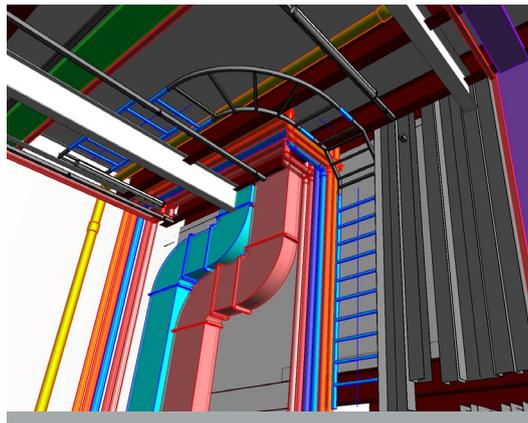
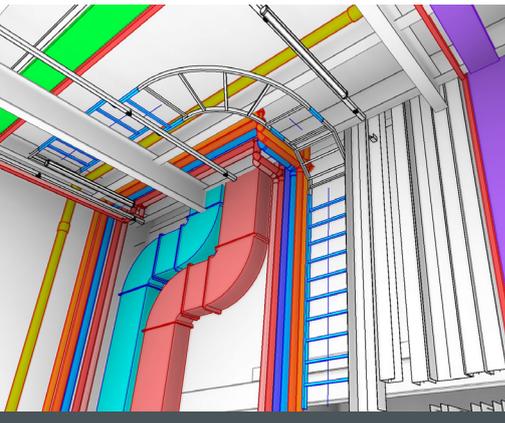


## CASE STUDY

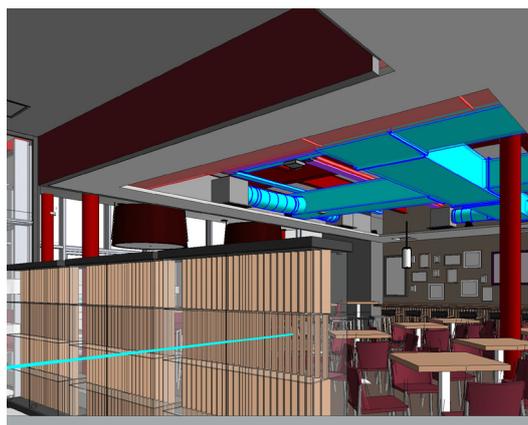
# BIM: THE BENEFITS FOR CONTRACTORS



## INTRODUCTION: G&H's USE OF BIM

We were one of the earliest building services companies to adopt BIM with a significant investment in the technology and personnel dating back to 2013. In this time, we have used BIM collaboratively with contractors on a wide range of schemes passing on numerous benefits in the process.

As such, the downtime while getting used to operating the technology and integrating it in use has decreased rapidly making it a very efficient system that complements all schemes from an M&E perspective.

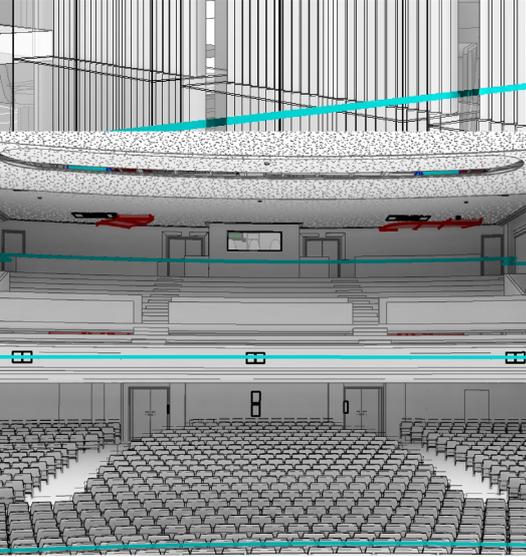


Our most recent BIM project has been in collaboration with Sewell Construction on the refurbishment of Hull New Theatre that also includes the building of a new front of house area.

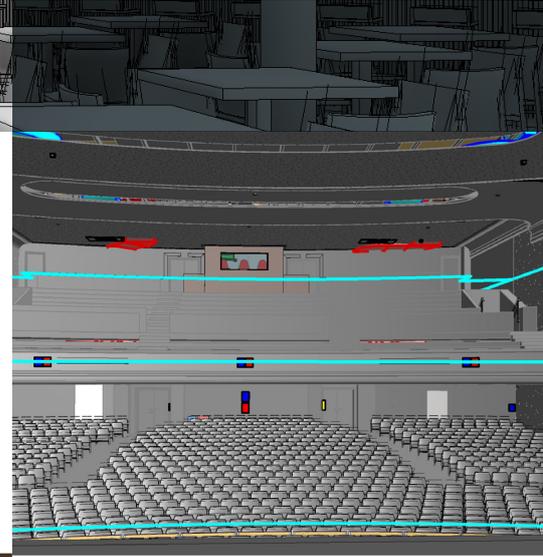
At the start of the project, Sewell Construction provided a full building model and from this we populated it with the building services that were required, just as we would if we were on-site and not using BIM.

While doing so, we identify any conflicts and request changes if needed so it is very much a design process, which requires ongoing co-ordination.

# CASE STUDY HOW WE DO IT



During the early design stage it became apparent that the main auditorium ventilation system required a considerable increase in ductwork size. Noise from plant and subsequent over heating as the main plant was adjusted to mitigate noise were two areas of concern for the design team. Implementing increased ductwork within the existing auditorium void created a significant challenge for our design team not only to work around existing steelwork and structure but also to co-ordinate around the electrical and theatre/production specific services.



Using the model we were able to design and propose various solutions without the need for repeat site visits and measuring.

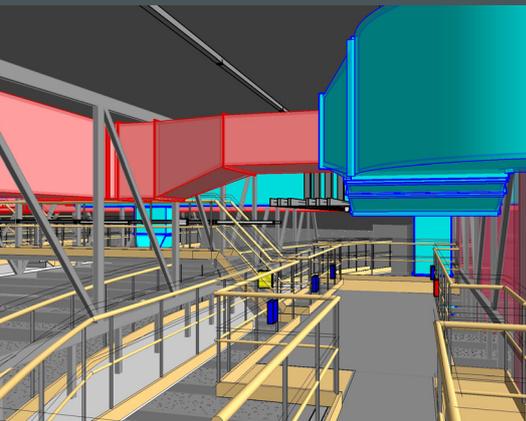
The issues in the auditorium area also meant we had limited room in the ceiling voids and looked at alternative routes, equipment and products to find the most suitable to save space.



This was easily rectified using BIM, changing the 3D modelling and issuing updated drawings for the contractor. We calculated this saved four days of work - the equivalent of 75 per cent of the time - it would have taken if we were not using BIM. Without BIM, this change would have required several visits to site to measure and check, therefore delaying the process.

## CONTRACTOR BENEFITS

- More efficient management of project information.
- Streamline the construction process by reducing delays.
- Identify any potential conflicts before they are identified on-site.
- Allow contractors, architects and the entire M&E team to visualise the project better using 2D and 3D drawings when walking the building.
- Speed up the time needed to resolve any conflicts or changes to designs
- Improve programme productivity and quality
- Encourage ongoing coordination between contractor and M&E engineers
- Reduce time taken to provide cost estimates.
- Enable an accurate handover book showing all changes made at project completion.
- Fully populated 3D model shows contractors every building services component from pipe valves to air handling units.
- Enable contractors to place accurate orders for plant and equipment, reduces waste and drive value through the whole supply chain
- Reduce duplication of work



## KEY CONTACT

Andrew Hudson  
Director  
andrew.hudson@ghbs.me  
0113 255 6433