



Zoning: Technical Guidance Note 5

Updating Zoning Layers

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Table of Contents

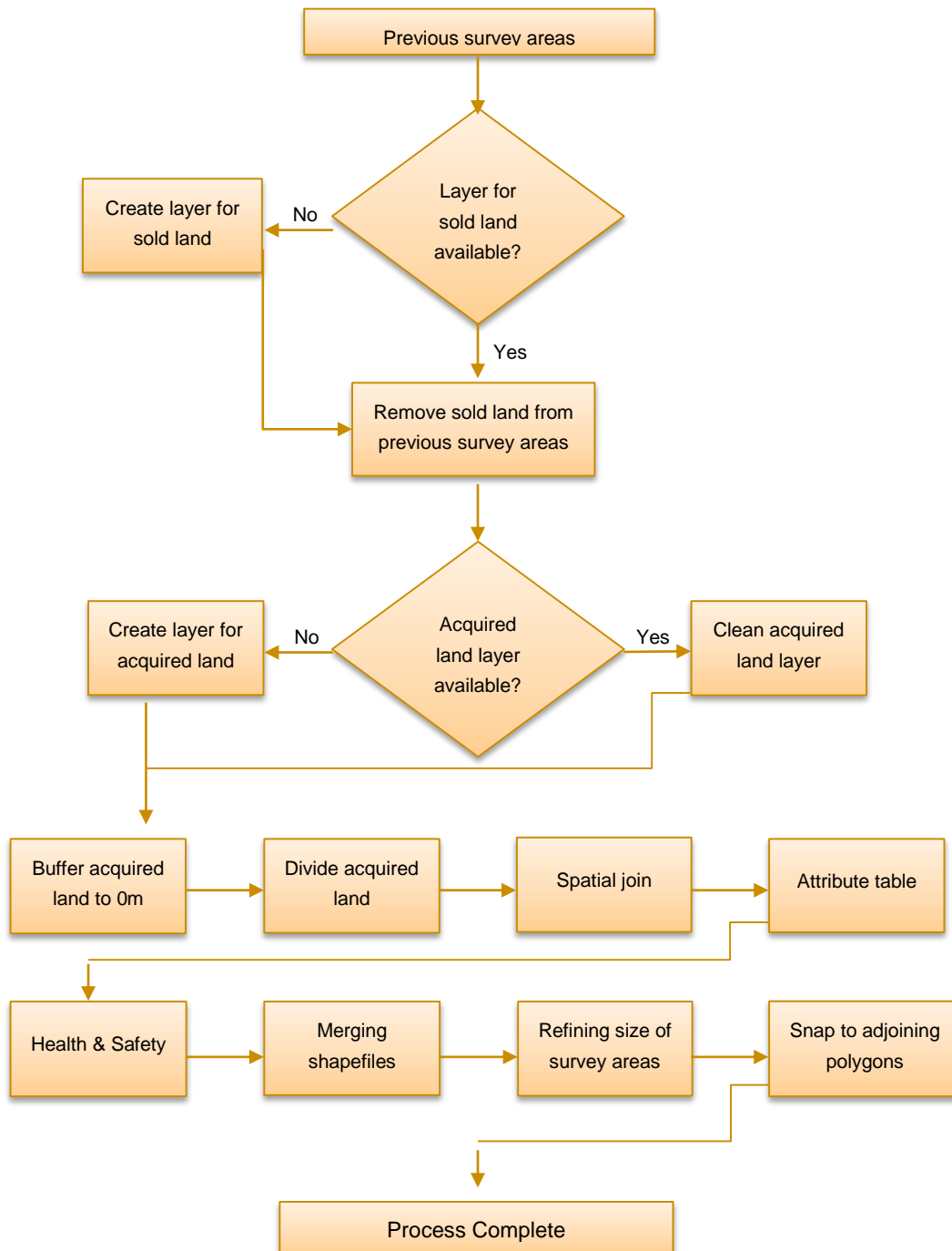
1. Introduction	3
2. The Process	3
2.2. Adding Newly Acquired Land	6
2.2.1. Creating An 'Acquired' layer	6
2.2.2. If An 'Acquired' Layer Already Exists	6
2.3. Buffering 'Acquired' Land to 0m	7
2.4. Dividing 'Acquired' Land	7
2.5. Spatial Join	8
2.6. Attribute Table	9
2.7. Removing Locations With Health & Safety or Access Issues	9
2.8. Merging Shapefiles	11
2.9. Refining Survey Area Size	12
2.10. Snapping to Adjoining Polygons	14

1. Introduction

Local Authority land ownership and areas of responsibility are not static. Therefore, it is necessary to periodically update the zoning layers to reflect any changes. It is important when making these changes, that the unique identifiers associated with unchanged land are not affected.

Technical Guidance Note 6 provides a step-by-step guide to updating zoning layers in future years..

2. The Process



Figures 1 and 2 provide a simple example to demonstrate the process:

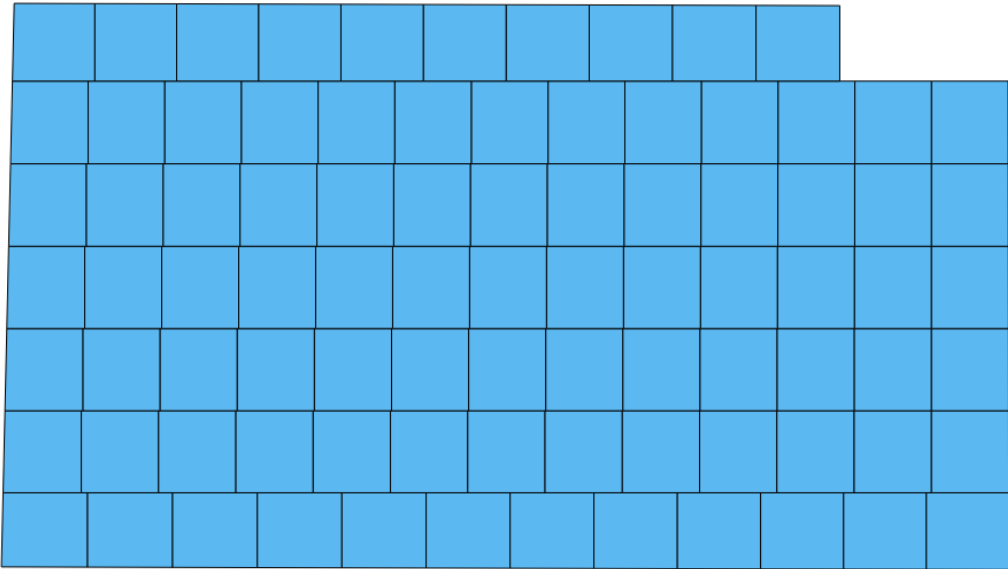


Figure 1: Survey areas 2017 (herefter referred to as '2017')

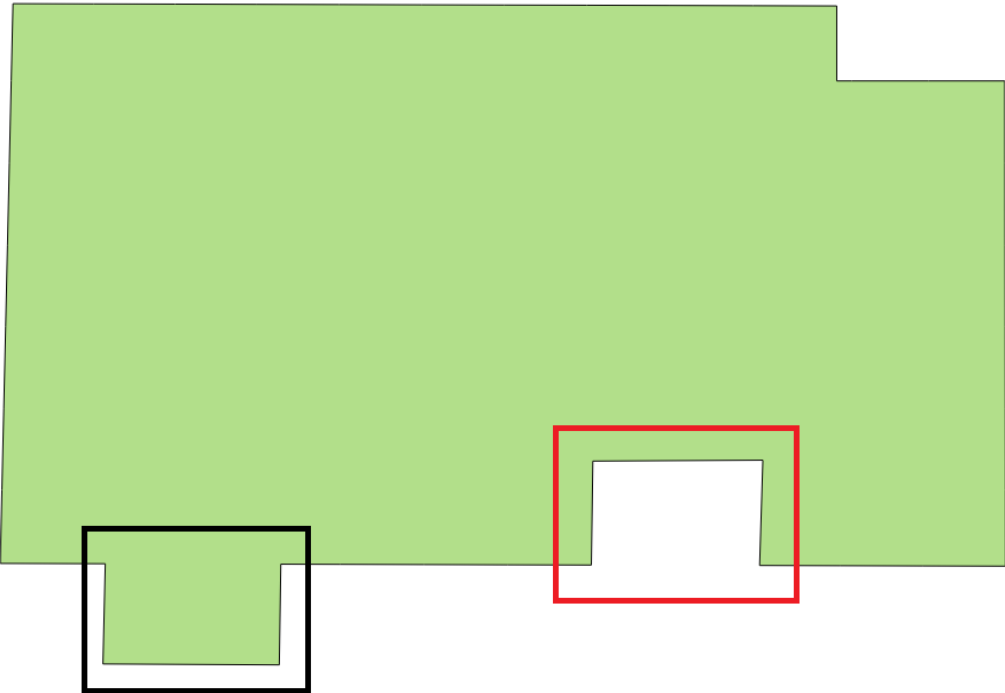


Figure 2: Land ownership / responsibility 2018 (hereafter referred to as '2018 Boundary')

Changes since the 2017 assessment have been highlighted as follows:

- A red square has been used to highlight where land has been sold; and
- A black square has been used to highlight where further land has been acquired.

These changes to the land boundary need to be reflected for the 2018 survey areas.

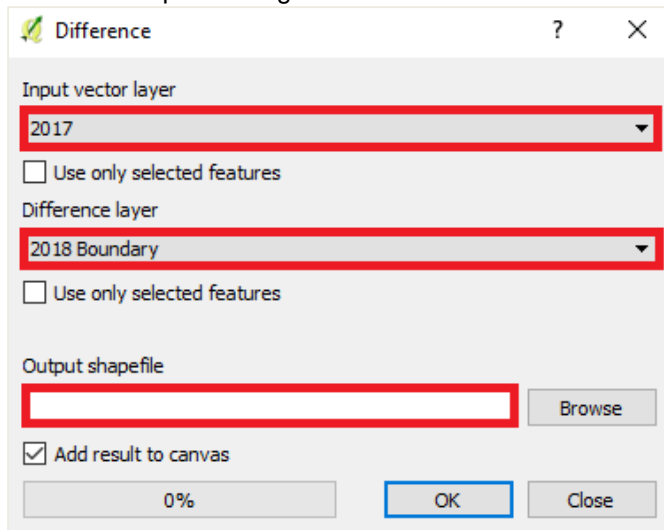
2.1. Removal of Sold Land

The first step is to create a layer that represents land that you are no longer responsible for (henceforth referred to as sold). If you already have such a layer skip to Paragraph 2.8.

2.1.1. Creating A 'Sold' Layer

To create the 'Sold' layer you need to cut the '2018 Boundary' layer from the '2017' layer. The process is as follows:

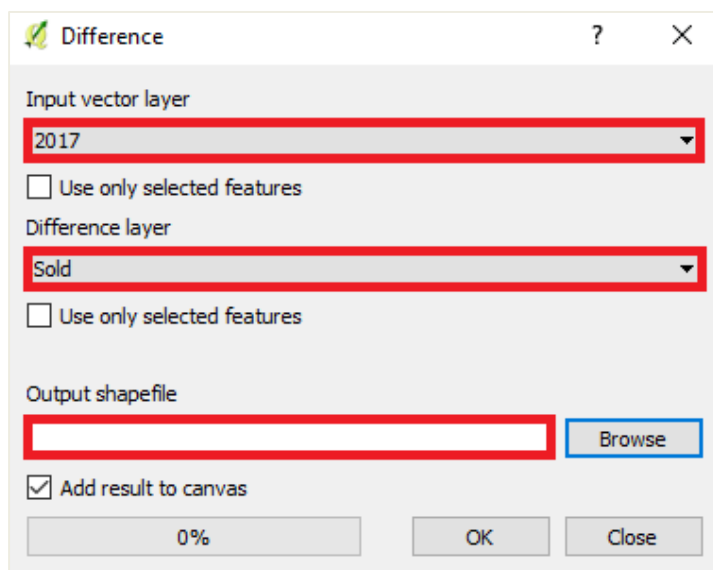
- Vector > Geoprocessing Tools > Difference



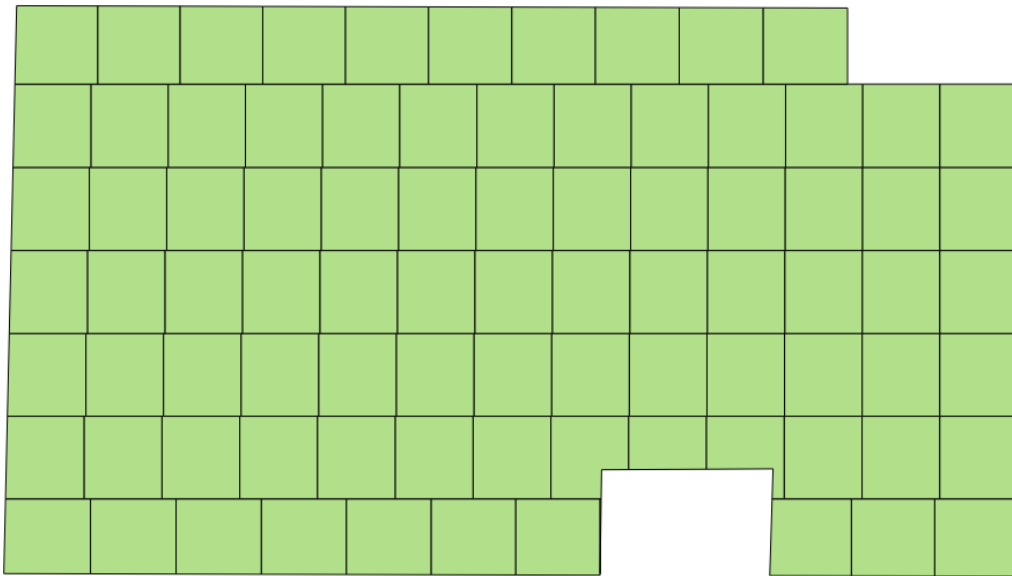
2.1.2. Removing Sold Land

The removal of land that has been sold involves cutting the 'Sold' layer from the '2017' layer. The process is as follows:

- Vector > Geoprocessing Tools > Difference:



- **Important:** Create a sub-folder called 'merge' and save the 'Output shapefile' there.
- You now have a layer ('2017 Sold') that takes into account the land that has been sold:



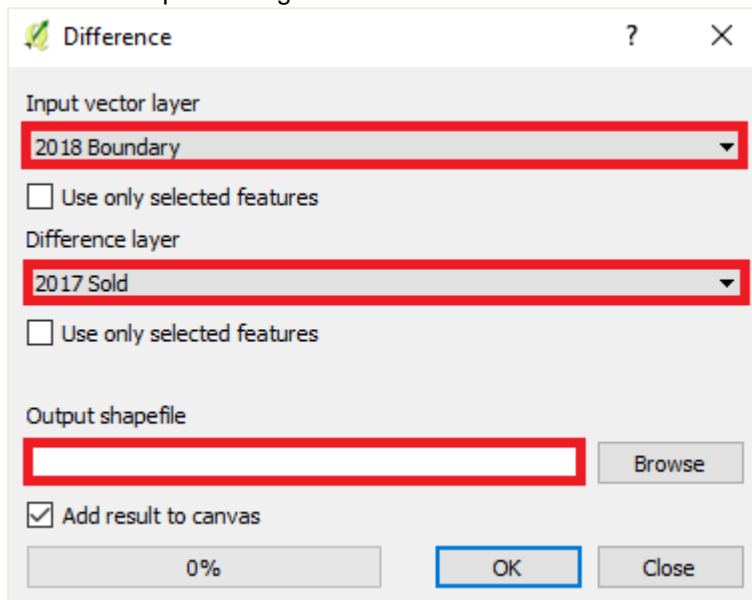
2.2. Adding Newly Acquired Land

The next step is to create a layer that represents land that has been acquired since the 2017 survey areas were created (hereafter referred to as 'Acquired'). If you already have such a layer skip to Section 2.2.2.

2.2.1. Creating An 'Acquired' layer

To create an 'Acquired' layer you need to cut the '2017 Sold' layer from the '2018 Boundary' layer. The process is as follows:

- Vector > Geoprocessing Tools > Difference



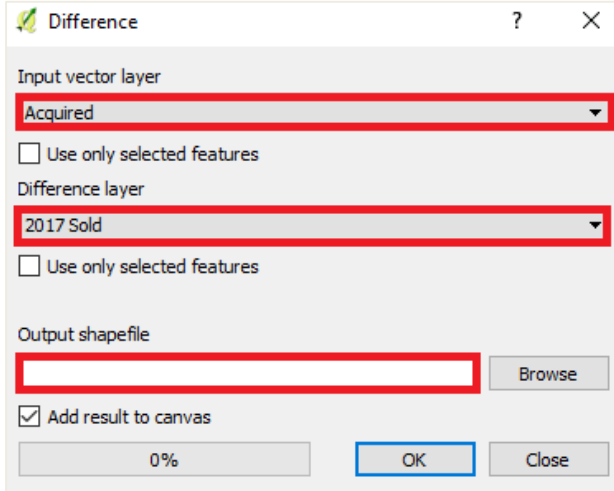
2.2.2. If An 'Acquired' Layer Already Exists

If you have just created an 'Acquired' layer you can skip to Section 2.3.

It is important that your 'Acquired' layer doesn't overlap the '2017 Sold' layer. Therefore it is recommended you cut the '2017 Sold' layer from the 'Acquired' layer before proceeding.

The process is as follows:

- Vector > Geoprocessing Tools > Difference

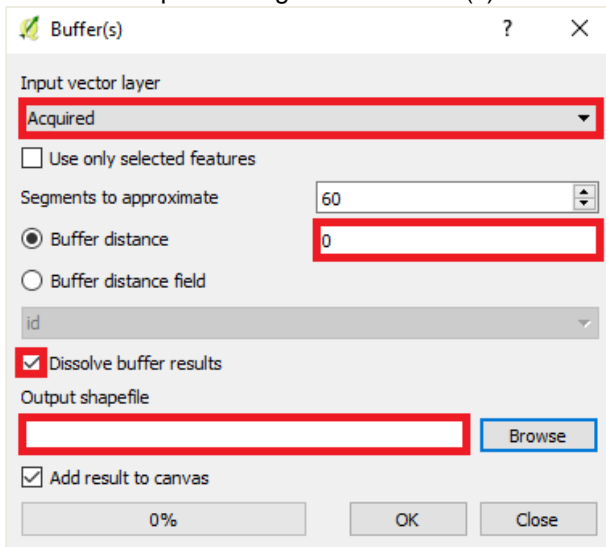


2.3. Buffering 'Acquired' Land to 0m

To ensure more uniformly shaped survey areas, the 'Acquired' layer should be buffered to 0m. This should dissolve the layer and have the additional benefit of removing a lot of the errors (further details on dissolving/buffering are provided in Zoning: Technical Guidance Note 4).

The process is as follows:


- Vector > Geoprocessing Tools > Buffer(s):

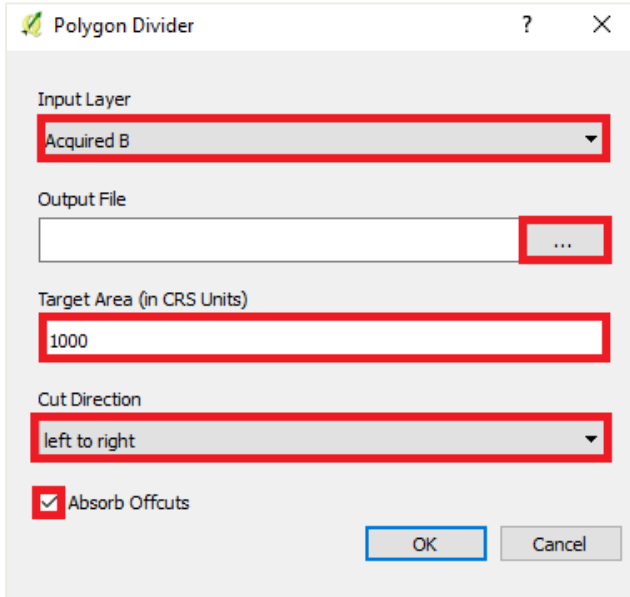


2.4. Dividing 'Acquired' Land

The newly buffered acquired land ('Acquired B') can now be divided using the 'Polygon Divider'.

The process is as follows:

- Click on the 'Polygon Divider' button  in the top toolbar (or select from the 'Plugins' pulldown menu):








Further details on the 'Polygon Divider' are provided in Zoning: Technical Guidance Note 4.

2.5. Spatial Join

Please note: This step is only required if you have dissolved or buffered your 'Acquired' layer prior to dividing it.

Before performing the 'Spatial Join', it is important that any fields relating to the original undissolved 'Acquired' layer are removed. This is to ensure the joined layer doesn't have duplicates that impact the prescribed attribute naming conventions.

The process for deleting fields from the 'Attribute Table' is as follows:

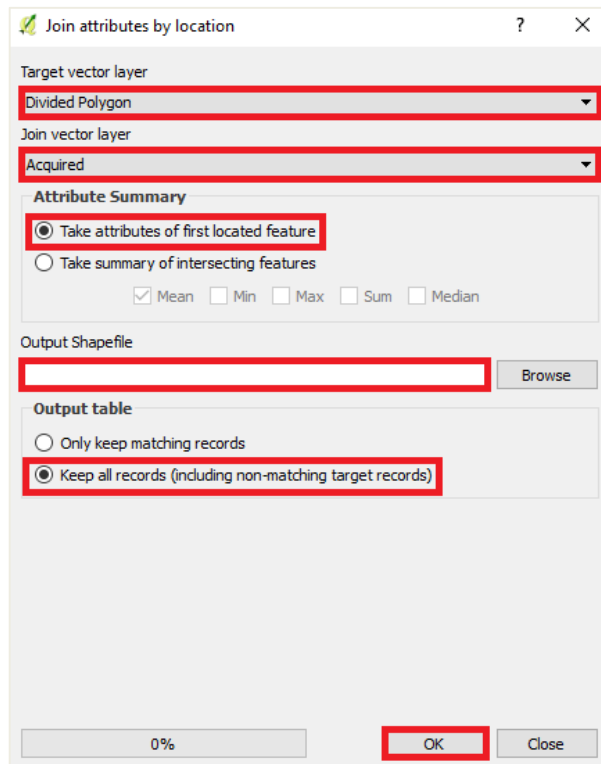
- Left click on the divided layer in the 'Map Legend';
- Click on the 'Attribute Table' button  on the top toolbar;
- Make the layer editable ;
- Click on the delete fields button ;
- Select the layers you want to delete from the dialog box and click 'OK';
- It may take a few minutes if you are deleting a number of fields from a large database; and
- Save the changes  and stop the layer from being editable .

The only fields remaining after the above process should be:

- Poly_ID;
- Unique_ID;
- Area;
- PointX; and
- PointY.

The 'Spatial Join' process is as follows:

- The 'Spatial Join' tool is accessed via Vector > Data Management Tools > Join Attributes by Location;
- The 'Target vector layer' is the divided polygon;
- The 'Join vector layer' is your original undissolved/unbuffered 'Acquired' layer;
- Browse to where you want to save the new layer;
- **Important:** Change the 'Output table' from the default position to 'Keep all records (including non-matching target records)';
- Click 'OK':



2.6. Attribute Table


Any unwanted or duplicate fields should be deleted  from the 'Attribute Table'. The exact fields that should remain:

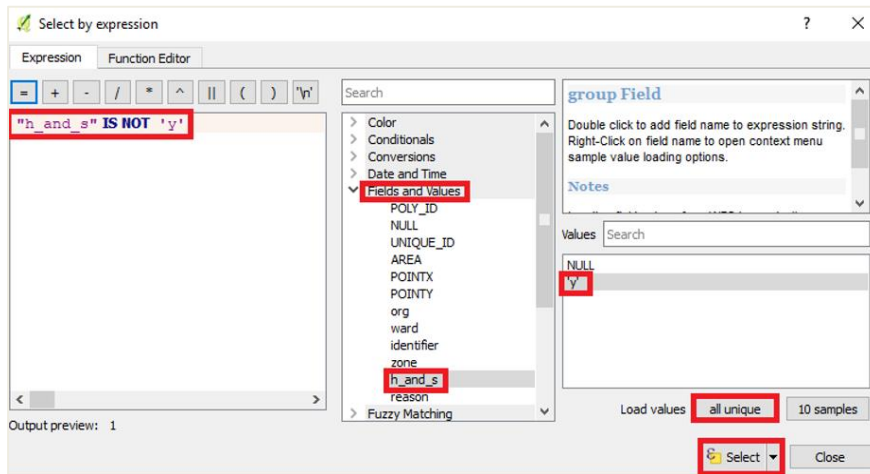
- Org;
- Ward;
- Identifier;
- Zone;
- H_and_S;
- Reason;
- Poly_ID;
- Unique_ID;
- Area;
- PointX; and
- PointY.

2.7. Removing Locations With Health & Safety or Access Issues

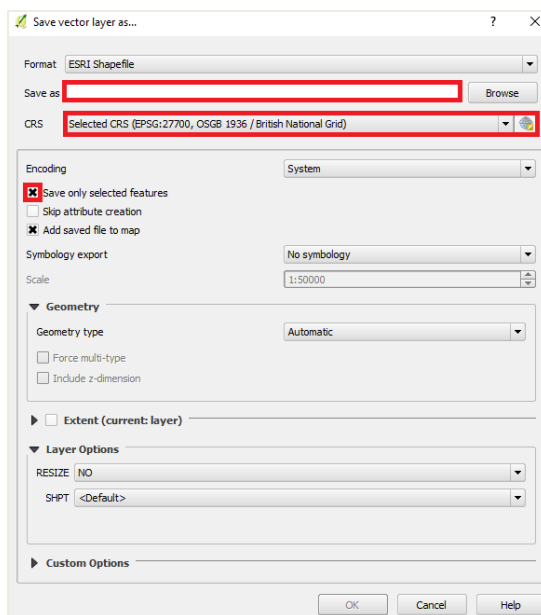
The next step is to remove any new survey areas that have H&S or access issues.

The process is as follows:

- Left click on the layer in the 'Map Legend';
- Click on the 'Select features using an expression'  button in the top toolbar;
- In the dialog box, expand the 'Fields and Values' list and double click on 'h_and_s';
- Type: **IS NOT**;
- Click on the 'all unique' button and double click on 'Y' in the box above;
- The dialog box should look like this:



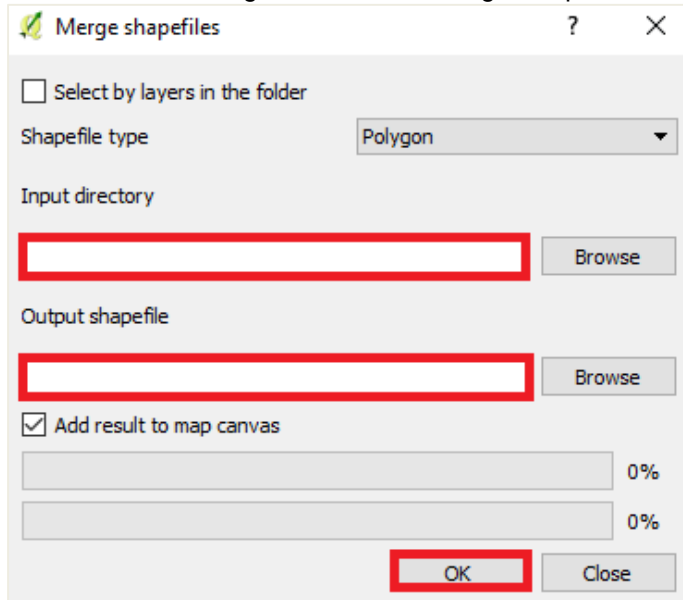
- Click on the 'Select' button on the bottom right of the dialog box:
- Close the dialog box:
- Right click on your layer in the 'Map Legend' and select 'Save As...';
- **Important:** Save file to the 'Merge' sub-folder;
- Make sure the CRS is British National Grid;
- **Important:** Check the 'Save only selected features' checkbox;
- Click 'OK':



2.8. Merging Shapefiles

The next step is to merge the previously created '2017 Sold' layer to the layer you have just created. Both layers should have been saved in the 'Merge' sub-folder. The process is as follows:

- Vector > Data Management Tools > Merge Shapefiles to One:



- The 'Input directory' is the 'Merge' folder.

You now have a divided layer, that takes into account the sold and acquired land (Figure 4).

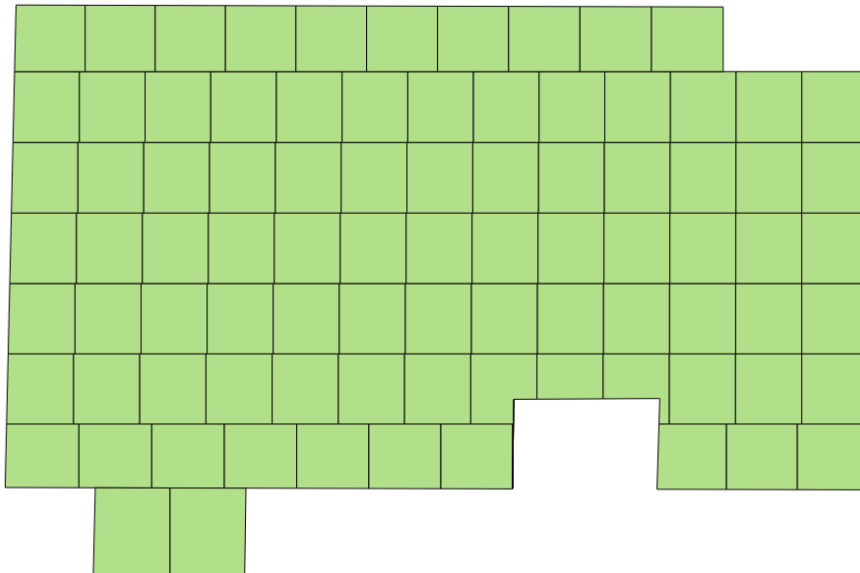



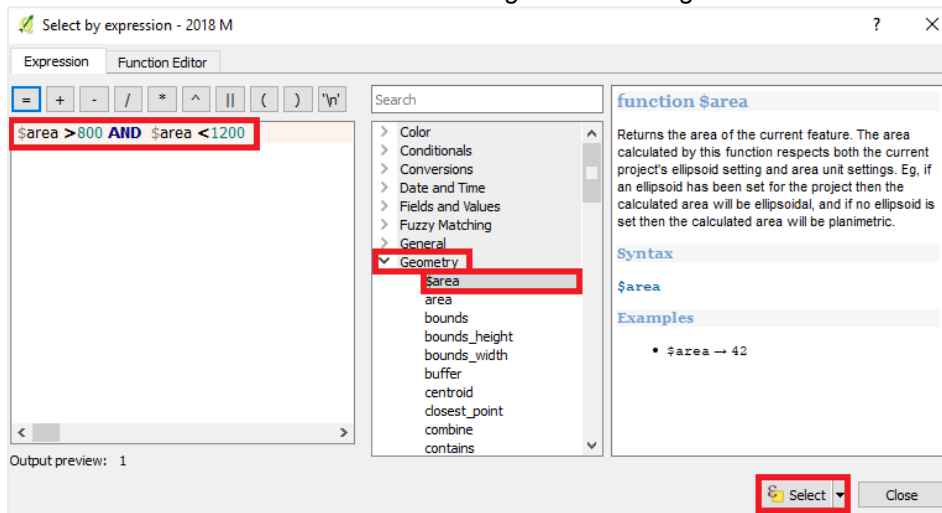
Figure 3: Merged layers

2.9. Refining Survey Area Size

The process of removing and adding sections of land may have resulted in the creation of survey areas that are smaller or larger than required. Therefore, we need to refine the size of the survey areas within the merged layer ('2018 M') so that only those with an area between 800m² and 1200m² are included.

The process for refining the survey areas is as follows:

- Left click on your '2018 M' layer in the 'Map Legend';
- Click on the 'Select features using an expression'  button in the top toolbar;
- In the dialog box, expand the '**Geometry**' list and double click on '\$area':
 - Type: > 800 AND \$area <1200
 - It is **important** that you do **not** use "Area" from 'Fields and Values'.
- Click on the 'Select' button at the bottom right of the dialog box:



- Close the dialog box.

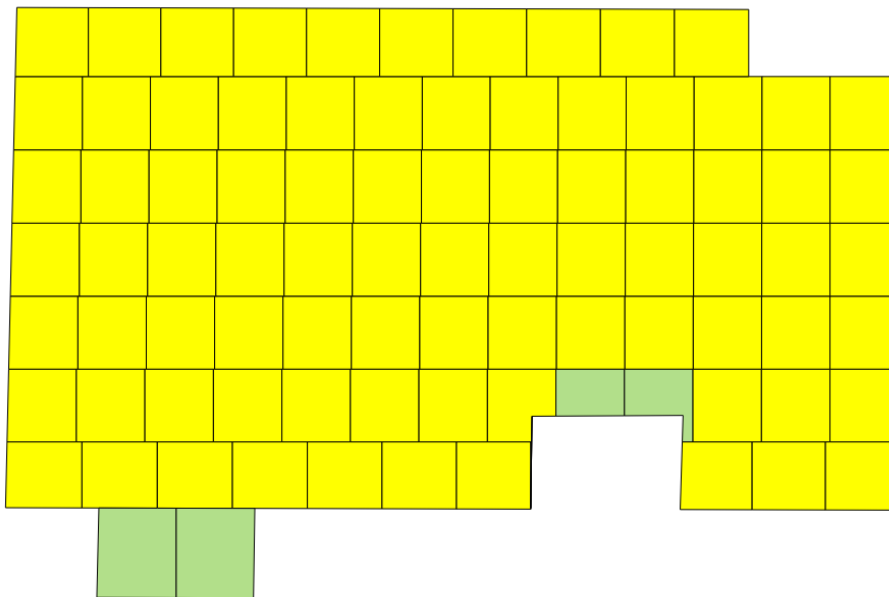
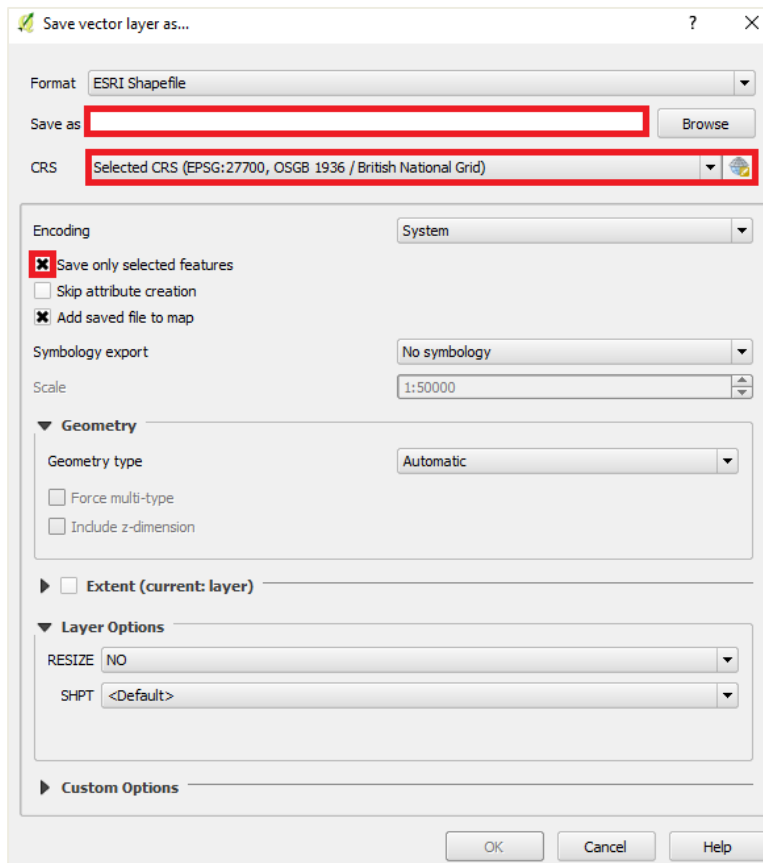


Figure 4: Survey areas of defined area that have been selected (yellow)

- Right click on your merged layer (2018 M) in the 'Map Legend' and select 'Save As...';
- Browse to where you want the new layer to be saved;
- Make sure the CRS is British National Grid;
- **Important:** Check the 'Save only selected features' checkbox;
- Click 'OK':



You now have a layer ('2018') that represents the 2018 survey areas (see Figure 6). In other words, a layer that maintains the previously assigned survey areas and accounts for the subsequent changes in land ownership.

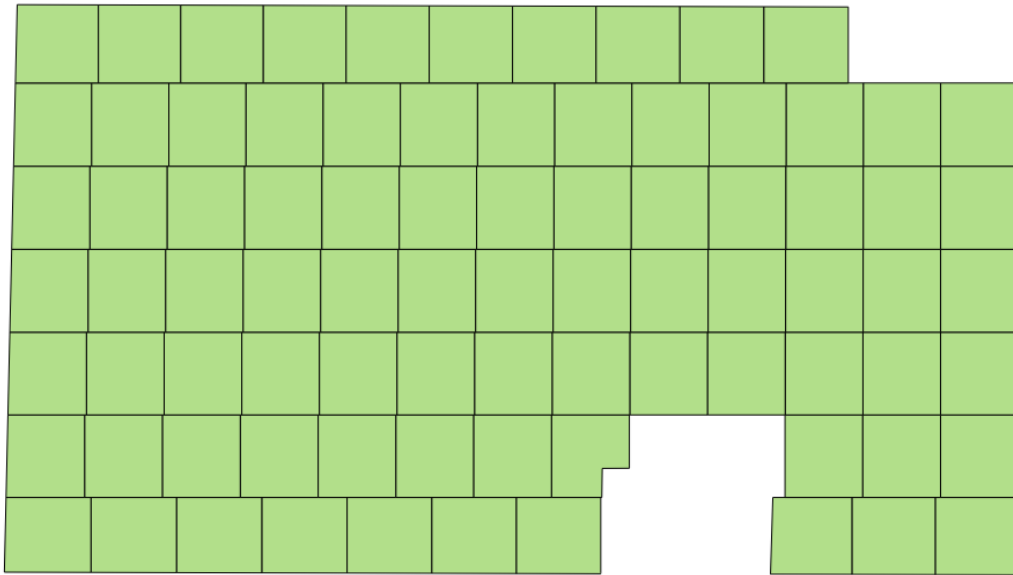


Figure 5: '2018' survey areas

2.10. Snapping to Adjoining Polygons

Finally, there may be instances where there are unnecessary gaps between sections of newly acquired land and existing survey areas. Where this occurs, the snapping tolerances should be set (see Zoning: Technical Guidance Note 1), the layer should be made editable, and the polygons snapped together.

Once the adjustments have been made, the 'Topology Checker' should be used to make sure no overlaps have been created (See Zoning: Technical Guidance Note 3).

The process of updating the zoned layer is now complete.

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