

## GIS Team at Nottingham City Council



### Client:

The GIS team at Nottingham City Council embarked on an ambitious journey to disrupt the status quo and shift their corporate GIS to a fully interactive 3D environment. Recognising that an incremental approach provided the best chance of success, their initial focus was on revolutionising the Council's approach to planning.



**Nottingham**  
**City Council**

### Industry:

Local Government

### Product:

MetroVista

*“ We now have a fully integrated internal assessment tool which is delivered online and accessible anywhere; throughout the planning department, enabling planners to undertake advanced visualisations, constraint checks and spatial analysis. In addition, it sits alongside a public application which is shareable with partner organisations, external stakeholders and the public. The online tools have Bluesky MetroVista data at its heart making it easy for non-professional users to engage with and interpret. ”*

Laura Pullen, GIS Business Development Manager,  
Nottingham City Council

### Summary:

Nottingham City Council is working towards its vision of creating a digital twin for the city. In what's believed to be a UK first they are combining the intricate, rich MetroVista 3D mesh with existing photogrammetric 3D modelling within the same application. This enables the visualisation of new developments in an immersive real-world environment whilst retaining the ability to engage with their broad network of development stakeholders.

## Challenge:

The Council had long-held 3D aspirations, with its planning department pioneering its use nearly two decades ago. However, at that time the city model was on a single, standalone computer that had to be carried from meeting to meeting. More recently they deployed a number of light-weight GIS applications using simplified 3D buildings, but were keen to create an internal tool utilising high-detailed 3D data at its core which could also exploit their GIS data holdings.

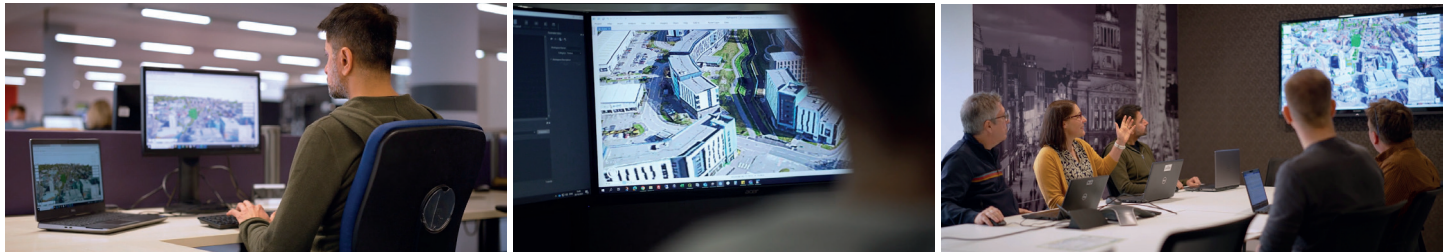
## Solution:

Developed using Bluesky's innovative MetroVista 3D mesh model product, the new visualisation tool will ensure accurate data is driving decision making in a bid to offer transparency and increased engagement with the planning process. Users can identify buildings and features they are already familiar with and the data is easy to consume, hosted within Nottingham's existing online storage service. It is editable, so redundant buildings can be dynamically demolished and new developments 'dropped' in, and is compatible with our other geospatial datasets including traditional 3D building models and other data such as flooding, conservation areas and live CCTV streams.

## Results:

A 3D site assessment platform has been built bringing together all relevant spatial data into a single 3D environment, including the proposed scheme itself, plus other developments across the city, conservation areas, listed buildings, site allocations and flood

risk data. Nottingham City Council's pilot has proven the value of using 3D visualisations integrated with other existing data, to allow constraints and impact assessments to be carried out simultaneously in an immersive user environment.



| Specification              | Aerial Photography                   | Obliques                          | LiDAR   | Mesh Models                                |
|----------------------------|--------------------------------------|-----------------------------------|---|--|
| <b>Resolution</b>          | 5cm                                  | 5cm                               | 16 - 100 PPM  | Derived from 5cm                           |
| <b>Coverage</b>            | Selected cities across Great Britain |                                   |   |  |
| <b>Accuracy XY</b>         | ± 10cm rmse                          | ± 10cm rmse                       | ± 15cm rmse   | ± 25cm rmse                                |
| <b>Accuracy Z</b>          | -                                    | -                                 | ± 10cm rmse   | ± 25cm rmse                                |
| <b>Formats</b>             | Include: JPG, TIFF, ECW, SID, KMZ    | Include: JPG, TIFF, ECW, SID, KMZ | Include: ASCII Grid, ASCII XYZ, DXF Point, GeoTiff, LAS | Include: OBJ, FBX, I3s, 3DML, SLPK, Cesium |
| <b>Standard Projection</b> | British National Grid                |                                   |   |  |

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