

# Current status of 3D in Great Britain

→ David Holland January 2026



# 3D as part of a national digital twin

- A UK national digital twin programme exists
- It's remit is not to create a national digital twin
- Rather, to advance digital twin capabilities across the UK
- Many local digital twins exist
- A strategic road network digital twin is in the process of being built (National Highways)

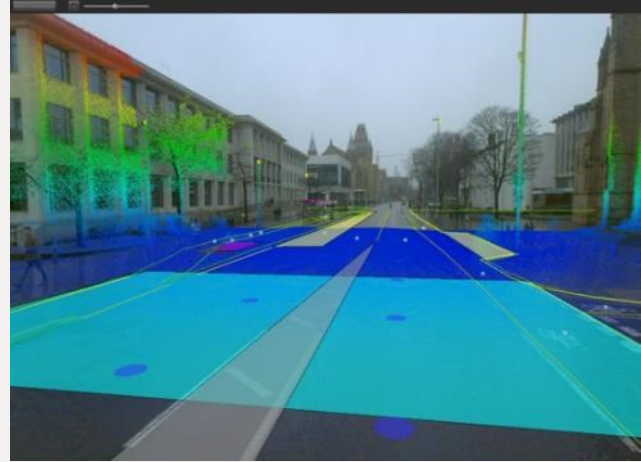
# 3D in local and national government

- Recent uptake of 3D by government agencies
- Used especially in urban planning
- Improves the pre-planning process and is now seen as an essential tool by planners
- Useful for citizen-participation in the planning process
- Data sourced on a project-by-project basis
- Already proven to be cost-effective by some authorities



# 3D at OS

- 35+ years of research and proof of concept projects
- Long-standing contour and DTM products
- Building heights & other attributes on topographic data
- 3D mesh model introduced as a beta product in 2025
- Most people at OS still have a tendency to treat geospatial data as 2D



# OS 3D mesh

- We followed a product development process to find what users wanted and what we could viably create
- Producing a 3D mesh from our existing imagery proved to be the most viable option for an entry-level product
- Use cases include:
  - urban planning
  - event security
  - telecommunications mast planning
  - visualization/backdrop to customer's own data

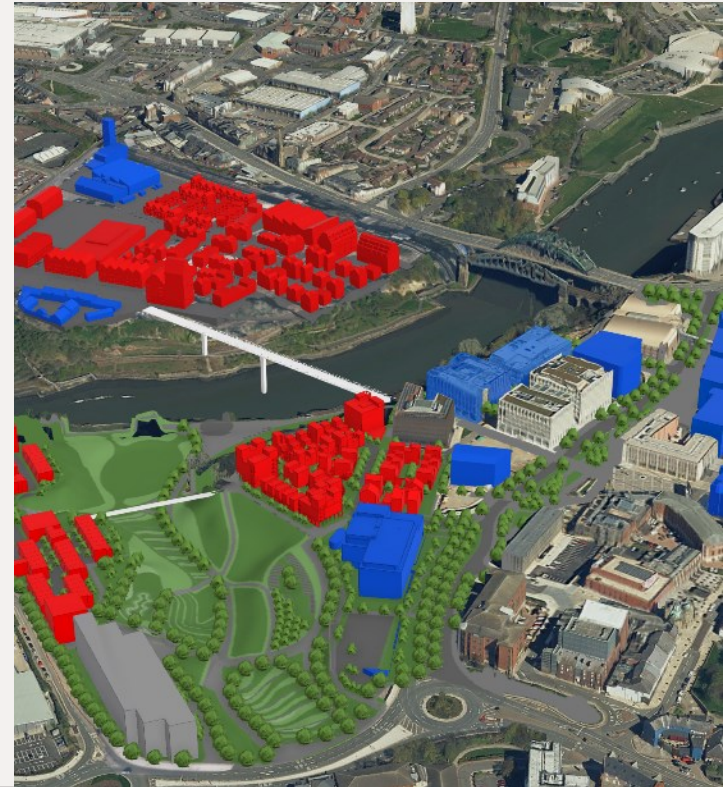
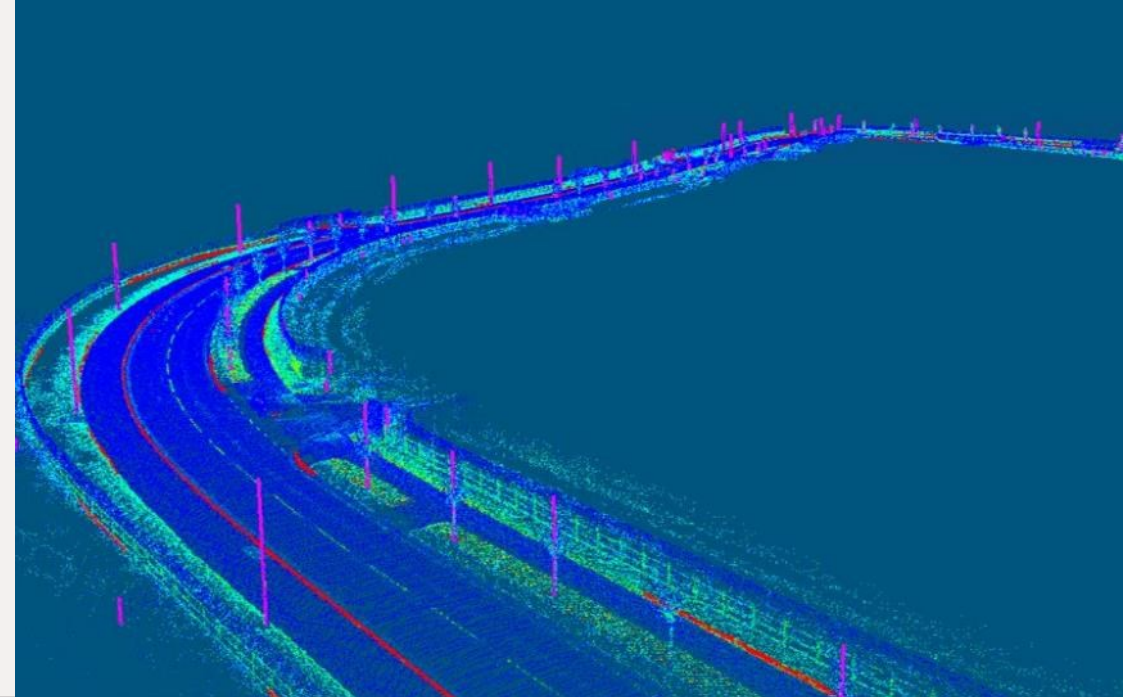


Image courtesy of Homes England

# 3D data sources at OS

- Aerial imagery
- UAV imagery
- Terrestrial scanning
- Mobile mapping

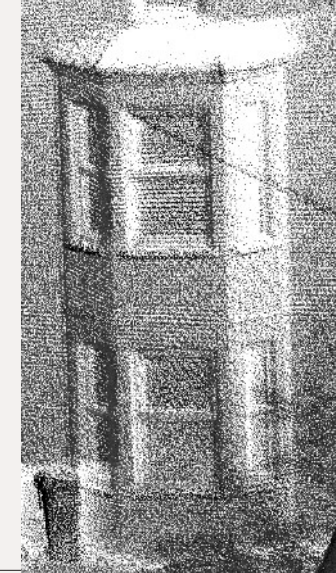


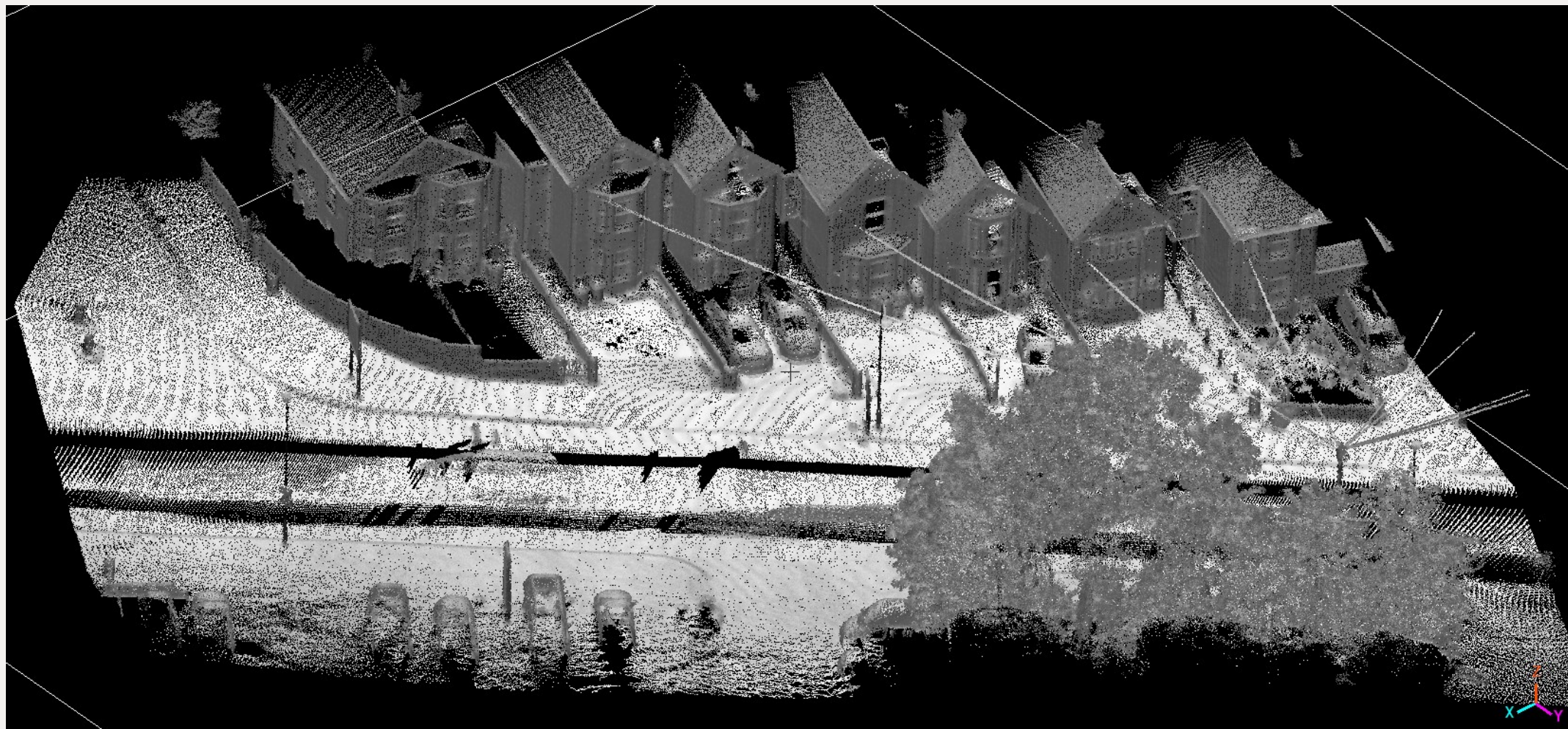
# In house mobile 3D data collection (OSMOSIS)

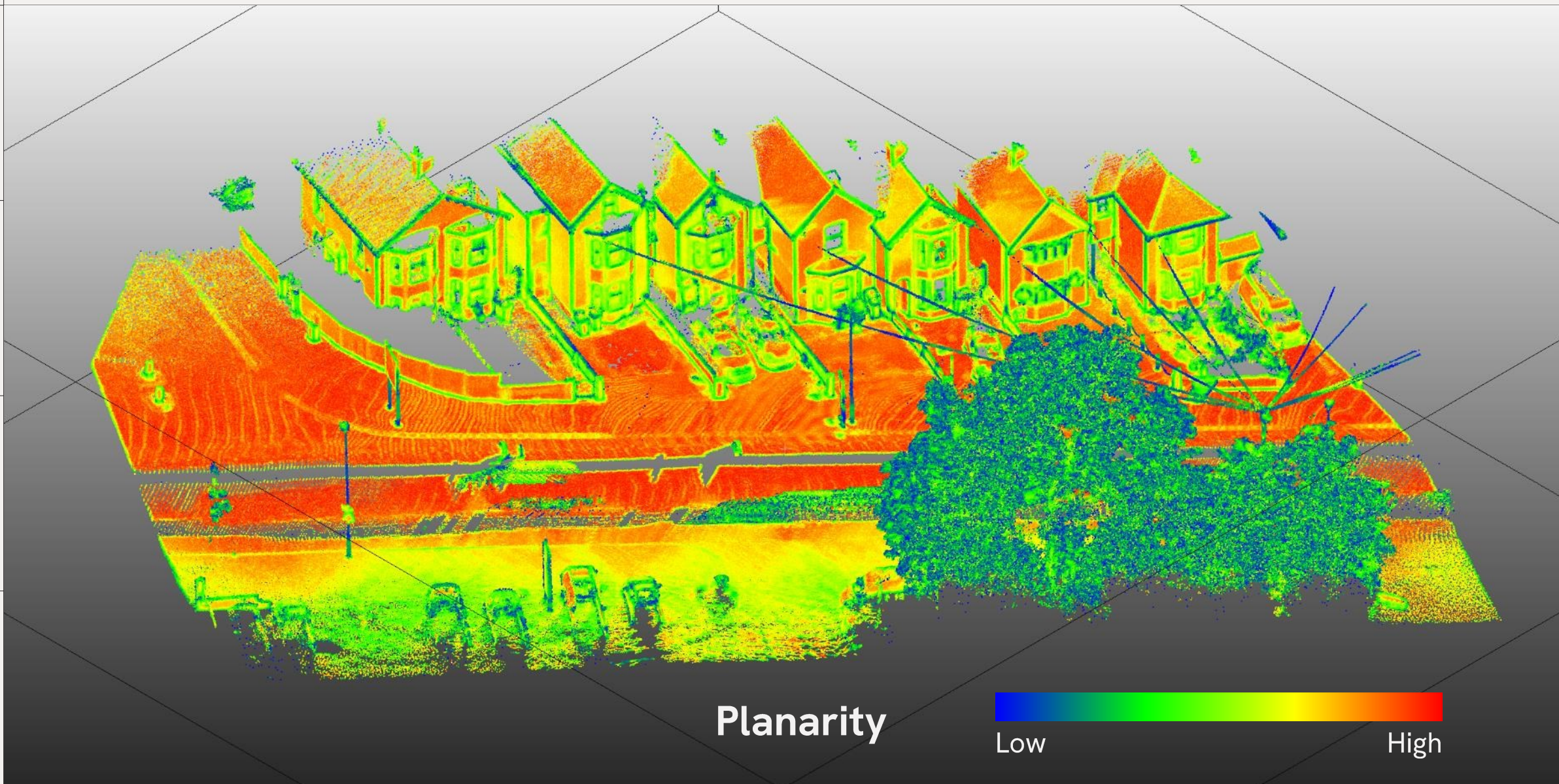


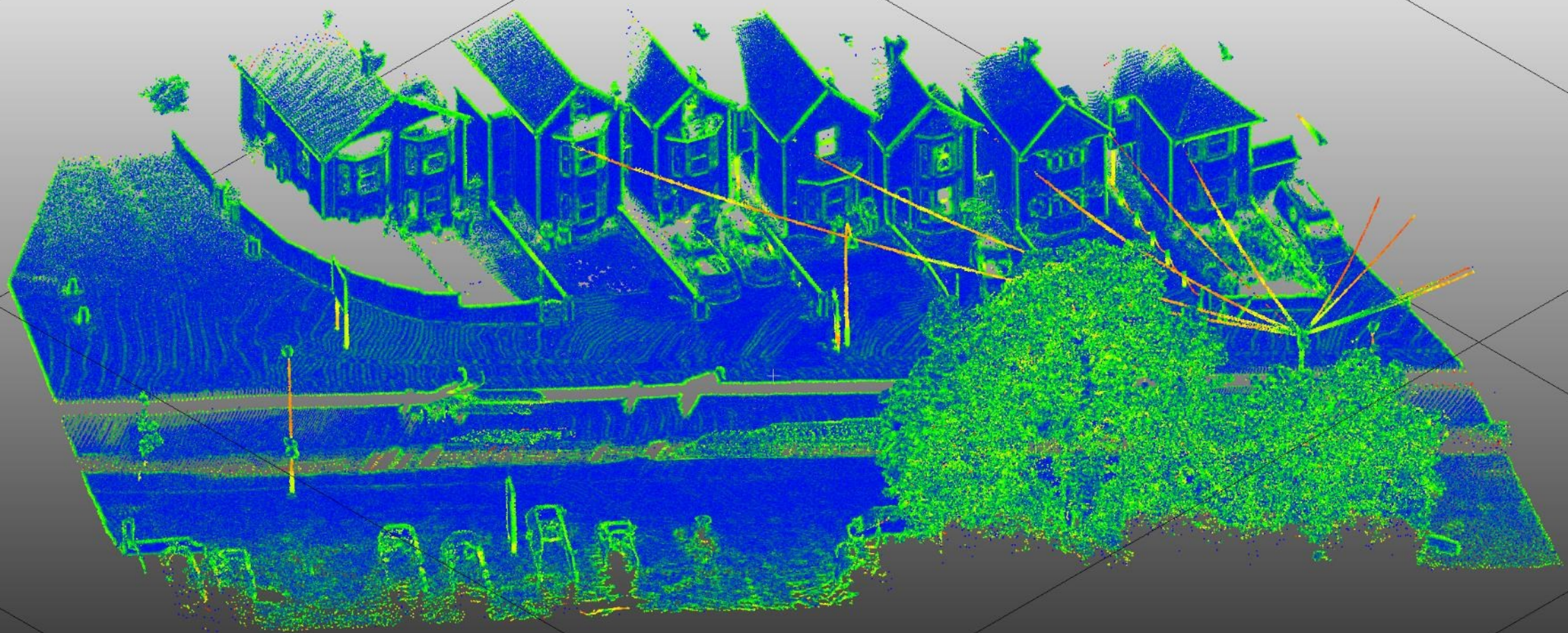
# Uses of OSMOSIS (mobile mapping) data

- Initially as a source of control points for aerial imagery
- Subsequently for capture and update of features such as:
  - Street lights
  - Windows and doors
  - Road markings
  - Road signs, utility poles





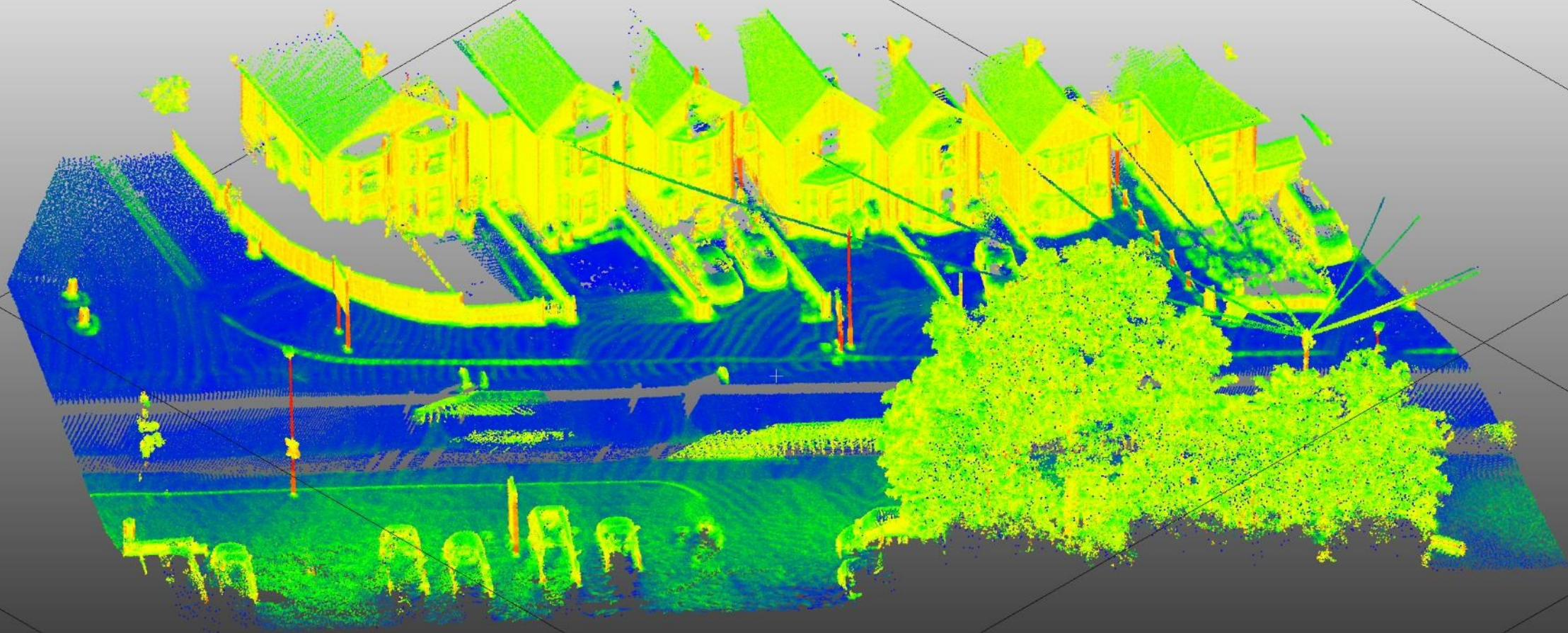




Linearity

Low

High



Verticality



# Looking forward

- OS a founder member of the Association for Geographic Information (AGI) 3D Network
- Reviewing new ways of capturing and processing data:
  - Lidar
  - Oblique imagery
  - Use of machine learning and AI
- Adding new attributes and investigating new product options



Thank you