

Case Study

Building Information Modelling facilitates coordinated supermarket installation

Services: Refrigeration Design and Associated Services Consultancy

Project Overview

A leading UK retailer enlisted the support of Orwell Design Associates (ODA) to deliver a complete refrigeration package and associated services for their new build store.

ODA used Building Information Modelling (BIM) to coordinate the refrigeration services for the store.

The overall BIM objectives for the project were:-

- Reduced scheme dropout
- Reduced waste
- Reduced cost to build
- Reduced cost to maintain
- Improved accuracy
- De-risk business operations for the future
- Coordinated refrigeration, mechanical and electrical services
- Detailed bill of materials

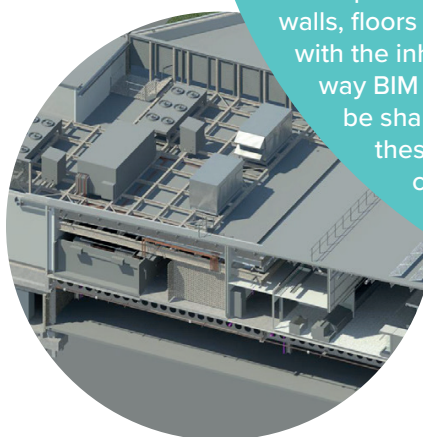
The project also provided the opportunity to expand the client's BIM library on a high profile, large scale project, providing added benefits for the future.

Our Solution

Orwell Design Associates used the latest Autodesk Revit® design software to model the refrigeration systems and associated services and equipment for the new store.

Using Revit® our in-house Design Team was able to produce clash detection reports to identify inconsistencies within the project model. This enabled us to resolve any coordination issues prior to installation, driving efficiency in the overall build.

The BIM process also provided greater visibility of builder's works including service penetration points in the walls, floors and ceiling. Combined with the inherently accurate way BIM enables this data to be shared, we ensured that these elements were fully coordinated with the refrigeration services.



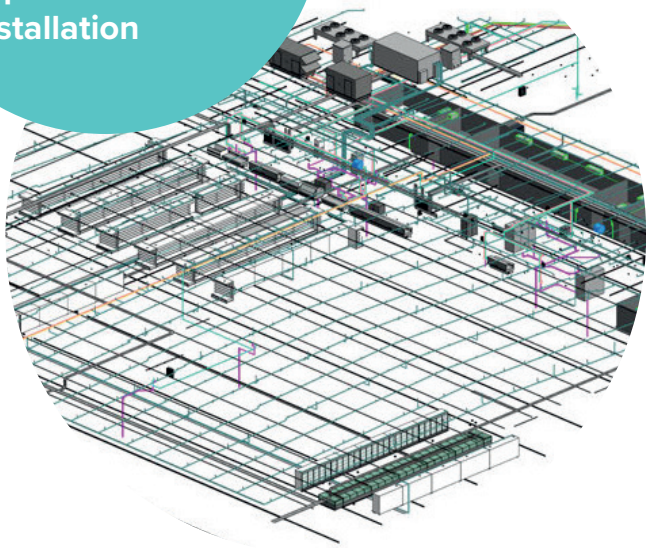
For further information on how Orwell Design Associates can help your business, please contact:

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“With over 50 BIM projects completed and counting, our expertise of using this software combined with our team’s vast experience provided the framework for us to successfully deliver accurate and customised refrigeration design services. This enabled us to implement a cost-efficient and data-driven solution for this ambitious and important retail project.”

**Jahangir Miah, Design Engineer,
Orwell Design Associates**

Challenges Faced

BIM is a paradigm shift in construction design and challenges traditional project workflows. ODA’s expertise in BIM and the team’s breadth of knowledge provided the required resources and capabilities to ensure the project’s success.

Key Benefits

BIM software helped reduce the cost to build by improving the accuracy of the design by virtue of higher levels of co-ordination which resulted in an overall reduction in waste. BIM software facilitates fully integrated modelling with all project contractors to create a model that is a much truer reflection of the final install.

With our experience of BIM projects inclusive of this store we now have a full and comprehensive library of BIM families that has driven further efficiency in our design and reduced production time for both 3D modelling and 2D output drawings.

One of BIM’s benefits includes cost efficiencies by accurately forecasting materials requirements for a project. This helps to deliver projects on time and in budget. This, added to the improved and far more flexible way of data sharing ensures there are fewer surprises and therefore less obstacles for the onsite delivery teams to manage.

An impressive advantage of BIM software is the ability to see the final store installation in a virtual environment. Clients can look around the property and make changes if required to ensure confidence in the design prior to any build taking place. BIM also provides an added long term benefit with historical data stored accurately with all information viewable in a far more comprehensive way in readiness for FM to access and evaluate for potential future schemes.

Design Experience

Our in-house team has a wealth of experience to help provide an integrated design service as part of our wider refrigeration, mechanical and electrical offering. The successful completion of this project is a great example of how our teams apply innovative ways of working to drive efficiency and deliver cost effective solutions for our clients.

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