knack

Power BI API guide

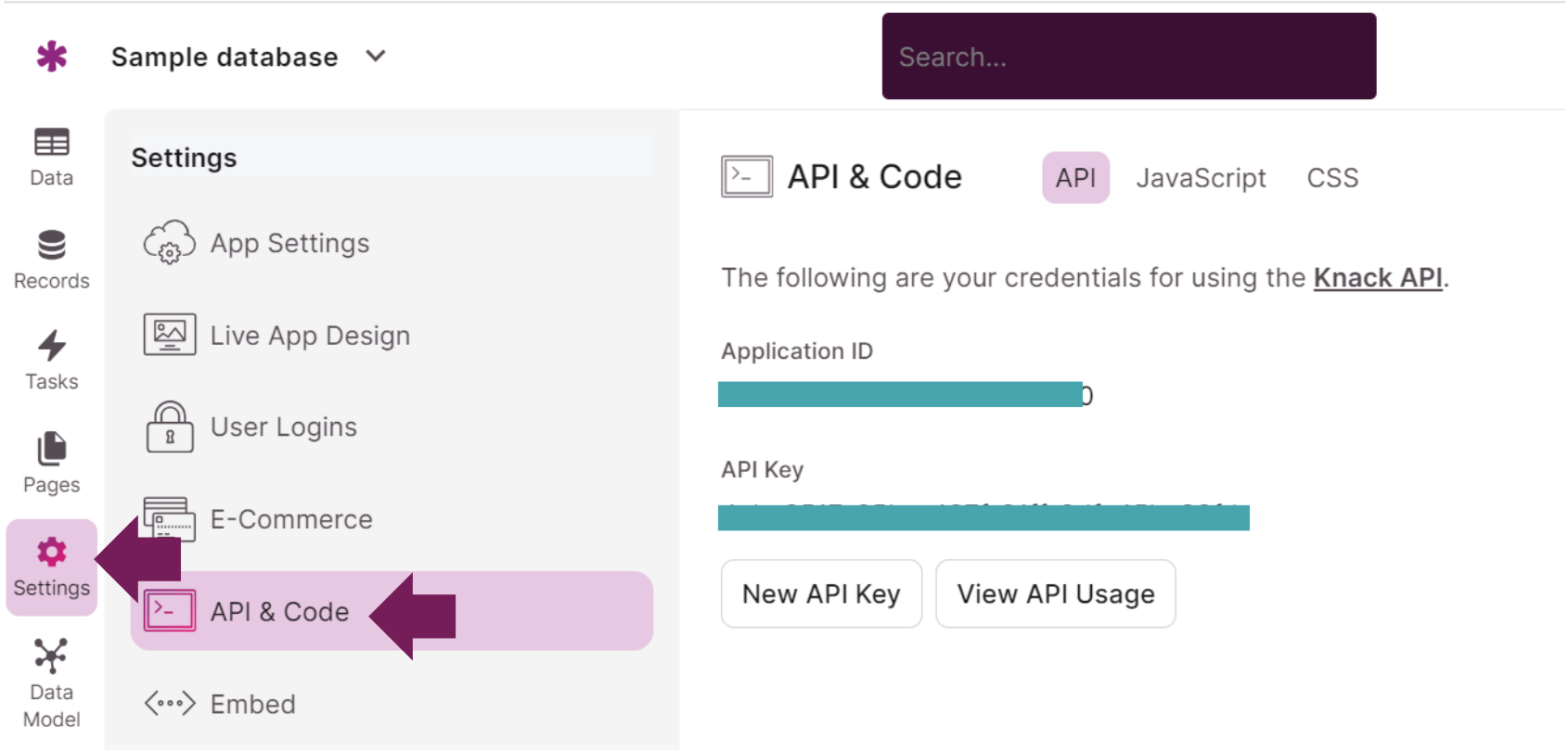
HOW TO CONNECT KNACK TO POWERBI FOR REPORTING

Note before starting

These instructions are for the Knack API only. Knack is a no-code/low-code database tool which allows you to quickly and easily build databases without extensive technical knowledge.

All instructions are for the Power BI desktop application which you will need installed. You do not require a Pro licence to set up your connection and create your report but you will probably need it when it comes to sharing and publishing your reports.

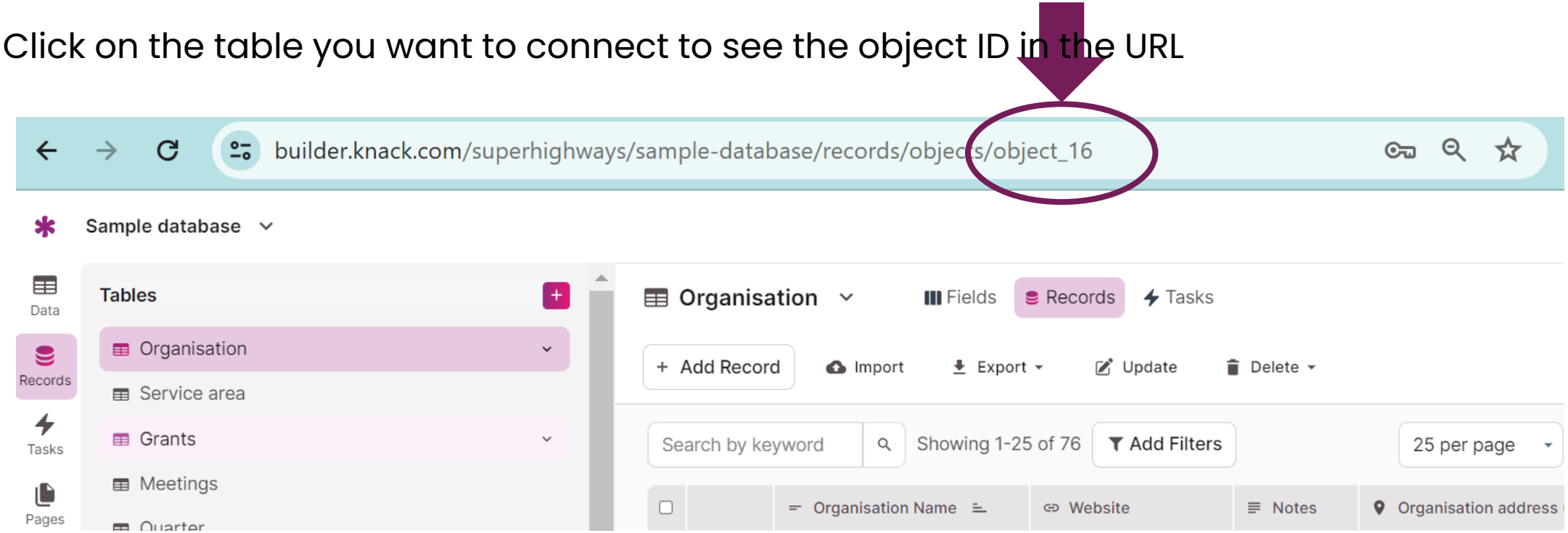
Find your Knack database's application ID and API key



1. Open the Knack database you want to connect
2. Click on Settings
3. Select API and Code

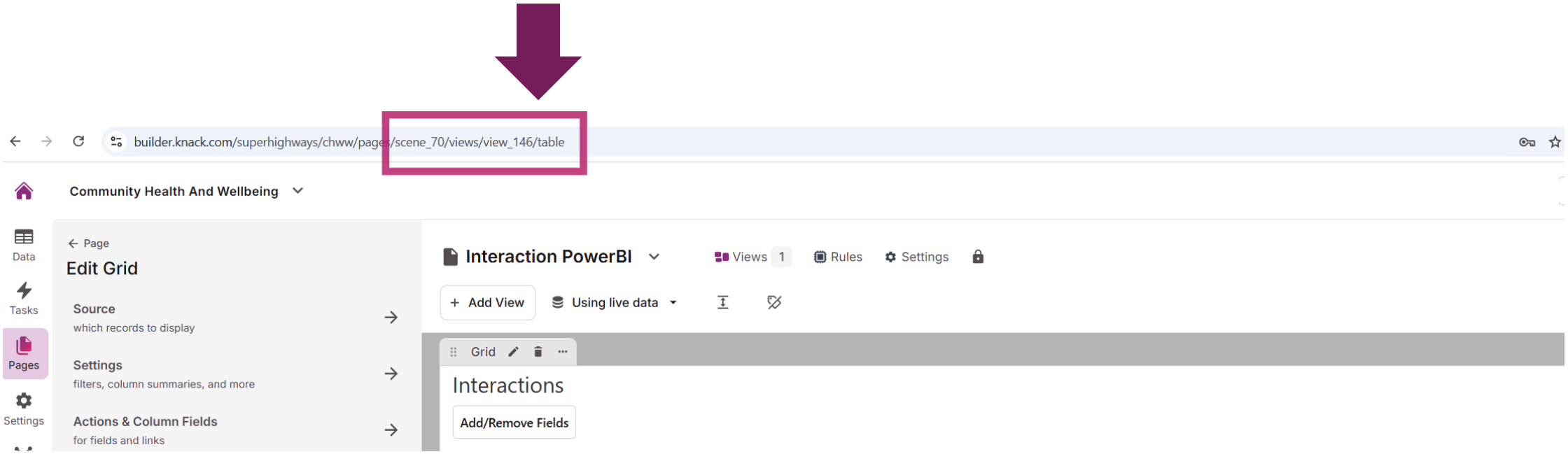
Find the Knack object ID for the table you want to connect

Click on the table you want to connect to see the object ID in the URL



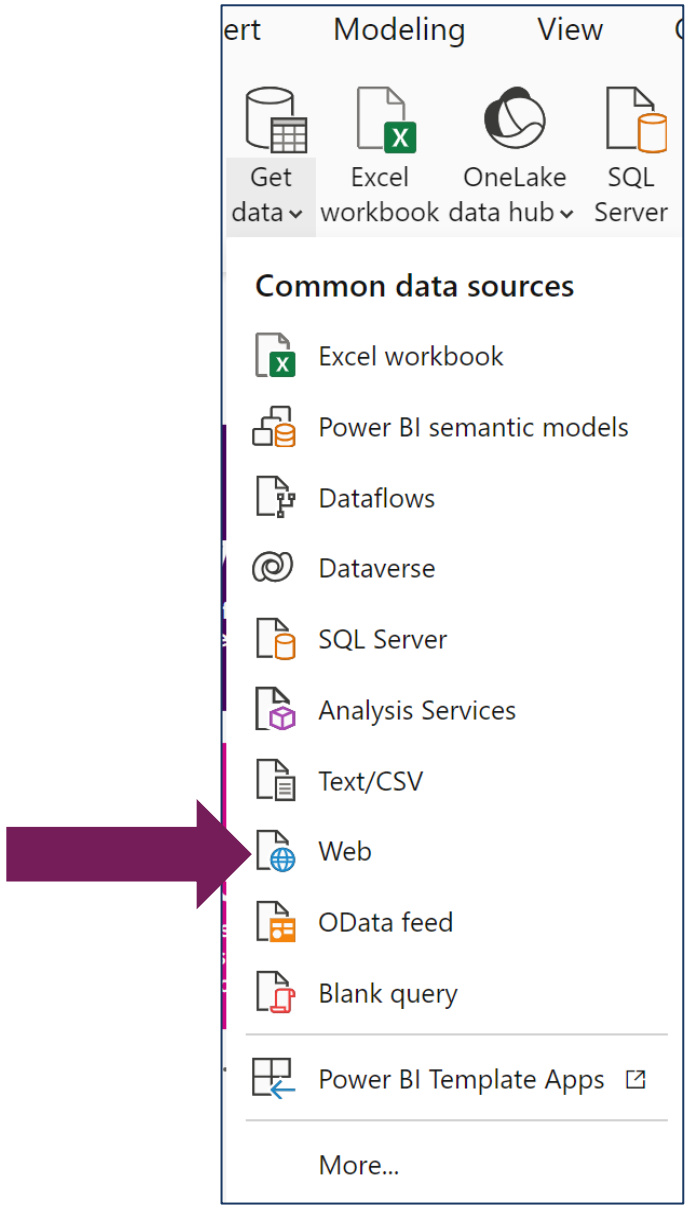
Alternative method - Using Views:
Find the Knack scene and view ID for the table you want to connect

Click on the table you want to connect to see the scene and view ID in the URL



Power BI Get Data

1. Open the Power BI desktop application and create a new report
2. In the report, select the option **Web** (you might need to search for it if it doesn't appear at the top of the list)



Enter URL and HTTP request header parameters

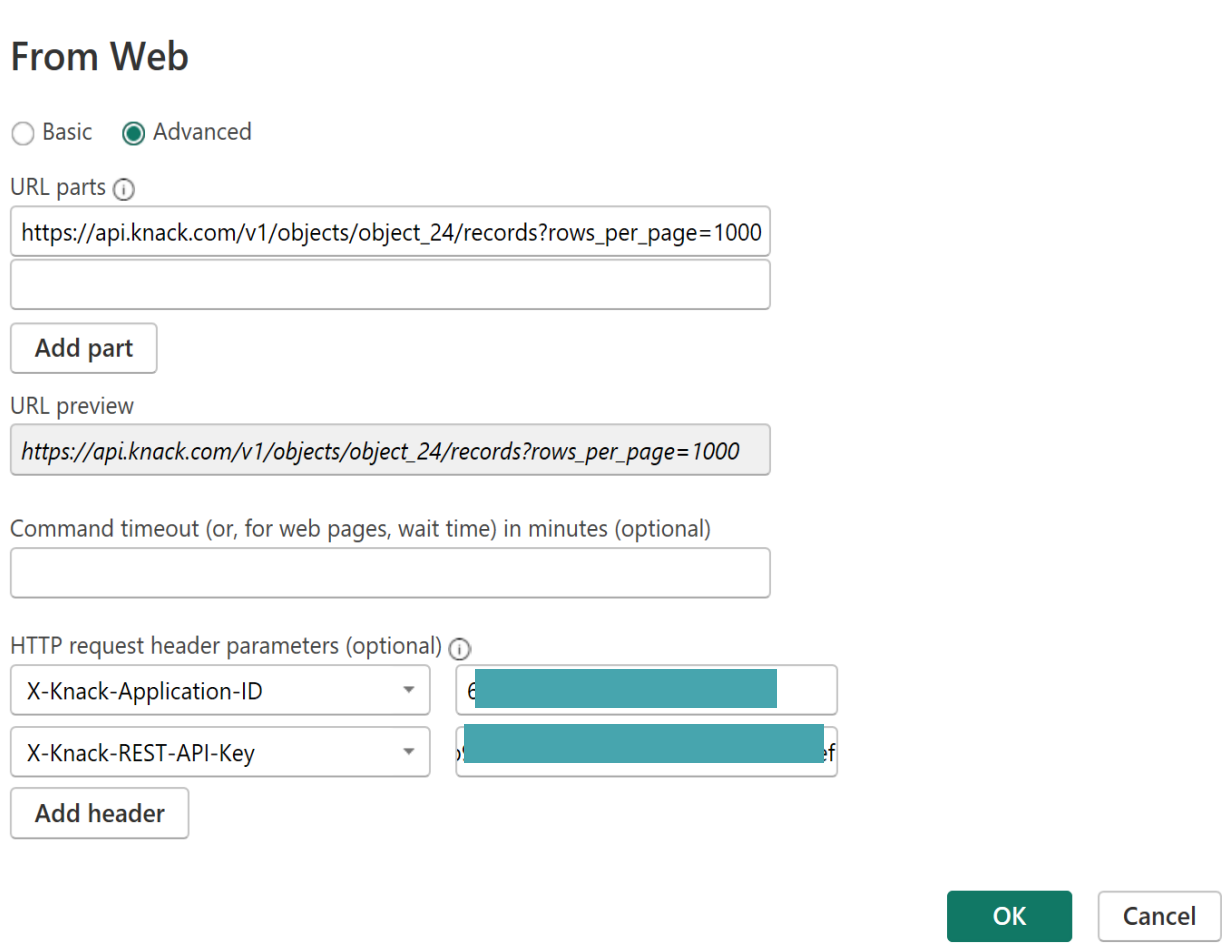
1. Select Advanced
2. Add URL Parts

   https://api.knack.com/v1/objects/object_1/records?rows_per_page=1000

   Where the it says object_1 you will need to add the number of the object you wish to connect to
3. Add HTTP request header parameters

   X-Knack-Application-ID

   X-Knack-REST-API-Key



Alternative method - Using Views:
Enter URL and HTTP request header parameters

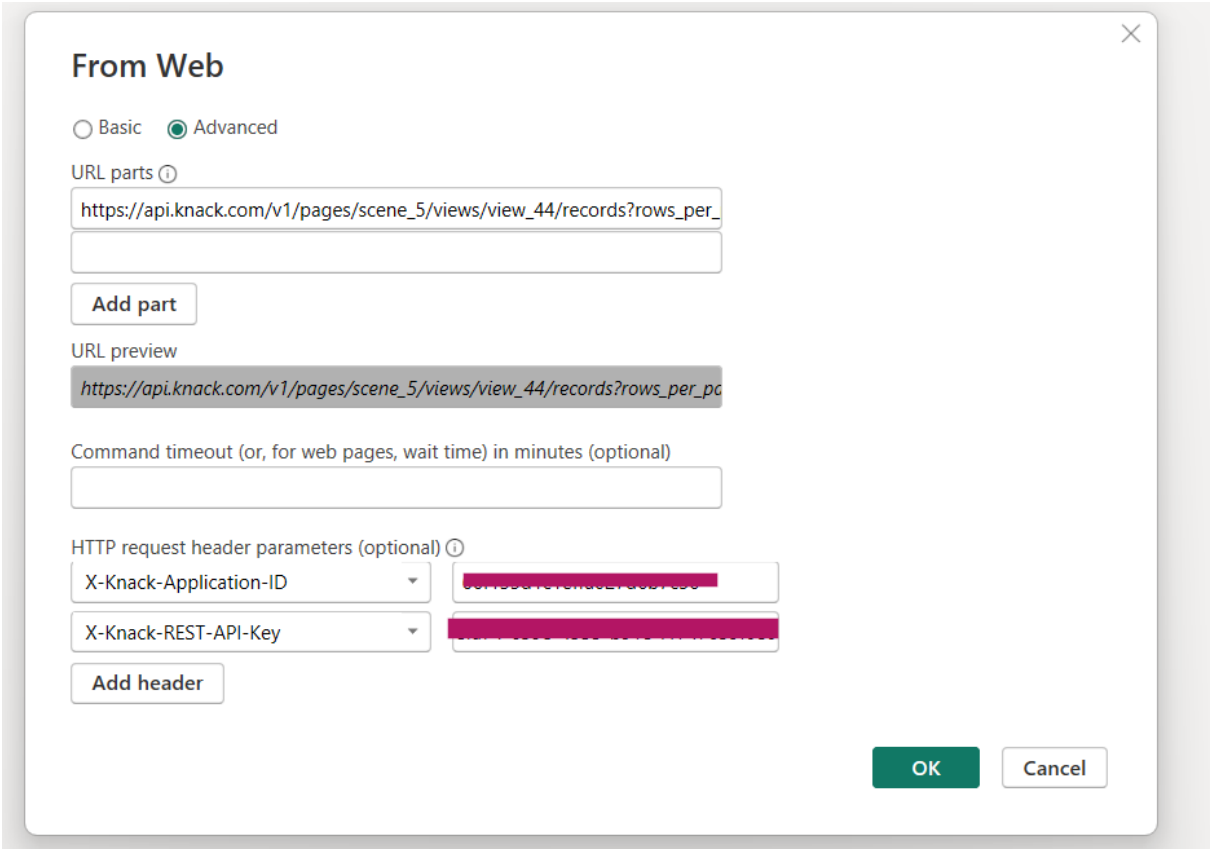
1. Select Advanced
2. Add URL Parts

   https://api.knack.com/v1/pages/scene_5/views/view_44/records?rows_per_page=1000

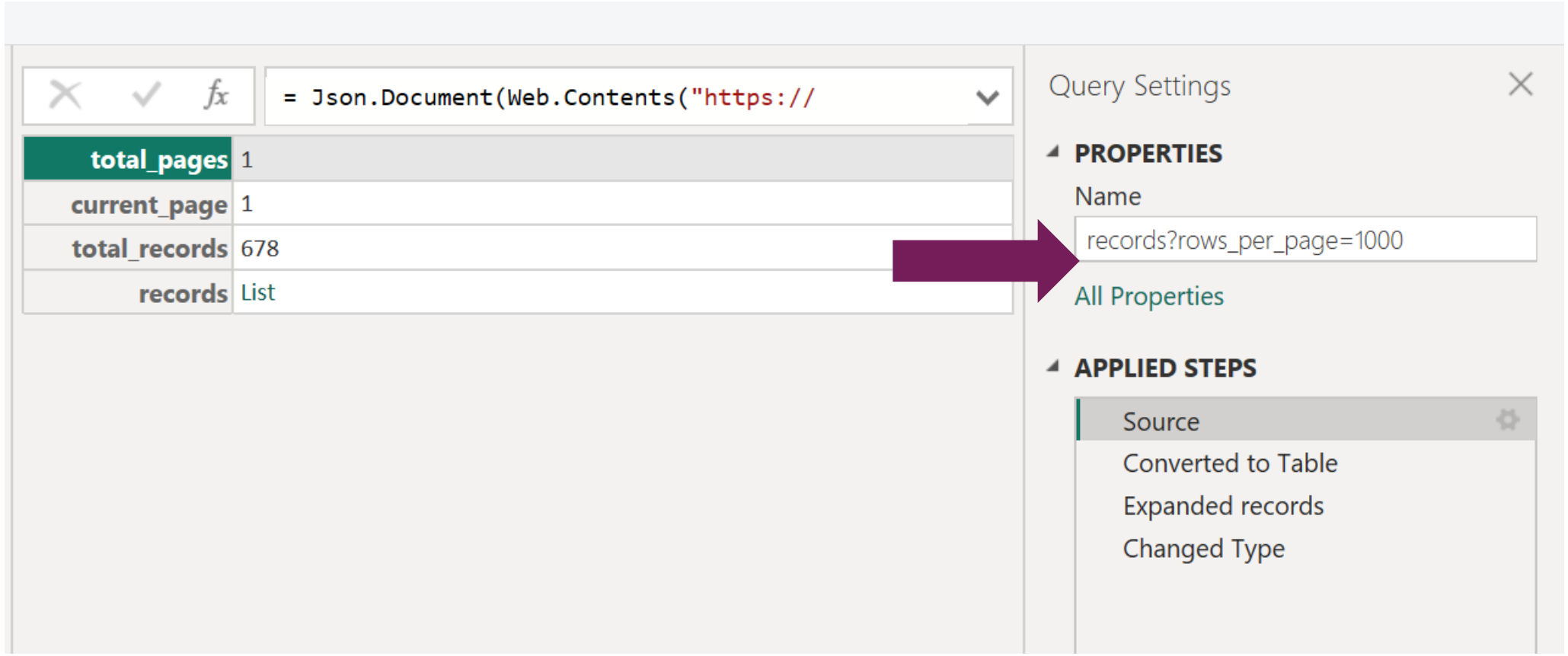
   Where the it says scene_5 and view_44 you will need to replace the scene and view you wish to connect to
3. Add HTTP request header parameters

   X-Knack-Application-ID

   X-Knack-REST-API-Key

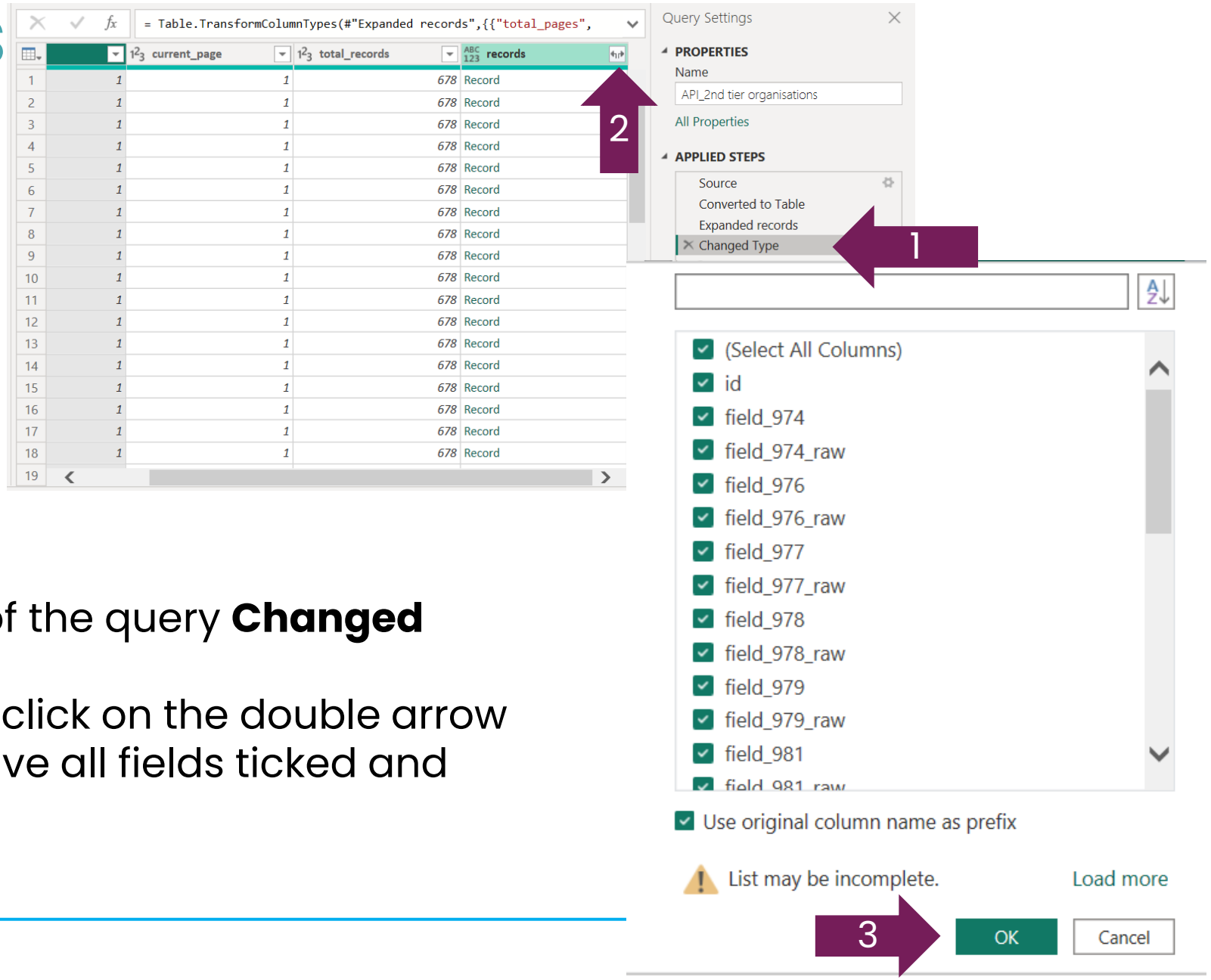


Rename your query



For example: If you are querying an organisation table you might want to call your query API_Organisations

Expand records



1. Click on the final step of the query **Changed Type**
2. In the column **Records** click on the double arrow
3. In the dialogue box, leave all fields ticked and click on **OK**

Managing the data after connection

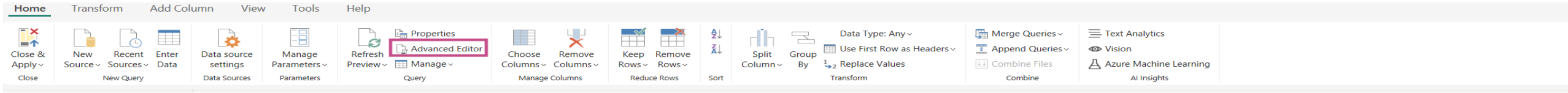
- ✓Fields will come across with their field IDs rather than their field (column) names so will need to be renamed in Power BI
- ✓Number fields might lose their data type so might need to be manually change to a number format
- ✓Comma separators will need to be manually added to number fields
- ✓Relationships will need to be set up between tables to recreate your data model in Knack

Security considerations

If you want to share your PowerBI file externally you will need to investigate your security settings in more detail to ensure your data and your database are properly protected. You will need to:

- ✓Ensure your API details are not visible
- ✓Ensure underlying sensitive data is not visible

Querying over 1000 records



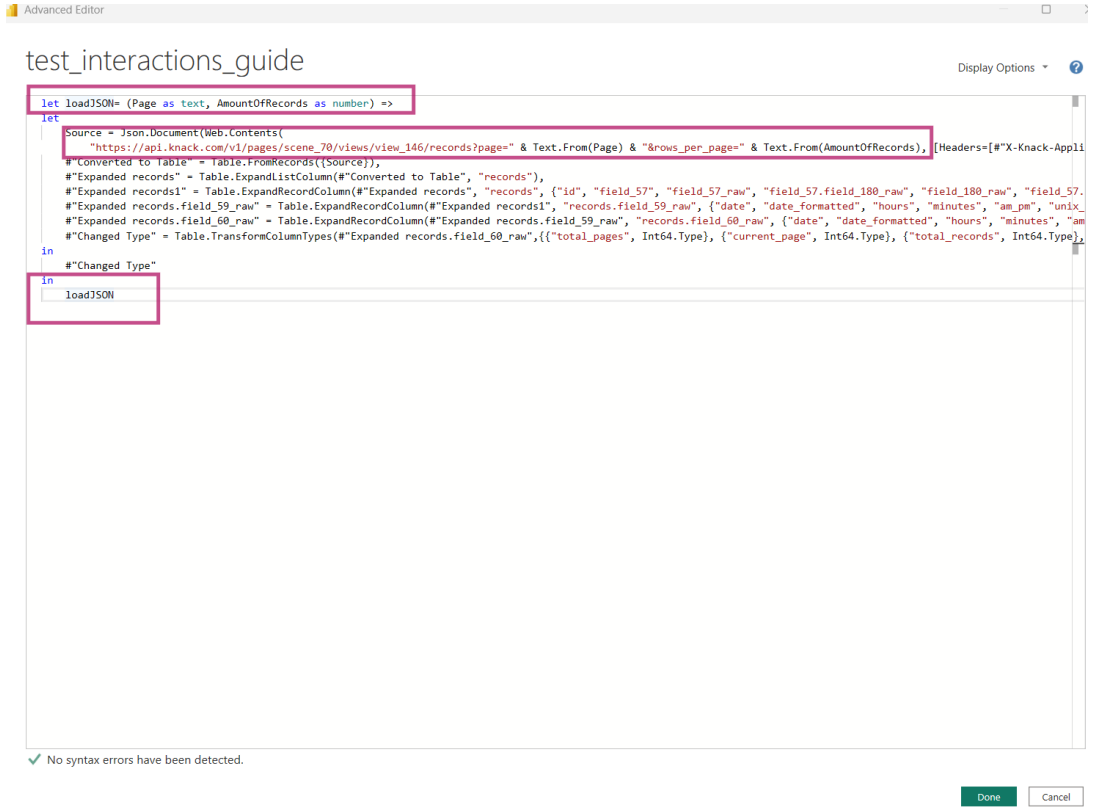
To handle more than 1000 records from the Knack API in Power BI, you need to convert your query into a function that supports pagination.

Begin by wrapping your query in a function definition. At the very top of your query in the Advanced Editor, insert the line:
let loadJSON = (Page as text, AmountOfRecords as number) =>.

Next, modify the Web.Contents call to dynamically accept page numbers and record limits. Replace your existing static URL with the following dynamic version:
Web.Contents("https://api.knack.com/v1/pages/**scene_70**/views/**view_146**/records?page=" and Text.From(Page) and "androws_per_page=" and Text.From(AmountOfRecords),

This change allows the function to fetch different pages of data based on the parameters passed. Finally, close the function by adding in loadJSON at the end of your query. This setup enables you to call the function repeatedly with different page numbers to retrieve all records in batches of up to 1000, effectively paginating through the entire dataset.

in loadJSON



Looping Through Pages to Retrieve All Knack Records

✓ **Create a New Blank Query**

This query will generate a list of page numbers to loop through.

✓ **Generate Page Numbers**

In the formula bar, enter: = {1..10}

✓ This creates a list of 10 pages (for up to 10,000 records if each page returns 1,000).

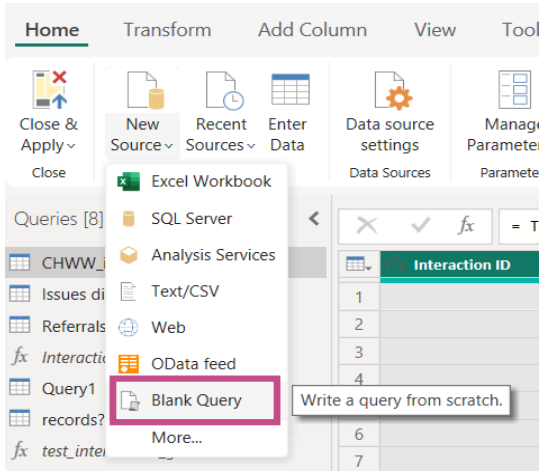
✓ **Convert to Table**

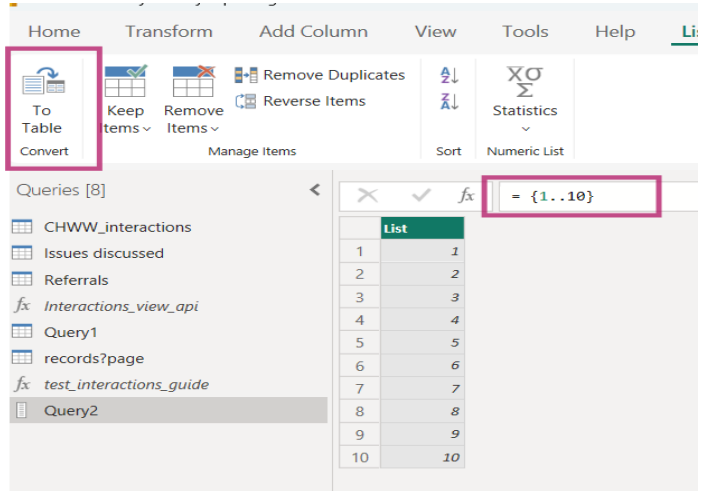
Click **“To Table”** to transform the list into a table format.

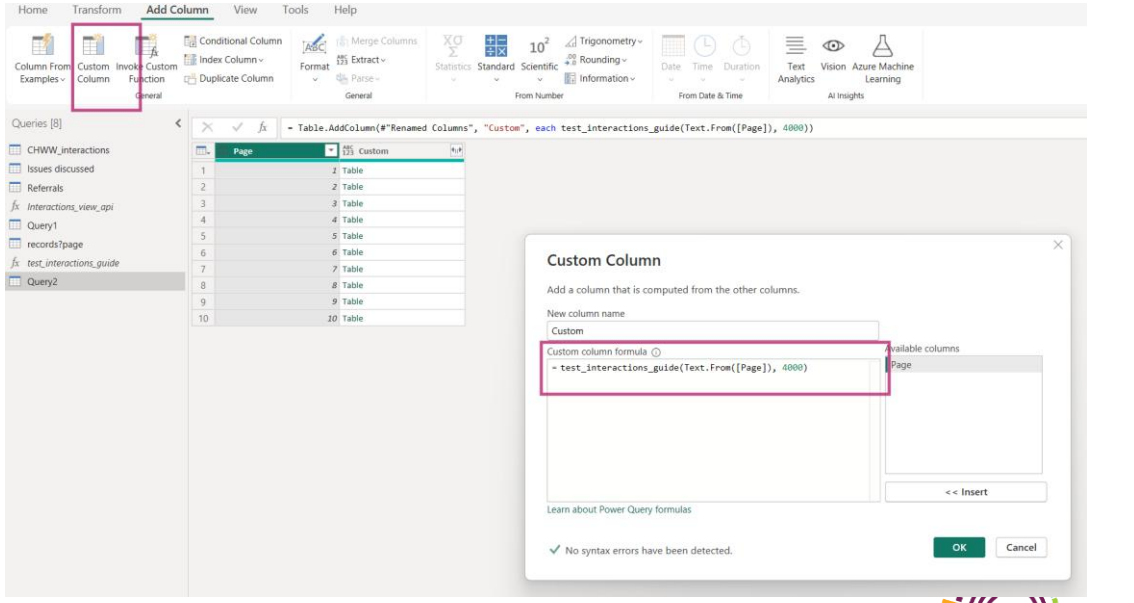
✓ **Add a Custom Column to Call the Function**

Go to **Add Column > Custom Column**.

Replace “Page” with your column name and test_interactions_guide with your function name, use this formula: test_interactions_guide(Text.From([Page]), 4000)

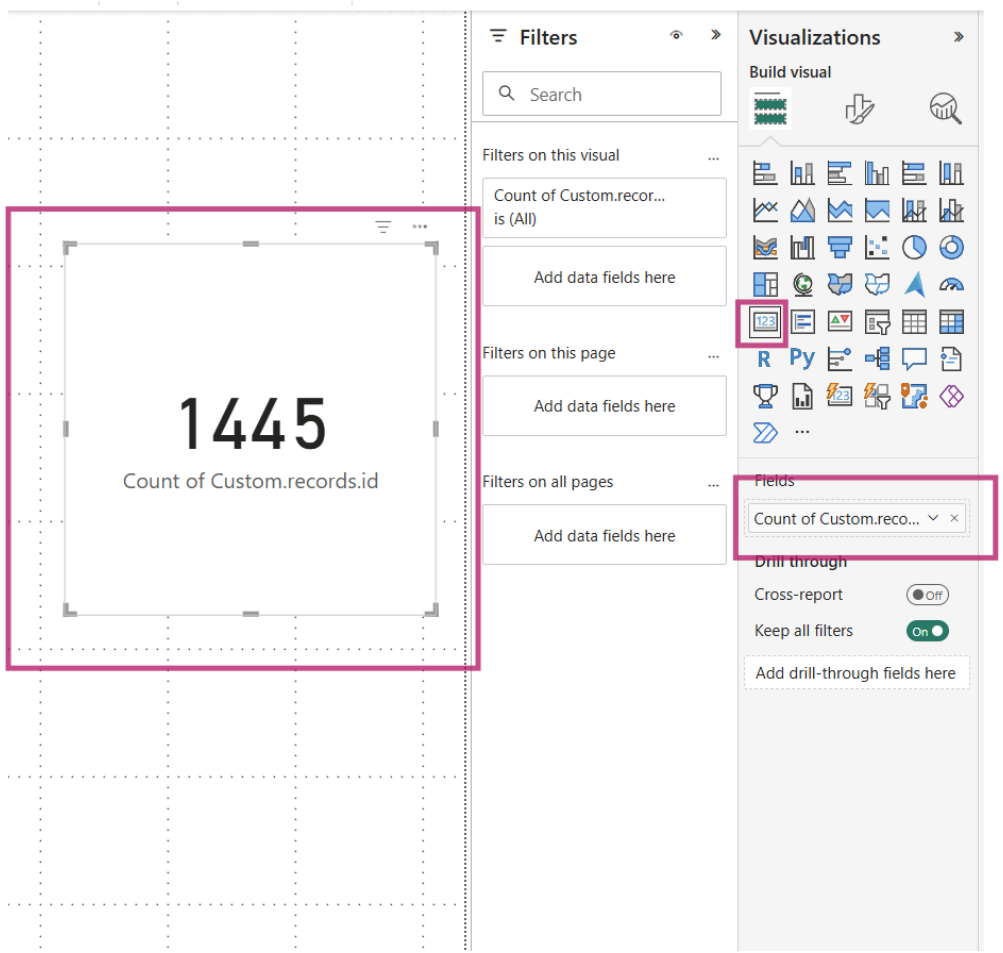






Verify Record numbers

- ✓ Now verify that you have retrieved all records but putting a simple card visualisation



Other resources

https://mgr.medium.com/querying-a-knack-object-from-excel-8f2b7163d81b
https://superhighways.org.uk/training-advice-and-technical/training/
https://datawise.london/resources/power-bi-resources/
https://docs.knack.com/docs/using-the-api