Aberdeenshire COUNCIL

SUSTAINABILITY COMMITTEE

WEDNESDAY, 21 FEBRUARY 2024 at **10.15 am**

Your attendance is requested at a meeting of the **SUSTAINABILITY COMMITTEE** to be held **VIRTUALLY VIA TEAMS** on **WEDNESDAY, 21 FEBRUARY 2024**, at **10.15 am**

This meeting will be live streamed and a recording of the public part of the meeting will be made publicly available at a later date.

Tuesday, 13 February 2024 Director of Business Services

To: Councillors S Dickinson (Chair), J Gifford (Vice-Chair), G Hall, P Johnston, F Joji, A Kloppert, S Payne and I Taylor

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B U S I N E S S

PUBLIC SECTOR EQUALITY DUTY – GUIDANCE FOR MEMBERS

What is the duty?

In making decisions on the attached reports, Members are reminded of their legal duty under section 149 of the Equality Act 2010 to have due regard to the need to:-

(i) eliminate discrimination, harassment and victimisation;
(ii) advance equality of opportunity between those who share a protected characteristic and persons who do not share it; and
(iii) foster good relations between those who share a protected characteristic and persons who do not share it.

The “protected characteristics” under the legislation are: age; disability; gender reassignment; pregnancy and maternity; race; religion or belief; sex; sexual orientation; and (in relation to point (i) above only) marriage and civil partnership.

How can Members discharge the duty?

To ‘have due regard’ means that in making decisions, Members must consciously consider the need to do the three things set out above. This requires a conscious approach and state of mind. The duty must influence the final decision.

However, it is not a duty to achieve a particular result (e.g. to eliminate unlawful racial discrimination or to promote good relations between persons of different racial groups). It is a duty to have due regard to the need to achieve these goals.

How much regard is ‘due’ will depend upon the circumstances and in particular on the relevance of the needs to the decision in question. The greater the relevance and potential impact that a decision may have on people with protected characteristics, the higher the regard required by the duty.

What does this mean for Committee/Full Council decisions?

Members are directed to the section in reports headed ‘Council Priorities, Implications and Risk”. This will indicate whether or not an Integrated Impact Assessment (IIA) has been carried out as part of the development of the proposals and, if so, what the outcome of that assessment is.

An IIA will be appended to a report where it is likely, amongst other things, that the action recommended in the report could have a differential impact (either positive or negative) upon people from different protected groups. The report author will have assessed whether or not an IIA is required. If one is not required, the report author will explain why that is.

Where an IIA is provided, Members should consider its contents and take those into account when reaching their decision. Members should also be satisfied that the assessment is sufficiently robust and that they have enough of an understanding of the issues to be able to discharge their legal duty satisfactorily.

For more detailed guidance please refer to the following link:-
https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.equalityhumanrights.com%2Fsites%2Fdefault%2Ffiles%2Ftechnical_guidance_psed_scotland.docx&wdOrigin=BROWSELINK

SUSTAINABILITY COMMITTEE

WEDNESDAY, 15TH NOVEMBER, 2023

Present: Councillors S Dickinson (Chair), Y Chou Turvey (as substitute for G Hall), J Gifford, A Hassan (as substitute for I Taylor), P Johnston, F Joji, A Kloppert, and S Payne.

Apologies: Councillor G Hall and I Taylor.

Officers: Team Leader (Environment and Sustainability); Sustainability & Climate Change Officer (Tara Murray); Sustainable Development Officer (Yvonne D'Ambruoso); Business Partner, Finance (Tina Wight); Principal Solicitor (Arlene Gibbs); and Committee Officer (Nicole Chidester), all Business Services.

Also in attendance: Clare Wharmby, Climate Strategies Lead, Edinburgh Climate Change Institute; Judi Kilgallon, Climate Change Transformation Manager, Improvement Service; and Martin Auld, Chair of Uryside Riverside Park SCIO.

Prior to considering the formal business, the Chair highlighted the Council's commitment to Fairtrade. Since the August 2023 Committee meeting, an application for approval to the Fairtrade Foundation was submitted and Aberdeenshire Council was awarded fairtrade status for a further 3 years.

At the Scottish Fairtrade Awards 2023, Aberdeenshire had three entrants and all three were winners in their category, including: Huntly Ethical Trading Initiative who won the Innovation Award, Alford Fairtrade Group who won the Fairtrade and Sustainability Award, and Peter Bellerby from the Stonehaven Fairtrade Group, won a special Recognition Award for his outstanding and sustained efforts to promote fair trade to local businesses, faith establishments and the wider community, and for playing a key role in supporting Stonehaven to achieve fairtrade town status.

1 SEDERUNT AND DECLARATION OF MEMBERS' INTERESTS

The Chair asked Members if they had any interests to declare, in terms of the Councillors' Code of Conduct. No interests were declared.

2 PUBLIC SECTOR EQUALITY DUTY

In taking decisions on the undernoted items of business, the Committee **agreed**, in terms of Section 149 of the Equality Act 2010:-

(1) To have due regard to the need to:-

(a) eliminate discrimination, harassment and victimisation;

(b) advance equality and opportunity between those who share a protected characteristic and persons who do not share it; and

(c) foster good relations between those who share a protected characteristic and persons who do not share it, and

(d) to consider, where an Integrated Impact Assessment has been provided, its contents and to take those into consideration when reaching a decision.

3 MINUTE OF THE MEETING OF 30 AUGUST, 2023.

On consideration of the circulated Minute of Meeting of the Committee of 30 August, 2023, Members **agreed** to approve it as a correct record.

4 STATEMENT OF OUTSTANDING BUSINESS.

A report by the Director of Environment and Infrastructure Services was circulated detailing the items of outstanding business as at 15 November 2023.

The Environment and Sustainability Team Leader introduced the report and provided the Committee with further details on the following outstanding actions:

Item 1: The Environmental Standards Scotland report had not been published. Discussions were still ongoing about proposed outcomes.

A report on 'How the Scottish government is set up to deliver climate change goals' had been presented to Committee on 30 August and that portion of the action could be removed from the outstanding business list.

Item 2: Due to resource capacity, a report would not be presented until the first half of 2024, as either part of an appendix or a full report.

Item 3: Business Services, Infrastructure Services and Education and Children's Services Committees had all considered their portion of the Carbon Budget 2023-24. All the To Be Determined items (TBDs) had been updated with calculated figures or marked as 'unknown'. Communities Committee would consider the Budget in December 2023, which contained projects from Live Life Aberdeenshire, Housing, and the Health and Social Care Partnership. It was unknown if all the TBDs within their portion of the budget would be resolved.

Thereafter, the Committee agreed to:-

(1) note the current position in respect of actions arising from previous meetings;

(2) add a further action under Item 2 to instruct officers to contact Zero Waste Scotland to establish if they had any information about carbon emissions and the impact on the Carbon Budget if the Deposit Return Scheme was (1) revived, (2) mothballed, or (3) completely removed, while officers continued to work on a report/appendix for Committee’s consideration; and

(3) add a further action under Item 3 to instruct officers to provide Committee with the updates to the Carbon Budget 2023-24 along with a formal guidance/timeline for the carbon budget process, following presentation of the budget to the Policy Committees, to help inform the Carbon Budget 2024-25.

5 URY RIVERSIDE PARK. (PRESENTATION)

A presentation was made to the Committee on Ury Riverside Park, by Martin Auld, Chair of Uryside Riverside Park SCIO.

The presentation began with an explanation of Ury Riverside Park, including the location and boundaries. The Park covered 60 hectares of land with the River Ury flowing through it, in addition to wetlands and pools, a wildflower meadow and native woodlands, wildlife, a network of paths, interpretation panels, and benches. Mr Auld reviewed how the park had developed from arable farmland to a biodiverse park registered as a Scottish Charitable Incorporated Organisation (SCIO). The purposes of the SCIO included advancement of environmental protection/improvement, and providing/organising recreational activities and facilities to improve the conditions of life.

The park was designed to withstand flooding. Mr Auld reviewed species of wildflowers which had been planted in the wetlands and drier areas, as well as the types of trees planted by volunteers, which gave the community a sense of ownership. There were some areas of natural regeneration as well. The different animal, bird and insect species that lived in this area were highlighted, as well as the invasive species and their management.

He reviewed some of the amenities and uses/users of the space, including notice and information boards, dog walkers, commuters, benches, parkruns, and volunteers. The space had been recognised for its contribution to the community and had received various awards. The presentation concluded with brief review of future plans and thanks to those who supported the park and provided sponsorship/future funding.

Following the presentation, the Chair thanked the presenter, particularly for the wellbeing benefits the park provided. Members thanked those involved with the park and for the work being done to manage the nonnative species. Members queried the use of sheep to manage the nonnative species and the potential for ponies to graze to help as well. They wished the park many generations of success. Members asked how effective and reliable the solar panel lighting was, how the park interacted with different users of the park/if there was a 'friends of the park' group, how they managed continuity of funding, and if the carbon capturing was measured, and how well the sheep and dogs shared the park.

The Chair thanked Mr Auld for an excellent presentation, as well as praising the work around biodiversity and carbon capture.

6 CLIMATE INTELLIGENCE SERVICE. (PRESENTATION)

A presentation was made to the Committee on the Climate Intelligence Service by Clare Wharmby, Climate Strategies Lead, Edinburgh Climate Change Institute, with Judi Kilgallon, Climate Change Transformation Manager, Improvement Service, assisting with questions raised following the presentation.

Ms Wharmby began by reviewing the Service which was a joint effort between Edinburgh Climate Change Institute, Improvement Service and Sustainable Scotland Network. She provided background of the Service which was jointly funded and co-designed with local government and other stakeholders.

She defined the challenges the Service would address, and reviewed Scotland's and Scotland's Council emission figures/where emissions came from. Although Councils reported on organisational emissions and were addressing this via carbon budgets, she emphasised that the area-wide emissions were more important to consider, but highly complex with different policies at national and local levels. It was noted that the supply chain emissions outwith Scotland, and aviation and international shipping were not included in the area-wide territorial footprint.

The Service would help support local authorities to implement changes to reach net zero targets. Various policies, strategies, and regulations would be needed. It was difficult to quantify work being done currently and that led to the creation of this Intelligence Service to capture what was happening and coordinate/collaborate efforts. Ms Wharmby recognised the potential for double-counting of carbon emissions but emphasised that double-counting would provide double attention/action to resolve. The presentation briefly reviewed levels of influence/control of emissions from direct/indirect, to high, medium, and low levels of influence.

Key points of the presentation included: area-wide emissions were not just large organisational footprints; there was a difference in control versus influence; a complex array of multi-level stakeholders and multiple co-benefits existed; this was a long term problem with short-term progress required and an action gap existed; and carbon reductions on area-wide footprint would take time to appear.

The philosophy for the Service included a commitment to be live and not static, to find consistency between local authorities and share practices/communicate more effectively with Scottish Government, and recognising that climate change was not a data problem, but rather a decision-making, financing, political and emotional problem. The Service would be designed with this in mind.

She reviewed the aims of the Service: (1) procure a platform for all local authorities, and populate it with area-wide data; (2) support local authorities and partners to identify and enter actions into platform/provide training to enable decision-makers; and (3) provide a service to local authorities to support decision-making through access to data, best practice sharing, help with difficult questions, and identifying common ground/solutions.

Timelines and engagement points were highlighted. The presentation concluded with a review of next steps.

The Chair thanked Ms Wharmby for her presentation and opened it up to a question and answer session. Members acknowledged the importance of this work, but recognised the resource constraints and queried when Central Government should be approached for assistance. They praised the creation of a library of evidence which would assist future requests for funding/support. Members also raised questions on how to stop carbon leaking out of Council/Scottish boundaries and not being accounted for, if there were routes for legislative changes with low financial implications, and about innovative financing, particularly for smaller scale projects. Although recognising the value of the Service, Members also expressed concerns about the amount of work required to populate the platform and queried if information would need to be provided in a specific format.

Following the discussions and questions, the Chair thanked the presenters for their work and what the Service will offer.

7 PUBLIC BODIES CLIMATE CHANGE DUTIES REPORT 2022-23.

There was circulated a report dated 2 November 2023, by the Director of Environment and Infrastructure Services, that presented Committee with a draft of Aberdeenshire Council's Public Bodies Climate Change Duties Report for 2022-23 for consideration prior to submission to the Scottish Government by 30 November 2023.

Members were informed that Appendix 2 to the report outlined consumption and emission factors and compared them to previous levels. The most notable increase was in business travel (personal travel, trains, flights) due to the removal of covid restrictions. Home working emissions, which were previously calculated as an estimated percentage of who could work from home, were now calculated as the percentage of people working from home converted into hours.

Members commented on the national grid and discussed the best ways to update, respond to, and track progress on climate change and sustainability throughout the year, requesting a 6-monthly review of this report. Officers emphasised that they were provided a template spreadsheet each July that had the emission factors imbedded and that reporting on this mid-year would pose a resource challenge. However, the Route Map, which was updated 6 monthly contained much of the same information as this report and would enable progress tracking.

The Chair emphasised the role every Councillor had on Policy Committees to scrutinise carbon and financial budgets. Members asked if there were adequate staffing levels in place to meet budget targets. The Committee reviewed some cultural changes that had occurred, including Directorates taking responsibility and Sustainability Champions, and the need for sustainable thinking to be built into thinking and actions.

Members of the Opposition asked if there could be opportunity for additional engagement for them with the Sustainability Team, including at pre-meetings. It was **agreed** this would be considered and discussed outwith the meeting.

Thereafter the Committee **agreed** to:-

(1) acknowledge Aberdeenshire Council’s draft Public Bodies Climate Change Duties Report 2022-23 (Appendix 1 to the report); and

(2) delegate authority to the Chief Executive to sign the declaration in Part 6e of the report once the final draft was completed and submit to Scottish Government before the 30 November 2023 deadline.

PROGRESS WITH OUTSTANDING ACTIONS FROM PREVIOUS MEETINGS OF THE SUSTAINABILITY COMMITTEE AS AT 21 FEBRUARY, 2024

	Item Title	Date of Meeting	Action Agreed	Responsible Service	Progress to Date
1.	Environmental Standards Scotland report	31 11 22	Officers to give an update to Members on the 1 other audit/investigation underway.	Environment and Infrastructure Services	The Environmental Standards Scotland report has been published and a summary has been provided as part of today's Agenda.
2.	Outstanding Business	30 08 23	Members requested a report on the theoretical carbon emissions and impact to the Carbon Budget if the Deposit Return Scheme was (1) revived, (2) mothballed, or (3) completely removed. Officers to contact Zero Waste Scotland to establish if they have any information about carbon emissions and the impact on the Carbon Budget (as explained above) while officers continue to work on a report/appendix for Committee's consideration.	Environment and Infrastructure Services	This information has been provided in the Carbon Budget 2023-24 Final Update report (Appendix 3) on today's Agenda.
3.	Carbon Budget 2023-2024 Progress Update	30 08 23	The Chief Executive agreed to assist Officers in reducing the number of TBDs contained within the Carbon Budget 2023-2024. Officers to provide Committee with the updates to the Carbon Budget 2023-24 along with formal guidance/timelines for the carbon budget process, following presentation of the budget to the policy committees, to help inform the Carbon Budget 2024-25.	Environment and Infrastructure Services	This update has been provided in the Carbon Budget 2023-24 Final Update report on today's Agenda.

Aberdeenshire COUNCIL Environment & Infrastructure Services

REPORT TO SUSTAINABILITY COMMITTEE – 21 FEBRUARY 2024

ABERDEENSHIRE COUNCIL ROUTE MAP TO 2030 AND BEYOND PROGRESS UPDATE

1 Executive Summary/Recommendations

1.1 This report provides an update to the Sustainability Committee on progress to date of the Aberdeenshire Council Route Map to 2030 and Beyond which was approved by Aberdeenshire Council on 29 September 2022 (Item 14). It contains the newly developed draft Route Map Action Plan which breaks down the 11 Recommendations within the Route Map into timebound actions as well as including how these relate to the additional recommendations from a number of National reports.

1.2 The Committee is recommended to:

1.2.1 Consider and comment on Aberdeenshire Council's progress towards addressing the recommendations as set out in the Route Map to 2030 and Beyond through the development of a new Route Map Action Plan (Appendix 1); and

1.2.2 Consider and comment on the update provided by Property and Facilities Management on the ongoing progress with the various Renewables-related projects (Appendix 2).

2 Decision-Making Route

2.1 On 29 September 2022 the Aberdeenshire Council Route Map to 2030 and Beyond was approved by Full Council (Item 14).

2.2 The Sustainability Committee is to support the monitoring of the Carbon Budgets and the 11 Recommendations as set out in the Route Map to 2030 and Beyond. This is to ensure progress continues to be made in actioning the Route Map so that the Council meets its climate change targets as set out in the Aberdeenshire Council Climate Change Declaration.

2.3 On 30 November 2022 (Item 9), the Sustainability Committee instructed officers to include the Accounts Commission's 5 recommendations for Councils in future update reports on the Route Map. This will now be done through updates on the Route Map Action Plan.

2.4 The last Route Map to 2030 and Beyond update was provided to the Sustainability Committee on 30 August 2023 (Item 9).

3 Discussion

3.1 **Appendix 1** contains a newly developed Roue Map Action Plan which sets out specific actions to address each of the 11 recommendations which were agreed

as part of the Route Map to 2030 and Beyond. The recommendations are a mix of process and organisational opportunities. Each support a people and culture shift that is required for embedded action, and then there are technical studies that will be required for a better understanding of the challenges and opportunities. The recommendations were developed following a risk analysis on the barriers which may prevent the Council from reaching its targets through the Carbon Budget process and Route Map development.

3.2 Included in the Route Map Action Plan are a number of additional internal and National report outcomes and recommendations. This has been done so that the Council are able to demonstrate where they are addressing these additional recommendations within its Route Map. It will also support the monitoring of these going forward.

3.3 In addition, a separate update on progress with the various Renewables-related projects led by Property and Facilities Management has been provided by the Service in **Appendix 2**.

4 Council Priorities, Implications and Risk

4.1 This report helps deliver the Strategic Priority “Climate Change” within the Pillar “Our Environment”.

Pillar	**Priority**
Our People	• Learning for Life • Health & Wellbeing
Our Environment	• Climate Change • Resilient Communities
Our Economy	• Economic Growth • Infrastructure and public assets

4.2 The table below shows whether risks and implications apply if the recommendations are overleaf.

Subject	**Yes**	**No**	**N/A**
Financial			X
Staffing			X
Equalities and Fairer Duty Scotland			X
Children and Young People’s Rights and Wellbeing			X
Climate Change and Sustainability			X
Health and Wellbeing			X
Town Centre First			X

4.3 There are no direct staffing or financial implications arising from this update report.

4.4 The screening section as part of Stage One of the Integrated Impact Assessment (IIA) process has not identified the requirement for any further

detailed assessments to be undertaken. An IIA is not required as there are no direct implications of considering this update as it is a performance monitoring report. An IIA was completed for the Route Map to 2030 and Beyond which was approved by Aberdeenshire Council 29 September 2022 (Item 14).

4.5 The following Risks in the Corporate Risk Register have been identified as relevant to this matter on a Corporate Level:

- Risk ID ACORP010 as it relates to environmental challenges; and
- Risk ID ACORP006 as it relates to reputation management
- Risk ID ACORP001 as it relates to budget pressure

The following Risk in the Directorate Risk Registers has been identified as relevant to this matter on a Strategic Level:

- Risk ID ISSR010 as it relates to Climate Change.

4.5.1 Mitigation of these risks could be addressed by sufficient communication and engagement on the progress Aberdeenshire Council is making with regards to climate change mitigation and adaptation both internally and externally. This includes being transparent on the challenges of addressing climate change as well as the opportunities for the organisation and region. Budget pressures can only be mitigated against if additional sufficient long term funding is made available to support the significant Capital investment required to meet climate change targets.

5 Scheme of Governance

5.1 The Head of Finance and Monitoring Officer within Business Services have been consulted in the preparation of this report and their comments are incorporated within the report and they are satisfied that the report complies with the Scheme of Governance and relevant legislation.

5.2 The Committee is able to consider and take a decision on this item in terms of Section R paragraph 1.1 (a) of the List of Committee Powers in Part 2A of the Scheme of Governance as it relates to reviewing and monitoring the Council's work in respect of sustainable development and climate change.

Alan Wood
Director of Environment & Infrastructure Services

Report prepared by Claudia Cowie, Team Leader Sustainability and Climate Change
9 February 2024

List of Appendices

Appendix 1	Route Map to 2030 and Beyond Action Plan
Appendix 2	Property & Facilities Management Renewables Update

Route Map to 2030 and Beyond Action Plan – Version 1.0 – February 2024

Additional documents containing recommendations that have been considered and added to the Action Plan:

- **Internal Audit Carbon Budget Report Mitigations - https://aberdeenshireintranet.moderngov.co.uk/documents/s12329/10%20Appendix%20C%20-%20Service%20Reponse.pdf**
- **Audit Scotland recommendations for Councils as outlined in their report: Scotland's Councils' Approach to Addressing Climate Change - https://www.audit-scotland.gov.uk/publications/scotlands-councils-approach-to-addressing-climate-change**
- **Leaders' Climate Emergency Checklist - https://sustainablescotlandnetwork.org/uploads/store/mediaupload/2109/file/Leadership_Checklist.pdf**
- **Climate Emergency Response Group (CERG) Outcomes - https://cerg.scot/wp-content/uploads/2023/08/CERG-Report-August-2023.pdf)**
- **Environmental Standards Scotland (ESS) Outcomes - https://environmentalstandards.scot/wp-content/uploads/2023/09/ESS-Investigation-Climate-Change-Improvement-Report-IESS.21.012.pdf**
- **Local Climate Impact Profile (LCLIP) 2019 – 2022 Recommendations – *Link to be added once report is approved on 21 February 2024***

Key:

RAG	
Red	Not Started – work has not started on this action yet, but it is still on track for its completion date
Amber	Underway – work is underway on this action with a % given on progress to date towards completion
Green	Completed – action has already been completed

Recommendation 1: Set up a central steering group. Take ownership of and monitor progress of delivery of the projects and Route Map 2030. Identification and recommend measures to manage resistance to change.				
	Actions	**RAG**	**Timeline**	**Lead**
1.1	Develop Terms of Reference for a central steering group and seek membership from Management of key services. Set up bi-monthly meetings for the new Route Map Steering Group to lead on the delivery of the Carbon Budgets and 11 recommendations.		March 2023	HoS Environment and Sustainability
1.2	Develop an action plan for the delivery of the Route Map to be presented to Sustainability Committee in February 2024 for comments. Update the action plan after an annual review of the actions to ensure that they remain the most effective options. Updates will also take place when significant documents are published and require additional action. *(Related to Audit Scotland Recommendation - Include details of the extent to which individual actions in the plans will impact on climate goals for reducing emissions and adapting to climate change, so the scale of the challenge can be clearly seen.)* *(Related to Audit Scotland Recommendation - Regularly update action plans. Given the scale of the emergency and the speed at which action is required, an annual review of actions would help to ensure that the actions identified are the most effective options.)* *(Related to Audit Scotland Recommendation - Include detailed route maps to achieving climate goals.)* *(Related to ESS Recommendation 1. Make climate, adaptation and sustainability plans at local authority level compulsory.)*	75%	First draft February 2024 Annual Updates to 2030	Team Leader – Sustainability and Climate Change

1.3	Determine the best route/system for future monitoring of the Action Plan (e.g. Pentana). The system is to support 6 monthly monitoring of progress and delivery of the Route Map and Carbon Budgets. Reports can then be pulled for the progress updates provided to Sustainability Committee and relevant Policy Committees.	25%	July 2024	Route Map Steering Group E & I Support Services
1.4	Develop a workshop and deliver across a selection of service management meetings over 2024/25 which support: • Identifying resistance to change and recommended measures to manage this change. • Identifying areas of influence to ensure proactivity on wider mitigation and adaptation action. • Capability and capacity challenges and opportunities. • Consideration for roles within services who can lead on climate change and sustainability. • Identifying service reporting mechanisms which could include climate change and sustainability. *(Related to the Leaders' Climate Emergency Checklist – Governance - The body is proactively influencing partners, citizens and stakeholders to drive change at scale, locally, regionally and nationally.)* *(Related to Audit Scotland Recommendation - Assess whether the council has sufficient capacity, skills and knowledge to support effective decision-making on climate change and to implement the necessary actions by, for example, carrying out a skills and competencies review.)* *(Related to Audit Scotland recommendation - Identify and integrate climate change into key overarching organisational annual reports and plans.)* *(Related to Internal Audit Mitigation 1.2 – Carbon Budget Allocations)*		March 2025	Team Leader – Sustainability and Climate Change

1.5	Development of a formal Carbon Budget risk register which identifies the risks, consequences and controls / mitigations in place to provide clarity and assurance over the Carbon Budget risk environment. This will then be integrated into the Climate Change Risk Register and reviewed annually. *(Related to Internal Audit Mitigation 1.3 – Carbon Budget Risks)* *(Related to Leaders' Climate Emergency Checklist – Finance - Understanding of how to align spend with targets. Finance gaps identified and work underway to secure resources.)*	25%	May 2024	Route Map Steering Group
1.6	Identify all annual reports and plans beyond the Public Bodies Climate Change Duties Report (PBCCDR) that include the Council's action on climate change and ones where this could be considered for inclusion going forward to further support monitoring of progress on delivery of the Route Map. *(Related to Audit Scotland recommendation - Identify and integrate climate change into key overarching organisational annual reports and plans.)* *(Related to Leaders' Climate Emergency Checklist – Strategy - Monitoring is above and beyond mandatory requirements and reporting is shared and reviewed with stakeholders.)* *(Related to ESS Recommendation 3 – Introduce a separate reporting Framework for Local Authorities)*	50%	March 2025	Route Map Steering Group
1.7	Review the current existing governance and business processes to ensure climate change is well integrated into Council processes (this is in addition to the Council's risk management and internal audit processes which already consider climate change).	50%	October 2024	HoS – Legal and People

	(Related to Audit Scotland recommendation - Ensure climate change is fully integrated into existing governance and business processes, including risk management and internal audits.)			
1.8	Develop an integrated impact assessment which includes climate change and sustainability impacts on policy and strategy development and Council decisions. *(Related to Audit Scotland recommendation - Develop mechanisms to ensure that the potential impact of policies on climate change goals is considered fully in decision-making.)* *(Related to the Leaders' Climate Emergency Checklist – Governance Climate change embedded into decision making at all levels, with evidence reported of how this influences decisions on plans, projects and resources.)*		March 2023	Team Leader Sustainability and Climate Change
Recommendation 2: Define clear roles & responsibilities. Define accountabilities, roles, responsibilities across the Authority for delivering the Route Map 2030. This should be followed by delivering an internal capability and capacity gap analysis against this for all services and recommend actions to address the gaps and resource challenges.				
	Actions		**Timeline**	**Lead**
2.1	Ensure 'Climate Change' is one of the Council's strategic priorities within the Council Plan. *(Related to Audit Scotland recommendation - Ensure senior level buy-in and leadership by integrating climate change into strategic priorities and setting out accountability arrangements.)* *(Related to Leaders' Climate Emergency Checklist – Strategy - Climate change is embedded in all organisational strategies and plans, and shapes decision making and resource allocation.)*		December 2022	Director of Business Services

2.2	Develop a guidance document for the Carbon Budget 2024/25. This will contain roles and responsibilities as well as Directorate targets (for accountability). It will be reviewed annually in October to ensure pace with revisions to the Carbon Budget process. *(Related to Internal Audit Mitigation 1.1 – Staff Guidance and Governance)*		March 2024	Team Leader – Sustainability and Climate Change
2.3	Directors to appoint Carbon Budget leads and deputes in their Directorate who are responsible for pulling the 6 monthly reports together and bringing them to the relevant Policy Committees. *(Related to Internal Audit Mitigation 1.2 – Carbon Budget Allocations)*		March 2024	Each Director
2.4	The Carbon Budget Toolkit guidance (that is currently embedded within the tool) for trained 'super-users', will be re-written and provided in Word format to make it easier for users to find and utilise. *(Related to Internal Audit Mitigation 1.5 – Carbon Budget Toolkit)*	75%	March 2024	Team Leader – Sustainability and Climate Change
2.5	Refresher training for previous and new super-users from Property and Facilities Management, Fleet and Streetlighting teams to be provided by Arcadis. *(Related to Internal Audit Mitigation 1.5 – Carbon Budget Toolkit)*		March 2024	Team Leader – Sustainability and Climate Change
2.6	Develop a new training module specifically on the Carbon Budget process hosted on ALDO. This will be supported by Sustainability Champions to ensure the training is meaningful and delivers on providing further support to the written guidance. *(Related to Internal Audit Mitigation 1.1 – Staff Guidance and Governance)*	50%	March 2024	Team Leader – Sustainability and Climate Change

2.7	Services to review key Council documents - Plans, Strategies, Policies, etc. and complete IIAs on each to assess impacts and opportunities to update them ensuring climate change and sustainability is embedded and demonstrates resource allocation for reporting. *(Related to Leaders' Climate Emergency Checklist – Strategy: Climate change is embedded in all organisational strategies and plans, and shapes decision making and resource allocation.)*		May 2025	Chief Officers across the Organisation
2.8	Work with HR to develop a Net Zero focused Leadership Forum workshop (for Senior Management of the organisation) utilising the Leaders' Climate Emergency Checklist. Support to be provided by Sustainable Scotland Network and the Improvement Service. *(Related to all the recommendations in the Leaders' Climate Emergency Checklist.)*	75%	March 2024	Team Leader – Sustainability and Climate Change HR Manager – Legal and People
2.9	Utilise the outcomes of workshops and the Leadership Forum to develop a suite of internal training modules on climate change and sustainability to be hosted on ALDO.	25%	March 2025	Team Leader – Sustainability and Climate Change
2.10	Support services to progress outcomes from the information collected at workshops and leadership forum (as discussed in Actions 1.4 and 2.8) related to the capacity and capability challenges and opportunities across the organisation. *(Related to Audit Scotland Recommendation - Assess whether the council has sufficient capacity, skills and knowledge to support effective decision-making on climate change and to implement the necessary actions by, for example, carrying out a skills and competencies review.)*		March 2025	Team Leader – Sustainability and Climate Change

2.11	Future planning for carbon reduction will need to assess planned impact, costing and resourcing over the medium term to provide assurances that targets set for 2030 and 2045 will be met. Areas this work will need to consider: • Medium term financial strategy incorporation • Resource required for external funding applications • Connecting projects applying for funding to Climate Change • Whole life carbon consideration on tender bids • Limits on 'carbon expenditure', similar to financial budgets and efforts made to recover projected 'overspend'. • Maximising the value of public spending. • Prioritise capital investment that achieves net zero. • Net zero conditionality for significant public sector investment. *(Related to Internal Audit Mitigation 1.2 – Carbon Budget Allocations)* *(Related to Leaders' Climate Emergency Checklist – Finance: Resource and spend clearly aligned with targets, climate impact of investments being managed, and collaborations in place to leverage resources.)* *(Related to Audit Scotland Recommendation - Improve information on costs and budgets of actions)* *(Related to CERG Recommendation - Introduce a Net Zero Test to inform all policy and investment decisions)* *(Related to recommendation 3 from LCLIP 2019 – 2022 - Generating a cost code to recapture costs from all extreme weather events and a central fund for climate change costs and adaptation measures.)*		March 2025	SLT HoS Finance Capital Plan Group

Recommendation 3: Supply Chain Capacity and Capability Gap Analysis: Confirm the ability for current and local suppliers to deliver the future type and volume of hard interventions and services. This includes procurement strategy review, frameworks and existing (long term and FM) contract gap analysis.				
	Actions		**Timeline**	**Lead**
3.1	Procurement Strategy review – The revised Joint Procurement Strategy for 2023 – 2026 review will include a theme related to Climate Change, Net Zero & Circular Economy. https://www.aberdeenshire.gov.uk/business/procurement/#joint *(Related to ESS recommendation 2 - Ensure that the planned statutory guidance covers the full breadth of local authorities' climate change responsibilities and includes the changes which will be required as a result of the recommendations contained within this report.)*		October 2023	HoS Commercial and Procurement Services
3.2	Progress key actions from the Joint Procurement Strategy for 2023 – 2026 including: • Ongoing review of opportunities for inclusion of Climate and Circular Economy considerations • Increase inclusion of climate and circular economy considerations in procurement activity • Further develop mechanisms to track delivery of Environmental outcomes *(Related to ESS recommendation 2 - Ensure that the planned statutory guidance covers the full breadth of local authorities' climate change responsibilities and includes the changes which will be required as a result of the recommendations contained within this report.)*	25%	March 2025	HoS Commercial and Procurement Services

3.3	Develop and implement a Community Benefit and Sustainable Procurement Policy (agreed by the partners to the Shared Service) setting direction and clear guidelines for delegated procurers on requirements for considerations to Climate Change, Net Zero & Circular Economy. *(Related to ESS recommendation 2 - Ensure that the planned statutory guidance covers the full breadth of local authorities' climate change responsibilities and includes the changes which will be required as a result of the recommendations contained within this report.)* *(Related to Audit Scotland Recommendation - Work with partners to further develop existing support networks to ensure learning and good practice is shared across the sector.)*	25%	March 2025	HoS Commercial and Procurement Services
Recommendation 4: Set targets for reducing Direct and Indirect emissions: Requirement as set out in the Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Amendment Order 2020 for reporting periods commencing on or after 1 April 2021. These will need to be identified and then different targets set for different sources.				
	Actions		**Timeline**	**Lead**
4.1	Carbon Budget targets to be considered and set annually for each Director. These will be provided in the Carbon Budget Guidance document. The 'Route Map to 2030 and Beyond' will be utilised as well as consideration on where reported emissions come from and which services have the greatest influence to make changes. This process will be reviewed annually to ensure it continues to support action. *(Related to Internal Audit Mitigation 1.2 – Carbon Budget Allocations)*		January 2024	Directors

	(Related to Audit Scotland Recommendation - Be clear and transparent about what is and is not included in corporate and area-wide targets.) *(Related to Audit Scotland Recommendation - Utilise appropriate interim targets to ensure ongoing progress can be measured and monitored effectively.)* *(Related to Audit Scotland Recommendation - Regularly report progress against targets in a clear and transparent way.)*			
4.2	Set a target for Scope 1 emissions currently reported on. This will require identifying emissions, any policy drivers for reducing these emissions, consideration of supply chains and skills, Council resource to action and fund projects, statutory timelines etc. A best estimate will need to be agreed by key services before taking to Committee for consideration and approval. *(Related to Audit Scotland Recommendation - Be clear and transparent about what is and is not included in corporate and area-wide targets.)* *(Related to Audit Scotland Recommendation - Utilise appropriate interim targets to ensure ongoing progress can be measured and monitored effectively.)* *(Related to Audit Scotland Recommendation - Regularly report progress against targets in a clear and transparent way.)* *(Related to Internal Audit Mitigation 1.2 – Carbon Budget Allocations)*		March 2025	Engineering Services Manager - Property and Facilities Management Fleet Manager Team Leader – Sustainability and Climate Change
4.3	Set a target for Scope 2 emissions currently reported on. Currently these emissions are our purchased electricity from the grid. We will be required to determine future use of the grid which will increase, any local/National policy and strategy drivers for reducing emissions from the grid, Council resource to action and fund projects, statutory		March 2025	Engineering Services Manager - Property and Facilities Management

	timelines etc. A best estimate will need to be agreed by key services before taking to Committee for consideration and approval. *(Related to Audit Scotland Recommendation - Be clear and transparent about what is and is not included in corporate and area-wide targets.)* *(Related to Audit Scotland Recommendation - Utilise appropriate interim targets to ensure ongoing progress can be measured and monitored effectively.)* *(Related to Audit Scotland Recommendation - Regularly report progress against targets in a clear and transparent way.)* *(Related to Internal Audit Mitigation 1.2 – Carbon Budget Allocations)*			Team Leader – Sustainability and Climate Change
4.4	Set a boundary for types of scope 3 emissions, how these will be measured and then a target for reduction. This will require identifying these emissions beyond what we already report on (water, business travel, internal waste, electricity T&D loses) to include the services and goods we procure, staff commuting, regional waste, any policy drivers for reducing these emissions, consideration of frameworks, supply chains and skills, Council resource to influence change, action and fund projects, statutory timelines etc. A best estimate will need to be agreed by key services before taking to Committee for consideration and approval. *(Related to ESS Recommendation - Make the reporting of Scope 3 emissions mandatory for local authorities)* *(Related to Audit Scotland Recommendation - Be clear and transparent about what is and is not included in corporate and area-wide targets.)*	25%	March 2026	Team Leader – Sustainability and Climate Change

	(Related to Audit Scotland Recommendation - Utilise appropriate interim targets to ensure ongoing progress can be measured and monitored effectively.) *(Related to Audit Scotland Recommendation - Regularly report progress against targets in a clear and transparent way.)* *(Related to Internal Audit Mitigation 1.2 – Carbon Budget Allocations)*			
Recommendation 5: Delivery of the Feasibility studies at operational buildings, to support definition of future Carbon Budgets.				
	Actions		**Timeline**	**Lead**
5.1	Develop the asks and deliver the feasibility studies covering Gas to Air Source Heat Pump; Oil to Electric Heating; Roof Top PVs Whole building retrofit; Renewables – Wind Turbines, Solar Farms, Battery Storage; Council Assets.	75%	May 2024	Engineering Services Manager - Property and Facilities Management
5.2	Improve information on costs of actions for future Carbon Budgets with the outcomes of the feasibility studies. Utilise the data to update the Carbon Budget Toolkit so budgets/funding can begin to be identified for future projects. *(Related to Internal Audit Mitigation 1.5 – Carbon Budget Toolkit)*	25%	March 2025 Ongoing annual updates to the tool by Service leads.	Team Leader – Sustainability and Climate Change Engineering Services Manager - Property and Facilities Management Fleet Manager Street Lighting Officer

Recommendation 6: Electric Vehicles/Hydrogen (EV/H2) Fleet Assessment				
	Actions		**Timeline**	**Lead**
6.1	Improve the information and estimates on costs/savings/emissions of actions related to fleet in the Carbon Budget Toolkit. *(Related to Internal Audit Mitigation 1.5 – Carbon Budget Toolkit)*	25%	April 2024	Fleet Manager Team Leader – Sustainability and Climate Change
6.2	Develop an Electric/H2 availability/resilience risk assessment. Supply and demand issues along with costs continue to be a challenge. This requires constant monitoring as currently demand and cost continues to be higher than that for diesel/petrol which is a challenge/risk to the Council meeting targets. An interim step is looking at utilising hybrid vehicles and/or retrofitting current vehicles. *(Related to Internal Audit Mitigation 1.3 – Carbon Budget Risks)*	25%	March 2026	Fleet Manager
6.3	EV charging infrastructure roll out - utilising £6.8M grant from Transport Scotland forming the main investment for the next three years. This covers public chargers in rural and city locations but also expected to offer a compelling solution from the market to maximise gilt edge sites like park and rides, tourist locations, sports centres etc. and also offer a solution for developing EV chargers at all of our depots for council fleets for up to the next 20 years across four Councils in collaboration.	25%	March 2027 (and onwards)	HoS Commercial and Procurement Services Fleet Manager Sustainable Development Officer (Climate Change)

Recommendation 7: Develop Hydrogen Strategy				
	Actions		**Timeline**	**Lead**
7.1	Working Group set up to oversee a study on Hydrogen Opportunities.	25%	August 2024	Director Environment and Infrastructure
7.2	Continue to consider further opportunities to engage with Hydrogen activity ongoing in the region, Nationally and Internationally.	50%	Ongoing	Strategy Manager Fleet Manager HoS Commercial and Procurement Services HoS Planning and Economy
Recommendations 8.1: Electrification Risk/Resilience Study				
	Actions		**Timeline**	**Lead**
8.1.1	Map out Council owned buildings which are being impacted by storm events and others potentially at risk – assess what is needed to ensure our own resilience out with limitations of the grid. *(Related to Internal Audit Mitigation 1.3 – Carbon Budget Risks)*		March 2026	HoS Property and Facilities Management
8.1.2	Housing service to continue their work on recovery and identity of assets at risk to ensure the correct back up support is in place. This includes supporting Local Housing Associations with resilience. Ongoing work on reducing actual heat demand from the Housing stock increases resilience too so this work is to continue.	50%	Ongoing	HoS Housing and Building Standards

	(Related to Internal Audit Mitigation 1.3 – Carbon Budget Risks)			
8.1.3	Housing to continue to encourage community resilience planning. *(Related to Internal Audit Mitigation 1.3 – Carbon Budget Risks)*	75%	Ongoing	HoS Housing and Building Standards
Recommendations 8.2: Embed zero carbon standard for both new build and retrofit initiatives				
	Actions		**Timeline**	**Lead**
8.2.1	Review the Zero Carbon Standard developed by Scottish Futures Trust and determine if the Council should adopt all or aspects of this approach. Provide transparent reasoning around the decision which sets out the best outcome for Aberdeenshire Council when reviewing new build and retrofit initiatives going forward. *(Related to CERG Recommendation - Introduce a Net Zero Test to inform all policy and investment decisions)*	25%	March 2025	HoS Property and Facilities Management
Recommendation 9.1: Residual Emission Action Plan including an organisational carbon footprint scope and target review				
	Actions		**Timeline**	**Lead**
9.1.1	Develop a Residual Emission Action Plan which incorporates the targets set out in Recommendation 4. The Residual Emissions Action Plan will include the following actions with assigned leads: • Identify the Council's residual emissions i.e., what estimated emissions will remain at the point of net zero.		September 2025	Team Leader – Sustainability and Climate Change Team Leader Natural Env

	• Identify what the Council has done so far and what plans are already in place which can support dealing with residual emissions for a net zero target, using March 2020 as a starting point. • Identify which of these residual emissions can be inset through the implementation of nature-based solutions such as reforestation, renewable energy, regenerative agriculture, etc. • Identify external carbon inset projects which the Council could utilise. • Create a list of potential inset projects (internal and external) which the Council could implement to deal with residual emissions. *(Related to Audit Scotland Recommendation - Be clear and transparent in policies about how the Council will deal with residual emissions if net zero or carbon neutral targets are in place.)* *(Related to Audit Scotland Recommendation - Ensure the co-benefits or potential negative impacts of net zero actions and adaptation actions on each other are clearly understood.)* *(Related to ESS Recommendation 1. Make climate, adaptation and sustainability plans at local authority level compulsory.)*			
9.1.2	Support the Climate Intelligence Service to ensure the Council is proactively influencing partners, citizens and stakeholders to drive change across Aberdeenshire while monitoring progress with the Net Zero by 2045 target. *(Related to Leaders' Climate Emergency Checklist – Governance: The body is proactively influencing partners, citizens and stakeholders to drive change at scale, locally, regionally and nationally.)*	25%	March 2027	Team Leader – Sustainability and Climate Change

	(Related to Audit Scotland Recommendation - Work collaboratively to tackle some of the key challenges involved in defining and setting targets and monitoring progress, combining resources where it is more effective to do so, and focusing on maximising impact and adding value.)			
9.1.3	Continue to support and lead the Climate Ready Aberdeenshire voluntary cross-sector network to capture current work and future plans of relevant groups and organisations in the region, including their strategic intents to 2030, with the aim to increase shared learning and collaboration between network members that will help tackle the challenges of climate change. *(Related to Leaders' Climate Emergency Checklist – Governance: The body is proactively influencing partners, citizens and stakeholders to drive change at scale, locally, regionally and nationally.)* *(Related to Audit Scotland Recommendation - Work collaboratively to tackle some of the key challenges involved in defining and setting targets and monitoring progress, combining resources where it is more effective to do so, and focusing on maximising impact and adding value.)* *(Related to Audit Scotland Recommendation - Work collaboratively with local communities and ensure that people are able to effectively contribute to the design and delivery of climate change actions.)*		Ongoing	Team Leader – Sustainability and Climate Change
9.1.4	Actively consider opportunities to utilise the Housing Association Charitable Trust (HACT) Retrofit Credits programme which is a carbon credits programme that unlocks additional funding into housing retrofit by verifying the emission reductions and social value of retrofit projects. carbon credits in Housing project. Assess the data for costing and eligibility and if a business case can be made present this to SLT and Members for consideration.	25%	September 2024	HoS Housing and Building Standards

	(Related to Audit Scotland Recommendation - Work collaboratively to tackle some of the key challenges involved in defining and setting targets and monitoring progress, combining resources where it is more effective to do so, and focusing on maximising impact and adding value.)			
Recommendation 9.2: Resilience/Adaptation Assessment				
	Actions		**Timeline**	**Lead**
9.2.1	Develop and distribute an employee Climate Change Adaptation and Resilience Questionnaire to officers from across all services for a 4-week period followed by focused interviews. The results to be used to complete other adaptation/resilience assessment actions.		March 2023	Sustainability and Climate Change Officer
9.2.2	Develop an adaptation plan which pulls together all the council's actions and allows an assessment of the impact of these actions using information gathered from other resilience/adaptation assessment and recommendations from the LCLIP once approved. *(Related to Audit Scotland recommendation - Develop an overarching adaptation plan which pulls together all the council's actions and allows an assessment of the impact of these actions)* *(Related to recommendation 2 from LCLIP 2019 – 2022 - developing a management plan or model to ensure all extreme weather events are given equal prioritisation.)*		March 2025	Sustainability and Climate Change Officer
9.2.3	Set interim targets with clear performance indicators to ensure focus on adaptation goals using information gathered from other		March 2025	Sustainability and Climate Change Officer

	resilience/adaptation assessment actions and recommendations from the LCLIP once approved. *(Related to Audit Scotland recommendation - Set interim targets with clear performance indicators to ensure focus on adaptation goals)* *(Related to recommendation 2 from LCLIP 2019 – 2022 - developing a management plan or model to ensure all extreme weather events are given equal prioritisation.)*			
9.2.4	Regularly report progress against actions in a clear and transparent way through update reports to the Route Map Steering Group and Sustainability Committee, using Adaptation Scotland's Benchmarking Report which is submitted every March and through the Public Bodies Climate Change Report which is submitted every November. *(Related to Audit Scotland recommendation - Regularly report progress against actions in a clear and transparent way.)*		Ongoing	Sustainability and Climate Change Officer
9.2.5	Set up a Short Life Working Group (SLWG) with representatives from across services to develop an Employee Adaptation and Resilience Guidance document and to review and update the Climate Change Risk Register. Group will remain in place until these tasks are complete. *(Related to recommendation 1 from LCLIP 2019 – 2022 - developing a climate change adaptation and resilience training programme.)*	75%	June 2024	Sustainability and Climate Change Officer
9.2.6	Develop a Local Climate Impact Profile 2019-2022 Report with recommendations as an evidence base for adaptation/resilience action. Present report at Sustainability Committee for approval.		March 2024	Sustainability and Climate Change Officer
9.2.7	Review and update the Climate Change Risk Register considering the findings from the LCLIP. Get approved by the SLWG, Risk		March 2024	Sustainability and Climate Change Officer

	Officer and Route Map Steering Group before being added to the Corporate Risk Management Steering Group for monitoring.			
9.2.8	Develop an Employee Adaptation and Resilience Guidance document with the SLWG considering findings from the questionnaire, interviews, LCLIP and Risk Register. Consultation and approval by SLWG, Route Map Steering Group, SLT and Sustainability Committee before publication. *(Related to recommendation 1 from LCLIP 2019 – 2022 - developing a climate change adaptation and resilience training programme.)*	50%	September 2024	Sustainability and Climate Change Officer
9.2.9	Develop an Employee Adaptation and Resilience Guidance ALDO training module with the SLWG using the Guidance document. Ensure this is consistent with other Sustainability & Climate Change training modules. *(Related to recommendation 1 from LCLIP 2019 – 2022 - developing a climate change adaptation and resilience training programme.)* *(Related to recommendation 4 from LCLIP 2019 – 2022 - developing an employee redeployment and volunteer programme for extreme weather events.)* *(Related to recommendation 5 from LCLIP 2019 – 2022 - developing an adaptation and resilience communication and engagement plan for communities.)*	25%	June 2024	Sustainability and Climate Change Officer
9.2.10	Monitor how adaptation and resilience is being considered in decision making through the Council's Integrated Impact Assessment (IIA) process. *(Related to Audit Scotland recommendation - Ensure adaptation and climate resilience are considered in decision-making.)*		Ongoing	Team Leader Sustainability and Climate Change

Recommendation 9.3: Develop Local Heat and Energy Efficiency Strategy (LHEES)				
	Actions		**Timeline**	**Lead**
9.3.1	Complete all 8 steps of the LHEES Methodology; **Stage 1**: Policy and strategy review (note all national and local policies and strategies that could influence or be influenced by LHEES). **Stage 2**: Data and tools library (Document of all resources that were used in preparation of the LHEES). **Stage 3**: Strategic Zoning and pathways (first look at potential zones of interest and pathways to achieve the priorities of the LHEES). **Stage 4**: Generation of initial delivery areas or focus for delivery plan and Heat Network Zoning (data led zoning to be reviewed and refined by internal LHEES steering group). **Stage 5**: Building level pathway assessment (refining the detail of interventions to be set out for specific areas). **Stage 6**: Finalisation of delivery areas. **Stage 7**: Development of the Strategy document using outputs from Stages 1-3 and Heat Network Zoning document. **Stage 8**: LHEES delivery plan development using outputs from the strategy and the information developed for stages 4-6.		December 2023	Sustainable Development Officer
9.3.2	Consultation of LHEES draft Strategy and delivery plan: This will be a consultation of our internal experts, Scottish Government, and the general public (using Engage Aberdeenshire platform). Along with the public consultation, we will ensure that parties with a vested interest such as heat network developers, Distribution Network Operators and community groups are made aware of the documents for comment.	50%	February 2024	Sustainable Development Officer

9.3.3	Consider whether Aberdeenshire Council should be leaders in the development of any potential heat network or if this is something the Council should approach the private sector to invest in. There are some funding avenues available whichever direction is taken.	25%	March 2025	Sustainable Development Officer
9.3.4	Approval at Full Council of both the Local Heat and Energy Efficiency Strategy and Delivery plans (5 year) following on from the consultation and assessment and inclusion of any comments and representations made on the draft documents.		June 2024	Sustainable Development Officer
9.3.5	Development and delivery of 5 year LHEES delivery plans.	50%	Ongoing	Sustainable Development Officer
Recommendation 9.4: Develop Re-use Business Case				
	Actions		**Timeline**	**Lead**
9.4.1	Feasibility study to be carried out to take forward the proposed Aberdeenshire Council idea of a large-scale reuse project in the region. The aim of the study is to objectively assess the practicality and viability of the venture and identify any potential opportunities or issues.		May 2023	Waste Management Officer
9.4.2	Set up a Working group/advisory group and develop some terms of reference.	50%	April 2024	Waste Management Officer
9.4.3	Map services objectives to determine the opportunities and challenges for the different services that should be engaged in the project development.		May 2024	Waste Management Officer

9.4.4	Council and external partner meeting to progress the project further.		May 2024	Waste Management Officer Area Managers & Community Planning Identified local third sector stakeholders
9.4.5	Identification of preferred site, identification/agreement of preferred operating model, and site/operating area for the 2 recommendations from the feasibility study: 1) Increase capacity of reuse containers at HRCs throughout Aberdeenshire 2) The development of a Reuse Hub in a central Aberdeenshire location.		August 2024	Waste Management Officer Area Managers & Community Planning Economic Development
Recommendation 10: Central assurance and reporting: Design and implement a central reporting function, possibly incorporated in the current carbon budget tool. All services should centrally store progress data to track if projects are on track, delivered on or under budget and risks to successful delivery can be identified on time to be mitigated.				
	Actions		**Timeline**	**Lead**
10.1	A new Microsoft Form to be developed for gathering Carbon Budget 2024/25 data covering the budget setting principles set out by Internal Audit. Carbon Budget Toolkit will then be utilised to input all projects provided via the Form so that one location which tracks and monitors progress is in place ensuring well-organised records are maintained year on year. *(Related to Internal Audit Mitigation 1.3 – Carbon Budget Risks)*	75%	March 2024	Team Leader – Sustainability and Climate Change

	(Related to Internal Audit Mitigation 1.4 – Carbon Budget Setting and Principles)			
10.2	Determine the best route/system for future monitoring and reporting of the Route Map Action Plan and Carbon Budgets (e.g. Pentana). The system is to support the 6 monthly monitoring of progress and delivery of the Route Map and Carbon Budgets. *(Related to Internal Audit Mitigation 1.6 – Carbon Budget Monitoring)*	25%	May 2024	Route Map Steering Group
10.3	Consider if PowerBi can be used for the reporting of projects saved within the Carbon Budget Toolkit to make the data stored there more presentable and easier to interpret for wider reporting. *(Related to Internal Audit Mitigation 1.6 – Carbon Budget Monitoring)*		March 2025	Team Leader – Finance
Recommendation 11: Communications to support and implement the change and generate buy-in of the people and Directorates at all levels. Design and management of the communications and map the impact on the people and what it means for them.				
	Actions		**Timeline**	**Lead**
11.1	Utilise current communication methods e.g. Arcadia, Engage, Team Talks, Surveys, Carbon Literacy Training, new Aldo modules etc. to communicate all the ways the Council is delivering on its Climate Change commitments. *(Related to Leaders' Climate Emergency Checklist – Governance: The body is proactively influencing partners, citizens and stakeholders to drive change at scale, locally, regionally and nationally.)* *(Related to Audit Scotland Recommendation - Work collaboratively to tackle some of the key challenges involved in defining and setting*	75%	Ongoing	Comms team Team Leader – Sustainability and Climate Change

	targets and monitoring progress, combining resources where it is more effective to do so, and focusing on maximising impact and adding value.)			
11.2	Utilise current communication methods across external networks and partner organisations (e.g. Climate Ready Aberdeenshire, NESCAN) to communicate the ways the Council is delivering on its Climate Change commitments. *(Related to Leaders' Climate Emergency Checklist – Governance: The body is proactively influencing partners, citizens and stakeholders to drive change at scale, locally, regionally and nationally.)* *(Related to Audit Scotland Recommendation - Work collaboratively to tackle some of the key challenges involved in defining and setting targets and monitoring progress, combining resources where it is more effective to do so, and focusing on maximising impact and adding value.)* *(Related to Audit Scotland Recommendation - Work collaboratively with local communities and ensure that people are able to effectively contribute to the design and delivery of climate change actions.)*	75%	Ongoing	Comms team Team Leader – Sustainability and Climate Change
11.3	Share the learnings and integrate outcomes from the workshops and leadership forum (as discussed in Actions 1.4 and 2.8) held across different services to generate buy-in across the organisation.		March 2025	Marketing & Communications Officer Team Leader – Sustainability and Climate Change

Appendix 2 – Property & Facilities Management Renewables Update

PROPERTY & FACILITIES MANAGEMENT RENEWABLES UPDATE

1 Executive Summary

1.1 The purpose of this appendix is to describe and review ongoing progress with the various Renewables-related projects led by Property & Facilities Management (P&FM).

1.2 There have been five categories of Renewables projects identified:

- Carbon reduction feasibility studies
- other carbon studies
- non-domestic energy efficiency framework (NDEEF)
- ongoing building design / construction projects
- carbon budget 2024/25 – P&FM contribution

2 Carbon Reduction Feasibility Studies

2.1 Arcadis were appointed to provide a scope of service / specification for a series of feasibility studies exploring different aspects of the Net Zero Carbon or Carbon Reduction agenda. The studies are as follows:

No.	Type	Location
1	Gas to Air Source Heat Pump	Portlethen Swimming Pool
2	Oil to Electric Heating	Crathie Primary
3	Roof Top PVs	Aberdeenshire-wide – 15 Sites
4	Whole building	Mackie Academy, Turriff Academy, Meiklemill Primary
5	Renewables – Wind Turbines, Solar Farms and Battery Storage – Council Assets	Aberdeenshire-wide – 24 Sites

2.2 Study 1 – Gas to Air Source Heat Pump (ASHP) – Portlethen Pool. The aim of this study is to assess the viability of ASHP being installed in an existing building to replace a gas boiler, where no improvements are made to the building fabric or heating ancillaries. Harley Haddow were appointed from Aberdeenshire Council's consultant framework in August 2023 to carry-out this study. Draft report was issued in November 2023, and comments provided to the consultant by Council officers. While the study is focused on changing the heating source, notably in the report the consultant is recommending upgrades to the building fabric and installing PVs. The final report should be available in February 2024.

2.3 Study 2 – Oil to Electric Heating – Crathie Primary School. The aim of this study is to assess the viability of electric heaters being installed in an existing building to replace an oil boiler, where no improvements are made to the building fabric or heating ancillaries. Harley Haddow were appointed from Aberdeenshire Council's consultant framework in August 2023 to carry-out this study. Draft report was issued in November 2023, and comments provided to the consultant by Council officers. As with Study 1, the consultant has included a fabric-first recommendation along with other renewable technologies which go beyond the narrow remit of this study, and there are technical issues with some of their proposals. The final report should be available in February 2024.

2.4 Study 3 – Rooftop PVs – Various locations across Aberdeenshire. The aim of this study is to assess the viability of a rooftop PV array solution across 15 sites, while providing evidence that the roof is structurally suitable for the installation of PV, and any additional works required to ensure this. Mott MacDonald were appointed through a mini competition organised by hub North Scotland in November 2023, with the site surveys organised for January 2024 and completion of the study in April 2024.

2.5 Study 4 – Whole building – Mackie Academy, Turriff Academy and Meiklemill Primary. The aim of this study is to use the whole building method to assess the viability of a range of carbon-reducing measures in an existing property – it is similar to the work undertaken at Johnshaven (Items 3.1 & 3.2) but at a larger scale. Rybka were appointed to lead a multi-discipline team through a mini competition organised by Hub North in December 2023, with completion of the study estimated in April 2024. There was a kick-off meeting in January 2004, and a SharePoint site has been set-up with access for the consultant team.

2.6 Study 5 – Renewables on Council Assets. The original Arcadis study on ground-mounted PV panels (solar farms) was rewritten by Council Officers to include wind turbines and battery storage, and rationalised to avoid repetition. List of council assets finalised – this will be a desktop study on 24 sites, and a survey followed by detailed site assessment on 8 sites. Green Cat have been awarded the contract and a kick-off and progress meeting have taken place. The initial information was issued to Green Cat in November 2023. The completion of the study is estimated to be in May / June 2024.

2.7 The findings of the five different studies, which are all going to be costed fully, have been commissioned to inform the Council's thinking on the scale of the carbon reduction programme, with the resulting impact on carbon reduction, financial outlay and cost carbon consumption (and impact on revenue budgets) to delivery on Carbon Budget commitments. For one output of the studies the consultants will be providing marginal abatement cost curves, which will assist the Council in making decisions as to those aspects of the programme to be taken forward.

2.8 Further development and the transition to become a 'real' project is particularly relevant for Studies 3, 4 and 5. Carbon Savings are likely to be realised in

2025/26 and for several years following this, directly or indirectly from these studies.

3 Other Carbon Studies

3.1 Johnshaven Primary School. Johnshaven has been assessed on an incremental basis with a range of options from 'do nothing' through to a full fabric & building services upgrade. The purpose of the options appraisal exercise was to determine which option offers the Council the most significant carbon reduction saving for every pound spent. An initial draft of the options appraisal was issued in October 2023, recommending to progress with renewable technology for the building services upgrade, and fabric work being enhanced through lifecycle maintenance. This was reviewed during November 2023, and as part of an intention to apply for the Scottish Government's Heat Decarbonisation Fund, the Energy, Capital, and Whole Life (30 year) costs were updated, and the report changed its recommendation to a fabric-first / deep retrofit approach. The report is currently being updated again by a multi-discipline team within Property to take account of a recently developed utility pricing forecast model.

3.2 Unfortunately Johnshaven was not part of any application to the Heat Decarbonisation Fund, as at the deadline for 2023 the information necessary was unavailable. This funding would have provided 80% of the estimated capital cost of £1,179,200 for the preferred option, so it was disappointing the Council were not able to apply this year. Going forward, in 2024/25, the plan is for Johnshaven to be launched as a new project for the upgrade works, and P&FM would develop the design and get all governance in place, but the project will not go ahead until some sort of funding is secured for it.

3.3 Insch Primary School. Insch is currently being assessed according to the 'EnerPHit' energy standard. Using the Passive House Planning Package (PHPP) tool, this study aims to define and provisionally quantify the retrofit works required to achieve this challenging energy standard for retrofits. Passivhaus is an international construction system which leads to very low energy buildings, and can be employed on every building type; EnerPHit is the Passivhaus equivalent standard for deep retrofits. The draft report suggests Insch achieves more than 95% reduction in carbon emissions, and around 90% reduction in space heating demand, if EnerPHit standard is achieved. Due to the cost associated with the plant and improving the fabric to EnerPHit standards, it is likely that a similar approach as Johnshaven will be adopted – namely, in 2024/25 the design will be developed but not go ahead until funding is attained.

3.4 Council officers will include Johnshaven and Insch Primary Schools in the next application to the Heat Decarbonisation Fund in December 2024.

4 Non-Domestic Energy Efficiency Framework (NDEEF)

4.1 NDEEF Phase 1. Twelve properties were included within the main project during 2022/23 and 2023/24, with five energy efficiency measures implemented:

LED lighting, EC (Electronically Commutated) fans, pipework insulation, rooftop PVs, and BMS (Building Management System) upgrades. Three schools remain to be re-fitted with LED lights – Turriff, Mintlaw and Mackie Academy – with the works expected to be complete by end-March 2024. Overall NDEEF-1 will have provided approximately 346 tCO2e savings, making up an important part of the Council's Carbon Budget in 2022/23 and 2023/24.

4.2 NDEEF Phase 2. Work is currently underway on NDEEF-2, managed by Property, with the emphasis to decarbonise buildings as well as improving energy efficiency. A list of 12 Council properties were provided to a consultant (funded by Scottish Government), who subsequently prepared a report on possible Energy Conservation Measures (ECMs). The report provided estimated capital costs and potential carbon savings for each of the ECMs on all 12 buildings, including a Lifetime Carbon Savings Cost Metric (£/LTt.CO2). This report is currently under review by Council Officers as part of a prioritisation and decision-making exercise. All carbon savings from further development of the ECMs would not be realised until 2025/26 or 2026/27.

5 Ongoing Construction Projects

5.1 The Ellon Office has been designed using Passivhaus principles, characterised by high levels of airtightness, super-insulation and a heat recovery system. It has rooftop PV panels producing 50kW of energy, which is re-used by the building's services, making it a Net-Zero-ready project. This project has a Glulam and Cross Laminated Timber (CLT) structure to meet embodied carbon targets. Ellon Offices was designed largely by an in-house team and started on-site in September 2023, and is on-track for completion in February 2025.

5.2 Peterhead Community Campus is being developed as a fully Passivhaus-certified project, to attain the key funding outcomes on Energy Efficiency and Condition of Scottish Government's Learning Estate Investment Programme (LEIP) Phase 2. Funding is spread over 25 years, with Passivhaus considered the best way to meet the outcomes, including an energy performance target of 67 kWh/sqm/annum to access the payments. The design team of external consultants is managed by P&FM. A main contractor has been appointed through a Two-Stage Design & Build contract, with the project scheduled to start on-site in May 2024 and completion in July 2026.

5.3 Fraserburgh Primary School is being developed as a fully Passivhaus-certified building. It was designed to the funding requirements of LEIP Phase 3, which as well as an Energy Efficiency and Condition targets in earlier phases had an Embodied Carbon outcome, so the steel structure was replaced with Glulam and CLT early in the design process. Passivhaus is considered a route map to meet the funding outcomes, and although the Council was unsuccessful with the LEIP funding application, the final Passivhaus-certified building will be an exemplar Net Zero Carbon project. The project was led by an in-house team scheduled to complete RIBA Stage 4 in March 2024. It is anticipated that the project will be paused at that stage..

6 Carbon Budget 2024/25 (P&FM contribution only)

6.1 By way of Asset Rationalisation it is estimated there will be Carbon Savings = 248 tCO2e. Through the Office Space Strategy, which went to Committee in January 2024, a number of Council buildings are recommended for closure in the next financial year. The figure takes account of the development of new offices in Ellon (refer Item 5.1), and the move of staff away from their current energy-intensive properties.

6.2 In addition, non-Housing Refurbishment Works will provide an estimated Carbon Savings = 79 tCO2e. Fabric and lighting improvements are considered part of the Carbon Budget, as these measures mean it takes less energy to provide heat and power to these buildings. This is based on the figures for 2023/24: Windows Upgrades 19, Roof Upgrades 40 and Lighting Upgrades 20.

6.3 In line with other Local Authorities, the creation and implementation of a more formal Heating Policy by Aberdeenshire Council should unlock significant savings through the prevention of energy waste. Services will be supported on this focus with tools and advice, but ultimately empowered at a site level to take direct action and apply best practice. By ensuring heating is being operated within the most appropriate schedules and setpoints to meet operational needs – and identifying and tackling persistent overheating – it should mean the release cost and carbon savings, with minimal investment. The Heating Policy is intended to be ready for communication in early-Summer after passing appropriate approvals, but it will need support from all leadership levels to deliver the forecast benefits.

6.4 Council officers in the Energy team have calculated the Heating Policy will provide an estimated Carbon Saving of 923 tCO2e in both 2024/25 and 2025/26. This reduction level aligns with the experience of other local authorities. If the Heating Policy is launched Spring 2024 as planned, and there is an 18 month period for the behaviour change it formalises to take effect, this would fall equally between the next two financial years.

6.5 The total estimated Carbon Savings from these measures being led by P&FM as part of the Business Services contribution to the Carbon Budget 2024/25 (Asset Rationalisation, Non-Housing Refurbishment Works and Heating Policy) = 1,250 tCO2e. The situation will improve in 2025/26 and later years because, as well as the above items in this section, there would be the opportunity to add Johnshaven, Insch and NDEEF-2, and following the feasibility studies, some of the Rooftop PVs, Whole Building and Renewables on Council Assets projects.

Appendix prepared by Iain Wylie, Engineering Services Manager
17 January 2024

Aberdeenshire COUNCIL Environment & Infrastructure Services

REPORT TO SUSTAINABILITY COMMITTEE – 21 FEBRUARY 2024

CARBON BUDGET 2023-2024 FINAL UPDATE

1 Executive Summary/Recommendations

1.1 This report presents the final update to the Sustainability Committee on the actions listed in the Carbon Budget 2023-2024 that were agreed by Aberdeenshire Council on 9 March 2023 (Item 5). The report also contains the Directorate update reports which went to the relevant Policy Committees between October 2023 - December 2023.

1.2 Recommendations

The Committee is recommended to:

1.2.1 Consider and comment on the Carbon Budget 2023-2024 final update as attached in Appendix 1;

1.2.2 Note the Directorate update reports which went to the relevant Policy Committees between October 2023 - December 2023;

1.2.3 Note the Carbon Budget 2024-25 Guidance document attached in Appendix 2 which was developed to support Directorates considering projects for inclusion in the Carbon Budget 2024-25 being presented to Aberdeenshire Council on 22 February 2024; and

1.2.4 Note the update provided by officers with information relating to the impact on the theoretical carbon emissions based on the Deposit Return Scheme (DRS) if it was to be revived, mothballed, or completely removed, presented in Appendix 3.

2 Decision-Making Route

2.1 On 9 March 2023 (Item 5) a total Carbon Budget for 2023-2024 was set as 44,152 tonnes Carbon Dioxide Equivalent (tCO2e) by Aberdeenshire Council in line with linear progression towards a 75% reduction in Council owned emissions by 2030. A list of CO2e reduction measures was presented at this meeting to support the Council in reaching its Carbon Budget for the year. At the same meeting, it was agreed that all Directors were required to submit six-monthly updates on in-year progress in relation to these reduction measures to their relevant Policy Committees and additionally to the Sustainability Committee.

2.2 On 30 August 2023 (Item 8) the Sustainability Committee was presented with a 6-month update on the projects identified within the Carbon Budget 2023-24 and any additions and/or amendments made to them at the time. At this meeting it was highlighted that there was a risk that the target of 44,152 tCO2e set for the Carbon Budget 2023-24 was unlikely to be met. At this meeting

members also requested that the Chief Executive agree to assist officers in reducing the number of TBDs (to be determined) contained within the Carbon Budget 2023-2024.

2.3 At the Sustainability Committee on 15 November 2023 (Item 4 - Action 3), Members requested that officers provide Committee with the updates to the Carbon Budget 2023-24 along with formal guidance/timelines for the carbon budget process, following presentation of the budget to the policy committees, to help inform the Carbon Budget 2024-25.

2.4 On 30 August 2023 the Sustainability Committee Members requested a report on the theoretical carbon emissions and impact to the Carbon Budget if the Deposit Return Scheme was (1) revived, (2) mothballed, or (3) completely removed. This information has been provided in **Appendix 3**.

3 Discussion

3.1 This report contains the final update that has been provided by officers from each Directorate in **Appendix 1**. It sets out if projects are still running to schedule, have been further delayed, or if estimates have changed. Some projects have been provided with additional qualitative updates demonstrating how projects are supporting savings even if the quantitative data is not there to assess the impact by tCO2e savings.

3.2 As the figures in **Appendix 1** suggest, there is still a risk that the target of 44,152tCO2e set for the Carbon Budget 2023-24 is unlikely to be met. This is mainly due to the same reasons presented at the 6-monthly update provided on 30 August 2023:

1. Additional projects have not been added by Directorates since the Carbon Budget was agreed on 9 March 2023.
2. The emission factor for electricity which was estimated to bring a reduction of around 500tCO2e annually actually increased for 2023.
3. Challenges around supply chain delays.

3.3 At the 6-monthly update, the overall total of estimated emissions savings from projects had increased from an estimate of 1972tCO2e presented on 9 March 2023 to 2098tCO2e presented on 30 August 2023. However, this final update has provided some further reductions in some projects and therefore the total savings from projects is now estimated to be 1926tCO2e.

3.4 ‘TBDs’ (to be determined) that were in the Carbon Budget 2023-24 report approved at Full Council on 9 March 2023 have been resolved. However, in most cases the action has been to change these to ‘Unknown’. This step has been taken as these projects do not have robust enough data to make a best estimate on emissions savings. However, it is important to still include them as they should still support a reduction in the Council's overall emissions.

3.5 In year progress was provided to relevant Policy Committees by Carbon Budget leads in each Directorate between October and December 2023. Links to each of these update reports are provided below:

- Business Services Committee: 16 November 2023 Item 11
- Communities Committee: 14 December 2023 Item 14
- Education & Children's Services Committee: 12 October 2023 Item 9
- Infrastructure Services Committee: 5 October 2023 Item 7

3.6 Following an internal audit on the Carbon Budget process new guidance was developed for the Carbon Budget 2024-25. This guidance has been provided in **Appendix 2**.

3.7 The possible impact on the Council's Carbon Budget and wider Aberdeenshire Net Zero target on the theoretical carbon emissions based on the Deposit Return Scheme (DRS) if it was to be revived, mothballed, or completely removed, has been presented in **Appendix 3**.

4 Council Priorities, Implications and Risk

4.1 This report helps deliver the Strategic Priority "Climate Change" within the Pillar "Our Environment".

Pillar	**Priority**
Our People	• Learning for Life • Health & Wellbeing
Our Environment	• Climate Change • Resilient Communities
Our Economy	• Economic Growth • Infrastructure and public assets

4.2 The table below shows whether risks and implications apply if the recommendations are agreed.

Subject	**Yes**	**No**	**N/A**
Financial			X
Staffing			X
Equalities and Fairer Duty Scotland			X
Children and Young People's Rights and Wellbeing			X
Climate Change and Sustainability			X
Health and Wellbeing			X
Town Centre First			X

4.3 There are no direct staffing or financial implications arising from this Carbon Budget update monitoring report.

4.4 The screening section as part of Stage One of the Integrated Impact Assessment (IIA) process has not identified the requirement for any further

detailed assessments to be undertaken. An IIA is not required as there are no direct implications of considering this update as it is a performance monitoring report. An IIA was completed for the Carbon Budget 2023-2024 which was approved by Aberdeenshire Council 9 March 2022 (Item 5 – IIA is Appendix 5).

4.5 The following Risks in the Corporate Risk Register have been identified as relevant to this matter on a Corporate Level. However, it is acknowledged that working towards a 75% reduction in Council owned emissions has the potential to impact upon any number of areas across the Council risk portfolio.

- Risk ID ACORP010 as it relates to environmental challenges; and
- Risk ID ACORP006 as it relates to reputation management.

The following Risk in the Directorate Risk Registers has been identified as relevant to this matter on a Strategic Level:

- Risk ID ISSR010 as it relates to Climate Change.

4.5.1 The above risks could be mitigated against with sufficient communication and engagement on the progress Aberdeenshire Council is making with regards to climate change mitigation and adaptation beyond the Carbon Budget.

5 Scheme of Governance

5.1 The Head of Finance and Monitoring Officer within Business Services have been consulted in the preparation of this report and their comments are incorporated within the report and they are satisfied that the report complies with the Scheme of Governance and relevant legislation.

5.2 The Committee is able to consider this item in terms of Section R paragraphs 1.1a and 1.1c of the List of Committee Powers in Part 2A of the Scheme of Governance as it relates to reviewing and monitoring the Council's work in respect of sustainable development and climate change and, also to promote awareness of the need for sustainability within the Council.

Alan Wood
Director of Environment & Infrastructure Services

Report prepared by Claudia Cowie, Team Leader Sustainability and Climate Change
9 February 2024

List of Appendices
Appendix 1: Carbon Budget 2023 – 2024 Final Update
Appendix 2: Carbon Budget 2024-25 Guidance
Appendix 3: Scotland's Deposit Return Scheme (DRS) Update

Table 1: Abbreviations/Acronyms within the following table (2):

E&CS	Education and Children Services
EfW	Energy from Waste
H&SCP	Health and Social Care Partnership
JES	Joint equipment service
kWh	Kilowatt Hour
LED	Light-Emitting Diode
LLA	Live Life Aberdeenshire
NDEEF	Non-Domestic Energy Efficiency Framework
NHSG	National Health Service Grampian
P&FM	Property and Facilities Management
RTPI	Real Time Passenger Information
TBD	To Be Determined
tCO2e	Tonnes of Carbon Dioxide Equivalent

Table 2: Carbon Budget 2023 – 2024 Final Update

BUSINESS SERVICES	**Proposed Identified tCO2e Savings 2023/24**	**Anticipated tCO2e Savings 2023/24**	**Final Update on Projects**
Upgrade Windows	19	19	Upgrade works are ongoing and part of the P&FM Capital Plan. As completed, details of each project and achieved savings will be updated. The LED upgrades as part of the NDEEF project were delayed due to material supply and asbestos issues however they are expected to be completed by 31 March 2024 with carbon savings attributable to 2023/24.
Upgrade Roof	40	40	
Lighting Upgrades	20	20	
NDEEF – LED upgrades **carried forward from 2022/23*		*207	
Business Services Total	**79**	**286**	
ENVIRONMENT & INFRASTRUCTURE SERVICES	**Proposed Identified tCO2e Savings 2023/24**	**Anticipated tCO2e Savings 2023/24**	**Final Update on Projects**
High Specification Bus Shelters - off-grid	1	1	5 x high specification bus shelters and 3 x RTPI battery powered e-paper displays installed at Peterhead Bus Station (July 2023) total cost £98k. Plan to install 3 x high spec shelters with battery powered e-paper displays at Fraserburgh and 1 x similar specification at Stonehaven by no later than 31 March 2024 at a total cost of £95k – all products are off grid and

			combined are delivering the identified tCO2e savings.
Electric landscaping equipment – 3 more squads	TBD	Unknown	Electric grounds equipment still in use, had some technical issues obtaining the usage figures from the equipment but the feedback from the Service has been positive. Looking to extend this trial with another brand for comparison.
Two additional lease electric cars	TBD	Unknown	The two additional electric cars went into service in October.
Battery rammer to trial alongside traditional petrol machines	TBD	0	This project was not able to be progressed in 23/24.
Roads resurfacing – warm mix	220	68	Switched from hot mix to warm mix in March 23. A re-calculation was completed on actual savings being made reducing the overall emissions savings by 152tCO2e.
Reduced Greenspace maintenance	TBD	Unknown	We are unable to determine the emission savings from this project due to a lack of data.
Energy from Waste	900	1351	All waste is currently going to the NESS EfW plant during the commissioning phase. The plant is due to be fully operational by the end of August 2023. With all waste now going to EfW plant the estimate for emission saving has increased. An average of 3180tonnes of waste diverted from landfill (1419tCO2e) to EfW (68tCO2e) gives an estimated saving of 1351 tCO2e.
LED street lighting	261	190	Anticipated savings less than proposed estimate due to procurement issues. Still looking to gain a consumption saving of 944,449kWh for 2023-24, which is 11% reduction. We are experiencing issues with procurement of the lanterns. We had a delay with a framework which held up purchasing so trying to catch up from this. Now also impacted by issues in Red Sea deliveries taking weeks longer to arrive. We also have had many storms which have stopped works onsite.
Warp-It	10	6	Current savings from April – January is sitting at 5.6tCO2e.
Environment & Infrastructure Services Total	**1392**	**1616**	

EDUCATION AND CHILDREN SERVICE	Proposed Identified tCO2e Savings 2023/24	Anticipated tCO2e Savings 2023/24	Final Update on Projects
E&CS Energy Project	TBD	Unknown	With regard to ventilation in schools, adjustments to systems should encourage a return to lower pre pandemic levels of energy use across the educational estate in conjunction with plans being developed to support management of energy usage.
Reduction in pool temp	TBD	Unknown	Reduction in temperature of air and pool by one degree was trialled across venues with adverse customer feedback. Accurate measurements are very difficult to determine by their nature owing to mechanical plant, pool hall, air quality etc. These all vary between venues.
Heating review in smaller sites	TBD	Unknown	Heating is linked to both mechanical capability of venues, and operating hours. Operating hours were reviewed and implemented to a 70/50/40 hours per week model. Reduced operating hours results in less energy usage. Libraries and museum operating times are constantly reviewed, and halls are largely accessed by appointment. More time is required to quantify the energy efficiencies brought by these changes to operating hours, and access arrangements.
Industry assessment of main sites	TBD	Unknown	Good practices for example replacing lighting for LEDs (pool hall) using natural light, sustainable transport, photovoltaic roof panels, are all established within LLA, and with discussions with colleagues in property at the planning stages. Stonehaven LC refurbishment is a good example of this joined up thinking.
Asset rationalisation	TBD	22	Values taken from the assets currently closed per the LLA asset disinvestment strategy.
Princh Printing	TBD	Unknown	At the time of writing, this is available in libraries and has recently been rolled out to Banchory Sports Village. This service will continue to expand with the new Princh contract, which can enable up to 50 additional venues.
Digital access to resources	TBD	Unknown	A large suite of resources for all of the community are available online through the LLA website https://livelifeaberdeenshire.org.uk/live-

			life-at-home/. Much of our programmed activity requires being physically in our venues, however we will continue to grow social media channels and resource libraries which encourage an active lifestyle as local to home as possible.
Update of Raw Food Policy	1	1	Policy underway.
Participatory Budget Projects in Primary Schools	TBD	Unknown	Work continuing on individual projects in schools.
Waste Strategy Project	Unknown	Unknown	An E&CS Education Waste Strategy is being drafted which will directly support the Aberdeenshire Council Waste Strategy and Route Map. The draft strategy is committed to reducing the overall level of waste within schools, by encouraging the reduction in waste which is not currently recyclable, and optimising the levels of waste which may be recycled or repurposed. The strategy will further aim to encourage the participation of young persons in the development of local initiatives and projects to enhance behavioural changes in support of waste reduction.
Education & Children Services Total	**1**	**23**	
HEALTH & SOCIAL CARE PARTNERSHIP	**Proposed Identified tCO2e Savings 2023/24**	**Anticipated tCO2e Savings 2023/24**	**Final Update on Projects**
Reduction in business miles	TBD	Unknown	Aberdeenshire H&SCP has a 20 point Travel and Transport Action Plan reflecting both staff and patient/service user travel and transport issues. The plan has a sustainability/environmental impact column reflecting each action. Our Strategic Team has been asked to help us capture data against these action areas. One of our key commitments is to reduce unnecessary business travel. This reduction was significant as a result of Covid and we must avoid the need to meet in person where this is not essential. NHSG Staff Travel Policy is currently being reviewed but maintains the requirement to not

			travel unnecessarily – e.g. for meetings. Work is ongoing with teams using vehicles and with NHSG and Aberdeenshire Council Fleet leads to explore hybrid, electric and the potential for hydrogen vehicles, recognising the geographical challenges of operating across our area and the ability to meet 2025 deadlines with insufficient infrastructure and the cost of green vehicles.
Resources and Circular Economy Frameworks	TBD	Unknown	Joint Equipment Service (JES): Sustainability: • 75% of currently issued equipment is recycled. • Current plans to improve recycling equipment performance: - Working with Aberdeenshire housing “voids” to proactively identify properties that are becoming empty and have equipment present to try and reduce loss. - Working with recycling centres to identify any equipment and recovering it. - Recycling more equipment by partnering with a local business. This company are now also able to reupholster fabric items (clinical spec fabrics where necessary) which again extends the working life of items of equipment. - Training for JES technicians to upskill them so that repairs can be carried out on items of equipment that would otherwise not be economically viable to repair if contractors or manufacturers had to carry out this work. - Working with suppliers and manufacturers to emphasise the importance to our business model of recycling and maximising equipment working life. An example of this would be Closomat who supply JES with wash + dry toilets – we are the only authority in UK to recycle them. - Inclusion of questions about a suppliers environmental and sustainability credentials in the tendering process. Environmental: • Planning routes to minimise fuel use. • Driver training to drive more efficiently. • Recently the equipment

			decontamination and cleaning process was redesigned working with national infection control leads to reduce electrical and chemical requirements. This has not only saved resources but also resulted in considerable financial savings. • Consulting with Aberdeenshire Council to improve efficiency of hot water provision for equipment cleaning by rerouting pipes and removing inefficient immersion heaters from the circuit. • Energy survey - change to LED, hot water boiler. • Separating scrap and using Council recycling facilities. • Looking at increased “in house” servicing being done by upskilling technicians. This will not only save money on the cost of servicing but as is often the case a service user will have more than one item of equipment that requires servicing so there will be the environmental benefit of only one visit to a service users property.
Health & Social Care Partnership Total	**TBD**	**Unknown**	
Grid Decarbonisation	**500**	**0**	**The emission factor has increased. No emissions will therefore be reduced further by the electricity emission factor.**
Total Reductions Identified in March 2023 (tCO2e)	**1972**		
Total Reductions currently anticipated for 2023-24 (tCO2e)		**1926**	

*TBD = Data still to be determined for tCO2e savings if consumption data can be provided by services

*Unknown = Data is not available to be able to determine tCO2e savings

Carbon Budget Guidance for 2024/25

1. Background

1.1 Aberdeenshire Council has utilised a Carbon Budget process since 2017/18 as a method to plan and manage emission reduction across the organisation. An annual carbon budget figure is set each year to keep the council on track for its commitment to reduce emissions 75% by 2030 and be Net Zero by 2045 using 2010/11 as a baseline year (as set out in the Council's Climate Change Declaration). Management of the necessary annual reduction in emissions is the responsibility of the Leadership Teams and Services across all 4 Directorates with support from key support services and the Sustainability Team. The carbon budget is set in February/March each year at the same time as the financial budgets and is monitored throughout the year by the Sustainability Committee and Directorate Policy Committees.

2. Roles and Responsibilities

2.1 On 29 September 2022, Aberdeenshire Council approved its Route Map to 2030 and Beyond. This laid out future Carbon Budgets to meet the 75% reduction target by 2030. **Table 1** indicates future carbon budget targets.

Table 1: Future Carbon Budgets to reach 2030 target (75%)

Financial Year	Carbon Budget Required to reach Target (tCO2e)
2024/25	40,921
2025/26	37,690
2026/27	34,459
2027/28	31,228
2028/29	27,997
2029/30	24,766
2030/31	21,539

2.2 To keep the momentum in reducing emissions, an annual reduction target of approximately 3250 tCO2e is required. The current process for allocating annual reduction targets for each Directorate is based on where reported emissions come from and those services with the greatest influence to make changes (who delivers the service, building and fleet users, financial budgets etc.) **Table 2** provides the annual reduction targets for each Directorate.

Table 2: Reduction Targets for each Directorate

Directorate	Reduction Target for 2024/25
Business Service	1600 tCO2e
Environment and Infrastructure Service	1000 tCO2e
Education and Children's Service	500 tCO2e
Health and Social Care Partnership	150 tCO2e
Total	**3250 tCO2e**

3. Governance, Monitoring and Reporting

3.1 Governance and Monitoring of the Carbon Budget is done by the Senior Leadership Team, Sustainability Committee and relevant Policy Committees listed in **Table 3** below. Updates should be provided to the Committees every 6 months. An in-year progress update followed by a final update is required. At least 2 Carbon Budget Leads for each Directorate which cover the relevant Policy Committees is required. It is the responsibility of each of the Directors to appoint the Carbon Budget Leads and make them known to the Sustainability and Climate Change team.

4. Schedule and Tasks

4.1 The process for the Carbon Budget starts in November for the following financial year (e.g. in November 2023 projects for the 2024/25 financial year start to be collected). The schedule and the tasks to be completed in those months is provided below in **Table 3**.

Table 3: Schedule and Tasks for the Carbon Budget Process

Month	Task
November - December	Start collection of Carbon Budget projects for the following financial year and draft report for Full Council.
January	Draft Carbon Budget reviewed by Senior Leadership Team.
February/March	Carbon Budget presented to Full Council
April	Projects begin/continue
August-October	Full 6 monthly update report provided to the Sustainability Committee Following Policy Committees to be presented their section of the update by Directorate Carbon Budget leads: • Business Services • Infrastructure Services • Education and Children Services • Communities

February-April	Final progress report provided to the Sustainability Committee Following Policy Committees to be presented their section of final progress by Directorate Carbon Budget leads: • Business Services • Infrastructure Services • Education and Children Services • Communities

5. Process

5.1 Systems and Forms

5.1.1 A Microsoft Form has been created to support the gathering of interventions/projects for the Carbon Budget 2024/25. The output from the Form will be presented to Aberdeenshire Council at the Budget setting meeting in early 2024 (usually February or March).

5.1.2 The link to the Form can be found here: https://forms.office.com/e/8wssazL5rW

5.1.3 If you would like to look at previous years' Carbon Budgets then please follow this link: https://www.aberdeenshire.gov.uk/environment/green-living/environmental-policy/#carbonbudget

5.2 Estimated costs, Emissions calculations, Inherent assumptions, and any changes

5.2.1 When deciding if an intervention is relevant to the Carbon Budget you could consider some of the following prompts:

- Will it reduce energy use in a Council building (electricity or heat)?
- Will it reduce energy use fuel/electricity in services covering landscape, roads, harbours?
- Will it reduce consumption of petrol/diesel – in Council fleet or personal vehicles?
- Will it reduce waste, increase reuse across the organisation?
- Will it reduce the need for business travel (car, train or plane)?

5.2.2 Estimated costs and savings from the intervention have likely already been considered as part of the annual financial budget processes. If these are unknown at this time it is acceptable to state this and work on calculations at a later date (**but this work should be done before the 6 monthly updates go out**). Links to key documents which may support and provide further examples/context can be found in section 7.

5.2.3 When calculating the emission reduction of a project you need to understand what emission source will be reduced and by how much. For this you will need to know the estimated consumption that will be reduced. For example, will electricity in a building go down by 5%? If you know this and the building, then services like the Sustainability team and the Energy team could support in getting the data to make the calculation. Contact details for support are found in section 8.

5.2.4 It is important to note that we are looking at making the best estimate with the assumptions that we know. This is perfectly acceptable as long as we have recorded how the calculation has been made. **Table 4** demonstrates different examples of interventions from previous Carbon Budgets.

5.2.5 Throughout the year if the calculation needs to be amended this is also acceptable. You may also add any additional projects which were not included in the initial Carbon Budget report approved at Full Council. The update can be provided to Committees in the 6 monthly update reports. Again, the **focus is not on perfection but transparency**. This helps with our annual report to Scottish Government on our progress.

Table 4: Examples of interventions from previous Carbon Budgets

Intervention	***Asset Name***	***Carbon Saving*** *tCO2e*	***Capital Expenditure £***	***Annual Cost Saving £***	***Budget***	***Budget Line***
Solar PV	*Fraserburgh Academy*	*19*	*126,455*	*11,603*	*Capital*	*Carbon reduction*
Road resurfacing	*Across Aberdeenshire Road Network*	*220*	*0*	*0*	*Revenue*	*Roads Maintenance*
Warp-it – re-use platform for use across Council Services.	*Aberdeenshire Council*	*10*	*3,912*	*0*	*Reserve*	*Renewable Energy Reserve*
Energy Sparks	*30 pilot schools to be identified for initial free trial*	*34*	*0*	*Unknown*	*Revenue*	*Unknown - E&CS for future costs is possible after pilot.*
Reduction in business miles		*77*	*0*	*125,000*	*Revenue*	*H&SCP Business Mileage*

5.2.6 The following emission factors are the UK Government Conversion Factors for greenhouse gas (GHG) reporting. These are for 2023 and are the latest available factors suitable for use by UK-based reporting on UK operations. The emission sources in **Table 5** below are the areas we report on as an organisation so these have been pulled out for quick sourcing. The entire data set however can be found here: ghg-conversion-factors-2023-condensed-set-update.xlsx (live.com).

5.2.7 Please use these emission factors for calculations for the Carbon Budget 2024/25.

Table 5: Emission Sources and Factors

Emission Source	Unit	Emission Factor
Electricity	kWh	0.207074 kg CO2e/kWh
Electricity (Transmission and Distribution)	kWh	0.01792 kg CO2e/kWh
Natural Gas	kWh	0.18292 kg CO2e/kWh
LPG	kWh	0.21449 kg CO2e/kWh
Gas Oil	litres	2.75541 kg CO2e/litres
Gas Oil	kWh	0.25649 kg CO2e/kWh
Burning Oil (Kerosene)	kWh	0.24677 kg CO2e/kWh
Wood Pellets / Chips	kWh	0.01074 kg CO2e kWh
Water Supply	cubic metres	0.17668 kg CO2e/cubic metres
Water Treatment	cubic metres	0.20132 kg CO2e/cubic metres
Fleet - Petrol	litres	2.09747 kg CO2e/litres
Fleet – Diesel	litres	2.51206 kg CO2e/litres
General Waste (combustion)	tonnes	21.2808 kg CO2e/tonnes
Recycling (all types)	tonnes	21.2808 kg CO2e/tonnes
Average Car	km	0.16983 kg CO2e/km
National Rail	passenger.km	0.035463 kg CO2e/ passenger.km
Domestic Flights (UK)	passenger.km	0.27258 kg CO2e/ passenger.km
Short-Haul Flights (Europe)	passenger.km	0.18592 kg CO2e/ passenger.km
Long Haul Flights (Global)	passenger.km	0.26128 kg CO2e/ passenger.km

5.3 Carbon Budget Toolkit

5.3.1 The Carbon Budget Toolkit will be used to log projects annually. The toolkit will only be used by trained ‘super-users’. These are based in Property and Facilities Management, Roads and Infrastructure, and Environment and Sustainability. It is effectively a scenario calculator which allows the carbon impact and financial commitment associated with specific interventions to be calculated. This aids the decision making involved in establishing how carbon emissions reductions can be best achieved with the funds available. Separate guidance will be available for the Toolkit and provided only to those who are expected to utilise it.

6. Risks

6.1 A Carbon Budget Risk Register is currently under development and will be linked to this guidance in the future (timeline is for completion in May 2024).

6.2 In the Microsoft Form there is a question which asks you to highlight any risks which may prevent the intervention/project from going ahead and any mitigation measures in place to reduce this risk. This question will support the development of the Carbon Budget Risk Register and ensure all risks are being highlighted.

7. Relevant Links and Documents

7.1 To find further information on the below please visit: https://www.aberdeenshire.gov.uk/environment/green-living/environmental-policy/

- Previous Carbon Budgets
- Route Map to 2030 and Beyond
- Climate Change Adaptation and previous Local Climate Impact Profiles
- Climate Change Declaration
- Resources and Circular Economy Commitment
- Annual Public Bodies Climate Change Duties Reports

7.2 You can also visit the Internal Sharepoint site for the Sustainability and Climate Change Team where links to training modules in ALDO can be found. More modules will be developed throughout 2024, including one on the Carbon Budget process and the Sustainability and Climate Change section of the Integrated Impact Assessments.

7.3 National context and key documents can be found here: https://www.gov.scot/policies/climate-change/

8. Support Contact Details

8.1 If you require any support, please contact the Sustainability team in the first instance: sustainability@aberdeenshire.gov.uk

8.2 For specific data requests on energy use in buildings please contact the energy team: energy@aberdeenshire.gov.uk

Scotland's Deposit Return Scheme (DRS)
Update – January 2024

1 Purpose

1.1 The purpose of this update is to provide members of the Sustainability Committee with information relating to the impact on the theoretical carbon emissions based on the Deposit Return Scheme (DRS) if it was to be revived, mothballed, or completely removed.

2 Background/Current Status

2.1 Scotland's DRS was due to commence in August 2023. However, it was announced in June 2023 that DRS was to be delayed until October 2025 at the very earliest. To allow DRS to proceed in Scotland, an exemption from the Internal Market Act required to be approved by the UK Government. Unfortunately due to concerns raised by some UK businesses and Ministers regarding potential issues if there were different schemes within the UK, an exemption would only have been granted if glass was removed from the Scottish DRS which would therefore align the Scottish DRS with the scheme that England are planning to introduce. Due to this a further delay to the scheme was announced.

2.2 Should DRS progress in October 2025, this will most likely be a UK wide scheme which will not include glass drinks bottles. The scheme proposed by the UK Government will only include PET plastic drinks bottles and aluminium/steel drinks cans.

3 Impact to Council

3.1 Had DRS gone ahead as planned, the Council would have seen glass tonnages collected from household and trade collections drastically reduced, along with a reduction on the plastic PET drinks bottles and aluminium and steel drinks cans with these material streams being diverted from Council collections to DRS. This would have had a reduction on the Council's recycling rate as the Council would not be able to claim for the in-scope container tonnage that would have been captured by DRS in the authority area.

3.2 The current proposed DRS for aluminium and steel drinks cans and PET plastic drinks bottles will not have such a significant impact.

3.3 Using the sampling data from our new container recycling stream service provider we are able to forecast the potential maximum tonnage that will be diverted from the recycling collections undertaken by the Council should the DRS progress in October 2025. This includes recycling collections from households, trade and internal premises.

3.4 **Table 1** identifies the average percentage that each in-scope DRS material stream makes up of the mixed containers stream. The percentage of the

material stream that is classed as beverage containers is then applied to this figure. This is based on information provided by Zero Waste Scotland which has been identified within these industries. This leaves a maximum percentage of what material in the mixed containers stream that could be recycled through DRS if and when it goes ahead. However, as we are aware with any recycling scheme, capturing 100% of the in-scope containers is very unlikely and therefore all calculations are based on a 90% capture rate. Applying this to the calculations gives a final expected percentage of the recycling stream that could be collected by DRS instead.

Table 1

Material Stream	% of container stream	% of material stream beverage	Maximum %	% of material captured	Expected % of recycling stream
Aluminium	9%	93%	8.37%	90%	7.53%
Steel	8%	14%	1.12%	90%	1.01%
PET Plastic Bottles	21%	90%	18.90%	90%	17.01%

3.5 Applying these percentages to the estimated 4,500 tonnes of mixed containers that is collected annually by Aberdeenshire Council, this could amount to the following tonnage being diverted from Council recycling to DRS annually:

Aluminium Drinks Cans	321.28	
Steel Drinks Cans	46.44	
PET Drinks Bottles	751.96	
	1119.68	Tonnes diverted from recycling stream

3.6 There is also potential to divert tonnage from the residual waste collected by the Council to DRS which includes collections from households, trade and internal collections. Using the waste compositional analysis carried out on households in June/July 2022 we can establish the percentage of the residual waste that was identified as in-scope DRS containers (see **Table 2**). The analysis identified specific DRS categories therefore we do not need to apply the percentage to the material stream in relation to beverage only containers.

3.7 Although this analysis was only carried out on household waste bins, we have not carried out any analysis of trade/internal waste, therefore without any composition information for those collections, we only have the household composition to use to give an indication of potential reduction/diversion from waste.

Table 2

Material Stream	% of residual bin	% of material captured	Expected %
PET plastic drinks bottles	0.30%	90%	0.27%
Aluminium drinks cans	0.30%	90%	0.27%
Steel drinks cans	0%	90%	0.00%

3.8 Applying these percentages to the current estimated 67,000 tonnes of residual waste that is collected annually by Aberdeenshire Council, this could amount to the following tonnage being diverted from Council residual waste to DRS annually:

Aluminium Drinks Cans	180.90	
Steel Drinks Cans	0	
PET Drinks Bottles	180.90	
	361.80	Tonnes diverted from residual waste

3.9 Therefore, rounding up, DRS has the potential to reduce our residual waste arisings by up to 362 tonnes and reduce our recycling tonnage by up to 1,120 tonnes should DRS go ahead from October 2025. It should be noted that the tonnage diverted from our recycling stream to DRS will mean a reduction in our recycling rate as we will not be able to include that tonnage when reporting to SEPA Waste Data Flow as that tonnage will be captured under the DRS scheme.

4 Carbon Impact

4.1 For carrying out calculations in relation to the carbon impact, the Waste Service use the Carbon Metric calculations from Zero Waste Scotland (ZWS). Carbon factors (CF) have been compiled by ZWS to quantity the whole-life carbon impact of Scotland's waste (cdn.zerowastescotland.org.uk.xlsx (live.com)). The carbon factors are measured using a life cycle thinking approach and include the production (waste generated) through to the waste disposal impact which includes transport emissions from collection, waste management process emissions and disposal. Avoided production impacts are also included when waste is prevented and recycled.

4.2 **Table 3** (overleaf) details the estimated carbon impact in relation to the reduction of waste generated and managed by Aberdeenshire Council if and when DRS comes into force. This is based on current tonnage data and current waste analysis / sampling and therefore may be subject to change depending upon any changes to this data/analysis between now and when DRS gets rolled out. Please note this is based on total waste and recycling tonnage collected and managed by Aberdeenshire Council.

Table 3

	Tonnage	Carbon Impact - Reduction TCO2e
Reduction in residual waste	361.8	1,298.50
Reduction in aluminium recycling	321.28	958.06
Reduction in steel recycling	46.44	53.5
Reduction in PET plastic recycling	751.96	1,989.69
	Total reduction in Carbon TCO2e	4,299.75

4.3 This reduction is based on the waste and recycling tonnages that are managed by Aberdeenshire Council. The material streams will still be being recycled through DRS which will still have a carbon impact however this will be noted as a Scotland wide impact.

5 Carbon Budget Impact

5.1 In relation to the Council's carbon budget in relation to waste and recycling, this relates only to the tonnage of waste and recycling that is generated/collected from internal Council premises.

5.2 In relation to residual waste, including all the internal bin collections and skips for Woodhill House and Robertson schools, the total tonnage of waste to be used in the calculation is 2,989 tonnes. Please note that this does not include skips of waste from one off clearances, etc. as this type of waste would not include the typical waste found in a normal bin.

5.3 Applying the percentages of DRS in-scope containers calculated from the household waste composition analysis to the internal waste tonnage of 2,989 tonnes, this could amount to the following tonnage being diverted from internal waste to DRS annually:

Aluminium Drinks Cans	8.07	
Steel Drinks Cans	0	
PET Drinks Bottles	8.07	
	16.14	Tonnes diverted from internal waste

5.4 In relation to recycling, including all the collections for fully mixed recycling, the total tonnage of recycling relevant for this calculation is 986 tonnes.

5.5 As the recycling tonnages being used relate to fully mixed dry recycling (MDR), the sampling percentages for fully mixed recycling will apply to this tonnage as noted in **Table 4** (overleaf).

Table 4

Material Stream	% of MDR	% of material stream beverage	Maximum %	% of material captured	Expected %
Aluminium	3%	93%	2.79%	90%	2.51%
Steel	4%	14%	0.56%	90%	0.50%
PET Bottles	5.45%	90%	4.91%	90%	4.41%

5.6 Applying these percentages to the estimated 986 tonnes of MDR to the internal recycling tonnages this could amount to the following tonnage being diverted from internal recycling to DRS annually:

Aluminium Drinks Cans	24.75
Steel Drinks Cans	4.93
PET Drinks Bottles	43.48
	73.16 Tonnes diverted from internal recycling

5.7 Therefore, DRS has the potential to reduce the internal waste arisings by up to 16.14 tonnes and reduce internal recycling tonnage by up to 73.16 tonnes should DRS go ahead from October 2025.

5.8 Although the Waste Service use ZWS Carbon Metric system when calculating savings in relation to carbon impact, the Council Carbon Budget is reported to the Scottish Government through Public Bodies Climate Change Duties who use the Department for Business, Energy & Industrial Strategy (BEIS) Greenhouse Gas Conversion Factors for carbon impact which differs from Zero Waste Scotland carbon metric factors based on what is being considered for each analysis. The BEIS factors are provided to support company reporting and therefore do not take into account the full impact from waste generation and disposal and relates only to the activity that the reporting company carries out. For Aberdeenshire Council reporting, this means that the carbon impact being reported in relation to the waste being produced internally by the Council includes the collection of the waste and recycling streams, and onward transportation to the disposal/recycling facility. The carbon impact of waste generation, recycling, diversion and combustion are not included as a factor in the reporting undertaken by Public Bodies Climate Change Duties which is why the carbon impact figures per kg CO2e per tonne for combustion of waste and recycling of waste are identical as this relates only to the collection and transporting of the waste streams. The carbon impact is therefore 21.2808kg CO2e/tonnes for both General Waste (combustion) and Recycling (all types).

5.9 Therefore based on the carbon budget reporting figures, the impact that DRS would have on the carbon budget due to the estimated reduction in tonnage by DRS in-scope containers being diverted from internal waste and recycling streams would be as follows:

	Tonnage	Carbon Impact - Reduction TCO2e
Reduction in residual waste	16.14	0.34
Reduction in aluminium recycling	24.75	0.53
Reduction in steel recycling	4.93	0.10
Reduction in PET plastic recycling	43.48	0.93
Total reduction in Carbon TCO2e		**1.90**

6 Summary

6.1 In summary, the impact on the reported carbon budget would be minimal should DRS go ahead, be further delayed or completely removed altogether. The larger impact in relation to DRS is with regards to the household collections in that there could be up to a 25% reduction in the recyclate collected through the mixed container stream.

Aberdeenshire COUNCIL **Environment and Infrastructure Services**

REPORT TO SUSTAINABILITY COMMITTEE – 21 FEBRUARY 2024

LOCAL CLIMATE IMPACT PROFILE 2019-2022

1 Executive Summary/Recommendations

1.1 This report contains a draft copy of the Aberdeenshire Council's Local Climate Impact Profile (LCLIP) 2019 - 2022 for consideration and approval. The purpose of the LCLIP is to raise awareness of the impact of extreme weather events to Aberdeenshire Council's services, and the need to adapt and build resilience to these. It does this through collating evidence from employee interviews and questionnaire, media articles and internal documents using the United Kingdom Climate Impacts Programme (UKCIP) LCLIP framework. The LCLIP also provides some recommendations for the Council to consider taking forward.

1.2 The Committee is recommended to:

1.2.1 Consider and approve the Aberdeenshire Council's draft Local Climate Impact Profile 2019-2022 (Appendix 1).

2 Decision-Making Route

2.1 The Climate Change (Scotland) Act 2009 is a statutory framework for greenhouse gas emissions reductions in Scotland. Included within the Act are the following requirements on public bodies in the exercising of their functions:

- Act in the way best calculated to contribute to delivery of the Scotland's emissions reduction targets;
- Act in the way best calculated to deliver any statutory adaptation programme; and
- Act in a way that it considers most sustainable.

2.2 On 27 February 2019 the Sustainability Committee was presented with the LCLIP 2011-2018 (Item 4). The LCLIP covering 2019-2022 is an update from the previous one. All LCLIPs are used as an evidence base to support updating the Council's Climate Change Risk Register.

2.3 At the Sustainability Committee meeting on 30 August 2023 (Item 5) the main outcomes of the draft LCLIP 2019-2022 were presented to members by the Sustainability and Climate Change Officer. This report contains the final draft for comment and approval.

3 Discussion

3.1 The United Kingdom Climate Impacts Programme (UKCIP) developed the Local Climate Impact Profile (LCLIP) tool to assist local authorities and organisations to establish and prepare for the impacts of climate change.

3.2 The purpose of the LCLIP is to raise awareness of the impact of extreme weather events to Aberdeenshire Council's services, and the need to adapt and build resilience to these, by collating evidence from employee interviews and questionnaire, media articles and internal documents using the UKCIP's LCLIP framework.

3.3 Aberdeenshire Council published an LCLIP in 2011, looking at extreme weather impacts between 2000 and 2010 and updated this in 2019 with an LCLIP looking at extreme weather impacts between 2011 and 2018. This LCLIP is an update to the LCLIP 2011 - 2018, detailing how extreme weather has affected services, people, and infrastructure across the region between 1 January 2019 and 31 December 2022.

3.4 Between 1 January 2019 and 31 December 2022 there were thirteen incidents of excessive rainfall, eighteen storm incidents, eleven incidents of extreme low temperatures/snow and ice, and nine incidents of extreme high temperatures/heatwaves across the region.

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3.5 There is boundless potential for documenting every impact that extreme weather has across areas, communities, employees, and services. The scope of the LCLIP is therefore broad. Research from this LCLIP has been utilised to update the Council's Climate Change Risk Register which was first developed in 2015 and updated in 2023. The research will also be utilised to create Aberdeenshire Council's Climate Change and Extreme Weather Resilience: A Guide for Aberdeenshire Council Employees, to be published in 2024.

3.6 The main recommendations from the LCLIP 2019 – 2022 are that Aberdeenshire Council considers opportunities for exploring the following:

- developing a climate change adaptation and resilience training programme.
- developing a management plan or model to ensure all extreme weather events are given equal prioritisation.
- generating a cost code to recapture costs from all extreme weather events and a central fund for climate change costs and adaptation measures.
- developing an employee redeployment and volunteer programme for extreme weather events.
- developing an adaptation and resilience communication and engagement plan for communities.

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3.7 Previous Aberdeenshire Council LCLIPs can be found here: Publications - Aberdeenshire Council

4 Council Priorities, Implications and Risk

4.1 This report helps deliver the Strategic Priority "Climate Change" within the Pillar "Our Environment".

Pillar	**Priority**
Our People	• Learning for Life • Health & Wellbeing

Our Environment	• Climate Change • Resilient Communities
Our Economy	• Economic Growth • Infrastructure and public assets

4.2 The table below shows whether risks and implications apply if the recommendation is agreed.

Subject	**Yes**	**No**	**N/A**
Financial			X
Staffing			X
Equalities and Fairer Duty Scotland			X
Children and Young People's Rights and Wellbeing			X
Climate Change and Sustainability		X	
Health and Wellbeing			X
Town Centre First			X

4.3 There are no direct staffing or financial implications arising from this report.

4.4 An Integrated Impact Assessment (IIA) has been carried out as part of the development of the proposals set out above. It is included as **Appendix 2** and positive impacts are as follows:

- The purpose of the recommendations in the LCLIP is to support the Council with climate change adaptation and increase the Council's resilience to extreme weather events.

4.5 The following Risks in the Corporate Risk Register have been identified as relevant to this matter on a Corporate Level:

- Risk ID ACORP006 as it relates to reputation management; and
- Risk ID ACOPP009 as it relates to operational risk, and
- Risk ID ACORP010 as it relates to environmental challenges

The following Risk in the Directorate Risk Registers has been identified as relevant to this matter on a Strategic Level:

- Risk ID ISR010 as it relates to Climate Change.

4.5.1 Mitigation of these risks could be addressed by sufficient communication and engagement on the progress Aberdeenshire Council is making with regards to climate change mitigation and adaptation.

5 Scheme of Governance

5.1 The Head of Finance and Monitoring Officer within Business Services have been consulted in the preparation of this report and their comments are incorporated within the report and they are satisfied that the report complies with the Scheme of Governance and relevant legislation.

5.2 The Committee is able to consider and take a decision on this item in terms of Section R paragraph 1.1 (a) of the List of Committee Powers in Part 2A of the Scheme of Governance as it relates to approving and monitoring the Council's work in respect of sustainable development and climate change.

Alan Wood
Director of Environment & Infrastructure Services

Report prepared by: Claudia Cowie, Team Leader Sustainability and Climate Change and Tara Murray, Sustainability and Climate Change Officer
9 February 2024

List of Appendices

Appendix 1	Draft Local Climate Impact Profile 2019 – 2022
Appendix 2	Integrated Impact Assessment

Aberdeenshire COUNCIL

From mountain to sea

Local Climate Impact Profile (LCLIP) 2019 - 2022

Draft for approval

August 2023

Foreword

Alan Wood, Director of Environment and Infrastructure Services

Scotland's climate is changing. Temperatures are increasing and extreme weather events are becoming more frequent across the country and Aberdeenshire, impacting people, businesses, the environment, and Aberdeenshire Council.

As a Council we are working hard to reduce our carbon footprint and our impact on the climate and environment, but we also have a crucial role to play in enabling our region to adapt to climate change and extreme weather events and increase our resilience to their impacts. This means shifting the focus from reacting to these events to adapting and preparing for them. To do this we need to look at future weather projections and at the impact of past weather events to identify and manage risks, bring forward policy responses and embed these into plans, policies, and service delivery.

Our Route Map 2030 and Beyond has already identified a need to address and improve climate change adaptation performance, to benefit our employees and residents of Aberdeenshire, but also to continue to fulfil our legislative duty to act and report on our progress to adapt and build resilience.

This Local Climate Impact Profile report emphasises the importance of climate change adaptation and resilience by highlighting the real-life consequences of extreme weather events on Aberdeenshire Council and its communities in recent years.

The findings and recommendations within this report will help Aberdeenshire Council look ahead and work together to prepare our services and our region for future weather events.

"As a Council we have a crucial role to play in enabling our region to adapt to climate change and extreme weather events and increase our resilience to their impacts."

Alan Wood

Acknowledgements

The Sustainability & Climate Change team would like to thank all Aberdeenshire Council employees who took the time to complete the Climate Change Adaptation and Resilience Questionnaire, those who took the time to participate in a Climate Change Adaptation and Resilience interview and those who shared photographs and their personal experiences of working and living in Aberdeenshire during the extreme weather events of the last few years. Thank you also to colleagues from across the Council for sharing information and data from your service. Your contributions have been invaluable to the development of this Local Climate Impact Profile report.

The Aberdeenshire Council leadership team would also like to thank all members of staff for their hard work, dedication and going the extra mile for their colleagues, service users and the residents of Aberdeenshire when faced with the challenges of responding to and recovering from severe and unexpected weather events and a changing climate.

Ballater, Aberdeenshire

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Executive Summary

Between 1st January 2019 and 31st December 2022, Aberdeenshire Council was affected by 51 weather events, including extreme low temperatures with snow and ice, extreme high temperatures and heatwaves, excessive rainfall events, high winds, and storms.

The main impacts to Aberdeenshire Council because of these were damage to Council buildings, housing stock, infrastructure, land, vegetation and local ecosystems and biodiversity; disruption to and an increase in demand for services; risks to employees and public health and wellbeing; and an increase in engagement and support to communities.

The total financial cost of these events has not been calculated; however, the estimated cost of the storms alone stands at approximately £1.075 million. As this figure was below the 1% threshold (£1.2 million) set by Scottish Government there was no additional funding made available to the Council from the Bellwin Scheme. The Council therefore had to absorb the cost of the storms with no extra financial support.

These figures, and the results behind them, emphasise the importance of identifying Aberdeenshire Council's vulnerabilities to weather events and using these to prepare for a longer-term adaptation and resilience programme to minimise the expense and damage of future weather events.

The Aberdeenshire Council Sustainability and Climate Change team has used a Local Climate Impacts Profile (LCLIP) to look at how extreme weather events have affected people, the environment, and Aberdeenshire Council services between 2019 and 2022.

Its purpose is to develop a story for Aberdeenshire Council employees, elected members, the public and other Council stakeholders, to raise awareness of the impact of weather events and the need to adapt and build resilience to these. This LCLIP report will also consolidate existing evidence to provide an evidence base for future climate change adaptation and resilience actions and provide recommendations for improving the preparedness of Aberdeenshire Council to future weather events.

1 Introduction

The Local Climate Impact Profile (LCLIP) Report 2019 - 2022 is the first step in Aberdeenshire Council's climate change adaptation and resilience programme.

1.1 What is an LCLIP and Definitions

The LCLIP tool was developed by the UK Climate Impacts Programme (UKCIP) to assist local authorities and organisations to assess their exposure and vulnerability to past weather events, as a step towards preparing for future risks. An LCLIP considers the effects of weather events now and in the recent past. It is important to note that an LCLIP does not consider the consequences of climate change.

- **Climate** refers to the average weather conditions in a particular place over a long period of time. **Climate change** refers to long-term changes to these conditions. For example, rising temperatures.

- **Weather events** refer to short term atmospheric conditions in a particular place. For example, storms, rain, snow, etc.

- **Extreme weather events** are weather events which are unusual or unexpected. These can be severe or unseasonal and have an impact on the place they occur. For example, extreme hot and cold temperatures, excessive rainfall, high winds, etc.

For further information about Local Climate Impact Profiles, please see the UKCIP website.

1.2. Purpose of this LCLIP

The purpose of this LCLIP is:

- To develop a story and raise awareness of the impact of weather events and the need to adapt and build resilience to these.
- To consolidate existing evidence to provide an evidence base for future actions.
- To provide recommendations for improving the preparedness of Aberdeenshire Council.

The LCLIP's primary audience is Aberdeenshire Council elected members and employees, the public and other council stakeholders. This report should be used primarily as a communication tool to raise awareness of vulnerability and resilience across Aberdeenshire Council.

The outputs of the LCLIP are:

- This report.
- One-page synopsis of LCLIP findings for the primary audience.
- Presentation to the Aberdeenshire Council Sustainability Committee.

The LCLIP will be used:

- To identify potential adaptation opportunities.
- To identify future climate change risks and contribute to the Aberdeenshire Council Climate Change Risk Register.
- To prepare for a longer-term adaptation programme, including an Employee Adaptation & Resilience Guidance document.
- To be used alongside the Council's Adaptation Scotland Capability Benchmarking Framework and Public Bodies Climate Change Duties Reporting.

The context of the LCLIP within Aberdeenshire Council is as an update to previous LCLIPs. The Council's first LCLIP was released in 2011 and was based on weather events and impacts between 2000 and 2010. This was followed up in 2019 by a second LCLIP covering weather events and impacts between 2011 and 2018 with key recommendations. This report will provide an update on the progress of these recommendations and provide further recommendations.

The scope of the LCLIP is the geographical area of Aberdeenshire and the timeframe covered is 1st January 2019 to 31st December 2022. The shorter timescale of this LCLIP is due to the amount of extreme weather events within this period. This report will detail how weather events within this timeframe have affected people, the environment, and Aberdeenshire Council services.

The LCLIP was completed by a member of Sustainability and Climate Change Team based within Environment and Infrastructure Directorate.

In addition to covering a shorter period, this LCLIP differs from previous LCLIPs in that it overlaps with three major global events.

- United Kingdom's withdrawal from the European Union
- COVID-19 Pandemic
- Russia's invasion of Ukraine

Each of these has had a significant impact on Aberdeenshire, including the consequences of extreme weather events in the region and the Council's ability to respond. These impacts include:

- Increase in cost of living.
- Increase in energy prices.
- Increase in cost of external services, contractors, and materials.
- Reduced funding.
- Delays to projects.
- Recruitment and staff retention challenges.
- Increase in demand for some Council services.
- Significant changes in how services were delivered.

1.3. United Kingdom withdrawal from the European Union

In January 2020, the UK withdrew from the European Union (EU). This saw restrictions to trade, an increase in the cost of living including food and energy bills, an increase in business costs, difficulties with recruitment and staff retention, changes to standards and policies, and the loss of EU funding.

Leaving the EU influenced Aberdeenshire Council recruitment, procurement, supply chains and project funding due to the loss of EU funds. Services also saw an increase in the cost of external services, contractors, and materials, which impacted their ability to respond to weather events and make repairs or improvements to increase weather resilience. Examples of this include the increased cost of water sampling and cost of materials for infrastructure improvements.

1.4. Impact of COVID-19 Pandemic

The COVID-19 pandemic in the United Kingdom came into effect from early 2020. The resulting lockdown restricted travel and other activities, all non-essential shops and retailers were closed, social distancing was introduced, and employees worked from home where they could.

With regards to the consequences of extreme weather events, there were some positives to pandemic restrictions; people not working or working from home and travel restrictions resulted in less people on the roads and using public transport. This meant fewer people were impacted by the consequences of extreme weather events such as flooded and blocked roads and rail lines.

However, there were negative consequences. Travel restrictions, social distancing and procedures put in place to protect employees and service users made it difficult for services to respond to weather events, including clearing roads and reaching

those affected. Working from home posed its own weather-related challenges as many homes were not as equipped for extreme heat and cold as some Council offices and reliance on ICT when working from home meant many employees were unable to work when their networks or power supplies were affected by weather. More people at home also increased the demand on private water supplies, causing additional water testing and increasing the risk of water shortages during heatwaves and periods of drought.

Travel restrictions to other countries meant more people were visiting outdoor spaces in Aberdeenshire, which although was positive for health and wellbeing, led to an increase in littering, damage to land and an increase in wildfire risks due to inappropriate camping and BBQs. A risk that was increased by high temperatures and heatwaves.

1.5. Russia's invasion of Ukraine

In February 2022, Russia invaded Ukraine. The invasion had worldwide repercussions to the environment and the economy and led to one of the worst refugee crises in recent history. By May 2023 more than 8.2 million people had fled Ukraine and were welcomed to countries throughout the world, including Scotland.

The invasion also had a profound effect on global energy markets leading to a substantial increase in the cost of oil and gas. This in turn has led to a further increase in the cost of external services, contractors, and materials, with some Council employees estimating a 30 – 50% increase in costs in 2022. With regards to weather events, this has caused a delay in some services responding to events or completing projects which would build resilience to these extreme weather events.

1.6. Aberdeenshire

Aberdeenshire is a predominantly rural area in North East Scotland of approximately of 6,339km2, representing 8% of Scotland's overall territory and includes the mountainous Cairngorm National Park, rich agricultural lowlands and varied coastal landscapes. In 2022, Aberdeenshire's population had risen by 4% since 2010 to 260,780 making up around 5% of the Scottish population. 20% of the region's population are over 65 years of age, an increase of 4% since 2010.

There are 62 towns and villages in Aberdeenshire with a population greater than 500 and six towns with a population greater than 10,000.

Housing stock within Aberdeenshire has risen by 9% to 120,140 since 2010 and accounts for 5% of Scotland's total household stock. Due to the large and rural nature of the region, many of these houses are out with the mains gas network,

relying largely on oil and gas for heating and 8,000 have private water supplies not provided by Scottish Water.

Aberdeenshire's economy is closely linked to Aberdeen City and the energy industry but is also dependent on agriculture, forestry, fishing, and tourism. The region's diverse and rich built heritage is reflected in its 3,500 structures and 41 Conservation Area designations, and its natural heritage is represented by its numerous Special Protection Areas, Special Areas of Conservation, Sites of Special Scientific Interest, 2 Local Nature Reserves, 9 National Nature Reserves and one National Park. Aberdeenshire also has over 4,000 kilometres of watercourse and approximately 200 kilometres of coastline which includes 7 harbours.

The geography, industries and dispersed population of Aberdeenshire mean it is reliant on its supporting infrastructure of 5,640 km of roads and over 1,300 bridges, which are maintained by Aberdeenshire Council. This infrastructure and other characteristics mean Aberdeenshire is vulnerable to the 15 key consequences of climate change, which Aberdeenshire Council has a duty to identify and mitigate.

Aberdeenshire Council is Aberdeenshire's local authority with 10,360 full time equivalent (FTE) employees as of November 2022, spread across 4 Directorates and working in community halls, depots, libraries, offices, parks and open spaces, schools, arts, and museum locations, including an aquarium, and sports and physical activity locations across the region. Since the COVID-19 pandemic, some of Aberdeenshire Council's employees are predominately home-based.

Under the Climate Change (Scotland) Act 2009 Aberdeenshire Council has a legislative duty to deliver its services in a way best calculated to deliver any statutory adaptation programme and report on this annually through the Public Bodies Climate Change Duties Report. To help deliver this, we need to assess Aberdeenshire's vulnerability to climate change and weather events which will be partly achieved through this LCLIP report.

Other adaptation legislation which Aberdeenshire Council must adhere to includes, but is not restricted to:

- Planning (Scotland) Act 2006, under which Aberdeenshire Council has a statutory duty to include adaptation in spatial and development planning, recognising the varying climate impacts across different locations and communities.
- Marine (Scotland) Act 2020, under which Aberdeenshire Council has a statutory duty to protect and enhance the natural marine environment, recognising the impact changing weather has had and will continue to have on marine ecosystems.

- Flood Risk Management (Scotland) Act 2009, under which Aberdeenshire Council has a statutory duty to manage flood risk and promote sustainable flood management. Under this act, Aberdeenshire Council is the lead Local Authority for the North East Local Plan District, publishing the Flood Risk Management Plan 2016 and 2022.

For further information on the Climate Change (Scotland) Act 2009 and public sector duties, please see Scottish Government Climate Change and Adaptation Scotland Legislation and international agreements.

Fowlsheugh Nature Reserve, Stonehaven

2 Methodology

The 2019 - 2022 LCLIP was completed using the suggested methodology from the UKCIP's online LCLIP pack for local authorities and UKCIP 2009. A local climate impacts profile: how to do an LCLIP.

There were four stages in the completion of the LCLIP:

1. Project Planning
2. Data Collection
3. Data Analysis
4. Outcomes and agenda for further action

2.1. Project Planning

The Project Planning stage was used to define and agree the following:

1. Purpose of the LCLIP
2. Primary audience
3. Outputs
4. How it will be used/outcomes
5. Context
6. Scope
7. Who will complete the LCLIP
8. How data will be collected and analysed
9. Any constraints to the completion of the LCLIP and how to mitigate these

Please see section 1.2 and below for details of these.

2.2. Data Collection

The data collection stage comprised of:

- A **media trawl** of extreme weather events in the region of Aberdeenshire between 1st January 2019 and 31st December 2022.
- **UKCIP**, **Climate Change Committee** (CCC) and **Met Office** data.
- Data collected through the completion of **Aberdeenshire Council's Adaptation Scotland Capability Benchmarking Framework submissions** between 2019 and 2022. The framework allows the Council to measure its capability to deliver climate change adaptation through effective leadership, governance, planning and collaboration, and improve on this through recommended actions.
- Data collected through the completion of **Aberdeenshire Council's annual Public Bodies Duties Climate Change Reports** between 2019 and 2022. As a public sector body, Aberdeenshire Council is required to report annually on

compliance with climate duties established within the Climate Change (Scotland) Act 2009, which includes climate change adaptation duties.

- Information from **Aberdeenshire Council's Bellwin Scheme 2021 - 2022 and 2023 - 2024 Reports.** This scheme allows local authorities to apply for additional support to assist with immediate and unforeseen costs in dealing with the aftermath of emergency incidents, including extreme weather events. Bellwin reports give an indication of the financial costs of these events to Aberdeenshire Council.
- **Employee Climate Change Adaptation and Resilience Questionnaire** was disseminated to all Aberdeenshire Council employees in February 2023. The purpose of this was to discover how Council services have been impacted by extreme weather events, their level of knowledge and awareness of these events and what actions are already taking place. A link to the online questionnaire was sent to all employees via email to Service Managers and Sustainability Champions for dissemination to their teams and networks, through service newsletters and via Aberdeenshire Council's online collaboration tool Microsoft Yammer. It was completed by **74** employees from a range of services, employee levels and Council locations.
- **Climate Change Adaptation and Resilience Interviews** with Aberdeenshire Council employees in March 2023. These were a follow-up to the questionnaire and to establish links between the strategic and operational priorities of different services and weather impacts. The Sustainability & Climate Change Officer interviewed **14** employees from a range of services, employee levels and Council locations.

2.3. Data Analysis

The data collected was collated and analysed using tools provided by the UKCIP LCLIP guidance document. This included the LCLIP spreadsheet template to record weather events details.

2.4 Outcomes and Agenda for further Action

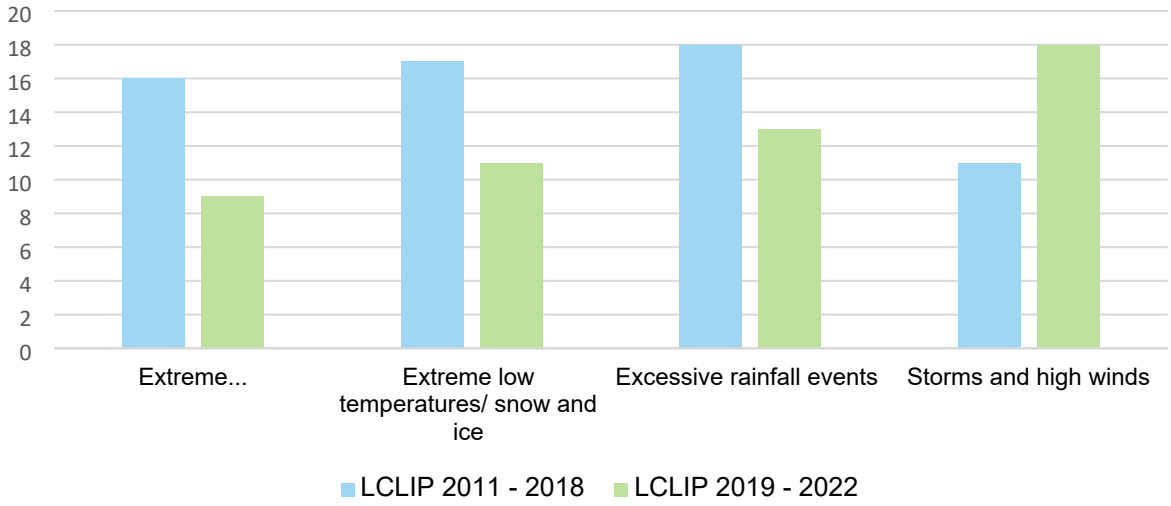
The main outcomes from the LCLIP are:

1. **Recommendations** for how Aberdeenshire Council can prioritise adaptation and resilience issues and risks.
2. **Recommendations** for how Aberdeenshire Council and its employees can increase their preparedness for extreme weather events.
3. **Tools** for sharing the outcomes and recommendations of the LCLIP with Aberdeenshire Council employees and elected members.
4. **Tools** for sharing the outcomes and recommendations of the LCLIP with the public and other stakeholders.

Results

2019 to 2022 saw more extreme weather events per year than the previous LCLIP period of 2012 to 2018, including 18 storms in a 4-year period compared to 11 storms in the 8-year period of 2011 – 2018. This is consistent with Scotland's changing weather patterns and the Met Office has predicted that these types of weather events are likely to continue and intensify.

Table.1 Comparison 2011 – 2018 and 2019 – 2022 weather events in Aberdeenshire



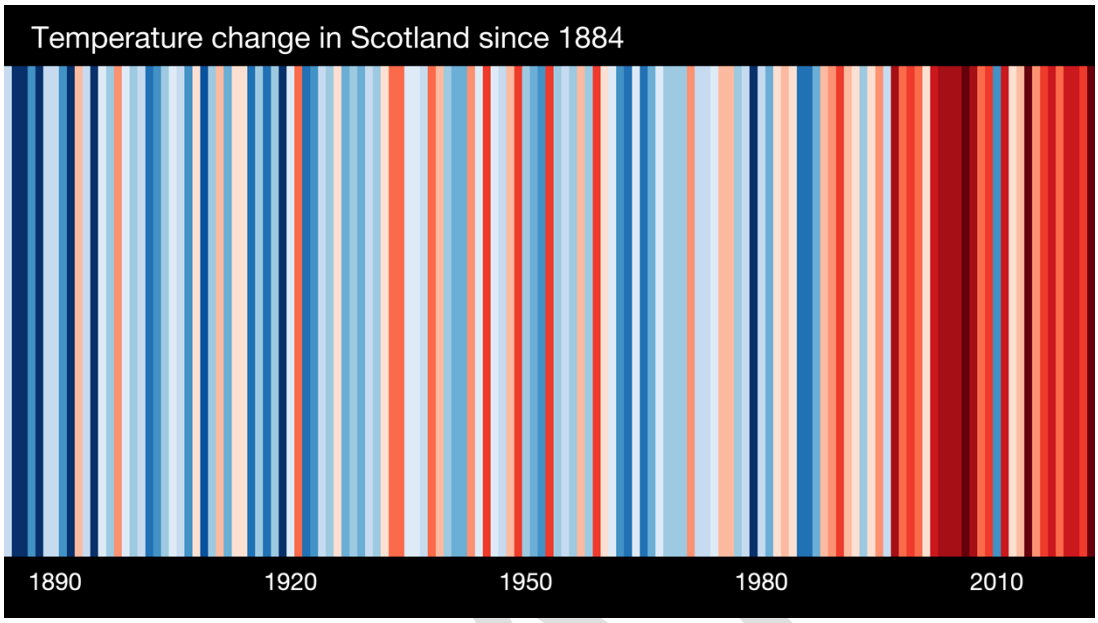
3.1. Scotland's Weather

Scotland's weather is changing. Over the past few decades, the country has experienced changes in its climate and weather patterns, including more frequent and more extreme weather events. The climate is warming with our hottest days getting hotter, rainfall patterns have changed causing our wettest days to get wetter and our sea-levels are rising.

Rainfall: Rainfall has increased in Scotland, particularly during the winter months, and extreme weather events and storms have become more frequent leading to an increase in surface and coastal flooding in many areas. The annual average rainfall from 2010-2019 was 9% wetter than the 1961-1990 average, with winters being 19% wetter according to the Met Office.

Sea level rise: Nearly a fifth of Scotland's coastline is at risk of erosion and the effects of climate change and weather events. Mean sea levels around Scotland have risen by approximately 1.4 mm a year from the start of the 20th century.

Temperature: Scotland has generally seen an increase in average temperatures over the past century. Winters have become milder, and summers have become warmer. The country's top 10 warmest years since 1884 have occurred since 1997 with 2022 being Scotland's warmest year on record.



Climate Stripes showing the global temperature change in Scotland

According to the UK Climate Projections 2018 (UKCP18), these changes in Scotland's weather patterns are projected to continue and intensify with their consequences becoming more likely.

These projections include:

- Average temperatures will increase across all seasons.
- 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 snowfall.
- Weather will remain variable and may become more variable.

For further information on these changes, see Adaptation Scotland's summary of the UK Climate Projections for Scotland

Scotland and Aberdeenshire are already experiencing the social, economic, and environmental consequences of these changes, including their impact on property and infrastructure, water and food supplies, biodiversity, and the delivery of health, social care, and other essential services.

The Scottish Climate Change Adaptation Programme has identified 15 key consequences of climate change for Scotland, many of which have already been experienced in Aberdeenshire.

1. The productivity of our agriculture and forests.
2. The occurrence of pests and disease.
3. The quality of our soils.
4. The health of our natural environment.
5. The security of our food supply.
6. The availability and quality of water.
7. The increased risk of flooding.
8. The change in our coast.
9. The health of our marine environment.
10. The resilience of our businesses.
11. The health and well-being of people.
12. Our cultural heritage and identity.
13. The security and efficiency of our energy supply.
14. The performance of our business.
15. Infrastructure network connectivity and interdependencies.

For further information on these, please see Adaptation Scotland's Impacts in Scotland.

3.2. Aberdeenshire's Weather

Below is a summary of extreme weather events within and impacting Aberdeenshire between 1st January 2019 and 31st December 2022. Please note, these do not include every weather event in Scotland, only those which had an impact on Aberdeenshire.

Summary of weather events between 1st January 2019 and 31st January 2022:

9 Extreme high temperatures/heatwaves

11 Extreme low temperatures/ snow and ice

13 Excessive rainfall events

18 Storms and high winds

2019 was a year of extremes across Aberdeenshire, from record low temperatures to record highs and heatwaves

January: The year began with the coldest January on record for 7 years with a temperature of **-14.3℃** in Braemar and one of driest Januarys on record.

February: Storm Erik hit Aberdeenshire with heavy rain and windspeeds of up to **78mph** causing widespread flooding, damage, and disruption. Conversely this month also set a record for the highest February temperature in Scotland by reaching **19.3℃** in Aboyne.

March: Storms Freya and Gareth brought heavy rain and strong winds to Aberdeenshire, although the impact on the region was less than that of the rest of Scotland.

April: Aberdeenshire experienced **50mph** winds, heavy rain and a yellow thunderstorm warning as Storm Hannah arrived.

July: Despite heatwaves and high temperatures in July causing droughts in some areas, the summer of 2019 was also the **second wettest summer** on record with thunderstorms and a yellow weather warning across Aberdeenshire.

December: The year ended with unseasonably high temperatures, particularly overnight, with an average monthly temperature of **7.5℃.**

River Dee in Ballater in July 2019

2020 was one of the five hottest years on record and top ten wettest and top ten sunniest years in the UK with Aberdeenshire experiencing all these extremes.

January: The year began with a yellow warning for wintry showers and wind due to Storm Brendan. Although Aberdeenshire wasn't affected as much as other parts of Scotland, the unusual combination of storm surge and naturally high tides led to high tide risks in the region, including Stonehaven.

February: The 2019 - 2020 storm season continued with Storms Ciara and Dennis just a week apart bringing heavy rains and winds of up to **80mph.** Storm Dennis in particular caused flooding and travel disruption.

April: Warm and dry weather following a relatively dry winter led to water shortages across the region. Aberdeenshire Council and Scottish Water provided support to users of private water supplies experiencing water shortages, however the COVID-19 pandemic and its restrictions made this more challenging than in previous years where this support was provided.

July: Flooding after a spate of heavy thunderstorms resulted in road closures and damage to businesses in Inverurie and Garioch Heritage Centre.

August 2020: Storm Francis, torrential downpours and thunderstorms caused flash-flooding and disruption to the south of Aberdeenshire, particularly in Stonehaven and caused a landslip which contributed to the Stonehaven derailment.

October: The month began with heavy rain and Aberdeenshire was one of many regions in the UK to record its **wettest October day** with **66.6mm** of daily rainfall. The month ended with further rain and high winds as Storm Aidan hit Aberdeenshire. Although the region wasn't as heavily impacted as other regions in Scotland, the south of Aberdeenshire did experience heavy rain.

Flooded grounds of Garioch Heritage Centre in July 2020

2021 saw more average temperatures than 2020 but Aberdeenshire still managed to break some records. The year started and ended with heavy rain and storms including Storm Arwen, one of the most severe storms to hit Aberdeenshire.

January: The year began with heavy rains causing flooding in some areas of Aberdeenshire and causing damage to Turriff United's pitch and stadium. Mid-January also saw the arrival of Storm Christoph which brought wintery showers and heavy snow.

February: Storm Darcy caused the UK and Aberdeenshire's most severe spell of winter weather since the 'Beast from the East' in 2018. There was heavy and persistent snow showers and daytime temperatures struggled to rise above freezing with overnight temperatures of **-10℃ to -15℃.** Braemar recorded the **UK's lowest temperature** since 1995 at **-23℃**

March – April: An exceptionally warm end of March was followed by an exceptionally cold April with wintry showers, frost, and snow with Oyne recording **5cm of snow** overnight.

July: Heatwaves saw the **first ever amber extreme heat warning** issued by the Met Office and led to an increased demand for water and concern about wildfires. Conversely the month ended with heavy rain which caused flooding across Aberdeenshire resulting in homes being evacuated in Portsoy.

November: A Met Office red wind warning was issued for Storm Arwen which brought severe **90mph** winds, and heavy rain and flooding across Aberdeenshire. There was substantial loss of tree cover, structural damage to properties and infrastructure, and thousands of homes were left without power.

December: Less than 2 weeks after Arwen, Storm Barra hit Aberdeenshire with **80mph** winds causing further structural and tree damage. The year ended with an exceptionally mild December and New Year with temperatures of between **6℃** and **8℃** higher than average for that time of year.

2022 began with several storms but became Scotland's hottest year on record with an average temperature of 8.5C, beating the previous record of 8.43C in 2014.

January: Storms Malik and Corrie arrived with less than 24 hours between them bringing high winds which caused extensive loss of tree cover, structural damage and road closures and the loss of power to thousands of homes across Aberdeenshire. Nearly a third of Aberdeenshire's schools were closed, including Banff Academy due to external roof damage after high winds.

February: The 2021/22 storm season continued with Storms Dudley, Eunice, and Franklin, all of which caused further structural damage with Eunice being the second storm after Arwen to be issued with a red warning for high winds. Eunice also resulted in heavy snow in the region.

March: Heavy snowfall and blizzard conditions led to travel disruption and school closures as some areas saw between four and six inches of snow fall.

June: A period of prolonged rainfall resulted in localised flooding and landslides.

July: Heatwaves hit Aberdeenshire again with temperatures reaching **31.3℃** in Aboyne. The Met Office issued a **red extreme heat warning**, and SEPA, Scottish Water, NHS Grampian and the Scottish Fire and Rescue Service issued warnings and advice regarding water usage, fire risks and heat risks to health.

November: Heavy rain again caused flooding in Aberdeenshire with SEPA escalating their flood warning to severe. Huntly was impacted heavily by the rain and the rising River Deveron which flooded the outdoor spaces of the Huntly Nordic Centre, and Kintore, Inverurie, Stonehaven, Portlethen and Hatton of Fintray were all affected by power cuts.

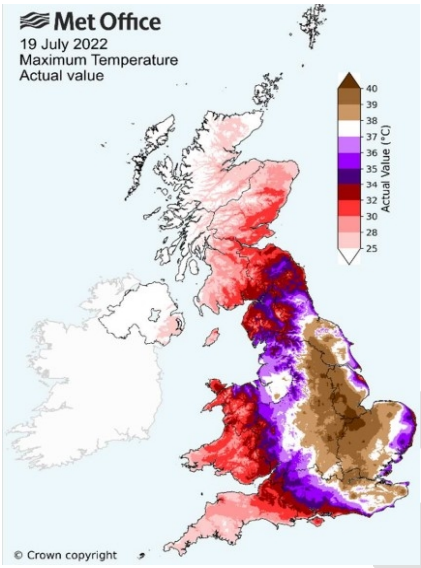
December: The year ended with snow, prolonged low temperatures and hard frosts lasting for over a week with Braemar recording the UK's lowest daily minimum temperature of **-17.3℃.**

3.3. Case Studies

The case studies below were selected based on the media coverage they received, mentions in responses to the Employee Climate Change Resilience and Adaptation questionnaire and interviews and their impact on Aberdeenshire Council.

3.3.1. Heatwaves 2019 – 2022

In Scotland, a heatwave is a period of at least three consecutive days with daily temperatures exceeding 25℃. Annual heatwaves with temperatures well above this took place between 2019 and 2022, posing risks to human health, ecosystems, and infrastructure. In 2022 alone, Aboyne broke the record twice for Aberdeenshire's highest temperature.



These conditions were extremely challenging for Aberdeenshire Council as some services saw an increase in demand and there were concerns over employee health and safety. Droughts led to private water supplies maintained by Aberdeenshire Council running dry, increasing demand for water system maintenance and emergency supplies to communities. High temperatures in Council buildings and offices affected employee wellbeing, and although some buildings were equipped with air conditioning and cooling systems, many employees had to work from home due to pandemic restrictions causing concern over the heat in employee homes which are not designed for high temperatures. There were also health risks to front line workers working outside and travelling in high temperatures.

The Aberdeenshire Health & Social Care Partnership (AHSCP) faced additional challenges due to the impact of the heatwaves on human health, particularly to vulnerable populations such as the elderly, children, and individuals with pre-existing conditions. High temperatures caused care homes and schools to overheat affecting the health and wellbeing of residents, pupils, and staff leading to a rise in heat-related illnesses such as heatstroke and dehydration.

The region's native biodiversity struggled to adapt to the hotter and drier conditions and the lack of water increased the risks of wildfires and disrupted the food chain. These risks were exacerbated by the increase in visitors to Aberdeenshire's green spaces due to the sunny weather, causing additional work for the Council's Environment & Sustainability Services.

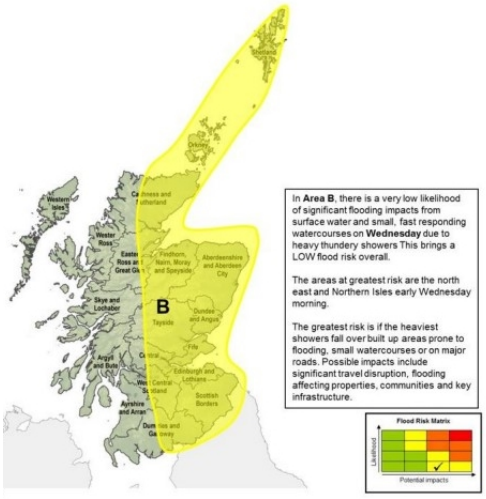
The agricultural sector also faced significant challenges as crops and livestock suffered from heat stress resulting in reduced yields and economic losses leading to additional support from the Council's Planning & Economy services. This impact was even more severe due to the challenges the sector was already facing with Brexit and the COVID-19 pandemic.

Impacts: damage to ecosystems and biodiversity, damage to land and vegetation, disruption to services, increased demand for services, increased engagement and support to communities, risk to employees, risk to health and wellbeing

3.3.2. Thunderstorms 11th and 12th August 2020

Please note this section contains information about the Stonehaven Derailment of 12th August 2020 which some readers may find distressing.

In August 2020, Aberdeenshire was hit by heavy rains and thunderstorms causing flash flooding mainly in the south of the region. SEPA reported an hourly rainfall of greater than 50mm and the equivalent of a month's worth of rain in three hours.



SEPA and the Met Office's Flood Guidance Statement Area of Concern map from 11th – 12th August

The impact of this was severe damage and disruption to transport infrastructure, school closures and flood damage to residential and council properties, predominately in the Stonehaven area due to surface flooding and minor flooding from the river Carron. However, the most severe impact was the train derailment at Carmont near Stonehaven known as the Stonehaven Derailment.

The incident occurred when a passenger train enroute from Aberdeen to Glasgow encountered severe weather conditions, derailed, and slid down an embankment causing the death of one of the passengers, the driver, and the conductor, and injuring six passengers. Investigations afterwards attributed the incident primarily to a landslip triggered by the heavy rain which caused stones and debris to fall on the tracks resulting in the derailment. The incident had significant implications for the rail industry in Scotland and the UK and highlighted the need for robust safety measures, especially during adverse and extreme weather conditions.

The impact of the August thunderstorms to Aberdeenshire Council was not just the

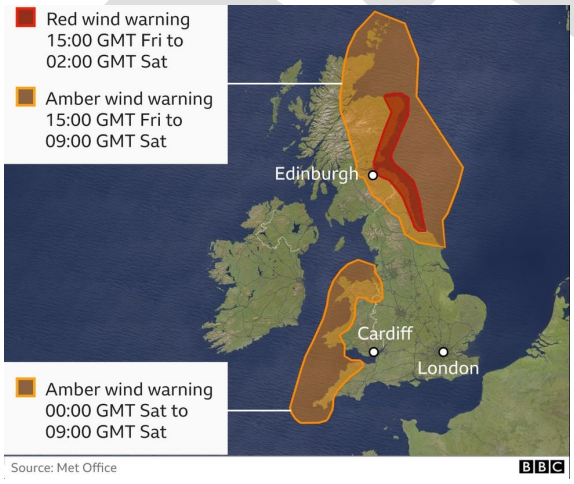
Impacts: damage to council buildings, damage to housing stock, damage to infrastructure, disruption to services, financial cost, increased demand for services, increased engagement and support to communities, risk to health and wellbeing

cost and disruption to services caused by the flood damage to infrastructure and properties, but also the emotional impact the Stonehaven Derailment had on Council employees and elected members who live and work in the area as well as the wider community. The derailment was also a stark reminder of the vulnerability of transport infrastructure to extreme weather events and the severity of the consequences of these events.

3.3.3. Winter Storms 2021 – 2022

Between November 2021 and February 2022, Aberdeenshire was hit by seven storms in quick succession: Arwen, Barra, Malik, Corrie, Dudley, Eunice, and Franklin. These brought powerful winds, heavy rain, snow, and freezing temperatures all of which had severe immediate impacts and lasting effects on the region and Aberdeenshire Council. What intensified the severity of these storms was how close together they were, giving communities and Council services little time to repair and prepare between each one.

The biggest impacts were to Aberdeenshire's infrastructure and landscape. Strong winds brought down trees causing extensive damage to power lines and the loss of power and communication networks to several communities. Roads were blocked by fallen trees, debris and flooding which affected transportation and made many homes in the area, including those without power, inaccessible to emergency and Council services. In addition, many employees were unable to travel during and after the storms due to unsafe road conditions. This included employees from Property and Facilities services who were unable to reach and repair weather damaged buildings, resulting in the closure of some public buildings.



Met Office red and amber wind warnings for Storm Arwen

The most damaging of the storms was Storm Arwen between 25th and 29th November 2021. This storm was issued with a red wind warning by the Met Office and became the most damaging storm to hit Aberdeenshire since Storm Frank in 2015. Thousands of homes were left without power, and an Aberdeenshire resident died when his pick-up truck was hit by a falling tree. During and after Arwen, schools were closed, and school transport cancelled due to unsafe travel conditions. High winds resulted in telecom outages which impacted all services and had a severe impact on the Council's Digital DRT Service, obstructing employees, and contractors from operating passenger transport systems, including school transportation. Walking paths were washed away, Council buildings and housing

stock were damaged and several areas, including Ballater, Stonehaven and Portsoy were affected by floods thereby increasing the demand for Council services.

The severity of Storm Arwen also put a considerable strain on the Communications Team to keep employees and communities up to date with weather warnings, travel information and updates on power and other recovery efforts after the storm. Power and communication loss also meant that some home-based Council employees were unable to work causing disruption to many services.

One of the biggest impacts of all the storms, including Arwen was to Aberdeenshire's woodlands and greenspaces. The 2021 – 2022 storm season flattened and caused considerable damage to more than 30ha (just under 10%) of Council owned woodland, including parks and open spaces where trees were snapped or uprooted by the storms' high winds, with Haddo Country Park being the most affected.

Table.2 Impact of 2012 – 2022 winter storms on Aberdeenshire Council managed woodland

Site	**Area affected (hectares)**
Aden Country Park	6.4
Haddo Country Park	12.4
Lucy Laws Woods, Banff	1.3
Battlehill, Huntly	3.4
Gauchhill, Kintore	1.0
Meadows, Huntly	0.7
McDonald Wood, Ellon	3.0
Cleanhill, Aberchirder	0.4
Alford Community Campus	1.9
Rhynie Industrial Estate	0.5
	31ha

In addition to damage to property, roads, and power systems by fallen trees, their loss has had an immediate and long-term effect on Aberdeenshire's biodiversity, which relies on these trees for habitat and food. The sheer amount of woodland lost and damaged has also had a significant impact on the Council services responsible

for clearing trees and repairing any associated damage, and those responsible for recording the damage and the long-term programme of work to clear and replant trees.

Impacts: damage to council buildings, damage to ecosystems and biodiversity, damage to housing stock, damage to infrastructure, damage to land vegetation, disruption to services, financial cost, increased demand for services, increased engagement and support to communities, risk to employees, risk to health and wellbeing

Storm damage to trees following Storm Arwen in November 2021

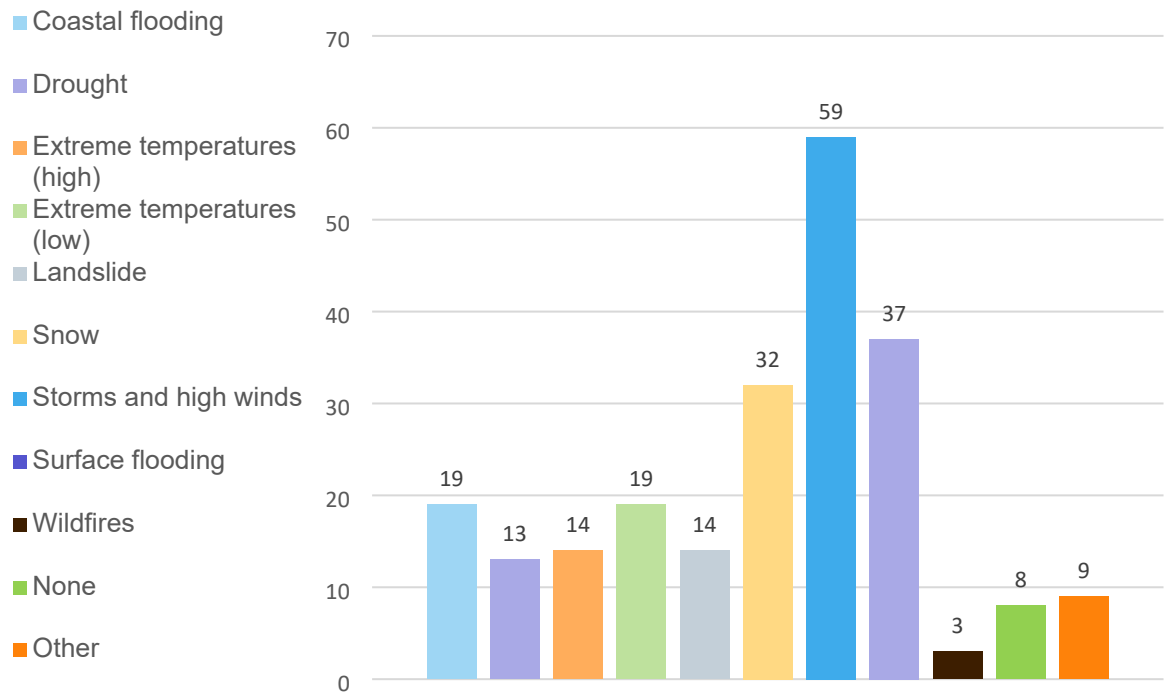
3.4. Summary of Impact on Aberdeenshire Council Services

This summary and the data below are from responses to the Aberdeenshire Council Employee Climate Change Resilience and Adaptation questionnaire and interviews.

All participants were asked to provide answers only related to extreme weather events between 1st January 2019 and 31st December 2022.

When employees were asked if their service had been impacted by any of the following weather events during this period, less than 11% said their service had not been impacted. Storms and high winds and coastal flooding were the most common events affecting services.

Table. 2 Weather events which impacted Aberdeenshire Council services



When asked to comment further on what affect these events had, the most frequent impacts to services were:

- Damage to council buildings
- Damage to ecosystems and biodiversity
- Damage to housing stock
- Damage to infrastructure
- Damage to land and vegetation
- Disruption to services
- Financial costs
- Increased demand for services
- Increased engagement and support to communities
- Risk to employees
- Risk to health and wellbeing

Although all Aberdeenshire Council services were affected in some way by extreme weather events, the following directorates and services were most impacted:

- Business Services (Customer & Digital, Finance, Legal & People, Property & Facilities Management, Risk & Resilience)
- Education and Children's Services (Education, Live Life Aberdeenshire)
- Environment and Infrastructure Services (Environment & Sustainability, Housing & Building Standards, Planning & Economy, Roads & Infrastructure)
- Health and Social Care Partnership (Health & Social Care)

Please note this list does not include all services within each directorate, only those most impacted.

3.4.1. Business Services

Customer & Digital:

Each extreme weather event required additional support from the Communications Team before, during and after each event, including customer service support through a helpline for residents. Any weather event which caused a power outage made it even more difficult for the team.

Finance

The finance team faced additional pressure in processing the costs of each weather event for repairs, resource and recording claims. Between 1st January and 31st March 2022, the following costs were claimed through the Bellwin Scheme showing the highest financial costs were from the damage caused by Storm Arwen in November 2021 followed by Storms Malik and Corrie in January 2022. The financial cost of other extreme weather events has not been recorded.

Table.3 Costs to services by each storm claimed through the Bellwin Scheme

	Arwen	Barra	Malik & Corrie	Dudley, Eunice & Franklin
Business Services	401,460	0	403,600	1,729
Education & Children's Services	25,897	0	12,450	550
Environment & Infrastructure Services	142,225	0	26,478	7,142
Health & Social Care Partnership	3,256	0	636	0
Housing	97,856	41,161	44,821	0
Total	**670,694**	**41,161**	**487,985**	**9,421**

With regards to insurance claims, Aberdeenshire Council issued 25 Public Liability Claims related to storms and flooding between 1st January 2019 and 31st December

2022, 4 of which were settled to a total value of £8,624.

Legal & People:

The biggest impact on Council employees was the inability to attend work or fulfil their duties. From March 2020 onwards, many of Aberdeenshire Council's staff began working from home due to the COVID-19 pandemic. This meant they were less impacted by unsafe road conditions and disruption to transport but were affected by power outages, making it impossible for some employees to work from home. Many front-line employees who were not working from home, were also unable to attend work due to weather related travel restrictions and unsafe road conditions. These challenges were compounded by the increased demand for Council services as employees were called on and redeployed to other services and areas. This was to provide additional help and support to communities and vulnerable service users and people affected by weather events.

Property & Facilities Management:

Due to the nature of the service, Property & Facilities Management saw an increase in demand for their services due to Council property damage caused by extreme-weather events, in particular flooding, storms, and high winds. The service also attended to the private water supplies they maintained when these ran dry during annual droughts. Other impacts included attending to extreme high and low temperatures in offices, care homes and schools which were affecting the health and wellbeing of employees, pupils, and residents, and attending incidents of damage to the external fabric of several buildings and school playgrounds due to storms and high winds. As these services were often required during or immediately after weather events, employees also had to ensure they were not putting themselves at risk by travelling to incidents in unsafe weather conditions.

Risk and Resilience

This service is the key responding and co-ordinating unit for Aberdeenshire Council so is involved in all responses to extreme weather events. The need for this service has greatly increased over the period of 2019 to 2022 in terms of responding and working with communities and council services to increase their resilience and prepare for future events.

3.4.2. Education and Children's Services

Education:

The biggest impact to this service was the closure of schools due to power outages, damage to buildings and grounds, and the inability of staff and pupils to reach schools due to unsafe travel conditions and the cancellation of school transport services. Transport services were cancelled to blocked, icy, and flooded roads or due to high winds if the service was normally operated by double deck vehicles.

Each of the major storms from 2019 to 2022 led to closures and loss of working days which had knock on effect on the school programme and already tight timescales for course completion. In August 2020, Portlethen was closed due to torrential rain and in the same month flooding from Storm Francis damaged Dunnottar School's boiler and heating system. The storms and flooding of 2021 caused power outages cutting school staff off from their virtual network and reducing access to schools. From November to December 2022 several schools were closed, external staff training and placements and after school youth activities were cancelled and school transport routes were cancelled due to the flooding and high winds of Storm Arwen and the heavy snow in December.

Live Life Aberdeenshire:

There were forced facility closures, property damage and reduced service delivery due to weather events which caused a significant financial cost and loss of income to Live Life Aberdeenshire, at a time when the service was still trying to recover from the devastating impact of the closure of their facilities during the COVID-19 pandemic. Localised flooding in November 2021 had a significant impact on the Huntly Nordic Centre and surrounding parks and fields, leaving the centre inaccessible. The Centre was then closed due to fallen trees following the 2021 – 2022 storms. Heavy rain and localised floods caused closures at Alford Ski centre due to standing water on the slope, and flooding and snow caused closures of Turriff Sports Centre and other sport and community facilities. There was also additional pressure on the Cultural Engagement team to salvage and restore collections damaged from weather events and to safeguard them from future events, as well as provide support to community cultural partners such as the Fraserburgh Lighthouse Museum.

3.4.3 Environment and Infrastructure Services

Environment & Sustainability

Several storms over the winter 2021 – 2022 caused extensive loss of tree cover destroying large sections of woodland and affected many parks, cemeteries, and open spaces. Access to sites was restricted and paths damaged due to fallen trees and damage.

The inaccessibility of some areas such as McDonald Park in Ellon and Haddo Country Park also affected Aberdeenshire Ranger led public, school and group activities. The Ranger's service faced additional challenges. The hot weather and pandemic travel restrictions saw an increase in visitors to the countryside, leaving litter, causing damage, and not following cooking guidance or paying attention to fire risk warnings causing damage to sites through wildfires.

With regards to Aberdeenshire's environment and biodiversity, planting of trees and vegetation did not grow or thrive due to drought and flood conditions, which then impacted the ecosystem and biodiversity. Regular drought affected mature trees and woodland habitats and changes in temperature have increased invasive species numbers and tree disease. There has been an overall loss of biodiversity due to weather impacts.

- Waste Services

There was flooding at the Souterford Waste Deport following Storm Arwen and disruption to waste collection services due to blocked roads and unsafe driving conditions.

Housing & Building Standards:

The biggest impact to this service was responding to the damage to housing stock following extreme weather events. These included burst pipes and property damage following low winter temperatures, power outages caused by storms, and damage to housing and sheltered housing, from wind damage and flooding. In Stonehaven, Huntly, Ballater and Inverurie, this required some tenants to be rehoused. Within the service, low temperatures with ice and snow meant some meetings between employees and tenants were cancelled due to unsafe travel conditions.

Planning & Economy:

Within the Historic Environment services, land slip and slope instability associated with extreme weather events affected several of Aberdeenshire's historic sites. These included Macduff Cross which has been restored and reset due to slope instability and St. Brandon's Inverboyndie which will be a major project in 2024 due to slope instability. There is also concern that other damaged sites may be left as 'managed decline' as this may be the only viable option.

The planning service also saw an increase in emergency permitting for damages (increase in requests for emergency permits) which occurred during these evets and in planning applications following flooding.

Droughts caused private water supplies to dry up, in some cases for months, which created additional work for the Environmental Health Service as residents ran out of water. This has had a long-term effect as some of these supplies have never returned or if they do, the quality of the water has been altered meaning new supplies need to be found. Furthermore, the longer periods of high temperatures promoted blue green algae and a risk of Legionella which posed a public health risk. The Private Water Supply team had to deal with the impact of these conditions in addition to their routine work.

Demand for the services of the Food Safety team also increased due to unsafe water as flooding impacted businesses who were forced to close due to potential contamination and the increased risk of public health issues.

Freezing pipes due to low temperatures and tree roots ripping up distribution pipes or lack of power following storms resulted in no power pumps or treatment which also led to no water in homes and council buildings or water that was unsafe to drink.

These cold temperatures increased residents' use of fires and stoves which resulted in an increase in complaints to the Environmental Health Service regarding smoke issues from people not knowing how to manage fires and stoves correctly.

Roads & Infrastructure:

The Roads and Infrastructure service are responsible for all of Aberdeenshire's 5,640 kilometres of roads, 1,300 kilometres of footpaths and pavements, and its 1,300 plus bridges. Given its remit, all extreme weather events increased the demand for this service. These events also caused disruption in delivering services and additional strain and potential risk to their employees on an almost daily basis. A further implication of damages to roads and bridges from storm conditions is this can change the prioritisation order of other maintenance works resulting in greater delays to that work. Frontline services include preparing, clearing, and repairing damage to roads, paths and bridges, street light maintenance and drainage.

- Bridges:

Heavy rainfall events led to swollen rivers which damaged bridges and scoured bridge foundations causing bridge closures and repairs. Frost damage to concrete bridges, for example, the A93 Inver Underpass Dec 2022; landslide causing blockage of a culvert on the A93/330 Allt Domhain in October 2022; and scour at the Mill of Sterin Bridge in late 2022 resulted in closures and damage.

- Electrical grid infrastructure:

Storms and high winds after the 2021 – 2022 storm season caused damage to the electrical grid infrastructure and telecoms network infrastructure resulting in power outages and had an impact on the aim of further expansion of telecoms networks as telecoms operators had to repair and upgrade historic infrastructure before expanding new infrastructure. The storms in Aberdeenshire and their impacts have set back improvements in digital connectivity for the region.

- Footpaths:

Footpaths were damaged and blocked by flooding and debris following storms. These had to be repaired and cleared as soon as possible for the health and safety of residents.

- Road maintenance:

Every storm and cold weather event increased the demand for road maintenance services; from gritting routes and supplying grit bins to communities, to snow and debris clearing, including trees from roads.

The provision of the winter maintenance service, costs Aberdeenshire Council between £4 and £9 million depending on the severity of the winter, with approximately 220 frontline staff working to ensure the region's road infrastructure is safe. However, the unexpected severity of the 2021 – 2022 storm season and the number of storms in a short period of time meant the service was unable to adequately prepare for the 2021 – 2022 winter.

The service was also under pressure to clear and repair roads as soon as possible following each event increasing pressure on the service and their employees. In many cases there were delays in responding to weather events as driving conditions were too dangerous for employees to travel.

Added to this, the pandemic and the cost of fuel following the invasion of Ukraine meant the level of winter maintenance and capacity of the roads service was severely reduced.

3.4.3. Aberdeenshire Health and Social Care Partnership

Aberdeenshire Health & Social Care Partnership

The most direct impact to this service was responding to incidents where people had been injured or become unwell due to weather events, for example injured in storms or heat-related illnesses, this included ensuring people in their care such as patients, care home residents and vulnerable adults were protected from the effects of weather events and extreme changes in temperature. Within the service poor or no internet connection and loss of power were also an issue and snow, high winds and flooding made it impossible to meet clients in person of for employees to come into work. At times both staff and service users were sent home due to high winds.

4. Recommendations and Next Steps

4.1. 2011 – 2018 LCLIP Recommendations update

The 2011 – 2018 LCLIP was published in 2019 with the recommendations below. Unfortunately, due to the COVID-19 pandemic and staff turnover within the Sustainability and Climate Change Team, Aberdeenshire Council are not as far on as they would have liked with these recommendations, however progress has been made.

The key recommendations from the previous LCLIP were:

1. Development of a Climate Change Adaptation Strategy to ensure a uniform approach across services in addressing climate change risk.

Update: This has been progressed through the recruitment of a Sustainability & Climate Change Officer in January 2023. The officer is responsible for implementing the Council's long-term climate change and adaptation and resilience programme to ensure a uniform approach across services in addressing climate change risk. The first step in this programme is the 2019 - 2022 LCLIP and progression of the recommendations within this and the 2011 – 2018 LCLIP report. This will be followed by the formation of a cross-service Climate Change Adaptation and Resilience short-life working group who will contribute to updating the Aberdeenshire Council's Climate Change Risk Register, benchmarking the Council's adaptation capability against Adaptation Scotland's Benchmarking Framework and the publication of an Employee Climate Change Adaptation and Resilience Guide.

2. Updating the Climate Change Risk Register to reflect the UKCP18 projections and the findings of the latest LCLIP.

Update: The Climate Change Risk Register was reviewed and updated in 2023 using the Met Office's Climate Data Portal. The mitigating actions and leads for these actions within the register will be uploaded onto the Council's Pentana system to ensure they are allocated and monitored. Climate change is identified as a risk within both the Corporate Risk Register and Directorate Strategic Register and service managers have been asked to include climate change risks in their appropriate risk registers.

3. Consideration of impacts outlined in the LCLIP when supporting climate mitigation and adaptation action across Aberdeenshire.

Update: This is ongoing across all services - climate change and resilient communities are strategic priorities in the Aberdeenshire Council Plan 2022 - 2027 and adaptation is included in the Route Map to 2030 and Beyond. An Integrated Impact Assessment (IIA) to examine the impacts of project proposals on climate change adaptation has been introduced and requires consideration at every Council Committee. Local Development Plans have identified adaptation as an element of their vision and plans.

Adaptation actions that have been delivered following the 2011 – 2018 LCLIP include:

- The creation of Climate Ready Aberdeenshire to raise awareness and understanding of climate risks, support decision-makers and link private, public and third sector organisations across Aberdeenshire.
- Building more resilient and sustainable paths.
- A bridge scour alert system to monitor and react to severe rainfall and an emergency closure plan for the rapid closure of certain major bridges if required.
- Flood Protection studies across the region focussing on direct defences, relocation of properties and property protection.
- Business-critical operational buildings now have backup generators in case of failure during extreme weather events.
- Impacts of climate change were included in the Aberdeenshire Council Pollinator Action Plan 2019 – 2021 and updated 2022 – 2027 plan.

4. Explore the options around having a cost code that is explicitly linked to severe weather events and further investigated possibilities of having a central fund for climate change costs and adaptation measures.

Update: This recommendation has not been progressed but will be discussed with the Council's Finance team. Please see recommendations in this report.

5. Capture costs from weather-related incidents so that cost benefit analysis for adaptation can be included in future decision making.

Update: Costs are captured partly through the Bellwin Scheme to assist with the immediate and unforeseen costs on dealing with the aftermath of emergency incidents. However, these are only related to storms and do not include damage from other weather-related incidents. A process to capture all events including heatwaves, etc has been included in the recommendations of this report.

6. Explore research and development opportunities in adaptation and resilience-building technologies.

Update: This work was progressed in part through the adaptation capability benchmarking exercise undertaken by the Sustainability and Climate Change team in 2020. It will continue through further adaptation benchmarking and annual reports to Adaptation Scotland.

7. Explore opportunities for Aberdeenshire to tap into the economic growth potential of climate adaptation and resilient infrastructure.

Update: This has not been progressed but will be suggested to the members of Climate Ready Aberdeenshire and Aberdeenshire Council's Route Map to 2030 and Beyond steering group as a project for consideration.

8. Engage communities through workshops to explore climate risk and adaptation measures.

Update: This work is ongoing through:

- Climate Ready Aberdeenshire including Climate Ready Strathdon.
- Emergency Planning Risk and Resilience team
- Flooding Team
- Digital Stakeholder Team

Since the publication of the 2011 – 2018 LCLIP report, the North East Scotland Climate Action Network (NESCAN) Hub has been formed with a remit to provide support and advice to communities regarding climate change mitigation and adaptation. In 2022 NESCAN Hub held their first Climate Change Adaptation workshop for communities with assistance from the Aberdeenshire Council Sustainability and Climate Change team.

Further information on how Aberdeenshire Council is assessing, managing, acting, and reporting on climate and weather-related risks can be found in Aberdeenshire Council's Public Bodies Climate Change Report.

4.2. 2019 – 2022 LCLIP Recommendations

The following recommendations for consideration are based on the data gathered through the completion of this LCLIP, the progress of 2011 – 2018 LCLIP recommendations and the views of employees gathered through the Employee Climate Change Adaptation and Resilience questionnaire and interviews.

As stated in section 2.4. these are recommendations for how Aberdeenshire Council can prioritise adaptation, resilience issues and risks, and recommendations for how Aberdeenshire Council and its employees can increase their preparedness for extreme weather events. Please note these recommendations are stated here for further discussion and exploration alongside the work being done already on climate change adaptation.

Key Recommendations

1. **Climate change adaptation and resilience training programme.** This should include an ALDO (Aberdeenshire Learning & Development Online) module for all employees and councillors regarding climate and weather trends, impacts, and their responsibilities; specific training for managers to ensure adaptation and resilience is built into teams, systems and decision-making; and service specific training modules designed by services with assistance from the Sustainability and Climate Change team.

2. **Management plan** or model to ensure all extreme weather events are given equal prioritisation. The Flood Risk Management Plan is a good example of this and could be replicated for other weather events, in particular heatwaves and incidents of high temperatures as these will become more frequent and intensify.

3. **Cost code** to capture costs from all extreme weather events, including non-storm events so that a cost benefit analysis for adaptation can be included in future decision making, and investigating the feasibility of establishing a **central fund** for climate change costs and adaptation measures.

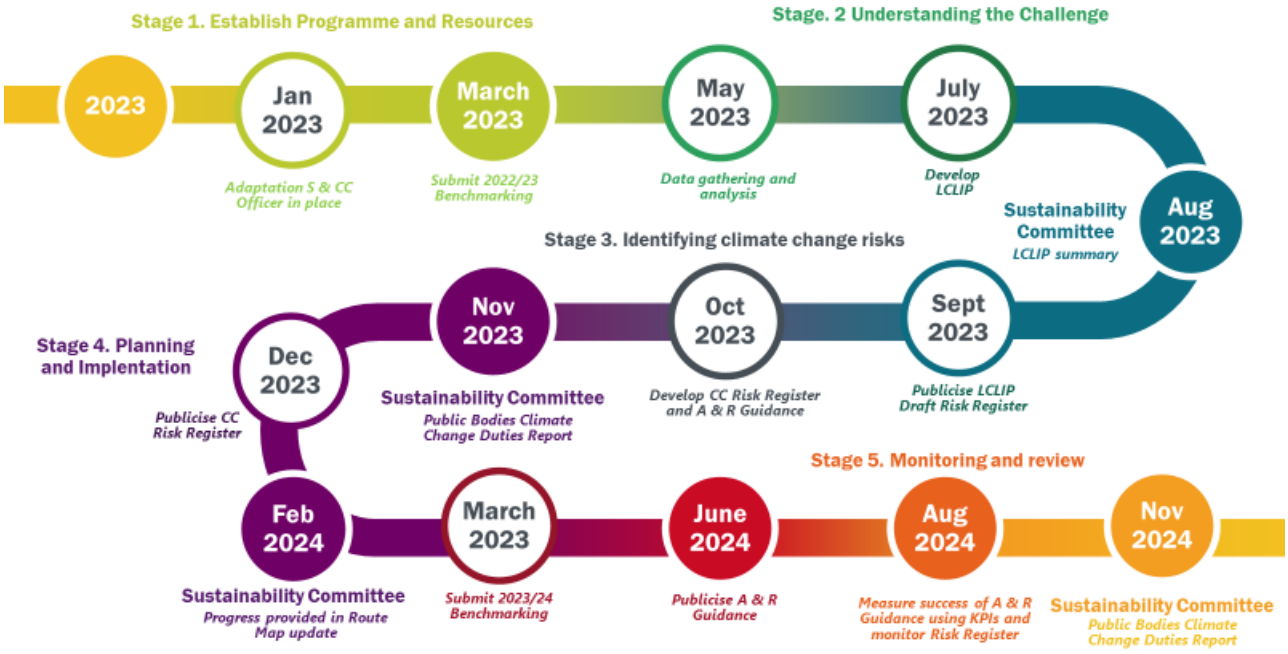
4. **Employee redeployment and volunteer programme** for extreme weather-events with training and capacity for employees to respond to events and assist services and communities where required.

5. **Communication and engagement plan for communities** to raise their awareness of the impacts of extreme-weather events, provide advice on how to build their resilience, signpost to useful resources, and explain what their responsibilities are and the responsibilities and capabilities of Aberdeenshire Council. This would complement the current work of the Community Resilience Service, Climate Ready Aberdeenshire and NESCAN (North East Scotland Climate Action) Hub.

4.3. Next Steps

Following the publication of this report, the next steps for Aberdeenshire Council are:

- Discuss the recommendations within this report with the Risk and Resilience Team, leaders and service managers and at appropriate group meetings and committees, and if they are approved, create an agreed action plan.
- Finalise the Climate Ready Aberdeenshire Strategy considering the results and recommendations within this report.
- Further embed adaptation, resilience, and climate change risk in Aberdeenshire Council by supporting services, in particular with identifying and managing climate change risks to their service with the support of the Sustainability Champions programme.
- Collate and share the results of Employee Climate Change Adaptation and Resilience questionnaire and interviews across the Council employees, leaders and councillors.
- Continue with the Council's long-term climate adaptation and resilience programme. Please see the Adaptation and Resilience Programme Route Map for details.



Aberdeenshire Council Adaptation and Resilience Programme Route Map

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Aberdeenshire Council. (January 2022) *Storm Arwen Report to Aberdeenshire Council*

Aberdeenshire Council. (February 2022) *Storm Arwen Debrief Report*

Aberdeenshire Council. (August 2022) *Winter Storms 2021/22 Community Engagement Report*

Aberdeenshire Council. (August 2022) *Route Map 2020 and Beyond (DRAFT)*

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Aberdeenshire Council. (December 2022) *Local Flood Risk Management Plan 2022 – 2028*

Aberdeenshire Council. (December 2022) *Report to Infrastructure Services Committee – Flood Risk Management (Scotland) Act 2009 – Local Flood Risk Management Plan for North East Scotland Plan District 2022 - 2028*

Aberdeenshire Council. (December 2022) *Report to Infrastructure Services Committee – Impact of winter storm events on trees and woodland*

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Scottish Government. (September 2019) *Climate Ready Scotland: Second Scottish Climate Change Adaptation Programme 2019 – 2024*

Aberdeenshire Council Winter Maintenance Resources https://www.aberdeenshire.gov.uk/roads-and-travel/roads/winter-maintenance/resources-and-limitations/

Adaptation Scotland https://www.adaptationscotland.org.uk/

Carbon Copy Aberdeenshire https://carboncopy.eco/local-climate-action/aberdeenshire#:~:text=CO2%20emissions%20in%20total%201%2C348%2C628%20tonnes%20People%20in,5.2%20tonnes%20Additional%20local%20carbon%20emissions%201%2C409%2C836%20tonnes

Met Office 2021: the UK's weather in review https://www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2021/2021-a-year-in-weather-a-review

Met Office Past Weather Events https://www.metoffice.gov.uk/weather/learn-about/past-uk-weather-events#y2019

Met Office Past Weather Events https://www.metoffice.gov.uk/weather/learn-about/past-uk-weather-events#y2019

Scottish Government Climate Change https://www.gov.scot/policies/climate-change/climate-change-adaptation/

Scottish Government Storm Arwen Review https://www.gov.scot/publications/storm-arwen-review/

SEPA Water Scarcity https://www.sepa.org.uk/environment/water/water-scarcity/

UK Climate Impacts Programme https://www.ukcip.org.uk/

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Published in 2024

Aberdeenshire Council

Integrated Impact Assessment

Local Climate Impact Assessment (LCLIP) Report 2019 - 2023

Assessment ID	IIA-001920
Lead Author	Tara Murray
Additional Authors	Yvonne D'Ambruoso
Service Reviewers	Claudia Cowie
Subject Matter Experts	Claudia Cowie
Approved By	Ewan Wallace
Approved On	Friday February 02, 2024
Publication Date	Monday February 05, 2024

1. Overview

This document has been generated from information entered into the Integrated Impact Assessment system.

We're updating the Council's LCLIP report. Its purpose is to develop a story for Aberdeenshire Council employees, elected members, the public and other council stakeholders, to raise awareness of the impact of weather events and the need to adapt and build resilience to these. This LCLIP report will also consolidate existing evidence to provide an evidence base for future climate change adaptation and resilience actions and provide recommendations for improving the preparedness of Aberdeenshire Council to future weather events.
If the recommendations within the LCLIP are accepted, there may be an impact on how staff operate, how services are delivered and how financial resources are used. The main purpose of this IIA is to ensure these possible impacts are highlighted.

During screening 2 of 10 questions indicated that detailed assessments were required, the screening questions and their answers are listed in the next section. This led to 1 out of 5 detailed impact assessments being completed. The assessments required are:

- Sustainability and Climate Change

In total there are 7 positive impacts as part of this activity. There are 0 negative impacts, all impacts have been mitigated.

A detailed action plan with 1 points has been provided.

This assessment has been approved by ewan.wallace@aberdeenshire.gov.uk.

The remainder of this document sets out the details of all completed impact assessments.

2. Screening

Could your activity / proposal / policy cause an impact in one (or more) of the identified town centres?	No
Would this activity / proposal / policy have consequences for the health and wellbeing of the population in the affected communities?	No
Does the activity / proposal / policy have the potential to affect greenhouse gas emissions (CO2e) in the Council or community and / or the procurement, use or disposal of physical resources?	No
Does the activity / proposal / policy have the potential to affect the resilience to extreme weather events and/or a changing climate of Aberdeenshire Council or community?	Yes
Does the activity / proposal / policy have the potential to affect the environment, wildlife or biodiversity?	Yes
Does the activity / proposal / policy have an impact on people and / or groups with protected characteristics?	No
Is this activity / proposal / policy of strategic importance for the council?	No
Does this activity / proposal / policy impact on inequality of outcome?	No
Does this activity / proposal / policy have an impact on children / young people's rights?	No
Does this activity / proposal / policy have an impact on children / young people's wellbeing?	No

3. Impact Assessments

Children's Rights and Wellbeing	Not Required
Climate Change and Sustainability	No Negative Impacts Identified
Equalities and Fairer Scotland Duty	Not Required
Health Inequalities	Not Required
Town Centre's First	Not Required

4. Sustainability and Climate Change Impact Assessment

4.1. Emissions and Resources

Indicator	Positive	Neutral	Negative	Unknown
Consumption of energy		Yes		
Energy efficiency		Yes		
Energy source		Yes		
Low carbon transition		Yes		
Consumption of physical resources		Yes		
Waste and circularity		Yes		
Circular economy transition		Yes		
Economic and social transition		Yes		

4.2. Biodiversity and Resilience

Indicator	Positive	Neutral	Negative	Unknown
Quality of environment	Yes			
Quantity of environment	Yes			
Wildlife and biodiversity	Yes			
Infrastructure resilience	Yes			
Council resilience	Yes			
Community resilience	Yes			
Adaptation	Yes			

4.3. Positive Impacts

Impact Area	Impact
Adaptation	The purpose of the recommendations is to adapt to a changing climate and increase the Council's resilience to extreme weather events.
Council resilience	The purpose of the recommendations is to adapt to a changing climate and increase the Council's resilience to extreme weather events.
Infrastructure resilience	The purpose of the recommendations is to adapt to a changing climate and increase the Council's resilience to extreme weather events. This includes increasing the resilience of infrastructure to climate change and weather.
Quality of environment	The purpose of the recommendations is to adapt to a changing climate and increase the Council's resilience to extreme weather events. This includes the protection of the natural environment.
Quantity of environment	The purpose of the recommendations is to adapt to a changing climate and increase the Council's resilience to extreme weather events. This includes the protection of the natural environment.

Impact Area	Impact
Community resilience	The purpose of the recommendations is to adapt to a changing climate and increase the Council's resilience to extreme weather events. This includes working with communities to increase their resilience to climate change and weather.
Wildlife and biodiversity	The purpose of the recommendations is to adapt to a changing climate and increase the Council's resilience to extreme weather events. This includes the protection of the natural environment and its wildlife and biodiversity.

4.4. Evidence

Type	Source	It says?	It Means?
Internal Data	Bellwin Reports	Lists the damage caused by storms and high winds with the financial costs of responding to and repairing these.	This is evidence of the damage caused to buildings, infrastructure, etc by extreme weather and the need to adapt and build resilience to this.
Internal Consultation	Rangers Service Reports on damage caused by extreme weather events	Identifies the damage to the natural environment and local wildlife and biodiversity due to extreme weather	Provides evidence that action is required to protect the quality and quantity our natural environment including its wildlife and biodiversity and build its resilience to weather.
Internal Consultation	Questionnaire and interviews with employees	All employees stated their service had been impacted by extreme weather events, including impacts on service delivery and an increase in demand for services	Provides evidence of the impact of weather on the Council and services and the need to adapt and build resilience.
Internal Consultation	Community Risk and Resilience Team interview	Communities have been impacted negatively by a changing climate and weather events and have a desire to work with the council and other services to adapt and build their resilience.	Provides evidence of the impact pf extreme weather on communities and the need for action to help them adapt and increase resilience.
External Data	Adaptation Scotland	The previous and predicted impact of climate change and extreme weather events to communities, businesses and the environment of Scotland.	Provides evidence of the need to adapt and increase resilience

4.5. Overall Outcome

No Negative Impacts Identified.

The purpose of this report is to provide evidence of the negative impact of extreme weather

events and provide recommendations to decrease these impacts. These recommendations have been assessed by the Sustainability and Climate Change Team and presented at Sustainability Committee and no negative impacts were identified by either.

5. Action Plan

Planned Action	Details	
The recommendation's from the LCLIP will be included in the Council's Route Map Action Plan to ensure that, if they are accepted, that they are completed and their outcomes monitored.	**Lead Officer**	Tara Murray
	Repeating Activity	No
	Planned Start	Monday April 01, 2024
	Planned Finish	Monday March 31, 2025
	Expected Outcome	That recommendations are accepted, completed and are achieve their outcomes.
	Resource Implications	None

Aberdeenshire COUNCIL Environment & Infrastructure Services

REPORT TO SUSTAINABILITY COMMITTEE – 21 FEBRUARY 2024

ENVIRONMENTAL STANDARDS SCOTLAND REPORT

1 Executive Summary/Recommendations

1.1 This report contains a summary of the Environmental Standards Scotland (ESS) Improvement Report titled: An investigation into the effectiveness of the systems in place to support local authorities in their duty to contribute to the delivery of climate change targets (Case Reference IESS.21.012). The ESS report contains 5 recommendations which were made to Scottish Ministers. The Scottish Government has agreed to put in place measures which implement recommendations 1, 2, 3 and 5. In respect to recommendation 4 (make the reporting of Scope 3 emissions mandatory for local authorities), where informal resolution has not been achieved, Scottish Ministers must now respond in the form of an improvement plan to the Scottish Parliament.

1.2 The Committee is recommended to:

1.2.1 Consider and comment on the Environmental Standards Scotland report (a summary is provided in Appendix 1).

2 Decision-Making Route

2.1 Environmental Standards Scotland (ESS) was established under the UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021 ("the Continuity Act") to fill the environmental governance gap caused by the UK's departure from the European Union. It is an independent body, accountable to the Scottish Parliament.

2.2 Their role is to ensure effective scrutiny of public authorities' compliance with and effectiveness of environmental law, and the way it is being implemented and applied in Scotland. They may investigate matters in response to concerns brought to its attention (known as representations), or on its own initiative.

2.3 On 15 June 2022 the Environmental Standards Scotland (ESS) launched an investigation into the effectiveness of the systems in place concerning local authorities' contribution to the delivery of climate change targets. The investigation was the result of a submission of a representation to ESS highlighting concerns regarding current arrangements.

2.4 In March 2023 ESS completed their investigation and, on the 6 December 2023 laid their improvement report in Parliament. The improvement report was in respect of the Scottish Government's support of local authorities in the delivery of their climate change duties and provided 5 recommendations to the Scottish Government. A copy of the report can be found here: https://environmentalstandards.scot/wp-content/uploads/2023/09/ESS-Investigation-Climate-Change-Improvement-Report-IESS.21.012.pdf.

2.5 The Sustainability Committee has been kept up to date on the progress of this investigation at previous meetings through the Outstanding Actions updates. **Appendix 1** provides a short summary of the report.

3 Discussion

3.1 The report shares key findings and 5 recommendations for the Scottish Government following ESS's investigation into the effectiveness of the systems in place to support local authorities in their duty to contribute to the delivery of climate change targets

3.2 The 5 recommendations made by ESS to the Scottish Government were:

1. Make climate, adaptation and sustainability plans at local authority level compulsory.

2. Ensure that the planned statutory guidance covers the full breadth of local authorities' climate change responsibilities and includes the changes which will be required as a result of the recommendations contained within this report.

3. Introduce a separate reporting framework for local authorities.

4. Make the reporting of Scope 3 emissions mandatory for local authorities.

5. Identify or introduce an appropriate monitoring body and give the monitoring body the necessary powers, including the powers to: scrutinise compliance; follow-up on climate plans; and recommend improvements in climate activity.

3.3 The Scottish Government accepted 4 of these recommendations and ESS considers that sufficient pathways have been provided by Scottish Government for how these will be implemented. ESS will be monitoring progress of these to make sure they are done. In respect of recommendation 4 that the Scottish Government did not accept ESS have reported this to Parliament and the Scottish Government must now prepare an improvement plan for Parliament's consideration and approval.

3.4 Oficers are aware that COSLA discussed their position on the ESS improvement report at the Environment and Economy Board on Friday 15 December 2023 where the Board were asked to agree a position on the recommendations from the inquiry.

3.5 The Sustainability and Climate Change team will continue to monitor any further developments from this report through the Sustainable Scotland Network. Inclusion of the recommendations into the Council's Route Map Action Plan has been considered and where this has taken place it is highlighted within the plan.

4 Council Priorities, Implications and Risk

4.1 This report helps deliver the Strategic Priority “Climate Change” within the Pillar “Our Environment”.

Pillar	Priority
Our People	• Learning for Life • Health & Wellbeing
Our Environment	• Climate Change • Resilient Communities
Our Economy	• Economic Growth • Infrastructure and public assets

4.2 The table below shows whether risks and implications apply if the recommendations are agreed.

Subject	Yes	No	N/A
Financial			X
Staffing			X
Equalities and Fairer Duty Scotland			X
Children and Young People’s Rights and Wellbeing			X
Climate Change and Sustainability			X
Health and Wellbeing			X
Town Centre First			X

4.3 There are no direct staffing or financial implications arising from this external performance monitoring report.

4.4 The screening section as part of Stage One of the Integrated Impact Assessment (IIA) process has not identified the requirement for any further detailed assessments to be undertaken. An IIA is not required as this report is providing a summary of an external report being brought to the Committee for consideration and comment only.

4.5 The following Risks in the Corporate Risk Register have been identified as relevant to this matter on a Corporate Level. However, it is acknowledged that working towards a 75% reduction in Council owned emissions has the potential to impact upon any number of areas across the Council risk portfolio.

- Risk ID ACORP010 as it relates to environmental challenges; and
- Risk ID ACORP006 as it relates to reputation management.

The following Risk in the Directorate Risk Registers has been identified as relevant to this matter on a Strategic Level:

- Risk ID ISSR010 as it relates to Climate Change.

4.5.1 Mitigation of these risks could be addressed by sufficient communication and engagement on the progress Aberdeenshire Council is making with regards to climate change mitigation and adaptation both internally and externally. This includes being transparent on the challenges of addressing climate change as well as the opportunities for the organisation and region.

5 Scheme of Governance

5.1 The Head of Finance and Monitoring Officer within Business Services have been consulted in the preparation of this report and their comments are incorporated within the report and they are satisfied that the report complies with the Scheme of Governance and relevant legislation.

5.2 The Committee is able to consider and take a decision on this item in terms of Section R paragraph 1.1 (a) of the List of Committee Powers in Part 2A of the Scheme of Governance as it relates to reviewing and monitoring the Council's work in respect of sustainable development and climate change.

Alan Wood
Director of Environment & Infrastructure Services

Report prepared by Claudia Cowie, Team Leader Sustainability and Climate Change
9 February 2024

List of Appendices

Appendix 1: Environmental Standards Scotland Report Summary

Appendix 1 Environmental Standards Scotland Report Summary

1. A Summary of the Environmental Standards Scotland Report: An investigation into the effectiveness of the systems in place to support local authorities in their duty to contribute to the delivery of climate change targets.

1.1 Environmental Standards Scotland (ESS) was established under the UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021 ("the Continuity Act") to fill the environmental governance gap caused by the UK's departure from the European Union. It is an independent body, accountable to the Scottish Parliament.

1.2 Their role is to ensure effective scrutiny of public authorities' compliance with and effectiveness of environmental law, and the way it is being implemented and applied in Scotland. They may investigate matters in response to concerns brought to its attention (known as representations), or on its own initiative.

1.3 ESS received a representation concerning a number of the climate change duties, including the support and scrutiny provided by Scottish Ministers of how local authorities contribute to meeting climate change targets. The representation presented concern that without adequate support and scrutiny, it would be difficult for Scotland to achieve its net zero target.

1.4 The representation submitted that ESS should focus on the following provisions contained within part 4 of the Climate Change (Scotland) Act 2009:

- public bodies' duty to act in 'the way best calculated' to contribute to climate change targets, and to act in a way that they consider most sustainable, as set out in section 44 of the 2009 Act
- Scottish Ministers' duty to provide guidance and co-operate with relevant public bodies to help those bodies comply with their climate change duties, as set out in section 45 of the 2009 Act
- the adequacy of the monitoring and evaluation of climate change responsibilities, as set out in sections 47-52 of the 2009 Act

1.5 Considering that the consequences of not achieving climate targets are serious and that it is crucial that local authorities demonstrate leadership, ESS took the decision to launch an investigation.

1.6 The purpose of the investigation was to consider:

- the duties placed on local authorities and Scottish Ministers in respect of the delivery of climate legislation;
- the support that is available to this end;
- reporting and monitoring of performance.

1.7 Having considered the implementation and application of the duties contained within the Act, ESS concluded that there were significant structural weaknesses in delivering climate change targets, the support that is available to local authorities, and the reporting and monitoring of performance.

1.8 The following key points have been identified from the investigation:

- there is inconsistency across the reports submitted by local authorities, and no definitive overview of how their activity has been calculated to achieve best effect.
- the data maturity of emissions calculations is weak, and reported emissions data is unreliable.
- there is no legal obligation on local authorities to report on Scope 3 emissions, which is the largest proportion of emissions.
- clarity on the proportionate extent of Scope 3 emissions is missing.
- there is no legal obligation for local authorities to produce climate plans.
- although there is evidence to show that Scottish Ministers are co-operating with public bodies, Scottish Government guidance to public bodies is out of date, or non-statutory, and there is no single, comprehensive, up-to-date, accessible source for climate practitioners.
- strategies for co-ordinating government policy with local authority plans is weak, and although support for co-ordination between local authorities is available and well-regarded, the reporting process does not fulfil its aim to encourage knowledge sharing between local authorities.
- there is no evidence that public bodies' climate change delivery is monitored against reported progress, evaluated or scrutinised, despite there being a legal mechanism to do so.

1.9 In view of the above, ESS made the following 5 recommendations to Scottish Ministers:

1. Make climate, adaptation and sustainability plans at local authority level compulsory.
2. Ensure that the planned statutory guidance covers the full breadth of local authorities' climate change responsibilities and includes the changes which will be required as a result of the recommendations contained within this report.
3. Introduce a separate reporting framework for local authorities.

4. Make the reporting of Scope 3 emissions mandatory for local authorities.

5. Identify or introduce an appropriate monitoring body and give the monitoring body the necessary powers, including the powers to: scrutinise compliance; follow-up on climate plans; and recommend improvements in climate activity.

1.10 ESS invited the Scottish Government to work with them to resolve the issues identified. The Scottish Government agreed to put in place measures which implement recommendations 1, 2, 3 and 5. For recommendation 4, where informal resolution was not achieved, an improvement report was laid in the Scottish Parliament under ESS statutory powers and Scottish Ministers are now required to respond to this in the form of an improvement plan to Parliament.

1.11 Against the backdrop of declared crises, where climate targets are not being met and the window for taking effective action narrows, the ESS's view is that it is important for this gap to be addressed. Accordingly, they recommended that the Scottish Government introduces a standard Climate Plan template with mandatory reporting for local authorities.

1.12 It is their view that a standard template for climate plans will support consistency and quality in the production of local authority climate plans. The template is to incorporate what is required for local authorities to demonstrate how they are acting in the way best calculated in contributing to climate targets, adaptation programme and sustainability duties. The template should also be capable of yielding reliable data (internally and externally) for continuous assessment and improvement on the question of whether local authorities are 'acting in the way best calculated'. Climate plans should also be clear as to whether they are area-based or specific to the local authority.

1.13 During the informal resolution process, the Scottish Government accepted the importance of local authorities having appropriate plans to comply with their duties and have proposed that that the Climate Intelligence Service (CIS) will develop a common climate change plan template. The Scottish Government then intends to consult, under section 44(7) of the 2009 Act, on an order under section 44(3) of the 2009 Act, requiring local authorities to maintain appropriate plans for complying with their duties under section 44.

1.14 The Scottish Government also confirmed that new statutory guidance, expected to be introduced in March 2025, will cover climate plans for local authorities and will also contain guidance on climate plans for other public bodies, which public bodies must have regard to.

1.15 In respect of the reporting of Scope 3 emissions, although the Scottish Government acknowledged that more should be done in this area, it explained that it could not support the mandatory nature of the recommendation and instead proposed the following pathway for improvement:

- Exploration of a strong voluntary response from public bodies on increasing measurement, reporting and action on Scope 3 emissions pending the new statutory guidance (by end of 2023).

- Development of clear and robust expectations in the new statutory guidance on Scope 3 emissions (anticipated to be completed by mid-2025).

- Development of, and investment in, improved methodologies around Scope 3 emissions across this period

1.16 In light of this, and the other findings within this report, ESS recommended that the Scottish Government identifies or introduces a body with the remit to monitor the system of climate duties compliance holistically. During the informal resolution process, the Scottish Government explained that central assessment in detail of 32 individual local authorities would be a 'huge challenge' and that it would strongly prefer that monitoring arrangements should be closely related or integrated into existing scrutiny systems. The Scottish Government considered that ESS may be an appropriate monitoring body and suggested that, with appropriate funding, ESS could be nominated under section 47 of the 2009 Act ('a section 47 monitoring body').

1.17 The link to full report can be found here: https://environmentalstandards.scot/wp-content/uploads/2023/09/ESS-Investigation-Climate-Change-Improvement-Report-IESS.21.012.pdf

Aberdeenshire COUNCIL Environment and Infrastructure Services

REPORT TO SUSTAINABLITY COMMITTEE – 21 FEBRUARY 2024

ABERDEENSHIRE COUNCIL BIODIVERSITY DUTY REPORTING 2021 TO 2023

1 Executive Summary/Recommendations

1.1 This report presents Aberdeenshire Council's proposed reporting for the period 2021 to 2023 on the public sector biodiversity duty. The duty and reporting requirements were created via the Nature Conservation (Scotland) Act 2004. The Committee are recommended to approve the proposed response.

1.2 The Committee is recommended to:

1.2.1 Approve the proposed Aberdeenshire Council 2021 to 2023 public sector biodiversity duty reporting response in Appendix 1;

1.2.2 Note the summary of 2023 Aberdeenshire Council biodiversity action in Appendix 2; and

1.2.3 Note the 2023 report of the Aberdeenshire Council Pollinator Action Plan in Appendix 3.

2 Decision Making Route

2.1 Sustainability Committee approved the previous biodiversity duty report, covering the period 2018 to 2020, on 17 February 2021 (Item No 5). In compiling the report in **Appendix 1**, the Natural Environment Team have consulted with teams and Services across the Council.

2.2 If approved by the Committee, the biodiversity duty report in **Appendix 1** will be sent to Scottish Government.

3 Discussion

3.1 Every three years, Aberdeenshire Council report to Scottish Government on its works in relation to the 'public sector biodiversity duty'. The biodiversity duty was introduced in the Nature Conservation (Scotland) Act 2004 and states 'It is the duty of every public body and office-holder, in exercising any functions, to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions.'

3.2 **Appendix 1** presents the proposed Aberdeenshire Council response for the reporting period 2021 to 2023. The report uses a template provided by Scottish Government. The Committee are asked to approve the response.

3.3 The proposed response notes the following highlights for the period:

- The success of the Greenspace Project and it now being adopted as a mainstream approach to the management of our open spaces;

- The adoption of the 2022-2027 Aberdeenshire Council Pollinator Action Plan;

- The Countryside Ranger Service and NESBReC continuing to be hugely important for environmental education and recording in the region;

- The 2023 Aberdeenshire Local Development Plan which includes strong policies, supplementary guidance and planning advice for the protection and enhancement of the natural environment and biodiversity;

- Turning the significant negative of extensive storm damage to our woodland to a positive with re-planting and active management to ensure the woodlands maximise biodiversity benefit and are also resilient to the effects of extreme weather and climate change.

3.4 The proposed response also notes Local Authority budgets as a challenge in delivery action for biodiversity going forward and encourages Scottish Government to make the welcome and significant support provided by the Nature Restoration Fund, a long term commitment.

3.5 The Committee will note that each year a summary of Aberdeenshire Council biodiversity actions for the calendar year is provided to Sustainability Committee via a bulletin. For completeness, the summary for 2023 is provided in **Appendix 2**. This and summaries for the previous two years have been used to compile the proposed response in **Appendix 1**.

3.6 In addition, specific monitoring on the Aberdeenshire Council Pollinator Action Plan 2022 to 2027 is provided to Sustainability Committee each year via a bulletin. Reporting for 2023 is presented in **Appendix 2**. The Committee will note the positive report with all but one action identified as ‘green’. Action is required to address the ‘amber’ action on exploration of the production of perennial and wildflower plants in Council facilities.

4 Council Priorities, Implications and Risk

4.1 This report summarises work the Council undertakes in support of the ‘Our Environment’ pillar and the Climate Change priority, by showing how the Council contributes to the protection and enhancement of biodiversity and uses natural solutions to mitigate and adapt to climate change.

4.2 This report summarises work the Council undertakes in support of the ‘Our People’ pillar and the Learning for Life priority, by highlighting the extensive environmental education and engagement work the Council undertakes.

4.3 The table overleaf shows whether risks and implications apply if the recommendations are agreed. As the report presents a summary of already agreed and undertaken work, there are no implications for the issues identified.

Subject	Yes	No	N/A
Financial		X	
Staffing		X	
Equalities and Fairer Duty Scotland		X	
Children and Young People's Rights and Wellbeing		X	
Climate Change and Sustainability		X	
Health and Wellbeing		X	
Town Centre First		X	

4.4 The screening section as part of Stage One of the Integrated Impact Assessment process has not identified the requirement for any further detailed assessments to be undertaken. As this is a summary of already agreed and carried out work, approving the report to Scottish Government will not impact on any of the topics, characteristics or issues identified.

4.5 The following Risks have been identified as relevant to this matter on a Corporate Level:

- As Biodiversity Duty reporting is a legal requirement under the Nature Conservation (Scotland) Act, corporate risk ACORP006 is relevant to this report as there is a reputational risk in not completing the reporting process. As per this report, we are progressing reporting, so this risk does not manifest itself. If the currently proposed response in not acceptable, we will work with Committee to create an acceptable response and then send it to Scottish Government.

The are no identified strategic level risks.

5 Scheme of Governance

5.1 The Head of Finance and Monitoring Officer within Business Services have been consulted in the preparation of this report and their comments are incorporated with the report and are satisfied that the report complies with the Scheme of Governance and relevant legislation.

5.2 The Committee is able to consider this item in terms of Section R1.1b of the List of Committee Powers in Part 2A of the Scheme of Governance as part of the Committee's role to respond, on the Council's behalf, to the Scottish Government and other relevant bodies regarding sustainable development and climate change issues, including reporting on Scotland's Climate Change Duties Report and the Covenant of Mayors for Climate & Energy.

Alan Wood
Director of Environment & Infrastructure Services

Report prepared by James Davidson, Environment Planner
9 February 2024

List of Appendices

Appendix 1 – proposed Aberdeenshire Council Biodiversity Duty Report 2021 to 2023
Appendix 2 – Aberdeenshire Council biodiversity work collation 2023
Appendix 3 – Aberdeenshire Council Pollinator Action Plan 2022 to 2027 monitoring

APPENDIX 1: THE BIODIVERSITY DUTY REPORTING: LEVEL ONE ORGANISATIONS

Public bodies that own or manage land, regulate land use, or have responsibilities linked to biodiversity

Report Outline

Bodies are encouraged to use the following structure for their report. This is set out in the template below, which you can either type directly into, or copy into a separate document.

- Section 1: Introductory information about your public body
- Section 2: Actions to protect and enhance biodiversity
- Section 3: Mainstreaming biodiversity
- Section 4: Nature-based solutions, climate change and biodiversity
- Section 5: Public engagement and workforce development
- Section 6: Research and monitoring
- Section 7: Biodiversity highlights and challenges

Completion Notes

These completion notes offer guidance to support your public body to complete your Biodiversity Duty Report. Taken together with the associated hyperlinks, they provide suggestions on the breadth of actions that could be included in your report. They may also assist with forward planning on how biodiversity can be taken into account in future.

While they incorporate the key elements on which you may wish to report, they are not an exhaustive list and it is likely that there will be a range of additional work that your organisation carried out in support of biodiversity on which you may also wish to report. To find out more on the Biodiversity Duty see the NatureScot website.

SECTION 1: INTRODUCTORY INFORMATION ABOUT YOUR PUBLIC BODY

Please describe your organisation's role and purpose, including any particular environmental responsibilities

Guidance on completing this section	Summarise your organisation's role and purpose, including if own or manage land, regulate land use, and any particular responsibilities linked to biodiversity. Summarise any relevance and impacts of biodiversity to your organisation, including your role in: • Land and estate management; • Regulation of land use and development; • Providing public information, supporting community learning and education around nature and the environment; • Any significant environmental impacts from your operations.
Text Field	Aberdeenshire Council manages a large estate which includes schools, care homes, housing, offices and their associated greenspaces. We also manage a range of public greenspaces and paths. We manage almost all of the public road network within the area also. In all aspects of our estate management there are impacts, benefits and opportunities in relation to biodiversity. Key ones are further explored in this report. As a Local Authority, Aberdeenshire Council has a broad regulatory remit. Of particular relevance to biodiversity is our role as the Planning Authority for Aberdeenshire. Included within this role is the preparation of a Local Development Plan which outlines plans and polices which aim to protect and enhance biodiversity. As a Local Authority we also administer the Tree Preservation Order process and have a role in the management of public access. We have a pivotal role in public information, community learning and education around nature and the environment for Aberdeenshire. We are the Education Authority for Aberdeenshire – managing schools. Nature and environment are key components of school activities. Our Countryside Ranger Service delivers information and education to children and adults. We also host NESBReC (North East Scotland Biological Record Centre) – the local biological records centre – which provides environmental information to a range of audiences. Our principal environmental impacts result from us fulfilling our statutory duties and operating our estate, in particular the carbon emissions that result from our operations. We have ambitious targets to reduce these

	emissions and were the first Local Authority in Scotland to publish a yearly carbon budget. Our management of buildings and greenspace, our role in flood protection and in the management of the public road network can all potentially impact and benefit biodiversity.

SECTION 2: ACTIONS TO PROTECT AND ENHANCE BIODIVERSITY

Please describe and explain any actions that your organisation has undertaken alone or as part of a partnership to benefit biodiversity directly, to tackle the main drivers of biodiversity loss, or to achieve wider outcomes for nature and people

Guidance on completing this section	As a Level One reporting organisation, you may wish to report on practical actions across your organisation in addition to actions on land that you manage or regulate. Please explain how your actions have benefited (or will benefit) biodiversity, noting successes and challenges, and any plans for future or follow-up work, such as on preparing for local nature networks or securing biodiversity enhancements in new developments. Actions might include: • Contributing to actions in the Scottish Biodiversity Strategy and Delivery Plan, and on local biodiversity priorities • Leading or contributing to a Local Biodiversity Action Plan Partnership • Integrating Nature-based Solutions through Community Planning, Local Development Plans and Local Place Plans • Providing opportunities for young people and learners to connect with and understand nature through Learning for Sustainability, Outdoor Learning and through STEM subjects • Supporting a Local Records Centre • Mapping natural capital and ecosystems • Digitising habitat maps and biodiversity surveys and audits • Integrating multi-functional Green Infrastructure into spatial plans • Working at a regional scale to restore nature Please include quantitative measures where possible (e.g. area of habitat restored, meadow created, of Protected Areas, Local Nature Reserves and Local Nature Conservation Sites, and the number of new developments where biodiversity is being enhanced).

	At a local level it is possible to enhance biodiversity through actions in and around buildings and new developments, such as by: • supporting the NPF4 approach to delivering biodiversity enhancement and contributing to nature networks • providing bird boxes / feeders, or taking other measures set out in the guidance on Buildings and biodiversity, while Developing with Nature listed below • making space for nature by creating wildflower meadows, raingardens, ponds and woodlands • installing green roofs and walls; • organising staff environmental volunteering days.
Text Field	**Biological Records** Aberdeenshire Council hosts NESBReC – the biological records centre for the region. NESBReC covers Aberdeenshire, Aberdeen City, Moray and the Cairngorms National Park and currently holds 1.8 million biological records. As well as hosting records, they carry out survey work and provide training on biological recording. • Each year NESBReC hold a Recorders' Forum. The 2021 event, held at University of Aberdeen, had 92 attendees, the 2019 event had 85 and the 2023 event had 90. • Promoting wildlife recording through on average 10 wildlife recording training events per year, focusing on identification skills and how to submit records. These are mixture of online and face to face events with good attendance. • Habitat surveys of Aberdeenshire – NESBReC administers a habitat survey of Aberdeenshire and over the last 20 years has amassed a huge and valuable dataset. To date, over a third of Aberdeenshire has been surveyed. • Over 3,000 data searches are carried each year for planning applications, environmental consultants, organisations, students, researchers, local authorities and the general public. • Regular postings on the NESBReC Facebook page highlight issues and events concerning local biodiversity.

Nature Restoration Fund

Yearly since 2021, all Local Authorities and National Parks have been awarded a Capital grant from the Scottish Government Nature Restoration Fund. The fund aims to 'provide additional funding to support a wide range of projects that will deliver nature restoration, safeguard wildlife and tackle the causes of biodiversity loss especially climate change'. Aberdeenshire was allocated £268,000 in 2021, £212,000 in 2022 and £445,000 in 2023. The enlarged 2023 allocation included an aspiration to support the creation of local and regional nature networks. This very welcome provision has been spent on a wide range of projects in Aberdeenshire. New equipment to manage our greenspace for biodiversity has been a particular focus, as has plants to diversify that greenspace (which has resulted in a huge amount of positive community engagement). Projects have enhanced a range of woodland, wetland and grassland sites. Engagement of schools in practical habitat enhancement works has been a regular feature each year. Other works have targeted tacking invasive non-native plant species, including using sheep grazing, and installation of green roofs on new bus shelters.

Aberdeenshire Invasive Non-Native Species Project

A LEADER funded project working with agencies, river trusts, local authorities and community groups to raise awareness of and facilitate action to record and control non-native invasive plant species in Aberdeenshire ended in 2020. However, the legacy of the project is on-going with yearly works to tackle invasive species undertaken by the Council and by volunteers supported by the Council. A bi-annual forum will continue to be held, providing a focus for discussing activity. Promotion of invasive non-native species issues continues through the dedicated website for the area and through leaflets and social media. A particularly notable and popular project in recent times has been the use of sheep grazing to control Giant hogweed in Uryside park, Inverurie.

Aberdeenshire Greenspace Project

The initially fixed term Greenspace project launched during the previous reporting period is now a permanent fixture within Landscape Services. An extensive amount of work has taken place to modify management of greenspace to enhance biodiversity. Strong support from the Nature Restoration Fund has ensured equipment and plants are available to effect this change. The Council's Pollinator Strategy targets 10% of greenspace to be managed for biodiversity. Community engagement and input has been significant with over 100 schools and

community groups physically enhancing sites through planting each year. The dedicated social media for the work is popular, with lots of engagement.

Protected Sites and Species

- Aberdeenshire currently has 115 Local Nature Conservation Sites as designed through the 2023 Local Development Plan. Preparation for the 2028 Local Development Plan is underway with existing sites being reviewed and proposed extension or new sites being assessed and a review was carried out as part of the proposed 2021 Aberdeenshire Local Development Plan.
- Aberdeenshire Council Housing Service have been operating under a NatureScot Licence for all repair and maintenance work to Council housing properties that has the potential to impact on bats. The Licence excludes sheltered housing, which generally has a higher roost potential and is therefore covered separately. The Licence has resulted from a collaborative project between the Natural Environment Team and Housing Service. Communication with all Housing staff regarding what to do if bats are found on site has been required. Enhancement measures have also been put in place with bat boxes installed on some properties. The Licence has been renewed for 2020 and 2021.
- Aberdeenshire Council has continued its good working relationship with Huntly and District Swift Group, jointly identifying opportunities for the protection and provision of Swift nest sites in Council buildings and through the planning process. Projects include Swift provision in Council housing Inverurie, built in Swift provision in Housing Association new builds in Huntly and installation of nesting boxes on public buildings in Stonehaven.

Trees and Woodland

- Throughout the reporting period, there have been very significant storms in Aberdeenshire which have resulted in extensive tree loss across the area. This includes in woodland managed by the Council. The tree loss and necessary clear up operation has been seen as an opportunity. Replanting schemes for areas lost comprise predominately native trees to provide biodiversity benefits and a more diverse species mix to build resilience in responding to the impacts of climate change. The Council has taken the opportunity to review and update existing woodland management plans in line with the principles of sustainable woodland management. The comprehensive plan for all woodland owned and managed by Aberdeenshire Council seeks to ensure woodlands are managed in a manner which protects and

enhances the environment, biodiversity and local culture, benefits and supports the local economy, provides value and enjoyment to residents and visitors and are resilient to the effects of climate change.

- As part of the wider work undertaken within the historic landscape of Haddo Country Park, new trees were planted within the Deer Park to ensure the continuation of tree cover and enable restoration of the depleted areas of ancient wood pasture. 81 individual standard trees of species which included oak, cherry, Norway maple, Scots pine and elm, were planted within the open parkland. Protection from livestock was provided with the use of traditional wood pasture crate fencing. It is hoped that this area of wood pasture and the associated biodiversity habitat can be extended and enhanced in future years.
- The Council continue to protect notable and valuable trees through Tree Preservation Orders.
- An Ash Dieback Action Plan is being developed in response to the identification of corporate and strategic risks arising from the impact of the disease. Widespread loss of the species ash will result in a detrimental impact on the biodiversity of Aberdeenshire woodlands and therefore action will be taken to ensure unaffected trees identified and monitored. The Recovery Plan will consider appropriate species for replacement planting, seeking to create woodlands and groups of trees which will be resilient to the impact of climate change and provide positive contributions for biodiversity.

Partnership Projects

- NESBiP (North East Scotland Biodiversity Partnership) continues delivery of local biodiversity projects – with Aberdeenshire Council sitting on the Steering Group.
- The Dee Catchment Partnership, which Aberdeenshire Council is a member of, has continued to deliver a range of projects within the Dee Catchment and is currently implementing a river restoration project. Events and educational visits have raised awareness of issues such as invasive species, sustainable urban drainage schemes and natural flood management.
- Aberdeenshire Council continues to support the work of the Ugie Peatland partnership and in particular advising on issues relating to planning and the protection of important peatland sites through identification as Local Nature Conservation Sites.

SECTION 3: MAINSTREAMING BIODIVERSITY

Please outline any steps your organisation has taken to incorporate measures to protect biodiversity into its wider policies, plans or strategies. This should include decision-making structures and staff and organisational roles and responsibilities.

Guidance on completing this section	Describe and explain your organisation is integrating or considering nature and biodiversity though its policies, plans, guidance and strategies, and how these are reflected in the structure of your organisation. These may include policies on estate management, Open Space Strategies, Supplementary Planning Guidance, understanding the impact of your supply chains on biodiversity, adopting sustainable procurement and purchasing policies, using Environmental Management Systems, Sustainability and Climate Change commitments or infrastructure plans such as catchment management plans or surface water management. Detail any areas in which your organisation has most successfully embedded ways of protecting biodiversity in your work or has demonstrated leadership in a local or national context, including through working with others, raising awareness, or delivering landmark projects or activities.
Text Field	**Council Plan** Our Council Plan is centred around three pillars: People, Environment and Economy: Aberdeenshire Council Plan 2022 – 2027 - Aberdeenshire Council. It sets out our strategic approach to supporting Aberdeenshire communities and businesses to thrive, working with our partners to face the challenges of cost of living and the increasing inequalities, continue our recovery from the pandemic and respond positively to climate change, all whilst ensuring that Aberdeenshire is and remains a welcoming place to live, work and visit. Aberdeenshire Council became the first Local Authority in Scotland to sign the Edinburgh Biodiversity Declaration: https://online.aberdeenshire.gov.uk/apps/news/release.aspx?newsid=7023 **Strategy and Policy** The **2023 Aberdeenshire Local Development Plan** (LDP) includes relevant policies, supplementary guidance and planning advice for the protection and enhancement of the natural environment and biodiversity: Aberdeenshire Local Development Plan 2023 - Aberdeenshire Council.

	Supplementary guidance to the 2023 Local Development Plan includes identification of a network of Local Nature Conservation Sites in Aberdeenshire as well as Special Landscape Areas. Of particular note, in advance of the requirements subsequently set out in National Planning Framework 4, is the LDP's requirement for all development to have positive effects for biodiversity with Planning Advice setting out the Planning Authority's expectations: http://publications.aberdeenshire.gov.uk/dataset/0ceb7c55-b43d-45c4-a311-798f4bc9fa75/resource/fd777edd-c277-4621-bd31-f3672edef765/download/pa2023-10---planning-advice---securing-positive-effects-for-biodiversity.pdf The Aberdeenshire Forestry and Woodland Strategy 2023 is also Planning Advice. The Strategy outlines a range of action to protect and enhance woodlands as well as make them more resistant to climate change and disease. It includes a map of preferred areas for new woodland creation, within which the protection and enhancement of biodiversity is key. Further Planning Advice provides best practice guidance on bats and development, biodiversity enhancement, ecological surveys, buffer strips, protected trees and outdoor access. https://www.aberdeenshire.gov.uk/planning/plans-and-policies/planning-advice/ Within the reporting period, we reviewed and revised the Council Pollinator Action Plan. Producing a more focused document with clear, measurable targets. The **Aberdeenshire Council Pollinator Action Plan 2022 to 2027** identifies the work we will do to address the significant threats facing pollinating insects and includes the headline target that 10% of public greenspace will be managed for pollinators and biodiversity. https://www.aberdeenshire.gov.uk/media/27229/pollinatoractionplan.pdf The Nature Environment Team provide input to, on average, 600 planning applications a year commenting on issues ranging from protected species and sites, woodland and trees, greenspace enhancement and protection of the water environment. They also review, on average, 60 forestry grant scheme and felling licence applications a year.

Procurement

Aberdeenshire Council is committed to securing meaningful environmental, social and economic value in procurements and working with all sectors of the business community in order to achieve increased prosperity. As a responsible and ethical buyer, the Council aim to embed the key principles of sustainability into procurement activity for the benefit of society, the economy and the environment. We consider environment sustainability, community benefits and economic benefits/stability as key parts of our procurement process.

Staff Engagement

The Aberdeenshire Council Sustainability Champions programme was launched in the summer of 2022. The programme aims to lead and support teams and Services in understanding and aligning with the Council's various sustainability aspirations and commitments, including biodiversity. The Champions meet informally every month to discuss ideas, opportunities and challenges. They have also engaged in a number of litter picks and some native/wildflower planting on Council grounds.

Construction of new Aberdeenshire Council Buildings

Delivering sustainable construction solutions is a key driver in the design and specification of projects delivered or managed by Aberdeenshire Council. In achieving this, improving the project site's biodiversity is one of the opportunities explored for every development, where practical to do so.

One example that illustrates the design team's approach to biodiversity is the 1140 Early Years programme, which includes individual projects at 80 locations. The 1140 programme is Aberdeenshire Council's response and commitment to the ambitious Early Years and Childcare expansion standards set by the Scottish Government. The key principle behind the outdoor learning enhancements in the 1140 programme is to create play and learning spaces inspired by nature. Where a lot of the sites were originally mostly tarmac or rubber crumb, the new spaces are a mix of sand, bark, varied planting beds or natural aggregate surfaces like self-binding gravel. This is not only beneficial for the children, offering textures, sensory benefits and seasonal changes, but replaces hard-man made elements with natural, permeable, living and circular elements. Sustainability has been centric to the detailed design of the schemes, with a particular focus on:

	• Introducing a range of plants, many of which are native species or are aimed at pollinators such as Betula or Sarcococca • Introducing areas of native wildflower meadow • Native hedgerows where appropriate to support bird life • Raingarden features to promote SuDS and create a variety of habitats • Specifying informal contractor built play features made primary of timber, boulders or willow – all these items were locally sourced to ensure a low carbon footprint and supporting a circular economy • All specified timber to FSC standard

SECTION 4: NATURE-BASED SOLUTIONS, CLIMATE CHANGE AND BIODIVERSITY

How has your organisation integrated biodiversity into actions on the climate emergency such as through Nature based Solutions?

Guidance on completing this section	Climate change is a direct driver of biodiversity loss. Many species are negatively impacted by higher air temperatures, changing weather patterns and extreme events, and by higher sea levels. Many animals and plants can be badly affected by such changes and may be at risk of local extinction in regions experiencing climate impacts. As well as being a direct driver of biodiversity loss, climate change can exacerbate other ways in which Scotland's nature is harmed loss. A warmer climate can enable non-native invasive species to spread more quickly. For example, rhododendrons which were not naturally found in Scotland and which are highly detrimental because they grow vigorously and shade out our native woodland plants may become even more dominant as our climate becomes warmer and wetter. Similar problems are arising in our freshwater and marine environments. Combined actions for biodiversity loss and climate change can be achieved through Nature-based Solutions, which can play a vital role in helping us to protect and enhance biodiversity, achieve net zero targets, and improve people's quality of life. This reporting section provides the opportunity for your organisation to provide details on how you are supporting the positive contribution biodiversity can make to building resilience, and helping nature to mitigate and adapt to climate change. You may wish to report on a range of specific processes or activities that your organisation has undertaken, including on land you own or manage, within your buildings and workforce, and projects that you have delivered. Integration might include incorporating biodiversity into Nature-based Solutions to: • Help Scotland and nature to adapt to climate change by developing strategies that include nature, investing in green infrastructure, restoring nature and taking action for pollinators – these should be included in climate change reports

	• Inclusive economic growth, for example by growing nature based industries, or investing in key natural visitor attractions. • Improve health and wellbeing, for example by increasing opportunities to connect with nature for all. Strategies or initiatives incorporating actions to address climate change might include: • Climate Change Adaptation Plan; • Local Development Plan; • Regional Marine Plan; • Open Space Strategy; • Forest & Woodland Strategy; • Green Infrastructure Strategy; • Pollinator Strategy; • Soil management strategy; • Locally-implemented Nature Network Strategy.
Text Field	Our **Climate Change Declaration** sets out our commitment to a sustainable future which mitigates and adapts for climate change: https://www.aberdeenshire.gov.uk/media/25146/climatechangedeclaration.pdf Aberdeenshire Council has a target to reduce carbon emissions by 75% by 2030 and to be Net Zero by 2045 from the 2010/11 baseline year. As part of the Council's commitment to climate change mitigation, we set our first carbon budget for 2017/18. We are the first Local Authority in Scotland to implement such a budget. This approach is to make sure that we are placing as much focus on our carbon footprint as we do on our financial budgets. The carbon budget is set in February each year at the same time as the financial budget and is monitored throughout the year by the Sustainability Committee. https://www.aberdeenshire.gov.uk/environment/green-living/environmental-policy/ **Climate Ready Aberdeenshire 2020 – 2030**: Climate Ready Aberdeenshire is a cross-sector initiative to create Aberdeenshire's climate change adaptation and mitigation strategy. It brings together the views and

	expertise of a range of diverse stakeholders from communities, public, private and 3rd sector organisations, to set out how we can work collaboratively to meet the challenges of a changing climate within Aberdeenshire. Our aim is a shared vision, strategy and action plan for Aberdeenshire to mitigate climate change and adapt to its impact. https://www.aberdeenshire.gov.uk/environment/green-living/climate-ready-aberdeenshire/ Objectives: 1. Increase the understanding and awareness of climate change risks and opportunities within Aberdeenshire 2. Work with communities using a place-based approach to discover what their priorities are and how they can be supported to mitigate and adapt to climate change 3. Support decision-makers to make climate friendly and climate ready decisions which support the delivery of local and national commitments, and mutually benefit Aberdeenshire's environment, economy and people Provide knowledge, advice and support, and link businesses, community groups and individuals to resources, projects and funding opportunities to help them mitigate and adapt to climate change. In 2023 Climate Ready Aberdeenshire completed the final draft of their Strategy after short term working groups supported gathering more detailed information on Mitigation and Net Zero, Sustainable Economy & Communities, Adaptation and Resilience, and Enhancing and Protecting Biodiversity. The group are now focusing on the development of an Activity Log which is capturing activity in the 4 themes across Aberdeenshire by the different member groups of CRA. Enhancing and protecting biodiversity is very much a core theme of Climate Ready Aberdeenshire. More information can be found here: https://www.aberdeenshire.gov.uk/environment/green-living/climate-ready-aberdeenshire/ The Climate Change Risk Register was updated after a Local Climate Impact Profile (LCLIP) was completed for 2019-2022. The outputs of the LCLIP helped to enhance the Risk Register. Biodiversity sits within the Risk Register as 'Damage to ecosystems and damage to and loss of biodiversity due to climate change and extreme weather events'. The Council's Integrated Impact Assessment (IIA) includes Climate Change and Sustainability. Within this assessment there are several questions requiring a response on the impacts in relation to Biodiversity.

	Positive, neutral and/or negative impacts are assessed on the quality of environment, quantity of the environment, wildlife and biodiversity. Guidance has been prepared to support officers in completing IIAs to ensure due regard is considered to the impacts on biodiversity.

Looking ahead, what do you think will be the main climate change related challenges for biodiversity over the next three years?

Guidance on completing this section	You may wish to detail any arrangements that your organisation has in place to review or monitor the implications from modelling biodiversity on land that you own or manage under future climate scenarios.
Text Field	Extreme weather events do appear to be more frequent. Strong winds, flooding and periods or drought have all had significant implications for the area through this reporting period. Predictions do suggest this is a trend which will continue. Inevitably this extreme weather has a significant, abrupt impact on nature also. This is of course in addition to the general trend of climate change which is incrementally impact on nature in the area. As detailed elsewhere, the Council aims to ensure its estate is providing habitat for biodiversity and is resilient to the effects of climate change. We will continue to have strong polices which protect and enhance natures – through Planning for example. We will continue to promote and educate nature and biodiversity to our communities, though our schools and Countryside Ranger Service also.

SECTION 5: PUBLIC ENGAGEMENT AND WORKFORCE DEVELOPMENT

Public Engagement

Guidance on completing this section	Detail communication and education activities you have undertaken to inform or engage directly or indirectly with communities, young people and the public. This might include actions to raise staff, customer and public enjoyment and understanding of, and connection with, biodiversity and nature, such as: • Supporting volunteering; • Exhibitions and events; • School outreach; • Outdoor learning; • Citizen Science initiatives; • Providing a Countryside Ranger Services or public outdoor education programmes; • Providing information on your website on how to connect with local nature; • Blogs and press releases about biodiversity and nature.
Text Field	**Aberdeenshire Council Countryside Ranger Service** The Aberdeenshire Council Countryside Ranger Service takes a lead role in the area on environmental education and awareness in the area. Each year they deliver over 200 sessions for schools, community groups and the general public. These sessions: • Provide volunteer opportunities for communities and organised groups in biological recording, practical conservation, biodiversity enhancement and climate change actions. • Enhance the condition of natural and historic features through site and countryside management; raise awareness of climate emergency and biodiversity loss at Countryside Ranger Service public and group sessions. • Encourage and support positive action by the public to address the climate emergency and biodiversity loss. • Support partner organisations to combat biodiversity loss and climate change and support the enhancement of biodiversity.

	The Countryside Ranger Service also responds to hundreds of requests from individuals, schools, local businesses and community groups seeking advice and guidance biodiversity topics, including protecting and enhancing biodiversity. The Service also launched its Biodiversity Education pack and Sharepoint page. This is an interactive resource to support teachers looking to undertake biodiversity awareness and understanding activities in their school grounds or local area. **Schools** All schools in Aberdeenshire have signed up to the Eco-Schools Programme. 123 schools have achieved the bronze award, 14 schools have silver awards and 69 have Green Flag awards. Education and Children's Services have developed a Sustainability and Climate Change strategy with extensive input from pupils: https://online.aberdeenshire.gov.uk/apps/news/release.aspx?newsid=8320

Workforce development

Guidance on completing this section	Detail any activities that have been undertaken to support the development of your workforce, particularly in relation to skills relevant to biodiversity, nature, outdoor learning and community engagement in the natural environment. Activities might include: • Staff training, education and capacity building; including through CPD events for example from the Improvement Service and Chartered Institute of Ecology and Environmental Management. • Hosting conferences, exhibitions and events; • Providing a Ranger service; • Collaborative working with other organisations and sharing best practice

Text Field	Aberdeenshire Council Countryside Ranger Service contributes to the development and delivery of the Scottish Countryside Rangers Association (SCRA) North East, training programme. Courses delivered for Rangers and allied professionals include Bat Ecology, Wildcat Ecology, Research Talks and Visitor and Habitat Management. The Countryside Ranger Service deliver "Toolbox talks" to Landscape Services mowing teams on what biodiversity is, why biodiversity matters and how to share this information with the public in relation to mowing regimes, complementing the work of the Greenspace Officers. The Service have also developed and online training resources on tree planting and greenspace management. The Natural Environment Team provide support and training to a range of Teams and Services across the Council. Training on protected species is provided to those that manage infrastructure such as roads and bridges. There is regular engagement with Development Management Officers on biodiversity issues including a regular online newsletter providing updates and information and key issues of relevance at that time. The team have development an online training resource on bats and Council property.

Identify any opportunities that are available to your staff to take part in practical actions

Guidance on completing this section	Activities might include: • Volunteering days, for example with environmental Non-Governmental Organisations; • Participation in staff networks that aim to deliver on or promote biodiversity objectives; • Opportunities for secondments to other organisations working on biodiversity and conservation.
Text Field	Greenspace enhancement programmes with opportunities to 'adopt' and enhance greenspace are open to Council teams as well as to the community. The Natural Environment Team have adopted a site in Westhill and are helping to enhance the site with wildlife and tree planting. The site was formerly mown grass. As noted above, the Aberdeenshire Council Sustainability Champions programme includes opportunities for practical works to enhance biodiversity.

SECTION 6: RESEARCH AND MONITORING

Describe any research activities that your organisation has undertaken to help develop understanding and awareness of biodiversity

Guidance on completing this section	Detail relevant research activities undertaken to raise awareness and understanding of nature and biodiversity both internally and externally, either alone or in partnership with others. Where relevant, summarise the key changes that this research has supported within your public body. This might include research papers, surveys or reports undertaken by your organisation.
Text Field	No relevant research

What follow-up actions or monitoring have you undertaken to assess the impacts of the actions you have taken? How have you measured this? If you do not carry out any monitoring activities, please explain why.

Guidance on completing this section	Where appropriate, you may wish to report on monitoring of: • Your impacts on local biodiversity priorities and national and international biodiversity targets; • Enhancing biodiversity in local developments • Biodiversity programmes or projects that you have delivered either alone or in partnership with others; • Implementing strategies or policies; • Physical environmental parameters, such as soil, weather, coastal erosion, and local hydrology; • Organisational capacity and development in relation to biodiversity.
Text Field	Every year, Aberdeenshire Council reports on the Council's biodiversity and environment actions to its Sustainability Committee. This includes reporting on a huge range of programmes and activities – all of which are listed in this report. The Aberdeenshire Pollinator Action Plan annual monitoring and reporting is carried out by the Natural Environment Team. Progress with the actions is reported to the Council's Sustainability Committee.

Does your monitoring show any significant trends or highlight any areas of concern?

Guidance on completing this section	Trends or areas of concern might include those related to: • The conservation status of habitats that you manage or deliver programmes to protect; • The ecological health of land that you own or manage; • Adverse recordings of water or soil quality; • Increases or decreases in species present.
Text Field	No specific trends highlighted.

Have you added any data collected to the National Biodiversity Network or your Local Records Centre?

Text Field	Aberdeenshire Council host the local records centre for the region – NESBReC. Various activities and programmes undertaken by the Council, promote, supply or encourage records to be sent to NESBReC. These include: • NESBReC's own training programme – approximately 10 events every calendar year • The outdoor education and engagement undertaken by the Countryside Ranger Service, • Record collecting encouraged by the Invasive Non-Native Species Project • Record collecting encouraged by the Greenspace Project NESBReC and the NBN (National Biodiversity Network) share and exchange a range of data.

SECTION 7: BIODIVERSITY HIGHLIGHTS AND CHALLENGES

Describe your organisation's main achievements for biodiversity over the reporting period and what you are most proud of (this can include processes, plans, projects, partnerships, events and actions).

Guidance on completing this section	As a Level One reporting organisation, it is likely that you will own or manage land, regulate land use, or have biodiversity as one of your main responsibilities. Examples of key achievements in this context might include: • Updating your LBAP • Integrating nature in your Local Development Plan • Leading or contributing to programmes or projects that directly support actions in the Scottish Biodiversity Strategy, or contribute to international Biodiversity Targets; • Demonstrating national or international leadership or expertise in relation to biodiversity; • Meeting your strategic aims in relation to biodiversity; • Improvement in habitat or ecological status; • Notable species present or recorded; • Completion of key projects; • Funding achieved or delivered; • Volunteering days or time invested; • Provision of successful education or public engagement activities.
Text Field	The success of the Greenspace Project and it now being adopted as a mainstream approach to the management of greenspace has been a significant success. Backing this was the adoption of the new Pollinator Action Plan for the Council – our third. This identifies that 10% of greenspace should be managed for biodiversity. The Nature Restoration Fund funding from Scottish Government came along at the perfect time for our greenspace works and has provided the very welcome funding to support changes in management and enhancement works. This in turn has resulted in a huge, positive community enhancement and effort in enhancing greenspace, which over 100 community groups doing practical works to enhance greenspace each year.

	Our Countryside Ranger Service and NESBReC continue to be hugely important for environmental education and recording in the region. The 2023 Aberdeenshire Local Development Plan includes strong policies, supplementary guidance and planning advice for the protection and enhancement of the natural environment and biodiversity. Of particular note, in advance of the requirements subsequently set out in National Planning Framework 4, is the Local Development Plan's requirement for all development to have positive effects for biodiversity with Planning Advice setting out the Planning Authority's expectations. While the significant damage and challenges of storm damage to our woodlands was a significant negative during the reporting period. This has been turned to a positive, with re-planting and active management to ensure the woodlands maximise biodiversity benefit and are also resilient to the effects of extreme weather and climate change.

Looking ahead, what do you think will be the main challenges over the next three years?

Guidance on completing this section	Challenges might include: • Economic and resource pressures; • Delivery of cross-cutting actions; • Preventing further loss of habitats and species; • Effective management of invasive non-native species; • Pressures for space; • Need to meet targets; • Encouraging enhanced partnership working.
Text Field	The situation with Local Authority budgets means there are very likely to be resource constraints. However in line with our duties, Aberdeenshire Council will continue to deliver on biodiversity activities. In doing so we shall of course seek to show the benefits to our wider environment from that work. The Council wide support and approval for all the actions identified in this report shows it has been successful in doing this over the reporting period. There is an opportunity desire to create a single, Council wide, high-level strategy on nature recovery which makes the valuable and cost-effective action as clear and visible as possible. Linking our duty

	under legislation to long-term funding is a core part of supporting a strategic approach and the Nature Restoration Fund has been hugely beneficial in this respect over the reporting period. Extending such a funding commitment into the future would provide a secure basis to plan the long-term delivery for nature that is clearly required. Indeed, we understand it is possible this may potentially be legally required if statutory nature recovery targets result from the Scottish Biodiversity process. It is clear Scottish Government sees Local Authorities as key deliverers of nature recovery and as with so many areas of our work there needs to be financial support to allow us to do this fully.

Aberdeenshire Council Biodiversity Work Collation 2023

Every three years, Aberdeenshire Council report to Scottish Government on its works in relation to the 'public sector biodiversity duty'. The biodiversity duty was introduced in the Nature Conservation (Scotland) Act 2004 and states 'It is the duty of every public body and office-holder, in exercising any functions, to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions.'

This is the third year of the current 3 year reporting period and we are due to provide information to Scottish Government in early 2024 on the period 2021 to 2023. Data for 2021 and 2022 has been gathered and provided in previous years to Sustainability committee via bulletins. Below is a collation of biodiversity related work in 2023. The collation for 2023 will be added to that for 2021 and 2022 in compiling the report to Scottish Government.

Countryside Ranger Service programme 2023

Countryside Ranger Service strategy objectives relating to biodiversity. Please note that one session may cover more than one objective.

Ranger Team Objective 10 - Provide volunteer opportunities for communities and organised groups in biological recording, practical conservation, biodiversity enhancement and climate change actions.

65 sessions
1208 attendees.
Examples include sessions on invertebrate surveying, creation of invertebrate habitats and homes, piling dam building sessions, surveying for non-native invasive species.

Ranger Team Objective 11 - Enhance the condition of natural and historic features through site and countryside management; raise awareness of climate emergency and biodiversity loss at Ranger Service public and group sessions.

138 sessions
3244 attendees
Examples include, removing invasive species, tree planting in local woodlands and wildflower and bulb planting in school grounds and community spaces.

Ranger Team Objective 12 - Encourage and support positive action by the public to address the climate emergency and biodiversity loss.

72 sessions
1839 attendees
Examples include sessions on indicator species, nest box building and non-native species removal.

Ranger Team Objective 13 - Support partner organisations to combat biodiversity loss and climate change and support the enhancement of biodiversity

27 sessions
975 attendees
Examples include sessions in partnership with Social Work, Education, and Branching Out (mental health group).

The Countryside Ranger Service also responded to 298 requests from individuals, schools, local businesses and community groups seeking advice and guidance biodiversity topics, including protecting and enhancing biodiversity.

During this period, the Countryside Ranger Service promoted awareness of biodiversity on subjects such as fungi, birds, invertebrates, amphibians, mammals, pollinators, non-native invasive species jellyfish and wildlife gardening through social media.

Trees and Woodlands

Woodland Management

Woodland management in areas affected by the winter storms of 2021/22 has continued throughout 2023. Most of the storm damage woodland has now been cleared. Work has now begun on the recovery phase with replanting schemes comprising of predominately native trees to provide biodiversity benefits and a more diverse species mix to build resilience in responding to the impacts of climate change. Of the 30.5ha of woodland which has been harvested 17.2ha will be replanted as native woodlands. To date 1.4ha has been planted with another 3ha scheduled to be planted during this planting season.

Following the storm events Aberdeenshire Council have taken the opportunity to review and update existing woodland management plans in line with the principles of sustainable woodland management. The comprehensive plan for all woodland owned and managed by Aberdeenshire Council seeks to ensure woodlands are managed in a manner which protects and enhances the environment, biodiversity and local culture, benefits and supports the local economy, provides value and enjoyment to residents and visitors and are resilient to the effects of climate change.

Wood Pasture, Haddo Country Park

As part of the wider work undertaken within the historic landscape of Haddo Country Park, new trees were planted within the Deer Park to ensure the continuation of tree cover and enable restoration of the depleted areas of ancient wood pasture.

81 individual standard trees of species which included oak, cherry, Norway maple, Scots pine and elm, were planted within the open parkland. Protection from livestock was provided with the use of traditional wood pasture crate fencing.

It is hoped that this area of wood pasture and the associated biodiversity habitat can be extended and enhanced in future years.

Protected Trees

Seven new TPOs have been served during 2023, together protecting 37 individual trees, 9 groups of trees and 11 areas mixed woodland. While the TPO designation is primarily utilised to protected trees and woodland areas in the interests of visual amenity, the resultant impact of long-term protection of these mature trees and areas of woodland is a biodiversity gain.

Small Grant Scheme

Development of a small grants scheme for tree and hedge planting within Aberdeenshire is progressing and has gained wide support from the local forestry and woodland sectors. The aim of the scheme is to provide opportunities to deliver low effort, high impact, small scale tree planting schemes of a size below the threshold for existing forestry grants. A pilot project is underway focussing on achieving biodiversity improvements within the primarily agricultural landscapes of the River Ugie catchment.

Ash Dieback

An Ash Dieback Action Plan is being developed in response to the identification of corporate and strategic risks arising from the impact of the disease. The plan includes actions to:

- Quantify extent and spread of disease through on the ground tree surveys.
- Develop a strategy for managing privately owned roadside trees.
- Develop a comprehensive communication plan.
- Develop a prioritisation strategy for tree management.
- Develop a recovery plan focussed on effective establishment of replacement trees.

Widespread loss of the species ash will result in a detrimental impact on the biodiversity of Aberdeenshire woodlands and therefore action will be taken to ensure unaffected trees identified and monitored. Communication messages will promote the importance of retaining unaffected ash trees and also of not felling affected and dying ash trees in low risk locations where appropriate. Retention of dead wood and appropriate pruning will be encouraged to maximise protection of existing biodiversity value. The recovery plan will consider appropriate species for replacement planting, seeking to create woodlands and groups of trees which will be resilient to the impact of climate change and provide positive contributions for biodiversity.

North East Biological Records Centre (NESBReC)

- **191,302** new species records added to the database in 2023.
- Recorders' Forum event held in person in March with 90 attendees
- Promoting wildlife recording through nine wildlife recording training events focusing on identification skills and how to submit records. These were mixture of online and face to face events with good attendance.
- LNCS habitat monitoring carried out in Aberdeenshire

- **2792** data searches carried out for planning applications (2696), environmental consultants (73), organisations (10), students (1) local authorities (10) and the general public (2).
- Regular postings on the NESBReC Facebook page to highlight issues and events concerning local biodiversity.
- Participation in NE Scotland Biodiversity Partnership and Climate Ready Aberdeenshire

Aberdeenshire Invasive Non-Native Species project

Continued support was provided to community groups to allow them to undertake INNS control work through assisting with advice, insurance and the supply of equipment.

Continued working with the community to progress discussions on the issue of giant hogweed on the River Ury, and following community consultation, fenced an area of land and introduced sheep grazing as a more sustainable means of control. Monitoring of this work was carried out with the local community.

Promoted awareness of harm caused by pirri pirri bur and how it can spread. Undertook some control of pirri pirri bur with contractors and with volunteers in Deeside. Volunteer effort to survey this species.

Maintained NENNIS website to provide source of information on issues relating to INNS and provide newsletter to update members of the NE INNS Forum on related news and topics of interest.

Aberdeenshire greenspace enhancement

Greenspace Officers continued to work with promoting and enhancing biodiversity on the Aberdeenshire Council land that is being maintained by the Landscape Services, in partnership with other council departments and local communities.

Examples of this include planting Scottish heritage fruit trees and bushes, native trees and shrubs, creating wildflower habitat, meadow-making, sowing yellow rattle and adding bulbs and wildflower plugs to grassland.

We have launched specific projects that are open to communities across the region. In 2023, we completed the spring phase of **'Growing Living Greenspaces'**, an initiative that provided community group applicants with a selection of native trees, shrubs, fruits, wildflower plugs, and pollinator-friendly bulbs to be planted on Council-owned land.

We completed the second year of the **'Perennials for Pollinators Project 2023'**. **76 groups** received and planted **5189** herbaceous perennials.
In March, we supported the creation of the second 'Wee Forests', in Banchory.

In addition, this autumn, we ran a campaign **'The Big Bulb Plant 2023'**, which provided and facilitated the planting of **316,750** native or pollinator-friendly bulbs in greenspace across the region, completed by **101 community groups**' monumental volunteer efforts.

We continue to work directly with individuals and community groups who are keen to brighten up their local environment, making use of amenity grassland that is underused. Such projects have led us to trial different methods of establishing a species-rich grassland, including turf-stripping, low-cut and scarifying with yellow rattle, plug planting into the grass, and use of a biodegradable fleece - all of which support the move away from herbicide use.

We have supported 'No-Mow May' and in some areas 'Let it Bloom June' on prominent sites in settlements. We put up signage to explain the change and its value. This is a critical step towards implementing sustainable changes to the grass-cutting regime that enhances biodiversity.

Nature Restoration Fund

In July 2023, all Local Authorities and National Parks were awarded capital funding from Scottish Government's Nature Restoration Fund with Aberdeenshire Council receiving £445,000. This was a significant increase on the previous two years of funding where £212,000 was granted in 2022 and £268,000 in 2021.

The grant is 'capital funding to be spent in 2023-24 to support new, or to enhance existing, approaches to restoring biodiversity, complemented this year by an additional … specific focus on creating Nature Networks'.

Spending timescales are tight with money to be spent by 31st March 2024. The money was spent on a wide range of enhancement and communication projects including:

- Support Landscape Services modification and improvements to greenspace management for biodiversity by purchasing new equipment
- Supporting community groups and schools to improve public greenspace by purchasing bulbs, trees and herbaceous perennials for them to plant
- Continuation of the very successful B-Lines project in north Aberdeenshire in 2022, with further material purchased for schools to plant
- Development of plans to enhance the biodiversity benefits of the Formartine and Buchan Way
- Supporting further roll out of green roofs on new bus shelters across Aberdeenshire
- Countryside Ranger Service worked in partnership with colleagues in the Natural Environment team to deliver to 97 wildflower seed ball kits and planters to schools across Aberdeenshire
- Purchase of Swift and Bat boxes to enhance the Council estate at various locations
- Bat survey equipment for Nesbrec
- Supporting Denman Park Ponds Westhill water treatment wetland project to filter the central Westhill area surface water drainage outfall into the park's ponds and downstream into the Elrick Burn to prevent contaminated discharges wiping out the biodiversity in the ponds and downstream burn.

Partnership projects

The Dee Catchment Partnership

- ongoing work on the Easter Beltie Burn restoration project involving habitat enhancement, monitoring and interpretation. Development of a new 5 year Delivery Plan
- Awareness raising on a wide range of issues related to the River Dee through press releases and in particular its biodiversity through Naturewatch.
- Ongoing development of river restoration proposals including those relating to the CNP Heritage Horizons Project.

Ugie Peatland Partnership - Aberdeenshire Council continues to support the work of the Ugie Peatland partnership and in particular advising on issues relating to planning and the protection of important peatland sites through identification as Local Nature Conservation Sites.

Ury Riverside Park – Aberdeenshire Council and the NEINNS Project have continued to work with the SCIO in 2023 to deliver control of giant hogweed within the park using a variety of means including grazing.

North East Scotland Biodiversity Partnership (NESBiP)

- Ongoing development of funding proposals to secure resources for taking forward the 2022-25 Strategic Plan..
- Continued support for community delivery of wildlife gardening projects.
- Ongoing collaboration on biodiversity projects through the NESBiP Awareness Network formed from the previous Awareness and Involvement group.

Strategy and Policy

The Environment Team continued to provide input to planning applications in 2023, commenting on issues ranging from protected species and sites, woodland and trees, greenspace enhancement and protection of the water environment.

A review of the Councils existing Local Nature Conservation Sites commenced in 2023 with 8 biological sites and 5 geological sites reviewed. Data from previous habitat survey was assessed to identify further potential LNCS.

The Climate Change Risk Register was updated after a Local Climate Impact Profile (LCLIP) was completed for 2019-2022. The outputs of the LCLIP helped to enhance the Risk Register. Biodiversity sits within the Risk Register as ‘Damage to ecosystems and damage to and loss of biodiversity due to climate change and extreme weather events’.

The Council’s Integrated Impact Assessment (IIA) includes Climate Change and Sustainability. Within this assessment there are several questions requiring a response on the impacts in relation to Biodiversity. Positive, neutral and/or negative impacts are assessed on the quality of environment, quantity of the environment,

wildlife and biodiversity. Guidance has been prepared to support officers in completing IIAs to ensure due regard is considered to the impacts on biodiversity.

Engagement

The Aberdeenshire Council Sustainability Champions programme was launched in the summer of 2022. The programme aims to lead and support teams and Services in understanding and aligning with the Council's various sustainability aspirations and commitments, including biodiversity. The Champions meet informally every month to discuss ideas, opportunities and challenges. They have also engaged in a number of litter picks and some native/wildflower planting on Council grounds.

Throughout 2023 internal biodiversity messaging and discussions have continued through our internal online tools Engage and Viva Arcadia. A 'Biodiversity and natural heritage' section can also be found on the Council's external facing 'Climate change and sustainability' web page with a link to the Council's Natural Heritage web information.

In 2023 Climate Ready Aberdeenshire completed the final draft of their Strategy after short term working groups supported gathering more detailed information on Mitigation and Net Zero, Sustainable Economy & Communities, Adaptation and Resilience, and Enhancing and Protecting Biodiversity. The group are now focusing on the development of an Activity Log which is capturing activity in the 4 themes across Aberdeenshire by the different member groups of CRA. Enhancing and protecting biodiversity is very much a core theme of Climate Ready Aberdeenshire. More information can be found here: https://www.aberdeenshire.gov.uk/environment/green-living/climate-ready-aberdeenshire/

Schools and Education

All schools in Aberdeenshire have signed up to the Eco-Schools Programme. 123 schools have achieved the bronze award, 14 schools have silver awards and 69 have Green Flag awards.

Education and Children's Services have developed a Sustainability and Climate Change strategy with extensive input from pupils: https://online.aberdeenshire.gov.uk/apps/news/release.aspx?newsid=8320

Housing

Nesting boxes for swifts put up at 6 roof replacement projects in Council housing Inverurie, with a total of 36 boxes and nest entrance holes provided into corner soffits at 12 locations.

Aberdeenshire Council Pollinator Action Plan monitoring 2023

The table below summarises the 2023 monitoring of the Aberdeenshire Council Pollinator Action Plan 2022 to 2027. Monitoring indicates a very positive report with all but one action identified as ‘green’. Action is required to address the ‘amber’ action under 1.2 on exploration of the production of perennial and wildflower plants in Council facilities. This will be furthered in 2024.

Key priority	Action	Lead	Other contributors	Due date	2022 update	2023 update	Status
Objective 1 Create Habitat for Pollinators							
1.1 Implement habitat enhancement for pollinators on Council owned/managed land	At least 10% of Council managed public greenspace to be enhanced and managed for pollinators & biodiversity	Landscape Services		Mar-27	Metrics currently being developed to measure this.	Current data indicates 2% of public greenspace managed for pollinators and biodiversity. There are plans to improve monitoring of this figure. However, extensive work by communities and by Landscape Services to modify and improve greenspace management for pollinators and biodiversity is on-going.	
	Maximise opportunities for pollinator habitat at Corporate Offices as part of maintenance review	Property and Facilities		Mar-23	Ongoing changes to maintenance at Woodhill House providing much increased area of grassland managed for pollinators.	Additional areas added during 2023 to increase area of grassland managed for pollinators. Link with NHS Grampian sustainability staff made to ensure management of adjacent 'Blackbird walk' is also promoting wildflowers for pollinators.	

	Measures for pollinators introduced in at least 80 school grounds	Education	Landscape Services	Mar-27	Single apple trees planted in 115 school grounds. A number of larger scale projects progressed with 25 schools. Over 80 school interested in further engagement and project work with Landscape Service.	Wide range of school projects ongoing to enhance biodiversity in their grounds with extensive support from Ranger Service, Greenspace Officers and the Nature Restoration Fund grant.	
	Modify road verge management policy and process to further benefit pollinator populations	Landscape Services	Natural Environment Team	Mar-25	Roads Service will create a holistic road verge management policy. Natural Environment Team will engage during drafting to ensure action benefits to pollinator maximised.	Road Service review or verge management still to take place - due 2025. Natural Environment Team will engage during drafting to ensure action benefits to pollinator maximised.	
	Explore habitat creation at Council owned woodland sites – shrub planting in open rides or woodland edge	Natural Environment Team		Mar-24	Post-winter storms 2021_22, focus has been on the clearance of windblow and making woodlands safe. However, replanting to begin in 2023 which will include implementation of greater woodland diversity to benefit pollinators	Continued work to clear storm damage in Council owned woodlands continues in 2023. However, replanting has also begun with a strong focus on native trees to create resilient diverse woodlands which benefit biodiversity.	

	Share information and experience from works to date/demonstration sites both within Aberdeenshire and from other areas	NESBiP		Mar-23	Planned spring seminar currently on hold pending securing NESBiP funding.	Seminar (NESBiP/NESCAN joint event) planned for 15th March 2024. Suggested that this is followed up by programme of site visit opportunities to continue sharing experience.	
1.2 Use and supply pollinator friendly plants	Supply community groups with native wildflower seed to trial on 100 to 200m2 areas	NESBiP		Mar-22	Seed supplied to 10 small local projects during funding period.	Funding period ended in 2022. 10 groups were supported.	
	Explore opportunities for Council plant nursery facilities to produce alternatives to annual bedding – perennial plants, wildflowers or native trees for example	Landscape Services		Mar-24	Yet to be fully explored - Landscape Services do wish to identify opportunities	Yet to be fully explored - Landscape Services do wish to identify opportunities	

	Develop guidance on native plant seed collection and propagation	NESBiP		Apr-22	Completed and available on NESBiP web site. Here - https://www.nesbiodiversity.org.uk/wp-content/uploads/2022/10/2022-Growing-local-wildflowers-in-NE-Scotland-seed-collecting-and-sowing.pdf	Completed April 2022	
1.3 Use Buglife identified 'B-lines' as a catalyst for habitat creation in Aberdeenshire	Run River Don B-lines delivery mechanism project with Buglife. Use findings/outputs to shape further work.	Natural Environment Team		Apr-22	Project feasibility report completed. Many identified actions are picked up by Landscape Services Greenspace Officers work. Discussions on-going with Buglife and Aberdeenshire City on joint pollinator projects in 2023.	B-Lines project has inspired excellent engagement with schools in the north of Aberdeenshire in creating habitat in their grounds. With strong similarities to B-Lines, the 'Nature Networks' concept is now being widely promoted by Scottish Government with a requirement for Local Authorities to map and support enhancement to networks.	
Objective 2 Help raise awareness of pollinators							
2.1 Aberdeenshire Council Ranger Service to raise awareness of pollinators	150 Ranger Service sessions per year with schools, groups and communities to raise awareness of pollinators	Ranger Service		Annual monitoring	Ranger Service promoted the action plan & pollinators at 173 sessions during 2022	Awareness of pollinators and the Pollinator Action Plan promoted at 255 Ranger Service Sessions	
Objective 3 contribute to the monitoring of pollinator populations							

3.1 Increase pollinator monitoring and identification skills in the community and encourage participation in monitoring	Run at least one Nesbrec training course per year which focusses on volunteer recording of certain pollinating insects.	Nesbrec		At least one training course per year	Two Nesbrec training courses run on bumblebee identification and survey methods. One online in May with 34 participants and an in-person event at Dinnet in July with 19 participants.	Two Nesbrec training courses run on bumblebee identification and survey. 12 participants at online event and 13 at in person training at Forvie NNR. Species on the Edge target species northern brown argus and bordered brown lacewing training at Stonehaven for 10 participants with Species on Edge officer.	
	Highlight pollinators at annual Recorders Forum	NESBReC		Every year at annual recorders forum	Talks on bumblebee recording and butterflies at annual Recorders Forum in March 2022.	Talk on the impact of ash dieback on forest insects and more general talks promoting recording to NESBReC or iRecord highlighting the importance of insect recording.	

Aberdeenshire COUNCIL Environment and Infrastructure Services

REPORT TO SUSTAINABILITY COMMITTEE – 21 FEBRUARY 2024

LOCAL HEAT AND ENERGY EFFICIENCY DRAFT STRATEGY CONSULTATION

1 Executive Summary/Recommendations

1.1 This report comprises the draft Local Heat and Energy Efficiency Strategy (LHEES) for Aberdeenshire Council which we are seeking views upon through consultation. As part of the legislative requirement to produce an LHEES, we wish to gather opinions on whether we have captured the appropriate priorities and direction for our area in the first iteration of this strategy. This draft is for consideration by the Sustainability Committee as part of the wider consultation.

1.2 The Committee is recommended to:

1.2.1 Consider and comment on the Draft Local Heat and Energy Efficiency Strategy (Appendix 1); and

1.2.2 Acknowledge that following public and stakeholder consultation on the strategy aims and priorities via Engage Aberdeenshire, expected to be completed in March 2024 the final draft of the Local Heat and Energy Efficiency Strategy will go to the next Full Council committee for approval.

2 Decision Making Route

2.1 Local Heat and Energy Efficiency Strategies (LHEES) have been on the Scottish Government agenda for several years. Initial consultations were carried out in 2017 on stakeholder views regarding proposals for Local Authority level plans for Heat and Energy Efficiency. The Sustainability Committee noted Aberdeenshire Council's response on 30 August 2017 (Item 7). Following that, all 32 Local Authorities were involved in piloting aspects of the LHEES approach, with Scottish Government funding support. Aberdeenshire Council took part in Phase 2 of these pilots in 2018/2019. Results of these pilots enabled Scottish Government to develop the statutory order, refining the methodology and guidance for the requirement.

2.2 The Draft LHEES Order Consultation was responded to by Aberdeenshire Council on 2 February 2022. On 16 February 2022 (Item 8) the Sustainability Committee acknowledged the response which had been submitted by officers.

2.3 Following consultation and partnership working with COSLA (Convention of Scottish Local Authorities) and Local Authorities, the Local Heat and Energy Efficiency Strategies (Scotland) Order was laid in the Scottish Parliament on the 11 March 2022. It was then passed on 19 May 2022 and came into force on 21 May 2022. The Order requires each local authority to develop and publish a LHEES and Delivery Plan. The Order requires these plans and strategies to be kept updated and reviewed at intervals of no more than 5 years and also

requires the plans to have regard to the guidance published in support of the production of LHEES.

2.4 Scottish Government made funding available to enable authorities to resource the development of LHEES. We have utilised this funding to employ one dedicated officer and some consultancy support for data collation and GIS (Geographical Information System) work. There will be further stages linked to LHEES that we will work on in the coming year and beyond. Detailed development of the Delivery Plan is required as well as refinement of potential Heat Network Zones.

3 Discussion

3.1 Through LHEES, the Scottish Government aims to drive area-based planning and delivery of the heat transition, supporting achievement of statutory emissions reduction targets. The strategies are long-term plans for decarbonising heating in buildings and improving energy efficiency across an entire Local Authority area and sits at the heart of the Scottish Government's Heat in Buildings Strategy.

3.2 The Heat in Buildings Strategy commits to having strategies and accompanying Delivery Plans in place for all Local Authority areas.

3.3 It is the intention that LHEES will form the basis for local public engagement and community involvement in decision making at the local level and support investment planning by the bodies who then develop and maintain the electricity and gas networks. The team have ensured that in taking this work forward colleagues within the Housing, Property and Local Development Plan teams have been fully engaged along with key regional partners in other authorities and agencies.

3.4 Aberdeenshire Council engaged Changeworks consultants to develop Stages 1 to 4 of the LHEES for the Aberdeenshire area as part of an earlier resource call which was separately funded by Scottish Government. Once the Order was approved, we further engaged Changeworks to support the full development of the Aberdeenshire LHEES.

3.5 The Heat Network analysis was limited to those areas where public or semi-public buildings could be used as anchor loads. Anchor loads are high heat demand buildings which would be key connections for a heat network as they are required to drive the economics of such systems. In our assessment, we limited selection to those with 2 or more potential anchor load buildings. The process has resulted in the identification of 14 potential Heat Network priority zones which may present opportunities for decarbonisation of heating requirements. These areas will be investigated further as part of identifying Heat Network Zones which is likely to be a further statutory requirement.

4 Council Priorities, Implications and Risk

4.1 This report helps deliver all six of the Council's Strategic Priorities.

Pillar	**Priority**
Our People	Education Health & Wellbeing
Our Environment	Infrastructure Resilient Communities
Our Economy	Economy & Enterprise Estate Modernisation

4.2 The table below shows whether risks and implications apply if the recommendations are agreed.

Subject	**Yes**	**No**	**N/A**
Financial	**X**		
Staffing	**X**		
Equalities and Fairer Duty Scotland			**X**
Children and Young People's Rights and Wellbeing			**X**
Climate Change and Sustainability			**X**
Health and Wellbeing			**X**
Town Centre First			**X**

4.3 There are staffing and financial implications now that the Order to make LHEES a Statutory Duty has been agreed. As previously highlighted, the LHEES for Aberdeenshire will potentially require a number of Aberdeenshire Council buildings to be anchor load buildings for various Heat Networks if they are designated and then come to fruition. In addition, there will be an expectation that as a Local Authority we lead the way in reducing carbon impact of our own building stock. Funding for either option has not been identified.

4.4 An Integrated Impact Assessment was carried out and is attached as **Appendix 2**. A Strategic Environmental Assessment prescreening process was carried out and the consultation authorities agreed that a full assessment was not required in the development of the Local Heat and Energy Efficiency Strategy.

4.5 The following Corporate Risks have been identified as relevant to this matter on a Corporate Level:

ACORP001 Budget pressures (Our Environment and Our Economy)

ACORP004 Business and organisation change (including ensuring governance structures support change; managing the pace of change)

ACORP005 Working with other organisations (e.g. supply chains, outsourcing and partnership working)

ACORP010 Environmental challenges e.g. extreme weather events, climate change.

The following Risks have been identified as relevant to this matter on a Strategic Level:

ISSR004 as it relates to Climate Change in the (Directorate Risk Registers)

4.5.1 Mitigation of these risks could be addressed by sufficient communication and engagement on the progress Aberdeenshire Council is making with regards to climate change mitigation and adaptation both internally and externally. This includes being transparent on the challenges of addressing climate change as well as the opportunities for external collaboration and funding which should be identified and pursued.

5 Scheme of Governance

5.1 The Head of Finance and Monitoring Officer within Business Services have been consulted in the preparation of this report and their comments are incorporated within the report and are satisfied that the report complies with the Scheme of Governance and relevant legislation.

5.2 The Sustainability Committee is able to consider this item in terms Section R paragraph 1.1 (a) of the List of Committee Powers in Part 2A of the Scheme of Governance which dictates that this committee review and monitor the Council's work in respect of sustainable development and climate change.

Alan Wood
Director of Environment and Infrastructure Services

Report prepared by Yvonne D'Ambruoso, Sustainable Development Officer (Climate Change)
9 February 2024

List of Appendices

Appendix 1: LHEES Draft
Appendix 2: Integrated Impact Assessment.

Aberdeenshire COUNCIL

From mountain to sea

Local Heat and Energy Efficiency Strategy (LHEES) Aberdeenshire Council draft for comment

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Glossary

ABS	Area-Based Schemes
ASHP	Air Source Heat Pump
CHP	Combined Heat and Power technology
Decarbonisation	Reduction or elimination of carbon dioxide emissions from a process
DNO	Distribution Network Operator
ECO	Energy Company Obligation
EES: ABS	Energy Efficient Scotland: Area Based Schemes
EESSH	Energy Efficiency Standard for Social Housing
EPC	Energy Performance Certificate
EST	Energy Saving Trust
GIS	Geographic Information System
GSHP	Ground Source Heat Pump
HEEPS: ABS	Home Energy Efficiency Programmes for Scotland: Area Based Schemes
HES	Historic Environment Scotland
HiBS	Heat in Buildings Strategy
HNSU	Heat Network Support Unit
HNZ	Heat Network Zones
HVO	Hydrotreated vegetable oil
LA	Local Authority
LAEP	Local Area Energy Plan
LDP	Local Development Plan
LHEES	Local Heat and Energy Efficiency Strategy
Low regret measures	Relatively low-cost measures that provide relatively large benefit under predicted future climates
LPG	Liquefied Petroleum Gas
MCS	Microgeneration Certification Scheme
No regret measures	Cost effective measures now and under a range of predicted future climates that do not have hard trade-offs against other policy objectives
NPF4	National Planning Framework 4
PEAT	Portfolio Energy Analysis Tool
RSL	Registered Social Landlord
SAP	Standard Assessment Procedure
Solar PV	Solar Photovoltaic
UPRN	Unique Property Reference Number
Zero Carbon	Systems with lower operational carbon dioxide emissions
ZDEH	Zero Direct Emissions Heating
ZWS	Zero Waste Scotland

Overview

What is a Local Heat and Energy Efficiency Strategy? (LHEES)	A long-term, flexible strategy providing a local, tailored approach for an area. Their aim is to direct improvements in building energy efficiency and plan for changes to climate friendly heating of all buildings[1].
Why are the Council preparing a Local Heat and Energy Efficiency Strategy?	The Scottish Government's Local Heat and Energy Efficiency Strategies (Scotland) Order 2022 requires local authorities to publish a strategy and delivery plan. Increasing buildings' energy efficiency and changing to climate friendly heating will help Aberdeenshire, and Scotland, reduce greenhouse gas emissions while contributing to achieving reduction targets which will help address the climate emergency. Support from Scottish government will be required to action these aspirational solutions.
Focus of this Local Heat and Energy Efficiency Strategy?	The strategy and delivery plan will have some aspirational actions which could be delivered in the first few years to reduce climate change impacts. It will also identify where further work is needed. This includes actions on tackling key challenges to ensure we have a successful document which is useful for all stakeholders. The pace of change needs to increase if our nation is to reach the ambitious targets set. This strategy will provide focus to enable improvements to be rolled out. The strategy will also allow for new policies, targets, and data to be considered as and when required. We recognise that this document highlights the current situation and that achieving Government aspirations will require significant investment.
Call to Action	Making buildings greener and more environmentally friendly will help reduce greenhouse gas emissions and meet national targets. To achieve this, everyone will need to do their part to reduce greenhouse gases from buildings and improve energy efficiency. The Council, businesses, organisations, communities, tenants, and householders will all need to work together to make progress on this issue. Support and direction from Government will be key.
What is meant by a just transition?	Scottish Government defines a just transition as *"both the outcome – a fairer, greener future for all – and the process that must be undertaken in partnership with those impacted by the transition to net zero. Just transition is how we get to a net zero and climate resilient economy, in a way that delivers fairness and tackles inequality and injustice."*[2]
Who are stakeholders?	Stakeholders include all public, private and third sector organisations in Aberdeenshire, as well as people who live in Aberdeenshire and their communities.

[1] https://www.gov.scot/publications/local-heat-energy-efficiency-strategies-delivery-plans-guidance/
[2] National Just Transition Planning Framework - Just Transition - A Fairer, Greener Scotland: Scottish Government response - gov.scot (www.gov.scot)

Executive Summary

Introduction

The Local Heat and Energy Efficiency Strategy (LHEES) is the key element to the Scottish Government's place-based, locally led, tailored approach to heat decarbonisation and energy efficiency across the country.

The Heat in Buildings Strategy[3] presents the Scottish Government's vision for the future of heat in buildings. It sets out actions the Government is undertaking in the building sector to deliver their climate change commitments, while at the same time maximising economic opportunities and ensuring a just transition, including helping to address fuel poverty.

The key element of the approach to heat decarbonisation is the Local Heat and Energy Efficiency Strategy (LHEES). The aim of an LHEES is to set out a long-term plan for how each local authority will decarbonise the heat supply in buildings and improve their energy efficiency across the entire local authority area.

The Scottish parliament passed The Local Heat and Energy Efficiency Strategies (Scotland) Order 2022[4] which requires all local authorities to produce an LHEES strategy and delivery plan by December 2023 with these to be reviewed at five-yearly intervals. This is the first iteration of that document.

Reducing emissions from buildings represents one of the most critical and daunting tasks to combat Scotland's role in climate change. The transformation of our homes and workplaces is imperative to achieve greater comfort, efficiency, and environmental responsibility. Scotland has committed to ambitious targets, with the Scottish Parliament unanimously agreeing on "net zero" greenhouse gas emissions by 2045. Interim milestones include a 75% reduction by 2030 and 90% by 2040[5]. Around one-fifth of Scotland's total greenhouse gas emissions come from providing heat in buildings, improving their energy and performance becomes pivotal on our journey to net zero.

The rate of change required to reduce the climate impact of emissions means that as a society we must prioritise enhancing the infrastructure of our homes. In doing so, we can attain not only emission reductions but also various benefits, such as better heating efficiency, better comfort with health benefits and reduced energy expenses. Moreover, these efforts are hoped to help alleviate fuel poverty. Nevertheless, fabric improvements alone will not make us reach net-zero emissions from buildings. It is equally vital to transition from direct emissions heating systems like gas and oil boilers to zero direct emissions alternatives such as heat pumps and heat networks. By adopting these measures, we will curtail the energy consumption for heating in buildings, ensuring they no longer directly contribute to climate change.

The LHEES for Aberdeenshire was developed with input from key stakeholders and with the delivery plan, once developed in detail, will direct the changes required for the building stock across the area. It will identify various options for decarbonisation and inform where investment in infrastructure is needed to support mass change of heating across the area.

[3] Heat in Buildings Strategy - achieving net zero emissions in Scotland's buildings - gov.scot (www.gov.scot)
[4] The Local Heat and Energy Efficiency Strategies (Scotland) Order 2022 (legislation.gov.uk)
[5] Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 (legislation.gov.uk)

Further input in the consultation process and beyond would be welcomed from businesses, organisations, community groups and other stakeholders. One key takeaway should be that everyone will be affected in one way or another and for our area to succeed in a fair and just transition, we need to know what works best for those that will be living and working here.

Strategic Vision

The Heat in Buildings Strategy's[6] vision "*that by 2045 our buildings are cleaner, greener, and easy to heat, and no longer contributing to climate change, as part of the wider just transition to net zero*." is one that this LHEES and Aberdeenshire Council support. Our vision for this first Local Heat and Energy Efficiency Strategy is to:

> ***Provide a baseline for Aberdeenshire to begin the process of systematically improving the energy efficiency of the buildings in the area, alongside reducing the carbon intensity of the heat demand in a way that is accessible for all reducing both fuel poverty and carbon emissions within the area, minimising the contribution to climate change.***

Drivers

National and local policies which drive this LHEES are detailed in Section 3. Heating is the UKs biggest source of carbon emissions producing 37% of the UK total. Of that 37%, around 14% is attributable to heating (and cooling) domestic properties[7]. This is why it has become a target to reduce emissions from heating for governments in the UK.

Another driver which must be recognised is the current cost of living/energy crisis. Energy costs have soared for all from late 2021 and show little signs of coming down. With Aberdeenshire having high levels of properties without mains gas, this is exacerbated since oil or LPG heating is a more expensive way to heat buildings than mains gas.

The pathways suggested within this LHEES, if actioned, would reduce both the level of fuel poverty and carbon intensity of the heating across the area.

Opportunities

There are a few technologies which could offer low or zero carbon heating choices currently and some in development for the near future, but there is no single technology that will be able to achieve decarbonisation economically and effectively at the scale required. Electrification of heat or moving to zero direct emissions heat networks (where available) are considered the top two options.

Within the industry there is a focus on fabric first, dealing with the structure of the building prior to adjusting the heating technology. This is where insulation and basics such as double glazing and draught-proofing come in. The fabric first measures reduce the energy requirements of the building to achieve the same levels of comfort which also means that lower temperatures can be used which are more efficient than higher temperature systems and a common thread in renewable technologies.

Insulation, heat pumps and heat networks will all feature as key requirements for buildings. In the North East, we have long been a centre of excellence for oil and gas and are now developing as

[6] Heat in Buildings Strategy - achieving net zero emissions in Scotland's buildings - gov.scot (www.gov.scot)
[7] https://es.catapult.org.uk/guide/decarbonisation-heat/

an energy centre and that could extend to energy efficiency too. There a serious skills gap in the energy efficiency and decarbonisation industry, particularly in our region, which could compliment the transition phase away from oil and gas, utilising those skill sets for new purposes and expanding the employment opportunities which will benefit the area.

Challenges

Some potential challenges have been highlighted during the researching of this LHEES. Solutions to these issues will be required otherwise they could undermine the desired changes. These are detailed in Section 4.2 and relate to insulation issues, gap in skills, heat pump suitability and funding.

The challenges need to be addressed prior to implementation to ensure that undesired impacts do not occur. This would have issues for the affected building and occupant as well as having reputational damage to the recommended actions. To mitigate this, we will focus on the inclusion of measures that have a high certainty of success and positive impacts. We will avoid any recommendations that could cause damage to buildings or have a negative impact on fuel poverty of the occupants. This will mean that actions to resolve the potential issues must be included in the delivery plan.

Future potential

Some potential solutions are being trialled in areas of the UK and whether they become part of the decarbonisation solution will depend on government decisions and appropriateness. One example is Hydrotreated Vegetable Oil (HVO) liquid fuel which could replace kerosene in oil boilers as a slightly lower carbon alternative. HVO does raise some issues related to carbon footprint of supply and knock on effects of using the oil as a fuel, nevertheless, it could be a potential where other solutions cannot be used. Another example is hydrogen in the gas network which is to be decided upon by UK government from 2026. For now, neither of these will feature in the Aberdeenshire LHEES but policy around them will be tracked and incorporated in future iterations where appropriate.

Primary Priorities

This strategy has four primary priorities which will drive the delivery plan and be the initial areas of focus. These are expanded upon in chapter 6. These initial priorities are to drive change. There is a real sense of urgency to make changes that will reduce carbon emissions within the next 5 years, which is the timeframe for this first LHEES and delivery plan. The priorities are all interlinked, progress is required on them all.

Priority 1: improve building energy efficiency. This applies to all building types, in the UK and the North East in particular, we have a high percentage of inefficient, leaky buildings. We need to identify the actions that work for specific building type without unintended consequences.

Priority 2: increase uptake of low and zero-carbon heating technologies across the area. This priority relies on the properties in question being able to take on the identified solutions. Part of this is identifying areas that present good opportunities for potential heat networks.

Priority 3: drive reduction in fuel poverty across Aberdeenshire. This is a key priority which has some statutory targets and will be linked to the other priorities. Often poor energy efficiency of buildings can be a driver for fuel poverty, particularly in off gas grid locations.

Priority 4: increase awareness of available information relating to decarbonisation and energy efficiency. This one is key to engaging communities that we hope to support through the energy transition. There are some funding opportunities as well as building archetype guides to inform people as to the appropriate insulation methods for specific property types. Looking at the figures on uptake of financial support would suggest this information is not widely known.

LHEES Development

Methodology and guidance documents were supplied by Scottish Government to support the development of each local authority LHEES, these documents were used to develop this document, though the final version did not use the given template which was optional. In addition, Scottish Government partners, Zero Waste Scotland (ZWS), led development sessions to go through the various stages described in the methodology and to help deepen the knowledge of local authority LHEES officers. Prior to the statutory obligation to develop the LHEES, Scottish Government organised quarterly forums where local authority officers and some interested consultants could come together to raise questions on the initial methodology and anticipated process. All these were very useful in learning about the requirements as they developed. Separate to this, there was an LHEES officer group convened by the Improvement Service where officers could have useful conversations about any issues and findings that arose in a less formal manner. There was opportunity to give and receive guidance from the various experience levels present. Thanks are due to the knowledgeable voices on that group that supported the production of this strategy and delivery plan, in particular the LHEES team at Fife Council who shared the structure of their strategy to be used as a framework for Aberdeenshire. This alternative structure was easy to follow, logical and will support readers to understand the potential options for Aberdeenshire in a concise and clear manner. It will enable people from all groups in our region to appreciate what needs to be done to the buildings we own, rent, and use to reach the levels of improved energy efficiency and heat decarbonisation required to achieve net zero and fuel poverty targets which are the ultimate goal.

1. Introduction

1.1. Why are we producing a Local Heat and Energy Efficiency Strategy?

In May 2022 Scottish Government passed an order 'The Local Heat and Energy Efficiency Strategies (Scotland) Order 2022' which put a statutory duty on all local authorities to publish a strategy and delivery plan.[8].

Local Heat and Energy Efficiency Strategies (LHEES) are at the heart of a place based, locally led and tailored approach to the heat transition. These local Strategies will underpin an area-based approach to heat and energy efficiency planning and delivery. LHEES Strategies will set out the long-term plan for decarbonising heat in buildings and improving their energy efficiency across an entire local authority area.

LHEES should be primarily driven by Scotland's statutory targets for greenhouse gas emissions reduction and fuel poverty:

- Net zero emissions by 2045 and 75% reduction by 2030.
- In 2040, as far as reasonably possible, no household in Scotland is in fuel poverty.

For each local authority area, the Strategies should:

[8] https://www.legislation.gov.uk/ssi/2022/171/contents/made

- set out how each segment of the building stock needs to change to meet national and local 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 strategic heat decarbonisation zones, and set out the principal measures for reducing buildings emissions within each zone; and
- prioritise areas for delivery, against national and local priorities.

Accompanying the Strategies will be delivery plans, which will be developed in partnership with key stakeholders, and provide a strong basis for action for local communities, government, investors, developers and wider stakeholders, pinpointing areas for targeted intervention and early, low-regret measures.

LHEES are long term strategies to be developed for each local authority area, tailored to the region to improve the energy efficiency of buildings, and reduce the carbon impact of heating them. This supports the Scottish Government's Heat in Building Strategy vision[9]: "Our vision is that by 2045 our homes and buildings are cleaner, greener and easy to heat, with our homes and buildings no longer contributing to climate change, as part of the wider just transition to net zero".

The LHEES focusses on heating of buildings from domestic dwellings to multi-story business centres and everything in between. As a region, we need to address what changes across the building stock will be required to meet national and local targets and objectives in order to tackle climate change or at a minimum, stop the heating of these buildings from impacting on greenhouse gas emissions which could impact climate change further.

To achieve these aims will require input, collaboration, and support from everyone across Aberdeenshire including businesses, householders, tenants, organisations, and the Council supported by Scottish Government. Working together we can make Aberdeenshire cleaner and greener improving comfort and quality of life for everyone in a way which is fair and just, making sure that no-one is left behind.

1.2. Strategic Vision and desired outcomes

Aberdeenshire Council supports the Heat in Buildings Strategy's[10] vision "*that by 2045 our buildings are cleaner, greener, easy to heat, and no longer contributing to climate change, as part of the wider, just transition to net zero*."

Using key supporting documents, local data analysis and working with key stakeholders within Aberdeenshire Council and in the wider community, the following vision statement for our first Local Heat and Energy Efficiency Strategy is to:

> ***Produce a strategy with guided focus for Aberdeenshire to improve the energy efficiency of all building types across the area, with affordable warmth provided by decarbonised heat sources, ensuring that buildings are no longer responsible for contributing to climate change and support us to meet statutory and aspirational targets.***

[9] https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings/

[10] Heat in Buildings Strategy - achieving net zero emissions in Scotland's buildings - gov.scot (www.gov.scot)

We will aim to align with the key targets and aspirations from the National and Local policies. Our delivery plan will focus on this and specifically on buildings of high influence, aiming to pave the way for others to follow our lead.

Our key priorities form the foundation of this strategy and delivery plan. These were developed from national and local policies and strategies, working with internal and external stakeholders and data analysis.

Focussing on key priorities for the first iteration of the LHEES aims to accelerate the journey to improve energy efficiency and decarbonise the heat provided in buildings. These aims go hand in hand with reducing fuel poverty and improving quality of life for people in Aberdeenshire.

Priority 1: improve building energy efficiency.
Priority 2: increase uptake of low and zero-carbon heating technologies across the area.
Priority 3: drive reduction in fuel poverty across Aberdeenshire.
Priority 4: increase awareness of available information relating to decarbonisation and energy efficiency.

The above targets take into account requirements of the Heat in Building strategy, The Council plan and information given by stakeholders in LHEES workshops. The priorities are discussed in further detail in Chapter 7.

2. Structure and Function

2.1. Structure

The Local Heat and Energy Efficiency Strategies (Scotland) Order 2022 came about after considerable engagement and participation in pilot programmes with all 32 local authorities in Scotland.

The resulting LHEES framework has a two-part structure:

- The strategy is a long-term strategic framework for the improvement of the energy efficiency of buildings in the local authority's area, and the reduction of greenhouse gas emissions resulting from the heating of such buildings.
- The delivery plan is a document setting out how a local authority proposes to support implementation of its local heat and energy efficiency strategy. This will require input and action by building owners and residents across Aberdeenshire.

2.2. Function

Energy for heating buildings (including water heating) is responsible for around a fifth of carbon emissions in Scotland. Around 50% of all Scottish energy demand is for heating[11]. This needs to be addressed to reduce energy consumption and reach the various Net Zero Carbon commitments across Aberdeenshire.

The LHEES strategy and delivery plan guidance gives a framework of six considerations[12] which have been used to develop our strategy and delivery plan.

[11] https://scotland.shinyapps.io/sg-scottish-energy-statistics/?Section=WholeSystem&Chart=EnConsumption

[12] https://www.gov.scot/publications/local-heat-energy-efficiency-strategies-delivery-plans-guidance/pages/2/

Table 1: LHEES considerations

	No.	LHEES Considerations	Description
Heat decarbonisation	1	Off-gas grid buildings	Transitioning from heating oil and LPG in off-gas areas
	2	On-gas grid buildings	On-gas grid heat decarbonisation
	3	Heat networks	Decarbonisation with heat networks
Energy efficiency and other outcomes	4	Poor building energy efficiency	Poor building energy efficiency
	5	Poor building energy efficiency as a driver for fuel poverty	Poor building energy efficiency as a driver for fuel poverty
	6	Mixed-tenure, mixed-use and historic buildings	Mixed-tenure, mixed-use buildings, listed buildings, and buildings in conservation areas

(Visual to be replaced with clearer version)

- 'Low regrets' heat decarbonisation. This is identifying off-gas mains areas that will transition primarily from heating oil and LPG, and potentially viable heat networks in more densely populated areas. This is particularly relevant in Aberdeenshire as we have a large percentage of properties that cannot access the gas grid.

- On-gas grid heat decarbonisation. To meet our emissions targets, we must reduce significantly, and eventually phase out entirely, our use of natural gas. By 2030 at least 1 million homes across Scotland will need to have switched to zero emissions heat, away from high carbon heating such as gas. This consideration will identify on-gas areas that will transition to zero carbon heating. It should be noted that currently the LHEES methodology does not identify where hydrogen or other decarbonised alternatives to gas could be used.
- Secondary outcomes include identifying areas in which:

    - there are mixed-tenure, mixed-use and historic buildings. For mixed-tenure and mixed-use, building level intervention is likely to be the most effective way to reduce emissions caused by heating. For historic buildings (including those in conservation areas and listed buildings), these are categories that may require established alternative approaches to the installation of low carbon heat and energy efficiency solutions, or where specific advice and support might be available. Identifying such areas would enable the public sector to coordinate or regulate to achieve this outcome;

    - poor building energy efficiency is prevalent leading to higher fuel use and where it acts as a driver of fuel poverty. This would enable the Scottish Government to continue to ensure that the area-based energy efficiency and heat decarbonisation projects through the HEEPS: ABS (Home Energy Efficiency Programmes for Scotland: Area Based Schemes) programme will be effective in reducing fuel poverty, as well as highlighting where extreme fuel poverty is prevalent and further measures may be needed.

For Aberdeenshire, our strategy and delivery plan will use the data analysis to identify and prioritise future actions.

At a strategic level, this is identifying the possibilities for certain zones or property types across the area. This will give an idea of the scale of potential solutions and highlight initial areas of focus for the first LHEES delivery plan as well as identify where further analysis is required.

3. Policy and Drivers

3.1. Summary of policy landscape

Many national and local policies and strategies guide the direction of this LHEES. Principally Scottish Government's Heat in Buildings Strategy[13], The Climate Change (emissions reduction targets) Scotland Act 2019[14], Heat Networks (Scotland) Act 2021[15] and Fuel poverty Act 2019[16].

3.2. National policy and strategy

The following table takes highlights from the key national policy and strategies related to energy efficiency and heat decarbonisation. The priorities, actions, and targets within these, support the framing of the LHEES for the local authority. These will continue to be monitored with the ongoing development of the LHEES Strategy and delivery plan as changes may influence the direction and urgency of specific areas of change.

The full list of related policies and drivers for the LHEES are noted in Appendix 1.

Table 2: Highlights from National policies and strategies related to Energy Efficiency and Decarbonisation.

National Policy /Strategy	Description	Priorities/ targets/ actions
Climate Change (Emissions Reduction Targets) (Scotland) Act 2019	Targets to reduce Scotland's emissions of all GHGs (Greenhouse gases) to net-zero.	Net-zero by 2045; 56% by 2020; 75% by 2030; 90% by 2040.
Updated Climate Change Plan	This update to Scotland's 2018-2032 Climate Change Plan sets out the Scottish Government's pathway to new and ambitious targets set by the Climate Change Act 2019. It is a key strategic document on our green recovery from COVID-19.	See Heat in Buildings Strategy.

[13] Heat in Buildings Strategy - achieving net zero emissions in Scotland's buildings - gov.scot (www.gov.scot)

[14] https://www.legislation.gov.uk/asp/2019/15/enacted

[15] https://www.legislation.gov.uk/asp/2021/9/2021-03-31

[16] https://www.legislation.gov.uk/asp/2019/10/enacted

Heat in Buildings Strategy	Updates the Energy Efficient Scotland route map and commits to putting in place standards and regulation for heat and energy efficiency to ensure that all buildings are energy efficient by 2035 and use zero emission heating and cooling systems by 2045.	The strategy contains 111 actions, some of the key figures are: • Private rented homes to reach Energy Performance Certificate (EPC) grade C by 2028. • 68% reduction in emissions by 2030 against a 2020 baseline. • 1 million homes and 50,000 non-domestic buildings zero or low emissions heating systems by 2030. • Heat Networks Target: the combined supply of thermal energy by heat networks to reach 2.6 TWh of output by 2027 and 6 TWh of output by 2030. • All homes to reach EPC C by 2033. • All fuel poor homes to reach EPC B by 2040. • Buildings no longer contribute to climate change by 2045. • The Heat in Buildings Bill is currently out for consultation and will result in other actions and requirements.
Heat Networks (Scotland) Act 2021	The aim of the Act is to encourage greater use of heat networks in Scotland. Only the identification of potential heat network zones is part of the LHEES requirements. Further investigation would be required to gauge which sites are viable.	The Act puts in place rules and regulations on heat networks, including: •making applications. • identifying exemptions. • granting licenses. • identifying potential heat network zones / setting up heat network zones.
Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act	The Bill sets out a new target relating to the eradication of fuel poverty, as well as providing a revised definition of fuel poverty.	By 2040: no more than 5% of households in Scotland are in fuel poverty (FP); no more than 1% of households in Scotland are in extreme fuel poverty (EFP). By 2030: 15% (FP); 5% (EFP) and by 2035: 10% (FP); 3% (EFP).
NPF4	Scotland's national spatial strategy sets out spatial principles, regional priorities, national developments and national planning policy – our area is North East which encompasses Aberdeen City, Shire and links to neighbouring authority areas.	To deliver sustainable places, Regional Spatial Strategies and Local Development Plans in this area should plan infrastructure and investment to support the transition from oil and gas to net zero, whilst protecting and enhancing blue and green infrastructure and decarbonising connectivity. With a focus on growing the renewable sector here and promoting the energy transition, skills already in the area can be utilised for the emerging technologies required to transform the building sector.

As well as the key strategies noted in the previous table, the EESSH2 (Energy Efficiency for Scottish Social Housing 2) programme, which is currently suspended pending review, is a standard for social housing which plays a significant part in improving the energy rating of these properties while alleviating potential fuel poverty for the residents. There is a proposed Scottish Government replacement called the Social Housing Net Zero Standard which would require landlords to replace fossil fuel heating systems by 2045 and reach EPC rating of B by 2040.

National policies will drive development and change across Scotland and support development of local policies which focus on the specific requirements for Aberdeenshire. The national policies noted above have a focus upon reducing the carbon impact of heating, reduction of fuel poverty and increase in heat networks, or highlighting of areas to investigate further to confirm viability. The North East as a whole is known for oil and gas expertise and while there will be a required program of development to move away from this dependency, the skills in the area being able to transition over to low carbon technologies and infrastructure will be pivotal for ensuring the skills gap is closed for these emerging technologies.

3.3. Local policy and strategy, and linkages

Aberdeenshire Council have 6 strategic priorities: Climate change, Infrastructure & public assets, Resilient communities, Economic growth, Health & wellbeing and Learning for life. These are a reflection of current challenges, all of which the LHEES can influence and be influenced by.

There are multiple local strategies, policies and plans that support the achievement of the 6 strategic priorities and that have some influence or overlap with the LHEES. Local policies tend not to have specific targets but confirm the way we are heading or need to go. The key policies are noted below with the full list in Appendix 2.

Table 3: Highlights from Local Strategies and Policies

Local Strategy / Policy/ plans	Description	Priorities/ actions
Local Outcome Improvement Plan	This Plan provides a vision and focus, based on agreed local priorities, to which partners work systematically and collaboratively to meet the needs and aspirations of local communities in Aberdeenshire. Identifies four key priorities, each with their own action plans, only one of which is relevant for LHEES (see Reducing Poverty Action Plan below)	Priority 1: Reducing Child Poverty in Aberdeenshire (broadened to “Reducing Poverty” in 2020) - see detailed actions in reducing poverty plan below.

Reducing Poverty Action Plan (September 2021 Update)	Identified 17 key actions for reducing poverty across Aberdeenshire	Action 5. Reducing home energy and fuel costs. Outcome is reduced living costs. Key focus is minority ethnic groups. KPIs: Increase the number of families that receive support to reduce fuel costs. Increase the number of funded energy efficiency measures installed in the private sector, via Scottish Government schemes. Decrease the number of families in both private and social sector housing living in fuel poverty. Action 10: Increase support for those who are financially vulnerable. KPI: Increase household income of low-income families by developing and implementing a comprehensive benefit take-up campaign i.e. fuel poverty voucher scheme/winter warm scheme.
The Council Plan[17]	Sets the strategic aims and outcomes that drive the council's work.	Three key pillars: Our People (Learning for life, Health and wellbeing), Our Environment (Climate change, Resilient communities) and Our Economy (Economic growth, Infrastructure and public assets). Key relevant council priorities: Health & Wellbeing: • Enable and deliver the provision of good quality, energy efficient and accessible housing. Climate Change: • Reach a 75% reduction in emissions by 2030 and Net Zero by 2045, with the Council showing leadership. Resilient communities: • Develop and implement a Place Strategy that considers the current and future needs of communities. • Support communities to help themselves and encourage and assist in the delivery of community priorities. • Improve the life chances of people at risk of falling into poverty, or already living in poverty. • Promote greater participation by communities in decisions that impact them.

[17] https://www.aberdeenshire.gov.uk/council-and-democracy/council-plan/

		Economic Growth: • Enabling community organisations and businesses to access project funding • Stimulate and nurture a culture of entrepreneurship within the region • Support new and existing businesses to thrive, creating competitive advantage and providing fair work opportunities • Develop our key sectors and secure inward investment to sustain economic growth Infrastructure and Public Assets: • Create and sustain a Council Estate that is fit for purpose to provide modern public services that meet the current and future needs of our communities.
The Local Housing Strategy	The Local Housing Strategy sets out Aberdeenshire's key housing plans over a five-year period. Also covers fuel poverty and energy efficiency priorities for the Council (no separate plans for these)	Priority 2: Energy Efficiency, Fuel Poverty and Sustainability. • Improve the energy efficiency of housing across all tenures. • Assist households to maximise their income. • Reduce fuel costs for households across all tenures. • Change behaviours. KPIs (no quantitative targets set): • Energy efficiency measures installed in private sector housing. • Energy efficiency measures installed in social sector housing. • Households receiving in-house, in-depth energy efficiency advice. • Households provided with social tariff referrals. • Households assisted to maximise their income. Priority 6: Private sector. • The quality of private sector housing is maintained and improved to promote health and wellbeing by addressing disrepair and enhancing energy efficiency. • The private rented sector provides high management standards that inspires consumer confidence and encourages growth through attracting increased investment. KPIs: • Number of households assisted in order to address BTS (below tolerable standards) elements or prevent properties falling BTS.

Local Development Plan	Informs and advises developers and communities on the principles that built development should follow and where it should be located.	Our current LDP was developed just prior to the issue of NPF4. There are links to the LHEES in being mindful of potential heat network zoning and what this could mean for future development areas and potentially locating key infrastructure.
Climate Change Declaration	Aberdeenshire Council recognises that the world faces a climate challenge, and our responsibility is to provide leadership in order to move to a more sustainable and low carbon future.	Sets out a commitment to working towards a carbon free society by reducing our emissions by 75% (against our 2010/11 baseline) by 2030 and become Net Zero by 2045.
Carbon budget	An annual carbon budget figure is set each year to keep the council on track for its commitment to reduce emissions by 75% by 2030 and Net Zero by 2045 using 2010/11 as a baseline year.	Each annual carbon budget report contains projects across the Council which will reduce emissions – this includes work being carried out in relation to energy efficiency and heat decarbonisation across the Council's owned non-domestic building stock.
Route Map 2030 (and beyond)	The Route Map to 2030 (and beyond) has been developed to identify what must happen across the authority in order to meet a 75% reduction in its own emissions by the end of the decade. A key aspect of the Route map is the creation of a toolkit which supports a cost-abatement curve and demonstrates which projects give us the most carbon savings for the least financial outlay so we can prioritise projects that give best value carbon reduction initially,	1: Set up a central steering group. 2: Define accountabilities, clear roles, responsibilities across the Authority for delivering the Route Map 2030. 3. Supply Chain Capacity and Capability Gap Analysis: 4: Set targets for reducing Direct and Indirect emissions 5: Delivery of the Feasibility studies at operational buildings, to support definition of future Carbon Budgets 6. EV/H2 Fleet assessment 7. Develop Hydrogen strategy 8.1 Electrification risk / resilience study. 8.2 Embed zero carbon standard for both new build and retrofit initiatives. 9.1 Residual Emission Action Plan including an organisational carbon footprint scope and target review. 9.2 Resilience / Adaptation assessment 9.3 Develop LHEES 9.4 Develop Re-use business case. 10. Central assurance and reporting:

	moving to the harder to reach projects as we progress.	11. Communications to support and implement the change and generate buy-in of the people and Directorates at all levels.
Regional Economic Strategy	20-year plan to deliver a range of activities that maintain and grow the economy, period covered is 2015-2035.	This is in development following the awarding of Investment Zone to the North East region. A draft was presented prior to this to Full Council last year: Agenda for Aberdeenshire Council on Thursday, 29th June, 2023, 10.15 am – Aberdeenshire Council (moderngov.co.uk) Key themes include: •To establish the North East as a pioneer of the energy transition, by delivering an 80% reduction in carbon emissions per head. • Maintain a healthy, sustainable, working age population through increasing economic participation rates • Protect and enhance the natural capital of the region by aligning to national ambitions to manage 30% of the region for people and nature by 2030

3.4. Other Drivers

In 2021, just over half of energy consumed, split by sector, was for heating[18] with related greenhouse gas emissions of 20%. Energy use for transportation and electricity make up most of the remaining 50%. With consumption and emissions related to heat so significant, Scottish Government set a target to have 50% of energy from renewable sources by 2030,[19]. To support this, the Scottish Government committed:

- £2.8 billion of investment over the current parliament[20] (to 2026).
- At least £200 million of investment in the public sector estate to improve and reduce energy use and install zero emissions heating systems[21].
- £479.6M for energy in the 2023-4 budget[22], of which £231.1 million is for tackling fuel poverty and improving energy efficiency.

The Scottish Government have also indicated Local Heat and Energy Efficiency Strategies will considered when allocating funding, there is no further detail on what this could mean.

Locally, the oil industry passed the production peak in the late 90's. Though the industry is still a key player in Aberdeen City and Shire, to keep those people employed in the area, we need to become a centre of excellence for energy in addition to oil and gas. Alongside this, there is a definite skills gap for installers of retrofit products and insulation which could be an answer to falling employment levels within the oil industry.

[18] Scottish Energy Statistics Hub (shinyapps.io)
[19] Scottish Energy Statistics hub.
[20] https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings/documents/
[21] https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings/ & https://www.gov.scot/publications/heat-networks-delivery-plan/
[22] https://www.gov.scot/publications/scottish-budget-2023-24/pages/10/

4. Opportunities, Challenges and Barriers

4.1. Opportunities

Although many of the proposed technologies are not new, some are still considered alternative here in Scotland, as such, local expertise, and knowledge on some of the heating solutions is limited. This could be seen as both a challenge and an opportunity.

A fabric first approach is key, dealing with any building inefficiencies prior to making any changes to the heat source. These range from small DIY jobs to large scale wall insulation.

Energy efficiency[23]
Insulation and draught proofing improve the capacity of a building to retain heat. Insulation can be fitted in loft spaces, under the floor, in and on the walls (depending on construction type) as well as on the pipework and water cylinders. Ensuring doors and windows are draught proof as well as fitting energy efficient doors and windows all help keep the heat in.

Decarbonised heating[24]
A heat pump extracts heat from the outside air, ground or a nearby water source using an electrically powered compressor. The quantity of heat delivered into your home is much greater than the quantity of electricity used to power the system. They are zero direct emissions technologies. There are 'air to air' systems which operate like an air conditioner, the most common heat pumps systems in the UK include wet heating systems similar to a standard gas boiler configuration. Direct electric heating such as storage heaters or electric boiler systems are also zero direct emission heating (ZDEH), though they are less efficient than heat pump technologies.

Heat Networks[25]
Heat Networks, also known as district heating, use one heat source and feed this heat round multiple properties. Across mainland Europe they are much more common than in the UK. The source of heat can be a single or series of heat sources such as combined heat and power (CHP) systems, gas boilers, heat pumps, or waste heat sources. Being part of a heat network removes the requirement for individual boilers or heaters in each property. However, heat networks require careful regulation, planning and significant capital investment before proceeding with development.

4.2. Challenges

The requirement to reduce building heating requirements using a fabric first approach and simultaneously decarbonise the heat sources across Scotland (and further afield) is a large-scale issue. Some funding is available if appropriately certified installers are used, the numbers of certified installers in Aberdeenshire is

[23] Measures to help reduce home heat loss - Energy Saving Trust
[24] In-depth guide to heat pumps - Energy Saving Trust
[25] Heat networks - Renewable and low carbon energy - gov.scot (www.gov.scot)

very low and as such, this limits the potential for residents to apply for and claim funding towards the fabric improvements. Further issues arise in continued maintenance of systems, sometimes the installation is done by companies further afield as it is a financially viable opportunity, however a routine service or call back for an arising issue is less so. The maintenance issue also arises where installers have travelled from out with the area to install as part of a funded package (for example ECO scheme installers). Recipients of the systems as funded packages can be left for longer periods with breakdowns due to the distance from the installers base location.

Similarly, certified installers of low carbon technologies are few. Some funding is available towards installation of heat pumps but again, the MCS accredited installation is a prerequisite. Even where contact is made with appropriately certified installers, they can be located quite remotely from Aberdeenshire which can cause delays to resolution should any problems arise. Scottish Government is aware of the skills gap. Supporting growth in this area could be a substantial opportunity to ensure a just energy transition, providing jobs, skills, and growing the market for export of Scottish zero emissions heating technology[26].

The 'heat' sector is only part of the drive to Net Zero and as such there will be competing priorities, particularly in areas of constrained electricity supply. Widespread rollout of technologies like heat pumps, batteries or solar panels need the grid to be robust enough to cope with the additional load. There will be some sectors of the economy that will continue to emit carbon which will need to be offset, as such, heating targets need to be tough, effectively zero carbon in most buildings. Currently there are under 3% of domestic properties in Aberdeenshire that are heated with zero carbon technologies which shows the scale of work to be done in our area.

There is no 'silver bullet' solution to resolve this issue, some locations will be better suited to heat networks where they become a viable option, others may lean towards individual property solutions such as heat pumps. A decision on hydrogen and any potential future use in heating will be made by UK Government in 2026.

Some properties require retrofitting of energy efficiency measures to ensure that any heat supplied in the property is not lost. Insulation and draught proofing requirements will depend upon the property construction and any previous work done.

Awareness of energy efficiency and the benefits of applying them to buildings has increased, particularly as a consequence of the recent energy crisis, however, awareness of incentives and support is not at the level it needs to be to encourage widespread adoption of zero carbon measures.

4.3. Barriers

Driving net zero emission heating systems is not the only challenge facing us in Scotland and Aberdeenshire. Transport is another huge hurdle which needs to be tackled to reach net zero. Transport Scotland are driving change in this area

[26] https://www.gov.scot/publications/heat-buildings-supply-chains-delivery-plan-towards-industry-green-heat/

investing their efforts to improve charging infrastructure across Scotland to enable people to switch to electric vehicles, in urban and rural locations so they can travel in the knowledge that they will be able to top up the battery along the route. Although transport is not part of the scope of LHEES, improvements to support greener travel options will also put demand on the electricity grid. Currently there is not a local area energy plan for Aberdeenshire, but this needs to be considered to ensure that the DNOs have the full picture of plans for the area that may affect their network. Unfortunately, not every home in Aberdeenshire will be heat pump ready. As most heat pumps use a lower temperature of heat, building energy efficiency and air tightness needs to be good. For some building types, the cost of getting to this stage is currently prohibitive.

Poorly completed works, either insulation or new heating systems can lead to dissatisfaction, higher energy costs and ultimately damage confidence in the steps this strategy will suggest. Having a quality assurance system such as the MCS process for installers can help alleviate this and gives assurance to those making the changes. Other potential approaches could involve air tightness testing and thermal imaging of properties to ensure any fabric measures have been carried out to the required standard prior to installation of low temperature systems.

Building fabric issues such as damp, mould and condensation can be highlighted upon the installation of insulation. This can be noticeable immediately or be a long-term issue that can degrade the building fabric over decades.

Possibly the largest of barriers is the potential cost. It has been mooted that the total cost to decarbonise Scotland's buildings will around £33billion between now and 2045[27]. This is both for the retrofitting of energy efficiency measures and replacement low carbon heating systems. As well as being a potential barrier, ensuring the appropriate skills and experience are in the local area will bring economic benefits and improve employment opportunities for the region.

To avoid some of the issues noted above, the Aberdeenshire LHEES will focus on measures which have a higher certainty of successful outcomes. Actions which will support the progression of other measures will be part of the detailed delivery plan.

5. The bigger picture

5.1. Whole area energy planning

This strategy is focussed on heat within buildings. We need to be aware of the wider area plans and requirements for energy that will also support the goal of a net zero economy such as electric vehicle charging and power storage. These other requirements and more will require grid supply and connection and may impact on possibilities for heat solutions in any one area.

The LHEES and delivery plan will provide information on likely scenarios which can be used to drive education, upskilling and potential investment in the area. The LHEES will feed into the next Local Development Plan to support plans for properties

[27] Chapter 1: Policy Context - Towards an Industry for Green Heat: heat in buildings supply chains delivery plan - gov.scot (www.gov.scot)

to link into the proposed actions in the delivery plan and potential heat network zones. Furthermore, should there be future industrial processes within the region that have heat that can be utilised, this will be considered in revisions of the delivery plan.

To ensure that plans and processes are not working against each other, it would be beneficial for this LHEES to feed into a comprehensive area or region wide energy plan.

5.2. Employment benefits

There is an identified skills gap in Aberdeenshire and the wider North East with respect to the required skills to improve property energy efficiency as well competent installers for carbon zero heating (including maintenance). This needs to change to enable building energy efficiency improvements and wide scale adoption of zero carbon heating systems.

To improve the building stock and reduce carbon emissions related to heat in Aberdeenshire will require significant investment. The PEAT domestic analysis for Aberdeenshire suggests costs of around £2billion to achieve just over 308,000 measures across nearly 116,000 properties. This does not consider any costs related to Heat Networks in the area which is another significant way heat can be decarbonised and fuel poverty reduced.

Employment linked to the oil and gas industry has been reducing in recent years. Having held the position of centre of excellence for oil and gas, the region is well placed to benefit from the transition to a low-carbon economy. There are already a number of innovative businesses in the renewables sector in the city and Aberdeenshire. Some former oil or gas energy personnel in the region could transition to energy efficiency or renewable energy which could help stave off unemployment in the area. This would occur over the coming decades as there will still need to be expertise retained in the oil and gas industry right through the transition.

5.3. Natural assets

Part of the investment costs noted above would relate to installation of air source heat pumps (ASHP) within appropriate properties which makes use of existing heat in the outdoor air to heat the property. This can be successful and is commonplace in parts of Europe that experience far harsher winters than we do in Scotland.

Alongside ASHP (or GSHP where suitable) there are other opportunities in our rural area that can be tapped into to heat our properties. Heat Networks can be developed to utilise various heat sources from using heat pump technology such as ground or water source heat pumps or using waste heat from wastewater systems or some industrial processes. There could be opportunity to utilise and amplify waste heat from industry across the region. Much of Aberdeenshire sits over geothermal granite ‘hot rock’ deposits. Though limited data exists on the potential within them for our area, there are successful examples worldwide of tapping into hot rocks for

energy production and associated heat which can power district heating in many countries including in the South of England.

5.4. Stakeholder input

As this strategy will cover all buildings across the area, it is crucial to engage with stakeholders from all sectors. In development, we have engaged with key internal department officers, RSLs, our DNO, local community representatives and a few business organisations that have expressed interest in this strategy. For this document to become fully embedded and useful for all, we will continue to reach out to gather input to finalise the initial version but also to further refine the delivery plan now and for future iterations. The delivery plan will be a fluid, live document that can be adapted to recognise local needs and opportunities that arise.

Some of the points raised by stakeholder engagement to date have been noted in this document. They include risks such as substandard insulation, due to lack of skilled workforce, which could mean properties affected are not as energy efficient as planned following installation. This will impact suitability for fitting low temperature zero carbon heating or the performance of such systems. Linked to this is the potential of increased fuel bills where measures are installed to inappropriate buildings causing high electricity usage. Stakeholder comments and input will be considered in development of the detailed delivery plan.

For Aberdeenshire, we will initially focus on measures that have a high chance of successful outcome, limiting potential damage to buildings and securing the reputation of climate friendly measures. This is likely to mean we begin with the easier to implement interventions such as glazing improvement and loft insulation.

Potential Issues and solutions:

Topic	Challenge	Possible Solution
Uncertainty of measures	Improving thermal efficiency of buildings is a key requirement prior to installing low temperature zero carbon heat solutions. However, poor installation can exacerbate issues, even causing side effects such as damp within the building or within the frame or cause high fuel costs. Archetype specific measures to be clarified.	• Focus on low regret measures that do not present potential issues. • Include an action to develop archetype specific measures in collaboration with others to identify reliable actions to undertake.
Energy Performance Certificate data	EPC analysis will often reflect visible measures but revert to building age and apply assumed measures. Current scoring methods do not lean to encouraging zero carbon heating.	• The EPC process has been consulted upon and is expected to resolve issues raised. • Changes to the system may require revisions to the strategy.

Heat pumps	Poorly insulated buildings and a lack of dedicated and knowledgeable installers impacts the effectiveness, cost and efficiency of heat pumps. This can increase the likelihood of fuel poverty for occupants. This is also a risk to the effectiveness of a strategy that will recommend their implementation as people are more likely to hear about poor installs than good ones.	• Building specific suitability needs to be identified before instal. • Upskilling of the workforce on heat pump specific issues and ongoing maintenance, needs to be coordinated. • Reliable, easy to access advice on heat pump use to be developed nationally.
Skills and supply chain	There is a significant skills gap for the installation of energy efficiency and heat decarbonisation measures. This is likely to affect the implementation of delivery plan actions. Incorrect installation (insulation or heat pump) may cause issues for the occupant. Due to a delay in the roll out of zero carbon measures, there is likely to be a bottleneck of demand for heat pumps when regulatory deadlines are near.	• There needs to be a nationally driven upskilling of the workforce, local efforts will ensure skills are available in the region too. • An increase in required workforce will become evident with the publishing across Scotland of LHEES and delivery plans giving job certainty (and investment assurance). • Supply chain should be made aware of forthcoming investment in heat pumps to enable them to keep up with demand.
Ensuring funding to deliver	The strategy and delivery plan will provide the framework for delivery of capital projects across the area. However, to be able to deliver the actions and further required analysis will require significant levels of additional funding and support. Local Authorities are struggling to balance their finances already and it is unlikely that there will be resources there to tap into. The cost for individual building owners (occupiers and landlords) may also be significant. This needs	• Some analysis can be done in-house to reduce costs. • Engage with Scottish Government on funding needs. • Be aware of any new funding opportunities and work with the support mechanisms within Scottish Government such as HNSU (Heat Network Support Unit).

	to be considered when making funding streams available to avoid any knock-on effect in the rental market.	

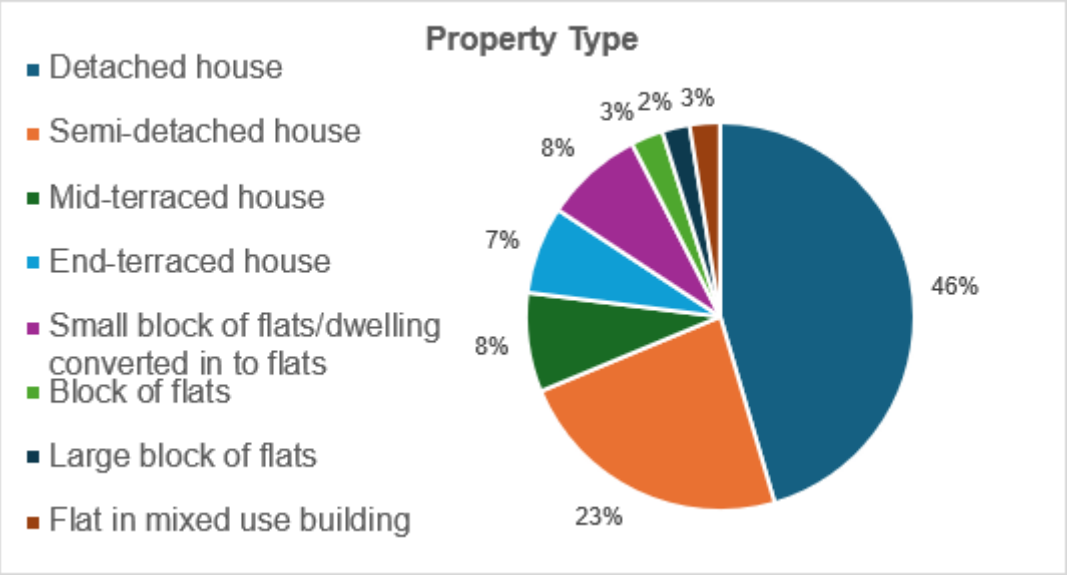
6. Aberdeenshire building stock baseline

6.1. Domestic

Aberdeenshire has approximately 123,000 domestic homes[28] with a population of around 264,000 (2022 census). The average heat demand per property in the region is 16,741kWh per annum. The whole heat demand for the area sits at around 205,000,000KWh/yr (or 205,000MWh/yr).

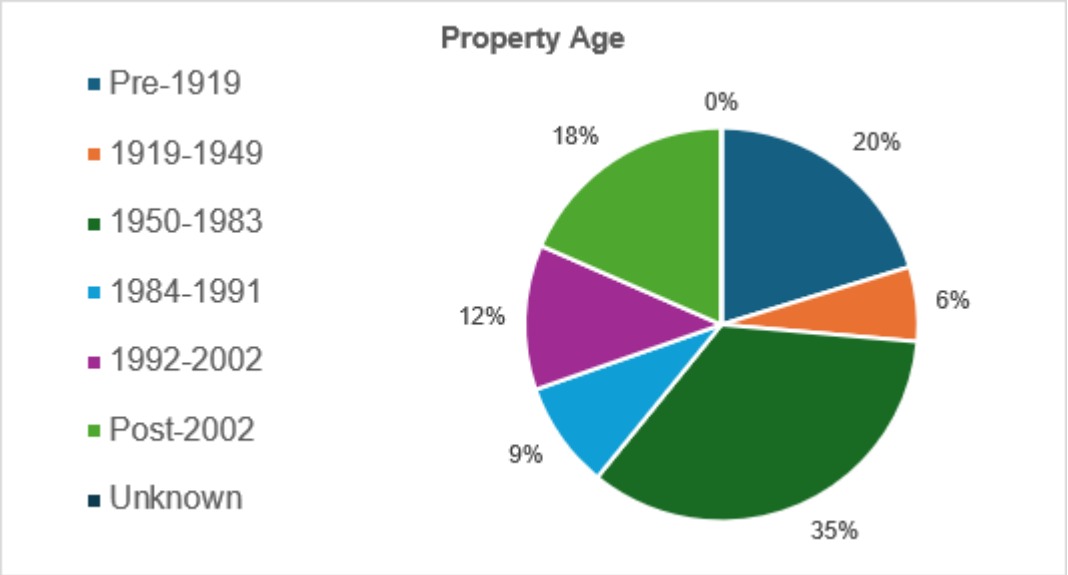
Age, Type and tenure
From our LHEES domestic baseline tool, we found that around 70% of the domestic stock was built before 1984, with 20% being pre-1919. Solid granite wall properties are commonplace around the North East in many of the traditional fishing villages and old towns. The total percentage of solid wall construction is 40% for the area. Solid walls are the most costly and technical to insulate.

The data showed that 94% of the domestic properties in Aberdeenshire would benefit from one or more measures to improve energy efficiency or decarbonise the heating system, that equates to 115,975 properties. If all the measures were carried out, at current costs (per energy savings trust Version 3.7.2) would be around £2billion, resulting in carbon savings of 370,000 tonnes per annum and running cost savings averaging £948 per household receiving at least one measure.



Domestic property type percentages.

[28] 123,048 listed in Local Heat & Energy Efficiency Strategy Domestic Baseline Tool



Domestic property age percentages

In Aberdeenshire, only 16% of dwellings are flats which is much lower than the national average of 40%. This weighting towards houses is typical of rural areas and smaller towns and villages.

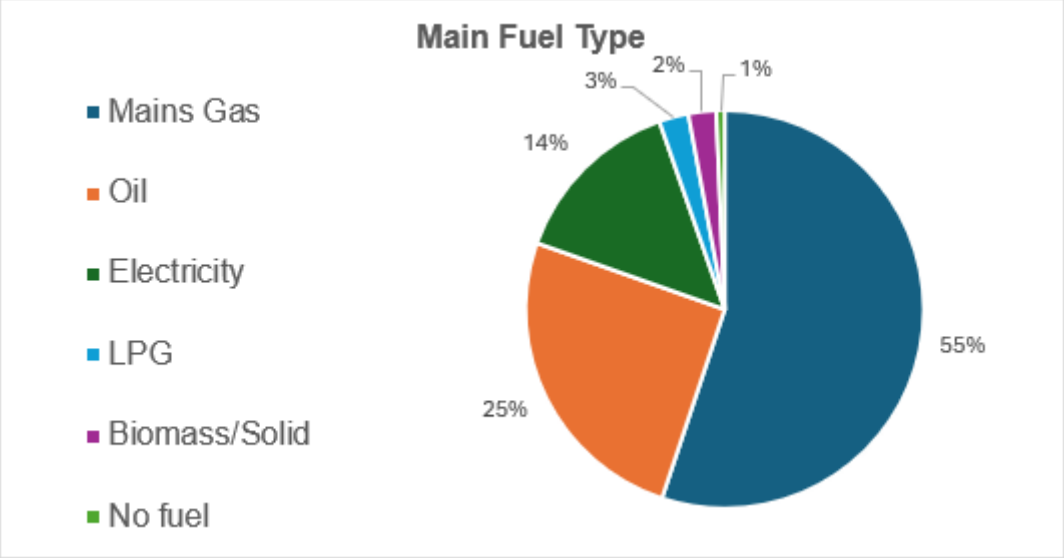
The tenure profile shows 71% of homes are owner-occupied, a 18% social housing, and 11% privately rented. The targets for achieving certain energy efficiencies for properties is dependent on this tenure, with social housing leading the way, followed by private rented, then owner occupied targets.

7% of our homes are in conservation areas, which is slightly lower than the national average of 10%[29]. 2% categorised as listed[30] in categories A, B or C.

Fuel types
As a large, rural authority there are 45% of properties that are not served by the gas grid. This is known as 'off-gas'. This is significantly higher than the national figure of 19%.

Oil heating features highly with those that are off the gas grid with electrical heating systems being the next most popular and only 3% use LPG and 2% biomass/solid fuels. 1% have no fuel and less than 1% unknown. To decarbonise in the off-gas areas, all those on oil and LPG as well as any on coal (part of the solid fuel 2%) would need to change to zero emission heat sources. Those currently using electricity can be counted as zero emission already, though some direct electric heating can be very expensive to run and cause fuel poverty issues or be slow to respond such as storage heating. Consideration should be given to ensuring the properties are as energy efficient as possible and potentially consider high efficiency systems such as heat pumps or heat networks where and when they are an option.

[29] Heat In Buildings Strategy: Achieving Net Zero Emissions in Scotland's Buildings (www.gov.scot)
[30] Historic Scotland categorises listed buildings based on their level of importance; Category A is assigned to buildings of national importance, Category B for buildings of regional importance, and Category C for buildings of local importance.



Domestic main fuel type percentages

Fuel poverty

Fuel poverty driven by high energy costs is exacerbated in off-gas grid areas due to the higher relative cost of heating oil, solid fuels or LPG compared with mains gas. That said, there are significant areas which are on-gas grid in Aberdeenshire that score as being at a greater risk of fuel poverty around Peterhead and Fraserburgh which are on-gas areas.

According to the Scottish House Condition Survey (SHCS), the percentage of households likely to be in fuel poverty in Aberdeenshire is 25% which is in line with the Scottish average. The percentage anticipated to be in extreme fuel poverty is 15% which is a little above the Scottish average of 12%.

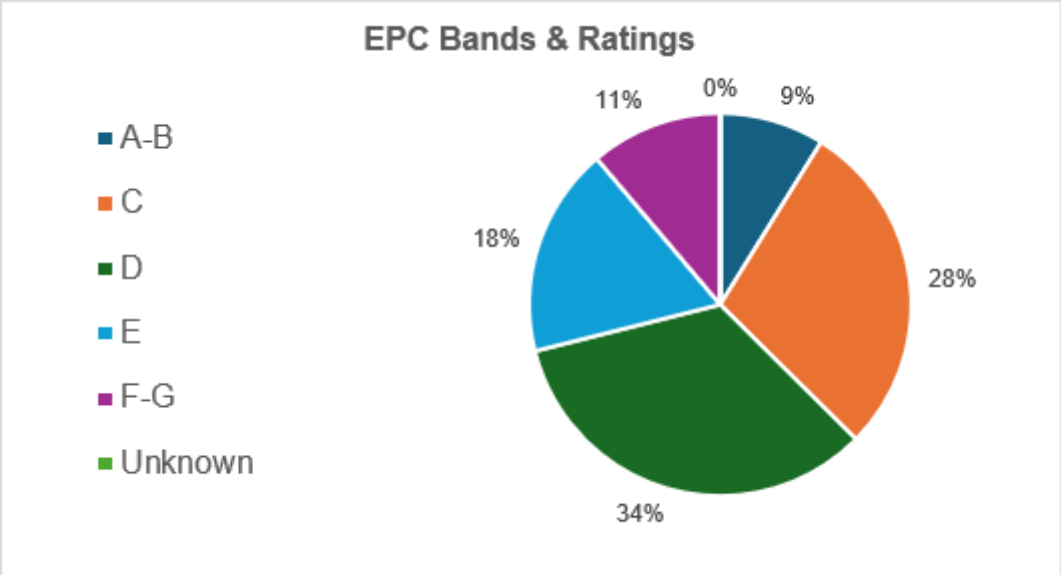
Since the data was gathered to reflect risk of fuel poverty, energy prices have soared, and it is likely that there are more households experiencing fuel poverty than before. Addressing building fabric to improve energy efficiency will provide some resilience against rising energy costs.

Fuel poverty is when after housing costs, 10% or more of the household income is required to maintain satisfactory heat levels in the property.
Extreme Fuel poverty is when is when more than 20% of the household income after housing costs is spent on fuel costs. Both definitions state that the remaining income left is not sufficient to maintain an acceptable standard of living.

Energy Efficiency

Around 63% of properties in Aberdeenshire have energy performance certificate (EPC) of D to G which is considerably more than the national average of 51% of properties in these brackets. 84% of homes in Aberdeenshire are detached, semi-detached or end of terraced. These will cost more to treat due to the greater external surface area to be insulated. 51% of domestic properties in Aberdeenshire have uninsulated walls which is above the national average of 41%. All this means

that the building stock in Aberdeenshire requires significant upgrading to provide warmer homes which hold on to the heat provided, giving more affordable warmth to occupants.



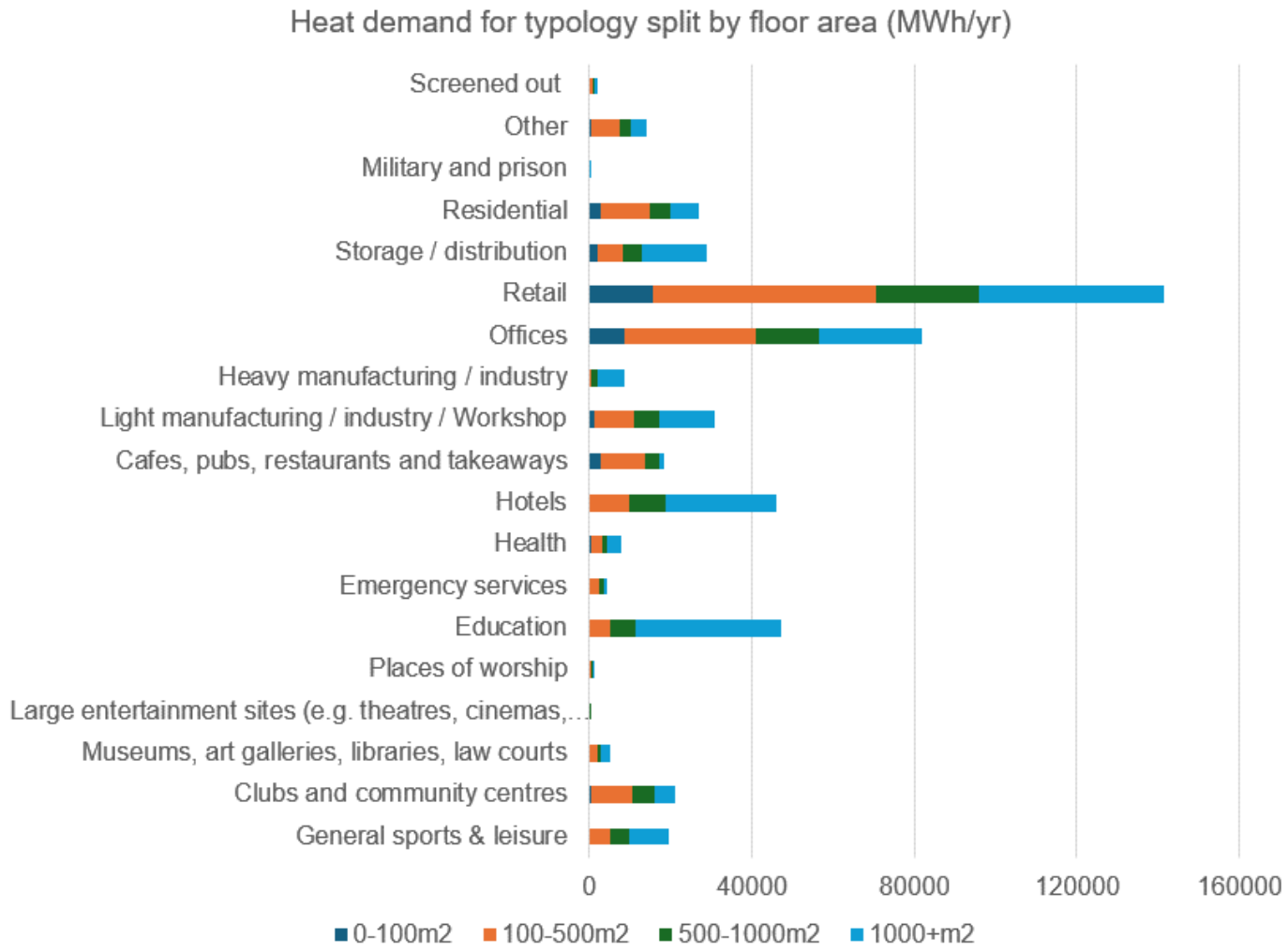
Domestic Energy Performance Certificate Band percentages.

6.2. Non-Domestic

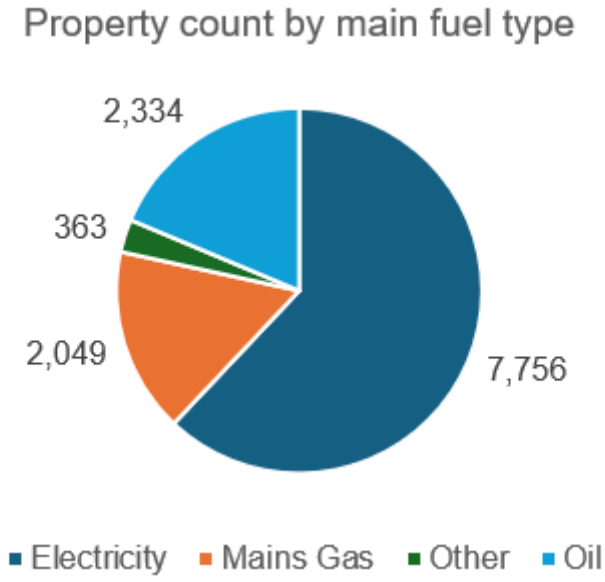
There are around 12,500 non-domestic buildings in Aberdeenshire[31]. The most common types being retail (39%) and offices (24%).

Heat demand is calculated to be 506,054MWh per annum. The graphs below show the energy demand split by floor area and also count of fuel type and heat demand by fuel.

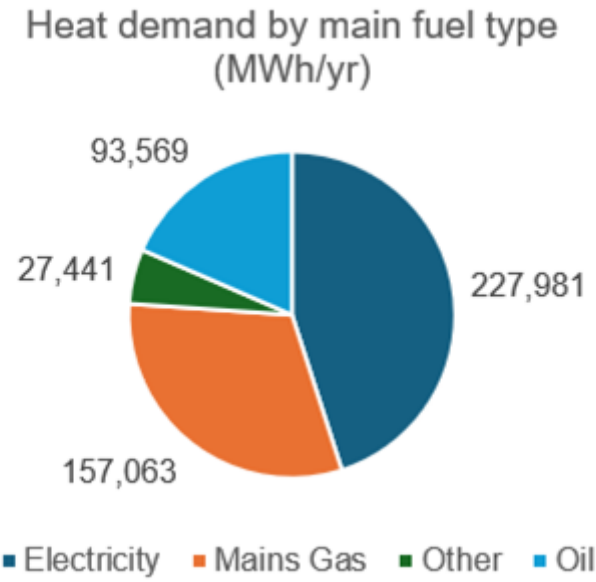
[31] 12,502 properties, based on Non-Domestic Analytics and Non-Domestic Baseline Tool.



Heat demand for non-domestic buildings split by floor area and type of occupant.



Non-domestic buildings fuel type count



Non-domestic buildings heat demand (MWh/yr)

Although only 16% of non-domestic buildings have gas for heating, the heat demand pie chart shows that around 30% of the non-domestic heat is fuelled by gas. The oil fuelled properties make up just over 18% and the oil-fired heat demand is 18% of the total. Between gas and oil, around half of the heat demand in these non-domestic buildings is high carbon.

There is a relatively even split between those built before 1949 (49%) and those after (51%) – with (46%) built pre-1919. Just over 3000 of pre-1919 properties are retail premises and offices. 39% of properties are in accessible rural locations with the remainder split across other urban areas, remote rural and remote small town. Challenges for Aberdeenshire are exacerbated by the fact that it is a large rural authority with no cities but a few large towns and many smaller population centres. Confidence in the non-domestic statistics is low, due to the amount of extrapolated data (around 80%), so any information that would potentially be used for other purposes would need to be verified. The recent requirement for public bodies to produce Building Assessment Reports will provide building specific, usable data for buildings that can be utilised for areas of interest, such as those which may be suitable for development of heat networks. It is anticipated that this requirement may be rolled out further in the coming years.

Across the non-domestic stock, local authorities have the most influence on their own and then some influence over other public body buildings and other RSLs. At almost 100,000GWh/yr, around 20% of the annual non-domestic heat demand is under the control of Aberdeenshire Council.

The regulatory timelines are nearer for public body buildings when compared to other non-domestic sectors with respect to the requirements to reach energy efficiency targets or zero direct emissions. This will support change in the area by leading by example, increasing skills in the area, and giving potential heat network systems anchor loads of heat demand with which to improve the viability and economics of such systems.

7. Priorities and Outcomes

To achieve the aims of the LHEES, we have 4 priorities which form the basis of the strategy and delivery plan. They are all linked, and the order is not a reflection of importance. Here we explore these in more detail:

Priority 1 - Improve building energy efficiency to reduce energy demand, thus reducing fuel poverty and improving quality of life and health for building occupants.
Priority 2 - Increase uptake of low and zero carbon heating technologies across the area.
Priority 3 - Reduce fuel poverty within Aberdeenshire.
Priority 4 - Increase awareness of available information related to decarbonisation and energy efficiency.

7.1. Priority 1: Improve building energy efficiency.

7.1.1. Outcomes

Improvement in energy efficiency of domestic and non-domestic buildings is required across the area. This is necessary to ensure national targets for specific building groups are achieved within the relevant timeframe, contributing proportionately to the national targets set while recognising applicable challenges.

7.1.2. Context

Energy efficiency measures help reduce heat demand, which should lower costs to maintain comfort within the building. Energy efficiency is central to the Scottish Government HiB strategy which is designed to reduce fuel poverty and meet net zero targets. For inefficient buildings, improvement of building energy efficiency is a precursor to being able to switch to many of the zero emissions heating systems which operate at lower flow temperatures.

7.1.2.1. Domestic

Targets relevant to this priority are as follows:

- Private rented homes to reach EPC band C by 2028
- Social Housing to achieve EPC band B by 2032
- Remaining domestic dwellings to achieve EPC band C by 2033
- All fuel poor homes to achieve EPC band B by 2040 .

The last point is impossible to quantify as there are no limitations to which buildings may have fuel poor residents now or at a point in the future. A small change in circumstances can mean this applies to all so we will include all non-social landlord properties in this total, since social landlord properties will have to achieve B rating sooner than 2040.

These are challenging targets, partly due to the building stock types we have in Aberdeenshire with a high proportion of houses, as opposed to flats, with more surface area to insulate but also the higher percentages of dwellings with low energy efficiency ratings compared to the national average (63% have D-G EPC rating, national average is 51%[32]). Only 9% of Aberdeenshire properties are EPC rating A or B meaning around 100,000 properties will require some intervention to reach B by 2040 (or before).

[32] National averages provided by Energy Savings Trust and are from Home Analytics v3.8 aggregated to a national level.

Of the privately rented dwellings, there are just under 10,000 that will need some intervention to reach EPB C by 2028. The challenge will be ensuring there are available skills and there will be a risk that rents are increased because of the property improvement cost which will be something to look out for. Funding is also limited for this sector due to the properties not being occupied by the owner so effectively run as a business. This increases the risk that the costs are more likely to affect rent rates which will affect tenants and the overall rental market. Those at greatest risk of fuel poverty are more likely to rent than own. Another issue of concern is if property owners cannot afford to improve the building to required standards, this could increase the number of vacant or unlettable properties if they are not brought up to the required standard. We need to ensure that we work with colleagues in the Council and Scottish Government to support landlords through these changes.

The next target is for social housing to achieve EPC band B by 2032, (this target may be revised when EESSH2 is replaced by Social Housing Net Zero Standard). Although social housing energy efficiency is better than the average dwelling, around 27% of the current stock in Aberdeenshire currently meet these standards, which leaves 73% with varying amounts of efficiency measures to be undertaken.

There are almost 500 social housing properties in Aberdeenshire languishing at the bottom of the energy efficiency scale with F or G ratings, this accounts for 2.5% of the social housing in the area. A further 1281 properties currently sit at EPC E which is 6.6% of the social housing total. The remaining 64% are rated C and D which accounts for just over 7700 properties.

There has been a consultation on the EESSH2 standards and some of the RSLs in the area are awaiting the outcome of this review before continuing with energy efficiency upgrades to avoid the scenario of having to return to a property to achieve revised standards. Currently there are just over 14,000 social landlord properties (including local authority) that are below EPC B rating which will need to be upgraded prior to 2032. Should the revised standard include a requirement for decarbonised heating, there may be interventions required to many of the A and B rated properties in addition to those that are below the target EPC of B.

Picture: Average Energy Performance Certificate Band in Aberdeenshire (pdf /map snip insert to be received)

7.2. Priority 2: Increase uptake of low and zero carbon heating technologies across the area

7.2.1. Outcomes

This priority will ensure that Aberdeenshire buildings contribute proportionately to the national targets of achieving 35% of domestic heat demand and 70% of non-domestic heat demand by low or zero carbon means by 2032. This priority will identify potential heat network zones as another method of decarbonising heat.

7.2.2. Context

Low and zero carbon heat sources are also known as decarbonised heating. Systems include heat pumps (air source, ground source or water source), heat networks, infra-red heaters or electric heaters combined with solar photovoltaic panels (to reduce electricity demand); solar water heating; and thermal storage. Implementation of these heating systems will produce less emissions than gas, oil and coal heating and contribute towards meeting net zero targets.

7.2.3. Domestic

Most Aberdeenshire properties will fall out with any potential heat network zones, as such, heat pumps are likely to be the recommended low carbon solution for heat in these buildings. Whether they end up being individual property heat pumps or small networks run from one larger ground source system is to be decided on a case-by-case basis. Either way, the fabric of the building and readiness for lower temperature heating systems will be key to their success.

Within Aberdeenshire, 14% of domestic properties use electricity for their fuel source. This percentage will include those using heat pumps but there will be a significant amount of those that are using direct electric heating, without solar generation, which can be a costly method of providing heat. As the electricity grid is decarbonising, they fall within the low carbon heating category. This leaves around 26,000 properties that need to switch to low or zero carbon heating before 2032 to reach the domestic target.

Domestic properties fall into four categories with respect to being suitable for heat pump installation. Category 0 is for those that already have zero carbon heat sources, this accounts for just over 3% of dwellings in Aberdeenshire with the vast majority being in off grid areas (80%). Those in the category 1 bracket are considered heat pump ready, around 30% of our dwellings are considered heat pump ready. Only one third of the category 1 properties are in off gas areas with the other two thirds in on gas areas. Category 2 properties account for a further 23% of homes being split across on and off gas areas. This group require a small amount of intervention before they would be considered suitable for a heat pump. A weighty 44% of homes in Aberdeenshire fall into category 3 which are not considered to be viable for heat pumps without considerable intervention, this fraction is also split fairly evenly across on and off gas areas.
Decarbonising heat is not easy, there are various reasons for this, some of the key points are below:[33]

- **Net Zero targets** – in Scotland, the aim is to reach Net Zero by 2045. Some sectors will continue to emit carbon that will need to be offset or captured. This means that other sectors will have tougher targets to compensate with heating in building targets being zero carbon for the vast majority.
- **Size of the challenge** – around 5% of homes in the UK currently run on low carbon heating with the majority of those doing so for environmental reasons (as opposed to cost). Aberdeenshire, even with 45% of properties off the gas grid, is dominated by gas and oil for heating with around 100,000 homes that will need to switch.
- **No silver bullet solution** – low carbon or carbon neutral heating solutions already exist, however a top-down “blanket” solution such as all-electric or all-hydrogen is projected to cost over twice as much respectively compared to a bottom-up approach that chooses the best low carbon heating solutions on a place-by-place basis.
- **Poor energy efficiency** – UK building stock is generally of poor thermal efficiency. Many households suffer from either damp, draughts, or overheating – wasting energy and making home life uncomfortable. This does not bode well for introducing lower temperature heating such as heat pumps.
- **Incentives and workforce** – according to surveys carried out by the Department for Energy Security and Net Zero, around half the population have no awareness of low carbon heating and current funding levels do not encourage many households to switch to low carbon heating. This is backed up by the data we gathered for Aberdeenshire which shows the uptake of grants for energy efficiency measures as low across the area.

[33] https://es.catapult.org.uk/guide/decarbonisation-heat/

The challenge is huge for the heat sector. Building emissions account for around a fifth of Scotland's greenhouse gas emissions and making progress on reducing this figure is essential to the accomplishment of reaching net zero emissions targets. A centrally driven communications plan as noted in the Heat and Buildings strategy will go some way to increasing knowledge of the requirements.

Running lower temperature systems such as heat pumps requires the fabric of the building and the heat loss from within to be of a very good standard to give the energy efficiencies published. A well-insulated home with a heat pump can be a very cost-effective method to heat the home. However, fitting heat pumps in buildings that are not well insulated can cause electricity bills to rise significantly.

To date, much of the switch to low carbon heating has been carried out for environmental reasons. In general, the public seem unaware of how to improve buildings to be able to take on low carbon technologies. There is a need for a mass behavioural shift in understanding how we heat our homes and benefits of making the change to other heating technologies. Some of the reluctance stems from the outlay for zero carbon systems compared to replacing like for like. There are some funding streams available which reduce the outlay, but it is not enough to drive mass uptake alone[34].

7.2.4. Non-domestic

Within the non-domestic sector 52% of the heat demand is produced by electricity. Like the domestic electrically heated properties, this can be treated as low carbon, regardless of whether it is direct electric heating or a heat pump. This leaves a requirement of a further 18% of the non-domestic heat demand requiring decarbonisation which is likely to be in the region of 3000 properties (total non-domestic count is 12,500, with 52% of heat demand already electric but heat demand is 50% oil or gas). As mentioned previously, 20% of non-domestic heat demand falls under the control of Aberdeenshire Council. We are already working on reducing the carbon intensity of the heat provided in our buildings along with other public body organisations to achieve net zero direct emissions by 2038 which will help drive the improvement in non-domestic decarbonisation of heat.

The national data on building fabric of non-domestic buildings is comprised of a considerable amount of extrapolated information and as such, focussing initially on public body buildings where data is recorded and available makes most sense.

7.2.5. Heat Networks

Part of the low and zero carbon heating technologies for both non-domestic and domestic buildings could be covered by heat networks. These are systems that supply heat (or cooling) to multiple buildings from one heat source. The heat source can be waste heat from an industrial source or a large heat pump. Having one system supplying the thermal needs for multiple buildings removes the requirement for individual boilers in each property. These systems are also known as district heating.

The Heat Networks (Scotland) Act 2021 established new statutory targets for heat networks. The thermal targets to be supplied by Heat Networks in Scotland is 2.6TWh by 2027 and 6TWh by 2030. With Aberdeenshire being a rural local authority without cities, it is not anticipated that the heat supply requirement level will be set very high for our area though this is a heating method that has been proven to be very successful across mainland Europe, and when tied in with waste

[34] https://www.climatexchange.org.uk/research/projects/public-awareness-of-and-attitudes-to-low-carbon-heating-technologies/

heat sources or energy generation, can be successful at heating both large and small areas sustainably and at very reasonable costs (depending on governance of the systems in the recipient country).

There is also a requirement under the act for each local authority to identify areas that could potentially be suitable for heat networks. This information will then be used in the near future to quantify areas that are viable, and the authority will be expected to designate such areas as heat network zones. This process will require further investigation and data gathering. Further guidance on this process is anticipated. Heat networks are a potential solution to help decarbonise heat one area at a time which can be large or small scale. The provision of heat networks in an area can be a significant investment opportunity, providing jobs and a stable heat source which is not linked to volatile carbon fuel price variations. In some European countries, district heating systems are owned by co-operatives or municipally run. Depending on the framework of operation, heat networks have the potential to provide sustainable, low-cost heat, supporting the reduction in fuel poverty in our area as well as the opportunity to create funds for use in the community which can then further improve communities within the region.

7.2.5.1. Existing Heat Networks

Aberdeenshire has a significant heat network in part of Banchory. It is a privately run, biomass system with gas back up. The system serves around 250 dwellings, a sports centre and 7 other businesses. Any potential to expand or fully switch to decarbonised heat sources will be explored in the detailed delivery plan. Other than this one, there are a significant number of small networks around the area.

Insert point map of existing heat networks*

7.2.5.2. Potential Heat Networks

The Heat Networks (Scotland) Act 2021 puts a duty on local authorities to carry out a review to identify potential heat network areas. Any formal designation that follows will use this initial information as a starting point before carrying out more detailed analysis on the areas and deciding whether they are suitable for formal designation and all that may encompass. Further legislation which will cover formal designation of heat network zones is anticipated by 2025.

The LHEES methodology (Heat Networks – Generation of Potential Zones) was followed to identify potential heat networks in Aberdeenshire, building on the First National Assessment work carried out by Scottish Government. We focussed on areas with at least 2 anchor loads in the control of the local authority/public buildings to begin with. Anchor loads are buildings with a high heat which improve the economic viability of any potential heat network. These are usually non-domestic buildings. The guidance uses linear heat density, buffer zones and anchor load numbers to identify the potential in an area. The methodology has both baseline requirements and stringent requirements giving what would be considered potentially viable and most likely viable outputs. As Aberdeenshire is made up of towns and villages, initial feeling was that our area was not as suitable for heat network systems, however, there is some funding streams directed at this low carbon solution and in areas of fuel poverty, this can be a significant opportunity to provide low-cost heat which is also low or zero carbon which would satisfy multiple priorities.

See below table for the threshold criteria used for potential heat network zone identification and prioritisation:

	Linear heat density benchmark (kWh/year/m)	Anchor load threshold (MWh/year)	Minimum number of anchor loads per cluster
Baseline	4,000	500	2
Stringent	8,000	500	5

Using the criteria above, 14 potential zones have been identified using the baseline methodology. These potential zones are spread across Aberdeenshire in the towns of Fraserburgh, Peterhead, Inverurie, Alford, Westhill, Portlethen, Banchory, Stonehaven and Laurencekirk.

As part of the delivery plan development, further analysis and engagement will be done. This will enable further prioritisation of zones which will help achieve the best return on our priorities as well as ensuring that the statistics are up to date (some information used in the first stage of analysis we are aware has since undergone significant changes to heat demand). This will improve confidence to support zone prioritisation. We will look at all potential sources for heat supply and engage with other potential stakeholders as part of the process. There are multiple potential areas in Peterhead, Fraserburgh and Inverurie. The total heat demand of the potential zones is 279,628 MWh/yr with the majority of them falling within on-gas areas. Moving properties from gas to heat network could support the requirement to have 1 million on gas homes transitioned to zero emissions heating by 2033. Furthermore, in areas of higher risk of fuel poverty, heat networks can help alleviate this.

Visual to be updated without Banff. Potential heat network zones identified by performing a baseline heat network assessment on Aberdeenshire (could be replaced with visual marking differences between those passing baseline criteria and stringent (different colour). Banff showing (snip from Arc GIS) but didn't make the baseline/stringent tables). Individual maps of the 14 locations in appendice 3 (to be added when received)

7.3. Priority 3: Reduce fuel poverty within Aberdeenshire.

7.3.1. Outcomes

This priority is to drive a reduction in the number of people in the area at risk of or experiencing fuel poverty. There will be a transition to more energy efficient homes, reducing energy input required to maintain comfort. Ensuring that the strategy and delivery plan have a positive impact and provide a just transition to net zero is a key factor. Reducing fuel poverty.

7.3.2. Context

Poor energy efficiency in buildings can be a driver of fuel poverty, simply due to the extra energy required to heat the inefficient property. While low-income households are the most likely to experience fuel poverty, it can be experienced across income levels where a disproportionate amount of income is spent on heating the property.

7.3.2.1. Just Transition and Health

As part of our journey to net zero, we must ensure that the transition is a just one which is inclusive and promotes social equality at the heart of achieving our climate linked goals. We must ensure that in making Aberdeenshire more energy efficient and reducing the carbon impact of heating, that affordability to carry out works required does not end up isolating those that are in most need of the measures. Improving property energy efficiency can help lift occupants out of fuel poverty and improve health and wellbeing at the same time[35].

Part of this strategy is to ensure that measures do not cause unintended consequences such as condensation or interstitial damp within properties. Such consequences could have a negative impact on indoor air quality which would be detrimental to occupants. To ensure that measures are carried out in a manner that will not have negative impacts, we will engage with Government and other partners to ensure approved methods are backed by research.

7.3.2.2. Fuel Poverty

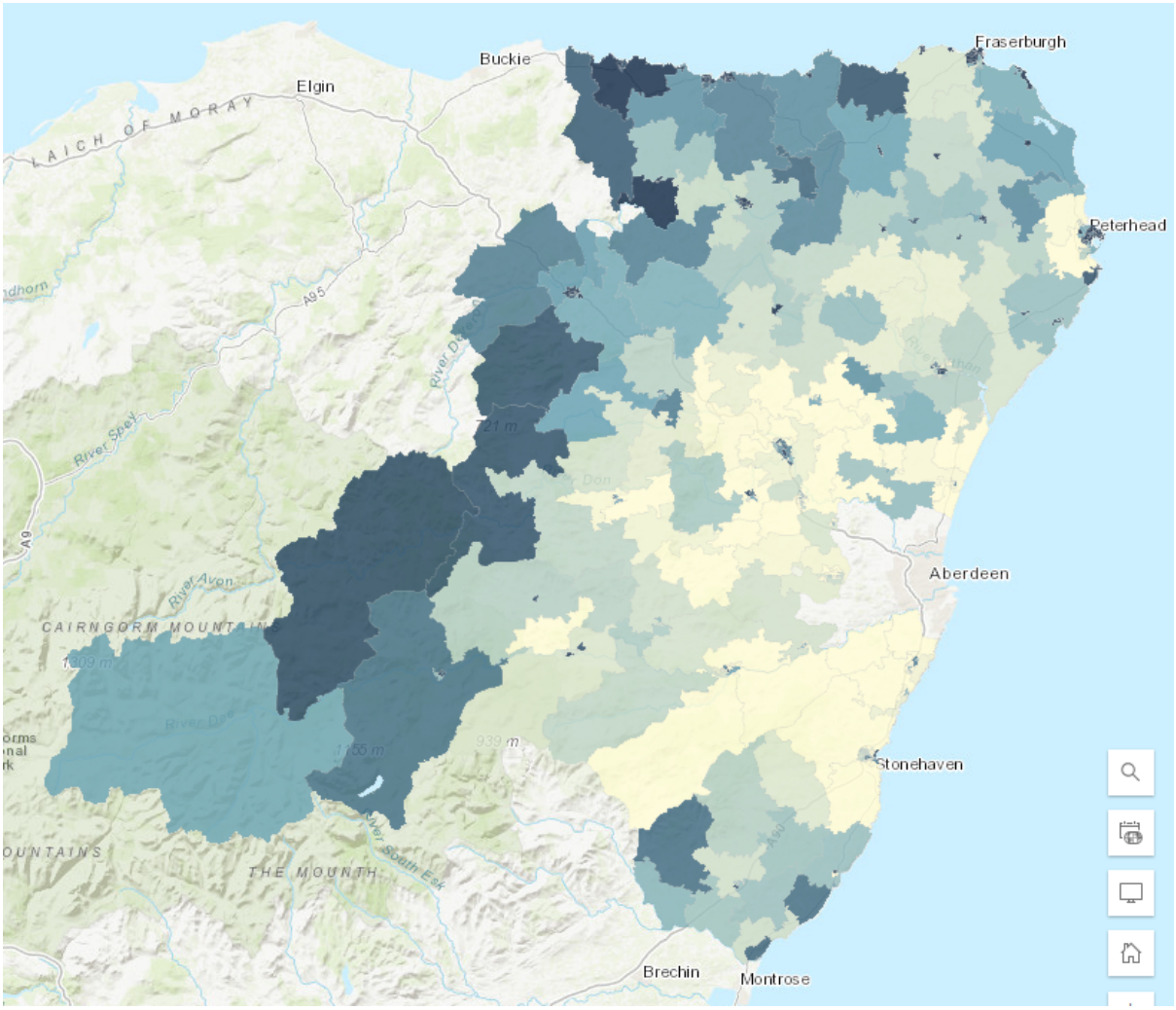
As previously noted, fuel poverty occurs when a household spends more than 10% of adjusted net income on fuel, with the remaining income unable to sustain an acceptable standard of living. For extreme fuel poverty, the spend on fuel increases to 20%. Data relating to fuel poverty suggests our area is in line with national levels of fuel poverty at 25% which will affect around 30,500 households. The extreme fuel poverty data reflects slightly higher than national levels 15% which accounts for around 18,100 households. As the data used was collated before the recent energy crisis it is likely that fuel poverty levels will be higher than the statistics show, albeit that the national averages will also have risen.

The likelihood of fuel poverty is higher in off-gas properties, which applies to almost half of Aberdeenshire. Properties where fuel poverty is most likely to be driven by energy inefficiency statistically in Aberdeenshire are shown below, interestingly the highest risks are not in off-gas areas, though some of the locations further down the ranking are. The regeneration towns of Fraserburgh, Peterhead, Macduff and Banff all feature in the table.

[35] https://www.who.int/teams/environment-climate-change-and-health/healthy-urban-environments/housing/strategies

Most at risk from poor energy efficiency driving Fuel Poverty	
1. Fraserburgh Harbour and Broadsea	7. Portsoy, Fordyce and Cornhill
2. Fraserburgh central – Academy	8. New Pitsligo
3. Peterhead Harbour	9. Huntly
4. Peterhead Bay	10. Macduff
5. Banff	11. Gardenstown and King Edward
6. Fraserburgh Lochpots	12. East Cairngorms

Fuel poverty probability in Aberdeenshire – darker colours indicate highest risk of fuel poverty. (awaiting better visual)



As well as energy efficiency driving fuel poverty, research indicates several groups 'more likely' to experience fuel poverty[36]. These groups include people with the lowest net income, people with disabilities, young & middle age groups, women, single marital status, families with 2+ children or lone parents, social housing/private rented, ethnic minority communities, those relying on electric heating, and those in rural areas.

[36] Not everyone in these groups will be struggling to the same extent to pay for fuel - in social research studies, evidence suggests high levels of people classified as being in fuel poverty, stated they did not have heating problems and were managing well financially.

7.3.3. Summary

This priority highlights the requirement for this strategy to have positive impacts that close the fuel poverty gap, improving comfort and health and wellbeing for all. This will be through lowering fuel requirements with energy efficiency improvements and aiming for affordable warmth for all.

There is further work to do on understanding optimum insultation methods to all building types so there are no unintended consequences and ensuring that measures are done to the relevant standard to enable use of lower temperature zero carbon heating systems that will not deepen fuel poverty. We will continue to liaise with national partners with specialist knowledge and ensure that actions are supported with this knowledge.

Priority 4: Increase awareness of available information related to decarbonisation and energy efficiency.

7.3.4. Outcomes

People in Aberdeenshire are aware of the requirements of national and local policy relating to energy efficiency and have the knowledge to increase energy efficiency and decarbonise heat within their own properties as well as having access to support mechanisms including funding to facilitate behaviour change.

7.3.5. Context

In order to make informed, climate friendly changes, people need to have information and knowledge to progress. According to the ClimateXChange, broad concern about climate change does not seem to be translating into widespread uptake of low carbon heat[37]. To achieve a just transition all people responsible for buildings and wider stakeholders need to be engaged with and informed on the Local Heat and Energy Efficiency Strategy. From being aware of how to improve energy efficiency within buildings to decarbonising the heat sources or being able to access support or funding that may be available. Making this information easily accessible and driving awareness up the agenda is required to encourage behaviour change and make achievement of national targets within reach.

[37] https://www.climatexchange.org.uk/research/projects/public-awareness-of-and-attitudes-to-low-carbon-heating-technologies/

7.3.5.1. Existing Support

There are organisations across Scotland, the UK and Aberdeenshire that can provide generic and tailored advice to those seeking information on decarbonisation and low carbon heating. As part of the delivery plan, these organisations and groups will be promoted along with available funding resources to drive the switch. The Council can work with these organisations to ensure the message is getting through to those who need it. Sharing information across sectors will help upskill groups in the community who can then inform those approaching them for advice. Information and advice services:

Home Energy Scotland[38]	Provide information on large and small measures householders can take as well as information on decarbonising heat and funding.
Aberdeenshire Council[39]	The Home energy advice team (HEAT) provide energy efficiency advice and support.
Aberdeenshire Voluntary Action (AVA)[40]	Third sector interface with Warm Spaces information and more.
Energy Savings Trust[41]	Independent organisation giving advice on energy efficiency and clean energy empowering householders to make better energy choices. They also work in partnership with government to deliver energy programmes. They also support businesses.
Changeworks[42]	Environmental charity Changeworks' vision is for a world where everyone is able to live, work and enjoy life with a low-carbon impact. The webpages contain energy and retrofit advice for homeowners.
Business Energy Scotland[43]	Funded by the Scottish Government for SME's, giving guidance on saving energy, access to training and can even perform energy efficiency audits.
Net Zero Nation[44]	Website from Scottish Government giving advice and information about saving energy and reaching Net Zero. Has a section on home energy.

In addition to the information and advice services noted in the table, Scottish Government have plans to set up a National Public Energy Agency[45] which will provide some leadership and coordination in the quest to increase the pace to decarbonise heat.

7.3.6. Summary

This priority cuts across every sector to ensure all buildings are included in the decarbonisation journey. We must bring everyone with us and increase awareness of what needs to be done and the appropriate timescales for the various building types and sectors. There is some funding and national support along with research going on to ensure that retrofit efforts are positive and anticipated outcomes achieved.

[38] Home Energy Scotland
[39] https://www.aberdeenshire.gov.uk/housing/private-housing/energy-efficiency-advice-and-support/
[40] https://www.avashire.org.uk/
[41] Energy Saving Trust
[42] www.changeworks.org.uk
[43] https://businessenergyscotland.org/
[44] https://www.netzeronation.scot/
[45] https://www.gov.scot/policies/energy-efficiency/the-national-public-energy-agency/

A key action from this priority will be to build a communications strategy that works in tandem with any Government led campaign ensuring all stakeholders are reached and enlightened with developing information as it becomes available.

8. Delivery Plan

The first delivery plan is a summary of high-level actions that we will work on to flesh out in the coming months with the aim of having the first full delivery plan in spring 2025. This will give time to engage further with external and internal stakeholders.

Our detailed delivery plan needs to support the meeting of regulatory requirements across the board. It needs to contribute to reducing fuel poverty and be deliverable, paying heed to potential limitations such as grid capacity, cost of measures or conservation/listed building status.

It is important that this strategy and delivery plan are viewed as live and flexible documents. This will allow potential heat solutions to be researched with emerging technologies and solutions to be incorporated to the live delivery plan as and when they arise.

Delivery plan outline:

Building energy efficiency

- Work with internal stakeholders using the route map to direct the improvement of Aberdeenshire Council buildings with the aim of achieving net zero direct emissions by 2038 from building stock (or other date as dictated by consultation from Heat in Buildings Bill outcomes).
- Engage with RSLs to work together across areas where collaboration can lead to cost and time saving.
- Continue to use ABS funding to install measures to areas at risk of fuel poverty using data to select optimum areas as per the Local Housing Strategy.
- Work with partners to create a knowledge base of archetype specific retrofit to ensure no unintended consequences occur when improving property energy efficiency.
- Identify areas for no-regret measures for energy efficiency improvement, targeting fuel poor areas.

Heat Network opportunities

- Identify from the potential zones (14) which are most likely to achieve key strategy aims and objectives and work with HNSU to carry out feasibility studies on the top zone.
- Continue to work with external stakeholders on any potential to decarbonise or expand existing heat networks.
- Keep information updated and include any new LDP zones which may influence viability of potential zones.
- Engage with local communities to improve understanding of acceptance of potential heat network opportunities through community partners and council teams.
- Engage with other public body organisations regarding potential anchor load buildings incorporation in identified/potential heat network zones.
- Explore any investment or funding opportunities related to progressing heat networks, particularly for potentially fuel poor areas.
- Engage with potential waste heat producers.

Other decarbonisation actions

- Engage with DNOs regarding potential heat decarbonisation zones to ensure the grid in the area can support mass change to electrified heat, potentially building an area wide energy plan.

- Explore potential ground source multi property opportunities that are emerging via some suppliers.
- Engage with external public bodies to include their site-specific plans to decarbonise as required.
- Work with RSLs making use of multi-organisation funding as it arises.

Other actions

- Work with government and other local authorities to build a communications strategy that will increase awareness of forthcoming targets, energy efficiency opportunities and decarbonisation options for everyone.
- Continue to seek external funding to realise community opportunities and increase the sense of place within them.
- Explore if there are opportunities arising from the Just Transition funding awarded to the North East to transition away from oil and gas with respect to decarbonisation of properties in the area.
- Engage with educational and workforce stakeholders regarding learning and employment opportunities that the heat transition can provide in order for appropriate courses and employment to be made available.

8.1. Asks for Scottish Government

This strategy is largely aspirational as there is a large gap between the steps to take to resolve or achieve priorities and that for which Local Authorities have the resource and funds to complete. Across the country (and the wider UK) there will need to be investment in educating the general populus as well as funding the measures required to make this strategy a realistic tool for completing the priority actions and making progress with decarbonisation, fuel poverty and energy efficiency. To further support success of this strategy, financial and practical support from Scottish Government is required. This includes funding, communications, research, and policy support. All Scottish Local Authorities have been tasked with developing the LHEES for their area but there are large segments of heat and energy efficiency in the locality that we will not have under our control or influence and further legislative developments will be required to ensure all segments are bound to make progress in these areas.

Actions below were summarised by Fife Council and are seconded by Aberdeenshire Council as necessary to the ongoing success in decarbonising heat and improving energy efficiency across Scotland.

Asks for Scottish Government

	Ask	**Outcome**
Funding	Provide a significant increase in funding to support energy efficiency and heat decarbonisation projects, and supporting activities (fuel poverty; data collection, modelling, and analysis; funding for community organisations).	Greater funding availability.
	Provide significant funding for research institutions, local authorities, social landlords, and others to develop studies and Building Information Modelling for archetypes.	Guidance for each archetype.

Knowledge & Awareness	Produce a national communications toolkit to raise awareness of Local Heat and Energy Efficiency Strategies; energy efficiency and heat decarbonisation measures; support and advisory services.	Improved awareness and behavioural change.
	Deliver “a public communications programme to raise awareness of the support and advisory services available and to encourage home upgrades, in order to maximise uptake of these schemes."	Improved awareness and behavioural change.
Research/ Data	Encourage use of Building Energy Management Systems and sub-metering by building owners and sharing of data.	Greater awareness of building performance.
	Develop a sustainable data sharing model and platform.	Improved data accessibility.
	Research the density of new housing/building developments required to support a new heat network.	Improved modelling.
	Research how indoor air quality is impacted/improved by energy efficiency/heat decarbonisation measures by: • Ensuring indoor air quality and retrofitting buildings are fully considered in the Clean Air Strategy 2 review. • Agreeing standard methodology for monitoring indoor air quality pre- and post-retrofit – including pilot projects. • Developing a framework model to identify how factors impact indoor air quality (e.g. insulation type, air tightness). • Convening task group to identify actions to be undertaken to address issues associated with indoor air pollution.	An understanding of how risks related to poor indoor air quality can be mitigated to make improved decisions on building level actions to implement.
	Model heat efficiency in the context of changing workstyles now and moving forward.	Greater insight of heat demand.
Policy	Map policies/targets to evidence and tools to provide a timeline of anticipated improvements.	Improved awareness and accessibility to key policies.
	Clarify the phrase “*as far as reasonably possible*” in the Heat in Buildings Strategy.	Improved understanding of targets.
	Increase the number of green jobs (and supporting roles) to close the skills gap.	More green skilled jobs.
	Incentivise and/or further regulate developers to ensure new builds are suitable for decarbonised heating.	New builds suitable for net zero.
	Work with the Building Research Establishment on energy performance certificate reform to develop an improved metric.	An improved metric.

	Agree a new Energy Efficiency Standard for Social Housing 2 target, aligned to net zero and supporting fuel poverty eradication.	A revised target.
	Develop policy levers to support short-term mitigation to alleviate current grid capacity pressures. For example: revise battery storage definition; private wire for heat networks; surplus from private grids/renewables to power local buildings.	Alleviation of grid pressures improving capacity.
	Continue to support National Planning Framework 4 Policy 19: *Development proposals within or adjacent to a Heat Network Zone identified in a Local Development Plan will only be supported where they are designed and constructed to connect to the existing heat network*.	Heat networks become standard consideration for developments.

8.2. Next steps

Following consultation and adoption by the Council, the strategy and delivery plan will be published online. It must be appreciated that this strategy is a flexible and live document. Monitoring of actions to ensure key outcomes are achieved will be pivotal for success. The delivery plan will adapt to incorporate any changing requirements and include new information or updated data. We will report updates within the Council to the relevant Committee/s on a regular basis. Internally, the stakeholders that have worked together to contribute to development of the

LHEES and delivery plan will continue to play a key part in the ongoing development.
The development of the detailed delivery plan will continue through 2024, homing in on the top actions to make progress on the key priorities highlighted.

The Strategy and Delivery Plan are required to be reviewed at least every 5 years though we anticipate the delivery plan will have continuous amendments throughout that timeframe.

Appendix 1 Full Table of National Policies and Strategies

National Policy/Strategy	Description	Priorities/actions
Climate Change (Emissions Reduction Targets) (Scotland) Act 2019	Targets to reduce Scotland's emissions of all GHGs to net-zero.	
Updated Climate Change Plan	This update to Scotland's 2018-2032 Climate Change Plan sets out the Scottish Government's pathway to our new and ambitious targets set by the Climate Change Act 2019. It is a key strategic document on our green recovery from COVID-19.	See Heat in Buildings Strategy
Programme for Government	The Programme for Government is published every year at the beginning of September and sets out the actions we will take in the coming year and beyond.	2020 Programme for Government: Over the next Parliament to invest nearly £1.6 billion in transforming buildings to ensure that emissions from heating are eliminated by 2040 to remove poor energy efficiency as a driver of fuel poverty. The deal uplifts Heat and Energy efficiency spend from £112m in 2019/20 to £398m p.a. in 2025 26 and will include: •Additional £55 million to support scale up of energy efficiency programmes •At least £95 million to decarbonise the public sector estate •Opening the £50 million Green Recovery Low Carbon Infrastructure Transition Programme (LCITP) •Up to £50 million to invest in significant energy efficiency improvements to the Royal Botanic Gardens in Edinburgh •£25 million for zero carbon energy infrastructure and heat networks for residential and commercial premises along the river Clyde's path

Heat in Buildings Strategy	Updates the Energy Efficient Scotland route map and commits to putting in place standards and regulation for heat and energy efficiency to ensure that all buildings are energy efficient by 2035 and use zero emission heating and cooling systems by 2045.	Sets out approx. 111 actions and proposals that SG will take to work towards target and aspirations.
Energy Efficient Scotland	20-year route map to define a set of actions aimed at making Scotland's buildings near zero carbon by 2050, in a way that is socially and economically feasible.	2 main objectives. Remove poor energy efficiency as a driver for fuel poverty. Reduce greenhouse gas emissions through more energy efficient buildings and the decarbonisation of heat supply.
Heat Networks (Scotland) Act 2021	The aim of the Act is to encourage greater use of heat networks in Scotland.	The Act puts in place rules and regulations on heat networks, including: • making applications • identifying exemptions • granting licenses • setting up heat network zones
Fuel Poverty (Targets, Definition and Strategy) (Scotland) Bill	The Bill sets out a new target relating to the eradication of fuel poverty, as well as providing a revised definition of fuel poverty.	
EESSH 1 & EESSH2	The Standard aims to improve the energy efficiency of social housing in Scotland.	EESSH 2 was suspended in 2022 pending review. During the review period, Scottish Government advised landlords to continue with planned investment in energy efficiency measures and decarbonised heating systems, prioritising the investment on measures that would contribute to meeting Net Zero targets.
Scottish Energy Strategy	The 2050 vision for energy in Scotland is to provide a 'flourishing, competitive local and national energy sector, delivering secure, affordable, clean energy for Scotland's households,	The 3 core principles are to: take a whole-system view; provide an inclusive energy transition and; have a smarter local energy model.

	communities and businesses.	
National Planning Framework	The National Planning Framework (NPF) sets the context for development planning in Scotland and provides a framework for the spatial development of Scotland as a whole.	A successful sustainable place – supporting economic growth, regeneration and the creation of well-designed places; A low carbon place – reducing our carbon emissions and adapting to climate change; A natural resilient place – helping to protect and enhance our natural cultural assets and facilitating their sustainable use; A connected place – supporting better transport and digital connectivity.
Hydrogen Policy Statement	Sets out vision for Scotland to become a leading hydrogen nation in the production of reliable, competitive, sustainable hydrogen, securing Scotland's future as a centre of international excellence as we establish the innovation, skills and supply chain to underpin our energy transition.	Support for the development of a low-cost hydrogen capability to meet an initial ambition of generating 5GW of renewable and low-carbon hydrogen by 2030.
Heat Policy Statement	The Heat Policy Statement 2015 (HPS) sets out how low carbon heat can reach more householders, business and communities and a clear framework for investment in the future of heat in Scotland.	It sets out our future policy direction for addressing the three key aspects of the heat system: how we use it (heat demand and its reduction); how we distribute and store it (heat networks and heat storage); where our heat comes from (heat generation).
Scotland's Sustainable Housing Strategy	Scotland's position for warm, high-quality, affordable and low carbon homes, and a housing sector that supports the establishment of a low carbon economy.	Delivery of the Home Energy Efficiency Programmes for Scotland (HEEPS); appropriate use of standards and regulation; market transformation.
Tenements (Scotland) Act 2004	The Tenement Management Scheme, as outlined in Schedule 1 of the Tenements (Scotland) Act 2004, lists the 'scheme property' (explaining	The Climate Change (Scotland) Act 2009 amends the Tenement Management Scheme to log insulation installation as a maintenance measure rather than an 'improvement' so changes can be approved via a majority rather than unanimously.

	what parts for the tenement every flat owner should maintain) and explains how to come to arrangements about maintenance ('scheme decisions') and how costs are shared between owners.	
Historic Environment Policy Scotland	HEPS is a non-statutory policy statement directing decision-making that should be taken into account whenever a decision will affect the historic environment.	HEPS outlines three policies on managing change to the historic environment: - Decisions affecting the historic environment should ensure that its understanding and enjoyment as well as its benefits are secured for present and future generations. - Plans, programmes, policies and strategies, and the allocation of resources, should be approached in a way that protects and promotes the historic environment. - Changes to specific assets and their context should be managed in a way that protects the historic environment. Opportunities for enhancement should be identified where appropriate.
The Planning (Listed Building Consent and Conservation Area Consent Procedure) (Scotland) Regulations 2015	Listed building consent is the mechanism by which planning authorities ensure that any changes to listed buildings are appropriate and sympathetic to their character. It helps to protect what is a rare and unique resource. Conservation area consent controls the demolition of unlisted buildings in conservation areas.	

Appendix 2 – Full Table of Local Policies and Strategies

Strategy/Policy/ Plan	Description	Priorities/actions
Local Outcome Improvement Plan	This Plan provides a vision and focus, based on agreed local priorities, to which partners work systematically and collaboratively to meet the needs and aspirations of local communities in Aberdeenshire. Identifies four key priorities, each with their own action plans, only one of which is relevant for LHEES (see Reducing Poverty Action Plan below)	Priority 1: Reducing Child Poverty in Aberdeenshire (broadened to "Reducing Poverty" in 2020) - see detailed actions in row below.
Reducing Poverty Action Plan (September 2021 Update)	Identified 17 key actions for reducing poverty across Aberdeenshire	Action 5. Reducing home energy and fuel costs. Outcome is reduced living costs. Key focus is minority ethnic groups. KPIs: Increase the number of families that receive support to reduce fuel costs. Increase the number of funded energy efficiency measures installed in the private sector, via Scottish Government schemes. Decrease the number of families in both private and social sector housing living in fuel poverty. Action 10: 10. Increase support for those who are financially vulnerable. KPI: Increase household income of low-income families by developing and implementing a comprehensive benefit take-up campaign i.e. fuel poverty voucher scheme/winter warm scheme

Council Plan	Sets the strategic aims and outcomes that drive the council's work.	Three key pillars: Our People (Learning for life, Health and wellbeing), Our Environment (Climate change, Resilient communities) and Our Economy (Economic growth, Infrastructure and public assets). Key relevant council priorities: Health & Wellbeing: • Enable and deliver the provision of good quality, energy efficient and accessible housing. Climate Change: • Reach a 75% reduction in emissions by 2030 and Net Zero by 2045, with the Council showing leadership. Resilient communities: • Develop and implement a Place Strategy that considers the current and future needs of communities. • Support communities to help themselves and encourage and assist in the delivery of community priorities. • Improve the life chances of people at risk of falling into poverty, or already living in poverty. • Promote greater participation by communities in decisions that impact them. Economic Growth: • Enabling community organisations and businesses to access project funding • Stimulate and nurture a culture of entrepreneurship within the region • Support new and existing businesses to thrive, creating competitive advantage and providing fair work opportunities • Develop our key sectors and secure inward investment to sustain economic growth Infrastructure and Public Assets: • Create and sustain a Council Estate that is fit for purpose to provide modern public services that meet the current and future needs of our communities.
Local Housing Strategy	The Local Housing Strategy sets out Aberdeenshire's key housing plans over a five-year period. Also covers fuel poverty and	Priority 2: Energy Efficiency, Fuel Poverty and Sustainability. • Improve the energy efficiency of housing across all tenures • Assist households to maximise their income • Reduce fuel costs for households across all

	energy efficiency priorities for the Council (no separate plans for these)	tenures • Change behaviours KPIs (no quantitative targets set): • Energy efficiency measures installed in private sector housing • Energy efficiency measures installed in social sector housing • Households receiving in-house, in-depth energy efficiency advice • Households provided with social tariff referrals • Households assisted to maximise their income Priority 6: Private sector. • The quality of private sector housing is maintained and improved to promote health and wellbeing by addressing disrepair and enhancing energy efficiency. • The private rented sector provides high management standards that inspires consumer confidence and encourages growth through attracting increased investment. KPIs: • Number of households assisted in order to address BTS elements or prevent properties falling BTS.
Local Development Plan	The Plan sets out the policies that will be used for assessing planning applications and identifies development opportunities across Aberdeenshire.	Aim: To take on the challenges of Sustainable Development and Climate change: Policies say that new developments must reduce greenhouse gas emissions. We have introduced new policies to encourage the development of renewable energy resources in a sensitive way. New development will be sustainable, what we do and how we live today should not leave our children unable to achieve a similar quality of life in the future and should take into account the important issues of climate change and reducing carbon.
Aberdeenshire Council Environmental and Climate Change Policy Statement	One page policy statement recognising the Council's impact on the environment and making commitments to reduce this. Accompanying action plan detailed below.	Set challenging targets to act in a way best calculated to reduce CO2 and other greenhouse gas emissions from council buildings, operations and activities reporting these each year in our Carbon Budget. Provide a planning system that ensures all development is sustainable and take action to

		prevent pollution and minimise environmental risks.
Climate Change Action Plan	A Climate Change Action Plan to cover the operations of the Council itself - *to be replaced by Route Map 2030 once live*	Defines a number of actions and outcomes from page 5 onwards, the most relevant of which are outlined here. 1.1. Investigate the installation of ground mounted PV arrays on Council land. Outcome: Effective use of Council assets to reduce CO2 emissions and generate income. 1.2. Investigate feasibility of creating Council run/owned Energy Service Company (ESCo). Outcome: Sale of energy to internal & external customers. Fuel security, income generation. 2.5 Maintenance Strategy. Continue to improve the condition of buildings and plant and to reduce energy consumption. 3.15. Upgrade the Heat/Energy Map of Aberdeenshire. 3.26 Develop a Climate Change Adaption Strategy 3.27 Development of a Carbon Budget Set challenging targets to act in a way best calculated to reduce CO2 and other greenhouse gas emissions from council buildings, operations and activities reporting these each year in our Carbon Budget.
Regional Economic Strategy	20-year plan to deliver a range of activities that maintain and grow the economy, period covered is 2015-2035.	This is in development following the awarding of Investment Zone to the North East region. A draft was presented prior to this to Full Council last year: Agenda for Aberdeenshire Council on Thursday, 29th June, 2023, 10.15 am - Aberdeenshire Council (moderngov.co.uk) Key themes include: •To establish the North East as a pioneer of the energy transition, by delivering an 80% reduction in carbon emissions per head. • Maintain a healthy, sustainable, working age population through increasing economic participation rates • Protect and enhance the natural capital of the

		region by aligning to national ambitions to manage 30% of the region for people and nature by 2030
Local Energy Plan (Aberdeenshire Council Net Zero Roadmap - decarbonisation assessment)	Report identifies what actions and decarbonisation options are available for Aberdeenshire Council assets to meet the net zero trajectory and makes recommendations on which actions to follow - *in development and needs to be reviewed by the Committee for approval*	Stage 1: Fabric First Energy Efficiency Programme (~2022 - 2030) Stage 2: Off Gas Buildings (start with fuel oil and kerosene then LPG) (~2023-2030) Stage 3:On gas buildings (schools, leisure centres and sheltered housing) (~2025 - 2040) Stage 4: Other buildings and hard to treat buildings (~2030-2045) A Heat Decarbonisation Decision Roadmap is proposed to be followed, which starts with fabric improvements and energy efficiency, then district heating assessment and then technologies choices based using on gas and off gas Heat Decarbonisation Decision Tree for short term (2021-2025), medium term (2025-2030), and long term (>2030) decisions. (p.65-67 for more detailed actions/recommendations)
Strategic Housing Investment Plan	Sets out the strategic policy approach by Aberdeenshire Council and its partners to delivering affordable housing in accordance with the Local Housing Strategy.	This SHIP will enable the delivery of high quality and energy efficient homes including specialist housing provision (and appropriate support) as well as assist in reducing fuel poverty and carbon emissions. The main outcome of this SHIP to enable the delivery of high quality, energy efficient housing. This will be done across a variety of tenures whilst maximising a range of funding streams and delivery options.
Local Community Plans (Marr Community Plan)	Aberdeenshire council has six Local Community Plans which define the priorities for the local areas - Banff, Buchan, Fortmarine, Garioch, Kincardine and Mearns, and Marr. Each of the plans were reviewed and only one (Marr) included relevant priorities/targets for LHEES.	Goals: •We will support community housing projects •Community projects are supported that seek to address climate change mitigation, adaption and preparedness

Aberdeen City & Shire Strategic Development Plan	This Strategic Development Plan outlines where and how the City Region can grow and is used to inform Local Development Plans prepared by both Aberdeen City and Aberdeenshire Councils.	Target: For all new developments to be designed to minimise resource demand and incorporate water and energy efficiency measures. How to meet the target: Local Development Plans and masterplans will identify areas where technology can potentially contribute to the supply of renewable energy along with the potential opportunity to use residual or waste heat. Both Councils should use masterplans to consider the scope of combined heat and power and district heating schemes to contribute towards using energy more efficiently and in reducing the amount of energy used overall. Other: Developments should examine the potential for including, or linking to, combined heat and power schemes or district or community heating schemes, and also ensure the incorporation of low and zero carbon generating technologies wherever appropriate. Tackle the supply of energy during the Plan period. This will involve increasing the supply of heat and power from renewable sources, as well as supporting reduced emissions from existing power stations. We will also need to tackle the supply of energy during the Plan period. Opportunities for energy from waste, solar and biomass, as well as ground, water and air source heat pumps to be explored. All developments must consider opportunities to reduce fuel poverty and address the impact of climate change. It is hoped that hydrogen from St Fergus will be blended directly into the gas grid and enable phased decarbonisation of heat. The City Region also remains committed to Carbon Capture and Storage and the development of hydrogen opportunities, both to maximise the benefits from existing energy resources and energy infrastructure available.

Climate Ready Aberdeenshire (CRA)	CRA is a voluntary cross-sector network to create and coordinate Aberdeenshire's climate change adaptation and mitigation strategy.	CRA's shared vision is that: "All sectors, including public, private and the community, are increasingly engaged in shared dialogue, shared goals and shared action relating to climate, biodiversity, and sustainability in support of a flourishing Aberdeenshire." Through its network, CRA's objectives are to: • Increase the understanding and awareness of climate change risks, challenges, and opportunities within Aberdeenshire. • Encourage the use of a place-based approach when engaging with communities on how to mitigate and adapt to climate change. • Support decision-makers to contribute to the delivery of local and national commitments to climate change that mutually benefit Aberdeenshire's environment, economy, and people. • Ensure that network members are best placed, within their remit, to provide knowledge, advice, and support on climate change mitigation and adaptation action, including helping to signpost businesses, community groups, and individuals to resources, projects, and funding opportunities to deliver change.
North East Scotland Regional Economic Strategy Statement in Response to COVID-19	Paper outlining the economic ambitions of the region despite the challenges following the Covid-19 pandemic and recovery (an addition to the Regional Economic Strategy)	The refreshed vision reflecting this is as follows: In 2040, the Aberdeen city region provides outstanding economic opportunities, best-in country quality of life and a spectacular natural environment. It is: • a net-zero city region that powers the nation and drives energy transition nationally and internationally; • a competitive city region to work and invest in with a diverse and robust economy, high-value jobs, and nationally significant productivity; and • a city region of choice where prosperity and opportunity, educational attainment, quality of life, natural heritage and sense of place attract and retain talent, enterprise and investment. Net Zero – a region with an integrated energy cluster that is a global leader in the

		development of energy transition and net zero carbon solutions.
Carbon budget	An annual carbon budget figure is set each year to keep the council on track for its commitment to reduce emissions by 75% by 2030 and Net Zero by 2045 using 2010/11 as a baseline year.	Each annual carbon budget report contains projects across the Council which will reduce emissions – this includes work being carried out in relation to energy efficiency and heat decarbonisation across the Council's owned non-domestic building stock.
Route Map 2030 (and beyond)	The Route Map to 2030 (and beyond) has been developed to identify what must happen across the authority in order to meet a 75% reduction in its own emissions by the end of the decade. A key aspect of the Route map is the creation of a toolkit which supports a cost-abatement curve and demonstrates which projects give us the most carbon savings for the least financial outlay so we can prioritise projects that give best value carbon reduction initially, moving to the harder to reach projects as we progress.	1: Set up a central steering group. 2: Define accountabilities, clear roles, responsibilities across the Authority for delivering the Route Map 2030. 3. Supply Chain Capacity and Capability Gap Analysis: 4: Set targets for reducing Direct and Indirect emissions 5: Delivery of the Feasibility studies at operational buildings, to support definition of future Carbon Budgets 6. EV/H2 Fleet assessment 7. Develop Hydrogen strategy 8.1 Electrification risk / resilience study. 8.2 Embed zero carbon standard for both new build and retrofit initiatives. 9.1 Residual Emission Action Plan including an organisational carbon footprint scope and target review. 9.2 Resilience / Adaptation assessment 9.3 Develop LHEES 9.4 Develop Re-use business case. 10. Central assurance and reporting: 11. Communications to support and implement the change and generate buy-in of the people and Directorates at all levels.

Climate Change Declaration	Statement of intent regarding climate change	Actions: Significantly cut our own emissions by reducing our dependence and use of fossil fuels, avoiding waste, and promoting biodiversity; Work with others across the region to ensure that Aberdeenshire reaches Net Zero by 2045, by promoting energy transition and a circular economy; We will support a transition that is socially fair and just and will communicate reasons for change and the potential effects on service delivery to our communities and staff.
Waste Strategy	Four-year waste strategy	Deliverable 5: Recover energy from waste not prevented, reused or recycled. Continue working with Aberdeen City and Moray Councils to build a joint facility for recovering energy (heat and power) from non-recyclable waste. Objective 6: Reduce carbon emissions. • Carbon emissions from disposal and reprocessing of waste.

Appendix 3

14 potential HNZ identified areas maps.

Aberdeenshire Council

Integrated Impact Assessment

Local Heat and Energy Efficiency Strategy (LHEES)

Assessment ID	IIA-000776
Lead Author	Yvonne D'Ambruoso
Service Reviewers	Claudia Cowie
Subject Matter Experts	Susan Forbes, Claudia Cowie, Kakuen Mo, Caroline Hastings, Annette Johnston, Christine McLennan
Approved By	Claudia Cowie
Approved On	Friday February 02, 2024
Publication Date	Friday February 02, 2024

1. Overview

This document has been generated from information entered into the Integrated Impact Assessment system.

This report details potential impacts in developing a Local Heat and Energy Efficiency Strategy (LHEES) and associated delivery plan, the first iteration of which is to be published following consultation in early 2024 and revised thereafter at least once every five years.

During screening 8 of 10 questions indicated that detailed assessments were required, the screening questions and their answers are listed in the next section. This led to 5 out of 5 detailed impact assessments being completed. The assessments required are:

- Childrens' Rights and Wellbeing
- Equalities and Fairer Scotland Duty
- Health Inequalities
- Sustainability and Climate Change
- Town Centres First

In total there are 41 positive impacts as part of this activity. There are 0 negative impacts, all impacts have been mitigated. The impact on 2 groups is not known, information is provided in the detailed sections of this document.

A detailed action plan with 1 points has been provided.

This assessment has been approved by claudia.cowie@aberdeenshire.gov.uk.

The remainder of this document sets out the details of all completed impact assessments.

2. Screening

Could your activity / proposal / policy cause an impact in one (or more) of the identified town centres?	NotSure
Would this activity / proposal / policy have consequences for the health and wellbeing of the population in the affected communities?	Yes
Does the activity / proposal / policy have the potential to affect greenhouse gas emissions (CO2e) in the Council or community and / or the procurement, use or disposal of physical resources?	Yes
Does the activity / proposal / policy have the potential to affect the resilience to extreme weather events and/or a changing climate of Aberdeenshire Council or community?	Yes
Does the activity / proposal / policy have the potential to affect the environment, wildlife or biodiversity?	Yes
Does the activity / proposal / policy have an impact on people and / or groups with protected characteristics?	Yes
Is this activity / proposal / policy of strategic importance for the council?	Yes
Does this activity / proposal / policy impact on inequality of outcome?	Yes
Does this activity / proposal / policy have an impact on children / young people's rights?	No
Does this activity / proposal / policy have an impact on children / young people's wellbeing?	Yes

3. Impact Assessments

Children's Rights and Wellbeing	No Negative Impacts Identified
Climate Change and Sustainability	No Negative Impacts Identified
Equalities and Fairer Scotland Duty	No Negative Impacts Identified
Health Inequalities	No Negative Impacts Identified
Town Centre's First	No Negative Impacts Identified

4. Childrens' Rights and Wellbeing Impact Assessment

4.1. Wellbeing Indicators

Indicator	Positive	Neutral	Negative	Unknown
Safe		Yes		
Healthy	Yes			
Achieving		Yes		
Nurtured		Yes		
Active		Yes		
Respected		Yes		
Responsible		Yes		
Included		Yes		

4.2. Rights Indicators

UNCRC Indicators upheld by this activity / proposal / policy	Article 24 - Health and health services Article 27 - Adequate standard of living

4.3. Positive Impacts

Impact Area	Impact
Healthy	The strategy drives progress towards better insulated homes, requiring less energy to heat, reducing fuel poverty, benefitting occupants. In addition, the strategy shows potential pathways to heating systems with low or zero carbon emissions which will reduce air pollution, improving air quality for all.

4.4. Evidence

Type	Source	It says?	It Means?
Other Evidence	World Health Organisation research	https://www.who.int/teams/environment-climate-change-and-health/healthy-urban-environments/housing/strategies	Well designed strategies can reduce energy use and create healthier environments for occupants and increase health equity and support achieving an adequate standard of living as per articles 24 and 27

4.5. Information Gaps

Further assessment of potential heat network zones will be required prior to the Council making the decision about designating any potential zones as Heat Network Zones as per the separate requirement.

4.6. Measures to fill Information Gaps

Measure	Timescale

Measure	Timescale
There will be further analysis and scrutiny of the potential zones and other highlighted areas of interest in the LHEES to produce a detailed delivery plan over the next year.	12 months

4.7. Accounting for the Views of Children and Young People

There will be a public consultation on the draft Local Heat and Energy Efficiency Strategy and delivery plan. All are welcome to read and respond.

4.8. Promoting the Wellbeing of Children and Young People

The strategy is not specifically aimed at children and young people but on improving energy efficiency of buildings and driving a reduction in fuel poverty which will have a positive impact on all. Improving insulation levels in the home reduces the amount of fuel required to achieve comfort. Improved comfort is attributed to better health (https://www.who.int/teams/environment-climate-change-and-health/healthy-urban-environments/housing/strategies).

4.9. Upholding Children and Young People's Rights

Article 7 - right to be cared for by their parents. In progressing with this strategy, there is a higher likelihood of implementation of projects to promote fabric improvement projects and heat networks which can improve the affordability of thermally comfortable proeprties.

4.10. Overall Outcome

No Negative Impacts Identified.

This impact assessment is related to a strategy development which aims to guide improvements in building fabric and uptake of less polluting technologies for achieving comfort in buildings. The strategy will drive progress in reducing fuel poverty which will improve living conditions for those affected.

5. Equalities and Fairer Scotland Duty Impact Assessment

5.1. Protected Groups

Indicator	Positive	Neutral	Negative	Unknown
Age (Younger)	Yes			
Age (Older)	Yes			
Disability		Yes		
Race		Yes		
Religion or Belief		Yes		
Sex		Yes		
Pregnancy and Maternity		Yes		
Sexual Orientation		Yes		
Gender Reassignment		Yes		
Marriage or Civil Partnership		Yes		

5.2. Socio-economic Groups

Indicator	Positive	Neutral	Negative	Unknown
Low income	Yes			
Low wealth	Yes			
Material deprivation	Yes			
Area deprivation		Yes		
Socioeconomic background		Yes		

5.3. Positive Impacts

Impact Area	Impact
Age (Older)	Following the strategy and delivery plan will improve thermal comfort for dwelling occupants, younger and older people are considered at higher risk from low and high temperature environments. Keeping the indoor temperature comfortable by improving building fabric will have knock on positive effects.
Age (Older)	Younger and older persons are more affected by excessive cold and heat. This strategy aims to drive fabric improvements of buildings which will make achieving thermal comfort easier and less costly.
Age (Younger)	Following the strategy and delivery plan will improve thermal comfort for dwelling occupants, younger and older people are considered at higher risk from low and high temperature environments. Keeping the indoor temperature comfortable by improving building fabric will have knock on positive effects.

Impact Area	Impact
Age (Younger)	Younger (and older) people feel the effects of extremes of temperature the most and have the most to gain from improving the fabric of buildings to keep them thermally comfortable.
Age (Younger)	Younger and older persons are more affected by excessive cold and heat. This strategy aims to drive fabric improvements of buildings which will make achieving thermal comfort easier and less costly.
Low income	Low income families may be able to access funding to improve the thermal fabric of their property which in turn will reduce required energy input to maintain comfort.
Low wealth	Similar to low income, those with low wealth may qualify for funded programmes aimed at improving the energy efficiency of properties which in turn reduces the cost of keeping the property at a suitable temperature.
Material deprivation	Part of the strategy is to promote areas that may be suitable for heat networks. The government aim is that these provide low cost warmth to properties in the area (that opt in) with low connection costs.

5.4. Evidence

Type	Source	It says?	It Means?
Other Evidence	Development of the strategy	The world health organisation have stated that younger and older persons are most affected by extremes of temperature. Improving the fabric of buildings to ensure that indoor comfortable temperatures can be maintained with less energy usage will benefit everyone including these specific ages.	Though all people will benefit from improved building fabric which will maintain more stable indoor temperatures, older and younger people are most affected by extremes of temperature and therefor will have the most to gain from building improvements driven by the strategy.

5.5. Engagement with affected groups

The draft strategy is to go out for public consultation in the coming weeks. This will be an open consultation for all to respond.

5.6. Ensuring engagement with protected groups

In the development of the strategy engagement has mostly been with internal and social landlord stakeholders to date. The consultation will be done along with a topic report for the Local Development plan to try and ensure as many people engage with it as possbile.

5.7. Evidence of engagement

The consultation is imminent, the report being presented to committee is of the draft strategy.

5.8. Overall Outcome

No Negative Impacts Identified.

Improvement of building fabric and indoor temperature stability and cost will not have negative impacts on those groups identified.

5.9. Improving Relations

Promoting the strategy and highlighting that the changes are beneficial for all . Should there be a heat network zone identified it would be good to ensure those in the specific area are kept informed of the potential benefits of such a system and how to ensure they are included if they wish to connect.

5.10. Opportunities of Equality

Promoting improvement of building fabric and increasing awareness of funding opportunities will ensure that those that cannot afford the improvements to their homes can access funding to increase energy efficiency and potentially reduce fuel poverty.

6. Health Inequalities Impact Assessment

6.1. Health Behaviours

Indicator	Positive	Neutral	Negative	Unknown
Healthy eating		Yes		
Exercise and physical activity		Yes		
Substance use – tobacco		Yes		
Substance use – alcohol		Yes		
Substance use – drugs		Yes		
Mental health		Yes		

6.2. Evidence

Type	Source	It says?	It Means?
Other Evidence	Strategy development	The strategy is about improving the energy efficiency of buildings and decarbonising heating systems.	None of the health behaviours are directly impacted by the development of this strategy.

6.3. Overall Outcome

No Negative Impacts Identified.

This is a strategy on improving the thermal efficiency of buildings and decarbonising heat sources.

7. Sustainability and Climate Change Impact Assessment

7.1. Emissions and Resources

Indicator	Positive	Neutral	Negative	Unknown
Consumption of energy	Yes			
Energy efficiency	Yes			
Energy source	Yes			
Low carbon transition	Yes			
Consumption of physical resources	Yes			
Waste and circularity	Yes			
Circular economy transition		Yes		
Economic and social transition	Yes			

7.2. Biodiversity and Resilience

Indicator	Positive	Neutral	Negative	Unknown
Quality of environment	Yes			
Quantity of environment		Yes		
Wildlife and biodiversity		Yes		
Infrastructure resilience	Yes			
Council resilience	Yes			
Community resilience	Yes			
Adaptation	Yes			

7.3. Positive Impacts

Impact Area	Impact
Adaptation	Adapting our heating systems to low and zero carbon and improving the energy efficiency of buildings will support the wider drive to achieve net zero by 2045 and also mean that building occupants can achieve better thermal comfort using less energy.
Adaptation	Improving the fabric of buildings to increase energy efficiency ratings and moving away from fossil fuels are both positive adaptations in behaviour which are steps towards reaching Net Zero by 2045.
Council resilience	Improving the energy efficiency of Council buildings will improve their resilience. Public buildings are likely to be necessary to drive the economics of heat networks and will benefit from the resilience from the electricity network should they be installed in Council properties.

Impact Area	Impact
Council resilience	Part of the requirement for heat networks is to have 'anchor load buildings'. It is likely that some of these anchor loads would be Council buildings and being part of a heat network gives resilience from dependence on fossil fuels. Additionally, the improvement of the fabric of council buildings will also give some resilience to heat loss.
Council resilience	Council resilience will be improved where the building fabric energy efficiency is improved in line with the strategy and also if Council buildings are used as anchor loads for heat networks.
Infrastructure resilience	Better insulated properties can hold onto warmth for longer periods which will give resilience should there be power cuts that affect heating. Heat Networks can produce both electricity and heat for circulating which would give resilience from the national grid should they be employed.
Infrastructure resilience	Should viable heat network areas be identified, they are often producers of electricity with heat being a by product. In these circumstances, there is potential that they would have resilience from the national grid should there be a power outage.
Infrastructure resilience	The strategy aims to reduce use of more polluting heating fuels, with one specific aim being to increase heat networks. Heat Networks are often supplying heat as a by product of electricity production meaning that the systems themselves are not reliant on the wider electricity grid or fuel input. This builds resilience.
Quality of environment	The strategy directs people to take up low and zero carbon emitting heating systems which will reduce pollutants and particulates in the air.
Quality of environment	Moving society towards low and zero emission heat sources will improve the air quality locally. The improvement of building fabric with insulation measures will also improve the indoor environment by using less energy to achieve a level of comfort.
Quality of environment	The strategy aims to influence property owners to move towards clean heating systems which produce low or zero carbon emissions which will reduce localised air pollution, improving air quality.
Community resilience	Part of the strategy involves highlighting areas that would benefit most from improved energy efficiency measures and identifying those where heat networks could be possible. Employing either measure on an area basis will give better resilience to that place and community.
Community resilience	Areas are highlighted for targeted improvements in energy efficiency installation which in turn would improve the resilience in the community to heat loss from the building and also fuel poverty.
Community resilience	Communities where heat networks are installed will have a level of resilience to increasing energy prices due to the fact that heat tends to be a by product of energy production for heat networks.

Impact Area	Impact
Consumption of energy	The strategy highlights the importance of improving energy efficiency of the fabric of buildings which in turn reduces the amount of energy required to maintain comfort within.
Consumption of energy	Reduced energy consumption required for better insulated buildings.
Consumption of energy	Improvement of energy efficiency of buildings will reduce the energy required to maintain thermal comfort.
Energy efficiency	Improving energy efficiency of the built environment is a key aim of this strategy.
Energy efficiency	The strategy aims to improve energy efficiency and drive building owners to make changes to achieve this.
Energy efficiency	Part of the strategy is to identify key areas where building energy efficiency is low and drive improvement and uptake of funding to improve this on an area basis.
Energy source	The strategy drives building owners and occupants to move to lower carbon energy sources, principally electric and heat networks. For Heat Networks to receive funding and approval, there is a requirement for them to be fuelled with renewable sources.
Energy source	Part of the strategy includes designating areas as having potential for heat networks, these are required to use low or zero carbon energy sources.
Energy source	Driving the change to low and zero carbon heating systems includes a drive to increase the number of heat networks. These are now required to use renewable heat sources. This will be particularly impactful where they are deployed in 'on gas network' areas.
Economic and social transition	Part of the strategy has identified a skills gap in our region which we have highlighted to Scottish government so that investment in training and upskilling people in installing and maintaining low and zero carbon systems can be facilitated. With the North East already being a centre of excellence for energy, it is envisaged that it will develop into a centre of excellence for renewable energy and systems too.
Low carbon transition	The Local Heat and Energy Efficiency strategy will drive change towards low carbon heating.
Low carbon transition	The strategy is a key instrument in the low carbon transition and will promote use of low and zero carbon technologies.
Low carbon transition	The entire LHEES strategy is in line with the low carbon transition.
Consumption of physical resources	The strategic drive to zero carbon fuelled heat sources means there will be a reduction in fuel deliveries to rural (off grid) properties, reducing delivery mileage and associated energy consumption as well as the fact that clean energy sources do not have the same filters to replace during servicing that oil and gas boilers contain, thus reducing consumption of physical resources.

Impact Area	Impact
Consumption of physical resources	As the strategy is driving a change to low carbon technologies to heat properties, there will be less kerosene and LPG used. In addition, there will be less fuel filters requiring replacement during servicing.
Consumption of physical resources	Less fuel filters will require replacement dues to the switch over to low and zero carbon heat sources. In addition, with heat networks there will be less individual boilers required to be installed as they are not required for that type of heating system
Waste and circularity	As identified in the consumption of physical resources section, there will be less waste arising from the renewable heat sources than those running on fossil fuels.
Waste and circularity	Driving an increase in zero and low emission heating sources will mean that there are less oil boilers being used which means less fuel filters to be replaced and disposed of.

7.4. Evidence

Type	Source	It says?	It Means?
Other Evidence	Various sources in development of the strategy.	Much data has been reviewed and used in the development of the LHEES. The ultimate aim of which is to support progression to Net Zero by reducing the environmental impact of heating (and cooling) in buildings.	This strategy if followed will help ensure buildings in Aberdeenshire improve in energy efficiency and reduce carbon emissions by switching to low and zero carbon heat sources.

7.5. Overall Outcome

No Negative Impacts Identified.

The strategy is part of the drive to lowering carbon impacts of heating on the environment and improving the fabric of those buildings so that they require less energy to maintain comfortable living and working environments.

8. Town Centre's First Impact Assessment

8.1. Local Factors

Indicator	Positive	Neutral	Negative	Unknown
Town centre assets				Yes
	Will find out by: This would come to light should an area be identified as a potential heat network zone.			
Footfall		Yes		
Changes to road layouts		Yes		
Parking		Yes		
Infrastructure changes				Yes
	Will find out by: If a particular town becomes the location of a heat network, the infrastructure to support the system would be installed in that location. Only after further assessment and investigation will this become apparent.			
Aesthetics of the town centre		Yes		
Tourism		Yes		
Public safety		Yes		
Town centre business		Yes		
Cultural heritage and identity		Yes		
Social and cultural aspects		Yes		

8.2. Evidence

Type	Source	It says?	It Means?
Other Evidence	Development of the strategy.	The aims of the strategy are to improve the energy efficiency of buildings and reduce the carbon emissions from heating them.	From a town centre perspective, it is unlikely that there would be negative impacts from improving the fabric of buildings and reducing emissions from heat sources.

8.3. Information Gaps

Part of the detailed delivery plan will be to identify which areas should be designated heat network zones. From there, any affected town centres would then be known.
Further information will be required to identify which potential areas go on to be designated heat network zones. This will then inform which town centres are affected.

8.4. Measures to fill Information Gaps

Measure	Timescale

Measure	Timescale
Further work on identification of the best locations for heat networks which will then identify which (if any) town centres are impacted.	12 months

8.5. Overall Outcome

No Negative Impacts Identified.

At present there are no negative impacts identified from producing the strategy. Should some of the outcomes of the strategy come to fruition such as provision of a heat network in an area, impacts of the specific project would be assessed at that point.

9. Action Plan

Planned Action	Details	
Gather feedback internally and externally on the draft strategy. Incorporate feedback and note any mitigations required or responses to feedback prior to presenting the strategy to Full Council to agree.	**Lead Officer**	Yvonne D'Ambruoso
	Repeating Activity	No
	Planned Start	Wednesday January 03, 2024
	Planned Finish	Sunday March 24, 2024
	Expected Outcome	A refined strategy with incorporated comments fit for Council adoption.
	Resource Implications	Time to review comments and suggestions for incorporation.