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## **CASE STUDY**

## **Congleton Greenhouses**



**Customer** Private Client

Location Macclesfield

Value £760k

**Contract** JCT Minor Works Contract with Contractor's Design

Project Duration 5 Months

Completion March 2022

### **Project Highlights**

Following from completion of the agricultural building, Knights Construction Civil Engineering division successfully negotiated a return to site for the next phase of the works; two high specification greenhouses.

Offering a full turnkey package, the project included civils and groundworks, bespoke steel frames, glazing, drainage and services (including heating, ventilation and irrigation services).

Prior to award, Knights Construction were able to work with the architect and client to value engineer a solution which met both the need of the client and came within the budget, offering alternatives and solutions to ensure value for money.

The finished project even made its debut on the BBC television news in a story relating to the honeyberries being grown at the development.





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#### The Solution

The project started in the Knights Construction CAD department where cut and fill models were completed to ensure minimal material was removed from site. The resultant arisings were utilised to backfill around the greenhouses and offer improved thermal performance.

Traditional foundations and footings were constructed in preparation for the bespoke structural steel frame to be installed. During the groundworks, ducts and services were installed to the greenhouses to allow water and electricity to feed the buildings, as well as ducting for the control cables to the ventilation and irrigation systems.



Traditional brickwork and blockwork followed to allow the installation of the glazing and the integrated GRP guttering to the centre of the greenhouse. All the glazing was finished with lead flashings, in keeping with the style and aesthetics of the build.

#### The Outcome

Rainwater harvested from the Phase 1 building and the new greenhouses is stored in a new rainwater harvesting tank installed as part of the project and is utilised in the irrigation system, aiming to minimise the effects of the development on the environment.

Bespoke gutter hoppers and finals were added enhancing the overall appearance of the build and the end result was a high-end bespoke greenhouse system, which will become a flagship asset to the client.



