



# Durham History Centre Durham, UK

<b>Completion</b> Autumn 2023
<b>Project Type</b> Civic
<b>Client</b> Durham County Council
<b>Main Contractor</b> Kier Group plc
<b>Value</b> £18m
<b>Area</b> 5,000sqm

Durham History Centre is a new central hub for the collection and exhibition of almost 900 years of the county's history.

The site is a grade II former manor house which had previously been used as the clubhouse for a local golf course. The development also includes a new build extension to the existing building, with both buildings being two storeys in height.

## Retrofit Strategy

The centre will consolidate a number of services previously located across multiple sites including the registrar's service, the city archives and the Durham Light Infantry (DLI) Museum.

Durham Registrars have outgrown their current property and its lease is coming to an end. Relocating to the new facility will enable a larger ceremony offer with supporting grounds and office space.

**Retrofit Type**  
**Critical Infrastructure - Cultural**  
**Heritage**





The city archives have also outgrown their current space, with a lack of accrual and storage areas necessitating its relocation. High operational costs of the property have also had an impact.

The Durham Light Infantry museum closed in 2016 following years of financial difficulties and low footfall. The extension building will provide a new home for the museum, shared with the archives collection.

Low carbon technologies underpin the strategy to offset the embodied carbon of the extension. This includes the installation of a 300kW Ground Source Heat Pump (GSHP) which has the potential to meet 89 percent of the building's heating demand and 60 percent of its cooling. The heat pump is connected to an aquifer, increasing its efficiency over a regular GSHP due to the higher transfer rate of water than soil.

The roof also accommodates 864sqm of PV panels. With a modular efficiency of at least 17.2 percent, orientated south at a 10 degree incline to the horizontal, an annual yield of 130,065kWh will be generated.

This has the potential to satisfy up to 31.8 percent of the development's electrical requirements and a 9.7 percent reduction in annual CO<sub>2</sub> emissions.



### Lessons Learnt

The long term conservation of cultural heritage collections relies on the buildings that house them being safe and having the appropriate environmental conditions. To follow guidance, the building specification of the new facility needed to align with passive principles.

Highly insulated rooms with an airtightness rating of less than 0.5m<sup>3</sup>/m<sup>2</sup>h@50Pa were required, maintaining temperatures of between 13 and 18 degrees at all times. The rooms also needed to have a 240min fire resistance rating and a level four security rating.