



3D Building Blocks

Adding dimension to your world

Cities Revealed **3D Building Blocks** is a unique database that provides outlines of building blocks with height information for all major towns and cities throughout the United Kingdom. Three height values are recorded and supplied for each building block in a database format. This valuable information can be used to easily create a highly visual representation of the built environment saving time and money on creating urban scenes.

3D Building Blocks is the ideal dataset for applications and projects that require a general 3D urban landscape model. This off-the-shelf product is an excellent solution for clients who have limited time and budget. The building blocks provide an quick way to create a 3D setting for a more complex building or site, which can be designed to a greater level of detail within the 3D landscape. The height data within **3D Building Blocks** can be used to obtain a first estimate on city wide building heights and number of floors.

The building block outlines within Cities Revealed **3D Building Blocks** are separated by their height differences; so a single building block may in

reality be divided into a number of individual properties. E.g. a row of terraced houses would be represented as a single block and have a single height value. Conversely, a single building such as a shopping mall or sports centre that has different heights would be divided into multiple blocks if the individual elements of the roof were more than +/- 3m height difference.

The 3D building blocks are supplied with flat roofs. The height of the flat roof is taken to be the height of the highest, most common roof surface within that block. For pitched roofs, that height would be the height of the pitch. This will not include lift shafts, chimneys, masts or other small roof infrastructure elements.

Case Study

City Vision Networks

Design Visualisation

Putting newly designed buildings into a real world context is hugely beneficial to architects. The success and acceptance of an urban design scheme can rely on effective communication and understanding. **3D Building Heights** provides Lattico an excellent foundation for producing highly detailed urban massing models.



*"The combination of **3D Building Blocks** and **Modern** aerial imagery has allowed us to offer our clients a full range of urban data, from basic massing models to photo-realistic city models throughout the UK. The city models we create help demonstrate the structural and aesthetic relationships within a design scheme. It also saves our clients time and effort by eliminating the need to model the urban landscape themselves."* Andy Hoskins, Lattico Ltd

Features

National coverage includes over 550 towns and cities across the UK.

All towns with a population in excess of 10,000* people are included.

Vector database of building block outlines

The three height values that are recorded for each building block include:

- the height of the top of the block above sea level,
- the height of the base of the block above sea level ,
- the height of the block above the local ground.

Data sources include:

- Intermap NEXTMap,
- Cities Revealed LiDAR,
- Cities Revealed Modern aerial imagery,
- Handheld laser measurements.

Vertical accuracy between 0.5m - 3m**

Rectified to the UK National Grid

*Figure correct as of 2005

**Accuracy levels vary across height data sources

Benefits

Comprehensive coverage and low processing requirement saves time and costs and reduces onsite visits.

Easy-to-use. There is no need for photo-interpretation skills for feature identification, enabling rapid recognition.

Enhances communication and understanding of the world by providing a 3D context.

3D Building Blocks is captured and processed independently of any national mapping agency.

No annual fees. The one off cost and the in perpetuity license makes the investment more affordable than alternative solutions.

Accuracy

The measurement accuracy of the devices used to collect the height information vary between 0.15m and 1m. However, when compiling a building block database that contains multiple roof elements, the absolute accuracy of the resulting roof surface may vary by more than this due to the integration of multiple roof elements and the interpolation of the ground surface.

Applications

3D Building Blocks can be utilised in many applications a few of which are listed below.

- Urban regeneration
- Architectural visualisation
- Land and property development
- Road network development
- Town Planning
- Telecommunications planning



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