

# **ECD DATABASE**



DEPARTMENT OF EDUCATION



EUROPEAN UNION

## **USER GUIDE**

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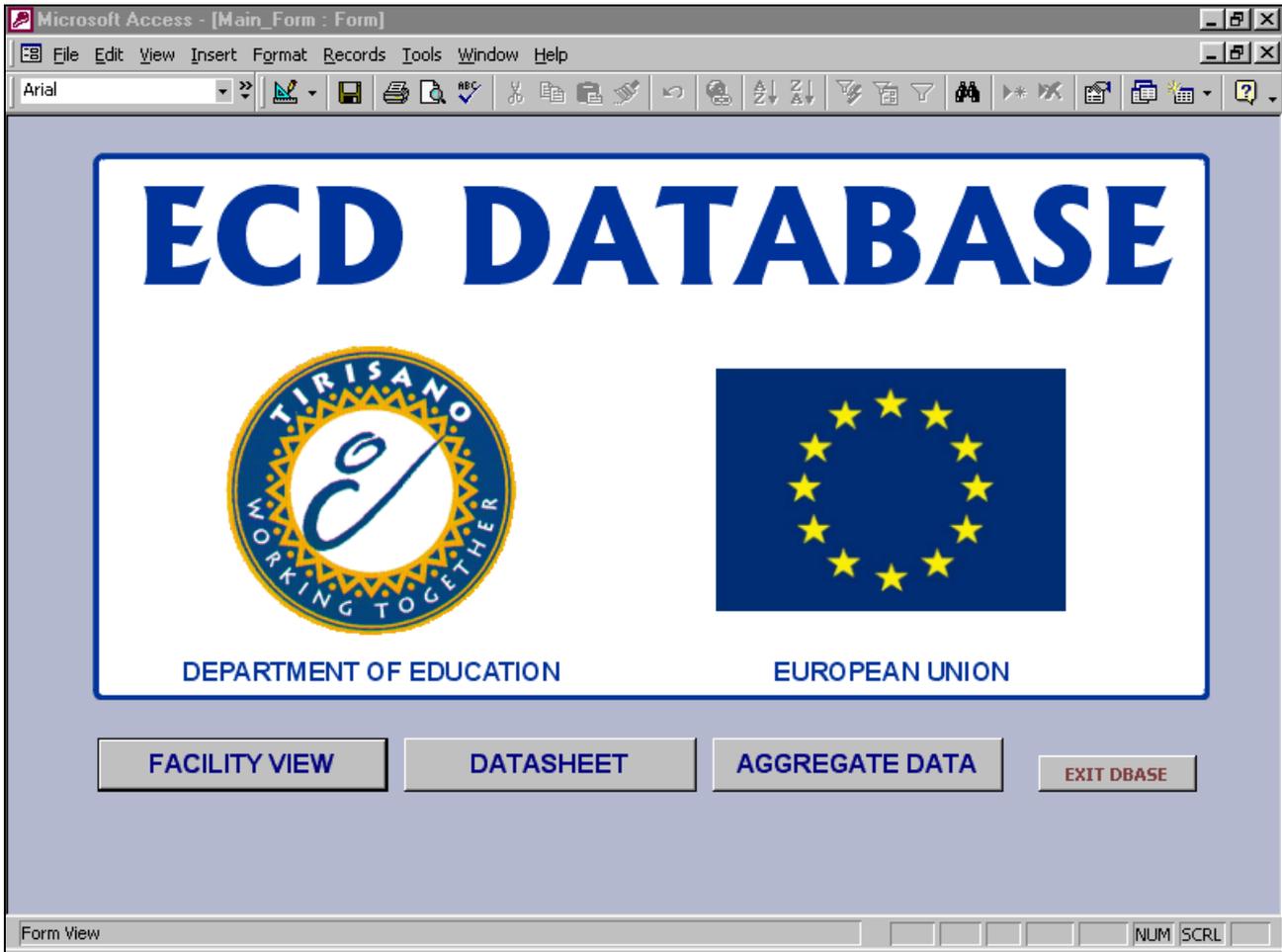
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# 1. GETTING STARTED

To install the database, please refer to the installation notes accompanying the data CD. Once the database is successfully installed, you should be able to launch it by double-clicking on the icon for ECDDBASE.MDB<sup>1</sup>.

Once you have opened the database, the opening screen should appear. If you see the following screen, you have successfully launched the database and you can begin using it:



<sup>1</sup> You may wish to create a shortcut on the Windows Desktop to the Database for easy access. The easiest way to do this is to drag the database's icon from the Windows Explorer onto the desktop with the right mouse button (instead of the left) and select "Create Shortcut here".

## 2. OVERVIEW OF THE DATABASE

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The ECD database is divided conceptually into two parts, namely facility-level and aggregate-level data. The first two buttons on the opening screen, “Facility View” and “Datasheet”, are for working with facility-level data while the last button is for working with aggregate data.

**Facility-level** data refer to the raw data. You can either work with a single facility at a time, by using the “Facility View” screen (see p.4) or with a list of facilities by using the “Datasheet” screen (see p.6). With the facility view it is possible to browse through all the data of a single facility. This view also has a search function, which can be used to locate and view a particular facility quickly.

The datasheet view has the advantage that it is possible to view the main fields of the facility-level data in a list format, which is useful when working with collections of facilities. In particular, you can select data (see p.13) according to specified criteria and then use the datasheet view with a list of facilities that conforms to the criteria. Data can be selected for viewing based on either simple criteria, such as all the facilities in a specified province, or on potentially complex combinations of user-specified criteria.

There are also several facility reports (see p.7), which are useful for printing facility-level data. For example, it is possible to print a list or directory (a list with contact information) of selected facilities.

**Aggregate-level** analyses (see p.9) can be done with the database, either on the entire dataset or on a subset. Subsets are specified in the same way in which data are selected for viewing in the facility-level sections. You can use the database to do simple aggregate analyses, such as determining the number of facilities, learners or educators in each province or type of facility. It is also possible to do cross-tabulations.

Results of aggregate-level analyses can be viewed as frequencies or as percentages, exported to MS Excel or charted. If MS Graph is correctly installed on your computer, you can quickly and easily create charts (such as pie-charts and bar-charts) based on aggregate data (see p.11). Such charts can then be edited and exported directly to other applications, such as MS Word.

## 3. WORKING WITH FACILITY-LEVEL DATA

### 3.1. The Facility View

The Facility View is used to browse through the basic data. The facility View is accessed by clicking on the relevant button on the opening screen or on other screens. The facility view looks like this:

The screenshot shows a Microsoft Access form titled "FACILITY VIEW" for "GALLOOPIE PLAY SCHOOL". The form is displayed in a window titled "Microsoft Access - [Facility\_main]". The menu bar includes File, Edit, View, Insert, Format, Records, Tools, Window, and Help. The toolbar contains various icons for file operations and navigation. The form fields are as follows:

- Facility ID:** EC\_ECS000001
- Province:** EASTERN CAPE
- Town:** PORT ELIZABETH
- Site Type:** School-based, Community-based (selected), Home-based
- Location:** Urban (formal) (selected), Urban (informal), Rural
- Data Navigator:** Contact Info (selected), Disability Data, Language Data, Educator Data, Learner Data, Operation, Support, Site + Buildings, Infrastructure
- Search for:** ID, Name, Town
- Facility Contact Information:**
  - Physical Address:** GALLOOPIE PLAY SCHOOL, 61 BOSHOFF STREET, WESTERING, PORT ELIZABETH 6000
  - Postal Address:** GALLOOPIE PLAY SCHOOL, 61 BOSHOFF STREET, WESTERING, PORT ELIZABETH 6000
  - Contact Person (A7):** MRS VLOK
  - Telephone Number (A8):** 041 3608771
  - Name of nearest Primary school (A15):** VERKENNER PRIMARY SCHOOL
- Buttons:** Datasheet, Aggregate Data, EXIT FORM, EXIT DBASE
- Record Navigation:** Record: 1 of 23482
- Form View:** NUM SCRL

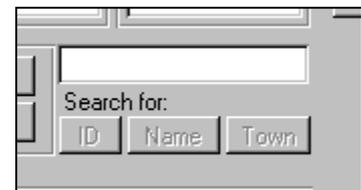
Since there are too many data fields for each facility to fit onto one screen, the design incorporates a shifting data pane that shows different fields of data. The data pane in the above screenshot shows contact information, but there are also 8 other sets of fields for the data pane. The data pane is shifted to other data by using the **data navigator**, illustrated below:

The Data Navigator consists of two rows of buttons. The top row contains: Contact Info (selected), Disability Data, Language Data, and Educator Data. The bottom row contains: Learner Data, Operation, Support, Site + Buildings, and Infrastructure.

Navigation between different facilities can be done using the **navigation buttons** at the bottom of the screen. The number to the right indicates the number of facilities currently selected for viewing. Initially, **all** the facilities are selected, so the number indicates the total number of facilities in the database. If you later select a subset of data to view (see p.6), the number will show the number of facilities that you have selected. The number in the text box (nr 1 in the example) refers to the number of the current facility (its position in the dataset of selected facilities). The buttons are used to navigate between facilities. The simple arrows (immediately to the left and right of the text box) navigate to the previous and next facilities respectively. The outer arrows navigate to the first and last records of the set.

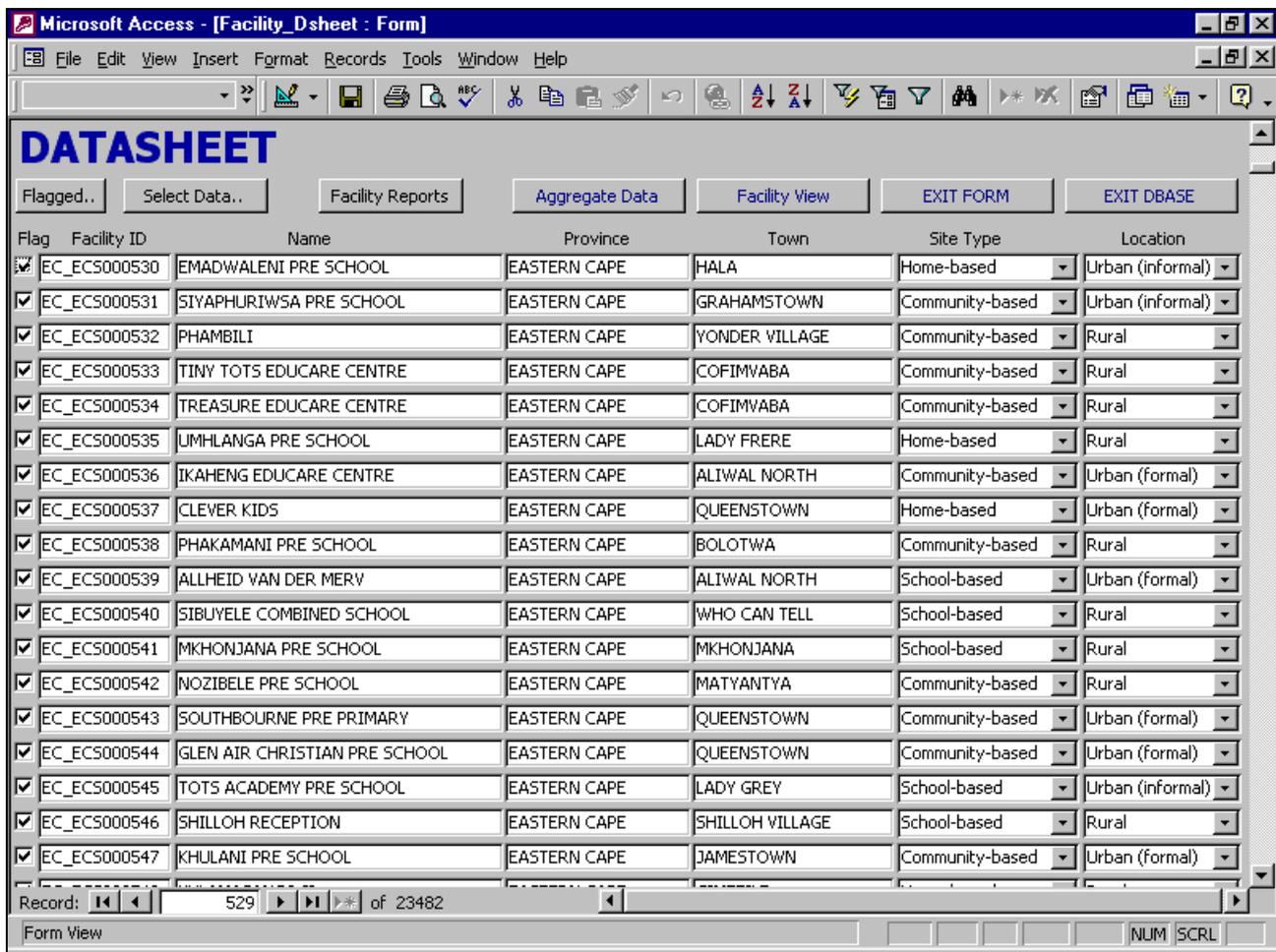


It is possible to search for a specific record in the currently selected dataset by using the **search facility**. You can search either for a specific facility ID, a facility name (or part thereof) or town (or part thereof). Enter your search term in the text box and click on one of the three buttons (ID, Name or Town). The buttons are disabled when the text box is empty (as in the above illustration). When more than one facility matches your search term, you can use the same search button to cycle through the matching facilities. Clicking on the button for the first time after having edited the search term will always find the first matching item in the list and the next click will find the next one. When there are no remaining matching items, clicking on the button will return to the first matching item. If there are no matching facilities to a search, no result will appear.



### 3.2. The Datasheet View

The datasheet view is used for browsing through data in a list format. It is useful when you are more interested in a subset of facilities rather than a specific facility. It is also a quick method to navigate between facilities.



The scroll bar on the right-hand side is especially useful to navigate large datasets (such as when all facilities are selected).

Note that when you use the Facility View button on the datasheet screen, **the same facility that is current in the datasheet will be current in the facility view**. If you see a facility in the datasheet view that you would like to view in more detail, click on the name of the facility to make it current. Then click on the Facility View button and the same facility will be current in the facility view. This feature works both ways: if you move from the facility view to the datasheet, the facility that was the current facility in the facility view will be visible on the datasheet.

### 3.3. Selecting Data to View

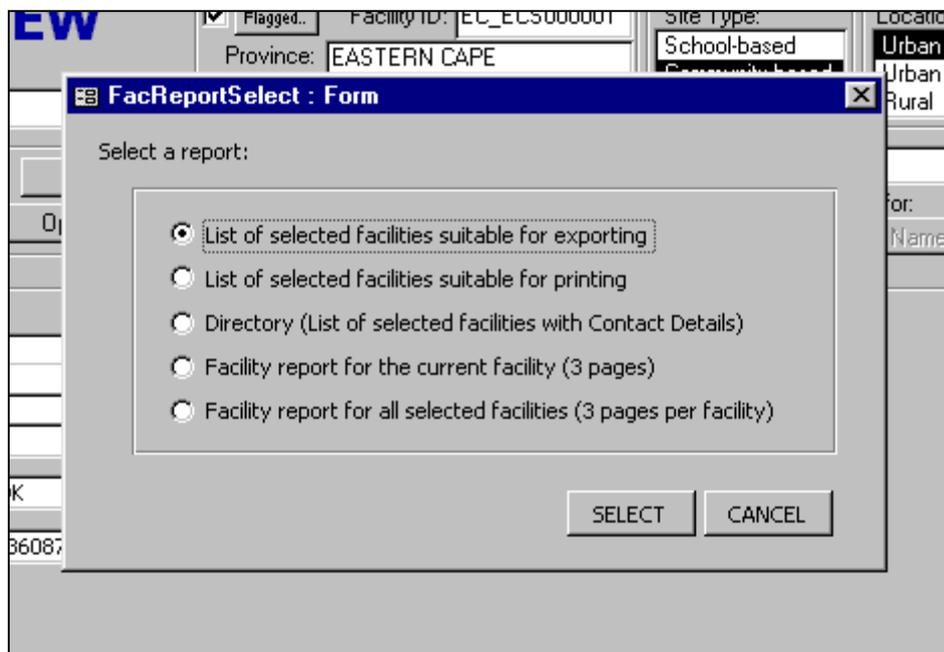
In the previous sections, mention was made of “selected facilities”. Both facility-level screens (facility view and datasheet) allow you to work with **subsets** of facilities, as opposed to all 23482 facilities at the same time. Note that selections made are persistent,

meaning that they are always saved to disk. Restarting the database or computer will **not** reset the selections. Furthermore, note that both facility-level views use the **same** subset, but not the same subset that is used for aggregate data analysis. If you select a dataset in facility view and then go to the datasheet view, you will be viewing the same subset of data. This is useful for navigation purposes, but it also means you cannot have separate selections for the two views.

On both views, there is a “Select Data..” button that can be used to select data. The selection process itself is described in a separate section (see p.13), because the process is the same as for selecting data for aggregate data analysis.

### 3.4. Facility Reports

Facility reports can be accessed via both facility-level views using the relevant button:



The different reports are described briefly below:

- List of selected facilities suitable for exporting: This will give essentially the same view as the datasheet view, but in an Access table format, which can be exported to other applications. Use Tools→Office Links→Analyse It With MS Excel to export it to Excel, for example. Close the view using the close button (the “X” at the top-right-hand side of the window) to return to the previous view.
- List of selected facilities suitable for printing: This gives a list of facilities in report-format. You will first be given a print preview, from which you can use the print button if you wish to print the report. Close the report to return to the previous view.

- Directory: Gives a list of facilities with contact details. This may be useful to print a directory of facilities selected according to specified criteria. There are four facilities per page.
- Facility report for the current facility: A 3-page report for the currently facility. This report contains all the data that is available in the facility view.
- Facility reports for all selected facilities: The same as the above, but for all of the selected reports. Warning: if you select this option for a large number of facilities, it may take very long and your computer is likely to run out of memory. Also, if you wish to print the report, keep in mind that a complete directory of all facilities would take  $23482 \times 3 = 70446$  pages.

## 4. WORKING WITH AGGREGATE DATA

### 4.1. Overview

Aggregate data analyses are conducted from the Aggregate Data Analysis screen:

Microsoft Access - [AGG\_Data : Form]

File Edit View Insert Format Records Tools Window Help

Tahoma

### AGGREGATE DATA ANALYSIS

Step 1: Flag data to be included in the query

Reset All Flags Flag All Facilities Flag Specified..

Number of Currently Flagged Facilities: 23482

Step 2: Select unit of analysis

Number of Facilities  
 Number of Learners  
 Average No. of Learners per Facility  
 Number of Educators  
 Average No. of Educators per Facility  
 Learner / Educator Ratio

Step 3: Select 1 or more row grouping criteria

Province	Telephone
Site Type	Access Road
Location	Building Type
Infrastructure Index	Mains Electricity
Support Index	Flush Toilets
ECD Registered	Tapped Water
Registered with Whom	Management Committee
Length of Operation	Town

Step 4: Select 0 or 1 column grouping criteria

Province	Telephone
Site Type	Access Road
Location	Building Type
Infrastructure Index	Mains Electricity
Support Index	Flush Toilets
ECD Registered	Tapped Water
Registered with Whom	Management Committee
Length of Operation	

Step 5: Click [here](#) to execute the query

Step 6: Use these buttons to view the results

View Results Table Excel Percentages (Col) Excel Percentages (Row) Excel Chart the Results

Facility View  
Datasheet  
EXIT FORM  
EXIT DBASE

Form View NUM SCRL

Aggregate data analysis centres on “queries”, which are constructed using the “steps” on the screen. Essentially, these queries divide the facilities into categories and give a statistic for the facilities that fall into each of these categories. To understand the process, it is best to experiment to see what results can be obtained. Each of the steps is discussed below.

### 4.2. Selecting (Flagging) Data to Analyse

Selecting data for analysis is similar to selecting data for viewing under the facility level, so the term “flagging” is used when selecting data for aggregate data analysis to avoid confusion. The first step in the analysis process is to flag the data that you wish to include in the query. There are a number of ways to flag data. Very often, you will

Step 1: Flag data to be included in the query

Reset All Flags Flag All Facilities Flag Specified..

Number of Currently Flagged Facilities: 23482

wish to include the **entire dataset**. This is accomplished by clicking on the “Flag All Facilities” button. You will see the number of flagged facilities in the relevant text box.

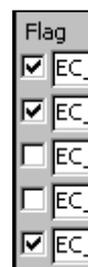
If you wish to select **data based on simple or complex criteria**, use the “Flag Specified..” button. This process is the same as selecting data for viewing at facility-level, and is described in a separate section (see p.13).

It is also possible to flag or unflag **individual facilities** in facility-level views using the checkboxes:

Facility View



Datasheet View



### 4.3. Selecting a Unit of Analysis

Step 2 is to select a unit of analysis. **Number of facilities** will simply count the number of facilities that fall into each category (categories described below). **Number of Learners** and **Number of Educators** will add up the totals for those variables for all the facilities that fall into each category. **Average Learners** and **Teachers per facility** divide the totals for those variables by the number of facilities that fall into each category. **Learner / Educator Ratio** divides the totals for each category to derive the ratio.

### 4.4. Selecting Row and Column Criteria

Step 3 selects the rows criteria and step 4 selects the column criteria (if you wish to have one.) You must select **at least** one row grouping criterion and you may select either zero or one column grouping criteria. The criteria you select determine the categories into which facilities will be grouped. If you select a column grouping criterion, your results will be a cross-tabulation.

### 4.5. Viewing and Exporting the Results

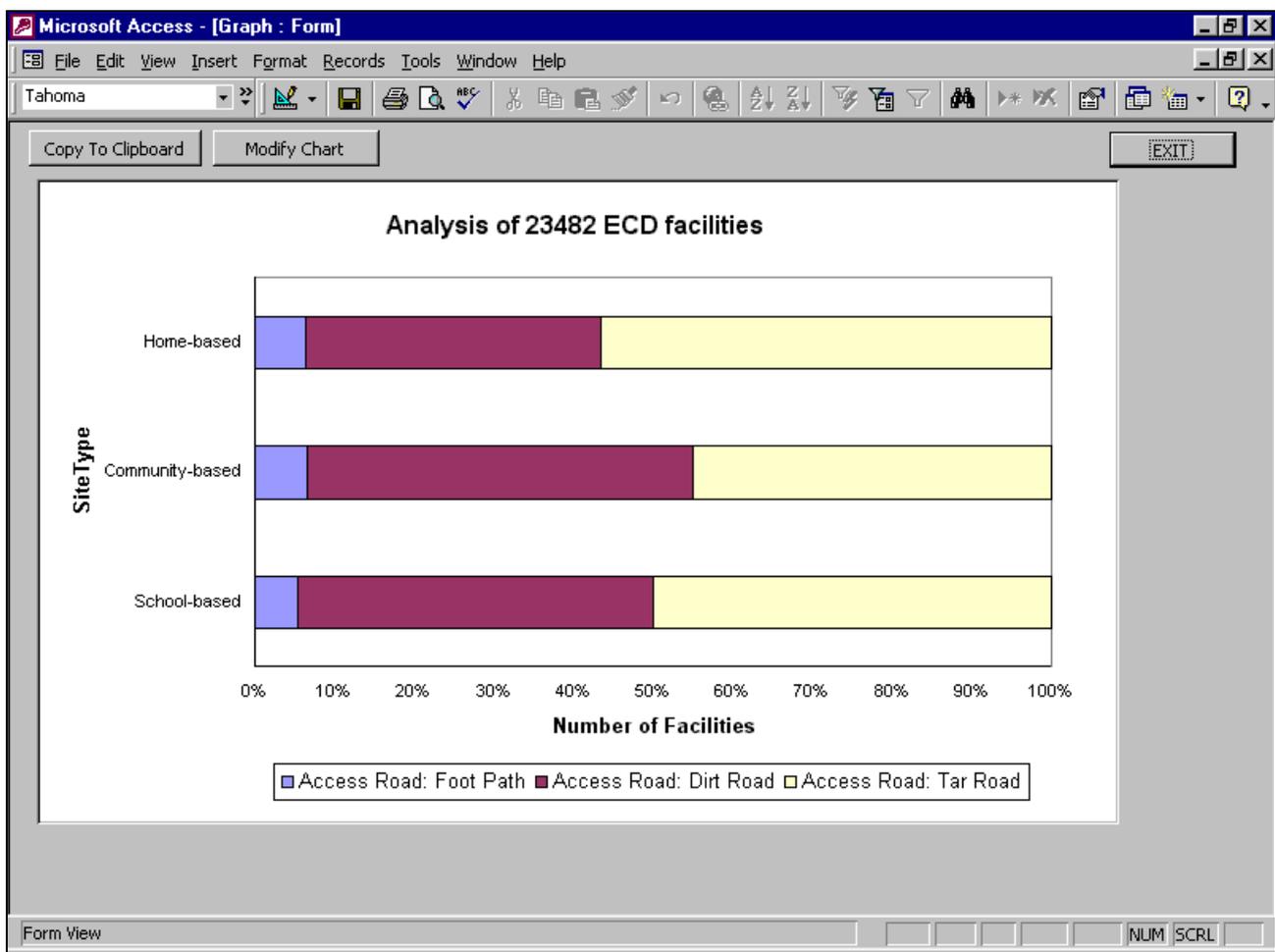
Step 5 executes the query by clicking on the relevant button. You should receive a pop-up message box to inform you that the query has been successfully executed.

Your results will remain stored (on disk) until you run a new query, in which case your old results will be overwritten. You can use the buttons in the bottom panel (step 6) to view, export to Excel and chart the results. The “View Results Table” gives a simple results view, while the “Percentages (Col)” and “Percentages (Row)” buttons gives the results as percentages of the total for each column or row. Note that empty rows or columns are not displayed.

When you view the results of a percentages table, the column widths will often be too narrow. You can adjust this by selecting one or more columns and then clicking Format→Columns→Best Fit. To return to the aggregate data analysis screen, close the results table. If Access asks whether to save the table layout, select either yes or no (both options produce the same result).

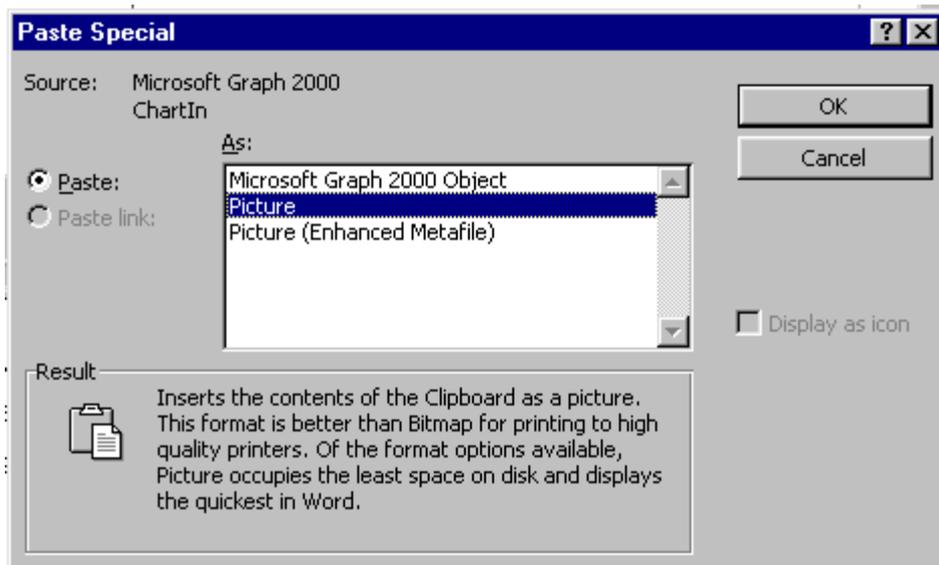
#### 4.6. Charting the Results

You can present your results in a visual format by clicking on the “Chart the Results” button. If MS Graph is correctly installed, a graph such as the one below will appear:

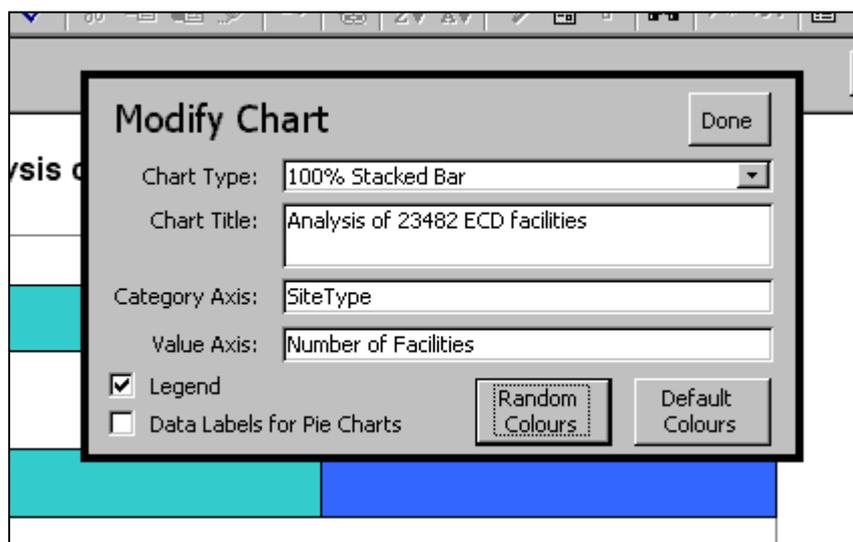


The type of graph will depend on whether your query was a cross-tabulation (i.e. whether you selected a column-grouping criterion) and on the unit of analysis that you selected.

You can export a chart by clicking on “Copy to Clipboard”. You can then use the paste function of any other application that supports pasting of MS Graph objects. Most word-processors and desktop publishing applications support this. If you use applications such as MS Word that allows you to “Paste Special..”, it is recommended that you follow this procedure: Instead of using the normal Paste icon or command, click on Edit→Paste Special, and then select paste as “Picture”.



It is possible to modify some aspects of the chart from the database. To activate this feature, click on “Modify Chart”. A pop-up window will appear from which you can change the type of the chart, change the chart’s title and change the axis titles. You also have the option to remove the Legend (click on the checkbox), since for some charts it will be unnecessary. For Pie charts you can opt to have data labels, which will indicate the percentage-value of each slice. “Random Colours” will randomise the colours. You can click on this button until you find your preferred colour combination!. Alternatively, “Default Colours” will revert to the MS Graph’s default colours. Remove the pop-up window when you have finished modifying by clicking on “Done”.

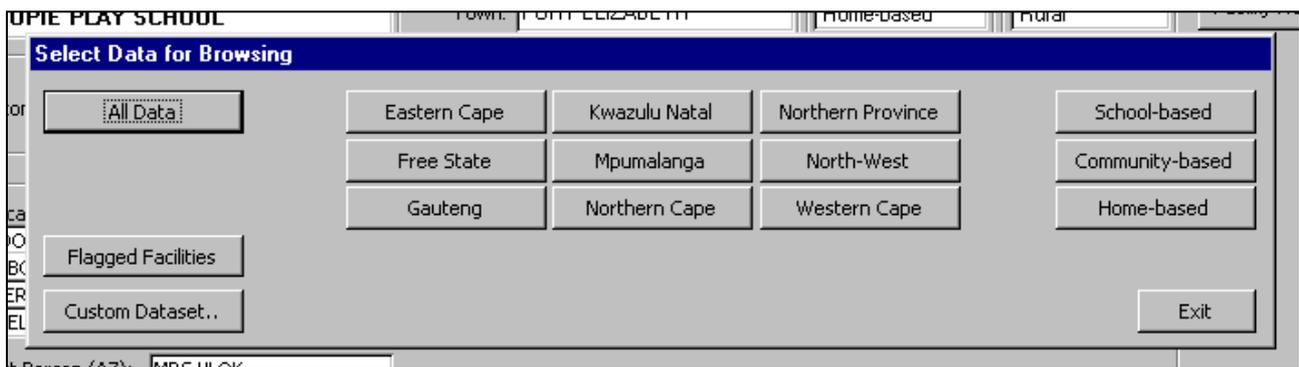


## 5. SELECTING DATA

### 5.1. Selecting Data for Viewing or for Analysis

The procedure to select data that is described in this section is used both to select data for viewing in the facility-level views as well as to flag data for aggregate data analysis. This does not imply that you are working with the same data subset. The two subsets are stored separately. To select data for viewing, click on the “Select Data..” button in either of the two views. To select data for flagging, use the “Flag Specified..” button.

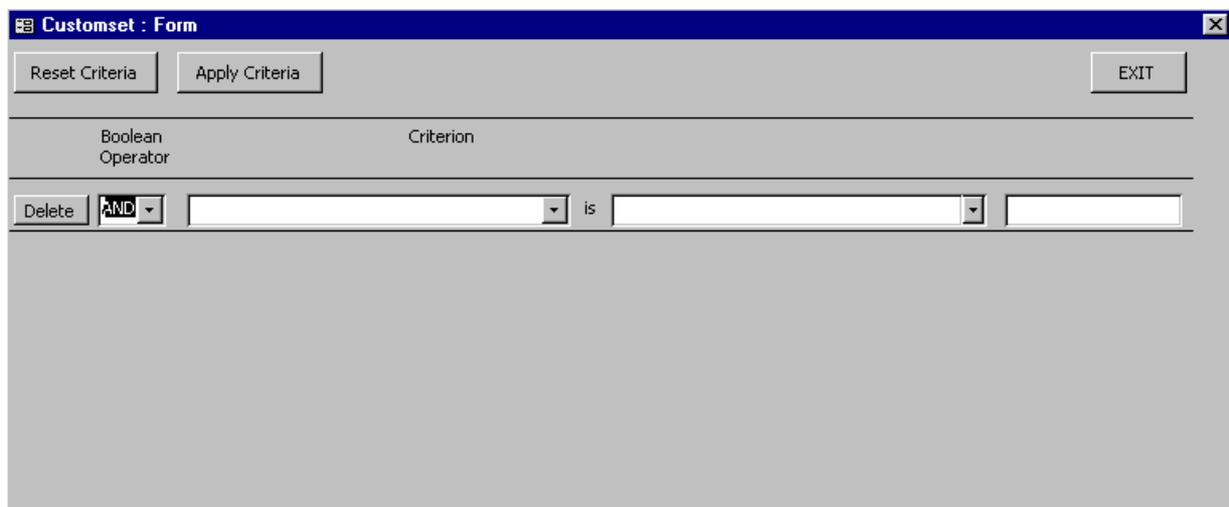
You should get the following pop-up window<sup>2</sup>:



You can select any of the predefined datasets on the window. Click “All Data” to select all the facilities, and any of the provincial or type-of-facility sets to select those. Clicking on “Flagged Facilities” is useful when you want to view data that you have selected for aggregate data analysis in facility view.

### 5.2. Working with a Custom Dataset

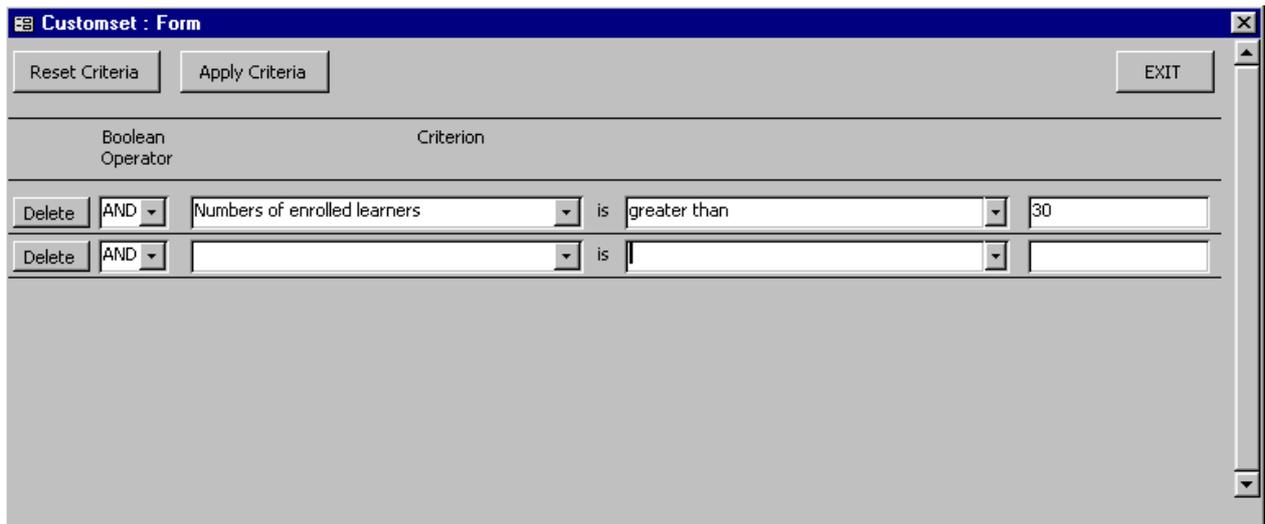
If you wish to select facilities based on user-defined criteria, click on the “Custom Dataset..” button. The following window will appear:



<sup>2</sup> The examples used will assume that you are selecting data for viewing.

The custom dataset provides you with a powerful environment in which to select data based on combinations of criteria. The simplest way to use a custom dataset is to define a single criterion.

Start out by clicking on “Reset Criteria” to clear the list of criteria. To enter a criterion, click on the downward arrow next to the first textbox under criterion (ignore the Boolean Operator box for now). You will see a list of criteria, from which you can select one. Next, do the same for the “value” box (the textbox to the right of “is”). If you have selected a criterion-value combination that requires a specific value, enter this into the third textbox. If not, ignore the third textbox. The following example uses a criterion-value combination with a specific value:



This example will select all facilities where the number of learners is greater than 30. Click on “Apply Criteria” to finish the procedure.

The following is a list of valid criteria and values:

Criterion	Values	Requires specific value?
Province	EASTERN CAPE FREE STATE GAUTENG KWAZULU NATAL MPUMALANGA NORTHERN CAPE NORTHERN PROVINCE NORTH-WEST WESTERN CAPE	No
Numbers of enrolled learners	equal to less than greater than	Yes
Flagged	ON OFF	No

Site Type	School-based Community-based Home-based No Information	No
Location	Urban (formal) Urban (informal) Rural Urban (formal or informal) No Information	No
Town	equal to not equal to	Yes
Infrastructure Index Rating	Below Average Average Above Average	No
Support Index Rating	Below Average Average Above Average	No
Learners with Disabilities	Present Not Present	No
Learners in Age Group 1-3	Present Not Present	No
Learners in Age Group 3-4	Present Not Present	No
Learners in Age Group 5-6	Present Not Present	No
Learners in Age Group 7+	Present Not Present	No
ECD Registered	Yes No	No
Registered with whom	Department of Education Department of Welfare Local Authority Other No Information	No
Nearest Telephone	In the building Within 5 minutes walk More than 5 minutes walk No Information	No
Access Road Type	Foot Path Dirt Road Tar Road No Information	No
Number of Educators	equal to Less than Greater than	Yes
Learner/Educator Ratio	equal to Less than Greater than	Yes

Type of Building	Conventional Traditional Shipping Container Other No Information	No
Electricity Supply	Mains Electricity Other / None	No
Toilets	Flushing Other / None	No
Water Availability	Tapped Water Other / None	No
Management Committee	Yes No	No
Languages of Teaching/Learning	English Only 1 Language (Non-English) 2 Languages (Non-English) English and 1 other Language 3 or more Languages No Information include Afrikaans exclude Afrikaans include English exclude English include IsiNdebele exlude IsiNdebele include IsiXhosa exclude IsiXhosa include IsiZulu exlude IsiZulu include Sepedi exclude Sepedi include Sesotho exclude Sesotho include Setswana exclude Setswana include Siswati exclude Siswati include Tshivenda exclude Tshivenda include Xitsonga exclude Xitsonga include Other exclude Other	No
Home Languages of Learners	( same values as previous criterion )	No
Fees: Learners up to 3 years	Less than R25 p.m. R26 - R50 p.m. R51 - R75 p.m. R76 and over p.m. No Information	No
Fees: Learners up 3 yrs & over	(same values as previous criterion )	No

How long site has operated	Less than 1 year 1 to 2 years 3 to 4 years 5 years and over Don't know No Information	No
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You can also create a **combination** of any number of criteria. Do this by simply filling in additional lines in the window. When you have more than one criterion, they are logically combined using the binary operator selected. If you are unfamiliar with Boolean logic, it is recommended that you either use OR for **every** criterion or AND for **every** criterion<sup>3</sup>. When you use OR operators, the resultant data subset will contain every facility that conforms to **any** of the criteria. When you use AND operators (the default), your dataset will contain only those facilities that conform to **every** criterion. The “Delete” button will delete a line, while new lines are automatically added as needed. Note that the first line’s Boolean operator has no function and is ignored by the program.

You can use the “flagged” criteria to complement already flagged data, since the criterion will use the flag’s status before execution of the query. For example if you use (FLAG is ON) AND (Province is GAUTENG), you will in effect unflag all facilities not in Gauteng.

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<sup>3</sup> If you wish to mix operators, note that OR takes precedence over AND. If you wish to have (A AND B) OR C, you have to specify it as A OR C AND B OR C.