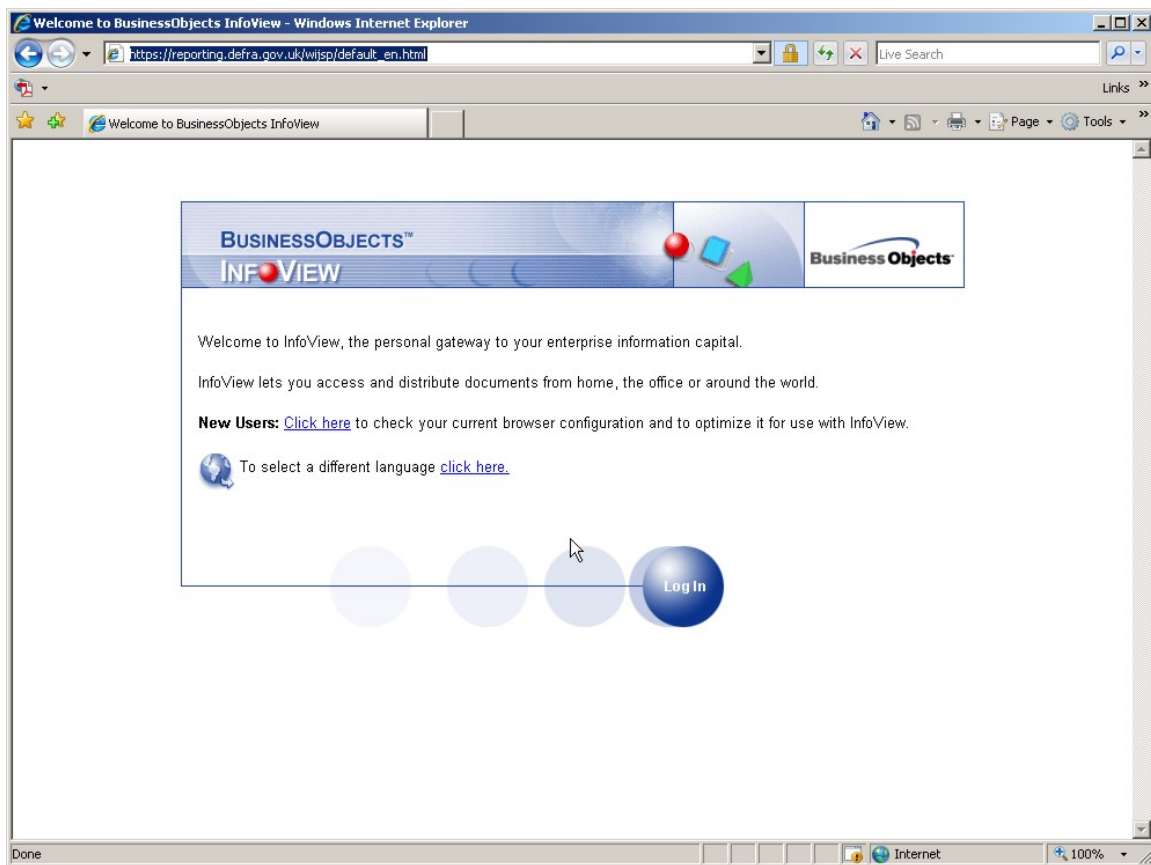


# BUSINESS OBJECTS FOR MERMAN

16 – 17 OCTOBER 2007



WORKSHOP HOSTED AND PRESENTED BY BODC

Mark Charlesworth & Corallie Hunt

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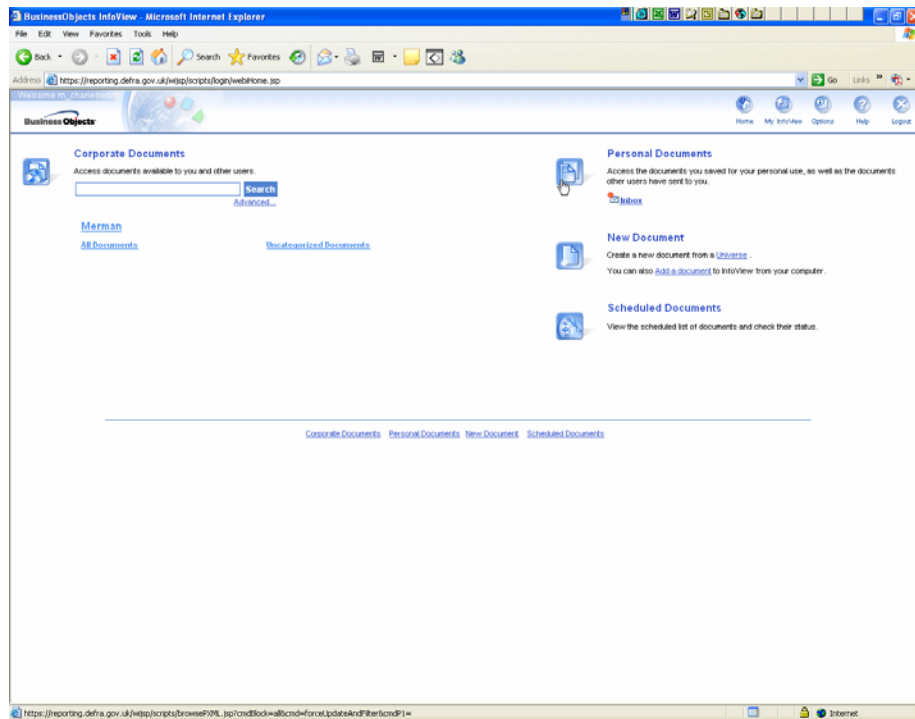
This manual follows on from the Power Point Presentation given at the start of the Workshop

## 1.0 Overview of Business Objects Homepage

### 1.1 What is a BO document?

A document is the results (report) of a query. When you save a document in BO you save both the query and the report (results).

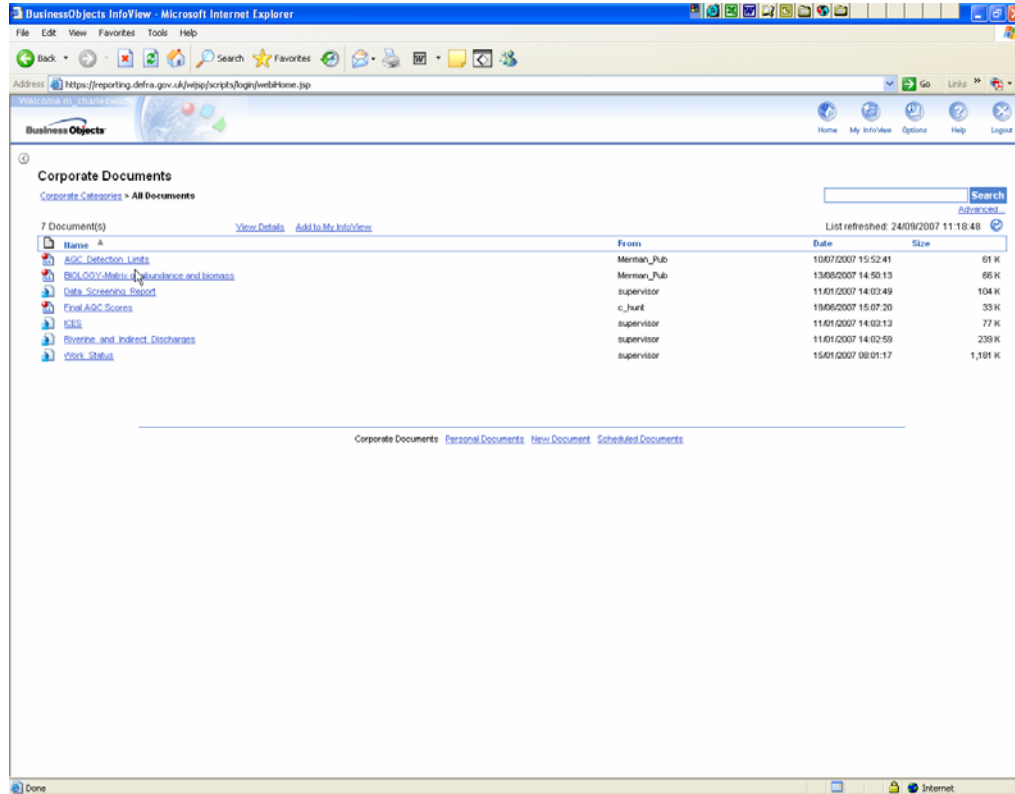
- Corporate Documents – documents of use to all MERMEN Users
- Personal Documents – documents for individuals
- New Documents – prepare new queries
- Universe – for building custom queries



## 2.0 Corporate Documents

### 2.1 Running Corporate Documents

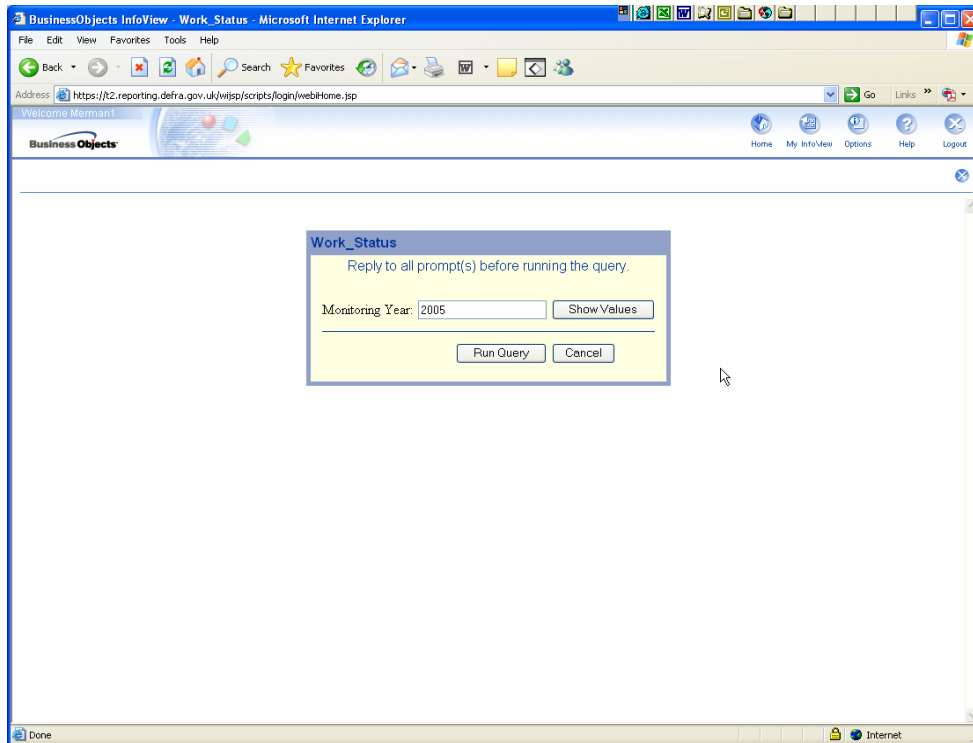
1. Select 'All Documents' or 'Corporate Documents' and a list of the available documents are shown:



2. Click a document to open it. Depending on which document you select you are then prompted to select some or all categories. If you know the value you may type in directly, or alternatively click 'show values' and select.
3. Then click on 'Run Query' and the report will return the results. The results are those that exist in the database at the time of running the report.

### 2.2 Work Status Report

- The work status report shows the status of submissions for a specific year.
1. Select Year of Interest and select 'Run Query'



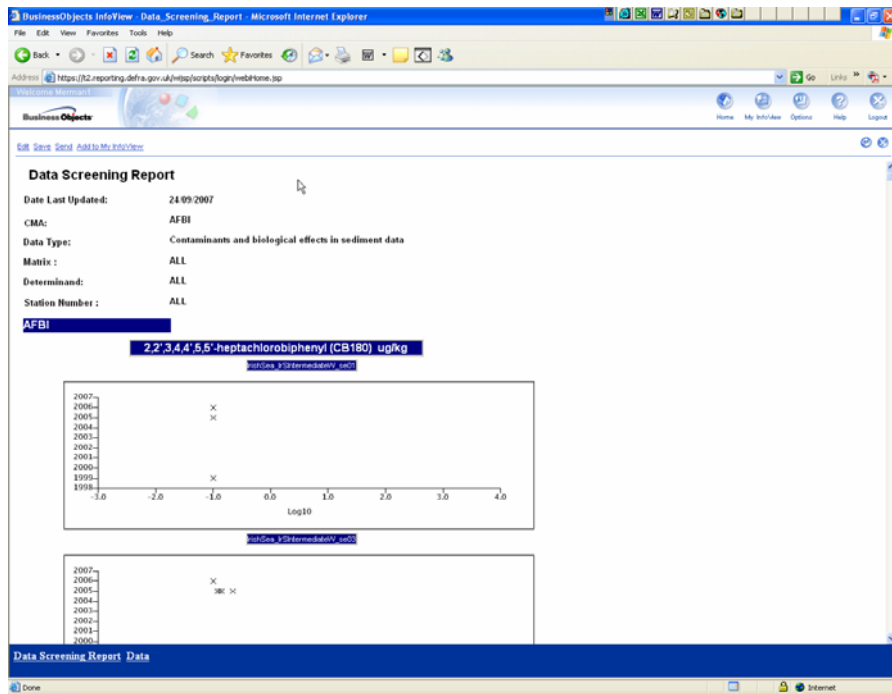
2. The submissions for that year by CMA and Data Type are shown. 'Accepted' means that the file has been loaded, once the file has been checked and unheld it then becomes 'cleared'.

Submission Date	CMA Code	Submitters Email Address	Submission Type	Status
01.06.2007 13:54:18	AFBI	brian.mstewart@hotmail.co.uk	AQC Biology	Cleared
07.06.2007 14:32:10	AFBI	brian.mstewart@hotmail.co.uk	AQC	Cleared
07.06.2007 14:34:24	AFBI	brian.mstewart@hotmail.co.uk	Sediment	Cleared
07.06.2007 14:38:12	AFBI	brian.mstewart@hotmail.co.uk	Seawater	Cleared
09.06.2007 09:00:30	SEPA	judy.dobson@sepa.org.uk	PT	Cleared
09.06.2007 15:50:44	EAAng	amanda.prior@environment.agency.gov.uk	Biota	Cleared
09.06.2007 16:51:35	EAWal	amanda.prior@environment.agency.gov.uk	Sediment	Cleared
11.06.2007 12:40:52	FRS	l.a.phillips@marlab.ac.uk	Sediment	Cleared
11.06.2007 13:40:44	FRS	l.a.phillips@marlab.ac.uk	Seawater	Cleared

3. To run a report again using different criteria select the refresh button in the top right of the report.
4. To close the report, click on the X in the top-right hand corner.

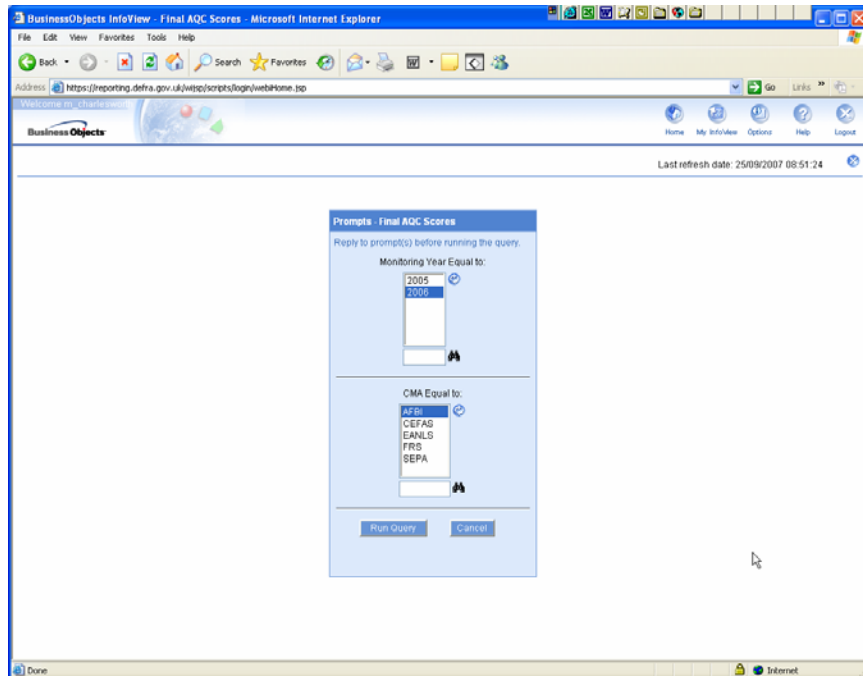
## 2.3 Data Screening Report

- Designed to show results on a log scale for each determinand across all years so that any outliers may be easily identified, particularly incorrect use of units.
1. Select some or all of the fields CMA, Data Type, Matrix, Determinand Code and Station Number.
  2. The results are grouped by determinands for each station and show years on the x-axis and log results on the y axis. If only one years data exists the x-axis defaults to 0 – 2500 years which may confuse at first!

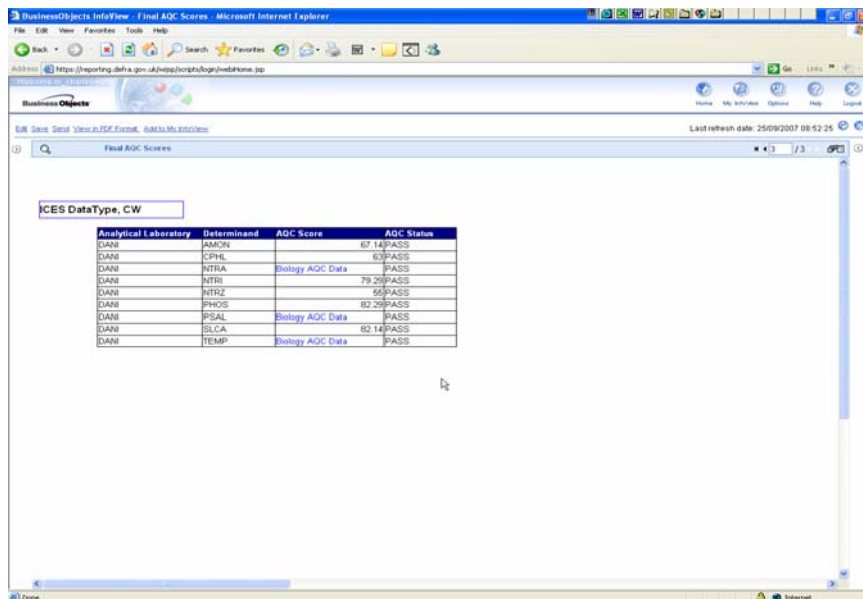


## 2.4 Final AQC Scores

- The Final AQC Scores shows the AQC results for each determinand that has AQC information.
  - The document was created by Corallie specifically so that a Responsible Officer could (and should) check the AQC status of each determinand at the end of a submission round before the monitoring results are cleared to be passed to ICES.
1. Select the 'Final AQC Scores' from Corporate Documents and choose the monitoring year and CMA of interest.
  2. Click on the refresh arrows to get updated lists of all the years.
  3. Run query.



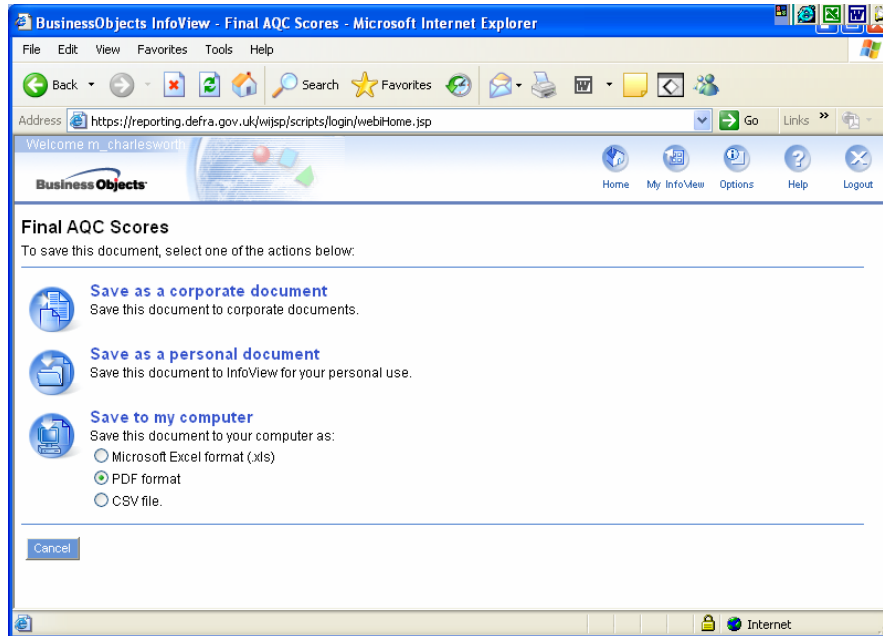
4. The results are shown on 3 pages with a new table for each data type.
5. Use the arrows on the right of the blue shaded bar to move between pages.
6. If the determinand has been automatically passed using the biology AQC spreadsheet then this is highlighted.



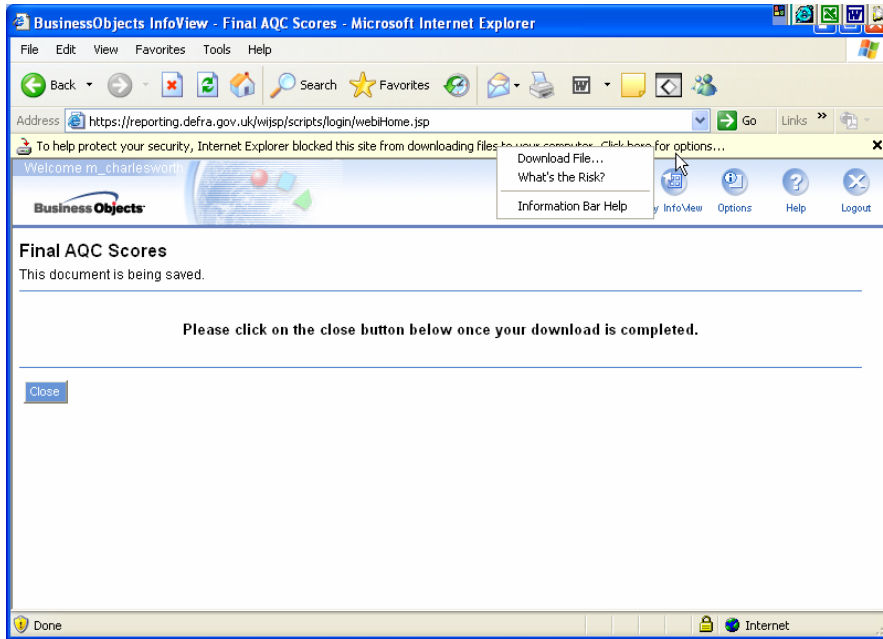


## 2.5 Saving

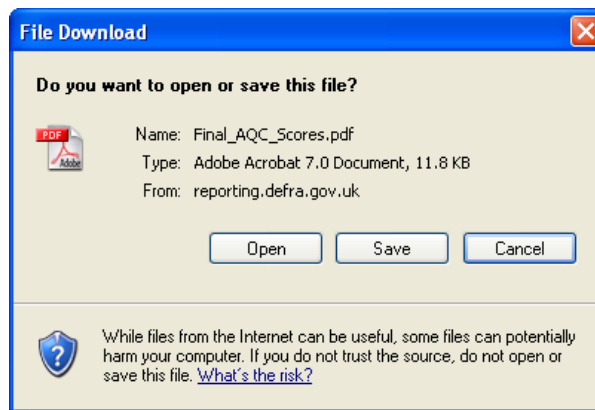
- There are 3 options for saving
- The report may be saved to any PC as a pdf, excel, .csv file or it may be saved as a personal document in Business Objects.
- If you save it to your PC it is just saved as the report (the results of a query).



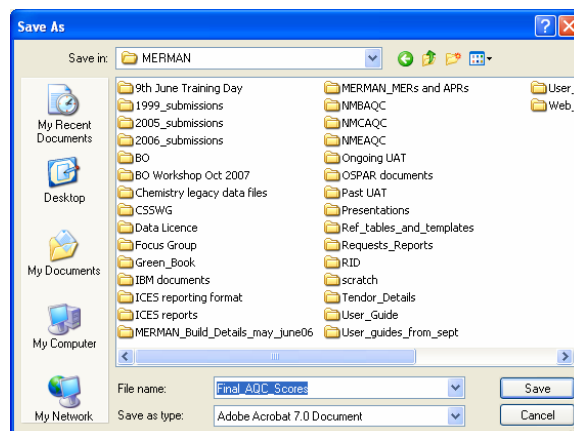
1. Open the Final AQC Scores document and select your own CMA and 2006 for the monitoring year.
2. Click save, select the pdf format, and the select '**Save to my computer**'.
3. Open a new folder specifically for saving reports for this workshop.
4. Depending on security settings for internet explorer you may get a cream bar at the top of the page saving '**To help protect your security, internet explorer.....**'.
5. If you do get the above message, right-click on the bar and select download file.
6. You will return to the screen above where you will have to select PDF format and '**Save to my Computer**' again.



7. You will then be asked to save or open.



8. If you select save, navigate to where you wish to save, name appropriately and click save.



- Once the download is complete select close.

## 2.6 *Biology Abundance Matrix*

- This document has been designed by Corallie to show the results of benthic invertebrates at a single station in a single year in the matrix format of samples as columns and species as rows.
- Navigate to corporate documents and open the 'Biology Abundance Matrix' document.
  - Click on the refresh arrows to get the updated station names.
  - Choose a year and station and run. (e.g. 2001 and Anglia Medway Se01)
  - You are presented with a report that has two tabs.
  - The first tab (sheet) shows the abundance and biomass for each species across all samples for that station, the second tab (sheet) shows the matrix.

Matrix Showing Abundance and Biomass of Species At Station 820se In 2004

EHS 2004 820se

ABUNDNR

	820seA0.5	820seA1	820seB0.5	820seB1	820seC0.5	820seC1	820seD0.5	820seD1	820seE0.5	820seE1
ANIMALIA	0	0					0	0		
Cardinus maenas	2	3								
Chironomidae	2	1								
Corophium volutator	2	1							4	2
Crangonidae			1		2	1				
DIPTERA							1		2	1
Cnidaria							24	6	23	4
Enchytraeidae	23	8	5							
Hediste diversicolor	242	120	211	105	163	30	158	79	150	75
Heterochaeta costata	2,679	559	2,553	487	1,168	252	1,058	273	1,422	426
Hydrobia ulvae	545	45	878	48	217	5	384	28	356	17
INSECTA				2	2	1				
MAXILLIPODA	41		2	3			7		2	
Neanthes virens	18	5								
NEMATODA	335		72		31		47	1		
OLIGOCHAETA	1				0	0				
Turbellaria	7									

BMWETWT

820seA0.5(m) 820seA1(m) 820seB0.5(m) 820seB1(m) 820seC0.5(m) 820seC1(m) 820seD0.5(m) 820seD1(m) 820seE0.5(m) 820seE1(m)

Table: Abundance\_Biomass Matrix: Abundance\_Biomass

- Save this report as an **excel** file to your PC.
- Open the excel file and take a look at the two sheets in the file.

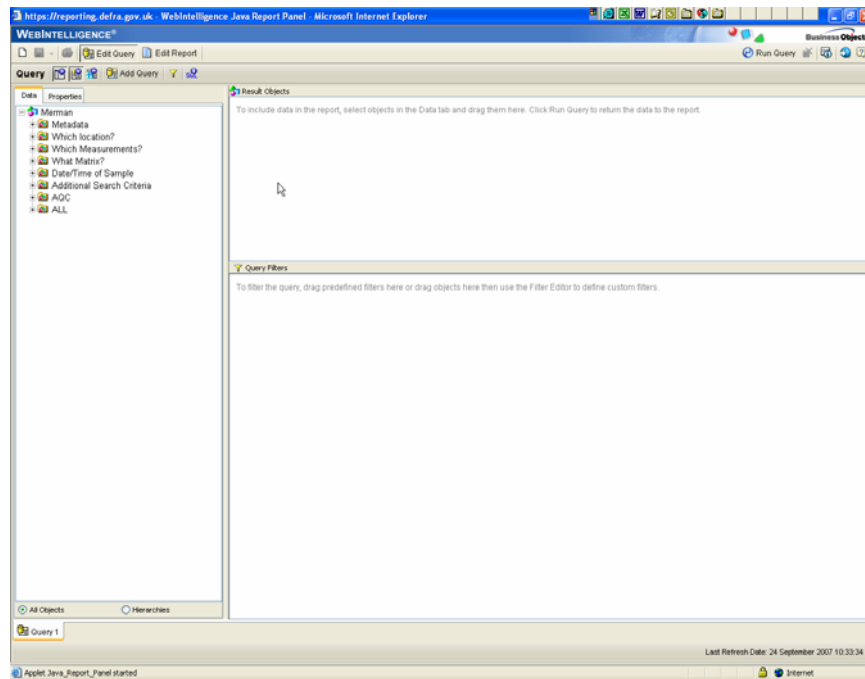
## 2.7 *EXERCISE: Corporate Documents*

Try running the other corporate documents in your own time.

## 3.0 The Universe

### 3.1 Overview

- The Universe is a way of getting from the complex MERMEN data tables to a more meaningful way of querying and extracting data.
- The Universe is selected from the BO homepage and it will open a new window 'Web Intelligence' that requires Java applets to be installed the first time of use.
- It has a page which shows the query '**Edit Query**' and a page that shows the results of that query '**Edit Report**'. The Edit Query allows you to build your query which may be run by selecting '**Run Query**'.
- The left hand pane of the Edit Query screen shows the fields that may be chosen to be used in queries which are broadly split into categories:
  1. Location
  2. Measurements (determinands)
  3. Matrix (what the determinand was measured in)
  4. Date/Time of sample
  5. All other search criteria
  6. AQC
- Clicking on the + opens up each category.



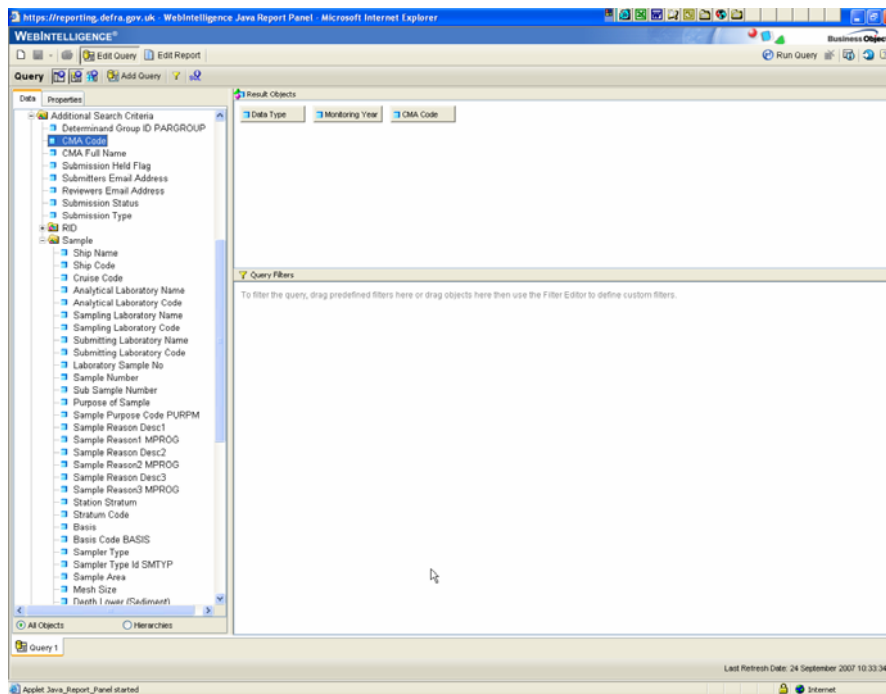
- The upper right hand pane (**Objects Pane**) shows the fields (e.g. determinand code, CMA etc) that you wish to be included in the query.
- The lower right hand pane (**Filter Pane**) allows you to restrict queries by specific codes within a field (e.g. Pb, CEFAS).

### 3.2 Starting a Simple Query

1. To add an object from the left hand pane to the objects or filter panes, click and drag or double click.
2. To remove an object, click on it and hit delete.

### 3.3 Running a simple query

1. Select Data type from the folder 'Which Measurements?'
2. Select Monitoring Year from 'Date/time of sample'
3. Select CMA Code from 'Additional Search Criteria'.



4. Click on **Run Query** and you will be presented with the results which shows which years, data types and CMAs have data in MERMAN.

The screenshot shows a WebIntelligence report viewer interface. The main content area displays a table with the following data:

Data Type	Monitoring Year	CMA Code
Contaminants and	1999	CEFAS
Contaminants and	1999	EAAng
Contaminants and	1999	EATNE
Contaminants and	1999	EANW
Contaminants and	1999	EASou
Contaminants and	1999	EASW
Contaminants and	1999	EATha
Contaminants and	1999	EAWal
Contaminants and	1999	EHS
Contaminants and	1999	FRS
Contaminants and	1999	SEPA
Contaminants and	2000	EANW
Contaminants and	2001	EANW
Contaminants and	2005	AFBI
Contaminants and	2005	CEFAS
Contaminants and	2005	EAAng
Contaminants and	2005	EANE
Contaminants and	2005	EANW
Contaminants and	2005	EASou
Contaminants and	2005	EASW
Contaminants and	2005	EATha
Contaminants and	2005	EAWal
Contaminants and	2005	EHS
Contaminants and	2005	FRS
Contaminants and	2005	SEPA
Contaminants and	2006	AFBI
Contaminants and	2006	CEFAS
Contaminants and	2006	EAAng
Contaminants and	2006	EANE
Contaminants and	2006	EANW
Contaminants and	2006	EASou
Contaminants and	2006	EASW
Contaminants and	2006	EATha
Contaminants and	2006	EAWal
Contaminants and	2006	EHS
Contaminants and	2006	FRS

5. Expand column width by clicking and moving on arrows which appear when you hover the mouse arrow between columns.
6. Columns may be easily moved into a different order by clicking on the column heading and dragging it to the right or left of a different column heading. A rectangular box will appear to highlight the positioning of the column.
7. Pick up the monitoring year by clicking on the column header and dragging it to the left of the Data Type column. Remember your the column heading has to overlaid on to the left-hand side of the other one, you should see a blue rectangle to reflect this.
8. Drop the column when you are happy.

The screenshot shows a WebIntelligence report titled "Report 1" with the following data:

Data Type	Monitoring Year	CMA Code
Contaminants and biological effects in biota data	1999	CEFAS
Contaminants and biological effects in biota data	1999	EAAng
Contaminants and biological effects in biota data	1999	EA NE
Contaminants and biological effects in biota data	1999	EA NW
Contaminants and biological effects in biota data	1999	EASou
Contaminants and biological effects in biota data	1999	EA SW
Contaminants and biological effects in biota data	1999	EATha
Contaminants and biological effects in biota data	1999	EAWal
Contaminants and biological effects in biota data	1999	EHS
Contaminants and biological effects in biota data	1999	FRS
Contaminants and biological effects in biota data	1999	SEPA
Contaminants and biological effects in biota data	2000	EA NW
Contaminants and biological effects in biota data	2001	EA NW
Contaminants and biological effects in biota data	2005	AFB
Contaminants and biological effects in biota data	2005	CEFAS
Contaminants and biological effects in biota data	2005	EAAng
Contaminants and biological effects in biota data	2005	EA NE
Contaminants and biological effects in biota data	2005	EA NW
Contaminants and biological effects in biota data	2005	EASou
Contaminants and biological effects in biota data	2005	EA SW
Contaminants and biological effects in biota data	2005	EATha
Contaminants and biological effects in biota data	2005	EAWal
Contaminants and biological effects in biota data	2005	EHS
Contaminants and biological effects in biota data	2005	FRS
Contaminants and biological effects in biota data	2005	SEPA
Contaminants and biological effects in biota data	2006	AFB
Contaminants and biological effects in biota data	2006	CEFAS
Contaminants and biological effects in biota data	2006	EAAng
Contaminants and biological effects in biota data	2006	EA NE
Contaminants and biological effects in biota data	2006	EA NW
Contaminants and biological effects in biota data	2006	EASou
Contaminants and biological effects in biota data	2006	EA SW
Contaminants and biological effects in biota data	2006	EATha
Contaminants and biological effects in biota data	2006	EAWal
Contaminants and biological effects in biota data	2006	EHS
Contaminants and biological effects in biota data	2006	FRS

9. **Note** that the data are sorted according to which columns appear first.

### 3.4 EXERCISE: Running Queries

Toggle between Edit Query and Edit Report to get a feel for what a document is made up of.

We do not need to save this document so click on new document and select yes when prompted to loose any unsaved modifications.

https://reporting.defra.gov.uk WebIntelligence Java Report Panel - Microsoft Internet Explorer

WEBINTELLIGENCE®

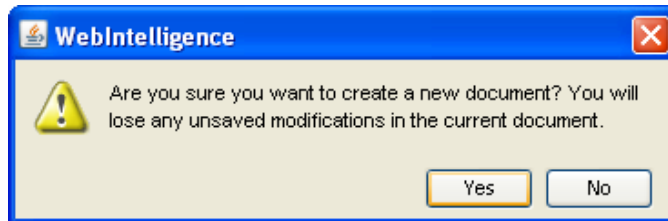
Business Objects

Report Title

CMA Code	Data Type	Monitoring Year
AFBI	Contaminants and biological effects in biota data	2005
AFBI	Contaminants and biological effects in biota data	2006
AFBI	Contaminants and biological effects in sediment data	1999
AFBI	Contaminants and biological effects in sediment data	2005
AFBI	Contaminants and biological effects in sediment data	2006
AFBI	Contaminants, nutrients, biological and eutrophication data	2005
AFBI	Contaminants, nutrients, biological and eutrophication data	2006
AFBI	Zoobenthos (e.g., soft-bottom macrofauna) data	1993
AFBI	Zoobenthos (e.g., soft-bottom macrofauna) data	1997
AFBI	Zoobenthos (e.g., soft-bottom macrofauna) data	1998
AFBI	Zoobenthos (e.g., soft-bottom macrofauna) data	1999
AFBI	Zoobenthos (e.g., soft-bottom macrofauna) data	1999
AFBI	Zoobenthos (e.g., soft-bottom macrofauna) data	2000
AFBI	Zoobenthos (e.g., soft-bottom macrofauna) data	2001
AFBI	Zoobenthos (e.g., soft-bottom macrofauna) data	2002
AFBI	Zoobenthos (e.g., soft-bottom macrofauna) data	2003
AFBI	Zoobenthos (e.g., soft-bottom macrofauna) data	2004
CEFAS	Contaminants and biological effects in biota data	1999
CEFAS	Contaminants and biological effects in biota data	2005
CEFAS	Contaminants and biological effects in biota data	2006
CEFAS	Contaminants and biological effects in sediment data	1999
CEFAS	Contaminants and biological effects in sediment data	2005
CEFAS	Contaminants and biological effects in sediment data	2006
CEFAS	Contaminants, nutrients, biological and eutrophication data	2005
CEFAS	Contaminants, nutrients, biological and eutrophication data	2006
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	1990
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	1992
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	1993
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	1994
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	1995
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	1996
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	1997
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	1998
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	1999
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	2000
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	2001
CEFAS	Zoobenthos (e.g., soft-bottom macrofauna) data	2002

Report1

Last Refresh Date: 24 September 2007 10:50:01

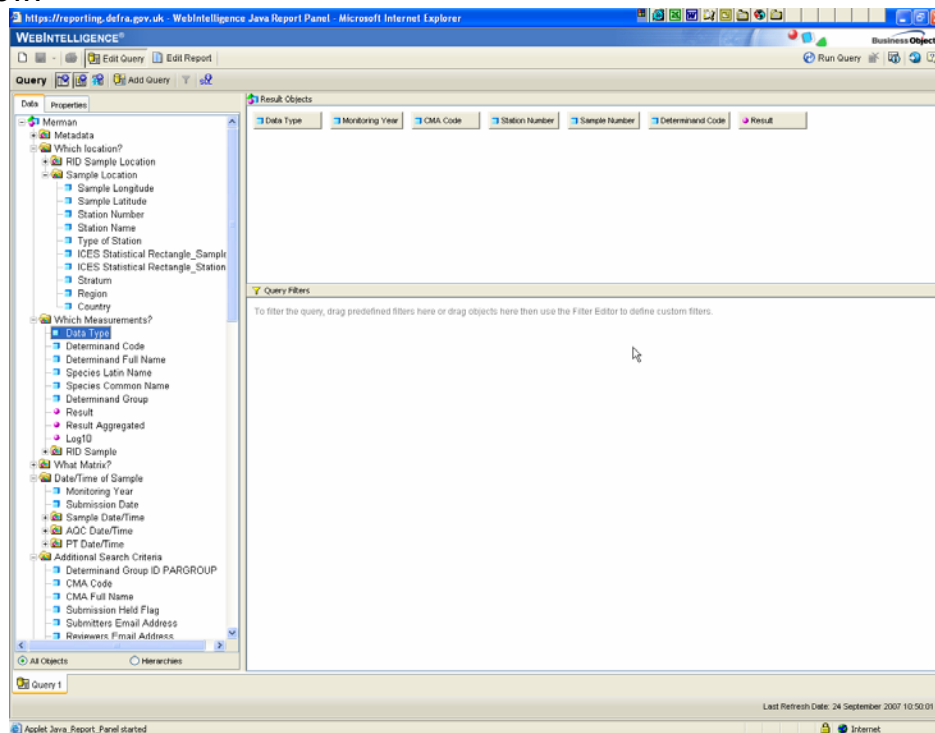




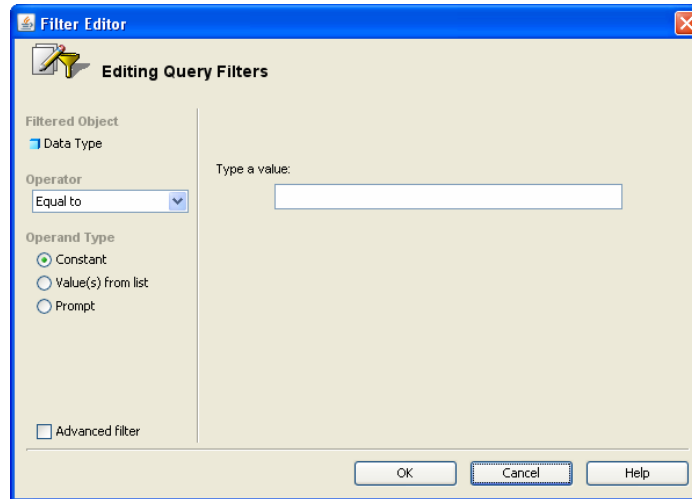
### 3.5 Running a more complex query using filters

- In this example we will retrieve data for Pb in sediment data for each Sample and each Site within 1 Monitoring Year for a specific CMA.
- To create this query we need to filter by Monitoring Year (2005), CMA (e.g. SEPA), Determinand Code (Pb) and Data Type (Contaminants in Sediments).
- We must also include Station Number, Sample Number and the Result in the query for the results to be displayed on those criteria.

1. Click and drag across the required objects to the object pane as shown below.

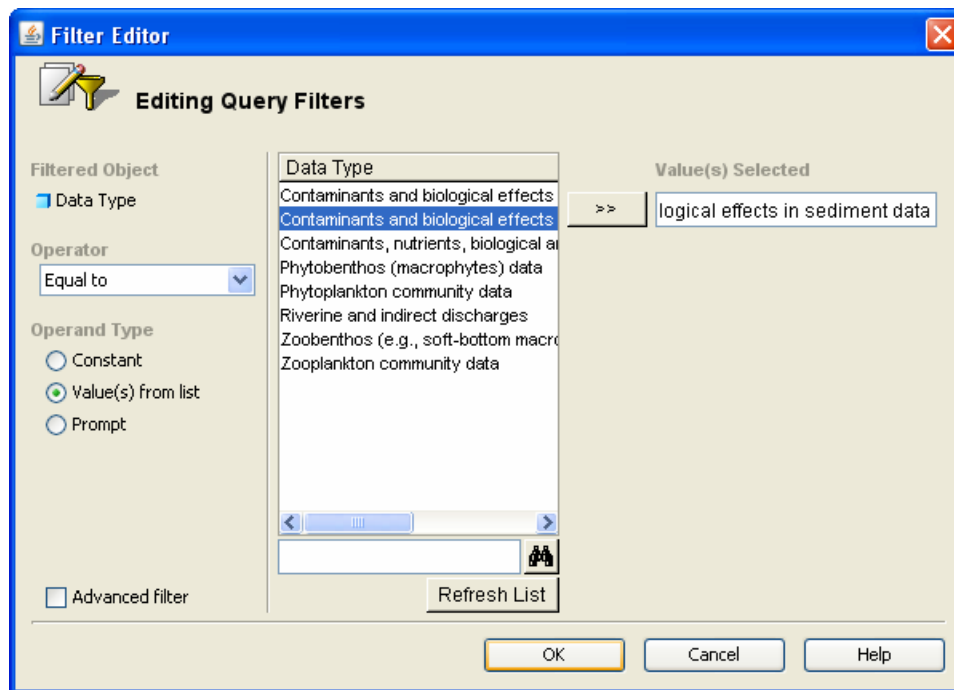


2. To filter, click and drag across Data Type to the filter pane.
3. You will be prompted to either type in the code you wish to filter by if you know it (**Constant**), or pick a value from a list.

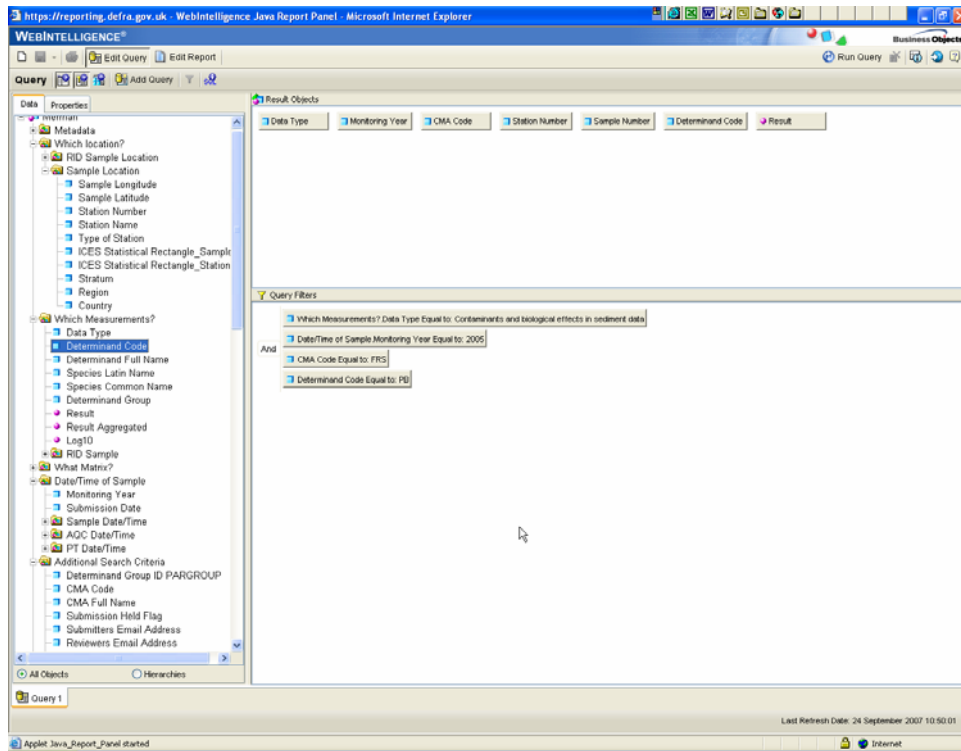


4. Highlight **Pick value from list** and double click 'Contaminants and Biological Effects in Sediments' (the second one down).
5. Select OK.

**Note:** It is good practice to 'Refresh List' if there have been any code changes.



6. Drag and filter the objects Determinand Code (filter by PB), Monitoring Year (filter by 2005), and CMA Code (filter by your own CMA).

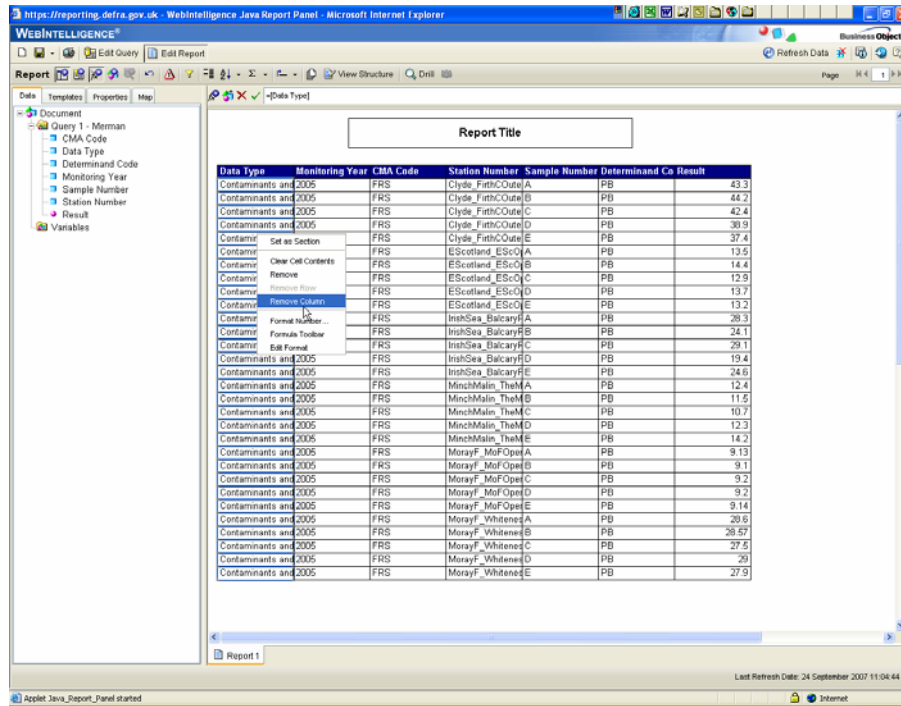


7. Once your screen looks like the above select **'Run Query'**.
8. The next screen should look something like the below but will be specific to each CMA.

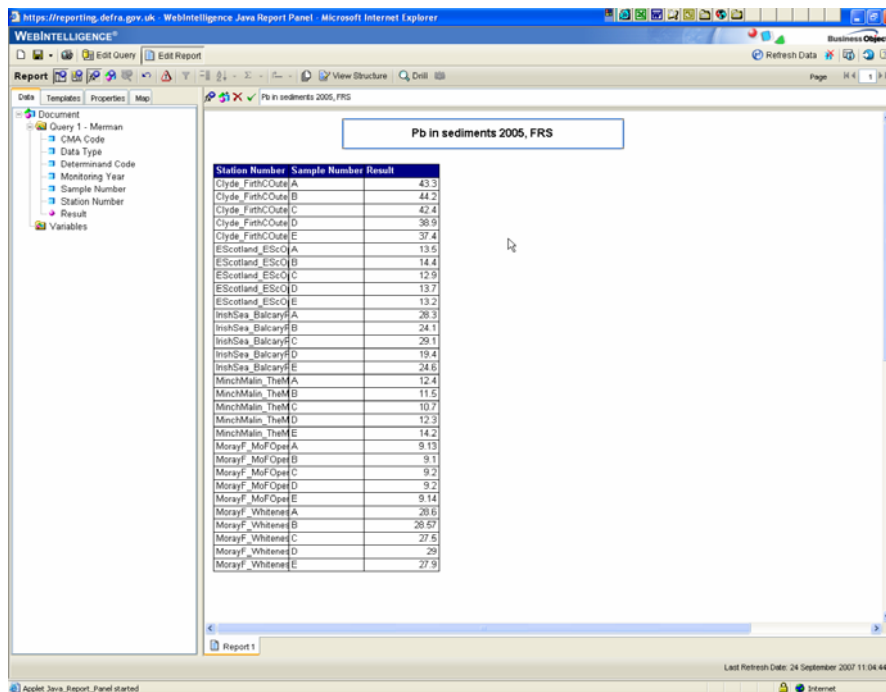
Data Type	Monitoring Year	CMA Code	Station Number	Sample Number	Determinand Code	Result
Contaminants and 2005	FRS		Clyde_FirthCouteA		PB	43.3
Contaminants and 2005	FRS		Clyde_FirthCouteB		PB	44.2
Contaminants and 2005	FRS		Clyde_FirthCouteC		PB	42.4
Contaminants and 2005	FRS		Clyde_FirthCouteD		PB	36.9
Contaminants and 2005	FRS		Clyde_FirthCouteE		PB	37.4
Contaminants and 2005	FRS		EScotland_ESCOA		PB	13.5
Contaminants and 2005	FRS		EScotland_ESCOB		PB	14.4
Contaminants and 2005	FRS		EScotland_ESCO C		PB	12.9
Contaminants and 2005	FRS		EScotland_ESCO D		PB	13.7
Contaminants and 2005	FRS		EScotland_ESCO E		PB	13.2
Contaminants and 2005	FRS		IrishSea_BalcaryA		PB	28.3
Contaminants and 2005	FRS		IrishSea_BalcaryB		PB	24.1
Contaminants and 2005	FRS		IrishSea_BalcaryC		PB	29.1
Contaminants and 2005	FRS		IrishSea_BalcaryD		PB	19.4
Contaminants and 2005	FRS		IrishSea_BalcaryE		PB	24.6
Contaminants and 2005	FRS		MerchMain_ThmA		PB	12.4
Contaminants and 2005	FRS		MerchMain_ThmB		PB	11.5
Contaminants and 2005	FRS		MerchMain_ThmC		PB	10.7
Contaminants and 2005	FRS		MerchMain_ThmD		PB	12.3
Contaminants and 2005	FRS		MerchMain_ThmE		PB	14.2
Contaminants and 2005	FRS		MorayF_MofOpenA		PB	9.13
Contaminants and 2005	FRS		MorayF_MofOpenB		PB	9.1
Contaminants and 2005	FRS		MorayF_MofOpenC		PB	9.2
Contaminants and 2005	FRS		MorayF_MofOpenD		PB	9.2
Contaminants and 2005	FRS		MorayF_MofOpenE		PB	9.14
Contaminants and 2005	FRS		MorayF_WhiteneA		PB	26.6
Contaminants and 2005	FRS		MorayF_WhiteneB		PB	26.57
Contaminants and 2005	FRS		MorayF_WhiteneC		PB	27.5
Contaminants and 2005	FRS		MorayF_WhiteneD		PB	29
Contaminants and 2005	FRS		MorayF_WhiteneE		PB	27.9

9. Some of the columns that are common to all rows are not required and may be removed and the details put in the report title instead.

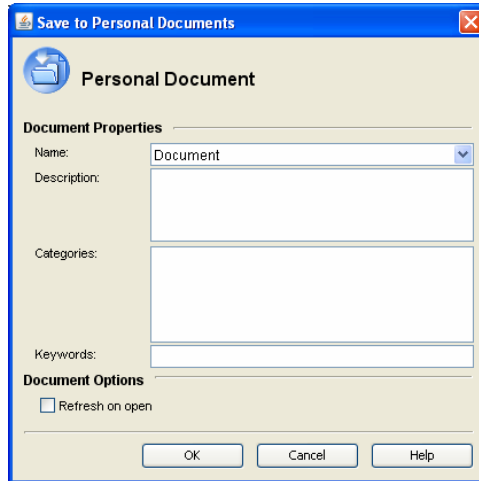
10. Right click on the columns to remove and select **Remove column**.
11. Continue until you are left with Station Number, Sample Number and Result.



12. Double click the report title and type a title into the box that appears (e.g. Pb in sediments 2005) and then hit return.
13. Your report should look like below (but specific to your CMA).



1. Save your document as a **Personal Document** by clicking the downward arrow next to the 'File save' symbol and selecting personal document.
2. Save your file as '**Pb\_in\_Sediment**', and type in some suitable description and keywords and click OK.

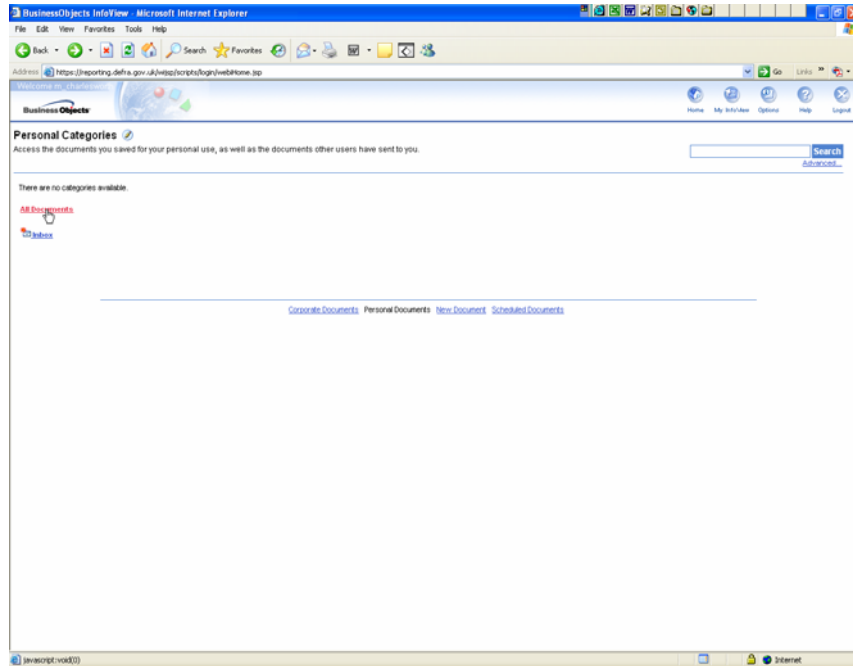


## Thoughts

- What would happen if you ran the query without filtering on data type?
  - What would happen if you ran the query without including the station numbers?
3. Close the Universe by clicking the X in the corner.

### 3.6 *Editing an Existing Query*

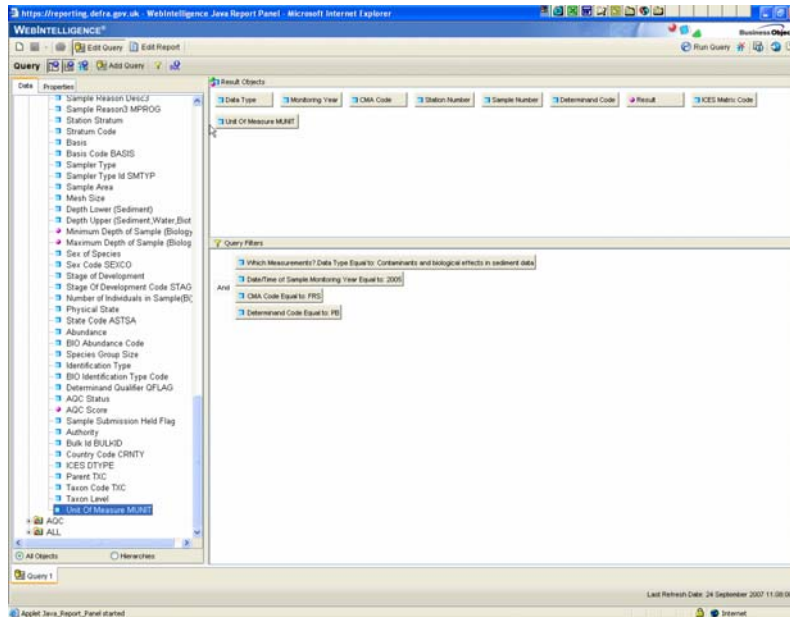
- Suppose you want to modify that query for a colleague who needs the information but also requires the units of measurement and the matrix code to be displayed.
1. From the BO homepage, open Personal Documents and select 'All documents'.
  2. Select the report you were just working on.



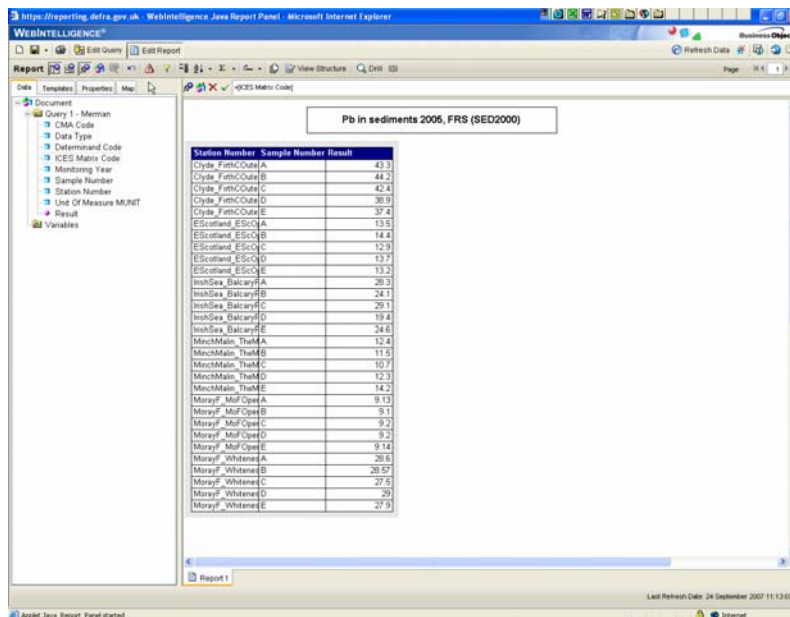
3. Your report will automatically open.
4. Select 'Edit' and the Web Intelligence Universe window will open allowing you to click 'Edit Query' and make changes to your query.

Station Number	Sample Number	Result
Clyde_FirthCOute	A	43.3
Clyde_FirthCOute	B	44.2
Clyde_FirthCOute	C	42.4
Clyde_FirthCOute	D	38.9
Clyde_FirthCOute	E	37.4
EScotland_EScOj	A	13.5
EScotland_EScOj	B	14.4
EScotland_EScOj	C	12.9
EScotland_EScOj	D	13.7
EScotland_EScOj	E	13.2
InshSea_Balcary	A	28.3
InshSea_Balcary	B	24.1
InshSea_Balcary	C	29.1
InshSea_Balcary	D	19.4
InshSea_Balcary	E	24.6
MinchMalin_TheM	A	12.4
MinchMalin_TheM	B	11.5
MinchMalin_TheM	C	10.7
MinchMalin_TheM	D	12.3
MinchMalin_TheM	E	14.2
MinchMalin_TheM	F	13.1

- From **What Matrix?** drag across 'ICES Matrix Code' and from **Additional Search Criteria** and from **Sample** folder drag across 'Units of Measurement' into the Objects Pane.
- Your query should look like the below:



- Click **Run Query** and you will be presented with the report as below:



- You will notice that the report does not have these new fields in.
- You must drag them in from the left hand pane and drop them into the columns as you wish.

**Pb in sediments 2006, FRS (SED2000)**

Station Number	ICES Matrix Code	Sample Number	Result	Units of Measure
Clyde_FirthOuter	SED2000	A	43.5	
Clyde_FirthOuter	SED2000	B	44.2	
Clyde_FirthOuter	SED2000	C	42.4	
Clyde_FirthOuter	SED2000	D	38.9	
Clyde_FirthOuter	SED2000	E	37.4	
EScotland_ESCo	SED2000	A	13.5	
EScotland_ESCo	SED2000	B	14.4	
EScotland_ESCo	SED2000	C	12.9	
EScotland_ESCo	SED2000	D	13.7	
EScotland_ESCo	SED2000	E	13.2	
InshSea_Balcary	SED2000	A	28.3	
InshSea_Balcary	SED2000	B	24.1	
InshSea_Balcary	SED2000	C	29.1	
InshSea_Balcary	SED2000	D	19.4	
InshSea_Balcary	SED2000	E	24.6	
MinchMain_TheM	SED2000	A	12.4	
MinchMain_TheM	SED2000	B	11.5	
MinchMain_TheM	SED2000	C	10.7	
MinchMain_TheM	SED2000	D	12.3	
MinchMain_TheM	SED2000	E	14.2	
MorayF_MoFOper	SED2000	A	9.13	
MorayF_MoFOper	SED2000	B	9.1	
MorayF_MoFOper	SED2000	C	9.3	
MorayF_MoFOper	SED2000	D	9.2	
MorayF_MoFOper	SED2000	E	9.14	
MorayF_Whitene	SED2000	A	26.6	
MorayF_Whitene	SED2000	B	26.67	
MorayF_Whitene	SED2000	C	27.5	
MorayF_Whitene	SED2000	D	29	
MorayF_Whitene	SED2000	E	27.9	

10. Remove the 2 extra fields, Matrix code and Units of Measure, from the report and change the title to reflect the changes so your report looks as below.
11. Save your document (i.e. overwrite the existing document). You could save this report as an excel file or pdf file if you need.

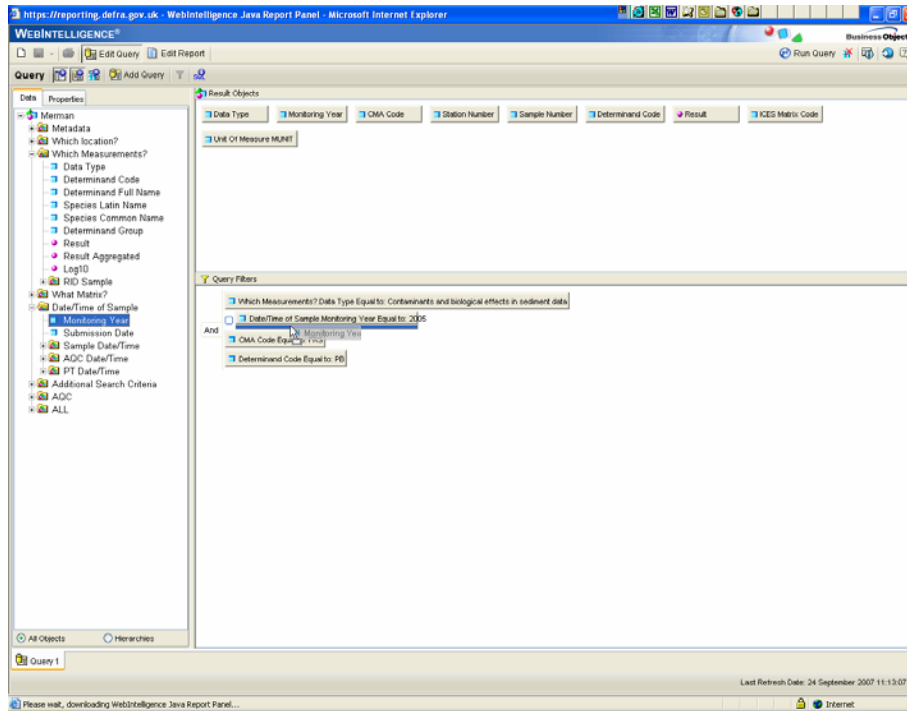
**Pb (mg/kg) in sediments 2006, FRS (SED2000), SED2000**

Station Number	Sample Number	Result
Clyde_FirthOuter	A	43.3
Clyde_FirthOuter	B	44.2
Clyde_FirthOuter	C	42.4
Clyde_FirthOuter	D	38.9
Clyde_FirthOuter	E	37.4
EScotland_ESCo	A	13.5
EScotland_ESCo	B	14.4
EScotland_ESCo	C	12.9
EScotland_ESCo	D	13.7
EScotland_ESCo	E	13.2
InshSea_Balcary	A	28.3
InshSea_Balcary	B	24.1
InshSea_Balcary	C	29.1
InshSea_Balcary	D	19.4
InshSea_Balcary	E	24.6
MinchMain_TheM	A	12.4
MinchMain_TheM	B	11.5
MinchMain_TheM	C	10.7
MinchMain_TheM	D	12.3
MinchMain_TheM	E	14.2
MorayF_MoFOper	A	9.13
MorayF_MoFOper	B	9.1
MorayF_MoFOper	C	9.2
MorayF_MoFOper	D	9.2
MorayF_MoFOper	E	9.14
MorayF_Whitene	A	26.6
MorayF_Whitene	B	26.67
MorayF_Whitene	C	27.5
MorayF_Whitene	D	29
MorayF_Whitene	E	27.9

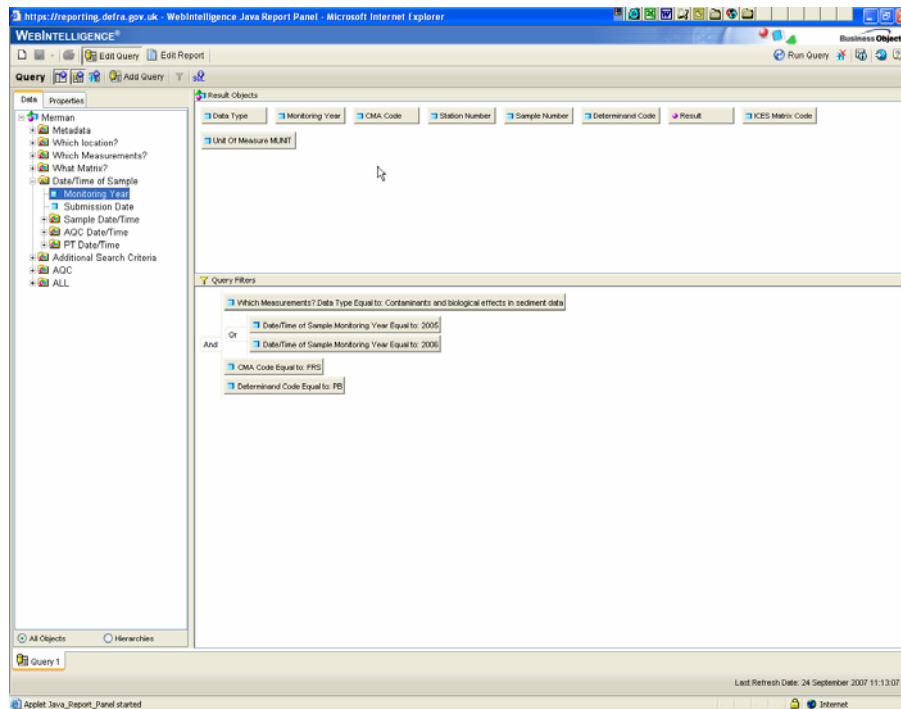


### 3.7 *Advanced Filtering - Using the AND/OR operators*

- When an object is dragged across to the filter pane it will be linked with the other objects in the filter pane by the AND/OR operators.
  - The AND operator will restrict data to the filtered objects. For example filtering by PB AND 2005 will restrict the results to data that was collected in 2005 and the determinand PB.
  - The OR operator will restrict the results to data of one or other criteria. For example filtering by PB AND 2005 OR 2006 will return data for PB in years 2005 or 2006.
  - The default operator is AND.
  - The AND/OR operators are chosen by the placement of the object when dragging to the filtering pane.
- 
1. Save your document as a new document, which we can play around with. E.g. append the file name with a suffix 'B'.
  2. Edit your existing query so that results are shown for 2005 **OR** 2006 by dragging across 'Monitoring Year' and overlying it on the existing filter 'Monitoring Year equal to 2005'.
  3. If the box that you are adding becomes indented then the operator will be OR.
  4. Note that by also double clicking the AND operator it will turn it to OR and visa versa.



5. Run the query and the results will be shown in the reports page.
6. Add in the Monitoring Year into the results table so that the 2005 and 2006 results can be distinguished.
7. Change the title accordingly.
8. Your Edit Query should look like this before you run the report.



9. Your report should be like this once you add in the monitoring year.

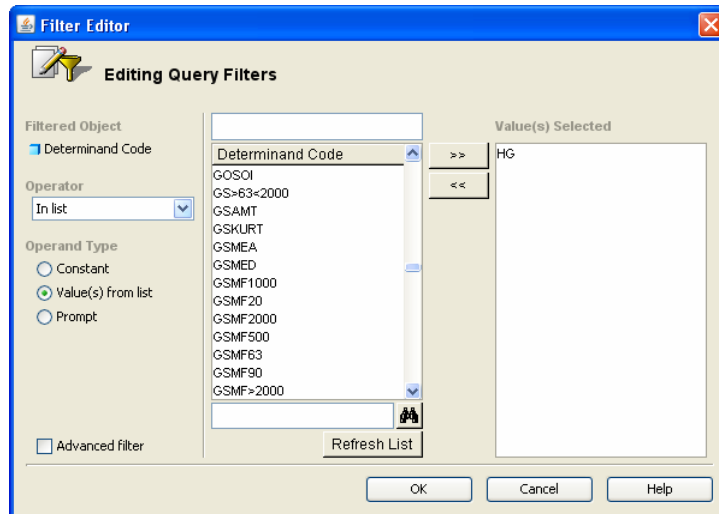
Pb (mg/kg) in sediments 2005, FRS (SED2000), SED2000

Station Number	Monitoring Year	Sample Number	Result
Clyde_FirthCOuterOffshore_se01	2005	A	43.3
Clyde_FirthCOuterOffshore_se01	2005	B	44.2
Clyde_FirthCOuterOffshore_se01	2005	C	42.4
Clyde_FirthCOuterOffshore_se01	2005	D	38.9
Clyde_FirthCOuterOffshore_se01	2005	E	37.4
EScotland_EScIntermediate_se01	2006	A	13.8
EScotland_EScIntermediate_se01	2006	B	13.55
EScotland_EScOpenSea_se01	2005	A	13.5
EScotland_EScOpenSea_se01	2005	B	14.4
EScotland_EScOpenSea_se01	2005	C	12.9
EScotland_EScOpenSea_se01	2005	D	13.7
EScotland_EScOpenSea_se01	2005	E	13.2
EScotland_EScOpenSea_se01	2006	A	13.9
EScotland_EScOpenSea_se01	2006	B	13.9
EScotland_EScOpenSea_se01	2006	C	13.58
EScotland_Scudiness_se01	2006	D	18.48
EScotland_Scudiness_se01	2006	E	18.18
EScotland_TheDentelHead_se01	2006	E	16.02
EShetland_ESNIntermediate_se01	2006	A	10.24
EShetland_ESNIntermediate_se01	2006	B	11.26
EShetland_ESNIntermediate_se01	2006	C	10.71
EShetland_ESNIntermediate_se01	2006	D	10.56
EShetland_ESNIntermediate_se01	2006	E	10.52
Fladen_FlaOpenSea_se01	2006	A	13.45
Fladen_FlaOpenSea_se01	2006	B	16.4
Fladen_FlaOpenSea_se01	2006	C	16.84
Fladen_FlaOpenSea_se01	2006	D	14.63
Fladen_FlaOpenSea_se01	2006	E	13.66
Fladen_FlaOpenSea_se02	2006	A	15.43
Fladen_FlaOpenSea_se02	2006	B	16.59
Fladen_FlaOpenSea_se02	2006	C	15.29
Fladen_FlaOpenSea_se02	2006	D	18.11
Fladen_FlaOpenSea_se02	2006	E	17.7
Fladen_FlaOpenSea_se03	2006	A	11.91
Fladen_FlaOpenSea_se03	2006	B	12.28

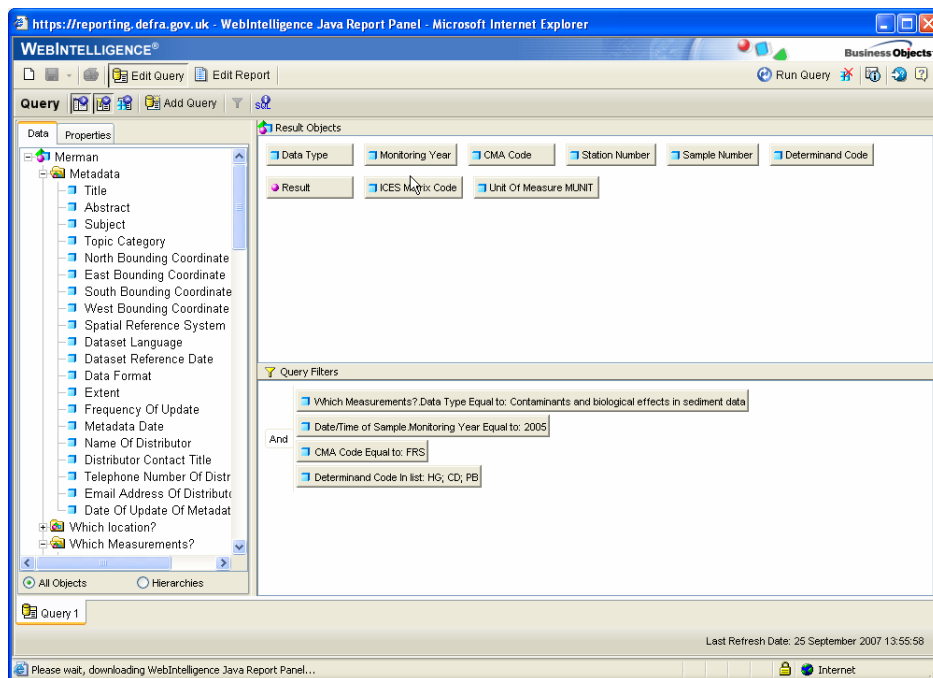
### 3.8 Using Other Operators from a List.

- Alternatively, there are a number of other operators that may be used such as 'In list' which allows you to choose more than one code per field (eg. more than one determinand from the determinand codes).

10. Edit the Query by deleting the additional filter pertaining to 2006.
11. Double click the Determinand Code object already in the Query filter pane and select 'In list' from the Operator drop-down list.



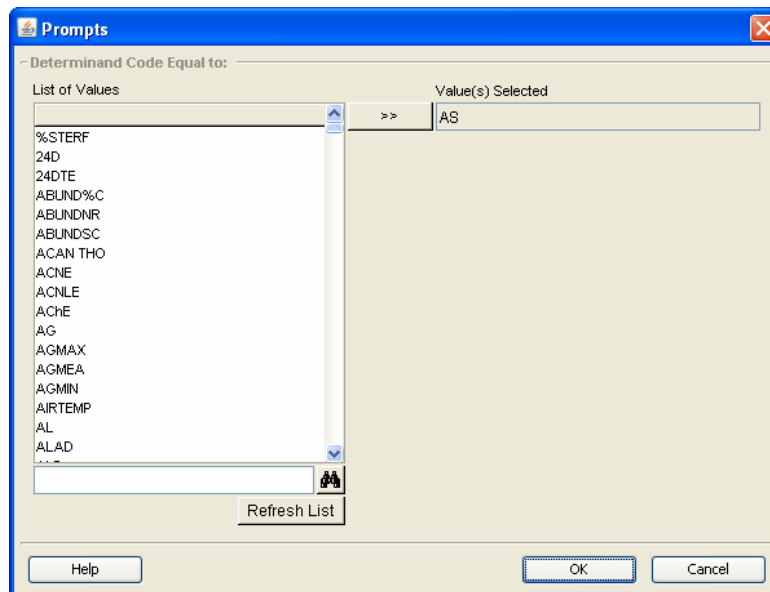
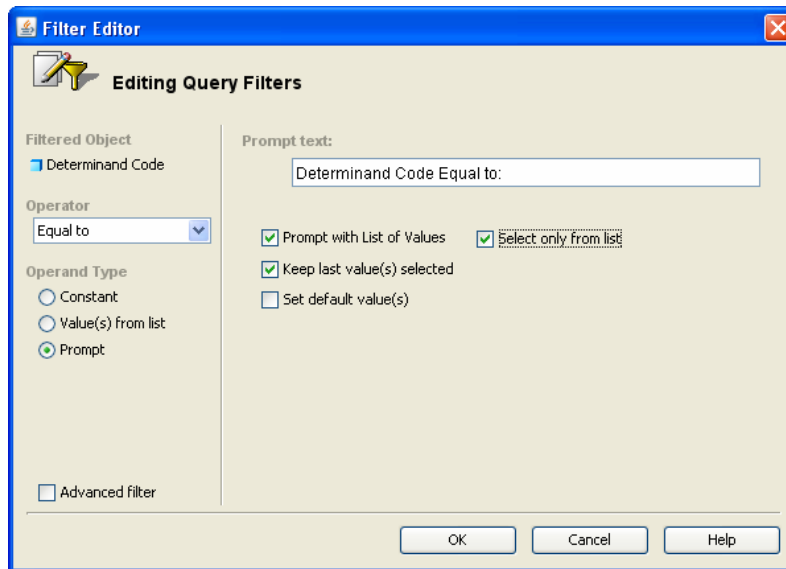
12. Double click on PB, HG and CD so they appear in the values selected.
13. Click OK.
14. Your query should look like the below. Run your query.



15. In the report remove the column for Monitoring Year (no longer needed) and add in the columns for Determinand Code and Units of Measurement.

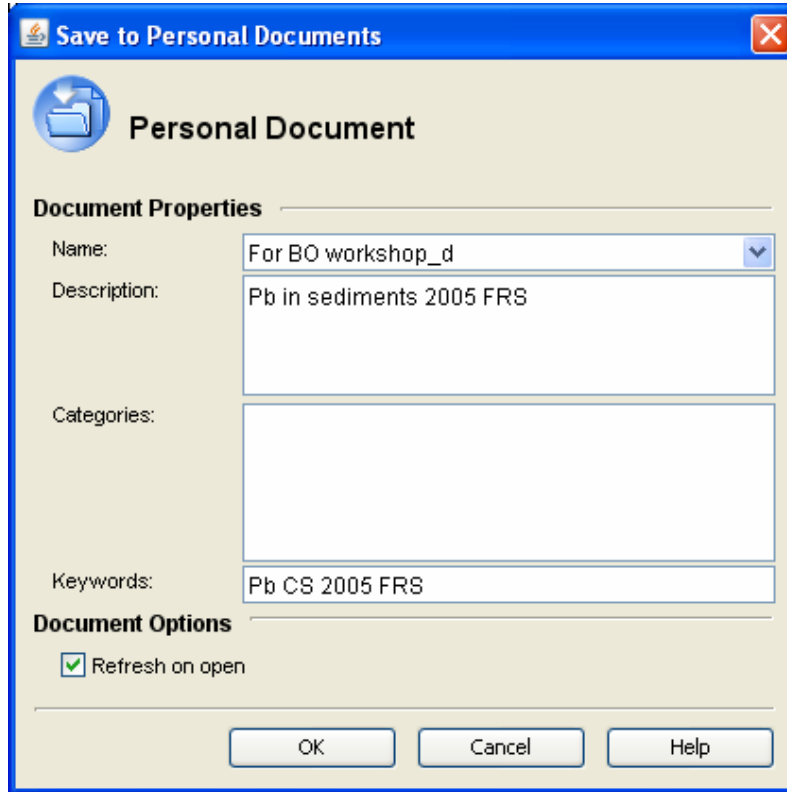
### 3.9 Prompt for filtering

- You may wish to run the same report for a number of different determinands and that each time the report opens it prompts you to choose a determinand rather than changing the query each time.
- Delete Determinand Code from your existing filter.
  - Drag it across again to the filter pane and select **'prompt'** and **'select from list'**, click OK.
  - When you **Run Query** you will now be asked to select a determinand and your results will reflect the determinand chosen.



### 3.10 Refresh on Opening

1. Save this document in BO Personal Documents using a different suffix.
2. On the save window check the box that says '**Refresh on open**'.
3. Click OK.
4. By clicking this box each time the report is opened you will be prompted to select a Determinand.
5. Close the report, reopen it and try this.



The screenshot shows a dialog box titled "Save to Personal Documents" with a sub-header "Personal Document". It is divided into two sections: "Document Properties" and "Document Options".

**Document Properties:**

- Name: For BO workshop\_d
- Description: Pb in sediments 2005 FRS
- Categories: (empty)
- Keywords: Pb CS 2005 FRS

**Document Options:**

- Refresh on open

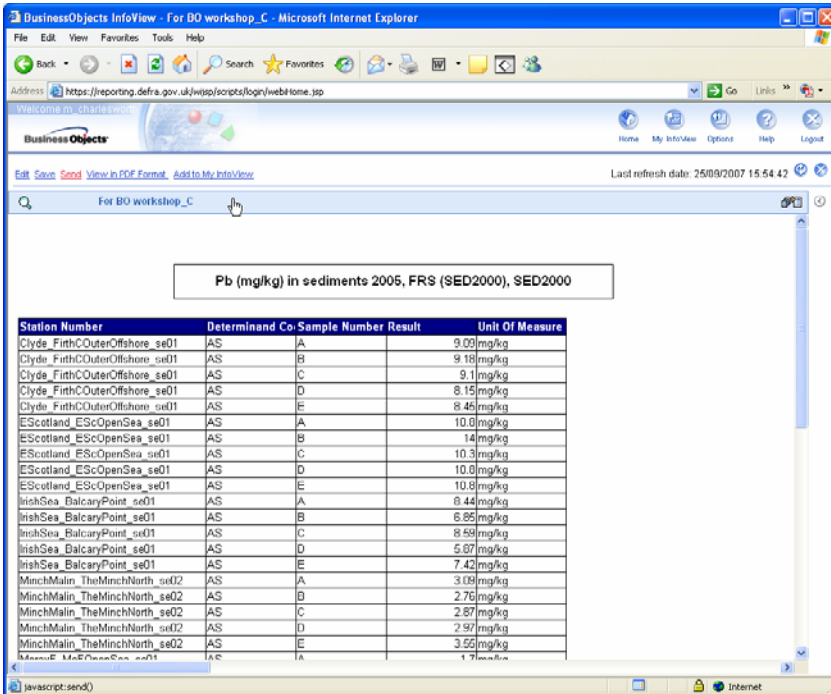
Buttons at the bottom: OK, Cancel, Help.

## 4.0 Sharing Documents

- It may be necessary to send a document (i.e. the BO query and results) to a colleague (myself and Corallie do this so we can check extractions of data for requests and if necessary make edits to the query or results).

### 4.1 Sending a document to a colleague who is also registered for MERMAN Business Objects

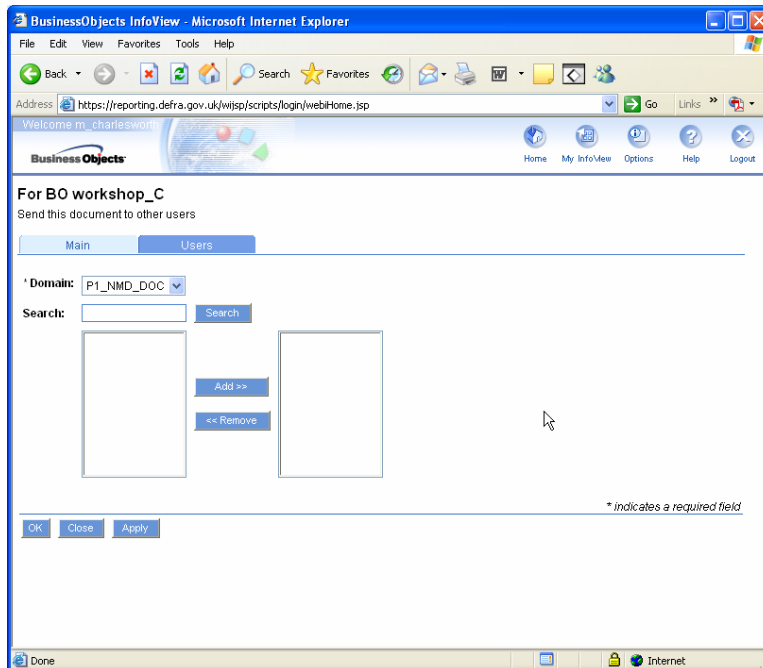
- Close all documents and return to the BO home page.
- Open a recently saved report from Personal documents and select 'Send'.



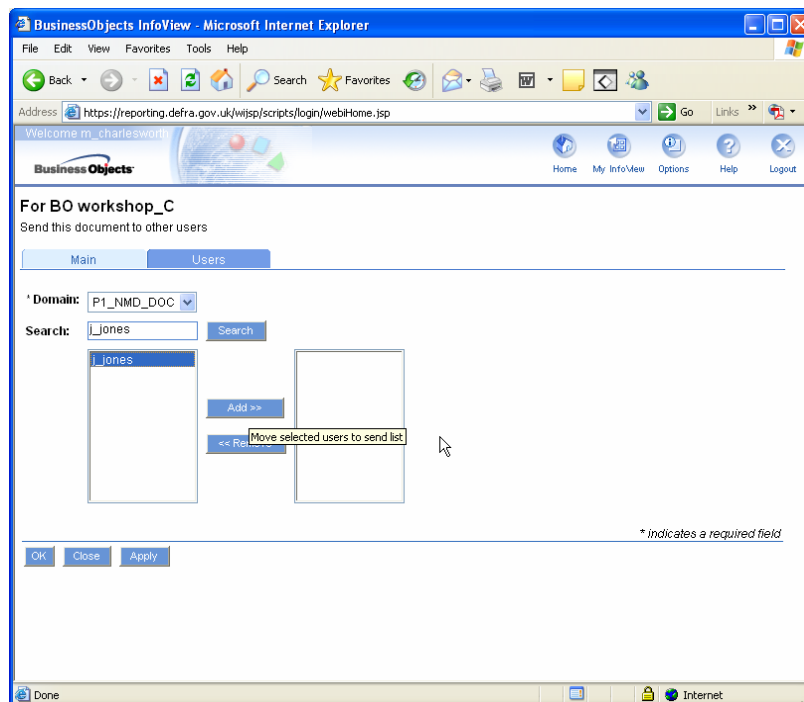
The screenshot shows a web browser window displaying the Business Objects InfoView interface. The main content area shows a report titled "Pb (mg/kg) in sediments 2005, FRS (SED2000), SED2000". The report is presented as a table with the following data:

Station Number	Determinand Co-Sample Number	Result	Unit Of Measure
Clyde_FirthCOuterOffshore_se01	AS A	9.09	mg/kg
Clyde_FirthCOuterOffshore_se01	AS B	9.18	mg/kg
Clyde_FirthCOuterOffshore_se01	AS C	9.1	mg/kg
Clyde_FirthCOuterOffshore_se01	AS D	8.15	mg/kg
Clyde_FirthCOuterOffshore_se01	AS E	8.45	mg/kg
EScotland_EScOpenSea_se01	AS A	10.0	mg/kg
EScotland_EScOpenSea_se01	AS B	14	mg/kg
EScotland_EScOpenSea_se01	AS C	10.3	mg/kg
EScotland_EScOpenSea_se01	AS D	10.0	mg/kg
EScotland_EScOpenSea_se01	AS E	10.0	mg/kg
IrishSea_BalcaryPoint_se01	AS A	6.44	mg/kg
IrishSea_BalcaryPoint_se01	AS B	6.86	mg/kg
IrishSea_BalcaryPoint_se01	AS C	6.59	mg/kg
IrishSea_BalcaryPoint_se01	AS D	5.07	mg/kg
IrishSea_BalcaryPoint_se01	AS E	7.42	mg/kg
MinchMalin_TheMinchNorth_se02	AS A	3.08	mg/kg
MinchMalin_TheMinchNorth_se02	AS B	2.76	mg/kg
MinchMalin_TheMinchNorth_se02	AS C	2.87	mg/kg
MinchMalin_TheMinchNorth_se02	AS D	2.97	mg/kg
MinchMalin_TheMinchNorth_se02	AS E	3.56	mg/kg
MinchMalin_TheMinchNorth_se02	AS	1.7	mg/kg

- Select the Users Tag from the new window as per below.

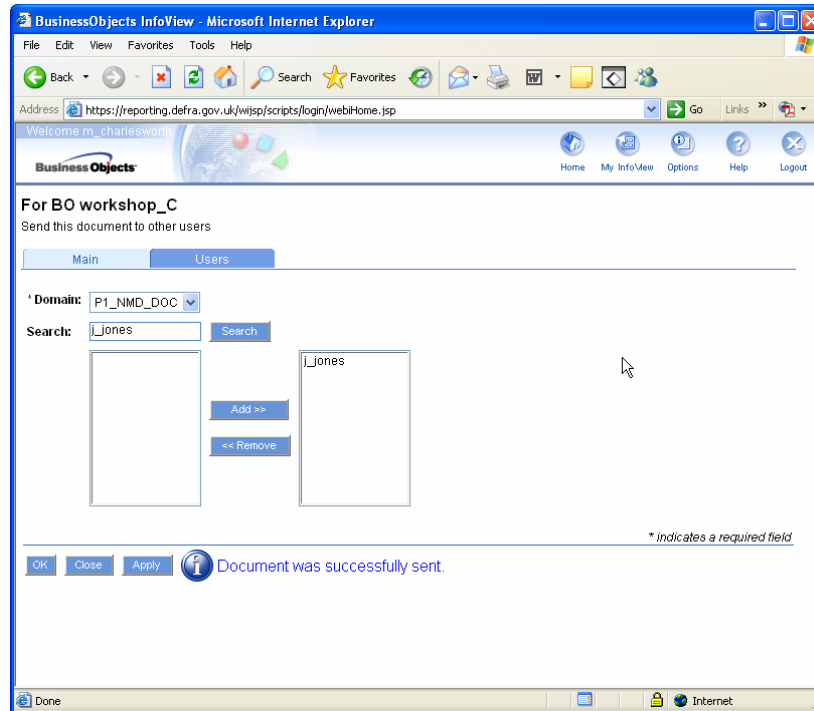


4. Type in the user name of the person you wish to send it to into the 'search' box.
- NOTE:** All Business Objects User IDs are the first character of their First Name, followed by an underscore, and then surname, e.g. m\_charlesworth.
5. Click search.
  6. If the person is registered then their ID will appear in the box below.
  7. Highlight the ID name and click add.





8. Select apply and if it has been successfully sent a message will appear.
9. Click close.
10. If you select 'Apply' and then 'OK' your document will be sent twice.



## 4.2 EXERCISE: Sending Reports

1. All send the report you have created to the person to your right.
2. Navigate to your inbox and await the file sent to you.

## 5.0 About Breaks

- 'Breaks' allow you to break up long tables of data into subgroups according to the data and the values you select.
- When you apply a break, the data are separated for each unique value of the selected variable.
- A blank row is also inserted after each value, which allows you to insert subtotals for the subgroup of the data if you so wish.

### 5.1 To organise a report with breaks:

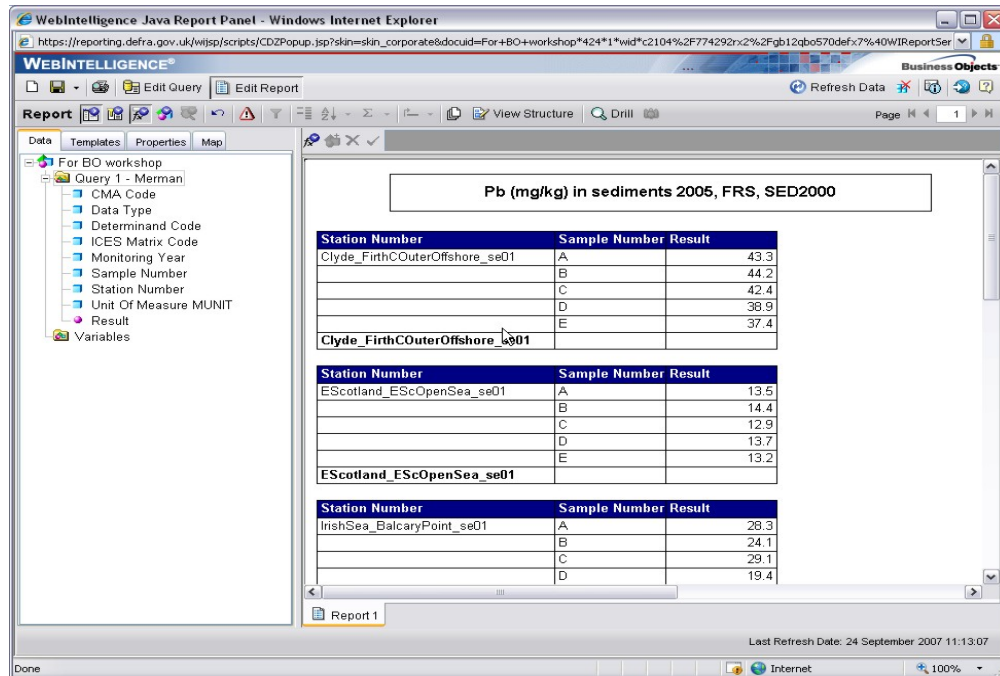
E.g. – We will use the '**PB\_in\_Sediment**' file for this chapter and break the table into smaller sections by Station Name

1. Go to Personal Documents and open up the **Pb\_in\_Sediments** document.
2. Click **Edit Document**
3. Click on a cell in the Station Name column

The screenshot shows a WebIntelligence report titled "Pb (mg/kg) in sediments 2005, FRS, SED2000". The report displays a table with three columns: Station Number, Sample Number, and Result. The data is grouped by Station Name, and a break is inserted after the first row of each group. An arrow points to the break symbol in the toolbar, labeled "Insert Break".

Station Number	Sample Number	Result
Clyde_FirthCOuterOffshore_se01	A	43.3
Clyde_FirthCOuterOffshore_se01	B	44.2
Clyde_FirthCOuterOffshore_se01	C	42.4
Clyde_FirthCOuterOffshore_se01	D	36.9
Clyde_FirthCOuterOffshore_se01	E	37.4
EScotland_EScOpenSea_se01	A	13.5
EScotland_EScOpenSea_se01	B	14.4
EScotland_EScOpenSea_se01	C	12.9
EScotland_EScOpenSea_se01	D	13.7
EScotland_EScOpenSea_se01	E	13.2
InshSea_BalcaryPoint_se01	A	26.3
InshSea_BalcaryPoint_se01	B	24.1
InshSea_BalcaryPoint_se01	C	26.1
InshSea_BalcaryPoint_se01	D	19.4
InshSea_BalcaryPoint_se01	E	24.6
MinchMalin_TheMinchNorth_se02	A	12.4
MinchMalin_TheMinchNorth_se02	B	11.5
MinchMalin_TheMinchNorth_se02	C	10.7
MinchMalin_TheMinchNorth_se02	D	12.3
MinchMalin_TheMinchNorth_se02	E	14.2
MorayF_MoFOpenSea_se01	A	9.13
MorayF_MoFOpenSea_se01	B	9.1
MorayF_MoFOpenSea_se01	C	9.2
MorayF_MoFOpenSea_se01	D	9.2
MorayF_MoFOpenSea_se01	E	9.14

4. From the report toolbar, click the **Insert/Remove Break** Button



5. An extra row has been added to the bottom of the table.
6. This can be kept or deleted, according to your preference.
7. To delete, click on a cell in the row. Right-click and **Remove Row**.
8. Save the document as **'Breaks'**.

## 5.2 To delete breaks

1. Click a cell in the column or row where you want to remove a break
  - E.g. Station name
2. From the report toolbar, click **Insert/Remove Break**.

## 6.0 About Calculations

- WebIntelligence provides standard calculation functions to help you make quick calculations in your reports.
- You can calculate *sums*, *averages* and *percents*. You can also calculate the *total count*, and the *minimum* and *maximum* values for a variable.

### 6.1 To organise a report with calculations

1. Using the '**Break's** report, we will find the sample count and average value for PB concentrations, per station.
2. Click on the column you want to add the calculation to to
  - E.g. Result
3. From the Report Toolbar, click the drop down menu next to the **Insert Sum** button

The screenshot shows a WebIntelligence report titled "Pb (mg/kg) in sediments 2005, FRS, SED2000". The report is displayed in a table format with columns for Station, Sample Number, and Result. The data is grouped by station. A calculation menu is open over the 'Result' column, showing options like Sum, Count, Average, Min, Max, and Percentage. The report shows results for four stations: Clyde\_FirthCOuterOffshore\_se01, EScotland\_EScOpenSea\_se01, IrishSea\_BalcaryPoint\_se01, and MinchMalin\_TheMinchNorth\_se02. Each station has five sample numbers (A-E) and their corresponding results.

Station	Sample Number	Result
Clyde_FirthCOuterOffshore_se01	A	43.3
	B	44.2
	C	42.4
	D	38.9
	E	37.4
EScotland_EScOpenSea_se01	A	13.5
	B	14.4
	C	12.9
	D	13.7
	E	13.2
IrishSea_BalcaryPoint_se01	A	26.3
	B	24.1
	C	29.1
	D	19.4
	E	24.6
MinchMalin_TheMinchNorth_se02	A	12.4

4. Click **Average**
5. An average is inserted in the bottom row of EACH subgroup.

WebIntelligence Java Report Panel - Windows Internet Explorer

https://reporting.defra.gov.uk/jw/jsp/scripts/CDZPopUp.jsp?skin=skin\_corporate&docid=For+BO+workshop\*424\*1\*wid\*c2178%2F774292rx1%2Fgb12qbo570defx7%40W/ReportServer%241\_\_EntityHome.858c

**WEBINTELLIGENCE®** Business Objects

Report Edit Query Edit Report Refresh Data View Structure Drill

Data Templates Properties Map

For BO workshop  
 Query 1 - Merman  
 CMA Code  
 Data Type  
 Determinand Code  
 ICES Matrix Code  
 Monitoring Year  
 Sample Number  
 Station Number  
 Unit Of Measure MUNT  
 Result  
 Variables

**Pb (mg/kg) in sediments 2005, FRS, SED2000**

Station Number	Sample Number	Result
Clyde_FirthCOuterOffshore_se01	A	43.3
	B	44.2
	C	42.4
	D	38.9
	E	37.4
<b>Clyde_FirthCOuterOffshore_se01</b>	<b>Average:</b>	<b>41.24</b>

Station Number	Sample Number	Result
EScotland_EScOpenSea_se01	A	13.5
	B	14.4
	C	12.9
	D	13.7
	E	13.2
<b>EScotland_EScOpenSea_se01</b>	<b>Average:</b>	<b>13.54</b>

Station Number	Sample Number	Result
IrishSea_BalcaryPoint_se01	A	28.3
	B	24.1
	C	29.1
	D	19.4
	E	24.6
<b>IrishSea_BalcaryPoint_se01</b>	<b>Average:</b>	<b>25.1</b>

Station Number	Sample Number	Result
MinchMalin_TheMinchNorth_se02	A	12.4

Report 1

Last Refresh Date: 25 September 2007 09:54:10

Done Internet 100%

## 6.2 EXERCISE: Applying Calculations

1. Add the Maximum and Minimum Value to the table.
2. Save Report as '**Calculations**'

## 6.3 To Delete a Calculation

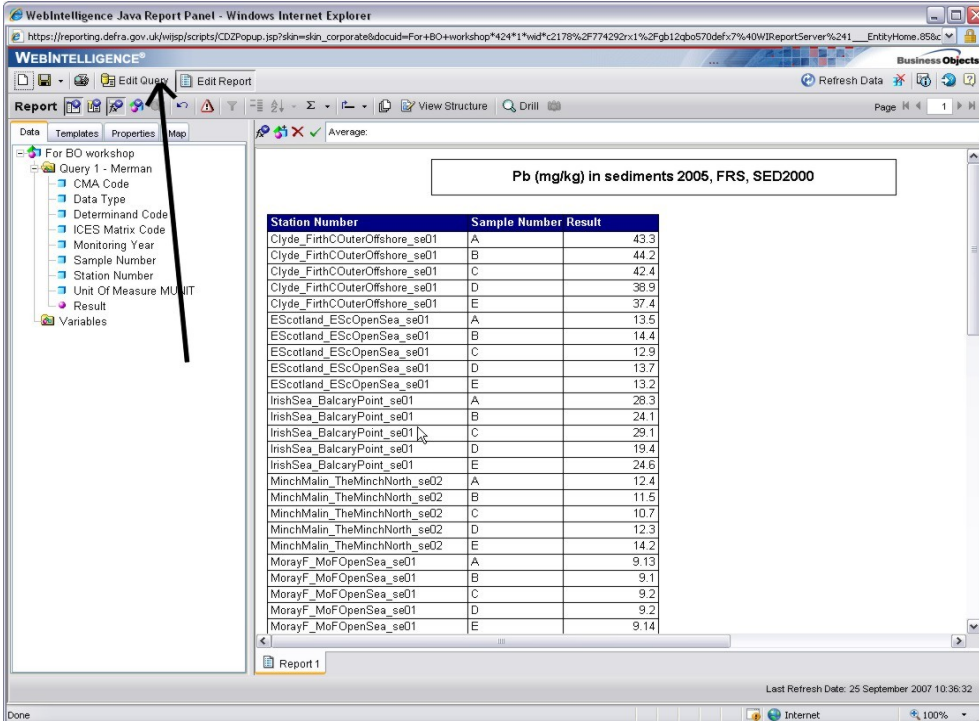
1. Right-click the table footer that contains the calculation
2. Select **Remove Row** or **Remove Column**

## 7.0 About Sorts

- The sort feature allows you to format data in an ascending or descending order.
- The default sort is applied to the 1<sup>st</sup> column, then the 2<sup>nd</sup> column etc.

### 7.1 Creating a Document with Sorts

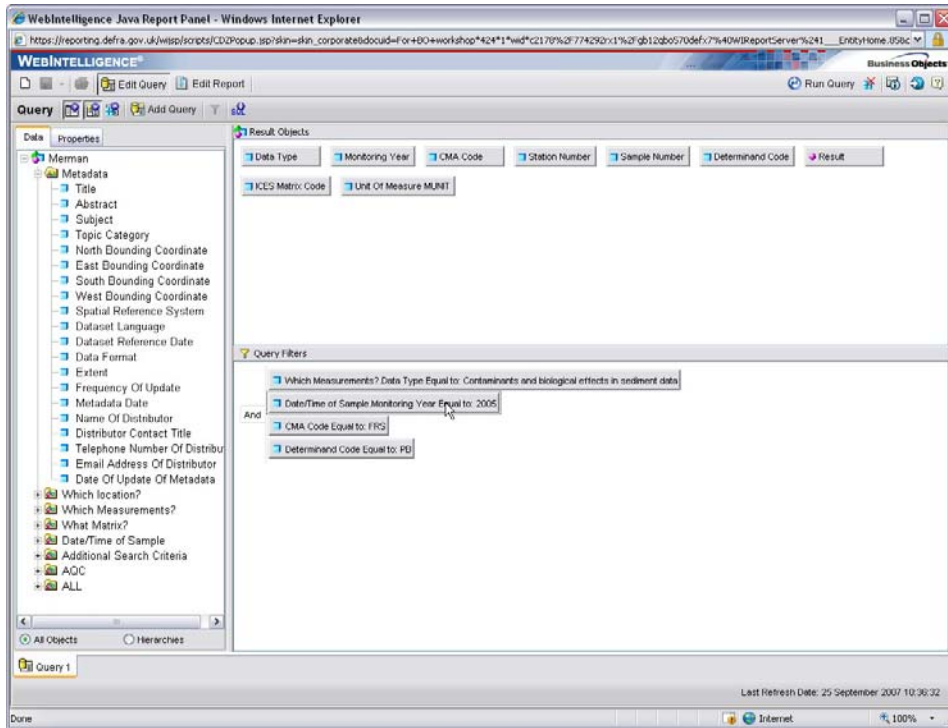
1. Open 'Pb\_in\_Sediments' document
2. The report is already sorted by 'Station Name' (1st column)
3. We can add in the 'Monitoring Year' and then sort by this.
4. First we need to take off the filter for the 'Monitoring Year', which at the moment is set to 2005.
5. Click **Edit Query**



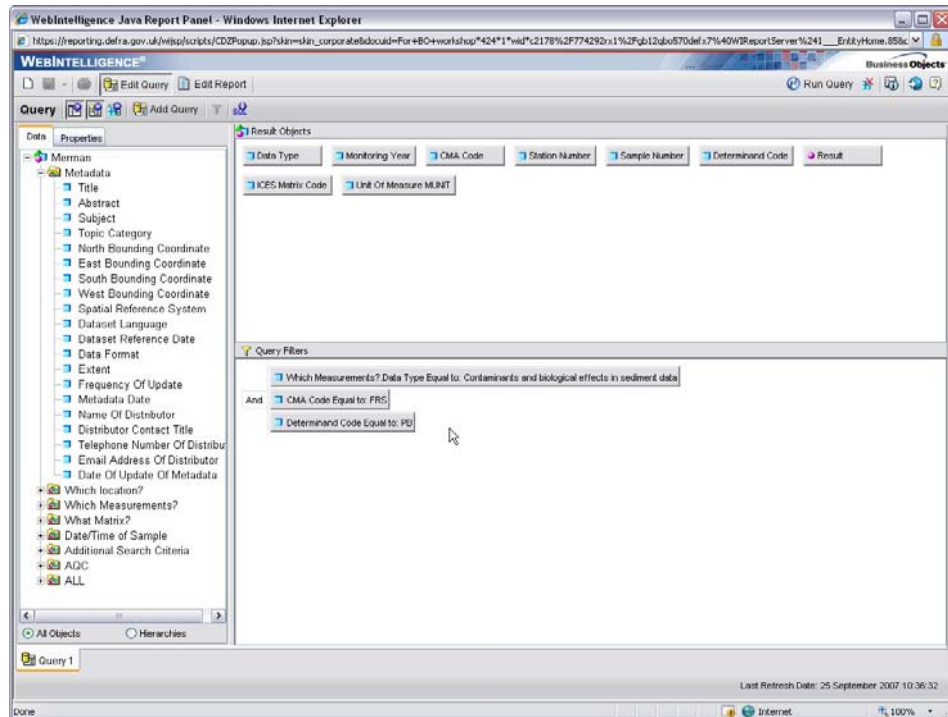
The screenshot shows the WebIntelligence Java Report Panel interface. The report title is "Pb (mg/kg) in sediments 2005, FRS, SED2000". The table below shows the data for various stations and sample numbers.

Station Number	Sample Number	Result
Clyde_FirthCOuterOffshore_se01	A	43.3
Clyde_FirthCOuterOffshore_se01	B	44.2
Clyde_FirthCOuterOffshore_se01	C	42.4
Clyde_FirthCOuterOffshore_se01	D	36.9
Clyde_FirthCOuterOffshore_se01	E	37.4
EScotland_EScOpenSea_se01	A	13.5
EScotland_EScOpenSea_se01	B	14.4
EScotland_EScOpenSea_se01	C	12.9
EScotland_EScOpenSea_se01	D	13.7
EScotland_EScOpenSea_se01	E	13.2
InishSea_BalcaryPoint_se01	A	28.3
InishSea_BalcaryPoint_se01	B	24.1
InishSea_BalcaryPoint_se01	C	29.1
InishSea_BalcaryPoint_se01	D	19.4
InishSea_BalcaryPoint_se01	E	24.6
MinchMalin_TheMinchNorth_se02	A	12.4
MinchMalin_TheMinchNorth_se02	B	11.5
MinchMalin_TheMinchNorth_se02	C	10.7
MinchMalin_TheMinchNorth_se02	D	12.3
MinchMalin_TheMinchNorth_se02	E	14.2
MorayF_MoFOpenSea_se01	A	9.13
MorayF_MoFOpenSea_se01	B	9.1
MorayF_MoFOpenSea_se01	C	9.2
MorayF_MoFOpenSea_se01	D	9.2
MorayF_MoFOpenSea_se01	E	9.14

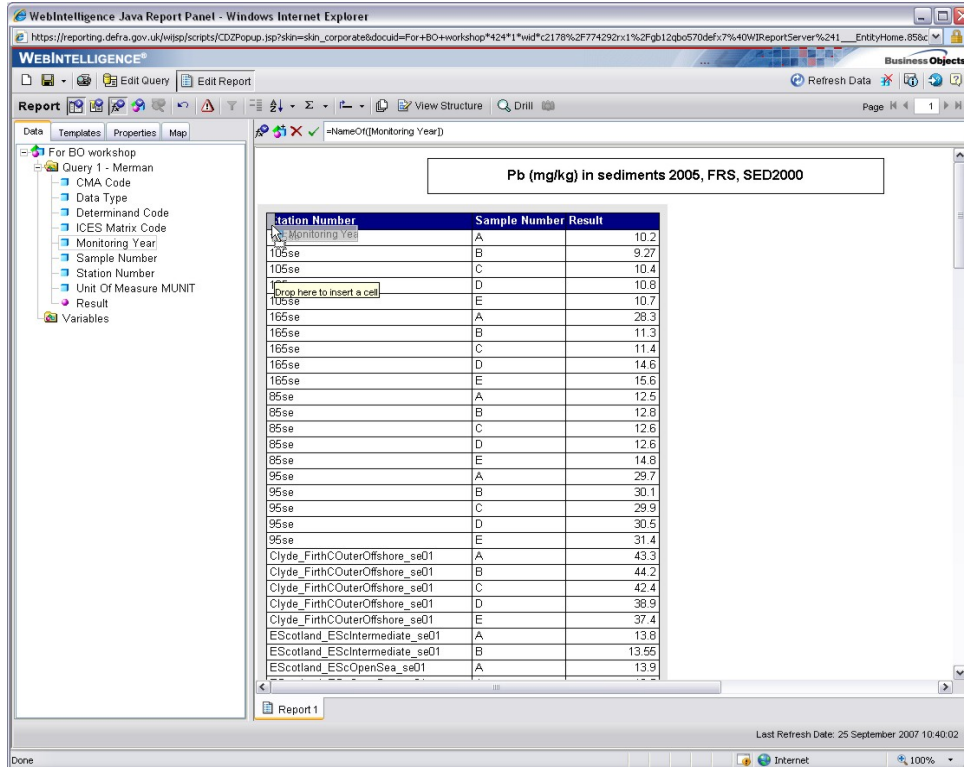
6. Click on the 'Monitoring Year' field in the Filter Pane



7. Holding the button down drag it into the left hand column and drop it.



8. Run Query.
9. We now want to incorporate 'Monitoring Year' back into the table.
10. Go to the data tab on the left-hand side.
11. Click and hold 'Monitoring Year' and drag it to the left hand side of 'Station Number' in the table header columns. You will see a grey rectangular box down the side, which acts a placement guide.



12. Drop the field and a new column will appear with year.



**Pb (mg/kg) in sediments 2005, FRS, SED2000**

Monitoring Year	Station Number	Sample Number	Result
1999	105se	A	10.2
1999	105se	B	9.27
1999	105se	C	10.4
1999	105se	D	10.8
1999	105se	E	10.7
1999	165se	A	28.3
1999	165se	B	11.3
1999	165se	C	11.4
1999	165se	D	14.6
1999	165se	E	15.6
1999	85se	A	12.5
1999	85se	B	12.8
1999	85se	C	12.6
1999	85se	D	12.6
1999	85se	E	14.8
1999	95se	A	29.7
1999	95se	B	30.1
1999	95se	C	29.9
1999	95se	D	30.5
1999	95se	E	31.4
2005	Clyde_FirthCOuterOfshore_se01	A	43.3
2005	Clyde_FirthCOuterOfshore_se01	B	44.2
2005	Clyde_FirthCOuterOfshore_se01	C	42.4
2005	Clyde_FirthCOuterOfshore_se01	D	38.9
2005	Clyde_FirthCOuterOfshore_se01	E	37.4
2005	EScotland_EScOpenSea_se01	A	13.5
2005	EScotland_EScOpenSea_se01	B	14.4
2005	EScotland_EScOpenSea_se01	C	12.9

13. The table is now sorted by year.

14. To sort by 'Station Number' again you can EITHER:

1. Click on a cell in the Station name Column and from the Report Toolbar click on **Insert/Remove Sort** OR
2. Drag and drop the Station Number column so that it becomes the first column in the table.

## 7.2 EXERCISE: Further Sorting

1. Can you try sorting the table by 'Monitoring Year' and then by 'Sample Number'? There are two possible ways.
2. Save document as '**Sorts**'

## 8.0 About Alerters

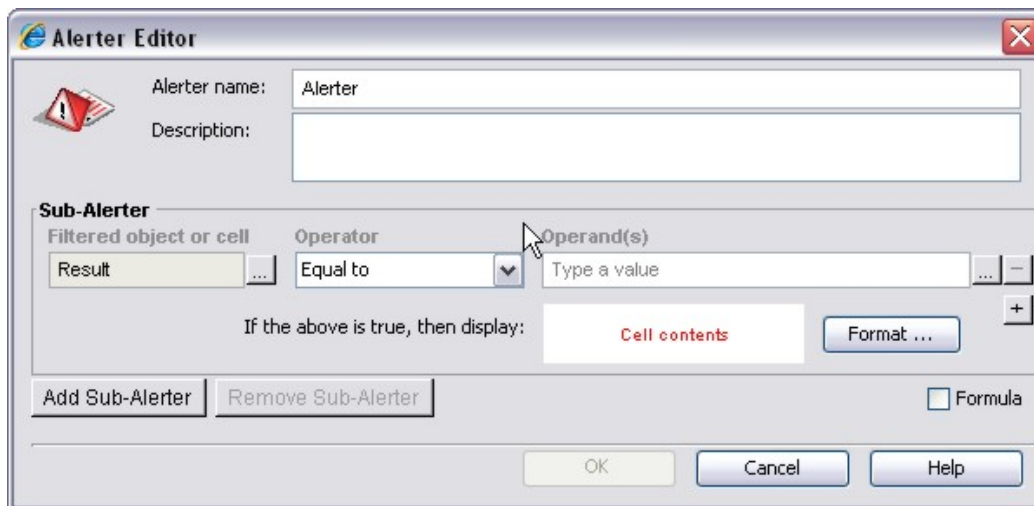
- Alerters enable you to highlight results that meet or fail specific conditions
- You can create a simple alerter to highlight particularly high or low results with a specific colour, or advanced alerters that display a text comment, for instance, 'Anomalous Value'.
- An alerter contains 5 elements:
  - A name
  - An object or cell contents
  - An operator
  - An operand value or another object
  - The conditional formatting
- When you apply the new alerter to a table column, row or cell on a report, WebIntelligence applies the condition to the cell values and displays any values that meet the condition in the alerter with the formatting specified.

### 8.1 To Create a Basic Alerter

1. Open the '**Pb\_in\_Sediment**' document.
2. Add the 'Units of Measurement' Column to the Table by dragging the object over from the Data tab and dropping it next to the Results column.
3. Break the report up into sections by 'Station Name'. Highlight a cell in the Station Name column and click the **Insert/Remove Break** button.
4. We will add an alerter to highlight any results that are over **25 mg/kg** for instance.
5. Click in the Result column.
6. From the Report toolbar click **Alerters**. The **Alerters** dialogue box displays.

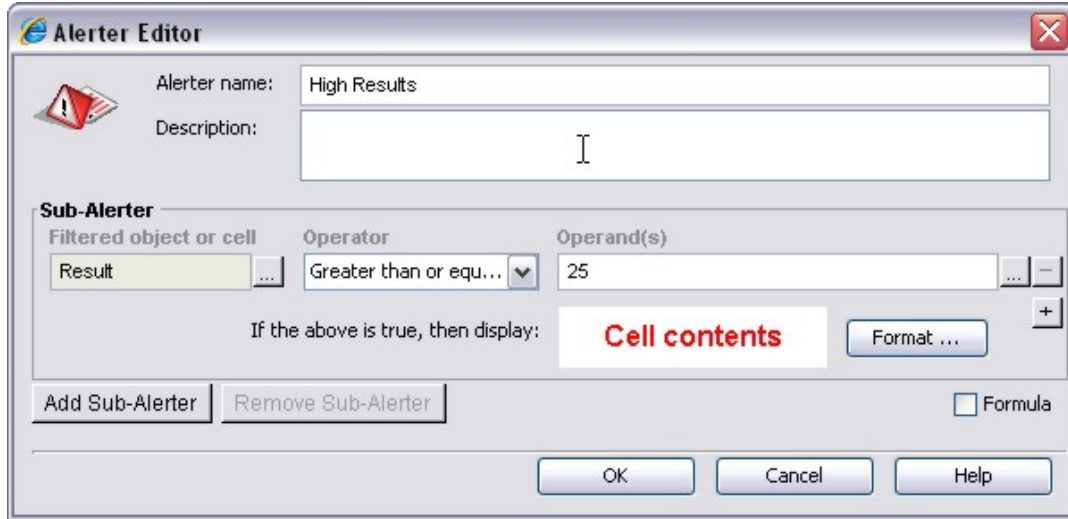


7. Click New. The Alerter Editor displays



8. Under **Alerter name**, type a memorable name for the alerter  
**Example:** High Results (You can also include an optional description).
9. Under **Operator**, select an appropriate operator  
**Example:** Greater than or equal to.
10. Under **Operand**, specify the value or object appropriate for the operand  
 Example: 25 (Do not include commas or decimals when specifying number values).
11. You can edit the format that the results specified by the alerter appear in.
12. Click format.

13. Choose bold and make the size of the font 12.



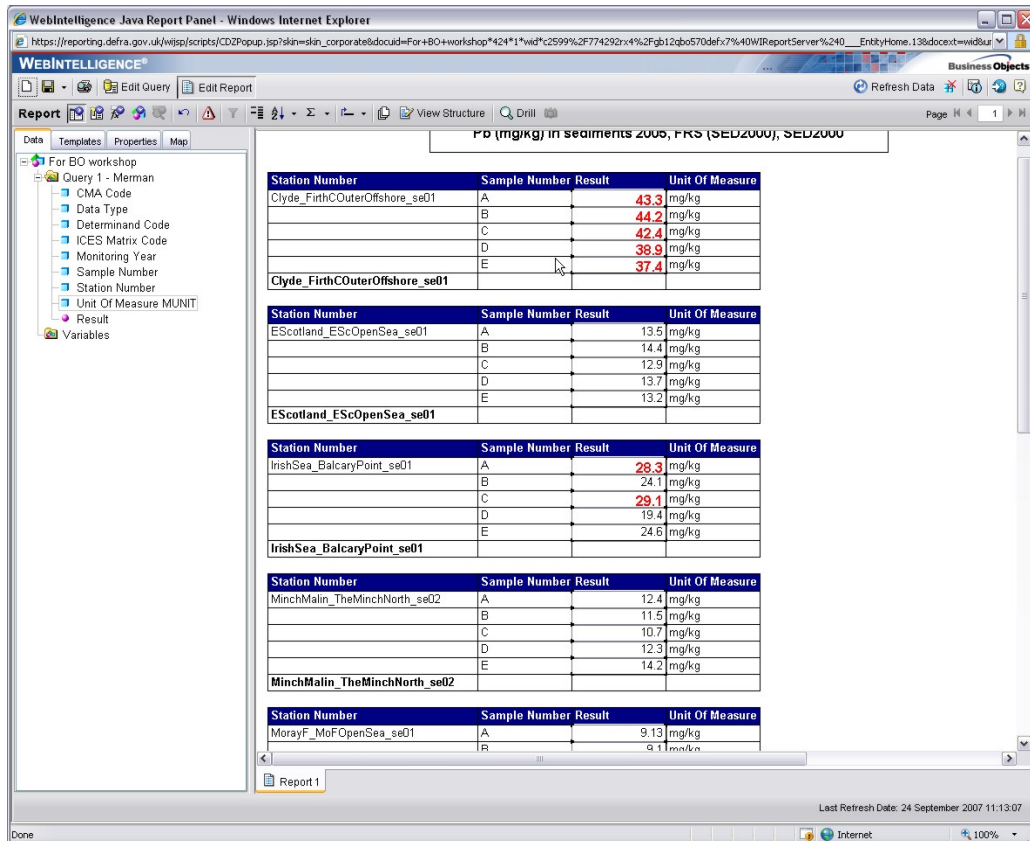
14. Click OK.

15. The new alerter is added to the list of alerters in the **Alerters** dialogue box. Verify that the check box beside the alerter is selected.



16. Click OK

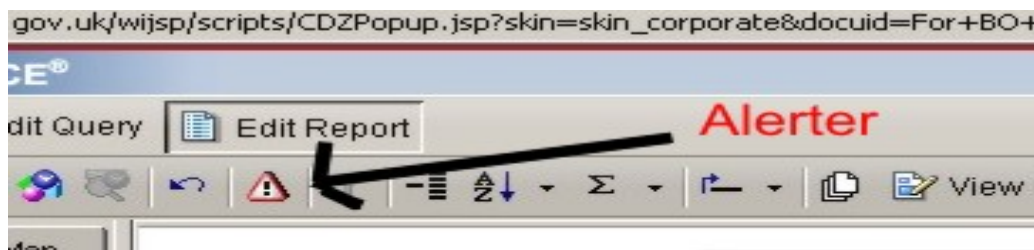
17. The alerter is applied to the report results



18. Save document as 'Alerter'.

## 8.2 To activate/edit alerters

1. Click on the table row or column, section cell or free-standing cell you want to apply the alerter to.
2. From the report toolbar, click **Alerters**.



3. The **Alerters** dialogue box displays a list of available alerters.
4. From the **Alerters** dialogue box, select the alerter you want to activate.
5. Select the check box beside the alerter you wish to activate, click OK.
6. **OR** if you wish to edit the alerter, select the check box beside the alerter and click edit.

**Note:** To deactivate an alerter, click the column, row, section cell or free-standing cell, click Alerters and deselect the check box beside the alerter you want to deactivate.

### **8.3 EXERCISE: Further Alerters**

1. Add an alerter to the results document which will highlight any value **less than 10**.
2. Format the alerter so that the following text appears in the box instead of the result value: 'Value less than 10'. Format the text to appear in Green, size 10.
3. Save document (i.e. overwrite).

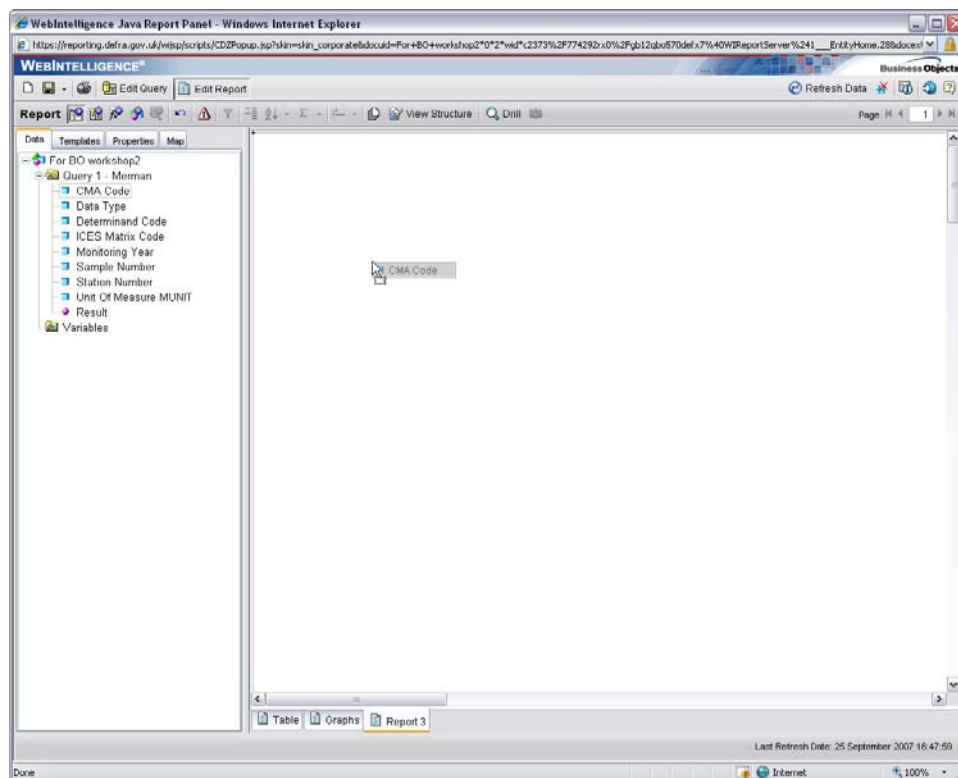
## 9.0 Working with Tables

- When you first create a new document by building and running a query, the data retrieved are generally displayed by default in a vertical table.
- You can also insert tables into a blank report and then build them up. This can be done by either:
  - Dragging the objects from the **Data tab** for which you want the table to display values
  - Dragging a table template from the **Templates tab** that defines the structure of the table. You can then drag objects into the table.

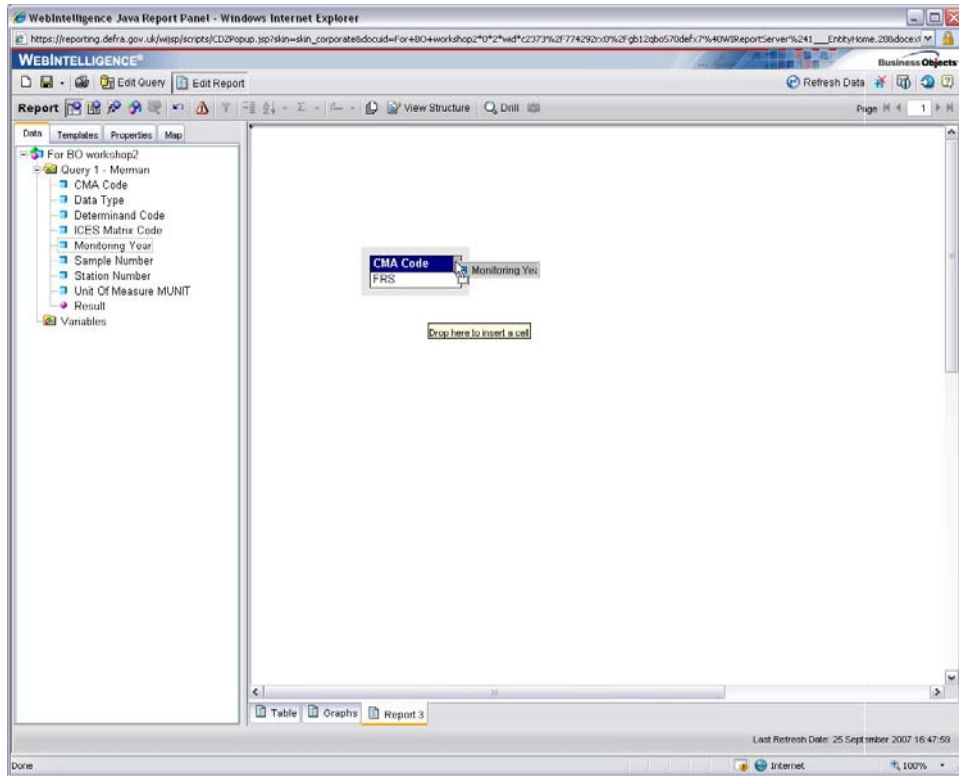
### 9.1 Creating Various Tables

In this scenario we will build a table by dragging the objects in to a blank report.

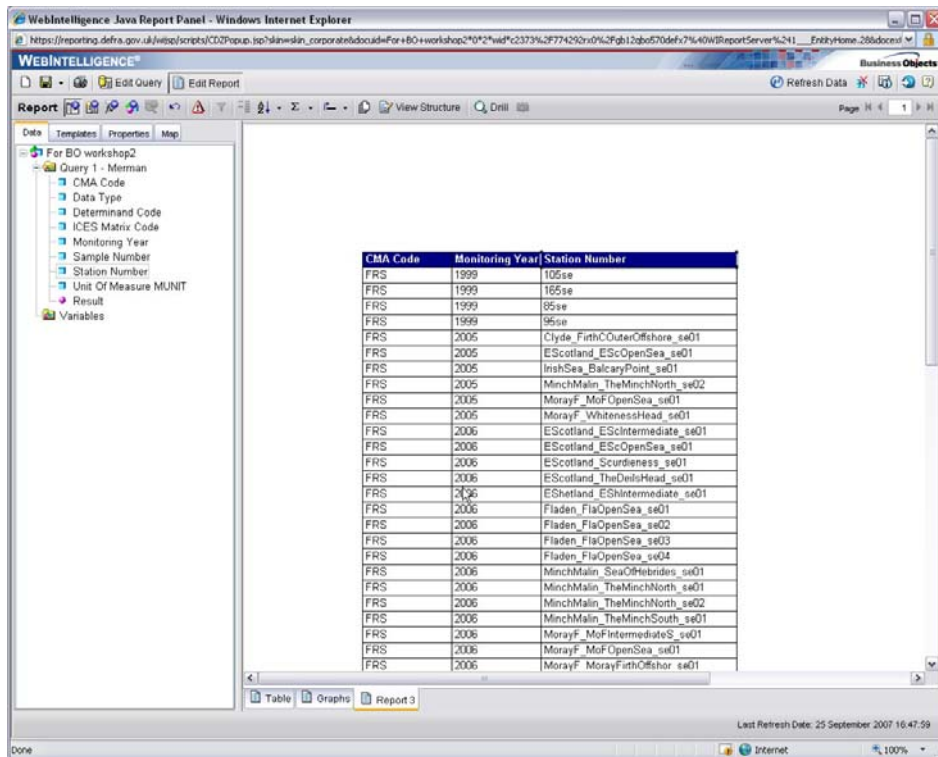
1. Create a blank report by right-clicking the Report tab at the bottom of the page, and **Insert Report**
2. Under the Data tab, drag across the 'CMA Code'.



3. Next pick up the 'Monitoring Year' and Drag it across so that it hovers on, but to the right-hand side, of the 'CMA Code' Cell.

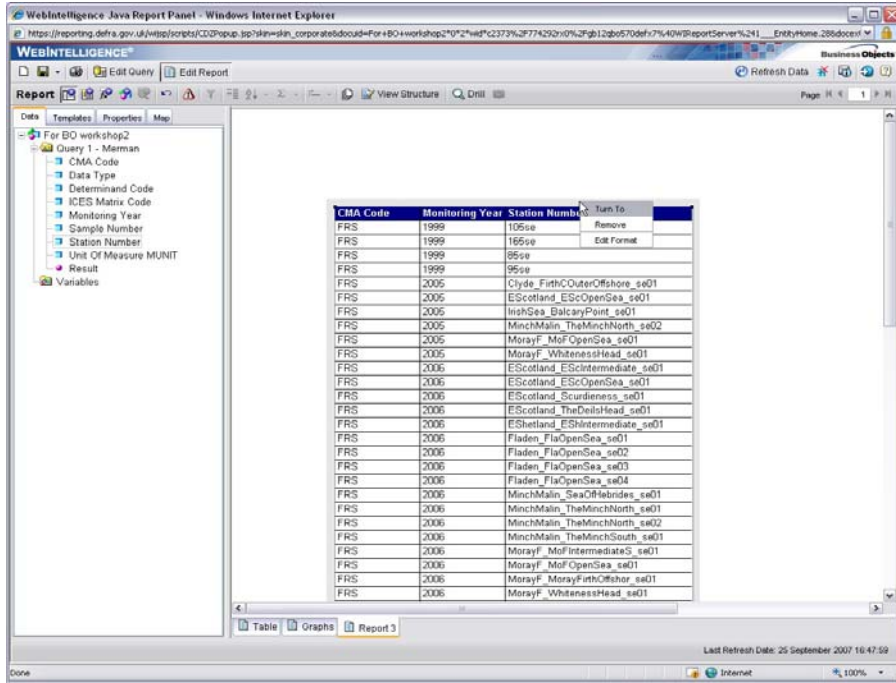


4. Finally pick up the 'Station Number' and drag it across so that it hovers on but to the right-hand side of the 'Monitoring Year' cell.

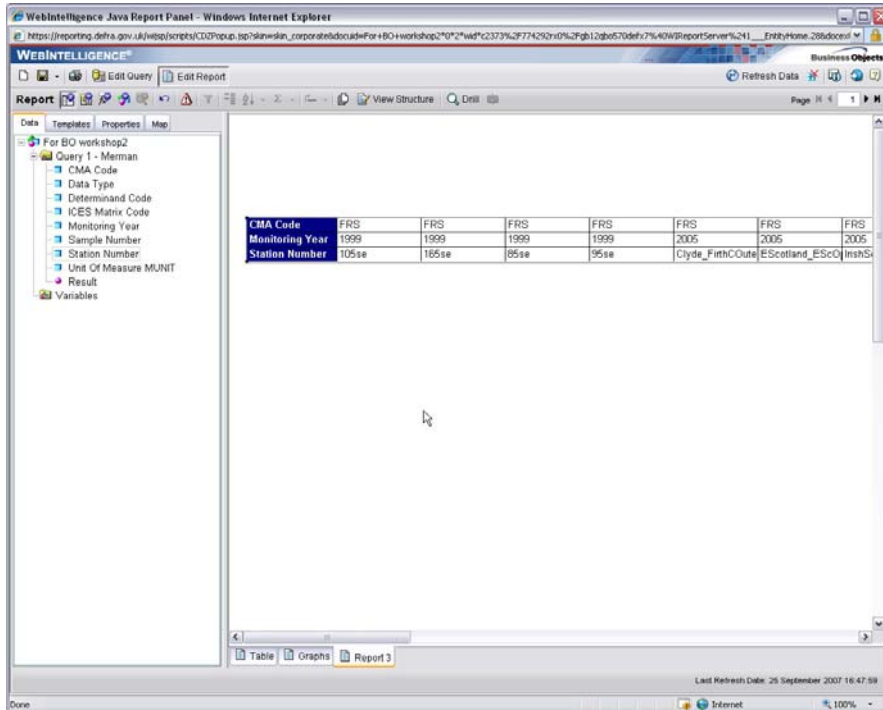




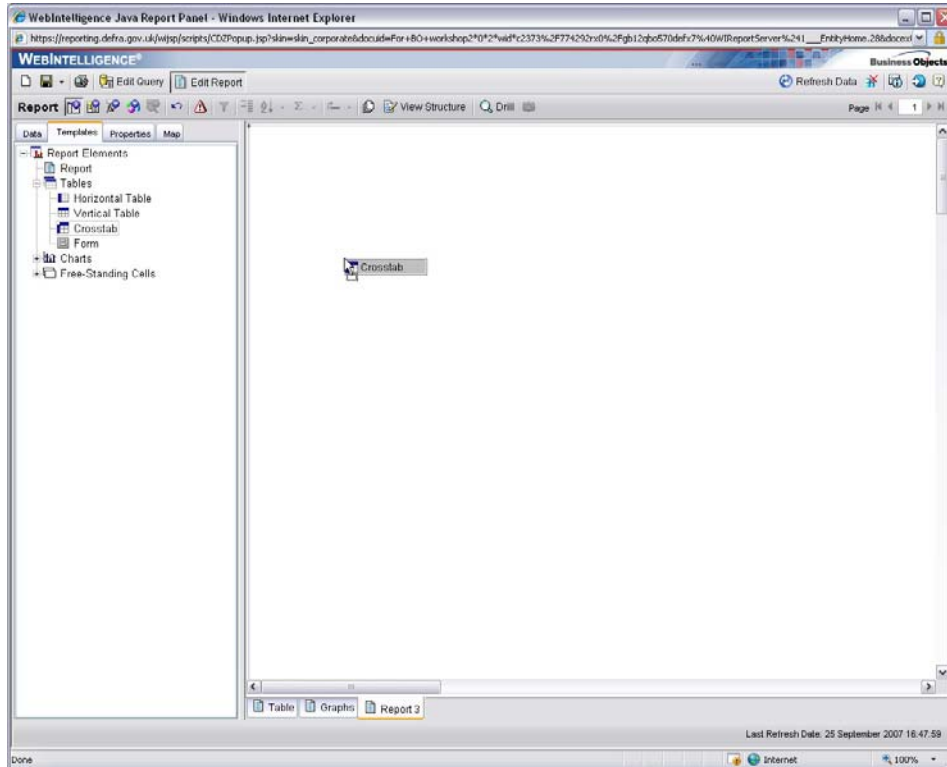
5. The table is built up in this fashion.
6. Move the cursor so that it hovers on the edge of the Table. A blue-grey shadow should appear.
7. Right-click and select **Turn to**.



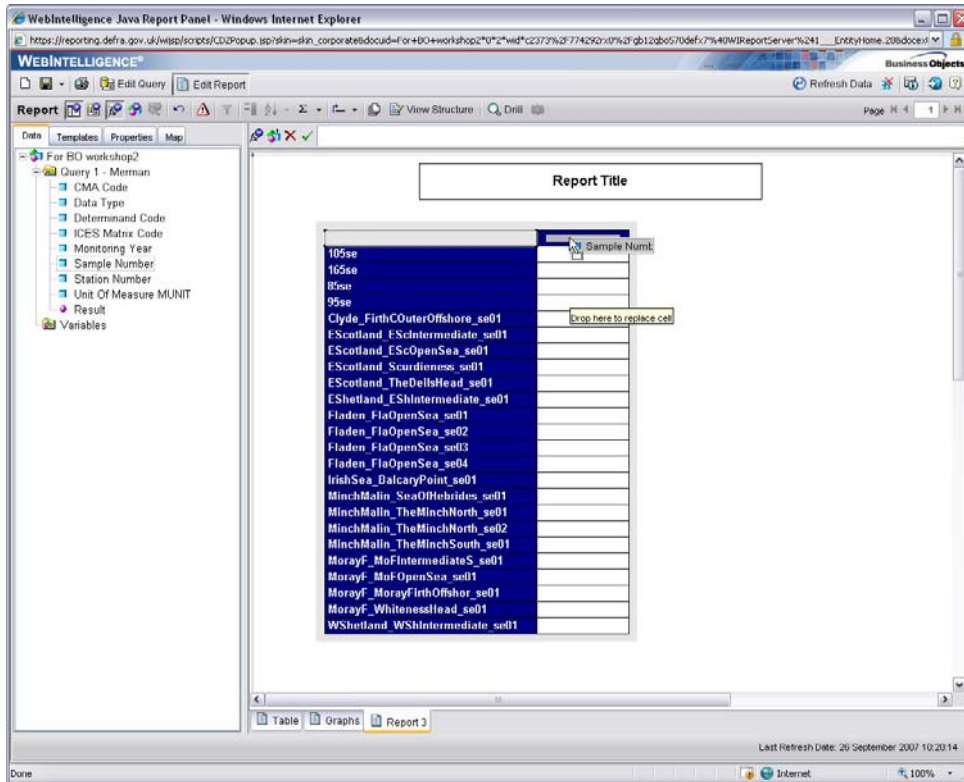
8. Select Horizontal Table.



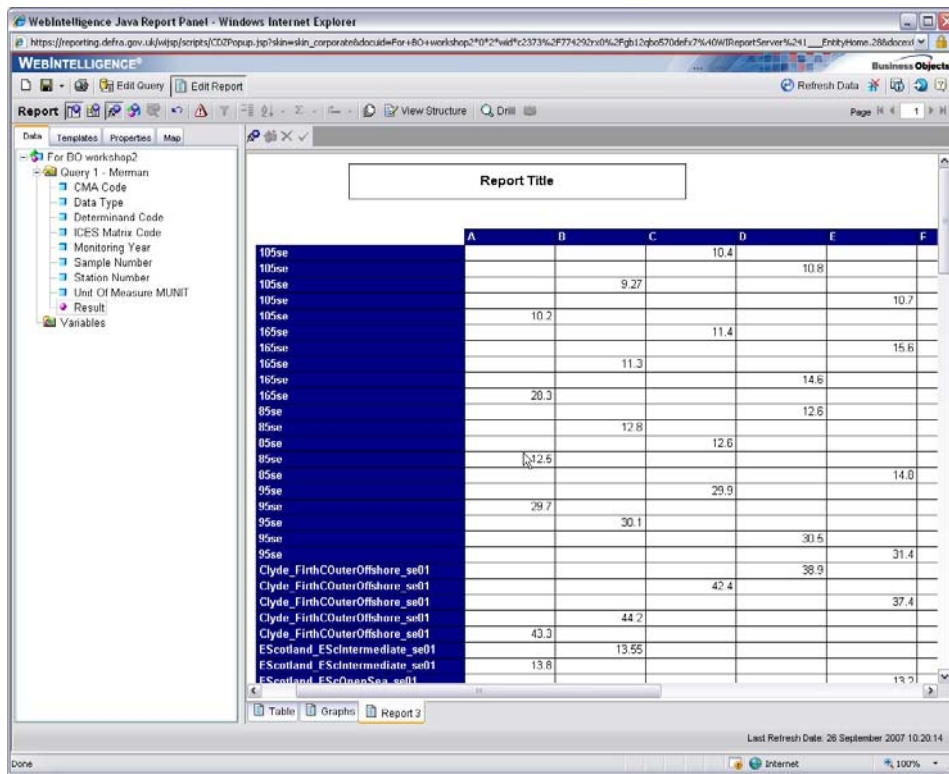
9. Alternatively you can use the template function.
10. Click the outside of the table and **Remove**.
11. Go to the **Templates** tab.
12. Click on the + sign next to table.
13. Click and drag the **Crosstab** option onto the blank reporting space.



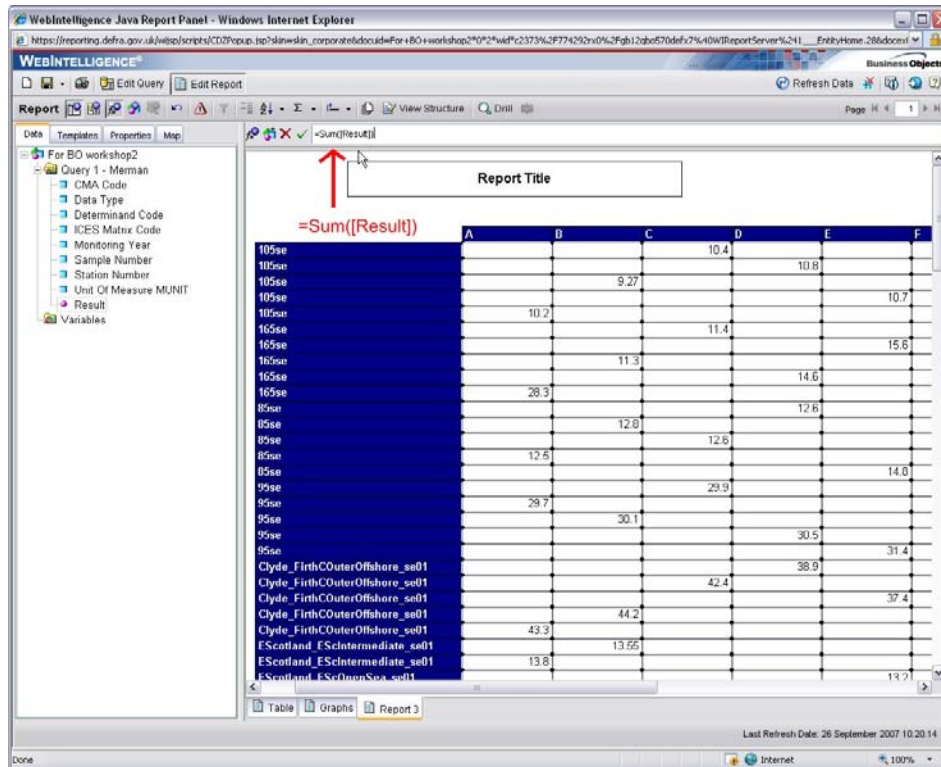
14. Add Objects to the table by clicking and dragging across from the **Data** tab
  - a. Add 'Station Number' by dragging it over the row header in the crosstab table
  - b. Add 'Sample Number' by dragging it over the column header in the crosstab table



c. Add 'Result' by dragging it over a cell body of the crosstab table.



15. This table isn't as user-friendly as it could be. The results haven't been aggregated, so each result for a sample appears on a new line.
16. If we apply a sum to the cell body, we can resolve this.
17. Double click on a cell body. The formula header will appear above.
18. Type the following : **=Sum([Result])** and enter.



19. This will aggregate the results per station so that there is only one line per station.

The screenshot shows a WebIntelligence report titled "Report Title" with a data table. The table has columns labeled A through F and rows listing various locations and their corresponding values. The data is as follows:

	A	B	C	D	E	F
105se	10.2	9.27	10.4	10.8	10.7	
165se	28.3	11.3	11.4	14.6	15.6	
85se	12.6	12.8	12.6	12.6	14.8	
95se	29.7	30.1	29.9	30.5	31.4	
Clyde_FirthCOuterOffshore_se01	43.3	44.2	42.4	39.9	37.4	
EScotland_EScIntermediate_se01	13.8	13.55				
EScotland_EScOpenSea_se01	27.4	28.3	26.48	13.7	13.2	
EScotland_Scurdiness_se01		18.48	18.18	18.18		
EScotland_TheDelleHead_se01					16.02	
EShetland_EShIntermediate_se01	10.24	11.26	10.71	10.56	10.52	
Fladen_FlaOpenSea_se01	13.45	16.4	15.84	14.63	13.68	
Fladen_FlaOpenSea_se02	15.43	16.59	15.29	18.11	17.7	
Fladen_FlaOpenSea_se03	11.91	12.28	13.67	14.88	17.57	
Fladen_FlaOpenSea_se04	18.2	16.48	13.53	16.18	17.36	
IrishSea_BalcaryPoint_se01	20.3	24.1	29.1	19.4	24.6	
MinchMalin_SeaOffshores_se01	20.1	23.39	22.59	22.16		
MinchMalin_TheMinchNorth_se01	14.93		30.11	24.19	22.67	
MinchMalin_TheMinchNorth_se02	23.32	22.6	23.39	12.3	14.2	
MinchMalin_TheMinchSouth_se01	30.64		23.8	27.51		
Morayf_MofIntermediateS_se01	25.68	25.37	25.02	23.48	19.97	
Morayf_MofOpenSea_se01	18.55	18.71	18.5	18.77	18.46	
Morayf_MorayfirthOffshor_se01	10.09	11.65	22.04	24.51	11.14	
Morayf_WhitenessHead_se01	65.95	56.19	54.25	55.89	54.53	
WShetland_WShIntermediate_se01			10.58	9.42	10.43	

20. Save the table as 'Crosstab'

## 9.2 Deleting a Table

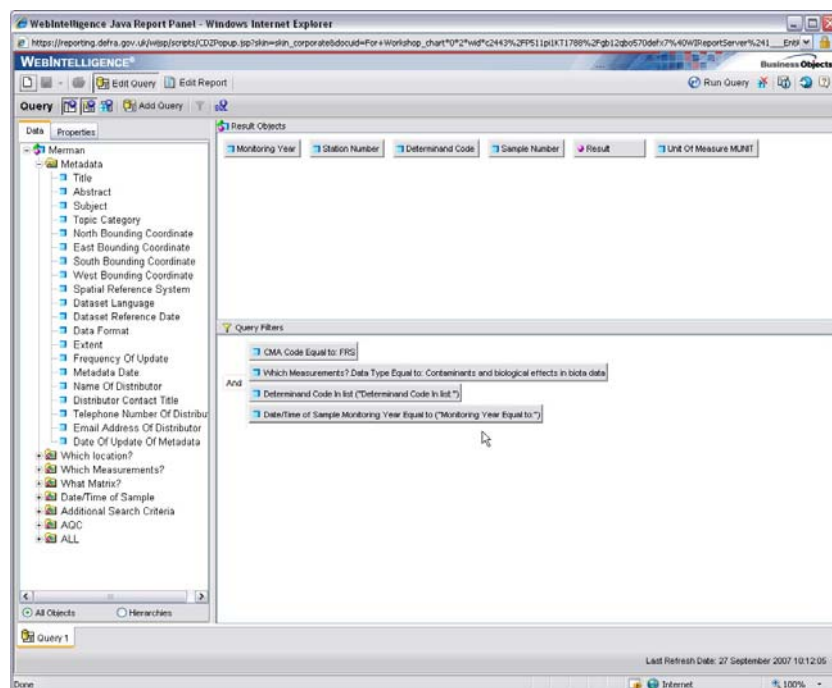
1. To delete a table, click on the outside of it so that the blue-grey border appears.
2. Right-click and select **Remove**.
3. Alternatively, you can drag the blue-grey border to the left-hand side of the screen and drop it off the page.

## 10 Presenting Data in Charts

- Web Intelligence offers standard chart formats to graphically display your information.
- The five basic charts are: bar, line, are, pie and radar, polar or scatter charts.
- Unfortunately charts are a little limited in their functionality – sometimes it may be more effective to save the report in Excel and format a chart from here. In future upgrades functionality should improve.

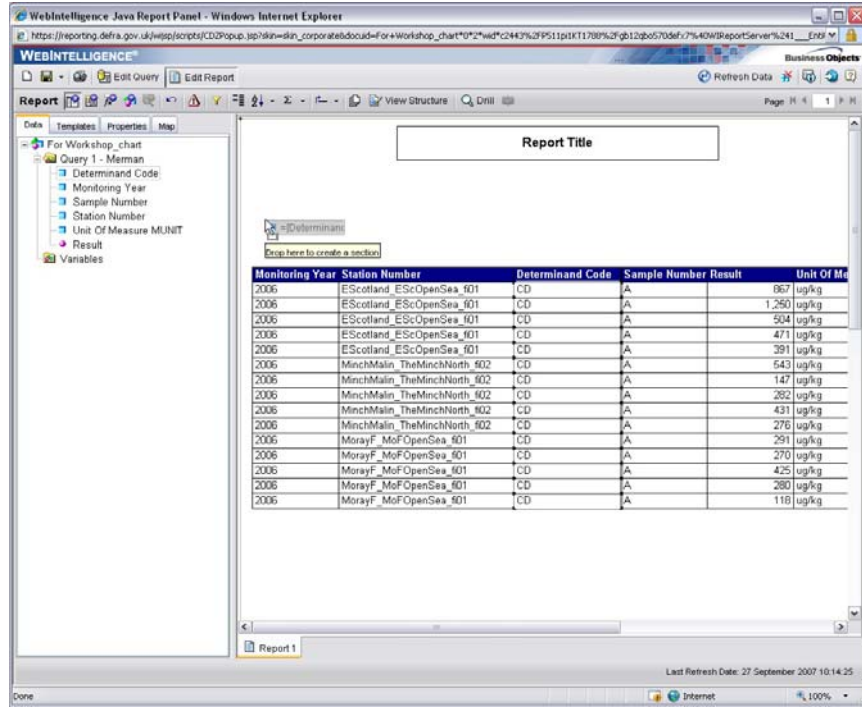
### 10.1 Creating a Chart

1. Open a new query from the Edit Query page – click on **New Document** in the report toolbar
2. Select the following objects to go in the **Result Objects** Pane:
  - ‘Monitoring Year’, ‘Station number’, ‘Determinand Code’, ‘Sample Number’, ‘Sub sample Number’, ‘Result’, ‘Unit Of Measurement’.
3. Select the following filter specifications:
  - CMA Code **Equal to** ‘Your CMA’
  - Data Type **Equal to** ‘Biota’
  - Determinand Code **In List – Add ‘CD’**
  - Monitoring Year – Select **Prompt, Only from List of Values**

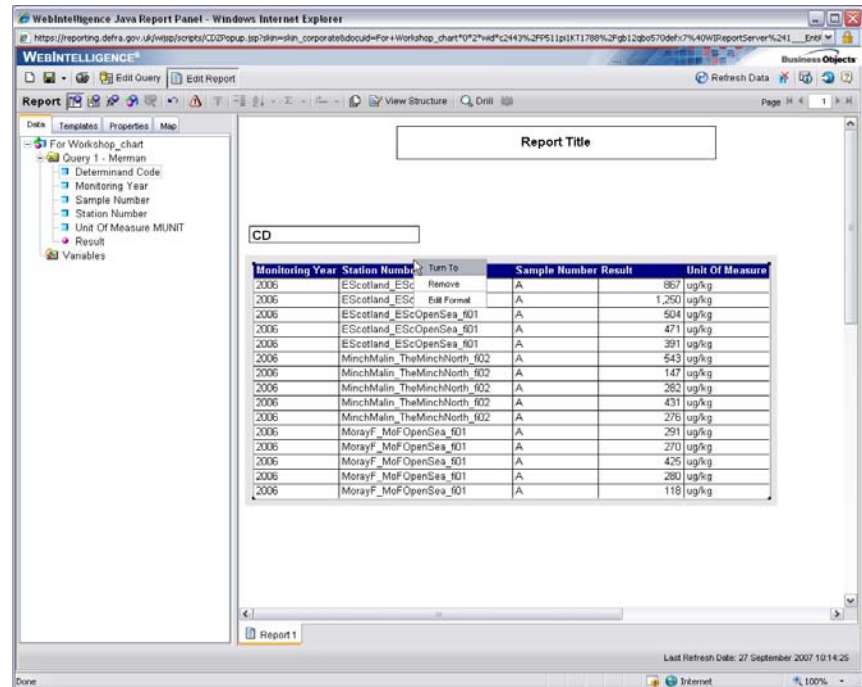


4. Run Query

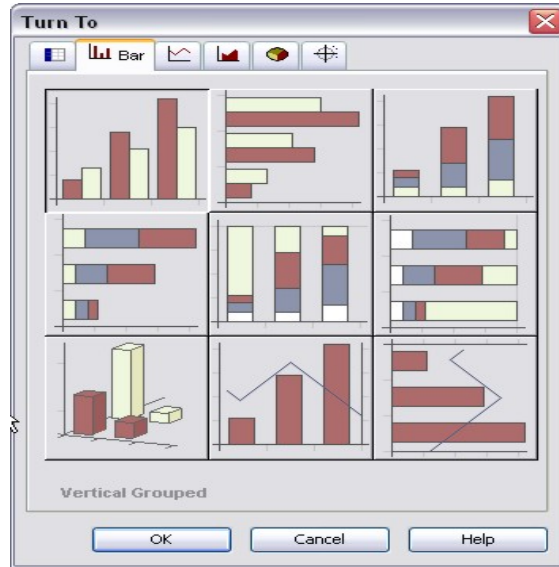
5. Select 'CD' for Determinand.
6. Select 2006 for 'Monitoring Year'.
7. Take out the Determinand Code to create a Section with the Determinand as a header.



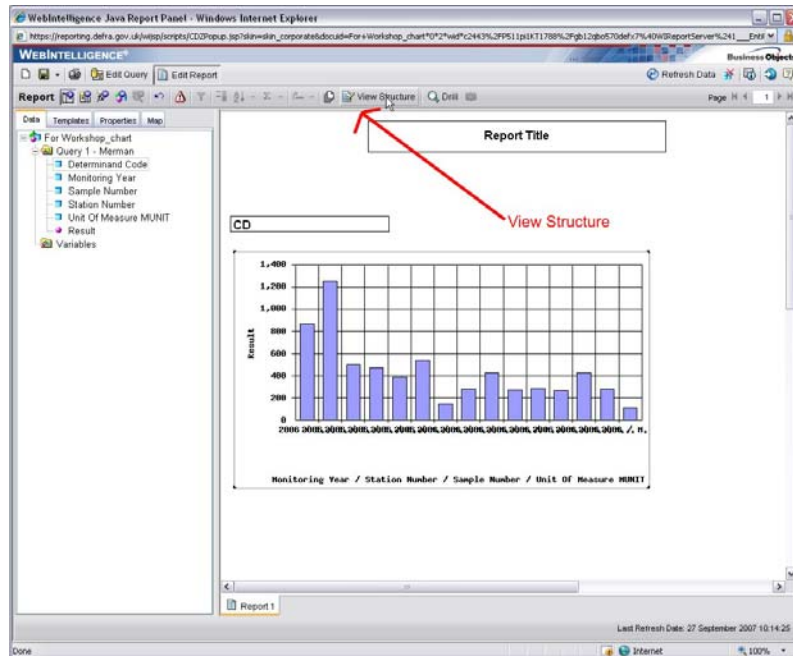
8. Click on the edge of the table so that the grey-blue shadow appears.



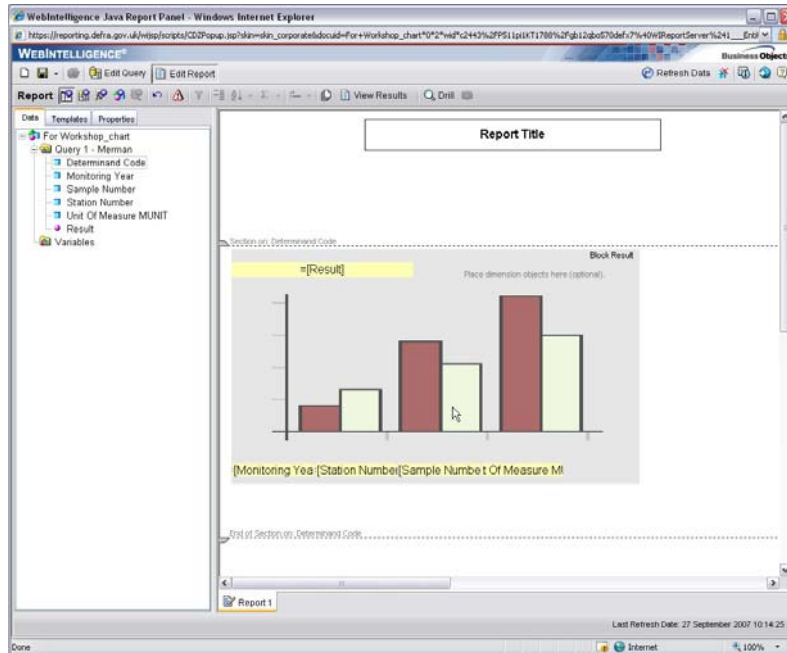
9. Right-click and select **Turn To**.
10. Select **Vertical Grouped**.



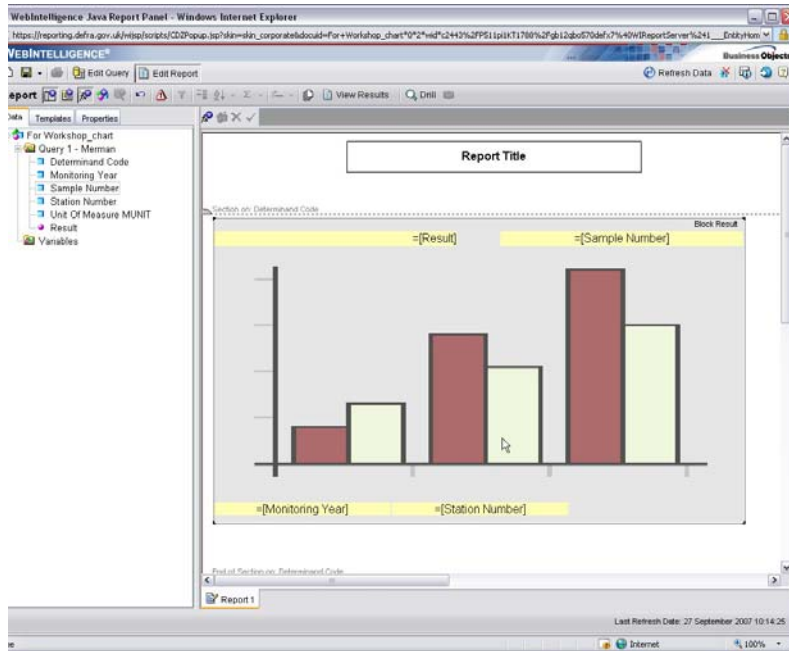
11. Arrange position on chart using the **View Structure** Tab.



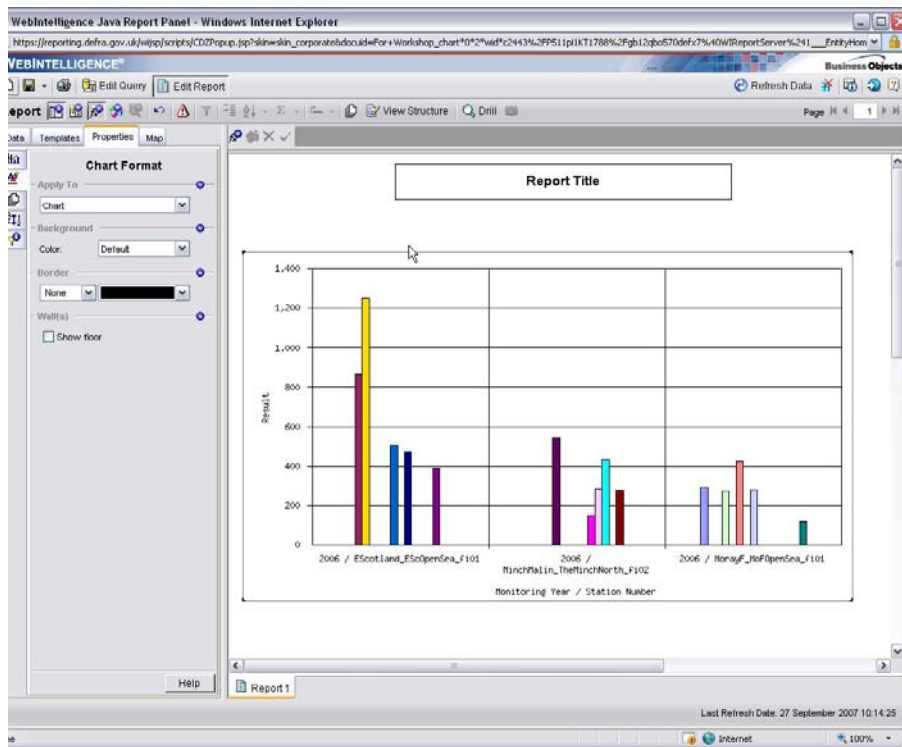




12. You can move the position of objects. Initially the graph wasn't particularly helpful with its layout. We can adjust the layout so that the replicates from each station are grouped together along the X-axis.
13. Firstly, we don't need the 'Unit of Measurement' along the X-axis. We can add it to the Y-axis Label later. Click on the box and press delete.
14. Do the same with the Determinand Code. We can add it to the table. Click on the box and press delete.
15. Click and drag the 'Sample Number' object, followed by the 'Sub sample Number', up to the top right hand corner, where it says '**Place dimension objects here (optional)**'. This will appear in the legend.



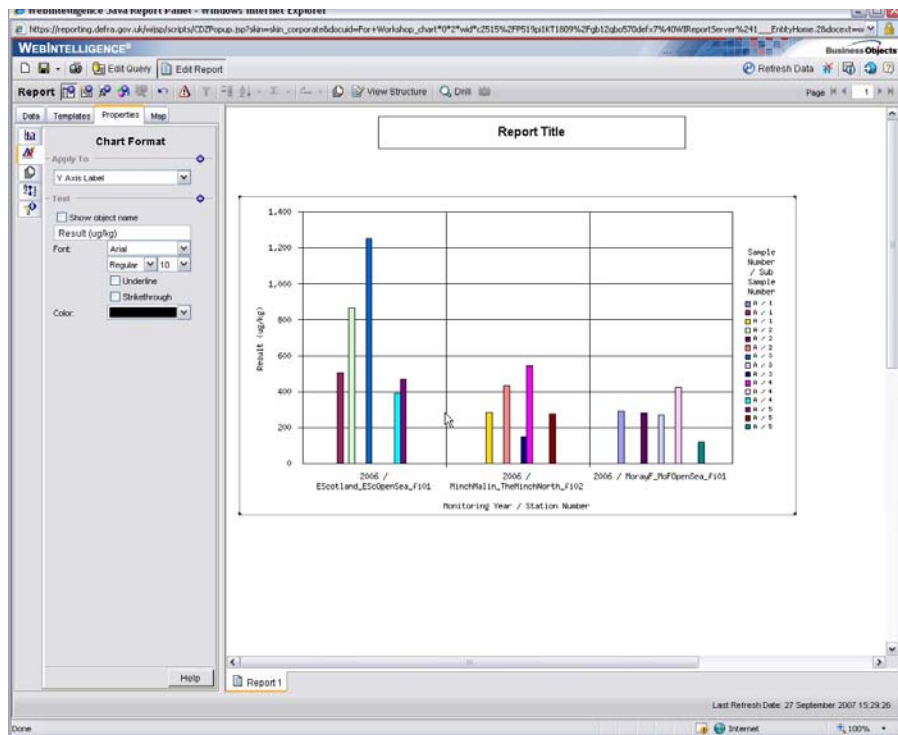
16. Click **View Results**



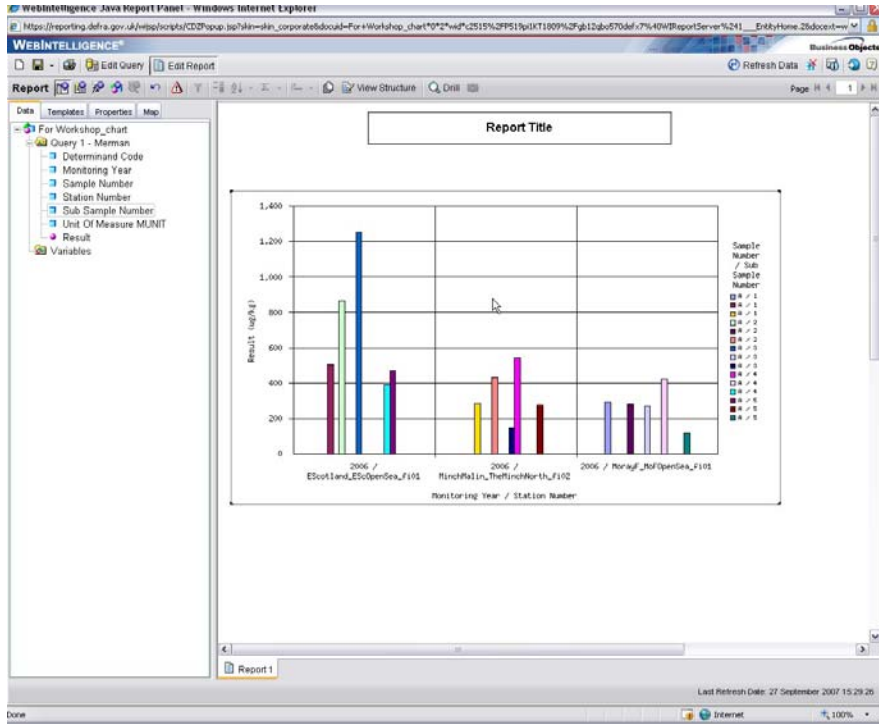
17. You should see something like this. *This is where this version of Business Objects falls down. As you can see there are inconsistent gaps between the bars and the colours are random and unfortunately cannot be changed.*

18. Click somewhere within the chart.

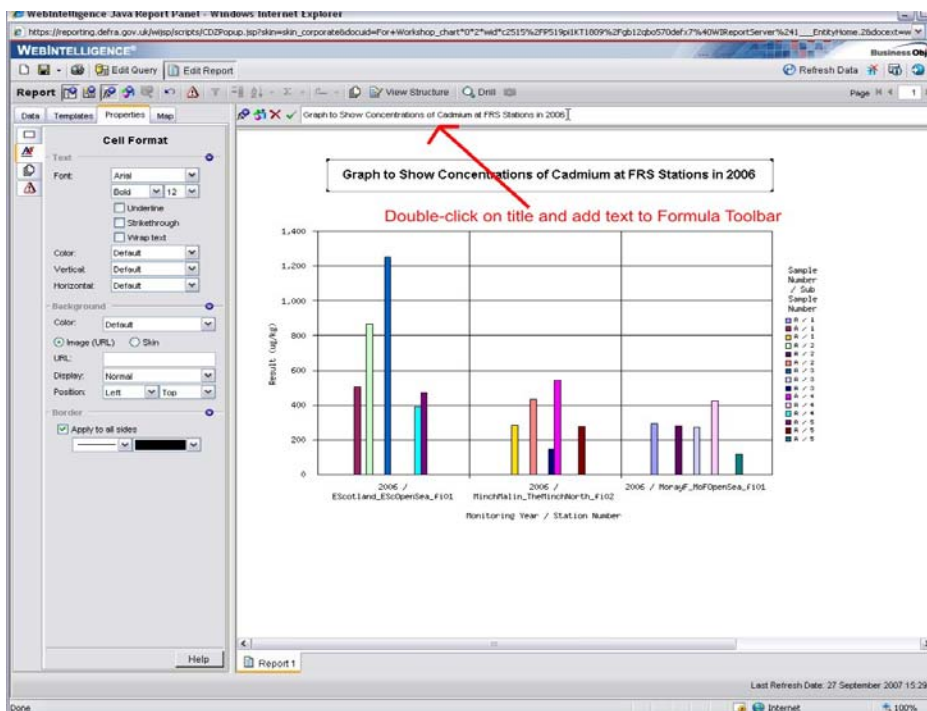
19. Under the properties tab on the left-hand side, you can format the chart.
20. To add the 'Units of Measurement', under **chart format**, click on **Apply to Y axis label**.



21. Under the text heading, de-select the '**Show object name**' option and type in '**Result (µg/kg)**'. Press enter.
22. Click on Chart Properties and under **Display**, select **Axis Legend**



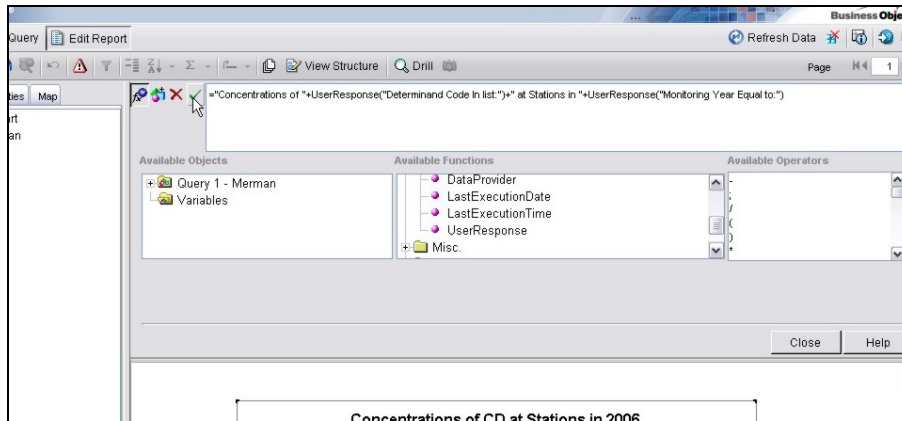
23. Format other aspects of the chart by highlighting the chart by either right-clicking and selecting **Edit format** or using the **Properties** tab on the left hand side of the page.
24. Add a Chart Title: Double click the Report Title Text.
25. In the formula toolbar above, type 'Concentrations of Cadmium at (Your CMA) Stations in 2006'



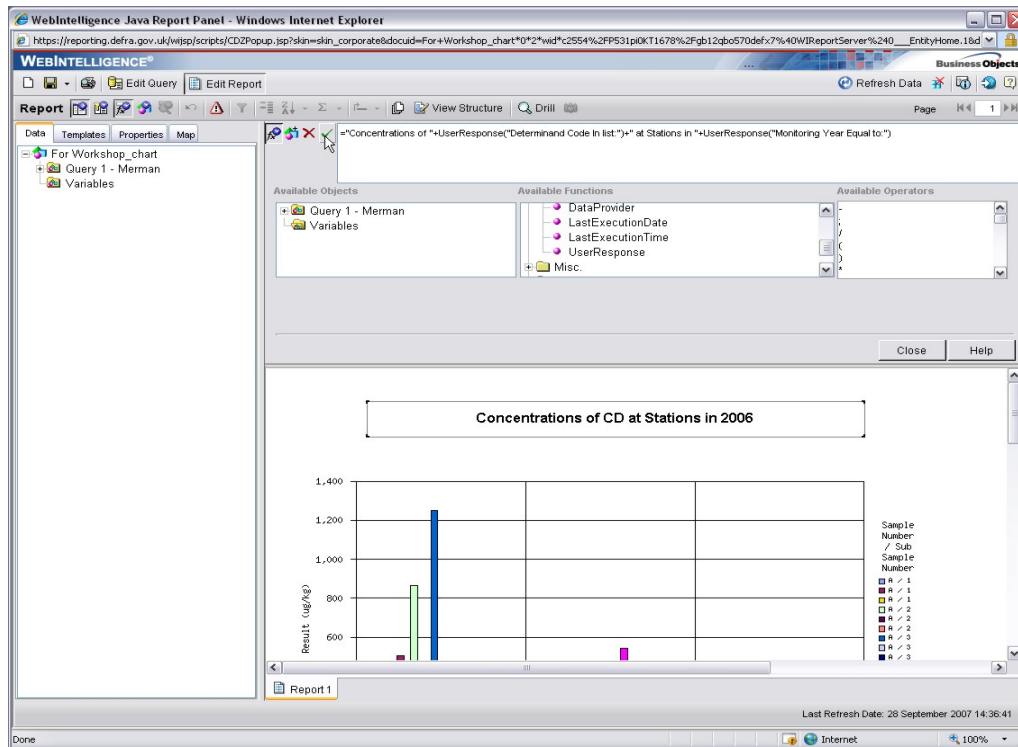
- While this title may be appropriate for this particular chart, if you were to refresh the data and choose another determinand or year, it wouldn't be.
- We need to formulate a Title that takes into account the possibility that the User can change the query using the prompt facility, built into the query.

## **10.2 To create the formula to capture the response to the prompt**

- You will create a formula that will display in the report title the value of the object selected in the prompt.
  1. Click the **Report Title cell**.
  2. Click **Formula editor** in the Formula Toolbar.
  3. In this editor, you define the characteristics of a formula, by selecting objects, functions and operators from the drop-down lists in the Editor.
  4. Type (=) to start the formula definition.
  5. Type in between quotes the generic text you want to display in the title.
    - Example : "Concentrations of "
  6. Under Available Operators, select the operator to continue the formula – in this case we want to add something onto the text so we use the (+) sign.
  7. Under **Available Functions** expand the **Data Provider** Folder.
  8. From **Data Provider**, select **User Response**. The User Response function relates to the User's response to the Query Prompt when they ran the query.
  9. Within the brackets, type in between quotes the filter prompt EXACTLY as it appears in the Query filters pane
    - Example : "Determinand Code In list:"  
(This is case-sensitive so the text needs to be exact.)



10. To add more text to the title add a **+** sign after the brackets and add what you want, again between quotes.
  - Example : “ at Stations in “ (Be aware of the spaces before and after the text)
  
11. To incorporate the ‘Monitoring Year’ you need to add in another User Response to the Title Formula. Under **Available Operators**, select the operator to continue the formula – in this case we want to add something onto the text so we use the **(+)** sign
  
12. Under **Available Functions** expand the **Data Provider** Folder and select **User Response**
  
13. With the brackets type in between the quotes the filter prompt EXACTLY as it appears in the Query filters pane
  - Example : “Monitoring Year Equal to:”



14. Click the green tick to validate the formula. You will get an error message if the formula doesn't make sense. Often this is just due to a typing error in the formula.
15. If you refresh the data and choose a different determinand and year, this should be reflected in the title.

### 10.3 EXERCISE: Formatting the Chart

1. Underline the Title and remove the border.
2. Change the graph so that it becomes a horizontal bar chart.
3. Add **Hg** to the Query as well (Use the In List Function when you re-run the query)
4. Add Determinand to the Legend (Use the **View Structure** to do this simply)
5. Save Document as '**Charts**'.

## 11 Organising a Report into Sections

- You can subgroup data in a block using the break function as illustrated below. We have already seen this function.

The screenshot shows a WebIntelligence report titled "Pb (mg/kg) in sediments 2005, FRS, SED2000". The report is displayed in a browser window with a sidebar on the left containing a tree view of the report structure. The main content area contains three tables, each representing a different station. The first table is for "Clyde\_FirthCOuterOffshore\_se01", the second for "EScotland\_EScOpenSea\_se01", and the third for "IrishSea\_BalcaryPoint\_se01". Each table has three columns: "Station Number", "Sample Number", and "Result".

Station Number	Sample Number	Result
Clyde_FirthCOuterOffshore_se01	A	43.3
	B	44.2
	C	42.4
	D	38.9
	E	37.4

Station Number	Sample Number	Result
EScotland_EScOpenSea_se01	A	13.5
	B	14.4
	C	12.9
	D	13.7
	E	13.2

Station Number	Sample Number	Result
IrishSea_BalcaryPoint_se01	A	28.3
	B	24.1
	C	29.1
	D	19.4

- You can **also** use 'SECTIONING' to subgroup data. The obvious difference is that the sub-grouped value appears as a header outside the block instead of remaining within the block as seen below:



The screenshot shows a WebIntelligence report with five sectioned tables. The left pane shows a tree view with 'Query 1 - Merman' expanded, listing fields like CMA Code, Data Type, Determinand Code, ICES Matrix Code, Monitoring Year, Sample Number, Station Number, Unit Of Measure MUNIT, Result, and Variables.

Monitoring Year	Sample Number	Result
2005	A	43.3
2005	B	44.2
2005	C	42.4
2005	D	38.9
2005	E	37.4

Monitoring Year	Sample Number	Result
2006	A	13.8
2006	B	13.55

Monitoring Year	Sample Number	Result
2005	A	13.5
2005	B	14.4
2005	C	12.9
2005	D	13.7
2005	E	13.2
2006	A	13.9
2006	B	13.9
2006	C	13.58

Monitoring Year	Sample Number	Result
2006	C	18.48
2006	D	18.18

Report 1  
Last Refresh Date: 25 September 2007 12:23:31

- However, there is a more important difference. ‘Sectioning’ subgroups the entire report. A section is created for each subgroup in which you can manipulate the data, creating multiple objects (e.g. graphs) all stemming from the same sectioned level.
- Any edits made to one section will be repeated to each sectioned group in the report.

## 11.1 To Create a Section

1. Open ‘Pb\_in\_Sediment’ report and click **Edit Report**
2. Sort by ‘Monitoring Year’, ‘Station number’, ‘Sample number’, ‘Result’.
3. We want to group the data by ‘Station Number’. Click on the column. The column is now highlighted.
4. Right-click on the highlighted column – a drop-down menu displays.

WebIntelligence Java Report Panel - Windows Internet Explorer

WEINTELLIGENCE

Report

Properties Map

Data Templates

For BO workshop

Query 1 - Merman

CMA Code

Data Type

Determinand Code

ICES Matrix Code

Monitoring Year

Sample Number

Station Number

Unit Of Measure MUH

Result

Variables

Pb (mg/kg) in sediments 2005, FRS (SED2000), SED2000

Monitoring Year	Station Number	Sample Number	Result
1999	105se	A	10.2
1999	105se	B	9.27
1999	105se	C	10.4
1999	105se	D	10.8
1999	105se	E	10.7
1999	165se	A	26.3
1999	165se	B	11.3
1999	165se	C	11.4
1999	165se	D	14.6
1999	165se	E	15.6
1999	85se	A	12.5
1999	85se	B	12.8
1999	85se	C	12.6
1999	85se	D	12.6
1999	85se	E	14.8
1999	95se	A	29.7
1999	95se	B	30.1
1999	95se	C	29.9
1999	95se	D	30.5
1999	95se	E	31.4
2005	Clyde_FirthCOuterOffshore_se01	A	43.3
2005	Clyde_FirthCOuterOffshore_se01	B	44.2
2005	Clyde_FirthCOuterOffshore_se01	C	42.4
2005	Clyde_FirthCOuterOffshore_se01	D	38.9
2005	Clyde_FirthCOuterOffshore_se01	E	37.4
2005	EScotland_EScOpenSea_se01	A	13.5
2005	EScotland_EScOpenSea_se01	B	14.4
2005	EScotland_EScOpenSea_se01	C	12.9
2005	EScotland_EScOpenSea_se01	D	13.7
2005	EScotland_EScOpenSea_se01	E	13.2

Table Graphs

Last Refresh Date: 25 September 2007 16:47:59

5. Select **Set as Section** (Or as an alternative you can drag a cell from the column up to hover above the top of the table and drop it)
6. The column selected is defined as the variable used to split the table into sections. Each value of the variable (e.g. 'Station Name') is displayed as a header, followed by the data concerning the column.

The screenshot shows a web browser window displaying a report titled "Clyde\_FirthCOuterOffshore\_se01". The report contains four tables, each with a header row and data rows. The tables are:

Monitoring Year	Sample Number	Result
2005	A	43.3
2005	B	44.2
2005	C	42.4
2005	D	38.9
2005	E	37.4

Monitoring Year	Sample Number	Result
2006	A	13.8
2006	B	13.55

Monitoring Year	Sample Number	Result
2005	A	13.5
2005	B	14.4
2005	C	12.9
2005	D	13.7
2005	E	13.2
2006	A	13.9
2006	B	13.9
2006	C	13.58

Monitoring Year	Sample Number	Result
2006	C	18.48
2006	D	18.18

The report also shows a "Report 1" tab at the bottom and a "Last Refresh Date: 25 September 2007 12:23:31" at the bottom right.

## 11.2 To Display an aggregate

1. Continue from the previous table.
2. Click the Result where you want to insert a calculation.
3. From the Report Toolbar, click Insert Average.
4. The average is calculated and inserted in a new row.

The screenshot shows a WebIntelligence report with five tables. The 'Average' row in each table is highlighted in blue. The tables are:

Clyde_FirthCOuterOffshore		
Monitoring Year	Sample Number	Result
2005	A	43.3
2005	B	44.2
2005	C	42.4
2005	D	38.9
2005	E	37.4
Average:		41.24

EScotland_EScIntermediate		
Monitoring Year	Sample Number	Result
2006	A	13.8
2006	B	13.55
Average:		13.68

EScotland_EScOpenSea_sl		
Monitoring Year	Sample Number	Result
2005	A	13.6
2005	B	14.4
2005	C	12.9
2005	D	13.7
2005	E	13.2
2006	A	13.9
2006	B	13.9
2006	C	13.58
Average:		13.64

EScotland_Scurdiensess_e		
Monitoring Year	Sample Number	Result
2006	C	18.48
2006	D	18.18
Average:		18.33

- Click on one of the Average rows and drag the cell with your mouse until it is level with the section heading, as shown below:

The screenshot shows the same report as above, but the 'Average' row from the first table has been dragged to the top of the report area, positioned above the 'Clyde\_FirthCOuterOffshore' table heading. The mouse cursor is visible over the 'Average' row.

Clyde_FirthCOuterOffshore		
Monitoring Year	Sample Number	Result
2005	A	43.3
2005	B	44.2
2005	C	42.4
2005	D	38.9
2005	E	37.4
Average:		41.24

EScotland_EScIntermediate		
Monitoring Year	Sample Number	Result
2006	A	13.8
2006	B	13.55
Average:		13.68

EScotland_EScOpenSea_sl		
Monitoring Year	Sample Number	Result
2005	A	13.6
2005	B	14.4
2005	C	12.9
2005	D	13.7
2005	E	13.2
2006	A	13.9
2006	B	13.9
2006	C	13.58
Average:		13.64

EScotland_Scurdiensess_e		
Monitoring Year	Sample Number	Result
2006	C	18.48
2006	D	18.18
Average:		18.33

- Release the mouse button. The section average appears next to the section header.

The screenshot displays a WebIntelligence report in a browser window. The report is titled 'Clyde\_FirthCOuterOffshore\_se01' and shows a section average of 41.24. Below this, there are several data tables, each with a header row: 'Monitoring Year', 'Sample Number', and 'Result'. The tables are organized into sections, each with its own section average displayed to the right of the table.

Monitoring Year	Sample Number	Result
2005	A	43.3
2005	B	44.2
2005	C	42.4
2005	D	38.9
2005	E	37.4

Section Average: 41.24

Monitoring Year	Sample Number	Result
2006	A	13.8
2006	B	13.55

Section Average: 13.68

Monitoring Year	Sample Number	Result
2005	A	13.5
2005	B	14.4
2005	C	12.9
2005	D	13.7
2005	E	13.2
2006	A	13.9
2006	B	13.9
2006	C	13.58

Section Average: 13.64

Monitoring Year	Sample Number	Result
2006	C	18.48
2006	D	18.18

Section Average: 18.33

Monitoring Year	Sample Number	Result
2006	F	16.02

Section Average: 16.02

The interface includes a left-hand navigation pane with 'Data' and 'Templates' tabs, and a top toolbar with 'View Structure' and 'Drill' options. The status bar at the bottom indicates the last refresh date as 25 September 2007 16:47:59.

- TIP:** It can sometimes be easier to rearrange section sizes and placement of objects using the **View Structure** Function.

The screenshot shows the 'Edit Report' interface in 'View Structure' mode. The toolbar includes 'View Structure' and 'Drill' buttons. Two data sections are visible:

**Clyde\_FirthCOuterOffshore\_se01**      **41.24**

Monitoring Year	Sample Number	Result
2005	A	43.3
2005	B	44.2
2005	C	42.4
2005	D	38.9
2005	E	37.4

**EScotland\_EScIntermediate\_se01**      **13.68**

Monitoring Year	Sample Number	Result
2006	A	13.8
2006	B	13.55

A red arrow points from the 'View Structure' button to the average value boxes. The text 'View Structure' is written in red to the right of the arrow.

- This mode displays the structure of the report and definition of data filters, sorts and calculations. It is also easier to move objects around and get a better idea of placements in this mode.

The screenshot shows the 'Edit Report' interface in 'View Results' mode. The toolbar includes 'View Results' and 'Drill' buttons. The report structure is as follows:

**Pb (mg/kg) in sediments 2005, FRS (SED2000), SED2000**

Section on: Station Number

**=[Station Number]**      **=Average([Result])**

Block1

=NameOf([Monitoring Year])	=NameOf([Sample Number])	=NameOf([Result])
=([Monitoring Year])	=([Sample Number])	=([Result])

End of Section on: Station Number

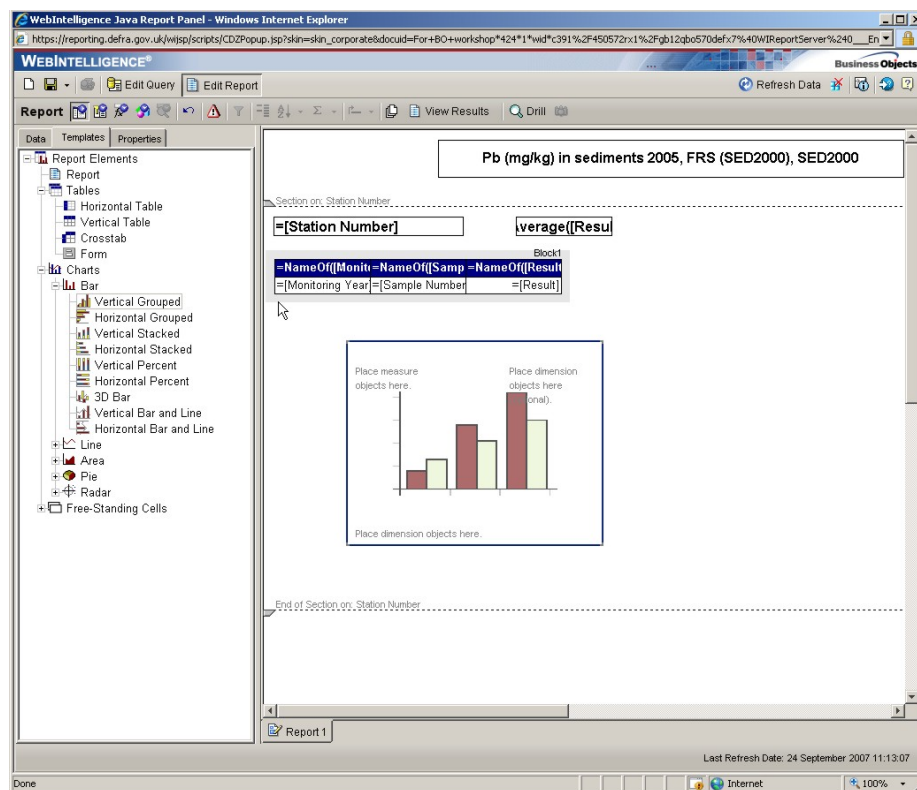
- Click **View Results** to see what the changes you've made look like in the actual report.

### 11.3 To insert a block in each section

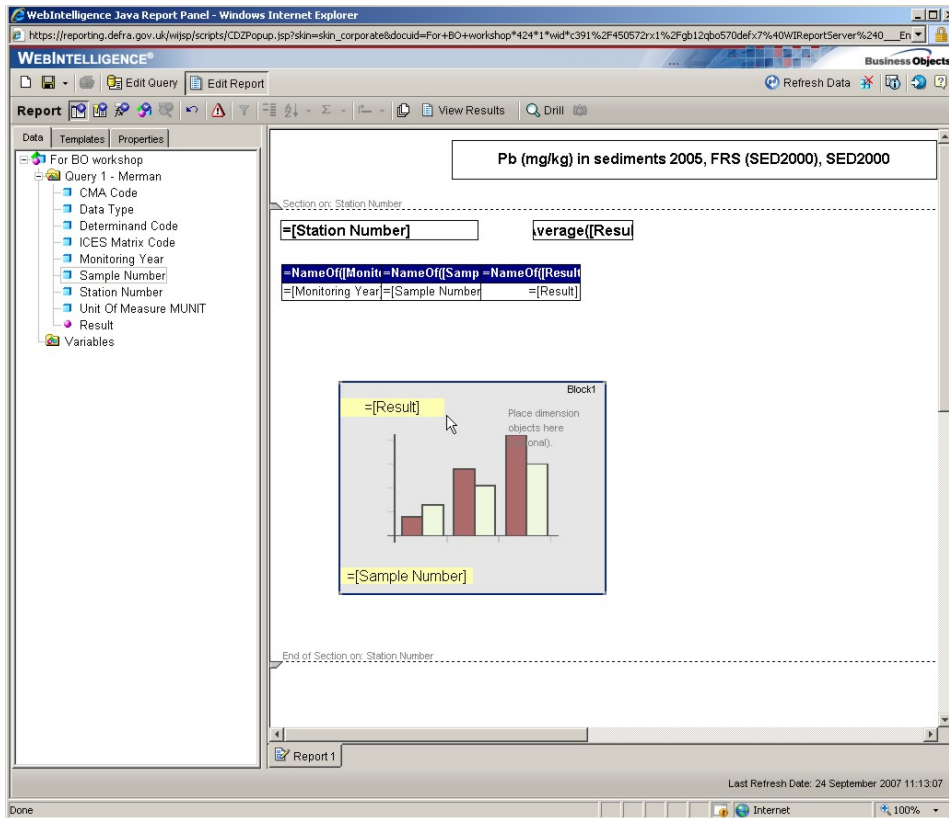
Continue using the report from the previous exercise

10. Click **Templates**
11. Select the chart type you want to use
  - Example : **Bar > Vertical Grouped**
12. Drag the template to the document zone.

**Note:** The panel automatically changes to **View Structure** mode displaying the structure of the report. The size of the section will automatically increase according to where you place the object.

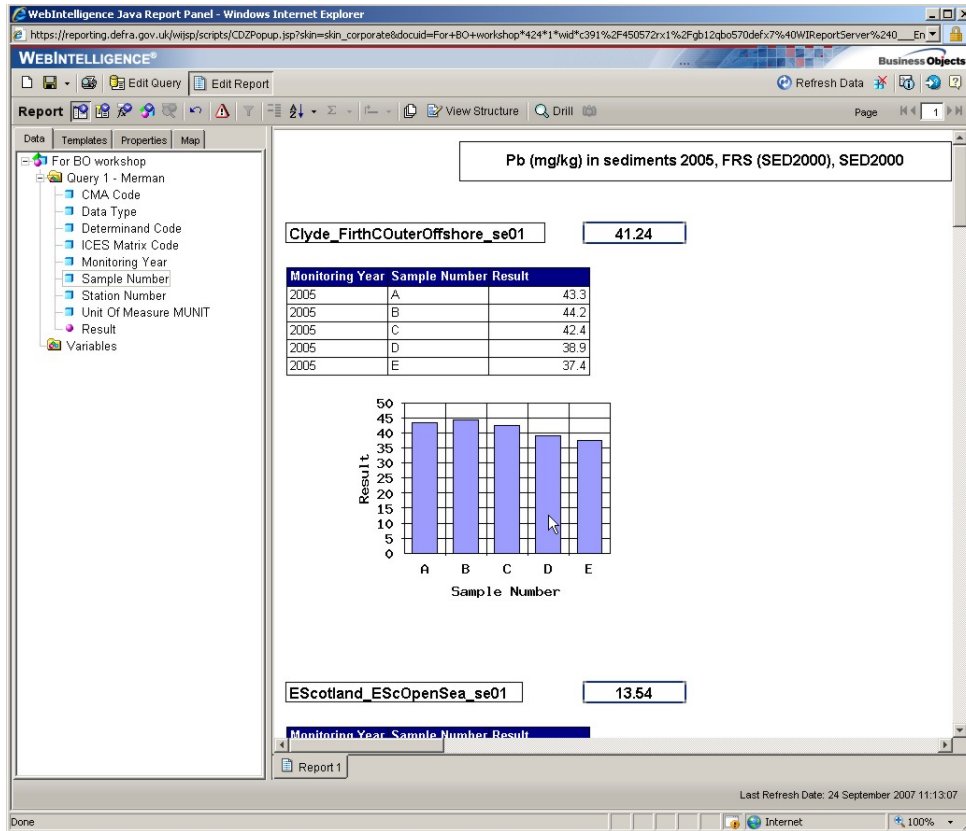


13. Click the **Data** tab
14. Drag a **measure** and a **dimension** object over the tool tips provided in the template
  - Example: 'Result' and 'Sample Number'
  - The measure and dimension objects are positioned within the template.



15. From the Report Toolbar, click **View Results**
16. The document zone appears in **View Results** mode, and the block is inserted into each section showing the values specified.





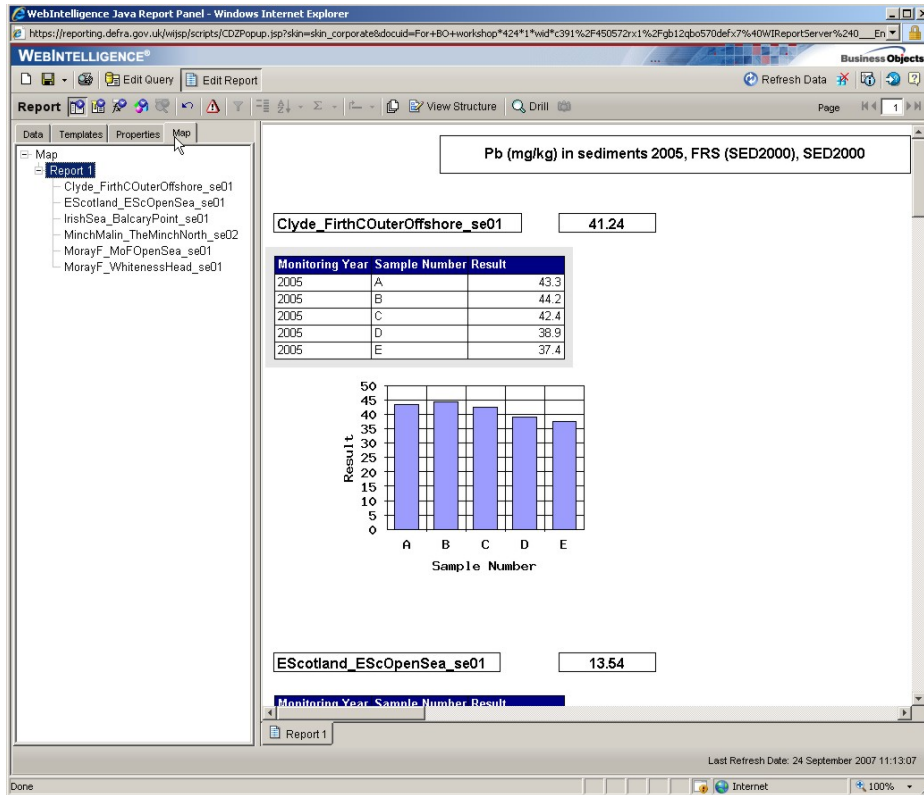
17. Save document as ' **Sections** '

#### 11.4 Navigating from section to section

18. From the Report Manager, click **Map**.

19. The **Map** tab displays all the reports and sections contained in this document. In this example below, there is only a single report.

20. Expand a report folder.



21. Click on the section you want to navigate to.
22. The document zone scrolls down to display the section selected within the report.

You can use the Map table in the Report Manager to jump from one report to another, as well as navigating from section to section. This feature is very useful if you have a large document with multiple reports and, any sections to navigate through.

TIP: It is recommended to use the View Structure mode to display the report structure when deleting a section

### 11.5 Deleting a section

1. In Edit Report Panel, click **View Structure**.
2. The section dividers show the beginning and end of the section.
3. Click the beginning or end divider of the section you want to remove.
4. Press the Delete Key.
5. Close without saving.

## 11.6 Modifying the default section properties

The Section Properties tab has five sub-tabs that you can use to change the default formatting of the selected section. You can access each of these five sub-tabs by clicking the little buttons that appear vertically on the left side of the Report Manager panel

1. Open '**Sections**' document.
2. Click just above the section header to select the section. A blue line appears above the header to indicate that the section is highlighted.

The screenshot shows the WebIntelligence Java Report Panel in a Windows Internet Explorer browser. The main content area displays two sections of data. The first section is titled "Clyde\_FirthCOuterOffshore\_se01" and has a value of 41.24. Below the title is a table with columns "Monitoring Year", "Sample Number", and "Result". The data for this section is as follows:

Monitoring Year	Sample Number	Result
2005	A	43.3
2005	B	44.2
2005	C	42.4
2005	D	38.9
2005	E	37.4

Below the table is a bar chart with the y-axis labeled "Result" ranging from 0 to 50 and the x-axis labeled "Sample Number" with categories A, B, C, D, and E. The bars represent the values from the table above.

The second section is titled "EScotland\_EScOpenSea\_se01" and has a value of 13.54. Below the title is a table with columns "Monitoring Year", "Sample Number", and "Result". The data for this section is as follows:

Monitoring Year	Sample Number	Result
2005	A	13.5
2005	B	14.4
2005	C	12.9
2005	D	13.7
2005	E	13.7

Below the table is a bar chart with the y-axis labeled "Result" ranging from 0 to 50 and the x-axis labeled "Sample Number" with categories A, B, C, D, and E. The bars represent the values from the table above.

The left sidebar shows the "Section Properties" tab selected. It contains several options: "Section on: Station Number", "Display", "Consider section empty when the following are empty" (with checkboxes for "Station Number", "Block1", and "Average(Res)"), "Show section when empty" (checked), and "Include section in Map" (checked). There is also a "Help" button at the bottom of the sidebar.

3. Click the **Properties** tab.
4. You can format the section using the Section Properties, Section Format, Section Page Layout, Sorts and Filters tabs.
5. Click the checkbox that specifies page breaks are avoided in a section.

WebIntelligence Java Report Panel - Windows Internet Explorer

Business Objects

Report

Section Page Layout

Positions: Top 0.8 cm

Relative to: Bottom of: Pb (mg/kg) in se

New Page

Start section on a new page

Page Breaks

Avoid page break in section

Pb (mg/kg) in sediments 2005, FRS (SED2000), SED2000

Clyde\_FirthCOuterOffshore\_se01 41.24

Monitoring Year	Sample Number	Result
2005	A	43.3
2005	B	44.2
2005	C	42.4
2005	D	36.9
2005	E	37.4

EScotland\_EScOpenSea\_se01 13.54

Monitoring Year	Sample Number	Result
2005	A	13.5
2005	B	14.4
2005	C	12.9
2005	D	13.7
2005	F	13.7

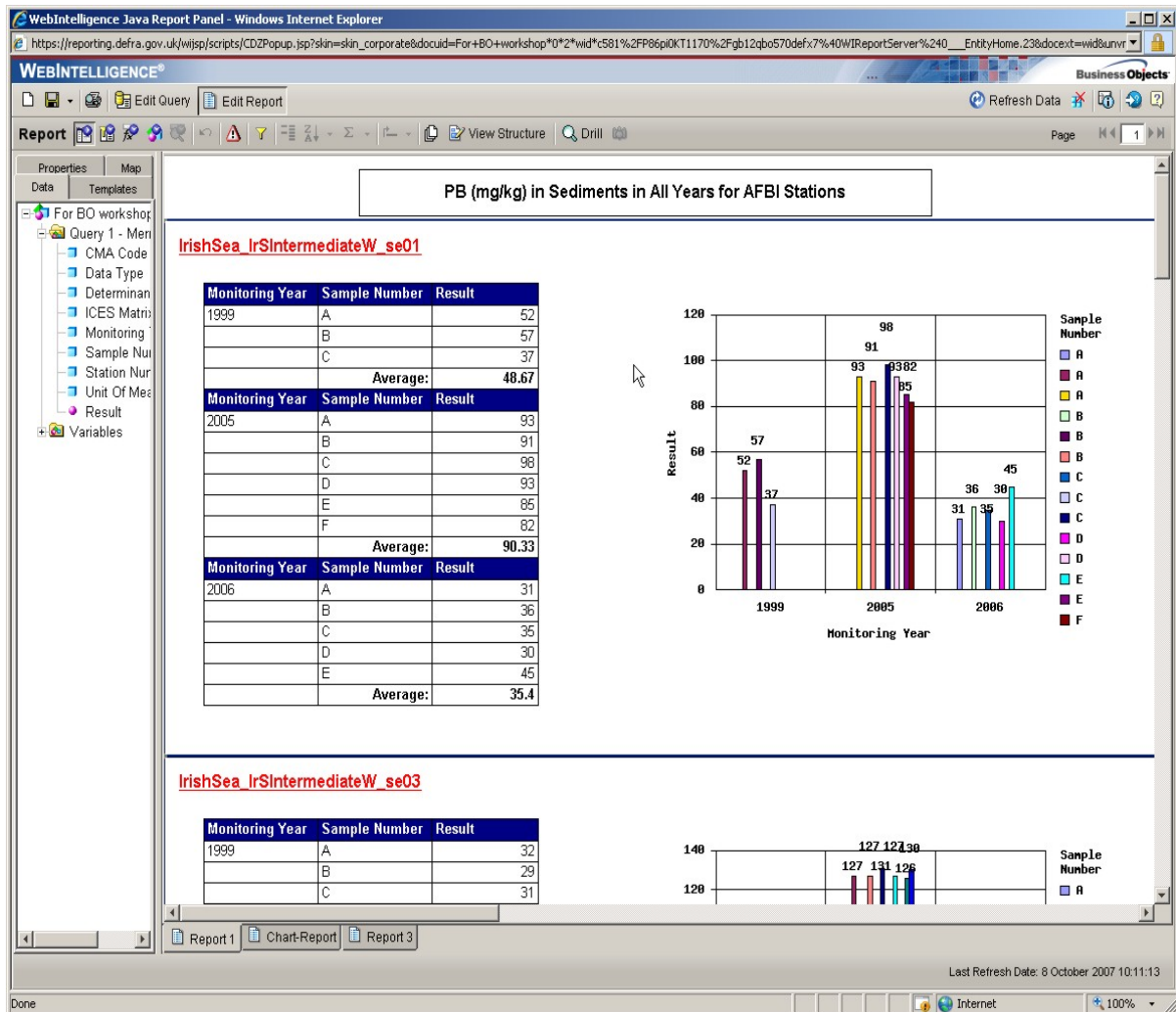
Report 1

Last Refresh Date: 24 September 2007 11:13:07

6. Save the document (I.e. overwrite).

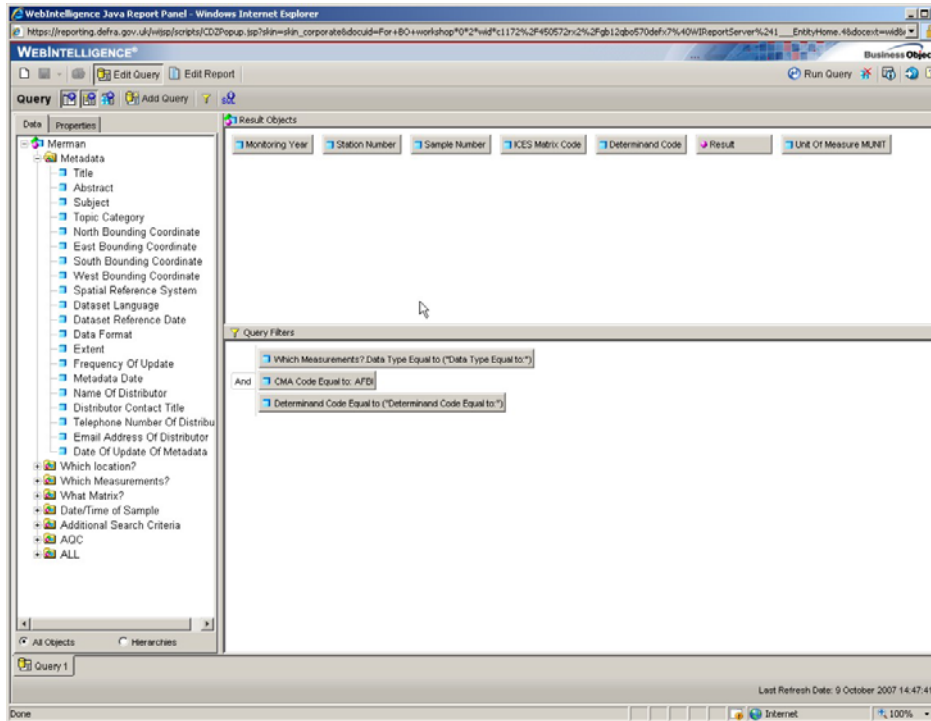
## 12 FINAL ACTIVITY: Creating and Formatting Reports

Starting a new query, we will attempt to create a report similar to the one pictured below:

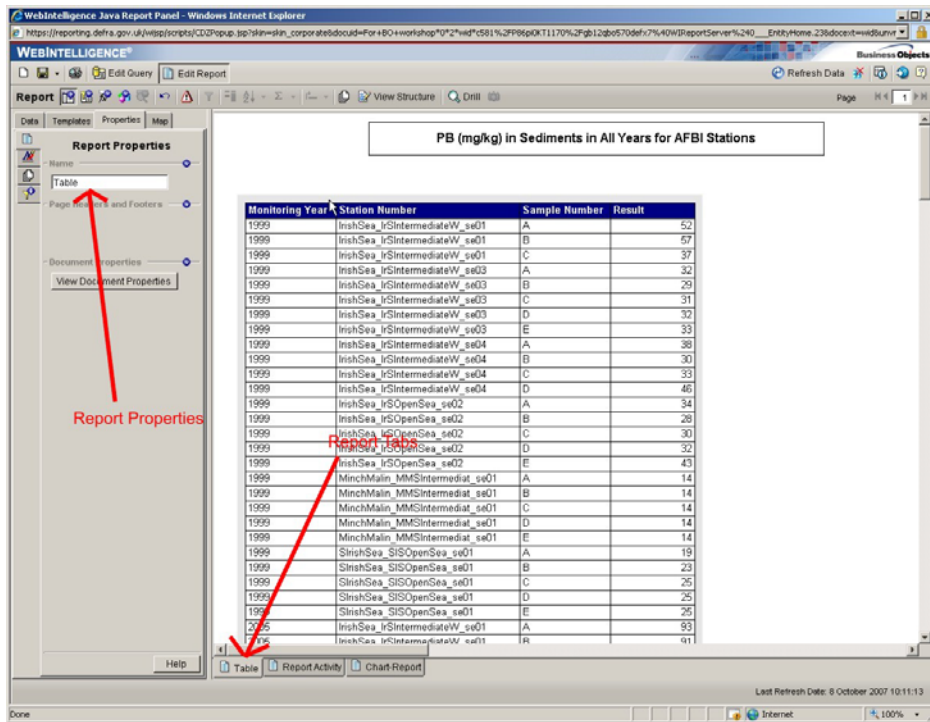


1. Open a new document.
2. In the **Edit Query** page, compile the following query:
  - **Results Pane** : Select 'Monitoring Year', 'Station Number', 'Sample Number', 'ICES Matrix code', 'Determinand Code', 'Result', 'Unit of Measurement'.
  - **Query Filters** : 'CMA Code' – Select your CMA code (Values from List)
  - **Query Filters** : Prompt on 'Determinand Code' (Select Values Only from List)
  - **Query Filters** : Prompt on 'Data Type' (Select Values Only from List) (Drag Data Type directly from the Data tabs to the Query Filter)

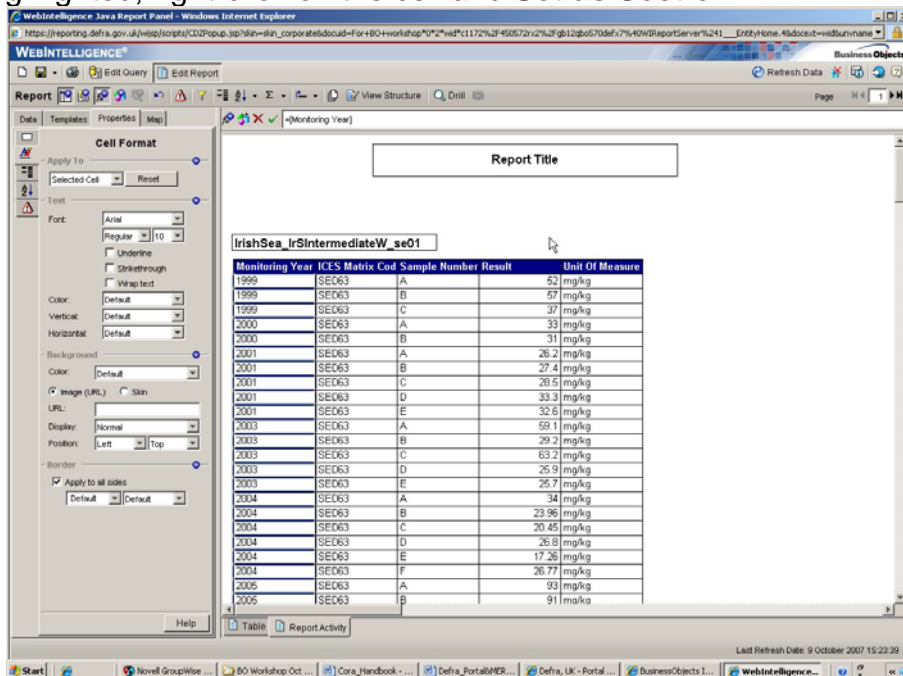
pane. You do not need to have 'Data Type' present in the Result Objects pane. The data will still be filtered accordingly.



3. Run Query. Select '**Pb**' and '**Sediment**' as your Prompt choices.
4. Remove the 'Determinand Code' by clicking and dragging it to the left of the screen and dropping it under the data tab.
5. **TIP: Copy your original report before you make edits so that if anything goes wrong, you can always start again!**
6. At the bottom of the report right-click the **Report** tab.
7. Rename the report to 'Table' in the **Report Properties** section and press enter.



8. Right-click the tab again and 'Duplicate Report'. This has created a copy of your table in a separate sheet.
9. Rename this second tab to 'Report Activity' in the Report Properties Section and press enter.
10. Click on the 'Report Activity' Tab
11. Divide the table up into sections by 'Station Number'.
12. Click on a cell in the 'Station Number' column. The column will be highlighted, right-click on the cell and Set as Section.



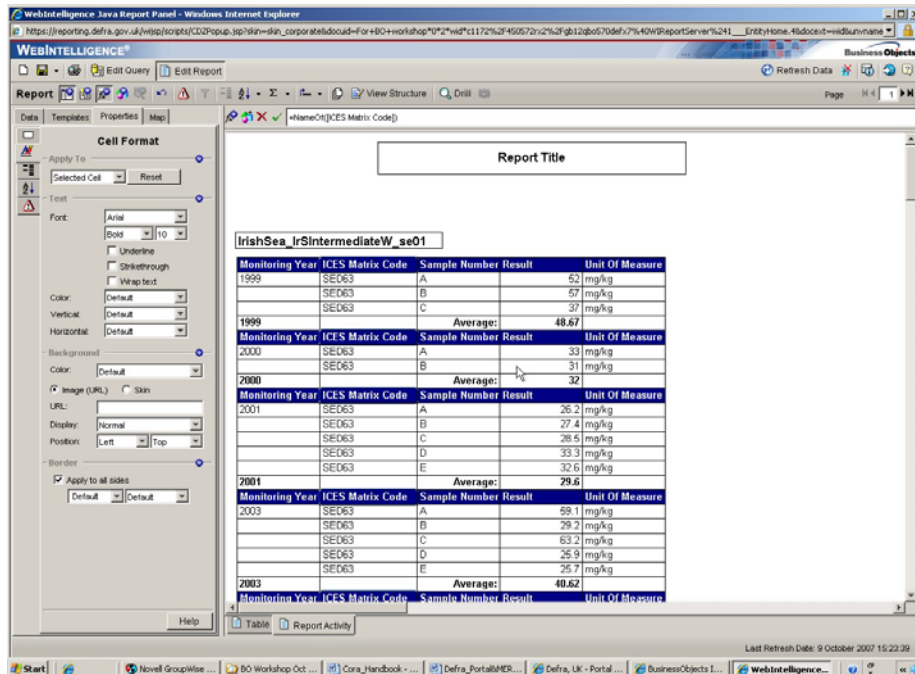
13. Double click on the 'Station name' cell so that it resizes to fit the station name fully.
14. Next break the 'Monitoring Year' up into groups.
15. Click on a cell in the Monitoring Year, and **Insert Break** using the icon in the Report Toolbar.

The screenshot shows a report titled "IrishSea\_IrSIntermediateW\_se01" in the WebIntelligence Java Report Panel. The report contains a table with the following data:

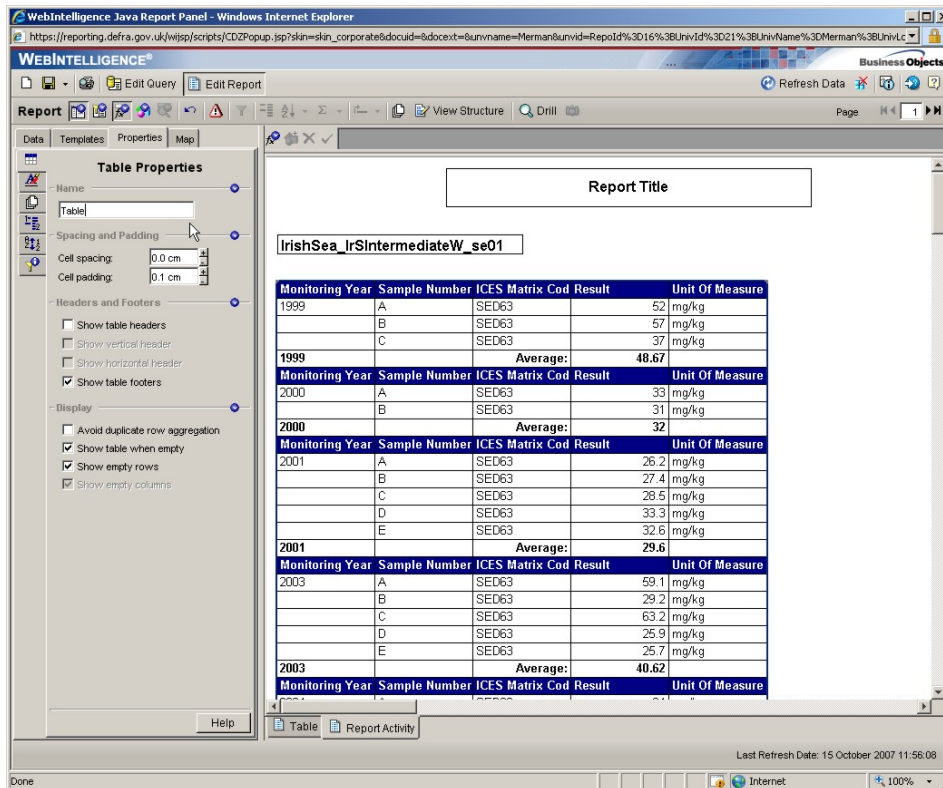
Monitoring Year	ICES Matrix Cod	Sample Number	Result	Unit Of Measure
1999	SED63	A	52	mg/kg
	SED63	B	57	mg/kg
	SED63	C	37	mg/kg
2000	SED63	A	33	mg/kg
	SED63	B	31	mg/kg
2001	SED63	A	26.2	mg/kg
	SED63	B	27.4	mg/kg
	SED63	C	26.5	mg/kg
	SED63	D	33.3	mg/kg
	SED63	E	32.6	mg/kg
2003	SED63	A	59.1	mg/kg
	SED63	B	29.2	mg/kg
	SED63	C	63.2	mg/kg
	SED63	D	25.9	mg/kg

16. Next we want to add the average concentration for each year to the table.
17. Click on a cell in the 'Result' column and from the Results Toolbar, select the Average function.
18. Right-click on the empty row between the cell groups and **Remove Row**



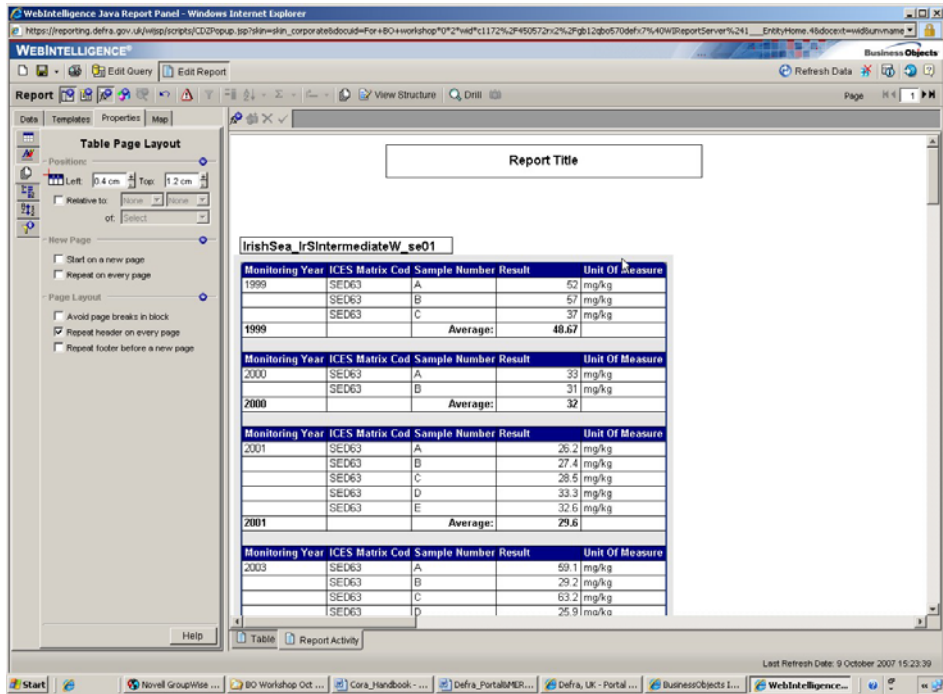


19. Name the Table. Click just outside the table so that it is highlighted and go to **Table Properties**. Under Name, write Table.

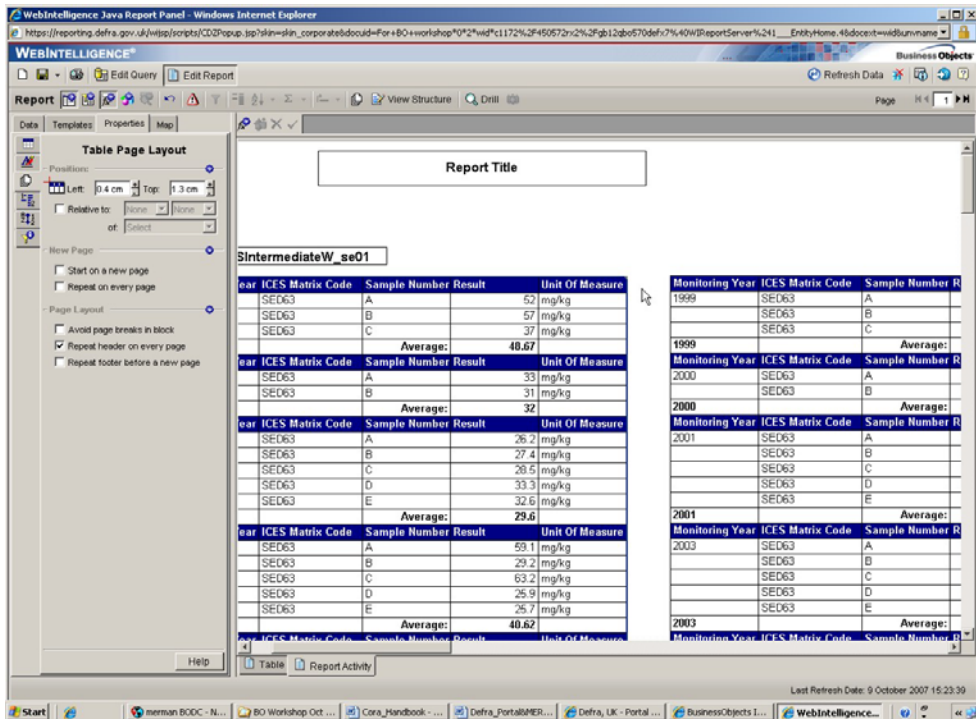


20. Make a copy of the table, which we will then turn into a Bar Chart

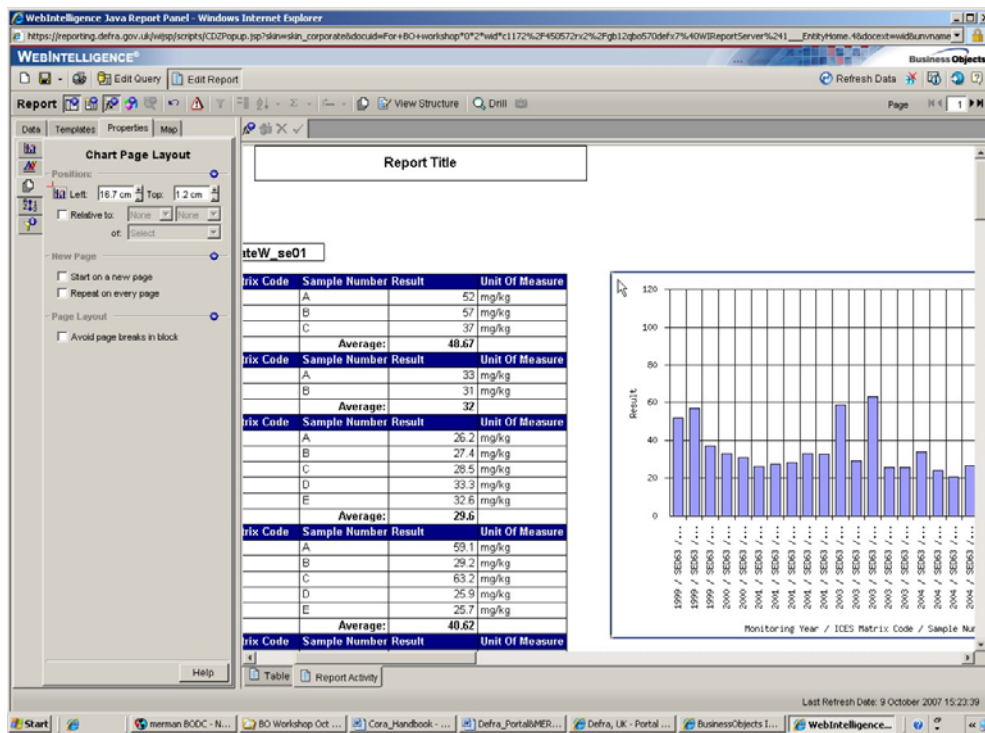
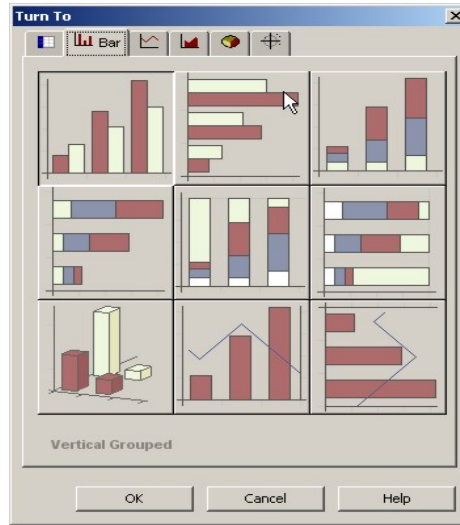
21. To make a copy of the object, click in the space just above the table so that the grey shadow appears.



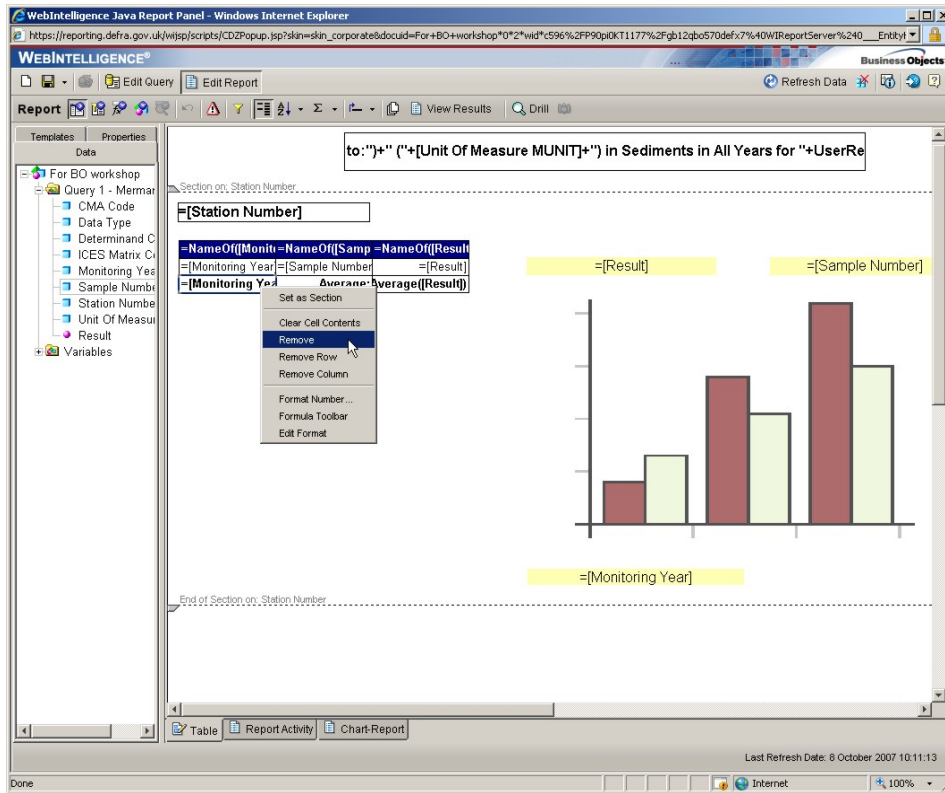
22. Holding down control, click and hold the grey shadow and drag it across the page. Drop the copy of the table so that it sits next to the original.



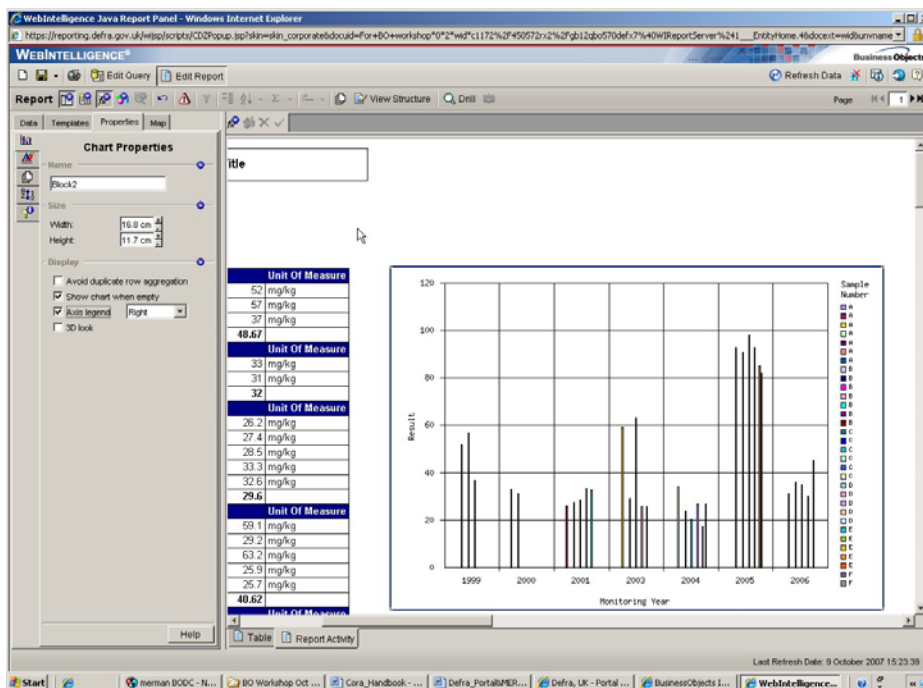
- Right-click the space just above the second table and Turn to a Bar Chart – Vertical grouped.



- We now need to format the chart. Click **View Structure**.
- Remove the 'Sample number' from the X-axis and move it to the top-right hand corner, '**Place dimension objects here**'.
- Delete the 'ICES Matrix Code' and 'Unit of Measurement' from the X-axis, by clicking on each one and pressing delete.



27. Click **View Results**
28. Click on the chart so that is highlighted, in order to format it.
29. Under the properties tab, select chart properties.
30. Add **Axis Legend**



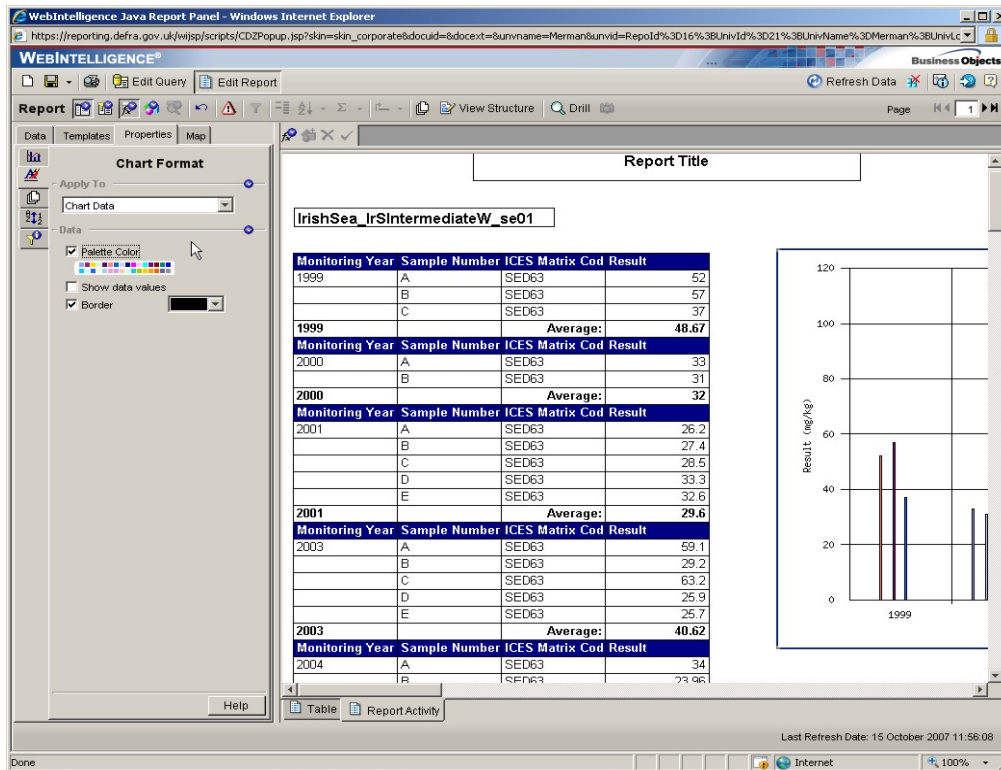
31. Click the **Chart format** tab.
32. We will now add the units to the Y-Axis label.
33. Under the **Apply To** Drop down menu, choose Y Axis label.
34. Uncheck the 'Show object name' and enter the following : Result (mg/kg)

The screenshot shows the WebIntelligence Java Report Panel. The report title is "IrishSea\_IrSIntermediateW\_se01". The main content is a table with the following data:

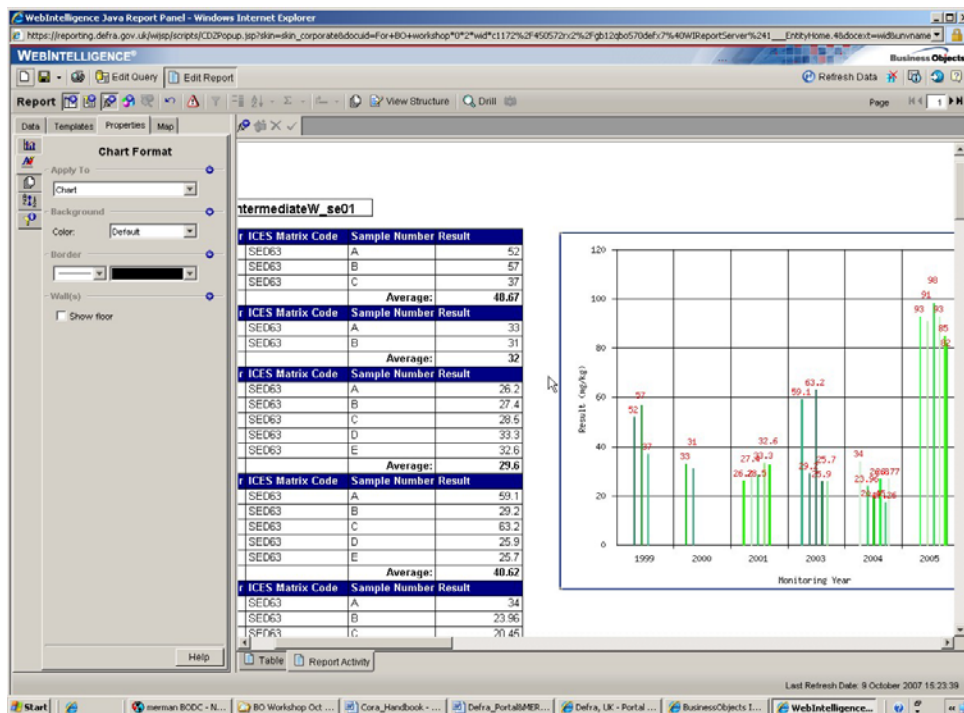
Monitoring Year	Sample Number	ICES Matrix Cod	Result	Unit Of Measure
1999	A	SED63	52	mg/kg
	B	SED63	57	mg/kg
	C	SED63	37	mg/kg
Average:			48.67	
2000	A	SED63	33	mg/kg
	B	SED63	31	mg/kg
Average:			32	
2001	A	SED63	26.2	mg/kg
	B	SED63	27.4	mg/kg
	C	SED63	28.5	mg/kg
	D	SED63	33.3	mg/kg
	E	SED63	32.6	mg/kg
Average:			29.6	
2003	A	SED63	59.1	mg/kg
	B	SED63	29.2	mg/kg
	C	SED63	63.2	mg/kg
	D	SED63	25.9	mg/kg
	E	SED63	25.7	mg/kg
Average:			40.62	
2004	A	SED63	34	mg/kg
	B	SED63	33.96	mg/kg

The 'Chart Format' tab is active, and the 'Apply To' dropdown is set to 'Y Axis Label'. The 'Text' field is set to 'Result (mg/kg)' and 'Show object name' is unchecked. The bar chart on the right shows the 'Result (mg/kg)' for each sample, with the Y-axis ranging from 0 to 120.

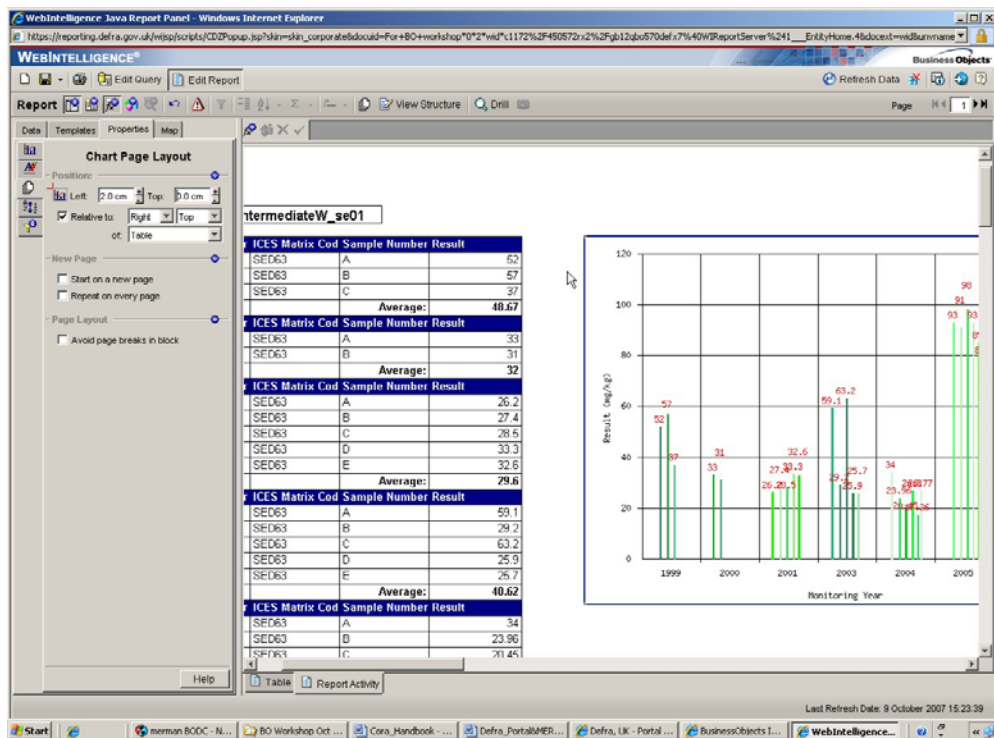
35. Take the 'Unit of Measurement' column out of the table by right-clicking and **Remove column**
36. Under **Chart Properties**, name the Object 'Graph'
37. Under the **Apply to** drop-down menu, select **Chart Data**.
38. Under **Palette colour**, select your choice of colour scheme.



39. Select the 'Show data values' box.
40. Set the data values to be **Font-size 10** and make them **Red and Bold**.
41. Take the border off the bars.



42. Under the **Apply to** drop-down menu, select **Chart**
43. Put a thin black border around the chart.
44. To keep the format consistent, we can set the position of the objects so that they are related to each other. I.e. if you move the table for instance, the graph will move relative to it.
45. Click on the Chart so that a blue box appears around it.
46. Go to **Chart Page Layout**.
47. Check the **Relative to** Option. Now we can choose where we want the graph positioned, relative to the table.
48. Select **Right** and then **Top** from the drop down menus. After 'of', select **Table** (named previously).
49. In the positional values above, type in **2.0 cm from the RIGHT** and **0.0 cm from the TOP**.



50. If you try moving the table, the graph will automatically reposition.
51. Check the 'Avoid page breaks in block' option under **Page Layout**.
52. Remove the border from around the Station numbers.
53. Click the 'Station name' cell and under **Cell format**, remove the border.
54. Change the 'Station name' font colour to Red.
55. Now we will change the Report Title so that it adjusts automatically, depending on the prompts.

56. Double-click inside the Title.
57. Start the Formula with '='
58. Type in between quotes the generic text you want to display in the title.
  - Example : "Concentrations of "
59. Under Available Operators, select the operator to continue the formula – in this case we want to add something to the text so we use the (+) sign
60. Under **Available Functions** expand the **Data Provider** Folder.
61. From **Data Provider**, select **User Response**. The User Response function relates to the User's response to the Query Prompt.
62. Within the brackets, type in between quotes the filter prompt EXACTLY as it appears in the Query filters pane
  - Example : "Determinand Code Equal to:"
63. To add more text to the title add a + sign after the brackets and add what you want, again between quotes.
  - Example : " : " (Be aware of the spaces before and after the text)
64. To incorporate the Data Type you need to add in another User Response to the Title Formula. Under **Available Operators**, select the operator to continue the formula – in this case we want to add something to the text so we use the (+) sign
65. Under **Available Functions** expand the **Data Provider** Folder and select **User Response**.
66. With the brackets type in between the quotes the filter prompt EXACTLY as it appears in the Query filters pane
  - Example : "Data Type Equal to:"
67. Expand the Title Cell by double-clicking the side of it.
68. Remove the border around the Title and Underline it
69. Save the Report as **Final Activity**.



## NOTES

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