VETtrak Data Insights
User Guide

for VETtrak version 4.4.8.2

Contents

Data Insights User Guide

What are Data Insights?

Data Insights is a new feature, introduced in version 4.4.7 of VETtrak. It is a new Manager in VETtrak that allows the user to:

1. Create, run and save custom queries on a number of entities such as clients and enrolments, using a drag-and-drop interface without the need to know any SQL code.

2. Choose which fields to retrieve, and arrange the selection of fields to suit requirements by choosing column order, sort order and aggregate functions.

3. Add criteria and filters to the query to define what records to retrieve. Multiple filters and criteria can be built up with AND and OR operations.

4. Run a number of actions for the list of records found, such as export to a number of formats, send email, send SMS, add to a group, run a report or update fields.

5. The "run a report" action may be used to "loop" through the list of records and send each person an individual built-in or mapped report, such as a certificate or statement, attached to a templated email. This functionality has not been previously available.

Additional actions and entities will be added over time in future updates of VETtrak.

Why is it called Data Insights?

This new feature allows you to look closely at your data by using the query filters and criteria to ask questions previously not available through the VETtrak interface. This provides a very powerful tool that can help you find patterns and anomalies in your data set. We think that the name "Data Insights" represents perfectly what the new feature does, that is to provide an insight into your data.

Why did we create this new feature?

This new feature was developed for several reasons:

1. To reduce the need for customers to request Custom Reports to extract data from their VETtrak database.

2. To allow customers to ask questions of their data so that they can select conditions and filters to get the best answer to their questions.

3. To give customers more options and flexibility to extract data and information from their databases.

4. To provide a mechanism for 'looping' through a selection of students and performing actions, such as sending certificates and statements.

What doesn't Data Insights do?

Data Insights are still in development, and will be for some time. Data Insights does not currently have all the information in a VETtrak database available. Currently the main entities that you can't yet use are:

- Financial information such as Invoices and Payments
- Tasks information
- Employer Enrolments information
- CRICOS information

There are many other entities not currently present in Data Insights. These will be added in future releases of VETtrak. In addition, the Data Insights Manager can't be used to perform actions that have complex rules such as:

- Record Results
- Record Attendance
- Record Awards
- Add Events, Attributes and Placements in bulk

This is not the design of the feature. Its main use is for data extraction, not data updating. There is the opportunity to perform some limited bulk actions such as updating selected fields.

What's the difference between Custom Reports and Data Insights?

Custom Reports and Data Insights do similar things, but use different routes to get there.

1. Custom Reports have the query and criteria built into the report, along with the formatting of the resultant output. The query can't be easily changed by the user without detailed SQL knowledge. This is why we create Custom Reports for you. With Data Insights you create the query and criteria and the output is always 'export friendly' not print friendly. If you require formatted output for your reports, you will still need to use a custom report.

2. Custom Reports are requested through a credit system on the VETtrak website. You need to provide a template of what it is to look like, as well as the rules for running the report. Each report request will cost a credit, whether it be from your annual allotment, or a purchased credit. Using Data Insights will replace the need to request some Custom Reports. The VETtrak Support team won't create Data Insights queries for you. The new feature is designed to be 'self-serve', that is it's a do-it-yourself system. You create the queries. You perform the actions.

Do I still need Custom Reports?

Because Data Insights doesn't produce formatted print-friendly exports, you will still need Custom Reports for things like:

- Certificates and Statements
- Invoices and Receipts
- Attendance Sheets
- Training Plans
- Enrolment Forms

What VETtrak products does Data Insights come with? Is there an additional cost?

Data Insights is available with all VETtrak products; Standard, Professional and Enterprise. There is no additional cost for this new feature.

How do I use it?

You will find the Data Insights menu under *Report > Data Insights* or on the Toolbar Icon or in the navigation panel on the left hand side of the VETtrak Dashboard. You'll be presented with the following Manager:
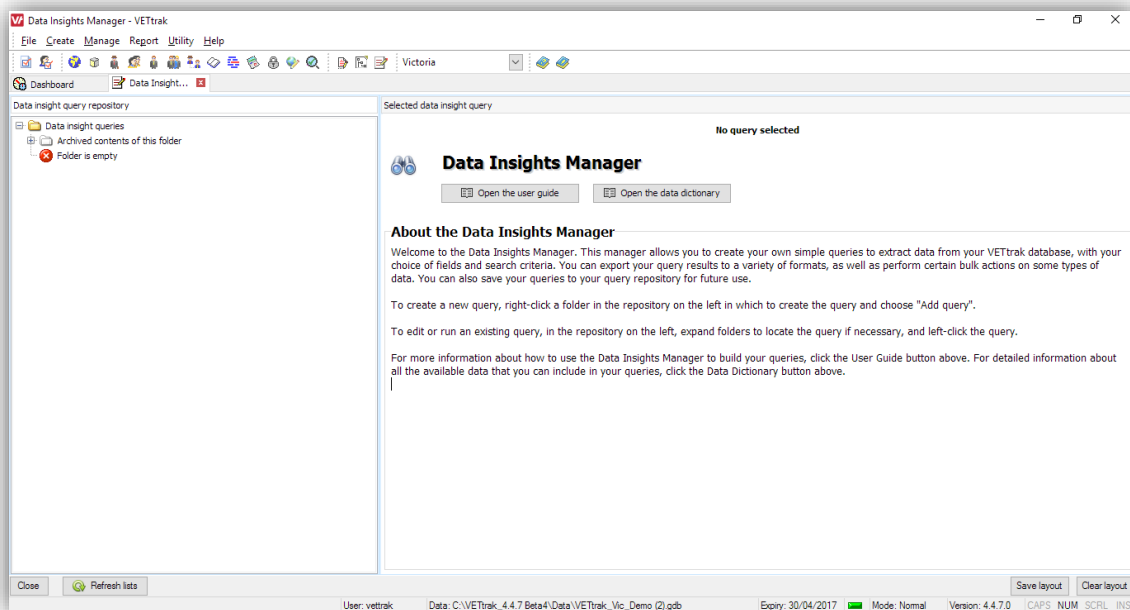
There are two panels. The left hand panel is the *Query Repository* where your queries are saved and loaded from. The right hand panel is where you will build and edit your queries.

To create your new query, right-click on the *Data insight queries* folder and select *Add query…*

It's important to note that you can import query definition files also. These can be queries that have been created for you by someone else, at another organisation, by a consultant, or sample queries created by VETtrak.

When you add a new query the right hand pane will change to the following:

There are several standard steps required to create your query. They are:

1. Choose the entity you are basing your query on. This will affect what other fields are available and what actions you can perform.
2. Select the fields you wish to display on screen and in any export of data.
3. Determine the order of the fields and any sorting and ordering.
4. Select the criteria used to perform any filtering or conditions on the selection to extract the information required.
5. Run the query and review the results.
6. Perform an action on the resulting list, or export the data to a standard file format for further analysis.

We'll look at each of these steps in detail as we follow an example.

Choosing the entity to base your query on.

Choosing the right entity to base your query on is an important first step. It will determine what actions you can run at the end of the process, and so getting this right initially is paramount. What this really means is 'what are you searching for'. The available entities currently are:

- Award
- Class
- Client
- Client enrolment
- Employer

- Occurrence
- Staff

If I was wanting to extract a list of student's names I would use the Client entity. If I was wanting to get out a list of enrolments, I would use the Client Enrolment entity.

The base entity you select will also determine what related fields you can chose to add to the query, or base your criteria on. The Data Insights Manager is programmed to only make available other fields to a base entity that have a direct relationship to that base entity. For example, if I was wanting to extract information about Classes, I would not use the Award entity as there is no direct relationship between Classes and Awards in VETtrak.

I'm going to select the *Client* entity to base a query on as shown below:

The list of available fields is now populated with the fields in the Clients table, as well as the tables and fields that have a direct relationship with the Clients table. There are differences in the types of fields and tables shown in the list, discernible by their icons. Examples are:
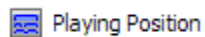
Enrolments

This is a standard table. You cannot add a standard table into the *Query fields* or *Query criteria*

Client

This is a filterable table. You can add this as *Query criteria* so you can select specific clients, but you can't add this into the *Query fields* section.

Code

This is a standard field. You can display this in the *Query fields* section and use it in the *Query criteria* to filter your data.

 Playing Position

This is a custom field. Custom fields are available against clients, employers and enrolments (new in v4.4.7). Custom fields can be added to *Query fields* and *Query criteria*.

There is a full description of the fields available in the Data Insights Manager by pressing the F1 key whilst in the Data Insights Manager, or going to the web site: http://www.vettrak.com.au/Data_Insight_Help/
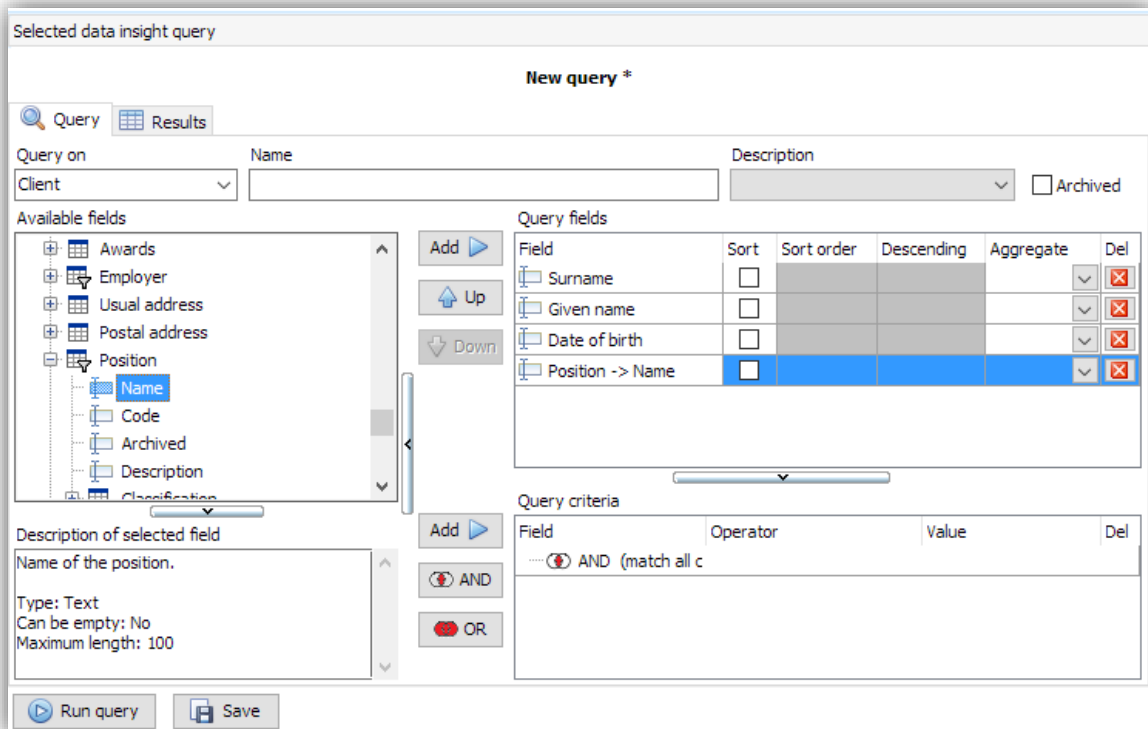
There is also a link to this page when you first open the Data Insights Manager.

Select the fields to display and export.

Once you have selected your base entity, you add fields to your query, not the tables. This can be achieved in four ways:

- Double clicking the field.
- Dragging and dropping the field.
- Selecting multiple fields using Shift and Ctrl and dragging them to the *Query fields* section.
- Highlighting the field using your mouse, then clicking the *Add* button between the *Available fields* list and *Query fields* sections.

Using any of these methods will copy it over to the *Query fields* section.

In the example above I've created a simple query to display the following client related fields:

- Given name
- Surname
- Date of Birth
- Position Name (from the related Position table)

Determine the order and any sorting

Once you're happy with the list then you can apply sorting and ordering, and possibly some aggregate information. In the screen below I'm sorting primarily on position, then on surname.

This is achieved by ticking the checkbox next to the fields you want to sort on, and then setting the order of sorting. By default it will be in ascending order, but this can be changed by checking the *Descending* checkbox.

Depending on the type of data you are including for viewing you may want to aggregate it to get a count or sum of the data.

You can also manipulate the order of the columns by using the *Up* and *Down* buttons to the left of the *Query fields* section. This can also be achieved by dragging and dropping the selected fields into the order you want them to be viewed.

Run the query and modify the selection

To see the results, click the *Run query* button at the bottom of the manager. The query will then run and the tab will change to the *Results* tab.

Note than whenever you make a change to the selection or criteria you must always use the *Run query* button to refresh the query results. Changing tabs will not re-run the query automatically.

The results of my query are shown below.
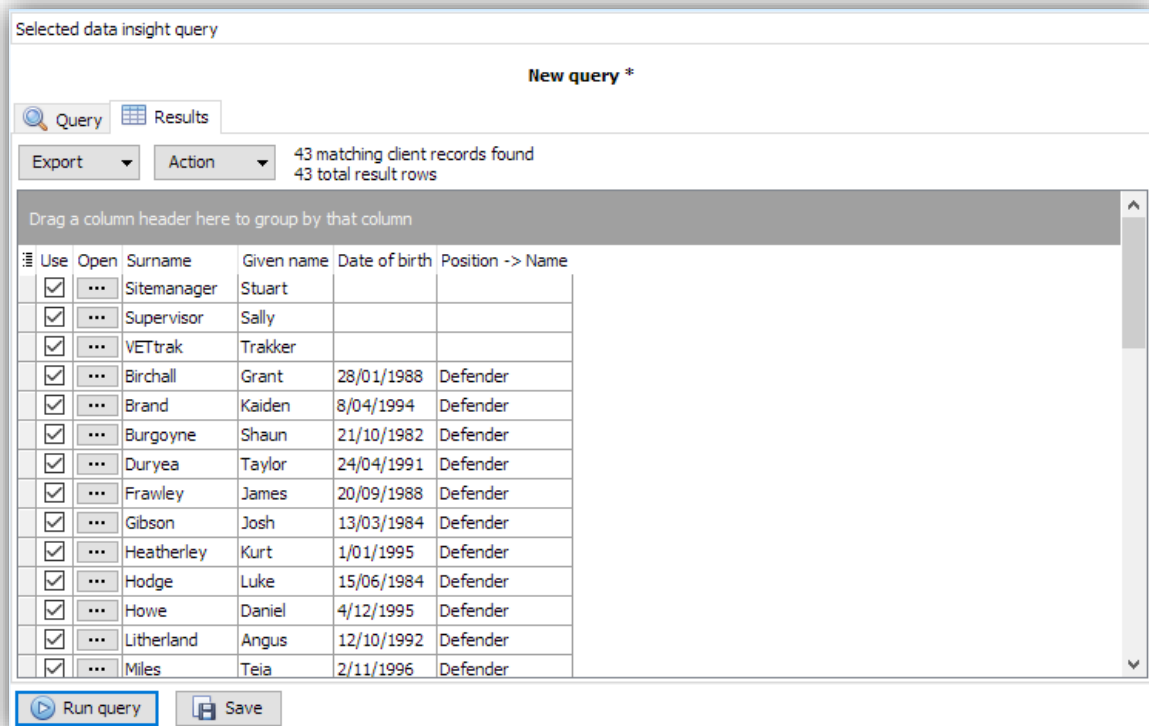
You'll note that there are 43 records found, but the first three are not ones that I want to see in the results. To fix this I could add criteria to the selection to filter out those unwanted results. There are a number of ways I could do this:

1. filter out all clients where the position was blank
2. filter out all clients where the birthdate was blank

Either way would be acceptable.

Add criteria to filter the selection

To add search criteria, you can either:

1. Drag and drop the field to the *Query criteria* section
2. Highlight the field using your mouse and click the *Add* button next to the *Query criteria* section

In the screenshot below I've added the Position Name field to the *Query criteria* section and set the operator as *NOT equal to* and the value as no value.

Relational operators are used in query criteria to define the list of records based on whether they meet the specified criteria. Queries may have a number of criteria containing combinations of relational operators, built up to define the results.

The relational operators used in Data Insights are as follows:

Operator:	Used to:	Data types where available:
Equals	Find all records where the value is X	Text, Number, Date, Checkbox, Lookup List
NOT equal to	Find all records where the value is not X	Text, Number, Date, Lookup List
Greater than	Find all records where the value is greater than X	Number, Date
Less than	Find all records where the value is less than X	Number, Date
Greater than or equal to	Find all records where the value is greater than or equal to X	Number, Date
Less than or equal to	Find all records where the value is less than or equal to X	Number, Date
Starts with	Find all records where the value starts with X	Text

Contains	Find all records where the value contains X	Text
Is any of	Find all records where the value is X or Y	Lookup List
Is NOT any of	Find all records where the value is not X or Y	Lookup List

By clicking on the *Run Query* button, the query will be re-run and the results populated with the new results.
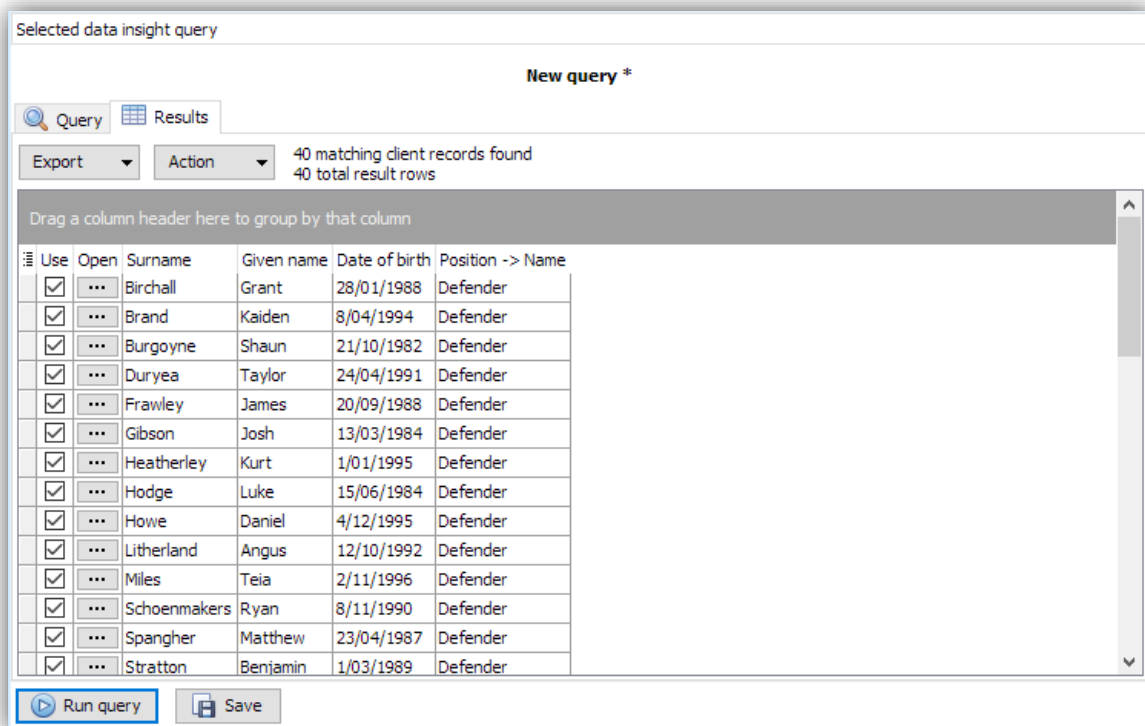
Because the first three records did not have a position recorded, they have been excluded from the list of results.

Let's say we want to narrow down the list to find only those players born before 1990. We can add another criteria to our query to narrow down the list further.

Note that I have the choice of providing a fixed date, or a calculated date. Using a calculated date is useful when you want to find out things like enrolments 'last month' or unit completions 'this year'. By saving your queries with these calculated dates relative to today's date it can be much easier to run these queries as progress reports.

I've selected that the date of birth is less than or equal to the 01/01/1990. Clicking *Run query* will then re-run our initial query wither the new results.
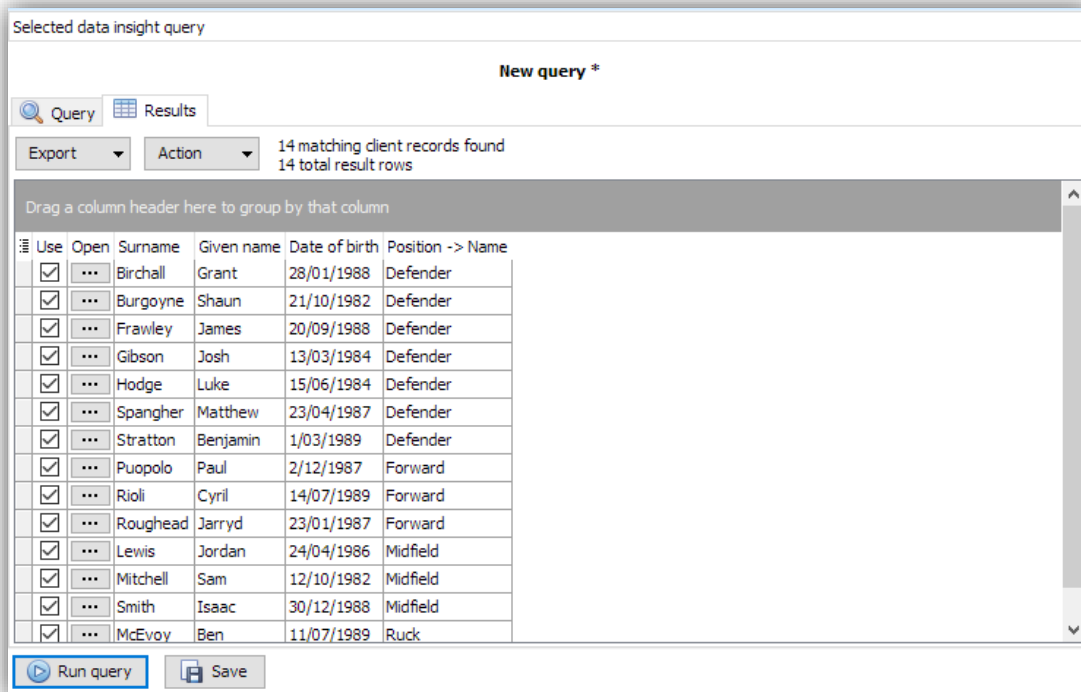
The list of clients is now much shorter. We can add additional criteria to this query to only display certain types of positions, say midfielders and rucks.
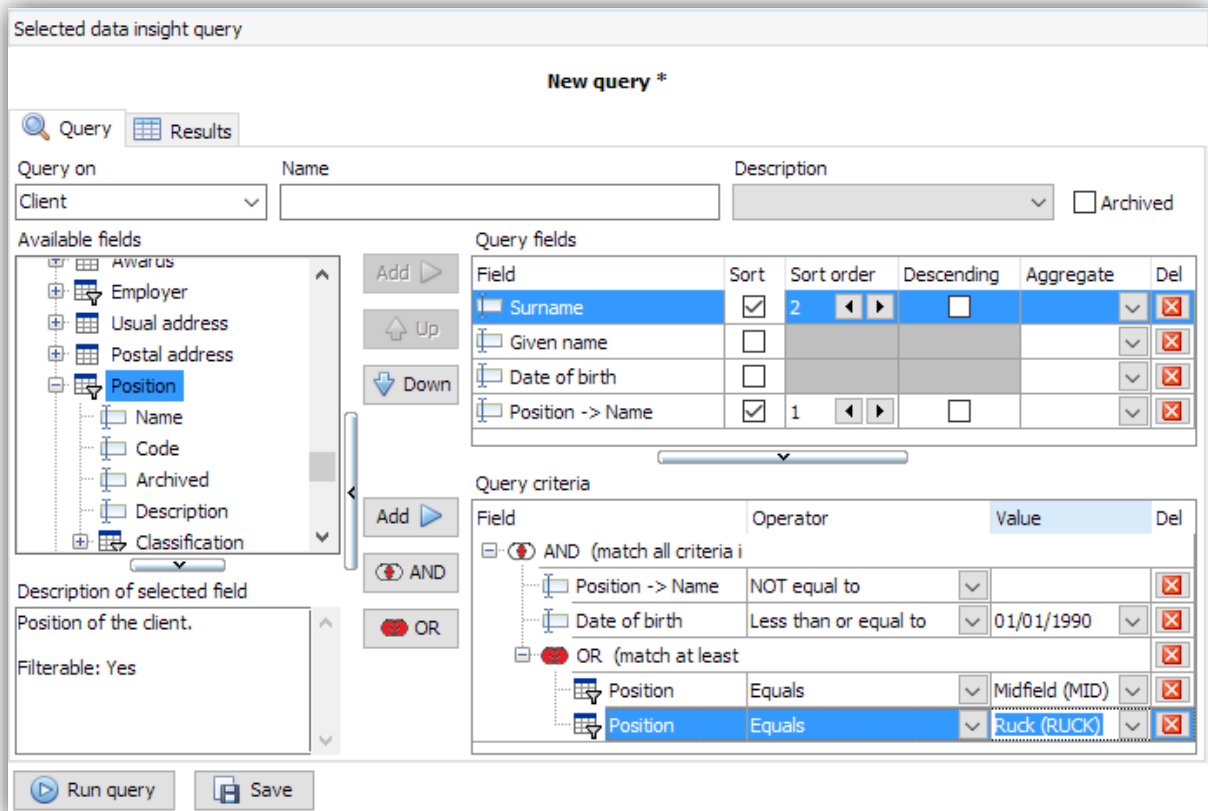
The query is starting to get more complicated. It's important that you perform the criteria selections in the right order. The steps taken to achieve the result above were:

1. Click the *OR* button to add the Or condition. This is important because we need to offer a choice between one value or another value. If we needed both conditions to be met we would use the *AND* button.
2. Add the position table (this is one of the filterable tables that allows you to choose values), equals operator and the first choice of Midfield
3. Add the position table again, with the second value of Ruck.

It's also worth noting that you can change an AND to an OR by right clicking on the condition in the query filter.

Data Insights uses two logical operators. They are **AND** and **OR**. Put simply, the AND operator is used when all the criteria must be met. The OR operator is used if any criteria is met.

It is often useful to use Venn diagrams to demonstrate this.
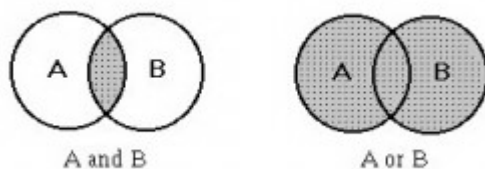
The combinations of AND and OR operators on criteria in queries can help select the required records.

There are two other operators the NOT and XOR operators. These are not available in Data Insights.

The results of the above query are as follows:

Note also that you can open the record for the base entity in the appropriate wizard or manager to allow you to edit the details of the record from within the Data Insights Manager by clicking the button on the left hand-side of the resultant list under the 'Open' column heading.

This also could have been achieved with the following query criteria:

Using the *is any of* operator gives you a drop-down list (or search) allowing you to tick the items you want, reducing the need for adding the Or conditions yourself. The results will be exactly the same.

Exporting the results

When you have generated your query you can export the results to a number of common formats as shown below.
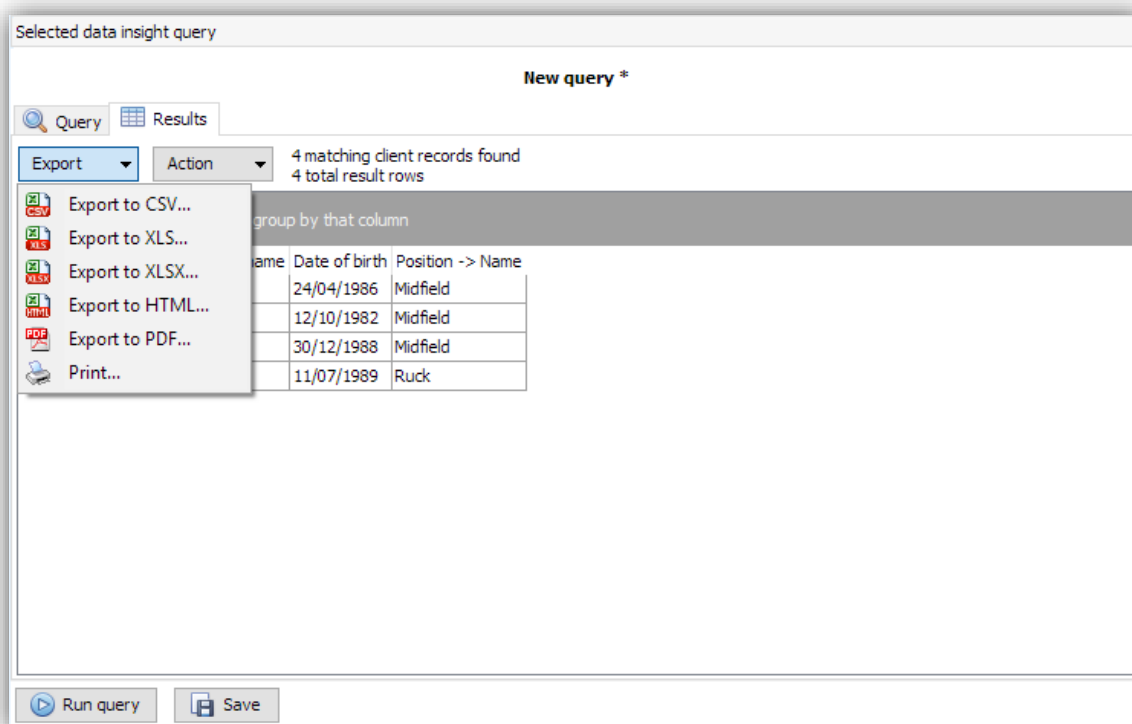
This can be useful for:

- Doing further analysis in Excel or another spreadsheet application
- Proving an export for import into another system
- Providing a printable version of the results via a common format of PDF
- Printing the results.

Perform an action on the results

There are a number of actions that can be performed on the query results. They are:

	Award	Class	Client	Client Enrolment	Employer	Occurrence	Staff	VFH
Add to groups			✓				✓	
Run report	✓	✓	✓	✓	✓	✓	✓	✓
Send email	✓	✓	✓	✓	✓	✓	✓	✓
Send SMS		✓	✓	✓	✓	✓	✓	
Update field	✓	✓	✓	✓	✓	✓	✓	✓
Update status				✓				

Some actions are not available to some entities. For example, *adding to groups* is only available to entities that can use groups. The list of actions available will be expanded in future versions of VETtrak.

Note that you can select and de-select which records to run the action for by using the checkboxes on the left hand side of the results list under the 'Use' column.
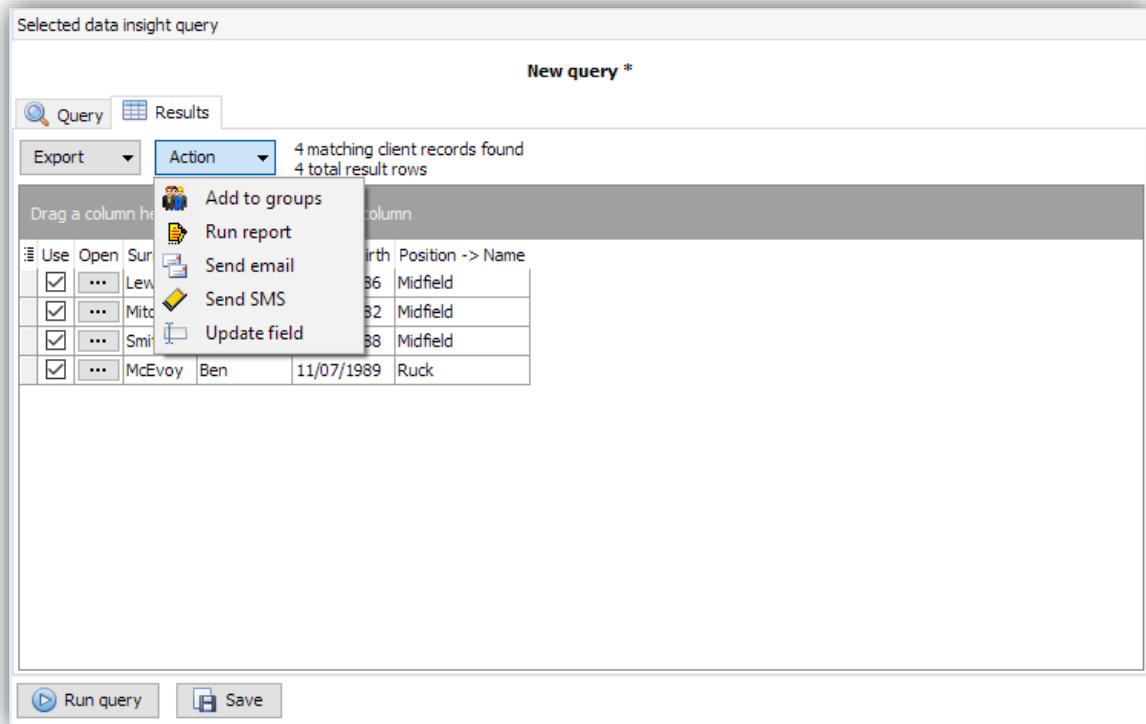
Add to groups

This action does just what it says. It allows you to add the list of selected clients to a group. As staff members are clients, you can add staff members to groups also.

Run Report
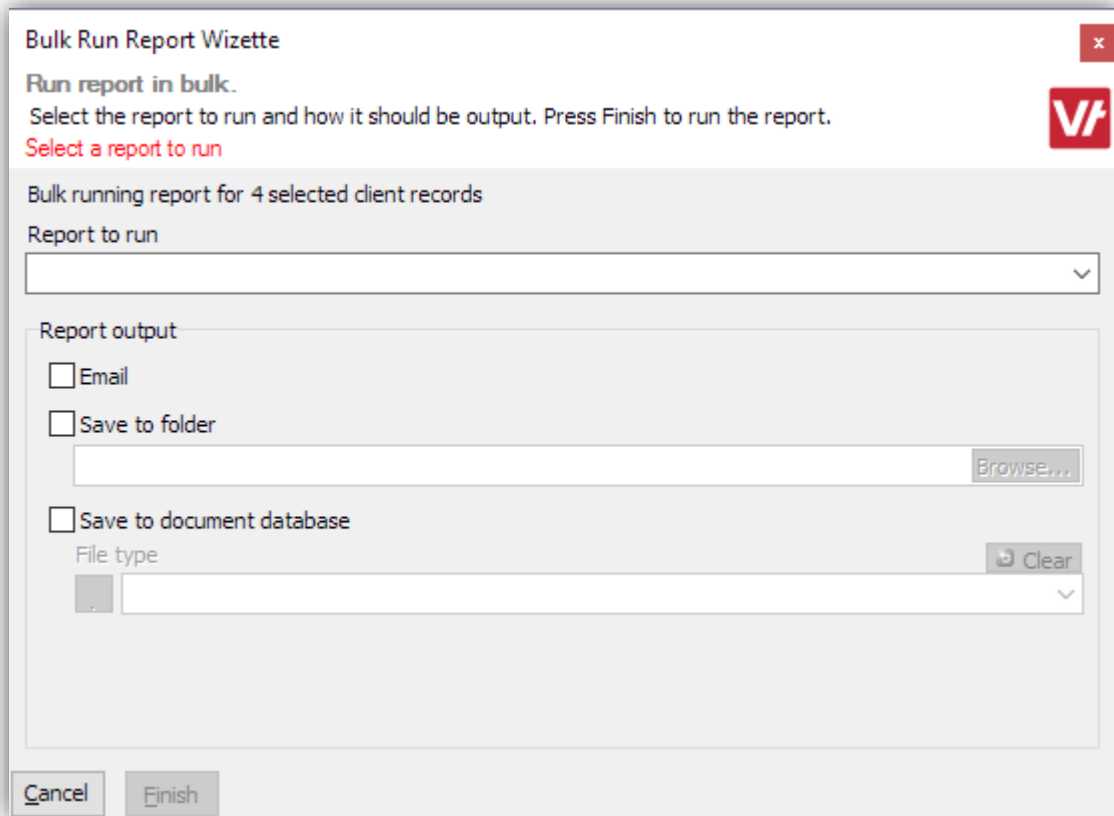
You have the ability to run selected in-built reports as an action. An in-built report is one that is available from a right-mouse-click menu by selecting *Show xxxxx report…*

Not every in-built report is available as an action, and the list of reports available will depend on the base entity that you have selected for your query. The list of all available in-built reports is available in Appendix A at the end of this document.

You can replace the standard in-built reports with custom replacements by using the *Reports Mappings* feature in VETtrak. This can then allow you to run customised versions of these reports. Please be aware that these reports are designed to run without user input, such as a dialog box on the report allowing you to make additional selections. If you replace a standard in-built report with a customised one with a dialog box, you will be presented the dialog box for each record in the list that you are running that report against.

There are some special rules relating to Certificates and Statements that I will cover separately in the next section.

When you select the action *Run Report* you will be presented with the following wizette:

The first thing to do is to select the report to run. This will run the selected report for every person in the list of items in the query report. In the case of the Client entity being the base entity, it will run the selected report for each client separately. This is essentially a 'loop' through the list and performing the action for each record.

Importantly you must then select the output for the report. There are three options:

1. Email the report to each client as an attachment using a merge email template.
2. Save the report to a folder as a separate PDF file for each client to a selected location
3. Save the PDF of the report to the document database for each client. The base entity will determine which entity the document is uploaded against.

Running Certificate and Statement Reports

Using the *Award* base entity, you are able to run Certificate and Statement reports for a selection of award records. There are a couple of extra conditions to this:

1. The list of selected awards must be homogenous, that is, they are all the same award type. You can't have a mixture of Certificates and Statements in the query selection as you can only select one report.
2. If you have a homogenous list of all Statements or all Certificates, you will only be allowed to select the mapped reports that are for that award type. This is to prevent you from printing Certificate reports for Statement awards and vice-versa.

Send Email and Send SMS

These actions will allow you to send templated emails and SMS's to the selected clients in the query report. They use the same wizards as you would use normally in VETtrak.

Update Fields

The *Update fields* action allow you to update selected fields for each entity. The available fields have been selected because they are ones commonly asked for to be updated in bulk, and they have no effect on government or AVETMISS reporting. The full list of fields available to be updated is available in Appendix B.

Updating fields is a very powerful tool and should be used with caution. The process is not reversible and changes are permanent. When using the update fields feature you will be presented with the following warning:
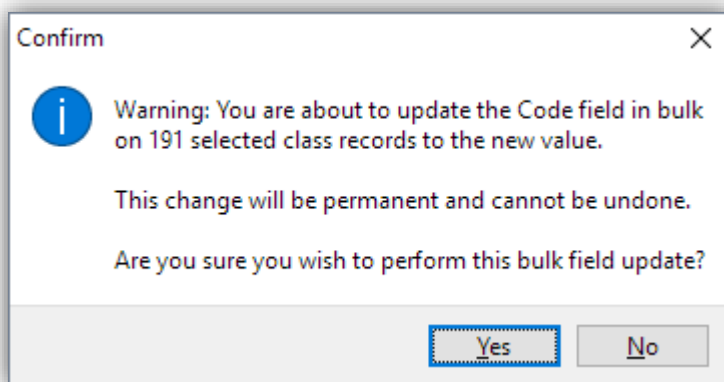
As the warning says, the change is permanent and cannot be undone. You can limit users to not having this ability through the Security feature, covered later in this guide.

If using the *Client enrolment* entity, there are separate menu items for *Update status* and *Update dates.* This allows you to update a selection of enrolments with different statuses and dates. Also, if updating enrolment start and/or finish dates, the selected enrolments must all have the same start and/or finish dates respective to which date you may be updating. The list must be a homogenous list.

Working with Data Insights Files and Folders

Queries can be:

- Saved to the repository during creation
- Imported from a file

- Exported to a file
- Archived
- Modified and Renamed
- Moved between folders
- Duplicated
- Deleted

To *Save* a query add your fields selections and criteria and add a name to the *Name* field at the top of the manager. You can also add a description of what the query is doing. This may be handy if you are providing the query for others to use. A query needs to have a name to be saved and will cause an error if not filled, as shown:

The name and description boxes are directly below the error message.

To *Import* a query file, you can right-click the *Data Insights Queries* node in the repository tree and select *Import query file…* this will then ask you to browse to the path of the query file to import. Note that query files have a .vtdq extension.
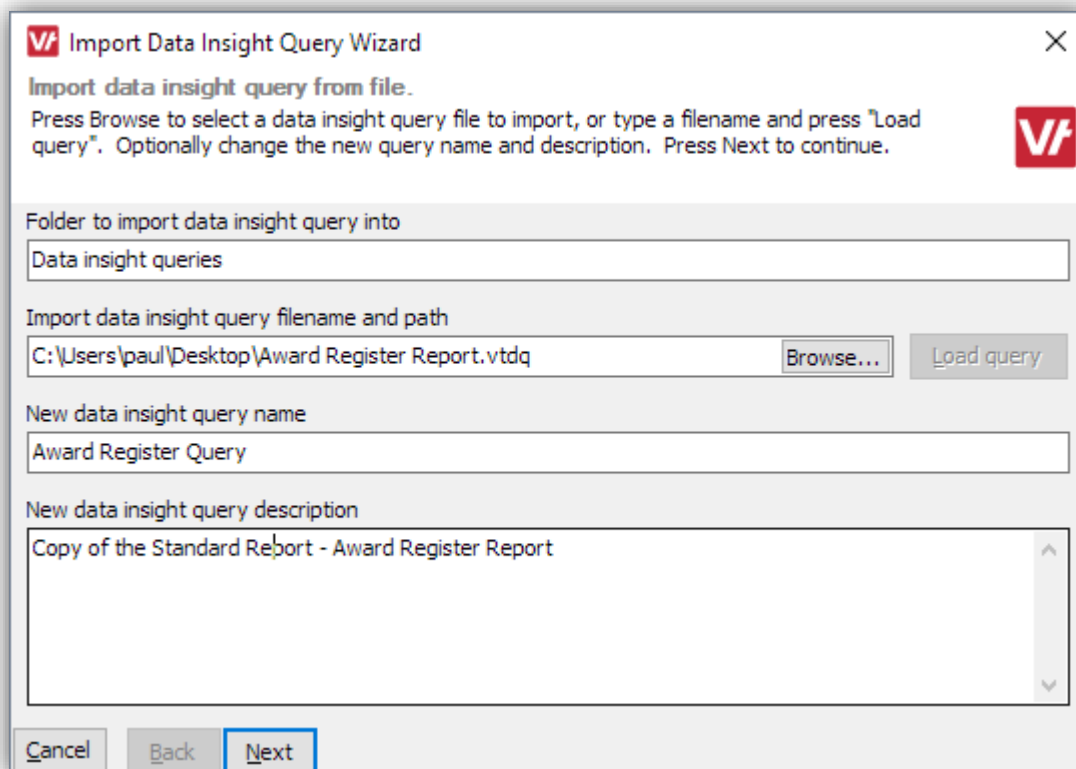
You can then give the query a new name and add a description. Click *Next* and *Finish* to import it.

To *Export* a query to file, right-click the query in the repository and select *Export query to file…*
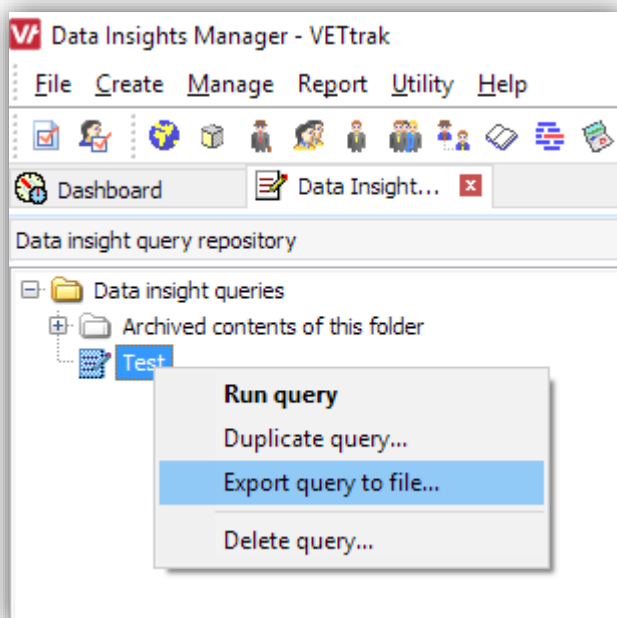
To *Duplicate* a query, right-click the query in the repository and select *Duplicate query…*
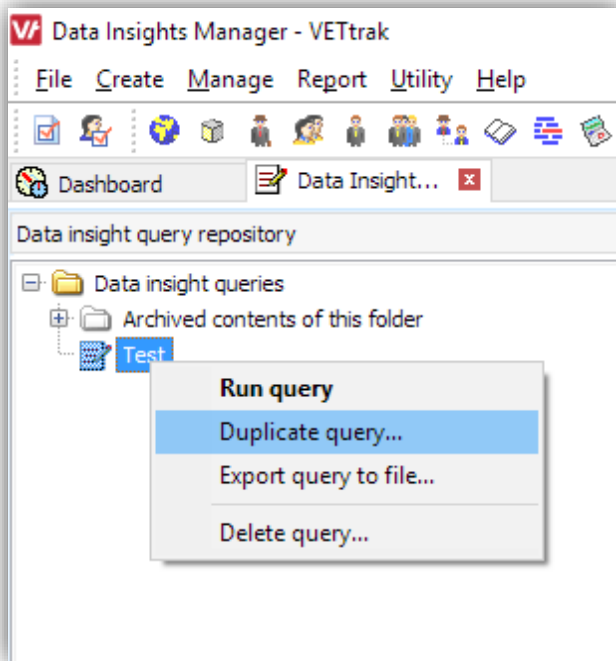
To *Delete* a query, right-click the query in the repository and select *Delete query…*
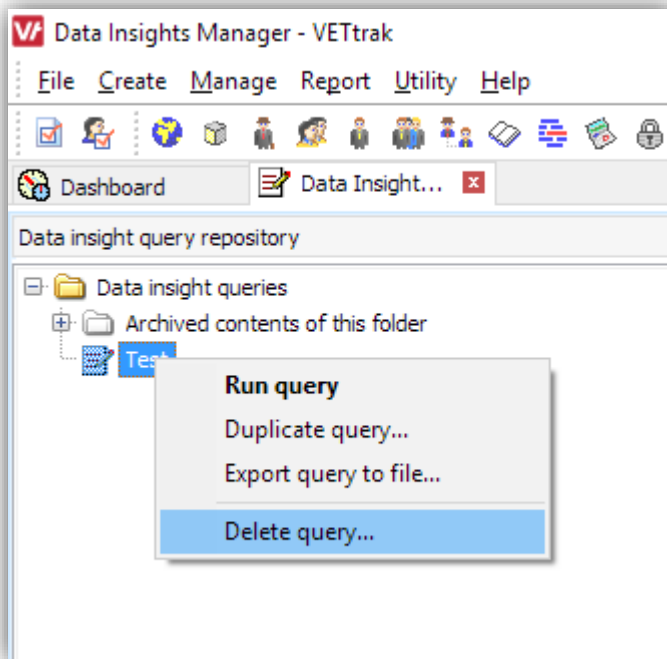
To *Archive* a query, check the box *Archived* next to the *Description* field in the right-hand side of the open query in the Data Insights Manager. The query must be loaded to archive it.

To modify and rename a query, first load the query into the manager. You can then modify the query and save it. This will save the new changes to the query. If you want to keep the original query, and create a second modified query, you will need to *Duplicate* the query first and make changes to the copy.

You can create a folder structure in the query repository. This serves two purposes:

1. It helps you organise your queries into a logical structure
2. You can add Security permissions on the folders so only certain people can run them.

You create new sub-folders by right clicking on the *Data insight queries* node in the repository and selecting *Add subfolder…* You then give the folder a name.

Clicking *Next* then allows you to set permissions on the folder based upon the roles that have been previously setup in the Security feature.

By checking the *Restrict the roles that can access this folder* checkbox, you can restrict certain users from editing and even seeing the queries that have been created, or adding new queries and deleting existing ones.

To create a new query in a folder, right-click the folder and choose *Add query*. You can move queries and folders within the repository by dragging a query or folder and dropping it onto a folder to move it to that folder.

Security Settings for Data Insights

There are several entities that can be configured in the Security Manager relating to Data Insights. They are:

- Data Insights bulk update field (View)
- Data Insights query (View, Edit, Add, Delete)
- Data insights query folder (View, Edit, Add, Delete)

These entities can be used to restrict a user from using the *update fields* action which may be of particular use.

You can also restrict users from creating, running, editing and deleting queries, as well as the query folders set up.

The location of the Security entities is shown below.
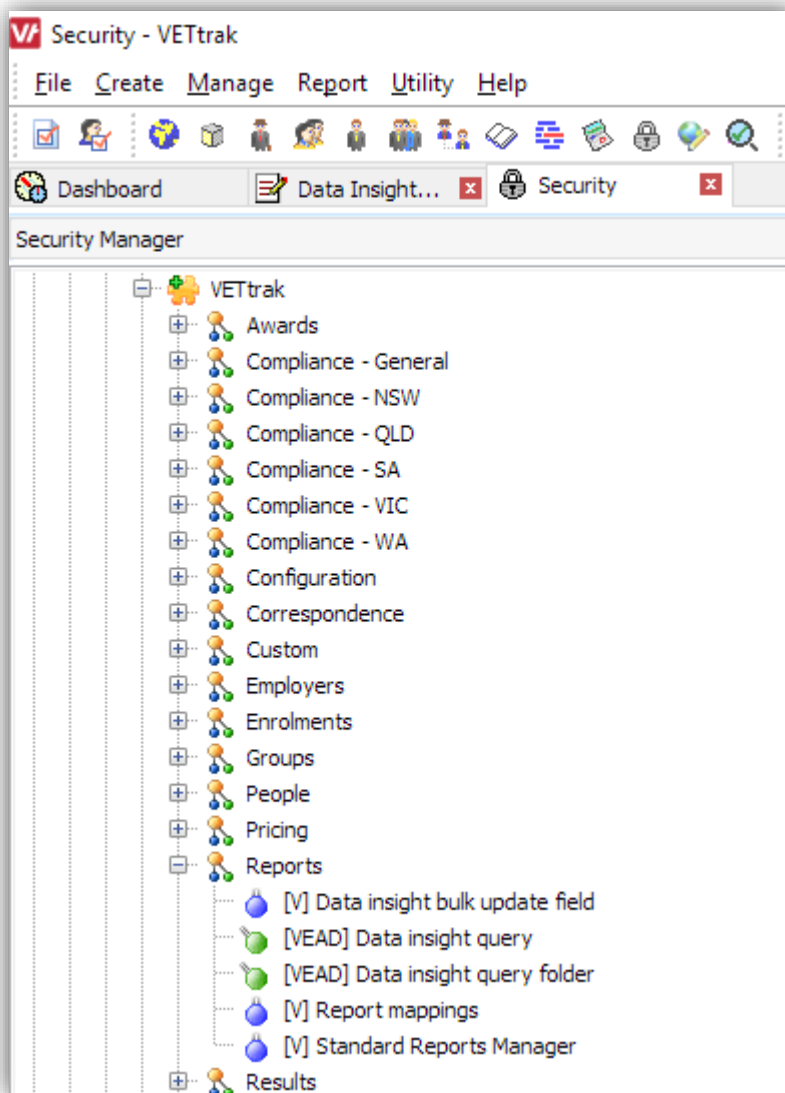
Appendix A: Available Reports

Available in-built reports to run as an action:

Award	Certificate
	Statement
Class	Occurrence Class Client Report
Client	Personal Information Report
	Invoice Summary Report
	Invoice Statement Report
	All Enrolments Report
	All Enrolments with Comments Report
	All Enrolments with Comments and History Report
	Occurrences Report
	Awards Report
	Group Report
	Events Report
	Class Report
	Attribute Report
	Placements Report
	Sent Email Report
	Sent SMS Report
	Units Completed Report
	Units not Completed Report
Client enrolment	Enrolment Report
	Enrolment Report with Comments
	Enrolment Report with Comments and History
	Training Plan Report
	Invoice Schedule Report
	Statement of Fees Report
	Attendance Report
	Confirmation Report
	Class List Report
	Events (linked to enrolment) Report
	Placements (linked to enrolment) Report
Employer	Employer Details Report
	Invoice Statement Report
	Invoice Summary Report
	Employee Report
	Attributes Report

	Events Report
	Sent Email Report
Occurrence	Unit Cross-Tab Report
	Tasks Cross-Tab Report
	Attendance Record Report
	Occurrence Class Report
	Occurrence Invoice Report
	Occurrence Payments Report
	Occurrence Event Report
Staff	Personal Information Report
	Class List Report
	Event Report
	Staff Units Report
	Supervised Placements Report
VET FEE-HELP	Commonwealth Assistance Notice Report
	Invoice Notice Report

Appendix B: Updatable Fields

Available fields that can be updated as an action:

Award	Issued Flag
	Expiry Date
	Document Reference
Class	Code
	Room
	Staff Member
Client	Staff Member
	Archived Flag
	Preferred Contact Method
	Exclude from Marketing Flag
	Commencement Date
	Last Assessment Date
	Termination Date
	Salary
	Citizenship Status
	Identification Confirmed
	Identification Details
	Problem Payer Flag
	Web Publish Flag
	Victorian Occupation Code
	Employer
	Position
	Manager
	Division
	Custom Fields
Client enrolment	Date of Status Change
	Confirmation Status
	VET in Schools Flag
	Victorian Funding Eligibility Key
	Victorian Eligibility Exemption Flag
	Victorian Provided Under VET FEE-HELP Flag
	Victorian Include in VSN Transfer Flag
	Victorian Evidence of Student Eligibility Verified Flag
	Victorian Student Declaration Signed Flag
	NSW Include in Provider Calculator Exports Flag
	WA Intake Number
	WA Fee Model Flag

	Enrolment Status**
	Enrolment Start and Finish Dates**
	Cancellation Reason
	Enrolment Type
	Referral Source
	Delivery Provider Employer
	Delivery Type
	Custom Fields
Employer	Code
	External Code
	Number of Employees
	Exclude from Marketing Flag
	Problem Payer Flag
	Employer Type
	ANZIC
	Custom Fields
Occurrence	Same as Client Enrolment
Staff	Same as Client
VET FEE-HELP	Course of Study Start Date
	Completion Status
	Completion Year

** This is by a separate menu items of 'Update status' and 'Update dates' respectively.