How aerial survey technology is helping to shape the future of the treescape of the UK

Bluesky's National Tree Map

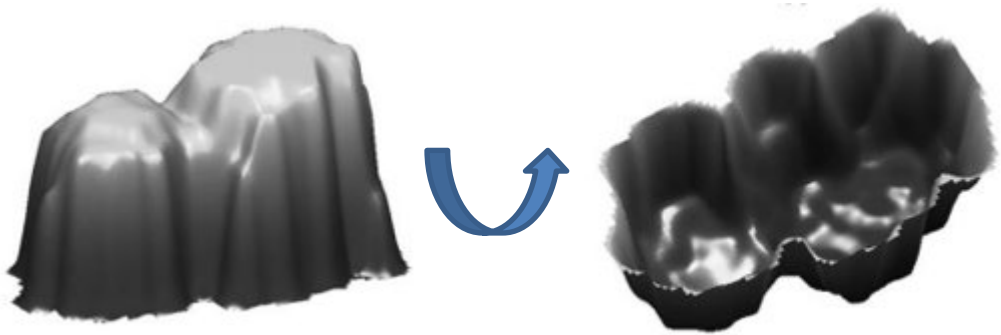
Bluesky International

- The UKs leading aerial survey company
- Suppliers of aerial imagery to the APGB framework
- 4 products created from an aerial survey flight:
  - Vertical aerial photography (AP)
  - Colour infrared data (CIR)
  - Digital Surface Model (DSM)
  - Digital Terrain Model (DTM)

- Combined → National Tree Map - a unique, comprehensive database of location, height and canopy/crown extents for every tree over 3m

Creation of NTM

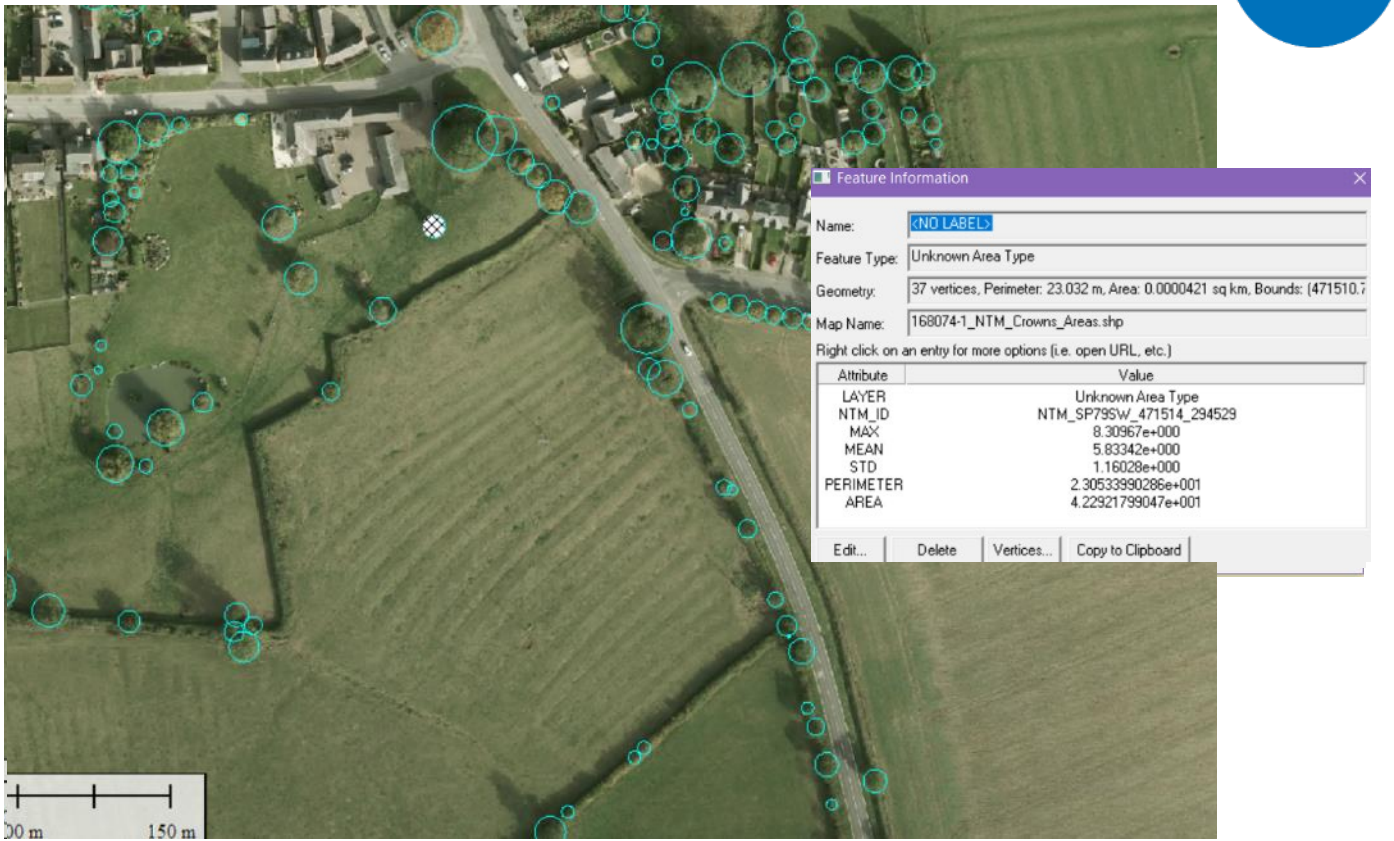
- OTS dataset first created in 2009/2010
- Use combination of AP, CIR, DTM/DSM to plot trees over 3m



- Largely automated process before manual QC checks
- Huge increase in licensing from public sector and across other market sectors

National Tree Map (NTM)

- Dataset comprising of 3 layers – all with common attributes:
  - Height point
  - Crown polygon
  - Idealised crown area
- Layers can be switched on or off depending upon end requirement
- Fully geo-rectified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Right click on an entry for more options (i.e. open URL, etc.)
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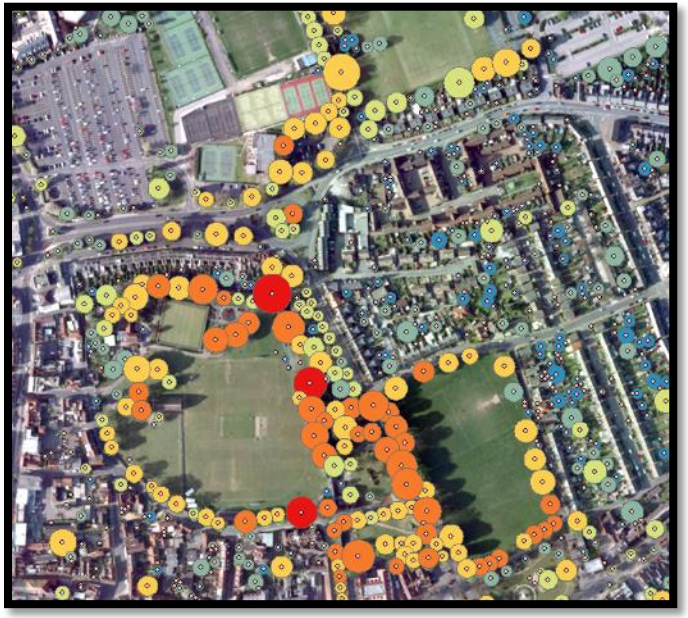
Licensing

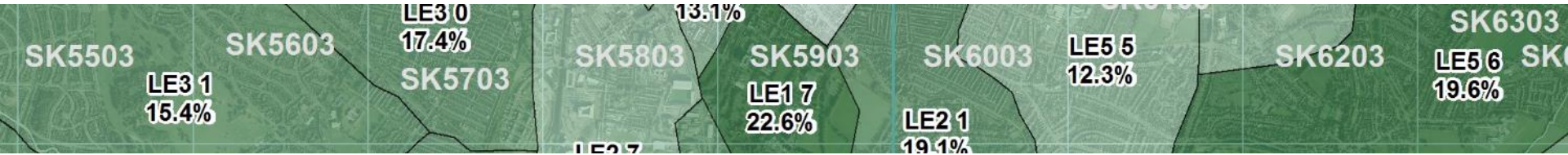
- Licensed annually and includes updates
    - 3 year national update programme
    - Full corporate internal licence
    - Use by sub-contractors and agents

- No-obligation licence



Using NTM to manage tree assets

- Quick easy canopy cover calculations across any area
- Tree planting opportunity maps
- Track changes in canopy as updates to NTM are added
- Manage trees as an asset, both individually and within woodland
- Manage trees as a risk
- Aid in basic biomass calculations – quantify pollution mitigation measures



NTM for meeting targets

- NTM has informed Local Council's commitment to planting more trees
- NTM has helped inform policy on **where** these trees should be planted
- NTM used to join up tree management information across the Council

Green light for NTM's future

- Commitment of future investment in the dataset by Board to continually update and enhance NTM
- Currently being rolled out for Scotland and Ireland
- Improved resolutions of imagery ⟶ enhancements in tree modelling
- Inclusion of oblique imagery over towns and cities will lead to even better quality NTM

Thank you
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