

# Coleg Cymunedol y Dderwen (Gateway to the Valleys)



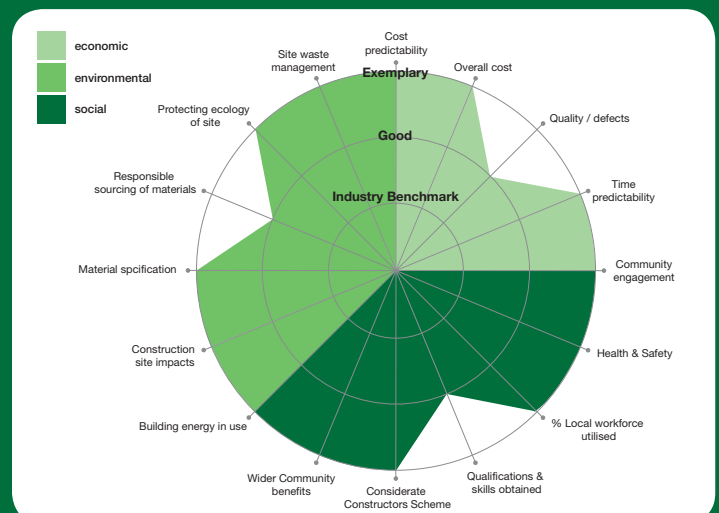
This project has created a new community focused secondary school to replace two other school buildings within Bridgend County Borough Council that were both energy inefficient and not fit for purpose. It also helps to address surplus places, introduces operational efficiencies and enables greater flexibility for teaching and learning to meet the needs of pupils now and in the future.

The strategy for the scheme was to:

- Create a landmark building
- Act as a base for a multi-agency hub
- Establish a successful public, private and third sector partnership that utilise the school and its facilities
- Provide a building that is sustainable

The development is very much a community project and provides facilities that are not otherwise available in the community. A community 'wing' forms part of the school offering dedicated facilities for a range of community groups. The scheme operates a combined heat and power system between the existing adjacent Leisure Centre and the school. The system has also been scaled up to serve a neighbouring elderly person's home. Excess electricity is fed to the grid.

The project was completed on time and budget. Significant social benefits were delivered during construction through engagement with local schools, recruitment and up-skilling of economically inactive individuals and business opportunities for local suppliers. High levels of energy efficiency have been achieved which lowers the whole life costs of the facilities and almost all construction waste from the site was diverted from landfill.



## project details

client:	Bridgend County Borough Council
architect:	Scott Brownrigg Architects
contractor:	JB Leadbitter & Co Ltd
value:	£39 million
project size:	13,933m <sup>2</sup>
contract:	NEC option C
procurement strategy:	Early Contractor Involvement (ECI) via Southeast Wales Capital Works Framework (SEWSCAP)



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## what is an Exemplar project?

An Exemplar is defined as 'something worthy of being copied'. The Exemplar programme has been developed to help identify the reasons why certain projects are successful in a standardised, quantifiable way, and to share with the industry what enabled these successes. An Exemplar considers all aspects of sustainability, including economic, social and environmental. Projects must demonstrate that they have been innovative in one or more of these aspects in a way that exceeds normal industry practices, while achieving at least minimum standards in all other areas of the project. This is to demonstrate that the scheme is well rounded and has not sacrificed one aspect to be successful in another, while also incorporating best practice measures that can advance the state of the industry. An Exemplar project therefore reflects the ideal industry goal of achieving a scheme's primary function aims in a sustainable way, at acceptable costs. Case studies are prepared at 3 key stages: post-design, post-construction, post-occupation. This ensures that lessons learnt can be demonstrated throughout the development of the project.

## what has made the project successful

- A drive towards continuous improvement based on continuity of the project team and supply chain allowing lessons learnt to be developed.
- Committed client leadership, an integrated delivery team from the outset and a commitment to collaborative working and behaviours.
- Maintaining a focus on whole life costs from the design stage through to the construction stage.
- A high level of stakeholder engagement has been maintained throughout the project with particular attention paid to the end user and the local community.
- The project team has placed a heavy emphasis on the use of local supply chains, up skilling local people and providing opportunities to economically disadvantaged groups.

## notable achievements

The procurement strategy for this project was based on a best value rather than lowest cost approach which allowed risks to be positively managed and ensured that the project was delivered on time and within budget.

For every £1 spent on this project a further £1.94 has been generated in the Welsh economy. This was supported by 90% of the total spend on this project being with companies located in Wales.

98% of waste has been diverted from landfill as part of this project.

An EPC rating of A has been achieved for the building and a BREEAM rating of Outstanding.

A 5 YEAR biodiversity plan has been developed to manage the school grounds as a nature reserve.

The project has achieved significant social benefits in what is an economically deprived part of Wales:

- 1380 local people have worked on this project.
- 53 trainees have worked on this project.
- 101 previously unemployed people have worked on this project.
- 89 school engagement activities were delivered involving 6,504 pupils and 17 different schools.





## economic considerations

The procurement strategy for this project was based on a best value rather than lowest cost approach which allowed risks to be positively managed and ensured that the project was delivered on time and within budget.

The client approached this project from a best value perspective focusing on a broad range of objectives rather than simply lowest tender price. This involved balancing the cost of the project with assurances over time certainty and defined quality objectives.

The client's objectives were considered alongside a number of potential procurement approaches with advantages and disadvantages set out against each approach. This allowed informed choices.

The contractor was selected on a quality/price basis in the ratio 70:30 and the contract was awarded via an NEC Target Cost form of contract.

The delivery team was incentivised to maintain cost and time certainty on a pain/gain basis where variations to the target cost were shared 50/50 up to a variation of +/-5%. Savings greater than 5% were wholly returned to the client and losses greater than 5% were borne by the contractor.

Risks were jointly assessed and managed to ensure that cost and time certainty were maintained and value engineering opportunities were jointly reviewed as part of the incentivisation process.

The project was delivered on time and within budget.

Copies of the Procurement Strategy Document for this project are available via this link <http://goo.gl/H3bhpz>

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An engagement programme (Meet the Buyer) with local businesses ensured that opportunities to retain investment locally were maximised. This was complemented by contractual clauses inserted by the client to incentivise the supply chain to maximise local investment.

90% of the total spend on this project was with companies located in Wales and over £23m of this spend was placed with companies located within 22 miles of the project. This helped to create a further £1.94 in the Welsh economy for every £1 invested. This data was collected via Value Wales' Community Benefits Measurement Tool.

A copy of the completed measurement tool is available via this link <http://goo.gl/4pqec9>

## environmental considerations

98% of waste has been diverted from landfill as part of this project.

As well as diverting almost all waste from landfill, over 15% of material used is from recycled sources as measured by the WRAP toolkit while over 90% of the total aggregate used was from secondary/ recycled sources. Copies of the waste review is available via this link <http://goo.gl/gixJCm>

## An EPC rating of A has been achieved for the building and a BREEAM rating of Outstanding.

The design incorporated passive design features, including use of natural daylight, avoidance of excessive solar gain and glare and provision of good ventilation. Additional energy requirements were offset by renewable technologies. A target airtightness of  $5 \text{ m}^3/\text{m}^2.\text{h}$  was set but this was exceeded at  $3\text{-}3.5 \text{ m}^3/\text{m}^2.\text{h}$ . A specialist airtightness consultant was employed to identify points to focus on in the design in order to minimise potential air permeability.

Heating is via a biomass boiler that is sized to deliver 78% of the annual heating load. A secondary gas boiler delivers the remaining peak load and serves as a backup when the biomass boiler needs to be taken offline for maintenance. A biomass specialist, employed from the start of the project, proposed options for supply to optimise the specification. Consequently, the boiler size was halved but still met the required loading. Special consideration was also given to the storage requirements for the wood pellets and access for deliveries. This also influenced the plant room location.

The building has achieved an EPC rating of A. Copies of the certificate are available via this link <http://goo.gl/btCbYR>

Initial work by the client ensured that BREEAM credits were gained during the options appraisal and feasibility stages. BREEAM was then integrated into the design development process from RIBA Stage B and a BREEAM Accredited Professional (AP) was appointed early in the design stage to help facilitate the team's efforts and ensure that credits were optimised.

The project has achieved a BREEAM Outstanding rating – the first of its kind in Wales for a secondary school.

## A 5 YEAR Biodiversity Plan has been developed to manage the school grounds as a nature reserve.

An important legacy for the project has been the desire to improve the biodiversity of the local community in the longer term.

A copy of the 5 year Biodiversity action plan is available via this link <http://goo.gl/kXMCLT>

## social considerations

The project has achieved significant social benefits in what is an economically deprived part of Wales:

- 1380 local people have worked on this project.
- 53 trainees have worked on this project.
- 101 previously unemployed people have worked on this project.
- 89 school engagement activities were delivered involving 6,504 pupils and 17 different schools.

The project team have used the Value Wales Community Benefits Measurement Tool to record social outcomes. A copy of the tool for this project is available via this link <http://goo.gl/4pqec9>

The delivery team were set a target of providing one new local job opportunity per £1m contract value with local defined as within the Bridgend postcode area plus within 22 miles of the site.

The team worked with the Bridgend Employer Liaison Partnership (BELP) to set up a local Jobs and Skills Group comprising of a number of local agencies including Communities First, Job Centre Plus, Careers Wales and voluntary groups.

A supply chain event was also held at the start of the project to encourage local companies to seek opportunities. The event was attended by 89 individuals representing 64 companies.

A total of 101 previously unemployed people worked on this project with 44 unemployed for over 4 months. A further 31 people were recorded as "Former Contract End" which means that they would have been unemployed had it not been for this opportunity.

A total of 53 trainees worked on the project consisting of 17 apprentices, 16 trainees and 20 work experience placements via local schools, colleges and Creation – an organisation to help up-skill disadvantaged young people.

A total of 6504 pupils have been involved in 89 school engagement activities across 17 different schools. Activities have included:

- Progress update assemblies
- Construction Ambassador events
- Site visits

The team also supported the Bridgend Careers event where bricklaying demonstrations were provided. Of 154 visits to the stand 75% were from females.