Alberta Government

Landscape Analysis Tool (LAT) User Guide

March 31, 2017

Revision History

Version Date	Author	Description
March 31, 2017	Ola Sofeso	• Amended the manual to reflect changes in the LAT release which includes addition of more disposition types apart from the ones which existed in the system (MSL, LOC, PIL and PLA). Also manual created to align with DMRP purpose/activity code changes.
December 9, 2013	Vendor	• Remove MSL Sump from Table 2
November 29, 2013	Vendor	• Updated screenshots for AER changes • Update Appendix A, Table 1, Table 2
March 25, 2013	Vendor	• LAT Changes Include - MSL Sump and Table 2 Purpose Types Renamed
January 16, 2013	Vendor	• Correct images and tables
February 28, 2012	Vendor	• Add in new road allowance types and LAT News Panel
August 30, 2011	Vendor	• Add in two new MSL Purpose Types in Appendix A – Table 2
May 30, 2011	Vendor	• Updated Appendix A to include "Using Multipart Features" • Section 4.4 – "Edit Project Information" lists permissible characters in the "Industry Company Name" and "Industry Contact Name" • Change "Activity Type" to "Purpose Type"

November 23, 2010	Vendor	• Appendix A - Introduction
		   o Shapefile extensions must be in lowercase
		• Appendix A - Proposed Activity Size Limitations
		   o Specified the area/length limitations
		• Appendix A - Table 1
		   o Resized table
		• Appendix A - Table 2
		   o Updated Disposition/Activity Type Codes

August 27, 2010	Vendor	Updates to screenshots
August 25, 2010	Vendor	First version

Disclaimer

In this disclaimer provision:

"Crown" means Her Majesty the Queen in right of the Province of Alberta;

"Minister" means the Minister responsible of the Alberta Environment and Parks;

"Their employees" means and includes each, any and every officer, employee, servant and agent of either or both of the Crown and the Minister and without limiting the generality of the foregoing, and includes employees of the Crown and the Minister employed in Alberta Environment and Parks.

"LAT" means Landscape Analysis Tool and all programs, hardware, documentation, functions and services forming a part thereof or associate therewith.

The Crown, the Minister and their employees and the contractors and technical advisors of the aforesaid:

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The entire risk of loss relating to or associated with the quality and performance of LAT and any product and results thereof shall be assumed by the Subscriber and by any other users of LAT.

Acknowledgement

Portions of the LAT were constructed using licensed GeoCortex Essentials technology, developed by Latitude Geographics Group Ltd. Portions of this LAT User Guide made liberal use of the contents of the GeoCortex Essentials On-line Help and Tutorial System for content. We greatly appreciate the ability to use this information and acknowledge their contribution to this document.

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Table of Contents

Tables

Figures

1   Introduction

This version of Landscape Analysis Tool (LAT) is the second release of the LAT software which encompasses more electronic disposition types used by AEP and AER. The table below classifies the dispositions according to the regulatory body it belongs to. The previous LAT version only supported the following disposition codes: MSL, LOC, PIL and PLA.

Disposition Code	Description	Regulatory body
DLO	License of Occupation	AEP
DML	Miscellaneous Lease	AEP
DMS	Mineral Surface Lease	AEP
DPI	Pipeline Installation Lease	AEP
DPL	Pipeline Agreement	AEP
EZE	Easement	AEP
LOC	License of Occupation	AER
MLL	Miscellaneous Lease	AER
MSL	Mineral Surface Lease	AER
PIL	Pipeline Installation Lease	AER
PLA	Pipeline Agreement	AER
REA	Rural Electric Association Easement	AEP
REC	Recreational Development	AEP
RVC	Vegetation Control Easement	AER
SMC	Surface Material License	AEP
SME	Surface Material Exploration	AEP
SML	Surface Material Lease	AEP
VCE	Vegetation Control Easement	AEP

Table 1 - Disposition Types

1.1   LAT Overview

LAT is a web-enabled geospatial tool that allows clients to plan activities on public land. LAT enables:
- Virtual siting of proposed project activities.
- Identification of operational constraints that may apply to the activity.
- Virtual re-siting or changes to that proposed activity at a landscape level to mitigate concerns prior to application.

1.2   LAT Features

The Landscape Analysis Tool:
- Provides a platform for geospatial information for industry and the regulatory body around disposition planning and application.
- Identifies areas requiring higher levels of risk mitigation planning.
- Links to approval standards and operating conditions directly related to a planning activity and location. LAT attaches the appropriate approval standards and operating conditions from the Integrated Standards and Guidelines document to a LAT report based on the proposed activity, location, and sensitivity layers intersected.
- Can be used to assist in the planning of other proposed activities or Temporary Field Authorizations to manage around identified resource values.
- Uses approximately 60 data layers, divided into two categories of layers:

Base Map Layer – This is a generalized view of key data layers that provide a background setting for the map. This presents the user with details at the provincial extent to help orient to the specific locations.

Operational Layers – These layers provide specific context and detail of key data layers that can be turned on or off. Some of these layers pertain to the report processing logic of a user's proposed activities.

1.3   LAT Report

The Landscape Analysis Tool (LAT) generates a LAT Report, which is a system generated PDF document that provides information specific to the proposed site and activity.

The LAT Report provides provincial and sensitivity section approval standards and operating conditions that are specific to the proposed activity. The approval standards and operating conditions identified in the LAT Report form a part of the disposition document.
The Approval Standards section in a LAT report can be used to make the routine/non-routine decision.

The LAT Report allows the client to:

- Make informed decisions.
- Make adjustments to the project if desired.
- Apply appropriate standards, conditions or risk mitigation.

1.4   Getting Help

The LAT Support help desk is available Monday to Friday 8:15 a.m. to 4:30 p.m. except on statutory holidays. The system is available from 5:00 a.m. to 11:30 p.m. every day. **For queries generating a LAT Report where the disposition type belongs to the regulatory body - AER, contact the AER Help desk** as shown below.

Contact email: inquiries@aer.ca
Telephone Number: 1 855 297-8311

For AEP related disposition types, help desk contact information is shown below

Contact email: eds.support@gov.ab.ca
Telephone number: 780 427-3570

1.5   LAT Use Restrictions

- LAT is limited to the following disposition types: DLO, DML, DMS, DPI, DPL, EZE, LOC, MLL, MSL, PIL, PLA, REA, REC, RVC, SMC, SME, SML and VCE.
- A LAT Report which has been used in support of an Application or an Amendment in EDS cannot be reused when filing in a new Application or Amendment.
- A LAT Report generated which is older than **120 days** will not be accepted for submission as an attachment for a Public Lands Disposition Application or Amendment in EDS.

2 Quick Start: How do I get LAT Reports for Proposed Activities?

2.1 The LAT Report Workflow

The workflow for generating LAT Report is shown in the diagram below and includes the following basic steps:

- Type in the LAT url.

- Enter the Proposed Activity locations into the LAT using the "Upload Data" tool, or by drawing a LAT Activity.

- Edit the locations of Proposed Activities where applicable using the (add, move, modify, or delete) icons.

- Enter the Project Information (company name, contact name, email, project name and project description).

- Generate the LAT Report(s).

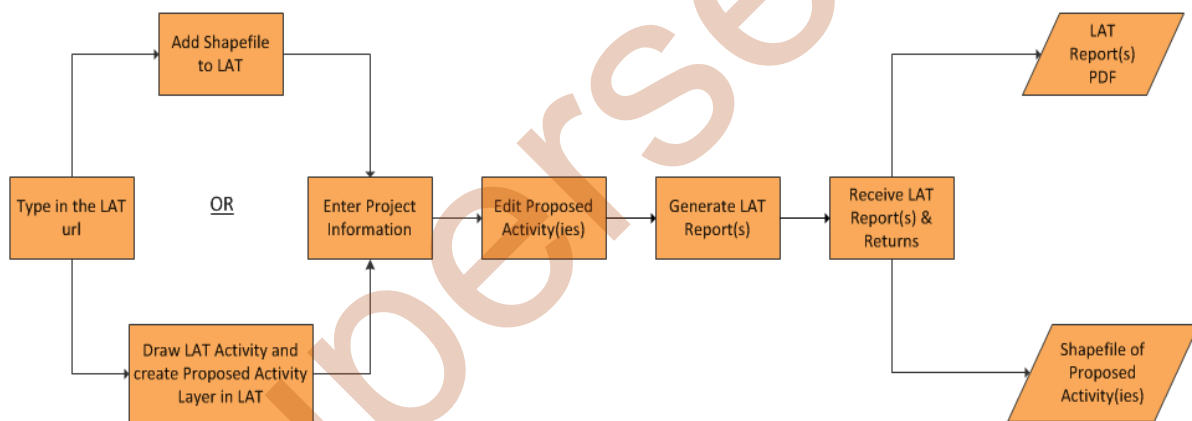- Receive the LAT Report(s) and associated returns by email.

Figure 1 - The LAT Report Workflow

2.1.1 Entering the LAT URL on your internet browser.

The LAT map viewer uses HTML5 technology and works on most browsers including MS Edge, Internet Explorer, Google Chrome and Mozilla Firefox.

You are directed to the "Terms of Use" page. Upon reading the terms and condition,

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This mapping website is maintained by the provincial government.

Please click on the continue button to consent to the content of this page and proceed to the site.

☐ I have read and understand this terms of use agreement. My use of this site is acknowledgment of my agreement to be bound by these terms and conditions.

1   **2**   Continue

Figure 2 - Terms of Use Agreement for LAT

1. Click the checkbox to accept it.

2. Click the continue button to proceed to the next page.

This launches the LAT Tool within your browser and displays the provincial base map. On the sidebar, a welcome page displays. Read through it and close it using the expand/collapse button when you're done to display the Map Data Layers.
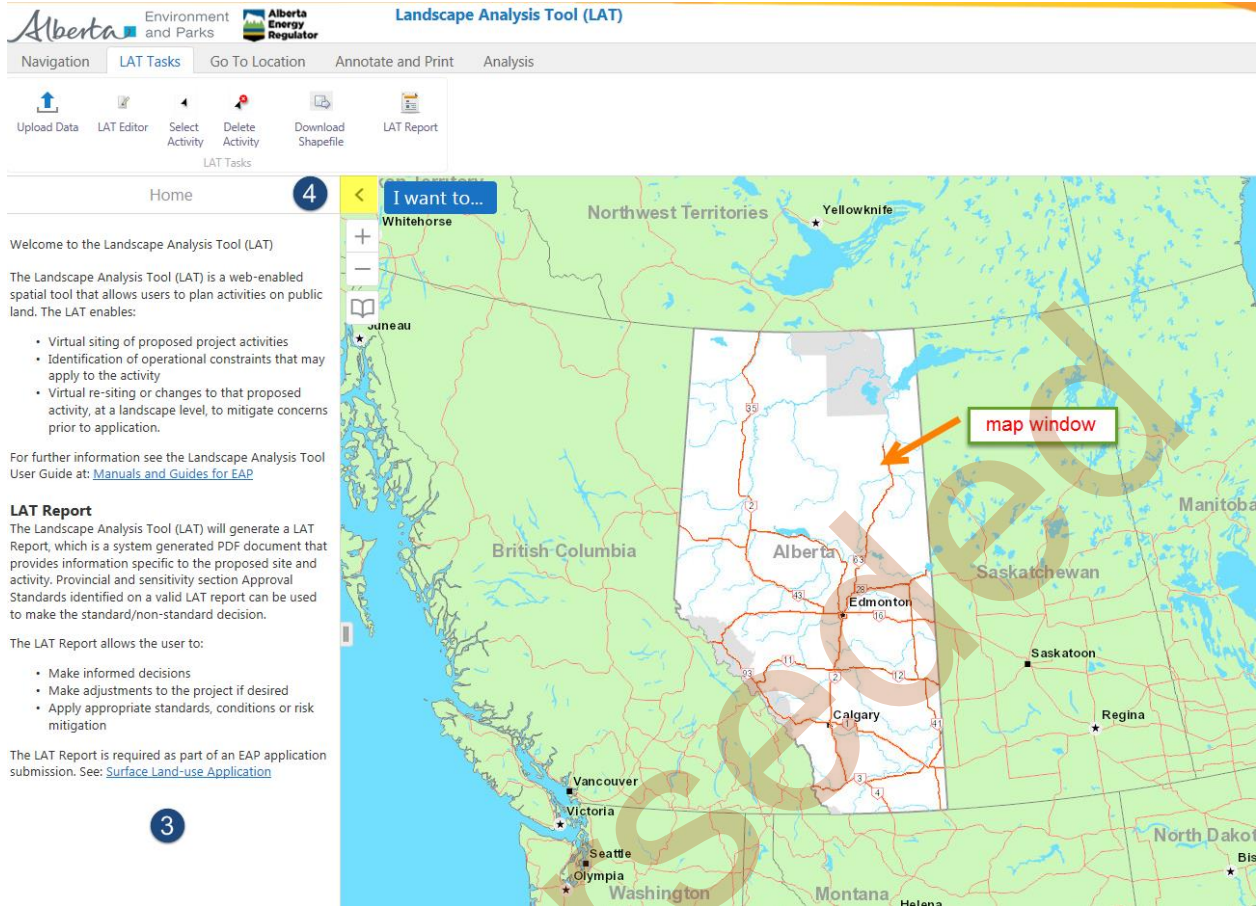
Figure 3 – LAT Map Interface/Welcome Screen

3. The LAT Home page displays.

4. Use the Expand/Collapse arrow to display or dock the left navigation pane.

2.1.2 Entering Proposed Activities into LAT

There are **two methods** to enter Proposed Activity data into LAT. Data can be entered in by:

a. Uploading a shapefile containing proposed activities;
b. Adding proposed activities into LAT using the LAT Editor tool.

Step A - How to upload a shapefile:

******Note:** LAT requires all shapefiles to be uploaded to conform to the specifications contained within:

- [LAT Shapefile Specification for Proposed Activities](#)

Please refer to this specification to ensure that your shapefile is processed. Failure to comply with this specification may result in an error or invalid LAT Reports.

A user who does not have the drafting skills required to produce the shapefile used in generating a LAT report must engage the services of a surveying/environmental company.

Alternatively, you may test your skills with adding the proposed activity (shapefile) using the LAT Editor tool explained in **Step B.**
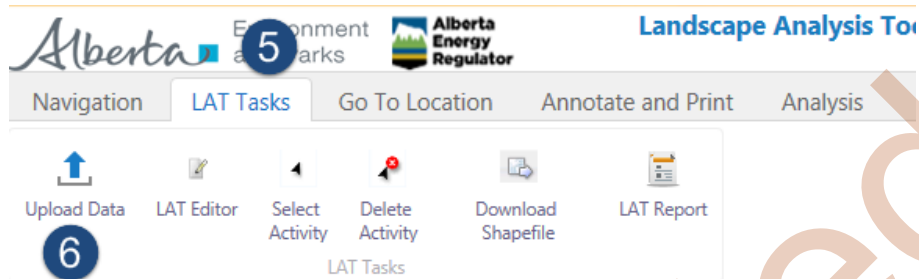
Figure 4 - Adding a Shapefile

5. Click on the "LAT Tasks" window pane.
6. Select the "**Upload Data**" Tool from the LAT Tasks pane.

A dialog box 'Add Data to Map' displays next. For LAT purposes, the only supported file type is a shapefile (.shp). As a minimum requirement the following shapefile extensions are mandatory when importing into the map viewer: .shp, .dbf, .shx and .prj shapefile extensions. All other shapefile extensions are optional.
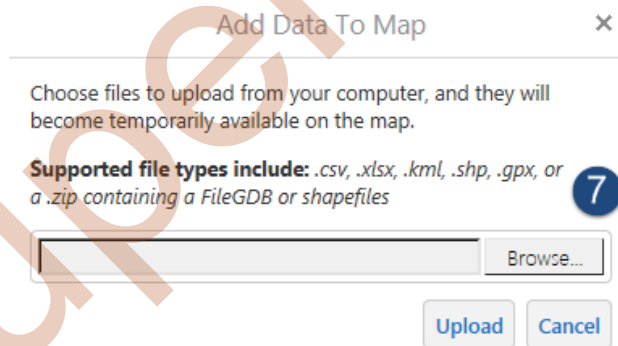
Figure 5 – 'Add Data to Map' Dialog box

7. Click on the Browse button.

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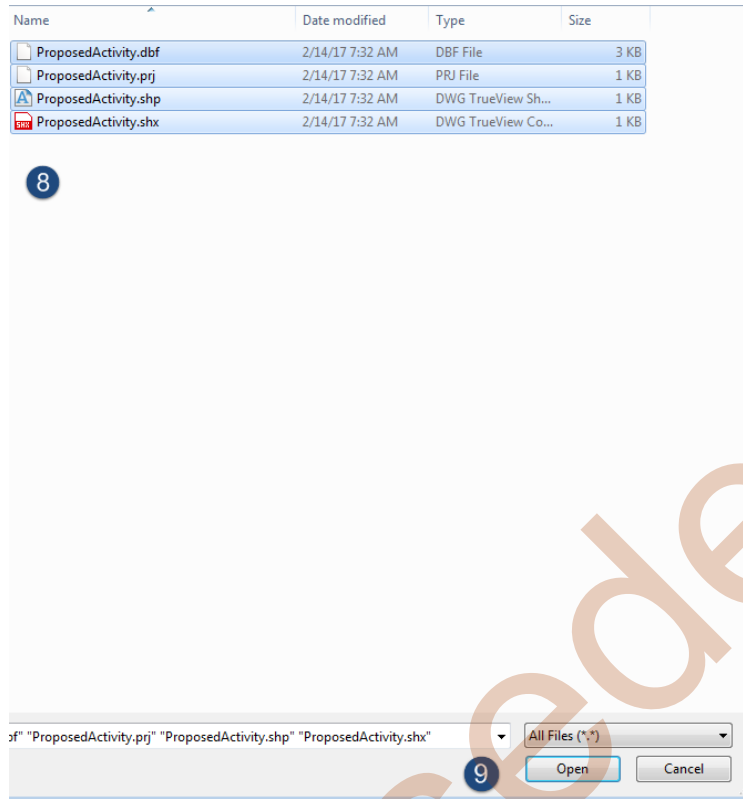
Figure 6 - Browsing to Shapefile location Dialog Box

Browse to the directory of the shapefile.

8. Select the shapefile extensions (.dbf, .shp, .shx and .prj) as illustrated above.

9. Click the Open button next to display the shapefile on the map window.
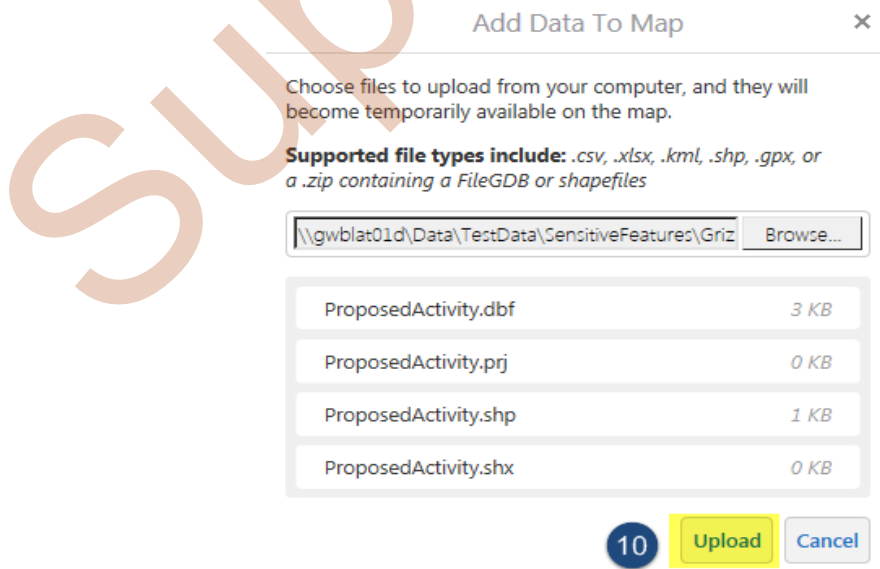
Figure 7 - Shapefile Upload Button

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10. Click on the Upload button to add the shapefile to the map window.

Layer Details ×

11

Layer Name: | Grizzly Bear |

12 **Proceed** Cancel
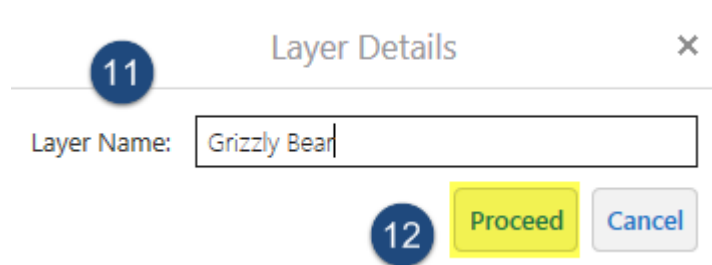
Figure 8 - Layer Details Window

11. Type in the name of the proposed activity layer.

12. Click on the Proceed button.

Symbolize Data ×

Color: ⦿ ◯ ◯ ◯ ◯ ◯

Transparency:
— 10 %

Line Width:
— 2 px

Line Style:
| Solid | ⌄ |

Fill Style:
| Solid | ⌄ |
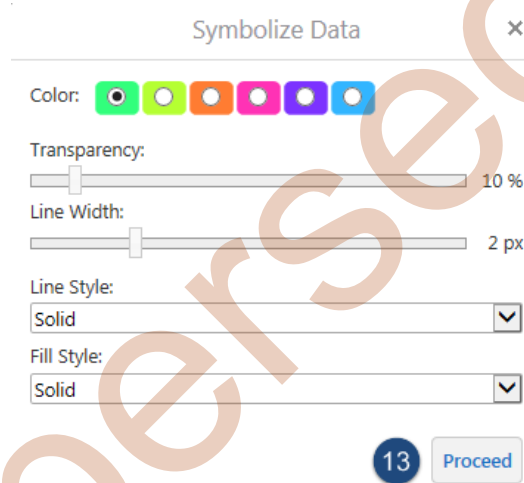
13 Proceed

Figure 9 - Symbolize Data Window

The Symbolize Data window allows you to configure the display of your shapefile on the map widnow. Colour, Transparency, Line Width, Line Style and Fill Style preferences can all be set.

13. Click on Proceed to accept all options.

The shapefile should be displayed on the map window. To view the shapefile from the layers table of content, click on the Layers icon as seen here. The toolbar is accessible from the bottom of the layer's table of content. You should have the window expanded to view the layer list. Information on how to expand this window can be found under Step 4 at:

- Figure 3 - LAT Map Interface/Welcome Screen

🏠 Home 🌐 Add V... 🔍 Add... **Layers**
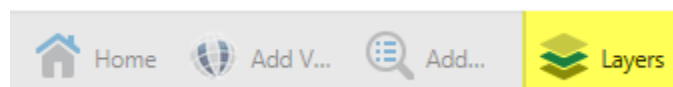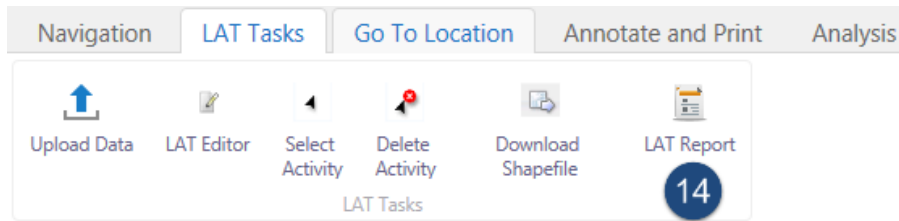
Figure 10 - LAT Report icon

14. From the LAT Tasks header on the toolbar, Click on LAT Report.

Figure 11 - LAT Report Contact/Project Information Dialog Box

The LAT Report window pops up next - fill in all the required fields. Asterisks signifies mandatory fields. Group Activity Type is only checked where you have multiple polygons/proposed activities with the same activity type on the map viewer you'd like to be listed and downloaded into a single LAT report rather than having them retrieved as separate LAT reports.

15. Click on Submit to have the LAT report generated.

You should see a message displayed in the upper left window saying …Generating LAT Report.
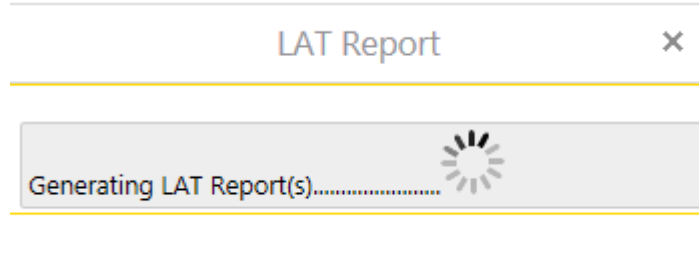
Figure 12 - Generating LAT Report Confirmation Dialog Box

This should take no more than fifteen seconds after which it reverts back to the LAT Report Contact/Project Information dialog box. At this point, the LAT report(s) is sent to the email address specified in the dialog box and no further action is required.

Two emails are sent to the email address supplied as seen in Figure 14; the first to arrive is simply a LAT Report Request notification email with a LAT reference number attached.

From:	☐ LAT-No Reply
To:	☑ Ola Sofeso
Cc:	
Subject:	LAT Report Request - Submitted (ref: 636225988830882280)

******* System Generated Email - DO NOT REPLY *******

Dear Ola Sofeso,

Your LAT Report request has been submitted.
You will be notified shortly by email with your LAT results attached.

If you do not receive your LAT Report(s) within a the next hour, please forward this email to the help desk email below.

Sincerely,

Alberta Environment and Parks (AEP) for activity types relating to: DLO, DML, DMS, DPI, DPL, EZE, REA, REC, SMC, SML and VCE.
eds.support@gov.ab.ca / 780-427-3570

and the Alberta Energy Regulator (AER) for activity types relating to: LOC, MLL, MSL, PIL, PLA and RVC.
inquiries@aer.ca / 1.855.297.8311

Figure 13 - LAT Report Request Email

The second email contains two attachments which correspond to the LAT report(s) and a copy of the Proposed Activity (shapefile) uploaded to the LAT viewer.

From:	LAT-No Reply
To:	Ola Sofeso
Cc:	
Subject:	LAT Report - Results Available for Download (ref: 636225988830882280)

Message   LATReportPDFs.zip (298 KB)   ProposedActivity.zip (1 KB)

******* System Generated Email - DO NOT REPLY *******

Dear Ola Sofeso,

Please find your LAT Report results (attached) as requested on 2017-02-13

Please note: LAT Reports with any noted errors are a result of the data you submitted.
LAT Report results are automatically purged from the system 30 business days after they are generated.

Sincerely,

Alberta Environment and Parks (AEP) for activity types relating to: DLO, DML, DMS, DPI, DPL, EZE, REA, REC, SMC, SML and VCE.
eds.support@gov.ab.ca / 780-427-3570

and the Alberta Energy Regulator (AER) for activity types relating to: LOC, MLL, MSL, PIL, PLA and RVC.
inquiries@aer.ca / 1.855.297.8311

Figure 14 - LAT Reports Available Email

Proposed Activity layers added using the Upload Data function can be removed from the LAT map viewer.

To remove the layer from the side pane, click on the right arrow beside the proposed activity layer indicated here:
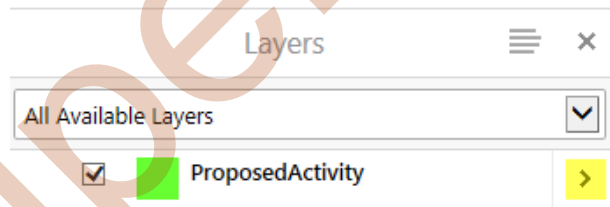
Three options become available which are Zoom to Extent, Zoom to Visible Scale and Remove Layer. To confirm deletion of the layer, click on 'Remove Layer'.

Only layers imported using the Upload Data icon can be deleted using the 'Remove' layer functionality described above. An alternative means to deleting layers added especially using the LAT Editor tool is by referring to:

- Figure 24 – "LAT Tasks" Toolbar icons (Deleting the Proposed Activity icon)

Step B - Adding proposed activities in LAT using the Draw LAT Activity tool

To enter proposed activities, continue as illustrated below.
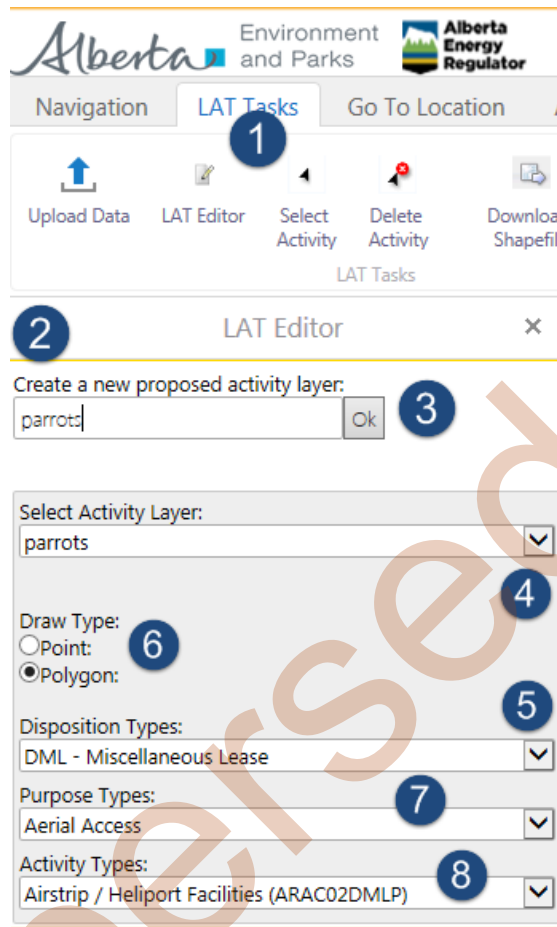
Figure 15 – Adding Proposed Activity using LAT Editor Tool

1. Click on LAT Tasks > LAT Editor.

2. Enter a name for the new proposed activity layer.

3. Click OK.

4. Click on the drop down arrow to select the proposed activity layer name created in Step 2.

5. Select the Disposition Type. This would instantly trigger the drawing type option i.e. geometry of the proposed activity.

6. Check on the radio button to indicate geometry type of the shapefile to be drawn. Another geometry (draw type) which should be noted is Polyline. This option is available depending on the disposition type code selected e.g. DLO. A polyline simply implies that the shapefile feature is linear in nature e.g. an Access Road.

7. Select the Purpose Type.

8. Likewise the Activity Type.

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Now it's time to start drafting the proposed activity. You may wish to navigate to a particular ATS, Place Name, Address by clicking on 'Go to Location' tab on the toolbar.
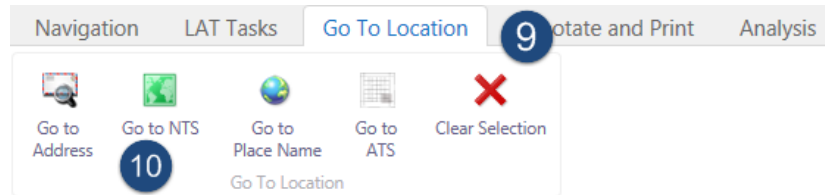
Figure 16 - Address Navigation

9. Click on 'Go To Location' tab.

10. And then search by any of these address references such as an ATS (Alberta Township System) grid.

Figure 17 - Go to ATS Dialog Box

11. Enter the ATS information.

12. Click on the Search button. With the option **Zoom to ATS** checked, the map window should take you directly to the ATS grid upon clicking the search button. If you had an ATS reference which spans across two quarter sections, enter the second one under "**Second ATS Specification**" heading.

Close the Go to Township or Quarter Section panel by clicking the **X** button

Go To Township or Quarter Section   ✕   to return to the LAT Editor box.

With the mouse pointer placed on the Map Window, left-click once to start drawing the polygon. For each vertex to be drafted, clicking on the left button of the mouse once, plants the coordinate. Repeat the step until a closed-loop polygon is created.

On the final vertex, a left double-click of the mouse button creates a perfectly closed polygon.

From the LAT Tasks tab, click on LAT Report icon filling in your contact information and project description to have the LAT report delivered to the specified email address as explained at:

- Figure 10 - LAT Report icon

At any point, to delete the entire polygon, point or polyline which you've started plotting, tapping the Esc key on the keyboard resets this.

3   LAT User Interface

The LAT User Interface/Viewer includes the following:

1. Toolbars.
2. Side Pane.
3. Map window.
4. Magnification Controls.
5. Toolbar icon shortcut.
6. Coordinates widget.
7. Scale Input Box.
8. Quick Action button.
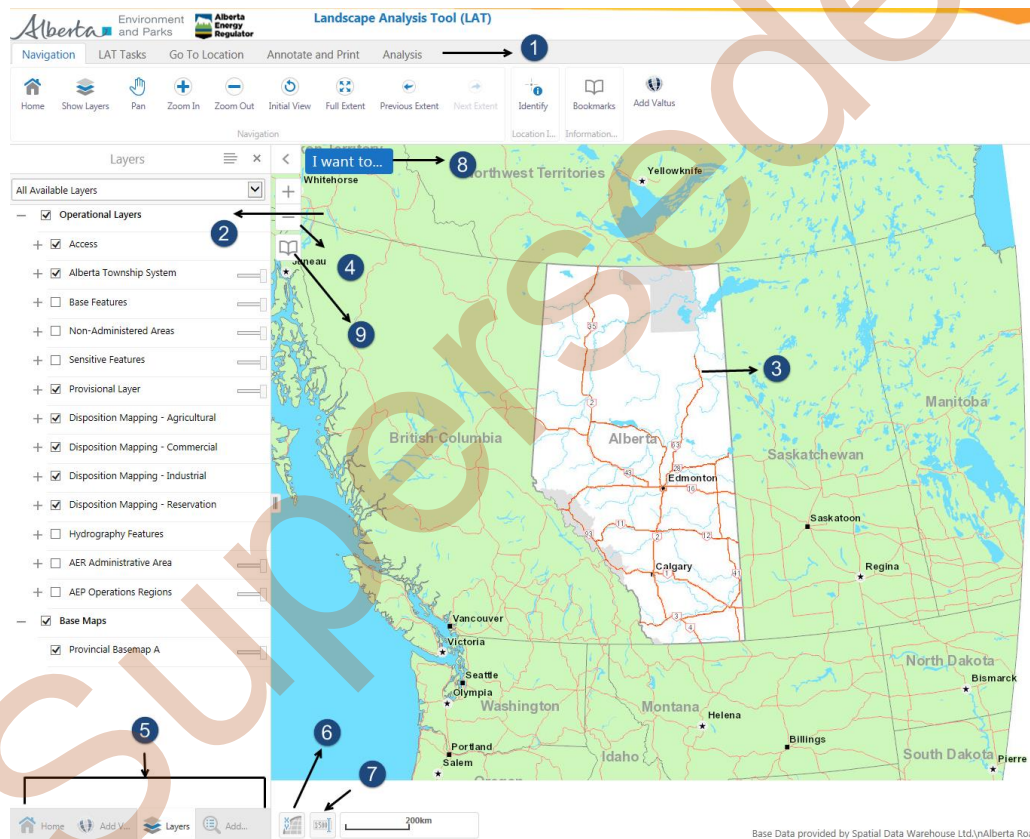9. Bookmarked Locations.

Figure 18 – LAT Viewer controls

3.1   LAT Toolbars

There are five toolbars on the LAT User Interface - Navigation, LAT Tasks, Go to Location, Annotate and Print and Analysis. The toolbar has a collection of functions which are used most of the time when interacting with the interface.

3.1.1 Navigation

The Navigation pane of the toolbar is frequently used as navigational functions when interacting with the map window.
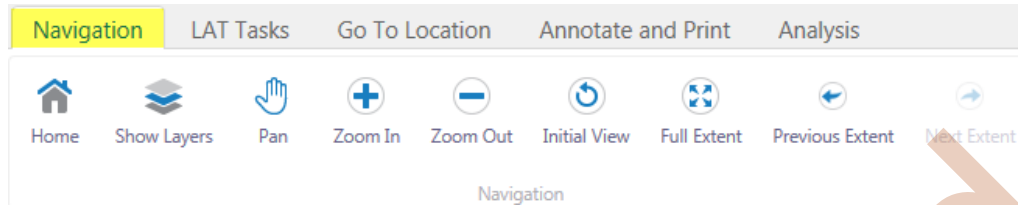

<p align="center">Figure 19 - "Navigation" Toolbar icons</p>

- **Home** - This takes you to the LAT Landing page message when clicked.
- **Show Layers** - This is used to display the Proposed Activity, Operational Layers and Base maps layers.
- **Pan** - The pan tool allows you to navigate around the map. To activate it, simply click on the icon, and then place the mouse cursor on the map window holding the left mouse button. The mouse pointer at this point should change into a quad arrow   . While still holding the left mouse button, drag this cursor to the direction on the map window you wish to navigate to.
- **Zoom In -** The Zoom In tool allows you to zoom in on any part of the map. To zoom in, left click with the mouse button on the icon then place the cursor on the map window whilst still holding the left mouse button to draw a rectangle around the area to be magnified.
- **Zoom Out -** This is the reverse action performed by the Zoom In tool. To zoom out, click on the icon (left mouse button click), then place the cursor on the map window around the object to be zoomed out. Still holding the left mouse button, drag a rectangle around the object which is to be zoomed out.
- **Initial View -** This restores the map window displaying the provincial boundary to its full extent.
- **Full Extent -** Once clicked, this allows you to zoom to the full map window extent. At full extent, the province of Alberta boundary is clearly visible.
- **Previous Extent -** This takes you to the previous view extent of the map window when clicked. It is similar to undoing the map window to the scale you were at before.
- **Next Extent -** This allows you to zoom to the extent or scale you were at before you clicked on the previous extent icon. Its function is equivalent to a redo action i.e. restoring to the zoom scale you were at before you clicked on previous extent.
- **Identify -** This allows you to identify features/layers on the map viewer. Simply click on the icon with the left mouse button and tap (left click on the mouse button) a location on the map viewer to learn what's there. A geo-marker is displayed on the location you clicked to have its layers/features revealed.

On the side pane, you see the layer which you had just identified.

Two other icons are visible when you click on the identify tool; Enable buffering and Identifiable Layers.
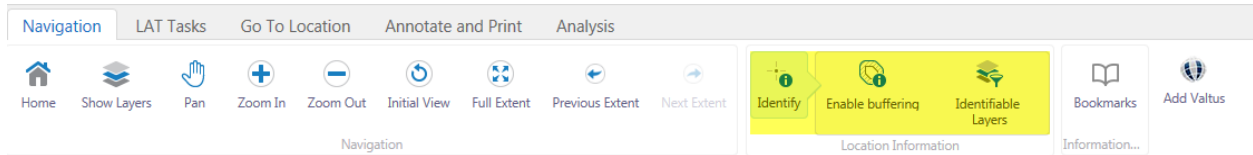
Figure 20 – Identify, Disable Buffering and Identifiable Layers icon on Tools toolbar.

- **Enable buffering** - This tool allows you to select multiple features/layers by specifying a buffer distance. To activate this tool, single-click on it with your left mouse button. Once active you see a check mark with the text changing from Enable buffering to Disable buffering.

  A buffer window pane is displayed on the side pane. Specify a buffer distance and default units. Once these values have been set, click on "Continue". Now you are ready to draw a buffer distance on the map window. Hold the left mouse button, then place on the map window drawing a rectangle to depict the area where you'd like to have its layers/features displayed. Once you're satisfied with the range, let go of the mouse button to see the different layers displayed represented by markers.

  To display the information pertaining to the different markers, again click on the layers/features displayed on the side pane to view its details.

  To disable buffering, simply click on the icon again. The text should at this point change from Disable buffering to Enable buffering.

- **Identifiable Layers** - This icon allows you to filter the layers to be identified when utilising the "Identify" or Enable buffering tool. To activate it, single click with the left mouse button, Identifiable layers are shown on the side pane. The layers are organised in a hierarchy so you might have to drill down to have some sub-layers either *checked* i.e. to be **identified** or *unchecked* if layer is **not to be identified**. The Select All button when clicked selects all group layers and sub-layers while the Clear All button deselects all groups and sub-layers.

- **Bookmarks** - Bookmarks allows you to create reference points based on the current map extent you are viewing. To create a bookmark, left click on the icon with the mouse button, and then click on "Bookmark Current Extent". Another dialog box pops open where you can give a name to the bookmark you are about to create. Click OK to finish creating the bookmark.
  You should now see the bookmark you've just created under the Bookmarked Locations box.
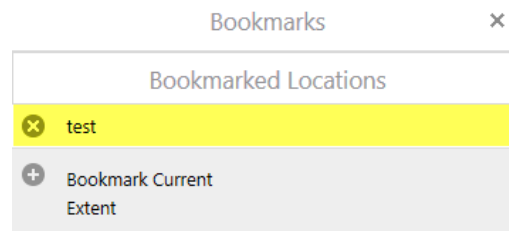
Figure 21 – Bookmarked Locations Box

Click on the Full Extent icon on the Navigations toolbar to view the province of Alberta boundary. Now go back to bookmarks icon on the same toolbar, left-click with the mouse button to launch the tool and then left click on the bookmark you created earlier to be taken to its view extent. For instance,

accordingly to Figure 24, I click on "test". Instantly, the map viewer should zoom to the location where I had the "test" bookmark added.

- **Add Valtus** – This feature icon allows Valtus Views Imagery to be added to the LAT site. You need a VIEWS Userid and Password to access the imagery in accordance with the licence agreement. If you do not have an account, please go to:

  - [Valtus](#)

Click login to access this feature.

The next pane includes some added layers on display. Check the layer's box to display the imagery on the map viewer.

Figure 22 - Logging into Valtus Imagery

1. Enter your Valtus User ID.
2. Enter your password.
3. Click Login.

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Add Valtus Imagery   ×

☐ VIEWS_CA_AB
Valtus mosaic

☐ VIEWS_MDA
Valtus mosaic

☐ VIEWS
A mosaic of imagery in the Valtus archive that a user has
permissions to view.

☐ VIEWS_2
An optimized layer that is a world mosaic of the best
imagery in the Valtus archive. This Layer has been
specifically designed to be used as a base imagery layer for
both web and desktop applications.

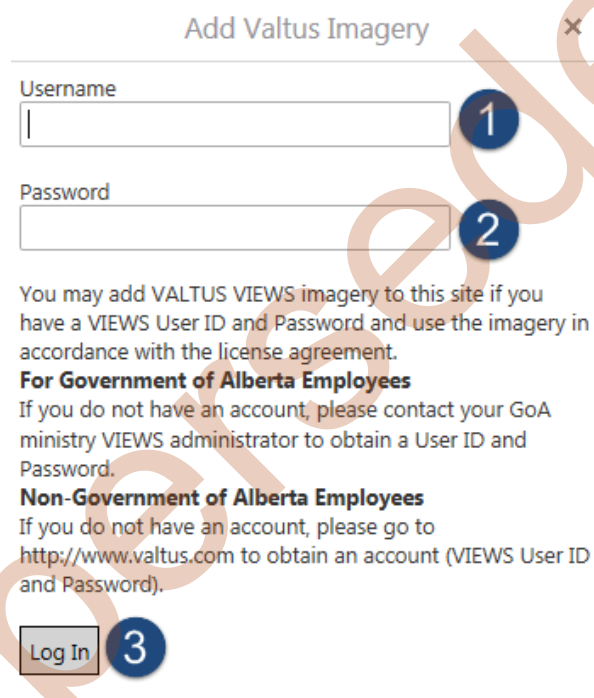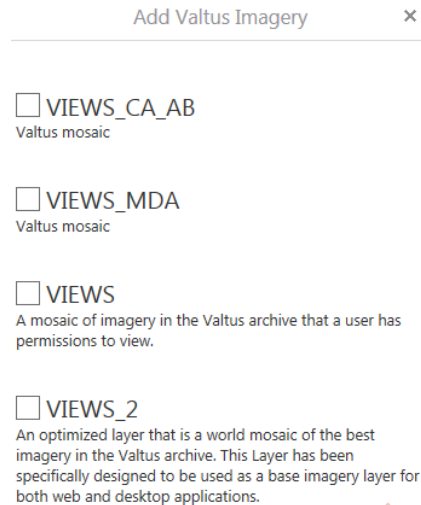**Figure 23 – Adding Valtus Imagery**

3.1.2 LAT Tasks

The LAT Tasks allows you to generate a LAT report by either uploading a shapefile according to the LAT specification or using the in-built LAT Editor tool which simply is a sketch tool for drawing proposed activity points, lines or polygons for the purpose of having its LAT report also generated.

| Navigation | LAT Tasks | Go To Location | Annotate and Print | Analysis |

Upload Data   LAT Editor   Select Activity   Delete Activity   Download Shapefile   LAT Report
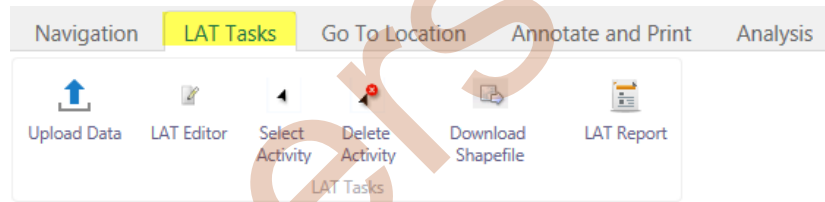
LAT Tasks

Figure 24 – "LAT Tasks" Toolbar icons

- **Upload Data** - This allows you to upload a shapefile containing the proposed activity boundary for which a LAT report is to be generated. Kindly refer to the following on how to use this icon.

  - Figure 4 - Adding a Shapefile

- **LAT Editor** - The LAT Editor permits you to create a proposed activity layer and have its point, line or polygon boundary sketched based on the location of the proposed site. Thereafter, you can generate its corresponding LAT report. Refer to the following on how to use this icon.

  - Adding proposed activities into LAT using the LAT Editor tool.

- **Select Activity** - This icon allows you to select an activity on the map window. The activity's geometry (point, line or polygon) boundary must be displayed on the map viewer before utilising this tool. To use it, click on the icon with the left mouse button, then left-click on the geometry to have it selected. At this point, the geometry has its vertices displayed as shown below.
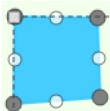
Once it is highlighted, you can perform different actions like moving it to another location on the map window, editing its size or deleting the geometry.

- **Moving the Proposed Activity** - To re-position the proposed activity, click on "Select Activity" which is accessible under LAT Tasks > Select Activity. Click the icon (Select Activity) with a single left-click of the mouse button, then left-click once on the object on the map viewer. Once selected, there are vertices around its edges in white. To move, hold the left mouse button and then drag to your desired location. Release the mouse button once you are satisfied with its new location.

- **Resizing the Proposed Activity** - To resize the geometry while selected, click (left mouse button) on any of the white vertices as illustrated in the diagram below. Once the vertex is active, the mouse cursor changes from a single arrow to a vertical bi-directional one.
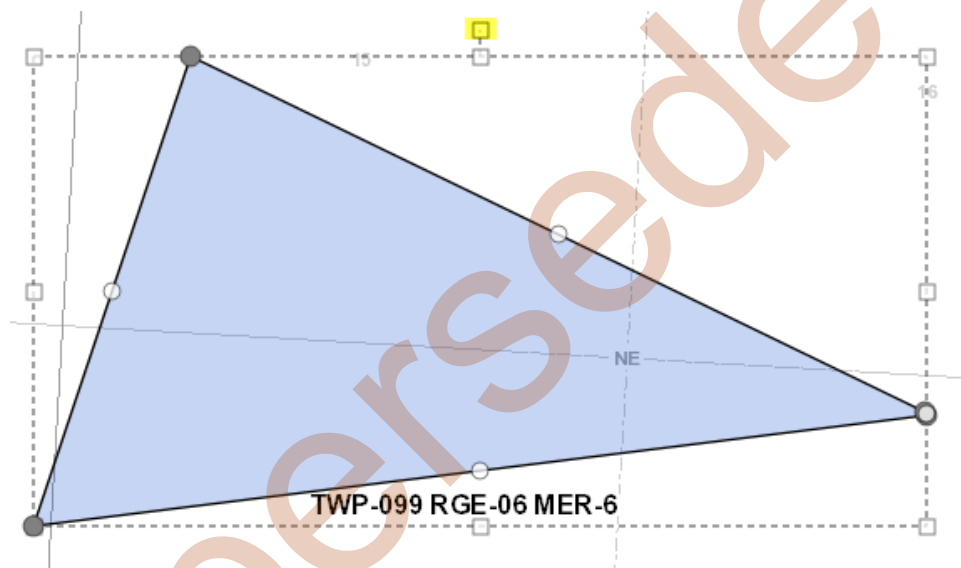

Figure 25 – Resizing a Proposed Activity

Holding the white vertex with the left-mouse button, drag it outwards to increase its size or inwards to reduce it. The shape's proportion is maintained such that it is represented at a larger scale when increased in size or at a lower scale when reduced.

- **Rotating the Proposed Activity -** To rotate the shape after its being selected, left-click on the vertex highlighted in yellow from *Figure 25* above. Holding the left-mouse button, still planted on the vertex, drag towards the right to rotate it in a clockwise direction or towards the left to rotate it in an anticlockwise direction.

- **Deselecting the Proposed Activity** - To deselect the proposed layer, simply click (left mouse button) anywhere on the map viewer outside the boundary of the selected geometry *i.e. defined by the white vertices*. Once deselected, you shouldn't see the white vertices anymore.

- **Deleting the Proposed Activity -** To delete the geometry after its being selected, click on "Delete Activity" icon accessed from LAT Tasks > Delete Activity. A Delete Confirmation window pops up next as shown in the figure below. Click OK to confirm deletion of the shape or Cancel to abort the deletion task.
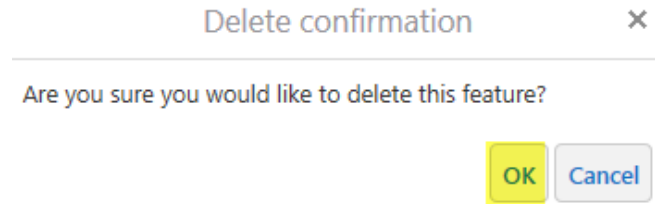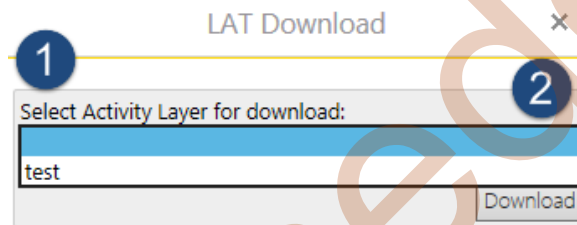
Delete confirmation ✕

Are you sure you would like to delete this feature?

OK Cancel

Figure 26 –Delete Confirmation window for a Proposed Activity

- **Download Shapefile -** To download a shape that was drafted using the LAT Editor tool or to simply create a duplicate shapefile from the one that was imported into the LAT map viewer, simply click on Download Shapefile icon under the LAT Tasks toolbar. The LAT Download action is displayed on the side pane as seen below.

LAT Download ✕

Select Activity Layer for download:

test

Download

1. Click on the drop down arrow to select the proposed activity layer.
2. Click on the Download button to have the layer downloaded as a shapefile. A confirmation dialog box is shown afterwards. To proceed with downloading the shapefile, click the OK button. To retract the action, click the Cancel button. A window pops up next prompting you to save the file to your directory.

- **LAT Report** - This icon when clicked allows you to enter project description and contact information including email address where the LAT report is to be sent. For more hints on using this icon, refer to:

  - Figure 11 - LAT Report Contact/Project Information Dialog Box

3.1.3 Go To Location

This toolbar contains several icons used for panning to the exact location of the proposed activity especially when drafting the shapefile's geometry using the "LAT Editor tool". Other uses also include unearthing existing layers which exist at a geo-location.
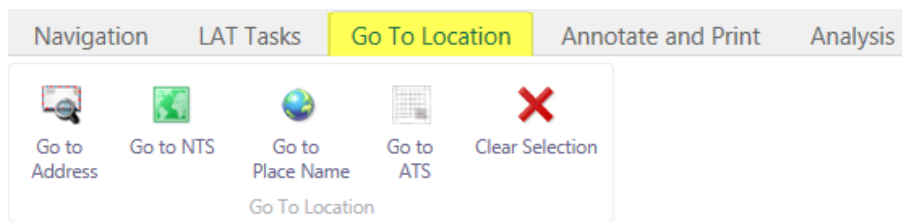
| Navigation | LAT Tasks | Go To Location | Annotate and Print | Analysis |

Go to Address   Go to NTS   Go to Place Name   Go to ATS   Clear Selection

Go To Location

Figure 27 – "Go To Location" Toolbar icons

- **Go to Address** – The Go to Address tool enables you to zoom to any location with a permanent address in the province of Alberta. Addresses searched with this tool that lies outside the province of Alberta returns an error message saying "The item is outside of the current extent".

  1. To query an address, type the address into the search field.
  2. Click the search button to have the map viewer zoom to this location.
  3. A couple of address suggestions are retrieved based on the search that was made. Scrolling through this list, identify the closest match to the address you want to zoom to by tapping the left mouse button. Instantly, the map viewer zooms to the location provided the checkbox is on for "Zoom to"
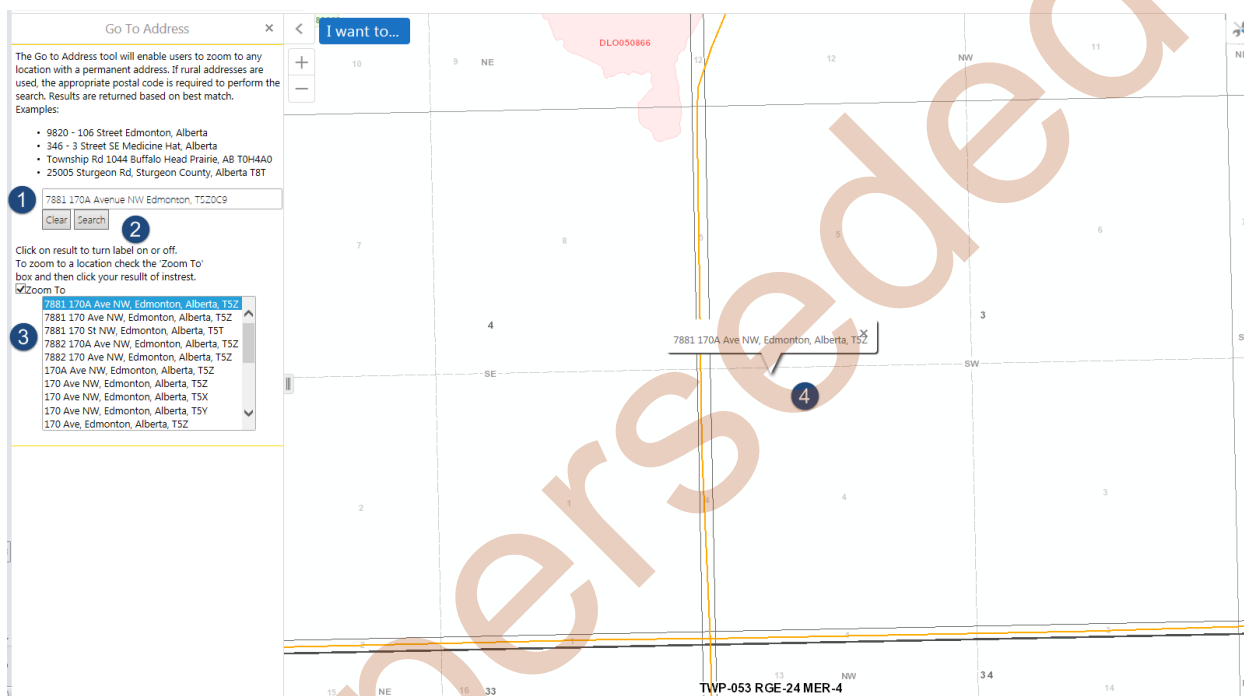 4. Address is returned with a marker symbol.

Figure 28 – Go To Address Search Field

- **Go to NTS** – NTS is an acronym for The National Topographic System of Canada, which is a mapping reference grid defined by National Resources Canada that is based on degrees of latitude and longitude. This tool allows you to search for polygon grids based on the scale of 1:50000 NTS extents within the province of Alberta. The format for each polygon's grid extent is a two digit number, a single letter and two additional numbers.

  To run a search, type the tile extent within the search field and then click on the Search button to be zoomed to its location.

- **Go to Place Name** – The "Go to Place Name" search allows you to locate any formally named feature as recognized in the Geographic Names System database. To execute this tool, simply key in the place name in the search field and once again clicking on the Search button displays a pane underneath with suggestions based on the text that was searched.

  To zoom to the place name of interest, left-click on it as seen from the address list section. Ensure the checkbox "Zoom to" is turned on.

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- **Go to ATS** – This tool lets you zoom to an individual pair of Quarter Section(s) [**QS**], Section(s) [**Sec**], Township(s) [**Twp**], Range(s) [**Rge**] and Meridian(s) [**Mer**] within the province of Alberta. Acceptable values for
  - ➢ **QS** are (NW, NE, SW and SE).
  - ➢ **Sec** is (1-36).
  - ➢ **Twp** is (1-126).
  - ➢ **Rge** is (1-30) and
  - ➢ **Mer** is 4-6

To zoom to any ATS section, fill in the field values for First ATS Specification and an optional Second ATS Specification where the layer's boundary spans across the First and Second ATS specification values. Click the Search button to be zoomed to this ATS location.

Possible error messages encountered are when ATS field values keyed in falls outside the range of accepted values as indicated earlier or when the ATS values entered lies outside the province of Alberta. The error message displayed in these circumstances is depicted below.

ATS Grid Selection ✕

No results found, try again

OK
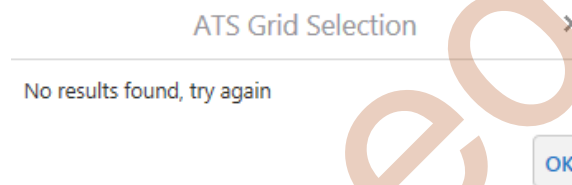
- Clear Selection – Clear Selection icon when clicked deletes all drawings (shapes) that have been added to the map viewer. Aconfirmation message displays asking if you want to delete all current drawings on the map viewer. Click on the OK button to proceed.

3.1.4 Annotate and Print

The Annotate and Print toolbar contains a library of functions that allows you to connect to external mapping services like Valtus, GeoDiscover Alberta and to perform basic geospatial representation like drawing of points, polygons, inserting text annotations etc.
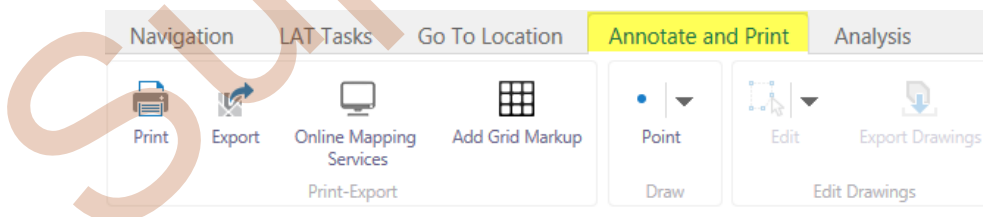
Figure 29 – "Annotate and Print" Toolbar icons

- **Print** – The Print icon when clicked allows you to print a defined map scale based on the extents on the map viewer. Select the print layout from the drop down. The fields: Output Format and Resolution are all default options while the Map Scale can be specified. Alternatively, you may add a Map Title and Comments to the printed map.

The option "Lock print preview with map" should be unchecked if you wish to move proposed activity polygons to fall within the print area denoted by the orange boundary otherwise the

polygons/geometry on the map viewer is locked in position and may not fall within the boundary of your print section. Once all these fields have been keyed in, click the Print button to execute the print function. You should see a confirmation window afterwards saying "Your file is ready. To view the file, please click Open file".

Click the Open file button to open the printed map which was generated in a PDF document.

- **Export** – The Export icon enables you to export the map from the viewer into several image formats which includes: PNG, JPEG, BMP, TIFF, GeoTIFF and PDF.
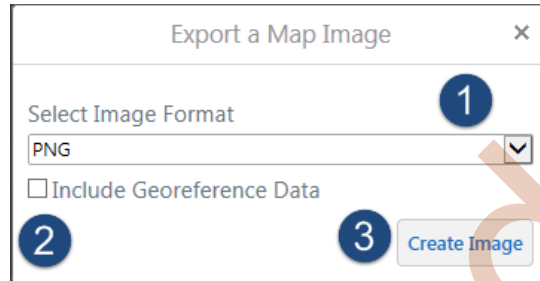

Figure 30 – Exporting a Map Image

1. Select the output file format.
2. Checking this box includes a projection file to the image format file selected which is available to be downloaded as a compressed zip folder. Unchecking it produces just the image file format. We keep this checked for now.
3. Click on Create Image to have the file exported.

Another dialog box displays with the option to click on a button that says "View Image". Click this button to have your map image displayed. The next window to pop up has several options for viewing the file; whether to open it directly or to save it to a directory on your computer. Open the image ending in the file extension you selected in Step 1.

If the checkbox in Step 2 isn't checked off, running step 3 opens the image in a new browser tab. To save it, right click on the image in the browser and choose Save Picture as…proceed to saving this in a file directory on the computer.

- **Online Mapping Service** – This icon when clicked allows you to connect to GeoDiscover Alberta which is a program that fosters collaboration and innovation in information sharing. It is the focal point for easily integrated and usable geospatial data and services including metadata searches.
    - GeoDiscover Alberta
- **Add Grid Markup** – The Add Grid Markup tool allows grid lines to be added to the map viewer. Pan to the area of interest on the map viewer, then click on this icon specifying a grid line distance in Km followed by the OK button. Immediately, a grid line with the specified parameter is displayed on the viewer**.** To remove the grid line, click on the Remove button.
- **Point** – The point icon enables you to draw various shapes unto the LAT map viewer. To draw a shape,
    1. Click on the Annotate and Print toolbar
    2. Click on the Points icon drop down arrow.
    3. Then hover to the shape you'd like to draw, click on it. Thereafter proceed by drawing the shape on the map viewer.
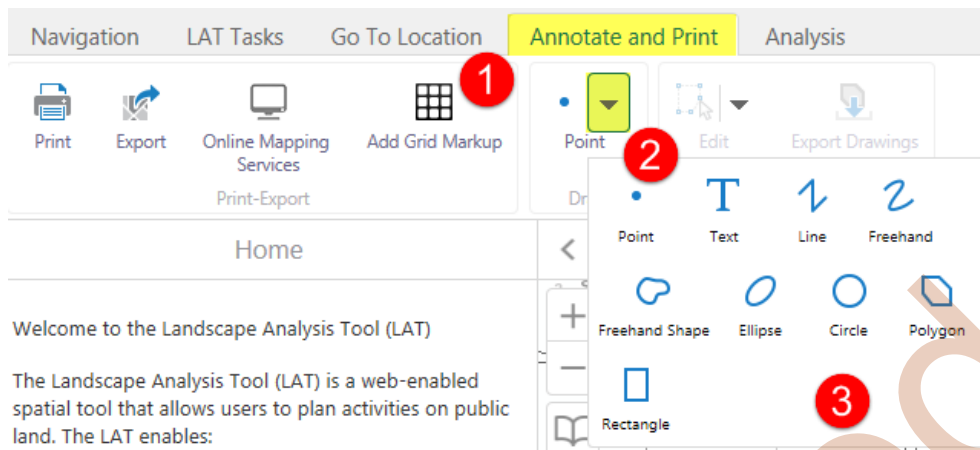
Figure 31 – Drawing Shapes under the Tasks>Point Icon

- **To represent a point on the LAT map viewer** – Following from the previous step, click on the Point shape from the drop down. Proceed by a single click of the left mouse button on the map viewer to insert the point. A blue dot should appear immediately.
- **To insert a Text** – Click on the Text symbol from Figure 34, then single-click with the left mouse button on the map viewer where you'd like the text inserted. You should see a confirmation window popped up verifying if you like to add the text at the location on the map. Enter the text in the field then click "OK". The text should be inserted at the location now.
- **To insert a Line** – Click on the Line symbol from Figure 34, then single-click on the left mouse button on the map viewer to start drafting the line. For each vertex, click the mouse button once, once finished double-click the left mouse button to finish the line sketch. To delete the line at any instance, tap the Esc button on your keyboard**.**
- **Freehand Line** – To use the freehand tool, click on the drop down from the figure above selecting the freehand icon, a tip is displayed at the bottom of the viewer saying you should hold the (left) mouse button or your fingertip down and then draw a freehand line on the viewer. Release the mouse button to finish the sketch.
- **Freehand Shape** – Similar to the Freehand Line, click on this icon and then holding the left mouse button draw the shape on the viewer. Release the mouse button to finish the sketch.
- **Ellipse** – To draw an ellipse, click on the icon followed by holding the left mouse button dragging it on the map viewer to draft the shape. To finish the sketch, release the mouse button.
- **Circle** – To draw a circle, click on the icon then holding the left mouse button proceed to the map viewer dragging it on the location where the circle is to be inserted. Release the mouse button to finish drafting the shape.
- **Polygon** – To draft a polygon, click on the icon, then with a single left click of the mouse button, tap to start drafting the vertex. Proceed by tapping another location to insert the next vertex. To enclose the polygon shape, double-tap at the final vertex, which is also the start vertex to complete the drawing**.**
- **Rectangle** – To draw a rectangle, click on the icon and then holding the left mouse button; drag the shape on a location on the map viewer. Release the mouse button to complete the sketch.

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Some additional icons are displayed based on which of the shapes listed above is selected. They are:
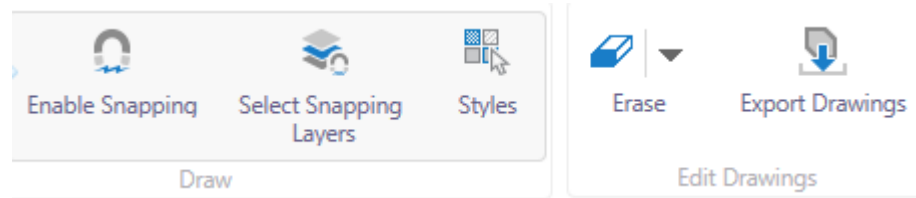
- **Enable Snapping** - Once this tool is checked by clicking on it, it enables the functionality to sketch the shape selected from the Point icon dropdown to a higher degree of accuracy by snapping the vertices to features on the map viewer. A white dot can be seen once this tool is enabled and when you move the mouse cursor to a feature on the map viewer. This is an indication to start the sketch as the first vertex is snapped to the feature. To disable, simply click the icon again.
- **Select Snapping Layers** – This icon allows you to define which layers listed in the side pane (layers' table of content) are to be snapped. To use this icon, simply click on it and then select the applicable layers from the list. You can either select the layers manually by clicking on the checkbox or by clicking the "Select All" button to have all layers selected to be snappable. Layers with a '+' symbol denote it is a grouped layer and there are sub-layers present. Simply click on the + symbol to expand it until a layer becomes visible with a checkbox. To remove layer(s) which have been checked earlier, either drill down to the individual layer manually and uncheck the box or to uncheck all the layers, click on the Clear All button.
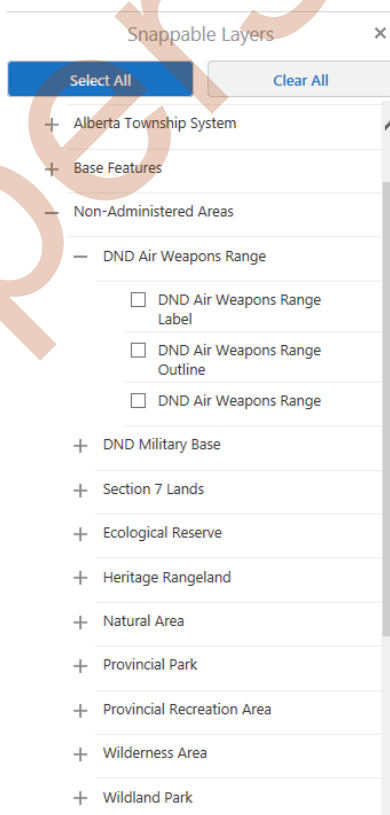

Figure 32 – Snappable Layers

- **Styles** – Styles icon contain predefined styling options for the shape selected from the drop down in Figure 34. Click the styles icon, then the desired styling option from the popped up window before sketching the shape. Notice that the shapes sketched on the map viewer adopt the styling option selected.
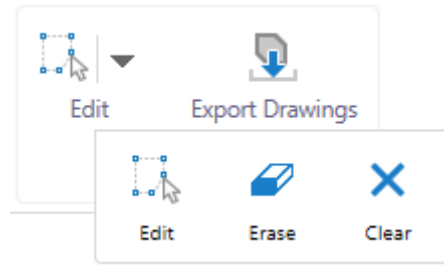- **Erase** – The Erase icon drop down has three sub-icons which are Edit, Erase and Clear.

Figure 33 - Edit Icon drop down

- **Edit** – Once clicked, this allows to you edit an existing drawing on the map viewer. This tool only works on all shape symbols including points, text, lines and polygons. To edit the symbol, click on the Edit icon, then tap the exisiting drawing or symbol on the map viewer. You can thereafter perform additional functions like editing the vertices, rotating the symbol or moving it to a new location.
For hints on how to edit the symbols, refer to:
    - 3.1.2   LAT Tasks
- **Erase** – The erase icon as the name indicates allows you to erase any symbol/shape which have been drafted on the map viewer. To utilise the tool, click on the erase icon and then proceed by tapping on a shape that was sketched on the map viewer. You should notice the shape is completely erased.
- **Clear** – The clear icon when clicked displays a confirmation window informing you all current drawings on the map viewer are permanently erased. Click OK to proceed with this action.

- **Export Drawings** – The Export Drawing icon when activated displays a confirmation window notifying you the ".shp" file (shapefile) is about to be downloaded. Click OK to have all the objects drawn on the map viewer exported in a shapefile format. Proceed by opening or saving the zip file. You need a GIS software e.g. ESRI ArcMap, QGIS etc. to open a shapefile.

3.1.5 Analysis

The Analysis toolbar contains a library of functions that allows you to specify shapes to be drawn based on surface measurements: area and distance. You can also plot coordinates defined in a coordinate system.
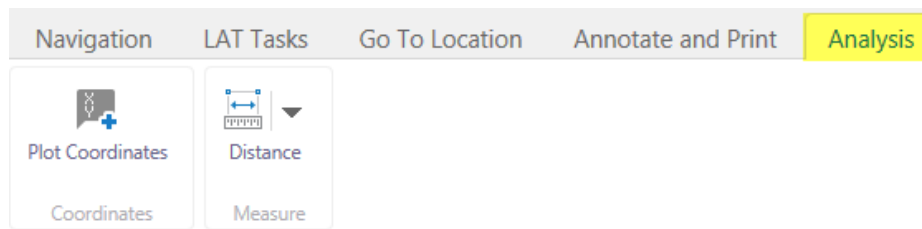

Figure 34 – Analysis Toolbar icons

- **Plot Coordinates** – This icon allows you to plot XY coordinates (Eastings and Northings) in a defined coordinate system. Click on the icon, typing in the Easting and Northing represented as X and Y. Select the coordinate system where the coordinates are plotted in from the drop down arrow on the Coordinate System field.

Click the Add button to add the coordinates to the map viewer.
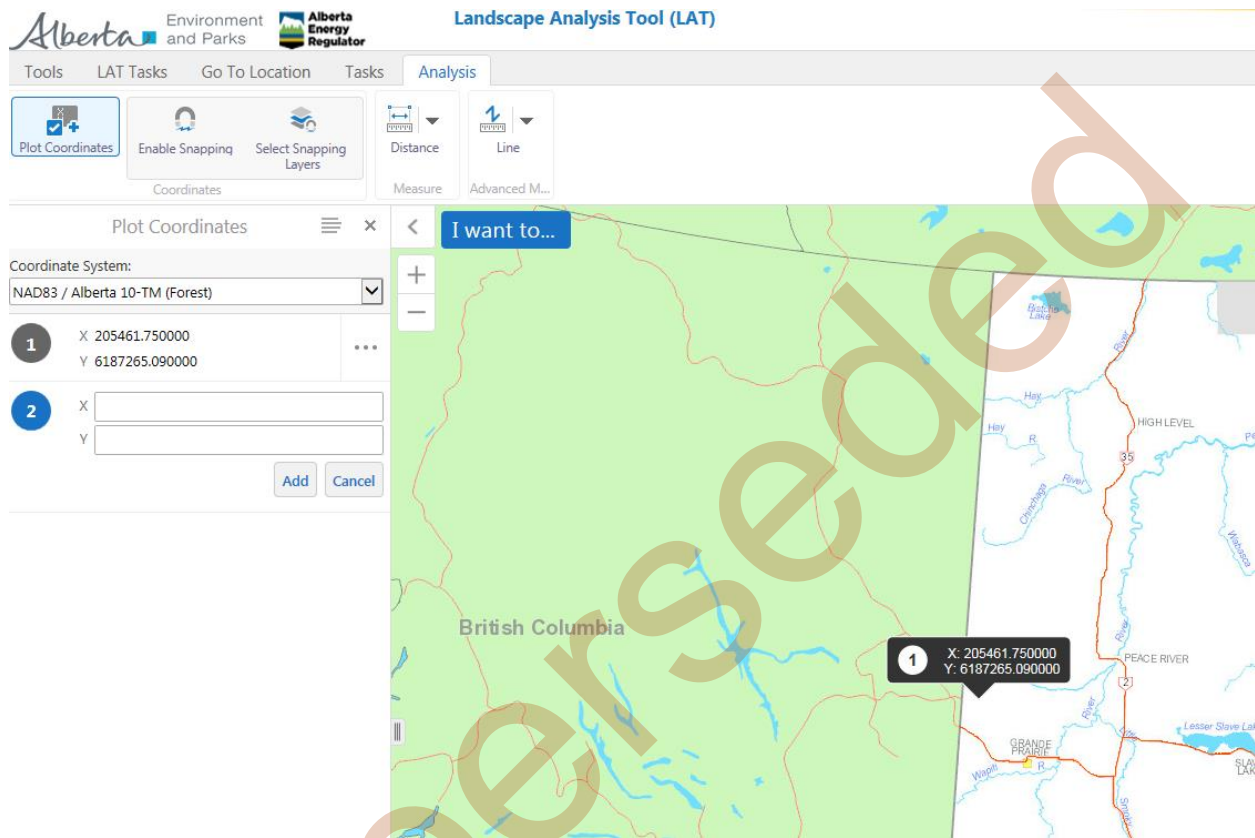
Figure 35 – Plotting a Coordinate

Similarly, you can plot a new coordinate on the map viewer by placing the mouse pointer to the location on the map viewer where the coordinate is to be inserted. Right click on the mouse button and then left click once on the option that says "Plot a Coordinate". The second coordinate is plotted with a marker icon saying 2.

To delete any of the coordinates or to delete all of them, refer to Erase and Clear icons, at:

-

They can also be deleted by clicking on the ellipsis beside the coordinate on the side pane as shown below. Three options are available, which are Hide Coordinate, Edit its location and Delete.

Figure 36 - Deleting a Plotted Coordinate

- **Distance** – The Distance icon is used to measure the distance between two features on the map viewer. To use the tool, click on the Distance icon as show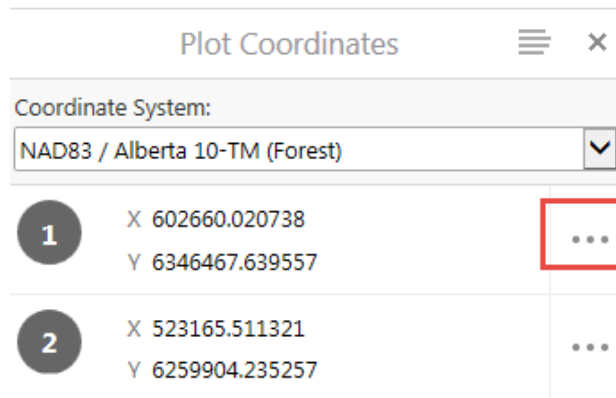n from Figure 37. The next available option is to set the units for distance to be calculated from the drop down arrow. Once all these parameters have been set, click on the first point on the map viewer and then hover the mouse to the next feature. You should immediately notice a line extension. Double click on the second feature to calculate the distance between them. Distance calculated should now be visible with the line separating those features highlighted in blue.

- **Area –** The Area icon as its name implies is used to calculate the area across features or land as represented on the map viewer. By default, **areas are only calculated on Polygon shapes**. Following from the Distance icon, click on the drop down arrow to switch to the Area icon. Set the unit for which area is to be calculated – I have used meters here. To start calculating the area across a region on the map viewer, move the mouse to the start point single-clicking on the left button. To continue drafting, extend the mouse to the next point, again with a single-click at the location to plot the next vertex. Proceed with these steps until a polygon enclosure is created i.e. where the first vertex connects with the last vertex. Double-click to complete the polygon sketch depicting the area of the region.
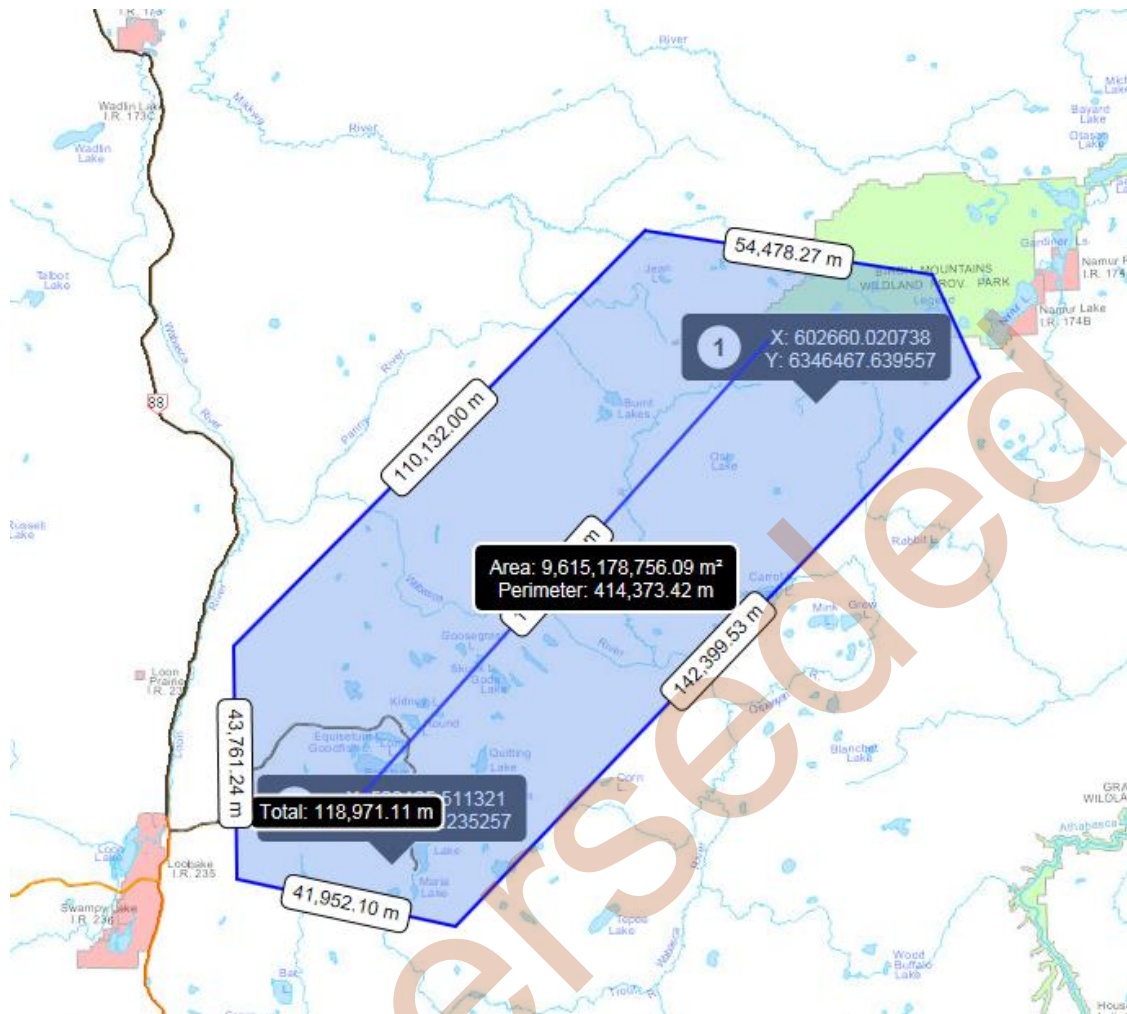
Figure 37 – Calculating the Area of a Polygon

All the line segments characterizing the polygon boundaries as seen from Figure 40 all have their lengths calculated in metres. The centre of the polygon also displays the Area in m^2 and its perimeter.

3.2 Side Pane

The Side Pane is a vertical display to the left of the map viewer, as seen in:

• Figure 18 - LAT Viewer Controls

The content displayed here is dependent on what toolbar icon shortcut is active at the time. For instance here, the layers list is shown because the **Layers** icon shortcut is active from Figure 21. Switching the **Active** toolbar icon shortcut to **Home** (bottom left of the map window) by clicking on it changes the content in the Side Pane to the LAT home page / welcome message. The Toolbar icon shortcut can easily be identified as it is highlighted in white shading. Inactive icon shortcuts are greyed out. Depending on what toolbar icon shortcut is active, you may be able to close it with the X control on the side pane. Once closed, you notice that the icon shortcut is no longer available for selection from the Toolbar icon shortcut pane.
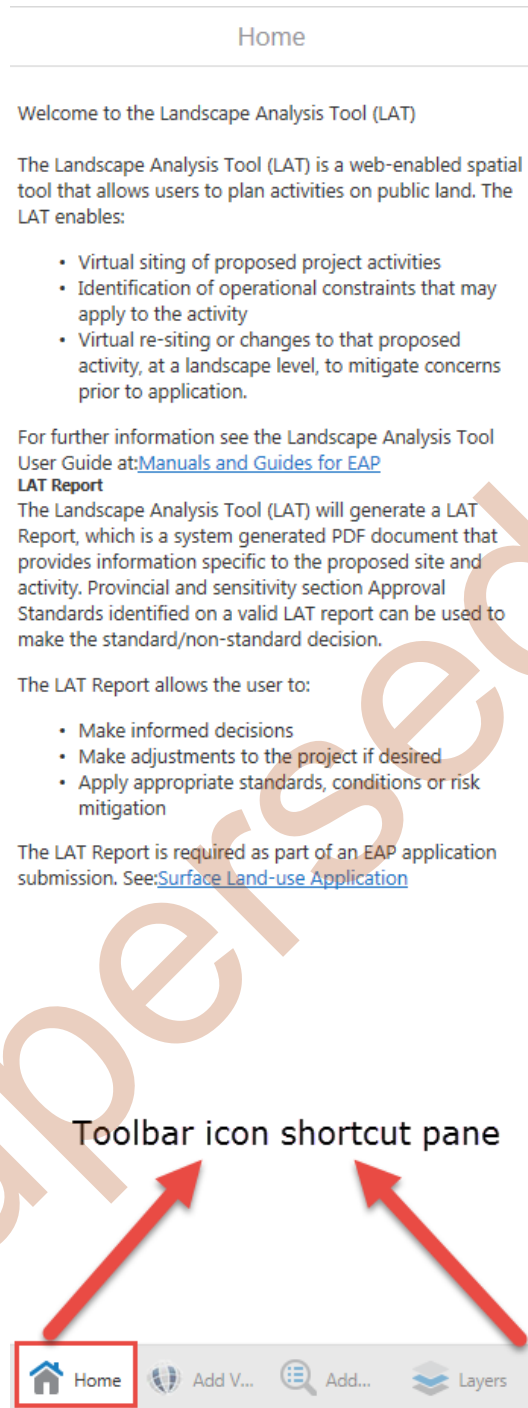
Figure 38 – Active icons on Side Pane

To reinstate the icon back in the Toolbar icon shortcut pane, navigate through the Toolbars as seen at:

- 3.1 LAT Toolbars

Once you've found the icon under the relevant toolbar category, single-click on it and you should have the shortcut created once again in the Toolbar icons shortcut pane.

3.3   Map Window

The Map window is the graphical layout where all the base maps, operational layers and proposed activity layers are displayed and interacted with using the several toolbar icons in the LAT program. An example of this can be seen at:

- Figure 18 – LAT Viewer controls

3.4   Magnification Controls

The Magnification Controls is used to zoom in and out of the map window as displayed from Figure 18 – LAT Viewer controls. To zoom in, click on the **(+)** control. To zoom out, click on the **(−)** control.

3.5   Toolbar icon Shortcut

The toolbar shortcut as seen from Figure 18 – LAT Viewer controls is a collection of LAT icons created as a shortcut. Once the icon is closed from the side pan, the shortcut disappears from the toolbar icon shortcut pane. To have it displayed again, simply locate the icon and click on it from the toolbar icons.

3.6   Coordinates Widget

The coordinates widget shown in Figure 18 – LAT Viewer controls is used to define a coordinate system used to project features on the map window. Their respective coordinates are shown alongside. The coordinate values change as you pan features on the map window.

3.7   Scale Input Box

The Scale Input Box as revealed on Figure 18 – LAT Viewer controls shows the scale of elements in proportion to the map viewer/window. The default unit is in Kilometres/metres. As you zoom in or out on the map window, the value on the scale input box changes.

3.8   Quick Action button

The Quick Action button referred to on Figure 18 – LAT Viewer controls has three options when clicked which are:
- **Change visible map layers** – This allows you to alter the visibility of map layers, perform layer actions and view the legend.
- **Return to initial map extent** – This icon when clicked takes you to the initial map position and zoom level
- **Bookmark current map extent** – This icon when clicked adds the current map extent to the list of bookmarks, so you can return to it later.

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3.9   Bookmarked Locations

The Bookmarked Locations icon is a shortcut to the Bookmarks functions where you can access previously saved bookmarks or create a new bookmark based on the current map extent. An example of this can be seen at:

- <u>Figure 18 – LAT Viewer controls</u>

4   Troubleshooting LAT Report Error Messages

Some error messages may be encountered when running a LAT report as some restrictions do apply based on areas of sensitivity that should never be intersected. Below are some of the most common errors you may notice.

4.1   Non-Admin Areas

A Proposed Activity layer should never be located within a Non-Administered Area. A sample LAT report is shown below where this error message was displayed. This implies you are prohibited from having a proposed activity in a Non-Admin area and to resolve this conflict, you need to establish your activity elsewhere.
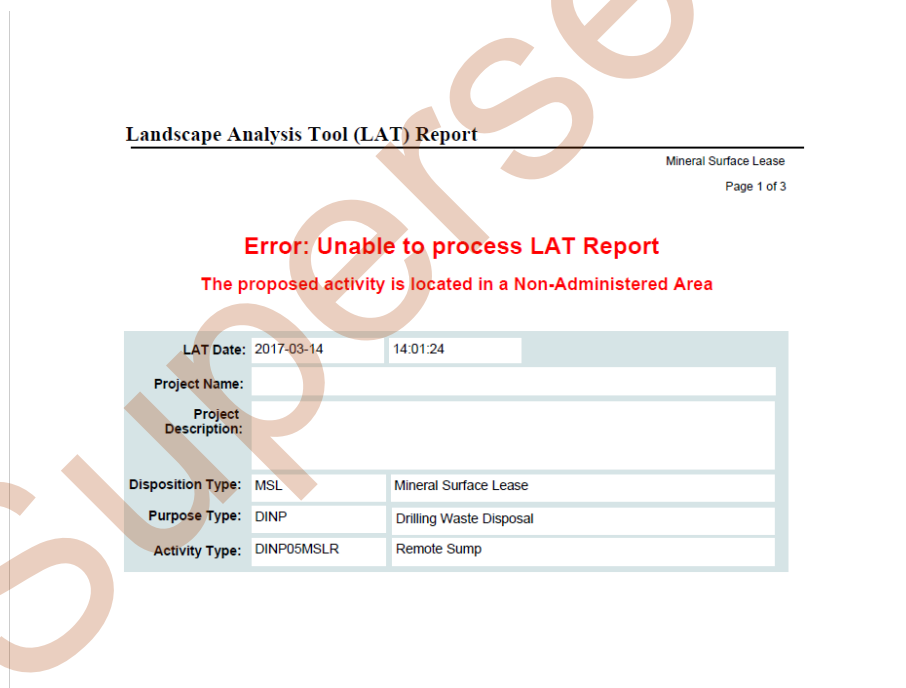

Figure 39 – LAT Report Error Screenshot – Non Admin Areas

4.2   Invalid Activity Code

Invalid Activity Code implies that the shapefile attribute field ACT_TYPE that was imported to the LAT Map window contains an invalid activity code. To remedy this error message, refer to:

- Appendix A - LAT Shapefile Specification for Proposed Activities

Make sure that an eligible activity code was used for the ACT_TYPE field in the shapefile's attribute data.

Landscape Analysis Tool (LAT) Report

Page 1 of 2

Error: Unable to process LAT Report

The Activity Code "BATT" is invalid. Please refer to the LAT User Guide for valid Activity Codes.

LAT Date:	2017-03-15	10:34:01
Project Name:		
Project Description:		
Disposition Type:		
Purpose Type:		
Activity Type:		

Figure 40 - LAT Report Error Screenshot – Invalid Activity Code

4.3   Out of Province

LAT reports are not be generated for proposed activity layer where the disposition boundary lies outside the province of Alberta. The proponent has to have a shapefile created for the disposition's boundary that lies within the province of Alberta.

Landscape Analysis Tool (LAT) Report

Error: Unable to process LAT Report

The Activity is located outside the province of Alberta

LAT Date:	2017-03-14	15:06:35
Project Name:		
Project Description:		
Disposition Type:	SME	Surface Material Exploration
Purpose Type:	SRMT	Surface Materials
Activity Type:	SRMT01SMEP	Exploration

Figure 41 – LAT Report Error Screenshot – Out of Province

Appendix A - LAT Shapefile Specification for Proposed Activities

Introduction:

The shapefile format is the native format of Environmental Systems Research Institute's (ESRI) ArcView product. Shape records store both geometry and attributes for features. Shapefile records consists of six files, however only four are required for the LAT "Upload Shapefile" functionality. The files required are:

- Shape records (geometry) are stored in the *.shp* file. This is the main file.
- Attribute records are stored in the *.dbf* file. This is a dBase file.
- A projection *.prj* file that contains the map projection and datum information.
- An index (.shx) file.

These extensions are added to the *basename* of the file. e.g. test.shp, test.dbf. test.prj, test.shx etc.

** Please note the following:

- **For LAT, the shapefile can only contain polygon shape features**
- **The shapefile extension must be in lowercase i.e. (.shp, .dbf, .prj, .shx)**

File naming:

There are no standards with respect to the naming convention for the base name (prefix), as long as it is supported by the ESRI shapefile format. The shape records attribute records and projection file must all have the same base name. For example gravel.shp:

Gravel – This is the base name while *.shp* – Is the extension, so all four files to be uploaded to LAT are named as (Gravel.shp, Gravel.dbf, Gravel.prj and Gravel.shx) with other extension files optional.

Map Projection and Datum:

All shapefiles must be in 10TM_AEP_FOREST projection. The following .prj file parameters are required.
PROJCS["NAD_1983_10TM_AEP_Forest",GEOGCS["GCS_North_American_1983",DATUM["D_North_American_1983",SPHEROID["GRS_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433]],PROJECTION["Transverse_Mercator"],PARAMETER["False_Easting",500000.0],PARAMETER["False_Northing",0.0],PARAMETER["Central_Meridian",115.0],PARAMETER["Scale_Factor",0.9992],PARAMETER["Latitude_Of_Origin",0.0],UNIT["Meter",1.0]]

Geo-referencing:

There are no standards with respect to geo-referencing; however for optimal results users should consider geo-referencing their data to the DIDS (Digital Integrated Dispositions) layer, or to the Base Features ATS Version 4.3.1

Shapefile Size Limitations:

The combined size of the four Shapefile files must not exceed 20480 KB.

Proposed Activity Size Limitations:

To optimize system performance, the following size limitations have been applied to Proposed Activities:

1. Using the online LAT Editor tool, the maximum area of a Mineral Surface Lease (MSL) and Pipeline Installation Lease (PIL) is 80 hectares (800,000 square metres);
2. Using the online LAT Editor tool, the maximum length of a License of Occupation (LOC) and Pipeline Agreement (PLA) Activity is 20 kilometres;
3. The overall maximum area of all uploaded shapefile Proposed Activities is 110 hectares (1,100,000 square metres);

**Note that these limits may be adjusted from time to time.

Shapefile Attributes and Attribute Values:

The following table contains a description of the required attributes and attributes values represented as fields within the shape .dbf file.

Field Name	Type	Description	Purpose	Mandatory
ACT_TYPE	TEXT(10)	The Disposition, purpose type code and Activity Type for the proposed activity.	This information is used to select the appropriate approval standards and operating conditions associated with the proposed project location. The disposition, purpose type and Activity type are displayed in the LAT Report.	Yes – this information must be pre-populated before uploading the shapefile. Refer to LAT Activity Code Table for valid codes to use.

Table 2 - Shapefile Attributes and Attribute Value Specification

ACT_TYPE is equivalent to the code to be used under the field name Activity Code on the spreadsheet, which lists all eligible activity codes to be used for a proposed activity layer.