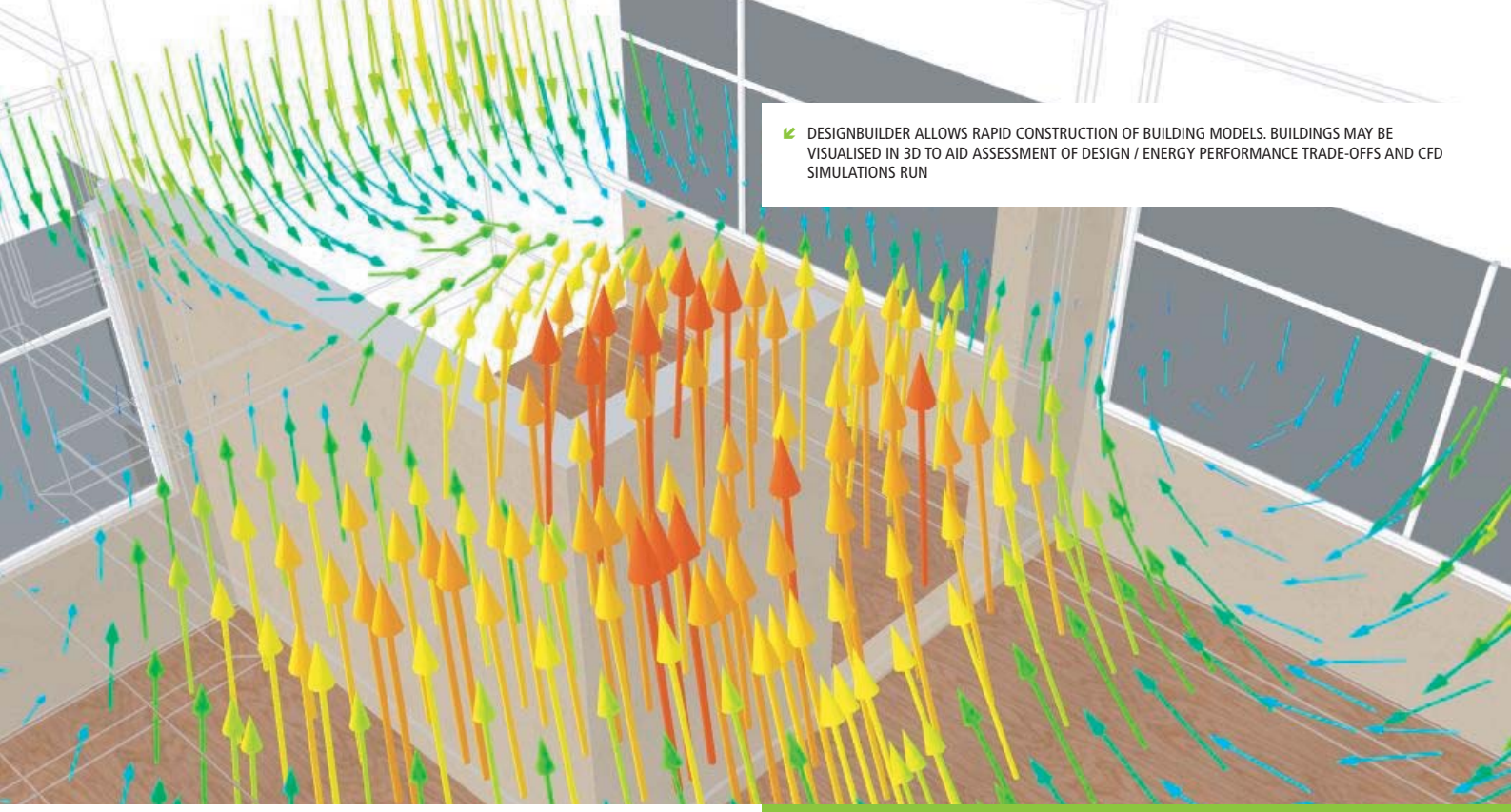


DESIGNBUILDER ALLOWS RAPID CONSTRUCTION OF BUILDING MODELS. BUILDINGS MAY BE VISUALISED IN 3D TO AID ASSESSMENT OF DESIGN / ENERGY PERFORMANCE TRADE-OFFS AND CFD SIMULATIONS RUN

DesignBuilder Software

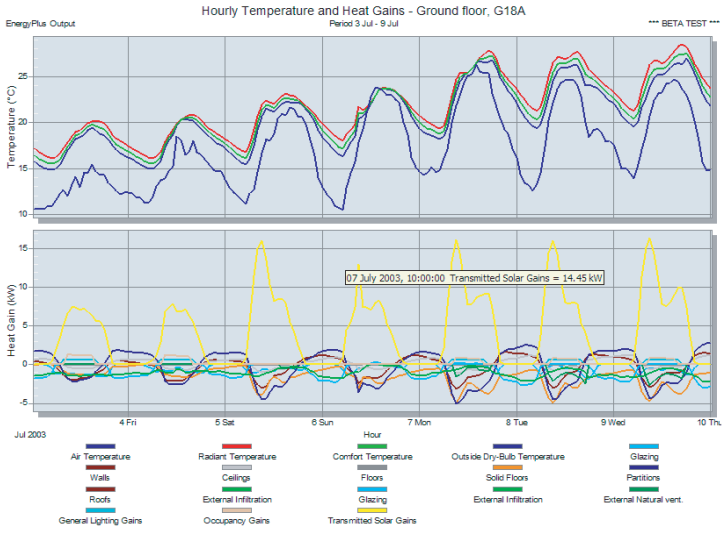
DesignBuilder combines rapid building modelling and ease of use with 'state of the art' dynamic energy simulation.

DesignBuilder is a unique software tool for creating and assessing building designs. It has been specially developed so it can be used effectively at any stage of the design process. From the concept stages where just a few parameters are needed to capture the building design to much more detailed building models for established designs.

DesignBuilder is suitable for use by architects, building services engineers, energy consultants, and university departments. Some typical uses are:

- Evaluating a range of façade options for the effect on overheating, energy use and visual appearance.
- Checking for optimal use of natural light. Modelling lighting control systems and calculating savings in electric lighting.
- Calculation of temperature, velocity and pressure distribution in and around buildings using CFD.
- Visualisation of site layouts and solar shading.
- Thermal simulation of naturally ventilated buildings.
- HVAC design including heating and cooling equipment sizing.
- Communication aid at design meetings.
- Teaching building energy simulation.

DesignBuilder is easy to use. Its innovative productivity features allow even complex buildings to be modelled rapidly by non-expert users. Data templates allow you to load common building geometries, constructions, usage patterns, HVAC & lighting systems into your design. This, combined with data inheritance, allows global changes to be made at building, block or zone level.



DESIGNBUILDER USES THE LATEST ENERGYPLUS SIMULATION ENGINE TO CALCULATE THE ENERGY PERFORMANCE OF THE BUILDING. OUTPUT DATA MAY BE SELECTIVELY GRAPHED OR EXPORTED IN TABLE FORMAT FOR USE IN OTHER APPLICATIONS.

EnergyPlus

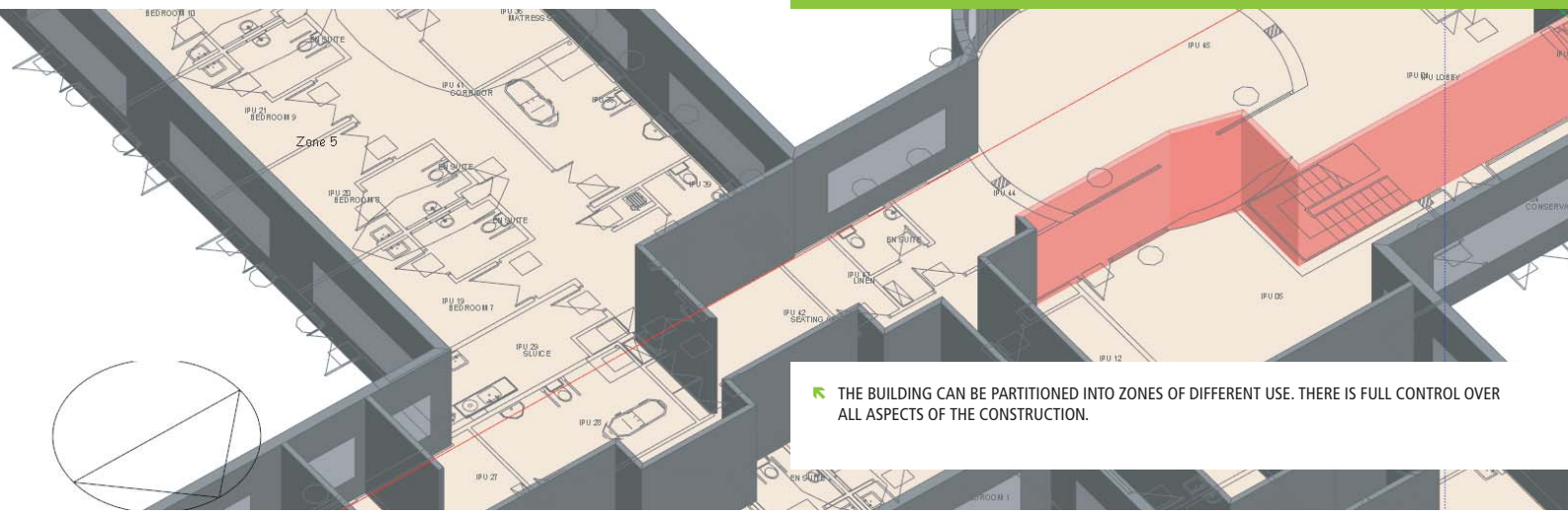
READ MORE ABOUT THE FEATUES OVERLEAF. ➔

DesignBuilder Software

FREE 30-DAY TRIAL

Download a free 30-day trial version of DesignBuilder V2 from our website

www.DesignBuilder.com



THE BUILDING CAN BE PARTITIONED INTO ZONES OF DIFFERENT USE. THERE IS FULL CONTROL OVER ALL ASPECTS OF THE CONSTRUCTION.

EnergyPlus is the U.S. DOE building energy simulation program for modelling building heating, cooling, lighting, ventilating, and other energy flows. It builds on the most popular features and capabilities of BLAST and DOE-2 but also includes many innovative simulation capabilities such as time steps of less than an hour, modular systems and plant integrated with heat balance-based zone simulation, multizone air flow, thermal comfort, and photovoltaic systems.

EnergyPlus is a stand-alone simulation program without a 'user friendly' graphical interface. DesignBuilder creates an elegant and easy to use interface for EnergyPlus. We have integrated EnergyPlus tightly within the DesignBuilder environment to allow you to carry out simulations without any fuss – just define your building model, request data and let the EnergyPlus simulation engine take care of the details.

Features

- OpenGL geometric modeller allows building models to be assembled by positioning 'blocks' in 3-D space. Blocks can be cut and stretched allowing just about any geometry to be modelled.
- Easy to use CFD function integrated with the simulation model and optionally using EnergyPlus outputs to define CFD boundary conditions.
- UK EPCs (level 3 and 4) using the SBEM calculation method.
- Natural ventilation can be modelled with the option for ventilation openings to be based on a ventilation set point temperature. Option for Mixed mode operation in 'change-over' with HVAC.
- A comprehensive range of simulation data can be shown in annual, monthly, daily, hourly or sub-hourly intervals:
  - Energy consumption broken down by fuel and end-use
  - Internal temperatures
  - Weather data
  - Heat transmission through building fabric including walls, roofs, infiltration, ventilation etc.
  - Heating and cooling loads
  - CO^2 generation
- Daylighting - models lighting control systems and calculates savings in electric lighting.
- Shading by louvres, overhangs and sidefins as well as internal and mid pane blinds.
- Heating and cooling equipment sizes can be calculated using design weather data.
- 'Compact HVAC' descriptions provides an easy way into detailed analysis of commonly used heating and cooling systems.
- Building geometry can be imported from CAD data or from scanned drawings. 3-D CAD models can be imported using a gbXML import facility.
- Parametric analysis screens allow you to investigate the effect of variations in design parameters on a range of performance criteria.
- Generate impressive rendered images and movies of your building design including the effect of site shading.
- ASHRAE worldwide design weather data and locations (4429 data sets) are included with the software and more than 2100 EnergyPlus hourly weather files are automatically downloaded as required.

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