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Konect Integration from ArcGIS Pro

Version 1.3 – Updated 11 August 2026

Konect is able to integrate with ESRI ArcGIS via a custom geoprocessing tool which can be configured as a custom tool menu. This tool displays as follows within ArcGIS Pro



Dependencies include;

- Access to a Konect API key
- Installation of Konect CLI tool on a windows machine. Default installation path is C:\konect\konect-cli. Documentation around Konect CLI tool installation available [here](#)
- Knowledge on and privileges to deploy an ArcGIS python toolbox (pyt script) into ArcGIS Pro

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



Part 1 – Download GIS Data for Konect

This ArcGIS python toolbox (pyt) tool has been designed to offer on demand access to ESRI feature services which represents a widely popular source of open data and is crucial to many GIS workflows. The Download GIS Data for Konect tool allows ArcGIS Pro users in any organisation to

- Search a catalogue of openly accessible ESRI feature service data from major local government jurisdictions around Australia. As the Konect Manager does not offer this option, this tool will speed up data load for Konect users
- Enter a feature service URL from an organisation not listed in the tool to add a map (prior to publishing to Konect)
- Import a shapefile from an external source (prior to publishing to Konect)
- Download data from Konect API (no CLI tool installation required)

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

Part 2 – Import GIS Layers to Konect

This tool within ArcGIS Pro displays a user interface to run to load data into Konect, providing a GUI for a GIS user in an organisation to load data into Konect. It could also be used in ESRI model builder to build an ETL workflow for an organisation migrate a large amount of data to Konect.

This tool contains the following features

- *Select ESRI layers to import into Konect* – shapefiles can be loaded directly into the tool to publish to a Konect environment. An ESRI feature service loaded using part 1 of this tool can also be directly loaded from the map into a Konect environment
- *The ability to enter a Konect API key within an ESRI environment.* Once entered, the key is masked in the UI to ensure it is not easily shared with screenshares and screenshots
- *Select the Konect environment name to publish to*
- *View Current Datasets within the selected Konect environment*
- *View Current Queries against selected datasets within a Konect environment*
- *Enter a Konect dataset name to publish to Konect (this can be different from the layer name which displays in the GIS)*
- *Define an action from a dropdown list within the tool.* Either **import** a new dataset into Konect via the import shapefile method or **replace** an existing dataset
- *Define the location of the Konect CLI on a PC or server – this defaults to C:\konect\konect-cli on windows but can be modified by the end user*

Workflows available within the tool

- Publish ESRI feature service layers, File Geodatabase Feature Classes and Shapefile Feature Classes directly to Konect (define Action = new)
- Add new records in ESRI and publish to Konect (define Action = replace)
- Edit table structures and publish to Konect



- Open a download data from public facing ESRI feature services and convert to shapefile for later use within Konect
- Select a subset of data within ArcGIS Pro and publish the subset of the data to Konect (both for shapefiles and feature layers)
- Download data from Konect API (no CLI tool required)

NB: changes to table structures once the Import GIS Layers to Konect tool has run should be managed in Konect only.

It is the client responsibility to use other CLI functions with custom scripts for their environment as required

Part 3 – Export Data from Konect

The export 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, File Geodatabase, CSV, KML, MapInfo TAB, GeoPackage, and Konect Package (KPK). GIS-format exports are automatically added to the current ArcGIS Pro map.

This tool contains the following features – ability to define a Konect API key, auto select an environment name, dataset or query to export

Note: exports may be restricted based on file names requiring specific characters such as underscores. The export tool also works for queries, which would be uploaded as a separate dataset if published to Konect using the “Import GIS Layers to Konect” tool.

An optional “Export photo attachments” setting downloads photo and document attachments alongside the GIS export into their own sub-folders, with an option to strip the Konect-branded footer from exported photos. A separate output folder can optionally be specified for photo attachments.

Part 4 – Download Data from Konect API

- Retrieve data from the Konect API, download a specific dataset with either as either 1000 records (recommended for data preview) or all records in a dataset
- Refresh data from the Konect API within the ESRI GIS environment

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 an ArcGIS Pro map first. It contains the following features

- *Map Service picker* – automatically lists any Map Services already loaded in the current ArcGIS Pro project, or a Map Service URL can be entered manually
- *Load / refresh layer list* – queries the Map Service and lists every available layer for selection
- Select the Konect environment/account to import into, using the same API key used by the other tools in this toolbox
- Automatically matches each layer’s geometry type so the import completes correctly



- Automatically retries with the correct action (new or replace) if a dataset with the same name already exists in Konect

Part 6 – Konect Dataset Photo Report

This tool generates a report listing every record in a selected Konect dataset, along with how many photos are attached to it – 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 toolbox, and choose an output folder – the report file is named after the dataset automatically
- Optional “Also create ArcGIS table” setting produces a standalone non-spatial table alongside the report, added to the current map automatically
- The report includes record ID, Konect record ID, record name, photo count and the date/time the report was generated for each record, plus a summary of total records, records with at least one photo, and the overall photo count

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 GIS layer or table, so a dataset newly loaded from GIS can have its fields backed by a proper Konect List rather than free text. The workflow is

- Select the input layer or table and the field whose unique values should become the list’s items, then give the list a name and, optionally, a default value
- Optionally create a two-level cascading list (e.g. Category → Sub-Category) in the same step, or attach the new list as a child of an already-existing Konect list
- Choose whether to create a new list or update an existing one; field values are automatically de-duplicated and sorted alphabetically before being sent to Konect, and any validation adjustments made by Konect are reported back in the tool messages

Part 8 – Export Layer Symbols to SVG

This tool exports the symbology (point markers, styles and colours) currently applied to a feature layer in ArcGIS Pro into a single SVG icon font file, ready to be merged into the Konect symbol/icon library. It contains the following features

- Supports standard vector point markers, most raster picture markers (auto-converted where possible), and simple stroke-based marker graphics
- Choose the input layer and an output folder, with optional settings for a custom font name and starting character code
- Certain advanced ArcGIS symbol types (e.g. character markers, embedded picture markers, rotated/offset markers, gradient or hatch fills) are not currently supported; these are reported as informational notes in the tool messages rather than causing the run to fail



Part 9 – Export Layer from Konect with Symbol Legend Classification

This tool downloads a dataset from the Konect API – using the same download logic as the Download Data from Konect API tool – and, in a single step, classifies the resulting layer into an ArcGIS Pro Unique Values legend keyed on a Style Column chosen by the user. This is the ArcGIS-side equivalent of 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 applies ArcGIS Pro's own default Unique Values classification (one legend category per unique value, auto-coloured from the active colour scheme), so the layer always renders with no missing glyphs or fonts, arriving with a ready-made legend to style from.

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 this toolbox, choosing either the first 1000 features or all features
- *Style Column* – select the field on the downloaded layer to symbolise by; the tool reads the sample values from Konect to populate this list
- Automatically classifies the downloaded layer into an ArcGIS Pro Unique Values renderer on the selected field, with one legend category created per unique value
- Reports the number of categories created, and warns in the tool messages if the chosen Style Column cannot be matched on the downloaded data

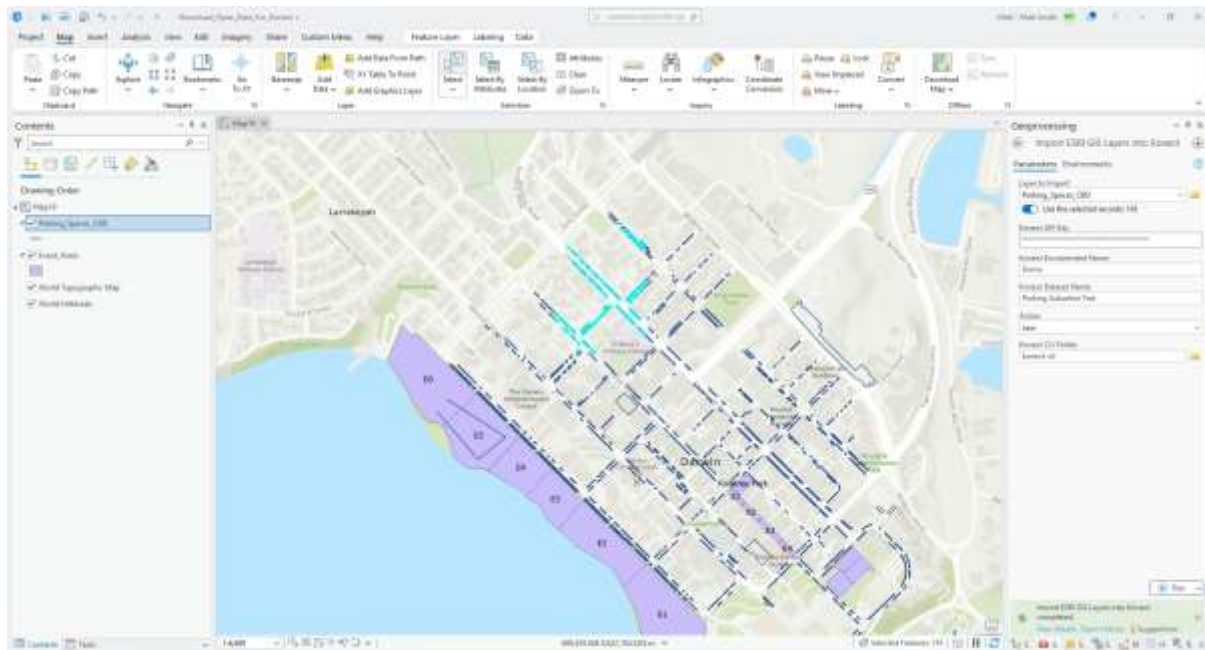
Note: because Konect's per-category symbol and colour assignments (Konect Manager > Datasets > Map Styles) are not available through the Konect API, the legend uses ArcGIS Pro's default category colours as a starting point. After the tool runs, open the Contents pane, right-click the layer > Symbology, and assign each category's symbol using the ArcGIS Pro style galleries.

Tool screenshots

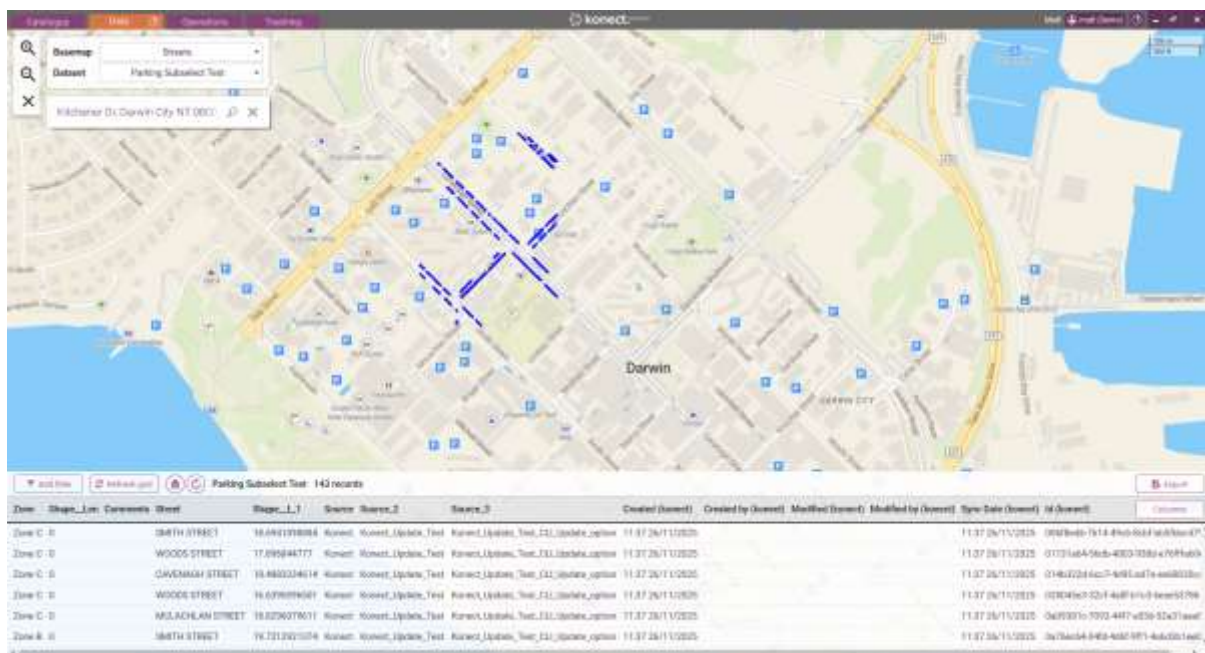
This section outlines workflows which can be undertaken between ArcGIS and Konect

Selecting and publishing of data (subset or entire dataset) within ESRI to Konect

Konect Whitepaper: Konect Integration from ArcGIS Pro

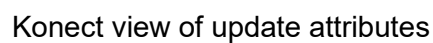
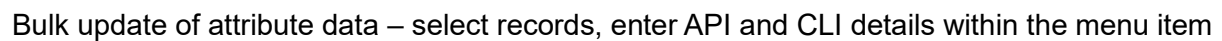


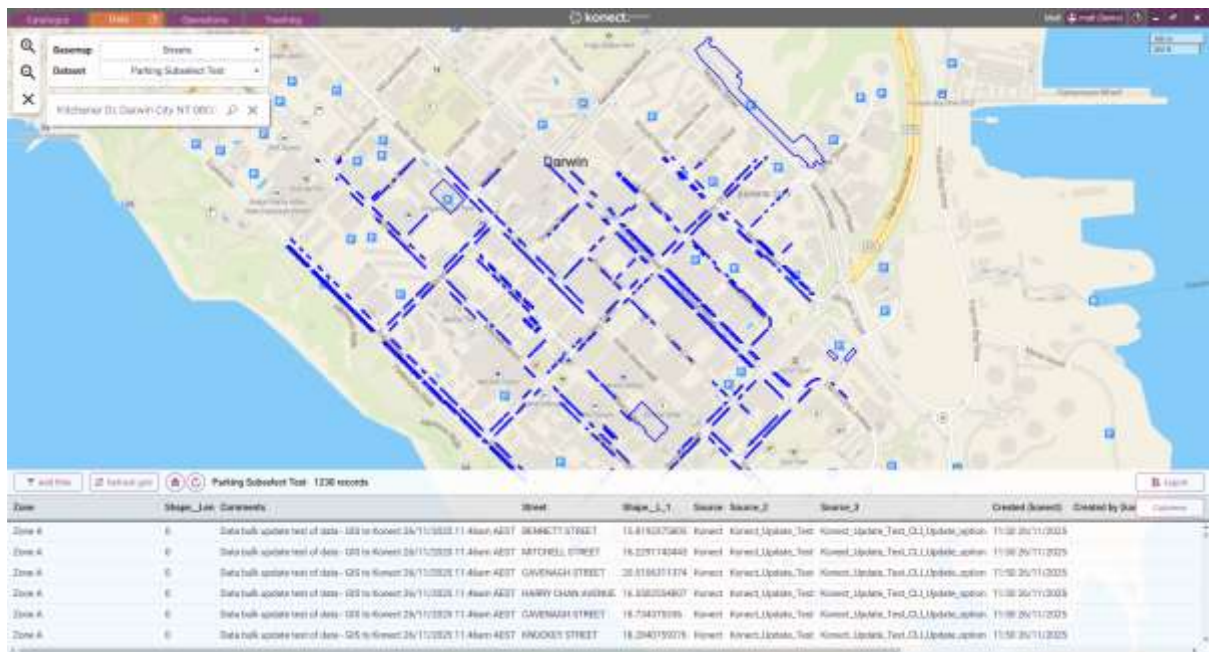
Konect view of published data – automatically added to the Konect once geoprocessing tool is run



The replace option can be used to refresh the subset of data within Konect

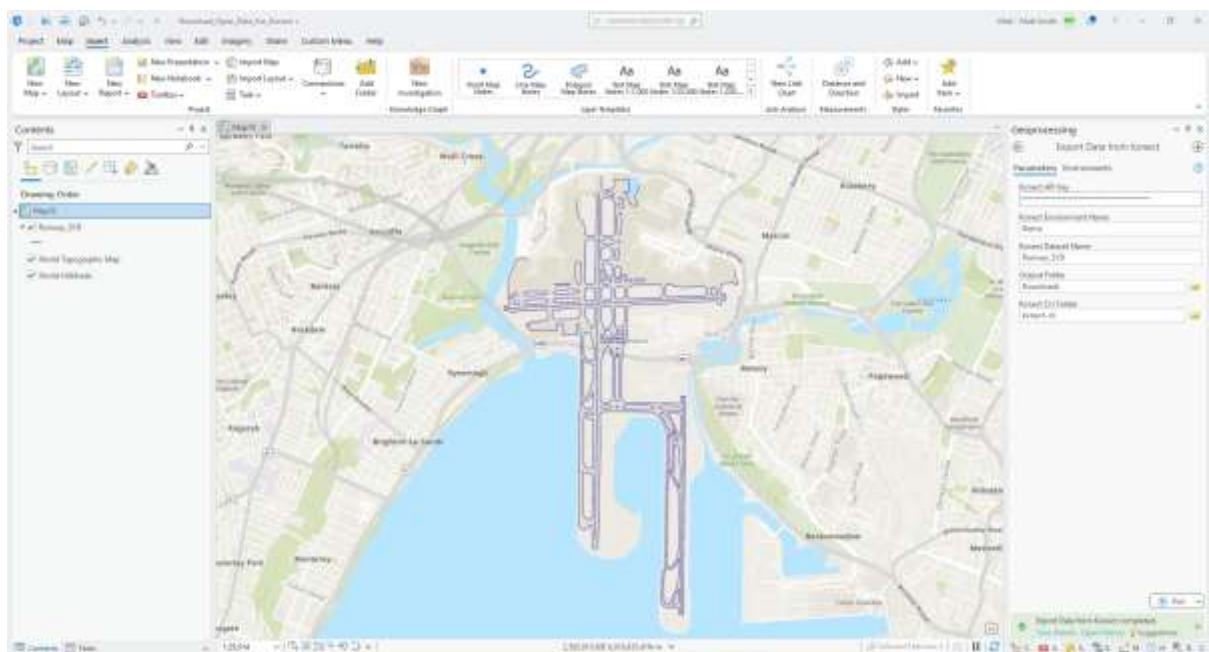
konekt.
PEOPLE. DATA. PLACES.





The export data from Konect option allows for a Konect dataset to be exported.

In this example, a subset layer published using the tool can be re – exported for attribute and/or feature updates



Download data from Konect API



Geoprocessing ▼ 🔍 ✕

⬅️ Download Data from Konect API ➕

Parameters Environments ?

Konect API Key

Konect Base URL
<https://public-api.konectech.com/PROD>

☐ Refresh lists from Konect

Environment / Account
Demo_WA_Open_Data ▼

Dataset
Footpaths View ▼

i Download amount
All features ▼
First 1000 features
All features

▶ Run ▼