Exor Leading the way in Infrastructure Asset Management Solutions

Exor Corporation Limited

Locator V 4.0
User Guide

The Global Leader in Infrastructure Asset Management

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Quality Assurance Statement

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CHAPTER

1

Introduction

This Guide provides information on the use of Locator and Exor's Web mapping in general.

Locator – NM0572 provides ***Exor*** Users with an easy to use web based spatial interface that allows information to be quickly found and viewed on a map. This might include searching for a Street Address, a Property or Land Parcel, an Asset such as a Street Light or Bus Stop or any Network Group or Element defined within ***Exor***.

Once 'located', business functions such as creating an Enquiry, creating a Defect, raising a Work Order or relocating an Asset may be carried out.

Locator allows ANY data set either held within ***Exor*** or data held externally to ***Exor***, which has been defined as an 'External Asset' (refer to the Asset Manager System Admin Guide for more information on External Assets), to be queried using the defining attributes of the object type. This includes data that has no spatial representation.

The ***Locator*** query is based on the data items Attributes and not necessarily on the items location, allowing data items that are not located on a Network to be easily found. However, the selection criteria may optionally be restricted to a defined Region of Interest that could represent a County/State Route, Maintenance Section, Parish, Town or any other Network Group of Network Extent defined within Network Manager.

The records returned by the ***Locator*** search are displayed in a Grid format that displays the records attributes and Network location if applicable. This enables Users to confirm that the correct item(s) has been found or select the required record(s) from a list of all records which match the search criteria.. The entire results set may subsequently be exported from the Grid in either Comma Separated Value (csv) or Extensible Mark-up Language (xml) format allowing manipulation or viewing in other Applications such as MS-Excel.

If the object type used within the ***Locator*** search has a spatial representation, one or more of the selected results may be viewed on the map. When the [Show Map] button is pressed the map will zoom and centre on the selected item(s) making the selected data type the Active Map Layer.

Standard ***Exor*** modules, such as Maintain Enquiry, Maintain Defects or Maintain Assets may be called from ***Locator*** for a given selected set of results. This allows updates, edits and any other business functions associated with the called module to be carried out on the selected data items. The Modules that can be called must be added as Theme Functions within ***GIS Themes – GIS0010*** (refer to General System Admin Guide)

In addition to standard ***Exor*** modules, ***Locator*** also allows custom-built PL/SQL procedures to be executed against a selected set of results. This allows an Organisations business processes to be closely mirrored within ***Exor***. Examples may include the update of Street Lights within a Park which have had bulb replaced or the sending of an escalation e-mail for Defects which are overdue for repair.

Note: Custom Built PL/SQL procedures are written by Exor Services. Contact you Account Manager for further details.

Locator can be used in either 'Standard' (the default) or 'Advanced mode'. Both modes of operation limit the search to a single data type, for example 'Street Address' or 'Bus Stop'. When using multiple attribute values within the search criteria via the 'Standard' mode of operation, the relationship between the attribute values is always an 'AND' relationship.

The 'Advanced' mode allows a more complex query to be constructed where, if multiple attributes are selected the relationship between the attributes may be defined as an 'AND' or 'OR' relationship and attribute value conditions may be defined as 'greater than', 'less than', 'like' etc. Attribute criteria may be nested with 5 levels of nesting available if required.

To select all Items of a particular data type no attribute criteria should be applied, i.e. the only selection criteria entered is the required data type.

Locator may be called as a Module from the Asset menu or from any of the Map enabled Modules e.g. ***Asset Items – NM0510***, by pressing the **[Show Map]**  button on the menu toolbar.

Locator - NM0572

Figure 1
Locator
Menu Option

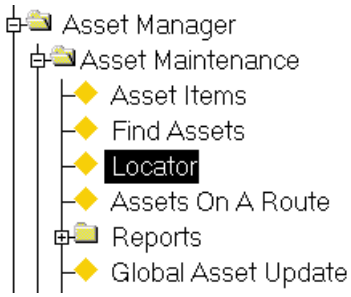
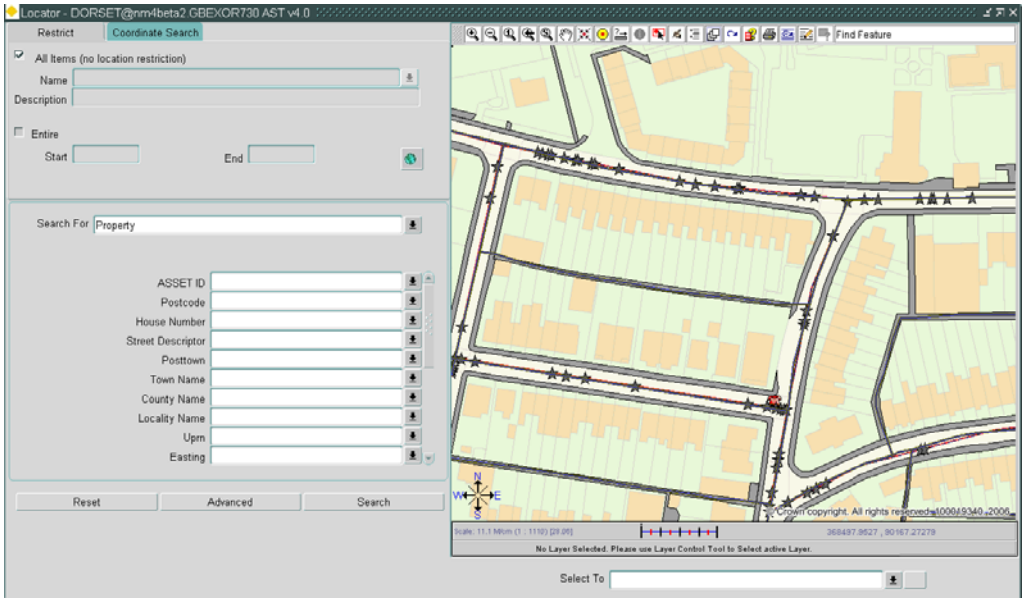


Figure 2



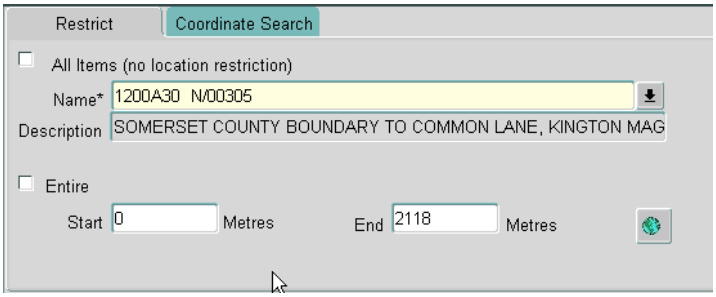
Locator – 'Standard' Search Panel

The Search panel of the ***Locator*** module is used to enter the data type and attribute values for which to search and optionally the Region of Interest, if the search is to be restricted by a Network Location.

If the search is restricted by a Network Location only the items which both match the defined selection criteria and which are also located either wholly or partially within the selected extent of network will be found.

The Network Location panel may also be used to define a Network element (Maintenance Section, Street etc) to select and zoom to on the map. To select and zoom to a Network element on the map enter the required Network Name as described below and press the **[Show Map]** on the menu toolbar.

Figure 3



Restrict Search by Network Location / Locate by Network Location

By default the **[All Items]** check box is checked, which means that searches are not restricted by a Network Selection. To restrict the ***Locator*** search to data items by a Network location the [All Items] checkbox must be unchecked.

All Items (Checkbox)

If this option is selected the Locator search will be based purely on the selection criteria defined and not further restricted by the location of a data object. If the option is selected the remaining fields within the Location Panel will be disabled.

Name

Enter the required Region Of Interest or select from the Gazetteer (refer the Network Manager User guide). If a Default Region of Interest has been defined using the ***User Preferences*** module (General User Guide) it will be automatically displayed. Default Regions of Interest allow commonly used network area's such as Divisions, Council Office area's or Regional Office area's to be pre-selected in various modules within Exor making the system faster and easier to use. If a Default Region of Interest has been defined it may be overridden if required.

Description

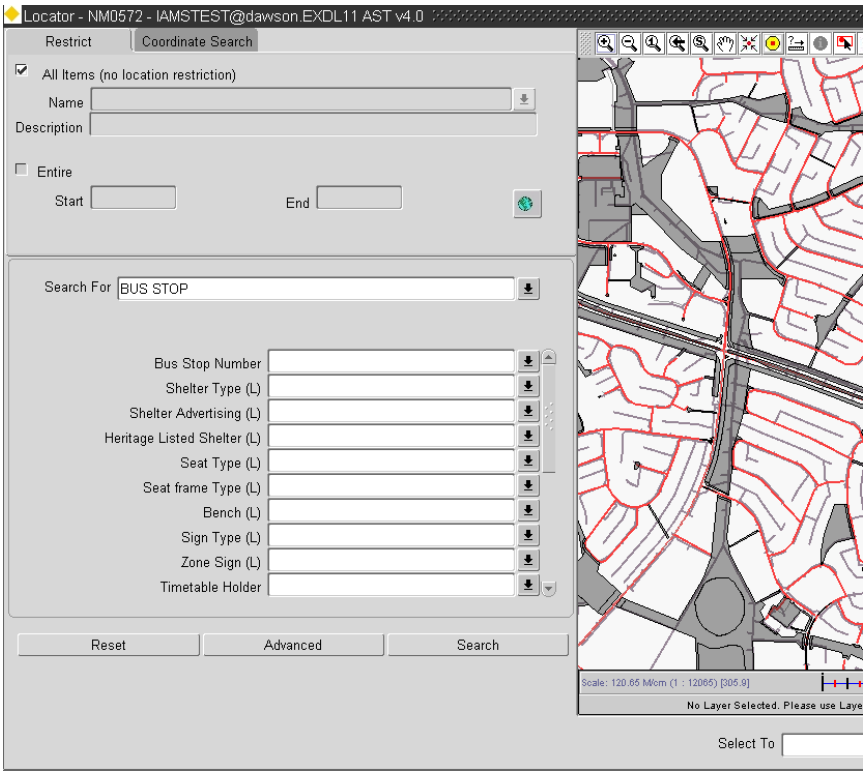
The description of the selected Region of Interest will be displayed.

Entire (Checkbox)

If a Linear Group or Route has been selected, a filter may be applied so as to return only those data items which meet the defined selection criteria and which are located within the extent of network between the specified Start and End Offsets on the Route. The default option is to return all matching items for the entire Route or Linear Group. To restrict the ***Locator*** search to the extent of network between the specified Start and End Offsets, uncheck the [Entire] check box and add the start and end Offsets as required in the 'Start' and 'End' fields respectively.

This Checkbox is disabled if a non-linear group is selected

Figure 4



Search For

The 'Search For' panel of the ***Locator*** module is used to define the object type, e.g. Bus Stop, Street Address Point etc, and attribute values for which to search

Note that object types must be Exor Assets Types or data object types defined as Exor Foreign Tables in the Asset Metamodel – NM0410. Refer to the Asset Manager System Admin Guide for details of this module.

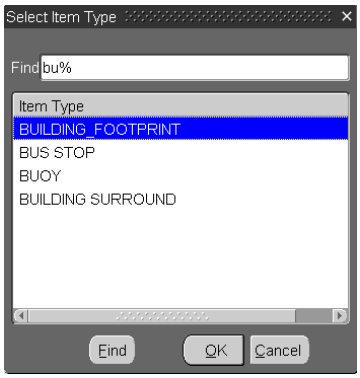
A default Object (Asset) Type may be defined using Product / User Option **DEFASSTYPE** (refer to the System Admin Guide or Asset Manager Admin Guide for more information relating to this option).

Search For (List)

Enter the required Asset Type or select from the allowable list of values. ***Locator*** uses the Asset Type description, e.g. '*BUS STOP*' and not the Asset Type code, e.g. '*BSST*' when displaying and validating the Asset Type for which to search.

Locator uses 'Auto Complete' when the entering the 'Search For' Asset Type. For example, if '*BU*' was entered, upon exiting the field the system will atomically populate the field with the appropriate Asset Type that begins with '*BU*'. If more than a single Asset Type matches the text string entered, a list of potential values is displayed allowing the User to select the required Type. The list of values displays the Asset Type description and is sorted in alphabetic order as shown in the example in Figure 5.

Figure 5



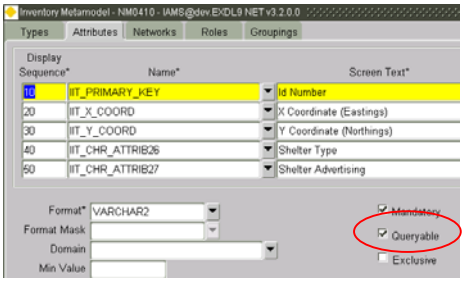
Only those Asset Types to which the User has been granted Role based access will be available.

'Search For' Attributes

When ***Locator*** is used in 'Standard mode' (the default) the relationship between attributes values is always an 'AND' relationship when using multiple attribute criteria. To create more complex search criteria press the [Advanced] button at the bottom of the Locator Search panel (page 11).

The Attributes available as search criteria are restricted to Attributes of the selected Asset Type that have been flagged as 'Queryable' in the ***Asset Metamodel – NM0410*** module. Figure 6 shows an example.

Figure 6



Queryable Attributes will be ordered as per the 'Display Sequence' defined for the Attribute.

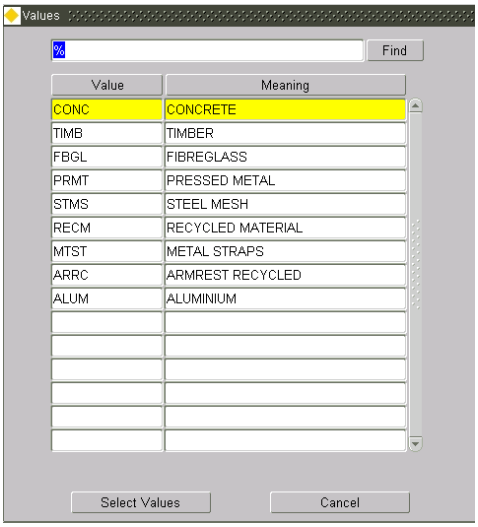
Search Attributes

Enter the value(s) for the required Attributes to be matched. If the attribute value is validated against a look up, ***Locator*** uses the lookup value meaning and not the actual lookup code value. For example, an attribute of Sign Type may be validated against a list of values of 01-Metal, 02 – Steel, 03 – Plastic. To search for a Sign Type of 03 – Plastic, the attribute value should be entered as 'Plastic' and not '03'.

Locator uses 'Auto Complete' when the entering attribute values which are validated against a Domain Lookup. For example, if 'PLA' was entered, upon exiting the field the system will automatically populate the field with the

appropriate domain lookup that begins with ‘PLA’. If more than a single domain lookup matches the text string entered the User will be prompted to select the required value from a List of Values. An example is shown in Figure 7.

Figure 7



The list of allowable attribute values will display both the lookup code Value and its Meaning

The list of the available values may be ordered by the Value or by the Meaning by pressing the **[Value]** button or the **[Meaning]** button respectively.

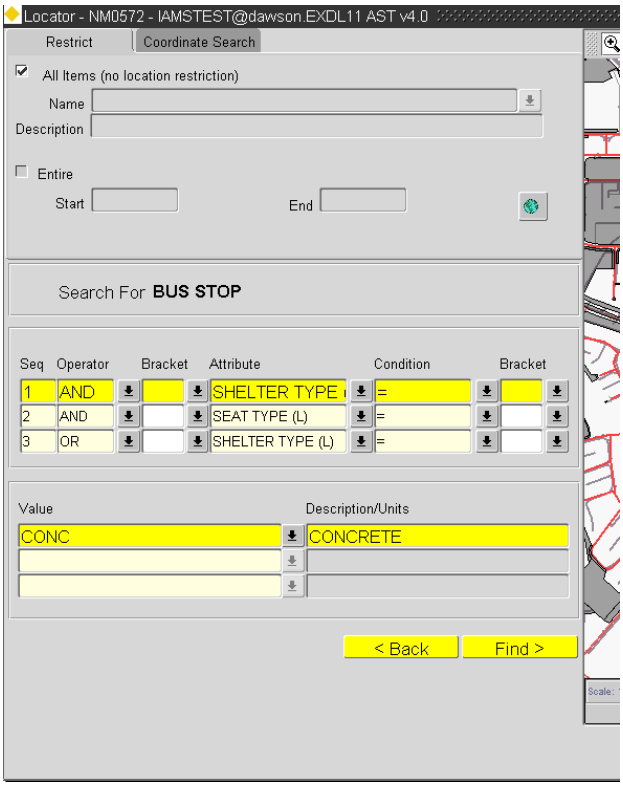
The column used to determine the list will also determine which field (Value or Meaning) will be used when refining the search criteria to limit the values displayed. For example, to search for all values where the Meaning begins with ‘ALU’, press the **[Meaning]** button then enter ‘ALU% in the ‘Find’ field and press the [**Find**] button on the window.

Click on the required lookup value to select, and press the [**Select Values**] button. To close the window without selecting a value, press the [**Cancel**] button.

To reset the criteria and search for a new Object Type press the [**Reset**] button on ***Locator***.

To execute the search press the [**Search**] button on ***Locator***.

Figure 8



Locator – 'Advanced' Search Panel

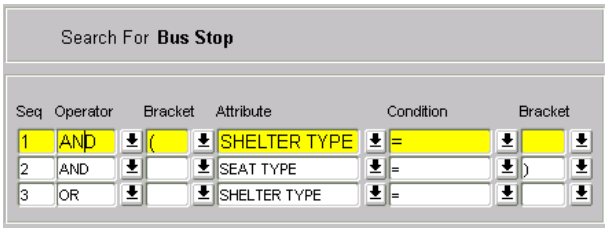
The 'Advanced' Search panel of the Locator module allows a more complex query to be constructed where, if multiple attributes are selected, the relationship between the attributes may be defined as an 'AND' or 'OR' relationship and attribute value conditions may be defined as 'greater than', 'less than', 'like' etc. Attribute criteria may also be nested with 5 levels of nesting available if required. When using the 'advanced' Search the query may be restricted to a defined Region of Interest' as described on page 7.

Note that the 'Advanced' Search panel is only available once an Object (Asset) Type has been selected and the [Advanced] button pressed.

Search For (Display Only)

The Object (Asset) Type meaning already selected will be displayed.

Figure 9



Attributes Criteria Panel

The Attributes Criteria panel is used to define the Attributes of the selected Object (Asset) Type to be used within the search. If multiple Attributes are selected the relationship between the Attributes may be defined as an 'AND' or 'OR' relationship. Attribute criteria may also be nested with 5 levels of nesting available if required by using the Pre and Post brackets as required.

Seq **(Required)**

Enter the sequence number for the Attribute. Attributes values are resolved in the defined sequence order.

Operator **(Required)** **List**

Select the required Boolean connector.

Note that the Operator or the Sequence 1 Attribute must always be 'AND'.

Bracket **List**

If required select the appropriate Pre Bracket.

Attribute **(Required)** **List**

Select the Attribute of the selected Item to be used in the Gazetteer Filter.

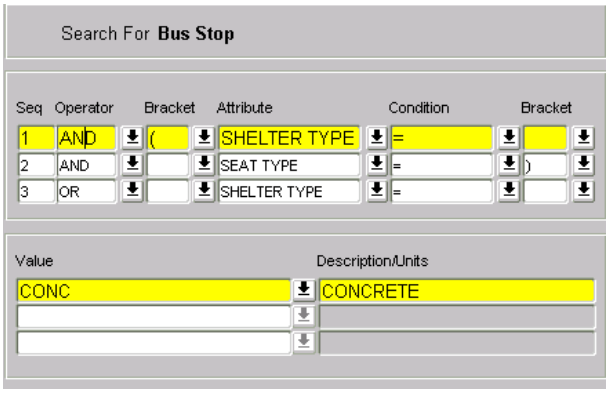
Condition **(Required)** **List**

Enter the condition for the selected attribute. These are standard Oracle conditions and are set up and maintained using ***Domains - HIG9120*** and updating the PBI_CONDITION option.

Bracket **List**

If required select the appropriate Post Bracket.

Figure 10



Attribute Value Panel

The ‘Attribute Value’ panel is used to define the parameter values for the currently selected Attribute.

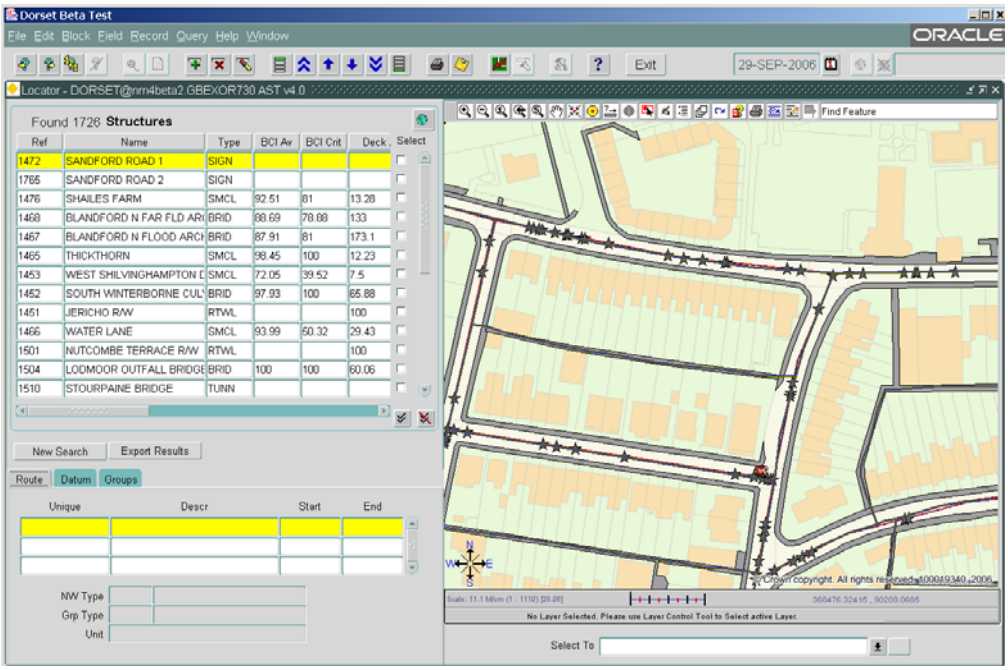
Value (Required) (List)

Enter the required ‘search’ value for the currently selected Attribute. If the attribute values are held in a Domain, the List of Values may be called and the description of the selected value will be displayed. If the ‘Condition’ entered for the Attribute is ‘BETWEEN’ enter the second value in the field below.

To return to the ‘Standard’ Locator Search panel press the **[<Back]** button.

To execute the search and display the results press the **[Find>]** button.

Figure 11



Results Grid

The results of the ***Locator*** search are displayed in a Grid format which displays the assets attributes and Network location if applicable for all records which match the search criteria. This enables confirmation that the correct item(s) has been found, or to select the desired record from all records that match the search criteria. The entire results set may subsequently be exported from the Grid in either Comma Separated Value (csv) or Extensible Mark-up Language (xml) format allowing manipulation or viewing in other Applications such as MS-Excel.

Show Map Button

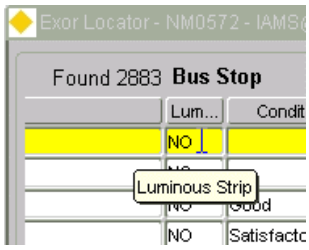
If the object type used within the ***Locator*** search has a spatial representation, one or more of the selected results may be viewed on the map. When the **[Show Map]** button is pressed the map will zoom and centre on the selected item(s) making the selected data type the Active Map Layer. If the search results in a single item being found, the Map will automatically zoom and centre on the item, assuming it has a spatial representation.

Only those attributes flagged as 'Displayed' in the ***Asset Metamodel – NM0410*** module (Refer to the Asset Manager System Admin Guide) will be displayed within the Results Grid. The Attribute column widths within the Grid are determined by the value populated for the 'Width' field for the Attribute in the ***Asset Metamodel – NM0410*** module. If no 'Width' value has been defined for an Attribute the column width is automatically sized in accordance with the Attribute values and not the Attribute Display (column heading text) Name. Hint Text is available to view the Column Heading if the Grid Column width is less than the Display Name.

For Attributes which are validated against a look up, the Results Grid displays the value Meaning and not the actual lookup code value. For example, an attribute of 'Sign Type' may have a Value of '01' meaning 'Metal', the Results Grid will display a value of 'Metal' as this is more meaningful to the User.

Attribute values and data Items within the Grid may be viewed by using the horizontal and vertical scroll bars respectively.

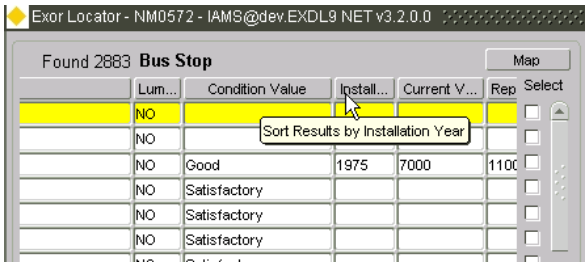
Figure 12



Hint Text

The entire Attribute Name is displayed in the 'hint text' that is automatically displayed when the mouse cursor is hovered over any value within the column. An example is shown in Figure 12.

Figure 13



Sorting Results

Results within the Grid may be sorted by any of the displayed Attributes by pressing the Attribute Names (column headings), which are also 'Sort' buttons. The first time a heading is pressed the records are sort in ascending order. If pressed again the records within the Grid will be sorted in descending order of the selected Attribute. A 'carat' (^) symbol or lower case 'v' (v) is displayed adjacent to the Attribute Name to indicate that the data has been sorted in ascending or descending order respectively as shown in Figure 14.

Figure 14

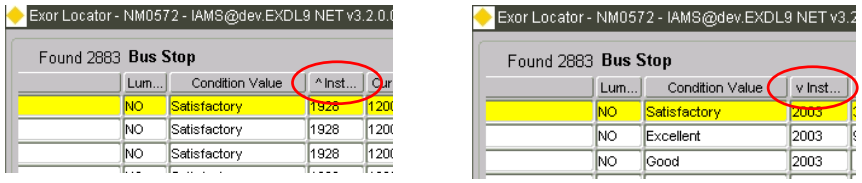
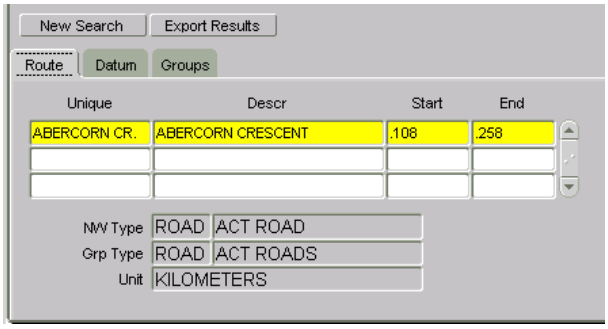


Figure 15



Results Grid – Location Panel

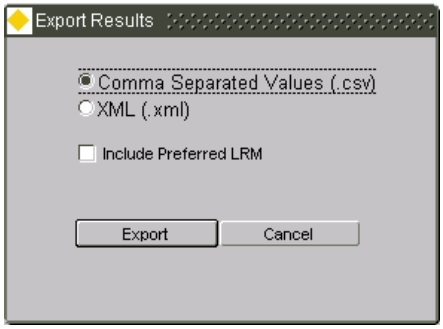
The ‘Results Grid – Location Panel’ displays the Network Location of the selected Item if applicable. The Network Location of an item is displayed relative to all Routes (linear groups), Datum Elements or Groups (non linear) on which it is located. The Network Type, Group Type and Unit of Measurement are displayed for the currently selected record in the 'Route' tab. The Unit of Measurement displayed will be in accordance with the Unit defined for the Group Type or Datum Network on which the Item is located.

The display of an Items location(s) may be restricted to a specific LRM (linear Referencing Method) by setting the Preferred LRM to the appropriate Group Type. This is done within the User Preferences form (refer to the General User Guide). If an Item is not located on a Route of the specified Type, then the Items location will be displayed relative to ALL LRMS on which it has a location.

Exporting Results

The entire contents of the Results Grid may be exported in either Comma Separated Value (csv) or Extensible Mark-up Language (xml) format allowing manipulation or viewing in other Applications such as MS-Excel. To export the contents of the Results Grid press the **[Export Results…]** button. The dialog shown in Figure 16 will be displayed.

Figure 16

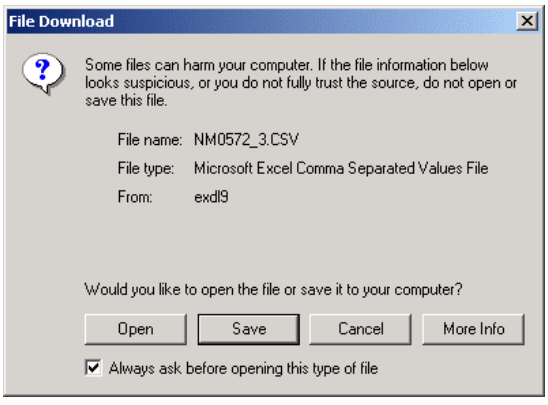


The default export format may be set as either CSV or XML using User/Product option **SAV_FORMAT** (refer to the General System Admin Guide for further details relating to User and Product Options).

When exporting results in either format, the Network Location (if applicable) of Items is not included within the export unless the 'Include Preferred LRM' check box is selected. This will then include the Items Network Location relative to the User defined preferred Linear Referencing Method (refer to the Network Manager User Guide for more information relating to Preferred LRM).

To export the data within the Results Grid press the **[Export]** button. When exporting in CSV format a standard Windows File Download dialogue will be displayed (Figure 17) allowing the csv file to be saved to the Client PC or any other network location accessible.

Figure 17



Note :
Some Pop-up blockers prevent the display of the 'File Download' dialogue. If the dialogue is not displayed the Pop Up blocker should be configured to allow the display of Pop-Ups from the Exor Application.

When exporting to XML format the xml data is displayed in a browser window allowing the user to select the ‘Save As’ option on the Windows File menu. An example of an xml formatted export is shown in Figure 18

Figure 18

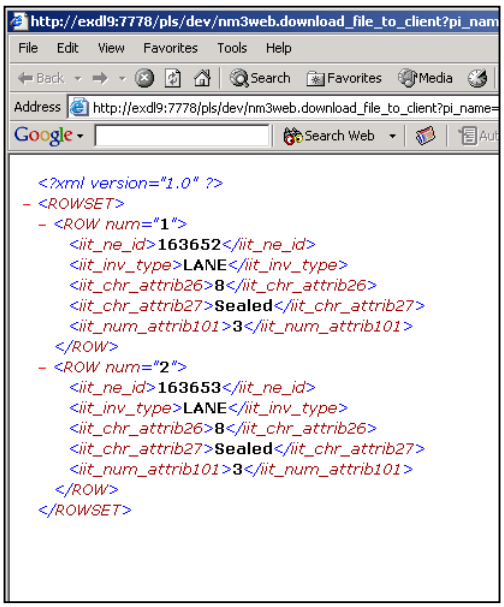
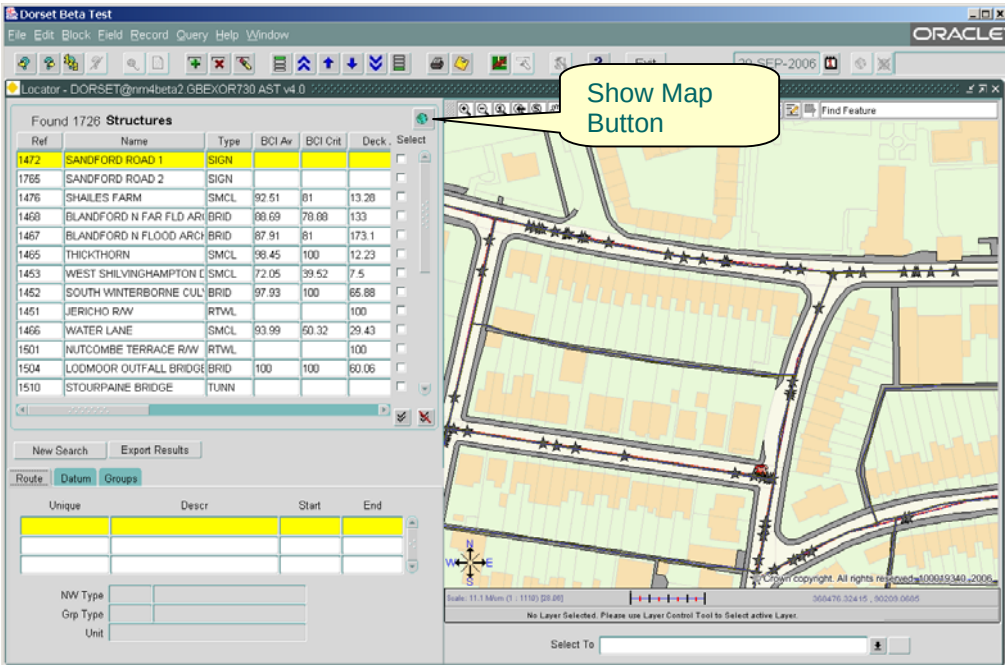


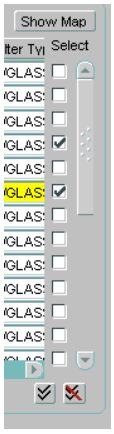
Figure 19



Selecting Data Items from the Grid for Display on Map

If the Object (Asset) type used within the ***Locator*** search has a spatial representation, one or more of the selected results may be viewed on the map. When the **[Show Map]** button is pressed the map will zoom and centre on the selected item(s) making the selected data type the Active Map Layer. If the search results in a single item being found, the Map will automatically zoom and centre on the item, assuming it has a spatial representation.

Figure 20



To view the required Item(s) on the Map check the appropriate 'Select' check box and press the **[Show Map]** button.

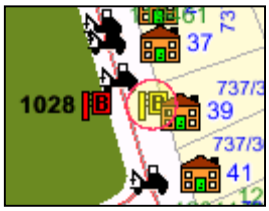
All items within the Grid may be selected or deselected using the 'Select All' and 'De-select All' buttons respectively as shown in Figure 20.

If multiple GIS Themes have been defined for the selected Asset Type, a list will be displayed to allow the User to select the appropriate Theme.

Selected Data Items are highlighted on the Map depending on their data type. These are as follows:

- ‘Point’ Items, e.g. Bus Stops are highlighted with a circle. An example is shown in Figure 21. The Map highlight style for Point data items may be changed using Product Option ‘**POINTSTYLE’**. Refer to the General System Admin Guide or Map Services Admin guide for more information on Product Options.

Figure 21



‘Line’ Items, e.g. Guard Rails, including selected Network Elements and ‘**Polygon**’ Items, e.g. Parks or Property Boundaries are highlighted in the defined selection colour and width select for Product Option ‘**LINESTYLE’**. Examples of these are shown in Figure 23 and Figure 22 respectively.

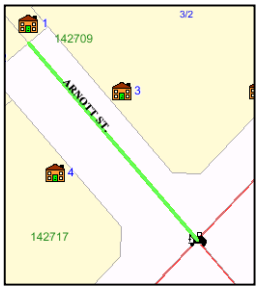


Figure 23
Line Item

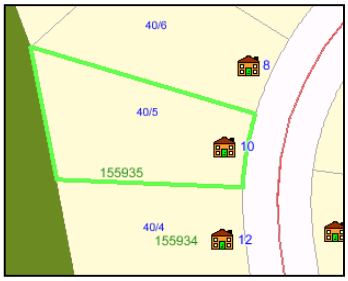
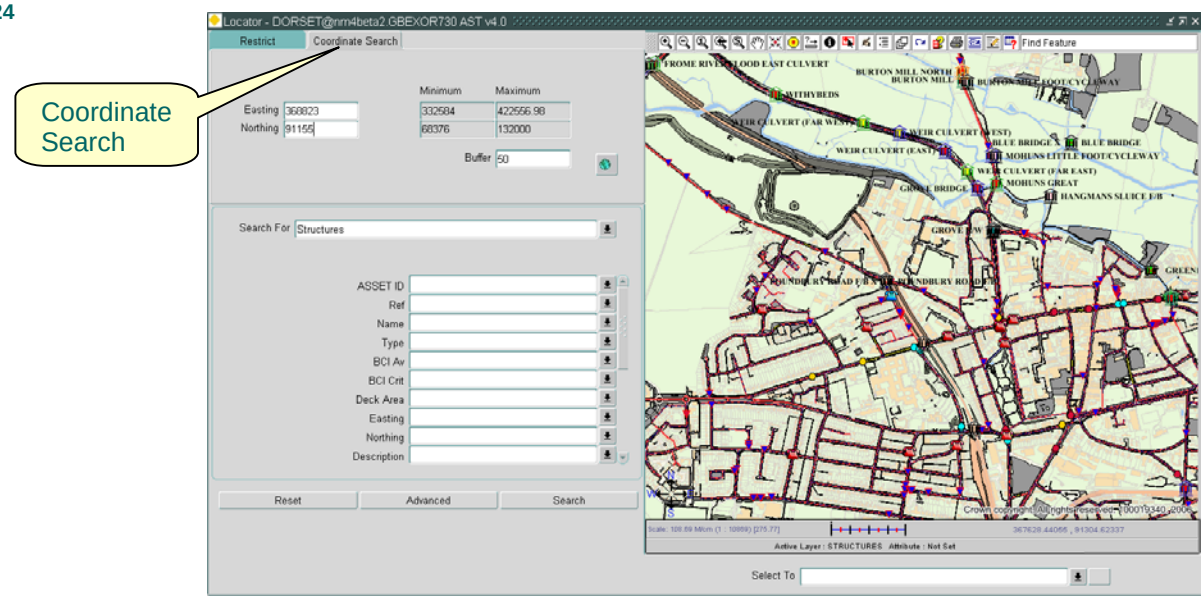


Figure 22
Polygon Item

Searching Using Coordinates

The required position on the Map can be navigated to, by using the grid coordinates to which you want to Zoom. This is done using the Coordinate Search Tab (Figure 24).

Figure 24

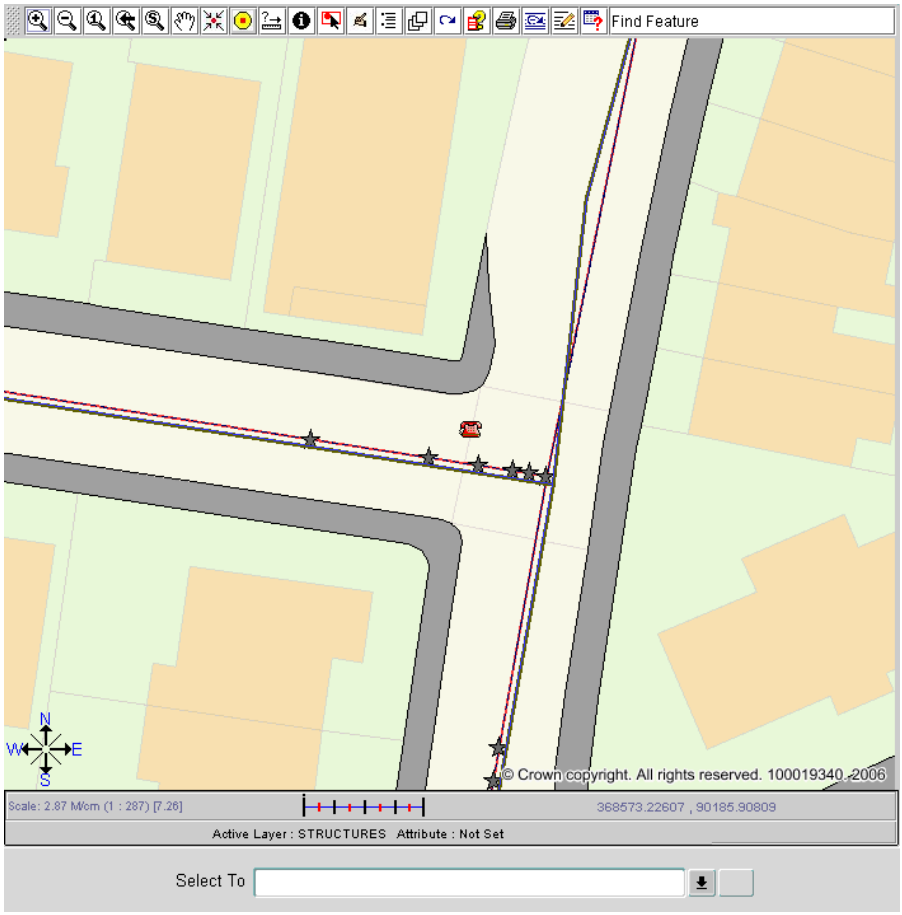


The Coordinate Search allows a set of Grid Coordinates to be entered and zoomed to by pressing the **[Zoom to Map]** button.

The Maximum and Minimum values are displayed for both the Easting and Nothings. These values are derived from the aggregate minimum and maximum spatial extents of any Datum Networks defined within the system.

When the Coordinate Search is used the map will zoom and centre on the Grid Coordinates entered. The 'Zoom buffer' can be set if required, but defaults to the value entered in Product / User Option **SDOPTZOOM**.

Figure 25



Locator Map Window

The ***Locator*** Map window provides a map based environment in which to view and manage data held within the Exor database or data held externally which has been registered as an 'External Asset' (refer to the Asset Manager System Admin Guide for more information relating to External Assets / Foreign Tables).

The ***Locator*** Map window has a number of embedded functions, available from the Map window Toolbar, which allows for the creation of Enquiries and Defects as well as the relocation of features, such as Assets, Enquiries, Defects or any other data item where the GIS Theme (refer to the General System Admin Guide) has been defined as to allow the relocation of data Items.

In addition to the embedded Map window functions, there is a "Select to" function in ***Locator*** that allows Standard ***Exor*** modules, such as Maintain Enquiry, Maintain Defects, Maintain Assets or Create Works Order to be called for a given selected set of results. This allows updates, edits and any other business functions associated with the called module to be carried out on the selected data items. The "Select to" function can call any module that is specified within the ***GIS Themes – GIS0010*** module.

In addition to standard ***Exor*** modules, the ***Locator*** 'Select To' functionality also allows custom-built PL/SQL procedures to be executed against a selected set of results. This allows an Organisations business processes to be closely mirrored within ***Exor***. Examples may include the update of Street Lights within a Park which have had bulb replaced or the sending of an escalation e-mail for Defects which are overdue for repair.

Note: Custom Built PL/SQL procedures are written by Exor Services. Contact you Account Manager for further details.

The initial Map Extent, Active Layer and selected features used within the Map window are depend on how ***Locator*** is called. If ***Locator*** is called using the [**Show Map**]  button on the Exor Menu Toolbar within a map enabled Exor Module, e.g. ***Asset Items – NM0510***, the Map extent will zoom to the selected Item and the feature Layer will be made the Active Layer. If however ***Locator*** is called as a Module from the Exor menu the initial Map Extent will be calculated based upon the feature metadata for the Oracle Spatial Layers.

The ***Locator*** Map window can display any Layer that is defined within the ***GIS Themes – GIS0010*** module. These may include Layers that do not contain data held within Exor. The ***Locator*** Map window may also display any Open GIS Consortium (OGC) Web Map Service (WMS) Layers. Refer to the Exor Map Services System Admin Guide for details.

Note that only the Layers defined within GIS Themes – GIS0010 to which the User has Role based access will be available to a User.

The display of a layer can be scale dependant, which means that it will only be displayed if the map is above or below a pre-configured scale.

Figure 26

Map Window Toolbar

The Map window Toolbar has a number of functions enabling interaction with the Map and displayed features. These are as follows:

- Navigation Tools
  - Zoom In
  - Zoom out
  - Zoom to Initial Extent
  - Zoom to Previous Extent
  - Zoom to Selected Feature
  - Pan
  - Re-Centre Map at selected point
- Show Buffer Area
- Route Offset
- Identify Feature
- Select Feature Menu
  - Select by Rectangle
  - Select by Polygon
  - Select Nearest Neighbour
  - Select By Buffer Area
- Feature Edit Menu
  - Send X,Y value to application
  - Create Public Enquiry
  - Create Public Enquiry on Asset
  - Relocate Enquiry
  - Create Defects on Assets
  - Create Defects on Asset at X,Y
  - Create Defect on Network at X,Y
- Map Legend Display (pop up window)
- Map Layer Control (pop up window)
- Refresh Map
- Toggle Tool Tips
- Print Map
- Refresh Metadata
- Query Layer
  - Set Query Attribute
  - Find

Each of these functions is described in the following section.

Navigation Tools

The following Navigation tools are available:

- Zoom In
- Zoom out
- Zoom to Initial Extent
- Zoom to Previous Extent
- Zoom to Selected Feature
- Pan
- Re-Centre Map at selected point

Zoom In

The Zoom In tool enables users to see more detail on the Map. This tool must be clicked on before it can be used to zoom in on the map.

There are two ways to use the “Zoom in” tool. One is to click and drag a rectangle on the Map. The area inside dragged rectangle will be enlarged to fill the entire Map window. The other is to click anywhere on the Map. The Map will be redrawn at a larger scale (factor of 2) and centre on the location of the click. The Zoom in Tool remains active until another function is selected.

Zoom Out

The Zoom Out tool enables Users to display a larger area on the map. Click on the Zoom Out button and the current map will be redrawn at a smaller scale to show a larger area. The Zoom Out Tool remains active until another function is selected.

Zoom to Initial Extent

The Zoom to Initial Extent tool resets the Map to the default Map extent. This is calculated based upon the feature metadata for the Oracle Spatial Layers.

Zoom to Previous Extent

The Zoom to Previous Extent tool resets the Map to the previously defined map extent.

Zoom to Selected Feature

The Zoom to Selected Feature tool allows the Map to zoom and re-centre on the selected feature(s). This is useful if the User has selected an Item using Locator or the Map window ‘Query Layer’ tool and subsequently ‘Panned’ or Zoomed out to an extent where the selected Item is no longer visible.

Pan

The Pan tool enables the User to ‘Grab’ the current Map image and drag it in any given direction. Click on the Pan button, then click and drag on the map window. When you release the mouse button the map will be redrawn with its centre where you leave the cursor. The Pan Tool remains active until another function is selected.

Re-Centre Map at Selected Point

This tool allows the User to click at a point on the Map and have the map extent Re-Centre on that point. Click on the 'Re-Centre' button then click on the required location on the Map. The Map window will automatically be re-centred. The Re-Centre Map Tool remains active until another function is selected.

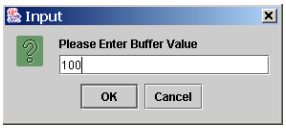
Show Buffer Area

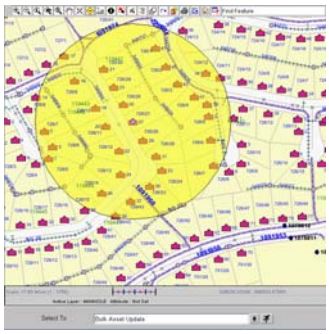
Show Buffer Area

This tool allows you to add a transparent buffer to your map. When you use the tool, you will be prompted to enter a buffer value (Figure 27). This value is in meters. The map will then display a transparent buffer around the current centre point with a radius equal to the buffer size. This means that you can easily see all features within a known distance to a point. Once you have created a buffer on the map, you will be able to select all the items of a particular type that are within the buffer, using the 'Select By Buffer' tool (page 29).

To centre the map on an Asset or another feature, select the required item and press the ' Re-centre Map on Selected Point' tool.

Figure 27



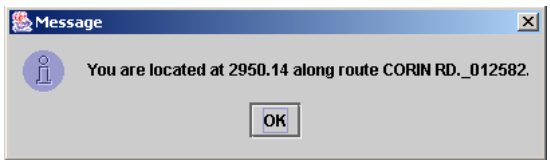


Route Offset

Route Offset

The Route Location tool allows the User to click on a Network feature and display the Route Offset at the selected point. The tool is only available when a Network Layer is the Active Layer. An example of a Route Location message is shown in
Figure 28.

Figure 28



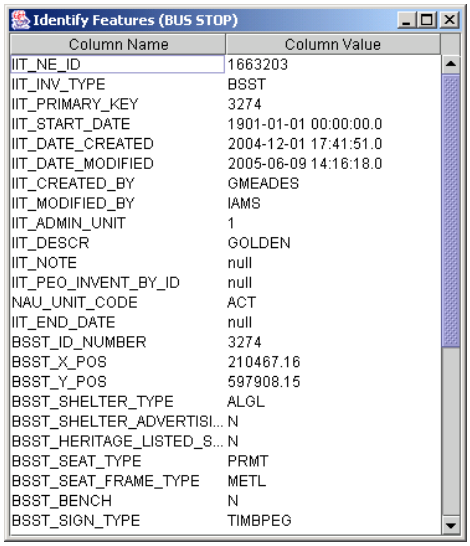
The Route Offset tool remains active until another function is selected.

Identify Feature

Identify Feature

The Identify Tool enables Users to view the details of the feature on which they click. To use the “Identify” tool, the Layer containing the feature the User wants to identify must be the Active Layer (see page 31 for information on Layer Control). Click the mouse pointer over the map feature you want to identify. The details of the identified feature will be displayed in a pop up window. An example is shown in Figure 29.

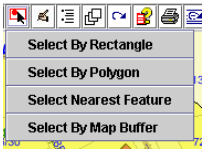
Figure 29



The Identify Feature tool remains active until another function is selected.

Select Feature Tool

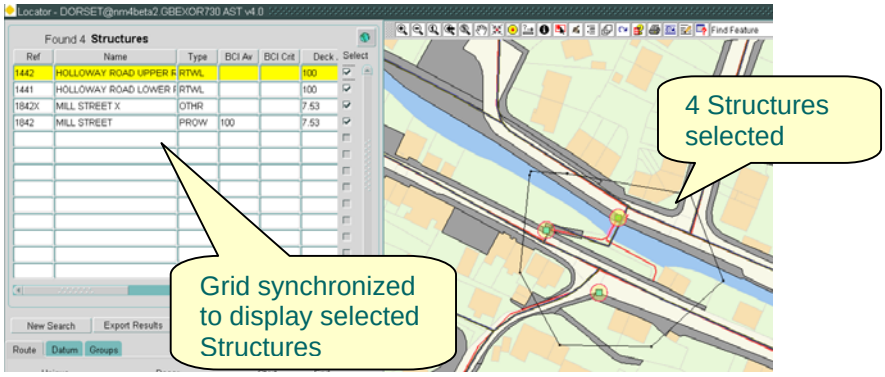
Figure 30



The Select Feature tool calls a Menu (Figure 30) that offers 4 different ways of selecting features of the Active Layer. These are

- Select by Rectangle
- Select by Polygon
- Select Nearest Feature
- Select By Map Buffer

When using any of the Selection methods, the Locator Grid will automatically synchronise with the selected objects on the map, if the Grid is currently displaying the Active selected Layer. The example below shows the grid synchronised to display 4 selected Structures.



Select by Rectangle

The Select by Rectangle tool allows features of the Active Layer, which fall within a rectangle drawn by the User to be selected. To use this tool, click on the menu option, then click and hold the mouse button whilst dragging the cursor to form a rectangle. Release the mouse button when finished. The Items within the Rectangle will be selected and highlighted as described on page 19.

Select by Polygon

The Select by Polygon tool allows features of the Active Layer, which fall within a polygon drawn by the User to be selected. To use this tool, click on the menu option, and then digitise the polygon's vertices. Double clicking will automatically close the polygon. The Items within the Polygon will be selected and highlighted as described on page 19.

Select Nearest Feature

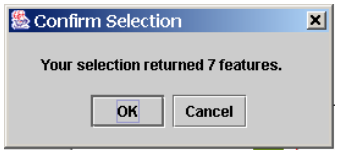
The Select Nearest Feature tool allows the nearest feature to position the User clicks on of the Active Layer to be selected. To use this tool click on the menu option, then click on the required position on the map. The nearest feature of the Active Layer will be selected and highlighted as described on page 19.

Select By Map Buffer

The Select by Map Buffer tool allows features of the Active Layer, which fall within a Buffer created using the 'Show Buffer Area' tool (page 26).

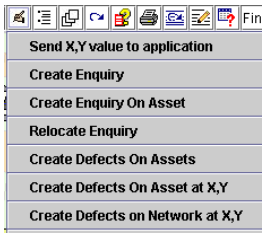
When using the 'Select by Rectangle', 'Select by Polygon' or 'Select By map Buffer' selection methods, the number of records selected will be displayed in a dialogue, as shown in Figure 31, allowing the User to confirm their selection.

Figure 31



Feature Edit Tool

Figure 32



The Feature Edit Tool calls a menu (Figure 32) which allows for the creation of new Enquiries and Defects as well as the relocation of features, such as Assets, Enquiries, Defects or any other data item where the GIS Theme (refer to the General System Admin Guide) has been defined as to allow the relocation of spatial features.

The 'Create Public Enquiry…' options are only available if ***Enquiry Manager by Exor*** (product code ENQ) is licensed and the current User has been granted either the **ENQ_USER** or **ENQ_ADMIN** Roles.

The' Create Defect…' options are only available if ***Maintenance Manager by Exor*** (product code MAI) is licensed and the current User has been granted either the **MAI_USER** or **MAI_ADMIN** Roles.

The available functions are:

- Send X,Y value to application
- Create Enquiry
- Create Enquiry On Asset
- Relocate Enquiry
- Create Defects on Assets
- Create Defects on Asset at X,Y
- Create Defects on Network at X,Y

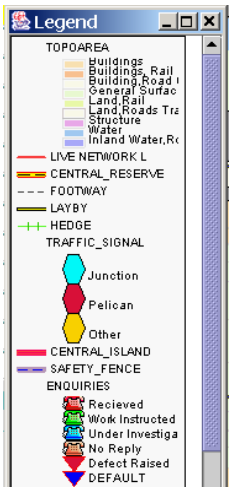
Each of these options is detailed later in this section.

Map Legend

Map Legend

The ‘Display Map Legend’ tool allows the Map Legend to be Toggled on or off. The Legend window lists the Layers visible in the current Map, and the set of symbols that is used for each. An example is shown in Figure 33. Refer to the Exor map Services System Admin Guide for more information relating to defining Map legends.

Figure 33

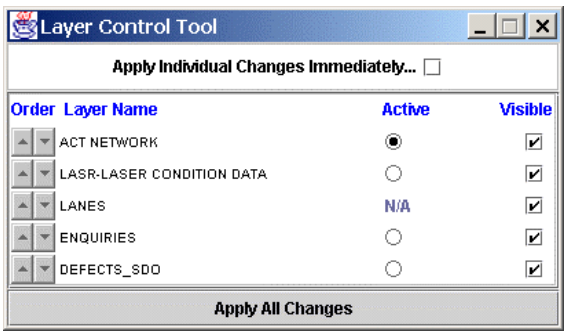


Layer Control

Layer Control

The Layer Control Tool is used to determine which Layers are displayed and which is the Active Layer. An example is shown in Figure 34.

Figure 34



Each Layer can be set to display or not display by checking or unchecking the check box next to the Layer in the 'Visible' column. The Layers that are checked are included in the Map Legend Window.

Only one Layer can be active at any time. The Active Layer is selected by clicking on the radio button next to it in the 'Active' column. Tools like identify and search operate only on the Active Layer. The modules available from the 'Select To' panel are also determined by the Active Layer.

Layers are drawn in the order in which they are listed within the Layer Control Tool window. The top Layer is drawn first, then the second Layer is drawn over the first, and so on. Web Map Service (WMS) Layers are always drawn first, and will therefore always be listed first.

You can set the Layer Control Tool to automatically refresh the Map and apply any change. To do this, check the "Apply Individual Changes Immediately" check box.

Refreshing the Map takes time and you may prefer to make a number of changes before applying any of them. If you leave the "Apply Individual Changes Immediately" check box unchecked then you must click on the "Apply All Changes" button for any changes to take effect.

Note that neither of the 'Apply changes…' options need be applied when changing Active Layers.

Refresh Map

Refresh Map

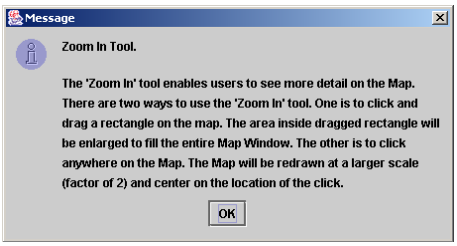
The Refresh tool re-draws the current Map window if needed.

Toggle Tool Tips

Toggle Tool Tips

The 'Toggle Tool Tips' option allows simple help tips for each of the Map Window Toolbar buttons to be switched on or off. When the Tool Tips are switched on a help message is displayed when the option is selected. Pressing the **[OK]** button will close the message and immediately make the toolbar function available. An example of the help message for the '*Zoom In*' tool is shown in Figure 35.

Figure 35



The 'Toggle Tool Tips' icon is displayed in Red or Green when the option is switched Off and On respectively.

Print Map

Print Map

The Print Map tool creates GIF image of the current Map window and displays it in an Internet browser window from where it can be saved or printed etc.

Refresh Metadata

Refresh Metadata

The Refresh Meta Data tool allows you to refresh the map meta data held in memory when the meta data in the server has been updated. Meta data is loaded from the server when the map starts and will not be updated unless you use this tool. For detailed information about each of these, please consult the administrator's guide.

The Items that are updated in memory when you use this tool are:

- **ENQLICENSED** Defines whether PEM product is licensed
- **USERHASENQROLE** Defines whether the user has the ENQ Role
- **MAILICENSED** Defines whether MM product is licensed
- **USERHASMAIROLE** Defines whether the user has the MAI Role
- **DEBUGLEVEL** Debug level (0 = off : 1 = on)

- **MAPTITLE** Specifies the text to be used for the map title bar
- **OVERVIEWLINESTYLE** Specifies the style used by the overview map outline
- **HIGHLIGHTLINESTYLE** Specifies the style used to highlight linear features
- **HIGHLIGHTPOINTSTYLE** Specifies the style used to highlight point features
- **WMSSERVERURL** Specifies the WMS Server URL
- **WMSDATALAYERS** Specifies the data layers in the WMS service
- **WMSLAYERNAME** Specifies the text to display for WMS layer name
- **WMSSERVICENAME** Specifies the WMS Service name to be used to read data
- **WMSIMAGEFORMAT** Specifies the image format used to render WMS layers
- **PEMTHEMEID** Specifies the theme ID for the PEM layer
- **DEFECTTHEMEID** Specifies the theme ID for the Defect layer
- **JDBCHOST** Specifies the Host name for the JDBC data source
- **JDBCPORT** Specifies the IP port number for the JDBC data source
- **JDBCSID** Specifies the Oracle SID used for the JDBC data source

Query Layer

The Map Window includes its own Query function. This enables Users to select records based on the values of any of their attributes. The Query will only be executed against the Active Layer.

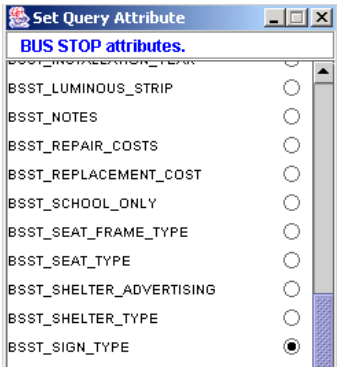
Searching is a two-step process:

1. Set the Query Attribute field
2. Specify the value for the Attribute

Set Query Attribute

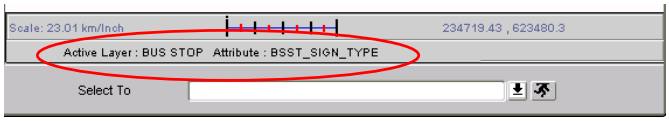
To set the Query Attribute click on the ‘Set Query Attribute’ button. This will open the Set Query Attribute window listing the Attributes that are available from the Active Layer. Click in the radio button next to the Attribute that you want to use for the query. An example is shown in Figure 36.

Figure 36



The selected Query Attribute will be displayed adjacent to the Active Layer description on the Map Window footer. An example is shown in Figure 37.

Figure 37



Specify Value for Attribute

To set the Attribute criteria on which to query, type the required value into the 'Specify Value for Attribute' field and press [Enter] on the Keyboard.

Wildcards may be used to search for a string that contains specific characters. For example, to search for a 'Bus Stop Type' value that started with 'TIM', the criteria may be entered as 'TIM%'. The query will return all features of the Active Layer matching the query criteria. The search function will only accept '%'as a wildcard.

If a wildcard operator is placed at the beginning, a search for every record ENDING with the search string will be returned. If a wildcard operator is placed at the end, a search for every record BEGINNING with the search string will be returned. If wildcard operators are placed at both the beginning and end of the search string, the records that CONTAIN the search string will be returned.

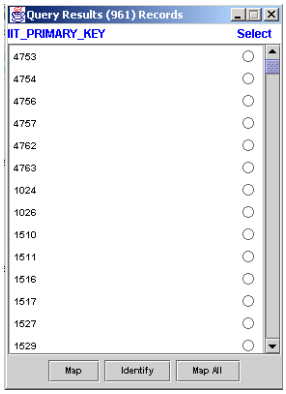
If the search string does not include any wildcard operators only exact matches will be returned.

The speed of the search depends on the size and number of the records that are retrieved.

If only one record matches the search criterion the Map will automatically zoom to the matching record. If more than one record matches the criterion then all the matching records will be listed in the Query Results window. An example is shown in Figure 38.

Note that the Data column displayed within the Query Results window is determined by the Value populated for the Layer in the 'Display' column of the GIS Theme – GIS0010 module.

Figure 38



The required record can be selected clicking on the radio button next to its listing.

There are three options for Query Results listed in the Query Results window. These are

- Map
- Identify
- Map All

Map

Choose this option to zoom and centre the Map on the Selected record.

Identify

Choose this option to call the Identify (page 27) window for the selected record.

Map All

Choose this option to select, zoom and centre the Map on All Query Results.

Overview Map Window

An Overview Map window may be displayed if required in the Map Window footer, and example of which is shown in Figure 39.

Figure 39

The Overview Window enables users to see a larger extent of data with a red box in the window representing the extent you are currently viewing. The Overview map is defined within the mapdef file (refer to the Exor Map Services System Admin Guide). If no Overview Map is the Map Window Footer is reduced in size with no Map Overview being displayed.

Creating Enquiries

New Enquiries can be created directly from within the Locator Map window using the 'Create Enquiry…' function available on the 'Feature Edit Tool' (Figure 40).

This provides a simple to use spatial interface allowing more accurate location of issues, leading to better information gathering and dissemination to Customers and efficiency improvements enabling Contractors to find the problem quickly thereby reducing travel time and costs.

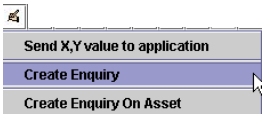
The 'Create Public Enquiry…' options are only available if ***Enquiry Manager by Exor*** (product code ENQ) is licensed and the current User has been granted either the **ENQ_USER** or **ENQ_ADMIN** Roles.

Two options relating to the creation of Enquiries are available: These are

- Create Enquiry
- Create Enquiry On Asset

Note that the Enquiry Layer does not need to be the Active Layer in order to create an Enquiry.

Figure 40



Create Enquiry

Create Enquiry

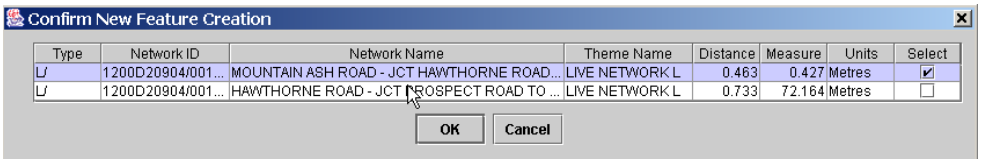
The Create Public Enquiry function option allows an Enquiry to be created by clicking on the required location on the Map window. Enquiries created in this manner may be 'snapped' to a Network Location if required.

To Create an Enquiry that is not associated with an Asset, firstly navigate to the appropriate map extent using the Locator Search facilities, described earlier in this section, the Map window Navigation tools or a combination of both.

Select the 'Create Public Enquiry' function from the 'Feature Edit' tool (Figure 40). The mouse cursor will change to a 'cross hair'. To create the Enquiry click on the required location within the Map window.

The system will attempt to derive a Network location by snapping to an available Layer. Only the visible Layers (defined within the Layer Control tool) which have been defined as 'Snapping Layers' for the Enquiry theme (in ***GIS Themes – GIS0010***) will be used by this 'snapping' process. A list of all Network Elements (Datum's or Groups) within a defined snapping tolerance (defined in ***GIS Themes – GIS0010***) from the Visible Active Layers is displayed to allow the User to select the appropriate Network element to which to Snap and derive its location. An example is shown in Figure 41.

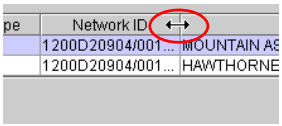
Figure 41



The following details are displayed within the 'Confirm New Feature Creation' window.

- Network/ Group Type of Element
- Element Name
- Element Description
- Theme or Layer name of snapping theme
- Perpendicular distance to the Element from the click position
- Offset measure along the Element at the 'snapping' point
- Units of measurements

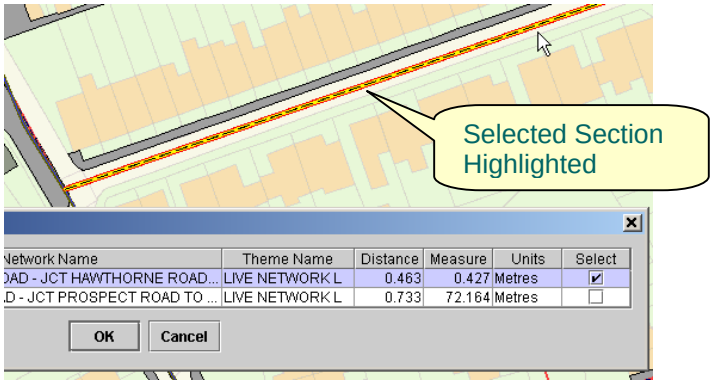
Figure 42



The displayed width of a column may be changed by dragging the boundary of the column heading until it is the required width (Figure 42).

Each Section within the List may be 'highlighted' on the Map in turn by checking the 'Select' option. This allows the User to select the correct Section on which to create the Enquiry (Figure 43).

Figure 43



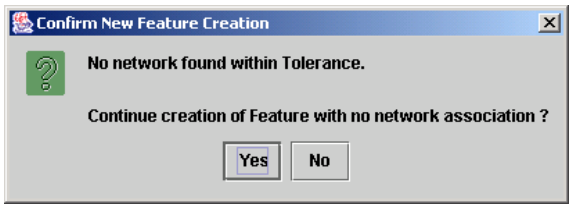
To Create the Enquiry and derive a Network Location using the Snapping facility select the appropriate Network Element by checking the 'Select' checkbox and press the **[OK]** button.

To cancel the entire Create Enquiry process press the **[Cancel]** button.

If none of the available 'Snap to' options are selected and the **[OK]** button is pressed the Enquiry record will be created without a Network Location.

If the User clicks on the Map window outside the defined snapping tolerance or there are no Visible Active 'Snapping Layers' available a message will be displayed advising the User that no Network could be found within Tolerance (Figure 44). The User may then continue and create the Enquiry without a Network Location or choose to cancel the entire Create Enquiry process.

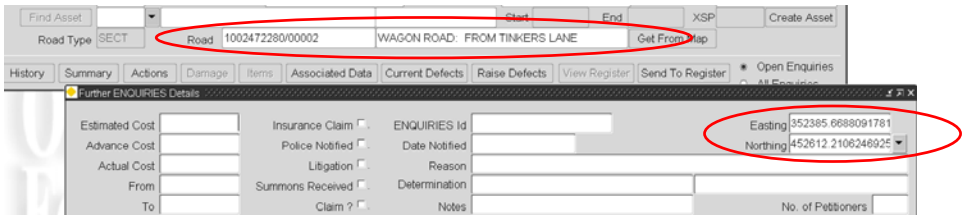
Figure 44



When the Enquiry has been successfully created a message with the Enquiry Id will be displayed (Figure 45).

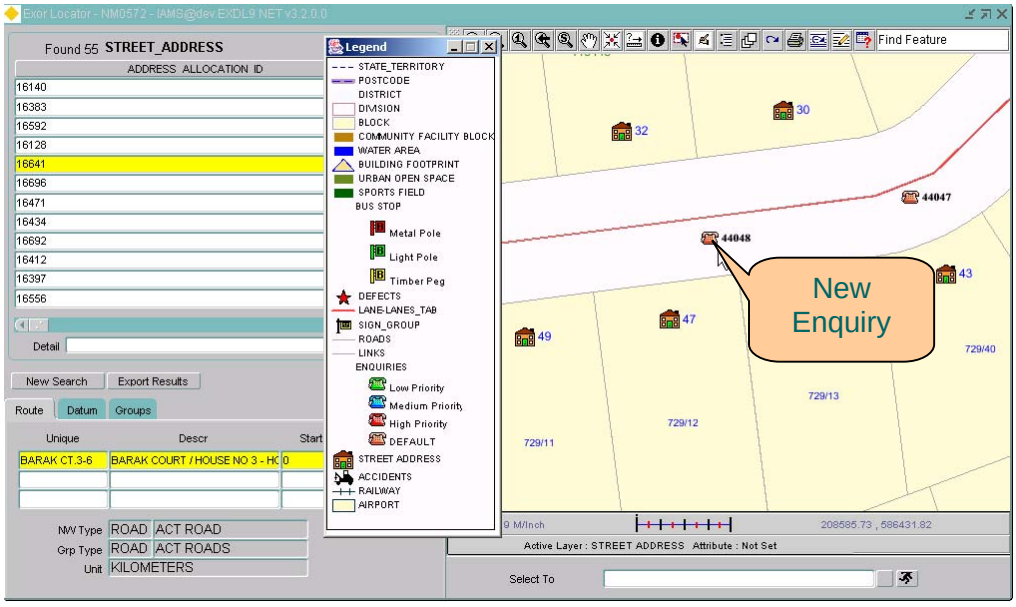
Figure 45

When the **[OK]** button is pressed to confirm the creation of the Enquiry, Locator will automatically call the ***Maintain Enquiries – DOC0150*** module allowing the remainder of the Enquiry details to be entered. If the Enquiry has been snapped to a network location the details will be displayed in the form along with the X and Y coordinates of the 'click' point on the Map window.



The Map window will automatically refresh and display the newly created Enquiry record as shown in Figure 46.

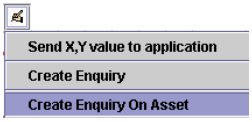
Figure 46



Create Public Enquiry On Asset

Create Enquiry on Asset

Figure 47



The Create Public Enquiry on Asset function allows an Enquiry to be raised against an Asset and optionally 'snapped' to a Network location if required. The Assets on which an Enquiry may be raised may include Point, Linear or Polygon Asset Types that are stored within the Exor database or Asset data stored in other external Applications that have been defined as External Asset Types (refer to the Asset Manager System Admin guide or details relating to Foreign Tables). This allows Enquiries to be raised against Items such as Bus Stops, Parks, Grass Verges and Buildings etc.

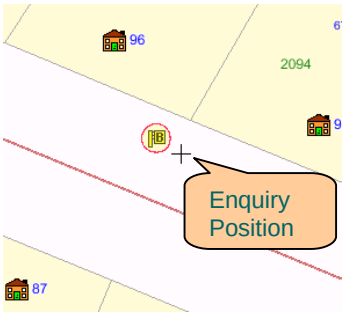
To Create an Enquiry on an Asset, the Asset in question must firstly be selected. This can be done using the Locator Search functionality as described earlier in this section or by using the Navigation and Feature Selection tools available within the Map window. If a Locator Search is used to select and zoom to the required Asset, the Asset Layer will automatically be made the Active Layer. When selecting an Asset directly from the Map window the appropriate Asset Layer must be the Active Layer. This is done using the Layer Control Tool (page 31).

After selecting the required Asset feature, select the 'Create Enquiry on Asset' function from the 'Feature Edit' Tool (Figure 47). The mouse cursor will change to a 'cross hair'. To create the Enquiry, click on the required location within the Map window.

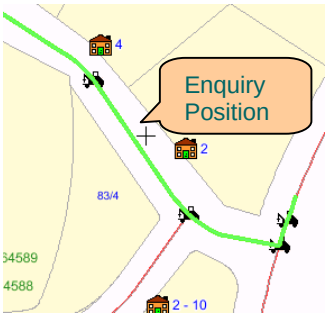
Note that when raising an Enquiry against a Point or Line feature the click point does not have to intersect with the feature.

Figure 48 shows examples of Enquiry's being raised against Point, Line and Polygon Features respectively.

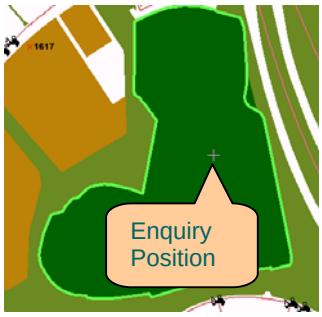
Figure 48



Point feature (Bus Stop) circled. Enquiry raised against Bus Stop but positioned adjacent to Asset.



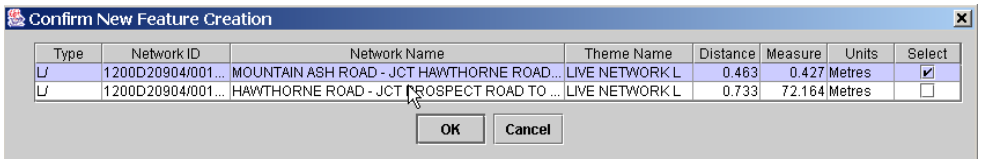
Line feature (Drainage) highlighted in green. Enquiry raised against Drain but positioned adjacent to Asset.



Polygon feature (Park) highlighted in green. Enquiry raised against Park and positioned within the Park.

The system will attempt to derive a Network location by snapping to an available Layer. Only the visible Layers (defined within the Layer Control tool) which have been defined as 'Snapping Layers' for the Enquiry theme (in ***GIS Themes – GIS0010***) will be used by this 'snapping' process. A list of all Network Elements (Datum's or Groups) within a defined snapping tolerance (defined in ***GIS Themes – GIS0010***) from the Visible Active Layers is displayed to allow the User to select the appropriate Network element to which to Snap and derive its location. An example is shown in Figure 49.

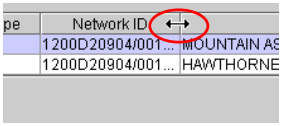
Figure 49



The following details are displayed within the 'Confirm New Feature Creation' window.

- Network/ Group Type of Element
- Element Name
- Element Description
- Theme or Layer name of snapping theme
- Perpendicular distance to the Element from the click position
- Offset measure along the Element at the 'snapping' point
- Units of measurements

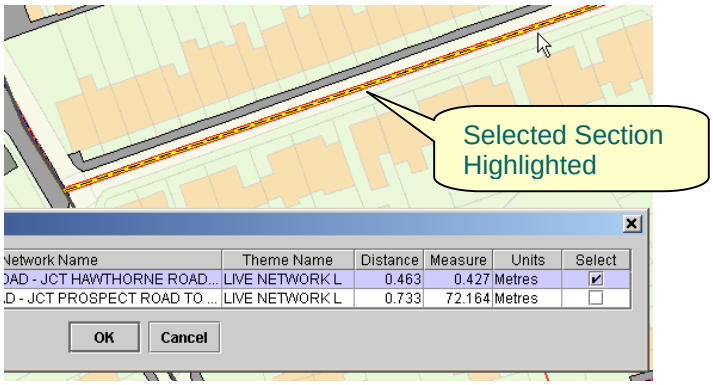
Figure 50



The displayed width of a column may be changed by dragging the boundary of the column heading until it is the required width.

Each Section within the List may be 'highlighted' on the Map in turn by checking the 'Select' option. This allows the User to select the correct Section on which to create the Enquiry (Figure 51).

Figure 51



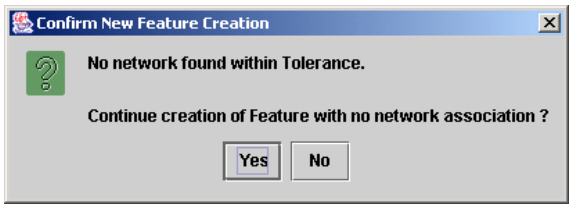
To Create the Enquiry and derive a Network Location using the Snapping facility select the appropriate Network Element by checking the 'Select' checkbox and press the **[OK]** button.

To cancel the entire Create Enquiry process press the **[Cancel]** button.

If none of the available 'Snap to' options are selected and the **[OK]** button is pressed the Enquiry record will be created without a Network Location.

If the User clicks on the Map window outside the defined snapping tolerance or there are no Visible Active 'Snapping Layers' available a message will be displayed advising the User that no Network could be found within Tolerance (Figure 52). The User may then continue and create the Enquiry without a Network Location or choose to cancel the entire Create Enquiry process.

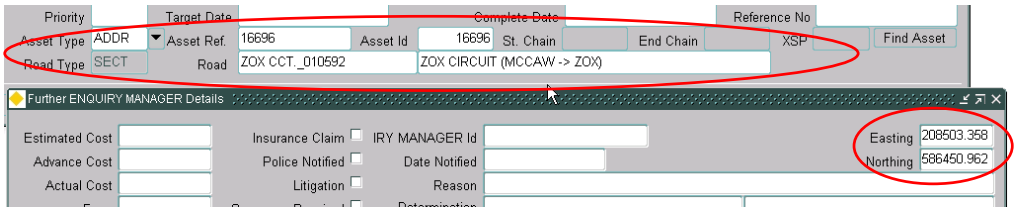
Figure 52



When the Enquiry has been successfully created a message with the Enquiry Id will be displayed (Figure 53).

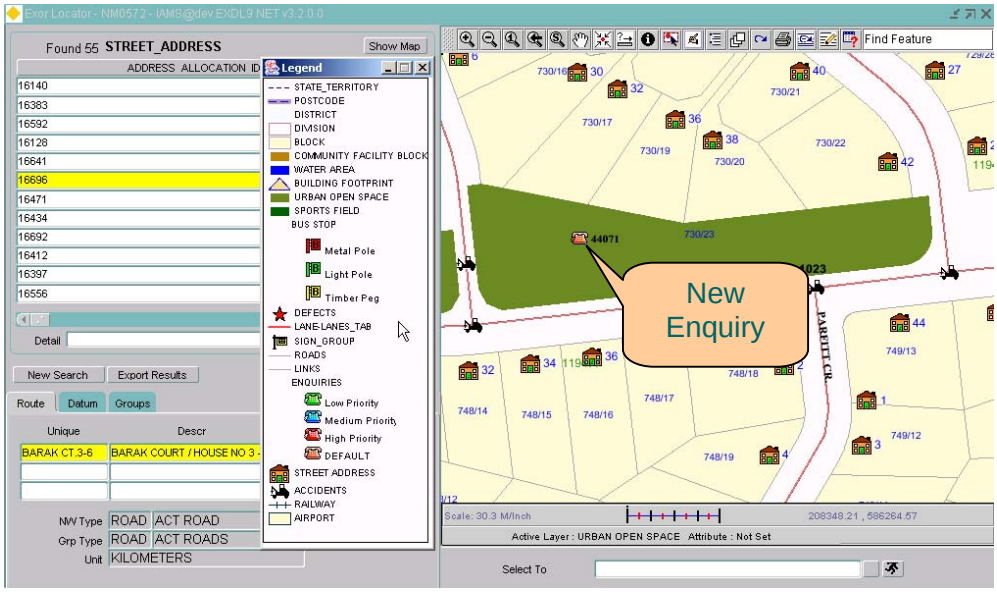
Figure 53

When the **[OK]** button is pressed to confirm the creation of the Enquiry, Locator will automatically call the ***Maintain Enquiries – DOC0150*** module allowing the remainder of the Enquiry details to be entered. The details of the Asset on which the Enquiry was raised, along with the Network details (if applicable) and the X and Y coordinates of the click point are automatically passed into the Enquiry records and displayed.



The Map window will automatically refresh and display the newly created Enquiry record as shown in Figure 54. The Enquiry Shown was raised against a 'Park' that is a Polygon feature held externally to the ***Exor*** database. This is an example of an Enquiry raised against a 'Foreign Table' Asset.

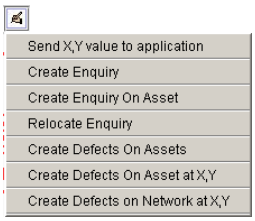
Figure 54



Creating Defects

Defects may be created on the Network or against Assets directly from within the Locator Map window using the 'Create Defects …' functions available on the 'Feature Edit Tool' (Figure 55).

Figure 55



Assets against which Defects can be created, include Assets held within the ***Exor*** Database AND Assets Items held externally to ***Exor*** in other Asset Management applications. These external Assets must be modelled as 'External Asset Types' (refer to the Asset Management System Admin Guide for further information relating to External Assets functionality).

Defects may be raised against Assets that have a Network location or Assets that are not located. Assets that are not located are known as 'Off Network Assets'. In order to create Defects on 'Off Network Assets' the Asset Type must be assigned a Budget Allocation. This defines a Budget for Work carried out on Assets of this Type. Budget Allocations are defined using the ***Budget Allocations - MAI3630*** module (refer to the Maintenance Manager System Admin Guide for details relating to Budget Allocations for 'Off Network Assets').

This gives a User the ability search on ANY spatially enabled dataset and to visually display Defective Assets and generate Work Requests in a simple, efficient mapping interface.

The 'Create Defects…' Functions are only available if ***Maintenance Manager by Exor*** (product code MAI) is licensed and the current User has been granted either the **MAI_USER** or **MAI_ADMIN** Roles.

Three options relating to the creation of Defects are available: These are

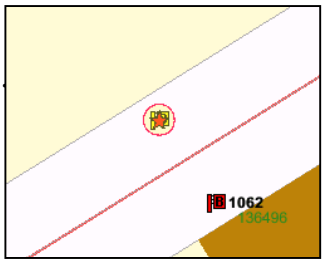
- Create Defect On Assets
- Create Defect On Asset at X,Y
- Create Defects On Network at X,Y

Create Defects On Assets

This option allows a single Defect to be created against an Asset. If multiple Assets are selected a separate Defect will be created for each. When Defects are created using this option the spatial position of the Defect is derived from the centroid of the associated Asset.

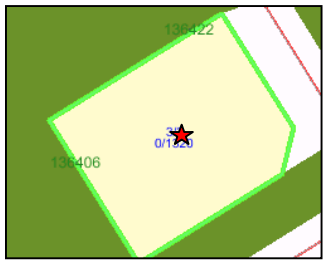
Figure 56 shows examples of Defects raised against Point, Line and Polygon Assets respectively (Defects are shown as Red Stars ★).

Figure 56



Point feature (Bus Stop) circled. Defect positioned at same X,Y position as feature.

Line feature (Lane) highlighted in Green. Defect positioned at mid point of line

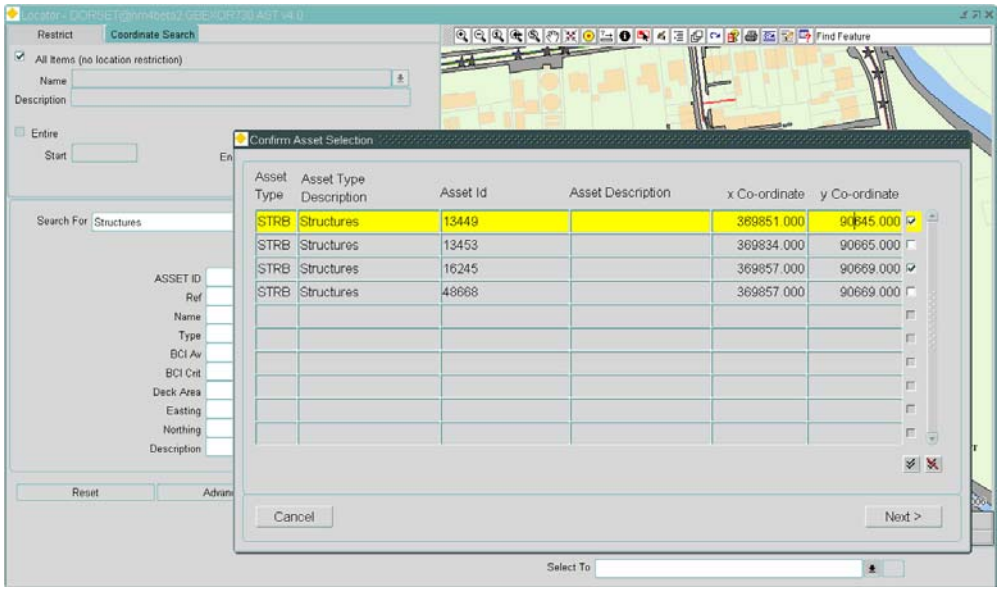


Polygon feature (Building Unit). Defect positioned at center of Polygon.

To Create a Defect on an Asset, the Asset(s) in question must firstly be selected. This can be done using the Locator Search functionality as described earlier in this section or by using the Navigation and Feature Selection tools available within the Map window. If a Locator Search is used to select and zoom to the required Asset(s), the Asset Layer will automatically be made the Active Layer. When selecting an Asset directly from the Map window the appropriate Asset Layer must be the Active Layer. This is done using the Layer Control Tool (page 31).

After selecting the Asset(s) on which the Defect(s) is to be created select the 'Create Defects On Assets' option from the 'Feature Edit Menu' Tool (Figure 55). This will call a form displaying details of the selected Assets (Figure 57) that allows the User to confirm their selection prior to raising Defects. If an Asset Item has been selected erroneously it may be de-selected by unchecking the record selection flag on the right hand side of the form. Only Assets that are flagged as 'selected' will have Defects raised against them.

Figure 57

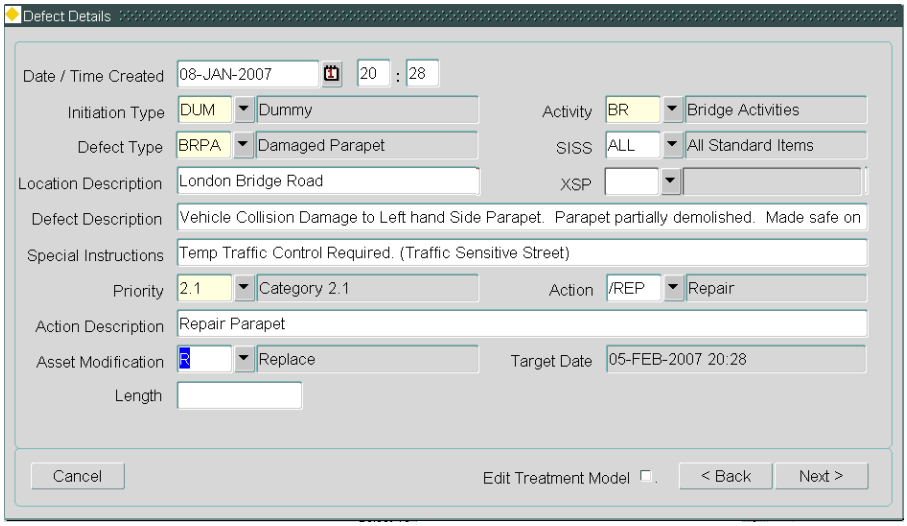


The following Asset Details are displayed on the 'Confirm Asset Selection' window:

- Asset Type Code
- Asset Type Description
- Asset Id (Primary Key)
- Asset Item Description
- X and Y coordinates of the Item centroid position

To continue the process of raising Defects against the selected Assets press the **[Next >]** button or **[Cancel]** to abandon the operation.

Figure 58



A window (Figure 58) will be displayed allowing the Defect details to be entered. To abandon the Defect creation process press the **[Cancel]** button. To reselect the Assets on which to create the Defects press the **[< Back]** button.

Date / Time Created (Default)

The current system date and time will be populated. These may be amended if required.

Initiation Type (Required) List

This is the Initiation Type used for the related Inspection record created for the Defect. The default value is defined using Product Option **INSP_INIT**. This must contain a valid value as defined for the **INITIATION_TYPE** Domain using ***Domains - HI9120*** (refer to the General System Admin Guide).

Activity (Required) List

Select the appropriate 'Activity' from the list provided. Only the Activities associated with the selected Asset Type will be available for selection. Activities and Asset Types are associated using ***Asset Activities – MAI3632*** (refer to the Maintenance Manager System Admin Guide).

Defect Type **(Required)** **List**

Select the appropriate 'Defect Type' from the list provided. Only those Defect Types associated with the previously selected 'Activity' will be available for selection. Defects and Activities are associated using ***Defect Control Data – MAI1300*** (refer to the Maintenance Manager System Admin Guide).

SISS Code **List**

If required, enter a SISS code (Standard Item Sub-Section). The default value is defined using Product Option **DEF_SISS.** Standard Items and Standard Item Sub-Sections are maintained using S**tandard Item Sections and Sub-Sections - MAI3886** (refer to the Maintenance Manager System Admin Guide).

Location Description

If required, enter a description for the Location of the Defect. A maximum of 40 characters is allowed.

XSP

If appropriate, select a Cross Sectional Position for the Defect.

Defect Description

A description of the Defect may be entered if required. A maximum of 240 characters is allowed.

Special Instructions

If required, enter any additional instructions or comments relating to the defect. A maximum of 254 characters is allowed.

Priority **(Required)** **List**

Select a 'Defect Priority' from the list provided. Only those Defect Priorities associated with the previously selected 'Activity' will be available for selection. The Priority selected will be used to generate a Target Date for the Defect Repair, which is displayed in the bottom right hand corner of the Defect Details window. Defect Priorities and Activities are associated using ***Defect Priorities - MAI3812*** (refer to the Maintenance Manager System Admin Guide).

Action (Treatment Type) **List**

If required select an Action (Treatment) for the Defects. If selected, the BOQ items from the Treatment model will be used as the Repair Items for the Defect. Only those 'Actions' associated with the previously selected 'Activity' / 'Defect Type' combination will be available for selection. 'Actions' are maintained using ***Treatment Data – MAI1315*** (refer to the Maintenance Manager System Admin Guide).

Action Description

If required a description of the repair Action may be entered. A maximum of 40 characters is allowed

Asset Modification **List**

An Asset Modification Flag may be set for the Defect Repair. This allows an indicator to be set to signify that the affected Asset has been 'Replaced',

'Renewed' or 'Repaired' for example. This is useful when carrying out Asset Valuations. The list of Asset Modification Flags is maintained using ***Domains – HIG1920*** and updating Domain name **ASSET_MODIFICATION** (refer to the General System Admin Guide for information relating to System Domains).

Target Date (Display only)

The Target Date and Time for the Defect Repair will be displayed. This is generated using the 'Defect Priority' previously entered.

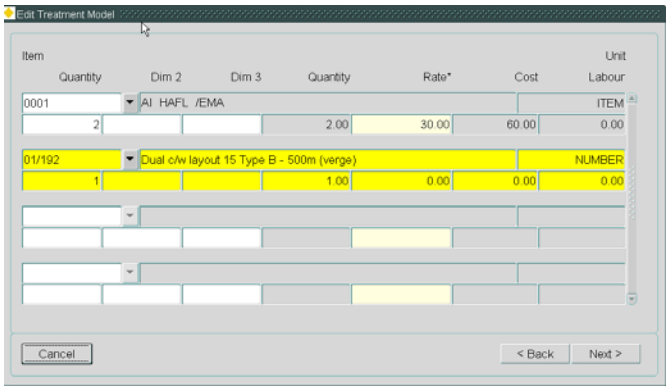
Flexible Defect Attributes

If any Attributes have been defined for the selected Defect Type using ***Defect Control Data – MAI1300***, these will be displayed at the bottom of the Defect Details window.

If Treatment Models are being used (see Maintenance Manager User/Admin Guides) the default Bill Of Quantity Items within the Treatment Model defined for the selected Activity/Defect Type/Action, can be amended for the current set of Defects by ticking the 'Edit Treatment Model' checkbox and then pressing the **[Next >]** button. This will display the 'Edit Treatment Model' window (Figure 59).

Note that the actual Treatment Model is not changed when this feature is used.

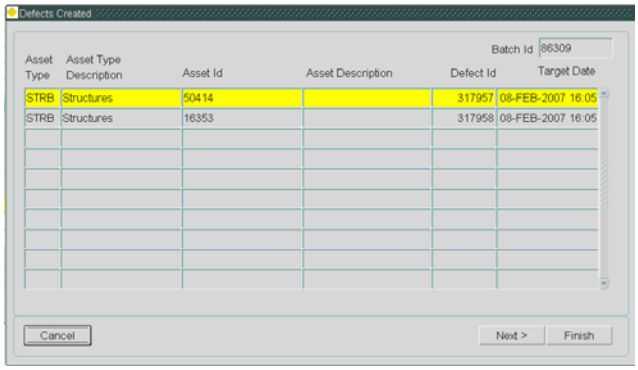
Figure 59



The Edit Treatment Model window allows the BOQ items and Quantities within the appropriate Treatment Model to be amended, add to, removed etc. These BOQ items apply to ALL Defects created within the current selection; however, these may be amended for individual defects later in the defect creation process (page 49).

To continue creating the Defects, press **[Next >]**.

Figure 60



The following Defect Summary details are displayed:

- Inspection Batch Id
- Asset Type Code and Description
- Asset Item Id (Primary Key)
- Asset Item Description
- Defect Id

Target repair Date and Time

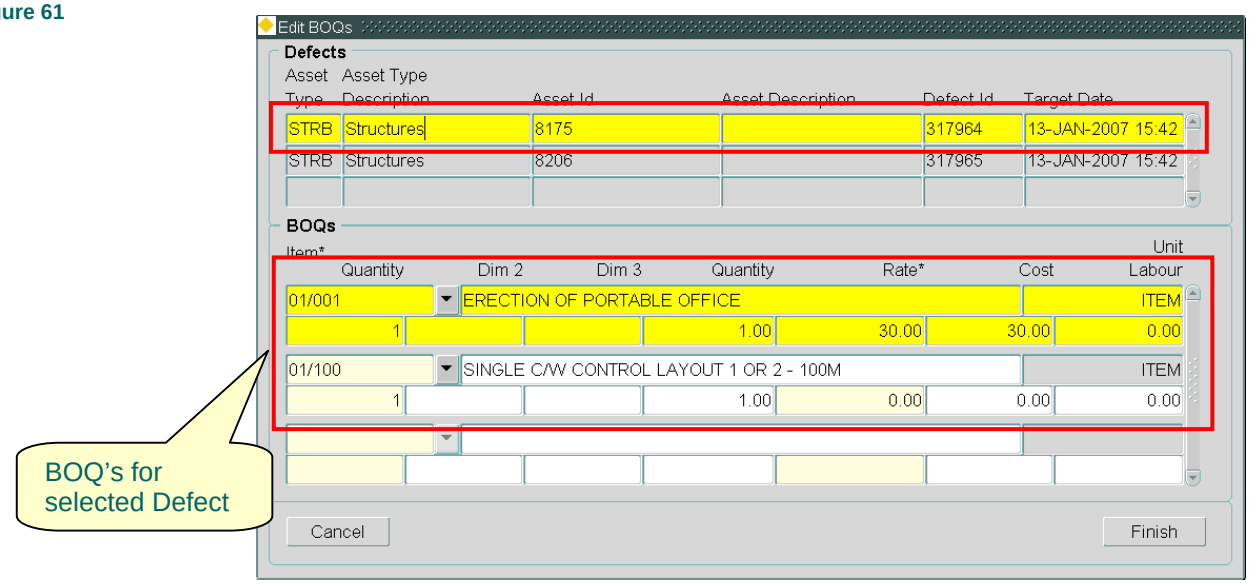
Note that a separate Inspection Record is created or each Asset / Defect

To cancel the Defect creation process press **[Cancel]**, no defects will be created.

To create the Defect(s) without editing the BOQ's for an individual Defect press **[Finish]**.

The BOQ items for individual Defects can be changed by pressing the **[Next >]** button. This will display the **Edit BOQ's** window (Figure 61).

Figure 61



The **Edit BOQ's** window allows Bill of Quantity Items to be amended for individual defects. This is useful if Treatment Models have been used and the defect repairs differ from the standard treatment, or where Treatment Models are not in use and BOQ Items and quantities need to be added for a Defect before it is placed on a Works Order.

The Window is divided into 2 panels. The top panel displays each of the Defects being created. The following details are displayed for each Defect.

- Asset Type Code and Description
- Asset Id (Primary key)
- Asset Description
- Defect Id
- Target Repair Date

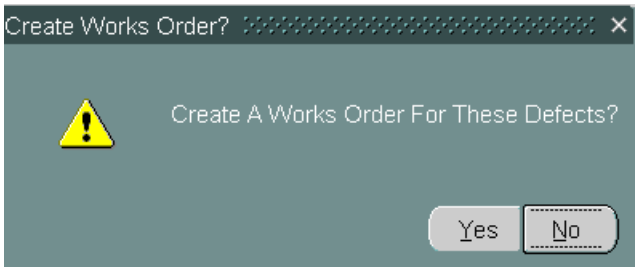
The bottom panel allows BOQ Items to be added/removed, quantities changed etc for the selected Defect.

Once all required BOQ's are correct press the **[Finish]** button to create the Defects

Note that if the [Cancel] button is pressed the entire Defect creation process will be cancelled and no Defects will be created.

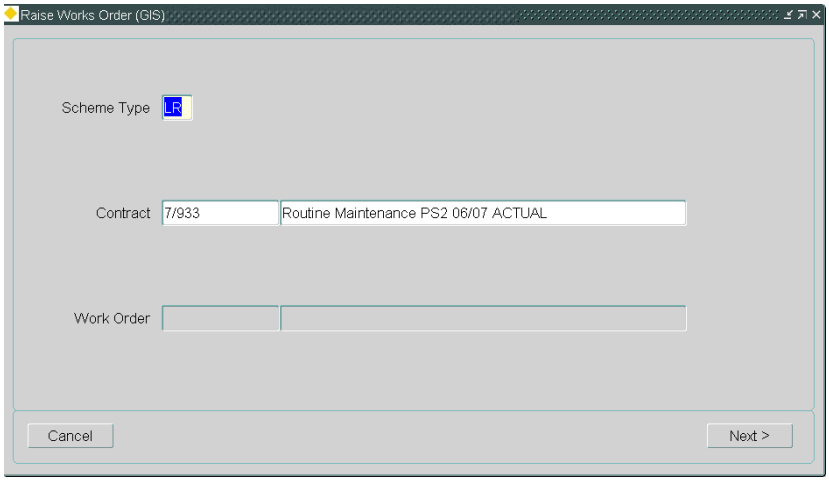
At the end of the Defect creation process a message will be displayed, offering the option to raise a Works Order to include the Defects just raised. To raise a Work Order press **[Yes]** or **[No]** to finish the entire process.

Figure 62



If a Works Order is to be raised the form shown in Figure 63 will be displayed.

Figure 63



The Raise Works Order form allows the required Scheme Type and Works Order Contract to be selected.

Scheme Type	(Default)	List

This is the Scheme Type for the Work Order. The default value is determined by the value set for Product Option **DEFSCHTYPL** or **DEFSCHTYPD** (depending on the System Flag set for the Section or Budget Allocation Group on which the Defect is raised). The default value may only be updated if product option **DEFSCHTYPU** is set to '**Y**'

Contract (Default) List

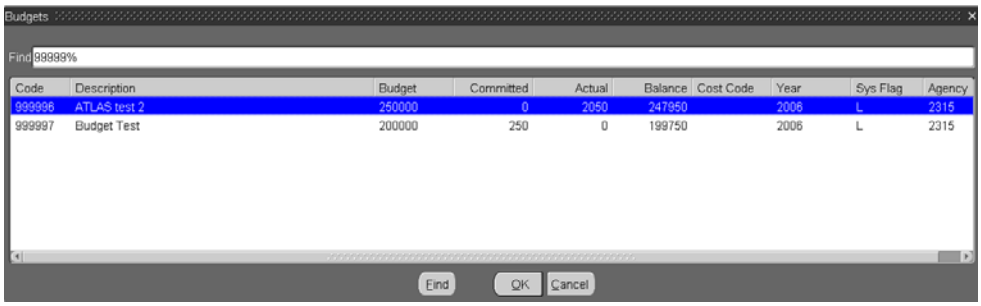
This is the Contract used within the Work Order. The default value is determined by the value set for product Option **DUMCONCODE**. Once the appropriate Contract has been selected press the **[Next]** Button.

Work Order

If Product Option **WORREFGEN** Is set to **M** – manual, the Work Order Number and Description should be entered. If set to **C**- Contract based or **A** – Admin Unit based the work order number will be automatically generated when the **[Next >]** button is pressed and a valid Budget is selected.

If Multiple Budgets exist for the defect Activity/Scheme Type/Section or Budget Allocation Group combinations, a list will be displayed from which to select the required Budget.

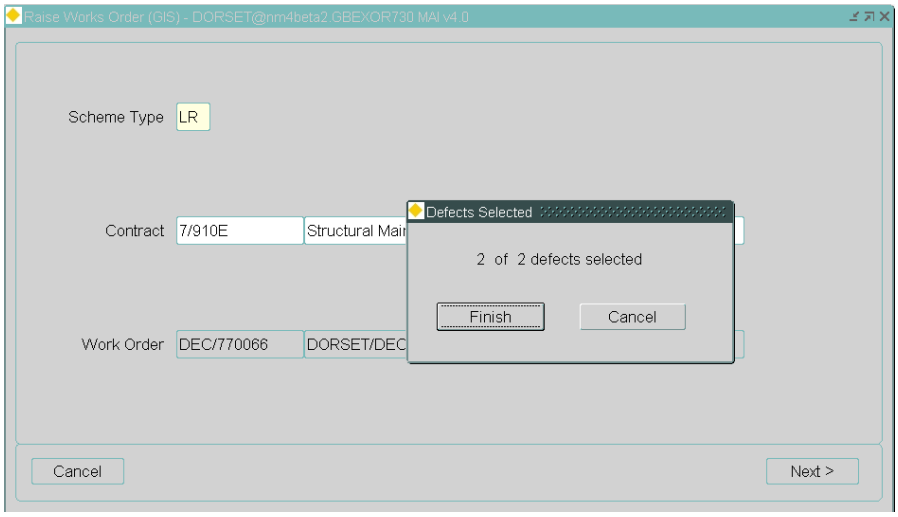
Figure 64



Once a Budget has been selected the Number of Defects added to the Work Order will be displayed in a pop-up dialogue. Press **[Finish]** to create the Work Order

Note that not all the selected Defects may be added to a Work Order. This may be caused by one of more of the Defects not matching the selected Budget due to differences in the associated Activity Code or Road Group for example.

Figure 65

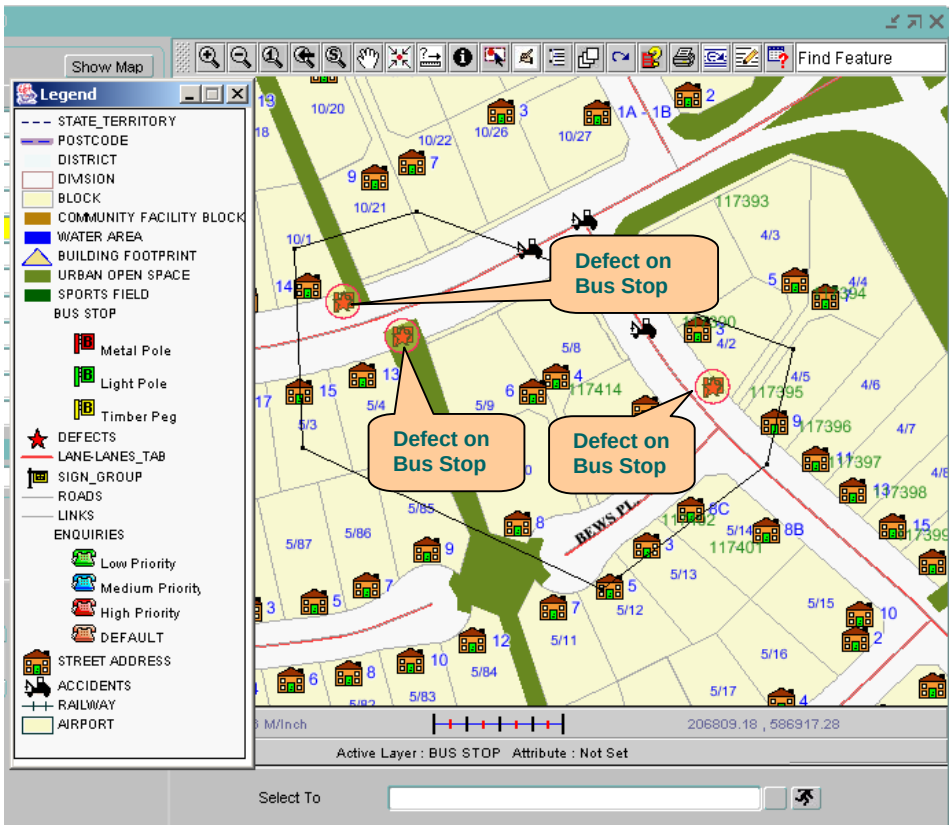


When the **[Finish]** button is pressed the **Work Order (Defects) – MAI3800** module will be called and the Work Order will be displayed.

The Map window will be automatically refreshed and the newly created Defects will be displayed.

Figure 66 shows an example where 3 Defects have been created against 3 separate Bus Stops. The Defects are indicated by a Red Star ★

Figure 66



To view the full details of a Defect or set of Defects make the Defects Later the Active Layer using the Layer Control Tool (page 31), select the required Defects as described earlier and call the ***Defects – MAI3806*** module from the 'Select To' list at the bottom of the Locator Map window. This will call the Defects module and display full details of the selected Defects.

Calling standard ***Exor*** Modules is described on page 56 .

Create Defects On Asset at X, Y

Create Defects On Asset at X,Y

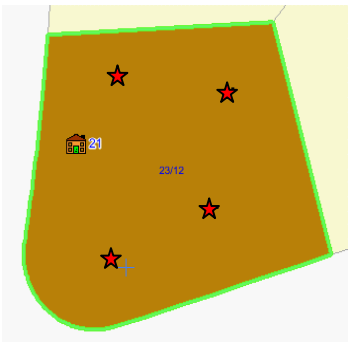
This option allows the creation of multiple Defects against a single selected Asset. Defects created using this option are associated with the selected Asset but are located at the X,Y position at which the User clicks and not at the centre of the selected Asset as is the case when using the 'Create Defects On Assets' option previously described.

This is useful when creating Defects or Work Requests at known locations within a Park or Land Parcel or creating Defects adjacent to but not coincident with a Bus Stop or Guard Rail etc. Figure 67 shows examples of Defects

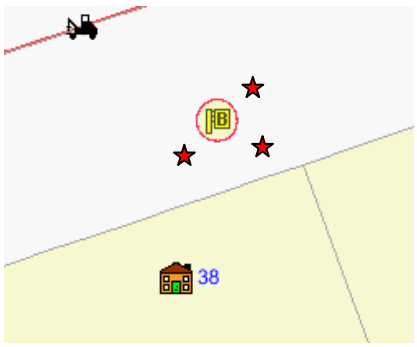
created at XY locations (shown as Red Stars ★) within a Park (polygon feature) and adjacent to a Bus Stop (point feature) respectively.

Note that no tolerance or validation is considered when creating Defects using this option. Therefore Defects may be created at any distance from the selected Asset or created outside the boundary of a selected polygon feature.

Figure 67



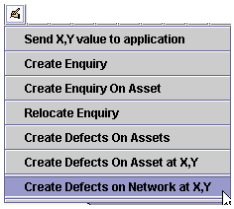
Defects created against a Park and located within the park (polygon feature) highlighted in Green.



Defects created against a Bus Stop and located adjacent to the Bus Stop (point feature) circled in red.

To Create Defects on an Asset at XY, the Asset in question must firstly be selected. This can be done using the Locator Search functionality as described earlier in this section or by using the Navigation and Feature Selection tools available within the Map window. If a Locator Search is used to select and zoom to the required Asset(s), the Asset Layer will automatically be made the Active Layer. When selecting an Asset directly from the Map window the appropriate Asset Layer must be the Active Layer. This is done using the Layer Control Tool (page 31).

After selecting the Asset on which the Defects are to be created, select the 'Create Defects On Assets at XY' option from the 'Feature Edit Menu' Tool. Click the left mouse button at each of the appropriate XY locations for the Defects. A 'dot' will be displayed at each 'click point' to indicate the position at which the Defect will be created. To complete the creation of the Defects against the Asset, Click the Right mouse button. The Confirm Asset Selection and Defect Details window will be called as described on page 46 to allow the defect details to be entered.



Create Defects On Network at X, Y

Create Defects on Network at X,Y

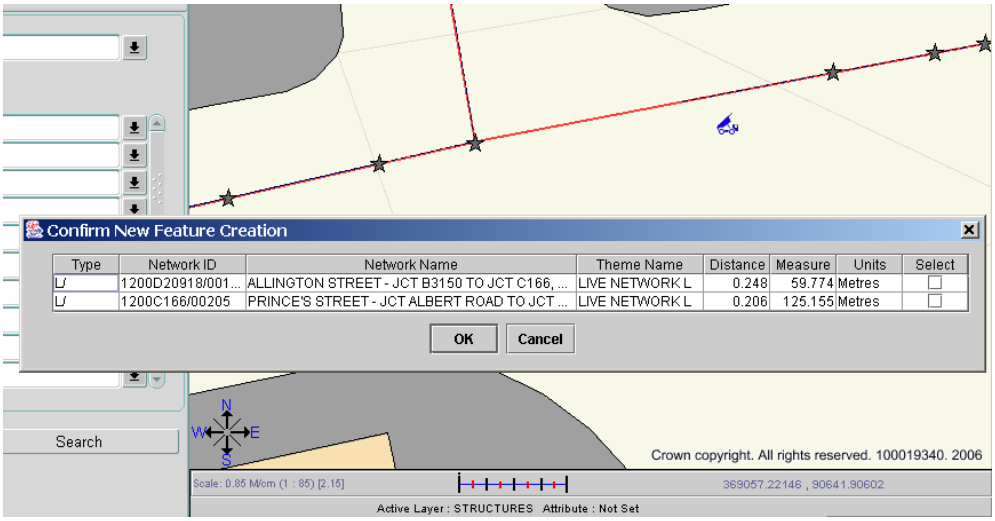
This option allows a Defect to be created on a Network Section, by clicking at the appropriate location on the map.

To create a Defect on the network, firstly navigate to the appropriate map extent using the Locator Search facilities, described earlier in this section, the Map window Navigation tools or a combination of both.

Select the 'Create Defects on Network at X,Y' function from the 'Feature Edit' tool. The mouse cursor will change to a 'cross hair'. To create the Defect, click on the required location within the Map window.

The system will attempt to derive a Network location by snapping to an available Layer. Only the visible Layers (defined within the Layer Control tool) which have been defined as 'Snapping Layers' for the Defect theme (in ***GIS Themes – GIS0010***) will be used by this 'snapping' process. A list of all Network Elements (Datum's or Groups) within a defined snapping tolerance (defined in ***GIS Themes – GIS0010***) from the Visible Active Layers, is displayed to allow the User to select the appropriate Network element to which to Snap and derive its location. An example is shown in Figure 68.

Figure 68

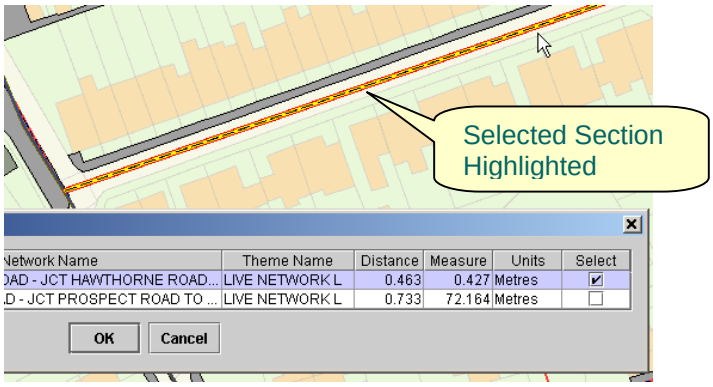


The following details are displayed within the 'Confirm New Feature Creation' window.

- Network/ Group Type of Element
- Element Name
- Element Description
- Theme or Layer name of snapping theme
- Perpendicular distance to the Element from the click position
- Offset measure along the Element at the 'snapping' point
- Units of measurements

Each Section within the List may be 'highlighted' on the Map in turn by checking the 'Select' option. This allows the User to select the correct Section on which to create the Enquiry (Figure 69).

Figure 69

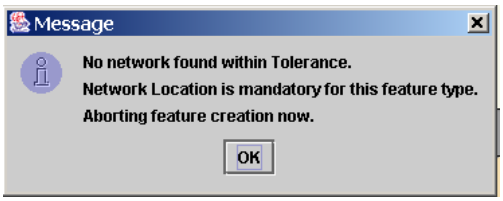


To create the Defect on the selected Network press the **[OK]** button.

To cancel the entire Defect Creation process press the **[Cancel]** button.

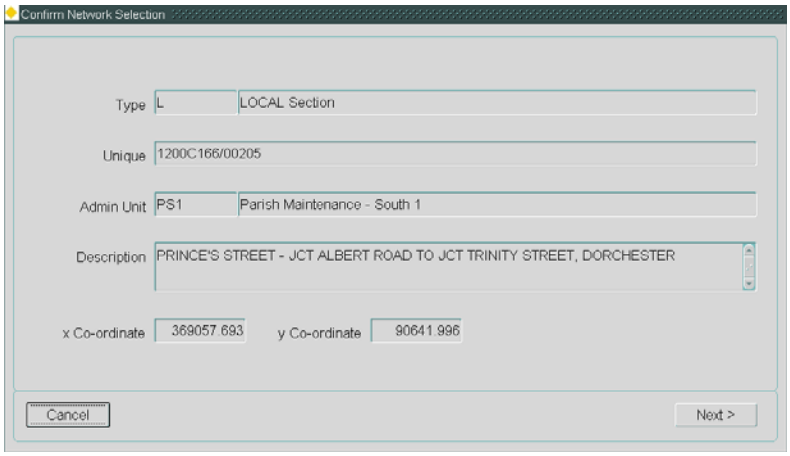
If the position at which the User Clicks to create the Defect on the Network is outside the Tolerance set an error message will be displayed. Acknowledge the message by pressing the **[OK]** button and re-select the 'Create Defects on network at X,Y ' option if the Defect is still required.

Figure 70



When the correct position for the Defect on the Network has been selected the 'Confirm Network Selection' window (Figure 71) will be displayed. If the incorrect Section has been selected press **[Cancel]** otherwise press **[Next >]** to continue with the defect creation process.

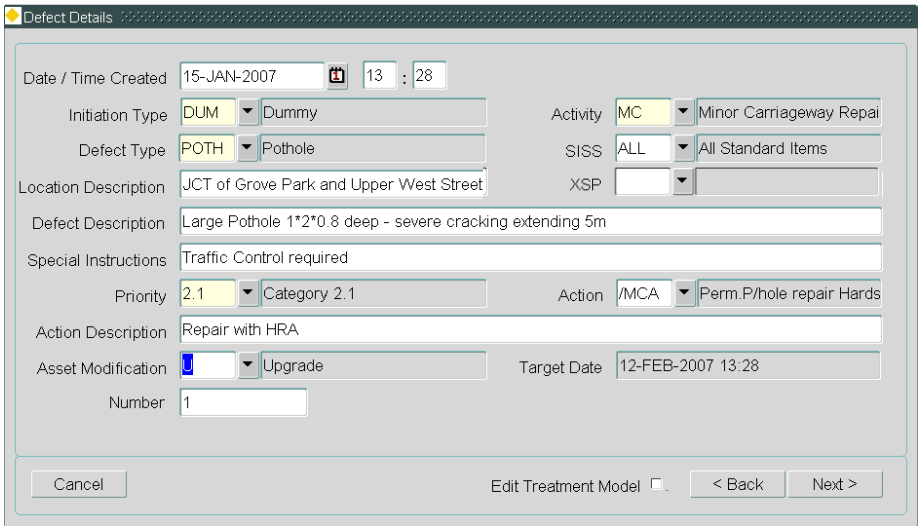
Figure 71



The following Details are displayed on the 'Confirm Network Selection' window:

- Network Type and Description
- Section Name and Description
- Section Admin Unit
- X and Y coordinates of the 'defect'

Figure 72



A window (Figure 72) will be displayed allowing the Defect details to be entered. To abandon the Defect creation process press the **[Cancel]** button.

Date / Time Created (Default)

The current system date and time will be populated. These may be amended if required.

Initiation Type (Required) List

This is the Initiation Type used for the related Inspection record created for the Defect. The default value is defined using Product Option **INSP_INIT**. This must contain a valid value as defined for the **INITIATION_TYPE** Domain using ***Domains - HI9120*** (refer to the General System Admin Guide).

Activity (Required) List

Select the appropriate 'Activity' from the list provided. Only the Activities associated with the selected Asset Type will be available for selection. Activities and Asset Types are associated using ***Asset Activities – MAI3632*** (refer to the Maintenance Manager System Admin Guide).

Defect Type (Required) List

Select the appropriate 'Defect Type' from the list provided. Only those Defect Types associated with the previously selected 'Activity' will be available for selection. Defects and Activities are associated using ***Defect Control Data – MAI1300*** (refer to the Maintenance Manager System Admin Guide).

SISS Code **List**

If required, enter a SISS code (Standard Item Sub-Section). The default value is defined using Product Option **DEF_SISS.** Standard Items and Standard Item Sub-Sections are maintained using **MAI3886 - Standard Item Sections and Sub-Sections** (refer to the Maintenance Manager System Admin Guide).

Location Description

If required, enter a description for the Location of the Defect. A maximum of 40 characters is allowed.

Defect Description

A description of the Defect may be entered if required. A maximum of 240 characters is allowed.

Special Instructions

If required, enter any additional instructions or comments relating to the defect. A maximum of 254 characters is allowed.

Priority **(Required)** **List**

Select a 'Defect Priority' from the list provided. Only those Defect Priorities associated with the previously selected 'Activity' will be available for selection. The Priority selected will be used to generate a Target Date for the Defect Repair, which is displayed in the bottom right hand corner of the Defect Details window. Defect Priorities and Activities are associated using ***Defect Priorities - MAI3812*** (refer to the Maintenance Manager System Admin Guide).

Action (Treatment Type) **List**

If required select an Action (Treatment) for the Defects. If selected, the BOQ items from the Treatment model will be used as the Repair Items for the Defect. Only those 'Actions' associated with the previously selected 'Activity' / 'Defect Type' combination will be available for selection. 'Actions' are maintained using ***Treatment Data – MAI1315*** (refer to the Maintenance Manager System Admin Guide).

Action Description

If required a description of the repair Action may be entered. A maximum of 40 characters is allowed

Asset Modification **List**

An Asset Modification Flag may be set for the Defect Repair. This allows an indicator to be set to signify that the affected Asset has been 'Replaced', 'Renewed' or 'Repaired' for example. This is useful when carrying out Asset Valuations. The list of Asset Modification Flags is maintained using ***Domains – HIG1920*** and updating Domain name **ASSET_MODIFICATION** (refer to the General System Admin Guide for information relating to System Domains).

Target Date **(Display only)**

The Target Date and Time for the Defect Repair will be displayed. This is generated using the 'Defect Priority' previously entered.

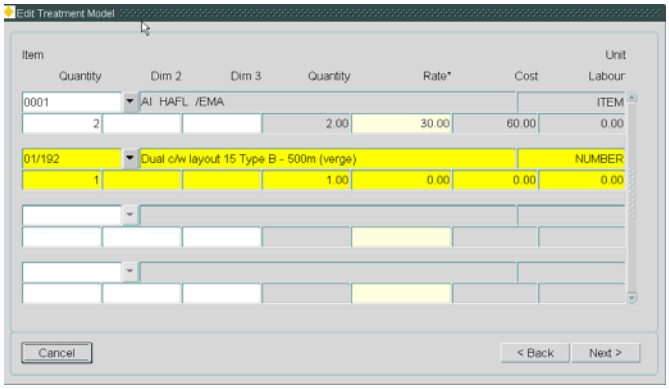
Flexible Defect Attributes

If any Attributes have been defined for the selected Defect Type using ***Defect Control Data – MAI1300***, these will be displayed at the bottom of the Defect Details window.

If Treatment Models are being used (see Maintenance Manager User/Admin Guides) the default Bill Of Quantity Items within the Treatment Model defined for the selected Activity/Defect Type/Action, can be amended for the current set of Defects by ticking the 'Edit Treatment Model' checkbox and then pressing the **[Next >]** button. This will display the 'Edit Treatment Model' window (Figure 73).

Note that the actual Treatment Model is not changed when this feature is used.

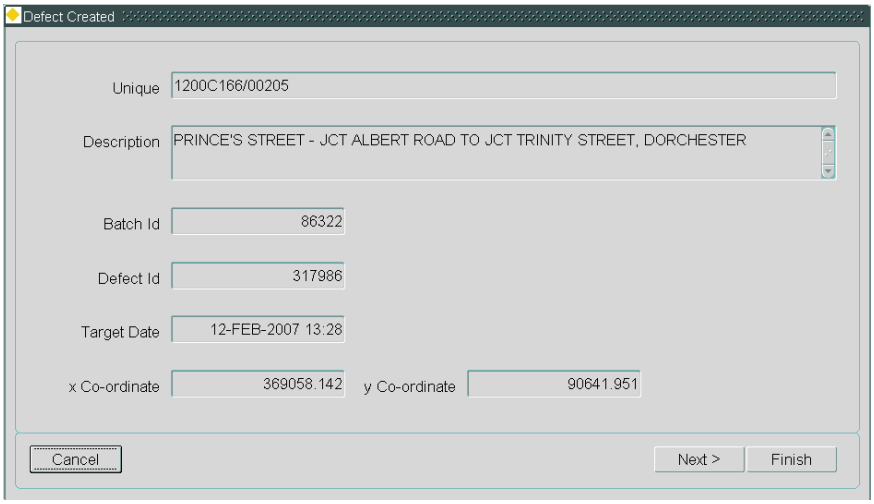
Figure 73



The Edit Treatment Model window allows the BOQ items and Quantities within the appropriate Treatment Model to be amended, add to, removed etc. These BOQ items apply to ALL Defects created within the current selection; however, these may be amended for individual defects later in the defect creation process (page 49).

To continue creating the Defects, press **[Next >]**.

Figure 74



The following Defect Summary details are displayed:

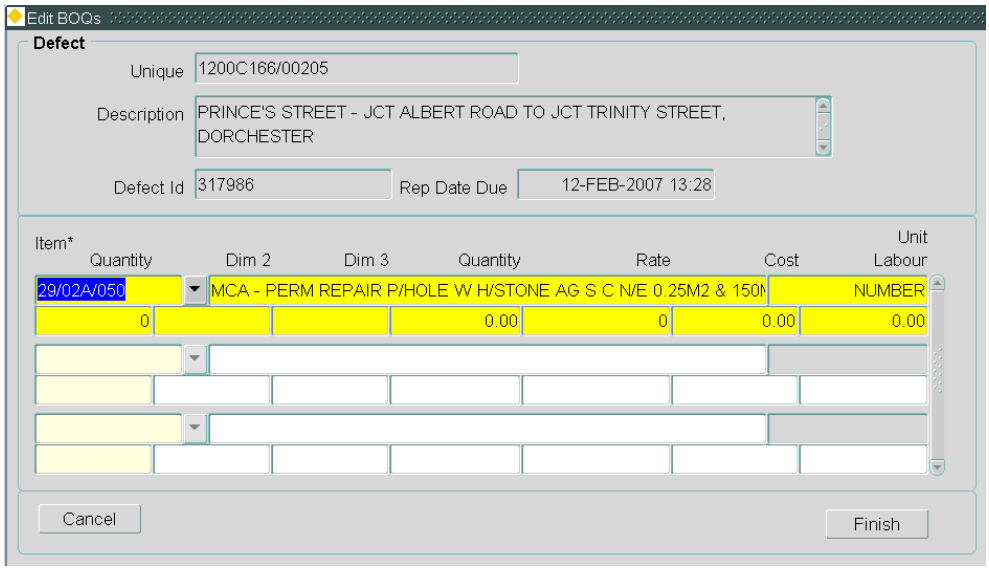
- Section Name and Description
- Inspection batch Id
- Defect Id
- Target Repair Date
- X and Y coordinates of the Defect

To cancel the Defect creation process press **[Cancel]**, no defect will be created.

To create the Defect without editing the BOQ's press **[Finish]**.

The BOQ items the Defect can be changed by pressing the **[Next >]** button. This will display the **Edits BOQ's** window (Figure 75).

Figure 75



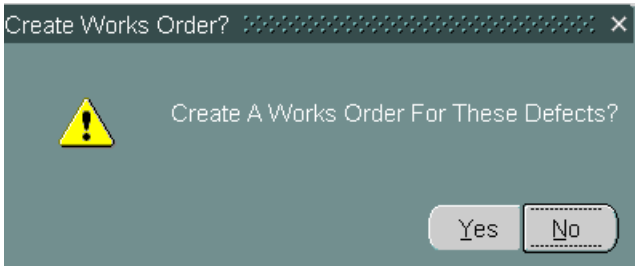
The **Edit BOQ's** window allows Bill of Quantity Items to be amended for the Defect. This is useful if Treatment Models have been used and the defect repairs differ from the standard treatment, or where Treatment Models are not in use and BOQ Items and quantities need to be added for a Defect before it is placed on a Works Order.

Once all required BOQ's are correct press the **[Finish]** button to create the Defects

Note that if the [Cancel] button is pressed the entire Defect creation process will be cancelled and no Defects will be created.

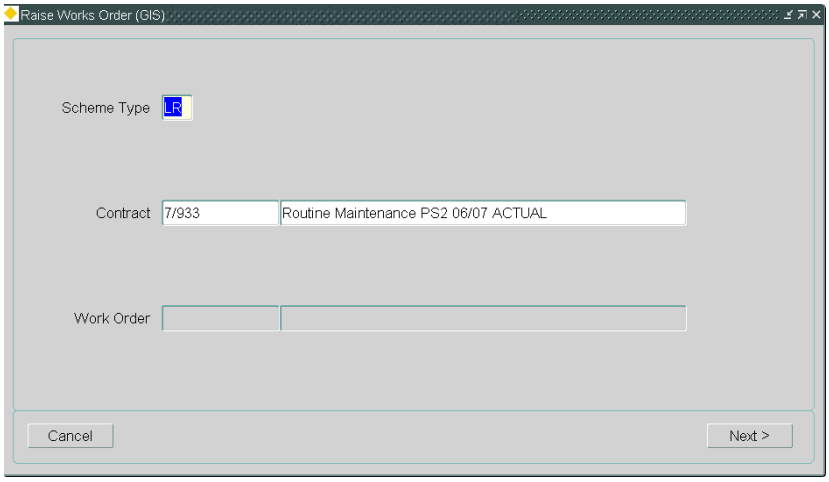
At the end of the Defect creation process a message will be displayed, offering the option to raise a Works Order to include the Defects just raised. To raise a Work Order press **[Yes]** or **[No]** to finish the entire process.

Figure 76



If a Works Order is to be raised the form shown in Figure 77 will be displayed.

Figure 77



The Raise Works Order form allows the required Scheme Type and Works Order Contract to be selected.

Scheme Type (Default) List

This is the Scheme Type for the Work Order. The default value is determined by the value set for Product Option **DEFSCHTYPL** or **DEFSCHTYPD** (depending on the System Flag set for the Section or Budget Allocation Group on which the Defect is raised). The default value may only be updated if product option **DEFSCHTYPU** is set to '**Y**'

Contract (Default) List

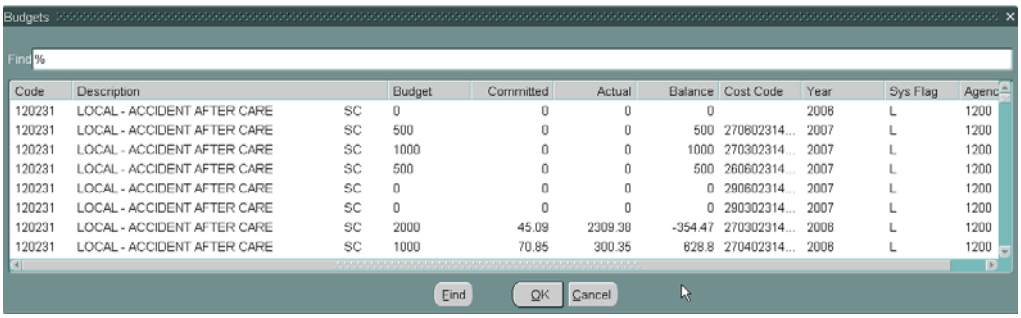
This is the Contract used within the Work Order. The default value is determined by the value set for product Option **DUMCONCODE**. Once the appropriate Contract has been selected press the **[Next]** Button.

Work Order

If Product Option **WORREFGEN** Is set to **M** – manual, the Work Order Number and Description should be entered. If set to **C**- Contract based or **A** – Admin Unit based the work order number will be automatically generated when the [Next >] button is pressed and a valid Budget is selected.

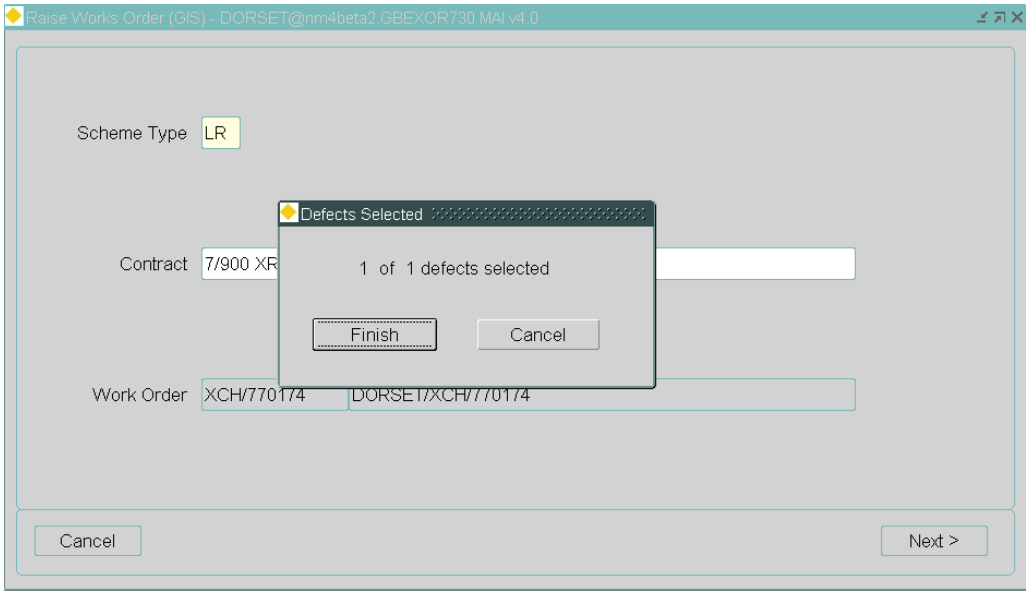
If Multiple Budgets exist for the defect Activity/Scheme Type/Section or Budget Allocation Group combinations, a list will be displayed from which to select the required Budget.

Figure 78



Once a Budget has been selected the Number of Defects added to the Work Order will be displayed in a pop-up dialogue. Press **[Finish]** to create the Work Order

Figure 79

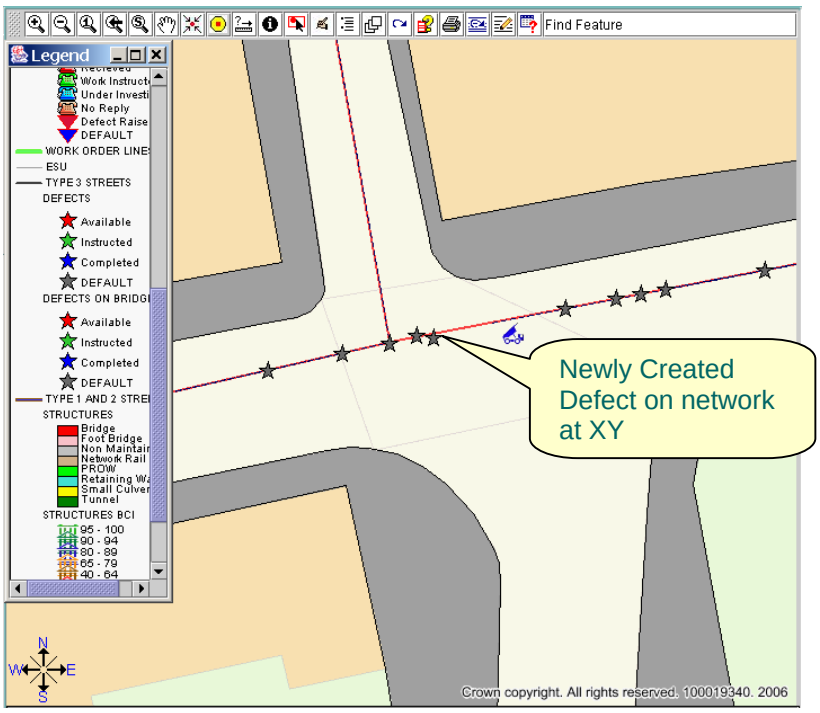


When the **[Finish]** button is pressed the **Work Order (Defects) – MAI3800** module will be called and the Work Order will be displayed.

The Map window will be automatically refreshed and the newly created Defects will be displayed.

Figure 80 shows an example.

Figure 80



To view the full details of a Defect or set of Defects make the Defects Later the Active Layer using the Layer Control Tool (page 31), select the required Defects as described earlier and call the ***Defects – MAI3806*** module from the 'Select To' list at the bottom of the Locator Map window. This will call the Defects module and display full details of the selected Defects.

Calling standard ***Exor*** Modules is described on page 63.

Calling Exor Modules and Custom Built PL/SQL procedures

Standard ***Exor*** modules, such as Maintain Enquiry, Maintain Defects, Maintain Assets or Bulk Asset Update may be called from ***Locator*** for a given selected set of results using the 'Select To' function. This allows updates, edits and any other business functions associated with the called module to be carried out on the selected data items.

In addition to standard ***Exor*** modules, ***Locator*** also allows custom built PL/SQL procedures to be executed against a selected set of results. This allows an Organisations business processes to be closely mirrored within ***Exor***. Examples may include the update of Street Lights within a Park which have had bulb replaced or the sending of an escalation e-mail for Defects which are overdue for repair.

The ***Exor*** modules and/or PL/SQL procedures available for the Active Layer are dependant on the Theme Functions defined for the Layer. This allows the appropriate Modules to be called for the data contained within the Layer. For example modules available to an Asset Layer, e.g. Bus Stops or Guard Rails may include the ***Asset Items – NM0510*** module whilst an Accidents Layer would have the ***Accident Items – ACC3021*** module available. Theme Function modules are defined for a Layer using ***GIS Themes – GIS0010*** (refer to the General System Admin Guide for more information relating to GIS Themes).

Exor Modules and/or custom built PL/SQL Procedures are called for a given set of selected features using the 'Select To' field below the Locator Map window.

Select To

To call an ***Exor*** module or custom built PL/SQL procedure, press the 'List' button adjacent to the 'Select To' field and select the required option. An example of a 'Function List' is displayed in Figure 82. The name of the selected Module will be displayed within the 'Select To' field.

Note that the Module name displayed within the list is determined by the value entered in the 'Menu Option Text' field, for the Theme Function within the GIS0010 – GIS Themes module and not the actual Module Name. Figure 81 shows an example of a GIS Theme Function where the NM0535 – Bulk Asset Update module has been 'renamed' as 'UPDATE SIGN ATTRIBUTES'. This allows module names to be more closely associated with the currently selected Asset Type and business process.

Figure 81

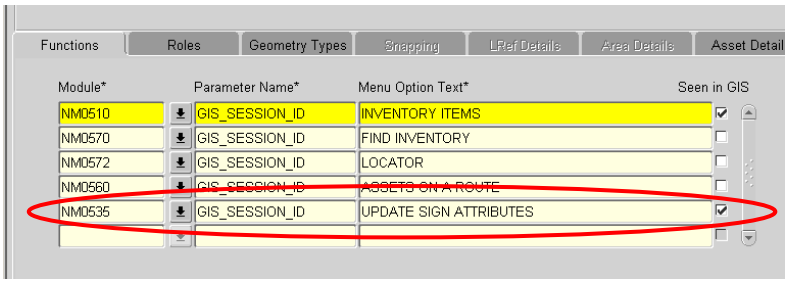
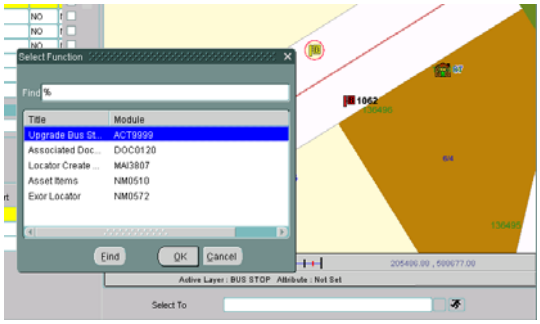


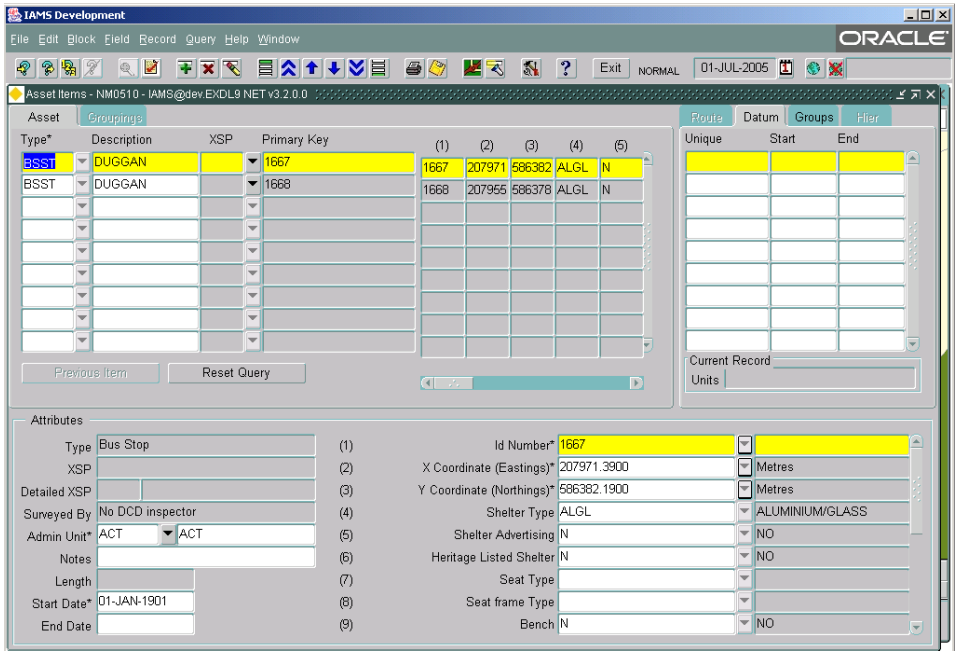
Figure 82



To call the ***Exor*** module or execute the custom built PL/SQL procedure, select the required option from the list.

Note that if no features of the Active Layer are selected on the Map the Exor module will still be be called.

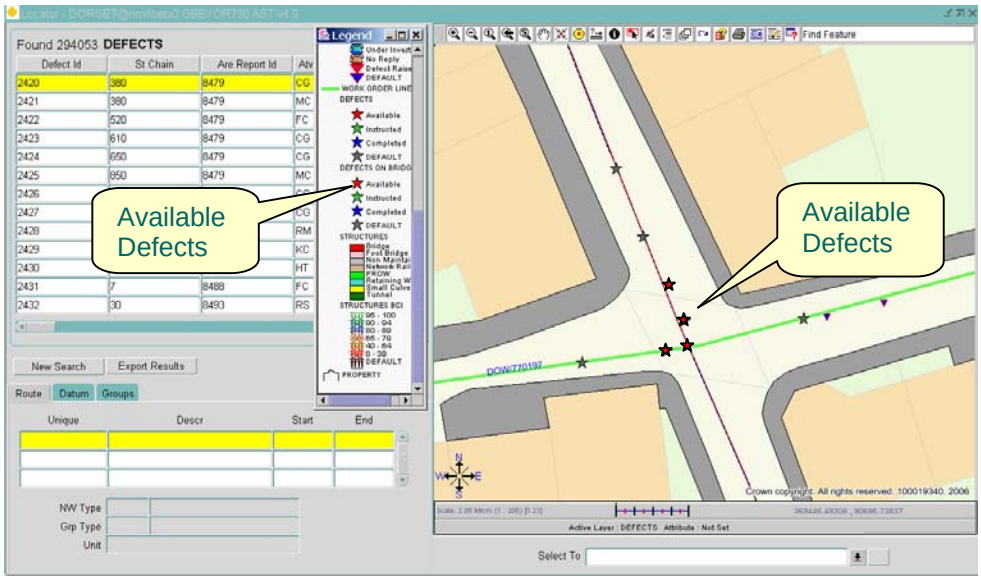
When the called Module is closed the Map will return to the same Map Extent as previously selected.



Create a Work Order from Existing Defects

Work Orders may be created directly from within Locator by selecting existing 'Available' Defects on the map and then calling the 'Place Defects on a Work Order' module from the 'Select To' feature at the bottom of the screen. Figure 83 shows an example of a 'cluster' of 'Available' Defects in the vicinity of a Road Junction.

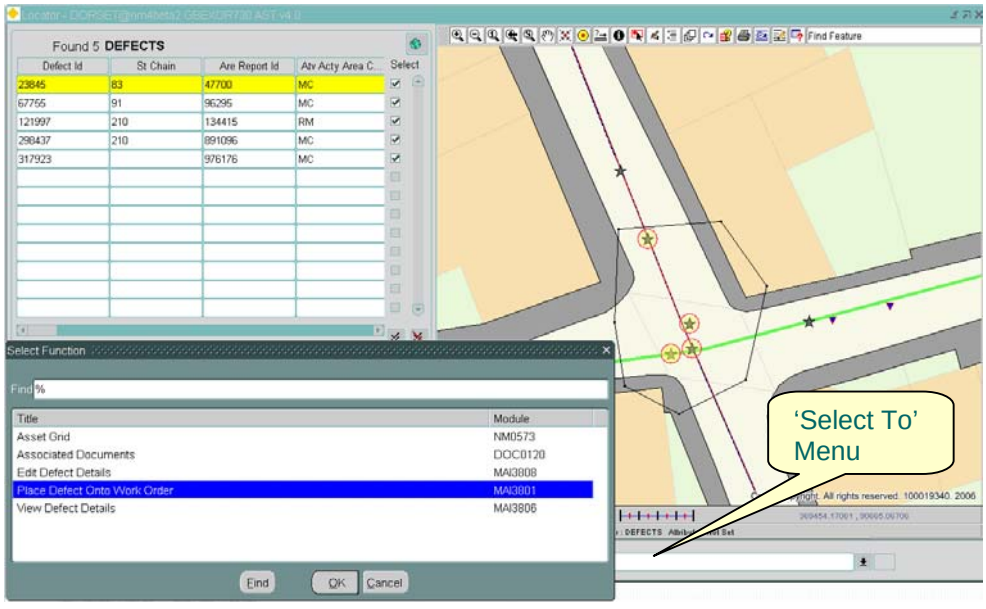
Figure 83



To select the Defects to place on a Work Order, ensure that the Defect Layer is the 'Active Layer' using the Layer Control Tool (page 31) and use one of the 'Select Tools' available on the Feature Select menu. Figure 84 shows an example where the 'Select by Polygon' tool has been used.

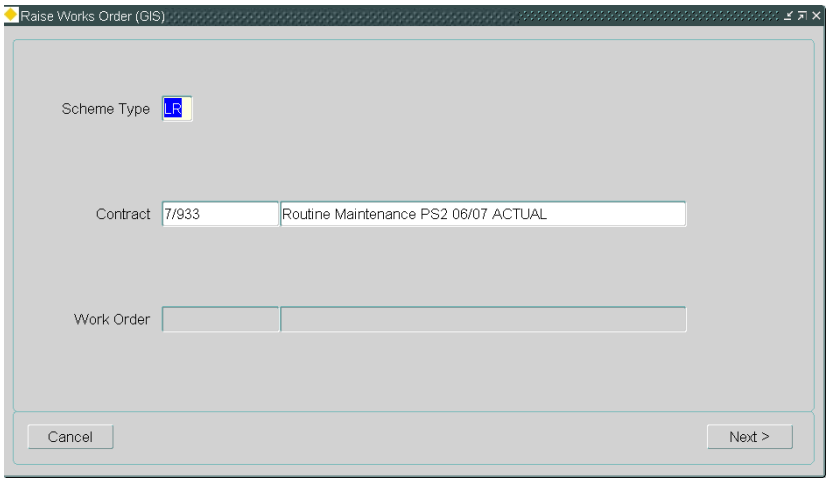
Note that Defects with a Status of 'Instructed', 'Completed', etc, can also be selected, but only 'Available' Defects are processed during the creation of a Work Order.

Figure 84



To raise the Work Order select the 'Place Defect onto Works Order' option from the 'Select To' menu at the bottom of the locator window. This will call the Raise Works Order form (Figure 85).

Figure 85



The Raise Works Order form allows the required Scheme Type and Works Order Contract to be selected.

Scheme Type (Default) List

This is the Scheme Type for the Work Order. The default value is determined by the value set for Product Option **DEFSCHTYPL** or **DEFSCHTYPD** (depending on the System Flag set for the Section or Budget Allocation Group on which the Defect is raised). The default value may only be updated if product option **DEFSCHTYPU** is set to '**Y**'

Contract (Default) List

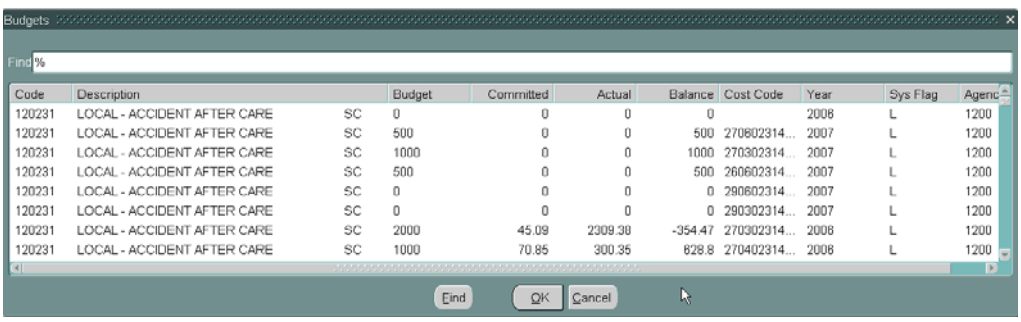
This is the Contract used within the Work Order. The default value is determined by the value set for product Option **DUMCONCODE**. Once the appropriate Contract has been selected press the **[Next]** Button.

Work Order

If Product Option **WORREFGEN** Is set to **M** – manual, the Work Order Number and Description should be entered. If set to **C**- Contract based or **A** – Admin Unit based the work order number will be automatically generated when the [Next >] button is pressed and a valid Budget is selected.

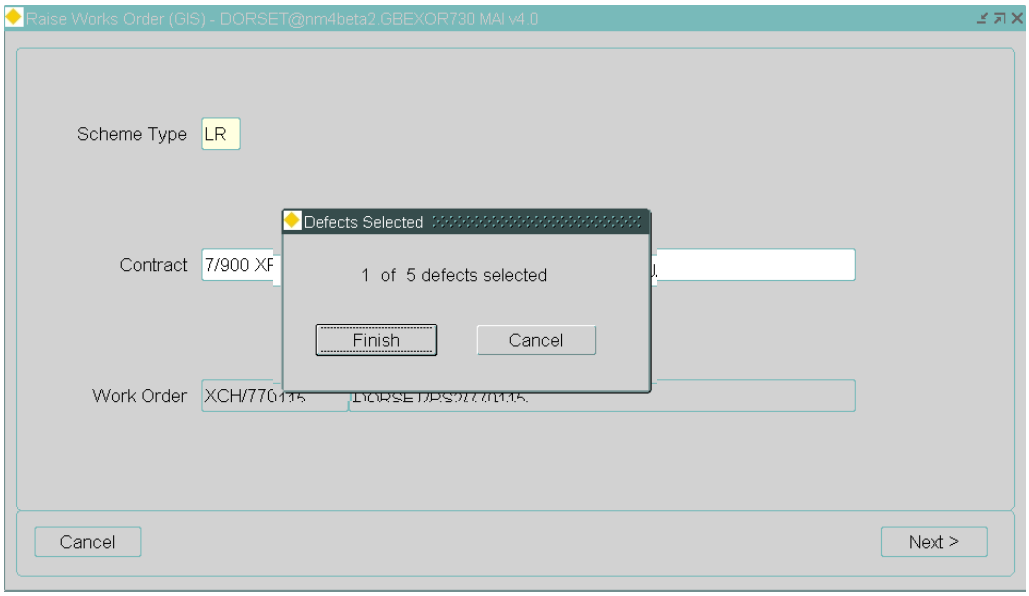
If Multiple Budgets exist for the defect Activity/Scheme Type/Section or Budget Allocation Group combinations, a list will be displayed from which to select the required Budget.

Figure 86



Once a Budget has been selected the Number of Defects added to the Work Order will be displayed in a pop-up dialogue. Press **[Finish]** to create the Work Order

Figure 87

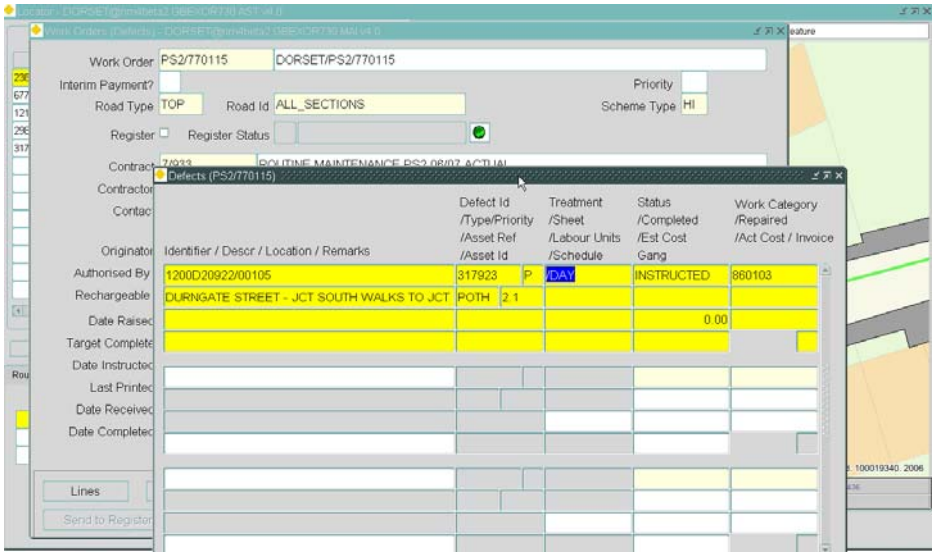


Note

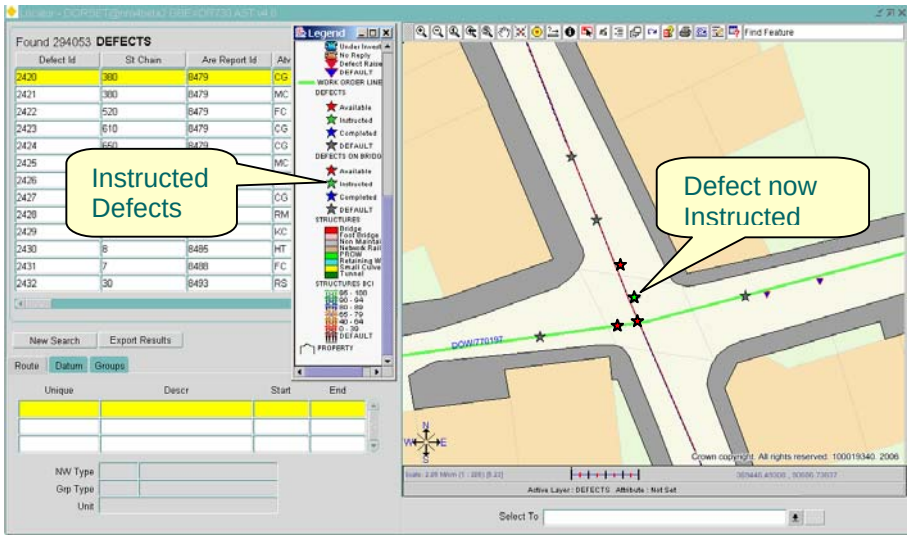
Only 'Available' Defects where the Defects Type, Activity Type and location (Road Section) match the selected Budget will be placed on the Work Order. In the example above only 1 of the originally selected 5 Defects matched all the criteria.

When the **[Finish]** button is pressed the Work Order (Defects) – MAI3800 module will be called and the Work Order will be displayed.

Figure 88



The Map window will be automatically refreshed to reflect the change in Defect Status Code.



Bulk Update Assets - Background

Road Maintainers are under increasing pressure to deliver Asset Management Plans and Asset Valuation for the Assets under their stewardship. The base Asset Register is a critical component that underpins these 2 deliverables. One of the most difficult problems is how the Asset Register is kept up to date to ensure the Asset Management Plan is being delivered and to underpin an accurate Asset Valuation.

Combining this new Bulk Asset Update Tool with our Web Mapping option, Exor can deliver an easy to use, map based Asset Updating environment which will help the Road Maintainer to change the Business Processes within their Organisation to ensure Asset Updates are performed on time and with high accuracy.

The security features and Web architecture available within Exor would allow the Road Maintainer to give Asset Update tool to Client, Internal Contractors or even External Contractors.

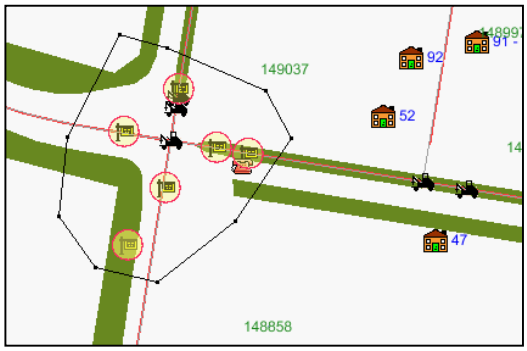
Bulk Update Asset Attributes

Asset Attributes may be updated directly within the web-mapping environment using the ***Bulk Asset Update – NM0535*** module. This allows any number of Attribute values to be updated for ALL selected Assets. This is particularly useful when large numbers of Assets must be updated to share the same Attribute values. For example, a Bulb Replacement Programme may have been undertaken on all Street Lights along a Street or within a Park. An attribute of 'Bulb Installation Date' could be updated in bulk for all Street Lights within the programme to reflect the new attribute value.

Note that the Bulk Asset Update – NM0535 module must be defined as a Theme Function for the required GIS Layer within the GIS Themes - GIS0010 module.

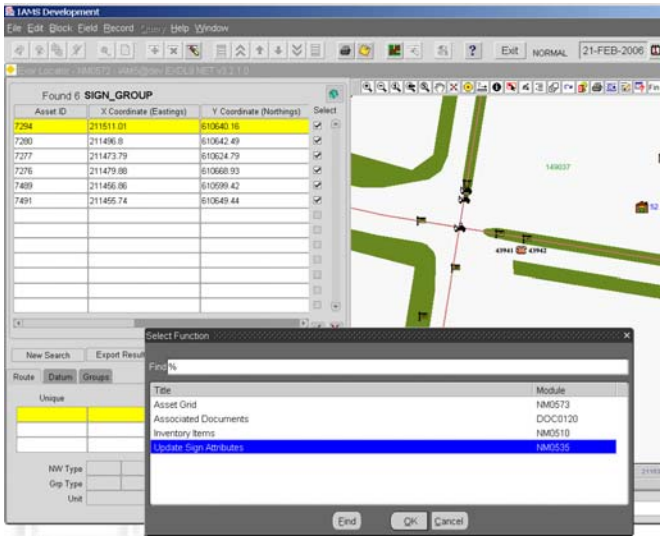
To Update Asset Attributes in bulk select the Assets required as described on page28. Figure 89 shows an example where 6 Signs have been selected for Update.

Figure 89



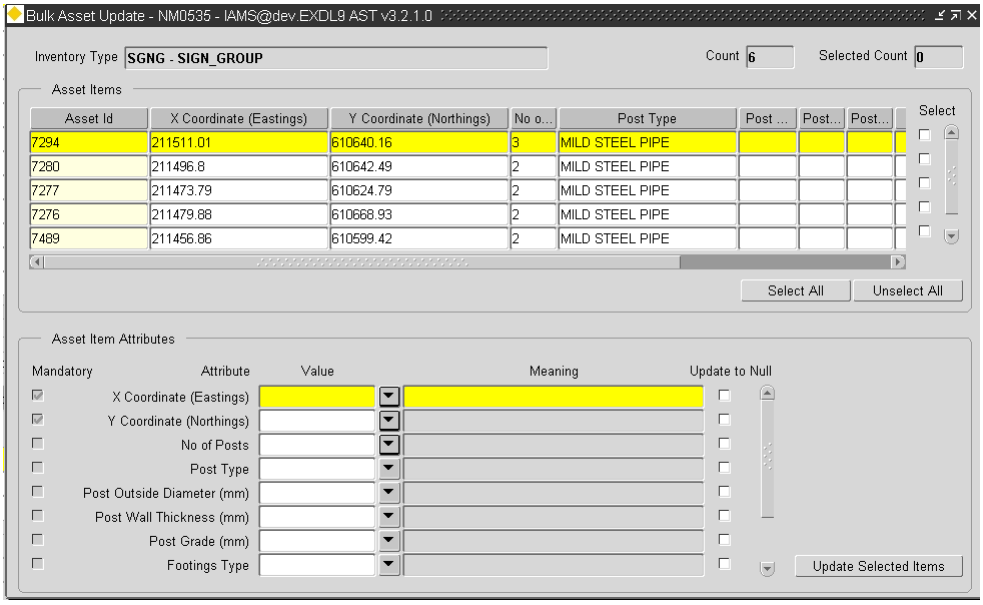
Using the 'Select to' LOV below the Map window, select the ***Bulk Asset Update – NM0535*** option (the name of the module may vary depending on

the ‘Function Name’ value defined for the Layer in GIS Themes – refer to the note on page 63).



This will call the Bulk Asset Update module allowing the required Asset Attributes to be updated.

Figure 90



Bulk Asset Update

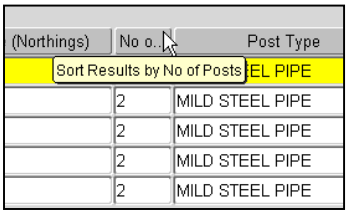
The selected Assets will be displayed in a Grid format, which shows the Assets attributes. This enables confirmation that the correct Asset(s) are selected. The Asset Type and Asset Type Description along with a count of the Assets within the Grid and a Count of the Assets selected for Update are displayed at the top of the Form. The 'Selected Count' value will change dynamically as Assets within the Grid are selected and deselected.

Only those attributes flagged as 'Displayed' in the ***Asset Metamodel – NM0410*** module (Refer to the Asset Manager System Admin Guide) will be displayed within the Assets Grid. The Attribute column widths within the Grid are determined by the value populated for the 'Width' field for the Attribute in the ***Asset Metamodel – NM0410*** module. If no 'Width' value has been defined for an Attribute the column width is automatically sized in accordance with the Attribute values and not the Attribute Display (column heading text) Name. Hint Text is available to view the Column Heading if the Grid Column width is less than the Display Name.

For Attributes which are validated against a look up, the Results Grid displays the value Meaning and not the actual lookup code value. For example, an attribute of 'Sign Type' may have a Value of '01' meaning 'Metal', the Results Grid will display a value of 'Metal' as this is more meaningful to the User.

Attribute values and data Items within the Grid may be viewed by using the horizontal and vertical scroll bars respectively.

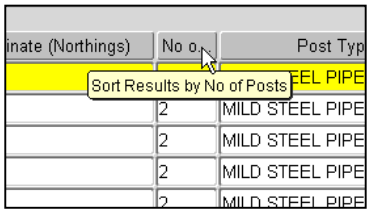
Figure 91



Hint Text

The entire Attribute Name is displayed in the 'hint text' that is automatically displayed when the mouse cursor is hovered over any value within the column. An example is shown in Figure 92.

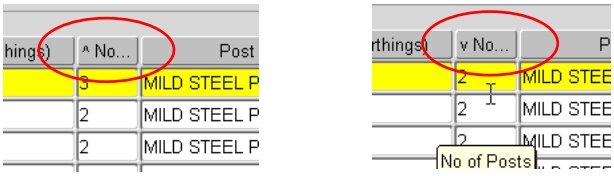
Figure 92



Sorting Results

Results within the Grid may be sorted by any of the displayed Attributes by pressing the Attribute Names (column headings) which are also 'Sort' buttons. The first time a heading is pressed the records are sort in ascending order. If pressed again the records within the Grid will be sorted in descending order of the selected Attribute. A 'carat' (^) symbol or lower case 'v' (v) is displayed adjacent to the Attribute Name to indicate that the data has been sorted in ascending or descending order respectively as shown in Figure 93.

Figure 93

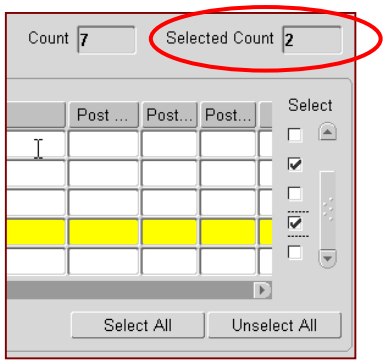


Selecting Assets within the Grid for Update

In some instances you may not want to update all Assets originally selected from the Web Map. The Asset Grid allows the User to select the required Assets by either selecting individual Assets using the 'Select' checkbox adjacent to the Asset or by using the **[Select All]** or **[Unselect All]** buttons on the Grid.

The total number of Assets selected is dynamically updated and displayed in the 'Selected Count' field highlighted below

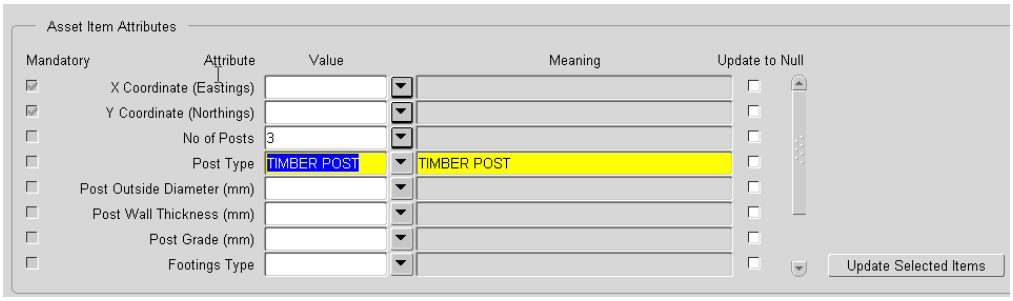
Figure 94



Updating Attributes of Selected Assets

Any number of Attribute values of the selected Asset Type may be updated using the ***Bulk Asset Update – NM0535*** module. All Attributes defined for the Asset Type in the ***Asset Metamodel – NM0410*** (refer to Asset Manager Admin Guide) module plus the 'End Date' attribute may be updated irrespective of whether it has been flagged as 'Displayed' within the Asset Metamodel.

Figure 95



Mandatory (Display Only)

The Mandatory flag will be checked if an Attribute value is mandatory for a given Asset. Mandatory Attributes cannot be updated to Null.

Attributes

All User defined Attributes plus the End Date attribute will be displayed and may be updated. LOV's will be available for those attributes, which are validated against an Asset Domain.

All values entered will be validated against any Minimum or Maximum values, Asset Domains or Cross Attribute Validation rules defined, to ensure data integrity and quality with appropriate error messages being displayed when appropriate.

Update to Null (checkbox)

To update an Attribute value to Null, this checkbox should be selected. Mandatory Attributes cannot be updated a Null value.

To carry out the Bulk Asset Update on the selected Assets press the [***Update Selected Items***] button. A confirmation dialogue will be displayed (Figure 96) allowing the User to proceed with the update or Cancel the operation.

Figure 96

If the User chooses to proceed, the selected Assets will be updated and saved. The Asset Grid will also be synchronised to reflect the new Asset Attribute values.

Note that no History of the amended Asset Attributes is retained.

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