TYNE & WEAR FIRE AND RESCUE AUTHORITY

Environment Strategy 2010-14

1.   Introduction

"The goal of sustainable development is to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life of future generations".
Sustainable Development Commission- Driving Change

1.1   Tyne and Wear Fire and Rescue Authority is committed to improving the quality of life of local residents through its vision of **Creating the Safest Community** and its mission **To save life, reduce risk, provide humanitarian services and protect the environment**.

1.2   The Service is an active partner in all five of Tyne and Wear's Local Strategic Partnerships (LSPs), and has helped to develop their Sustainable Community Strategies which seek to deliver economic and social improvements within environmental limits. The Service is actively contributing to delivering these strategies by reducing fires, deaths and injuries; responding to a wide range of incidents; and contributing to wider community priorities such as providing diversionary activities for young people at risk of anti social behaviour, and providing cleaner environments.

1.3   In this way, the entire business of Tyne and Wear Fire and Rescue Service is concerned with helping to develop sustainable communities. Our Strategic Community Safety Plan and Integrated Risk Management Plan set out how we will do this, linked to local community priorities through the District Plans prepared for each area.

1.4   The Authority also has a key role to play in supporting the community as it adapts to climate change. Providing support and civil protection to communities in times of emergency is a key part of the role of Fire and Rescue Services; whilst it is hoped that concerted action to mitigate climate change will succeed, the service must be ready to support those vulnerable to the potential effects of climate change such as higher summer temperatures, drought, floods and structural damage[1]. Recent floods in Newcastle, Morpeth and Cumbria have all called upon the skills and specialist equipment of firefighters from Tyne and Wear.

1.5   Tyne and Wear Fire and Rescue service is committed to adapting its own services to new community risks posed by climate change, and to supporting its communities to adapt. However, it is also taking action to help mitigate climate change by reducing the adverse impacts of its activities on the local and global environment.

1.6   This document is therefore not about what Tyne and Wear Fire Service does, but how we do it in a way which manages and mitigates our impact on the local and global environment.

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[1]Among the key projected climate change impacts for the North East region. *North East England Climate Change Adaptation Study, SustaiNE 2008*

2.   Declaration of Commitment

2.1   Our commitment to the principles and practices of environmental responsibility and sustainability was endorsed by the Fire Authority in 1997 with the production of our first environmental policy statement. This statement represents a renewal of that commitment.

2.2   Tyne and Wear Fire and Rescue Authority (TWFRA) is committed to employing principles of sustainable development with the aim of minimising adverse environmental impacts as a result of business activities within the resources at its disposal.

2.3   The Authority recognises that its operations can have an impact upon the local and global environment and will seek to reduce any adverse environmental impacts by examining practices and policies used, and taking action to improve environmental performance. This commitment underpins the Authority's vision of **Creating the Safest Community** *and its mission* **to save life, reduce risk provide humanitarian services and protect the environment.**

Responsibility

2.4   The Fire and Rescue Authority Members, Chief Fire Officer, Strategic Management Team and Representative Bodies are committed to actively leading and supporting employees in the implementation of the principles considered above.

Signed

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Chief Fire Officer   Chair
Tyne & Wear Fire and Rescue   Service   Tyne & Wear Fire and Rescue Authority

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Fire Brigades' Union   Unison

                                                        GMB Union

3.   Objectives

The Authority will seek to reduce its negative impact on the environment by delivering the following objectives:

3.1   We will seek to use natural resources efficiently and reduce consumption

The Authority recognises the global impact of energy use and environmental impact of water usage, and the subsequent treatment of waste water. The Authority will:

- Identify and quantify energy usage and emissions from our premises
- Establish targets and implement actions to reduce energy consumption
- Encourage energy efficiency
- Support the use of energy from renewable sources where possible and financially viable
- Identify and quantify water usage and encourage efficient use to reduce waste
- Ensure operational activities minimise the effects on the environment arising from the use / consequence of water
- Ensure organisational activities minimise the effects on the environment arising from the use of energy.

3.2 We will seek to reduce pollution and waste through our management of operational activities, buildings and fleet

Premises

The Authority understands the impact of pollution as a result of operating their premises and will:

- Undertake measures to reduce the amount of pollution occurring by identifying, controlling and removing the likely sources of pollution wherever possible
- Adopt and promote technological solutions
- Provide equipment and adequate arrangements to mitigate the consequences of any pollution that arises from the Authority's premises.

Incidents

The Authority will seek to ensure operational activities minimise the effects on the environment arising from the consequences of hazardous materials.

Transport

The Authority recognises the impact on the environment by using vehicles for operational, business and support purposes and by employees' journeys to and from work. The Authority will:

- Establish a vehicle fleet review to determine usage across the Service
- Consider technological and practical solutions to reduce the environmental impact of our fleet
- Reduce the social and environmental impact of vehicle usage by TWFRA staff by encouraging more sustainable modes of transport and the development of environmentally sustainable travel policies.

Waste

The Authority recognises the impact of waste leading to landfill disposal and the increased use of energy and water in the production of goods and will:

- Work towards minimising waste by eliminating, reducing, reusing, and recycling materials
- Examine how we can reduce waste from Procurement, Estates, Fleet Management, and the Service Delivery functions of the Authority.

Procurement

The Authority recognises the adverse environmental impact from the procurement of goods and services and will:

- Seek to utilise the purchasing power of the Authority and its Regional and National partners to improve the environmental standards and reduce the environmental impact of goods and services procured
- Incorporate environmental and sustainable considerations into the procurement policy.

Estates Management

The Authority recognises the need to work sympathetically with land, premises, neighbours and the wider environment, and will:

- Seek to avoid visual, noise and other impacts on the local environment
- Preserve the natural environment when undertaking maintenance and improvement measures to reduce the impact on the wider environment
- Promote the use of renewable resources and the conservation of non-renewable materials.

Service Delivery

In carrying out our service delivery activities, we will:

- Investigate the provision of equipment and the implementation of policies and procedures which will lead to a reduction in the impact of our actions on the environment.

3.3 We will promote engagement of the whole organisation in improving our environmental impact, and work with partners to improve environmental sustainability

The Authority recognises that the greatest effect on achieving waste minimisation and energy conservation will be to adopt policies and practices that will change the way their business is conducted to have positive impacts on the environment, and will:

- Seek to work with other agencies and organisations to support the principles of sustainability and environmental management
- Raise awareness, through the education, training and empowerment of staff
- Encourage and nurture our transition to support staff ownership and willingness to suggest change.
- Ensure that sustainability is managed as part of the core business of the organisation through the routine planning, decision making and performance management processes
- Provide timely and relevant information to the community.

4. Progress to date and current position

4.1 The Authority has delivered a range of initiatives to reduce negative environmental impact since the first commitment to environmental responsibility and sustainability in 1997. These include:

- Installation of double glazing and better insulation; use of low sulphur fuels by the vehicle fleet
- Station Energy efficiency - trial at two almost identical fire stations (North Tyneside South and Newcastle North) where movement sensors for lighting and urinal flushing were introduced at one and a less intensive programme of installing energy efficient lighting at the other. This led to reductions in energy consumption of 34% and 22% resulting in programmed installation at other fire stations.
- Achievement of Energy Efficiency accreditation from the National Energy Foundation
- Performance Pact 'Environmental Awareness' programme to all stations and staff. Working with the Energy Saving Trust awareness training was delivered to service personnel
- Installation of Building Energy Management Systems.
- Inclusion of sustainability within design criteria of new Community Fire Stations under the Authority's two PFI schemes. BREEAM Very Good rating achieved on the most recent design for the North Tyneside East station.
- Designation of all new fire stations as Community Fire Stations with facilities for community use, supporting the use of shared buildings.
- Procurement of new fire appliances over the next 3 years which will incorporate fuel efficient engines
- Introduction of environmentally friendly firefighting foam.
- Working with risk sites and partners to produce an 'oil pollution plan'
- Liaison with the Environment Agency to update working arrangements and introduce a Memorandum of Understanding relating to flooding incidents.
- Modifying tactics to reduce the amount of water used during the firefighting process, for example, aggressive positive pressure ventilation.
- Adopting a 'Call Challenge' process to reduce the number of unnecessary journeys.
- Carbon Management Programme – In partnership with other regional FRS's and the Carbon Trust a detailed carbon study and Carbon Management Plan was produced to help inform this environment strategy. This has led to a commitment of approximately £510,000 from the Capital programme over the next three years to invest further in carbon reduction initiatives
- Working with the Energy Saving Trust a green fleet review was produced to inform future planning. The fleet review illustrates the positive impact of earlier pool fleet procurement decisions, and also highlighted areas for further improvement.

4.2   Whilst there has been a clear sense of direction and significant activity, the Authority did not, in the earlier years of this programme, capture the impact in a systematic way. The revised Environment Strategy seeks to address this matter by taking 2008/9 as the baseline year for future reductions in carbon emissions and energy usage.

4.3   The 2008/9 carbon footprint (tonnes CO_2) based on all buildings, including those managed by Jarvis Accommodation Services, and transport is shown below:
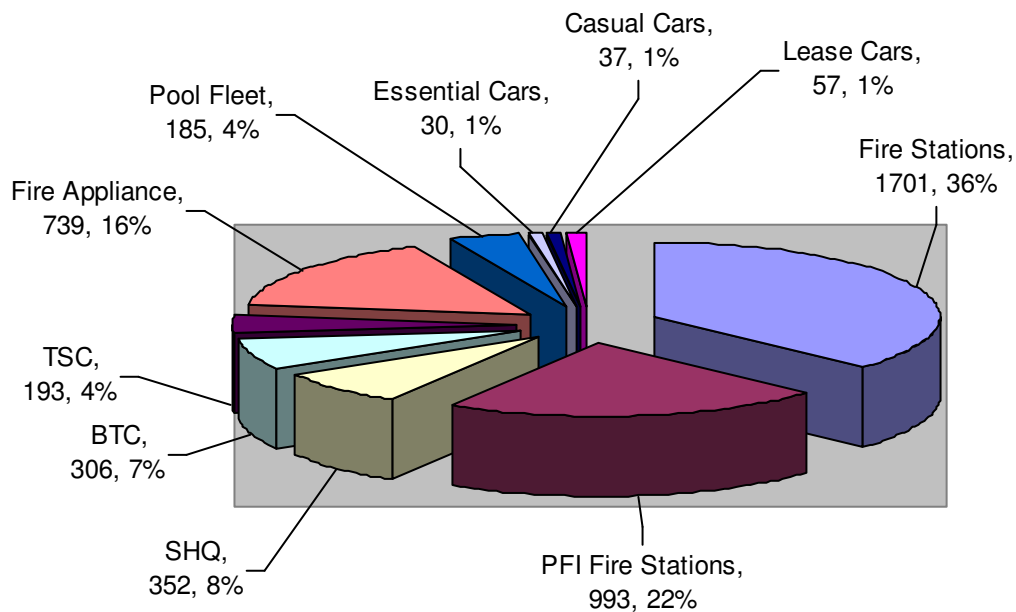
4.4   The consumption and footprint of buildings is shown in the table overleaf.

	Energy consumption, CO2 emissions and energy costs of buildings 2008/9						
ID	Building or site	Category	Gross Internal Area (m^2)	Energy type	Amount used (kWh)	CO_2 emission (kg)	Cost (£)
1	Service HQ	Admin	4,240	Electricity (grid)	459,163	240,141	39,029
1	Service HQ	Admin	4,240	Natural gas	605,701	112,037	21,200
2	BTC	Training Facilities	2,316	Electricity (grid)	370,349	193,692	31,480
2	BTC	Training Facilities	2,316	Natural gas	605,701	112,037	21,200
3	Technical Service Centre	Technical Services	2,459	Electricity (grid)	239,206	125,104	20,333
3	Technical Service Centre	Technical Services	2,459	Natural gas	367,667	68,007	12,868
4	Gateshead North 11 (Y)	PFI Fire Station	1,526	Electricity (grid)	205,108	107,271	17,434
4	Gateshead North 11 (Y)	PFI Fire Station	1,526	Natural gas	290,315	53,700	10,161
5	Gateshead East 12 (V)	PFI Fire Station	1,692	Electricity (grid)	225,711	118,046	19,185
5	Gateshead East 12 (V)	PFI Fire Stations	1,692	Natural gas	360,902	66,756	12,632
6	Gateshead South 13 (W)	Fire Station	1,011	Electricity (grid)	109,915	57,485	9,343
6	Gateshead South 13 (W)	Fire Station	1,011	Natural gas	324,098	59,948	11,343
7	Gateshead West 14 (Z)	Fire Station	211	Electricity (grid)	17,434	9,118	1,482
7	Gateshead West 14 (Z)	Fire Station	211	Natural gas	345,502	63,908	12,093

ID	Building or site	Category	Gross Internal Area (m^2)	Energy type	Amount used (kWh)	CO_2 emission (kg)	Cost (£)
8	Newcastle north 21 (E)	Fire Station	915	Electricity (grid)	116,733	61,051	9,922
8	Newcastle north 21 (E)	Fire Station	915	Natural gas	386,112	71,419	13,514
9	Newcastle East 22 (F)	PFI Fire Stations	1,509	Electricity (grid)	175,910	92,001	14,952
9	Newcastle East 22 (F)	PFI Fire Stations	1,509	Natural gas	427,766	79,124	14,972
10	Newcastle South 23 (C)	PFI Fire Stations	1,589	Electricity (grid)	208,499	109,045	17,722
10	Newcastle South 23 (C)	PFI Fire Stations	1,589	Natural gas	274,080	50,697	9,593
11	Newcastle West 24 (A)	Fire Station	2,768	Electricity (grid)	452,037	236,414	38,423
11	Newcastle West 24 (A)	Fire Station	2,768	Natural gas	817,274	151,171	28,605
12	North Tyneside East 32 (J)	Fire Station	xxxxxxxxxx	Electricity (grid)	115,642	60,481	9,830
12	North Tyneside East 32 (J)	Fire Station	xxxxxxxxxx	Natural gas	464,886	85,990	16,271
13	North Tyneside South 33 (G)	Fire Station	934	Electricity (grid)	90,090	47,117	7,658
13	North Tyneside South 33 (G)	Fire Station	934	Natural gas	299,419	55,384	10,480
14	South Tyneside East 42 (K)	Fire Station	1,589	Electricity (grid)	112,509	58,842	9,563
14	South Tyneside East 42 (K)	Fire Station	1,589	Natural gas	355,714	65,796	12,450

Energy consumption, CO2 emissions and energy costs of buildings 2008/9

						Energy consumption, CO2 emissions and energy costs of buildings 2008/9						

ID	Building or site	Category	Gross Internal Area (m^2)	Energy type	Amount used (kWh)	CO_2 emission (kg)	Cost (£)
15	South Tyneside West 44 (T)	Fire Station	1,067	Electricity (grid)	81,278	42,508	6,909
15	South Tyneside West 44 (T)	Fire Station	1,067	Natural gas	447,324	82,742	15,656
16	Sunderland Central 50 (Q)	PFI Fire Stations	1,466	Electricity (grid)	193,615	101,260	16,457
16	Sunderland Central 50 (Q)	PFI Fire Stations	1,466	Natural gas	339,281	62,757	11,875
17	Sunderland North 51 (M)	Fire Station	941	Electricity (grid)	118,121	61,777	10,040
17	Sunderland North 51 (M)	Fire Station	941	Natural gas	153,657	28,422	5,378
18	Sunderland East 52 (N) (SDHQ)	Fire Station	2,994	Electricity (grid)	444,255	232,344	37,762
18	Sunderland East 52 (N) (SDHQ)	Fire Station	2,994	Natural gas	479,483	88,690	16,782
19	Sunderland South 53 (H)	Fire Station	731	Electricity (grid)	75,778	39,632	6,441
19	Sunderland South 53 (H)	Fire Station	731	Natural gas	218,844	40,480	7,660
20	Sunderland West 54 (S)	PFI Fire Stations	1,526	Electricity (grid)	195,956	102,485	16,656
20	Sunderland West 54 (S)	PFI Fire Stations	1,526	Natural gas	271,640	50,245	9,507

5. Delivering carbon reductions

5.1 The service aims to reduce energy consumption and CO2 emission from the baseline through a range of actions identified through the Carbon Planning activity undertaken with the Carbon Trust, Green Fleet review and the Environment Steering Group (Section 6.5).

5.2 The organisation's high level CO2 emissions target, based on carbon planning activity and the actions identified in this Strategy, is:

> Tyne & Wear Fire & Rescue Service will reduce the CO_2 emissions from our normal business activities by 22% from 1st April 2010 to 31st March 2015

5.3 Station targets are extrapolated directly from the Service target, resulting in a 5% reduction target for each station / location per year.

5.4 The graph below shows our actual cost for the baseline year (2008/09), the 'business as usual' (BAU) with an expected cost increase (8.4%) per annum for emission sources, including energy production, transport, waste.
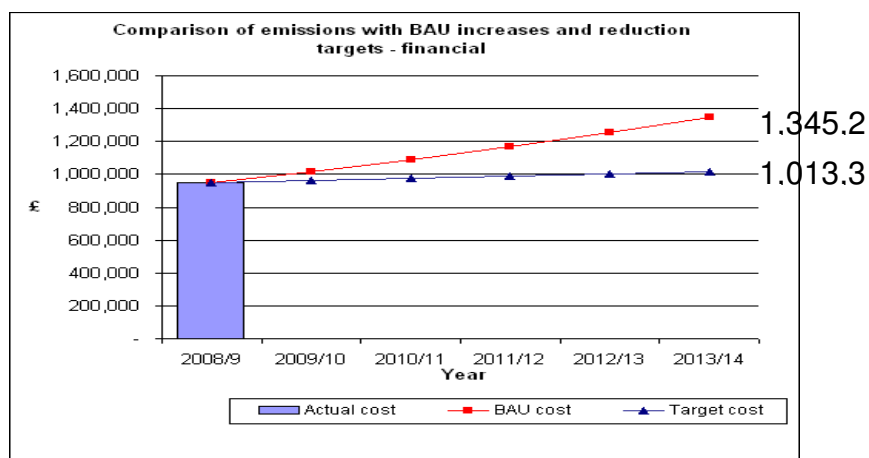
Choosing not to undertake any actions / projects associated to emission reduction (and our target of 22%) could result in an additional cost of £331,921 (cumulative cost of £942,468) for 2013/14 associated to buildings and transport.

5.5 In order to assist in achieving our target, a commitment of approximately £510,000 from our Capital programme and £73,000 from revenue has been made for the next three years, as detailed below. The Carbon Plan provides more detail on specific investments.

	2009/10	2010/11	2011/12	2012/13	Total Funding
Annual costs:					
Total annual capital cost		£199,678	£101,921	£207,735	£509,334
Total annual revenue cost	£30,000	£43,250			£73,250
Total (yearly) costs	£30,000	£242,928	£101,921	£207,735	

6.   Governance

A mainstream activity

6.1   Sustainable development is not something that can be achieved alone or is the responsibility of one department or function. Engagement is an essential part of embedding sustainability within our service. Development and delivery of actions will therefore be carried out through the organisation's planning, decision making and performance management processes.

6.2   It is the responsibility of all staff and service managers to develop actions to improve environmental performance, agree these through their service plans and monitor performance against them. Actions to minimise adverse impacts will be driven by the Authority's Strategic Community Safety Plan and Integrated Risk Management Plan; reflected in level 2 plans including the Medium Term Financial Strategy and Asset Management Plan; incorporated into the annual Level 3 plans of specific service teams; and managed through the corporate performance management process

6.3   Service Management Team (SMT) will ensure that such actions are included in high level strategies; that resources are allocated to these as appropriate; and that targets are set and progress reported and managed.

6.4   Key environmental performance indicators will be included in the corporate indicator suite from 2010/11. Overall progress on environmental initiatives will be reported annually to SMT and Authority, and included in the organisation's Annual Report.

Environment Steering Group

6.5   A cross cutting Environment Steering Group has been established to support and monitor the delivery of environmental actions. The terms of reference of the group are:

- To oversee delivery of the Environment Strategy and ensure progress is maintained
- To promote collaboration across the organisation on mitigating our environmental impact and draw together ideas from a diverse range of perspectives
- To ensure that environmental considerations are mainstreamed into the policy, strategy and delivery of the areas of work for which they are responsible
- To champion environmental sustainability and promote commitment and ownership across the organisation
- To deepen participants' understanding of environmental issues
- To identify relevant risks and ensure they are dealt with through the authority's risk management processes.

6.6 The group is chaired by the AM Corporate Support and consist of staff from:

- Special Projects
- Estates
- Procurement
- Technical Service Centre
- Service Delivery
- Community Safety
- Human Resources
- Learning & Development
- Finance
- Strategic Planning & Communications
- Response Support
- ICT

6.7 Key actions to deliver the Strategy are brought together in an informal Environment Action Plan for ease of monitoring, although all actions will be owned by specific individuals or teams within their own annual plans. Appendix A sets out the actions which have been identified to date.

Appendix A   Environment Strategy high level action plan

Objective 1: We will seek to use natural resources efficiently and reduce consumption					
1	**Priority Action**	**Key Task**	**Lead**	**Target date**	**Measures of Success**
	Implement measures which will minimise the consumption of energy	• Establish a baseline for energy consumption via partnership with Carbon Trust • Establish five year target to reduce consumption against baseline and include in key corporate PIs • Complete rollout of BMS programme • Establish and deliver three year programme of capital investment to reduce consumption, as set out in Carbon Plan • Work to obtain accreditation of our environmental management system under BS8555 • Support the use of energy from renewable sources where possible and financially viable	AM: Corporate Support	• Baseline: December 2009 • Target: March 2010 • March 2011 • March 2013 (plus interim milestones) • Accreditation to be sought by March 2012	• Reduce CO2 emissions from normal business activities by 22% from 1st April 2010 to 31st March 2015 • Achievement of BS8555 accreditation
		• Implement virtualisation of servers to maximize e enabled service delivery	AM: Strategic Planning and Communications	• March 2011	Successful completion of programme: increased server capacity

Objective 1: We will seek to use natural resources efficiently and reduce consumption					
1	**Priority Action**	**Key Task**	**Lead**	**Target date**	**Measures of Success**
	Implement measures which will minimise the consumption of water	• Establish a baseline for water consumption in buildings • Establish five year target to reduce consumption against baseline and include in key corporate PIs • Continue to investigate best practice/best equipment in minimizing operational water usage	AM: Corporate Support	Baseline:	Successful completion of baseline Reduction against baseline

Objective 2: We will seek to reduce pollution and waste through our management of operational activities, buildings and fleet					
2	**Priority Action**	**Key Task**	**Lead**	**Target date**	**Measures of Success**
	Reduce the amount of pollution arising from the Authority's premises	• Identify likely sources of pollution and add specific actions to the Action Plan to address these	AM: Corporate Support		
	Reduce the level of carbon dioxide emissions arising from the fleet	• Establish baseline position for vehicle emissions through work with Carbon Trust and Green Fleet Review • Continue to seek most carbon efficient standards in the procurement of new vehicles • Develop actions based on the Green Fleet review for inclusion in this Action Plan • Maximise use of virtual scenario software in Incident Command suite for training to mimimise emissions • Review the success of the Cycle to Work scheme • Develop and implement a Sustainable Travel Plan	AM: Corporate Support AM: Corporate Support AM: Corporate Support AM: Human Resources AM: Corporate Support	December 2009 As vehicles procured March 2011 Ongoing March 2011 March 2011	• Reduce CO2 emissions from normal business activities by 22% from 1st April 2010 to 31st March 2015

Objective 2: We will seek to reduce pollution and waste through our management of operational activities, buildings and fleet					
2	**Priority Action**	**Key Task**	**Lead**	**Target date**	**Measures of Success**
	Reduce waste and increase recycling	• Establish a baseline of current arrangements for the handling of waste • Identify and implement further opportunities for recycling	AM: Corporate Support	December 2009 March 2011	• Increase in number and recyclates from TWFRS premises
	Seek to use our purchasing power to improve environmental standards and procure sustainably	• Formalise our approach through a Sustainable Procurement Policy	AM: Corporate Support	September 2010	• Achievement of National Sustainable Procurement Flexible Framework level 3 by March 2011
	Work sympathetically with land, premises, neighbours and the wider environment in developing and managing our estate	• Seek to achieve BREEAM Very Good status for all new builds • Avoid visual, noise and other impacts on the local environment • Preserve the natural environment when undertaking maintenance and improvement measures to reduce the impact on the wider environment • Promote the use of renewable resources and the conservation of non-renewable materials	AM: Corporate Support		• Achievement of BREEAM status

Objective 2: We will seek to reduce pollution and waste through our management of operational activities, buildings and fleet					
2	**Priority Action**	**Key Task**	**Lead**	**Target date**	**Measures of Success**
	Minimise the environmental impact of operational service delivery	• Continue to seek reductions in fires and monitor the environmental impact of these • Continue to seek best practice in reducing the impact of firefighting and rescue activity, and build further actions into this action plan as identified	AM: Community Safety	Targets set annually	• Carbon emissions fro fires PIs (no target set as carbon reduction not the primary driver of the priority to reduce fires)

Objective 3: Promote engagement of the whole organisation in improving our environmental impact, and work with partners to improve environmental sustainability					
3	**Priority Action**	**Key Task**	**Lead**	**Target date**	**Measures of Success**
	Promote service-wide ownership of the Strategy and action plan	• Carry out initial awareness raising on mitigation and adaptation and seek staff views on potential actions • Establish the Environment Group • Seek agreement to the revised Strategy by SMT and elected members • Develop and deliver communications campaign via the Comms Team	ACO: Strategy and Performance AM: Corporate Support AM: Corporate Support and AM: Strategic Planning and Communications	December 2009 December 2009 March 2010 September 2010	• Progress towards achieving CO2 target (dependent upon individual action as well as investment)targets
	Build reporting of environmental performance into routine planning and performance management approach	• Ensure environmental targets discussed and agreed with staff and Members as part of target setting process for 2010/11 • Ensure that the environmental strategy is embedded in the Strategic Community Safety Plan/IRMP and financial strategy	AM: Strategic Planning and Communications	March 2010	Targets and resources agreed
	Incorporate sustainability into relevant training and	• Review provision of training on environmental issues and	AM: Human	March 2011	

Objective 3: Promote engagement of the whole organisation in improving our environmental impact, and work with partners to improve environmental sustainability					
3	**Priority Action**	**Key Task**	**Lead**	**Target date**	**Measures of Success**
	development areas	enhance provision where needed	Resources		
	Continue to work with partners to mitigate environmental impact and support adaptation to climate change	• Develop our relationship with the Carbon Trust and other regional FRAs in support of our environmental objectives • Align our activity with the work of the 5 LSPs to reduce carbon emissions in the 5 Districts	AM: Corporate Support AM: Service Delivery	Ongoing	Combined success in meeting agreed targets on NI 186 (per capita emissions)