

1.1	<ul style="list-style-type: none"> I. To present the draft Local Energy Action Plan (LAEP) and Queen’s Island Decarbonisation Plan to elected members. II. Note the contents of the reports and the proposed outline priority decarbonisation projects (domestic retrofit, heat network, solar PV on public buildings, solar car port with EV charging and oil boiler to heat pump transition) and near-term actions to progress the LAEP and the two modelled scenarios for Queen’s Island (a Heat network and Solar Photovoltaic Carports). III. Note that the ‘Belfast Net Zero pathfinder’ project provides the funding to enable BCC to immediately progress the LAEP and the Queen’s Island Decarbonisation Plan by developing two of the priority projects identified in these plans: 1) heat network, and 2) a solar PV project. IV. Note that the Climate Team are currently working with Climate NI to develop a proposal to secure up to €120k from a new funding programme Pathways2Resilience which has become available through Horizon Europe to support the development of climate adaptation and resilience for the city. V. An update will be brought back to elected members in due course.
2.0	Recommendation
2.1	<p>Give approval to:</p> <ul style="list-style-type: none"> I. establish a LAEP delivery group to support the delivery of decarbonisation projects across the city; II. establish a community of practice to ensure that the data generated by the modelling is fully utilised by key stakeholders across the City (eg QUB and UU).
3.0	Main Report
3.1	<p>Background</p> <p>A place-specific approach to delivery is critical to achieving a timely and cost-effective Net Zero as each place has its own unique geographical, socio-economic features and challenges. For example, Belfast’s dependence on imported fossil fuels - gas and oil to heat buildings and on petrol and diesel for virtually all its transport needs means that we spend over £300m on energy across the city every year – set to rise to c.£466 million per year or more in 2050. Belfast also has unique geographical features including access to the sea and 10km of waterfront as well as being located over a porous aquifer with Sherwood Sandstone which has above ambient temperatures which could be used to support low carbon infrastructure.</p> <p>3.2 A Local Energy Action Plan (LAEP) assesses the unique characteristics of Belfast as part of the net zero transition and uses place-based data and network system modelling to identify the most cost effective and impactful pathway to achieving net zero for the city.</p> <p>3.3 The Energy Systems Catapult (ESC) were appointed in February 2023 to develop a LAEP for the Belfast area while also providing an Energy Decarbonisation Plan specifically for the Innovation District of Queens Island. This is a foundational piece of work for Belfast to help attract external funding and investment into the city and will feed into the wider business case for potential LAEP roll out across Northern Ireland.</p> <p>3.4 The LAEP approach was developed by ESC to provide decision-makers with the detailed information needed to support informed investment decisions that enable a cost-effective transition to Net Zero.</p> <p>3.5 The approach uses whole system modelling with local stakeholder knowledge to deliver a comprehensive, data-driven and cost-effective plan for decarbonisation based on the unique characteristics of Belfast’s buildings, transport systems, local industry, energy generation</p>

	<p>and distribution assets, geographic and spatial constraints, and social factors including fuel poverty.</p>
3.6	<p>The process brings together the public and politicians, businesses and regulators, energy networks and local authorities, to help towns and cities decarbonise their energy systems on the path to Net Zero.</p>
3.7	<p>Objective</p> <p>The overall objective was to develop a Local Area Energy Plan (LAEP) for the city of Belfast and a Decarbonisation plan for part of the Innovation District, Queens Island with two intended outcomes:</p> <ul style="list-style-type: none"> • A facilitated, collaborative and coordinated transition towards becoming carbon neutral by 2050 with the plans and actions of stakeholders contributing towards a collective goal; and • an optimised, cost-effective, transparent and evidence-based pathway to achieving the target.
3.8	<p>Key outputs</p> <p>The draft LAEP (attached at Appendix 1) includes the following key outputs:</p> <ol style="list-style-type: none"> 1. The Pathway sequencing all of the interventions within the LAEP that set out the area's proposed route to net zero including near-term and long-term components; 2. A 'plan on a page' illustrating focus zones, priority actions, and areas of energy network change; 3. Visual focus zones for all the prioritised activity associated with the main components of the proposed energy system; 4. Five outline priority projects to take forward; 5. Breakdown of investment to decarbonise the local area aligned to the main energy system components; and 6. Next steps - near-term activities and actions needed to progress the LAEP.
3.9	<p>The outputs will determine network system choices, the level of investment required to transition to a net zero energy system, high level project identification and required policy changes.</p>
3.10	<p>The decarbonisation plan is a whole energy system approach to considering how Queens Island can achieve Net Zero over time eliminating the use of fossil fuels on site and replacing with a decarbonised alternative, while also considering the knock-on impacts on the other systems in place. The draft LAEP and the Decarbonisation Plan for Queens Island (Appendix 2) have been presented to the local energy consortium highlighting the most effective pathways to achieve decarbonisation in the city, accounting for the local development and growth plans.</p>
3.11	<p>Local energy consortium</p> <p>The work took place over one year and involved a diverse group of stakeholders in the city's energy system with oversight from a Steering group comprising: BCC, NIE, SONI, Phoenix Energy, NIHE, NIGS, the Federation of Master Builders, NI Water, Consumer Council, DFE and DAERA.</p>
3.12	<p>LAEP outline priority projects</p> <p>Through a combination of modelling and wider factor analysis with local stakeholders, five outline priority projects were identified for near term implementation. These projects were proposed on the basis of delivering a significant impact against Belfast decarbonisation ambitions. These include:</p>

- a High Temperature District Heat Network in City Centre which aims to connect multiple anchor loads from public buildings during phase 1, then connecting to domestic buildings in phase 2;
- a Domestic Retrofit pilot that targets a mixed tenure, low-income area with EPC ratings D-G;
- a Solar PV on Public Buildings project providing a total of no less than 1MWp of renewable electricity for local consumption;
- Solar Car Port with EV Charging;
- an Oil to Low Carbon Heating Transition project that seeks to replace existing oil heating in domestic and non-domestic buildings with low carbon heating technologies such as heat pumps.

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Modelled Scenarios for Queen’s Island Decarbonisation Plan

- Heat network (Belfast Met, Citi Gateway, Titanic Belfast, PRONI, Titanic Hotel)
- Solar Photovoltaic Carports (Odyssey and Catalyst)

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Next steps

The ‘Belfast Net Zero pathfinder’ project will develop two of the priority projects identified in these plans: 1) heat network, and 2) a solar PV project. The project is funded by Innovate UK and will run for one year from 1st June. See Appendix 3 for more information. The Climate Team will also establish:

- a LAEP Delivery group to maintain momentum, commitment and collaboration around delivering the LAEP; and
- a community of practice to ensure that the data generated by the modelling is fully utilised by key stakeholders across the City (eg QUB and UU).

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A report will be brought back to update elected members in due course.

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Funding Opportunity

A new funding programme has become available through Horizon Europe that will help support the development of climate adaptation and resilience for the city. The Pathways2Resilience project is run by Horizon Europe and aims to increase the resilience of European regions and communities.

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The programme seeks to empower regions and communities through systems innovation and capacity building towards climate resilience and can provide up to €120k to each participating region to co-design a vision of a climate resilience future and innovation to ensure long term impact.

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This current call which closes on 6th May aims to support 40 regions across Europe throughout 2024 and 2025. Applying for this call will provide access to networks, learning and capacity to help progress climate adaptation planning for the city, which is in line with the Northern Ireland Climate Adaptation Plan which is entering its third cycle.

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The Climate Team is currently engaging with Climate NI and DAERA on the role of local councils and Pathways2Resilience will provide more support to build more resources and capacity for this work if successful in securing funding. The Climate Team are currently working with Climate NI to develop a proposal to the fund. A further update will be brought back to elected members in due course.

Financial and Resource Implications

The funding (£150K) secured from Innovate UK will be used to progress two of the outline priority projects.

	<u>Equality or Good Relations Implications/Rural Needs Assessment</u>
4.0	Appendices - Documents Attached
	<ol style="list-style-type: none">1. Belfast Local Area Energy Plan2. Queen's Island Decarbonisation Plan