

About the ArcGIS Layer Files

Seven separate layer files are provided for the services available from GNS Science.

These layer files provide an easy way to consume the Web Map, Tiled Web Map, and Feature services that are available. They are compatible with ArcGIS 10.5.1 and above.

The layer files available are:

- xxxxxx_WMS.lyr
- xxxxxx_Tiled_WMS.lyr
- xxxxxx_FeatureService_AllData.lyr
- xxxxxx_FeatureService_SelData.lyr
- xxxxxx_elevationModels_WMS.lyr
- xxxxxx_geologyAnno_WMS.lyr
- xxxxxx_topographicData_WMS.lyr

Each provides access to the different services which have different capabilities. The full WFS functionality in ArcGIS is only available using the Interoperability Connection which requires a separate install. It also stores absolute paths in layer files that prevents their sharing. For these reasons, no layer file is provided for connection to the WFS. You are able to connect direct to the WFS service at (<https://data.gns.cri.nz/gis/rest>) but the recommended alternative and a simpler solution is to use the layer file for one of the Feature Services which provides the same functionality.

xxxxxxx_WMS.lyr

This is a layer file that sources a dynamic Web Map Service (WMS) which provides a symbolised view of the data. It is slower to draw than the Tiled WMS (see below) but provides you with the ability to turn off layers. You cannot change the scale dependent visibility or symbology. You can get access to the attributes associated with the visible features with the Identify tool, but you cannot see the attribute table or export the data.

xxxxxxx_Tiled_WMS.lyr

This is a layer file that sources a Tiled Web Map Service (WMTS) which provides a symbolised view of the data. It will be quicker to draw than other services but has very limited capabilities. As with the WMS you cannot change the scale dependent visibility or symbology, see the attribute table or export the data. In addition, you cannot choose what layers are displayed or use the Identify tool.

xxxxxxx_FeatureService_AllData.lyr

This is a layer file that sources a Feature Service that provides access to all the geological features available for this dataset. It is slower to draw than the WMS or WMTS but allows full control over visibility and symbology. Feature attributes can be accessed with the Identify tool and through the attribute table, and the data can be exported.

The symbology and scale dependent visibility for the service is set through the layer file but can be altered by the user. The user can also set definition queries to display only a part of the data.

Because this service provides access to all the geological features and not only the features that appear on the published map, the view can be cluttered in some areas.

[xxxxxx_FeatureService_SelData.lyr](#)

This is a layer file that sources a Feature Service which provides access to the selection of geological features used to create the published map. The service has the same functionality as the Feature Service described above but can only access a subset of the data. It is slower to draw than the WMS or WMTS but provides full control over visibility and symbology. Feature attributes can be accessed with the Identify tool and through the attribute table, and the data can be exported.

The symbology and scale dependent visibility for the service is set through the layer file but can be altered by the user. The user can also set definition queries to display only a part of the data. Some layers already have a definition query set, which provides information on the filter used in the service to limit features to only those included in the published map. Removal of these definition queries will still not provide access to the full dataset (the service described above should be used in that case).

[xxxxxx_elevationModels_WMS.lyr](#)

This is a layer file that sources a dynamic Web Map Service that provides a view of the elevation models used on the published map. Typically, it displays a hill-shaded model, but it may include bathymetry. It should be used as an addition to a Feature Service layer to create a more complete looking map (see details below).

[xxxxxx_geologyAnno_WMS.lyr](#)

This is a layer file that sources a dynamic Web Map Service that provides a view of the geological annotation used on the published map. Typically, it includes geological unit labels, fault and fold names and structure data annotation. It should be used as an addition to a Feature Service layer to create a more complete looking map (see details below).

[xxxxxx_topographicData_WMS.lyr](#)

This is a layer file that sources a dynamic Web Map Service that provides a view of the topographic data used on the published map. Typically, it includes roads, rivers and streams, and place names. It should be used as an addition to a Feature Service layer to create a more complete looking map (see details below).

[Creating a complete map when using a Feature Service](#)

To create a complete map when using one of the Feature Services place these layerfiles in your project in this order (from top to bottom in your Table of Contents).

- 1: xxxxx_geologyAnno_WMS.lyr
- 2: xxxxx_topographicData_WMS.lyr
- 3: xxxxx_FeatureServices_xxxData.lyr
- 4: xxxxx_elevationModels_WMS.lyr