment's (IEMA) website which sources its information via Cedrec Information Systems, as well as referencing information from environmental websites and periodicals.



Future developments & campaigns

The Service is always in search of innovative ideas and opportunities to improve its processes and efficiencies. In respect of future intentions for environmental improvements, the following are planned for the year 2019/2020:

- Develop and publish our 3rd Sustainability and Environment Strategy for the next 5 years;
- Increase awareness and motivation of all staff to engage in environmental improvement objectives;
- Implement an Ultra Low Emission Vehicle Corporate Project;
- Increase the number of Solar PV arrays on Service buildings;
- Introduce an environmental conservation aspect to the green space on Service sites;
- Collaborate with external organisations on Environmental Projects;
- Improving the frequency and reliability of environmental data provision;
- Improve space planning and occupation of our buildings so that maximum use is gained from heated/lighted premises;
- Improve the heating and controls of our Estate and invest in making our buildings "smart";
- Align battery storage to future PV initiatives in order to become cost neutral as we are no longer be able to sell back to the grid.



**SUSTAINABILITY IS
ABOUT IMPROVING THE
QUALITY OF LIFE IN A
WAY THAT DOES NOT
CAUSE IRREVERSIBLE
DAMAGE TO THE
ENVIRONMENT**

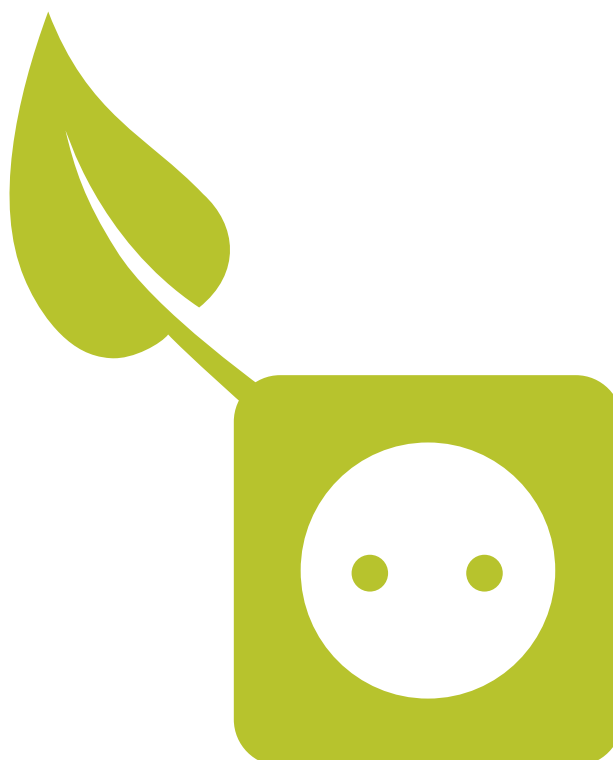


Environmental Objectives (EO), Targets and outcomes for 2018/19

Section 3

	OBJECTIVE	TARGET	2018/19 OUTCOME
EO1	To report on Environmental performance	<p>a) To publish an Annual Sustainability Report both internally and externally within 5 months of the end of the Financial year</p> <p>b) to report performance against environmental objectives using measurement, monitoring and pro-active management to ensure continual environmental improvement</p> <p>c) Report to highlight all Sustainable achievements and improvements</p>	<p>Fifth Annual Environmental Report was approved and published by end of Summer 2018</p> <p>Performance monitored and reviewed annually</p> <p>Continual environmental improvements are checked and reviewed by external auditors during Green Dragon Audit</p>
EO2	To promote the Services Environmental Strategy, Policies, Procedures and performance	<p>a) Ensure communication to all Staff regarding Environmental issues</p> <p>b) To have all personnel aware of the Strategy, Policy and Procedures and where to find them.</p> <p>c) Raise awareness with Staff via Environmental Training</p>	All Environmental documents are available on @Work and updated when needed
EO3	To prevent pollution from Fire Service locations.	<p>a) Zero pollution incidents recorded in accordance with Best Practice guidance</p> <p>b) To ensure 100% Compliance with current and relevant legislation</p> <p>c) Focus on developing a schedule of Site Drainage works</p>	<p>No pollution incidents</p> <p>Compliance upheld</p> <p>Site Drainage work to begin mid - 2019 to produce plans and colour code drains on all Stations.</p>
EO4	Reduce energy demand and GHG Emissions.	<p>a) To reduce energy / GHG emissions by 2% by the year end 31/3/2019 (against 2016/17 baseline)</p> <p>b) To incorporate long term energy conservation strategies into action planning and development.</p>	<p>Objective not achieved</p> <p>Solar PV Panels installed at Earlswood and HQ</p>

	OBJECTIVE	TARGET	2018/19 OUTCOME
E05	Reduce the amount of waste sent to landfill. Record and minimise waste and pollution risks	a) Reduce waste to landfill by 2% on the baseline year 2017/18 b) Reduce pollution risk by developing and operating sound waste management practices and procedures c) Raise awareness and focusing on the principles of the waste hierarchy.	<p>Figures calculated every 2 years when contracts are renewed.</p> <p>Biodegradable cups and containers used in HQ and Aberystwyth Café.</p>
E06	Collaborate with Estates & Procurement departments to reduce Waste	a) To identify and implement waste prevention, re-purposing, re-use b) To improve recycling/recovery opportunities throughout the Service.	<p>Increase in mixed recycling collection</p> <p>New contract set up for Swansea Command to improve monitoring</p>
E07	Reduce demand for transport fuels	a) Reduce fuel by 3% (and GHG emissions) - by the year end 31/3/2019 (against 2016/17 baseline). b) Incorporate Electric vehicles and charging points into the Service Fleet	<p>Objective not achieved</p> <p>Electric charging points installed at the Service Headquarters in March 2019. Corporate Project approved for future reporting on ULEV.</p>



Environmental Objectives – 2019/20

Mid & West Wales Fire & Rescue Service believes that evidencing corporate responsibility towards environmental management is best achieved by setting of both qualitative and quantitative environmental objectives.

These objectives are aligned with both the Service's Corporate Plan 2018 - 2023 and the Sustainability & Environmental Strategy 2015 -2020. The Service uses these objectives to measure its environmental performance against.

The seven overall themes of our environmental performance objectives for 2019/20 have not changed from 2018/19. The objectives for the year 2019/20 are as follows:

Our Environmental Objectives 2019/20

OBJECTIVE 1

To report quarterly and annually on performance against environmental objectives using measurement, monitoring and pro-active management to ensure continual environmental improvement.

OBJECTIVE 2

To promote the Service's Environmental Strategy, Policies, Procedures and Performance by communicating them across the Service.

OBJECTIVE 3

To prevent pollution in accordance with Best Practice guidance and current legislation, ensuring 100% compliance with relevant legislation, including a focus on on-site surface drainage.

OBJECTIVE 4

Reduce energy demand (and GHG emissions) by 2% by the year end 31/3/2020 (against 2016/17 baseline) and incorporate long term energy conservation strategies into action planning and development.

OBJECTIVE 5

Reduce the amount of waste sent to landfill by 2% on the baseline year 2017/18. Record and minimise waste and pollution risks by developing and operating sound waste management practices and procedures, focusing on the principles of the waste hierarchy (Prevention, Re-use, Recycle and Disposal).

OBJECTIVE 6

Collaborate with Estates and Procurement departments to identify and implement waste prevention, re-purposing, re-use - and improve recycling/recovery opportunities throughout the Service.

OBJECTIVE 7

Reduce demand for transport fuels by 3% (and GHG emissions) - by the year end 31/3/2020 (against 2016/17 baseline).

A report of performance against these targets will be incorporated in the 2019/20 Annual Environmental Report.

Environmental Statement

This Annual Environmental Report for the period 2018/19 will be externally verified as part of a Green Dragon Environmental Management Standard Audit by a registered assessor during the re-assessment of the Environmental Standard.

Appendix: Relevant Environmental Statistics

STATISTIC	2016/2017	2017/2018	2018/19
Total number of responses (Station Turnouts)	17,677	17,097	16,989

TRANSPORT	2016/2017	2017/2018	2018/19
Total annual fuel demand DIESEL (litres)	435,220	465,800	338,086.47
Total annual Carbon Emissions (tCO ² e) DIESEL	1,164	1,244	888.1

ENERGY	2016/2017	2017/2018	2018/19
Total annual ELECTRICITY demand (kWh)	2,350,171	2,444,689.7	2,626,677.6
Total annual GAS demand (kWh)	379,898.45	374,940.77	356,854.00
Total annual HEATING OIL (litres)	46,443	41,188.00	45,052.00
Total annual carbon emissions (tCO ² e) ELECTRICITY	968.4	859.4	743.53
Total annual carbon emissions (tCO ² e) GAS	69.9	69	65.6
Total annual carbon emissions (tCO ² e) HEATING OIL	11.4	10.1	11.1

WASTES	2016/2017	2017/2018	2018/19
General Waste (Tonnes)	Statistics unavailable	64% (1383.5)	Statistics unavailable
Mixed Recycling (Tonnes)	Statistics unavailable	36% (656.6)	Statistics unavailable
Absorbents (Kg)	300	264	323
Oil Filters (Kg)	564	342	685
Mixed Fuels (Litres)	650	200	610
Engine Oil (Litres)	2403	2225	5603
Hazardous components eg. Vehicle Parts (Kg)	150	400	450
Scrap metal (Tonnes)	4.26	3.6	10.18
Kg of clothing (Firefighters Charity)	69,835	75,091	87,388
Batteries - small (Kg)	151	273	150
Batteries Carbon emissions (Kg)	84.56	152.88	84



MID & WEST WALES FIRE & RESCUE SERVICE

SUSTAINABILITY AND ENVIRONMENTAL

5.40 – Environmental Policy

1.0 INTRODUCTION

Mid and West Wales Fire and Rescue Service covers the unitary Authority areas of Carmarthenshire, Ceredigion, Neath Port Talbot, Pembrokeshire, Powys and Swansea. It is committed to protecting the environment. The Service has a responsibility to protect the community it serves and to nurture the natural environment of the region. This Environmental Policy sets out MWWFRS Vision and Objectives. It demonstrates the Services' commitment to managing the environmental impacts of its activities and improving its environmental performance.

By promoting this Policy throughout the organisation the Service aims to encourage environmentally sound activity and minimise wasteful and damaging practices.

2.0 PURPOSE

This Policy describes Mid and West Wales Fire and Rescue Services' approach to environmental issues. The policy has four main purposes:

- It is a signal of intent to display the Services' commitment to minimise any negative impact from its activities, on the environment;
- It provides details of the commitments the Service has made to improve its environmental performance;
- It is intended as a reference point. It is intended that this document will be used to inform all of our day to day activities, and due account will be taken of this policy when policies are developed or reviewed.
- This policy is intended to support the Services Sustainability and Environmental Strategy.

3.0 SCOPE

This policy covers all of the activity of Mid and West Wales Fire and Rescue Service and the Trading arm of the Service, Rescue 365, and sets out a number of commitments which will help the Service and Rescue 365 to meet its corporate vision.

This policy does not prescribe the precise action to take; it is intended as guidance rather than instruction.



4.0 BACKGROUND

To assist Mid and West Wales Fire and Rescue Service and Rescue 365 CIC in realising its vision, the Service needs to be increasingly aware of the environmental impacts its activities have on the environment and work towards minimising any negative environmental impacts.

Most of the work carried out by the Service has some impact on the environment. This includes all operational work, such as attending fires, road traffic collisions and pollution incidents, and dealing with the after effects of such incidents; the Service has other direct environmental impacts through its own use of resources.

The Service will need to work with other organisations to ensure that the best interests of the environment are taken into account.

Additionally, the Service wants to promote an awareness of environmental issues in non-operational areas such as Transport, Procurement, Training, and all its administrative functions. Each of these has a part to play in ensuring that the Service meets its environmental objectives and targets.

Rescue 365 CIC (Community Interest Company) is the trading arm of the Mid and West Wales Fire and Rescue Service (MWWFRS). Created to deliver high quality Risk Management training and the provision of other specialist products and services, Rescue 365 is proud of the reputation it is building in its own right whilst recognising the heritage of the organisation from which it originated.

Rescue 365 is a small, lean entity that has modelled its management and training delivery practices on those employed by the Mid and West Wales Fire and Rescue Service in the pursuance of its activities. It trains its personnel in environmental matters and incorporates current best practice into all aspects of the delivery of its products and services.

For these reasons, this Environmental Policy – Statement of Intent has been created.



5.0 Statement of Intent

Mid and West Wales Fire and Rescue Service Environmental Policy - Statement of Intent

Mid and West Wales Fire and Rescue Service recognises that its operations and activities, impact on the environment. Through the conduct of its business, the Service is committed to reducing its use of natural resources and carbon footprint, preventing pollution and continually improving its environmental performance in a sustainable manner.

Mid and West Wales Fire and Rescue Service confirms a commitment to promoting a sustainable environment to the communities it serves. In pursuit of its vision "to become a World Class Organisation" and in working towards a more sustainable future, the Service is committed to supporting its communities by means of its fire prevention awareness and education programmes and by minimising its own adverse environmental impacts by reducing pollution, minimising waste, increasing recycling and tackling the causes of climate change.

Mid and West Wales Fire and Rescue Service is committed to making a valuable contribution to the protection of its environment by:

- Having a strategy to confirm the Services' commitment to protecting the environment;
- Ensuring our compliance obligations to all relevant UK, European and International legislative and regulatory requirements and agreements which relate to the Services' environmental aspects are met or exceeded;
- Reporting annually on performance, environmental objectives and targets to ensure continual improvement;
- Promoting the Services' Environmental Strategy, Policies and Procedures across the Service;
- Providing dedicated training to employees in their environmental responsibilities;
- Considering environmental issues in purchasing decisions and the planning and design of projects to make sustainable development the Services' 'Core Organising Principle';
- Adopting water reduction measures and enhancing the sustainable use of resources;
- Reducing energy consumption and incorporating long term strategies for energy efficiency into planning and development;
- Promoting the use of fuel efficient motor vehicles and adopting more sustainable modes of transport;
- Minimising any adverse impact on the environment of our Service Delivery at operational incidents;
- Minimising waste and pollution by developing and operating environmentally sound waste management procedures;
- Maintaining the grounds and buildings of Mid and West Wales Fire and Rescue Service in an environmentally sensitive way, having regard to the protection of local natural habitats and encouraging biodiversity;
- Working with our partners and other local and national agencies as appropriate, to promote environmental policies, promote 'Best Practice' and protect the environment.

This Statement confirms the Services' commitment to protect both our immediate and wider environment from its activities. Progress in developing and implementing environmental strategies will be reviewed and reported annually. This Statement and other related documents will be made available on our @Work and the external website and other locations as appropriate and will be subject to an annual review.



Chris Davies QSFM MBA
Chief Fire Officer



R Rees-Evans
Chair, Fire Authority

5th December 2018



Social Media

We encourage you to keep an eye on our
social media channels for updates

HOFFI DILYN RHANNU



LIKE FOLLOW SHARE

**Ein Negeseuon
Diogelwch**

Our Safety
Messages



Gwasanaeth Tân ac Achub
Canolbarth a Gorllewin Cymru

Mid and West Wales
Fire and Rescue Service

A Sustainability and Environmental Annual Report

2018 / 2019