



Plugin Description	1
Installation	3
Plugin Functionality	5
Part 1 – Download ESRI Data for Konect	5
Part 2 – Import GIS Layers into Konect	5
Part 3 – Export Data from Konect	6
Part 4 – Download Data from Konect API	6
Part 5 – Import ESRI Map Service to Konect	7
Part 6 – Konect Dataset Photo Report	7
Part 7 – Create Konect Lists from GIS Data	8
Part 8 – Export Layer from Konect with Symbol Legend	8
Part 9 – Export Layer Symbols to SVG	9
Example Workflow: ESRI Feature Service to Konect	9
Scripting Feature Layer Refresh	13
Download Data from Konect API	13

Release Notes v1.4 (11/8/2026)

Plugin Description

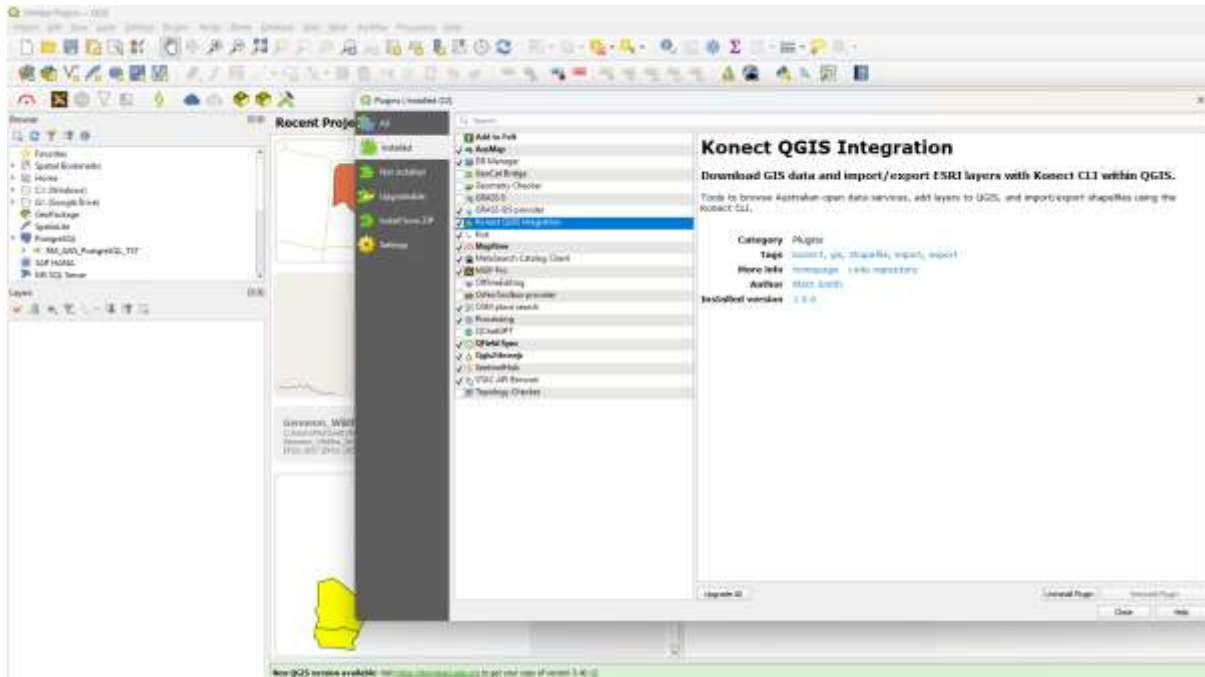
The Konect QGIS Integration plugin has been developed to allow users to;

- Download and direct publishing of ESRI feature service data within Konect
- View Konect environment(s) associated with an API Key
- View Datasets and Associated Queries which exist with an Konect environment
- Import of GIS shapefile, GeoJSON and MapInfo TAB files into Konect
- Users to make geometry edits, additions and attribute data edits and re – upload to Konect (using the CLI tool functionality)
- Allow users to select a subset of a GIS layer and upload to Konect
- Export datasets from Konect for viewing in QGIS. Analyse data from Konect alongside GIS layers in a QGIS project
- Download data into QGIS using the Konect API for viewing (no CLI tool required on PC)
- Import layers directly from an ESRI Map Service into Konect, without first loading them into a QGIS project
- Create and maintain Konect pick lists directly from the unique values found in a GIS layer or table
- Download a Konect dataset and automatically classify it into a QGIS legend by a chosen Style Column
- Export a layer's current QGIS symbology to Konect's SVG icon library format



- Generate a per-record photo-attachment coverage report for a Konect dataset

Please contact sales@globalgbm.com to request access to this tool to run within your QGIS environment



Plugin Developed by

GBM Konect Presales – v1.4 August 2026

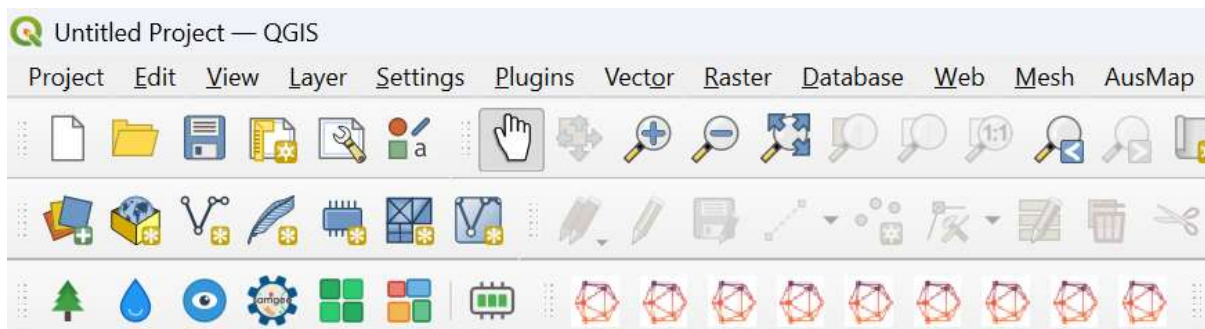
Supported versions

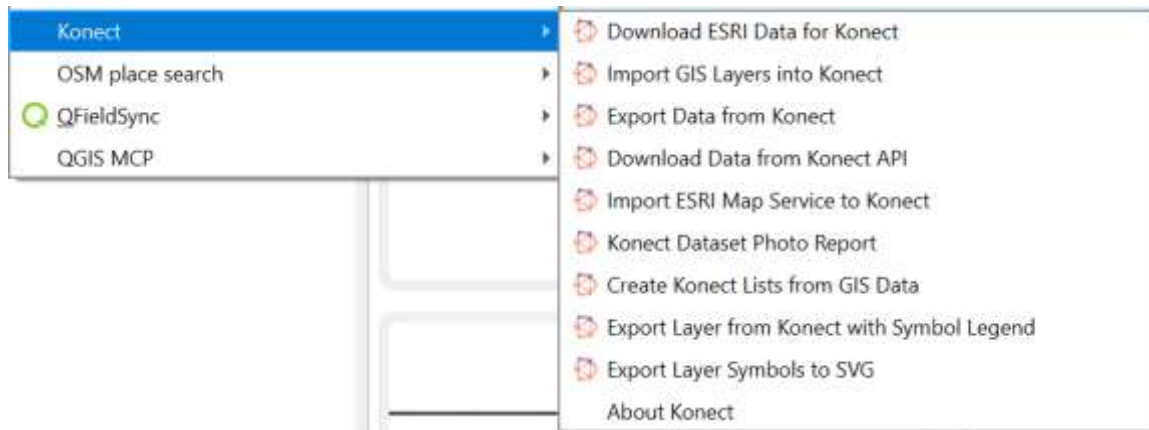
QGIS 3.34.0 and QGIS 3.40.13

Python version 3.11 and 3.12

Upon installation of a new version of QGIS, the plugin should load automatically in the QGIS plugins menu

The plugin features the following menu items





This QGIS functionality plugin is designed to offer GIS integration utilising the Konect framework.

Installation

Manually – deploy directly into QGIS app data directory

1. Create a new folder Konect QGIS plugin within the “plugins” directory

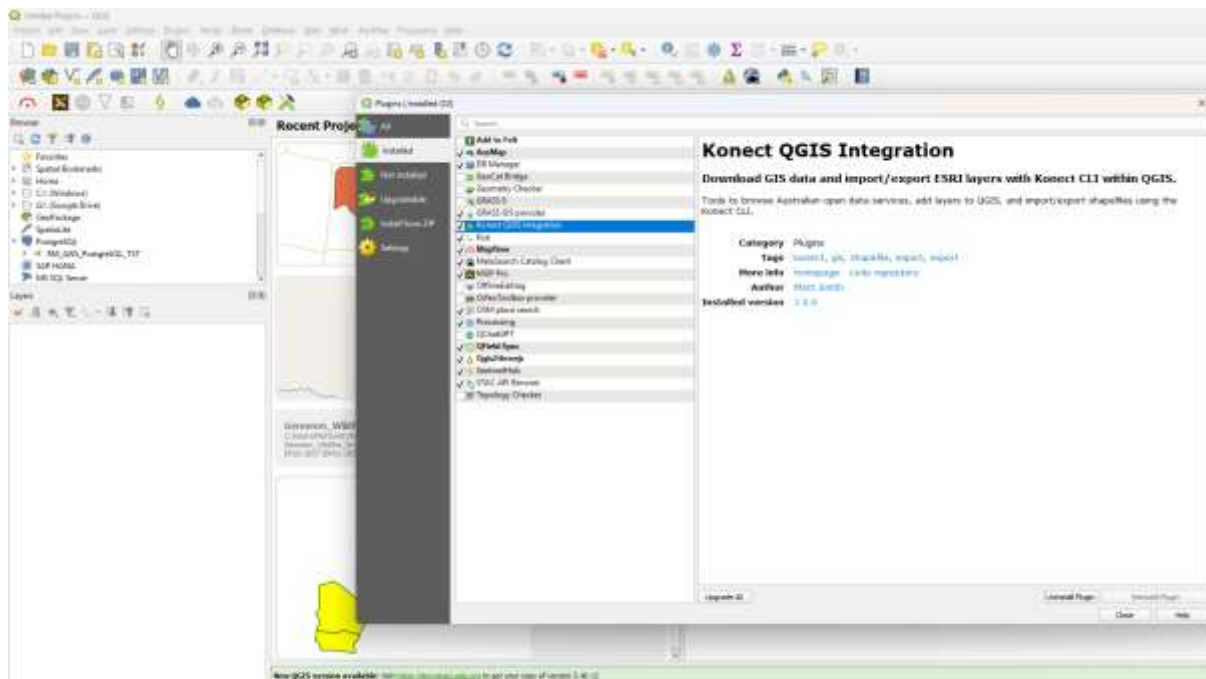
C:\Users\Username\AppData\Roaming\QGIS\QGIS3\profiles\default\python\plugins\konect_qgis

2. Create QGIS plugin directory

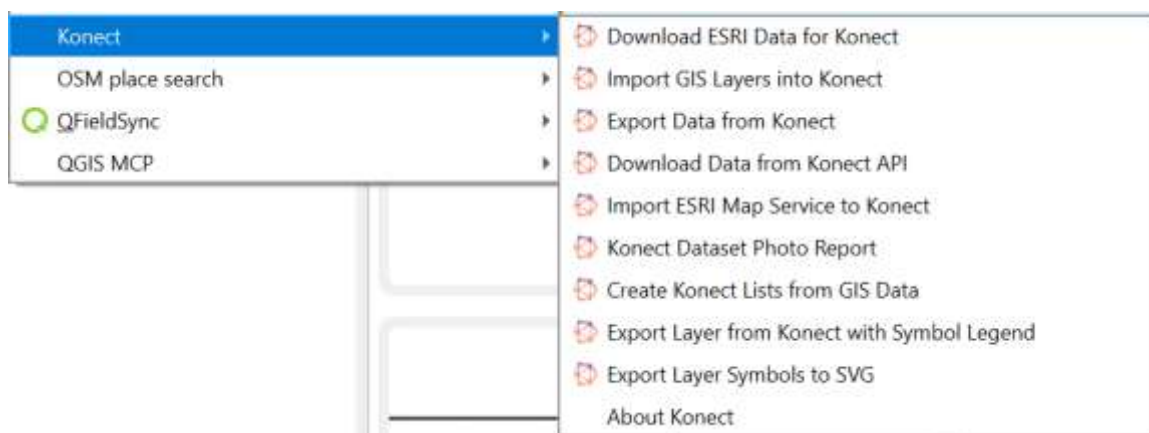
dialogs	27/11/2025 15:24	File folder	
__init__	27/11/2025 14:57	Python File	1 KB
konect_qgis	27/11/2025 14:57	Python File	2 KB
metadata	27/11/2025 14:56	Text Document	1 KB

3. Copy all files required as part of the plugin (if the plugin is not distributed online via the QGIS repository)

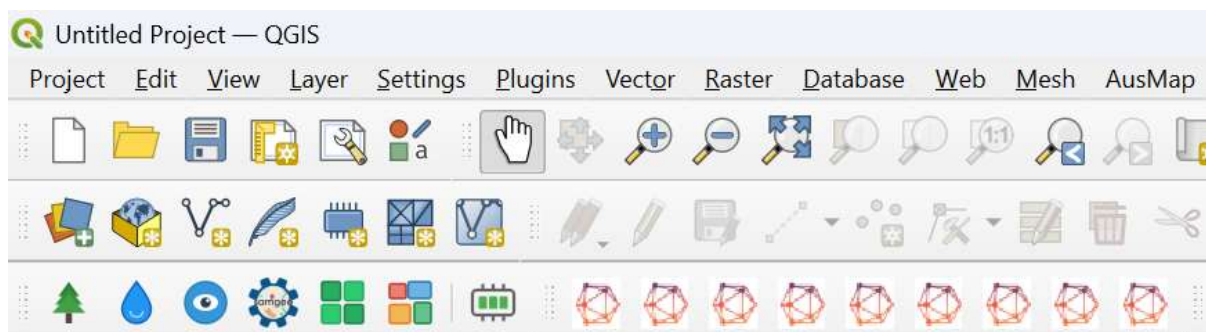
4. Re – open QGIS



Once the plugin is installed, the following item should appear in the QGIS plugins menu



Access the plugins via the Konect icons within QGIS which appear following plugin installation





Plugin Functionality

- Download ESRI Data for Konect
- Import GIS Layers into Konect
- Export Data from Konect
- Download Data from Konect API
- Import ESRI Map Service to Konect
- Konect Dataset Photo Report
- Create Konect Lists from GIS Data
- Export Layer from Konect with Symbol Legend
- Export Layer Symbols to SVG

Working with the above functions allows a QGIS user to;

- View Konect environments associated with a Konect API key
- View Datasets within a Konect environment and associated queries within QGIS

Part 1 – Download ESRI Data for Konect

This tool offers on-demand access to ESRI feature services and local shapefiles, so a QGIS user can bring open data into a project before publishing it to Konect. It offers three modes, selected from a Mode dropdown

- *Open Data Catalog* – select a State or Territory and an Agency from a built-in catalogue of Australian local government open data services (e.g. Brisbane City Council, City of Sydney, City of Melbourne), then choose one or more Datasets (Feature Services) from the list returned by that agency
- *Add From Path* – paste an ESRI Feature Service or Map Service URL (or any OGR-readable path) not covered by the built-in catalogue, and add it directly to the project
- *Add Shapefile* – browse to and add a local shapefile (.shp) to the project

In Open Data Catalog mode, two additional options control what happens with the selected datasets

- “Add to Map” – adds each downloaded feature service layer to the current QGIS project (checked by default)
- “Save to Shapefile(s)” – additionally writes each downloaded layer to a shapefile in a chosen Output Folder

These options can be accessed from the “Mode” menu within the Download ESRI Data for Konect tool

Part 2 – Import GIS Layers into Konect

This tool publishes a layer already loaded in the current QGIS project into Konect via the Konect CLI, giving a GIS user a graphical way to load data into Konect. It contains the following features

- *Layer to Import* – select any vector layer currently loaded in the QGIS project
- *The ability to enter a Konect API key within the QGIS environment.* The key field is masked to ensure it is not easily shared with screenshares and screenshots



- Select the Konect environment/account to publish to, via “Fetch Environments / Datasets”
- *Existing Datasets (view only)* and *Associated Queries (view only)* – browse the account’s current datasets and queries for reference; these do not auto-fill the dataset name to avoid accidentally overwriting the wrong dataset
- *Konect Dataset Name (required)* – must be entered explicitly by the user (highlighted in red if left blank) rather than being pre-filled from the dataset picker
- *Action of new or replace*
- *Konect CLI Folder* – defaults to C:\konect\konect-cli and can be browsed to

When run, the tool detects the correct Konect CLI import command from the layer’s source format (shpimport, geojsonimport or tabimport). If the layer is not already a shapefile on disk, it is first exported to a temporary shapefile – using the same shapefile-safe field type conversion shared with “Import ESRI Map Service to Konect” – before being handed to the Konect CLI.

NB: changes to table structures once a layer has been imported should be managed in Konect only.

Part 3 – Export Data from Konect

This tool uses the Konect CLI to export a Konect dataset or query back out into a range of common GIS and file formats: ESRI Shapefile, GeoJSON, CSV, KML, MapInfo TAB, GeoPackage, and Konect Package (KPK). Spatial-format exports are automatically added to the current QGIS project once the export completes.

This tool contains the following features – ability to define a Konect API key, auto-select an environment name, dataset or query to export, choose an Export format, an Output Folder, and the Konect CLI Folder

Note: if the chosen Output Folder looks like a folder previously created by the Konect CLI (e.g. “DATA_1330965”), the tool automatically corrects the output location to that folder’s parent rather than nesting a new export inside it. If an export returns 0 records, no output file is created and the tool reports this rather than treating it as a failure.

An optional “Export photo attachments (--photos)” setting downloads photo and document attachments alongside the GIS export into their own photos/documents sub-folders, with an option to exclude the Konect-branded footer from exported photos (--excludephotofooter). A separate Photo Output Folder can optionally be specified, independent of the main export Output Folder.

Part 4 – Download Data from Konect API

- Retrieve data from the Konect API, download a specific dataset or query with either the first 1000 features (recommended for data preview) or all features in a dataset
- *Refresh / replace an existing QGIS layer* – optionally target an already-loaded layer instead of always adding a new one, with an option to preserve that layer’s existing symbology across the refresh

The tool downloads features as GeoJSON directly from the Konect Integration API (no CLI tool installation required), trying an empty-body POST to the paged AST endpoint first, falling



back to an explicit match-all query, and finally to a plain GET request if needed – so a download can succeed even against Konect environments that only support one of these methods.

Part 5 – Import ESRI Map Service to Konect

This tool imports one or more layers directly from an ESRI Map Service (an ArcGIS Server REST endpoint) into Konect, without needing the layers to be loaded into a QGIS project first. It contains the following features

- *Map Server URL* – paste the service root or layer URL and click “Load / Refresh Layers” to query the service and list every available sub-layer for selection
- Select one or more layers to import in a single run
- Optional Where Clause to filter features server-side before download (defaults to 1=1)
- Select the Konect environment/account to import into, using the same API key used by the other tools in the plugin
- Enter a base Konect Dataset Name; each selected layer is published as “{base name}_{layer name}”
- *Action* of **new** or **replace**
- Define the location of the Konect CLI on the local machine – defaults to C:\konect\konect-cli and can be browsed to
- Each selected layer is downloaded as GeoJSON (falling back to ESRI JSON, then ESRI JSON with outSR=4326 and smaller pages if needed), written to a temporary shapefile using the same shapefile-safe field conversion as “Import GIS Layers into Konect”, and imported into Konect via the Konect CLI
- A summary of successes and failures across all selected layers is shown once the run completes

Part 6 – Konect Dataset Photo Report

This tool pages through every record in a selected Konect dataset, auto-detects photo/attachment fields on each record, counts photos per record, and writes a CSV report – useful for auditing photo coverage across a dataset. It contains the following features

- Select the API key, account and dataset from the same dropdowns used elsewhere in the plugin, and choose an output folder
- Automatically detects attachment fields by inspecting each record’s field names and values (matching common photo/image/attachment keywords, or list-of-object fields containing URL-like keys), rather than relying on a fixed field name
- Optional “Also add report as a table layer in QGIS” setting loads the CSV as a non-spatial table layer in the current project
- The report totals photo counts per record and provides an overall summary of records processed and total photos found



Part 7 – Create Konect Lists from GIS Data

This tool creates or updates a Konect pick list directly from the unique values found in a field on a QGIS layer or table, so a dataset loaded from GIS can have its fields backed by a proper Konect List rather than free text. It contains the following features

- Select the Input Layer or Table and the List Values Field whose unique values become the list's items, then give the list a List Name (Alias) and, optionally, a Default Value
- Optionally create a child (cascading) list from a second field in the same step, or attach the new list under an already-existing Konect list by entering its List Id and a Parent Values Field
- *Action* of **create** or **update** (update requires an Existing List Id)
- Field values are automatically de-duplicated and sorted alphabetically before being sent to Konect; any validation adjustments Konect makes to the submitted values are reported back to the user

Part 8 – Export Layer from Konect with Symbol Legend

This tool downloads a dataset from the Konect API – using the same download logic as “Download Data from Konect API” – and, in a single step, classifies the resulting layer into a QGIS categorized-by-unique-value legend keyed on a Style Column chosen by the user. This is the QGIS equivalent of the ArcGIS Pro toolbox’s “Export Layer from Konect with Symbol Legend Classification” tool, mirroring the Style Column workflow found in Konect Manager’s Datasets > Map Styles screen; the tool handles the classification, and the user assigns the actual symbol per category afterwards.

Konect’s public Integration API does not expose the per-value symbol and colour assignments configured in Konect Manager’s Map Styles screen, so this tool cannot reproduce Konect’s exact symbols. Instead it builds a categorized renderer with one legend category per unique value, seeded with colours from QGIS’s default “Spectral” colour ramp as a starting point.

This tool contains the following features

- Retrieves a dataset from the Konect API using the same account/dataset selectors and Konect API key used by the other tools in the plugin, choosing either the first 1000 features or all features
- *Style Column* – select the field on the downloaded layer to symbolise by; the dropdown is populated from a sample of the dataset’s values fetched from Konect
- Always adds the result as a new layer (no refresh-existing-layer option) and has no query/filter selector, mirroring the equivalent ArcGIS Pro tool
- Reports the number of categories created and the field used, and adds the layer without classification (with a warning) if the chosen Style Column cannot be matched on the downloaded data

Note: because Konect’s per-category symbol and colour assignments are not available through the Konect API, the legend uses QGIS’s default colour ramp as a starting point. After the tool runs, right-click the layer > Properties > Symbology to assign each category’s symbol.



Part 9 – Export Layer Symbols to SVG

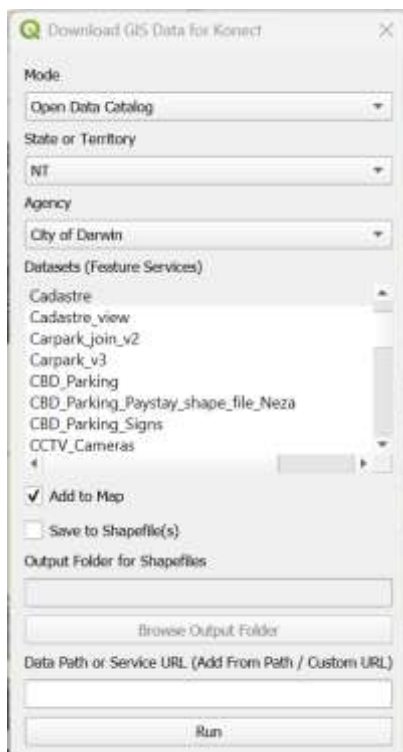
This tool exports a QGIS vector layer's current legend symbology into a single SVG icon-font file (one glyph per legend class), ready to be merged into the Konect symbol/icon library. It is a QGIS-native re-implementation of the equivalent ArcGIS Pro toolbox tool, reading the layer's renderer via QGIS's generic legend-symbol API so it works uniformly across single-symbol, categorized, graduated and rule-based renderers. It contains the following features

- Choose the input layer, an output SVG file path, and a Font Name for the generated icon font (defaults to "KonectIcons")
- Requires no Konect API access – it works purely on a layer already loaded in the current QGIS project
- Supports simple marker, fill and line symbol layers natively; SVG marker and font marker symbol layers (QGIS's closest equivalents to ArcGIS's picture and character markers) are represented with a placeholder swatch glyph, with the referenced file/font logged for the user rather than failing silently
- A summary at the end of the run reports how many glyphs were exported in full versus how many used a placeholder swatch (and why), matching the level of detail reported by the equivalent ArcGIS Pro tool

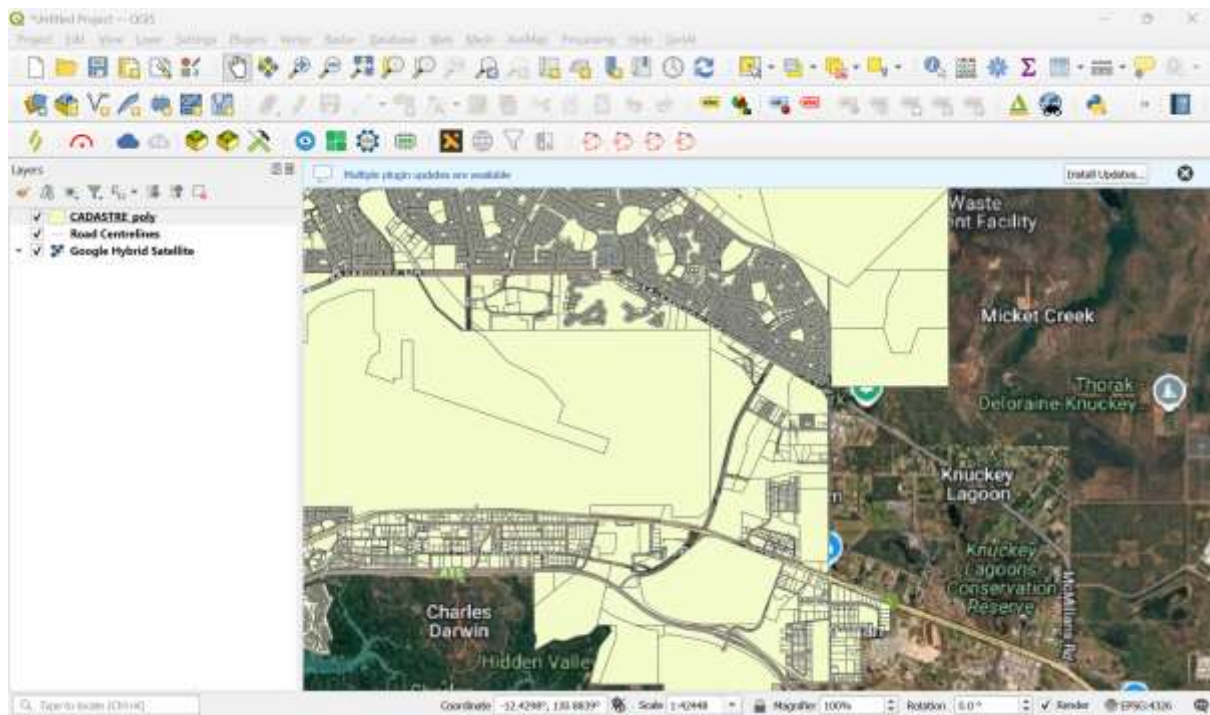
Example Workflow: ESRI Feature Service to Konect

ESRI Rest feature services – downloaded successfully

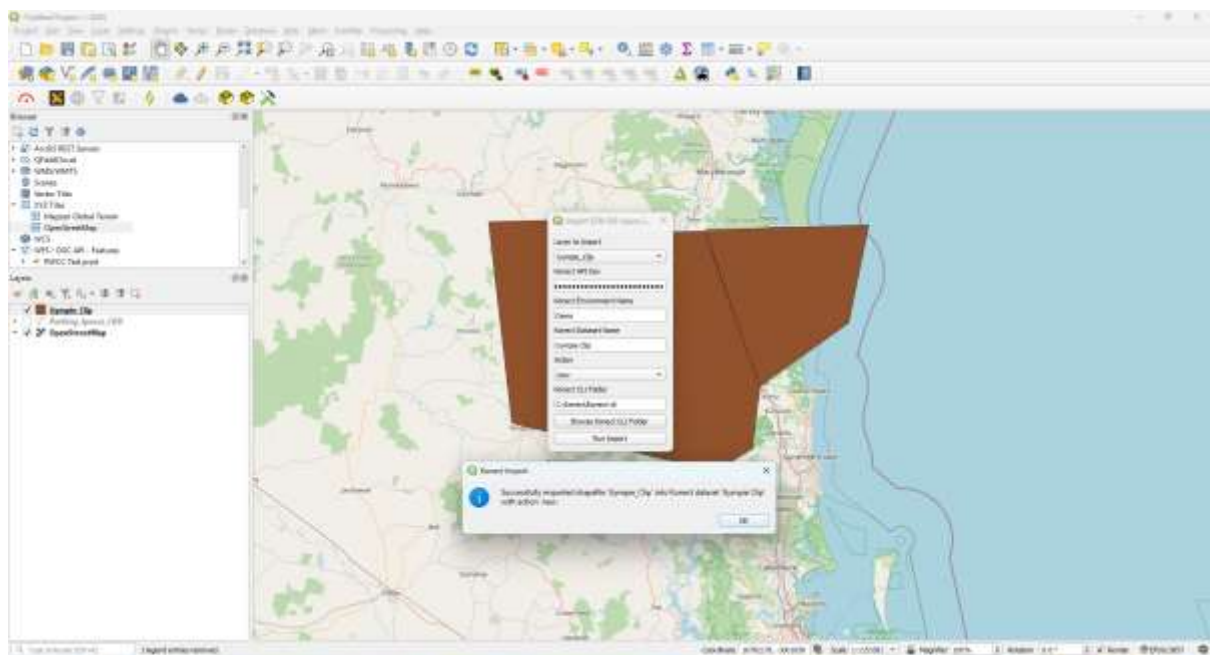
1. Open data directory – example cadastre download from council (bring one or more open datasets into QGIS)



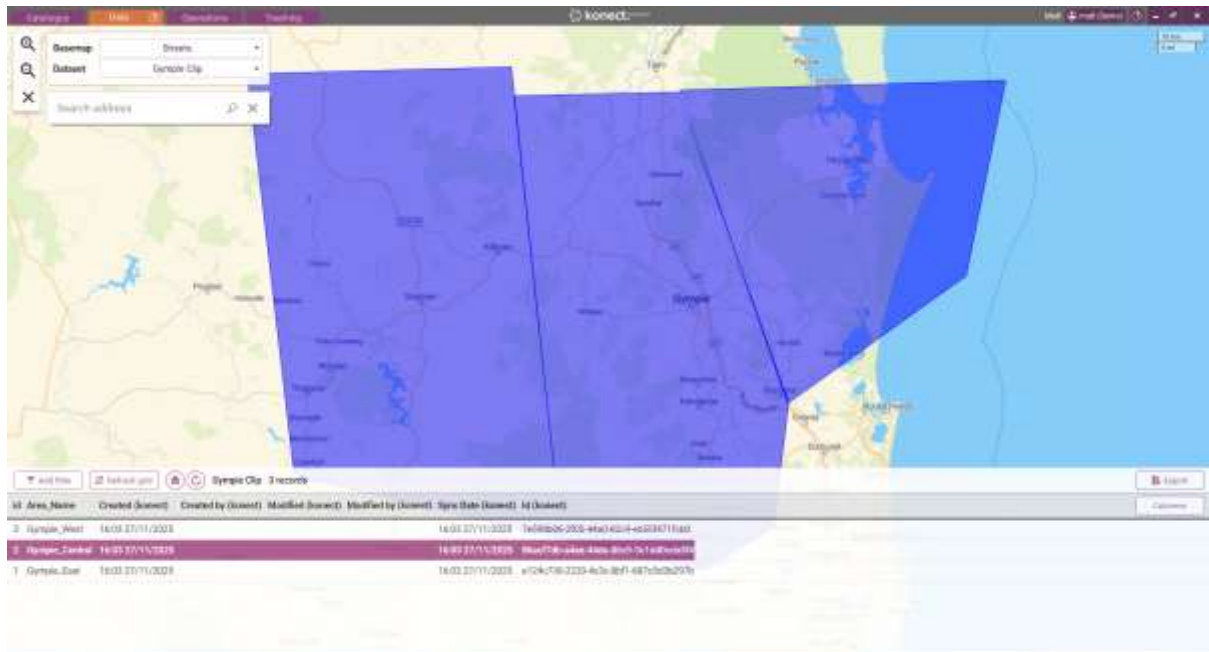
Konect Whitepaper: Konect QGIS Plugin Integration



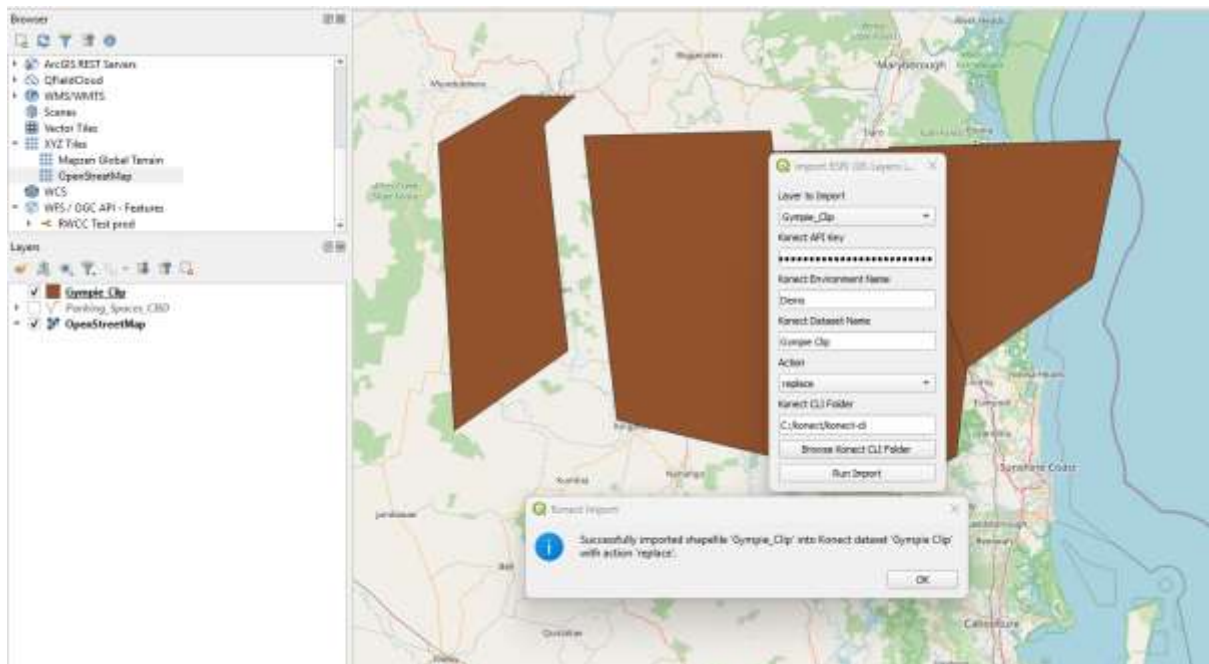
Import Data in Konect – publish shapefile or ESRI feature layer from QGIS to Konect



Konect Whitepaper: Konect QGIS Plugin Integration

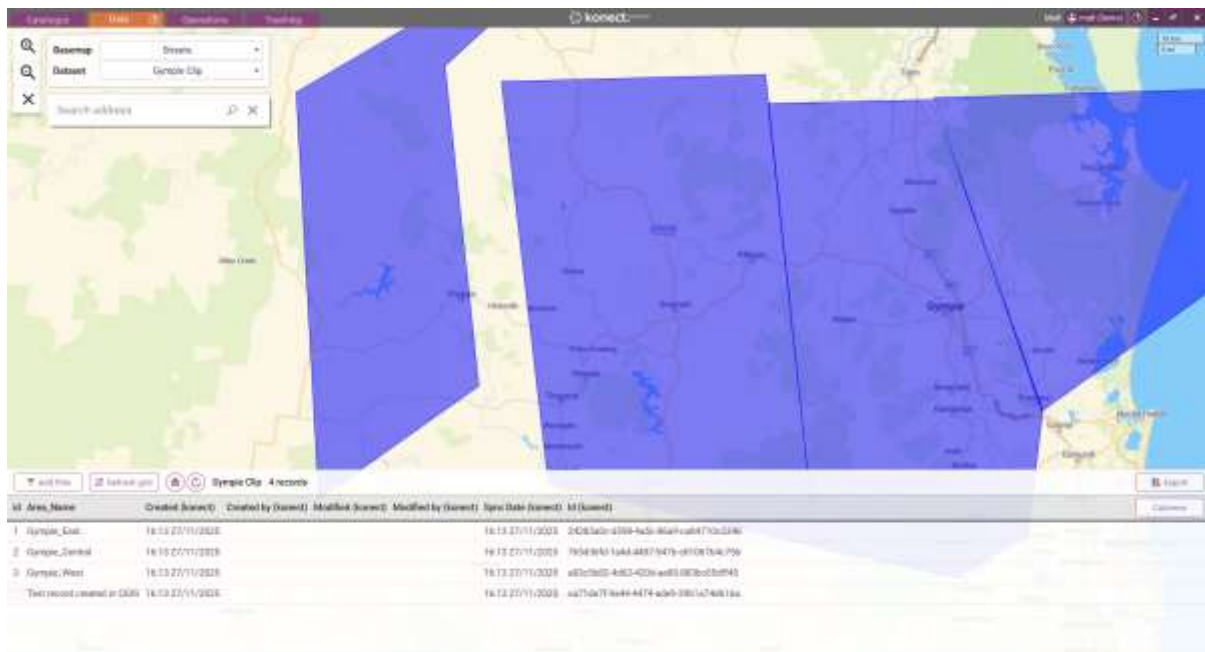


Test adding a feature and uploading

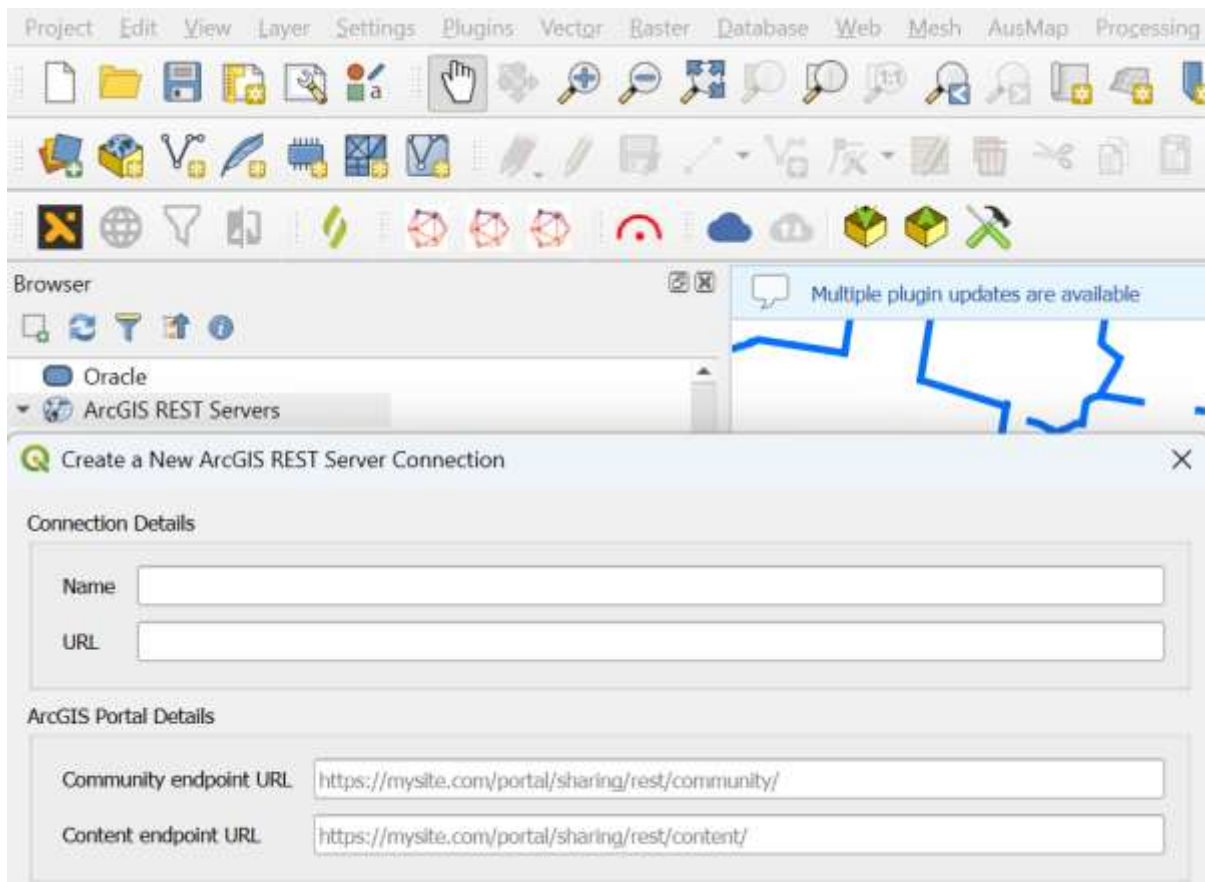


Refresh in Konect Manager – feature appears as below

Konect Whitepaper: Konect QGIS Plugin Integration



ESRI feature service connections created using the QGIS browser can also be uploaded to Konect (providing public access is enabled in ArcGIS enterprise or online)





Scripting Feature Layer Refresh

To automate the Download Data for Konect QGIS plugin, write a python script which silently runs QGIS python from the commandline. This will refresh the feature layer and logs the output as follows

```
2025-12-04 16:30:18,987 | INFO | ===== REFRESH PROCESS STARTED
=====

2025-12-04 16:30:18,987 | INFO | Project:
C:\Users\Path_to_QGIS_Project\Feature_layer_refresh.qgz

2025-12-04 16:30:20,180 | INFO | Loaded QGIS project successfully.

2025-12-04 16:30:20,180 | INFO | --- Refreshing dataset: 'BikePlan_OpenSpace' (layer 0) ---

2025-12-04 16:30:20,203 | INFO | REST service reachable.

2025-12-04 16:30:20,238 | INFO | Removed previous version from project.

2025-12-04 16:30:20,238 | INFO | Added updated layer to project.

2025-12-04 16:30:20,238 | INFO | --- Refreshing dataset: 'Bridge_Assets_2023' (layer 0) ---

2025-12-04 16:30:20,655 | INFO | REST service reachable.

2025-12-04 16:30:21,195 | INFO | Added updated layer to project.

2025-12-04 16:30:21,213 | INFO | Project saved successfully.

2025-12-04 16:30:21,329 | INFO | ===== REFRESH PROCESS COMPLETED
=====
```

Scripting feature layer refresh from QGIS to the Konect Manager

A separate python script can be developed within an organisation to;

- Refresh the ESRI feature service data within QGIS
- Replace and re – upload the GIS layer as a shapefile extract of the feature service layer to Konect

The Konect Manager will indicate a sync data for this the data as it is re – published to Konect from the open ESRI feature service data script

Download Data from Konect API

- No CLI tool required to be installed on a PC
- Option to download either the first 1000 features of a dataset from the API or all data from dataset



Download Data from Konect API [X]

Konect API Key
[.....] [Fetch Environments / Datasets](#)

Environment / Account
[Demo ▼]

Dataset
[Road Centrelines ▼]

Query (optional)
[(no query filter) ▼]

Download amount
[First 1000 features ▼]
[All features ▼]

Layer to refresh (optional)
[]

[Download / Load into QGIS](#)

Download Data from Konect API [X]

Konect API Key
[.....] [Fetch Environments / Datasets](#)

Environment / Account
[Demo ▼]

Dataset
[Road Centrelines ▼]

Query (optional)
[(no query filter) ▼]

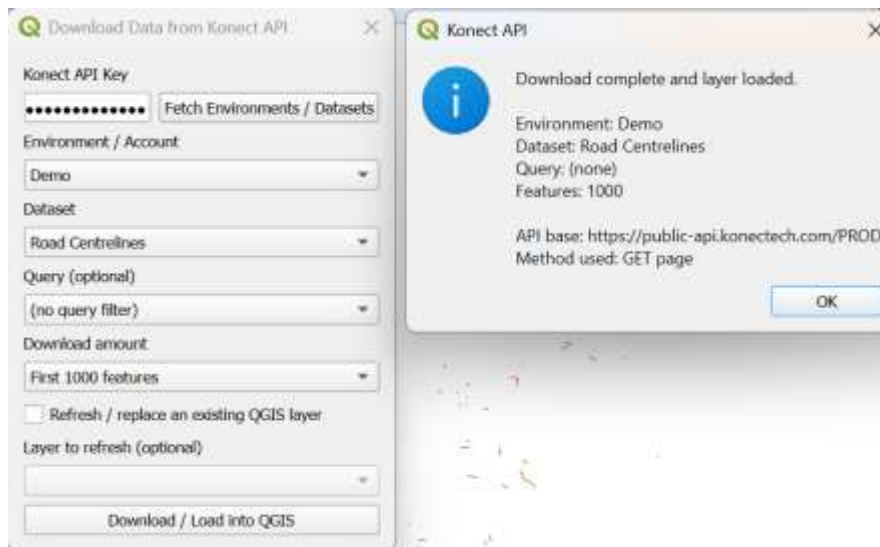
Download amount
[All features ▼]

☐ Refresh / replace an existing QGIS layer

Layer to refresh (optional)
[]

[Download / Load into QGIS](#)

Konect Whitepaper: Konect QGIS Plugin Integration



Geometries from the API display as below

