



How green is your building?

A decision was made to relocate Bexhill College, a sixth form facility serving the coastal strip on which Bexhill-on-Sea sits together with rural north-east Sussex and Hastings.

The result, it was hoped, would not only provide a modern campus that brought together a number of services but also offered the opportunity to reduce the college's impact on the environment and, as a result, it's running and maintenance costs.

Constructed on a green field site, the new building, which was designed by SMC Charter Architects, provides 8,700 square

metres of accommodation comprising a trio of three storey teaching blocks, a two storey refectory building, sports hall and an all-weather pitch.

Even by today's engineering standards the development is a particularly innovative design which, using Silcock Dawson's expertise, benefits from laterally thought through processes and systems to ensure the brief was met. As a whole, when comparing what was specified and what was delivered, the desired outcome was more than achieved.

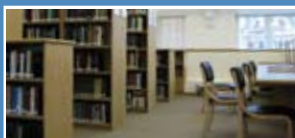
To view the complete Bexhill case study, please visit www.silcockdawson.co.uk.



Client: Bexhill College
Architect: SMC Charter Architects
Project Value: £10.4 Million

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Silcock Dawson & Partners is one of the UK's leading building services engineering consultants operating nationwide. With an increasing wealth of experience in the Education sector, the firm has become a supplier of choice to the market as highlighted in this showcase of our current and recent projects



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Practical innovation for inner city school, St John's School, Blackpool

Working closely with architects Aedas, Silcock Dawson is providing a full Building Services consultancy, including advising and developing a low energy design strategy for a brand new inner city school.

St John's School, Blackpool, is a £4.5 million project which has been commissioned by Blackburn Diocese and includes financial support from the Department for Education and Skills through the Targeted Capital Fund.

The School's location, a small urban site on Church Street, Blackpool which is on an arterial route into the town centre, and of an unusual height, has required an innovative

approach to its design including maximising on space and light.

The 1,500 sq m scheme includes a nursery and 1FE primary school. Classroom space is organised above a ground floor dedicated to administration use. Each storey of teaching space features its own play-deck area, culminating in a large rooftop playground.

These external spaces provide places to gather socialise and access resources as well as creating a sense of individual identity and character for the school. Building height delivers in-built security.

The school is due for completion in September 2009.



Client: Blackburn Diocese
Architect: Aedas, Manchester
Project Value: £4.5 Million

Aedas Architects

21st century setting for students

Education drives the future for generations to help fuel the wealth of the nation. In this respect, we are pleased to be an acknowledged leader in this sector with the provision of a new £17.8 million teaching facility for Hertfordshire.

Situated in a conservation area with listed buildings to be retained, the project will comprise on completion in November 2011 of an additional 9,627 square metres of modern and specialised teaching and administration space at the Ware campus.

Throughout the development it will be business as usual for the college as all works will take place without disrupting the college's everyday activities during the multi-phased construction and refurbishment programme.

Commenting on the project, college director of planning Jane Alford said: "We are delighted to be developing such a facility with Silcock Dawson's expertise on board. Such support will ensure we maintain our existing needs while creating an excellent 21st century teaching environment for our students."



Client: Hertfordshire Regional College
Architect: Bond Bryan
Project Value: £17.8 Million

New Veterinary School for the U.K.



The University of Nottingham have recently opened its new Veterinary Science School

with state-of-the-art, environmentally responsive, Clinical Teaching and Academic buildings that incorporate highly effective, low energy solutions.

Silcock Dawson was appointed to design the engineering services for the Clinical Teaching building which houses small animal handling areas, facilities for 80 students, laboratories and training rooms. In addition, the firm is designing a facility for a large local veterinary practice, which will be providing training amenities for course students.

The facilities and attendant services provide a modern teaching facility incorporating highly effective low energy solutions to the required facilities providing environmentally responsive buildings.

Client: University of Nottingham
Architect: Saunders Boston
Project Value: £10 Million



Silcock Dawson books its place at University of Cambridge

Silcock Dawson & Partners has completed an extensive re-development of the University of Cambridge's Whipple Library.

The project consisted of the removal of raked lecture room benches and replacement with four staggered floor levels with a central atrium to form a new library. Adjacent library area was converted into an IT and Journals Room, with access between the two areas provided by a new glazed bridge.

"We were commissioned to carry out the design and co-ordination of Whipple Library's Mechanical and Electrical services installations," comments Jerry Fagan, Silcock Dawson's Project Engineer. "These included the installation of heating, natural and mechanical ventilation, comfort cooling, hot and cold water services, lighting, power, CAT 5E data installations and a new BEMS system."

In addition, existing services were cut back to the point of entry and re-run to serve new radiators, sanitary ware, lighting and power. A new data installation was also incorporated, extended from an adjacent building.

Silcock Dawson also mounted roof "windcatchers" to provide natural ventilation to the upper floors, whilst an air handling unit provided mechanical ventilation to the lower levels.

"The challenge in installing the windcatchers was to incorporate the mechanisms into a very restricted space," comments Jerry Fagan. "We made excellent use of the layout of the bookshelves, implementing a ventilation system that was very discreet."



Client: University of Cambridge
Architect: JGP Architects
Project Value: £1.6 Million



The perfect prescription

The University of Bristol's Department of Social Medicine based at Canynge Hall - renowned for its research and teaching in epidemiology, public health and health services research – has received a major extension to its facilities to meet the departments expanding research programme.

The development, which includes clinical examination rooms, teaching rooms, a lecture theatre and office space for about 60 staff, has been designed by NVB Architects and Silcock Dawson to facilitate energy

conservation using natural ventilation, thermal mass of the structure and maximum use of natural light. Professor Jenny Donovan, Head of the Department of Social Medicine said:

"We are absolutely delighted with the new extension to Canynge Hall, funded by the University of Bristol and the Wolfson Foundation. The extension will greatly enhance our research and teaching capacities by providing state-of-the-art teaching facilities and high quality meeting and office accommodation."

Going Green: Ynysowen Primary School, Aberfan

Silcock Dawson has been commissioned to complete a £3 million replacement school project at Aberfan for Merthyr Tydfil County Borough Council – undertaking design and construction supervision for a project intended to become an exemplar for future eco-friendly school developments in Wales.

The design for the new school will reflect the modern principles of sustainable design including the use of renewable energy technologies where appropriate.

"We're delighted to be involved with this project," comments Brian Hughes at Silcock Dawson. "First steps have been to undertake a

full Thermal and Daylight Analysis in order to implement a number of design initiatives with the aim of producing a low energy building with the lowest possible carbon footprint."



The Aberfan project will achieve a BREEAM Excellent rating.



Client: Merthyr Tydfil County Borough Council
Architect: White Design Associates
Project Value: £3 Million

It All Adds Up for Silcock Dawson...

Silcock Dawson is part of a team that has successfully won a competitive pitch for the construction of **Filton High School**, a new **£24 million** development comprising a **1285 pupil Secondary and Sixth Form school on the outskirts of Bristol**.

Brought on board by BAM Construction Ltd, Silcock Dawson has played an integral role in the design and construction team which, in addition to Silcock Dawson, included NVB Architects, Hyder Consulting and FP Hurley & Sons Ltd, BAM Construction Ltd's Partnering M&E Sub-Contractor.

A comprehensive tender encompassing costs, programmes, methodology statements and testimonials was researched by the team and presented to the South Gloucestershire County Council and its Professional Team. Initial recommendations included a Thermal Model, produced by Silcock Dawson, which outlined design information in sufficient detail to allow contractors to cost the various elements.

By incorporating into the scheme Bio Mass Boilers, Natural Ventilation, Solar Water Heating, Rain Water Harvesting and a Photo Voltaic array, Silcock Dawson has confirmed the new development will better its low carbon target of 60 percent of the 2002 Part L requirements.



Client: BAM Construction Ltd
Architect: Alec French Architects/NVB Architects
Services Value: £5 Million
Project Value: £24 Million

Reproduced with the kind permission of Alec French Architects, the Client's Architect

Construction on the project began on 15th September 2008 and Silcock Dawson's efforts are being co-ordinated and managed by Andrew Smith and Adam Washburn. The school will be completed in August 2010.

Harnessing energy solutions

Silcock Dawson's Energy & Sustainable Design Group (ESDG) has a dedicated team of engineers providing specialist consultancy services in low and zero carbon solutions for the education sector.

The Government expects carbon emissions from new school buildings to be reduced by 60% relative to the 2002 Building Regulations standard. Additional funding of £50 per sq.M is available to support the delivery of this carbon reduction. In addition all new schools are required to achieve a 'Very Good' rating under the BREEAM Assessment Scheme.

ESDG uses in-house building simulation software, which enables us to create dynamic models and evaluate the performance of buildings throughout the design process including:

- Predict occupant comfort conditions throughout the year
- Estimate energy and carbon consumption and evaluate energy efficiency measures
- Allow innovative designs to be tested prior to construction
- Assess the environmental impact of a design
- Compare alternative construction materials and different building use sundries.



The building simulation module also enables us to:

- Design effective natural and hybrid ventilation solutions
- Optimise the benefits from passive solar design
- Improve the accuracy of energy consumption estimates and optimise plant control strategies.

We have accredited assessors who are experienced construction professionals and can provide an extensive range of services to the education sector, including DEC's and BREEAM assessments.

For further information on how we can help you please go to www.silcockdawson.co.uk



Poynton Bradbury Wynter Cole Architects

Truro Penwith College, Cornwall

Truro Penwith College, Penzance, South Cornwall has drawn on the expertise of Silcock Dawson to provide advisory services for the sustainability and mechanical engineering services for a major redevelopment programme

This will include the refurbishment and provision of new buildings to provide improved Further Education facilities. A sustainability report has been carried out by Silcock Dawson which has defined the requirement for the whole College to achieve above average sustainability targets.

The College has a number of buildings which will achieve a BREEAM Very Good rating and a particular number of Higher Education buildings which will achieve a BREEAM Excellent rating.

Client: Truro Penwith College
Architect: Poynton Bradbury Wynter Cole Architects
Project Value: £25 Million

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