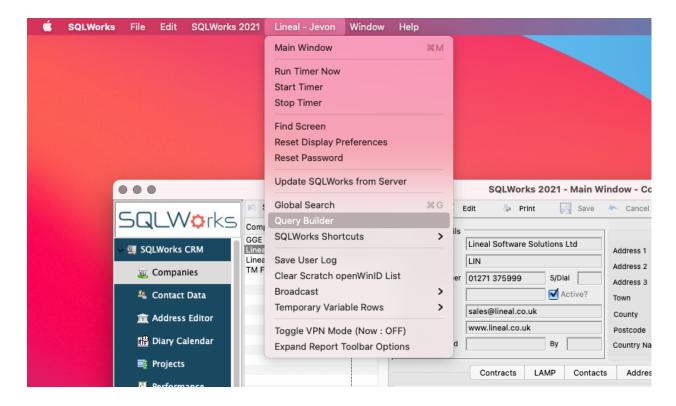
Introduction to Query Builder

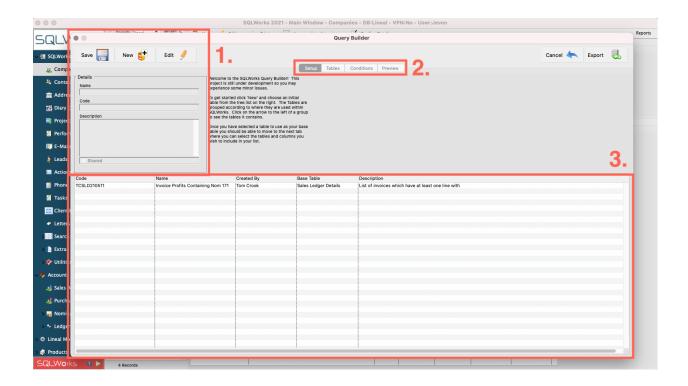


Query builder is a powerful reporting tool that advanced users can use to interrogate the SQLWorks database, cross-reference data in new ways, and get insight from business analytics.

To launch Query builder, click your company name from the top toolbar, and choose 'Query Builder.'

By default, query builder only allows users to query those parts of SQLWorks allowed by their security permissions.

Query Builder has four main tabs: 'Setup', 'Tables', 'Conditions', 'Preview'.



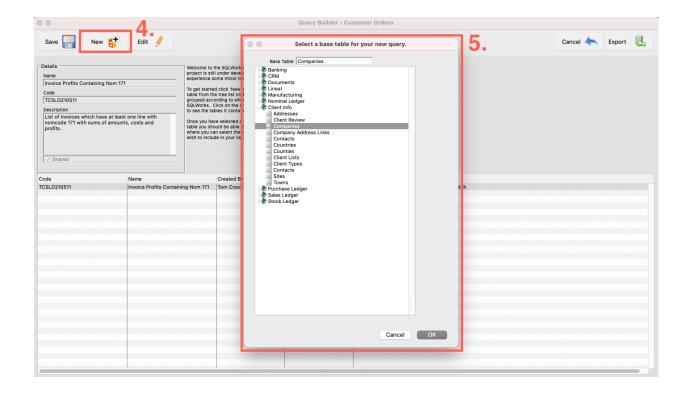
Setup

By default the Query Builder opens the 'Setup' tab.

This tab displays the controls for creating/editing a query (1.), four tabs to build and preview each query (2.) and existing saved queries that are visible to the user (3.)

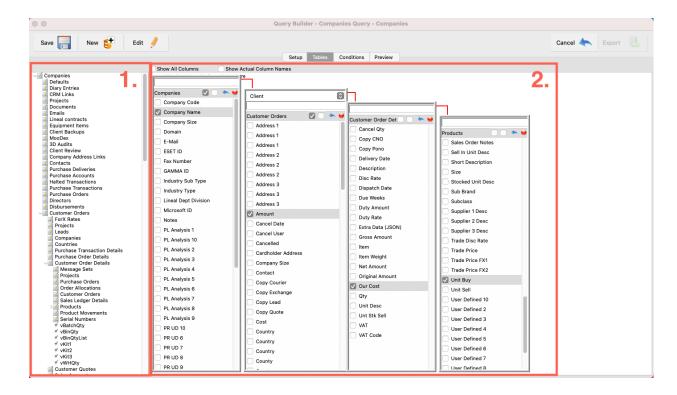
To create a new query, click the 'New' button at the top of the screen (4.) You will be prompted to choose the base table of your query – this is the data the overall report will be based upon, via which other data will be sorted (5.)

You will also be asked to give your new custom query a Name before saving. Each query is automatically assigned a reference code and can be optionally given a description. Existing saved queries are available to view or edit in the list below.



Each query will be locked to the user who created it by default, but queries can be made accessible to others using the 'Shared' tickbox.

When you have created your query, move on to the 'Tables' tab.



Tables

The tables tab allows the user to reference other data from the base layer of the query.

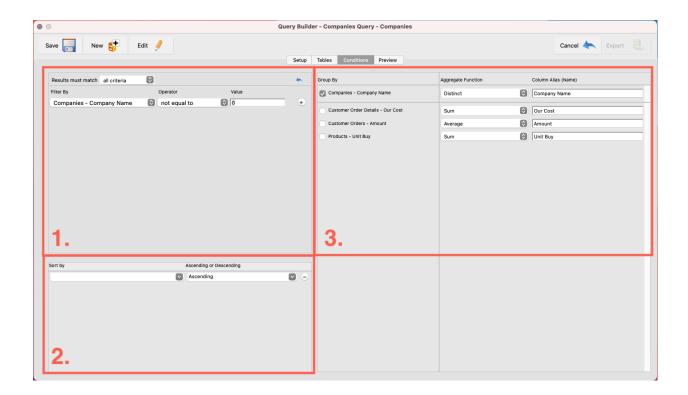
On the left hand side of the database tables that relate to the base layer (1.), with dropdowns allowing the user to drill down the sub-tables. To reference a table, simply drag it into the pane on the right hand side of the screen. Each table layer will be shown as descending from the previous table. (2.)

Within each table are data column headings identified by name. To reference this data in the custom query, tick the checkbox(es) next to the name. You must reference at least one data column heading at each layer you wish to appear in the final query.

To remove a query, click the red button on the table layer you wish to remove. To remove a layer when editing a query, you must first remove each of its descending layers first.

You can toggle between 'Actual' column names and their database table designation using the 'Show Actual Column Names' checkbox at the top.

When you have the correct tables referenced for your query, you are ready to move on to the 'Conditions' tab.



Conditions

The Conditions tab allows you to structure the output of the data being referenced in your custom query – including filter, sort order and 'group by' options.

Filter By (1.) allows you to specify whether certain fields include or exclude types of data – with normal SQLWorks Custom Search fields available (as under 'Find' buttons) which can be compared against search terms - including 'begins with', 'contains' & 'does not contain', 'is', 'is not equal to', 'greater than or equal to', 'less than or equal to', 'null' and 'not null.'

This can be used to build reports that use a subset of the available data, to be more specific.

Sort By (2.) allows you to reorder data in the query based on a specific table field, in either ascending or descending order.

This is helpful in cases where lists need to begin or end with priority data.

Group By (3.) allows you to toggle which data columns are included in the output of the query, and how they are aggregated:

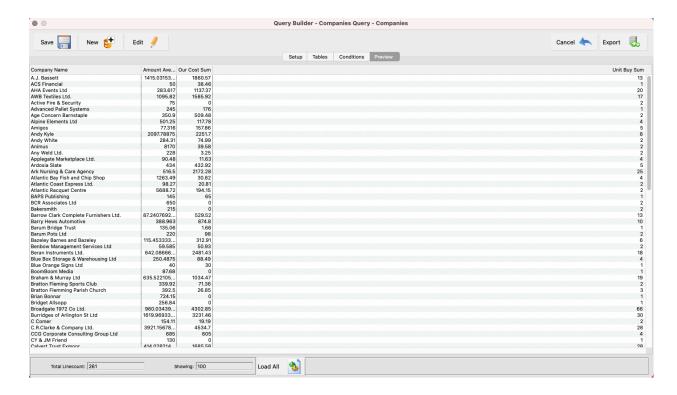
- Distinct Summarised / one per value available
- Count A count of the quantity of values available
- Concatenate A comma-separated string of available values
- Maximum Highest value available displayed
- Minimum Lowest value available displayed
- Sum Total value available displayed
- Average Mean average of values displayed

Note that to generate a working preview, at least one table (normally your query's base table' will need to be ticked and set as 'Distinct'.

You can also give each column a new 'alias' by typing into the 'Column Alias (Name)' field to temporarily rename it in the output results of the query.

This section of Query Builder is the most powerful, because it allows the user to assemble or subdivide the existing data in new ways that do not currently exist among the extensive set of pre-saved SQLWorks reports – to identify patterns, compare and contrast relative data, or summarise from a new perspective.

When ready, proceed to the 'Preview' Tab.



Preview

Swapping to the Preview tab, you can view the query results as specified on the previous tabs.

If the query results are not quite as intended, you can still swap back to the previous tabs to make edits.

By default the window loads a subset of data to prevent the user overloading system resources with more complex queries, but the user can load all available data using the 'Load All' button at the bottom of the screen.

When ready, press the export button to export the current results of the query to a file type of your choice. The download destination will offer you a number of different output types including .XLSX, .CSV, .PDF and more (including 'email to self' if your SQLWorks user has valid email account permissions.)

