Connect to our Data

Instead of downloading the data from Canterbury Maps, you can directly connect to the APIs / web services provided.

There are a variety of web service protocols to choose from:

1. ESRI REST
2. ESRI SOAP
3. OGC WMS
4. OGC WFS
5. OGC WMTS
6. KML
7. GeoJSON
8. GeoService

Canterbury Maps ESRI REST Servers:

Canterbury Maps Production Server - https://gis.ecan.govt.nz/arcgis/rest/services/Public

Basemap server - https://gisbasemap.ecan.govt.nz/arcgis/rest/

Imagery Server - https://gisimagery.ecan.govt.nz/arcgis/rest/

Various third party GIS applications can use these above services and protocols to gain direct data access. For example ArcGIS, QGIS, Intergraph, MapInfo are a few.
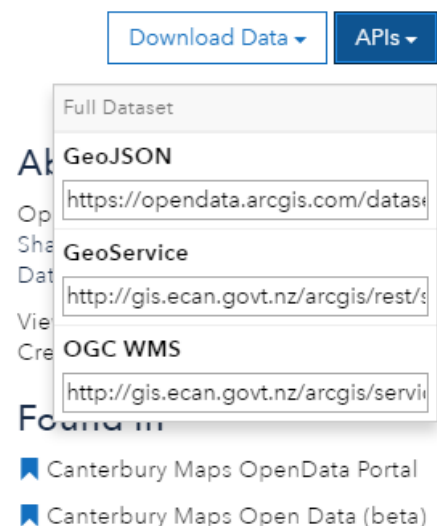
Known software (but not limited to) is listed below:

1. ArcDesktop (not free - licence required)
2. ArcGIS Online (free)
3. QGIS (free download)

OGC WMS/WFS/WMTS Services:

To find the URL's for the OGC WMS and WFS services, go to the open data page on the Canterbury Maps homepage. Locate the data you wish to find the service URL for and copy the URL from the APIs drop down

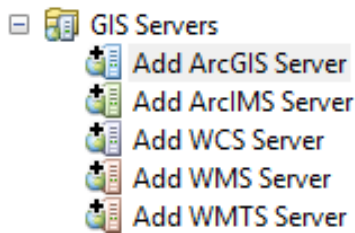**Note:** This is not enabled for all features, some layers may not have this feature set up.
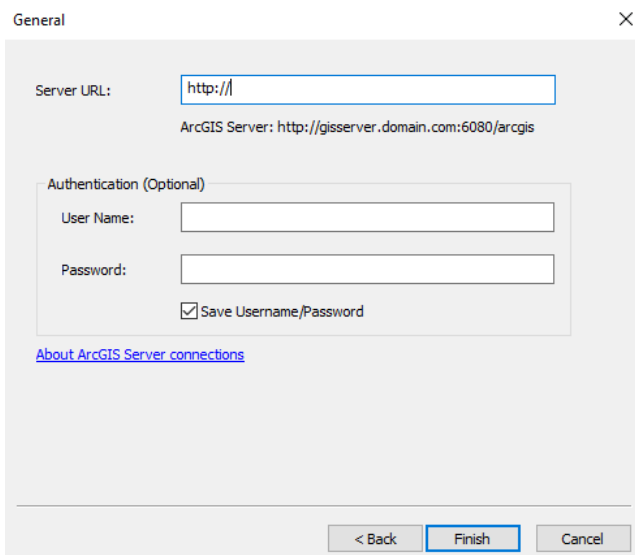
ArcDesktop

Tips

- You can alter the transparency of the tiled layer for better visualization of data overlays by right-clicking on the layer and selecting Properties> Advanced

- Set the map data frame to the same datum as the tile set being used. See View> Data Frame Properties> Coordinate System

- For details of the data source including extents, scale range, formats and coordinate system right-click the layer and select Properties> Source

1. In the catalog, expand the GIS Serves folder, click **'Add ArcGis Server'**

2. Type the URL of the ArcGIS Server site you want to connect to in the Server URL text box.

https://gis.ecan.govt.nz/arcgis/rest/	Canterbury Maps public server – this is where you can find all of the data that is on Canterbury Maps
https://gisbasemap.ecan.govt.nz/arcgis/rest/	BaseMap Server
https://gisimagery.ecan.govt.nz/arcgis/rest/	Imagery Server

3. Click **Finish**
4. If your request fails, you may need to change your internet settings to use a proxy server and enter your proxy details. ArcGIS uses your Internet Explorer settings. To change these settings:

   - Open Internet Explorer
   - Select Tools > Internet options
   - Select Connections > LAN settings
   - Check the use a proxy server box and fill out the details as per your IT policy

You can check that ArcGIS has imported the proxy setting from Internet Explorer by:

- Opening ArcCatalog
- Select Customize > ArcCatalog Options…
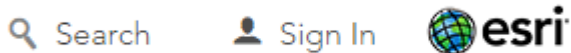- Select the Connections tab to view or edit the proxy details

5. Drag in the service you wish to view
6. If not already configured, ArcMap sets the data frame coordinate system to that of the first data set added.

   As all LDS WMTS services are added as Web Mercator by default, you will need to change the map data frame so that it is also NZTM. Aligning the data frame and WMTS tile set will ensure the tiles are displayed without distortion.

   Go to the View menu and select **Data Frame Properties**. Click on the 'Coordinate System' tab, and use the search function to find NZTM. Select NZGD 2000 New Zealand Transverse Mercator, then click **Apply** and **OK**.
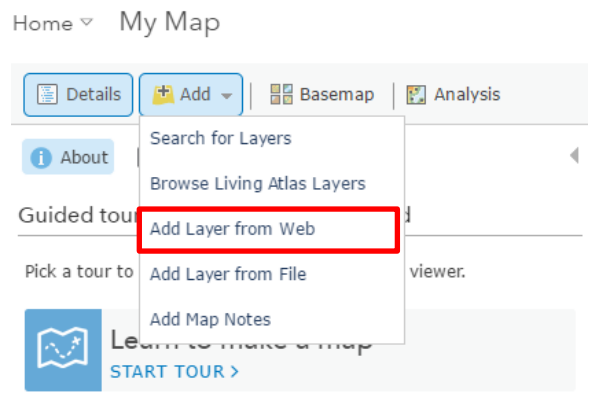
ArcGIS Online

1. Sign in with your ArcGIS Online account

2. Select the **Map** tab (at the top of the page)

3. At the top left, select **'Add Layer from Web'**

4. In the pop up box, type in the service URL, and **'add layer'**

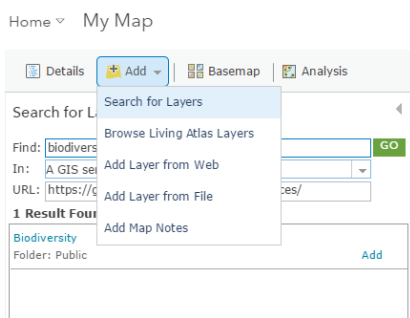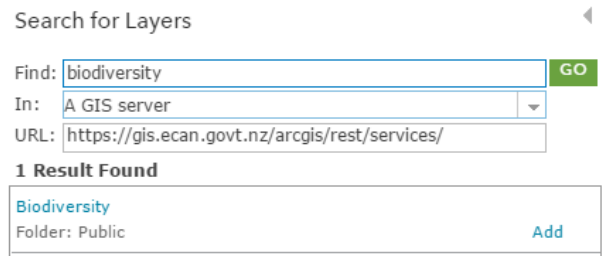| https://gis.ecan.govt.nz/arcgis/rest/	Canterbury Maps public server – this is where you can find all of the data that is on Canterbury Maps
https://gisbasemap.ecan.govt.nz/arcgis/rest/	BaseMap Server
https://gisimagery.ecan.govt.nz/arcgis/rest/	Imagery Server

Searching for layers in a service

Instead of connecting directly to the whole service, users can search for layers within a service.

1. In the map select 'add' – 'search for layers'

2. In the drop down box select 'A GIS server' and type in the URL of the server you wish to connect to.
3. Search for a specific service in the 'find' box. The result when then appear below and you can click add to add this service to the map
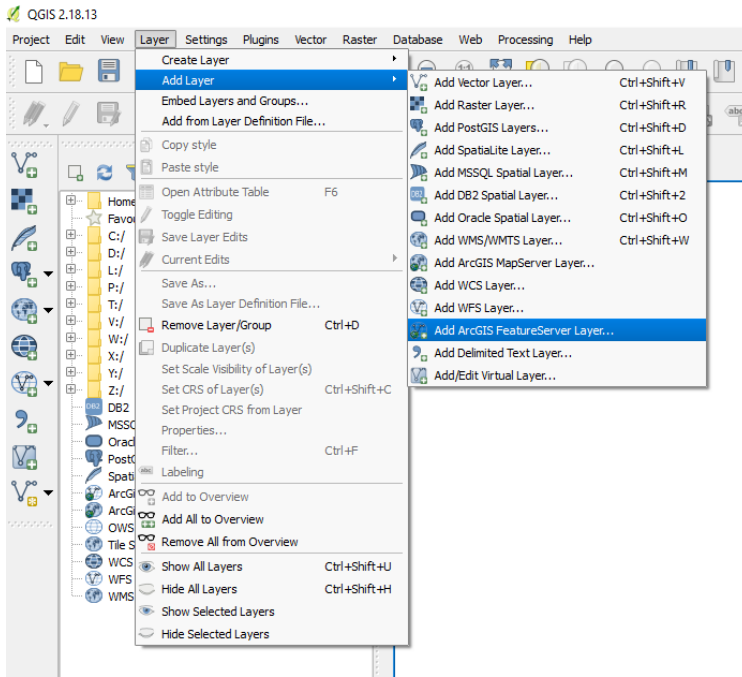

QGIS
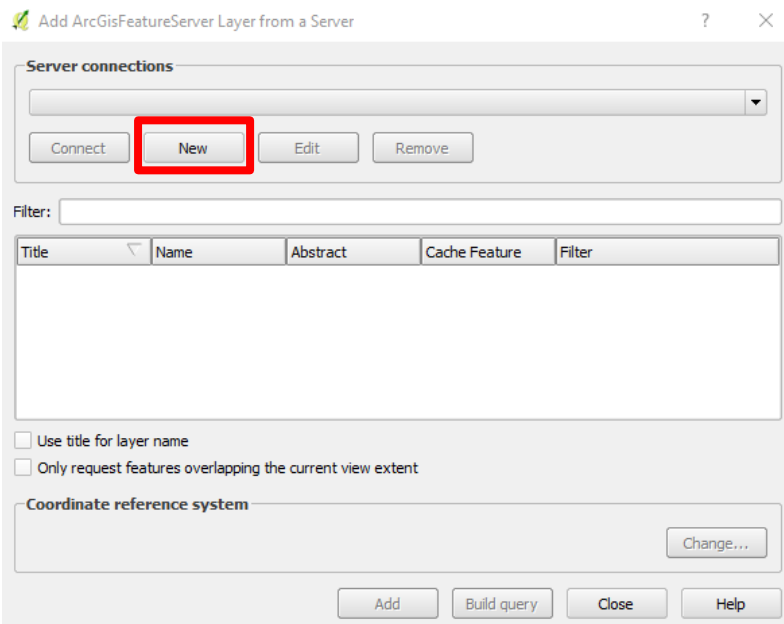
Tips:

- You can alter the transparency of the tiled layer for better visualisation of data overlays by right-clicking on the layer and selecting Properties > Transparency

- For details of the data source including extents, scale range, formats and coordinate system right-click the layer and select Properties > Metadata

1. Click **'Layer'**, and then **'Add Layer'**, followed by **'Add ArcGIS FeatureServer Layer'**
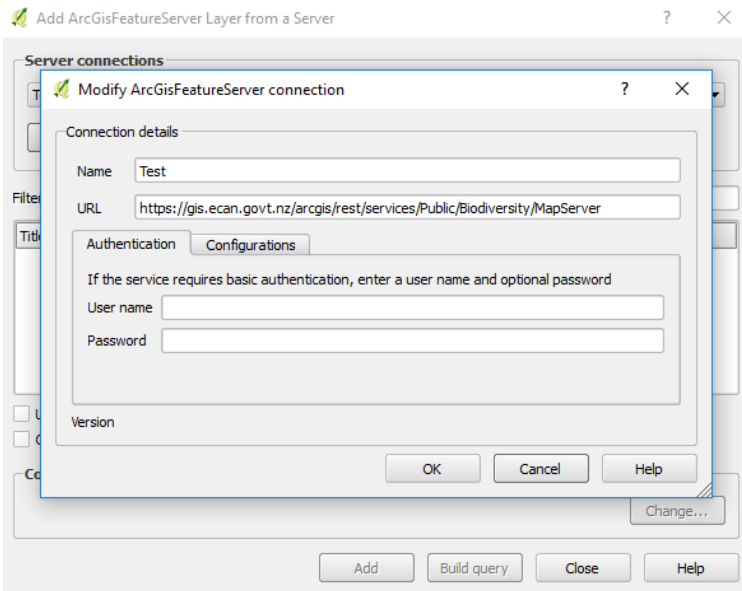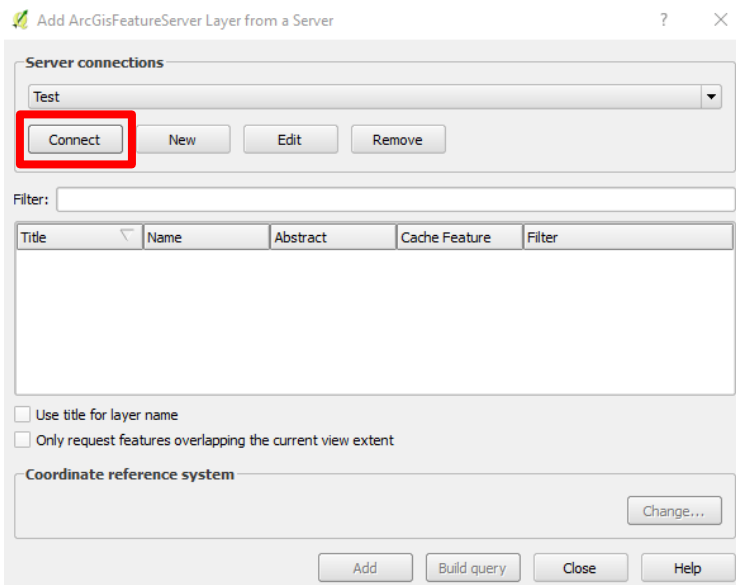
2. Click **'new'**

3. And then add the service name and URL

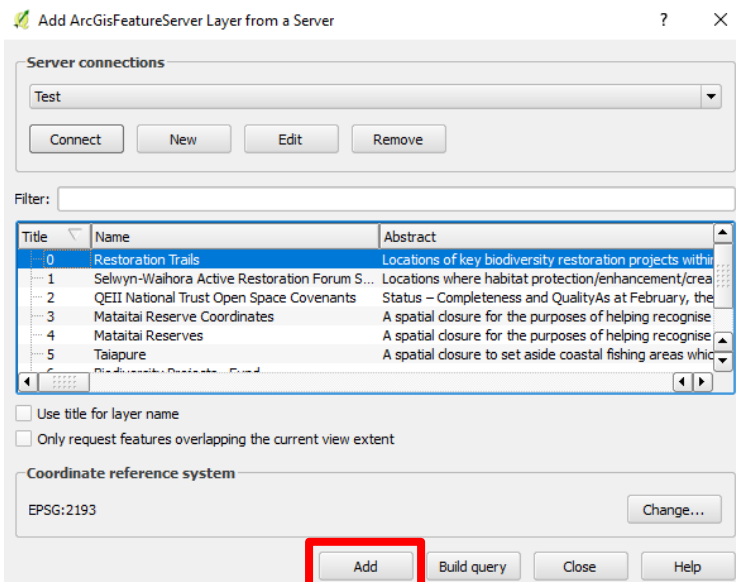|	
https://gis.ecan.govt.nz/arcgis/rest/	Canterbury Maps public server – this is where you can find all of the data that is on Canterbury Maps
https://gisbasemap.ecan.govt.nz/arcgis/rest/	BaseMap Server
https://gisimagery.ecan.govt.nz/arcgis/rest/	Imagery Server

Copy and paste the URL from the 'services' tab of the layer of choice into the URL field – removing the 'S' from https unless you're using version 2.8.1

4. Once added select **connect**

5. Select the layers you wish to add (or select multiple by holding down the Shift key), click **'Add'**

Adding other web service layers in QGIS

Web feature services (**WFS**) allow you to serve features over the internet and define symbology to use when displaying. A web map service (**WMS**) is a way of making maps available online.

A **WMS/WMTS** (Web Map Tile Service) delivers map images. It differs from **WFS** as a **WFS** communicates geographic feature information. All base maps and raster layers can be accessed via WMTS.

A **WCS** is a web service that is used to transfer coverages, any objects that cover a geographic area over space and time.

Any of these options can be added to QGIS by following the above steps. Instead of selecting 'Add ArcGIS FeatureServer Layer' select either

- Add WMS/WMTS Layer
- Add WCS Layer
- Add WFS Layer

You need to ensure that the service you are selecting has the selected capabilities enabled eg if adding a WMS layer the service selected has to have the WMS capability

ArcGIS REST Services Directory

Home > services > Public > Biodiversity (MapServer)

JSON | SOAP | WMS

Public/Biodiversity (MapServer)

View In: ArcGIS JavaScript   ArcGIS Online map viewer   Google Earth   ArcMap   ArcGIS Explorer

View Footprint In: ArcGIS Online map viewer

Service Description: Layers and features related to biodiversity restoration within the Cantebury Region.

Map Name: Biodiversity