

# Building a Sustainable Future







**Libraries NI is the public library authority for Northern Ireland, dedicated to providing welcoming and accessible spaces where communities can connect, learn and grow. We manage a network of libraries that serve as vital hubs for information, education, and cultural engagement. As part of our commitment to enhancing the quality of our public spaces and reducing our environmental impact, we are proud to announce that Killyleagh Library is the third public building refurbishment designed to the EnerPHit standard to be completed in the UK.**

The recent refurbishments of Ballymoney, Bessbrook and Killyleagh libraries illustrate Libraries NI's commitment to enhancing the quality of our public spaces and reducing our environmental impact. Ballymoney Library is now woven into history as the first non-residential building in the UK to be completed to the EnerPHit standard, with Bessbrook and Killyleagh libraries being refurbished to the same demanding requirements. These libraries not only provide comfortable and modern spaces for visitors but also contribute to the broader goal of creating a more sustainable future for Northern Ireland.

Refurbishing libraries to meet the EnerPHit standard represents a significant step forward in reducing energy consumption and carbon emissions. Buildings that meet this standard require far less energy to maintain a comfortable environment, which in turn reduces operational costs and the overall carbon footprint. This is particularly important for public spaces like libraries, which serve the community and set an example for sustainable practices.

# What is the EnerPHit Standard and why is it Important?

The EnerPHit standard is an energy efficiency benchmark developed by the Passivhaus Institute, which focuses on retrofitting existing buildings to achieve a high energy efficiency rating. Refurbishing to the EnerPHit standard ensures that older buildings meet modern energy efficiency values. This is achieved through a combination of advanced insulation, airtightness, triple-glazed windows, energy-efficient heating, cooling, and ventilation systems and elimination of thermal bridges.

By meeting the EnerPHit standard, buildings dramatically reduce their energy consumption and carbon emissions, contributing significantly to environmental sustainability. For Ballymoney, Bessbrook and Killyleagh libraries, this means lower running costs, a more comfortable, consistent indoor climate and up to 65% less combined carbon output, equating to a reduction of approximately 22 tonnes of CO<sub>2</sub> annually.

Expected combined energy saving:  
**59,858 kWh/year**

Expected combined carbon saving:  
**21,923 kg CO<sub>2</sub>/year**

**65%** combined carbon  
output reduction,  
equivalent to **22**  
tonnes per year.





# Killyleagh Library

The transformation of Killyleagh Library, and the unveiling of this revitalised space was eagerly anticipated by the local community. As with Ballymoney and Bessbrook libraries, Killyleagh Library was designed with a focus and commitment on sustainability and energy efficiency. The newly upgraded library offers a modern, environmentally friendly setting that is more accessible for all members of the local community, allowing everyone to enjoy enhanced services while contributing to a greener future.



## The New Library

- The library is 194m<sup>2</sup>
- A significant investment has been made on new furnishings
- The library is zoned to create dedicated spaces for children, young people, and adults
- The library is fully self-service with customer-friendly RFID kiosks for book borrowing and returns, printing facilities, card payments, and free Wi-Fi
- The library hosts a full programme of free events for children and adults with Rhythm and Rhyme, class visits, storytelling and Tea and Newspapers
- There are three public access computers.







# Leading the Way in Sustainable Public Buildings

Killyleagh Library is the third public building refurbishment designed to the EnerPHit standard to be completed in the UK.

The transformation was facilitated by the Department for Communities and supported by capital funding provided through the Department for the Economy Energy Invest to Save Programme 2023/24. This funding, specifically earmarked for energy efficiency projects, enabled the library to meet the stringent EnerPHit standard.

This significant capital investment in Killyleagh Library is leading the way in sustainable public buildings whilst creating a stunning, environmentally friendly library in the heart of the local community for all to enjoy.





# Achieving EnerPHit Standard

The process of achieving EnerPHit certification is rigorous and requires meticulous attention to detail. For Bessbrook, Ballymoney and Killyleagh libraries, the journey involved not only enhancing the aesthetic and functional aspects of the building but also implementing complex engineering solutions. The retrofit included the installation of high-performance wall and roof insulation, advanced airtightness measures, and triple-glazed windows that minimise heat transfer and prevent energy loss.

Additionally, the mechanical ventilation systems with heat recovery system (MVHR) plays a pivotal role in maintaining indoor air quality and temperature stability. It ensures that fresh air is constantly supplied, while stale air is efficiently removed, all while conserving the energy used to heat or cool the building. This not only prevents dampness and improves air quality but also contributes to the library's overall energy efficiency.







## Ballymoney Library

The First Non-Residential EnerPHit building in the UK

Ballymoney Library is a vital resource for the town's approximate 11,000 residents and the surrounding rural areas. With five primary schools and three post-primary schools nearby, the library plays a crucial role in supporting education. It serves over 2,000 active library members and extends its reach through the Causeway Homecall and Mobile Library services, ensuring access to books for housebound customers and rural communities.

Bessbrook Library was purpose built in 1993 as a detached single storey building. Its location on Church Road, which is the main road through the centre of Bessbrook, makes it easily accessible to the local community. As a public library, it serves the village of Bessbrook and the three townlands of Maghernahely, Clogharevan and Maytown. The library is a vital resource for the village's 3,000 residents and surrounding rural areas. With five nursery schools, 12 primary schools and one post-primary school nearby, the library plays a crucial role in supporting education.

## Bessbrook Library

The Second Non-Residential EnerPHit building in the UK



**The successful refurbishment of Killyleagh Library, alongside the completed projects at Ballymoney and Bessbrook libraries, represents a major achievement in advancing our commitment to sustainability. These efforts set a new benchmark for future public building projects, demonstrating what is possible when we invest thoughtfully in our libraries.**

Libraries NI extends its thanks to everyone involved in making these projects a reality. These achievements underscore the profound impact that even modest investments in libraries can have on our communities. By redesigning these spaces to not only meet but exceed modern standards, we are ensuring that they will continue to provide essential services in a more sustainable and environmentally friendly environment for many years to come.





# Protecting the Past and Driving the Future

Libraries NI recognises the importance of conserving and preserving our library buildings, particularly the historic Carnegie Libraries located in Lurgan, Bangor, Shankill Road, and Falls Road. These libraries not only represent significant architectural legacies but also contribute to the cultural heritage of their communities.

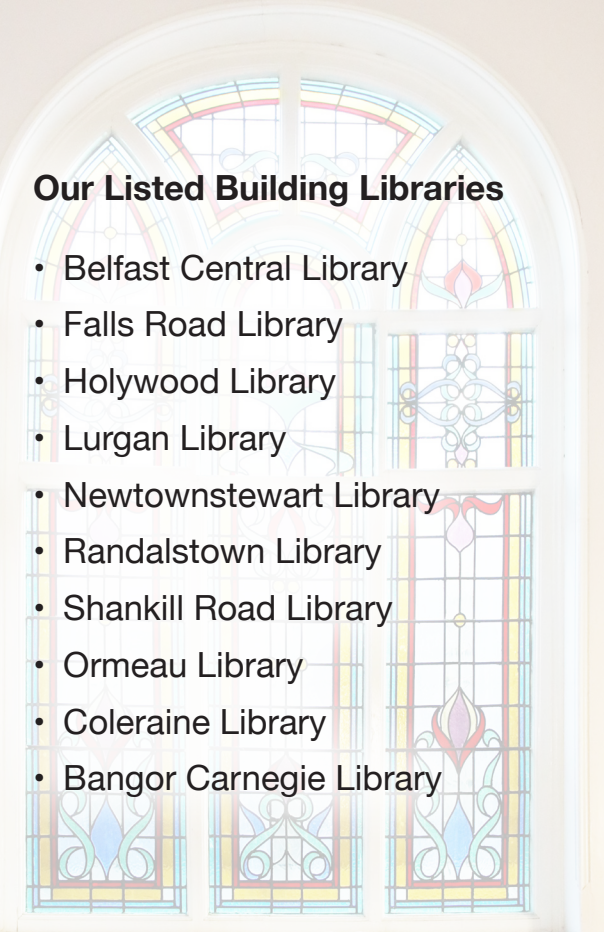
There are a number of studies demonstrating the impact of a new build or a refurbished library contributing to the regeneration in the immediate areas surrounding the new library and adding social value and amenity. The extension to Lurgan Carnegie Library in October 1991, followed by a refurbishment in 2020, exemplifies this contribution. These enhancements have provided modern library services while preserving the historical essence of the building, reinforcing its role in cultural, economic, social, and environmental development.

The legacy of our libraries is evident in their ability to empower and enable communities. The enduring nature, place, and value of libraries at the heart of communities are illustrated by the continued use and appreciation of these spaces. As we move forward, Libraries NI remains committed to enhancing our buildings and services, ensuring they remain vital hubs for information, education, and cultural engagement for future generations.



## Our Listed Building Libraries

- Belfast Central Library
- Falls Road Library
- Hollywood Library
- Lurgan Library
- Newtownstewart Library
- Randalstown Library
- Shankill Road Library
- Ormeau Library
- Coleraine Library
- Bangor Carnegie Library





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