ITEM 11: Climate Change Update

1. Purpose of Report
   This report provides an overview on the Authority’s historical work addressing the Climate Change agenda from 2009 and identifies current activity.

2. Recommendations:
   a. Members are asked to note the contents of this report.

3. Implications
   a. Financial: There are no financial implications from this report.
   b. Equalities: There are no equality implications from this report.

4. Background
   a. In 2008 Government introduced the Climate Change Act. At this time the then Secretary of State for the Environment and Rural Affairs engaged directly with national park authorities and asked that we play a key role in raising awareness as to the causes and impacts of climate changes and that we use our role in interacting with visitors to national parks to help change attitudes and behaviours.

   b. In its 2009 – 2014 National Park Management Plan, The Authority recognised that Climate change resulting from the emissions of carbon dioxide was widely accepted as one of the greatest challenges facing the global environment. It was accepted that the impact of climate change was having an effect upon the natural beauty, wildlife, cultural heritage and communities of the National Park and that further change was inevitable. Extreme weather events were becoming more prevalent, leading to an increase in wildfires and significant flooding events.

   c. The coalition Government at the time, in the 2010 English National Parks and the Broads: UK Government Vision and Circular, recognised that National Parks, National Park Authorities and their partners had a significant role to play in taking action on climate change through, for example, working with farmers and landowners to maintain healthy peat soils and forests which make a significant contribution to carbon storage.

   d. In rising to the challenge, the Authority, along with 300 plus local authorities, signed up to the Nottingham Declaration and committed itself to tackling climate change, specifically to reduce carbon emissions arising from its own activities and to increase the Authority’s resilience to a changing climate.

   e. In line with the Climate Change Act 2008 the Authority, using the Adaptation Reporting Power (ARP), also volunteered to report to Government on how it was addressing current and future climate impacts affecting its business and the fabric of the National Park itself. In December 2011 it produced a Climate Change Adaptation Report for 2012 – 2017 (enc).

   f. Addressing climate change was recognised as an important cross-cutting theme for the 2009 –2014 National Park Management Plan, and whilst it stimulated specific targeted actions, it also underpinned the planning for all elements of the future of the National Park. In 2010 a new post of lead member for climate change was also identified to champion the Authority’s work in this area.

   g. The current National Park Management Plan, 2016 – 2021 identifies that there has been a shift in the UK Government policy with regards to climate change. In July 2016 the Department For Energy and Climate Change was merged into the Department for Business, Energy and Industrial Strategy and we have seen a withdrawal of subsidies for onshore wind energy and solar farms and a relaxation of the planning control regime with regards to hydraulic fracturing (fracking). Fracking
is now being allowed in SSSI habitats located outside of National Parks and Areas of Outstanding Natural Beauty (AONBs).

h. At the same time that the Authority was seeking to step up its activity on addressing climate change it was having to make significant cuts due to the reduction in its grant in aid from government following the 2007 global financial crisis. In February 2011 the Authority passed a three year financial plan that took into account a real term loss of 33% in its core Defra grant funding. The autumn 2012 members’ policy conference saw climate change de-prioritised and this was subsequently reflected in the 2013 – 2016 Business Plan that identified limited resource for further new work on climate change initiatives but did encourage that the approach and lessons learnt thus far should be embedded into the Authority’s ongoing work and shared where relevant to do so.

5. Historical Activity

a. An early example of one of the initiatives that the Authority helped support was that of the Cheviot Futures Project 2000 - 2013. This initiative was committed to providing practical real-world solutions to the challenges our communities face due to the effects of climate change and was a cooperative of representatives from agencies and organisations involved in working with the rural communities of north Northumberland. Specific information on the case studies, reports and newsletters can be found on the Cheviot Futures website.

b. In relation to monitoring the effects of climate change in the National Park, the Authority undertook various research initiatives and invested in the installation of monitoring equipment. This was to record water level rise on the river Breamish at Ingram as a potential flood early warning system on the Till catchment and also in a remote early warning system for spotting wildfires on the Simonside Hills. Physical features such as water storage ponds were dug to aid the Northumberland Fire Services team when having to tackle wild fires in remote yet ecologically sensitive locations.

c. In 2009 the Authority produced a Climate Change Action Plan that had no less than 34 Key Activity areas that the Authority sought to deliver upon across the five strategic aims of the Management Plan. Actions included:-

I. Partnership working with organisations such as the North East Climate Change Partnership, local authorities, academic institutions and the private sector to collate and share information and data on climate change;

II. A comprehensive assessment of the risks associated with climate change, both for the Authority but also for the Park itself;

III. Achieving a targeted approach to reducing greenhouse gas emissions arising from the Authority’s own operations;

IV. Raising awareness of the implications of climate change with the communities within the National Park and also with the visitors engaging with the National Park and the Authority;

V. Facilitating a landscape scale approach for the testing and application of novel approaches to climate change mitigation, adaptation and innovation for sustainable development in the National Park;

VI. The identification and adoption of robust methodologies to establish baseline values and ongoing monitoring of progress towards climate change targets ensuring that reporting is transparent and publically available.
d. From this action plan specific activity arose such as:
   i. Realising a reduction in the Authority’s greenhouse gas emissions. This was undertaken in line with the Government’s National Performance Indicator on ‘Sharing information on greenhouse gas emissions from local authority own estate and operations’ (NI185). The results achieved through specific actions are summarised in the graphs overleaf.

**Total CO₂ emissions from NNPA buildings and transport (tonnes)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Emissions from building (tonnes)</th>
<th>Emissions from transport (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>174</td>
<td>134</td>
</tr>
<tr>
<td>2009</td>
<td>140</td>
<td>139</td>
</tr>
<tr>
<td>2010</td>
<td>130</td>
<td>124</td>
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<tr>
<td>2011</td>
<td>107</td>
<td>80</td>
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<tr>
<td>2014</td>
<td>79</td>
<td>157</td>
</tr>
<tr>
<td>2015</td>
<td>78</td>
<td>157</td>
</tr>
<tr>
<td>2016</td>
<td>120</td>
<td>159*</td>
</tr>
</tbody>
</table>

Graph 1 * Figure does not include CO₂ emissions from Sil gas, train travel, volunteer and member travel.

**Breakdown of CO₂ emissions by fuel type**

<table>
<thead>
<tr>
<th>Year</th>
<th>Emissions from gas consumption</th>
<th>Emissions from electricity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>157</td>
<td>120</td>
</tr>
<tr>
<td>2019</td>
<td>134</td>
<td>139</td>
</tr>
<tr>
<td>2010</td>
<td>130</td>
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<tr>
<td>2016</td>
<td>120</td>
<td>159*</td>
</tr>
</tbody>
</table>

Graph 2
Graph 3

Year on year carbon reductions were being made by initiatives such as:

- Improving the energy efficiency/insulation of the Authority’s buildings;
- Replacing electric storage heaters with air source heat pumps;
- Turning building thermostats down to 19°C;
- Installing solar PV panels at Church House and Once Brewed;
- Upgrading the Authority’s computer servers with more energy efficient models that also meant there was less need for air conditioning being used in the ICT rooms;

Graph 1 identifies that between 2008 and 2014 a 49% reduction was achieved in total CO₂ emissions from the Authority’s building and transport sources.

ii. Working with Northumberland Warmzone, providing free cavity wall and loft insulation to all residents across the National Park;

iii. Estimating the total amount of carbon stored in the peaty soils found across the Northumberland National Park. This was calculated to be 22,506,137 tonnes spread across the areas depicted in the map overleaf.
iv. Ascertaining the number of off-grid electricity properties across the National Park that were relying on carbon emitting diesel generators. This was identified to be 114 properties, part of the largest off-grid area anywhere in England;

v. Ascertaining the energy efficiency and renewable energy opportunities for off-grid properties in Upper Coquetdale. An independent study undertaken by North Energy;

vi. Undertaking a desk based hydro power feasibility study of the watercourses throughout the Northumberland National Park;

vii. Promoting the uptake and use of micro scale wind turbines, solar PV panels, air source heat pumps and other renewable energy technologies across the National Park;

viii. The installation of a network of electric vehicle charging points across NNPA car parks via the Plugged In Places initiative to promote and facilitate the use of electric vehicles across the National Park;

ix. The adoption of hybrid and trialling of electric vehicles as part of the NNPA pool of fleet vehicles.
x. The establishment of the staff Green Team that looked at the environmental and climate change implications of the Authority’s day to day activities and procedures and sought to implement ‘Green’ solutions in areas such as energy efficiency, recycling and procurement.

6. Recent and Current Activity

The following list represents a summary of some of the ongoing climate Change mitigation and adaptation work that the Authority is currently committed to undertake in its 2019-2020 Operational Plan.

a. Peatland restoration – The Authority is working with partners to help deliver on Defra’s £10m peatland restoration grant scheme identified in the 25 Year Environment Plan. As one of 21 sites in the north of England, the work will involve deploying various peatland restoration techniques over the next two years across a 150 hectare area of damaged/degraded peatland on the Cheviot summit, costing almost £305,000. It is expected that once complete, the work will help abate 585 tonnes of carbon from being released from this peatland environment on an annual basis. Over and above this the Authority staff continue to ensure peatlands are kept wet, both to maintain the anaerobic conditions that help lock up the stored carbon and also ensure that the sphagnum moss continues to capture additional carbon from the atmosphere. Advice is provided to land managers looking to take advantage of the Countryside Stewardship scheme to grip block previously drained peatland sites whilst volunteers and contractors are increasingly being deployed to remove unwanted Sitka spruce that tends to have a drying effect upon the peatland landscapes.

b. With the impact of global warming seeing hotter drier summers, the prevalence of wildfires across the National Park has increased in recent years. With the potential for the peaty soils to catch alight and burn for weeks at a time, there is a genuine risk of releasing the carbon locked up in the peaty soils into the atmosphere. Authority staff are working with the Northumberland Wildfire Group and the England and Wales Wildfire Forum to raise awareness of this issue amongst land managers. This work also looks to ensure that moorland management plans are produced and implemented as well as developing estate specific Wildfire Risk Assessments.

c. The Authority continues to work with land managers in order to encourage further tree planting and woodland creation schemes that will assist in capturing carbon from the atmosphere and help ‘slow the flow initiatives’ that will hopefully mitigate against future flooding incidents arising from watersheds within the National Park. It has a target to establish 200 hectares of new native broadleaf planting each year with 3 new 20 hectare creation schemes identified by 2021.

d. The Authority continues to run a fleet of low emission vehicles including two hybrid vehicles.

e. Countryside Stewardship Facilitation Fund - The Upper Coquet and Breamish Farm Group are currently developing a project looking into carbon accounting on a cross section of farms in the facilitation fund area. The information will then be taken to look at what measures a farm can take to become carbon neutral, whilst fitting in with a landscape scale approach to climate change mitigation, biodiversity and stewardship.

There will be a big push on knowledge transfer so the lessons learned can be used on all the farms in the area, ensuring a landscape scale approach to climate change action, as well as ensuring a landscape scale approach to stewardship and therefore biodiversity actions.
f. The Sill – Low Carbon building design – BREEAM Standard Very Good Rating and examples of visitor engagement. For example, through the promotion of the importance of peatlands as a carbon store by hosting the Flow Country temporary exhibition;

g. The Green Team was re-kindled in 2018 and following a staff survey to identify priorities, they have been focusing their attention on:-

   i. Waste / Recycling / Plastics – including research into what happens to our waste at Eastburn and The Sill;

   ii. Paper and printing - researching whether there is a more sustainable paper to buy; Leadership Team meetings have gone paperless. – There has been for some time an appetite from staff for members' meetings to be paperless, and consideration for this has been backed up by a quick study that has shown that 21 reams of paper have been used for the production of reports for the last five Authority meetings;

   iii. We have been collecting data relating to the Authority’s carbon footprint, (see graphs 1 and 2 above). This now captures the emission implications of the development of The Sill;

   iv. The development of a Northumberland National Park Sustainability Policy incorporating a Year of Green Action, Action Plan, currently sitting as a draft document;

h. Embedded practices from previous low carbon work including the use of two hybrid electric vehicles and use of video/teleconferences whenever practical and possible.

7. Conclusions

This paper identifies that the Authority, on the back of Government investment and a change in its strategic thinking, was successful between 2008 and 2014 in realising and embedding actions that significantly reduced the greenhouse emissions resulting from the Authority’s operations and successfully engaged with land managers to develop new techniques that help mitigate the impact of climate change on the special qualities of the National Park. This historical activity continues to have a positive ongoing impact.

However, activity and any further benefits appear to have stalled following a significant cut in the Authority’s core grant from Defra and a shift in priorities in 2013 that saw the successful development of The Sill National Landscape Discovery Centre that opened in the summer of 2017. It would appear that The Sill development, having increased the footprint at the old Once Brewed site, has led to an increase in CO₂ emissions from our built estate but further refinement of the 2018 data is needed to ascertain the true picture.

With initiatives such as the Schools Strike for Climate Change, Easter 2019 protests in London and numerous Local Authorities including Northumberland County Council, declaring a Climate Change emergency, tackling the cause of climate change would appear to be rising up the Government’s agenda once again. In June the Prime Minister announced that it would amend the Climate change act to enshrine in law a commitment to reach net zero carbon emission by 2050.

It is timely, therefore, that the Authority considers its role on tackling climate change and asks itself whether the expectations set out in the Government’s 2010 Circular are still achievable given all that has transpired since. There is a need to consider both climate change mitigation and adaptation initiatives, and look at what the Authority could do to further reduce emissions arising from its own operations, as well as work with land managers across the National Park to conserve and enhance existing carbon stores, to reduce carbon emissions or seek to deploy measures that mitigate against the impacts of climate change both within and out with the National Park.
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Background papers:

II. 2016 – 2021 National Park Management Plan
III. Northumberland National Park Climate Change Adaptation Report 2012 – 2017
IV. Northumberland National Park Authority 2009 Priority Setting Process