



Northumberland County Council

Communities and Place Overview and Scrutiny Committee – 2nd March 2022
Cabinet – 8th March 2022

Climate Change Update - *For Information and to agree the key recommendations.*

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Report of Cabinet Member: Cllr Glen Sanderson, Leader of the Council

Purpose of report

To provide an update on progress against the Climate Change Action Plan 2021-23, published in January 2021.

Executive Summary

At the end of the first year of the Climate Action Plan the following **key achievements** should be noted:

1. The Council's Climate Change Action Plan was ranked 25 / 409 (covering all local authorities in the UK) by a recently published independent assessment completed by Climate Action UK.
2. The Council has been awarded nearly £14.5 million across a broad range of low carbon grants.
3. More than 25,000 residents have been engaged through different climate initiatives with Climate Change Champion representation across 44 wards.
4. Four public webinar Q&As have been held, each of these has been well attended with audiences of over 100 at each event.
5. Nearly 18,000 trees have been claimed by residents and community groups through the Free Tree Scheme.
6. By the end of the financial year there will be 100 Council owned on-street electric car chargers across 27 wards.
7. 110 low income and high carbon homes have been upgraded as part of the Green Homes Grant Scheme.
8. By the end of the financial year nearly 3 million new trees will have been planted in support of the Great Northumberland Forest initiative.
9. The Council has reduced the emissions it is directly responsible for, by more than 50%.

It has only been possible to deliver these outcomes through a wide-ranging cross service partnership, that is aligned to a common purpose to deliver net zero by 2030. Every service in the Council has made a direct contribution to the delivery of one or more of these outcomes. The supporting role of the Climate Working Group and the Climate Change Steering Group with representation from across the county (residents, towns, urban areas, rural communities, business and the third sector) has also been a key factor in the results achieved in the past 12 months.

In the second year of the Climate Action plan the following **key aims** should be noted:

1. Continue to work closely with our residents and communities, through established partnership and engagement activities, additional projects with schools, strengthening connections with our business community and the annual free tree scheme.
2. Enhancing our partnerships with rural communities, to provide support to the farming community and at the same time help deliver the Great Northumberland Forest.
3. Lead the way nationally in delivering net zero through 'electrification' of transport and our estate, by: installing at least 75 EV charge points every year for the next three years, continuing to upgrade the Council fleet and start to build the solar car port at County Hall.
4. As part of the Net Zero Investment Strategy work with the business community, including British Volt, to create a world class supply chain in Low Carbon Technology.
5. Delivering schemes, through increased 'in-house' capability, that help our residents to tackle Climate Change directly every day. Including:
 - Deliver the Warmer Home programmes to more than 500 households to reduce carbon emissions, improve heating efficiency and resilience.
 - Pilot solutions for food waste, glass recycling and synthetic heating fuels.
 - Complete the District Heat Scheme Feasibility Studies for Alnwick, Ashington, Berwick-upon-Tweed, Hexham and Morpeth alongside detailed feasibility studies in Blyth and Cramlington.
6. Publish the Climate Change Action Plan v2.0, including adaptation and the route to net zero for Council owned emissions.
7. Accelerate staff engagement through mandatory online climate change training alongside continued in depth carbon literacy training including the Cabinet and Executive Team.

The following **key challenges** should be noted:

1. The scale of resident and community partnerships is increasing, creating a fantastic opportunity to enable the behavioural changes needed to deliver net zero. This will require even more communication and engagement activities in 2022. Recent weather events have brought the significance of high value communications into even sharper focus.
2. The interdependencies with national and local policy decisions, including decarbonisation of the national grid, national planning standards, tariffs on synthetic fuels and incentives for low carbon solutions, especially for transport (active and public), power and heating.
3. The increased emphasis on in-house delivery will offer the opportunity for greater value for money and an improved resident experience. This will be an incremental change in nature of the Council's role and further increase the importance of cross service collaboration.
4. The nature of the District Heat Schemes service delivery model will be critical to ensure the schemes are viable and affordable for customers (domestic or commercial).
5. As the low carbon supply chain develops this will bring high quality jobs to the region, including low carbon manufacturing, the impact of positive and negative emissions from this supply chain needs to be accounted for.
6. As national and global commitments to Climate Change evolve, the scope of work considered as part of any comprehensive Climate Change programme will increase, for example to include: Adaptation, Methane, and Green Finance.
7. The information provided through BEIS on the progress being made to deliver net zero lags project activities by two years.
8. Ensuring funding is secured with realistic conditions (e.g. timescales for delivering grants), including work to get the most from all our devolution deals and partnership arrangements.

Recommendations

1. Formalise the role of Climate Change Policy Group in the Council governance processes, with closer links to the Executive Team and Members, through quarterly reports on the impact of policy decisions on the Council's ability to deliver net zero.
2. Executive Directors and Cabinet Members should query reports, where the Carbon Impact Assessment has not been completed and it is expected to impact on the council's ability to deliver net zero, as part of the council's governance arrangements.
3. Executive Directors and Cabinet Members should complete carbon literacy training in 2022.
4. The online Climate Change module should be included in statutory and mandatory training for all staff.
5. The provision for targeted grant funding (Climate Change Community Fund £50,000 recurrent) for community climate change initiatives, that has been made in the upcoming Council budget, should be approved.
6. Continue running the Free Tree Scheme each year up to the 2030 net-zero target with the intention of offering a tree for every household in Northumberland.

Link to Corporate Plan

An update on the work underway to support the delivery of the council's ambition for Northumberland to be a net zero county by 2030. A key component of the Corporate Plan.

Key Issues

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2. The interdependencies with national and local policy decisions, including decarbonisation of the national grid, national planning standards, tariffs on synthetic fuels and incentives for low carbon solutions, especially for transport (active and public), power and heating.
3. The increased emphasis on in-house delivery will offer the opportunity for greater value for money and an improved resident experience. This will be an incremental change in nature of the Council's role and further increase the importance of cross service collaboration.
4. The nature of the District Heat Schemes service delivery model will be critical to ensure the schemes are viable and affordable for customers (domestic or commercial).
5. As the low carbon supply chain develops this will bring high quality jobs to the region, including low carbon manufacturing, the impact of positive and negative emissions from this supply chain needs to be accounted for.
6. As national and global commitments to Climate Change evolve, the scope of work considered as part of any comprehensive Climate Change programme will increase, for example to include: Adaptation, Methane, and Green Finance.
7. The information provided through BEIS on the progress being made to deliver net zero lags project activities by two years.
8. Ensuring funding is secured with realistic conditions (e.g. timescales for delivering grants), including work to get the most from all our devolution deals and partnership arrangements.

1. **Background**

This report will outline progress made against the *Climate Change Action Plan 2021-23* and will build upon the previous *Northumberland Climate Change Update* submitted in September 2021.

The Climate Change Action Plan identifies 7 priority action areas under which projects are delivered. Additionally, the Climate Change Action Plan considers the Council's own carbon footprint which we pledged to reduce by 50% by 2025 (from 2010 levels).

The Climate Change service is far reaching and is built upon cross-organisational collaboration with the shared ambition to deliver net zero by 2030. Integral to the delivery is a coalition of support from elected Members, resident and community groups, partner organisations and businesses across the county and beyond. The continued support of residents, colleagues and partners across these areas is essential to the continued success of the programme.

In the financial year 2021/22, the Climate Change service has been successful in attracting nearly £14,500,000 in funding for low-carbon schemes benefiting both our Council estate and our residents.

Project Name	Capital (£)	Revenue (£)	Total (£)
Public Sector Decarbonisation Scheme 1	3,012,580		3,012,580
Green Homes Grant LAD1b	2,923,176		2,923,176
Green Homes Grant LAD2	2,214,042		2,214,042
Sustainable Warmth Competition (LAD3 & HUG)	5,626,407		5,626,407
Heat Network Delivery Unit (HNDU)		200,000	200,000
OZEV On Street Residential Chargepoint Scheme	96,620		96,620
Hexham Hydro Feasibility		100,000	100,000
Public Sector Decarbonisation Fund 2 Round 1	304,152		304,152
	14,176,977	300,000	14,476,977

In the full report that follows, a number of **recommendations** have been made. These recommendations will appear in a green box for ease of reference.

In the full report that follows, a number of **key points** have been made. These key points will appear in a purple box for ease of reference.

2. Key Priorities for 2022

The key priorities for the Climate Change service in 2022 are:

Continue to work closely with our residents and communities.

- Hold quarterly public engagement events, extend our community climate champion network, strengthen connections with our business community and engage residents through continuation of the annual Free Tree Scheme.
- Work closely with rural communities, to provide support to the farming community and to help deliver the Great Northumberland Forest as we look to expand upon the 500 ha being planted by 2025.

Lead the way nationally in delivering net zero through ‘electrification’ of transport and our estate.

- Install at least 75 EV charge points every year for the next three years, continue to upgrade the Council fleet with the target to have 50% of eligible vehicles upgraded to EVs by 2025 and build a solar car port at County Hall.
- Work with the business community, including British Volt, to create a world class supply chain in Green Technology.
- Increasing the amount of renewable electricity we generate as a Council and undertaking a number of additional pilot projects.

Deliver schemes that help our residents to tackle Climate Change directly every day.

- Roll out the Warmer Home programmes to more than 500 households to reduce carbon emissions, improve heating efficiency and resilience.
- Continue to pilot solutions for food waste, glass recycling and synthetic heating fuels.
- Complete the District Heat Scheme Feasibility Studies for Alwick, Ashington, Berwick-upon-Tweed, Hexham and Morpeth as well as detailed feasibility studies in Blyth and Cramlington.

Alongside continuing high levels of community engagement a key focus in 2022, learning from the delivery experience of 2021, will be to take greater ownership for delivering schemes in-house, especially for schemes relating to sustainably heating homes and EV charge point installation.

3. Climate Change Action Plan Delivery

More than 30 projects are either at initiation or delivery stage across the priority action areas. Plans for additional projects or pilots are also under development.

Monitoring the CO2 impact of the projects delivered through the Climate Change service are dependent on data from BEIS, published two years in arrears. Work is underway with the Business Intelligence service to determine whether an in-house mechanism for monitoring CO2 emissions could be developed, to provide access to a more up to date emissions trajectory.

Further information on the progress made, plans and recommendations for each of the Climate Change Action areas is provided below.

3.1. Policy

3.1.1. Climate Policy Group

A dedicated Climate Change policy group has been established with Service Directors and Heads of Service from across all areas of the Council. The purpose of this group is to act as a central point for reviewing key policy and procurement decisions that could impact Climate Change. This forum is co-chaired by the Service Director, Climate Change and the Service Director, Policy.

Recommendation 1

Formalise the role of Climate Change Policy Group in the Council governance processes, with closer links to the Executive Team and Members, through quarterly reports on the impact of policy decisions on the Council's ability to deliver net zero.

3.1.2. Carbon Impact Assessments

In the previous Climate Change Cabinet update, it was agreed that all decisions going to Cabinet should have a carbon impact assessment (CIA) attached. The CIA form is now available on the top tasks intranet homepage and has been agreed with service directors at the Climate Change policy group.

Recommendation 2

Executive and Cabinet Members should query reports, where the Carbon Impact Assessment has not been completed and there is an impact on the council's ability to deliver net zero as part of the council's governance arrangements.

3.1.3. Staff Training

Monthly Carbon Literacy training sessions, built on training undertaken by the Climate Change service from the Carbon Trust, for Council employees have now been established. To date 83 staff Members have undertaken the training and are now classed as 'carbon literate'. We have also developed a carbon literacy toolkit on behalf of the Carbon Literacy Trust which is aimed at resident community groups.

In order to become a Bronze certified Carbon Literate organisation, senior leaders are required to undertake carbon literacy training.

Recommendation 3

Executive Directors and Cabinet Members should complete carbon literacy training in 2022.

An online module introducing Climate Change in the Northumberland context has been developed and is available on Learning Together. A paper will be submitted to Workforce Committee on 4th February recommending its inclusion in statutory and mandatory training.

Recommendation 4

The online Climate Change module should be included in statutory and mandatory training.

3.1.4. Planning

A process has been put in place to ensure the Climate Change service are a consulted party for all planning applications that could impact NCC's ability to deliver Net Zero by 2030.

3.1.5. Future of Farming

Given the rural nature of the county and the importance of the farming community to our rural economy, work is underway with the Economy & Regeneration team, Policy and the Climate Change service to deliver an evidenced based review of the future of farming, in partnership with Newcastle University.

3.2. Partnerships and Engagement

3.2.1. Community Climate Champions

A second cohort of Community Climate Champions have been added to the pilot group meaning that there are now 25 locations in Northumberland which have a Community Climate Champion. These champions have received training to support them develop Climate Change action plans for their communities which align to the Council's county-wide Climate Change Action Plan. Community Climate Champions have, in nearly all cases, identified a need for small amounts of funding to help them get their plans off the ground. A fund has been identified in the Council's upcoming budget which would be distributed through the Community Chest scheme.

Recommendation 5

The provision for targeted grant funding (Climate Change Community Fund £50,000 recurrent) for community climate change initiatives, that has been made in the upcoming Council budget, should be approved.

3.2.2. Working Group and Steering Group

The supporting role of the Climate Working Group and the Climate Change Steering Group with representation from across the county (residents, towns, urban areas, rural communities, business and the third sector) have been a key factor in the results achieved in the past 12 months.

3.2.3. Town and Parish Councils

A survey of all town and parish Councils has been conducted asking whether they had declared a climate emergency or had plans to address Climate Change. Of those who responded, the vast majority wanted to develop plans but identified a need for support. We are therefore in the process of developing a town and parish council Climate Change toolkit to support local climate action further. This toolkit could also be used by other community groups.

3.2.4. Free Tree Scheme

All 15,000 of this year's free trees have been allocated (5,691 to individual residents, 9,310 to groups). 2,200 have so far been handed out. Distribution was interrupted by Storm Arwen and rescheduled hand out events will take place in late February. Any trees not collected will be passed to the Great Northumberland Forest team for planting in Blyth and Cramlington as part of the Local Authority Treescape Fund.

Recommendation 6

Continue running the Free Tree Scheme each year up to the 2030 net-zero target with the intention of offering a tree for every household in Northumberland.

The benefits of the Free Tree scheme reach far beyond the carbon sequestered by each tree. Nevertheless, given that the average tree absorbs 10kg of CO₂ per year for the first 20 years of its life, we can estimate a carbon saving of 350,000kg over the two years the scheme has been running. By continuing to hand out 15,000 saplings per year for 10 years, the Free Tree Scheme alone has the potential to sequester approximately 8,250,000kg of CO₂ between 2020-2030, a figure which will only increase in future years as the trees mature.

3.2.5. Live Events

We have now held a four public webinars (three last year and one this January) and Q&As using Zoom. Each of these has been well attended with audiences of over 100. Across these events 295

questions were asked. We intend to continue holding live events on a quarterly basis and are currently analysing all 295 questions for emerging themes, which include: Green Finance, Active Transport and opportunities for Community Engagement. The answers to the most frequent questions will form the basis of future events and communication activities.

In addition to the online events, the Climate Change service have been asked to attend community led events across the county. These have ranged from Town and Parish Council meetings to stands at markets. Continuing to support these events demonstrates our commitment to community engagement.

3.2.6. Wider community engagement

We have two major communication channels with the wider Northumberland community. 6270 residents are now signed up to the Climate Newsletter. This provides a monthly update on the climate-relevant schemes and events happening in Northumberland, as well as providing useful information and tips for individuals to take action on Climate Change.

The Climate inbox is also an extremely valuable point of communication that allows direct communication with the Climate Change service. On a weekly basis, we get between 20-25 new queries to the mailbox alongside ongoing communications. To reach our net zero targets we will need to engage with and work alongside many different actors and sectors across Northumberland. The Climate Mailbox is often the first point of contact for this work and is therefore crucially important in facilitating our wider aims.

3.2.7. Net Zero Investment Strategy

Working with Advance, the Skills and Education service, Regeneration & Economy and Policy teams, the Climate Change service has created a Net Zero Investment Strategy. The Net-Zero Investment Strategy is the framework we will use to attract the investment and build the supply chain that the county needs to become net-zero, by 2030. The strategy focuses on the following areas:

- Natural Resources
- Generating, Supplying and Storing energy
- Changing the fabric of our homes and communities
- Moving around and through our county

Building on this strategy work is now underway with Newcastle University to complete further research and development activities into supply and demand for Synthetic Fuel and how this could enable rapid decarbonisation for:

- Complex rural issues (e.g. kerosene powered heating), where electric heat pumps may not be viable due to the fabric of older homes; and,
- Complex transport issues, where the cost of electrification is prohibitively high e.g. Heavy Goods Vehicles.

Three linked but separate projects will be started this year, the first looking at the demand side for heating, the second looking at the demand side for transport and the third looking at the supply side for all demand.

3.2.8. Future Projects

We are working to develop further means of engaging key stakeholders. A Schools Engagement Strategy is under development with support from colleagues in Education. We are also developing a

Business Engagement Strategy and hope to also be able to provide a toolkit for tourism providers this year.

3.3. Heating New and Existing Buildings

3.3.1. Warmer Homes Projects

The Council has successfully bid for a series of grants BEIS (Department of Business, Energy, and Industrial Strategy). In total these grants are worth £10.8 million and will improve energy efficiency in more than 500 of the most vulnerable homes in Northumberland.

Although each grant has their own specific criteria, they are all focussed on a 'fabric first' approach towards improving the energy efficiency of homes, or a conversion to low carbon heating.

The grants are all aimed at helping those households most at risk of fuel poverty, and the coldest/least energy efficient homes first. For eligible households in Northumberland (eligibility is slightly different for each scheme, but in general applies to properties with household income of less than £30,000 and an EPC rating of E or below) a range of measures can be used like external wall insulation, loft insulation, Air Source Heat Pumps, and solar photovoltaic panels, depending on what is most suitable for each home.

These funds will help NCC bring Social Value benefits to stakeholders at all levels (households, communities, delivery partners, and the NCC itself) through the following social value priority policy themes, Fighting Climate Change, Tackling economic inequality, Wellbeing and Covid 19 recovery.

Delivering Warmer Homes in 2022

Rather than relying exclusively on the Private Sector, we intend to deliver future schemes including Green Homes Grants LAD2 and the Sustainable Warmth Fund through an in-house retrofit team.

This team will be line managed within the Housing Team, with strategic, business intelligence and project management support from the Climate Change service. Adverts are currently live. Posts are funded through the grant funding awarded. This will enable us to have far greater control on the quality and value for money we offer through these schemes. We will still however, be reliant on resilient supply chains being able to deliver the materials and technologies to be installed. This will require a robust and well-managed procurement process.

Key Point 1

Note intention to deliver warmer homes schemes in house requiring close collaboration between colleagues in Climate Change, Housing and Customer Services. A dedicated report on the progress of warmer homes projects will be presented at Communities and Place OSC on 8th April 2022.

3.3.2. Public Sector Decarbonisation Scheme

The Climate Change service successfully secured two phases of funding to decarbonise heating at a range of NCC properties including leisure centres, schools and fire stations. Phase 1 will be complete by June 2022, with five sites having a ground source heat system installed that will reduce carbon emissions. Phase 1 had a total grant value of £3,012,580 for Willowburn leisure centre, Belford Fire Station, Swarland, Stamfordham, Stannington, and Alnwick Lindisfarne School. Phase 2 is in the process of being approved, with one bid for £148,210 waiting on a grant offer letter, and the second bid for £2,720,037 in the technical queries stage awaiting approval.

3.3.3. District Heat Schemes

Having completed heat mapping feasibility studies for low carbon district heat schemes in Blyth and Cramlington, we successfully applied for funding for the next stage – techno-economic feasibility studies. These will be procured and delivered during 2022. Schemes identified as feasible will then be progressed to business cases and bids for capital delivery.

A key aspect of this work will involve determining the best service delivery model for these schemes, to ensure they are commercially viable and affordable. This work will be undertaken in partnership with the Climate Change service, NCC Procurement and the North East LEP, to utilise their technical expertise in this area and involve assessment of other local, national and international delivery models for this type of scheme.

Key Point 2

Note the significance of the work needed to develop and agree the optimal service delivery model for District Heating Schemes in the county. The options under consideration and the recommended option will require Executive team and Member sign off.

We have also received funding to undertake stage one heat mapping in Berwick-upon-Tweed, Alnwick, Morpeth, Ashington and Hexham. These have been procured and will be delivered in quarter 1 of the 2022/23 financial year. We will then progress any feasible schemes to techno-economic stage.

3.3.4. Building Net Zero Schools

Work is underway, in partnership with the Education team, to support the build programme for new schools. The goal is to help facilitate the creation of new schools that can operate as 'net zero schools' and potentially as catalysts for district heating and / or community energy schemes.

3.4. Transport

3.4.1. Electric Vehicle Charging

We have continued to increase our electric vehicle charging provision across the county. This work takes place in collaboration with colleagues in Highways. A successful bid to the Office for Zero Emissions Vehicles (OZEV) has led to the installation of 30 new EV chargers targeted at residents who park on the street. This project is currently underway and all chargers will be commissioned and in service by the end of March.

Additionally, colleagues in Local Services have continued installing EV chargers in car parks, particularly where new car parks are being developed. This will lead to an additional 22 chargers serving up to 44 vehicles simultaneously by the end of 2021/22 financial year. This means that by the end of March we will operate over 100 chargers across the County making us one of the leading Local Authorities for EV charging.

Delivering EV Chargers in 2022 and Beyond

Going forward, it is intended that we significantly scale up our EV charging provision, focusing primarily on serving residents who park on-street and are therefore unable to install their own EV chargers at home. We will also continue installing chargers in key destinations and new car parks. A new bid to OZEV is being developed for 75 new on-street chargers in 2022/23. Further bids will follow on an annual basis.

To manage the quality of this work, these chargers will be installed and maintained by Council staff. This team will be line managed within the Highways team, with strategic, business intelligence and project management support from the Climate Change service.

Key Point 3

Note the intention to scale up EV charging provision through in-house delivery, funded through a combination of bids to the national OZEV scheme and NCC capital funding. The detail of the funding required will be specified in a standalone report and reviewed through the appropriate governance forums.

3.4.2. Synthetic Fuels

Hydrogenated Vegetable Oil (HVO) is a synthetic fuel which can be used as a substitute both for diesel in vehicles and for kerosene in heating. Burning HVO emits 90% less CO₂ than its fossil fuel equivalents.

This presents an opportunity to rapidly decarbonise our larger fleet vehicles, from 3.5 tonne tippers up to HGVs, where there are no economically or operationally viable electric alternatives currently available. Work is currently being undertaken to identify any issues or constraints regarding the implications of using HVO on manufacturers warranties on vehicles/engines etc.

This information is being used to help inform the development of a ~12 month pilot scheme for the use of HVO within some of the fleet vehicles at one of the depots, which will seek to assess the financial, operational and environmental performance of HVO. If successful, its use could then be quickly rolled out to our entire large vehicle fleet. This project will be delivered jointly by the Fleet team and the Climate Change service.

Key Point 4

Note intention to develop the business case for piloting HVO in Council owned large fleet vehicles where no viable electric alternatives are currently available. The detail of any funding required for this pilot will be specified in a standalone report and reviewed through the appropriate governance forums.

3.4.3. Fleet Replacement

Decarbonisation of our small van fleet has continued. 56 of our small vans have now been replaced with electric alternatives. Charging facilities have been installed in respective depots. Replacement of petrol-powered handheld equipment with battery alternatives is also continuing.

By 2025, assuming affordability assumptions remain stable and subject to availability of vehicles / robustness of the supply chain, 198 petrol or diesel vehicles in the NCC fleet will be replaced with electric alternatives. This will mean 50% of the eligible vehicles will be electric in the Council's fleet by 2025.

3.4.4. Active transport

There are twelve Local Cycling and Walking Infrastructure Plans (LCWIPs) entering consultation in February 2022, this is later than expected.

Following the assessment of the consultation feedback these plans will be further developed. The Levelling Up Fund may be able to support the capital infrastructure cost, the next application window is due to open in summer 22.

Key Point 5

Note progress with LCWIPs, assist in the communication of open consultations and support future developments, including closing links between the Climate Change service and the Active Transport team.

3.4.5. Other Projects

Several other key projects including the Northumberland Line and Blyth-Bebside cycle corridor are also continuing, led by colleagues in Economy and Regeneration. These will also contribute to reduced carbon emissions. The Climate Change team is also supporting the Transport team with mandatory carbon assessments of the Blyth Relief Road project and in discussions about the opportunity to decarbonise the school transport system.

3.5. Renewable Energy

3.5.1. Solar Car Port

The County Hall solar car port which will harvest energy from the sun through solar panels suspended above the County Hall car park, has encountered some delays over the past year. The issues have now been resolved and it is anticipated that the design, install and commissioning process will be completed within the 2022/23 financial year. The car port will also include 120 EV chargers for staff working at County Hall. Once complete this project will provide a blueprint for the sustainable use of further car parks, both private car parks within NCC's own estate and public car parks.

This project will be delivered jointly by the Climate Change service and Estates team.

3.5.2. Hexham Hydroelectricity Plant

A detailed feasibility study is being prepared into the possibility of hydroelectricity generation on the Tyne River at Hexham. The project has developed initial designs which are currently going through consultation with both Planning Authority and the Environment Agency. A proposal on how to take this forward from the Environment Agency is expected in February 2022 and subject to a mutually agreeable approach the feasibility should conclude in Summer 2022. If the scheme is identified to be feasible, a business case to fund construction will be presented to Cabinet via the Council's capital strategy governance route.

Key Point 6

Note, subject to the findings of the feasibility study and consultation, the intention to develop the business case for the Hexham Hydroelectric scheme.

3.5.3. Solar PV at Scale

The Climate Change service will be assessing the Council estate across the next three months to identify assets where solar PV can be installed to increase our renewable energy generation capacity and lower our carbon footprint. These will primarily be buildings but may also include car parks and historic landfill sites. Where projects are feasible, business cases will be created for consideration at Capital Strategy Group.

Key Point 7

Note intention to develop further business cases for installation of solar PV across Council estate, which will be specified in a standalone report and reviewed through the appropriate governance forums.

3.6. Carbon Sequestration

3.6.1. Great Northumberland Forest

The Great Northumberland Forest programme formally launched in autumn 2021. In reality, work has been taking place in support of this initiative since 2019. Land is identified for tree planting either at a large scale (woodland creation) or a small scale (hedgerows or individual trees). By the end of March 2022, 1,587 hectares of woodland will have been created and 321,893 further trees will have been planted since 2019. This means that in total, by the end of March 2022, nearly 3 million new trees will have been planted supporting the delivery of the Great Northumberland Forest initiative.

This project will be delivered jointly by the Climate Change service and the Great Northumberland Forest team.

3.6.2. Forest / Woodland management

Work is underway to develop a business case for a Woodland management team. This work is being completed jointly by the Climate Change service and the Great Northumberland Forest team.

Key Point 8

Note intention to develop a business case for creating a Woodland management team, which will be specified in a standalone report and reviewed through the appropriate governance forums.

3.6.3. Northumberland Peat Partnership

Peat has an important role to play in absorbing carbon dioxide. Restoring peatlands across the county will be a priority of the next Climate Change Action Plan as it delivers real-time carbon benefits. The Climate Change service is now represented on the Northumberland Peat Partnership alongside Ecology. In autumn 2021, the Peat Partnership was successful in being awarded £779,000 in revenue funding. This will largely fund project management positions to oversee conditional surveys and restoration projects for Northumberland's peatlands.

This project will be delivered jointly by the Climate Change service and the in-house team of Ecologists, working with our external Peat Partners, including both National Parks.

3.6.4. Biodiversity Net-Gain

The Climate Change Team will work closely with colleagues in planning to support the policy of biodiversity net-gain. Alongside this the projects above, whilst associated primarily with Carbon Sequestration, will improve biodiversity as a secondary objective.

3.7. Waste

3.7.1. Glass Recycling Pilot

The kerbside glass recycling pilot scheme has been running since November 2020 providing a once monthly collection of glass from around 4,000 households. Data from the period November 2020 to September 2021 shows that the trial scheme has been well received by participants with high satisfaction levels, requests for retention of the service and high yields of glass per household.

The costs of implementing the pilot scheme are as planned, with capital costs for purchase of bins being £63,000 and revenue costs for undertaking the collections and delivering on-going communications activity at £43,000.

The 301.3 tonnes of glass expected to be collected during the 12-month trial provides a positive contribution to tackling Climate Change, even after taking into account the CO₂ emissions from the collection and transportation of the recovered glass, with the trial delivering an overall net saving of 98 tonnes of CO₂e as of November 2021.

Going forward this data will be reviewed monthly to calculate carbon savings to report within the climate performance team.

3.7.2. Food Waste Pilot

A key element of delivering net zero in the county by 2030 is helping residents to understand the waste hierarchy and provide solutions for their waste. The Environment Act, recently passed into law, will mandate the separate collection of recycling waste streams for all English Local Authorities, one such being food waste.

We have been working with Waste Services to develop a proposal for a food waste pilot which will focus initially on the cost, performance and impact on residual waste that separate collections will have.

Using modelling provided by WRAP (<https://wrap.org.uk/about-us>), we can assume an average yield of 1.3 kg food waste per household per week, a pilot across 4288 properties will generate a yield of around 5.5 tonnes per week. This creates the opportunity to reduce carbon emissions by an estimated 12,220 kg CO₂e per year through diverting from Energy from Waste to Anaerobic Digestion, as well as increasing resident awareness of food waste and the impact that reduction can have both on the environment and on their household bills. This project would be delivered jointly by the Climate Change service and the Waste Services team.

Key Point 9

Note the intention to deliver a food waste pilot for the county, which will be specified in a standalone report and reviewed through the appropriate governance forums.

3.7.3. Repair Hubs

Working in partnership with the Communities Together Team, work is underway to identify sites and trades that could be part of Repair Hubs to help extend the life of everyday items for our residents.

3.8. Northumberland County Council Carbon Footprint

Analysis and evidence shows that NCC's organisational emissions have been dropping over the last 10 years of reporting and have now reached a 50.1% reduction against our 2009/10 baseline. It should be noted however that a significant drop in 2020/21 occurred due to reduced business mileage as a result of lockdowns. The Council's carbon footprint is now being measured biannually and reported through the corporate performance system.

Having met the Council's 50% reduction in operational emissions four years early, the Climate Change service is now developing a pathway to net zero for the organisation.

The strategy will support the key action areas developed in the 2021-23 action plan and will prioritise the decarbonisation of heat, transport and electricity across the estate. Net-zero for our operations will require the adoption of a methodology change to consider sequestration from Council owned and managed woodlands.

Since 2019 NCC has operated a travel salary sacrifice scheme, marketing primarily foreign holidays to staff. Due to the Covid-19 pandemic the scheme has been on hold since March 2020. Alternate low carbon schemes will be considered as part of the route to net zero for Council owned options, this could include access to low carbon heating, power and storage solutions for staff.

The proposal may also include analysis and proposals of the impact of green finance on our credentials as a low carbon Council.

It is expected that the Net-Zero plan for Council owned emissions will be available for consideration by Cabinet on or before June 22.

Key Point 10

Note the intention to develop plans to make the Council a carbon neutral organisation by 2030, which may also include proposals to change the salary sacrifice scheme.

3.9. Climate Change Action Plan 23-25

Work will be completed throughout 2022 to develop the Climate Change Action Plan for the 23-25. This will extend on the previous action plan and consider changes local, national and international knowledge and priorities. With the scope likely to include: Adaptation, Methane, and Green Finance.

It may also include Biodiversity, but given the scope and complexity of this area it is more likely that this will be the subject of a separate strategy and action plan and will require additional resources to complete.

Key Point 11

Note the intention to develop the next version of the Climate Action Plan, for 23-25, with a draft report being available for Executive Team and Member review in Autumn 2022.

Implications

Policy	Proposes Council policies should be aligned to mitigate Climate Change and support carbon reduction.
Finance and value for money	There are no direct financial implications associated with this report Notes that Climate Change work will be subject to corporate performance reporting in order to monitor success including value for money.
Legal	The Climate Change Act 2008 establishes a legally binding target to reduce the UK's greenhouse gas emissions by at least 80% in 2050 from 1990 levels.
Procurement	Refers to corporate social responsibility procurement policy.
Human Resources	Training of staff in carbon literacy.
Property	Projects for low-carbon heating and solar on NCC property
Equalities (Impact Assessment attached) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	Where possible projects and programmes will assist residents in fuel poverty and try to bring about fairer and more equal access to more affordable energy.
Risk Assessment	See corporate risk register
Crime & Disorder	N/A
Customer Consideration	Residents can expect the Council to lead a move to a net zero target by 2030. The Council will work to involve all residents and businesses in this process.
Carbon reduction	Adopting recommendations in this paper will either directly or indirectly lead to significant carbon savings.
Wards	All

Background papers:

Climate Change Action Plan 2021-23
Northumberland Climate Change Update September 2021

Report sign off.

Authors must ensure that relevant officers and Members have agreed the content of the report:

	Full name of officer
Monitoring Officer/Legal	Suki Binjal
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