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Research**

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# **Spatial Approaches to Local Energy Planning**

**Case study: Belfast**

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## This resource is part of the Spatial Approaches to Local Energy Planning (SALEP) suite

This resource is part of the RTPI's SALEP (Spatial Approaches to Local Energy Planning) suite of guidance, analysis and in-depth case studies on integrating energy planning with town planning across the UK. It was produced in collaboration with Regen.

For more information and access to the rest of the suite, please visit the [SALEP webpage](#).

## Authors

This document was produced by Regen with input from the RTPI.

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# 1. Case study summary

- The Belfast Local Area Energy Plan (LAEP) was adopted in 2024. It is the first LAEP in Northern Ireland.
- The LAEP has been used as a strategic tool to support the prioritisation of decarbonisation projects in Belfast.
- To further encourage project delivery, the council is taking a proactive approach to reducing risks for private investors by undertaking feasibility studies and other pre-procurement activities.

## 2. Key insights from this case study

- **A focus on developing priority projects:** Belfast City Council's LAEP approach was focused on establishing effective city-wide partnerships with network operators and key delivery partners and creating a strong evidence base to inform decision makers and enable private sector investment in low-carbon projects.
- **The value of cross-departmental collaboration and involving external stakeholders:** By adopting a holistic approach, Belfast City Council ensures that the city's energy, development / regeneration and infrastructure needs are addressed in an integrated manner, drawing upon relevant expertise.
- **Data-driven town and energy planning:** The use of advanced data visualisation tools provides benefits across the city.

## 3. Town Planning in Belfast

Town Planning became a local government responsibility in Northern Ireland in 2015. Belfast City Council adopted its Local Development Plan Strategy (LDPS) in May 2023, a process that began with the publication of the Preferred Options Paper in 2017. The Local Development Plan (LDP) 2035 provides a town planning framework to address the city's environmental, social and economic needs through two key components:

- **Plan Strategy (adopted 2023)** – The strategic policy framework for the plan area as a whole across a range of topics. It sets out an ambitious but realistic vision for Belfast as well as the objectives and strategic policies required to deliver that vision. Establishing this strategic direction early in the plan process provides a level of certainty on which to base key

development decisions in the area as well as the necessary framework for the preparation of the Local Policies Plan; and

- Local Policies Plan (LPP) (in development, expected by 2027) – The council’s local policies and site-specific proposals in relation to the development and use of land in Belfast. It contains the local policies, including site specific proposals, designations and land use zonings required to deliver the council’s vision, objectives and strategic policies, as set out in the Plan Strategy.

Complementing these plans is the 2020 Net Zero Carbon Roadmap, which maps Belfast's path to net zero by 2050, aligned with the global 1.5°C carbon budget and the 2024 LAEP which charts a path to net zero that is affordable and has the potential to create opportunities for new jobs and businesses.

## 4. Development of the Local Area Energy Plan (LAEP)

The LAEP was developed with Energy Systems Catapult and was adopted in 2024. It outlines five priority projects:

- District Heat Networks;
- Building Retrofit Programmes;
- Rooftop Solar PV;
- Solar Carports with EV Charging; and
- Low-Carbon Heating Transition.

The local authority views the plan as a tool to direct efforts and prioritise energy and heat projects, rather than detailing specific site-level initiatives. Described by the local authority as “a call to action”, the LAEP process has brought the right people together to focus on key priorities. This approach is especially important in Northern Ireland, where limited central government funding for energy initiatives demands innovative local solutions. To avoid strategy-heavy approaches with few tangible results, the council uses the LAEP as a catalyst for action, emphasising project delivery. This was evident at the LAEP launch, where the focus was on implementation i.e. what the plan says and what Belfast City Council and its partners are doing as a result.

To support project delivery, the council mitigates risks for private investors through undertaking feasibility studies and pre-procurement activities aligned with the five key priority projects. For instance, a heat network working group has been formed to inform and lead on the development of the council’s approach to incentivising the development of a heat network in Belfast. A Retrofit Hub was also established to catalyse retrofit activity across the city.

## 5. Collaborative governance during the LAEP development

A critical element of Belfast City Council's approach is robust cross-departmental collaboration. The council established an energy consortium and later evolved it into the Net Zero Belfast Delivery Group which provides collective leadership to promote and support the development of a coordinated series of net zero investments across the city to achieve the emission reduction targets in a cost optimal way whilst creating wider benefits for local communities. The group fosters collaboration across the community town planning partnership, and includes spatial planners, energy planners, the city regeneration and development team (who focus on the regeneration and development of the city) and external stakeholders, like network operators and housing organisations. This governance structure enables a coordinated whole-system approach.

The governance of the LAEP development was structured through a three-tier system:

- LAEP delivery team which was responsible for developing the plan;
- Steering Group which provided strategic oversight of the plan as it developed, supporting data gathering, providing local context, defining the modelling scenarios and reviewing the plan; and
- An Energy Consortium which supported the LAEP process through data gathering and providing local context.

Daily communication and regular meetings of the Steering Group combined with workshops with the Energy Consortium were held to ensure effective collaboration to develop a plan aligned to the local context. Since the LAEP publication, the Net Zero Belfast Delivery Group has continued to provide a basis for ongoing communication and collaboration. The council has focused heavily on ensuring that cross-city communication happens in the most efficient way. While such an approach is resource-intensive, it ensures an efficient, joined-up approach across city-wide activities.

### 5.1 The role of community engagement

The LAEP process focused on leveraging the plan as a high-level catalyst for action, prioritising engagement with key stakeholders (network operators, housing executives etc). While there was active collaboration across the city, community engagement was not part of the LAEP process although community interests were represented on the Steering Group and secondary stakeholder group.

During development and following the launch of the LAEP, the council has prioritised de-risking and supporting the delivery of priority decarbonisation projects that directly benefit people who live and work in Belfast.

### 5.2 Integration between the LAEP and local town planning

From the outset, the council saw the importance of the LAEP sitting alongside the LDP and recognised the value of local planners' input. Planners were heavily involved from the start of the Energy Consortium and represented on the Steering Group, shaping the development of the LAEP and ensuring alignment with town planning frameworks and spatial priorities. Additionally, the LAEP has served as a tool for coordinating cross-departmental efforts, providing ongoing benefits for town planning.

### 5.3 Integrating the LAEP in local town planning policy

At the time of the LAEP's creation, the LDP document (adopted May 2023) was already well-developed. This document provided useful town planning context for developing the LAEP.

As the statutory framework for town planning, the LDP serves as the principal consideration for town planning decisions within Belfast City Council's jurisdiction. Its policies and supplementary town planning guidance will support emerging decarbonisation projects as they progress to site-specific stages.

The LAEP is not directly integrated into the LDP, as it was developed after the plan was approved. Instead, it uses a whole-system approach to provide a portfolio of projects that decarbonise the city in the most efficient way. While not a statutory document, it offers an evidence base that supports decision-making and the prioritisation of projects that help to accelerate the transition to an inclusive, net zero future.

The council recognise that the language used to consider insights from the LAEP in statutory town planning must be carefully crafted to maintain its materiality in town planning decisions. Sustainable development is a strategic policy of the LDP which provides strong policy support for the objectives of LAEP.

### 5.4 Collaboration in heat network development

One of the central projects under the LAEP is the development of heat networks in areas with high building density. An ongoing feasibility study is identifying potential locations for an energy centre, with planners and other key stakeholders such as Northern Ireland Electricity Networks (NIE Networks) and System Operator for Northern Ireland (SONI) etc.) playing a critical role in evaluating these sites against housing and regeneration priorities. Mapping the future use of heat networks in tandem with local development priorities such as planned housing developments ensures that energy infrastructure aligns with anticipated growth, while regular engagement with town planning teams and cross-departmental discussions minimise hurdles for developers.

In the feasibility study, the council identified a viable route to market and engaged off-takers for the first phase of development. The aim was to reduce risks for a private-public partnership. Rather than prescribing rigid designs, Belfast City Council is testing market responses to encourage innovative solutions and maximise developer interest.



## 5.5 The Local Policies Plan (LPP) as an opportunity

The LPP presents a potential opportunity to integrate the LAEP with statutory town planning. While the LAEP is not statutory, aligning its goals with the LPP may help embed energy initiatives into broader urban development strategies.

The LPP offers a platform to identify and designate specific sites for critical infrastructure. There are ongoing discussions as to the potential integration of heat network zones; however, whether integration of the LAEP goes beyond cross-referencing between the documents may depend largely on timing due to the strict timeline for delivery of the LPP. The local authority also noted that Supplementary Planning Guidance (SPG) documents may provide future opportunities, particularly as they have been used extensively in Belfast.

## 5.6 Use of data

Belfast has leveraged the LAEP as part of its efforts to improve the evidence base and drive data-driven decision-making. A dedicated data group within the Net Zero Belfast Delivery Group aggregates and analyses energy and spatial data, drawing contributions from local universities, GIS specialists and other city stakeholders. This collaborative effort aims to extract meaningful insights from LAEP data and other sources, enabling the development of tools and frameworks to support urban planning and energy projects. There are regular data exchanges between council departments, particularly with GIS layers and data being provided from the town planning department.

The LAEP data provides a valuable evidence base. Assumptions are carefully managed to maintain reliability, and efforts to align LAEP data with town planning are supported by efficient collaboration structures. The raw data from the LAEP, in Excel format, has been disaggregated by electoral areas to make it more accessible to elected members and planners, supporting evidence-based actions. One of the group's key achievements has been the creation of online dashboards that visualise energy systems at a neighbourhood level. These dashboards display metrics such as Energy Performance Certificate (EPC) ratings and energy demand, providing stakeholders with the information needed to make informed decisions about retrofitting and the integration of energy projects with broader urban development plans. For example, this data has been used by the city's Retrofit Hub, helping to develop a retrofit pilot programme.

# 6. Key recommendations from this case study

## 6.1 Using the LAEP as a catalyst to encourage development

In Belfast, the LAEP has been largely considered as a means to identify and prioritise energy and heat projects with key stakeholders. The plan progressed quickly with input from across the council and city stakeholders. By conducting preparatory studies and aligning projects with statutory plans,



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Belfast City Council aims to minimise risks for private investors, enhancing project viability and encouraging development to come forward quickly.

## 6.2 The value of cross-departmental collaboration

By adopting a holistic approach, Belfast City Council ensures that energy, housing and infrastructure needs are addressed in an integrated manner. The Net Zero Belfast Delivery Group's monthly meetings provide a forum for the coordination of emerging net zero investments across the city, reviewing and updating the LAEP pathways and actions as needed, and ensuring interventions are cost-effective, attractive to funders and investors whilst also building social value and a wide range of benefits for Belfast. The cross- sectoral nature of the group enables it to identify synergies between emerging projects and initiatives and create opportunities for further collaboration and partnerships to accelerate progress. However, while collaboration is central to Belfast City Council's approach, it is resource intensive and places significant demands on council staff. The local authority identified funding as a key challenge, recognising that more could be done if funding was in place.

## 6.3 Data-driven town planning

Belfast provides a great example of how to ensure that data from the LAEP is being used to support project design and delivery across the council. By establishing a dedicated data group and developing accessible visualisation tools, Belfast City Council has ensured the LAEP evidence base can be used to support practical initiatives across departments. Cross-city collaboration including experts from within and outside the council is a central element of this.



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