

St Davids 2 and St Davids Centre Cardiff, Wales, United Kingdom



Project

Major city centre retail development

Location

Cardiff, UK

Commencement on site

SDC July 2007

SD2 September 2006

Completion year

SDC 2009

SD2 2010

Client

St David's Partnership

(a joint venture between Land Securities and Capital Shopping Centres)

Project partners

Architect: Benoy Architects and Design Consultants

Quantity Surveyor: G&T

Struct/Civil Engineer: ARUP

Mech/Elect Engineer: Foreman Roberts

Value

£295 million (SD2)

£41 million (SDC)

BLL role

Design and Build GMP (SD2)

Two stage with Contractors Design (SDC)

Highlights

Award winning UK first trial of new hoarding/shuttering product made from recycled waste plastic.



St David's 2 is a major city centre retail development situated in the heart of Cardiff. St Davids 1 is a refurbishment programme of an existing shopping centre. Both centres cover around 1.4 million square feet making the scheme one of the largest in the UK.

Our approach to the build features several innovative solutions including a raft prefabricated basement design, silent piling techniques and the trialling of hoardings from recycled plastic

Anchoring the southern end of the scheme will be the first ever John Lewis in Wales.

Project scope

There are 12 floors in this mixed use retail scheme. St David's 2 will include:

- 967,000 sq ft of retail
- A 4 storey, 260,000 sq ft John Lewis department store
- 160 retail units and 21 catering units including café's, bars and restaurants
- 2500 car parking spaces on top of the shopping centre, 550 spaces in the basement car park of the John Lewis store
- 304 luxury roof top apartments and 27 affordable housing units.

Along with building a contemporary retail centre, Bovis Lend Lease is responsible for extensive public realm upgrading which will include £10 million worth of paving, creating an area surrounding the centre which is attractive and safe people to enjoy.

The luxury apartments will be situated on top of the shopping centre. They will have shared courtyards and views overlooking the city.

In addition to the new St David's 2 development, Bovis Lend Lease has been awarded a separate contract to refurbish the existing St David's Shopping Centre (SDC) which will link with the new centre.

SDC will undergo an extension, modernisation and refurbishment, during which time the shopping centre will remain open. The refurbishment work will be carried out during the evenings and at quieter trading periods.

The existing Debenhams store will receive a new extension on the first floor and link seamlessly into St David's 2 via a glass bridge, anchoring the northern end of the new development.

Together, both centres will cover around 1.4 million sq ft making the scheme one of the largest in the UK.

Design Challenges and Innovation

Basement construction for St Davids 2 required an innovative design to reduce the amount of digging and the consequent demand for trucks that would cause congestion in the heart of the city. The construction is raft prefabricated with a sheet pile solution for the perimeter wall and a steel frame.

Construction Challenges and Innovation

The construction of the basement, notwithstanding the innovative design, still meant removing 270,000 cubic tonnes of earth. Work, below the water table, meant the use of a sophisticated 'dewatering' system, pumping 40 litres of water per second out of the basement into a feeder canal leading into Cardiff Bay

The 'silent piling' method used for the construction of the basement which sits underneath the John Lewis store, has been praised for the reduction of noise levels associated with the works, from a typical 104dB to 67 dB at a distance of six metres. Bovis has been the only company in the UK using this type of piling for the installation of steel sheet and tubular piles

Leadership in Sustainability

The St Davids project has won a number of awards for its groundbreaking use of recyclable hoardings (RePlas) rather than using traditional timber board which requires considerable natural resources most of which end up in landfill sites. The challenge for Bovis was to find an alternative, cost effective material, for the construction of the hoardings which would be safe and durable.

Bovis identified the possibility of using a recycled plastic material made under a new process called Powder Impression Moulding (PIM) and produced by a company called 3DM. The result is a material using up to 80 per cent recycled plastic waste therefore significantly reducing landfill volumes.

