

## New Ilkley Vicarage

When the Diocese of Bradford planned to build a new Vicarage at one of its parish churches, it decided this was going to be no ordinary Vicarage.



### KEY DRIVER: THERMAL

The C of E Church of St John's, located on the outskirts of the famous Yorkshire spa town of Ilkley in the Parish of Ben Rhydding, has been serving local parishioners for over 100 years. However, when the Diocese made the decision that a new Vicarage should be built it adopted a very 21st century approach to designing in a number of 'green' measures.

The Diocese approached Skipton based architects, Wales, Wales and Rawson (WWR) to design the new Vicarage.

**Liz Haestier, project lead for WWR, commented;**

*"It became clear in early discussions with the Diocese that they wanted a property that was well insulated and fuel efficient. From that initial brief, we opted for a traditional stone and block, super insulated property, with a conventional concrete strip foundation and floor slab."*

However, it was not until discussions began with the developer assigned to the project, Ilkley based Landmarks UK, that a radical new approach to the foundation was considered. Landmarks is a long standing customer of SIG Insulations' Orion Trent branch in Bradford and together they proposed a solution based on a super insulated foundation slab.

**David Robinson, the man tasked with managing the build from Landmarks UK takes up the story:**

*"We worked very closely with SIG Insulations and structural engineers to assess the ground conditions of the site and it became clear that the Insulslab system would provide significant benefits to us, the architects and the Diocese. We could see the benefits operationally and financially during the build and the Diocese could see the benefits financially and environmentally of the buildings' thermal performance over its lifetime. Combining Insulslab with underfloor heating and the use of a ground source heat pump was clearly going to deliver an extremely energy efficient property."*

In addition, Landmarks also realised benefits from not having to deal with manual handling of blocks in deep foundations and not having to employ specialist groundwork contractors.

Landmarks are very familiar with process of "shuttering" on foundation jobs so this part of the project was completed quickly and easily. In fact, they were even able to use some of the shuttering from a previous job. Excavation was only required to the depth of the shuttering (450mm).

**Commenting on the shuttering, David Robinson said:**

*"Producing shuttering for foundations is something we are used to and clearly there are advantages to carrying out a single pour. However, we realise this is not always the procedure of choice for many contractors but the Insulslab system is also certificated for a two-pour installation."*

Before a final decision to go with the Insulslab system could be made, the Insulslab team worked very closely with Andy Worship from GHW Consulting Engineers to satisfy the architects and Building Control that Insulslab was a viable option.

**Andy Worship explains:**

*"When a new method is proposed to construct something as fundamental as a foundation slab, a whole raft of questions will be asked by architects and Building Control that need answers. After evaluating the performance of the Insulslab pods in combination with the steel fibre reinforced concrete, providing those answers was pretty straightforward. The Insulslab system provides a cost-effective alternative to 'traditional' semi-raft and rafted foundations, as well as a cap on piles and replacement for beam and block. In combination with a well compacted granular blanket it can also be used as an alternative to deep trench fill foundations on shrinkable clay soils which was the case with the Vicarage project."*

*In addition, the reinforced concrete mix (Tabix HE 1/50 steel fibres at 40kg/m<sup>3</sup>) eliminates the need for traditional cut & bent reinforcement to be detailed, procured and site fixed offering significant time and labour savings."*

**Architect Liz Haestier of WWR comments:**

*"We were fortunate to have a lot of assistance and support from the Insulslab team who were on hand to answer all our queries and concerns. Their technical support was crucial in working together with our engineers, contractors and Building Control to ensure all parties were happy with the new system."*

**ENQUIRIES:**

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