

**Outwell Road
Using Celotex FI5000 to
optimise thermal
performance for underfloor
heating applications**

Client:
Ben Clifford, Self Builder

Celotex Solution:
Celotex FI5000

Application:
Underfloor heating

IMPORTANT: We have recently identified a compliance issue relating to our calculation and testing of the lambda value of products in our 4000 and 5000 range and the Crown-Bond and Crown-Fix products within Crown Flat Roofing range. Due to this issue, the suspension of the 5000 range will continue and now includes the FI5000 and GD5000 products. Materials relating to this product are for information only.

Under floor heating is a popular choice in housing design, and this self-build project in Norfolk was no exception. The project at Outwell Road had a tiled ground floor space of 200m² and needed to provide excellent thermal performance and efficient heating for the home owner. High performance insulation Celotex FI5000 was chosen to help meet these requirements. Specialist sub-contractor Flowscreed Ltd. was brought in to deliver an underfloor heating solution for the space, and chose Celotex as part of the flooring build-up.

Hugh Doggett, Director at Flowscreed comments, 'At the Outwell project the priority was thermal performance, and using a FI5000 board with a thermal screed would provide this. As the boards are denser than typical PIR insulation it's easy to insert the clips which hold the pipes down, this density also means that they are easier to cut.'

'The built-in vapour control layer also saves a significant amount of time during installation; it removes the need for an additional separating layer meaning the screed can be applied directly onto the taped boards.'

'FI5000 is a great product to use with liquid screed for underfloor heating applications. We get a lot of recommendations from work using this product combination.'

Self-builder Ben Clifford comments, 'I'm really pleased with the performance of the underfloor heating; I work in the construction industry and can see that this product from Celotex is the way forward, saving time on installation and decreasing the end users energy costs.'

'Flowscreed were very professional and did a great job. The floor is nice and warm and the finished product is fantastic, even if you can't see what is performing below the porcelain floor tiles. Outwell Road was our first self-build from scratch but as it's also my day job probably my last.'



Getting insulation right

Correct insulation forms an essential part of any well-designed underfloor heating system; therefore choosing the right type is crucial to ensuring as much heat as possible is absorbed into the house rather than into the ground below. Insulation below the pipes should therefore be much greater than the insulation created by the floor covering.



Celotex FI5000 is a premium flooring product targeted at under screed applications, to minimise insulation thickness and downward heat loss. This premium performance Celotex PIR solution provides reliable long-term energy savings for building structures and has excellent dimensional stability. Pipe retaining clips may also be inserted directly into the FI5000 insulation board, which has an enhanced compressive strength of $\geq 175\text{kPa}$.

The key application benefits of the built-in vapour control layer and easy-to-cut boards saves the installer both time and money.

To find out more about Celotex FI5000, download the product datasheet or request a sample here.