## Document Information

**Project title:** 3D geological model viewer user’s manual  
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<td>Beatriz Mozo Lopez</td>
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<td>Geological Survey Ireland</td>
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## Version History

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Introduction

Geological Survey Ireland (GSI) has added a new viewer to our website. The 3D geological model viewer displays the 3D models currently available from GSI. This viewer will continue to be updated with different models from different programmes within GSI as they are completed.

The viewer currently contains:

- Two Quaternary models, Dublin and Cork city.
- Two Bedrock models, Dublin city and Lough Allen area.

Please see the metadata documents for these models for full details of how they were produced.

This manual gives a description of the different components of the viewer and how to navigate and/or query the models.
1. 3D Viewer components

1.1. List of components:

- Tool bar (1)
- Location map (2)
- Table of contents (3)
- Coordinate system and orientation (4)
- 3D viewer window (5)

![Fig 1 different elements of the 3D viewer window](image)

**Tool bar**

From left to right the functions are:

- Add custom view. This button will save the current view of the 3D viewer window. Using the arrow you can return to a previously saved view.
- View options. This provides a variety of pre-set view options, such as; top, bottom, east, west etc.
- Copy link. This will produce a link that will open the model with the current view, ideal for sharing.
- Vertical scale. This allows you to add vertical exaggeration to the model, or return it to the same scale as the X and Y axes.
- Slicer. This tool allows you to cut through the model along any of the three axes to display internal features of the model.
- Overlay control. This allows you to add 2D maps and photographs to the viewer, overlying the model. NB some overlays will only display at certain scales, if your overlay doesn’t appear try zooming out.
- Filter. This tool allows you to filter the all the viewer features. For example you can choose to display all features that contain the word “Carboniferous”.
- Measurement tool. This measures total distance in 3D space as well as providing the distance along each axis.
- Query tool. This will provide the attributes and properties of any selected feature.
• Screenshoot tool. This tool will export a screenshot of the 3D viewer
• Scene preferences. This contains a variety of settings for customising the viewer window to best suit you.
• Full screen mode.
• Viewer toggle. This button changes the main window from a 3D viewer to a map viewer and back.
• Log in. It is possible to login with an account, although the 3D viewer does not require one for Geological Survey Ireland models.
• Feedback to Giga infosystems. This feedback will go to the creators of the viewer. If you wish to provide feedback on the models themselves we are always happy to receive it at GeologicalMappingInfo@gsi.ie instructions for mouse and keyboard navigation in the 3D viewer window.

**Location map**
The location map in the top right corners shows the position of the main screen within Ireland. This map shows also the base maps selected on the table of contents.

**Table of contents**
It contains the 3D models available, the base maps and the boreholes (only visible in the map view). Tick the appropriate element that you want to be displayed. Base maps are shown in the location map on the right top corner of the viewer, (number two in fig.1).

**Coordinate system and orientation**
It displays the coordinate system of the 3D model displayed.

**3D window**
It displays the 3D model selected on the table of contents.
2. 3D viewer user’s instructions

2.1. Step by step instructions

- Open the viewer and accept the disclaimer.

- Go to the tab of contents and select the 3D model you want to visualize in the 3D window and/or the layer you want to be displayed in the location map.

- To navigate through the model, click on the information icon (see “tool bar” section in the 3D viewer components) and a window with the instructions will pop up.

- Use the tool bar for exploring the model (saving views, slicing, changing vertical scale etc..)

- To further explore the model you can create synthetic boreholes, cross sections or horizontal sections. To use these features you will need to switch to the 2D view (see “tool bar” section in the 3D viewer components). There is a new toolbar available in the 2D view.

From left to right the functions are:

- Borehole. You can digitise a point on the map, select which model components you wish to include, and a borehole log will be created through the model.

- Cross section. You must digitise at least 2 points on the map (you can use more than 2 points if you wish dog-logs in the section), select which model components you wish to include and a cross-section will be generated.

- Horizontal section. You will need to digitise a line and specify the distance from the line to create the profile. You can also enter the depth you want the profile to be at. Once you select the model components that you want to include a horizontal section through the model will be generated.