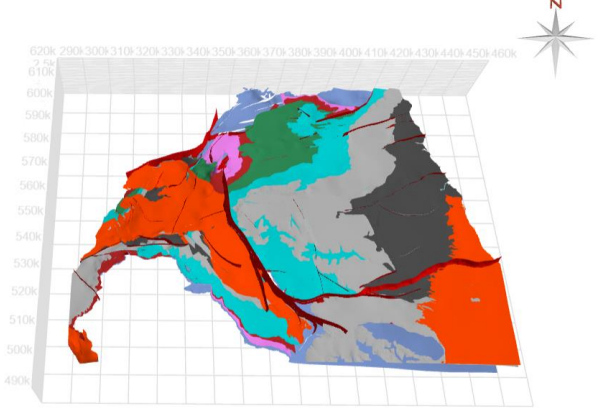
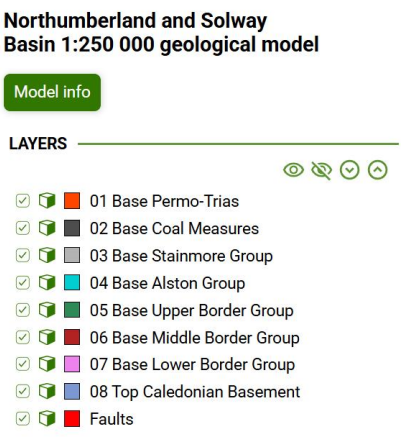
STEVE THORPE, RICKY TERRINGTON, TIM KEARSEY, PAULIUS TVARANAVICIUS (BGS)
ZBIGNIEW MALOLEPSZY (PGI)

Geo3D Geological Model Viewer – expanding its reach

British Geological Survey

Polish Geological Institute – National Research Institute



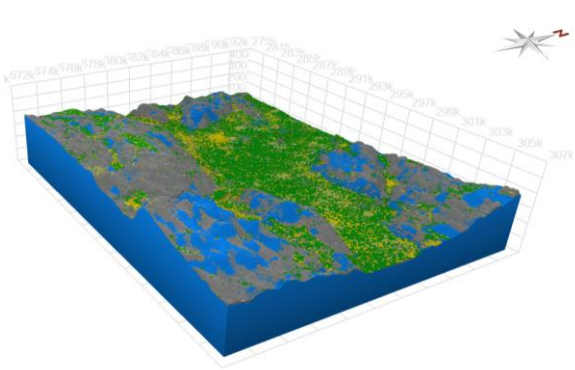


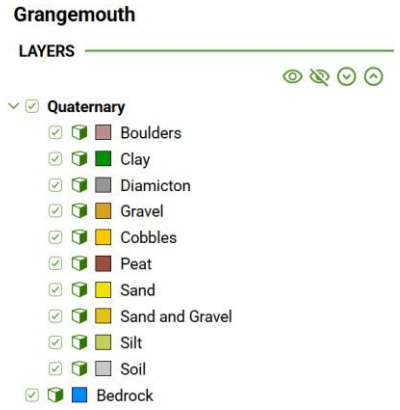
Background to Geo3D Model Viewer

- Visualisation of 3D geological models is limited only by imagination, technology, resources
- Many (!!) different packages and mechanisms have appeared over the last 20 years of model building. We all have different ways of doing similar things
- Providing a single point of contact for geological models has been an aspiration – e.g. One Geology, EGDI
- PGI have spent almost 10 years perfecting a model viewer which breaks down many of the barriers

Background to Geo3D Model Viewer

- Originally developed at University of Silesia in 2007. Success was limited because of number/content of geological models. Faded away after 5 years
- Revived with new spirit at Polish Geological Institute in 2015
- Focused on simple user interface and intuitive features
- Since then both features and content have improved year by year
- With new technology of WebGL obtained maximum flexibility and power of web visualisation
- Streaming data from EGDI 3D database
- Functionality intentionally designed for touchscreens of mobile devices.
- Using feedback from many stakeholders the user interface has been evolving significantly

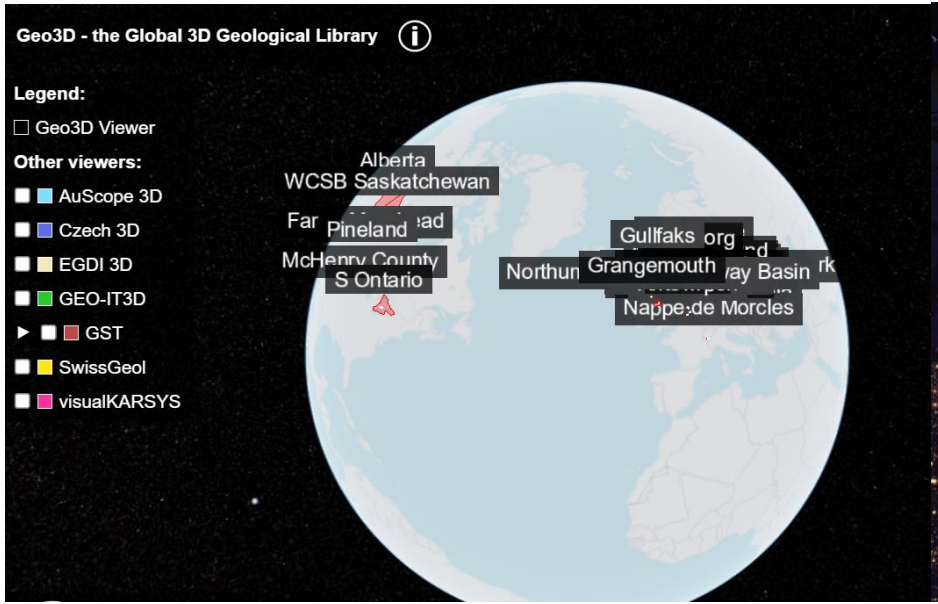




Progress

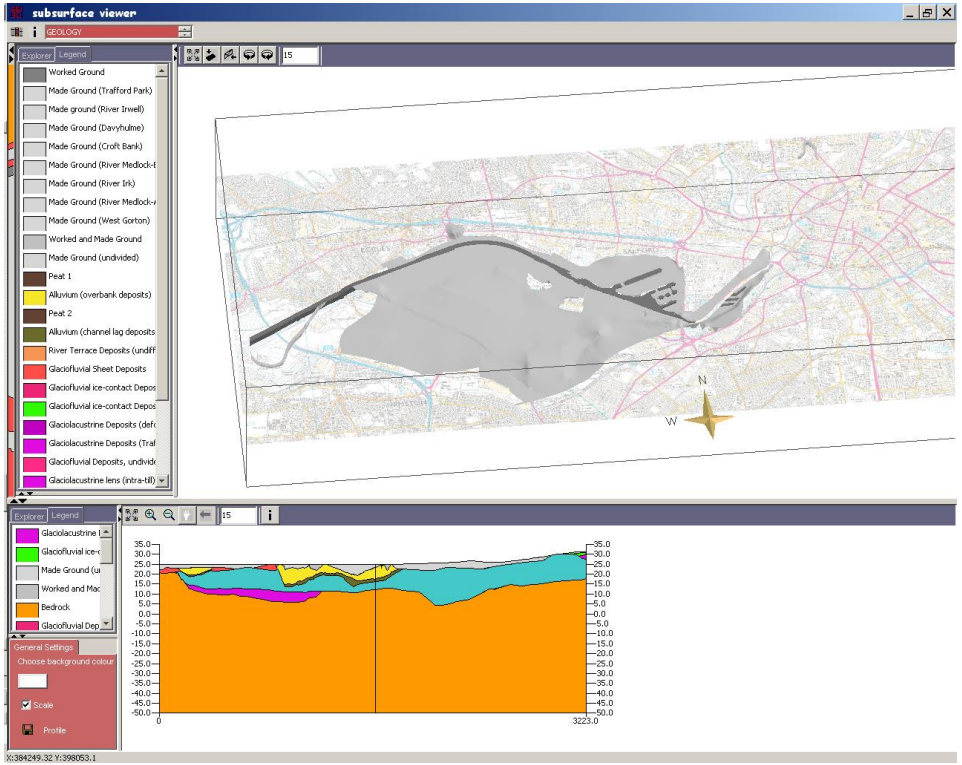
- Geo3D recognized internationally with models from Canada, Slovenia, Sweden and the Netherlands published
- Established strong position of free web service
- Openness is key for new cooperations in order to share 3D geological models online
- The need to streamline publishing process independently of PGI
- BGS pushed hard and collaboratively invented together the idea of Geo3D Builder – a web app to load model data and build the appealing 3D model scene

Yesterday it became the 3D Geological Global Library



BGS input

- BGS has developed many different viewer options – each has benefits/limitations
- LithoframeViewer – early viewer software developed alongside GSI3D



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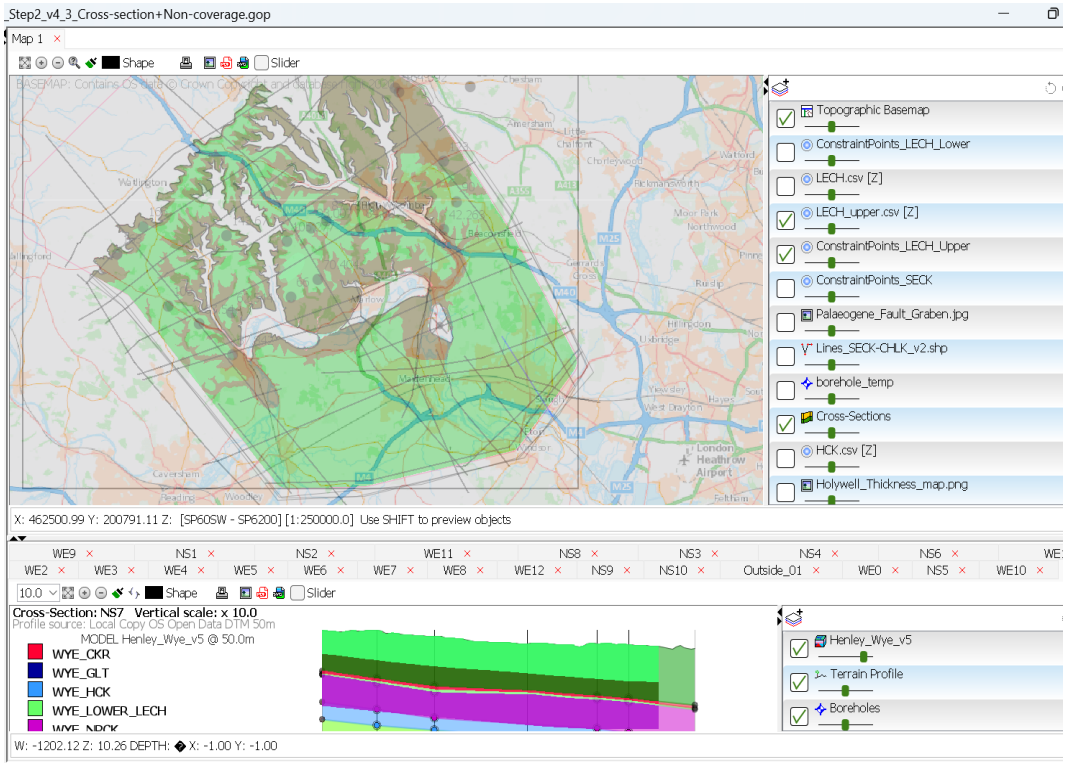
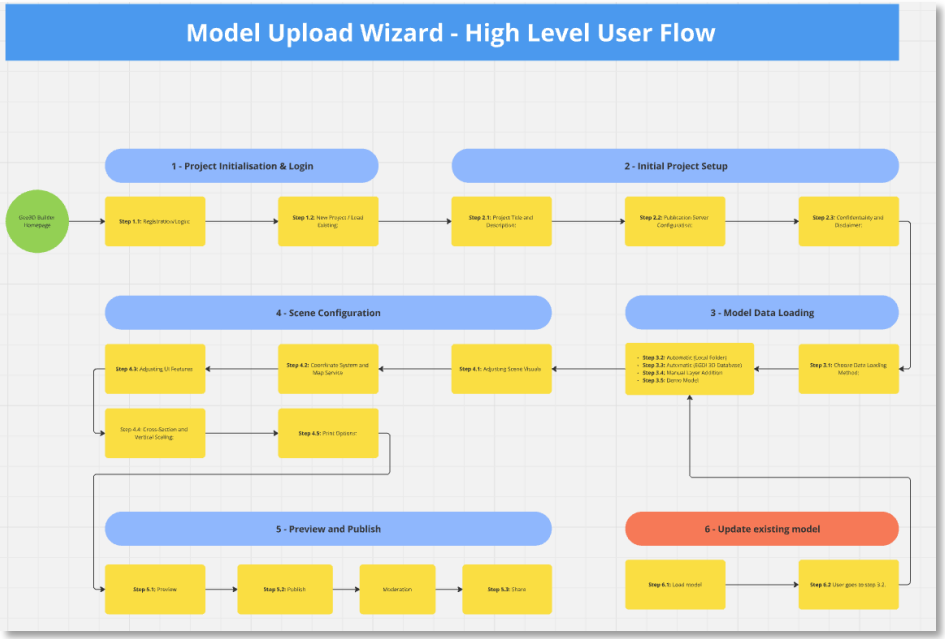


BGS input

- BGS has developed many different viewer options – each has benefits/limitations
- LithoframeViewer – early viewer software developed alongside GSI3D
- Groundhog – has lighter software load, integrated viewer
- GeoVisionary – more powerful, purpose-built visualisation
- BGS sees the value in having PGI Viewer technology available to everyone

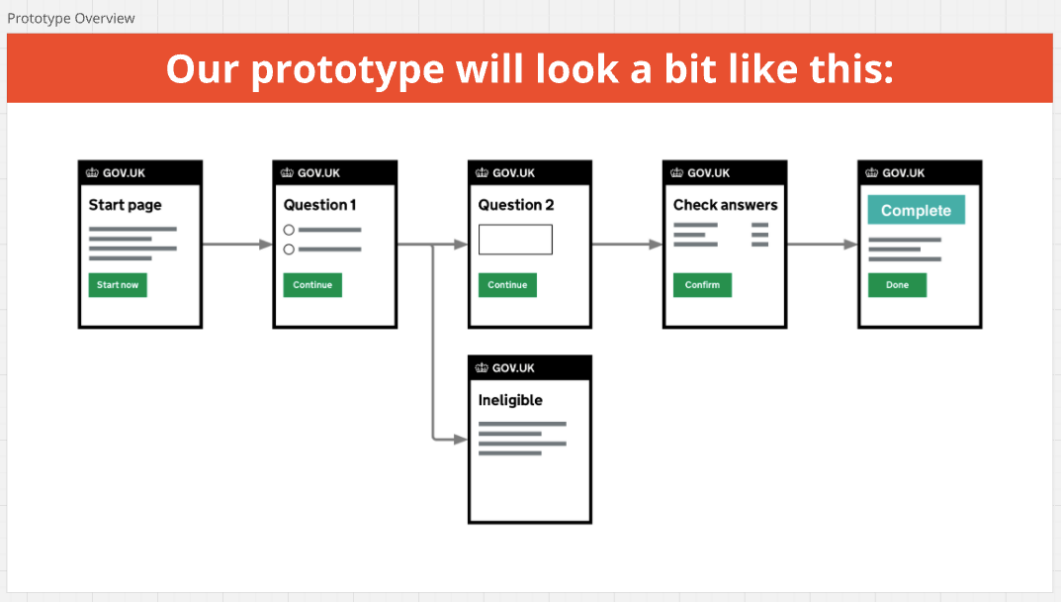
What have BGS done



- BGS has a UX (user experience) team
- The user perspective is often a difficult angle to view things from once you are the designer/ developer.
- It often seems obvious to you because you are absorbed in the technology.
- The UX team provided a unique insight to the Geo3D Builder process

Builder App

- UX team analyse the flow of information, user requirements and user personas
- Develop prototype layouts to enable the user journey to be understood
- Criteria are used to help upload and design the model view



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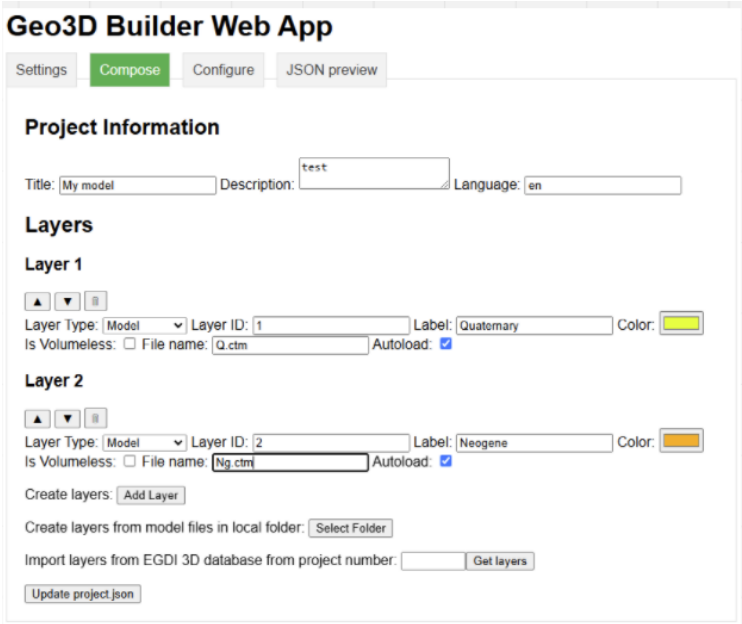

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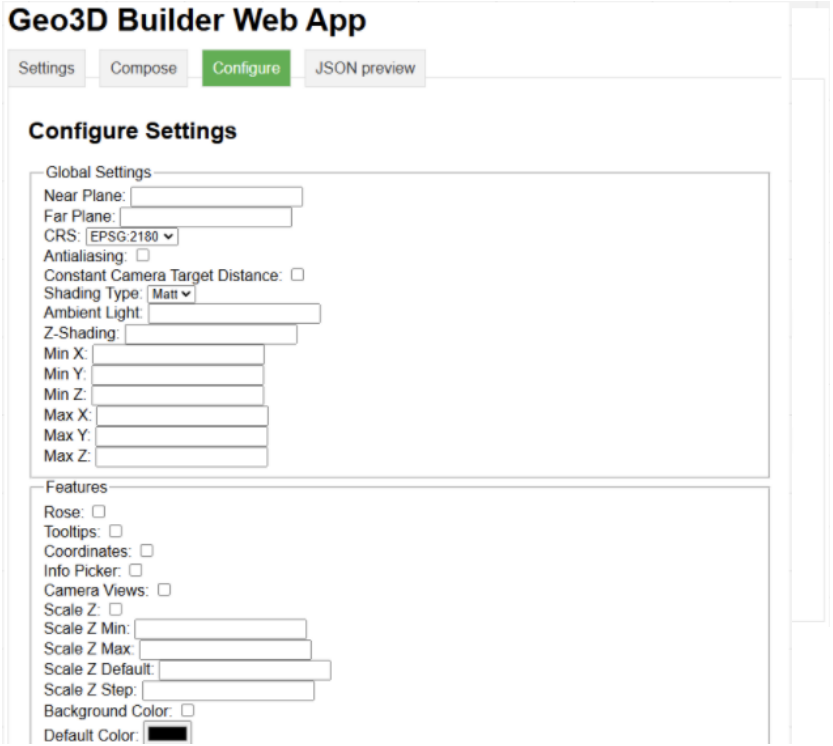
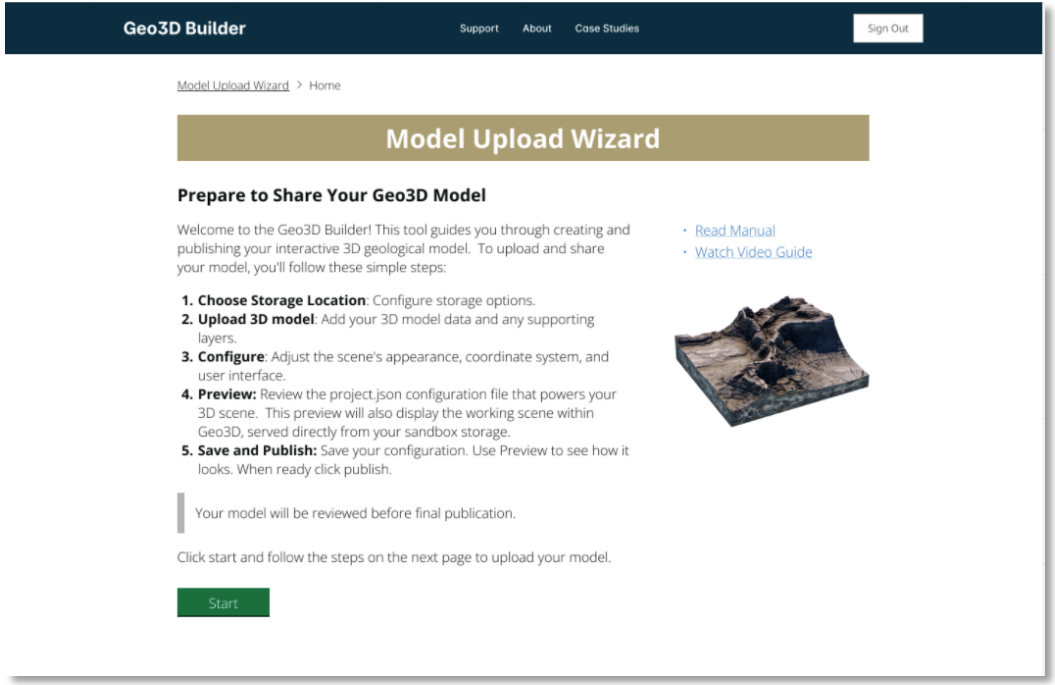


Builder App…so far



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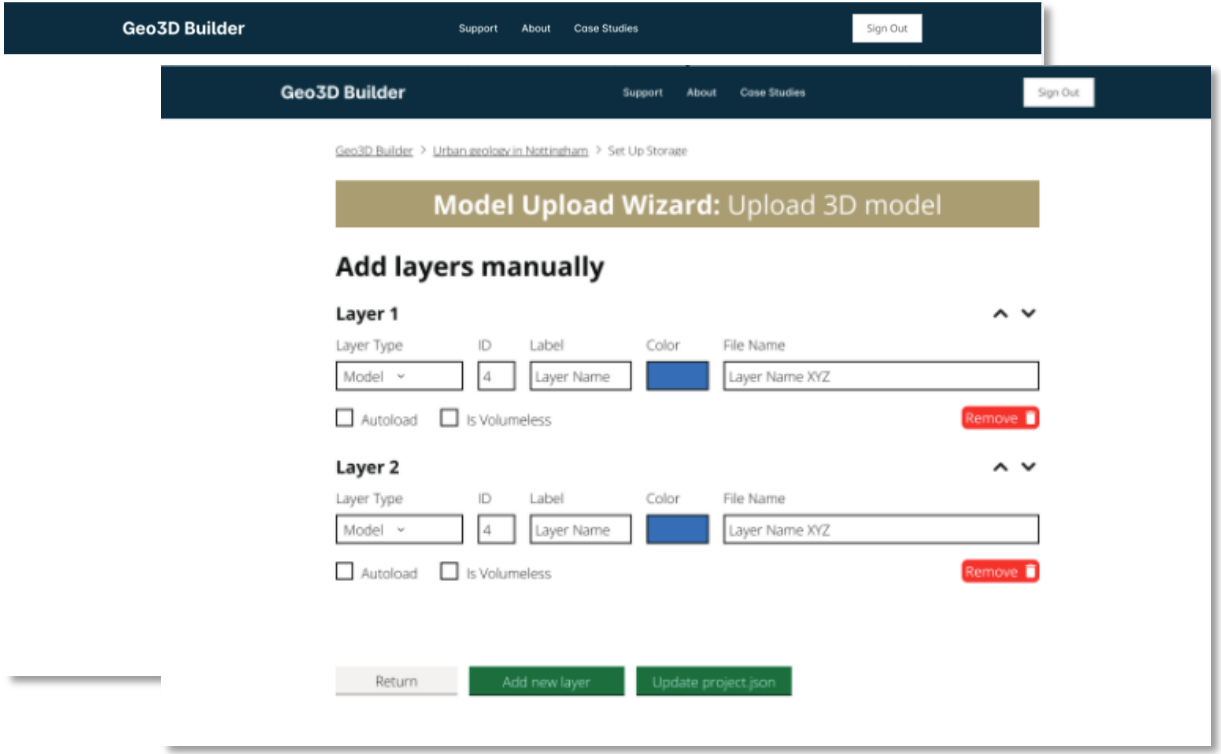

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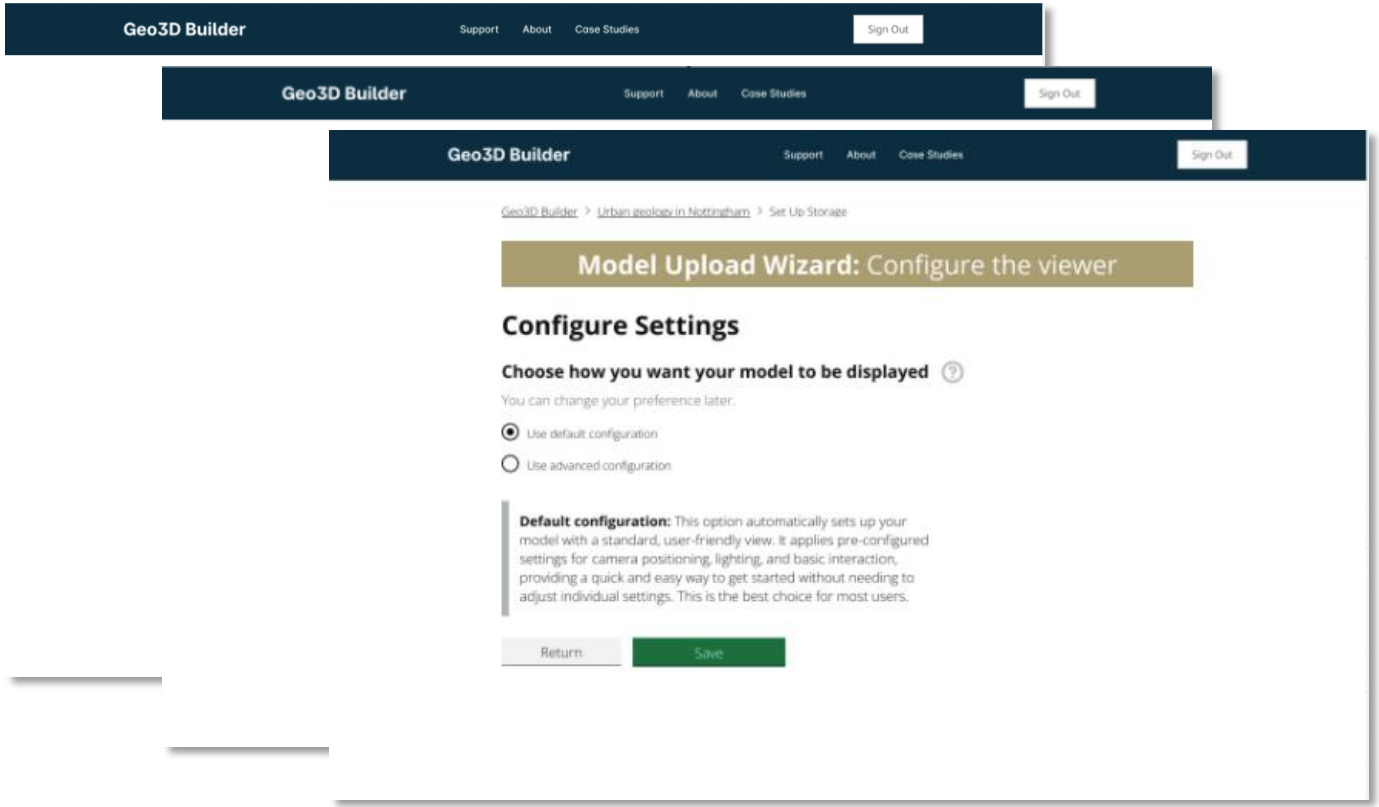

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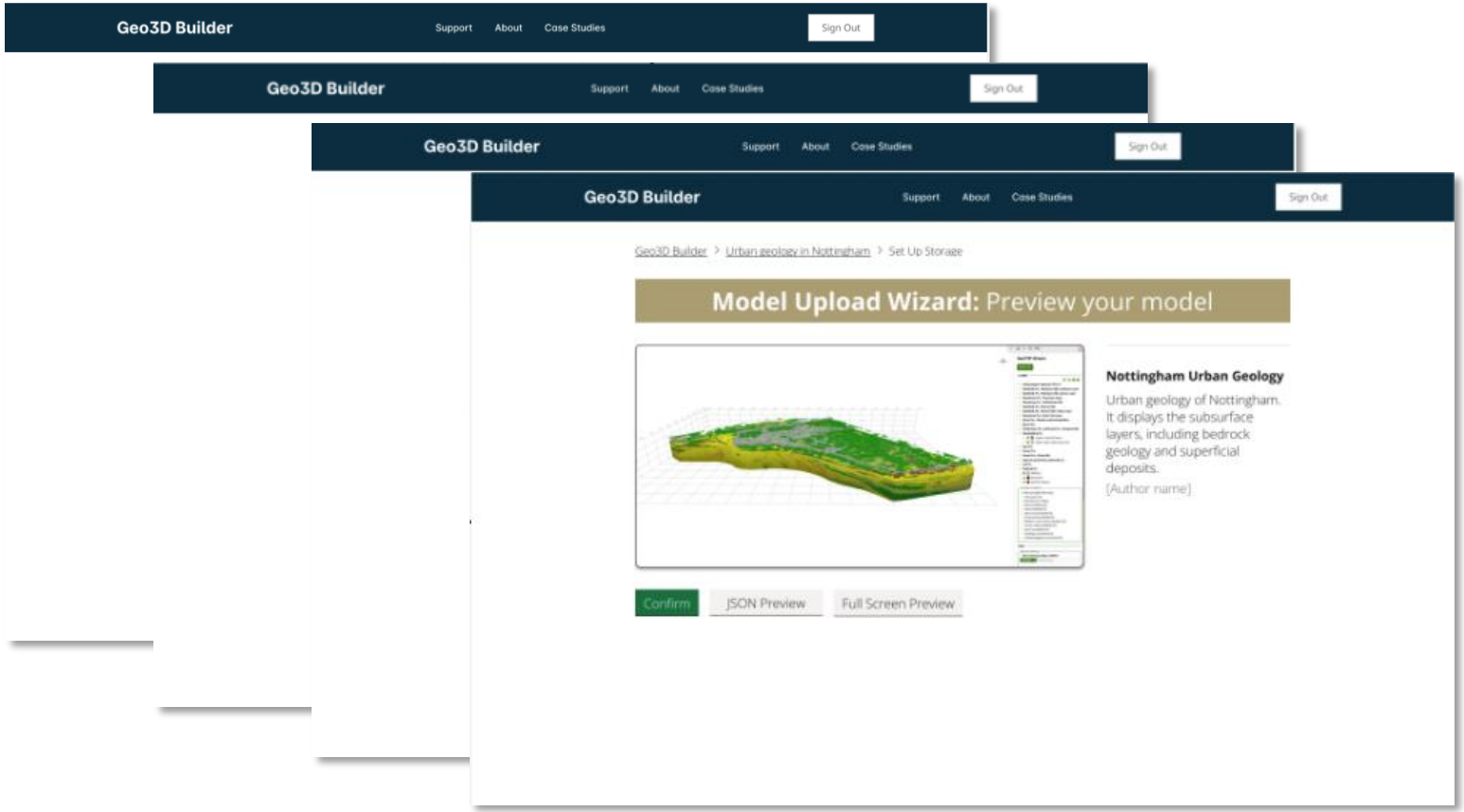
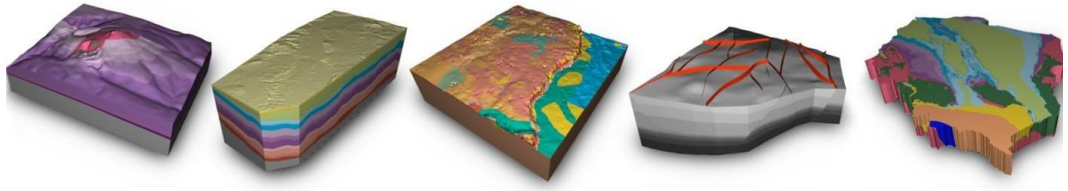


Summary



- Builder App provides easy and simple upload of 3D model data to the PGI's Geo3D Viewer
- Guides the user through the process
- Geo3D Viewer then acts as a web service for 3D models stored locally or in the cloud
- All models are listed in the Global Library collecting all on-line models. Now almost 110+ models including some made in BGS
- Provides a unique platform for BGS to develop our model delivery strategy
- Removes/reduces barriers to model visualisation such as stakeholder delivery requirements, technological experience, organisational capability