A&DS SCOTTISH FUTURES TRUST

Shared Learning Event

Refurbishments

Summary of Workshop

3rd March 2022

LEARNING ESTATE INVESTMENT PROGRAMME
Connecting People, Places & Learning

Attendees

Aberdeenshire Council
Aberdeen City Council
Angus Council
Architecture & Design Scotland
Dumfries and Galloway Council
Dundee City Council
East Ayrshire Council
East Lothian Council
East Renfrewshire Council
City of Edinburgh Council
Falkirk Council
Fife Council
Glasgow City Council
The Highland Council
Inverclyde Council
Midlothian Council
Moray Council
North Ayrshire Council
North Lanarkshire Council
Orkney Islands Council
Perth & Kinross Council
Renfrewshire Council
Scottish Borders Council
Scottish Futures Trust
Scottish Government Learning Directorate
Shetland Islands Council
South Ayrshire Council
South Lanarkshire Council
Stirling Council
West Dunbartonshire Council
West Lothian Council

Presenters

Roger Curtis	Historic Environment Scotland
Lisa Le Grove	Glasgow City Council
Derek Yuille	South Ayrshire Council
Lindsey Mitchell	BDP
Lindsay Henderson	Dumfries & Galloway Council
Vance Sinclair	South Lanarkshire Council

Introduction

Context

This Shared Learning Event was the first of 2022, and as with previous events, was designed to promote discussion and sharing of best practice.

The theme was 'Refurbishments' which was born out of discussions from previous Shared Learning Events. In particular, the focus was looking at the opportunities and challenges of dealing with existing buildings, with consideration given to heritage value, value of locked in carbon, embodied investment value and the potential abandonment of previous investment into an existing estate.

In terms of the LEIP programme itself there are some existing buildings within LEIP phases 1 and 2, with more anticipated in LEIP Phase 3 to be announced later this year.

As with previous events, it was hosted and facilitated by Scottish Futures Trust's (SFT) Learning Estate Infrastructure Team, alongside Architecture & Design Scotland (A&DS). The event was open to all Local Authorities across Scotland to provide an open forum to discuss initiatives and share ideas, best practice and challenges.

Workshop

The workshop was held online on Thursday 3rd March 2022. It brought together 100 delegates from Local Authorities across Scotland, including representatives from SG Learning Directorate.

The event included presentations from:

- Historic Environment Scotland
- Glasgow City Council
- South Ayrshire Council & BDP
- Dumfries & Galloway Council
- South Lanarkshire Council

There was also a discussion slot where delegates were invited to bring forward any comments or questions they had.

Standard and conservation retrofit compared

What we didn't do:

- Internal linings removed
- New doors and windows
- Replacement floors
- Mineral wool to roof space
- New ventialtion system
- Waste stream from above

What we did do:

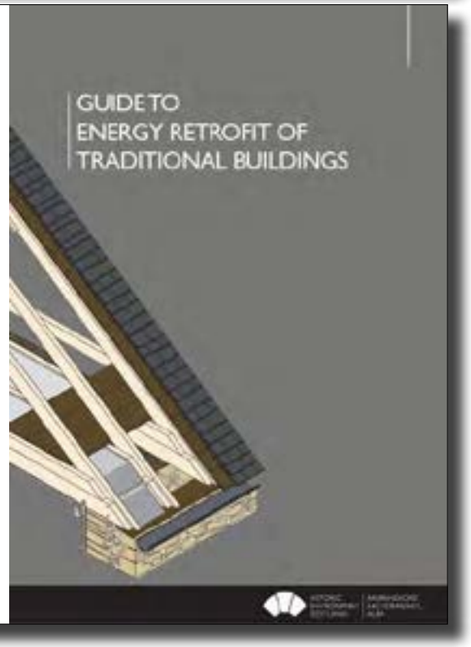
- Internal linings upgraded
- Windows and doors upgraded
- Wood fibre to timber floors
- Hemp batts to roof space
- Passive ventialtion maximised
- Minimised waste stream as above

For 2022:

- Renewables and thermal storage

Written Guidance

- New HES Retrofit Guide
- LBC compliant….
- As used at the Lodge
- Published Nov'21



Conservation Retrofit

Roger Curtis
Historic Environment Scotland

Historic Environment Scotland (HES) have been involved in domestic retrofit since 2008 and more recently have moved their focus to other building typologies and have started to look at indoor air quality, particularly in schools.

With retrofit there is the view that it is sometimes 'all or nothing' – a building is either demolished with obvious carbon impacts and considerations, or it requires extensive refurbishment which is very intensive. Whilst this will be very energy efficient, a lot of new material will have gone into it and a lot of old material taken out of it and put in landfill or burnt which has a long carbon tail. HES are trying to develop a middle ground which seeks to minimise this type of waste, arguing that in an era of resource scarcity and increasing material costs it is prudent to retain existing durable materials.

The price of timber, for example, has increased by 120% since the pandemic started and often the timber that you get is very poor quality. So by throwing away old doors, for example, we are throwing away embodied and captured carbon to be replaced with an intensely manufactured oil feed stock dependent which is high in VOCs and not locally sourced. The general direction HES are trying to get is "to minimise the skip count per refurbishment".

Reducing dependency on oil feed stock in refurbished materials also ties into SG policy with respect to the circular economy, in addition to focusing on a national or regional supply chain. There's also really interesting materials coming onto the market that will help us to fulfil the policy intention of SG. Reuse of existing buildings has to be a key part of achieving SG policy and "if we're going to reuse existing buildings let's do it in a sustainable way that accepts the good bits about them and upgrades the bits that aren't quite so good".

The benefits of a lighter touch

- Less invasive - will cost less - more likely to be done
- Less invasive – less disruption – more likely to be done

Lower operational performance, but:

- Upgrade - less removal
- Less removal – less landfill – less methane
- Less removal – less replacement stuff
- Better choice of upgrade materials - sequester carbon
- Smart energy supply and storage – make up the operational energy shortfall

Proving It – Doing the carbon maths

HES and Zero Waste Scotland will partner in a carbon accounting project:

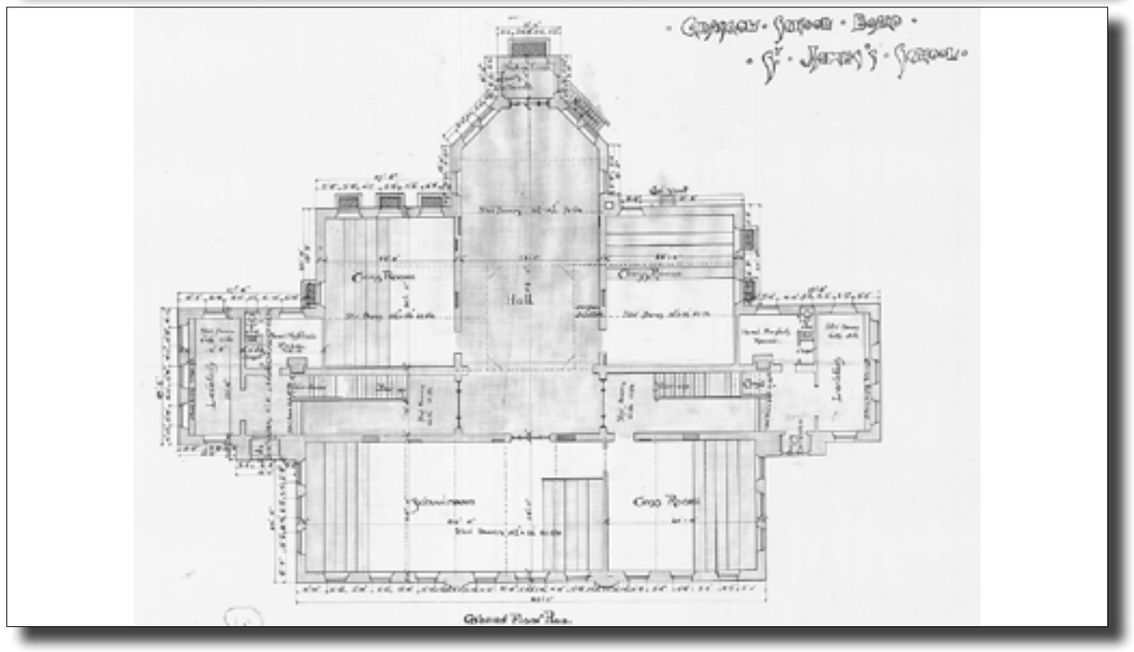
- To follow from the Historic England Report
- Taking the 'refurbishment counting' from a conservation approach
- And comparing that to a more intensive intervention
- Repeated for selected building typologies (a Cottage, a Villa, a Tenement)

And then looking at carbon offsetting from:

- Carbon capture by material used (hemp board
- Carbon saved through renewables (heat pumps, thermal batteries)
- Carbon saved by smart energy procurement (a decarbonised grid)
- To help get over the line to Net Zero

Conservation Retrofit Example

- Holyrood Park Lodge
- Cat B Listed, WHS
- Start - EPC Band F
- Finish – EPC Band C
- With renewables top C?
- And offsetting = Band ?
- Refurbishment Case Study 37 - Click here



Case Study 01
Gaelic Primary School

Lisa Le Grove
Glasgow City Council

The Gaelic Primary School in the former parish school of St James Primary in Calton, Glasgow, will be the fourth Gaelic school that Glasgow City Council (GCC) will create. The demand for Gaelic Medium Education in the City has increased substantially, due mainly to the success of the existing Glasgow GME schools.

The parish schools in Glasgow were built between 1873, after the Education Act, and continued until 1919; there were 152 in total. This large portfolio of buildings was designed by the best architects of the day and created healthy environments for the pupils. They provided a huge resource as Glasgow exploded in terms of its population around the industrial period and only began to lose their purpose when they lost their environment/context.

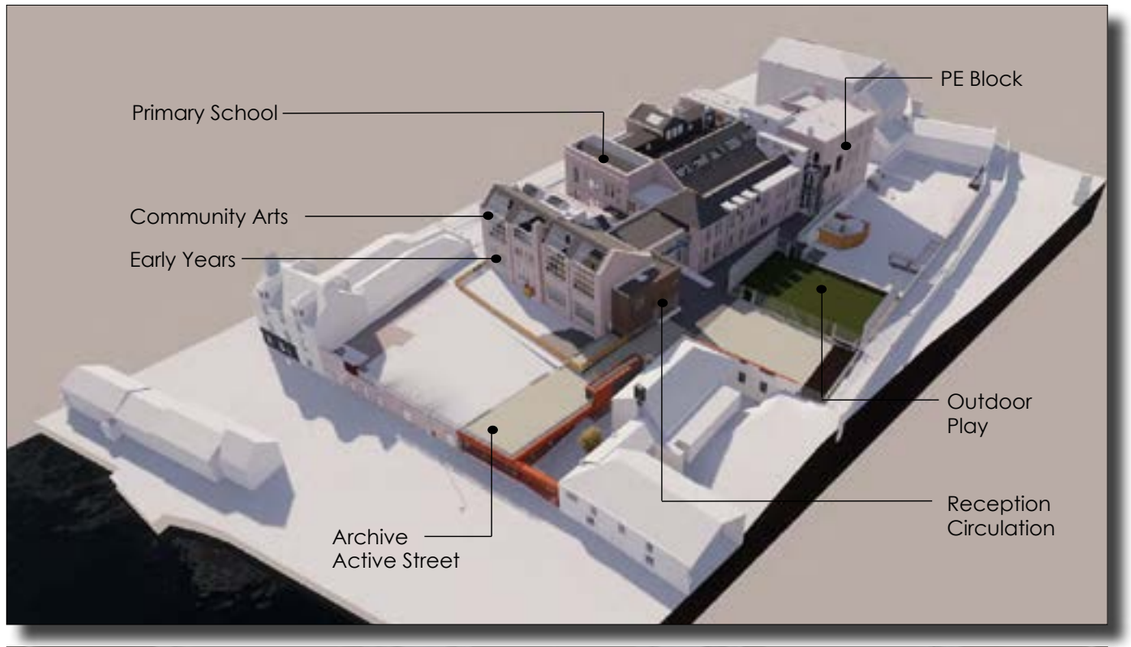
Back in 2016, GCC undertook a study to identify the remaining parish schools and established that 82 of the original parish schools existed, with 28 in use as primary schools. There were also 8 vacant and derelict parish schools, 2 of which were in the process of disposal for development as housing, leaving 6 derelict and causing a blight on their communities. GCC embarked upon a way of trying to generate interest. Various organisations were approached who liked the idea of a creative re-purpose project but were put off by the significant capital costs of re-development. GCC felt these buildings needed anchor tenants who have the resource and means to access funding and be able to deliver a major programme of work and to bring them into long-term financially sustainable use.

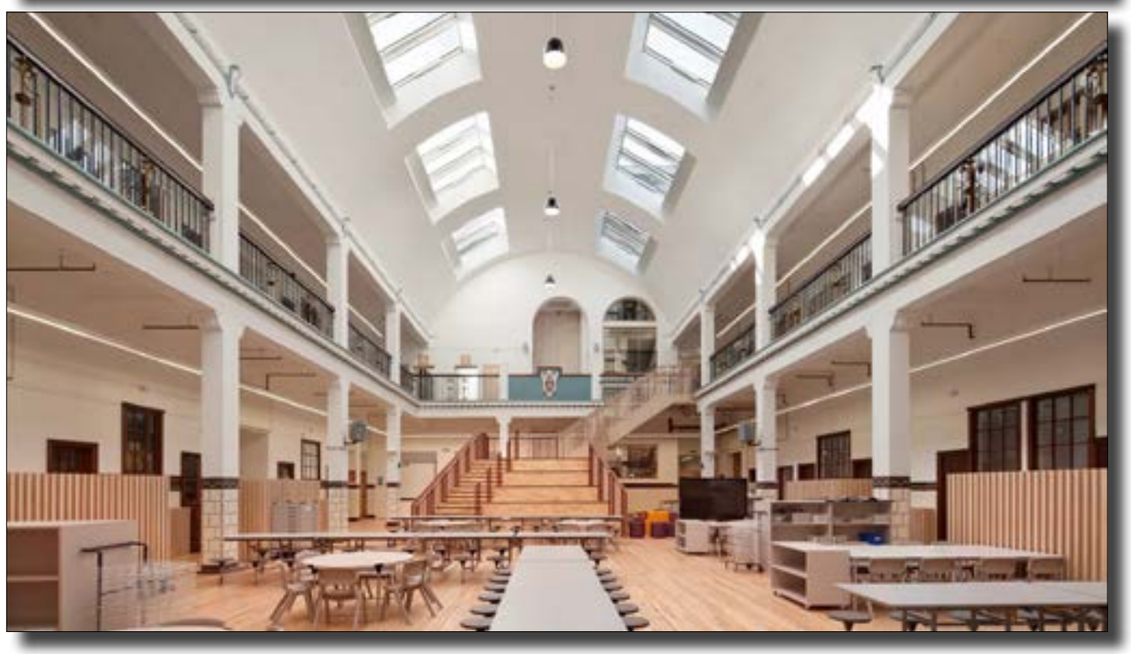
One of the initial challenges GCC faced is conforming the St James' building to the space metric set out by SFT as part of the LEIP funding criteria. Currently this is around 2400sqm and the metric of 7.5sqm per pupil for the roll of 360 would necessitate a building of around 2700sqm. GCC have therefore been looking at how they can extend the building to create some of the 'big volume spaces' without ending up with a building that is bloated in terms of its area.

The current condition of the building is very poor. It was closed in 2009 and there has been significant damage due to water ingress as the lead on the roof quickly disappeared after the site became non-operational. GCC has been in similar circumstances before with previous projects so remain committed to this challenging redevelopment project. The in-house GCC team will be supported with specialist external advice from John Gilbert Architects as EnerPHit consultant and David Narro Associates, helping with the structural aspects of the enabling works.

In principle GCC is looking to retain most of the ornate external parts of the building and the contribution that makes to the streetscape, but also to sympathetically extend to the rear of the building to increase the overall internal floor area. The main entrance will be relocated to the interstitial space between the old building and the new. The existing atrium will provide a key role in the air quality management for the classrooms, as well as becoming the heart of the building. Externally, the former pitch will be recreated as a 7-a-side synthetic pitch, and the existing mounds and trees will be integrated into landscaping proposals. Although it's a school first and foremost, "it will also be an incredible community resource."

Prior to 2019, the different departments of the Council had their own portfolio of buildings that they managed using small property teams. However, a reorganisation of the asset management arrangements has established a centralised Corporate Asset management department, which enables the Council to make more strategic decisions to benefit Glasgow as a whole. The re-use of existing buildings is a significant element of the Council's Property and Land strategy and links closely with the Council's Heritage Asset Plan.





Case Study 02
Ayr Grammar School

Derek Yuille & Lindsey Mitchell
South Ayrshire Council & BDP

South Ayrshire Council (SAC) have been looking at ways to try and address the decline in demand for retail on the high street and have been considering how to 'repurpose the high street'. Ayr High Street is long and at one point had shops running along its entire length which, pre-online shopping, was sustainable. However, due to the decline in demand the high street now has more gaps than retailers. SAC came up with a simple strategy to address this, which was to break the high street up into 4 different zones:

- Culture & Heritage
- Leisure & Recreation
- Retail
- Burns Status Square

A number of projects have either been completed or are underway within the culture & heritage zone, and this includes the recently completed Ayr Grammar Campus, which includes a primary school, Early Years centre, Archive & Registration Centre and a number of community facilities.

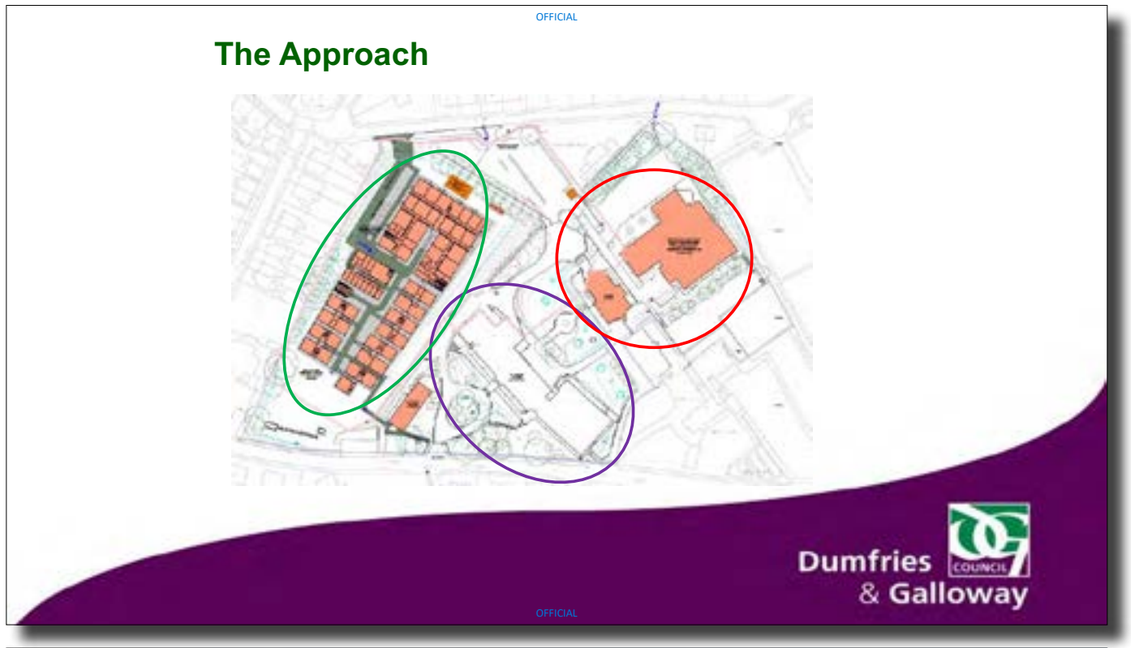
The project started with the relocation of Ayr Academy to the 18th century Craigie Estate on the banks of the River Ayr. With the University of West of Scotland, Ayrshire College, Dam Park Stadium and Craigie House, all based on the estate, the introduction of the new school has created a campus. This relocation left the previous site at the corner of Forth St and South Harbour St vacant.

The architects for the project, BDP, are very much proponents of the view that 'the greenest building is the one that already exists' and the Ayr Academy site presented a fine collection of buildings, albeit densely packed. The site itself is very historic and sits on the old site of the citadel of Ayr. Education has existed on this site for hundreds of years but the buildings remaining dated back to the 1880s. BDP began by looking at which buildings they could salvage, and which could be removed. Through a process of optioneering, they determined that the building added in 1939 was of a lesser quality in terms of space compared to the other buildings, and that the removal of this would open a lot of opportunities on the site.

BDP's approach to the Grade B listed 1880 block was 'if it wasn't broke we didn't fix it', meaning they retained as much of the existing building and fabric as they could. Any interventions have been sensitively carried out and the inclusion of new elements are sympathetic to the environment. Where windows were beyond refurbishment they were replaced, but where they were in good condition they were restored and refurbished. Existing timber flooring was stripped back and refinished wherever possible. Old radiators were also retained and refurbished. Over the years many services had been bolted onto the original fabric, so these have been stripped back and reintroduced in a more sensitive and integrated way.

In terms of sustainability, the building's performance has been improved through an upgrade of the building fabric. Primarily this has taken place within the roofscape, but where existing linings had to be removed insulation was added. There has also been an approach to material efficiency, with the view being that if the material existed and is of a great quality it has been cleaned it up, kept, and celebrated within the building. Lindsey Mitchell concluded; "I think it's really important that the history and legacy of the building still remains and we don't try and take that away from the spaces that exist."

"Most importantly for this project we have increased utilisation on the site because we have extended the offer; it's not just a school it is absolutely a community building and hopefully the community can engage with the building in a more positive way".



Case Study 03
St Joseph's College

Lindsay Henderson
Dumfries & Galloway Council

Dumfries & Galloway Council's (D&GC) St Joseph's College project was part of Phase 1 of Dumfries Learning Town and began on site in 2016. It was a 'Schools for the Future' funded project and involved the refurbishment of several different interlinking blocks of differing ages ranging from 1910, 1950 and 1980s.

The project involved a full decant (with the exception of high volume areas of PE, dining facilities and assembly) into a 'learning village' made up of portacabins. This is the area highlighted in green overleaf, with the purple area indicating the main works area and the area circled in red the third phase of works.

Roughly 10% of the capital project cost was the decant accommodation, but this has to be weighed up against all the benefits. The main benefit that is measurable in terms of cost is the impact on the programme; it significantly shortened the programme and sped up D&GC's ability to deliver the refurbishment works.

The school were initially reluctant to do the decant, but in the end, they saw it as an opportunity to do things completely differently. It afforded them the opportunity to think about how they were going to operate differently when they went back into the building. They worked hard to maintain community spirit and were careful with the terminology used, opting to use 'learning village' rather than cabins or huts, to give the message to all that this was not just temporary accommodation but was to be the school for a two-year period. The feedback since has been that it was a very positive experience.

Project Background

- Schools for the Future funded project – commenced 2016
- Tight delivery timescales
- Existing building – multiple, linked blocks of varying condition and age
- Listed building
- Limited ability for intrusive survey works

The Approach

- Full decant (with exception of PE, Dining Facilities and Assembly)
- Phase 1 – Enabling including decant
- Phase 2 – Main Works (occupying decant)
- Phase 3 – Back into refurbished main building (dismantle decant, demolish PE/Dining block and pitches)

The Challenges

- Expensive – hire cost v's programme cost
- Have to decant twice
- Dual planning – adjacencies, room layouts, IT, etc.
- Vandalism/damage and IT costs
- Tie in to existing services
- Achieving compliance challenging

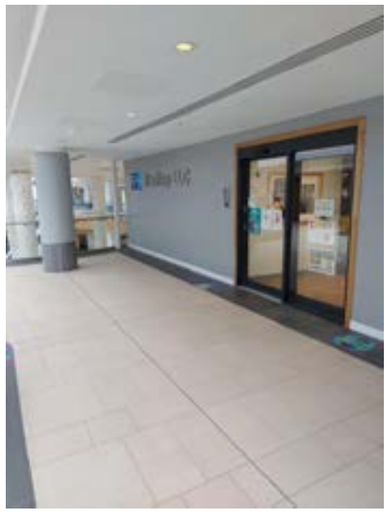
The Benefits

- Fast track programme
- Uncover all existing building issues
- Allowed the school to operate differently
- Second decant easier (110 years of stuff!)
- Allowed Remodelling; not just refurb
- Resolve all existing adjacency issues

Lessons Learned

- Avoid IT replication
- Use standardised temp room layouts
- Avoid PE and dining
- Use decant to initiate changes
- Encourage school to see it as an opportunity
- Learning Village – not cabins or huts
- Not temporary – "our school"
- Unexpected improvement
- Kept community spirit going
- Build good relationships from day 1

Rooftop ELC Entrance



Children playing in External Play Area

Case Study 04 Rooftop ELC, East Kilbride

Vance Sinclair
South Lanarkshire Council

As part of their Early Learning and Childcare expansion programme South Lanarkshire Council (SLC) identified a need for a number of new nursery facilities in East Kilbride, with a preference for a town centre location close to existing public transport routes coming to the fore early on.

Concurrently, the Council were chairing a Town Centre Action Group which was looking to try and reverse some of the decline in East Kilbride Town Centre which was suffering from significant downturn in terms of retail demand, the result of which was a large number of vacant retail premises. Unlike the historic town centre of Ayr as discussed earlier, East Kilbride's town centre was built in the 60s and 70s with some 90s additions and consists largely of an internal shopping centre with up to a quarter of the premises now vacant.

SLC were approached by the shopping centre owners through the Town Centre Action Group and asked to consider providing a new Early Learning Centre (ELC) within the shopping centre itself. Initially SLC were sceptical thinking that an agreement on the terms of the lease would take a substantial amount of time to agree. However, these fears were unfounded and SLC had a very positive relationship with the shopping centre owners and quickly got to the point where they were offered a peppercorn rent for a former nightclub within the shopping centre which became the location for the new rooftop ELC.

The biggest issue SLC faced by locating the ELC within the shopping centre was trying to get outdoor space, and this ultimately influenced their decision on where to locate the new facility. Sitting adjacent to the shopping centre ice rink, access to external roof space offered the opportunity to create an outdoor garden. However, locating the facility next to the leisure and entertainments area of the town centre presented issues in terms of sound attenuation so extensive sound proofing had to be undertaken to limit the impact on the ELC.

The vast open footprint of the former nightclub gave the flexibility to design the internal spaces specific to the educational needs of the nursery thus creating large flexible spaces, well-thought-out with direct access to the outdoors regardless of the weather.

Additional adaptations were needed to incorporate fire evacuation areas and additional car parking spaces. With these additional adaptations and the redesign and build of the internal space, the refurbishment costs have still come in significantly lower than a new build facility. SLC built a new build nursery in East Kilbride in tandem with the refurbishment project and the costs were essentially half for the refurbishment project.

Indications from the shopping centre owners are that the ELC is increasing footfall within the area. The nursery have created new links with the cinema, with the shops, the cafes and early indications are that it is assisting in bringing more people into East Kilbride Town Centre. People are dropping their kids off and then doing their shopping or participating in leisure activities. Parental feedback has been extremely positive citing that direct access to facilities in the centre creates opportunities to chat to each other along with shopping without having to travel further as being a huge benefit.

This project is a good example of creative thinking on how to revitalise our town centres and utilising underused facilities to create new and fresh approaches to town centre regeneration.

Further Support

As well as a forum for Local Authorities to join together, the Shared Learning Events are designed to complement support that is available on any aspect of the LEIP, from SFT's Learning Estate Infrastructure Team and wider stakeholders as appropriate. For relevant contacts at SFT and A&DS please see below;

SFT Contacts

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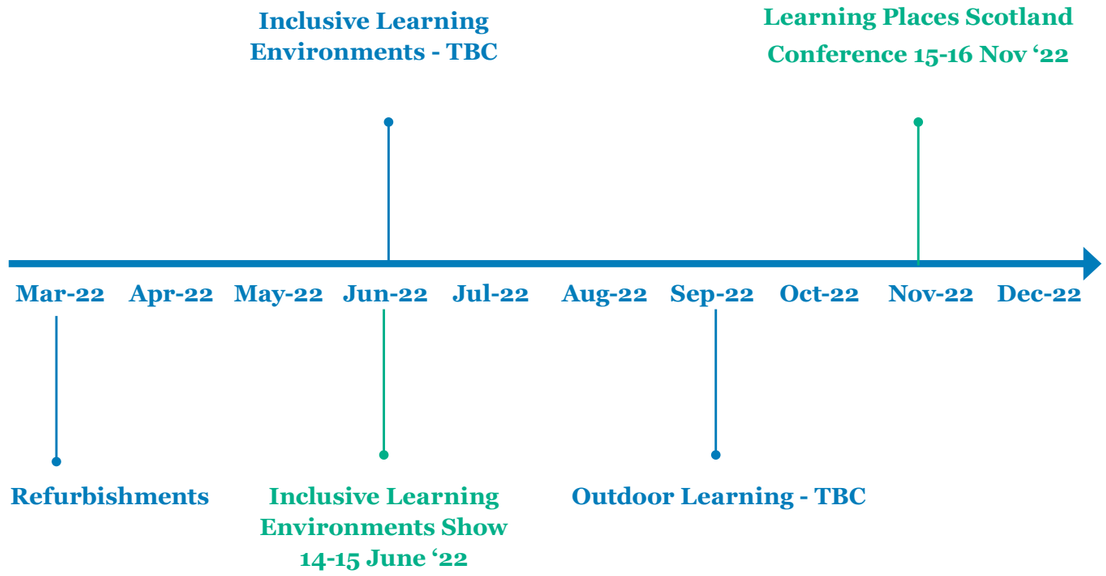
Useful Resources

Please click on the below for relevant links;

HES Guide to Energy Retrofit of Traditional Buildings

Indicative timeline for future Shared Learning Events

The indicative timeline highlights topics that we intend to cover in future LEIP Shared Learning Events across the year. If you have any suggestions for themes to be included in future events or would like to contribute insights or thoughts at these events then please contact SFT or A&DS at the contact details opposite.



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