



Pathology Centre of Excellence Newcastle upon Tyne, UK

Retrofit Type
Critical Infrastructure - Healthcare

Completion March 2014

Project Type Healthcare

Client Gateshead Health NHS Trust

Main Contractor Galliford Try Construction Ltd

Value £8.5m

Area 3,940sqm

The facility is part of the Queen Elizabeth Hospital site in Gateshead and is one of three labs that form the 'South of Tyne Bigger Picture' project. It comprises a series of labs accommodating specialist staff and the equipment needed to undertake clinical diagnostic tests of human tissue samples.

Retrofit Strategy

A large double height hall made up most of the existing building. This housed a few smaller structures, plant equipment and the old laundry hoppers. Over time, some smaller ancillary buildings had been added but were largely unsuitable for other functions.

The original superstructure was retained, including the original space frame roof structure and external masonry walls. The external fabric was upgraded throughout, improving thermal performance, cleaning, maintenance and aesthetics.

The transformation of a disused 1970s laundry building into a new state of the art laboratory and associated training, management and administration suite.

BIM modelling techniques were used to carry out the service coordination and clash detection. This helped to manage the challenge of working with an existing building.





“This is now a fantastic, ultra modern place to work and this will have some real benefits for the medical teams at the hospital, the GP surgeries in the region, but most importantly the patients who need their laboratory results.”

Chris Charlton, Service Manager, Pathology Centre of Excellence

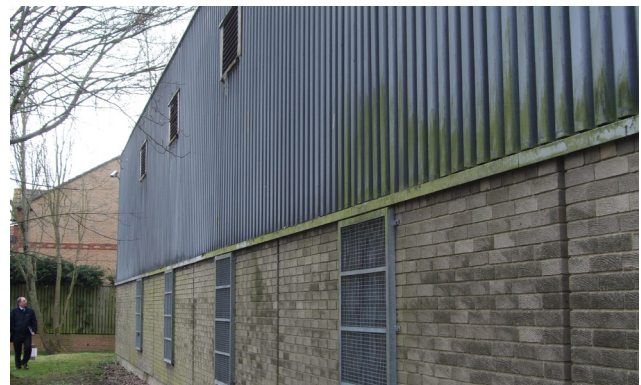


The double height open plan lab would not have been economically viable in a new build. This was a unique opportunity presented by the inherent design of the large existing laundry hall. The additional height improves the proportion and feel of the space and allows daylight to span across the whole lab.

Environmental factors were considered from the start including the use of natural daylight and ventilation, robust and renewable materials and reinforcing pre existing links to local transport.

The reuse of the existing building was key to the trust's business case and a determining factor in the centre's decision to locate in Gateshead. This has boosted the local economy and helped retain jobs at the hospital.

The repurposing of an existing asset also freed up space within the main body of the hospital for its use in patient facing services.



Lessons Learnt

Many of the lessons learnt resulted from assumptions made regarding the potential of the existing fabric. For example, the original intention was to retain the existing floor slab. However, during construction this proved to be unsuitable for the high specification flooring required for lab equipment.

Structural record drawings were also found to be inaccurate, leading to emergency remedial works on site.

The restricted floor to soffit heights of the extension and the specific air flow requirements of the histopathology labs required an innovative and collaborative solution.

Working closely with design engineers, the Trust estates team, ductwork manufacturers and installers enabled a bespoke diffusing system ventilation solution. The solution delivered all the technical requirements whilst integrating with the high performance ceiling finishes for the lab areas.