DATA LABEL: PUBLIC

West Lothian Council

ENVIRONMENT POLICY DEVELOPMENT & SCRUTINY PANEL

QUARTERLY CLIMATE CHANGE UPDATE

REPORT BY HEAD OF PLANNING, ECONOMIC DEVELOPMENT & REGENERATION

A. PURPOSE OF REPORT

The purpose of this report is present to the Panel the first of the agreed quarterly climate change updates as set out in the new Climate Change Strategy, informing and advising of key announcements and changes in relation to climate change both during and in the period since COP26, and to present an updated design of the Climate Change Strategy which was approved at a meeting of the Council Executive on 26 October.

B. RECOMMENDATION

It is recommended that the Panel:

1. Note the content of the report including the changes to public sector reporting from March 2022, and;
2. Notes the updated design of the Climate Change Strategy 2021-28 attached as Appendix 1, and that this version will now be published on the council's internet and intranet.

C. SUMMARY OF IMPLICATIONS

I	**Council Values**	Being honest, open and accountable; making best use of our resources; working in partnership.
II	**Policy and Legal (including Strategic Environmental Assessment, Equality Issues, Health or Risk Assessment)**	The council is legally bound to comply with duties for public sector bodies within the Climate Change (Scotland) Act 2009. The duties require that the council must, in exercising its functions, act: (a) in the way best calculated to contribute to the delivery of the targets set in or under Part 1 of the Act; (b) in the way best calculated to help deliver any programme laid before the Scottish Parliament under section 53; (c) in a way that it considers is most sustainable. The report does not raise any equality issues.
III	**Implications for Scheme of Delegations to Officers**	None

IV	**Impact on performance and performance Indicators**	The new reporting requirements apply from the report year ending on 31 March 2022 onwards. It should be noted that following the publication of the Climate Change Strategy 2021-28, the council meets the majority of the new reporting requirements and will incorporate this information into the 2021/22 annual report.
V	**Relevance to Single Outcome Agreement**	Outcome 4 – We live in resilient, cohesive and safe communities. Outcome 8 - We make the most efficient and effective use of resources by minimising our impact on the built and natural environment.
VI	**Resources - (Financial, Staffing and Property)**	The climate emergency response and achieving net-zero will require significant financial support, particularly capital investment, as well as staff resource from services across the council. Potential for emissions reduction projects to also contribute to revenue savings.
VII	**Consideration at PDSP**	This is the first consideration at PDSP.
VIII	**Other consultations**	None.

D. TERMS OF REPORT

D.1 Background

Scotland is committed to 75% reduction in greenhouse gas (GHG) emissions by 2030, and net-zero by 2045 and it is recognised that the public sector will play a major part in achieving that commitment. During the period of COP26 the Scottish and UK governments made a number of announcements relevant to the public sector. These included guidance from Sustainable Scotland Network (SSN) and the Scottish Government which sets out amendments to statutory reporting duties and the public sector's role and in achieving the net-zero commitment.

Also published in the 'post COP' period the Climate Change Committee's (CCC) annual Progress Report and the 2022-23 Scottish Parliament Budget set the context in which the public sector will be acting. This briefing note summarises the CCC Progress Report, the key announcements made by the Scottish and UK Governments during COP26 and the SSN Public Sector Leadership on the Global Climate Emergency guidance. It also provides an update on measures outlined in the Scottish Budget 2022-23 relating to climate change targets.

D.2 Progress Report to Parliament

The CCC report to the Scottish Parliament on Progress in Reducing Emissions in Scotland was published on 7 December. The report sets its emissions data in the context of having taken thirty years to halve Scotland's emissions, and contrasts this with the ten-year timeframe needed to halve emissions again if we are to meet net-zero targets. The report stresses that the annual targets during the 2020s will be very difficult to achieve, even with the strongest climate policies. Emissions in 2019 were above the annual target

- this represents a warning in respect to future annual targets, as there is unavoidable inertia in scaling-up policy to reduce emissions in those sectors that have made only slow progress to date. Electricity generation has already been largely decarbonised providing limited scope for future emissions reductions in that sector. Future reductions will have to focus on sectors that have previously been slow to change i.e. surface transport (particularly private car use), agriculture and construction.

Total annual emissions fell by 2% in 2019, the latest year for which the data has been published. It is likely that emissions in 2020 will be considerably lower due to the COVID-19 pandemic, it is likely that this reduction will be in the region of 13%. This data will be published in June 2022. However, for 2022 onwards there is likely to be a significant rebound in travel demand and as travel accounted for 30% of emissions in 2019 meeting annual emissions targets will be highly challenging. Locking in behaviour changes from the pandemic that reduce emissions, such as working from home and active travel, will be needed to maximise lasting impacts. The ambitiousness of the Scottish Government's 2045 net-zero target supports West Lothian Council's decision to set our own targets inline with the Scottish Government's, and not attempting to exceed them.

D.3 Scottish Government Announcements during COP26

The following announcements which are relevant to West Lothian were made on or around the time of COP26:

- The Scottish Government announced the Nature Restoration Fund funding for action on the ground to address the biodiversity and climate crises by aiding nature restoration in Scotland's terrestrial and marine environment, enabling transformative change through large-scale, multi-year, multi-partner projects. Funding will comprise of at least £13.5 million for each year of the current Parliament session (£11 million capital departmental expenditure limits and £2.5 million resource departmental expenditure limits, per year), plus £1 million across the Parliament for administrative costs.

- Blackburn was chosen as one of seven towns to take part in The Climate Action Towns programme. Delivered by design agency Architecture and Design Scotland with funding of £146,000 from Scottish Government. The project aims to offer support to find ways of making changes at a local level that will help tackle the crisis, giving them a voice and engaging those that may not have previously engaged in climate action.

- The Hydrogen Action Plan published. This is a five-year plan which sets out a target for 5 gigawatts (GW) of green and blue hydrogen to be produced by 2030 and 25GW by 2045. This is backed by more than £100 million of funding for capital investment.

- National Planning Framework 4 was released for consultation. It proposes that planning applications must show how they help meet Scotland's targets to cut emissions to net zero by 2045 to get approval under new proposals. Applications that create more town centre homes or help reuse vacant and derelict land will be more likely to succeed. There is also a focus on 20-minute neighbourhoods.

- The most environmentally damaging single-use plastic items will be banned from 1 June 2022. The ban will apply to the following single-use items: plastic cutlery (forks, knives, spoons, chopsticks), plates, straws, beverage stirrers and balloon sticks; food containers made of expanded polystyrene; and cups and other beverage containers made of expanded polystyrene, including their covers and lids.

- Heat Networks Delivery Plan published as draft for consultation. It sets out how the provisions of the Heat Networks (Scotland) Act 2021, and related policies, will contribute to increased heat networks across Scotland. It also outlines the proposed regulatory regime for the heat networks sector in Scotland.

- Draft statutory guidance published on the Guiding Principles on the environment and the duties set out in Part 2 of the UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021.

D.4 UK Government Announcements during COP26

The Glasgow Climate Pact agreed the first climate deal to explicitly plan to reduce coal. $500bn pledged to emerging economies by 2025. The commitments from COP26, if fulfilled, will only limit global warming to 2.4^{o}C. Over 35 countries, 11 car manufacturers and others have committed to rapidly accelerating the transition to zero emission vehicles to achieve the goals of the Paris Agreement. The UK pledged that all new heavy goods vehicles (HGVs) in the UK will be zero-emission by 2040.

The pact also notes the importance of ensuring the integrity of all ecosystems, including in forests, the ocean and the cryosphere, and the protection of biodiversity (recognised by some cultures as Mother Earth) and also notes the importance for some of the concept of 'climate justice', when acting to address climate change. It also emphasises the importance of protecting, conserving and restoring nature and ecosystems to achieve the Paris Agreement temperature goal, including through forests and other terrestrial and marine ecosystems acting as sinks and reservoirs of greenhouse gases and by protecting biodiversity, while ensuring social and environmental safeguards.

D.5 SSN 21 Oct Public Sector Leadership on the Global Climate Emergency Guidance

Changes in reporting

The Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Amendment Order 2020 sets out that public bodies will be required to provide in their annual reports:

- where applicable, the body's target date for achieving zero direct emissions of greenhouse gases, or such other targets that demonstrate how the body is contributing to Scotland achieving its emissions reduction targets;
- where applicable, targets for reducing indirect emissions of greenhouse gases;
- how the body will align its spending plans and use of resources to contribute to reducing emissions and delivering its emissions reduction targets;
- how the body will publish, or otherwise make available, its progress to achieving its emissions reduction targets; and
- where applicable, what contribution the body has made to helping deliver Scotland's Climate Change Adaptation Programme.

Public bodies are required to report targets on their operational/organisational emissions. These include reducing direct emissions, where possible, to absolute zero, and reducing indirect emissions in advance of Scotland's 2045 net-zero target. The Scottish Government wants public bodies to drive down emissions as close to zero as possible, as quickly as possible. This includes supply chain emissions. However, targets should remain achievable. Baseline emissions must be clearly defined, if there is a change in reporting boundary or emissions calculation then it might be appropriate to re-baseline. For indirect emissions it may be appropriate to have a range of targets covering specific categories of indirect emissions. Any emissions trade-offs should be recognised e.g. reduced communing vs. increase energy consumption in employee's homes.

Net zero targets must:

- be clear on what is in scope of the target;
- should cover all of the organisations' scope 1 & 2 emissions and appropriate areas of scope 3;
- have interim reduction targets at set periods that align to the Scottish Government interim targets years, and;
- the use of natural sequestration or carbon offsetting to achieve net zero targets should be mapped out, and the 'residual emissions' that will be sequestered should be estimated as part of net zero planning.

Residual emissions must be as small as possible and any assumptions and uncertainties clearly explained. Progress towards the targets must be reported in annual Public Bodies Duties report. If one or more interim targets are not met a catch-up plan should be produced which:

- reviews the organisation's emissions;
- analyses why targets were missed;
- implements corrective action, and;
- identifies senior sponsor who will be accountable for delivery.

The new requirements apply from the report year ending on 31 March 2022 onwards. It should be noted that following the publication of the Climate Change Strategy 2021-28, the council meets the majority of the new reporting requirements and will incorporate this information into the 2021/22 annual report. Officers are investigating where further action or information may be required to ensure full compliance.

Ecology & Biodiversity

Increasing investment in Scotland's natural capital is vital to achieving Scotland's climate change targets. Expanded natural carbon sinks (e.g. planted trees) play a significant role in the CCC's pathway for Scotland to reach net-zero by 2045.

The Scottish Government sees offsetting as an important means of mobilising private investment into projects. However, offsetting is not a replacement for emissions reductions, and should always be purchased in addition to action to reduce emissions as close to zero as possible at the time of purchase, and as part of targets and transition plans aligned with the Paris Agreement. Scottish Government will continue to improve its policies and actions across the board, in order to leverage private investment into Scotland's natural capital and into nature-based climate solutions.

<u>Offsetting Projects on Scottish Government or Agencies' Land</u>

The Scottish Government and its agencies will seek to increase the availability of verified offset available to purchase in Scotland, by responsible purchasers in order to deliver additional forestry and peatland restoration, that accelerates Scotland progress towards the net zero targets. Any offset projects on publicly owned land, available for sale in Scotland should continue to be verified to the highest available standard: currently the Woodland Carbon Code and Peatland Code, or any future standard of equivalent or higher environmental credibility. Scottish Government or agency offsetting agreements will be prioritised towards companies or organisations where there is clear evidence that they are already taking extensive and far-reaching action to reduce emissions, such as putting in place a transition plan aligned with the Paris Agreement, but wish to go beyond what is currently expected of them.

<u>Natural Sequestration Projects on Public Sector Land</u>

If public bodies own land that is suitable for investment to improve carbon sequestration rates, then they may wish to develop their own natural sequestration projects. They may use the sequestration achieved to net off any residual emissions, or potentially use land to support Scotland's wider decarbonisation goals. The following key principles were framed by Connecting Nature – a project funded through EU Horizon 2020. They provide a useful introduction to identifying and developing natural sequestration solutions:

- Does it use nature/natural processes?
- Does it provide/improve social benefits?
- Does it provide/improve economic benefits?
- Does it provide/improve environmental benefits?
- Does it have a net-benefit on biodiversity?

Any natural sequestration projects developed on public sector land should consider the above questions.

Natural sequestration projects should use the best available quantification methods such as the Woodland Carbon Code. For habitat types that do not currently have a code then the most up to date and comprehensive data should be used. Further codes are in development for certain habitat types and once developed these should be used. In 2021 the Environment Agency published a detailed report in the offsetting opportunities in the UK that provides information on sequestration of a wide range of habitat types, beyond those currently covered by codes. If the organisation intends to create offset credits to trade then a formal code e.g. Woodland Carbon Code must be used.

This is a new and developing area. As this develops supporting information and guidance will be published. Scottish Government is currently leading partnership initiatives which aim to significantly increase the level of private investment in nature-based solutions, such as peatland restoration. Any public body that is developing natural sequestration projects on their land should keep Scottish Government informed.

Other Relevant Information

Potential funding sources announced include a £1.8 billion commitment to capital support over five years set out in the Heat in Buildings Strategy. This will come with a monitoring and evaluation framework still to be published. The Scottish Green Decarbonisation Scheme commits £200 million capital support over 5 years for decarbonisation of public sector buildings with a minimum of £5 million capital funding to be made available in 2022/23.

The Scottish Government is working with SSN to produce capability framework for public bodies, which should be adopted when introduced.

In relation to the recovery from the Covid-19 pandemic, where an organisation has working from home (WFH) at scale and WFH is seen as a way to reduce emissions then WFH emissions must be estimated, included in reporting, and behaviour change initiatives and campaigns can be used to engage employees on minimising the impact of WFH. The council included an estimate for WFH emissions in the 2020/21 Climate Change Declaration report using the methodology provided by SSN.

Actions for WLC

A number of actions with specific target dates are outlined in the table below, including an update on progress against those objectives.

Area	Action for WLC	Target Date	Comment

Reporting	Must set and report target date for zero direct emissions and for reducing indirect emissions.	Nov 2022	2045 net zero target date set out for direct and indirect emission in Climate Change Strategy.
Fleet	Phase out petrol & diesel cars from fleet and light commercial vehicles. Phase out petrol & diesel in all new larger vehicles.	2025 2030	Fleet Decarbonisation Working Group established, will continue to work with Scottish Government on phasing out petrol & diesel vehicles. The group will report in early 2022.

Other actions include:

- The Climate Change Plan sets a target of 2032 for Scotland's electricity system to be powered largely from renewable sources. As a minimum, public bodies must aim to reduce emissions from electricity consumption in accordance with national targets.
- The Heat Networks (Scotland) Act 2021, will place a duty on public sector bodies to undertake a Building Assessment Report for buildings within their estate. Provisions will include: the potential for the non-domestic building to be supplied with thermal energy by means of a heat network; and the period for which any system providing thermal energy to the non-domestic building is expected to continue to operate effectively and efficiently.

The costs associated with the actions required to achieve net-zero emissions will be significant. From a fleet perspective, an initial financial impact assessment based on current market vehicle cost has identified an increase in budget requirement between £2.4 and £4.8m to replace and operate traditional petrol and diesel vehicles with alternatively fuelled versions. Objectives set out in the Scottish Government's Heat in Buildings Strategy include replacing a significant proportion of existing fossil fuel heating systems with low carbon equivalents in both domestic and non-domestic buildings. While a detailed analysis of the potential costs associated with this (including associated improvements to energy efficiency) has still to be carried out, looking at comparative studies elsewhere the costs of upgrading our non-domestic properties is likely to be between £70 and £100 million.

SSN Conference

The SSN Conference held on 8 December provided an opportunity for officers across the public sector to discuss the Public Sector Leadership on the Global Climate Emergency Guidance. Emerging from that discussion was an emphasis on the need to be proactive instead of reactive to statutory guidance, as meeting the 2045 net-zero target will require public bodies to go beyond their legal duties. Particular emphasis was put on the need to go beyond conventional scope three boundaries and the potential of adding a net-zero criteria to supply chain emissions was discussed.

D.6 Scottish Budget 2022-23

The Cabinet Secretary for Finance and Economy announced a funding package to accelerate Scotland's COVID recovery and help transition the country towards a net-zero wellbeing economy. The Cabinet Secretary stated the Scottish Government's intention to implement the recommendations of the Just Transition Commission.

The 2022-23 Budget allocates:

- £2 billion to low carbon capital investment in Scotland's public infrastructure – for the decarbonisation of homes and buildings, transport and industry.
- £60 million pledged for large scale heat decarbonisation projects and an investment of £53 million for industrial decarbonisation projects.
- £23.5 million pledged for a Green Jobs Fund.
- £150 million for active travel infrastructure.
- £43 million for developing the circular economy.
- £53 million for nature restoration, including peatlands.
- £69.5 million for woodland creation and sustainable management of woodlands - along with an increase in woodland creation target to 15,000 hectares.

More than £13 million has been awarded to local authorities to increase the quantity and quality of recycling in Scotland. A further nine local authorities have successfully bid for support from the Scottish Government's Recycling Improvement Fund, bringing the total investment to date to £20 million. West Lothian Council has secured £4,047,223 with a focus on the introduction of twin stream recycling.

The Scottish Government MCS Certification Fund will provide heating engineers with funds to pay their first-year fees to become MCS certified on heat pumps (either air, ground or water source). The grant will pay 75% of the certification fees, up to £1,000, and will run until the end of March 2022 while funding lasts.

An additional £18 million will be available this year to help householders install energy efficient measures and reduce their heating bills, bringing the total support available through Home Energy Scotland to £50 million in 2021-2022.

A new £13 million green energy investment has been announced by the Scottish National Investment Bank to accelerate the delivery of the Iona Wind Partnership's onshore wind project.

Zero Waste Scotland and Social Investment Scotland have launched the Social Enterprise Net Zero Transition Fund. The Fund is designed to support social sector organisations and the wider third sector to make the transition to carbon net zero by supporting projects that will reduce their carbon footprint, including activities that reduce energy consumption; improve energy efficiency; develop or move to renewable energy sources. The Fund provides loans from £10,000 (a small grant may also be available, in some cases).

Investment of £12.3 million has been awarded, so far this year, by Scottish Enterprise, South of Scotland Enterprise and Highlands and Islands Enterprise as part of the £100 million Green Jobs Fund and is expected to create and safeguard over 850 green jobs.

E. CONCLUSION

There has been a significant amount of activity in relation to climate change since the publication of the council's Climate Change Strategy in October and the COP26 conference in November. Officers continue to monitor and identify relevant guidance, policy and legislative changes and consider how they will impact on the delivery of the objectives set out in the strategy and officers will include updates in future quarterly reports to the Panel. The revised design of the Climate Change Strategy 2021-2028 will be published on the council's internet and intranet pages.

F. BACKGROUND REFERENCES

Climate Change Strategy - West Lothian Council 26 October 2021
https://coins.westlothian.gov.uk/coins/viewDoc.asp?c=e%97%9Di%91oy%8C

Climate Change (Emissions Reduction Targets) (Scotland) Act 2019
https://www.parliament.scot/bills-and-laws/bills/climate-change-emissions-reduction-target-scotland-bill

CCC Report to the Scottish Parliament – Progress in Reducing Emissions in Scotland 2021
https://www.theccc.org.uk/publication/progress-reducing-emissions-in-scotland-2021-report-to-parliament/

SSN/Scottish Government Guidance - Public Sector Leadership on the Global Climate Emergency
https://www.gov.scot/publications/public-sector-leadership-global-climate-emergency/

Appendices/Attachments: Appendix 1 –West Lothian Council Climate Change Strategy 2021-2028 (Redesign)

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1 February 2022

Climate Change Strategy.

2021-2028.

West Lothian Council

West Lothian Council

Climate Change Strategy. 2021-2028.

Contents

Foreword		3
1	Introduction	4
1.1	Context	4
1.3	About West Lothian	4
1.3	Key Drivers	5
1.4	Science of Climate Change	7
1.5	Green Recovery	9
1.6	Developing the Strategy	9
1.7	Scope and Ownership of the Strategy	10
2	Council Priorities	11
2.1	Corporate Plan – Transforming Your Council	12
2.2	Local Outcomes Improvement Plan	13
3	The Path to Net-Zero	14
3.1	Progress to Date	14
3.2	Net Zero Emissions Targets	16
4	Partnership & Community	18
5	Strategy Outcomes	20
5.1	Outcome 1 – Energy	20
5.2	Outcome 2 -Transport:	25
5.3	Outcome 3 -Waste	30
5.4	Outcome 4 - Adaptation, Resilience & Biodiversity	32
5.5	Outcome 5 – Land Use and Management	36
5.6	Outcome 6 - Embedding Climate Action	39
6	Delivering the Strategy	41
6.1	Monitoring & Reporting	41
6.2	Communications	41
Appendix 1 - Council Emissions 2019-20		42
Appendix 2 – Governance		43
Glossary		44

Foreword

West Lothian Council is committed to improving the quality of life for people in West Lothian, and making this the best possible place to live, work and do business. One of the biggest challenges we have to address in order to deliver this commitment is the impact of climate change.

Following on from the council's declaration of a Climate Emergency in September 2019, this Climate Change Strategy marks a firm commitment by the council to take action on climate change. It provides a framework for the council's actions as a public sector organisation aimed at reducing greenhouse gas emissions and preparing for the unavoidable impacts of changing weather patterns through the period 2021-2028 while also considering the pathway to achieving a net-zero West Lothian by 2045 at the latest.

Efforts to lessen the impact of climate change can also bring opportunities, such as cost savings from reduced energy bills and making better use of our resources, new business and employment opportunities, supporting healthier, more sustainable lifestyles and making our communities more resilient. The strategy aims to make sure West Lothian is best placed to benefit from these opportunities.

No single person or organisation can tackle climate change alone, so we are asking our partners, businesses, community groups and individuals to embrace the changes that must take place. There are many small changes we can all make to reduce our impact on the environment that, together, will help secure a better future for everyone in West Lothian.

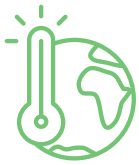
1 Introduction

1.1 Context

The world is in the midst of a Climate Emergency which requires urgent and meaningful action at an international, national and local level in order to safeguard our planet for future generations.

Scotland's climate is already changing. Our warmest 10 years on record have all been since 1997 and climate projections for the next century indicate that the climate trends observed over the last century will continue and intensify over the coming decades.

We all have a part to play to make West Lothian a more sustainable place to live and work



There has been an increase in rainfall in the past few decades and mean sea level around the UK has risen by approximately 1.4mm/year from the start of the 20th century.

The International Panel on Climate Change (IPCC) global climate change report published in August 2021 has been seen as a "code red for humanity". The report makes it clear that human activities have unequivocally caused observed increases in greenhouse gas emissions and that we are perilously close to hitting the internationally agreed threshold of 1.5°C of warming, beyond which the impacts of climate change and the measures required to adapt become significantly more challenging.

As well as reducing our emissions (mitigation), we will need to consider how we adjust to the impacts of climate change to reduce negative impacts and exploit any opportunities (adaptation). Our buildings will need to be able to cope with more extremes in summer temperatures, intense rainfall events and potential changes in wind and storm patterns.

Our infrastructure systems are likely to be impacted by an increase in disruptive events. Summer droughts may become more frequent and more severe, causing problems for water quality and supply. A warming climate may provide more opportunity to be outdoors and enjoy a healthy and active lifestyle while reducing mortality in winter; however, it could affect patterns of disease and other health issues. Climate change and associated extreme weather may disrupt the lives of individuals and communities, limiting access to vital services and impacting on people's physical and mental health. Emergency services may need to respond to an increased frequency and severity of flooding, landslide and wildfire events.

Climate change will, therefore, have an impact on us all now and for future generations. We all have a part to play to make West Lothian a more sustainable place to live and work.

Building a nature rich future is critical in addressing the causes and impacts of climate change. Climate change and biodiversity are inextricably linked. Our changing climate is accelerating the loss of nature, and at the same time restoring habitats can play a key role in helping us to address climate change and achieve net zero greenhouse gas emissions.

1.2 Key Drivers

The Climate Emergency

The term "Climate Emergency" came in to widespread use in 2019 following global protests to raise awareness of the significant climatic changes which were occurring as a result a warming of the atmosphere from human and natural activities.

Defined by the Oxford Dictionary as "a situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it", over 1,800 local governments in 34 countries have made climate emergency declarations (as of April 2021) including West Lothian Council which declared a climate emergency in September 2019.

Our declaration states that:

"Council recognises that the world is in the midst of a climate emergency which requires urgent and meaningful action at international, national and local level in order to safeguard our planet for future generations.

Council further agrees that having more environmentally progressive policies can lead to improved health, high quality jobs and more sustainable communities.

Council notes that West Lothian Council signed the Climate Change Declaration in 2007. Council further notes the significant work to date to make West Lothian a more environmentally friendly and sustainable place to live and work, and that the Council's agreed carbon reduction targets are already being exceeded."

The council has been committed to taking action to mitigate and adapt to the impacts of climate change for some time. The council's first Climate Change Strategy, the West Lothian Climate Change Strategy 2015-2020, provided a framework for change. As reported in November 2020, the council significantly exceeded its emissions reduction target of 20% from our baseline year of 2013/14, achieving an overall decrease of 40%. This new strategy builds on the progress made through the earlier strategy to provide the direction required to achieve our ambition of becoming a net-zero West Lothian by 2045 at the latest while recognising the significant challenges that will need to be overcome to achieve this goal.

A Global Response

The importance of tackling climate change has been recognised globally. Negotiations during the 21st Conference of the Parties (COP21) led to the Paris Agreement, ratified by 191 of the nations participating in the United Nations Framework Convention on Climate Change (UNFCCC). The Agreement's long-term temperature goal is to keep the rise in the global average temperature to well below 2 °C above pre-industrial levels; and to pursue efforts to limit the increase to 1.5 °C, recognising that this would substantially reduce the risks and impacts of climate change.

Following on from the Paris Agreement, the IPCC was invited to provide a Special Report on the impacts of global warming of 1.5°C above pre-industrial levels. Amongst other findings, the report concluded that global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate and that every effort should be made to ensure that temperature increases are limited to 1.5°C. The IPCC's latest report, published in August 2021 suggests that this threshold will be hit around 2040 and that more urgent action is required to reduce the current rate of warming.

UN Sustainable Development Goals

The 17 Sustainable Development Goals (SDGs) are a universal call to action to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere. These were adopted by all UN Member States in 2015 as part of the 2030 Agenda for Sustainable Development, and each goal has targets and indicators that UN member states are expected to use in setting their agendas over the next 15 years. Climate Change is at the core of how many of these goals can be delivered and as such, tackling climate change is essential for achieving sustainable development for all.

UN Sustainable Development Goals

In a drive towards a low carbon future, the Scottish Government set out ambitious emissions reductions targets in the Climate Change (Scotland) Act 2009. The targets were amended and updated in the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, with the new goal of reducing Scotland's emissions of all greenhouse gases to net-zero by 2045 at the latest, with interim targets for reductions of at least 56% by 2020, 75% by 2030 and 90% by 2040. While challenging, these targets present Scotland with significant social and economic opportunities, and require a range of actions across society and the economy.

The Climate Change (Scotland) Act 2009 places duties on all public bodies to contribute to emission reduction targets, deliver programmes to increase resilience against Climate Change and to act in a 'Sustainable' way. Under the act, the council is identified as a 'Major Player' due to its size and influence and, therefore, must submit a mandatory climate change report to the Scottish Government on an annual basis, detailing our progress in mitigating and adapting to climate change and outlining the actions undertaken and planned to reduce the council's environmental impacts. This updated Climate Change Strategy will be underpinned by a suite of actions which will support delivery and allow for more effective reporting.

In Scotland's latest climate plan - 'Climate Change Plan: Third Report on Proposals and Policies 2018-2032 (RPP3)', further expectations are placed on the public sector to increasingly demonstrate how its own operations are driving down emissions. RPP3 sets out the path to a low carbon economy while helping to deliver sustainable economic growth and secure the wider benefits to a greener, fairer and healthier Scotland in 2032.

Scotland's National Performance Framework

This Strategy has been developed in line with the outcomes and values set out in Scotland's National Performance Framework (NPF). This Strategy largely relates to NPF outcome: 'Environment - We value, enjoy, protect and enhance our environment'.

1.3 Science of Climate Change

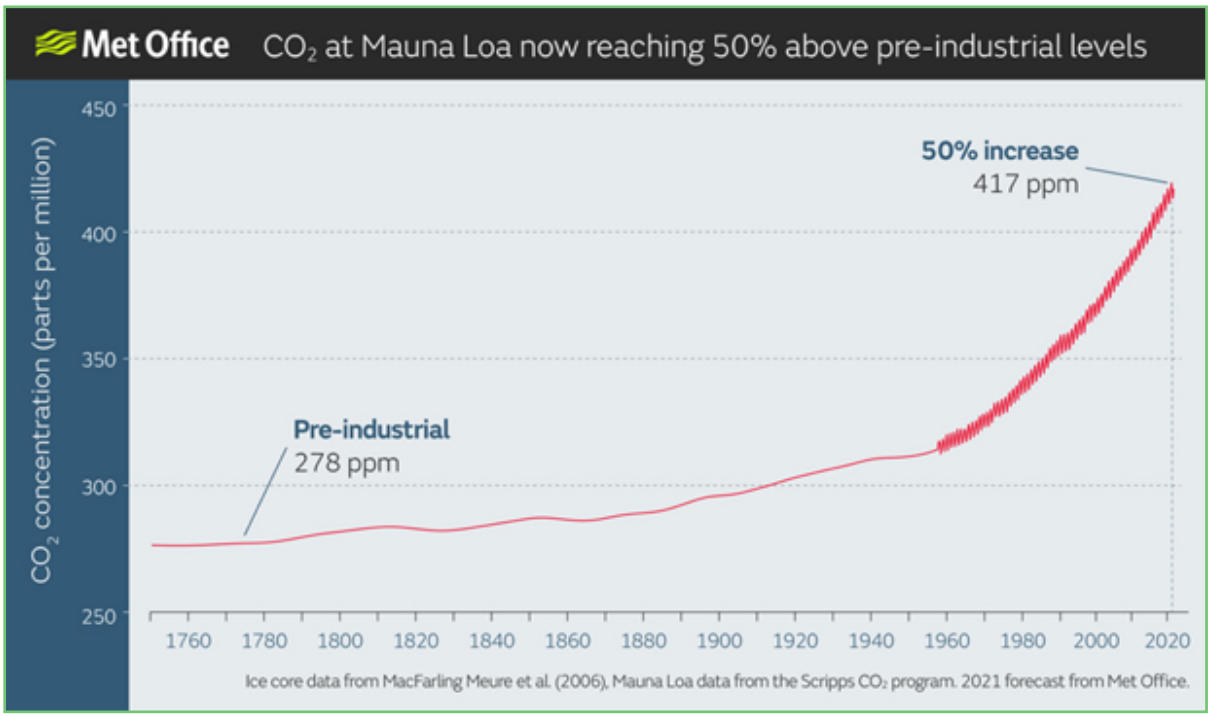
It is now clear that our climate is changing and that human influence is the key contributing factor.

Changes observed over several decades include increases in global average air and ocean temperature, rising global sea levels, widespread reduction of snow and ice cover, and changes in atmospheric and ocean circulation and regional weather patterns, which influence seasonal rainfall conditions.

The Intergovernmental Panel on Climate Change (IPCC) sets out the following established facts:

- Human activities are estimated to have caused approximately 1.2°C of global warming above pre-industrial levels;
- It is likely that the internationally agrees 1.5°C warming threshold will be hit between 2032 and 2050;
- In 2019, atmospheric CO2 concentrations were higher than at any time in at least 2 million years. The concentration of greenhouse gases in the earth's atmosphere is directly linked to the average global temperature on Earth;
- The concentration has been rising steadily, and mean global temperatures along with it, since the time of the Industrial Revolution;
- Climate change is already affecting every inhabited region across the globe with human influence contributing to many observed changes in weather and climate extremes; and
- Projected changes in extremes are larger in frequency and intensity with every additional increment of global warming.

The science behind climate change is supported by extensive scientific research performed and reported across the world. Monitoring data from NASA shows that the parts per million (ppm) atmospheric concentration of CO^2 has increased from 380ppm in 2005 to 417ppm in July 2021. In context, concentrations are 48% above pre-industrial levels found in 1850 and the highest historical level recorded from ice cores was 300ppm, recorded 300,000 years ago .



At a United Kingdom level, the Met Office published their UK Climate Projections in 2018 (UKCP18) . This latest generation of climate projections provides users with the most up to date scientific evidence on predicted changes to our climate using a range of low, medium and high impact scenarios.

For Scotland, it is anticipated that:

- Average temperatures will increase across all seasons.
- Weather will remain variable and may become more variable.
- Typical summers will be warmer and drier.
- Typical winters will be milder and wetter.
- Intense, heavy rainfall events will increase in both winter and summer.
- Sea levels will rise.
- There will be reduced frost and snowfalls.

The degree of changes that will be experienced will depend very much on how successful we are in reducing emissions globally.

1.4 Green Recovery

At the same time as actions to address the international Climate Emerging were gathering pace, the unprecedented global impact of the coronavirus pandemic has changed many aspects of our lives.

Reduced economic activity during the pandemic resulted in a number of short-term climatic benefits. It is widely recognised that the recovery from the pandemic creates an opportunity to build on these benefits and develop a greener society. In June 2020 the Committee on Climate Change published their annual report to the UK Parliament which included five investment priorities to drive the green recovery from the pandemic. These are:

- Low-carbon retrofits and buildings that are fit for the future.
- Tree planting, peatland restoration, and green infrastructure.
- Energy networks must be strengthened.
- Infrastructure to make it easy for people to walk, cycle, and work remotely.
- Moving towards a circular economy.

The priorities identified align with the outcomes set out in this strategy and support the council's net-zero objectives.

1.5 Developing the Strategy

The Climate Change Strategy has been prepared to ensure that activities to tackle the climate emergency contribute to the achievement of the outcomes identified within the council's Corporate Plan (2018-2023) and the West Lothian Local Outcomes Improvement Plan (LOIP) (2013-23).

The strategy commits the council and to achieving a number of targets that aim to mitigate the effects of climate change by reducing emissions and ensuring that West Lothian is well adapted and prepared for changing weather patterns brought about by climate change.

The approach adopted in developing this strategy ensures that it provides sound governance and a robust framework for ensuring that Climate Change is addressed in all future relevant council strategies, policies, management and action plans. This will enable the council to turn the aspirations and related actions of this document into reality while creating a framework for supporting others in West Lothian such as communities and businesses to contribute to a net-zero area.

1.6 Scope and Ownership of the Strategy

Due to the wide scope of climate change and the related activities, every service area within the council will need to assist delivery of the strategy outcomes, alongside community planning and other partners.

The Head of Planning, Economic Development & Regeneration is the owner of this Climate Change Strategy and has responsibility for climate change activity at a corporate level. In support of that role, each service area has a lead officer with the following areas of responsibility:

- Setting, monitoring and reviewing the actions and interim targets for mitigation of, and adaptation to, climate change.
- Reporting the activities of the Climate and Sustainability Working Group to service areas including through management and team meetings.
- Ensuring that climate change and sustainability understanding and action is embedded in all core corporate and business planning processes across the council.
- Prioritising the implementation of climate change actions and projects and removing obstacles to successful implementation.
- Reviewing and championing plans for the financial provision of climate change projects.
- Promoting a culture of low carbon and sustainable behaviour within the council as a whole and amongst staff at all levels.
- Supporting the council's budget strategy through reducing the cost and impact of the council's use of resources, including water, energy, and transport fuel.

Heads of Service have ultimate responsibility for climate change actions and targets within their service area although they may delegate their responsibility to a Service Manager to ensure that day to day management responsibilities are clear and that delegated decision making is undertaken at the appropriate level.

The Climate Change and Sustainability Working Group (CCSWG) has responsibility for identifying and ensuring delivery of the council's climate change outcomes, and assessing, informing and influencing progress on actions and targets. Progress reports from the CCSWG will be provided to the Executive Management Team and Corporate Management Team on a biannual basis to ensure that there is corporate oversight of progress against strategy objectives. The CCSWG also functions as the Community Planning Partnership (CPP) thematic forum and is responsible for taking forward the LOIP actions in relation to the environment. All performance indicators under the environment outcome in the LOIP are governed through the CCSWG. Performance against the outcome is reviewed at meetings, and reported back to the CPP Steering Group by the lead officer. The CPP Board also receive and scrutinise the performance reports. The lead officer for the group is the Head of Planning, Economic Development & Regeneration. Further details on governance can be found in Appendix 2.

Council Priorities

2.1 Corporate Plan – Transforming Your Council

The council has set eight priorities in the current Corporate Plan (2018/19 to 2022/23) in consultation with the local community, partners, stakeholders and our staff.

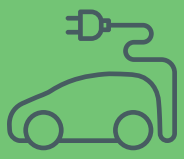
These priorities represent will help our community to grow and succeed and as a result, will be a focus for council resources in the years ahead as we strive to deliver positive change in each one. Figure 1 below illustrates where the Climate Change Strategy will directly contribute or support the delivery of each council priority or enabler:

Council Priorities		Climate Change Strategy
1	Improving attainment and positive destinations	✓
2	Delivering positive outcomes and early interventions for early years	✓
3	Minimising poverty, the cycle of deprivation and promoting equality	✓
4	Improving the quality of life for older people	✓
5	Improving the employment position in West Lothian	✓
6	Delivering positive outcomes on health	✓
7	Reducing crime and improving community safety	✓
8	Protecting the built and natural environment	✓

To ensure that the Climate Change Strategy contributes to the council's aim of making West Lothian the best possible place to live, work and do business, six Climate Change Strategy Outcomes (CCS Outcomes) have been identified:

Outcome 1 - Energy

We will continue to reduce the council's own carbon footprint and encourage and support others in West Lothian to reduce theirs.



Outcome 2 - Transport

We encourage sustainable transport and active travel by implementing measures to help people make smarter, sustainable travel choices, supported by low emission transport networks & infrastructure while further reducing our own fleet emissions.

Outcome 3 - Waste

We encourage householders and businesses to make the right choices when disposing of waste and will support the drive for sustainability, reducing the environmental impact of the residents of West Lothian.

Outcome 4 - Adaptation, Resilience & Biodiversity

We will continue to build a resilient and well adapted West Lothian where natural ecosystems are protected, sustainably used and strengthened while services, communities and places are adapting to cope with climate change impacts (including land use, buildings and infrastructure).

Outcome 5 - Land Use and Management

We understand the scope and benefits of local carbon offsetting and manage our publicly owned land assets in a way that contributes to our path to net-zero.

Outcome 6 - Embedding Climate Action

We embed climate action in our policies and practices across the council and create a culture of sustainability and resource efficiency.

Further details on the CCS outcomes and their associated actions are provided in section five of the strategy.

The council has already demonstrated a significant commitment to tackling the climate emergency by taking action to reduce our impact on the environment and adapt to the impacts of climate change. The strategy outcomes set out how we will build on the progress made to date on climate change related issues and support the council's priorities going forward.

2.2 Local Outcomes Improvement Plan

West Lothian's Local Outcomes Improvement Plan 2013-2023, 'Achieving Positive Outcomes' commits the council and its partners to work together to make sure that West Lothian is the best place possible to live, work and do business in for everyone.

Helping to achieve Scotland's national outcomes for the environment and building a sustainable West Lothian is a key priority for the Community Planning Partnership. This means valuing and enjoying our built and natural environment, and protecting and enhancing it for future generations. It also involves managing our natural resources in a more sustainable way, and working together to reduce the impact of climate change. The council is committed to working with its partners on mitigating and adapting to climate change and promoting sustainable development and the LOIP includes the outcome "We make the most efficient and effective use of resources by minimising our impact on the built and natural environment".

3 The Path to Net-Zero

3.1 Progress to Date

Council Emissions

In order to develop a pathway to net-zero, it is important to understand our current position. The council has been reporting annual emissions since 2007, originally as a signatory to Scotland's Climate Change Declaration and more recently as part of the Public Bodies Duties set out in the Climate Change (Scotland) Act 2009. This provides us with clear, consistent and comprehensive data on our emissions since our baseline year of 2013/14.

In our 2019/20 report, emissions from our activities totalled 36,635 tonnes CO_2e , a reduction of 24,426 (40%) from our baseline footprint of 61,061 tonnes.

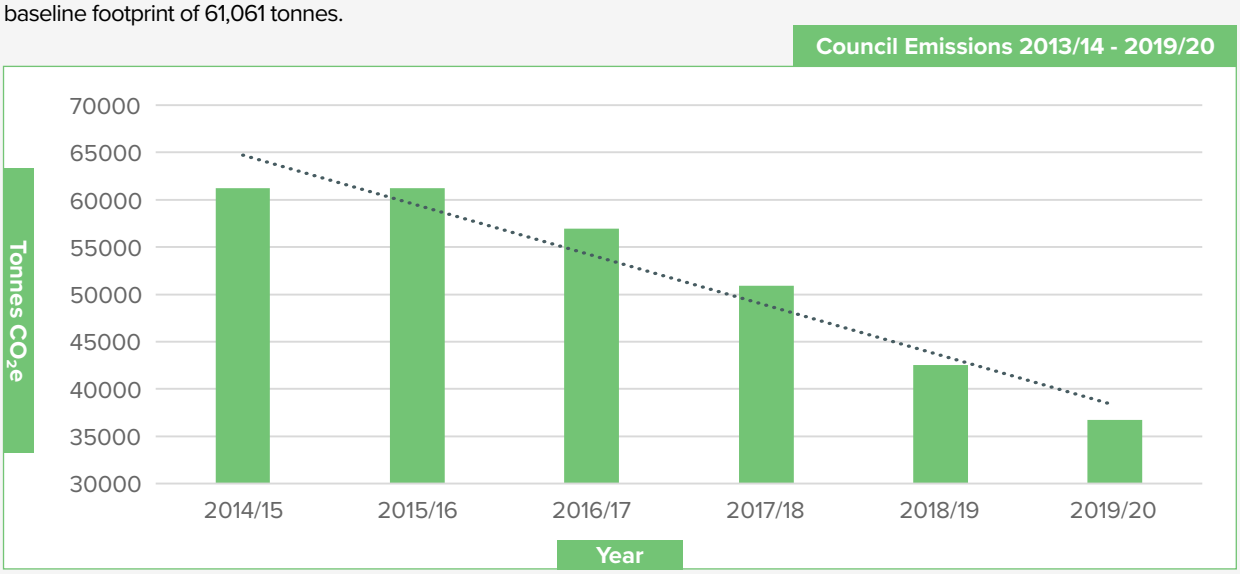


Figure 1 – Council Emissions CO_2e 2013/14 – 2019/20

The scope of the council's carbon footprint includes energy consumption in non-domestic council owned operational buildings, water supply and treatment, different waste streams, transport (including own-use mileage), and all external lighting. As outlined in figure 2, the overall emissions split has not changed considerably over that period, although the three overarching streams (utilities, waste & travel) have all contributed to the overall decrease. Full details of the breakdown of the council's emissions in 2019/20 are provided in Appendix 1.

The council will keep the scope of emissions under review, and will investigate additional scope 3 emissions in future strategy updates.

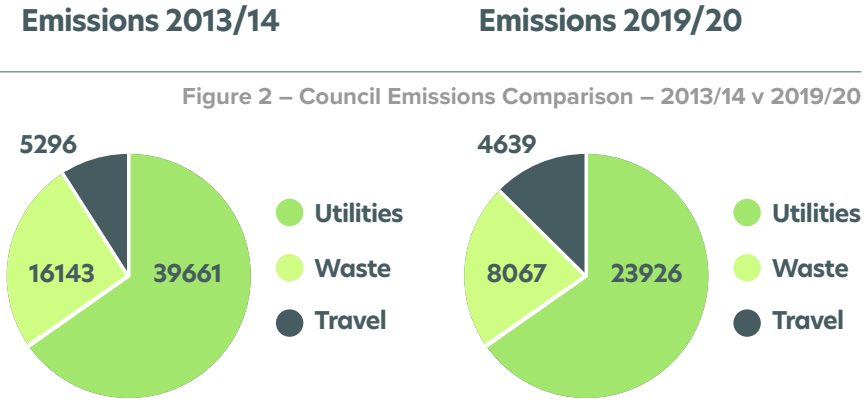


Figure 2 – Council Emissions Comparison – 2013/14 v 2019/20

There are a number of direct actions that have contributed to our emissions reductions including the implementation of energy efficiency projects, replacing street lighting with low energy LED equivalents and investing in renewable and low carbon technologies such as biomass boilers and solar photovoltaic (PV) panels. Another key driver has been a reduction in the emissions factor for grid electricity. This factor is applied to our consumption figure to establish our emissions and has reduced considerably over time as the carbon intensity of the grid has reduced. This has been a result of the shift from the use of traditional carbon-based fuels such as coal and gas for electricity generation to cleaner sources such as wind and solar. It is anticipated that the emissions factor for electricity will continue to reduce, with targets for the national grid to be net-zero carbon by 2050. It is this de-carbonisation that is driving the transition from fossil fuels to electricity for heating and transport.

West Lothian Wide Emissions

Statistical data for carbon dioxide emissions at a local authority level is published annually by the Department for Business, Energy & Industrial Strategy (BEIS) and includes estimated emissions from the industrial and commercial sector, domestic emissions including from gas and electricity consumption and emissions from transport. From 2014 the dataset also includes emissions from land use, land-use change and forestry.

West Lothian's per capita emissions have reduced by 1.4 tonnes (19%) since our baseline year of 2013/14, and while this is positive, more will need to be done to accelerate progress. The data highlights some of the key challenges to be faced in achieving a net-zero area in future. As outlined in Table 2 (below), West Lothian has a rapidly growing population and therefore demand for council and private sector services increases. In addition, while every other sector has decreased, transport emissions have actually risen since the baseline year, influenced mainly by road travel and the West Lothian's strategy location within the motorway and 'A' road networks.

Year	Industry Total	Commercial Total	Public Sector Total	Domestic Total	Transport Total	LULUCF Net Emissions	Grand Total	Population ('000s, midyear estimate)	Per Capita Emissions (t)
2013	219.6	190.5	60.1	384.3	383.3	35.2	1,273.0	176.2	7.2
2014	186.9	149.7	53.3	324.2	384.5	34.0	1,132.6	177.2	6.4
2015	194.3	130.0	51.9	317.3	394.7	33.5	1,121.7	178.6	6.3
2016	195.2	104.2	39.4	302.2	398.1	58.8	1,097.9	180.1	6.1
2017	199.1	101.9	32.0	285.6	405.4	30.3	1,054.4	181.3	5.8
2018	198.3	98.5	33.0	285.2	401.9	29.1	1,046.0	182.1	5.7
2019	210.2	114.3	35.9	279.6	388.4	28.1	1,056.4	183.1	5.8

Figure 3 – West Lothian area emissions by sector

The public sector figure used in Figure 3 consists of emissions from combustion of fuel in public sector buildings, such as schools, hospitals and offices. LULUCF refers to Land use, land use change and forestry. This relates to emissions and removals of greenhouse gases resulting from direct human-induced land use such as settlements and commercial uses, land-use change, and forestry activities.

3.2 Net Zero Emissions Targets

The National Targets

Net zero emissions are achieved when the emissions produced are balanced by those removed from the atmosphere. The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 sets targets to reduce Scotland's emissions of all greenhouse gases to net-zero by 2045 at the latest, with interim targets for reductions of at least 56% by 2020, 75% by 2030 and 90% by 2040 from a 1990 baseline year (with some exceptions using a 1995 baseline) . To help ensure delivery of the long-term targets, the legislation also includes annual targets for every year to net-zero.

West Lothian Council Targets

As part of our response to the Climate Emergency, West Lothian Council aims to achieve a net-zero position by 2045 at the latest, in line with Scottish Government targets set out above. While the council uses a different baseline year, it was assumed in our previous Carbon Management Plans that council emissions had broadly followed national reductions and that our original 2020 reduction target of 20% would give us an equivalent reduction of 42% from 1990 levels (equalling the Scottish Governments original interim target). This would put the council's 1990 emissions figure at around 85,700 tonnes CO_2e. On that basis, the revised interim target of 56% by 2020 would equate to a figure of 37,708 tonnes CO_2e from the council's operations. In our last reporting year (2019/20), our actual emissions (rather than net) were 36,635 tonnes.

Based on this information, and in order to align with the wider Scottish Government goals, the council's new emissions targets are:

Target Year	Reduction Level (from 2013/14 Baseline)	West Lothian Council Target (Tonnes CO_2e)
2028	61%	23,813
2030	65%	21,371
2040	86%	8,426
2045	Net-zero	0

Figure 4: West Lothian Council Net-zero Targets

To achieve this, the council must reduce the emissions generated from its operations to achieve a figure as close to zero as possible, and by 2045 ensure that we remove the same amount of greenhouse gases that we put into the atmosphere. Current levels of carbon offsetting from council owned land will be assessed during 2021/22 and an update provided to the Environment Policy Development & Scrutiny Panel in spring 2022.

The first interim target (2028) of 23,813 tonnes equates to an annual reduction figure of just over 5% per annum from our 2019/20 emissions figure as set out in figure 5 below. Progress against our emissions targets will be reviewed annually as part of our annual Climate Change Report and updated every five years.

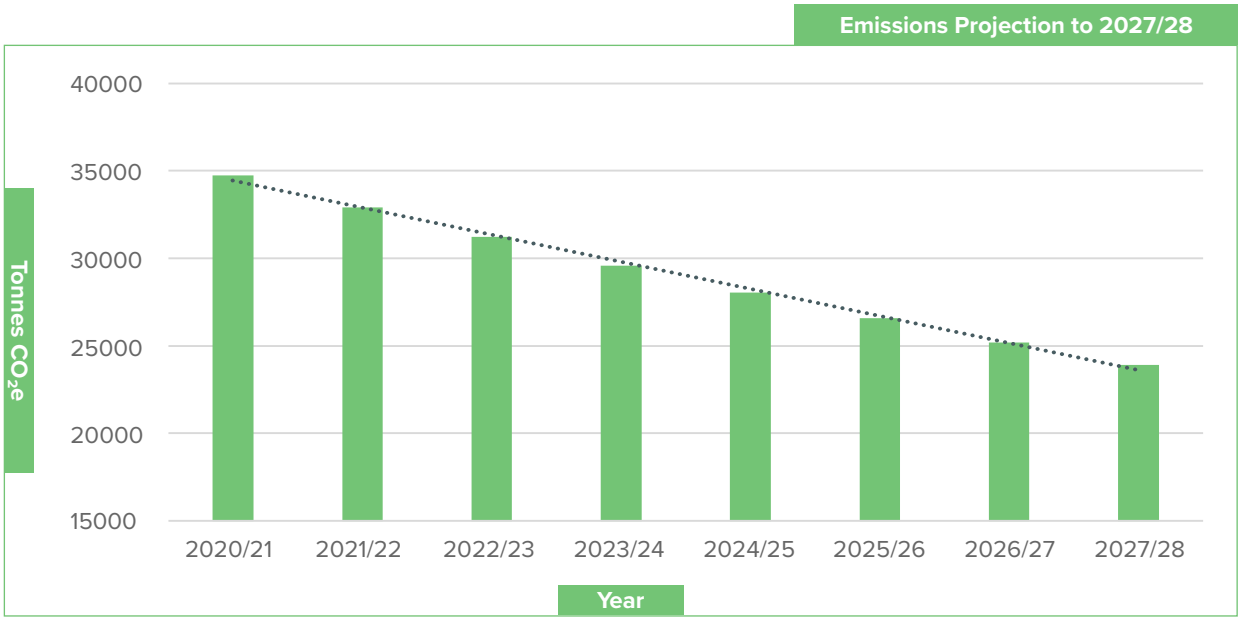


Figure 5: Emissions projection to 2028

Achieving a net zero emissions position will require significant financial, resource and infrastructure support from the Scottish Government and others. The council will continue to work with government, partners and other agencies to quantify the scale of the challenges presented and identify appropriate solutions.

West Lothian Wide Target

The council will encourage and support our partners, residents and businesses throughout West Lothian to reduce their emissions in line with the Scottish Government targets set out above. Achieving a net zero West Lothian will require significant support at a local and national level and will be significantly influenced by policies at a United Kingdom and Scottish Government level, particularly in relation to issues such as transport emissions where significant infrastructure and behavioural changes will be required.

4 Partnership & Community

Community Planning Partnership

It is recognised that a sustained partnership effort is required to achieve our net zero carbon target, involving all public agencies, businesses and communities across West Lothian. It is also important that the response to the Climate Emergency is community-led.

A great deal of work has been carried out to date to engage local partners and communities. The West Lothian Community Planning Partnership (CPP) Board held a meeting themed around the Climate Emergency in September 2019. As a result of this meeting a CPP Climate Change Seminar was held to further discuss the common challenges, opportunities and potential for collaboration and partnership working. The session was facilitated by the Sustainable Scotland Network and was well attended by partners, council services, community councils and local young people. Emerging themes from the discussion included Legislation, Policy and Finance; Partnership and Leadership; Engagement, Awareness-Raising and Communication. A CPP action plan was developed based on these discussions, identifying the short, medium and long-term actions around how partners will work together to tackle the Climate Emergency.

These discussions also fed into development of the CPP's forthcoming revision to the 2013-23 Local Outcomes Improvement Plan. Taking a partnership approach to achieving net zero carbon was identified as a key priority by community planning partners and communities through the LOIP engagement process and will be a key area of focus in the new LOIP.

As part of the council's Climate Emergency Declaration in September 2019, it was recognised that youth engagement and involvement would play a key part in the response to the climate emergency.

As part of the council's Climate Emergency Declaration in September 2019, it was recognised that youth engagement and involvement would play a key part in the response to the climate emergency. A climate change survey was carried out with young people in early 2021 with focus groups to follow as a result.

The survey had 1,184 respondents and gathered important information around what climate change means to young people, their understanding of climate change and local activities, what changes are required around skills and knowledge, lifestyle, diet, land use and travel and ideas for how the council can support young people and wider communities around climate action. Key findings include:

- There is a good understanding on the global impacts of climate change and most young people appear to have a good understanding of how they can help tackle climate change.
- More education is required (in schools and across the community) to raise awareness of local activities already underway to tackle climate change and how young people and wider communities can make a difference. It was also felt that education should start at a younger age.
- Most respondents felt that climate change is already having a big impact on young people (e.g. in terms of the weather, air quality, worries for the future, not being listened to and pressure on young people to make changes).

West Lothian College held a Sustainability Summit in March 2019 to raise awareness of the Climate Emergency amongst staff and students, to discuss how to combat climate change at West Lothian College and to announce their decision for “no single use plastic” from March onwards.

The council’s Energy & Climate Change Manager and Community Planning Development Officer attended the Summit and delivered a workshop to students and staff, providing an overview of activities that the council and CPP are undertaking to tackle the Climate Emergency and also to carry out some engagement.

An online survey tool was used to gather further information on where climate change ranks in young people’s priorities, what are the best ways to raise awareness with young people, what the young people would like to see happening locally to support climate action and how communities could be supported to do more. The information gathered provided valuable insight and will be used to shape the new LOIP and CPP Climate Change Strategy.

All of the above engagement has fed in to the Climate Change Strategy development process.

Wider West Lothian Community

Going forward, the council will improve collaboration with our partners and communities to identify and take forward actions to tackle the climate emergency, improving understanding amongst young people and the wider community on the impact of climate change and what individuals, communities, partners and businesses can do to help achieve net zero carbon.

In order to ensure that the response to the climate emergency is community led, the council will work with local organisations with an interest in climate change to develop a coordinated approach to climate action, sharing information and best practice.

The council’s Economic Development & Regeneration Service continues to work with local business on the net zero carbon agenda. In addition to a regular series of free workshops on tackling the issues around the climate emergency, the council are also enabling firms to access expert help from specialist providers. A series of job grants have been developed so that local businesses can employ dedicated net zero Champions while creating higher-value job opportunities. The council will continue to support businesses they will play a critical part in achieving a net-zero West Lothian.

5 Strategy Outcomes

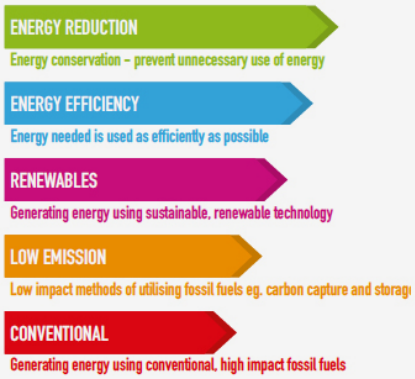
5.1 Outcome 1 - Energy:

We continue to reduce the council's own carbon footprint and encourage and support others in West Lothian to reduce theirs.

The Scottish Government published its Energy Strategy in 2017, setting out a pathway to 2050 and recognising some of the challenges and opportunities presented in developing our future energy systems.

Energy Hierarchy

To ensure that a balanced approach is taken to reducing our energy use, the council follows the general principles developed by the Scottish Government. The fundamental principle is to first reduce the amount of energy used in the first place, often through changing behaviours.



Local Heat & Energy Efficiency Strategies (LHEES)

At the heart of planning a place based, locally-led and tailored approach will be Local Heat & Energy Efficiency Strategies (LHEES). Once in place these local strategies will provide a framework for taking an area-based approach to heat and energy efficiency planning and delivery. LHEES will set out the long-term plan for decarbonising heat in buildings and improving their energy efficiency across an entire local authority area, supporting Scottish Government objectives to have 35% of heat for domestic buildings and 70% of heat and cooling for non-domestic buildings supplied using low carbon heat technologies, where technically feasible by 2032. For each local authority area, the strategies will draw on a consistent, data driven methodology to:

- set out how each segment of the building stock needs to change to meet national objectives, including achieving zero greenhouse gas emissions in the building sector, and the removal of poor energy efficiency as a driver of fuel poverty;
- identify heat decarbonisation zones, setting out the primary measures for reducing emissions within each zone, with a view to these zones acting as a potential trigger for regulation in the future if required, and;
- prioritise areas for delivery, against national and local priorities.

It is proposed by the Scottish Government that the development of a LHEES will become a statutory duty with strategies to be in place by 2023.

Action E1

The Council will develop a Local Heat & Energy Efficiency Strategy by 2023, building on the experiences from the work undertaken in the phase 2 pilot and in line with Scottish Government guidance.

Energy Use in Council Buildings

Current Energy Use & Carbon Emissions

The council's most recent Climate Change Declaration Report 2019/20, submitted to the Scottish Government in November 2020, highlighted an overall emissions figure for the organisation of 36,635 tonnes CO_2e. Energy consumed in our buildings accounted for 19,925 tonnes (or 54.4%) of the total amount, making our estate the largest contributor to our overall emissions.

Emissions from council buildings have been on a continued downward trend since our emissions baseline year of 2013/14, falling from 30,808 tonnes.

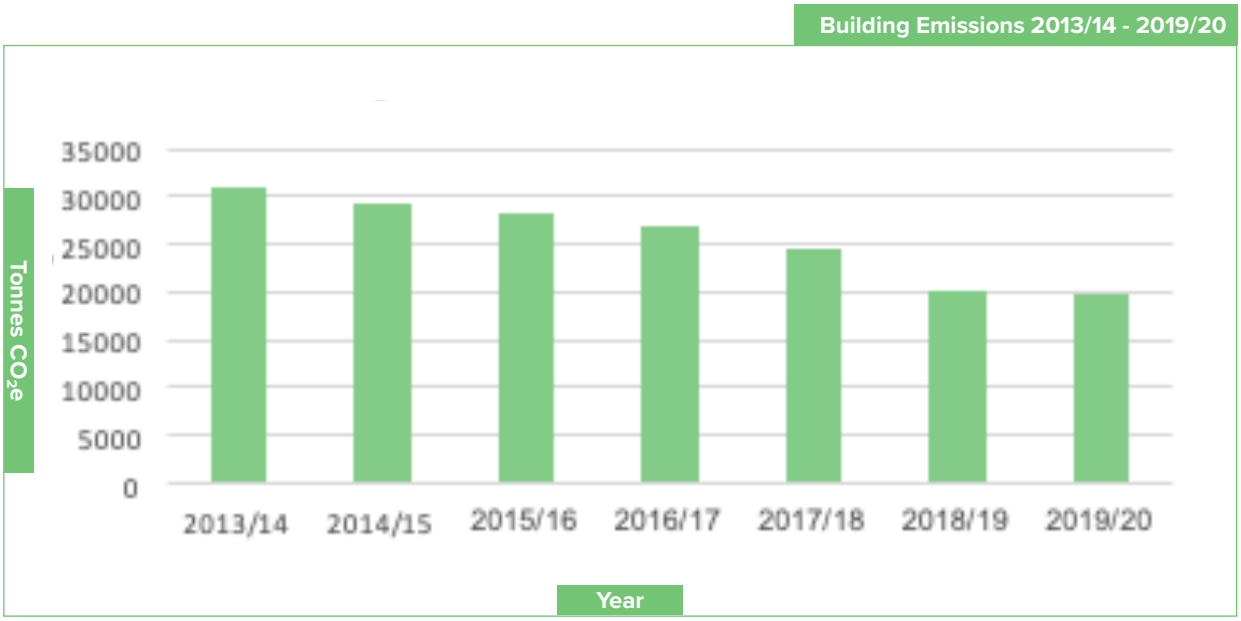


Figure 6: Emissions from buildings 2013/14 - 2019/20

There are a number of direct actions that have contributed to the reductions in our emissions including the implementation of energy efficiency projects and investment in renewable and low carbon technologies such as biomass boilers and solar photovoltaic (PV) panels. Another key driver has been a reduction in the emissions factor for grid electricity as explained in section 3.1. It is anticipated that the emissions factor for electricity will continue to reduce, with targets for the grid to be net-zero carbon by 2050. It is this de-carbonisation that is driving the transition from fossil fuels to electricity for heating and transport.

Improving Energy Efficiency & Decarbonising Existing Buildings

Decarbonising the existing building stock will present significant challenges for the council. It should first be recognised that our existing buildings, at least in the short to medium term, will never reach a zero-carbon position and that we will have to offset some emissions to achieve net-zero. There are a number of factors influencing this including the age of our building stock and the costs & complexity of upgrading. That does not, however, prevent us from striving to reduce our energy consumption and therefore emissions as much as possible.

The most significant challenge will be in managing the transition from current fossil fuelled heating systems to low carbon alternatives.

Action E2

The council will continue to invest in energy efficiency, renewable energy and other low carbon solutions to reduce our energy consumption and related emissions. We will reduce our emissions in buildings in line with the net-zero targets set out in section 3.2 of the Strategy.

Improving Energy Efficiency & Decarbonising Future Buildings

The council is already demonstrating a strong commitment to ensuring that our future buildings are as energy efficient as possible. This has been demonstrated recently with the development of the first public Passivhaus early learning and childcare facility in Blackridge. Future education buildings will conform with the strict energy efficiency targets set out in the Scottish government's Learning Estate Investment Programme (LEIP) and the BB101 (2018) standards for ventilation, thermal comfort and indoor air quality. The LEIP targets set out a challenging objective of achieving a measurable total energy consumption of 67kWh/m^2 in operational use, far lower than current averages.

Image 1: Blackridge Early Years facility

In the Climate Change Plan 2018-2032 Update published in December 2020, the Scottish Government has also committed to work collaboratively with the public sector to introduce a net-zero public buildings standard and the council will monitor progress on these developments and implement as required.

Action E3

The council will, as a minimum, achieve the standards set out in the LEIP and BB101 and will implement new standards for net-zero public buildings when introduced.

West Lothian Council Housing

Existing Stock and the Energy Efficiency Standard for Social Housing post 2020 (EESSH2)

The Scottish Government Guidance for Social Landlords on the Energy Efficiency Standard for Social Housing (EESSH) was introduced in March 2014 and encouraged landlords to improve the energy efficiency of social housing in Scotland. The first milestone for social landlords to meet for social rented homes was 31 December 2020. A second milestone was confirmed in June 2019, for social rented houses to meet by December 2032 (EESSH2). Decarbonising the existing housing stock and meeting the EESSH2 milestones will present significant challenges for the council. It should be noted that as with the council's non-domestic buildings our existing housing stock, at least in the short to medium term, is unlikely to reach a net zero-carbon position and that we will have to offset some emissions to achieve net-zero.

The council's Capital Programme of works will focus on the elements in the Route Map below to meet the EESSH2 standards. As time moves forward and as innovations in technology allow, further solutions may be investigated. Solutions to be explored will be around heat recovery technology, such as waste water, flue gas, and ventilation. Other elements which will be explored include floor insulation, Internal Wall Insulation where technically feasible, and provision of LED light bulbs and lighting.

Year	Lofts	Walls	Heating	Windows & Doors
2025	Minimum of 270mm insulation	All cavities filled and all solid walls to have External Wall Insulation (EWI)	Full central heating system	All are double glazed
2032	Minimum of 270mm insulation	All cavities filled and all solid walls to have External Wall Insulation (EWI)	Full central heating system A – rated boiler or low carbon alternative	Triple glazed windows High performance doors
2040	Minimum of 270mm insulation	All cavities filled and all solid walls to have External Wall Insulation (EWI)	Full central heating system A – rated boiler or low carbon alternative	Triple glazed windows High performance doors
2045	Minimum of 270mm insulation	All cavities filled and all solid walls to have External Wall Insulation (EWI)	Full central heating system – low carbon solution	Triple glazed windows High performance doors

Energy Standards for New Build Council Housing

Emissions from buildings are responsible for approximately 20% of Scotland's total greenhouse gas emissions. Energy efficient buildings reduce the demand for heat. Regardless of which system supplies a building's heating requirements, it is important that action is taken to limit the amount of energy that needs to be delivered to a new home to meet the heating demand to the best levels practicable. We also have to ensure that demand for heat in our housing stock is as low as possible, to meet our fuel poverty obligations and to protect consumers from high energy costs and cold homes. The Scottish Government are reviewing the energy standards which are included in Building Regulations. These will improve the energy efficiency of new buildings and include measures in support of the move to low carbon and renewable heat.

The council will make a strong commitment to ensuring that our future new build housing stock is as energy efficient as possible. It is proposed that all new build council housing stock are designed and constructed to meet the requirements to achieve an A – Rated Energy Performance Certificate (EPC) in terms of both the building's 'energy efficiency rating', and the building's 'environmental impact rating', which shows the buildings CO2 emissions. In addition to this it is proposed that all future new build council housing stock should meet all 8 requirements to achieve the current Scottish Building Standards "Silver" Standard.

Action E4

The council will investigate the implementation of strict energy efficiency standards recommended in The Committee on Climate Change (CCC) report "Reducing emissions in Scotland – 2019 Progress Report to Parliament" and report our findings in 2022. The standards state that homes must achieve 'ultra-high' levels of energy efficiency consistent with a space heat demand of 15-20 kWh/m^2/year, a figure similar to the space heating demand of a Passivhaus building.

Alternative Heating Sources for New Build and Existing Stock

Although significant headway has been made in the decarbonisation Scotland's homes and businesses (this figure represents a 24% reduction in emissions from 1990 the base reporting year for carbon dioxide emissions, Scotland cannot meet its legislated climate change targets unless virtually all emissions from heating (and cooling) buildings are eliminated. This means, in effect that by 2045, zero emissions heating will need to be deployed across Scotland's building stock. Through the use of zero direct emissions at point of use heating systems - coupled with very high levels of energy efficiency in new homes – West Lothian Council have the opportunity to greatly reduce our emissions, and move towards our net zero carbon targets.

Action E5

The Council will produce a revised and updated Employers Requirements Design Guide for council Housing in 2022/23 as part of the council's pathway to net-zero.

Renewable Energy

Using renewable energy rather than fossil fuels can significantly decrease energy related emissions and will play a key role in achieving net zero. The pace of investment and share of renewable energy as a proportion of the energy we generate and consume in Scotland has increased considerably over the past decade as the cost of technologies fall and efficiencies continue to rise. In 2020, the equivalent of 97.4% of Scotland's electricity use was generated from renewable sources such as solar and wind.

The council has already implemented a range of renewable and low carbon energy projects including the installation of solar panels and heat pumps in non-domestic buildings and council housing and biomass boilers at six sites including West Lothian Civic Centre. There is significant potential to further increase the renewable energy generation using West Lothian Council assets, including larger scale solutions on council owned land. In addition, the integration of technologies such as battery storage can help to ensure that the power generated is used when most required, helping to balance future challenges presented by electric vehicle charging and the decarbonisation of our heating systems.

Action E6

The council will continue to implement renewable and low carbon solutions where technically and financially feasible, will investigate the potential for large scale renewable installations on council owned land and will identify opportunities for the use of new technologies such as battery technology where appropriate.

Summary of Actions

Action E1	The Council will develop a Local Heat & Energy Efficiency Strategy by 2023, building on the experiences from the work undertaken in the phase 2 pilot and in line with Scottish government guidance.
Action E2	The council will continue to invest in energy efficiency, renewable energy and other low carbon solutions to reduce our energy consumption and related emissions. We will reduce our emissions in buildings in line with the net-zero targets set out in section 3.2 of the Strategy.
Action E3	The council will, as a minimum, achieve the standards set out in the LEIP and BB101 and will implement new standards for net-zero public buildings when introduced.
Action E4	The council will investigate the implementation of strict energy efficiency standards recommended in The Committee on Climate Change (CCC) report "Reducing emissions in Scotland – 2019 Progress Report to Parliament" and report our findings in 2022. The standards state that homes must achieve 'ultra-high' levels of energy efficiency consistent with a space heat demand of 15-20 kWh/m^2/year, a figure similar to the space heating demand of a Passivhaus building.
Action E5	The Council will produce a revised and updated Employers Requirements Design Guide for council Housing in 2022/23 as part of the council's pathway to net-zero.
Action E6	The council will continue to implement renewable and low carbon solutions where technically and financially feasible, will investigate the potential for large scale renewable installations on council owned land and will identify opportunities for the use of new technologies such as battery technology where appropriate.

5.2 Outcome 2 -Transport:

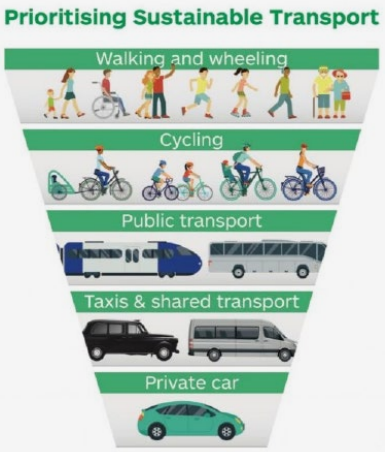
We further reduce our own fleet emissions and encourage sustainable transport and active travel by implementing measures to help people make smarter, sustainable travel choices, supported by low emission transport networks & infrastructure.

Emissions from transport amounts to approximately 37% of the total CO2 emissions for the West Lothian area. As highlighted in section 3.1 of the Strategy, it is also the only major sector where emissions have increased since the council's baseline year. Achieving our emissions targets can only be achieved with modal shift away from petrol/diesel car use, and significant improvements in the transport sector. The Scottish Government's Programme for Government 2021-22 sets out national ambitions to remove the majority of diesel buses from public transport by the end of 2023, reduce car kilometres by 20% by 2030, decarbonising Scotland's railways by 2035 and phasing out the sale of new petrol and diesel cars by 2030.

West Lothian's strategic location at the heart of the national road and rail network means that a significant proportion of movements between Glasgow and Edinburgh and other parts of the central belt of Scotland travel through the area. A large proportion of the transport related emissions in this area – almost 70% - are generated by national traffic using the 'A' road and motorway networks and are therefore outwith the Council's direct influence. The Council can, however, influence the travel patterns of residents and businesses within our area using a range of positive measures to help encourage a reduction in car use in line with national targets. Measures include improved walking and cycling opportunities, working with bus operators to enhance public transport, expanding the network of Park and Ride facilities and expanding the network of Electric Vehicle (EV) Charging Points. Through these actions, the Council will contribute to the national target of reducing vehicle kilometres by 20% (by 2030).

Action T1

The Council will continue its work with partners to develop road and passenger transport infrastructure to reduce car use through mechanisms such as the Edinburgh City Region Deal and Bus Partnership Funds.



Active Travel

Active travel is primarily defined as making journeys by walking, cycling and wheeling. It can also include horse-riding (and even running and non-motorised water-based transport.) It is an approach to travel and transport that focuses on physical activity as opposed to motorised means and which can lead to improved health and wellbeing outcomes.

The council's current Active Travel Plan (ATP) for West Lothian, 2016-21 "Making Active Connections" is a plan to link people to places by active travel. It is not just about physical connections however - it is also a framework for mainstreaming active travel in West Lothian, and creating a culture where active travel becomes the norm for suitable everyday trips. To achieve this, it is crucial that West Lothian Council works successfully with external partners, schools and local communities, and "joins up" policies and projects delivered by different Services and teams across the Council. Embedding positive behaviours at an early age is essential, and schools throughout West Lothian encourage pupils to use active travel methods, emphasising the health, wellbeing and environmental benefits.

Action T2

The council will develop a new ATP for the period 2022 – 2027 to replace the existing ATP, involving relevant stakeholders in drawing up its objectives. It will seek to continue to design and implement priority active travel schemes arising from the new strategy using the council's capital programme as well as externals funding. Non-physical measures will also be pursued.

Public Transport

While the COVID-19 pandemic has led to a negative shift in behaviour and a reduction in the use of public transport, the council is committed to maintaining a public transport network that meets the majority of transport needs within its geographic boundary and provides connections to neighbouring areas. A key council activity is the augmentation of passenger transport services provided by commercial and voluntary sector operators to provide a comprehensive network.

The council's current Passenger Transport Strategy sets the parameters for service provision and the priorities for resourcing services in future. It is intended to allow the development of an affordable network of connections between communities and to optimise service efficiencies so that sustainable transport needs are met. This connectivity is particularly important for communities where alternative methods of transport are more limited.

The council has also established a West Lothian Bus Alliance in partnership with local bus operators, SEStran and Bus Users Scotland which seeks to create a smarter, more successful set of bus services that maximises the potential of the sector in the West Lothian area for the benefit of the area's people.

Action T3

The council will develop a new Passenger Transport Strategy to replace the existing strategy involving relevant stakeholders in drawing up its objectives ensuring that it continues to provide sustainable and affordable public transport options.

Action T4

The council will continue to develop the West Lothian Bus Alliance in partnership with its members outlining climate action as a core priority while also prioritising reducing inequalities, helping to deliver inclusive economic growth, and improving the health and wellbeing of local communities.

Decarbonising the Council's Fleet

Emissions from the council's vehicle fleet in 2019/20 were 4,489 tonnes or just over 12% of the overall reported figure of 36,635 tonnes. In order to reduce emissions from fleet operations, the Scottish Government have stated that they will work with public bodies to phase out petrol and diesel cars, as well as phasing out the need for new petrol and diesel light commercial vehicles by 2025. There is an acknowledgement that heavy goods vehicle technologies are less developed but again the government will work with public bodies and the automotive sector to phase out the need for all new petrol and diesel vehicles in the public sector fleet by 2030. The council currently has a fleet asset register of over 1,100 pieces of Fleet and Mechanical Equipment which are used across all services to deliver statutory and discretionary activities across West Lothian.

The council will consider all possible alternatives to our existing fleet including electric and hydrogen powered vehicles. Providing the infrastructure to charge fleet vehicles will present significant challenges. There is currently capacity for charging 30 vehicles at sites across West Lothian including twenty standard and one rapid charger at Whitehill Service Centre. To allow for any increase in the electric vehicle fleet a significant amount of additional charging capacity will be needed, which is likely to require the development and upgrade of electric infrastructure capacity.

Reducing the council's Fleet emissions means that we not only need to decarbonise our existing models of transport but also change the ways in which vehicles are used to deliver services across West Lothian. The decarbonising of the council's Fleet should not be limited to a move away from traditional petrol and diesel fuelled vehicles, rather it will need to be supported by a change in traditional ways of working which will see the council able to reduce its Fleet and Mechanical Equipment assets (and in turn emissions) without impacting on service provision.

As part of our Covid recovery, the council will look to build on lessons learned from adopting new ways of working during the pandemic, and will look to minimise car travel through a combination of the following:

- Increased use of digital technology such as video conferencing;
- Adopting more flexible working arrangements such as hybrid working (workplace/homeworking), and;
- Implementing a sustainable travel hierarchy

Action T5

A short term working group has been established from services across the council. The working group will develop a clear and joined up asset management plan which will consider, amongst other issues, the timing and financial impact of fleet replacement, infrastructure requirements and the impacts on service delivery.

Public Electric Vehicle Charging Infrastructure

Both the Scottish and United Kingdom governments have set target dates for the phasing out of conventional petrol and diesel cars and vans by 2032. This presents a significant challenge in ensuring that there is sufficient charging capacity for the anticipated steep rise in EV ownership. In order to support the transition from petrol and diesel vehicle to low carbon equivalents, the council has developed a considerable network of publicly available electric vehicle (EV) charge points funded by Transport Scotland's Local Authority Infrastructure Programme. It is important to note, however, that while the council's role in providing charging facilities is key, it should not be seen as solely our responsibility. In the rest of the United Kingdom, development of charging networks is being driven by commercial operators who are installing charge points at key locations including service stations and supermarkets. Commercial units which charge for use are already in place in West Lothian and further development of these should be encouraged. The introduction of tariffs to council operated charge points will help to create more favourable market conditions for private sector investment in network development. In addition, electric vehicle owners with off-street parking are able to access funding to install their own charge point and should be encouraged to do so where possible.

Action T6

A short term working group has been established from services across the council. The working group will develop a clear and joined up asset management plan which will consider, amongst other issues, the timing and financial impact of fleet replacement, infrastructure requirements and the impacts on service delivery.

Summary of Actions

Action T1	The Council will continue its work with partners to develop road and passenger transport infrastructure to reduce car use through mechanisms such as the Edinburgh City Region Deal and Bus Partnership Funds.
Action T2	The council will develop a new ATP for the period 2022 – 2027 to replace the existing ATP, involving relevant stakeholders in drawing up its objectives. It will seek to continue to design and implement priority active travel schemes arising from the new strategy using the council's capital programme as well as externals funding. Non-physical measures will also be pursued.
Action T3	The council will develop a new Passenger Transport Strategy to replace the existing strategy involving relevant stakeholders in drawing up its objectives ensuring that it continues to provide sustainable and affordable public transport options.
Action T4	The council will continue to develop the West Lothian Bus Alliance in partnership with its members outlining climate action as a core priority while also prioritising reducing inequalities, helping to deliver inclusive economic growth, and improving the health and wellbeing of local communities.
Action T5	A short term working group has been established from services across the council. The working group will develop a clear and joined up asset management plan which will consider, amongst other issues, the timing and financial impact of fleet replacement, infrastructure requirements and the impacts on service delivery. The group will report early in 2022
Action T6	The council will continue to signpost individuals and organisations to relevant funding to support the move to electric vehicles and will work with Transport Scotland and others to develop an EV Infrastructure plan for West Lothian which will be published in summer 2022. As part of this plan, the council will consider the introduction of tariffs for EV charging.

5.3 Outcome 3 - Waste:

We encourage householders and businesses to make the right choices when disposing of waste and will support the drive for sustainability, reducing the environmental impact of the residents of West Lothian.

Emissions from waste in the council's latest Climate Change Declaration Report were 8#,069 tonnes, or 22% of the overall emissions for that year. While the council has made significant progress in reducing our waste emissions from our baseline year figure of 14,878 tonnes, waste emissions are still the second largest element of the council's carbon footprint after energy used in our buildings and street lighting.

The Scottish Government has set several ambitious targets for reducing waste and increasing recycling.

By 2025, the national aims are to:

- reduce total waste arising in Scotland by 15% against 2011 levels.
- reduce food waste by 33% against 2013 levels.
- recycle 70% of remaining waste.
- send no more than 5% of remaining waste to landfill.

The council is working to support these national objectives, with targets aligned to those set out above.

The Waste Hierarchy

The Scottish Government issued numerous documents to support the introduction of the Waste (Scotland) Regulations 2012. The Waste Hierarchy forms the cornerstone of the Scottish Government's regulations and the wider zero waste agenda. The hierarchy is show in the diagram below. Ideally waste should be prevented at the outset, be it through design or use. Where this is not possible the aim should be to move waste materials up through the hierarchy increasing their environmental sustainability. The quality of the waste material is fundamental to ensuring that materials can move up through the hierarchy. This can be achieved through sustainable design, to enhance the ability for material to be repaired, reused or recycled, but it is also achieved through the collection and handling process to keep high quality recyclable materials in a good condition for processing.

Prevention

If you can't prevent then...

Prepare for reuse

If you can't prepare for reuse, then...

Recycle

If you can't recycle, then...

Recover other value (e.g. energy)

If you can't recover value, then..

Disposal

Landfill if no alternative available.

Recycling & Waste Services

To increase the amount of waste recycled, the council continues to work towards Scotland's Zero Waste Targets in partnership with our residents. West Lothian signed the national "Household Recycling Charter" at the beginning of 2019 and is working with Zero Waste Scotland to progress the aims of the associated Code of Practice, which will introduce its aims to promote a more consistent household recycling service across Local Authorities, to increase recycling participation, quantity and quality and support the circular economy opportunities in Scotland. West Lothian has reviewed its Service Standards to suit the current service provision and take recognition of the national aims of the charter.

Introduction of Twin Stream Recycling collections

The council has agreed through the committee process to introduce Twin Stream recycling, planned for June 2022.

In 2020 65% of material collected from households as comingled recyclate was rejected as it had been contaminated by other materials such as food and drink. Households are not presenting the appropriate clean and dry materials within the container. The main carrier of food and liquids into the mixed containers is via plastic food containers and plastic bottles containing liquid.

Currently all paper, card, metals and plastics are accepted within the household blue bin, a fully co-mingled dry mixed recyclate collection, collected on an alternate week basis. Twin stream collections separate paper and card stream from the plastic/ cans/ containers stream and placing them within separate containers for collection which should result in dry paper and card and materials that can be separated mechanically, improving the quality and marketability of the materials.

Whilst changing the collection method assists with the drive to improve quality, it is essential that any change is supported by council-wide engagement and awareness raising with householders to demonstrate the impact of the current poor presentation as well as targeted intervention where required. Engagement and education will use a system seen nationally as a standardised route to improving performance within all Local Authorities.

Action W1

The council will implement the Twin Stream Recycling Project by mid-2022 and monitor progress following this to determine impact.

Zero Waste Towns Project

Waste and Recycling Services bid for and received additional internal revenue funding for the 'Zero Waste Towns Intervention Project'.

This will support delivery of the council's Carbon Management Plan and also support the Scottish Government revised Code of Practice under the Household Recycling Charter (once complete). The funding will enable the project, trialled in Kirknewton, to be extended throughout West Lothian. The trial had a positive impact on the environment by successfully reducing residual waste and improving recycling rates. After using performance data to determine a baseline position in relation to tonnage in waste streams, contamination levels and participation, additional project officer employed for one year will actively engage with community representatives to determine what local interventions could improve performance before putting these into place.as a standardised route to improving performance within all Local Authorities.an additional project officer will actively engage with community representatives to determine what local interventions could improve performance before putting these into place.

Action W2

The council will implement the Zero Waste Towns Project from 2022 to 2023 and monitor progress during and after to determine impact.

Summary of Actions

Action W1	The council will implement the Twin Stream Recycling Project by mid-2022 and monitor progress following this to determine impact.
Action W2	The council will implement the Zero Waste Towns Project from 2022 to 2023 and monitor progress during and after to determine impact.

5.4 Outcome 4 - Adaptation, Resilience & Biodiversity:

We continue to build a resilient and well adapted West Lothian where natural ecosystems are protected, sustainably used and strengthened while services, communities and places are adapting to cope with climate change impacts.

Adaptation & Resilience

A changing climate is likely to pose both threats and opportunities for the economy, environment and communities of West Lothian. Climate adaptation is about enabling our economy, society and natural systems to be resilient to climate impacts and take advantage of any beneficial opportunities.

Adaptation is key to making Services across the council more resilient to the impacts of severe weather events and long-term climatic changes, reducing the impacts on property, service delivery and the wider West Lothian community.

When the council adopted its first Climate Change Strategy in 2015, one of the key actions from the strategy was to prepare a Climate Change Adaption Action Plan. Due to resource issues, and in order to ensure that the Action Plan took account of the most recent available information, consultants (SNIFFER – Scotland, Northern Ireland Foundation For Environmental Research - who lead the Scottish Government “Adaptation Scotland” programme), were employed to prepare the Action Plan based on examples from other Scottish local authorities.

A Local Climate Impact Profile (LCLIP) prepared in 2018 found that the council has already experienced a range of adverse impacts on property and services as a result of extreme weather events.

The findings identified that between 2000 and 2015, the council spent approximately £40 million on maintenance and repair costs as either a direct or indirect result of extreme weather events, not accounting for loss of staff time and costs due to impairment of service delivery.

The draft Climate Change Adaptation Action Plan provides a set of common sense, resource efficient actions that will deliver long term benefits for assets, services and communities. It establishes clear adaptation outcomes, actions and allows for monitoring and evaluation of progress on a regular basis.

The Adaptation Action Plan identifies seven adaptation outcomes which the council will work towards through implementing over 70 actions over a 5 year period:

1. Communities;
2. Business & logistics;
3. Built environment;
4. Natural environment;
5. Transport and travel;
6. Partnerships, knowledge and skills; and
7. Strategic planning and investment.

Action A1

The draft West Lothian Climate Change Adaptation Action Plan will be updated and refreshed by March 2022 to take account of recent Scottish Government policy and the council's 10 Services Units will be re-engaged with to correlate the original actions proposed with current budgets and operations.

Through adaptation, the council can achieve cost-savings and improved efficiency as well as provide climate ready services to the public enabling more resilient and sustainable built and natural environments, communities and partnerships.

Climate change adaptation offers a solution to not only minimise impacts but enhance the resilience, sustainability and success of the council.

Whilst the challenges faced as a result of the impacts of climate change are significant, good adaptation provides an opportunity to deliver both short term benefits and greater progress against long term council outcomes as well as addressing legislative requirements for public bodies to adapt as mandated by the Climate Change (Scotland) Act 2009.

Biodiversity and Climate Change

The Scottish Government announced in December 2020 plans to protect at least 30% of Scotland's land for nature by 2030 – and to examine options to extend this further. A new 'Statement of Intent on Biodiversity', sets out priorities for tackling biodiversity loss as part of a strategy to combat climate change and ecological decline. Currently, 37% of Scotland's marine environment is safeguarded, with 23% of terrestrial land protected for nature.

Other commitments include plans to support new, locally driven projects that aim to improve ecological connectivity and the publication of a new national strategy on biodiversity within 12 months of the international climate change summit in Glasgow, COP26, rescheduled for November 2021.

The current West Lothian Local Biodiversity Action Plan (LBAP) (2009) is over 10 years old and while it is still an important baseline document it does require to be updated. The council has recently recruited three Ecology and Biodiversity Officers who will review and update the LBAP to produce a new 10-year plan. They will also provide effective and efficient oversight on the progress of the associated actions, harnessing community involvement and ensuring areas are developed to reflect the needs and aspirations of local communities who will have a key role to play in conserving and enhancing biodiversity. As the LBAP progresses officers will share opportunities for volunteers and communities to support biodiversity actions across the area. As part of the development of the LBAP, and through allocated funding of £60,000 from the West Lothian Climate Emergency Fund, specialist consultant resource, supported by council officers, will be contracted to prepare a Natural Capital Audit of the council's landholdings that will allow us to identify opportunities for habitat enhancement across West Lothian, identifying ecosystem services that are provided by our natural assets. The Natural Capital Audit will also allow for the identification of the council's carbon baseline in any future carbon sequestration projects.

Action A2

The council will engage with relevant stakeholders and prepare a new ten-year West Lothian Local Biodiversity Action Plan in 2022, focusing on protecting and enhancing existing habitats and joining up green networks.

An emphasis on 'pocket parks' and other green spaces could help to improve access to nature as part of the '20-minute neighbourhood' approach being developed through the Scottish Government's National Planning Framework 4 that will also develop "ambitious new proposals which will deliver positive effects for biodiversity from development, without the need for overly complex metrics, and how they can support wider approaches to natural infrastructure."

Peatland, as stores of carbon, are important in tackling climate change and as the basis of rural farming, sporting, tourism and crofting they are vital to the economy. They also play a role in flood regulation, water quality and support nationally and internationally important biodiversity. Peatlands are one of Scotland's largest degraded ecosystems. When peatlands are degraded the benefits they bring are lost, and in fact they become sources of carbon instead of sinks – contributing to climate change rather than mitigating it. In West Lothian there are areas of degraded peat along the north slopes of the Pentland Hills and in the Blackridge Heights, although it does contain a major National Nature Reserve at Blawhorn Moss. The council has been committed to restoring and managing peatlands on its land for some considerable time, with notable projects at Easter Inch Moss and Black Moss. The Scottish Government has committed a £250 million ten-year funding package to support peatland restoration, with a target of restoring 250,000 acres of degraded peatland by 2030.

Action A3

Through the Natural Capital Audit the council will determine the location and condition of the peatland resource in West Lothian with a view to encouraging landowners to apply for Scottish Government peatland restoration grants that will aid carbon sequestration efforts.

Flood Risk Management

One of the major impacts of our changing climate is increased severe weather events leading to flooding. As required by the Flood Risk Management (Scotland) Act 2009, West Lothian Council works together with its partners in the Forth Estuary Local Plan District (LPD) to manage flood risk in the council's area. The draft Cycle 2 (2022-2028) Flood Risk Management Plans are out for public consultation at the time of publication. The draft Plans propose 10 Objective Target Areas (OTA's) within West Lothian Council for Cycle 2: Armadale, Bathgate, Blackburn, Blackridge, Broxburn, Fauldhouse, Linlithgow, Livingston and Mid Calder, West Calder and Whitburn.

In each of the target areas, SEPA and the council have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated as further information becomes available. In others, they provide long-term direction for the management of flooding within a community. A number of objectives have been established for the area, and these must be considered alongside national principles to manage flood risk. Objectives include:

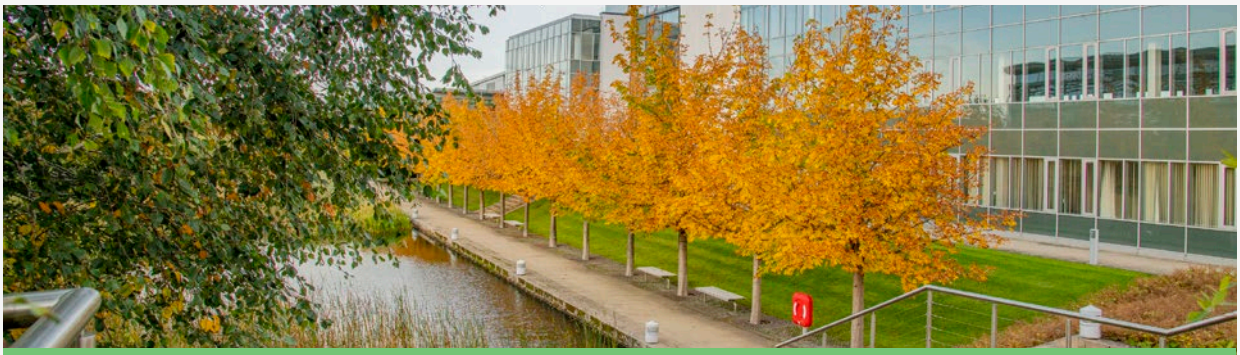
- Taking a long-term, risk-based approach to flood risk management decisions and one that considers the impacts of, and adaptability to, climate change;
- Delivering co-ordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services and resources, and;
- Considering whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Action A4

With approved funding mechanisms the council will implement the actions set out for the West Lothian area in the forthcoming Forth Estuary Local Plan District Flood Risk Management Plan 2022-28. These actions will consider the current understood impacts of climate change on flood risk, and the development of adaptation planning to manage the long-term impacts of climate change.

Summary of Actions

Action A1	The draft West Lothian Climate Change Adaptation Action Plan will be updated and refreshed by March 2022 to take account of recent Scottish Government policy, and the council's 10 Services Units will be re-engaged with to correlate the original actions proposed with current budgets and operations.
Action A2	The council will engage with relevant stakeholders and prepare a new ten-year West Lothian Local Biodiversity Action Plan in 2022, focusing on protecting and enhancing habitats and joining up green networks.
Action A3	The council will seek specialist consultants help to determine the location and condition of the peatland resource in West Lothian with a view to encouraging private landowners to apply for peatland restoration grants that will aid carbon sequestration efforts.
Action A4	With approved funding mechanisms the council will implement the actions set out for the West Lothian area in the forthcoming Forth Estuary Local Plan District Flood Risk Management Plan 2022-28. These actions will consider the current understood impacts of climate change on flood risk, and the development of adaptation planning to manage the long-term impacts of climate change.



5.5 Outcome 5 - Land Use and Management

We understand the scope and benefits of local carbon offsetting and manage our land assets in a way that contributes to our path to net-zero.

Carbon Offsetting

Carbon offsetting is defined as an action or activity such as the planting of trees that compensates for the emission of carbon dioxide or other greenhouse gases to the atmosphere. As noted elsewhere in the strategy, through its operations the council will continue to produce some emissions and it is these that will require to be offset or sequestered to achieve the net-zero targets. While carbon offsetting has a significant role to play in achieving net-zero, it should only be considered where all other avenues to reduce our emissions have been investigated and implemented where feasible. The priority should be to ensure that our overall emissions are reduced to a figure as near to true zero emissions as possible.

The council owns and manages significant land assets including agricultural land managed in-house and leased out to farmers, around 1,000 hectares of woodland, other semi-natural habitats such as grassland and peatland bogs (including at Easter Inch between Blackburn and Seafield and Black Moss, Armadale) as well as thousands of individual trees and shrubs within more formal park areas and along roads and streets. These are already sequestering (locking in) atmospheric CO^2 but as this is a relatively new area of focus the scale of current sequestration and the potential for future enhancement and expansion of offsetting is not clearly understood.

There are a number of available options maximise the potential of our land assets and offset emissions locally. These include:

- Changing the way we manage public land and water assets to take account of all ecosystem services including carbon sequestration, provision of sustainable products and renewable energy
- Removing emissions from the atmosphere through pro-active management of existing trees and woodland and, where appropriate, more extensive tree planting
- Restoring peatlands
- Significantly expanding existing and creating new wildflower meadows and other semi-natural grassland.

A review of council assets is underway which will consider each of these options to establish how they can best contribute to achieving our net-zero targets. All of the above options also provide additional benefits including improved biodiversity and contributing to climate change adaptation.

There are other offsetting options including involvement in accredited schemes outwith the local area such as investment in national and international renewable energy and afforestation projects. The priority, however, should be developing local projects to maximise the benefits and opportunities within West Lothian. Only once all these options have been exhausted should other initiatives be considered.

Action LU1

A Natural Capital Audit of all West Lothian Council landholdings will be undertaken and available by 2022. In association with the new LBAP, this will allow carbon sequestration and habtiat improvement projects to be prioritised and progressed with a combination of council capital investment and external grant funding.

Planning Policy & Local Development Plan

Climate Change is impacted through the Strategic Development Plan (SDP) for South East Scotland (SESplan), and the Local Development Plan (LDP), both of which help to deliver the spatial strategy and policy set out in the Scottish Government's National Planning Framework (NPF) and Scottish Planning Policy (SPP). Both are currently being reviewed and the SPP will be incorporated within the revised NPF4 that is due to be laid before the Scottish Parliament in Autumn 2021.

These are the starting points for making decisions on planning applications through setting policy considerations for development and also statutory Supplementary Guidance, or non-statutory Planning Guidance, which provides further explanatory information or detail on the planning polices or proposals that are within the development plan.

Action LU2

The council will review its current Local Development Plan (2018) on the adoption of the National Planning Framework 4 (which will now incorporate Scottish Planning Policy) by the Scottish Government and produce a second Local Development Plan (LDP2) that will focus on sustainable development targeted on brownfield sites close to public transport routes and hubs over new green field land releases.

Planning Guidance

The council has various statutory Supplementary Guidance and non-statutory Planning Guidance that relate to climate change issues

Action LU3

The council will update its Supplementary and Planning Guidance that covers climate change issues, with a spatial element, as new guidance emerges from Scottish Government and to combine it with LDP2.

Future Measures related to Planning & Climate Change

Going forward, schemes could be agreed in conjunction with the Planning, Economic Development and Regeneration (PED&R) Service and developers for a voluntary planning obligations scheme, such as an agreement by developers to offset carbon reduction from the development site in an alternative means for which the developer could promote the site in conjunction with West Lothian Council as being 'carbon neutral'. A similar type scheme as was previously employed for local apprenticeships and local materials / suppliers in conjunction with businesses and PED&R.

In addition, Planning Guidance for gathering voluntary developers' contributions towards tree planning on WLC sites and landholdings that contribute towards carbon sequestration as part of the West Lothian Climate Forest. Work is already underway via the councils Climate Change Emergency Fund to undertake woodland creation, woodland management and habitat enhancement via the Green Action Trust (GAT - formerly Central Scotland Green Network Trust) to form the "West Lothian Climate Forest". Additional woodland initiatives are also under way in West Lothian with the assistance of Edinburgh & Lothians Greenspace Trust.

Action LU4

The council will continue to work with GAT & E&LGT on progressing woodland creation and management, alongside habitat restoration, on public landholdings across West Lothian and seek to secure external grant funding to allow the continuation of a programme of new sites as part of expanding the West Lothian Climate Forest.

These developer contribution schemes would initially need to be voluntary as to be mandatory there needs to be a relationship to one of the statutory LDP policies and the obligation must be in accordance with Scottish Government current Circular 3/2012 'Planning Obligations and Good Neighbour Agreements', as interpreted by emerging case law and amended by subsequent amendments and legislation. The forthcoming review of the NPF4 and the accompanying SPP may hasten change on these climate change related issues.

Action LU5

The council will explore voluntary developers' contributions to offset carbon emissions from developments site and support tree planting on council owned sites and landholdings that contribute towards the West Lothian Climate Forest and carbon sequestration.

There is a need to embed climate action into the future spatial plans developed for villages and towns, shifting away from the current reliance on carbon-intensive developments, services and modes of transport, which requires thinking about planning and development in a more holistic, collective way. These aspects related to West Lothian can be explored spatially in the Regional Spatial Strategy as part of NPF4 and review of the Local Development Plan and its accompanying new planning policies to reflect the desire for a long term, no-carbon future to respond to the impacts of climate change.

Summary of Actions

Action E1	A Natural Capital Audit of all West Lothian Council landholdings will be undertaken and available by 2022. In association with the new LBAP, this will allow carbon sequestration and habitat improvement projects to be prioritised and progressed with a combination of council capital investment and external grant funding.
Action E2	The council will review its current Local Development Plan (2018) on the adoption of the National Planning Framework 4 (which will now incorporate Scottish Planning Policy) by the Scottish Government and produce a second Local Development Plan (LDP2) that will focus on sustainable development targeted on brownfield sites close to public transport routes and hubs over new green field land releases.
Action E3	The council will update its Supplementary and Planning Guidance that covers climate change issues, with a spatial element, as new guidance emerges from Scottish Government and to combine it with LDP2.
Action E4	The council will continue to work with GAT & E&LGT on progressing woodland creation and management, alongside habitat restoration, on public landholdings across West Lothian and seek to secure external grant funding to allow the continuation of a programme of new sites as part of expanding the West Lothian Climate Forest.
Action E5	The council will explore voluntary developers' contributions to offset carbon emissions from developments site and support tree planting on council owned sites and landholdings that contribute towards the West Lothian Climate Forest and carbon sequestration.

5.6 Outcome 6 - Embedding Climate Action:

We embed climate action in our policies and practices across the council and create a culture of sustainability and resource efficiency.

Leadership

Demonstrating climate change leadership will be crucial at all levels, with Heads of Service and Service Managers cascading directions and actions down through each service. The cross-council CCSWG attended by Heads of Service or senior officers will be responsible for delivery of the Climate Change Strategy outcomes.

Elected members play a key role in the response to the climate emergency. To ensure that they are best placed to consider climate change in their planning and decision making processes, regular training and awareness raising sessions will be carried out and quarterly updates will be provided to the relevant Policy Development & Scrutiny Panel.

The council has a responsibility to ensure that all of our employees understand the impacts of climate change and what they can do to help mitigate their impact both in the workplace and at home. Climate change information and online learning modules provided as part of the corporate induction process will be updated to reflect the latest available information and specific training will be developed and delivered where required.

Action EMB1

The council's committee report template will be revised to include explicit consideration of climate change /sustainability consultations and impacts.

Action EMB2

Council officers will facilitate elected member climate change training and awareness raising sessions. Specific web-based resources and materials will be made available.

Action EMB3

Corporate induction information and online learning module will be updated to reflect most recent information and specific training will be developed and delivered where required.

Sustainable Procurement

Public sector procurement is expected to contribute to climate change targets through implementation of the Sustainable Procurement Duty. The sustainable procurement duty, contained in section 9 of the Procurement Reform (Scotland) Act 2014, places sustainable and socially responsible purchasing at the heart of procurement activity.

Outcome 5 in the Corporate Procurement Strategy is focused on ensuring that the council is committed to maximising the benefits delivered from Sustainable Procurement through its procurement activities and those contracts awarded to achieve value for money on a whole life basis in terms of generating benefits, not only to the procuring organisation, but also to society and the economy, whilst minimising damage to the environment.

Action EMB4

Corporate induction information and online learning module will be updated to reflect most recent information and specific training will be developed and delivered where required.

Schools & Education

The council will build on the positive work already underway in our schools to ensure that climate change, sustainability and the environment are considered as widely as possible, educating and empowering our young people while encouraging them to take action on climate change.

Action EMB5

Further summits similar to the 2019 session at Howden Park Centre and the Learning for Sustainability conference in September 2021, will be organised by the council and the Community Planning Partnership to gauge the success of various forthcoming climate change related campaigns and seek further views on action.

Summary of Actions

Action EMB1	The council's committee report template will be revised to include explicit consideration of climate change /sustainability consultations and impacts.
Action EMB2	Council officers will facilitate elected member climate change training and awareness raising sessions. Specific web-based resources and materials will be made available.
Action EMB3	Corporate induction information and online learning module will be updated to reflect most recent information and specific training will be developed and delivered where required.
Action EMB4	The council will maintain Level 2 within the Scottish Government's Sustainability Framework Assessment and will update the Procurement Board on the requirements of Level 3 early in 2022 in order to agree a future position.
Action EMB5	Further summits similar to the 2019 session at Howden Park Centre and the Learning for Sustainability conference in September 2021, will be organised by the council and the Community Planning Partnership to gauge the success of various forthcoming climate change related campaigns and seek further views on action.

6 Delivering the Strategy

6.1 Monitoring & Reporting

A suite of performance indicators and actions are in place to monitor progress on climate change objectives and targets.

Performance indicators and actions are regularly reviewed to ensure they are fit for purpose to monitor progress on actions for the life span of the strategy. Progress will be reported to and monitored by the Climate Change and Sustainability Working Group, Community Planning Partnership Board, Capital Asset Management Board, Modernisation Board, Environment PDSP and Council Executive as appropriate.

The Council's Climate Change Declaration report is submitted annually to the Sustainable Scotland Network (SSN) acting on behalf of the Scottish Government. Reporting is a statutory duty under Public Bodies Duties of the Climate Change (Scotland) Act 2009 and includes a full inventory of the council's emissions for the reporting year along with details of supporting activities for both mitigation and adaptation. Future reports will also include updates on progress against the council's targets.

6.2 Communications

The importance of clear climate change communications is widely recognised and has driven significant changes in public opinion in recent years.

A key contributor in this change in public opinion has been a significant focus on the issue through print, broadcast and digital/social media at international, national and local levels.

The council will provide clear, consistent information on climate change, highlighting key council and partner projects and activities and signposting to other information sources, funding and support. A calendar of events produced each year which will be used to plan communication activities. Climate change related web pages will be regularly reviewed and updated to ensure that users have the most up to date information.

Appendix 1 - Council Emissions 2019-20

Emission source	Scope	Consumption Data	Unit	Emission factor	Units	Emissions (tC O2e)
Grid Electricity (generation)	Scope 2	41,986,267	kWh	0.26	kg CO2e/kWh	10,731.7
Grid Electricity (transmission & distribution losses)	Scope 3	41,986,267	kWh	0.02	kg CO2e/kWh	911.1
Natural Gas	Scope 1	64,317,929	kWh	0.18	kg CO2e/kWh	11,824.9
Biomass (Wood Chips)kWh	Scope 1	3,414,100	kWh	0.02	kg CO2e/kWh	53.4
Biomass (Wood Pellets) kWh	Scope 1	4,986,160	kWh	0.02	kg CO2e/kWh	77.9
Water - Supply	Scope 3	328,117	m3	0.34	kg CO2e/m3	112.9
Water - Treatment	Scope 3	303,114	m3	0.71	kg CO2e/m3	214.6
Refuse Municipal to Landfill	Scope 3	11,518	tonnes	586.51	kg CO2e/tonne	6,755.5
Refuse Commercial & Industrial to Landfill	Scope 3	3,142	tonnes	99.76	kg CO2e/tonne	313.4
Organic Food & Drink Composting	Scope 3	6,174	tonnes	10.20	kg CO2e/tonne	63.0
Organic Garden Waste Composting	Scope 3	10,336	tonnes	10.20	kg CO2e/tonne	105.5
Paper & Board (Mixed) Recycling	Scope 3	8,574	tonnes	21.35	kg CO2e/tonne	183.1
WEEE (Mixed) Recycling	Scope 3	1,016	tonnes	21.35	kg CO2e/tonne	21.7
Glass Recycling	Scope 3	2,473	tonnes	21.35	kg CO2e/tonne	52.8
Plastics (Average) Recycling	Scope 3	2,459	tonnes	21.35	kg CO2e/tonne	52.5
Metal Cans (Mixed) & Metal Scrap Recycling	Scope 3	3,096	tonnes	21.35	kg CO2e/tonne	66.1
Refuse Municipal /Commercial / Industrial to Combustion	Scope 3	20,218	tonnes	21.35	kg CO2e/tonne	431.7
Construction (Average) Recycling	Scope 3	17,724	tonnes	1.37	kg CO2e/tonne	24.3
Diesel (average biofuel blend)	Scope 1	1,655,659	litres	2.59	kg CO2e/litre	4,295.0
Petrol (average biofuel blend)	Scope 1	87,795	litres	2.21	kg CO2e/litre	193.9
Car - diesel (average - unknown engine size) km	Scope 3	867,601	km	0.17	kg CO2e/km	150.4
				Total	**#N/A**	**36,635.3**

Scope & Description	Amount (tonnes CO_2e)
Scope 1 (Direct emissions): Activities owned or controlled by the council that release emissions straight into the atmosphere. They are direct emissions. Examples of scope 1 emissions include emissions from combustion in owned or controlled boilers, furnaces and vehicles.	**16,445**
Scope 2 (Energy indirect): Emissions being released into the atmosphere associated with the council's consumption of purchased electricity, heat, steam and cooling. These are indirect emissions that are a consequence of the council's activities but which occur at sources not own or controlled by the organisation.	**10,731**
Scope 3 (Other indirect): Emissions that are a consequence of the council's actions, which occur at sources which the council does not own or control and which are not classed as scope 2 emissions. Examples of scope 3 emissions are business travel by means not owned or controlled by the organisation, waste disposal, or purchased materials or fuels.	**9,456**

Appendix 2 – Governance

Climate Change Lead Officers	
Area	**Responsible Officer**
Corporate, Operational and Housing Services	Head of Corporate Services; Head of Housing, Customer and Building Services; Head of Operational Services
Education and Planning Services	Head of Schools (Learning, Policy & resources); Head of Education (Curriculum, Quality Improvement & Performance); Head of Planning, Economic Development & Regeneration
Community Health and Care Partnership	Head of Social Policy
Finance and Property Services	Head of Finance and Property Services

The governance of the Climate Change Strategy is summarised as follows:

Governance		
Group	**Governance/Scrutiny Role**	**Reporting Frequency**
Climate Change and Sustainability Working Group (CCSWG)	■ Responsibility for the direction and scope of the Climate Change Strategy (CCS) and associated action plans. ■ Monitoring performance on the environment outcome of the Local Outcomes Improvement Plan (LOIP). ■ Monitoring performance and progress on targets and initiatives relating to the CCS.	Quarterly
Procurement Board	■ Monitoring performance on sustainable procurement including progress on the Sustainable Procurement Action Plan. The Corporate Procurement Manager is the council's nominated Sustainable Procurement Champion.	Quarterly/ As Required
Risk and Audit Management	■ Monitoring climate risks as identified in the council's Corporate Risk Register and actions to mitigate the risks.	Quarterly
Community Planning Partnership (CPP) Steering Group	■ Responsibility for the direction and scope of the CCS and input to action plans where appropriate. ■ Monitoring performance against the environment outcome of the SOA.	Quarterly
Capital Asset Management Board	■ Responsibility for the direction and scope of the CCS and associated action plans. ■ Monitoring the council's progress against the strategy's outcomes, actions and activities and approving the annual review.	Annually
Environment Policy Development and Scrutiny Panel	■ Consideration of the CCS and associated action plans. ■ Consideration of climate change reports including the annual Scottish Climate Change Declaration report.	Annually
Council Executive	■ Approval of the CCS and associated action plans. ■ Approval of climate change reports including the annual Scottish Climate Change Declaration report.	Annually
CPP Partnership Board	■ Monitoring performance against the environment outcome of the SOA.	Annually
Scottish Government	■ Approval of the council's Climate Change Declaration report.	Annually

Glossary

Scope & Description	Amount (tonnes CO_2e)
Adaptation	The adjustment in economic, social or natural systems in response to actual or expected climatic change, to limit harmful consequences and exploit beneficial opportunities.
Carbon footprint	A measure of the carbon emissions produced as a result of an organisation's or service's activities.
Climate Change	Any change in climate over time, whether due to natural variability or as a result of human activity.
CO_2	Carbon Dioxide. The most common greenhouse gas contributing to human made climate change.
CO_2e	Carbon Dioxide equivalent. A standard unit for measuring carbon impact and includes the six other major greenhouse gases in one unit.
Emissions factor	A measurement of CO2 emissions intensity per unit of electricity generation in the grid system.
kWh	Kilowatt Hour. A unit of energy equivalent to one kilowatt of power expended for one hour of time (1,000KWh = 1MWh). Commonly used in energy use.
LULUC	Land use, land use change. Emissions and removals of greenhouse gases resulting from direct human-induced land use such as settlements and commercial uses, land-use change, and forestry activities.
Mitigation	The attempt to lessen future climate change and its social, economic and environmental consequences by reducing greenhouse gas emissions.
Net zero CO2 emissions	Achieved when CO2 emissions are balanced by CO2 removals over a specified period. Also referred to as carbon neutrality.

Climate Change Strategy.
2021-2028.

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