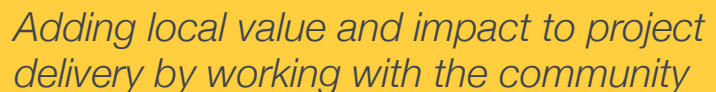


Local Value-Add Case Study
TECA



Adding local value and impact to project delivery by working with the community

Project: **The Event Complex Aberdeen**

Contract value: **£333m**

TECA: a tale about teamwork

Six contractors, a single team

December 2015 saw Aberdeen City Council's planning committee approving plans for a new, multi-million-pound venue to replace the city's exhibition and conference centre. It was the beginning of a process that would, among other achievements, create **600 jobs**, plant 29,000 trees and shrubs, raise £15K for children's charity Charlie House and create the largest hydrogen fuel cell installation in the UK.

THE BACKGROUND

Aberdeen City Council, aware that the city's energy-based economy was suffering due to the reduction of oil prices, was seeking additional ways to generate and maintain fresh income.

The Aberdeen Exhibition and Conference Centre (AECC) had always been an economic contributor. It had been bringing in around £80m a year, and up to £140m during years when it was host to Offshore Europe, the leading European event in the oil and gas industry.

Built in 1985, however, the AECC was no longer considered fit for purpose. Faced with competition from venues like the SSE Hydro and the Edinburgh International Conference Centre, it was falling behind in attracting the large-scale conferences, concerts and events so vital to the city's economy.

The city needed a new venue that could compete on a national and international level.

THE BRIEF

As well as seeking a new events centre, the Council wanted something that would be environmentally responsible, sustainably built and would achieve BREEAM Excellent Status.

Development partner HBD proposed the site of Aberdeen University's former Rowett Institute as the location for the Complex. It was near the airport, on the new city bypass and had potential for a scheme with four times the capacity of the AECC.

At the same time, as part of Aberdeen City Council's ongoing commitment to green technologies, a new energy centre based on three 460kw hydrogen fuel cells would provide independent, low-carbon power to the finished site.

As well as fuelling and powering the new centre, both facilities would help offset the cost by transferring fuel and energy to the local grid.

The finished brief, therefore, was to deliver the TECA complex, made up of:

- **15,000 capacity arena**
- **6,000sqm conference halls**
- **33,250sqm subterranean space for parking or additional events space**
- **200-bed Hilton hotel and spa**
- **150-bed Aloft hotel**
- **Hydrogen fuel cell energy centre and HV substation**



BUILDING THE LOCAL TEAM

A design and build team full of Scottish expertise was created to deliver the project. Glasgow-based architect firm Keppie was appointed by HBD and international professional services company Turner Townsend, which had a local Aberdeen base, was invited to act as project manager.



Robertson was appointed as lead contractor after a competitive bidding process. The Elgin-based company, which has had an office in Aberdeen for 30 years, understood the local area and had significant experience in delivering complex, high value and innovative projects.

Finally, Robertson appointed Glasgow, Edinburgh and Elgin-based Blyth & Blyth to provide civil and structural design, and Hulley and Kirkwood, Scotland's largest M&E practice, to deliver mechanical and electrical engineering services.

ACHIEVEMENT THROUGH COLLABORATION

From the outset, the team worked as an open, collaborative unit. Significant resources were invested in pre-planning before any work took place on site. Everyone contributed and supported the development of a digital model – effectively building the entire development on computers to maximise project certainty and drive specialist supply chain input.

Modelling also allowed sequencing and solution finding, making sure the team worked out potential issues in advance in order to deliver on time and within budget. In fact, pre-construction work delivered £19m of savings, representing 10 per cent of Phase 1 costs, through value engineering efficiencies.

The collaborative approach really came into its own as the project moved forward. When it seemed at one point that it would go almost 10 per cent over budget, all parties were able to work together to examine different options for delivery and bring the costs back in line.



CONTACTING LOCAL COMMUNITIES

The importance of community engagement as an integral part of the project was recognised in the dedicated resource allocated from the main budget. It supported the role of community engagement officer, with the aim of:

- creating excellent communication
- increasing education and employability/upskilling activities
- supporting local organisations and initiatives

That officer planned and carried out regular visits to respond to community concerns and requests, which had several direct impacts on plans. For example, after speaking with residents, the team improved the route to the local bus stop to meet the needs of a young wheelchair user.

More than 1,500 people visited the project stand at a public open day, and a newsletter/postcard system provided ongoing news, invited feedback and communication and signposted residents to a dedicated community information website.

More news and important notices, including road closures, were communicated through planned and highly effective media and social media programmes.

“TECA showcases how the strong partnership team of HBD and Robertson achieved excellence in innovation and supply chain collaboration to deliver a project on time and on budget, exceeding the expectations of Aberdeen City Council.”

Nick Harris, Group Executive Property Director, Robertson Group



LOCAL ENGAGEMENT AND INVOLVEMENT

Over and above keeping local people informed about developments on site, the project partners wanted to ensure the local community was fully engaged with it.

Work experience programmes were put in place for local schools, colleges and universities, as well as people not enrolled in education. This included 72 weeks of placements, which generated eight full-time employment opportunities at TECA.

The team also worked with local groups, including Men's Sheds, which works to reduce loneliness and isolation in men who might otherwise struggle to find friendship and support, to provide an informal introduction to the construction industry.

They got involved in community projects, helping to deliver:

- Repainting of Dyce Community Centre
- A friendship garden at Dyce Primary School
- A tar car park and access ramp at Stoneywood Scout Hut
- A nursery garden at Bramble Brae Primary School
- £15,000 fundraising for site charity Charlie House, which provides support for children with complex disabilities and life-limiting conditions and their families.

SPACE-AGE SUSTAINABILITY

TECA's hydrogen fuel cell installation is the largest in the UK, and on a par with Europe's largest.

It uses state-of-the-art NASA technology to generate electricity by combining hydrogen and oxygen, leaving only water and heat as by-products. The Energy Centre operates on a modular basis, which addresses seasonal variations in demand, so preventing over-production and waste.

It also offers plenty of room for future expansion, and will help to ensure TECA and the surrounding areas benefit from safe, reliable, independent low-carbon gas and energy supplies.

“ A strong commitment to the community builds trust in the community. It also helps the team – more colleagues appreciate the importance and value of community engagement, and this has supported our one-team approach. ”

Gemma Gourlay, Community Impact Director, Robertson Group



A LASTING LOCAL LEGACY

The TECA project not only met the brief in terms of sustainable practice and project delivery, it has also left behind a powerful legacy that will continue to positively impact the local area for many years to come.

This at-a-glance guide shows key achievements and impacts, which we've based on the five capitals model* for sustainability:

NATURAL	SOCIAL	HUMAN	MANUFACTURED	FINANCIAL
<p>Project designed to reduce impact on flora/fauna and quickly return environment to natural state</p> <p>Much external work completed first to encourage wildlife recovery</p> <p>29,000 trees and shrubs planted to aid wildlife recovery and increase biodiversity</p> <p>Ecologically-important burn diverted, associated walkways, heritage points and seating areas delivered (now used as example of SEPA best practice)</p>	<p>35 work placements leading to 8 full-time site jobs</p> <p>£15,000 raised for Charlie House</p> <p>Working closely with StopFire, employability providers and DWP to match staffing requirements with those seeking work, resulting in local employment</p> <p>600 new jobs in the community</p>	<p>Weekly safety meetings and monthly Stop for Safety presentations for all operatives</p> <p>Ongoing safety campaigns and materials, translated as needed</p> <p>Site welfare accommodation on site and in mobile units, mental, occupational and general health and wellbeing information displayed and updated</p> <p>Regular external nurse visits with monitoring and check-ups</p> <p>Flu jabs for all</p> <p>Minimum 5-point PPE, colour-coded hard hats to identify roles</p> <p>First aid room on site, mobile facilities in site vehicles, including defibrillator units registered with NHS Scotland for community use.</p>	<p>10,000m³ of demolition materials innovatively crushed/recycled, all salvageable heritage materials preserved for local landscaping</p> <p>100% of excavated material retained, requiring specialist stabilisation work. Sands and gravels used as backfill/final landscaping</p> <p>Circular construction project – 98.8% of all materials re-used onsite</p> <p>99.8% of non-hazardous demolition waste diverted from landfill</p> <p>98.6% non-hazardous construction waste diverted from landfill</p> <p>100% non-hazardous excavation waste diverted from landfill</p>	<p>£19m savings from pre-production modelling</p> <p>Budget management from collaborative team approach</p> <p>Ongoing revenue from fuel cell supplying energy to grid</p> <p>Remodelled space ensures wider range of uses for building</p> <p>Diverse range of conference spaces to maximise revenue</p> <p>Revenue from on site hotels</p> <p>An additional 4.5million visitors, generating £113 million spend</p> <p>£63 million annually into the Scottish economy</p> <p>600 jobs, including 352 full time permanent</p>

* The Five Capitals Model of Sustainable Development provides a basis for understanding sustainability. It is a dynamic process through which organisations can begin to achieve a balance between their environmental, social and economic activities to improve the quality of our lives. Source: **Forum For The Future**

“ As a company with roots in the North East, it has been a genuine privilege to lead the construction of a complex which will benefit the region for generations to come. It has been a pleasure to deliver the transformational vision of Aberdeen City Council and Henry Boot Developments. ”

Bill Robertson, Executive Chairman of Robertson Group



This case study was prepared by Construction Scotland Innovation Centre on behalf of the Scottish Construction Leadership Forum – **March 2021.**

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