The 360 Lab

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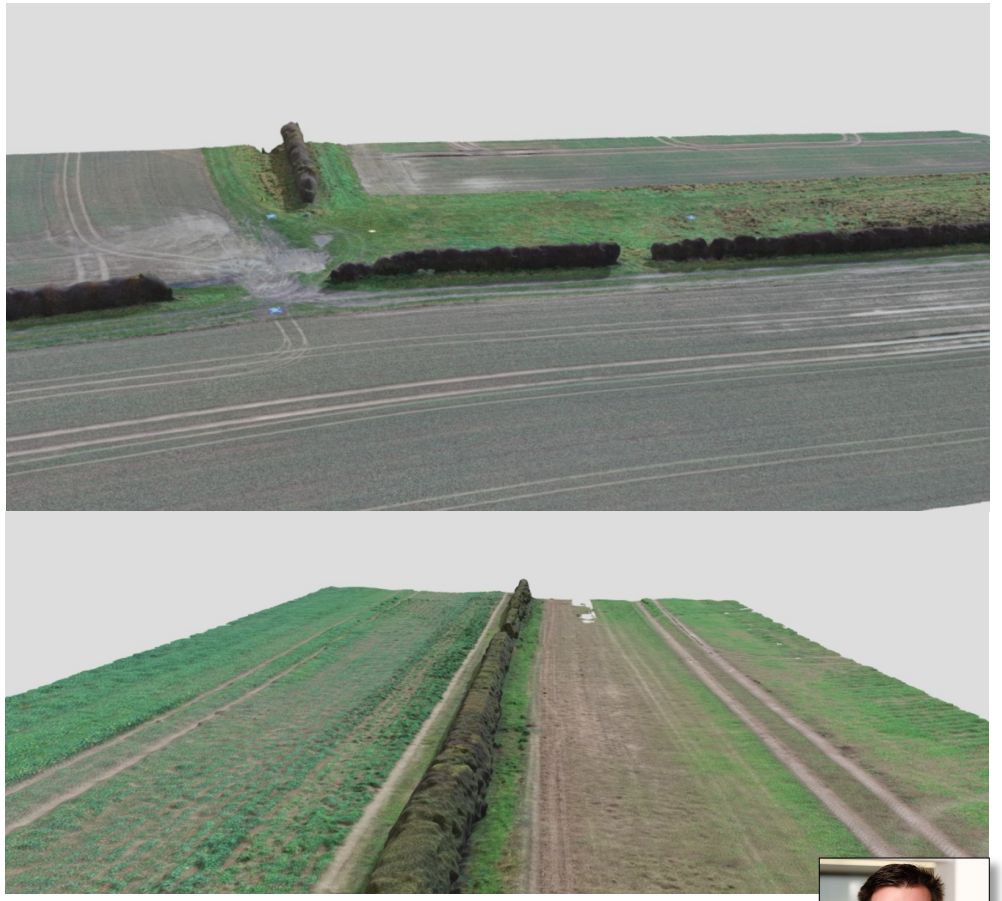
3D Models

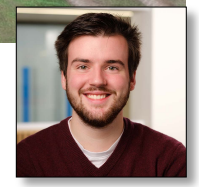
Flood Risk Management

Fully interactive, navigable, annotated 3D models

Hedgerow Gaps



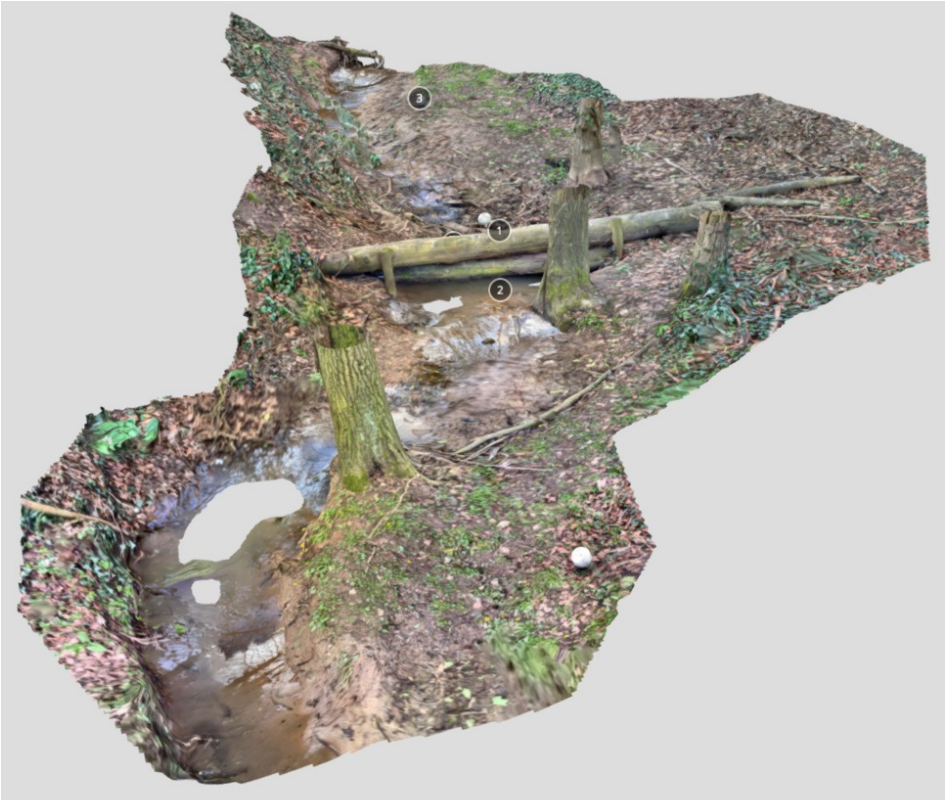
Coming Soon: Coastal Geomorphology



What is the 360 Lab?

3D Models

The 360 Lab establishes a databank of 3D models and 360° video that is fully interactive and freely available to the public, with the view to develop and distribute learning resources to schools, community groups and individuals.



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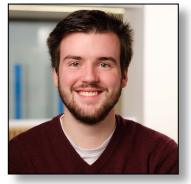

What is the 360 Lab?

3D Models

The project will lay a framework to establish an asset library for 3D models and 360 video, whether these be used for augmented reality, 2D computer viewing or 3D printing.

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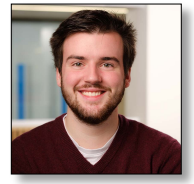

Why is it needed?

3D Models

Learning in geoscience often requires 3D thinking and visualisation of different landforms, flood interventions, geological structures and more. Arguably the best place to visualise these things is outside in nature, rather 2D images on flat screens or paper. With the advent of affordable, prosumer technology such as handheld laser scanners and drones, we can gather an enormous amount of data to process for use in education.

The need for access online is more prevalent, especially during times of home learning and widespread restrictions. Being able to view, interact with and navigate environments helps with a deeper understanding of topics, especially for those who are visual learners and struggle working from flat screens or paper.

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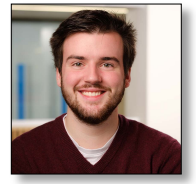

Current lab themes

3D Models

(Natural) Flood Risk Management

Hedgerows and Hedgerow Gaps

Coastal Geomorphology

Collection of nine interactive 3D models created with either with LiDAR* using an iPad Pro (2020), or using an uncrewed aerial vehicles, soon to be expanded

Coming soon! 12 UAV models and 12 360° narrated videos

*light detection and ranging

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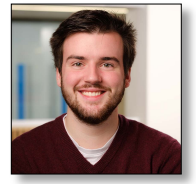

(Natural) Flood Risk Management

3D Models

Purpose: to provide materials to help communicate Natural Flood Management interventions

- Bridestones, North Yorkshire reach UAV
- Dalby forest, North Yorkshire leaky dam (downstream)
  - 2021-04-07
  - 2021-01-26
- Dalby forest, North Yorkshire leaky dam (upstream)
- Southwell, Nottingham leaky dam
  - Full area
  - Dam only

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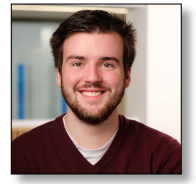

Hedgerows and Hedgerow Gaps

3D Models

Purpose: To develop a database of hedgerow and hedgerow gap interactive models for science communication and engagement

- Ottringham Farm, East Riding of Yorkshire
- Rise Farm, East Riding of Yorkshire
- Littlewood Farm, East Riding of Yorkshire

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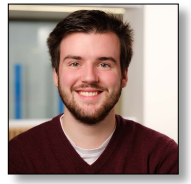

Coastal Geomorphology – coming soon!

3D Models

Purpose: To enable citizens access to the East Yorkshire coastline and view its geomorphological features, as well as experience a 360° interactive video of CoastSnap points and coastal viewpoints

- 12 360° narrated videos
- 12 UAV 3D models

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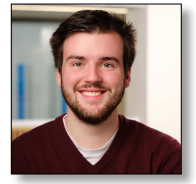

Future work

3D Models

- Collection of more flood management structures, including 360°narrated video, interactive 3D models and learning resources, integrating the models into teaching and learning
- Collection of more hedgerow 3D models as well as 360 video and learning resources regarding the importance of hedgerows in the environment, this links to one of our existing projects, Hedgerows: Mapping the Gaps
- Collection of narrated 360 videos and 3D models of 12 coastal geomorphologically significant sites, linking to CoastSnap to collect geoheritage and bring nature and the coast to those without access

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