Area-wide licence (AWL) tax calculator guide

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Canberra

Red Building   
Benjamin Offices  
Chan Street   
Belconnen ACT

PO Box 78  
Belconnen ACT 2616

T +61 2 6219 5555  
F +61 2 6219 5353

Melbourne

Level 32   
Melbourne Central Tower  
360 Elizabeth Street   
Melbourne VIC

PO Box 13112  
Law Courts   
Melbourne VIC 8010

T +61 3 9963 6800  
F +61 3 9963 6899

Sydney

Level 5   
The Bay Centre  
65 Pirrama Road   
Pyrmont NSW

PO Box Q500  
Queen Victoria Building   
NSW 1230

T +61 2 9334 7700 or 1800 226 667  
F +61 2 9334 7799

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Written enquiries may be sent to:

Manager, Editorial Services  
PO Box 13112  
Law Courts  
Melbourne VIC 8010  
Email: [info@acma.gov.au](mailto:info@acma.gov.au)

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# AWL tax calculator

The AWL tax calculator has been created to assist users in estimating annual tax amounts for ‘area-wide licences’ (AWLs) in the wider 26 and 28 GHz bands. The AWL tax calculator assists in estimating the associated taxes. You are reminded that additional fees will apply for the issue of the licence.

Each part of the AWL tax calculator spreadsheet relates to a different input into the AWL tax formula. The annual AWL tax formula is the following:

*AWL tax = $/MHz/pop price x bandwidth (MHz) x population of geographic area*

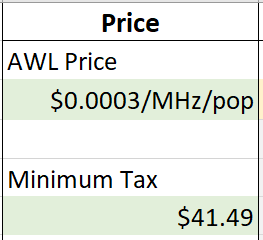
To demonstrate how to use the AWL tax calculator spreadsheet, an abstract example scenario has been generated. The example is based on Company A wishing to deploy a fixed wireless service in Newcastle and areas of regional New South Wales.

To simplify the AWL tax calculator, only yellow cells require user input – the other cells will then automatically calculate the tax based on the user input.

1. **Price**

The ACMA is proposing a fixed AWL tax of $0.0003/MHz/pop in the wider 26 GHz and 28 GHz bands. This pre-determined price will appear in the calculator, it does not require users to input this value and it cannot be altered.

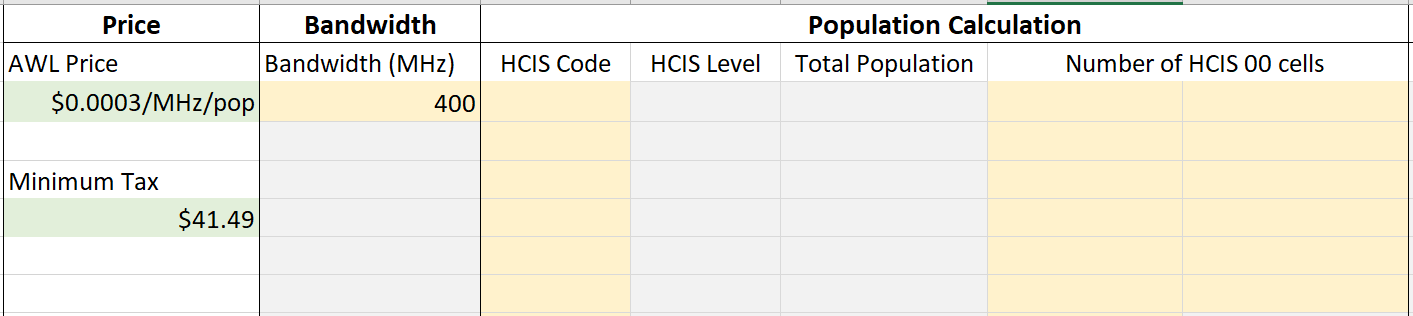
The minimum tax for an AWL is currently $41.49. The minimum tax constraint will be applied to the aggregate cost of the AWL, not to the individual tax per area or cell.



Fixed prices

1. **Insert the total bandwidth**

The next step for licensees is to input the amount of bandwidth (MHz) required for their service into the first column (C).



1. **Determining the total population**

For licensees interested in HCIS codes higher than level 1 will only need to complete Step 3a – those with any HCIS level 1 code must complete Steps 3a, 3b and 3c.

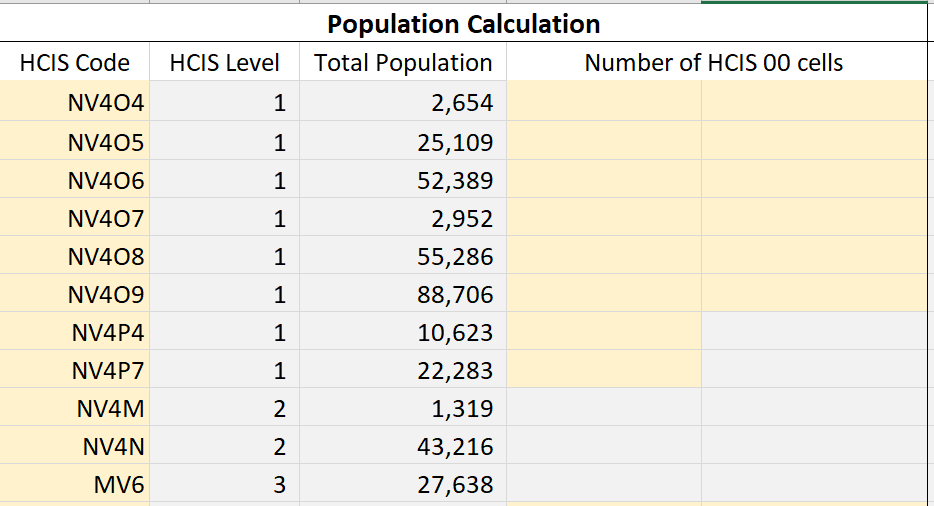
**3a. Identifying the HCIS codes**

Licensees not familiar with the hierarchical cell identification scheme (HCIS) or the specific codes desired, are directed to the [ACMA Site Location Map](https://web.acma.gov.au/rrl/site_proximity.main_page) (see instructions to use the tool in Appendix A.5). As the Site Location Map is limited to identifying codes above HCIS level 2, the ACMA recommends consulting an accredited person (AP) or utilising geospatial software to obtain HCIS level 1 information.

For each HCIS code that has been identified and input into the calculator, the corresponding HCIS level and population will be automatically generated. Note, all codes that generate a level above 1 will grey out the following columns – see step 3b.

In this case, a portion of Company A’s HCIS codes have displayed multiple level 1 which represents the Newcastle area, as well as the level 2 and 3 which represents the interested area in regional New South Wales.[[1]](#footnote-2)

To confirm the HCIS code is correct geographically, use the [HCIS converter](https://www.acma.gov.au/convert-hcis-area-description-placemark) or the above mentioned Site Location Map. See [Appendix A](#_HCIS_Converter).



**3b. Choose the number or maximum option**

The next step requires the user to choose an option, either “Number” or “Max” from the dropdown list.

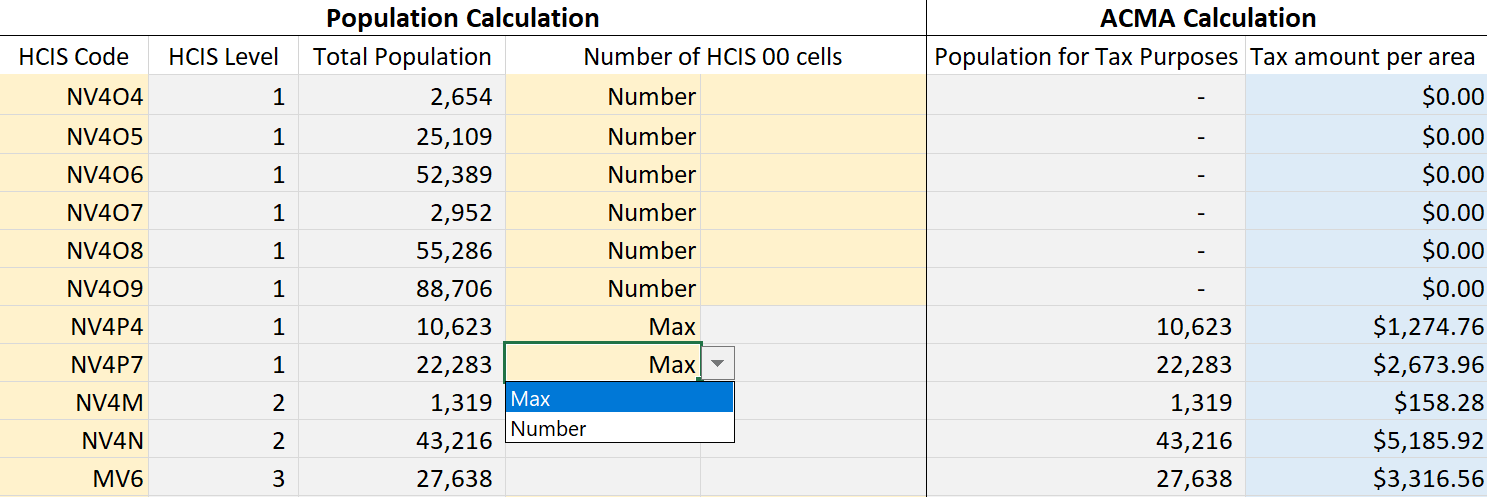
For licensees requiring HCIS level 2-4 codes only:

Those deploying a service in areas greater than a HCIS level 1 will not have the option to specify the number of 00 cells. Instead will be forced to choose the “Max” option which will calculate the tax based on all 00 cells in that location.[[2]](#footnote-3) Therefore, these licensees will not need to input any further values and can move to view their estimated annual AWL tax.

For licensees requiring HCIS level 1 codes:

If “Number” is chosen, the licensee is indicating it wishes to express an exact amount of HCIS level 00 cells it desires in the corresponding HCIS code. Go on to Step 3c.

If “Max” is chosen, the licensee is indicating it wants to obtain the maximum HCIS level 00 cells available in the corresponding HCIS Code. This will automatically grey out the next column and generate the maximum number of HCIS 00 cells will in the ACMA calculation section.

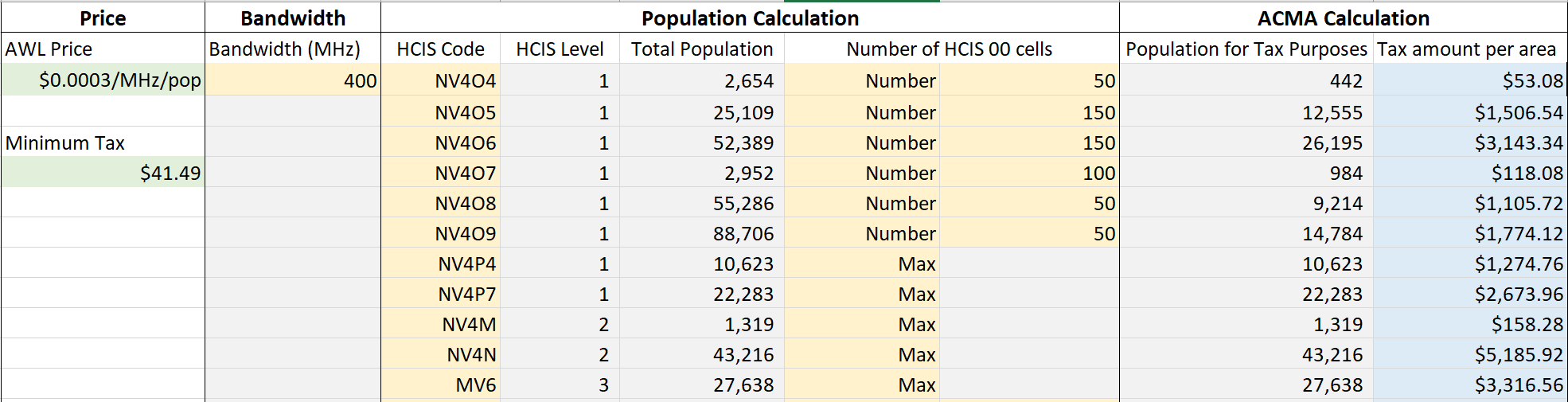


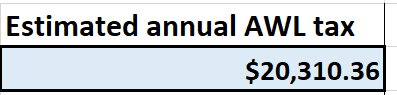
**3c. Specify the amount of HCIS 00 cells**

If “Number” is chosen for any of the HCIS level 1 codes, the user must specify the amount of HCIS 00 cells desired in a single code from 1-300. See ranges in [Appendix A](#_Taxes_and_charges).

If all HCIS Codes are above level 1 or the licensee has opted the max amount of 00 cells for all HCIS codes entered, the column will be greyed out and licensees can move onto Step 4.

In this case, Company A has a combination of “Number” and “Max” options so must complete Step 3.

Once this is complete the ACMA calculation section will have all the necessary values to calculate the tax based on the formula. The tax per HCIS Code is displayed in the blue cells.[[3]](#footnote-4)



Company A would expect to pay a total annual AWL tax of $20,310.00 (rounded to nearest dollar) annually, for the specified Newcastle and regional NSW areas.

# Appendix A

## HCIS Code Identification

Geospatial information (site coordinates) is an important parameter for many radiocommunications licences. Geospatial information is used to define geographic areas for the apparatus-wide licences, record the locations of radiocommunication-s devices in the Register for Radiocommunications Licences (RRL) and define areas where specific rules apply—such as location-based spectrum embargos, band plans and class licences.

The Hierarchical Cell Identification Scheme (HCIS) is a naming convention developed by the ACMA that applies unique ‘names’ to each of the cells of [The Australian Spectrum Grid Map](https://www.acma.gov.au/australian-spectrum-map-grid). Each five minute of arc square cell is assigned a unique identifier, derived from the cell’s position in a hierarchically arranged grouping of cells. The current hierarchy has four levels, with the introduction of two further sublevels (HCIS level 0 and 00) created for smaller AWL sized cells.

1 HCIS Level 1 = Max 300 HCIS level 00 cells.

1 HCIS Level 2 = Max 2,700 HCIS level 00 cells

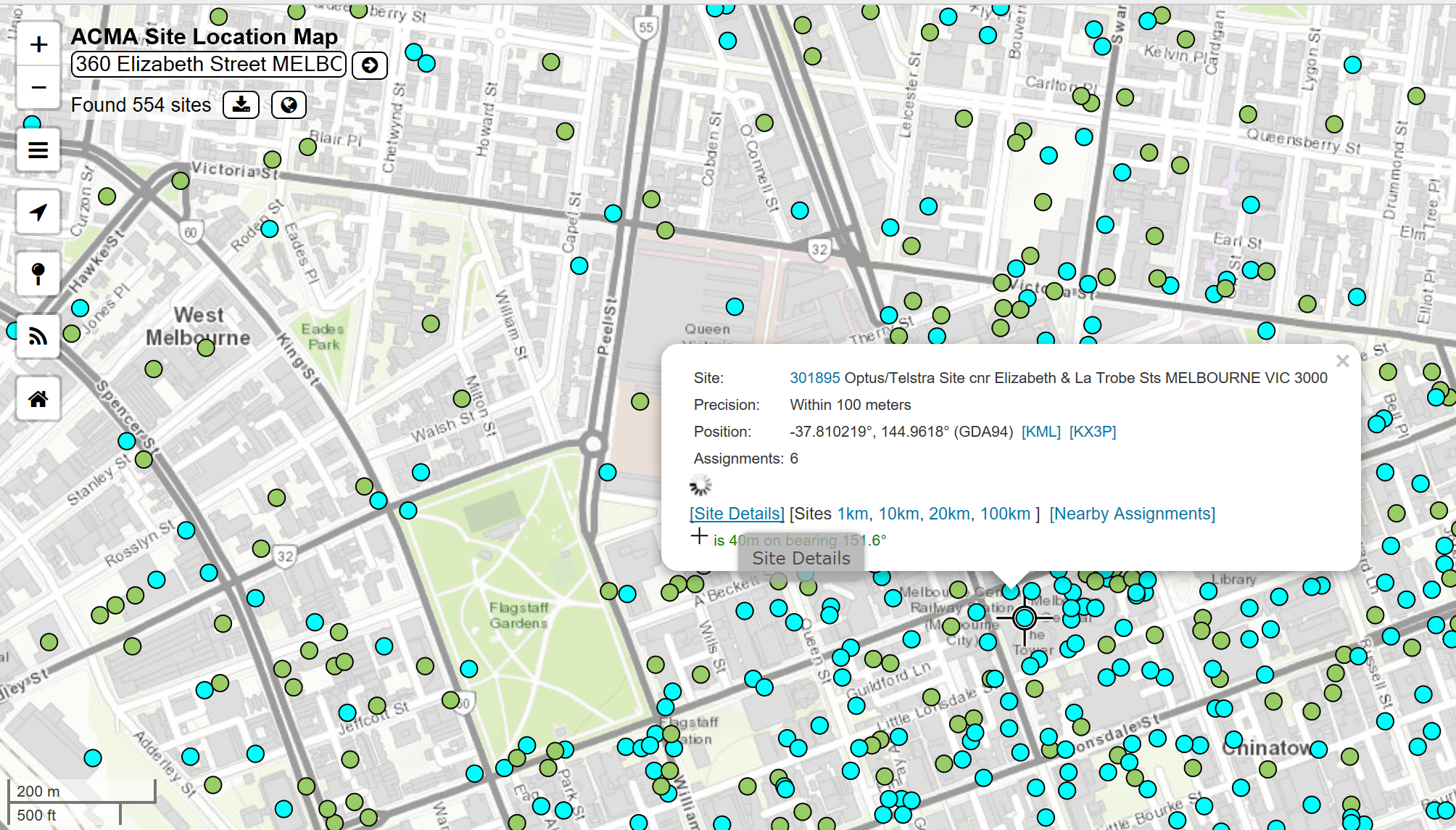
1 HCIS level 3 = Max 43,200 HCIS level 00 cells

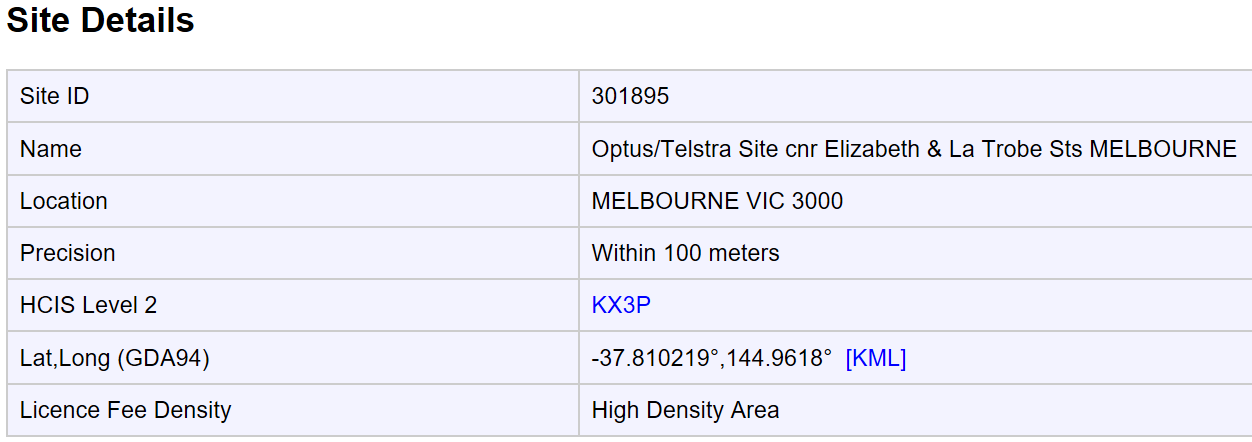
1 HCIS level 4 = Max 388,800 HCIS level 00 cells.

The use of the HCIS permits the description of areas that align with ASMG cells to be made independent of coordinate and datum references, by listing the identifiers of cells within the area.

### ACMA Site Location Map

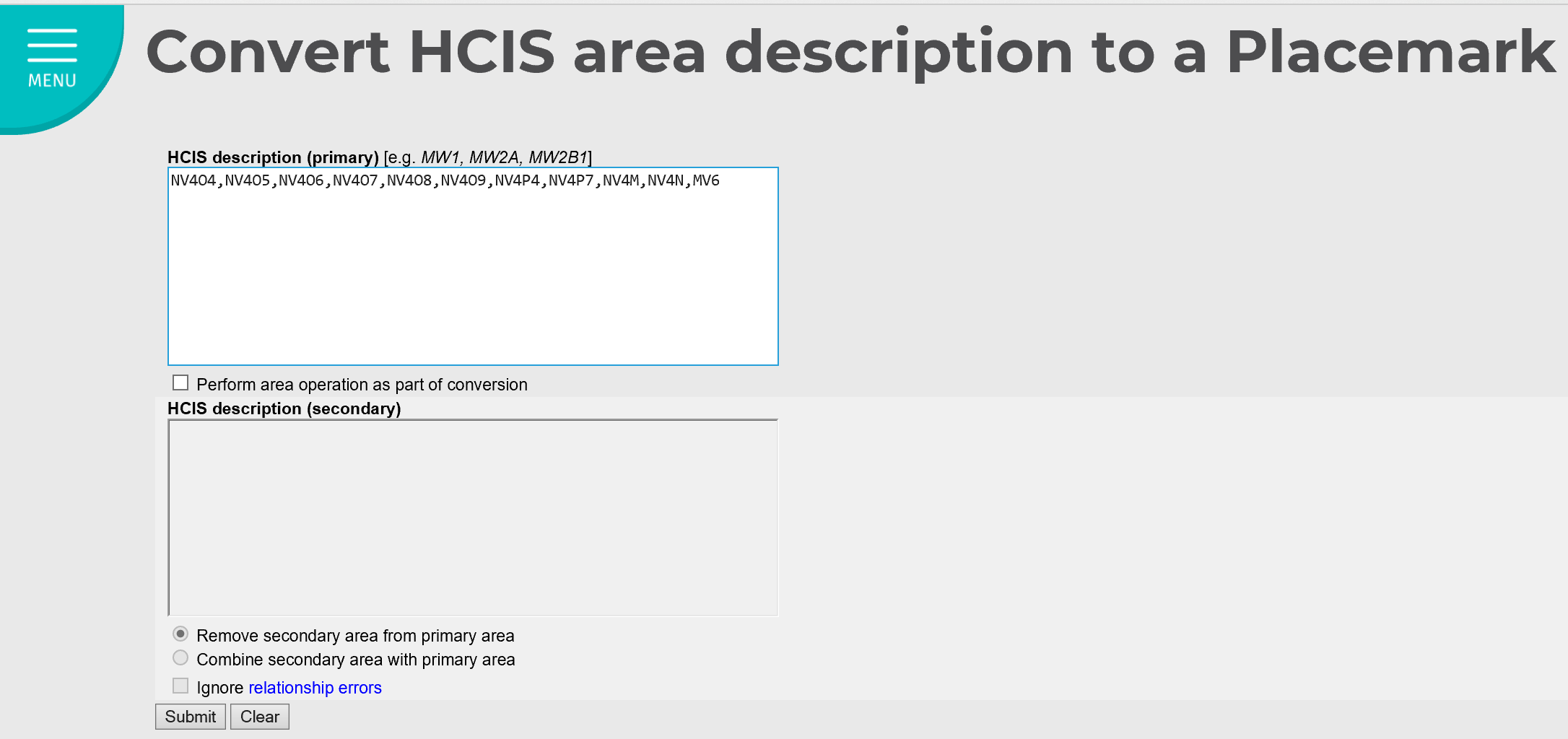
The [ACMA Site Location Map](https://web.acma.gov.au/rrl/site_proximity.main_page) tool allows the user to type a specific address or larger area into the search bar indicated below. This will return transmitters in the area in green/blue dots. The site information can be accessed when any dot is clicked which will take users to another page where they can view the HCIS Code for the area.

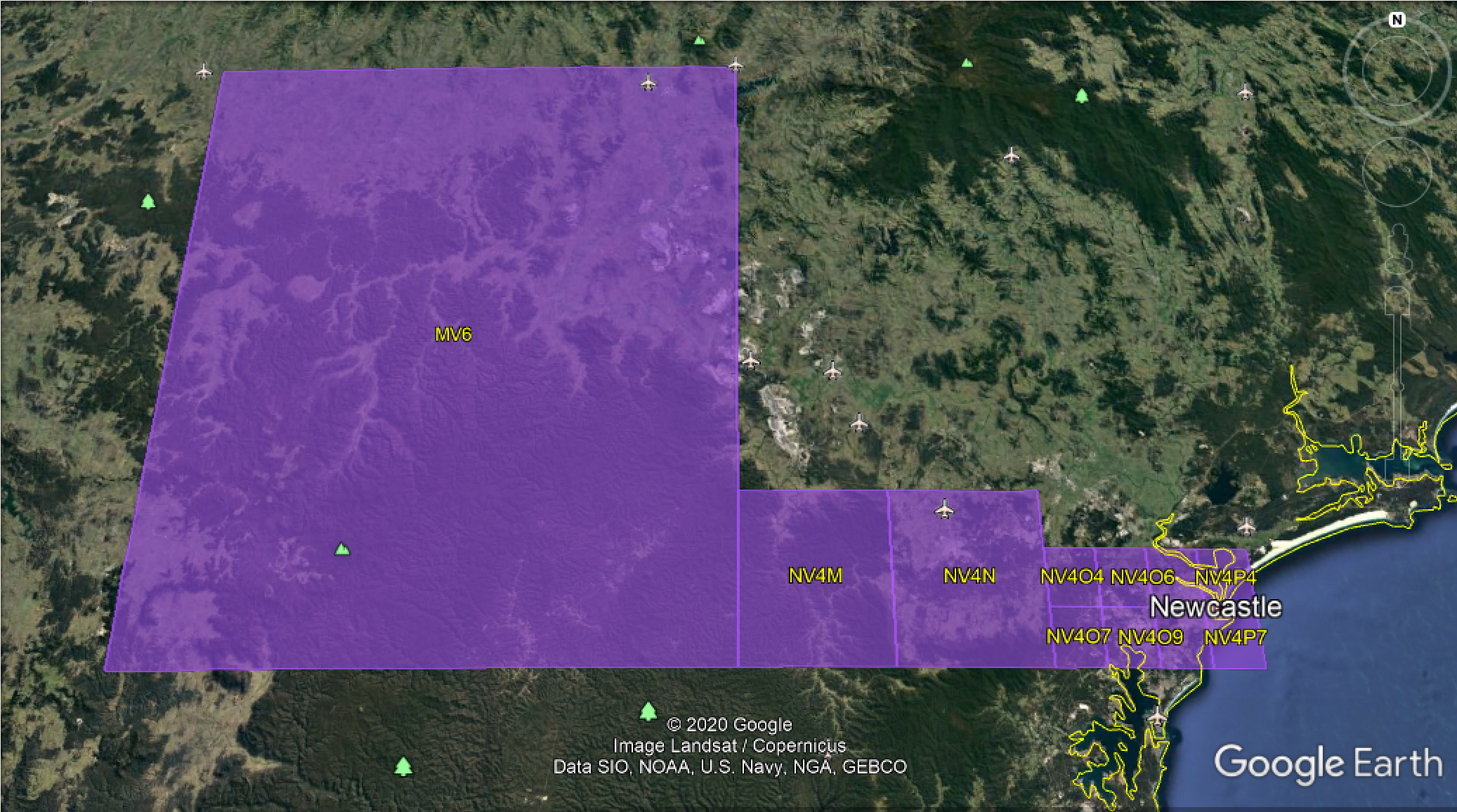




### HCIS Converter

The [HCIS converter](https://www.acma.gov.au/convert-hcis-area-description-placemark) tool allows users to input a HCIS code(s) (of any level) and identify the area it covers in Google Earth. For the above Company A example, the Google Earth image of the area they wish to service is shown below.





Therefore, using the ACMA Site Location Map to identify the HCIS level 2 code (e.g. NV4M) can establish its geographical position. Licensees can then use this information to identify the HCIS level 1 codes within this area, in this case NV4M1-9.

1. Note the dashes in the total population column represent a zero population for that HCIS code. [↑](#footnote-ref-2)
2. The ACMA assumes those wanting to occupy larger areas (HCIS level 1+) will most likely require all HCIS 00 cells in that code. [↑](#footnote-ref-3)
3. The ‘population for tax purposes’ reflects the portion of the total population for the HCIS level 1 code, based on the number of HCIS level 00 desired (e.g. NV4O5 has 25,109 people – if a user’s desires half of the total available cells in this code (150 HCIS 00 cells) then the population for tax is half also half of the total; 12,555). [↑](#footnote-ref-4)