case study

11 THE QUADRANGLE
Romsey, Hampshire

Client
Sensus Metering Systems

Building Type
Industrial + Office Space

Project Services
Energy Performance Certificate for entire site.

Brief
L'atelier were instructed to produce an Energy Performance Certificate for a Warehouse/Office combination building of approx. 2200m², of which 1800m² is warehouse space.

Project Description
Built around 1987, 11 The Quadrangle is one of 12 industrial units in the business park and also one of the largest on the entire site. The unit consists of full height warehouse/factory space for storage with vehicle doors suitable for HGV access and offices which span the full height of the building on ground and first floors. A reception is at one end of the office area which covers the combined height of both the ground and first floor.

The finished 3D model, the output from the Design Builder product, is shown in the picture below (centre). The great advantage of this 3D modelling tool is that it allows the modeller to check that all windows, doors, roof-lights etc are in the model and it also enables the QA team to quickly and easily make sure the correct building is represented, which is not the case with the standard SBEM tool. The elements in the image below that are highlighted in red are 3D representations of the buttresses that protrude from the building along both sides (East & West), the front (South) and rear (North) as well as all corners. These features were easily added to the data model as representative elements with minimal thermal impact on the model.

The overall rating for the site was better than expected remaining in double figures, which surprised our modelling team. The main reason for this was analysed as being down to the ratio of warehouse space to office space which had minimal heating present. The impact of the lighting, which was expected to push the rating up, was not as much of a negative element although improvements have been recommended in terms of modifying T8 lights to the more efficient T5 variety and also replacing the odd tungsten light bulb with a compact fluorescent (CFL) version. Other recommendations included further insulation to walls, roof and floors .