

Resources Online – Spatial Help

Guidance for use of the Spatial Module for Exploration and Mining Lodgements – September 2025

Release	Date	Changes Made
1.0	22 September 2025	Initial Release
1.1		Changed to conform to DMPE Template Report Style A

Table 1 Version History

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1.0 About This Guide

The Spatial Module in Resources Online is where you:

- Draw 3.5 or upload 3.4.6 activities on valid tenement(s) for Programme of Works (PoW) or Eligible Mining Activities (EMA).
- Enter activity details <u>3.5.4.2</u> (Attribute/ Table data).
- Respond to land and environment intersects <u>5.0</u>, <u>6.0</u>, <u>7.0</u> the system shows sections if your activities overlap <u>3.7</u> with areas like freehold land, reserves, or water resources.
- For applications (e.g., PoWs), you may need to confirm permissions or answer questions 4.0, 5.0, 6.0, 7.0.
- o For notices (e.g., EMAs), the sections are shown for information only.
- For mining lodgements, Mining Development Closure Plans (MDCP) and, Small Mining Operations MDCP (SMO MDCP) only uploading shape files or tab files are available 3.4.6.

This guide focuses on how to use the Spatial Module. It does not provide step-by-step Resources Online lodgement instructions — for these, refer to under "Publications" <u>Access Resources Online Guidance - Lodging Environmental Exploration Applications, Reports and Notices this will provide these instructions.</u>

It also does not provide environmental policy or regulatory guidance.

For information about eligibility, environmental obligations, assessment criteria, and other regulatory requirements, refer to Department of Mines, Petroleum and Exploration>Resource and environmental compliance on the Western Australian government information and services website.

Note: Figures and numbers that are underlined in blue refer to specific sections within this document e.g. <u>2.0</u> refers to 2.0 Pre-requisites chapter on page 2 and <u>2.1 Figure 1</u> refers to Figure 1 PoW Pre-requisite on page 2. Clicking on the link will take you to the appropriate section.

2.0 Pre-requisites

The pre-requisite for using this guide is to get your application to the stage where you can enter the spatial activities. For PoW and EMA applications you can draw 3.5 or upload 3.4.6 spatial files, for MDCP or SMO MDCP only the upload option 3.4.6 is available.

2.1 PoW Screen

For a PoW you will need to get to step 3 "Spatial".

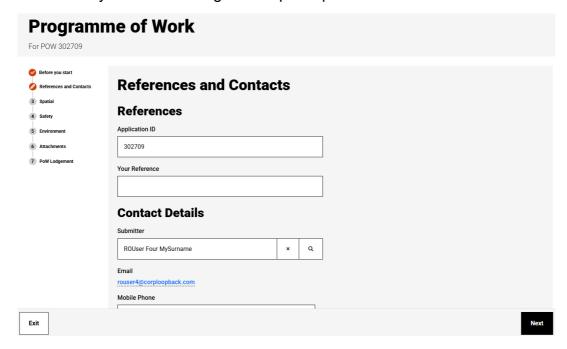


Figure 1 PoW Pre-requisite.

2.2 EMA Screen

For an EMA you will need to get to step 4 "Spatial".

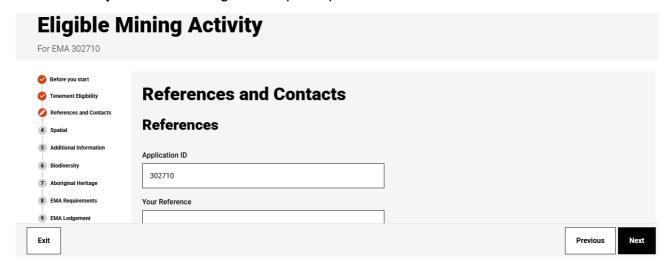


Figure 2 EMA Pre-requisite.

2.3 MDCP Screen

For an MDCP you will need to get to step 7 "Spatial".

Mining Development & Closure Proposal (MDCP) For MDCP 302711 Before you start **Activity Envelope** Proposal Details Mining Environment Group Mining Activity Area Activity Envelope Key Mining Activities An Activity Envelope must be uploaded as part of this MDCP application. The Activity Envelope defines the spatial extent within which the activities proposed within the MDCP will be located. The envelope must be uploaded as a shapefile or TAB format. For guidance and formats on how to prepare and upload a spatial file, please see Spatial Upload Formats. 7 Spatial For Small Mining Operations, uploading an Activity Envelope as shapefile or TAB format is optional. Click No then Next to continue with the application if you do not wish to lodge an Activity Envelope as shapefile or TAB format, a Site Plan document must then be uploaded at the Document Upload step. 8 Closure Outcomes -9 Closure Outcomes - Site-10 Document Upload 11 Declarations 12 Lodgement

Figure 3 MDCP Pre-requisite.

2.4 SMO MDCP Screen

For an SMO MDCP you will need click "Yes" on the "Activity Envelope" step then click "Next"

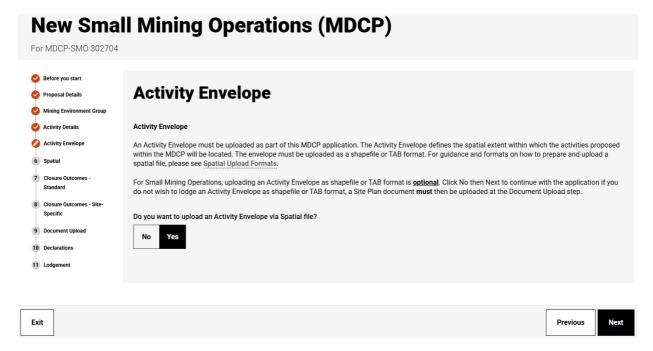


Figure 4 SMO MDCP Pre-requisite.

3.0 Spatial Screen Layout

The Spatial Module screen is divided into several parts see 3.0 Figure 5 and 6:

- 1. Map View 3.1 shows the tenement context and location of activities.
- 2. Map Navigation Controls <u>3.2</u> vertical controls on the map for zoom in, zoom out, and reset orientation.
- 3. Navigation Menu 3.3 (left side) lists all lodgement steps; use to move between application steps.
- 4. Toolbar <u>3.4</u> (top left) map tools such as layers, base imagery, measure, and upload.
- 5. Spatial Editor <u>3.5</u> lists available activity types and displays activities as they are added.
- 6. Main Menu <u>3.6</u> (top right) system options such as Manage My Account, Return to Resources Online, and Logout.
- 7. Appraisal Results panel <u>3.7</u> displays the appraisal results for the proposal/activity intersections.
- 8. Navigation Buttons <u>3.8</u> (bottom) Previous and Next buttons to move step-by-step through the lodgement.

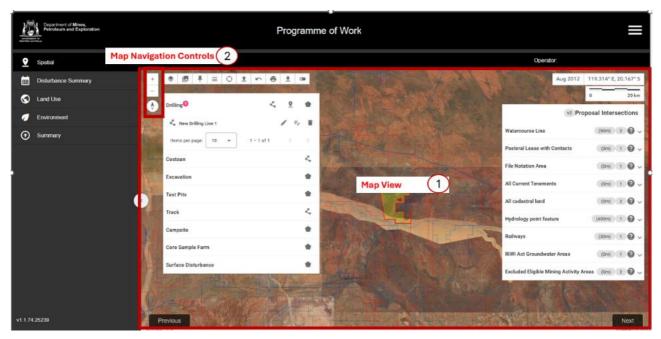


Figure 5 Spatial Screen Parts 1-2

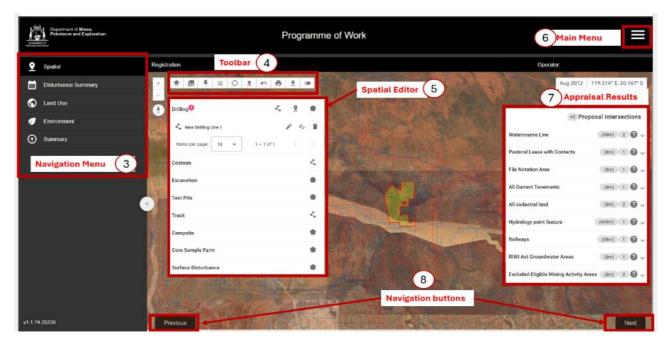


Figure 6 Spatial Screen Parts 3-8

3.1 Map View

Displays the current map display with layers currently turned on and visible <u>3.0 Figure 5</u>. See <u>3.4.1</u> for more information on layer configurations.

3.2 Map Navigation Controls

A summary of the navigation controls on the map interface is shown in the 3.2 Table 1 below, these are found in the top right corner of 3.0 Figure 5.

Navigation Icons	Function	Description
+	Zoom in	Zooms in on the map.
_	Zoom out	Zooms out on the map.
•	•	Resets the map to its default north-up orientation.

Table 2 Navigation Controls

3.2.1 Zooming

To Zoom in or out use the symbols shown in the 3.2 Table 1 above, the + or – on the keyboard or the mouse scroll wheel.

3.2.2 Panning

To Pan the map, use up, down, left, and right arrow keys on the keyboard, alternatively click on the map and drag with the left mouse button.

3.2.3 Map Orientation

To rotate the map right click the mouse button on the map and drag up and down or side to side, to reset north to the top click the "Reset Map Orientation" button shown in the <u>3.2</u> <u>Table 1</u> above.

3.3 Navigation Menu

The "Navigation Menu" has the following five sections shown in <u>3.3 Figure 7</u> for PoW and EMA applications, for MDCP and SMO MDCP only the "Spatial" section is present. Each section will need to be filled out as part of your application; this menu allows you to transition between each section.

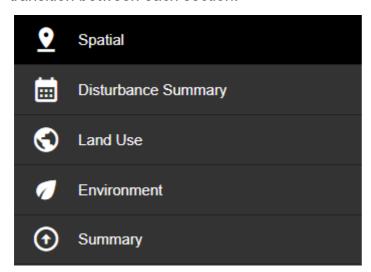


Figure 7 Spatial Steps

3.4 Toolbar

The toolbar at the top of the map display 3.0 Figure 6 is described in detail over the following ten chapters 3.4.1 to 3.4.10, the 3.4 Table 2 below gives a summary.

Toolbar Icons	Function	Description
\$	Layers	Turns layers on and off (e.g. Mining, Cadastre, Cultural, Environmental).
	Imagery	Changes the background imagery e.g. Landgate, Topography, Satellite Capture
#	Measure	Measures distance or area or clears measurements.
\cong	Legend	Shows or hides the legend for visible layer(s).
\Diamond	Navigate	Zooms and pans the map to the proposed exploration area using a Tenement ID or coordinate.
	Open Upload Dialog	Opens the upload dialog to drag and drop an activity shape or tab file set.
10	Proposal Extent	Zooms the map to the proposal boundary.
•	Print	Generates a PDF of proposal map.
_	Download	Downloads the activities set as a shapefile.
	Tenure switch	For uploads on Miscellaneous (L) or General Purpose (G) licences, turn ON to ensure activities are associated with the correct tenement.

Table 3 Toolbar

3.4.1 Layer Options

Clicking the layer icon on the left shows all layers available on the map, any layer with a white tick in the box, is currently turned on and visible on the map. Left clicking the boxes on the left will turn the layers on or off.

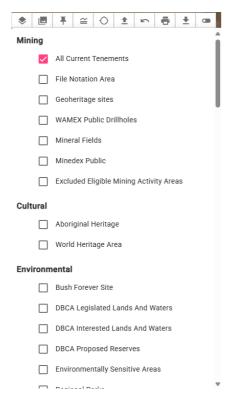


Figure 8 Layers.

Each layer will take time to load, this blue circle near the next button will disappear once loading has finished <u>3.4.1 Figure 9</u>.



Figure 9 Loading.

3.4.2 Imagery Options

Clicking on the icon will expand the background imagery options, left clicking the circle on the left will choose a different option, only one can be chosen at a time, Landgate imagery is on by default.

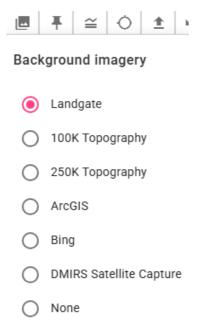


Figure 10 Background Imagery

3.4.3 Measuring Tools

Click the 📍 icon to open the measuring tools. Left clicking an option will start the tool.



Figure 11 Measure Tools

Note: When measuring you will have to close the select dialog box and zoom back in between each click, shown below in <u>3.4.3 Figure 12</u>.

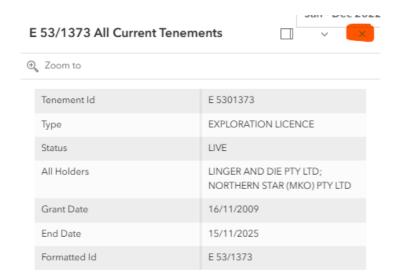


Figure 12 Select Dialog Window

Note: If you start measuring close to the corner of an application the measuring tool in use will snap to the vertex.

3.4.3.1 Measure Distance

Measure distance by left clicking once, click again in various locations to add as many vertices as you like, double click the final location to finish. A distance measurement requires a minimum of two vertices (points).

3.4.3.2 Measure Area

Measure area by left clicking once, click as many locations as you would like to add more vertices, double click to finish. An area measurement requires a minimum of three points.

3.4.3.3 Clear Measurement

To delete any measurements, click the Ticon again and click "Clear."

3.4.4 Toggle Legend

Click the \cong icon to toggle the legend of the map on and off, note it will only show currently displayed layers at your current zoom level.



Figure 13 Legend.

3.4.5 Navigate to a Location

Click the icon enter a Tenement ID, Latitude and Longitude, or Eastings and Northings with Zone to navigate to where your application will be. Alternatively click "Cancel" zoom and pan 3.2 to the location.

Note: With a PoW application this tool comes up automatically.

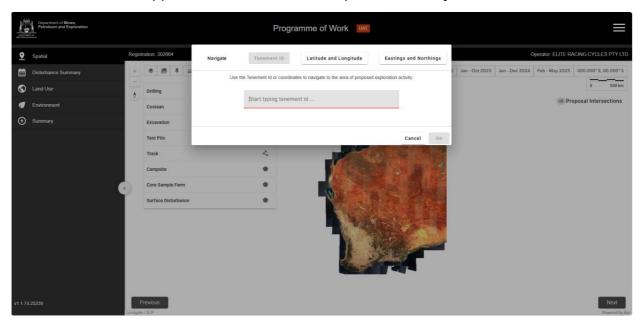


Figure 14 Navigate to Tenement ID

3.4.6 Upload a Spatial File

Click the icon to upload your Shape file or Tab file, if you are unfamiliar with spatial Shape file or Tab file formats, we recommend using the drawing tools to enter your application 3.5.

Note: For activities included over miscellaneous licences turn on the toggle before uploading 3.4.10.

Requirements for the spatial uploads are available at <u>Spatial Upload Formats for</u> <u>Resources Online</u> please ensure your files conform to the details in the appropriate document.

DMPE created example Shape file and Tab files to help with PoW, EMA, MDCP and SMO MDCP submissions see <u>3.4.6.1</u>. Once you have the appropriate files ready to upload drag and drop all parts of a shapefile .shp, .dbf, .prj, .shx or all parts of a tab file .map, .id, .dat, .tab. into the dialogue box that appears <u>3.4.6 Figure 15</u> below, only one Shape file or Tab

file should be entered at a time to add multiple click the icon again and left click and drag and drop each sequential file.

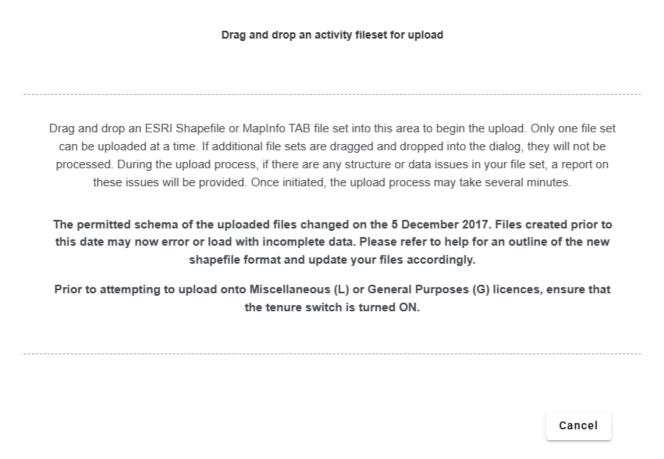


Figure 15 Upload Spatial File

3.4.6.1 Example Spatial Files

The example Tab files and Shape files can be found here <u>Example Shapefiles for Resources Online</u> and here <u>Example TAB Files for Resources Online</u> these have been set up with a random example of an activity and the mandatory fields filled in to the attributes tables. You will need to download and unzip them on a local drive before use.

You will need to create a new feature using the appropriate spatial software and all attributes filled in as appropriate for each point, line or polygon feature, ensure you fill in all the mandatory values correctly. Once you have entered the new feature correctly delete the original dummy feature row.

Alternatively, you can use these to read in the schema and your own data using software such as FME etc. The schema is another term for field names and data types of those fields, Resources Online accepts those outlined in documents found here Spatial Upload Formats for Resources Online.

3.4.7 Pan to Proposed Boundary

Left clicking the icon will pan and zoom the map display to show the activity currently being applied for.

3.4.8 Printing

The icon will prepare a pdf map of the drawn and/or uploaded activities the symbol will show "PDF Ready" once the map has been prepared.

Note; RO does not included imagery in the pdf map output.

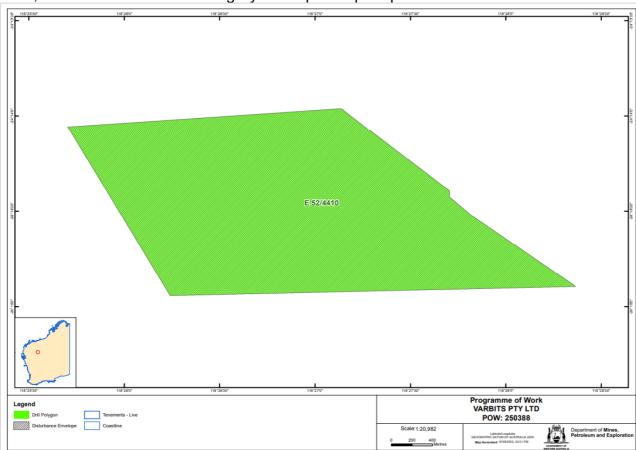


Figure 16 Printing Map to PDF

3.4.9 Download Spatial File

The $\stackrel{*}{=}$ icon allows the user to download the drawn and/or uploaded activity application as a shape file. This includes the geometry along with any included buffers. You can also access this in the summary section $\frac{7.0}{1.0}$.

3.4.10 L and G Toggle

Clicking the icon on, will indicate the proposed activity is to be included over miscellaneous tenements, with the toggle off exploration and mining tenement types are included instead. This is included because miscellaneous tenements often overlap both exploration and mining tenements. 3.4.10 Figure 17 shows the toggle on.



Figure 17 Toggle On

3.5 Spatial Editor

Proponents can draw PoW and EMA activity applications using the following four steps. If you are unfamiliar with the Shape file and/or Tab file formats, we recommend using the drawing tools to enter your PoW or EMA application.

Note: For activities over miscellaneous licences turn on the toggle before drawing 3.4.10.

3.5.1 Step 1 Choose Activity Type

Choose one of the activities on the left side to start drawing. Click the word then click the icon, you will be able to notice your cursor turns into a cross. For a PoW see activity types in 3.5.1 Figure 18 for an EMA see activity types on 3.5.1 Figure 19.

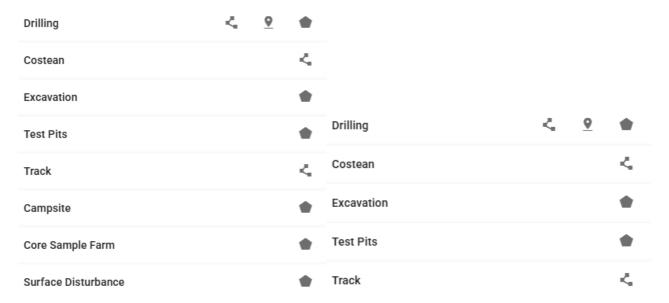


Figure 18 PoW Activity Types

Figure 19 EMA Activity Types

There are three geometry types that you can enter Points Lines and Polygons

Note: Ensure all drawings you do are within a valid live mining tenement boundary and for an EMA also outside of the Excluded Eligible Mining Activity Areas layer (This can be turned on see 3.4.1 Figure 8).

3.5.1.1 Geometry Type Point

To draw a point, $\stackrel{\P}{=}$ click once then go to the next step <u>3.5.2</u>. A point feature only requires a single click.

3.5.1.2 Geometry Type Line

To draw a line, click once, click again in various locations to add as many vertices as you like, double click the last point to finish, go to the next step <u>3.5.2</u>. A line feature requires a minimum of two points.

3.5.1.3 Geometry Type Polygon

To draw a polygon, click the first point, click as many points as you would like to add more vertices, double click to finish, go to the next step <u>3.5.2</u>. A polygon feature requires a minimum of three points.

3.5.2 Step 2 Enter Table Data

Depending on the activity type that you chose in <u>3.5.1</u> you will need to fill out the relevant fields, any that have a * symbol indicated are mandatory. Below <u>3.5.2 Figure 20</u> see an example of what needs to be filled out using "Drilling Areas", for a full list of expected values see the <u>Spatial Upload Formats for Resources Online</u> PoW or EMA document. See <u>3.5.4.2</u> for more information.

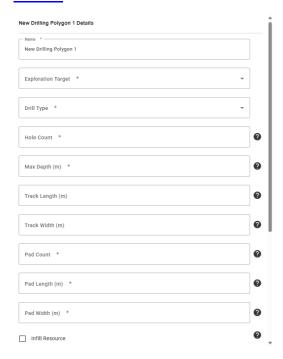


Figure 20 Drilling Area Table

3.5.3 Step 3 Analyse Results

Once you have saved the drawn activity successfully you will see the point, line or polygon displayed on the screen and a white number highlighted red on the left shown in 3.5.3 Figure 21.



Figure 21 Drilling Area Example

The "Proposal Intersections" will update on the right <u>3.5.3 Figure 22</u>, this could take time, keep an eye on the bottom right corner for the loading icon to finish <u>3.4.1 Figure 9</u>.

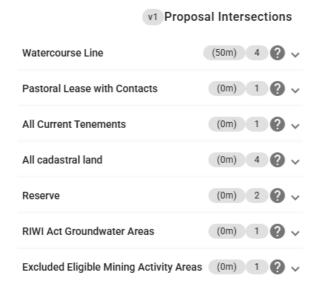


Figure 22 Proposal Intersections

You can draw any activity type by repeating Steps 1 to 3 3.5.1 to 3.5.3.

3.5.4 Step 4 Modify an Activity

You can edit the geometry 3.5.4.1 and/or table 3.5.4.2 data after drawing the application activity.

3.5.4.1 Geometry Edits

You can edit geometry on either the left side 3.5.4.1.1 where the activity menu is or the right side under the 5.5.4.1.2 "Proposal Intersections."

3.5.4.1.1 Activity Menu

You can edit the geometry of the point, line, or polygon after you draw the activity. Left click on the pencil icon to start editing 3.5.4.1.1 Figure 23.



Figure 23 Drilling Polygon Edit

You can left click and drag each vertex to a new location, for line and polygon features. Mid points can be moved, this adds a new vertex at the midpoint as well as two new mid points either side. Once you are happy with the changes click the save icon alternatively click the undo icon to revert the changes back to the original.

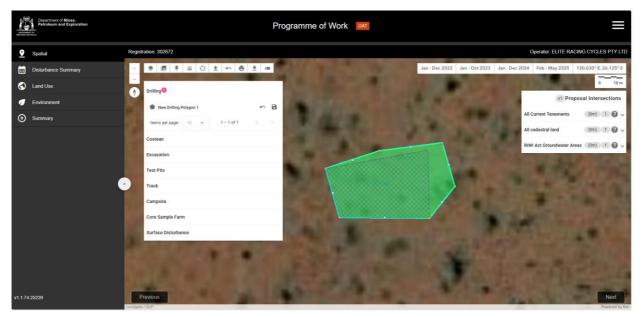


Figure 24 Drilling Areas Polygon in Edit Mode

3.5.4.1.2 Proposal Intersections

You can remove any proposed intersecting polygon from the drawn result by clicking the dropdown arrow then the \$ icon on the corresponding item.



Figure 25 Proposal Intersections Geometry Edit

Once you remove an intersection result, the "Proposal Intersections" is recalculated automatically including a new version number. The removed portion is excised from the activity geometry and removed from the "Proposal Intersections" list.

3.5.4.2 Table Edits

You can change the table data by clicking the line and pencil icon .

- To enter data into the fields, if it has a down arrow icon, left click and choose one of the options.
- The icon will give you tips on what sorts of values are expected in the adjacent field.
- All fields that include a * must be filled in as these are mandatory.
- Ensure you scroll all the way to the bottom and tick any appropriate boxes <u>3.5.4.2</u>
 <u>Figure 26</u>.
- ☐ Encounter Groundwater✓ Sump

Figure 26 Tick Boxes

Note; By ticking the boxes it may increase the mandatory fields, an example of this is "Sump" under "Drilling Polygons" shown in <u>3.5.4.2 Figure 27</u> below.

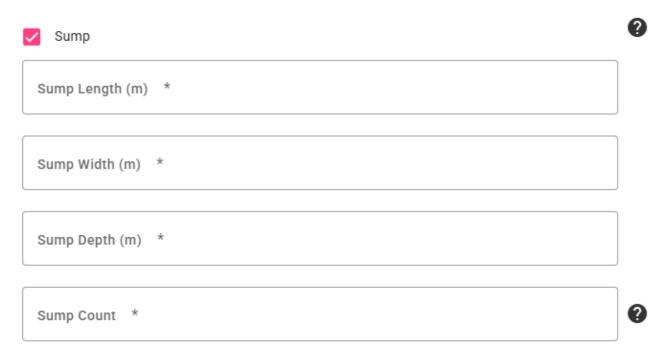


Figure 27 Sump Mandatory Values

Once you are happy with the changes click the "Save" button alternatively click "Cancel" to revert the changes back.

3.5.4.2.1 Advanced Table Options

At the bottom of the window click "Show advanced options" it will expand showing "Calculated Information" and "Approval Buffer".

• Left click on the arrow to the right to expand the "Calculated Information" it shows the "Proposed Area Disturbed" in Hectares and the "Proposed Mass Disturbed" in Tonnes, based off the proposed activity uploaded or drawn.

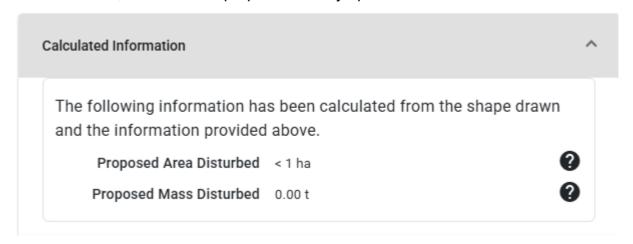


Figure 28 Calculated Information

• Left click on the arrow to the right to expand the "Approval Buffer" it allows a buffer in meters to be added around the proposed activity the default is 0 meters.

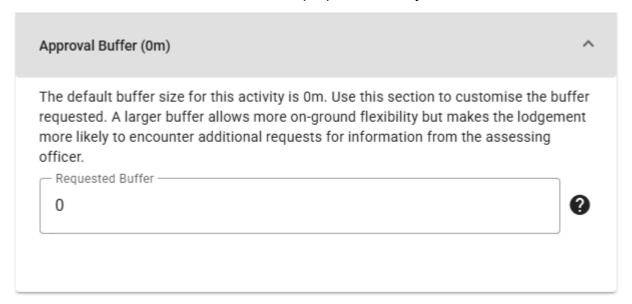


Figure 29 Approval Buffer

3.6 Main Menu

The "Main Menu" 3.6 Figure 30 found in the top right corner of the map under the icon allows you to:

- "Manage your account"
- "Return to Resources Online" screen to make a different application
- "Logout" completely.
- Manage ROUser Four MySurname
- Feturn to Resources Online
- ♠ Logout

Figure 30 Main Menu

3.7 Appraisal Results

The "Proposal Intersections" shown in <u>3.0 Figure 6</u> under "Appraisal Results" changes dependant on the proposed activity that is uploaded <u>3.4.6</u> or drawn <u>3.5</u>.

3.7 Figure 31 below shows the "Proposal Intersections" results.

- Hovering your mouse over the cicon indicates the requirements of that intersecting layer.
- The number indicates how many features intersect the proposed activity.
- The number in brackets indicates a buffer applied to that layer in meters.

Watercourse Line (50m) 1 ? Pastoral Lease with Contacts (0m) 1 ? All Current Tenements (0m) 1 ? All cadastral land (0m) 2 ? RIWI Act Groundwater Areas (0m) 1 ?

v5 Proposal Intersections

Figure 31 Proposal Intersects

Clicking the dropdown arrow on the right shows further options 3.7 Figure 32. The scissor

icon 3 allows removal of the intersecting portion in relation to the proposed activity point, line buffer area or polygon area, see 3.5.4.1.2 for more information.



Figure 32 Proposal Intersections Dropdown

3.8 Navigation Buttons

Once you have entered all the activities for the application, click the "Next" button in the bottom right corner to continue to the "Disturbance Summary" <u>4.0</u> section (This only applies to PoW and EMA applications).

The "Next" button for MDCP and SMO MDCP will continue the application process. Alternatively click the "Previous" button to go back to the previous step <u>2.0</u>.

4.0 Disturbance Summary Section

In the "Disturbance Summary" section, use the dropdown to select the appropriate "Mineral Targets," you can select more than one.

The "Disturbance Table Summary" outlines each activity with its proposed area and tonnage calculations, these are calculated automatically by RO.

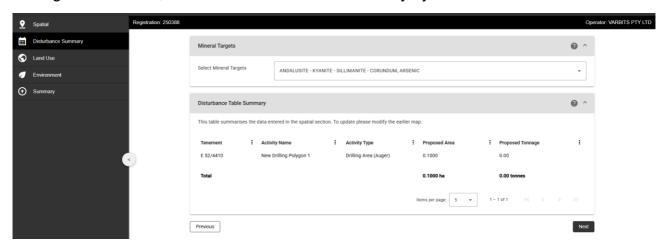


Figure 33 Disturbance Summary

Once you are happy with the inputs click the "Next" button.

5.0 Land Use Section

Under the "Land Use" section use the dropdown to select an option under "Consent Granted" for the tenement holder/s.

There will be multiple sections, dependent upon where you drew and/or uploaded the activity and what it intersects with.

You must select "Yes" for each section that requires a "Yes" or "No" option before commencing to the next step.

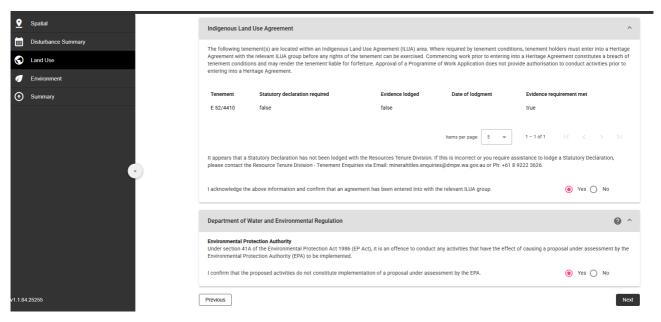


Figure 34 Land Use.

6.0 Environment Section

The "Environment" section will indicate whether your application intersects with Environmentally Sensitive Areas (ESA's). Please read the appropriate text and move to the next step.

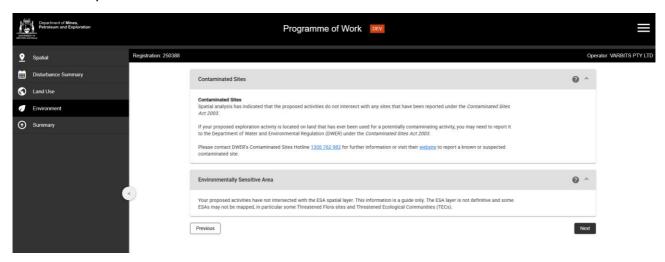


Figure 35 Environment.

7.0 Summary Section

The "Summary" section will indicate all conditions on the application.

You will need to tick the "Yes" option on, "I acknowledge that all activities to be undertaken will be compliant with the Tenement conditions and that failure to comply with these conditions will render the relevant tenement liable for forfeiture."

Other issues are summarized by RO in the "Issues Summary" this will indicate in the first column which section to go to and fix before proceeding <u>7.0 Figure 36</u> below indicates an issue with the "Land Use" <u>5.0</u> section for instance.



Figure 36 Issues Summary

Once there are no outstanding issues clicking "Next" will progress the application.

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Figure 37 Summary

You can download the spatial files here for future reference by clicking the

button. It will change to "Extract Ready" click on it and you will have a zip file with both the original geometry and the buffer in Shape file format.

8.0 Conclusion and Next Steps

This concludes the steps for the Spatial Module of Resources Online, for further guidance please see under "Publications" the <u>Access Resources Online Guidance - Lodging Environmental Exploration Applications, Reports and Notices</u> this will provide further instructions.

9.0 Glossary of Terms

Term	Description
Resources Online (RO)	The digital portal for lodging and managing environmental applications, reports, and notices.
Programme of Work (PoW)	A formal environmental application for conducting exploration activities that cause ground disturbance.
Eligible Mining Activity (EMA) Notice	A notice submitted for specific exploration activities that meet the EMA criteria. No assessment is required, but statutory notification and compliance is mandatory.
Mine Development and Closure Plan (MDCP)	The Mining Act defines a MDCP as a document that includes detailed information regarding: • the proposed mining operations to be carried out;
	the decommissioning of any proposed mine to which the mining development and closure proposal relates;
	the rehabilitation of the land subject of the mining tenement to which the mining development and closure proposal relates;
	• the closure outcomes; and
	any prescribed information.
Mine Development and Closure Plan Small Mining Operation (MDCP SMO)	A MDCP for small mining operations can be lodged where the mining operation meets the following criteria (and do not involve mining of uranium, mineral sands or rare earth elements):
	Scraping and detecting.
	Dry blowing.
	Wet and dry gravity separation activities.
	The following activities for a total footprint for the mining operation of 10 hectares (ha) or less:
	mining excavations (such as pits, costeans, quarries, shafts, winzes, harvesting, dredging),
	leaching operations (such as Carbon-in-Pulp (CIP), Carbon-in-Leach (CIL), vat leach, and heap leach),
	tailings treatment operations, crushing and screening, and any other appropriate mining or extraction activities,

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	any construction activities incidental or conducive to the activities above including plant, tailings storage facilities and overburden stockpiles.
Tenement	A legal right to explore or mine in a specific area. Tenements must be listed in applications or notices.
DMPE	Department of Mines, Petroleum and Energy – the agency responsible for administering RO and regulating exploration and mining activities.
Co-ordinate	A pair of x, y or Latitude and Longitude or Easting and Northings values representing a location on the earth.
Vertex	A single point Co-ordinate of a Point, Line or Polygon Spatial Feature.
Vertices	More than one Vertex.
Point	A single point coordinate representing a spatial location on a map.
Multi-Point	A single Spatial Feature that has several Points attributed to it.
Line	Two or more-point coordinates joined together, representing a linear spatial feature on a map.
Multi-Line	A single Spatial Feature that has several Lines attributed to it.
Polygon	A closed loop of three or more coordinates joined together to represent a spatial area on a map.
Multi-Polygon	A single Spatial Feature that has several Polygons attributed to it.
Spatial	Pertaining to a location in two or three dimensional space for use on a map.
Spatial Data	Geometry and table data represented, by Point, Line or Polygon features that can be represented on a map.
Spatial Feature	A single feature geometry on a map, this may include a Point, Line or Polygon. This is represented by a single row in the Spatial Attributes table. See also Multi-Point, Multi-Line and Multi-Polygon
Spatial Geometry	The coordinate vertex information for the Spatial Features.

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Spatial Attributes	The tabular data including fields and columns, pertaining to each Spatial Feature.
Shape File	A group of data files representing Spatial Data, file format is created and edited using ArcMap of ArcGIS Pro software.
Tab File	A group of data files representing Spatial Data, file format is created and edited using Map Info software.

Table 4 Glossary of Terms