Case Study

Llandough Hospital, South Wales

Welsh Health Board future-proofs its hospital development

Image kindly supplied by Cardiff & Vale University Health Board.

SDS Systems
SDS GEOlight® Attenuation Tank.

SDS Customer
Laing O'Rourke (Expanded Group).

Client
Cardiff & Vale University Health Board.

Project
University Hospital Llandough Mental Healthcare Unit.

Purpose
To centralise adult mental health inpatient services at Llandough Hospital.

Brief to SDS
To design and install sustainable drainage for the hospital's new car park.

Timing
The Care Unit officially launched in March 2016.

Project Background Information
University Hospital Llandough is one of nine hospitals operated by Cardiff and Vale University Health Board, one of the largest NHS organisations in Wales. Located in Penarth, five miles from the centre of Cardiff, Llandough has approximately 500 beds and runs a number of Day Hospital specialist clinics.

Whilst meeting an overall objective to support improved patient recovery and reduce the number of residents being cared for out of area, the main purpose of this project is to centralise all general adult mental health inpatient services for Cardiff and the Vale of Glamorgan at University Hospital Llandough. The new, energy efficient building will be equipped with state-of-the-art equipment and will accommodate older patients being transferred from hospitals in Whitchurch, which is considered no longer fit for purpose, Barry and St David's.

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A key component of the circa £88 million* project, the construction of a new, 135-bed, 19,800m² specialist mental health care unit, 'Hafan Y Coed', together with vehicle parking facilities, located on the site of the existing car park opposite the hospital's main entrance, will provide an 82-bed mental health hospital for older in-patients, a 40-place day hospital and an Assessment & Recovery Centre for up to 35 people. The new, multi-storey car park will add an extra 150 parking spaces, providing 1,120 on site in total, and will also create 85 construction jobs.

New landscaped gardens will benefit the mental health of both residents and their visitors whilst also sustaining local wildlife.

Project Objectives

To ensure the hospital car park is safeguarded against the risk of flooding.

Project Requirements

To enhance the capacity, and increase the resilience, of the hospital's flood prevention infrastructure, whilst minimising its impact on the surrounding environment.

SDS Product Features

Although not specified on the original drawings, SDS demonstrated how it could make significant improvements to the proposed designs and deliver a stronger package of benefits to the end customer. As a result, two GEOlight® tanks have been manufactured and installed, with a total combined capacity of 2,401m³.

Issues Overcome

Ready access to the site was restricted by the high numbers of staff, visitors and outpatients at the hospital throughout the day, along with the associated volume of traffic movements. Nevertheless, SDS was able to complete the project to our customary high standards ahead of schedule and without interference to the hospital's busy 24/7 operation.

Results

The project was delivered in a fully collaborative Level 2 BIM environment and with the objective of achieving BREEAM "Excellent" status.

*(Source: Powell Dobson Architects).

Peter Welsh, Senior Manager, UHL, said: *"The development of Hafan y Coed has been an immense undertaking from the development of the brief, the design of the facilities, the construction work and finally the commissioning of the building and services. It has only been possible with the work, input and support from a vast number of people both staff within the UHB and externally, including service users and carers, design and construction companies."*

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