



IGS - Vertical Farming

The UK's first vertical farm, which is being built at The James Hutton Institute in Invergowrie, Dundee.

“Vertical farming is the process by which plants and certain crops are grown indoors in a vertically-arranged system, providing the exact lighting and environmental conditions necessary for plant growth.”

Henry Aykroyd, Founder, Intelligent Growth Solutions

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- **Summary:** Creation of multiple concept, design and production parts for a leading edge patented technology in the vertical growth of plants.
- **Challenge:**
 - Produce high volume of custom parts.
 - Ability to respond to design changes and produce parts quickly to meet these changes.
 - Manage the manufacturing process.

IGS are designing, developing and building the UK's first fully automated vertical farm at The James Hutton Institute in Invergowrie, Dundee. This project brings both farming and the Internet of things (IOT) together and produces the farm of the future, today.

As with any leading-edge technology there is a significant amount of time spent developing the concept idea in to reality through the design process. Angus 3D Solutions is working closely with the design team at IGS to help bring these concept ideas to reality through the use of additive manufacturing (3D Printing).

IGS visited Angus 3D Solutions to discuss how both additive manufacturing and traditional manufacturing could be used to help develop the lighting technology required in the vertical farm. IGS engaged Andy Simpson to help design, produce and manage the manufacture of the critical parts. These parts were produced by using both 3D printing and traditional manufacturing technology to provide a responsive, efficient and effective manufacturing service to meet the individual requirements of this project.

Dave Scott, Chief Technical Officer, Intelligent Growth Solutions

“Having Angus 3D sit beside us, allowed us to juggle the requirement for very fast R&D and the correct ‘design for manufacture’. This was especially important to us due to the demonstration nature of our business. We must demonstrate the tech works and that it is also achievable at scale, with the price point demands. The quality of the samples was superb and the move to mid-scale production was seamless. We can use these parts at every stage, from initial introduction, through to mass manufacture and customer samples during each transition. Absolutely superb!”