We share our models with the design team, we know the benefits of working with accurate information, we work with all parties to highlight potential problems, and resolve them before the project starts on site.

We use Revit 2017, Autocad 2017, and 3DS MAX 17 to create accurate 3D models and detailed 2D drawings to aid the design process through the RIBA stages and during the construction phase.

RISE has produced manuals for BIM/Revit with its own template to implement BS1192:2007+A2:2016 ensuring all documents produced have the correct file names. The client’s name conventions or logo could also be incorporated.

CONTROLLED DATA ENVIRONMENT (CDE)
RISE provides a CDE using Autodesk A360, Aconex or Dropbox (as per our client’s wishes). This provides a central point for all models and documents to be uploaded allowing sharing between the design team.

COBIE
Construction Operations Building Information Exchange (COBie) is a non-proprietary data format for the publication of a subset of building information models (BIM) focused on delivering asset data as distinct from geometric information.

LEVEL OF DETAIL (LOD)
RISE model LOD4 as per the schedule below taken from PAS1192-3.
RISE Structures have:

- A clear understanding of benefits that outweigh the cost;
- Full training in 3D packages and data transfer;
- Knowledge of the way forward with regards to software and hardware; we embrace it!
- Support for implementation through projects;
- Previous collaboration with construction stakeholders such as contractors and property developers;
- A robust design process in place that ensures project collaboration goes smoothly.

By dynamically connecting design, analysis, and documentation in a BIM workflow, most of the effort in a structural design project is shifted back into the detailed design phase, where the ability to impact project performance is high.
BIM at RISE Structures

Collaborative working is progressive, with distinct and recognisable ‘levels’. These have been defined within a range from 0 to 3, and, the broad concept is as follows:

**Level 0 BIM**
In its simplest form, level 0 effectively means no collaboration. 2D CAD drafting is utilised. Output and distribution is via paper or electronic prints, or a mixture of both.

**Level 1 BIM**
Many organisations are currently operating at this level. This comprises 3D CAD for concept work, and 2D for drafting of Production Information. CAD standards are managed to BS 1192:2007, and electronic sharing of data is carried out from a common data environment (CDE), often managed by the contractor.

**Level 2 BIM**
All parties use their own 3D CAD models, but not necessarily working on a single, shared model. Design information is shared through a common file format, which enables any organisation to be able to combine that data with their own in order to make a federated BIM model, and to carry out interrogative checks on it. Hence exporting the common file formats to IFC (Industry Foundation Class) or COBie (Construction Operations Building Information Exchange) is critical. This is the minimum target by the UK government for all work on public-sector work. At RISE we are implementing BIM level 2.

**Level 3 BIM**
This represents full collaboration between all disciplines by means of using a single, shared project model which is held in a centralized repository. All parties can access and modify that same model. This is known as ‘Open BIM’.

**What this means in practice**
The target is to reduce waste in construction by 20%. It is considered that abortive work, discrepancies, mistakes and inefficiencies in the information supply chain are major contributors to this waste; and that collaborative working can assist in their reduction.

BIM dimensions - 4D BIM and beyond
This equates to the use of BIM data to analyse time; beyond this are ‘5D’ which includes cost management, and ‘6D’ for facilities management (FM) purposes. We are always happy to get quantities from the model to help the Quantity Surveyor and ultimately the client in negotiating the best deal for them.

RISE produces structural packages at BIM Level 2