

## COMPANY

**Hill**

## LOCATION

**London and the South East, United Kingdom**

## SOFTWARE

Autodesk® BIM 360™ Field  
 Autodesk® BIM 360™ Glue®  
 Autodesk® BIM 360™ Layout®  
 Autodesk® Navisworks®  
 Autodesk® Revit®

# The future of home design

## Hill embraces BIM to boost productivity and reduce waste

“Lots of people think BIM is only for big jobs, but that’s not the case. Every single job would benefit from BIM. Hill was an early adopter of BIM and we’re now looking to roll out more projects with BIM as standard.”

— **Mike Beckett MCIOB**  
 Director  
 Hill



Hill managed to facilitate collaboration, reduce risk, and improve productivity across a range of projects © Hill

### Introduction

Founded in 1999 Hill is one of the country’s top house builders, specialising in developing homes of distinction across London and the South East. Innovation, design excellence, quality build and respect for the local environment are key to Hill’s success, which has been recognised through several major industry awards. From rural to urban, refurbishment to new build, and heritage to contemporary, Hill is dedicated to creating beautiful, versatile and sustainable homes.

Hill also provides houses for housing associations and has a turnover of £250 million.

### The challenge

Before the introduction of the BIM mandate, Hill knew that there was technology on the market that could help them to understand buildings better and provide them with a more efficient way of working. One of the biggest issues that Hill wanted to address was to increase the productivity of its workforce, both onsite and in the back office, specifically through the adoption of mobile technology. Another very important aim was to tackle the inefficiency of procurement and quantification of the buildings Hill was working on.

Hill decided to adopt a range of Autodesk tools including BIM 360™ Glue®, BIM 360™ Field, Navisworks®, BIM 360™ Layout® and Revit® in order to facilitate better collaboration, reduce risk, and improve productivity across a range of projects, one of which involved a YMCA building in Upper Norwood, London.

### Inspiring spaces for vulnerable people

YMCAs in the UK provide over 8,000 bed spaces for vulnerable and homeless young people. The vast majority of this accommodation is supported, which is to say it is a platform through which residents access a range of other personal, social and educational services.

The South London YMCA (SLYMCA) at Sylvan Hill, Upper Norwood needed to be redeveloped and replaced with a highly sustainable, better quality residential building, designed to meet modern standards and provide a more positive short-term living environment for its residents. When designing the new building, Hill needed to provide communal spaces and residential accommodation for up to 78 people (in single occupancy or two people sharing).

# With BIM, you can spin buildings around; you can turn them upside down; and you can understand, in ways we never could, how buildings will be going together

## Challenge

With steep topography and the land falling away from the site itself, the Sylvan Hill building was very challenging to visualise. Hill needed to accurately assess the temporary works and could only do this by visualising in 3D. The building had a curved, pitched roof which made it difficult for Hill to know what equipment would fit inside. For this reason, Hill decided to appoint an architect to design in Revit whilst scrutinizing using Navisworks, to better understand the challenges and to more accurately find solutions.

A further inherent challenge that Hill faced with the YMCA, as well as with other projects, was change management and demonstrating the benefits of BIM adoption. While the younger generation is more inclined to understand how much this technology can help solve various industry challenges, Hill needed to enlighten many people both internally and externally and win them over to believing in the benefits of BIM.

## Boosting productivity

While all Hill sites are equipped with laptops and smartphones, the group wanted to ramp up productivity both onsite and in the back office. Autodesk cloud-based technology on synchronised iPads and other devices allows Hill employees to spend more time onsite and be more productive as they are empowered to carry out more admin tasks while in the field.

In addition, Navisworks enabled greater project visibility for head office. By providing the management team with better visibility of the YMCA project, they were able to provide useful feedback and help to deal with any issues before they escalated.

By using BIM modelling tools, Hill was able to save a great deal of time and money by simulating building processes before beginning the build. This meant that they were able to simulate different scenarios and make better-educated decisions regarding the design of the building, throughout the process. Access to this information saved Hill around £20,000.

Mike Beckett MCIQB, Director, Hill comments: "Using Revit and Navisworks means our site managers can in time expect to increase productivity by between 30 and 40% which allows them to get more done."

## Reducing waste

One of the most wasteful processes in building is quantification of building. In the 2D world, after each phase, survey work becomes redundant which means Hill would have to keep requantifying. However, using BIM tools means that Hill can own one set of models and assess the materials required at each phase of the process, giving them total control.

By investing in Navisworks, Hill is working towards eliminating waste. The technology is enabling them to take more control of the materials purchased and reduce wastage on orders. The company will be able to procure better bulk orders and have more control of orders onsite and at head office.

## The future

Regardless of the size of the projects it takes on in future, Hill is now fully committed to using BIM to ensure it can continue to reduce waste, boost efficiency and provide its customers with a better service.

Mike continued: "As a result of working with Autodesk, we're now looking to roll out more projects with BIM as a standard. Every single build would benefit from BIM, if only for the waste management benefits it delivers".

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Director  
Hill



By using 3D modeling, mobile and cloud technology, Hill employees spend a lot more time onsite and are more productive. © Hill



Using BIM and 3D modeling technology to visualize the challenges of the Sylvan Hill building. © Hill



Using Autodesk® Navisworks® to work with integrated 3D models and data; reduces project risk and improves quality and productivity. © Hill