

Appendix C – TRACC outputs

Modelling Assumptions - Spring 2024

20 settlements have been modelled for active travel (walking, and cycling), and public transport (bus, and train).

All isochrones indicate times to/from a central railway station, or a key 'High Street' or similar if the settlement is not served by rail.

All data is based on open-source DfT (Department for Transport) and Ordnance Survey data from Q4 2022. The models produced are intended to be indicative, not exhaustive. More-detailed 'Trafficmaster' road data could be explored if required.

Settlements:

Amersham	Burnham	Flackwell Heath	Little Chalfont
Aylesbury	Chalfont St. Giles	Gerrards Cross	Marlow
Beaconsfield	Chalfont St. Peter	Great Missenden	Princes Risborough
Bourne End	Chesham	Haddenham	Wendover
Buckingham	Farnham Common	High Wycombe	Winslow

Walking and Cycling:

Walk speed is 4.8 km/h (approximately 3 mph) and cycling speed is 16 km/h (10 mph) across all road types, excluding motorways which are considered off-limits.

Speed is assumed to be the same in both directions along any given link, accounting for any potential speed reductions going up hills and increases going down.

Hills can be accounted for in specific cases on request but would require extra time for modelling as each hill would have to be programmed into our maps manually.

Public Transport:

Only public transport services with a frequency greater than 1-per-hour have been used to calculate isochrones.

Bus and train service frequencies are based on real-world timetable schedules and are not influenced by traffic data or service reliability statistics.

In towns where all public transport services are less than 1-per-hour in frequency, public transport maps for these settlements are repeats of the walking maps.

Increased stop density will create a smaller isochrone due to increased numbers of stops made in the time allotted.

One-way roads that are not marked correctly in the open-source data set may have been included as bi-directional.

Certain bus routes such as Aylesbury to High Wycombe (served by identical 130 and X30 routes) are served by multiple bus operators that together create a frequent service but are less frequent individually. These have not been combined for the purposes of these maps.

Buses were run on an assumed one-hour minimum service (with exceptions for Aylesbury, Chesham, and High Wycombe, to account for errors in presentation).

Follow up work

Following the first tranche of work, other locations were also looked at using TRACC (focusing on walking, cycling, and bus accessibility).

These locations were:

- Silverstone
- Thame
- Tingewick
- Whitchurch
- Wing
- Brackley
- Leighton Buzzard

For the purposes of this report we have included walking, cycling and bus maps to show the relative sustainability of all settlements considered.

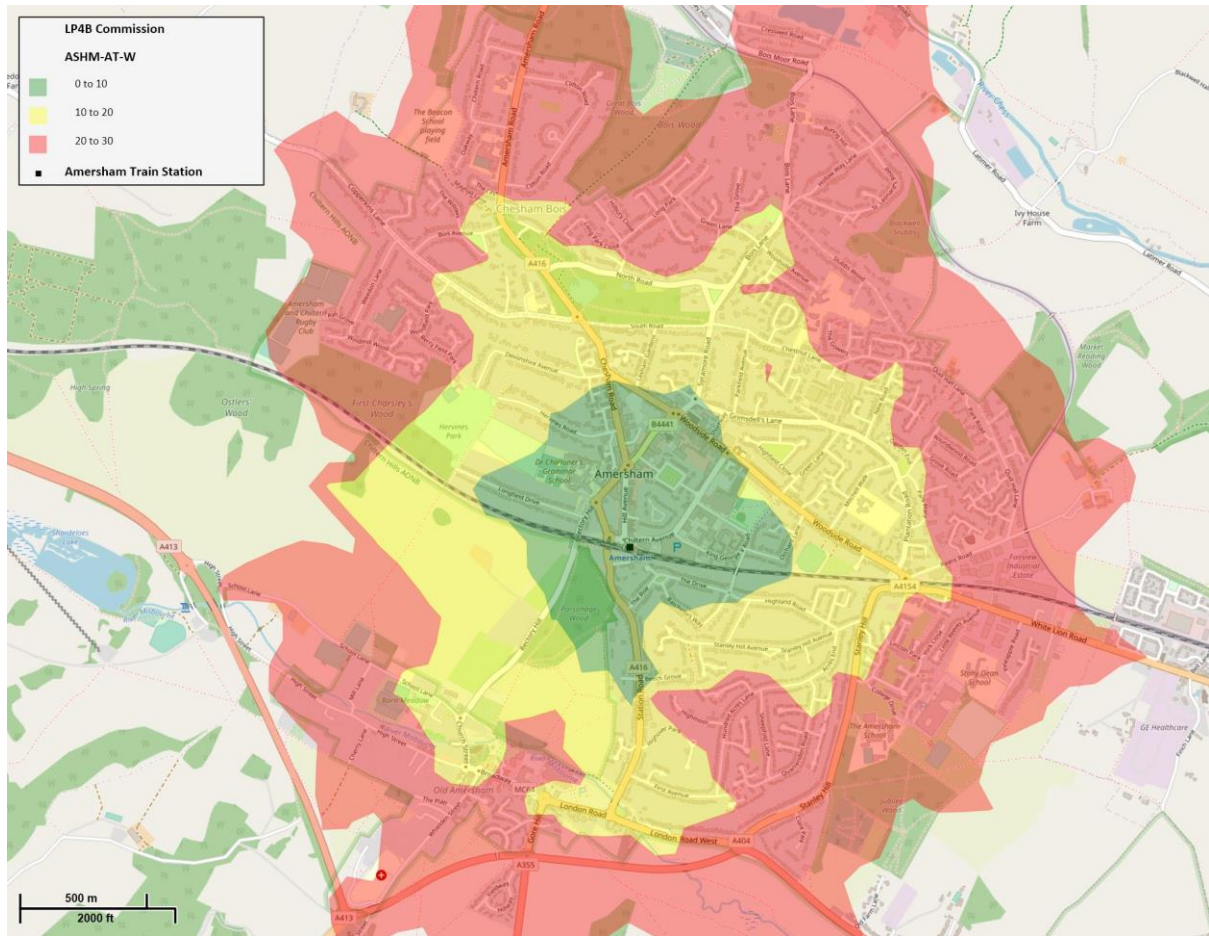
Data limitation:

There are limitations in the use of this data. Due to budgetary constraints, we have used a simplified set of average road speeds based on road type (as shown in the table above), rather than more-detailed road speeds per-link based on real-world observations. The isochrone areas may also include impassable locations within their bounds (e.g. private gardens or fields), as the models assume that all ground adjacent to roads can be walked- or cycled-on, albeit at greatly reduced speed. Finally, we have limited the resolution of our isochrone plots to reduce the amount of time required to process the models on non-specialist computer hardware. We are exploring the use of the EEH cadence tool in further site assessments for the Local Plan.

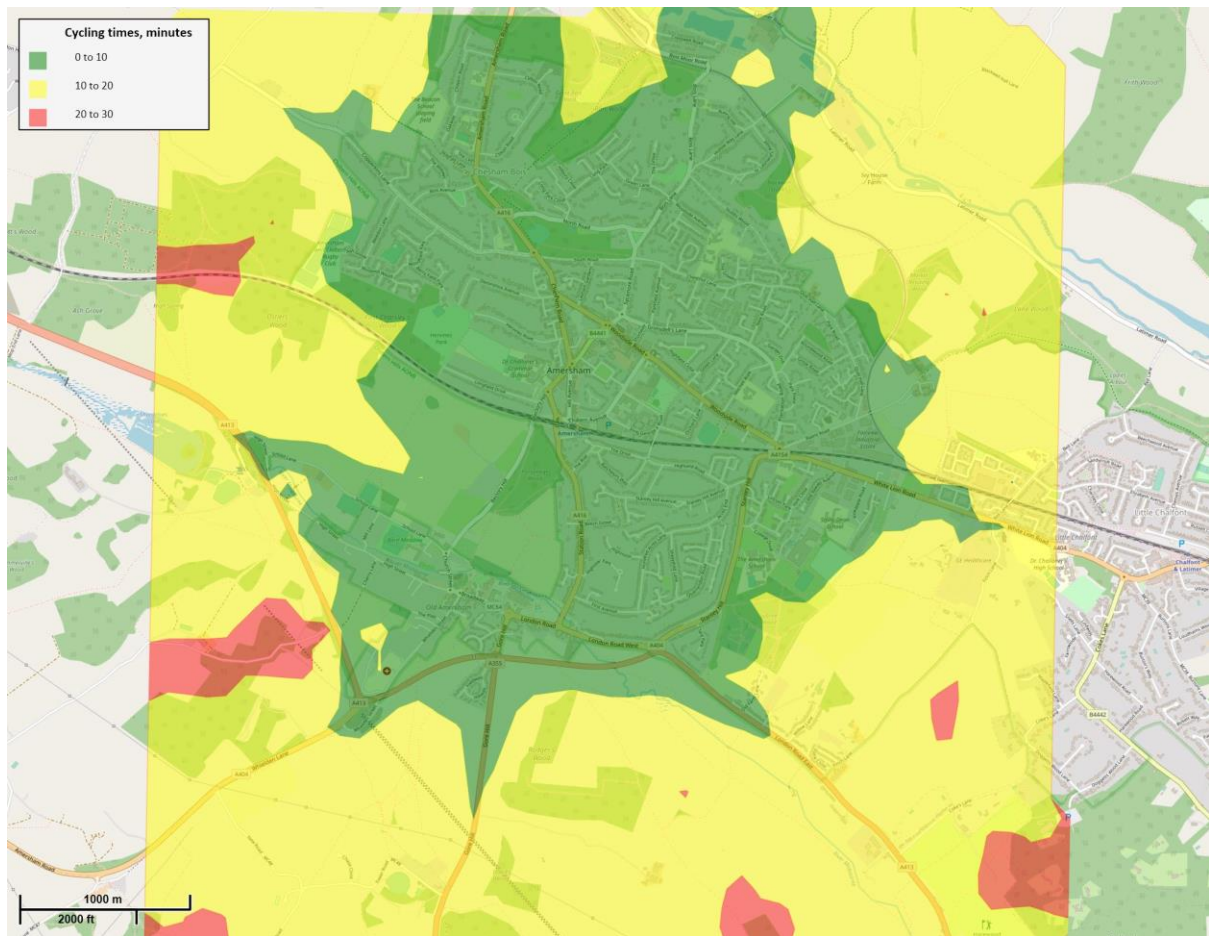
TRACC Maps outputs

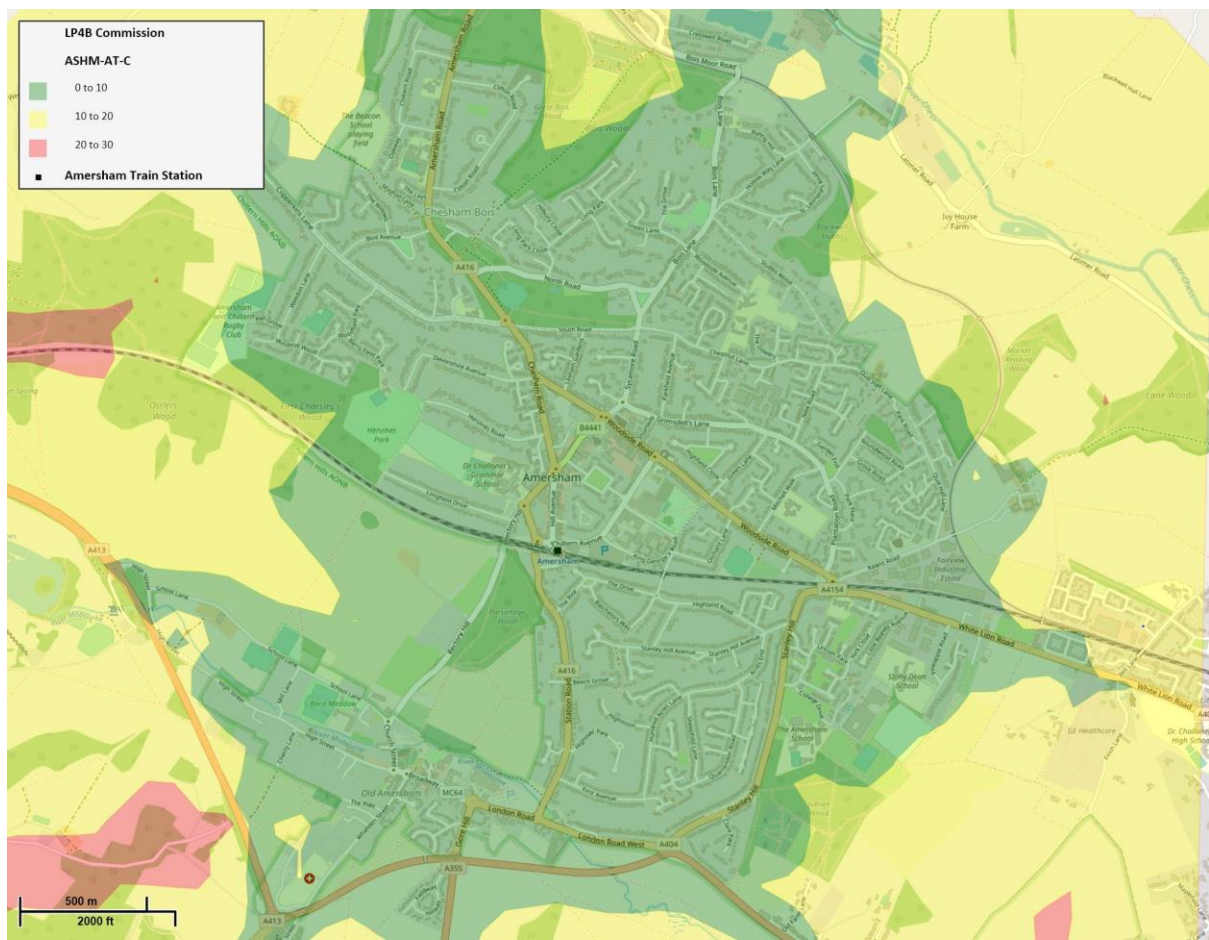
Amersham

Walking

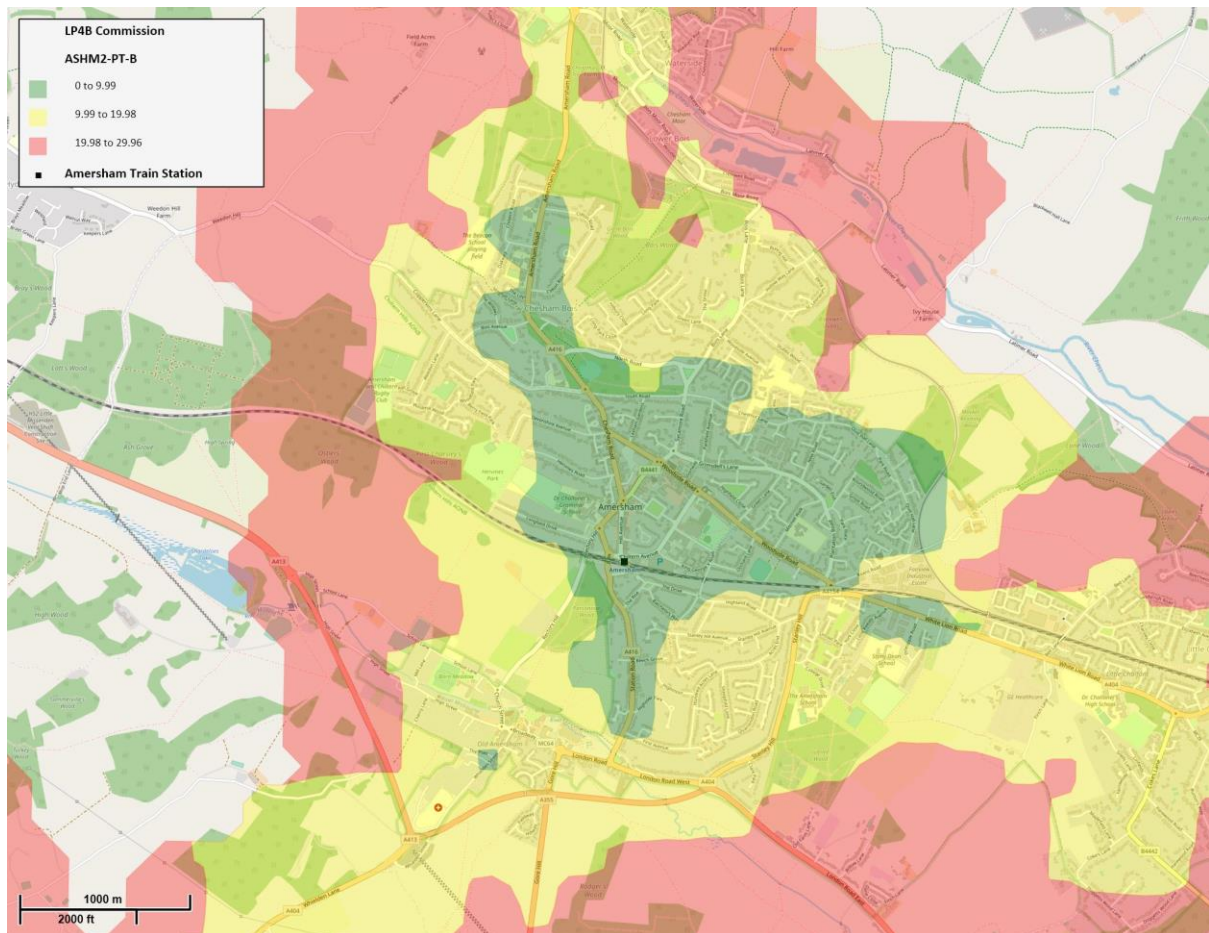


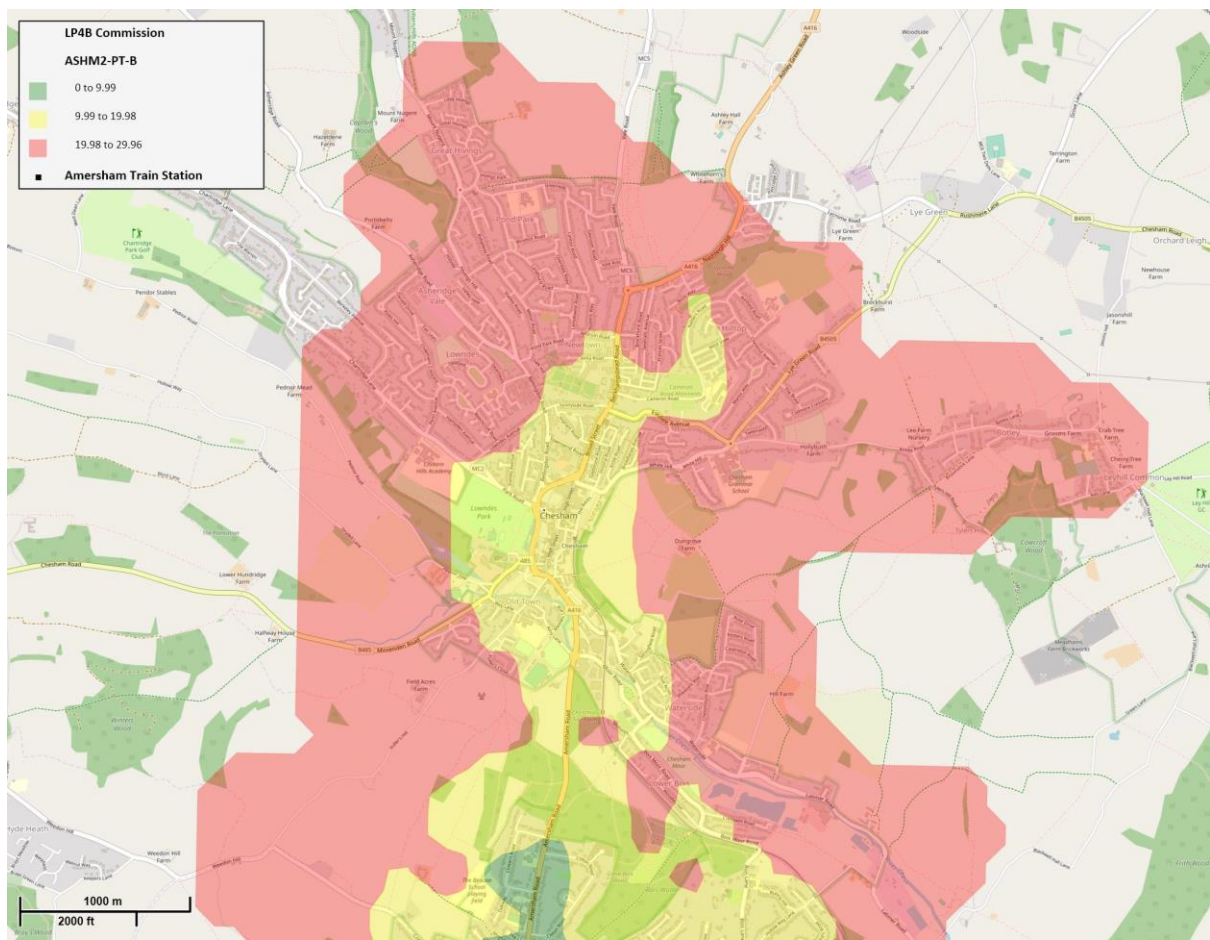
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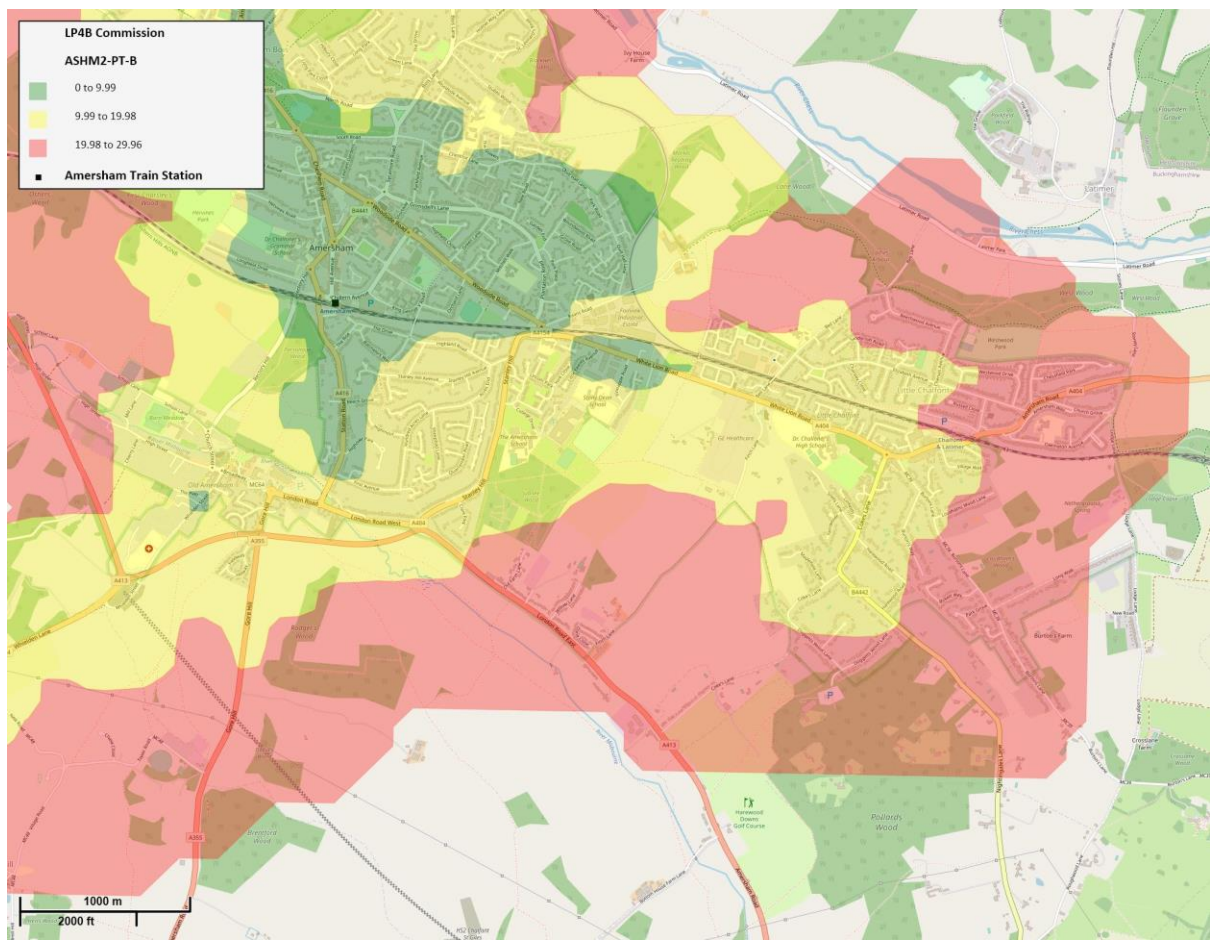


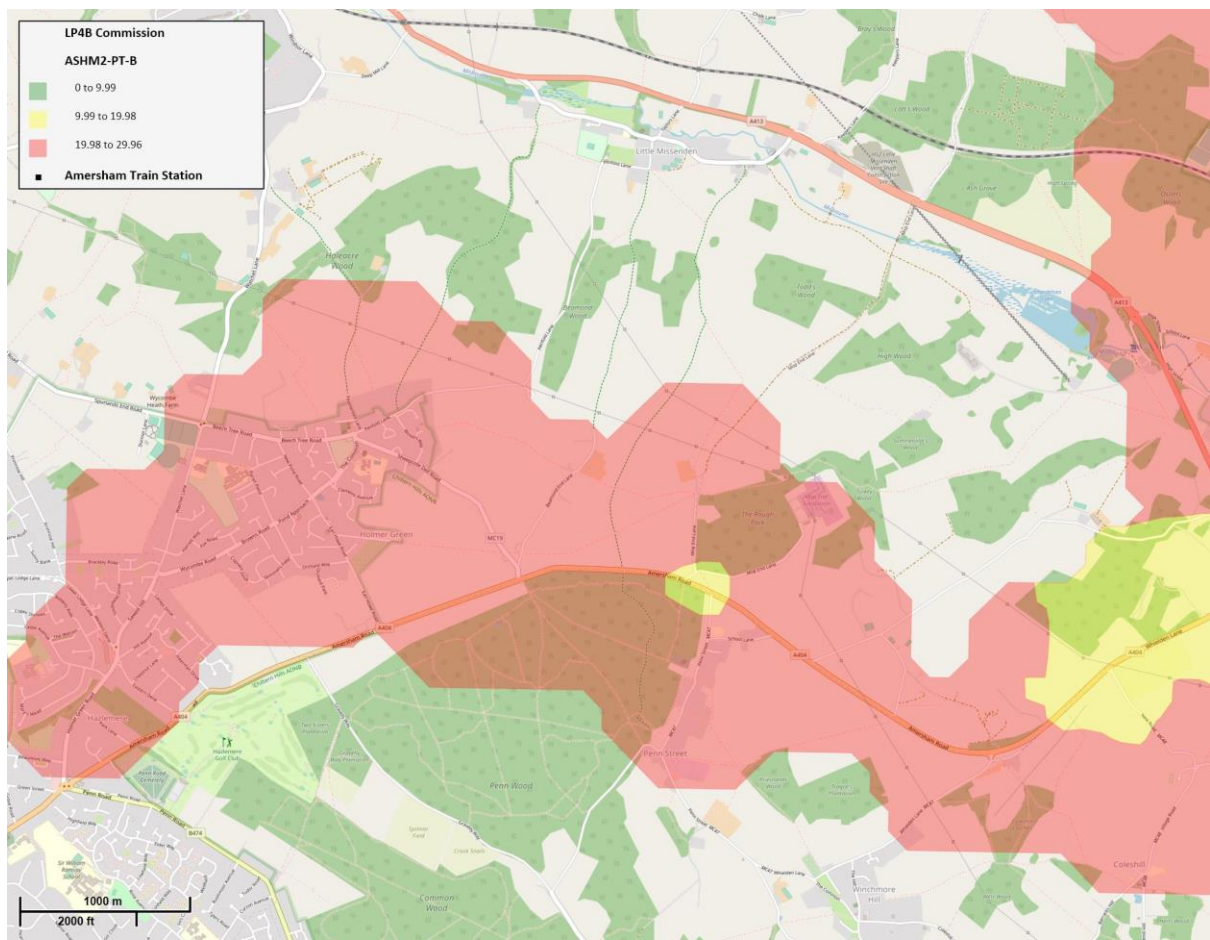


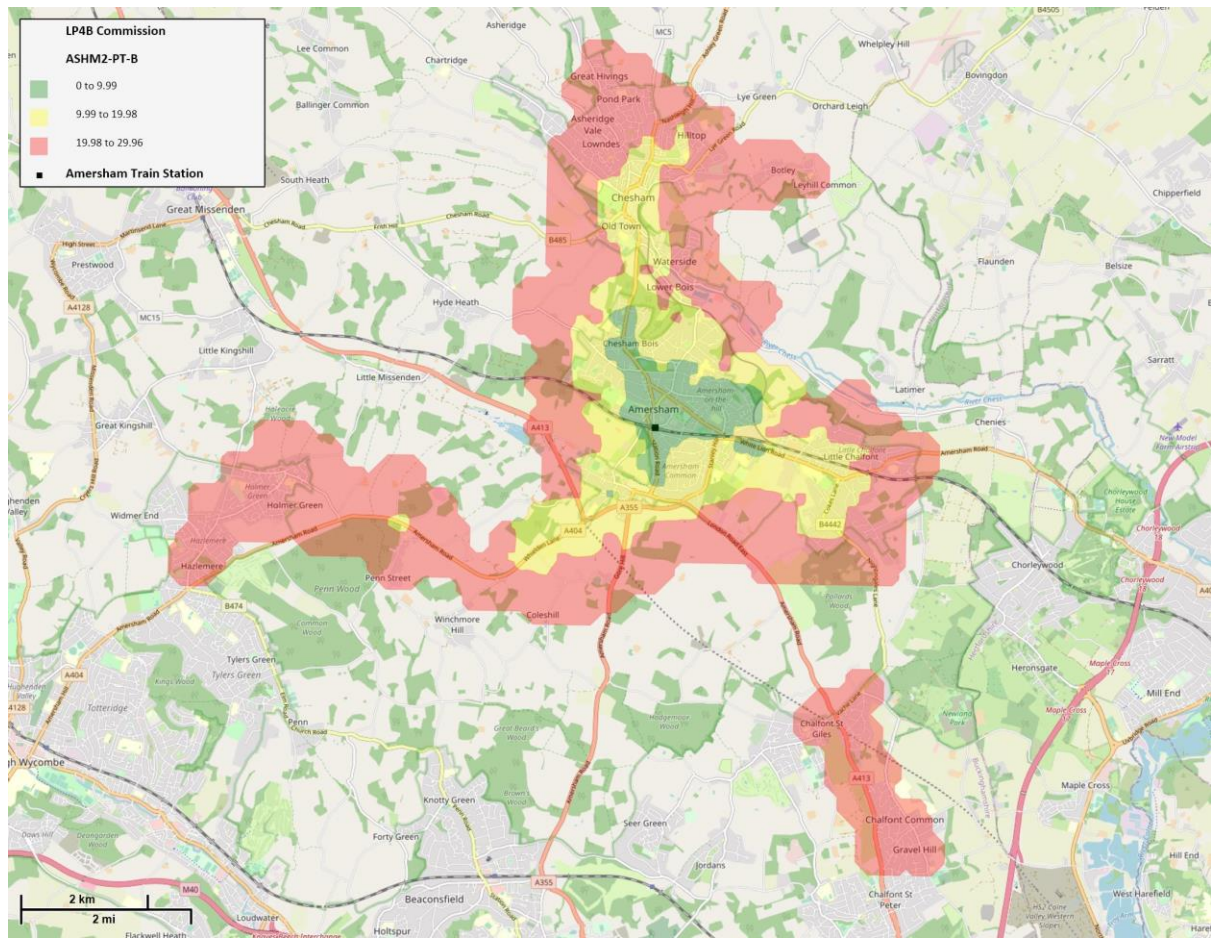
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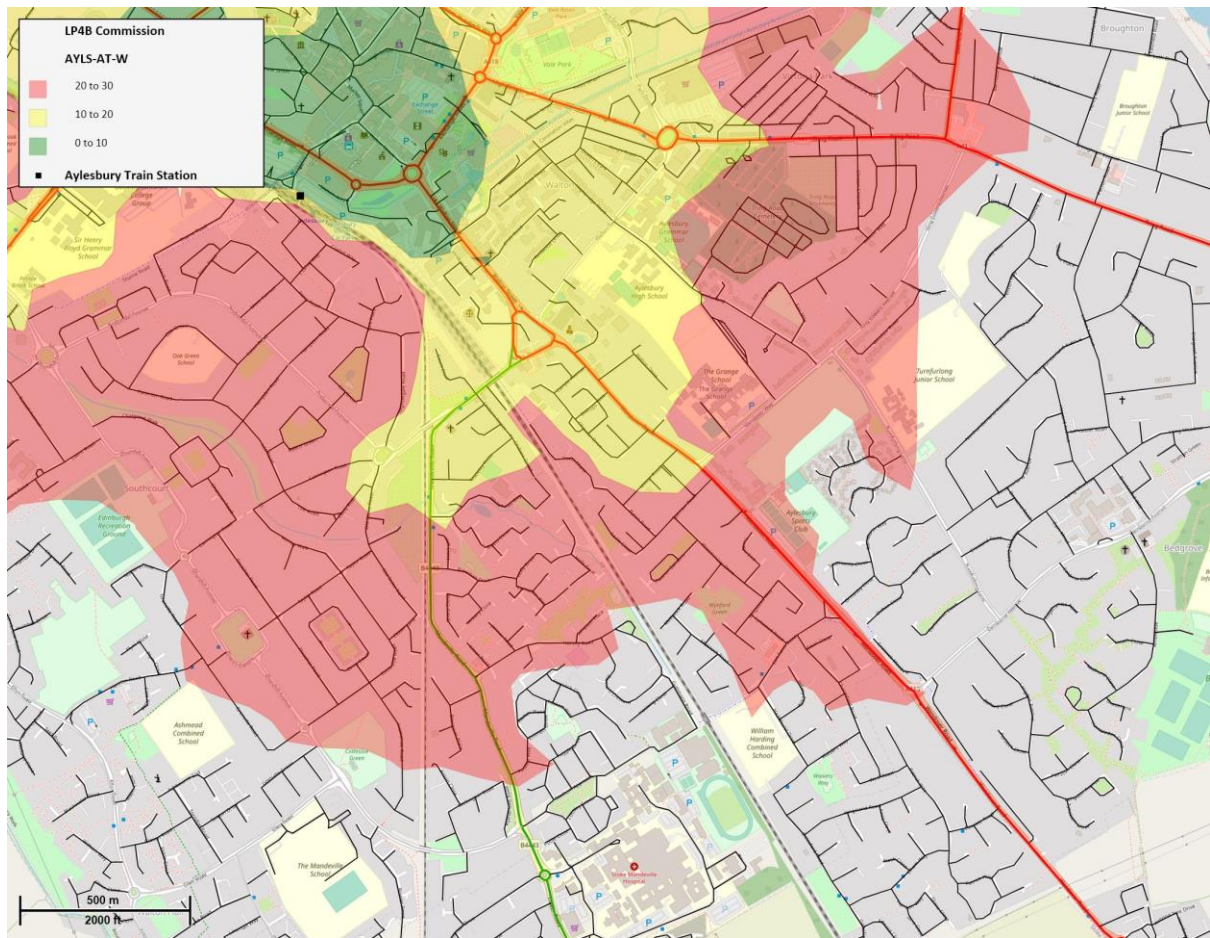


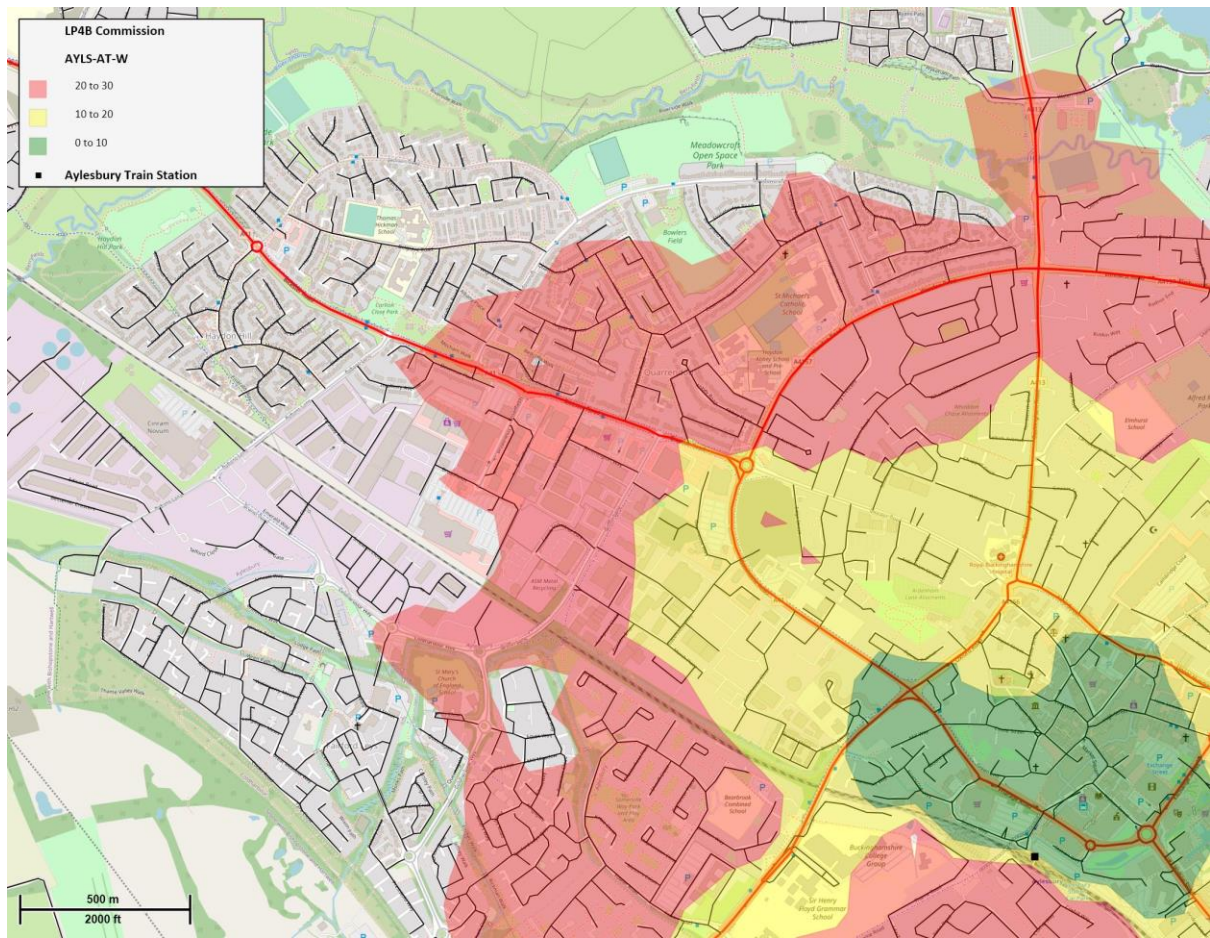


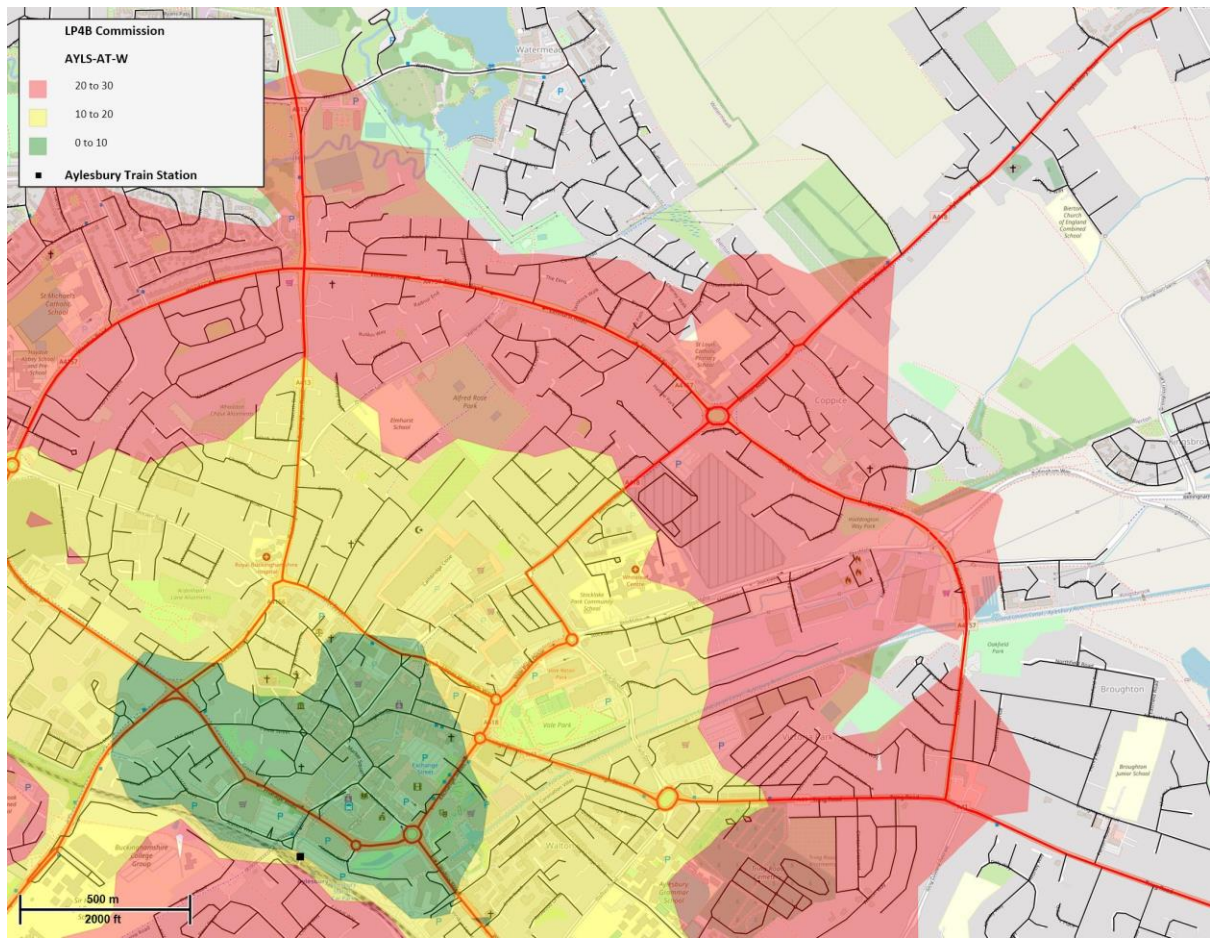


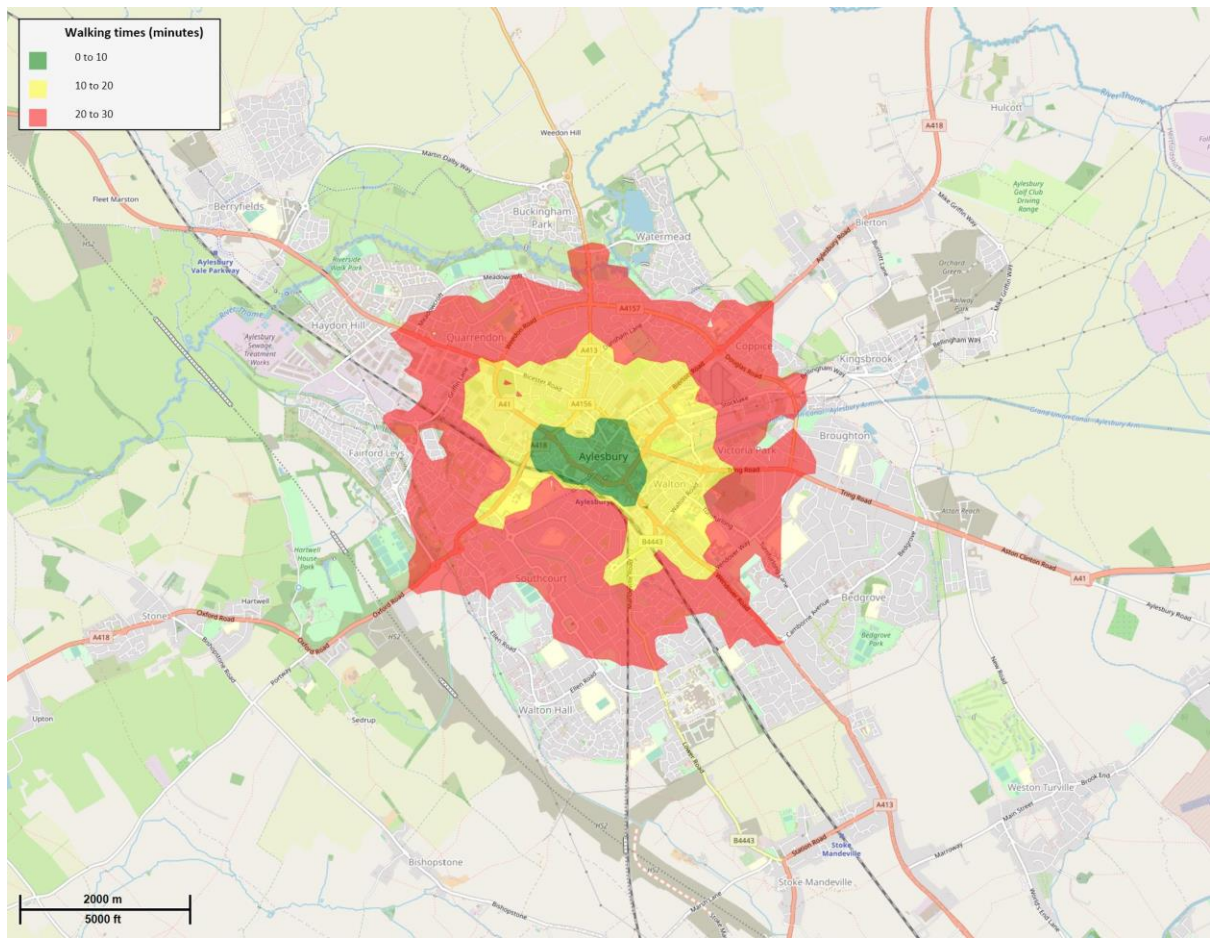
Aylesbury

Walking

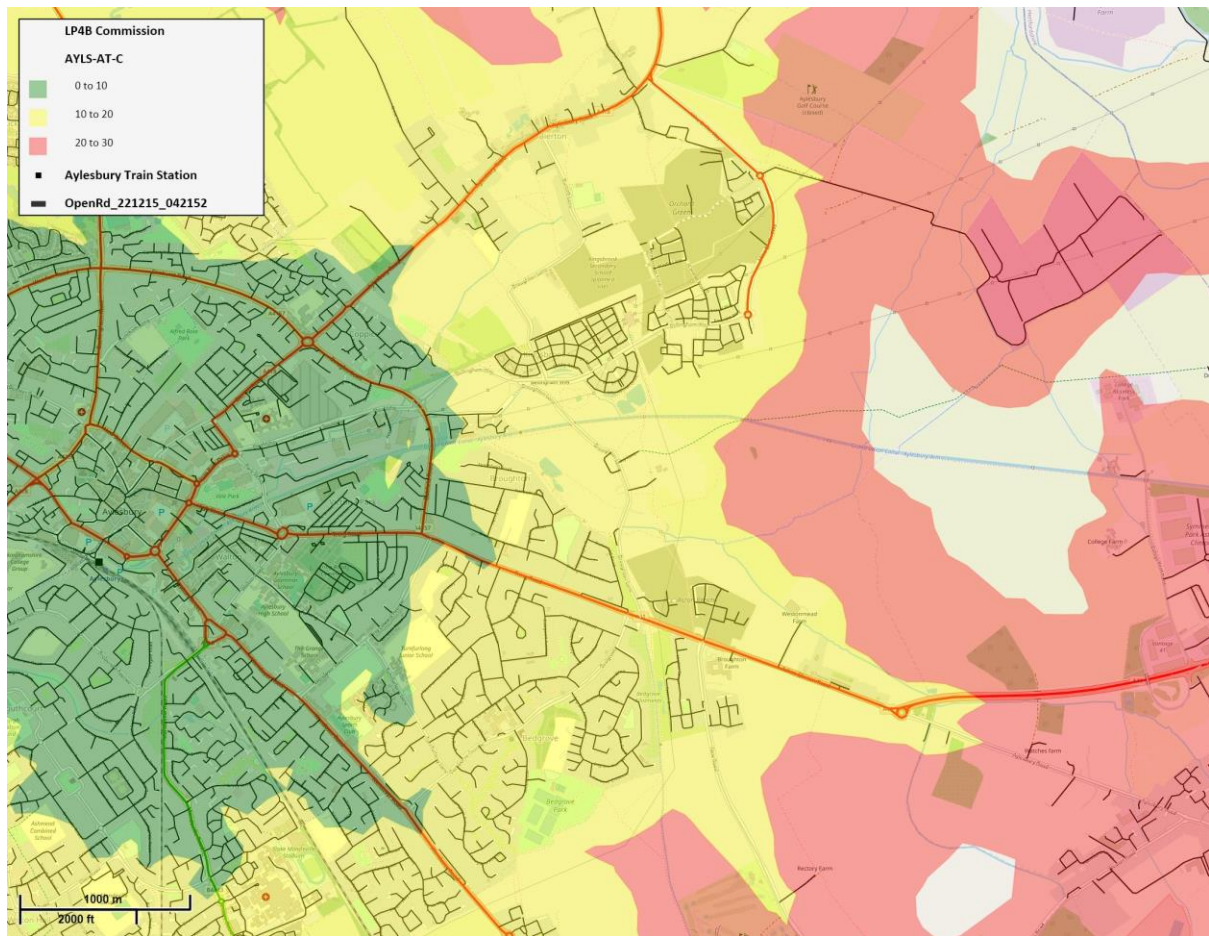


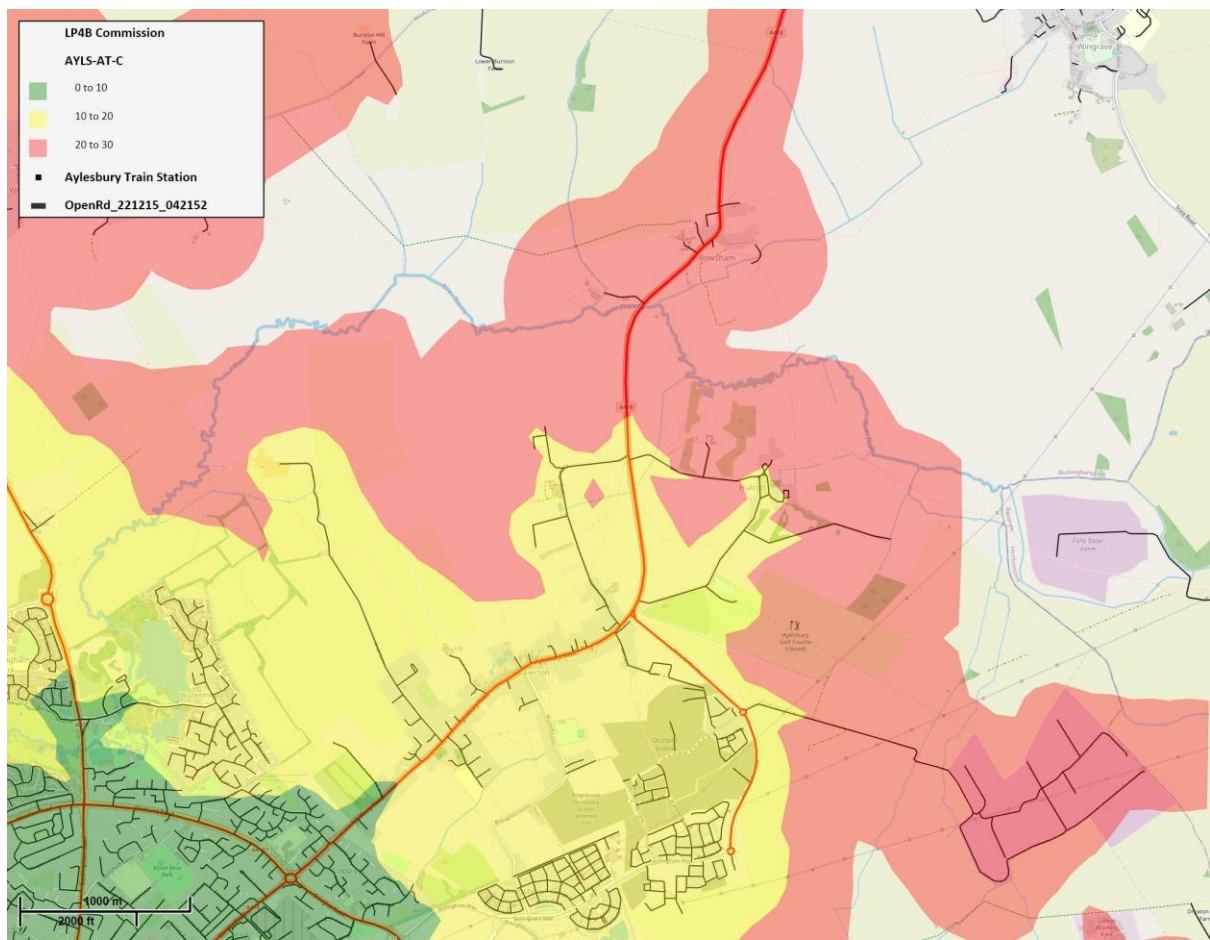


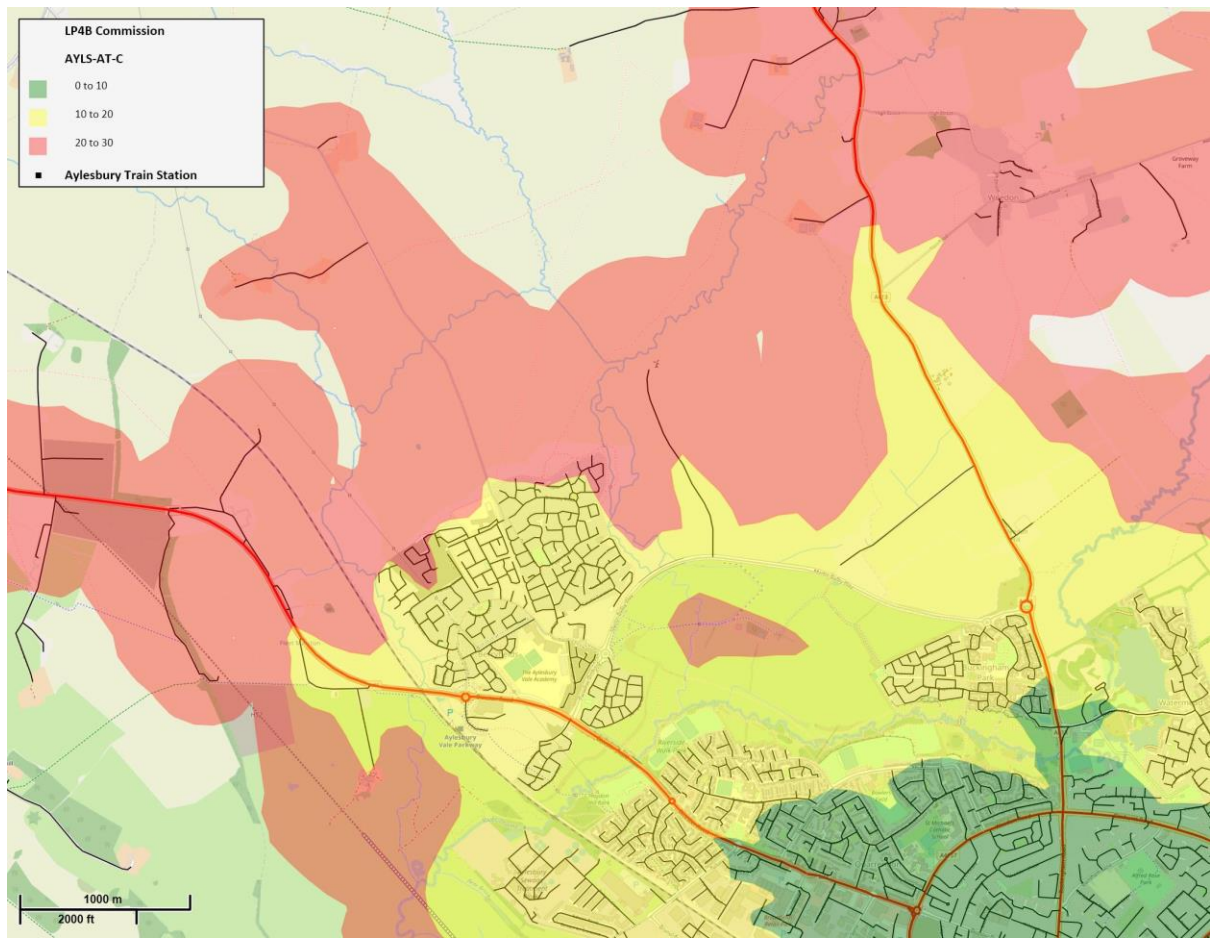


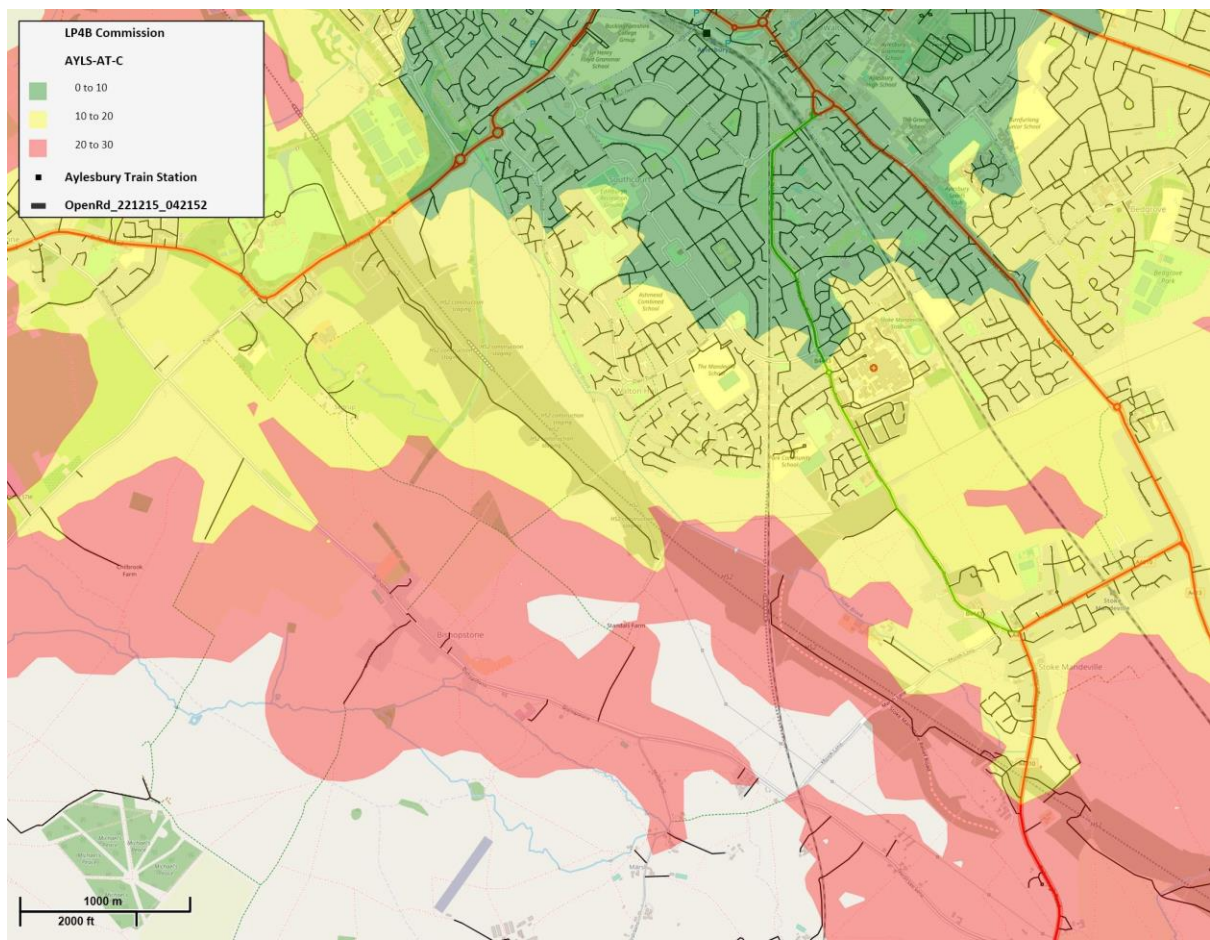


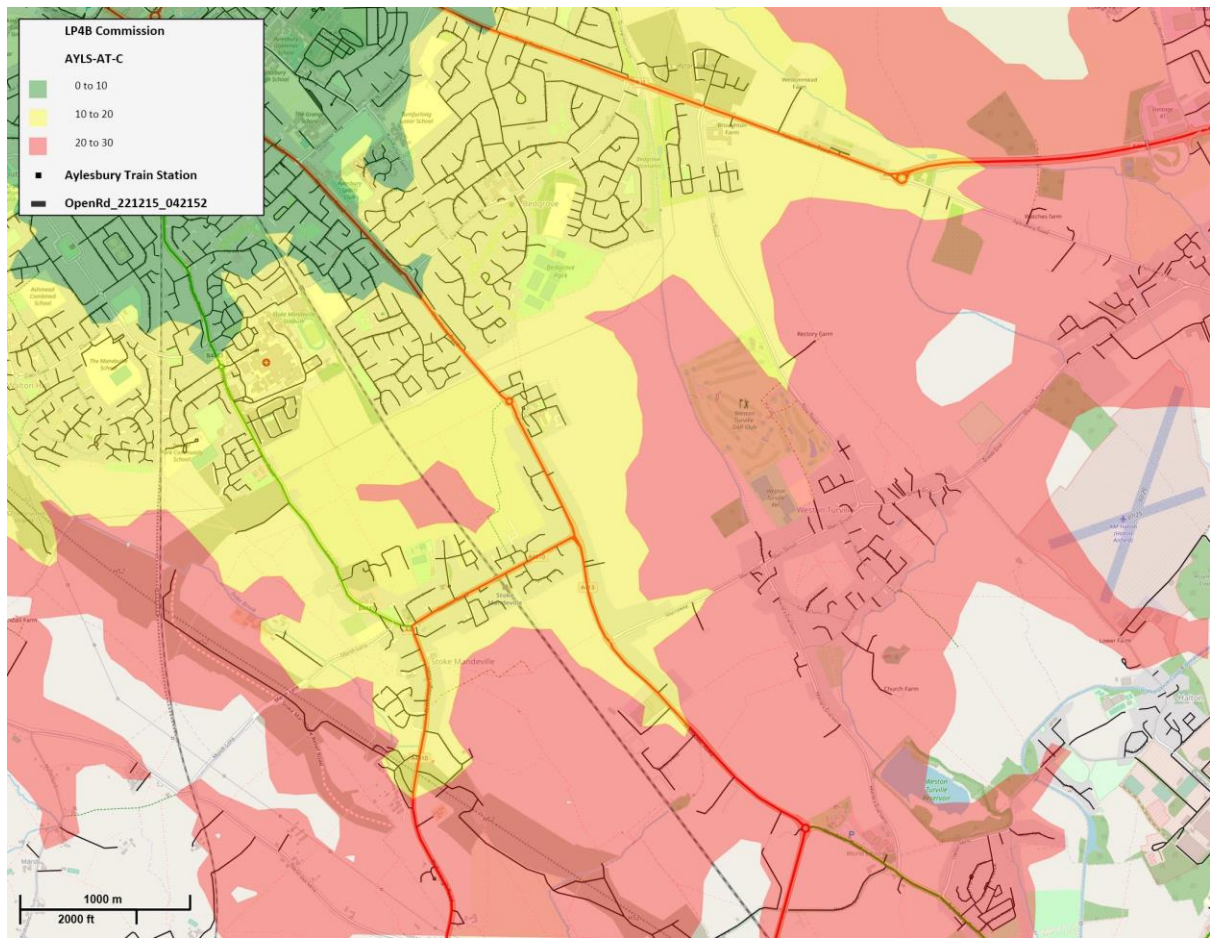
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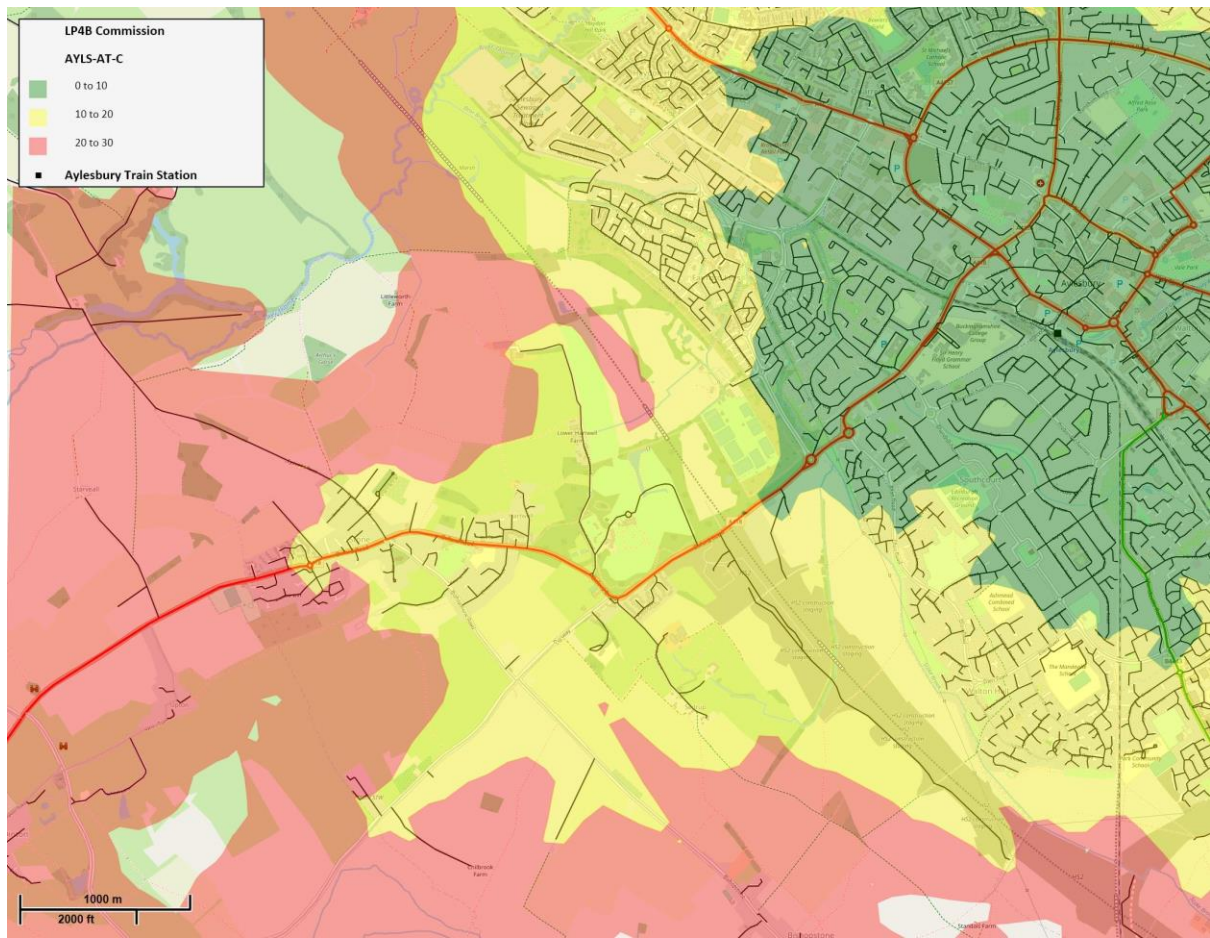


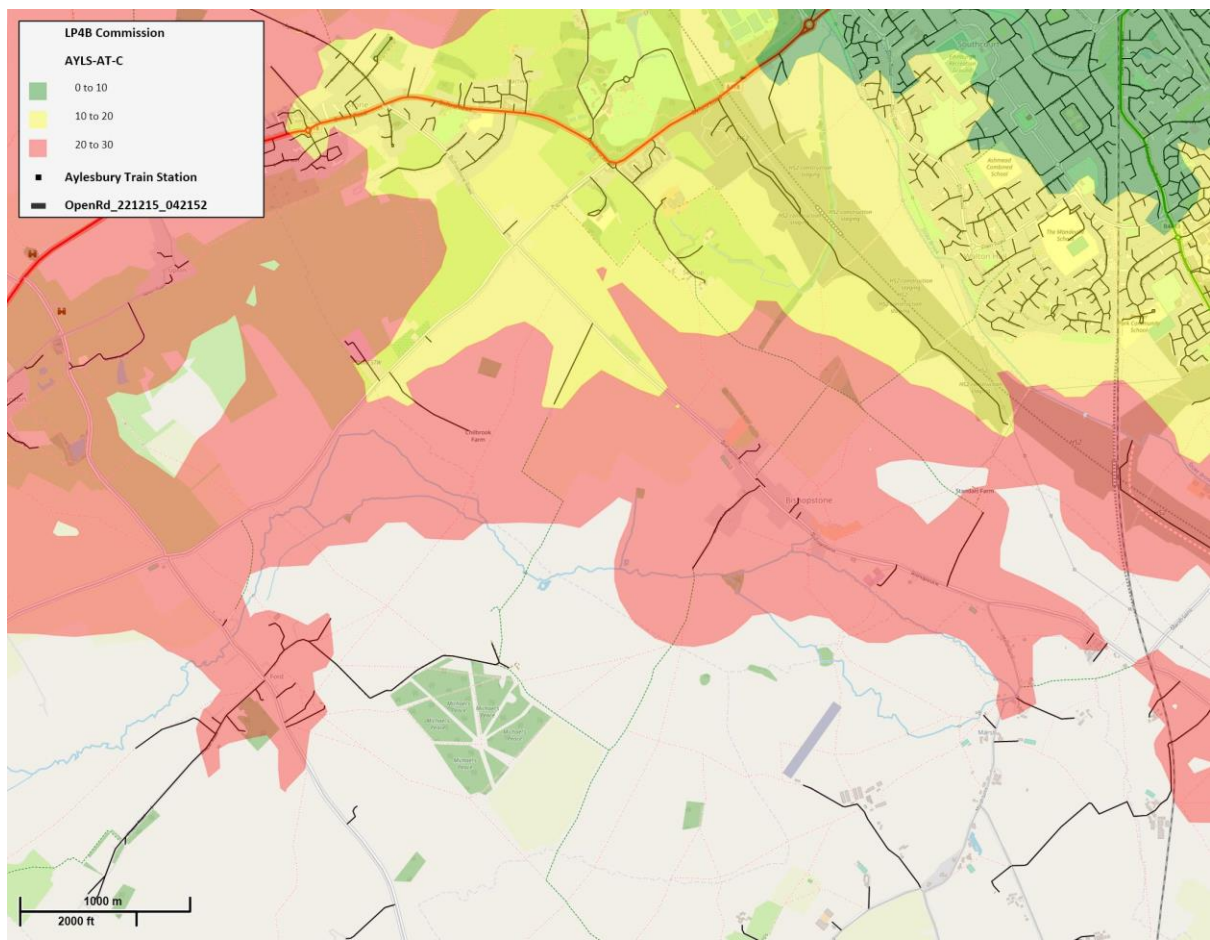


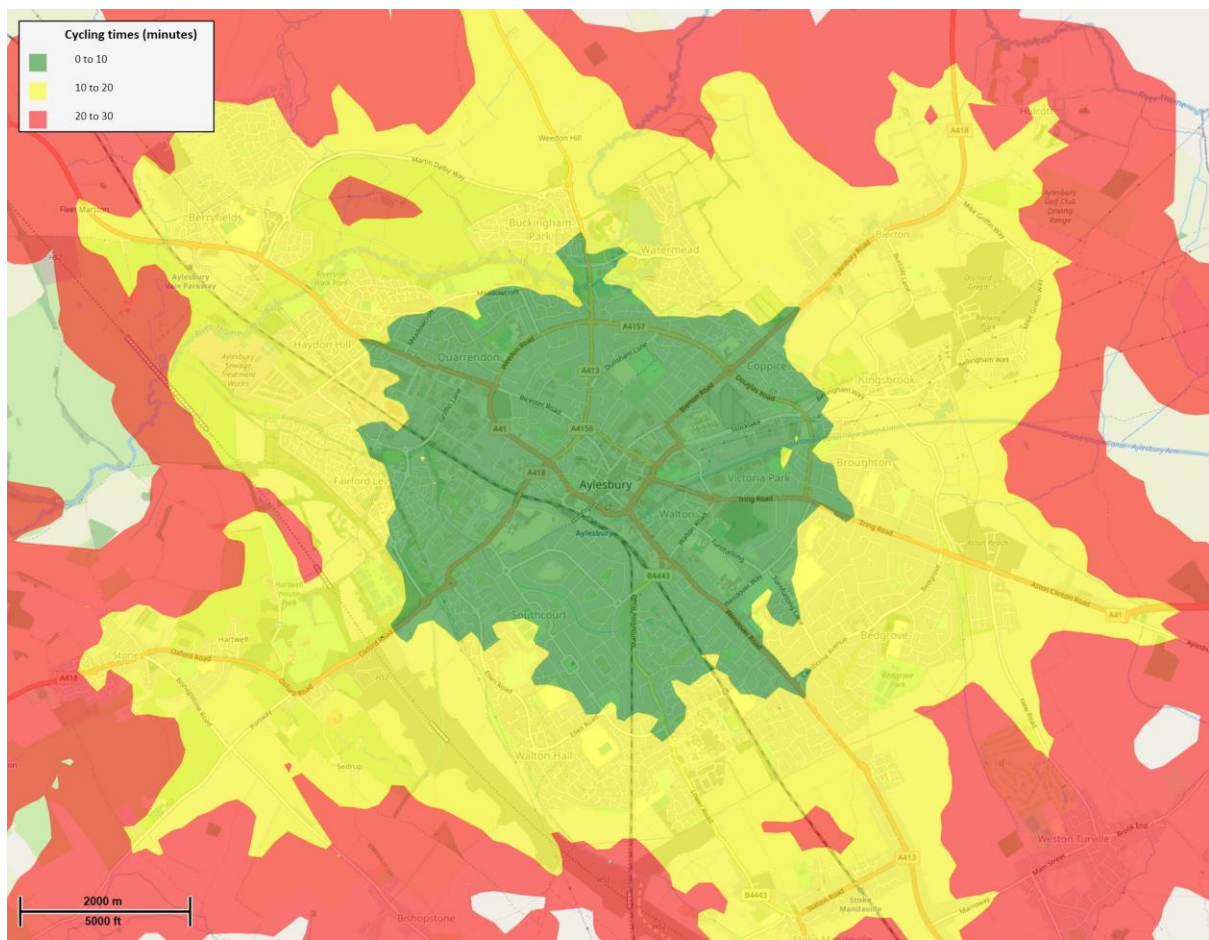




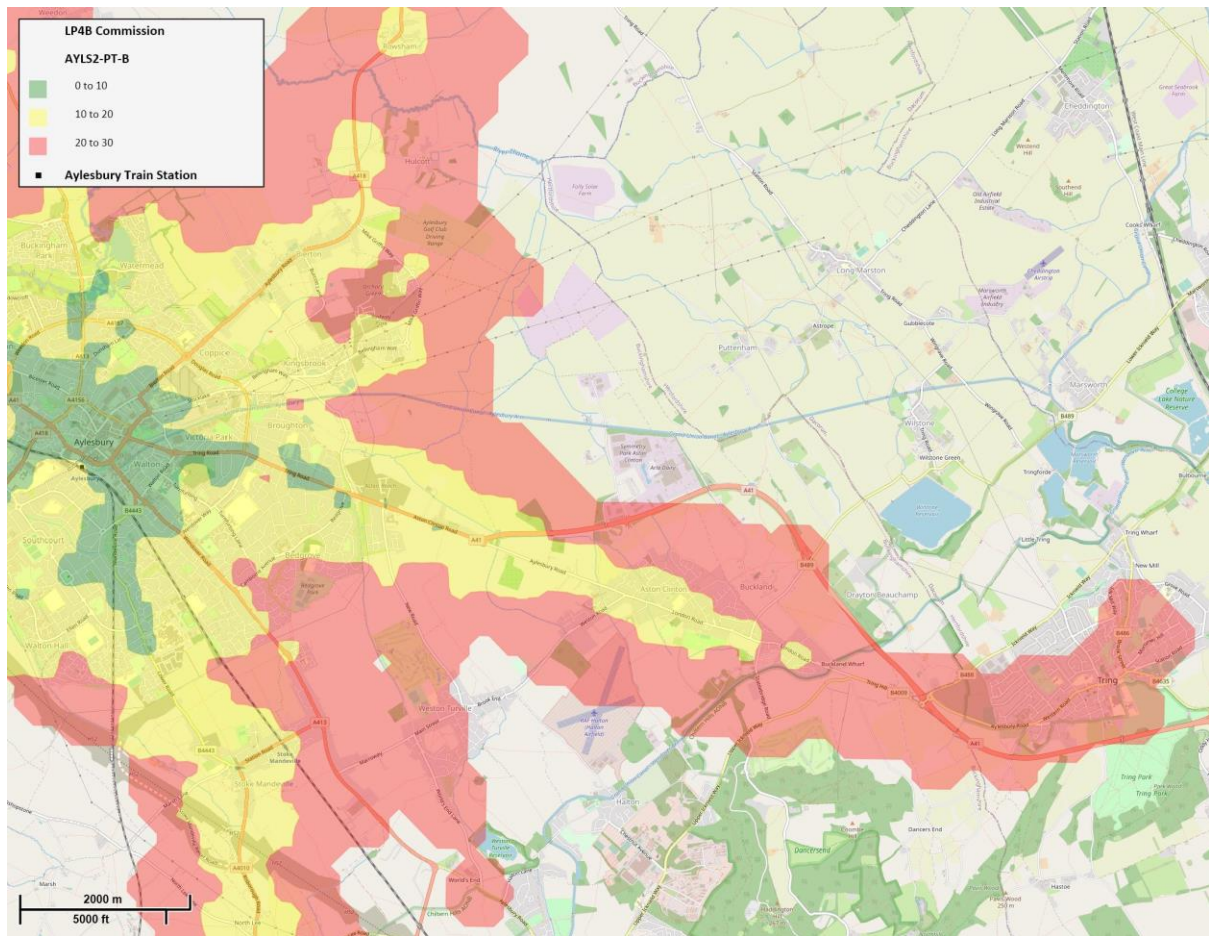


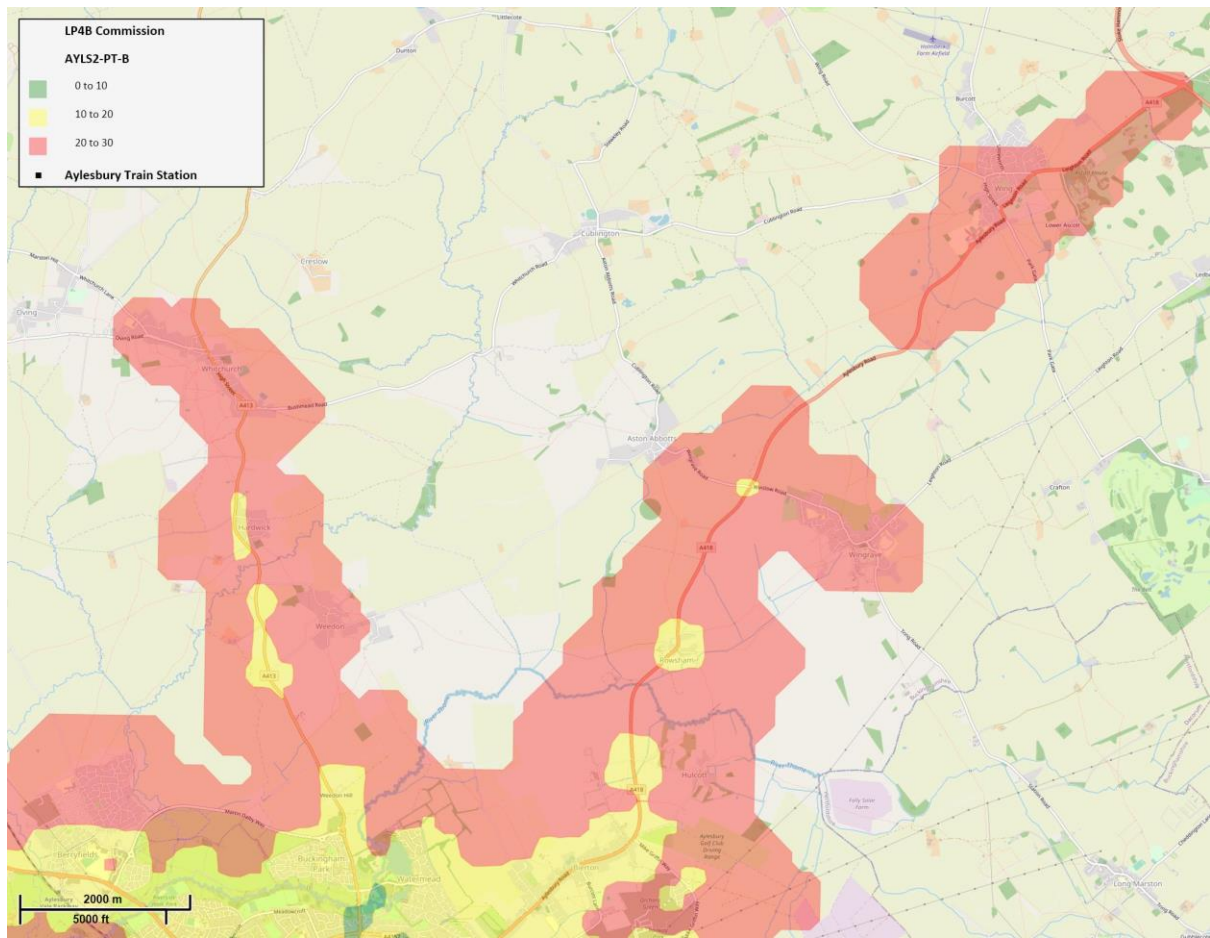


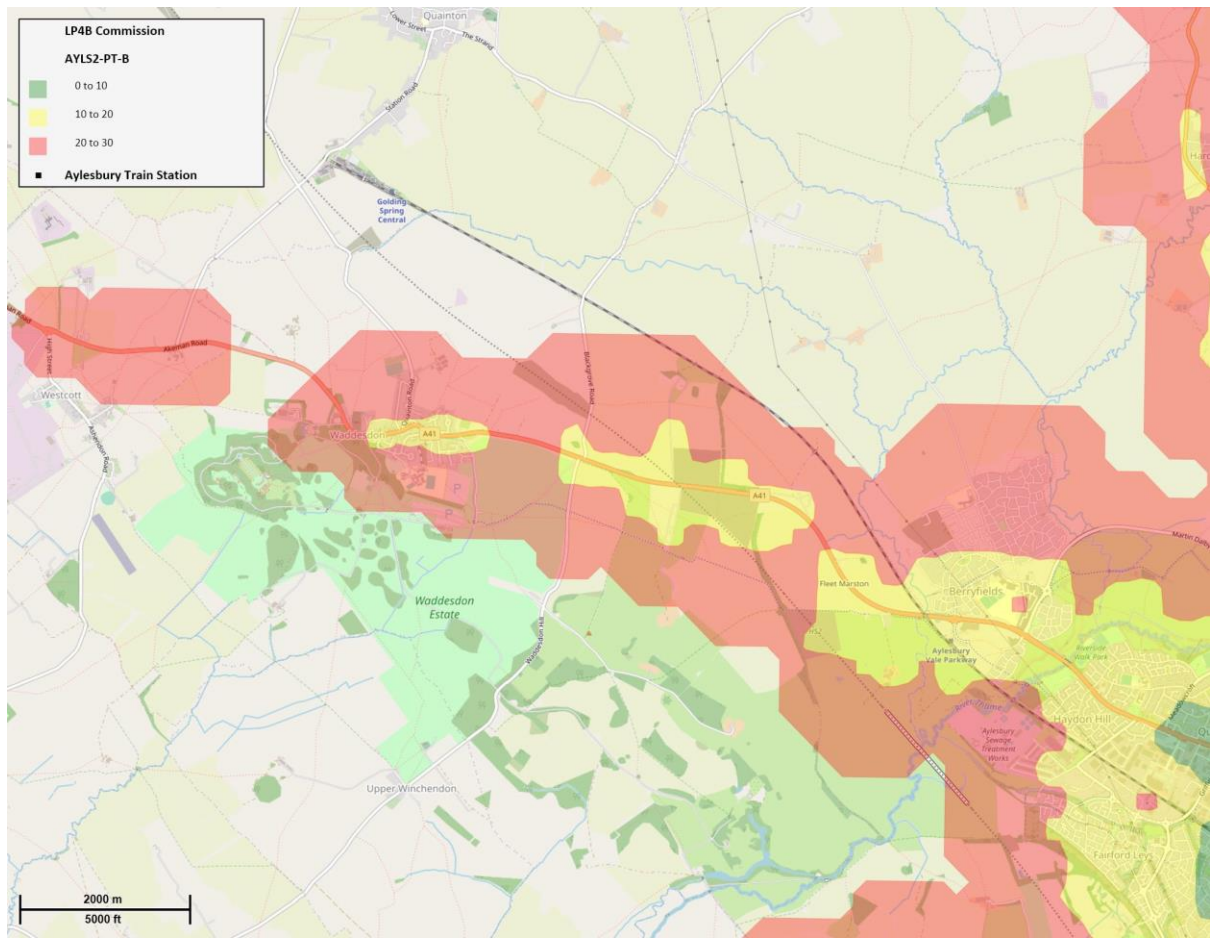


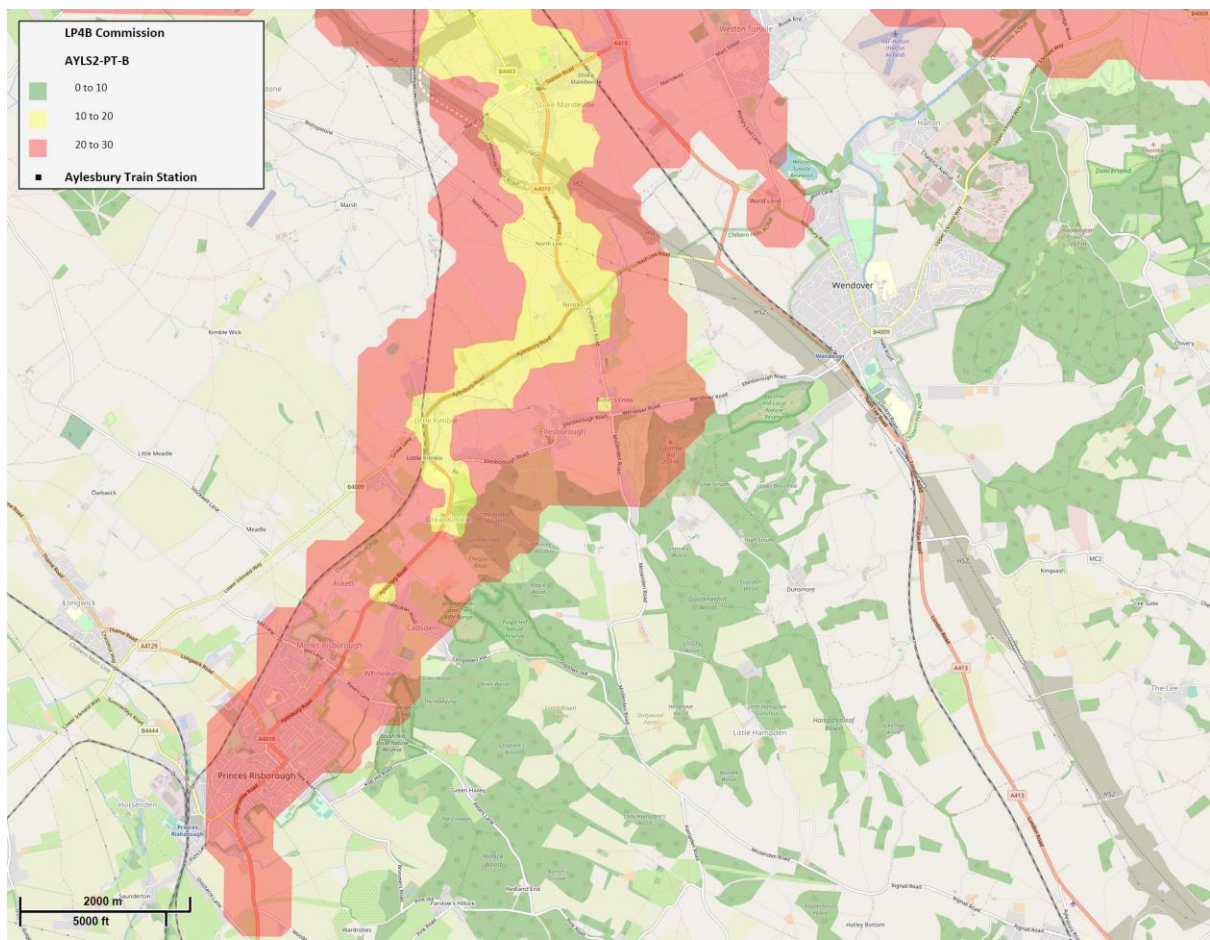


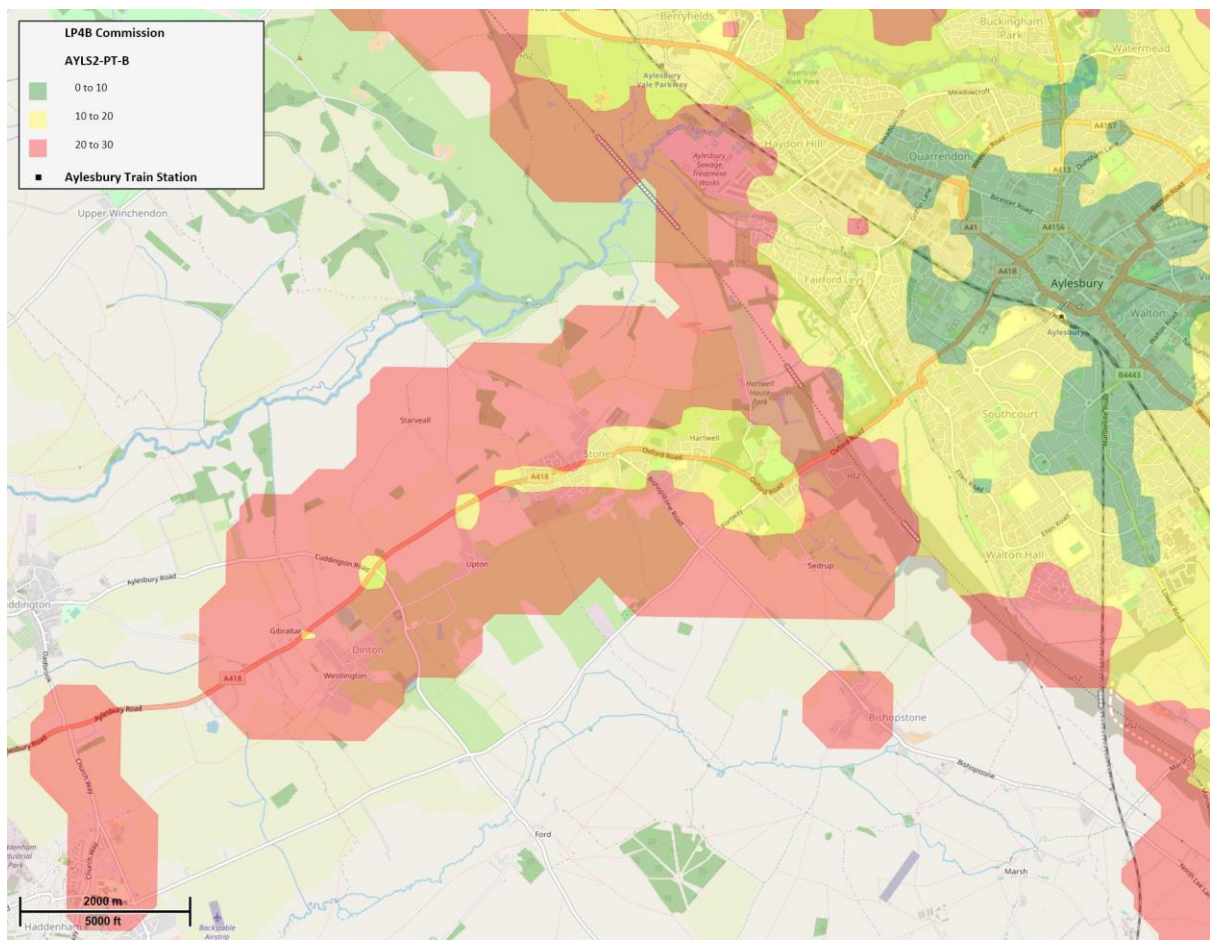
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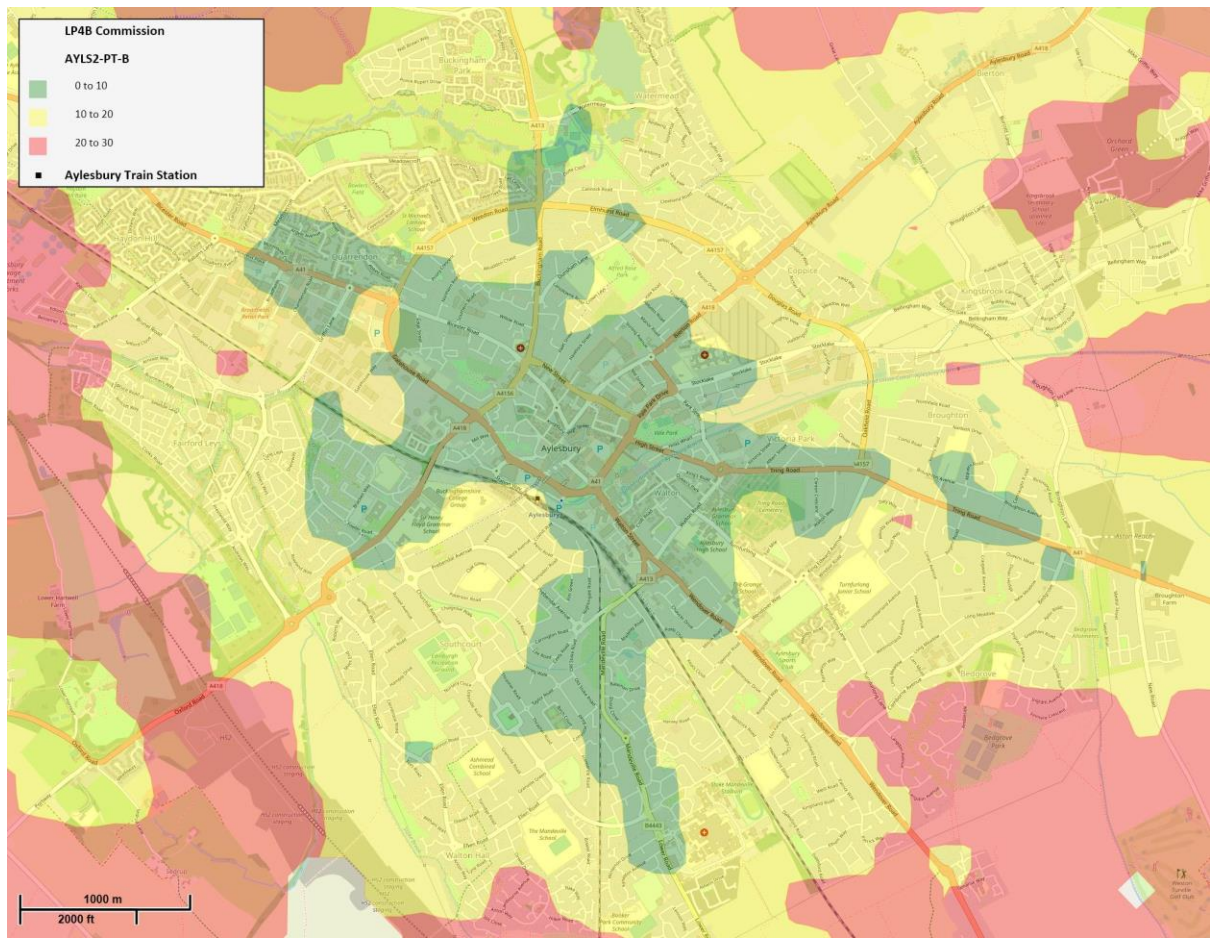


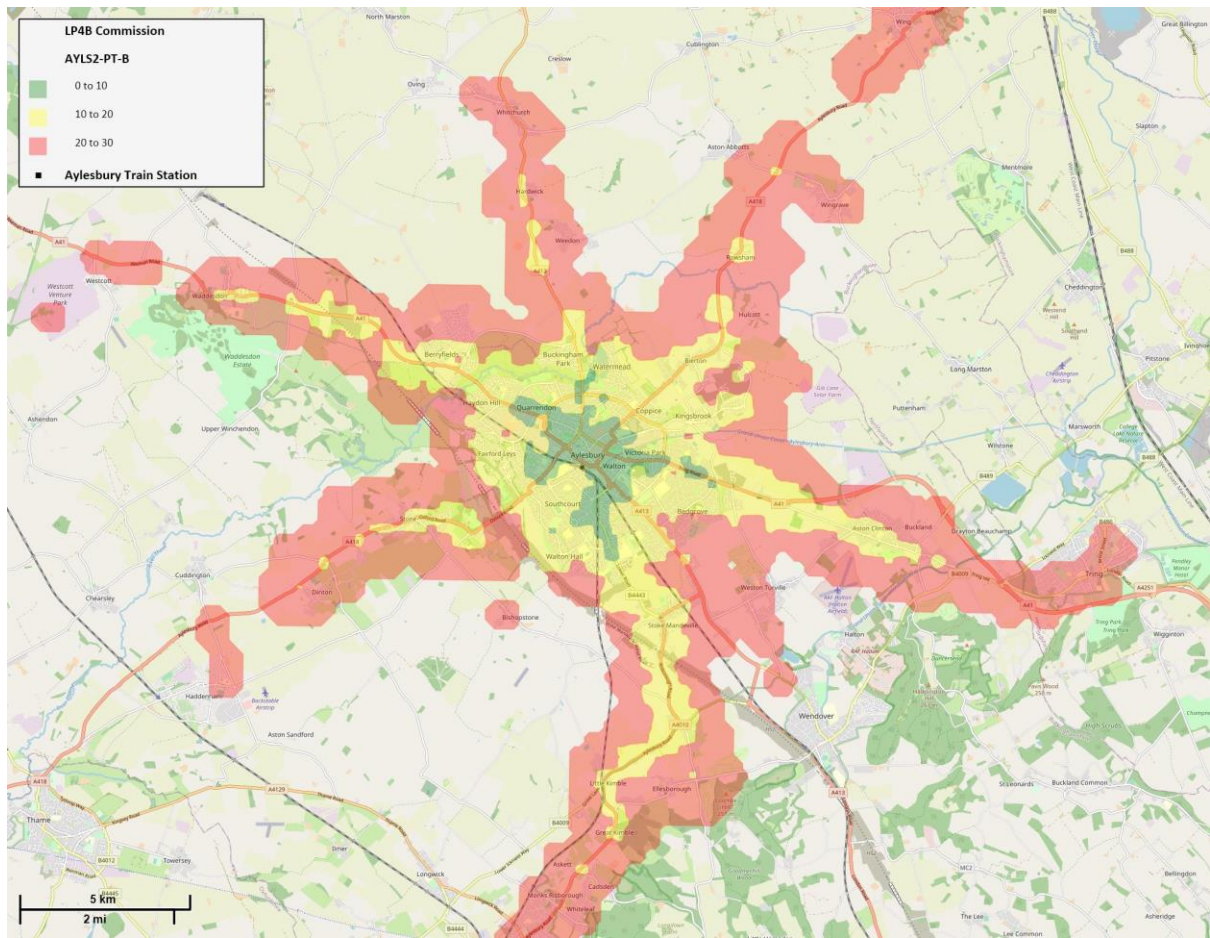






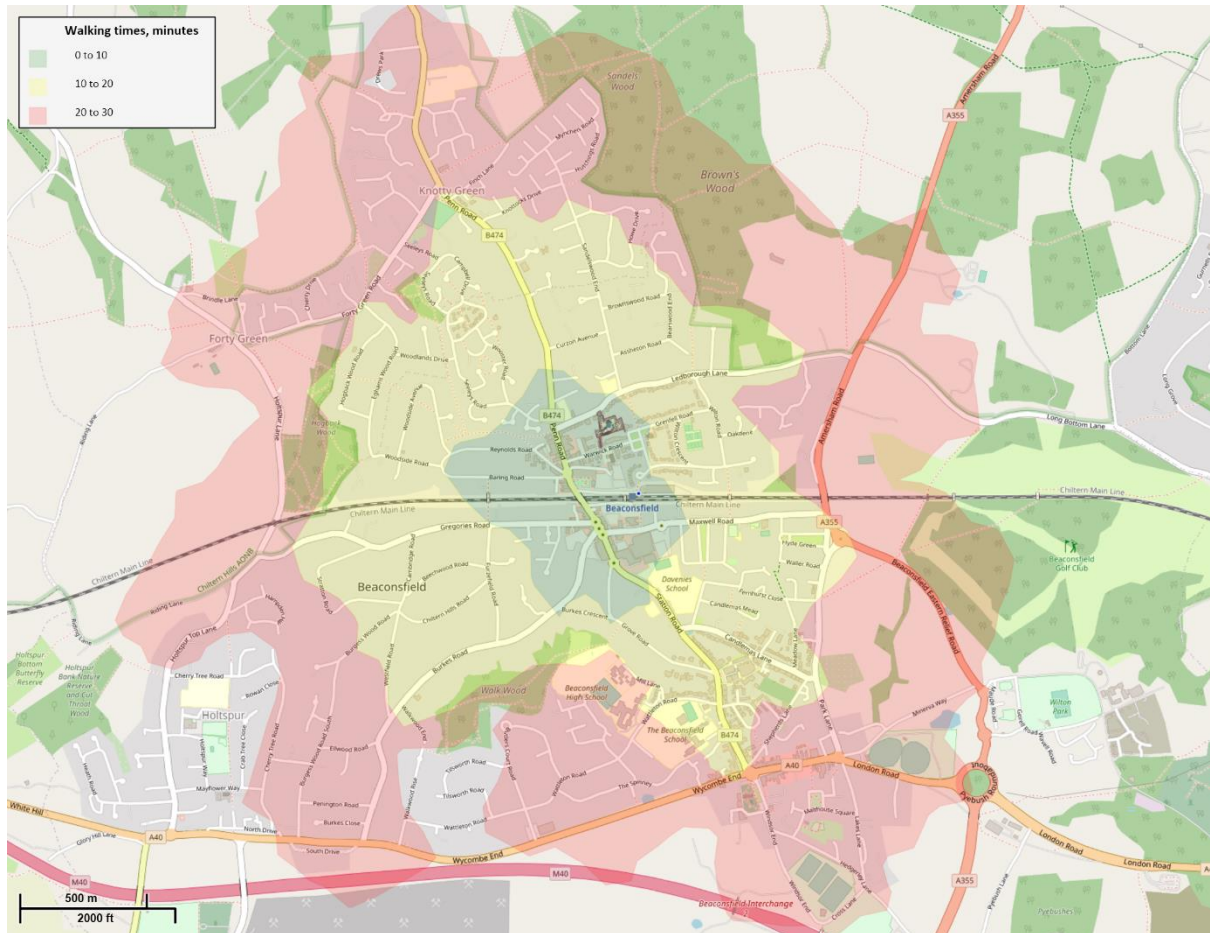




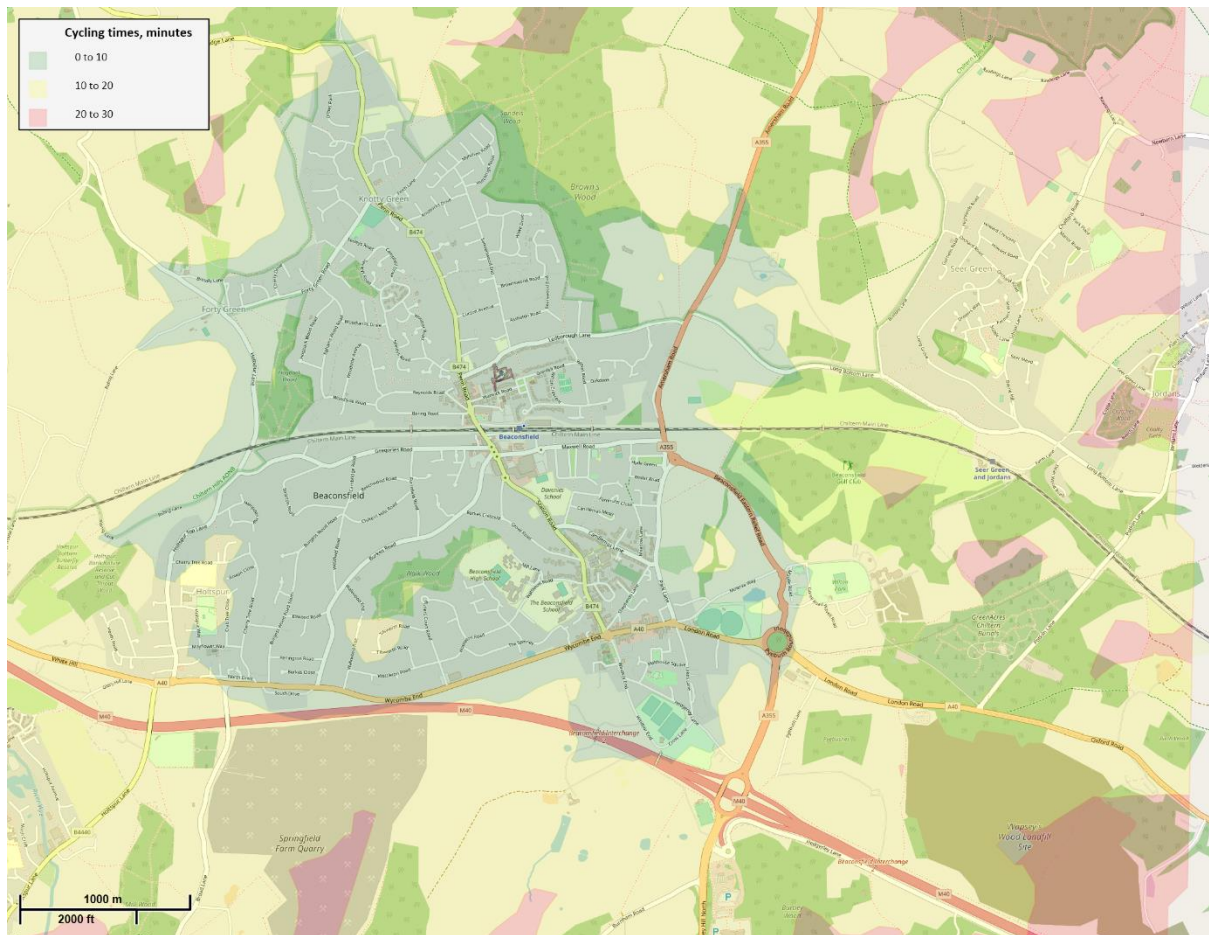


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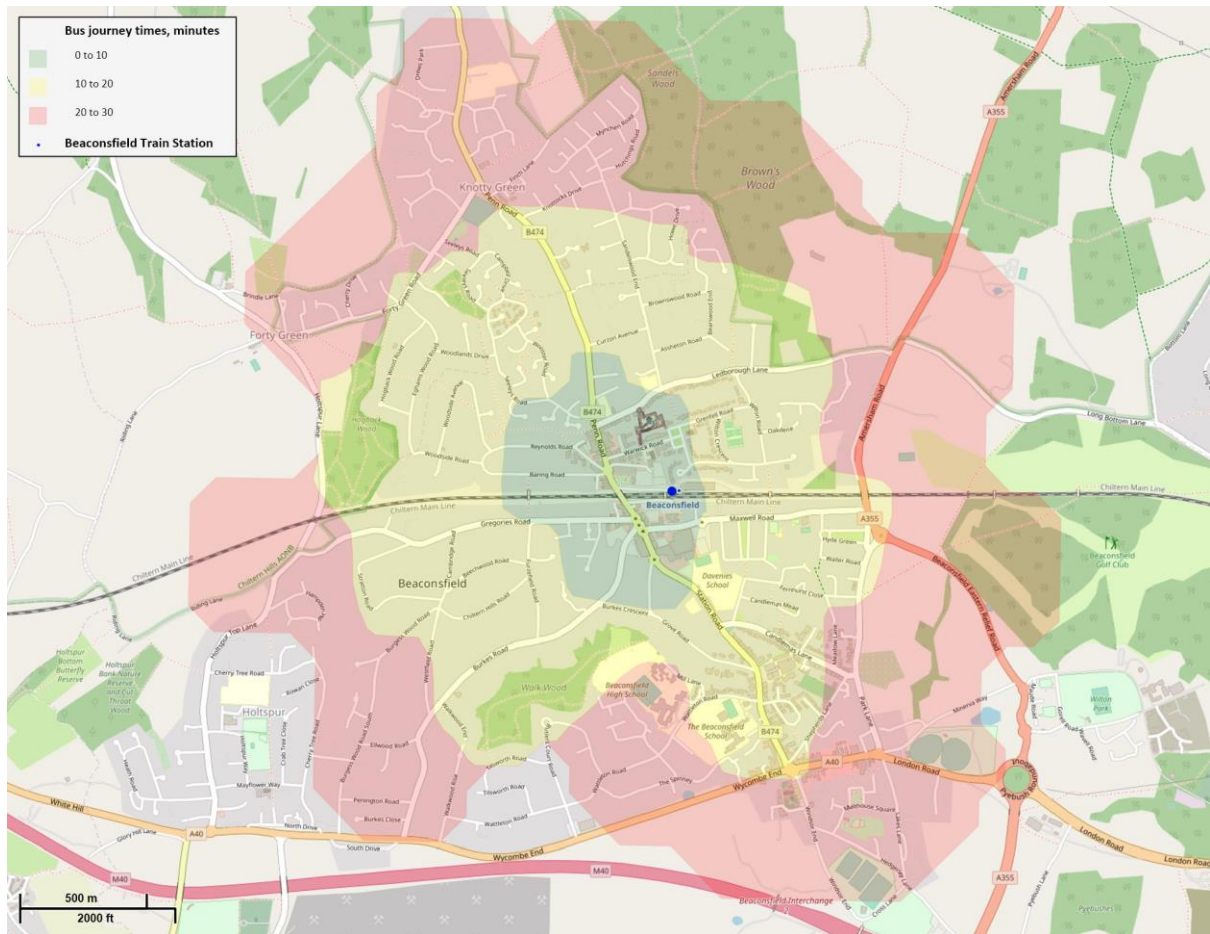
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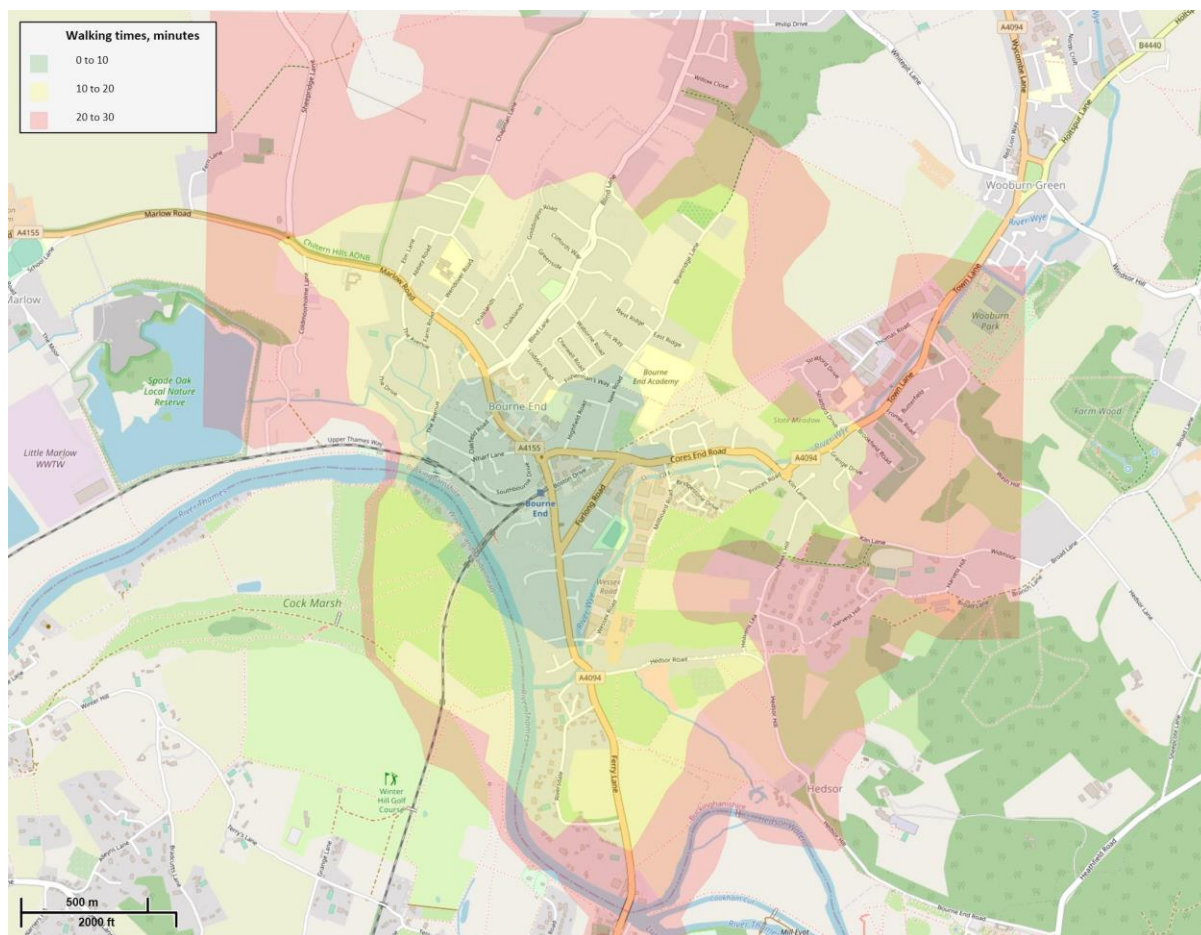


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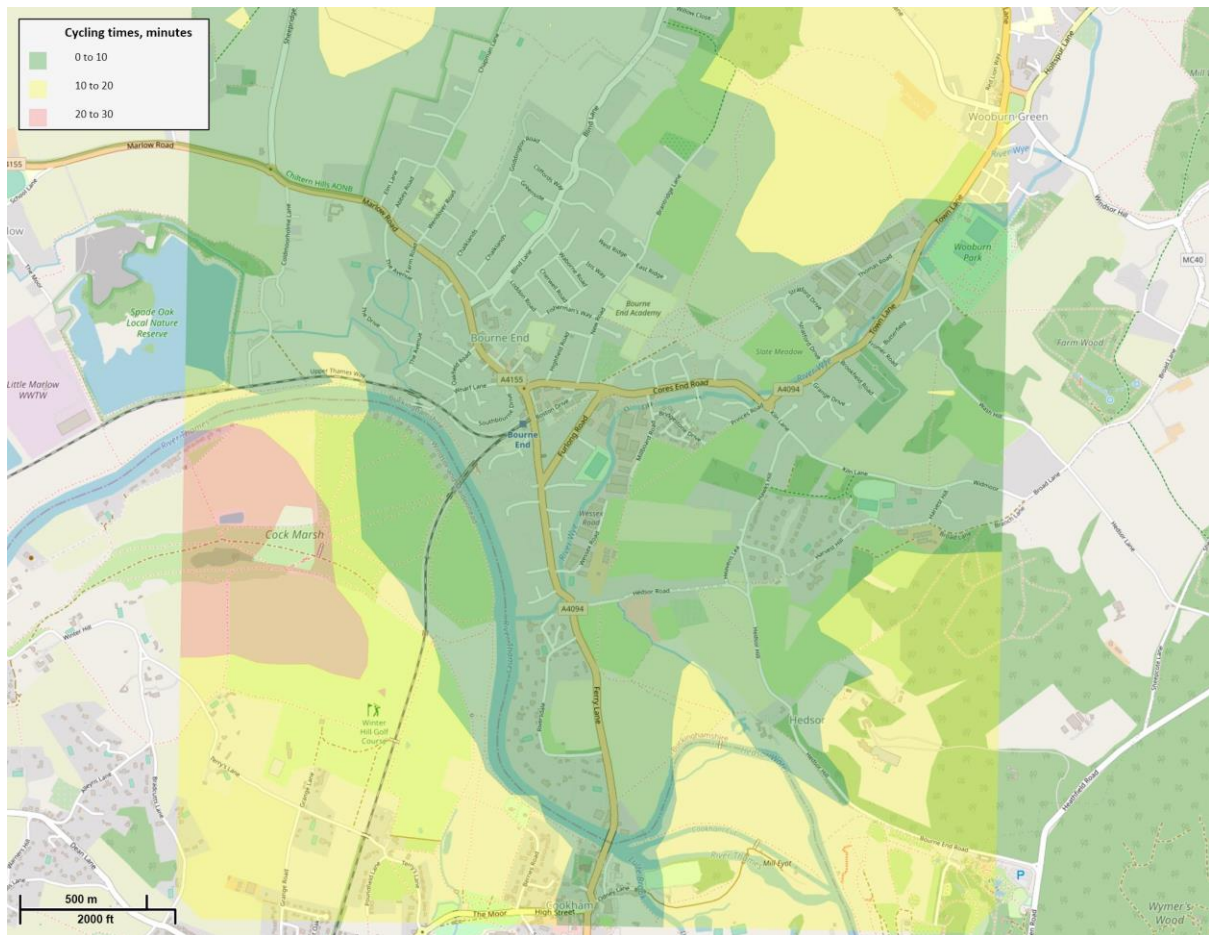


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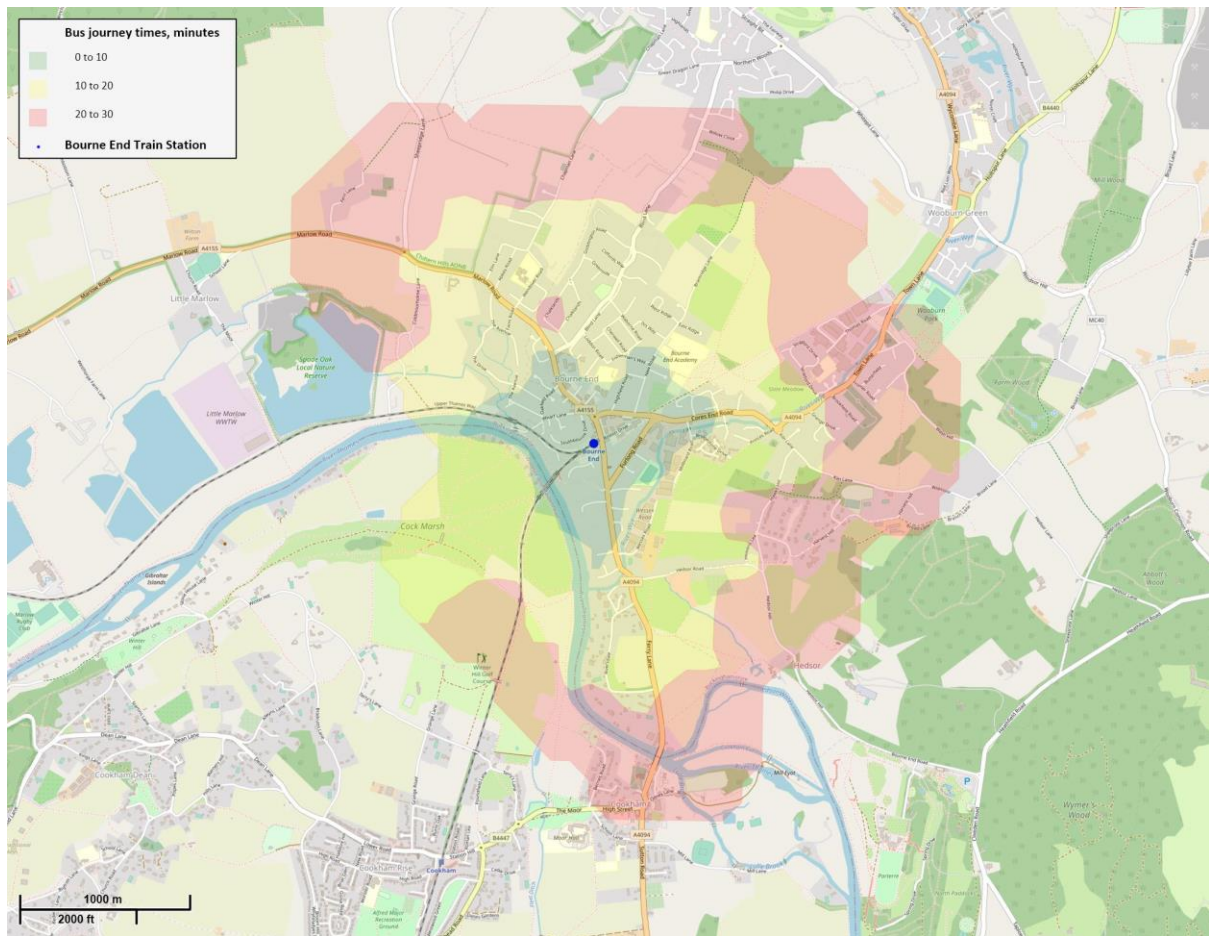
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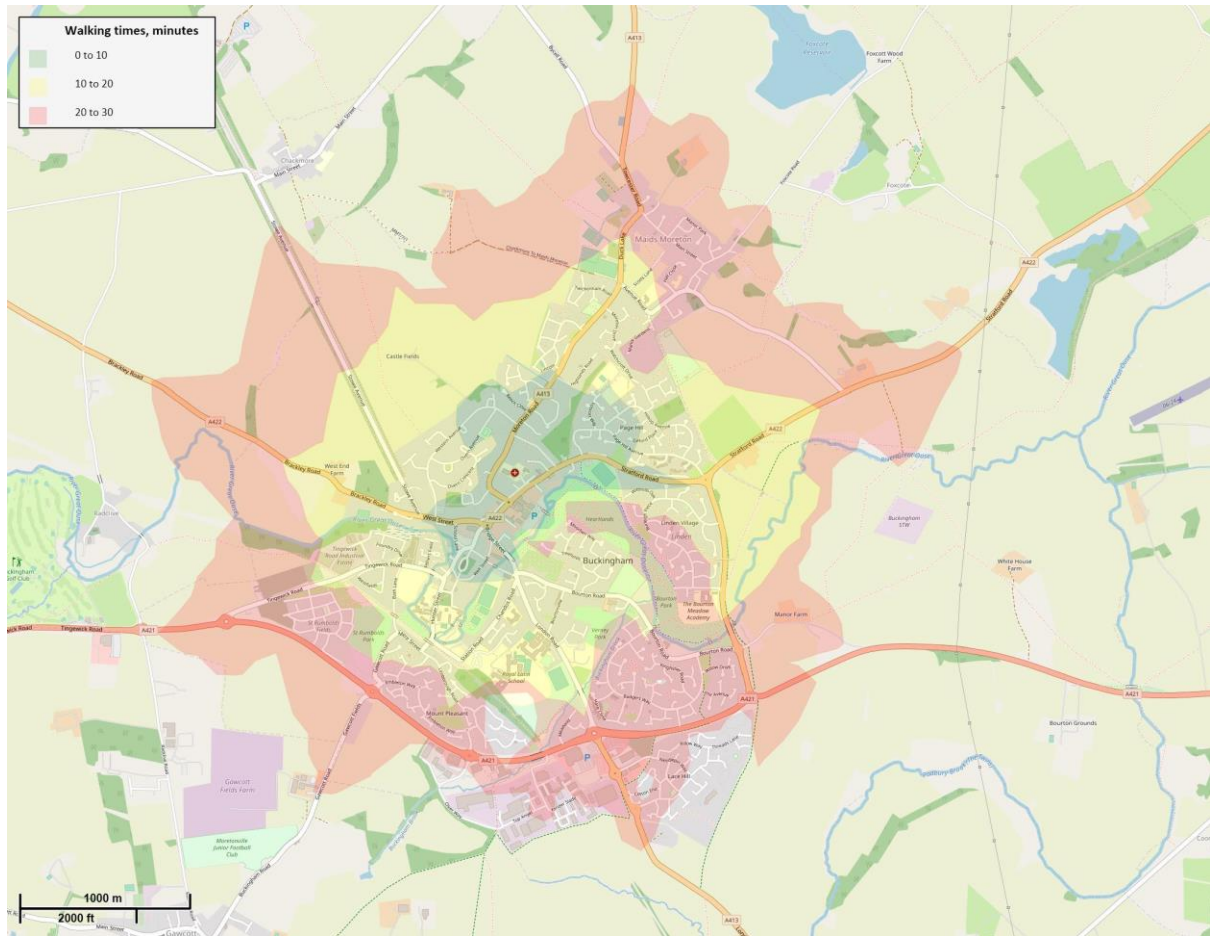


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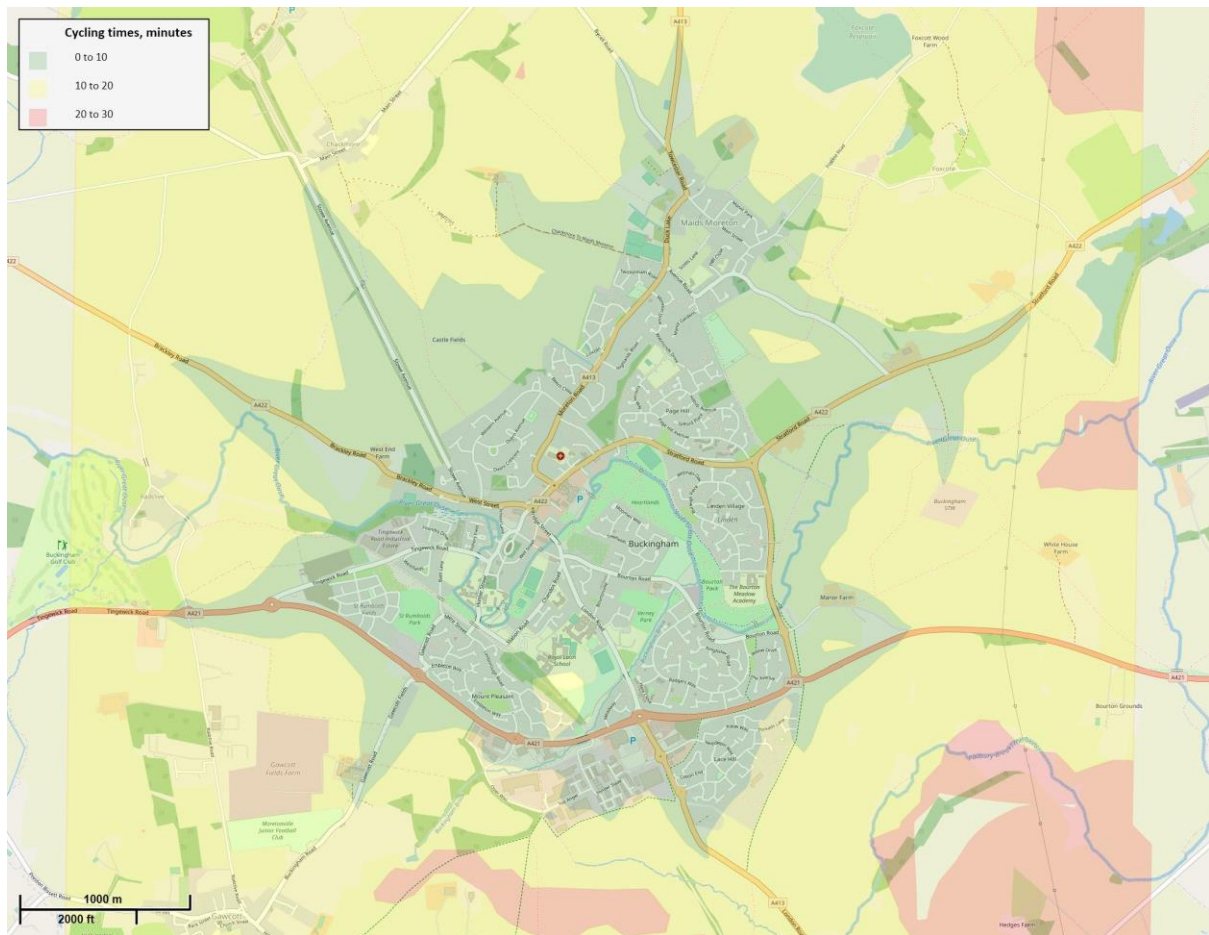


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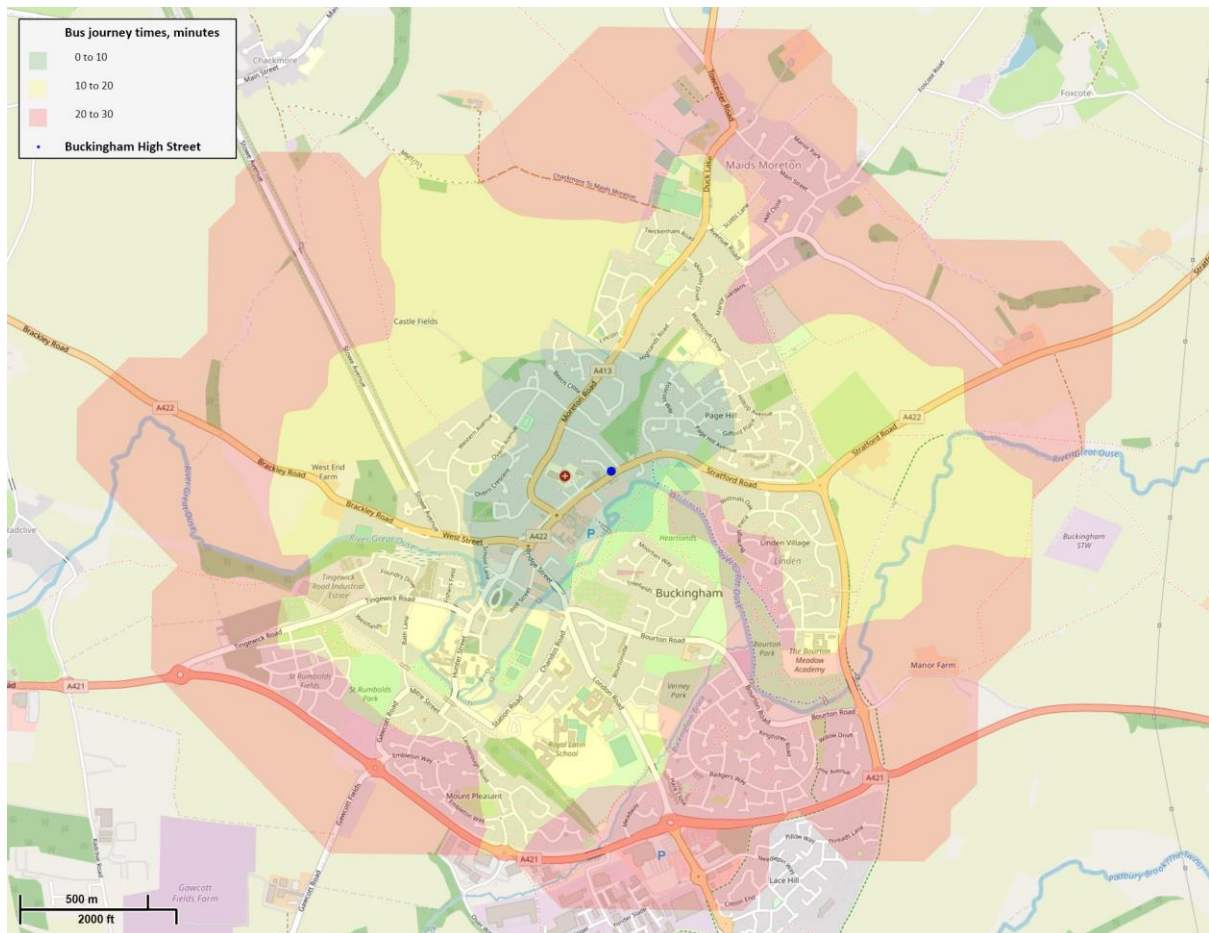
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Cycling

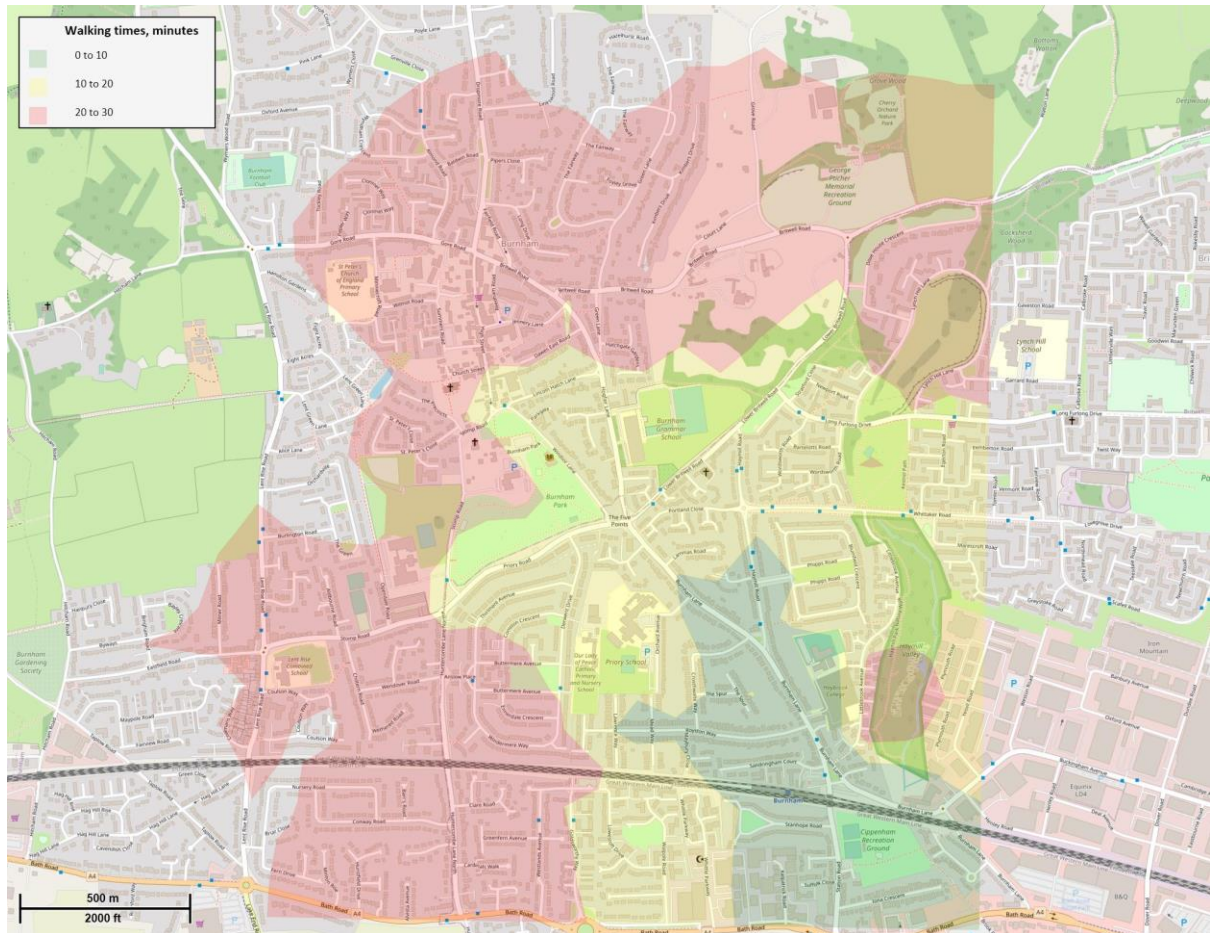


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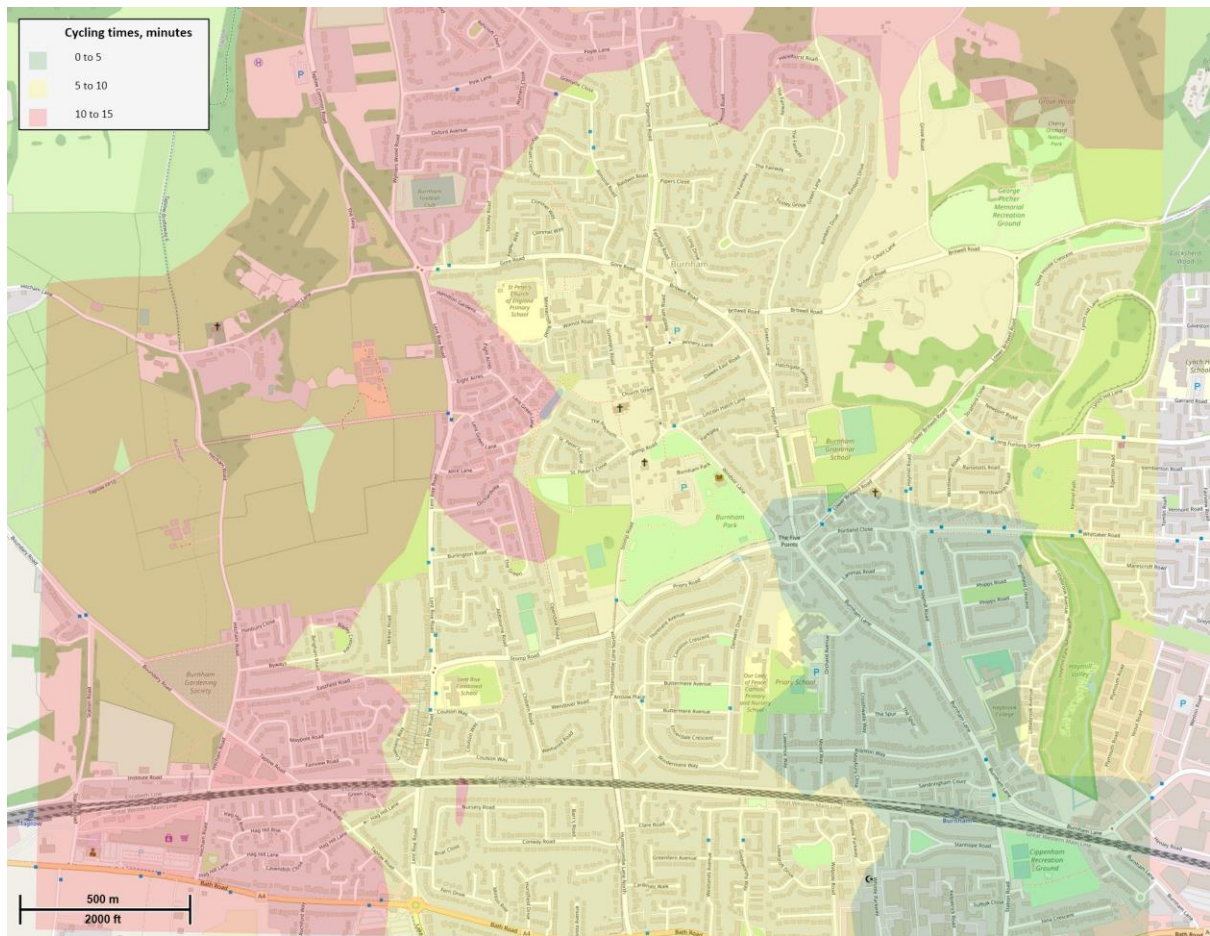


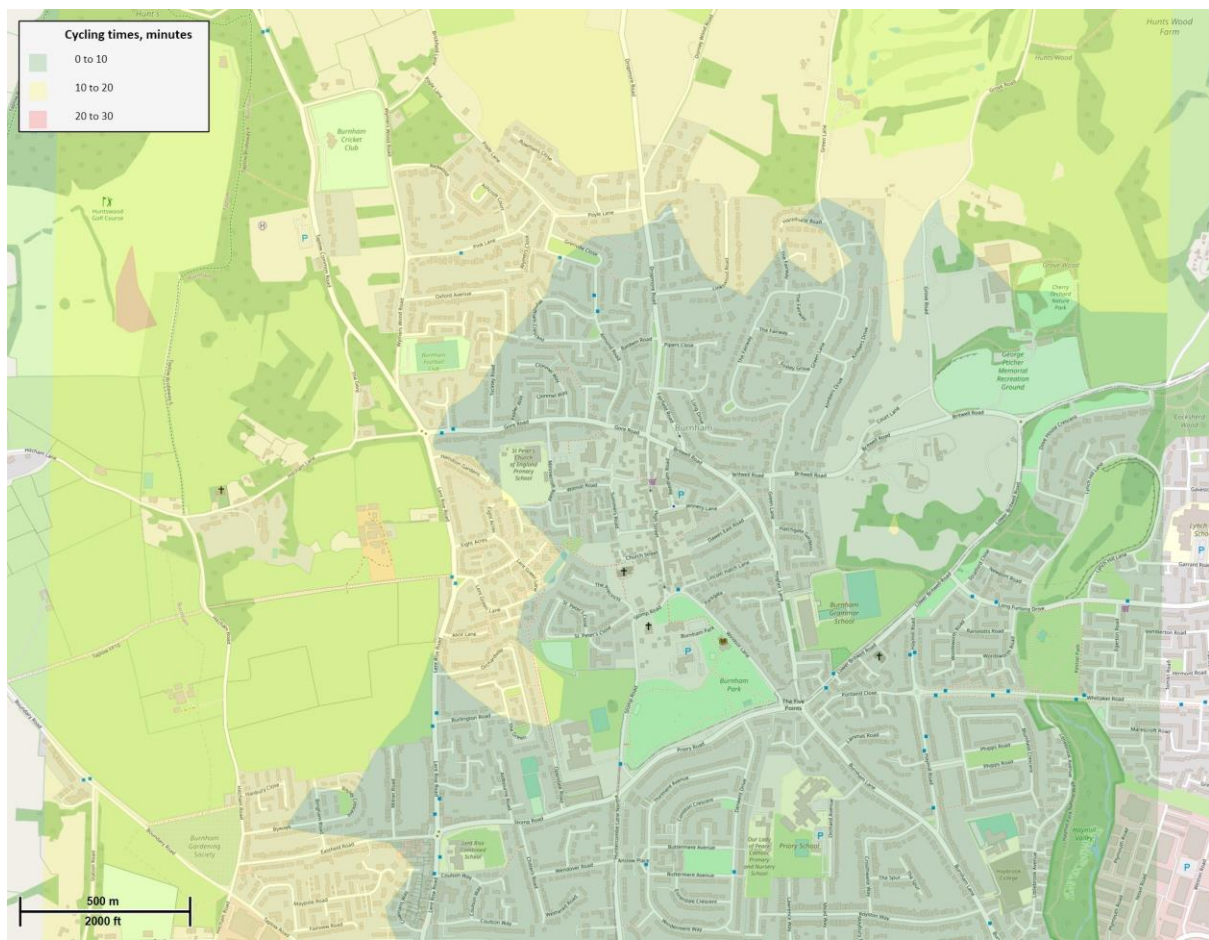
Burnham

Walking

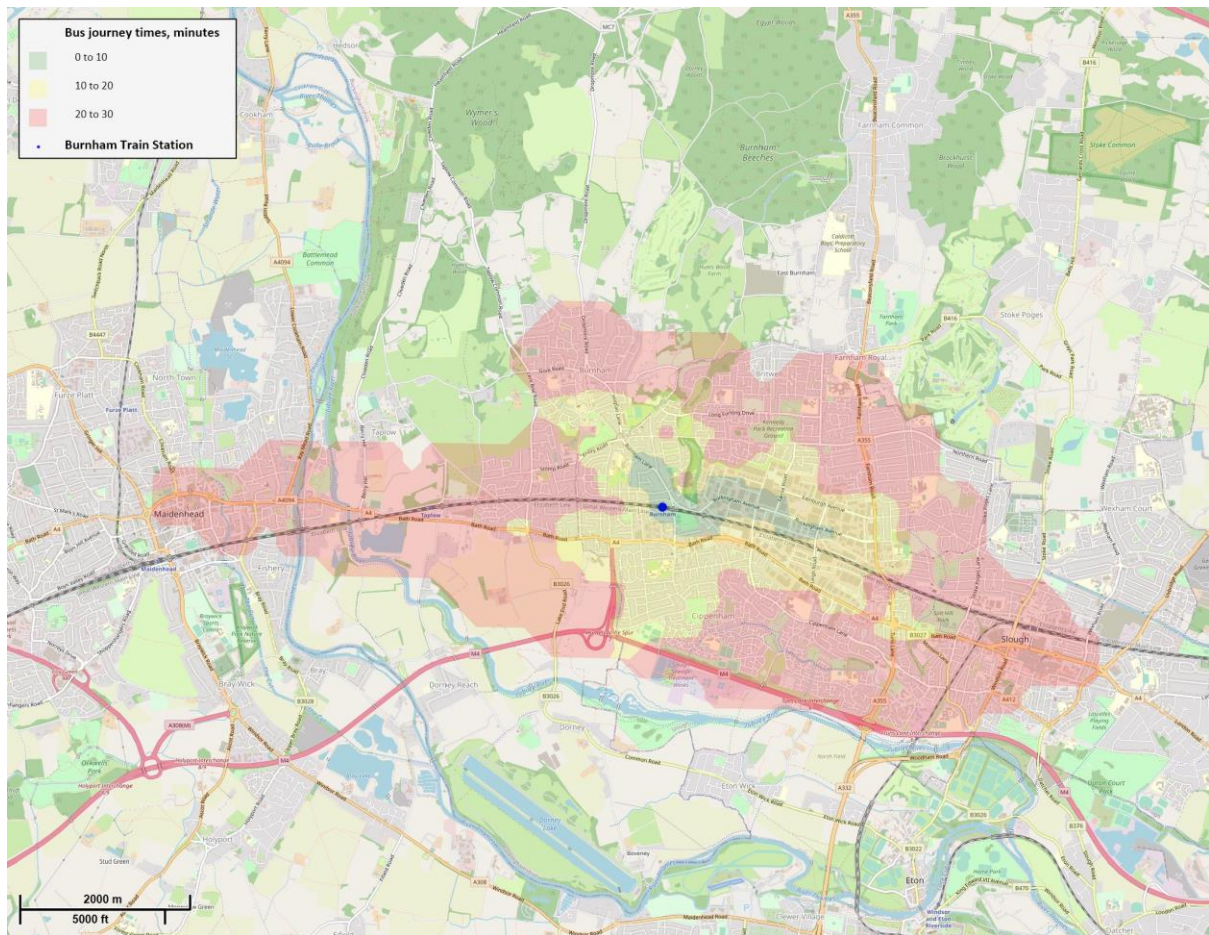


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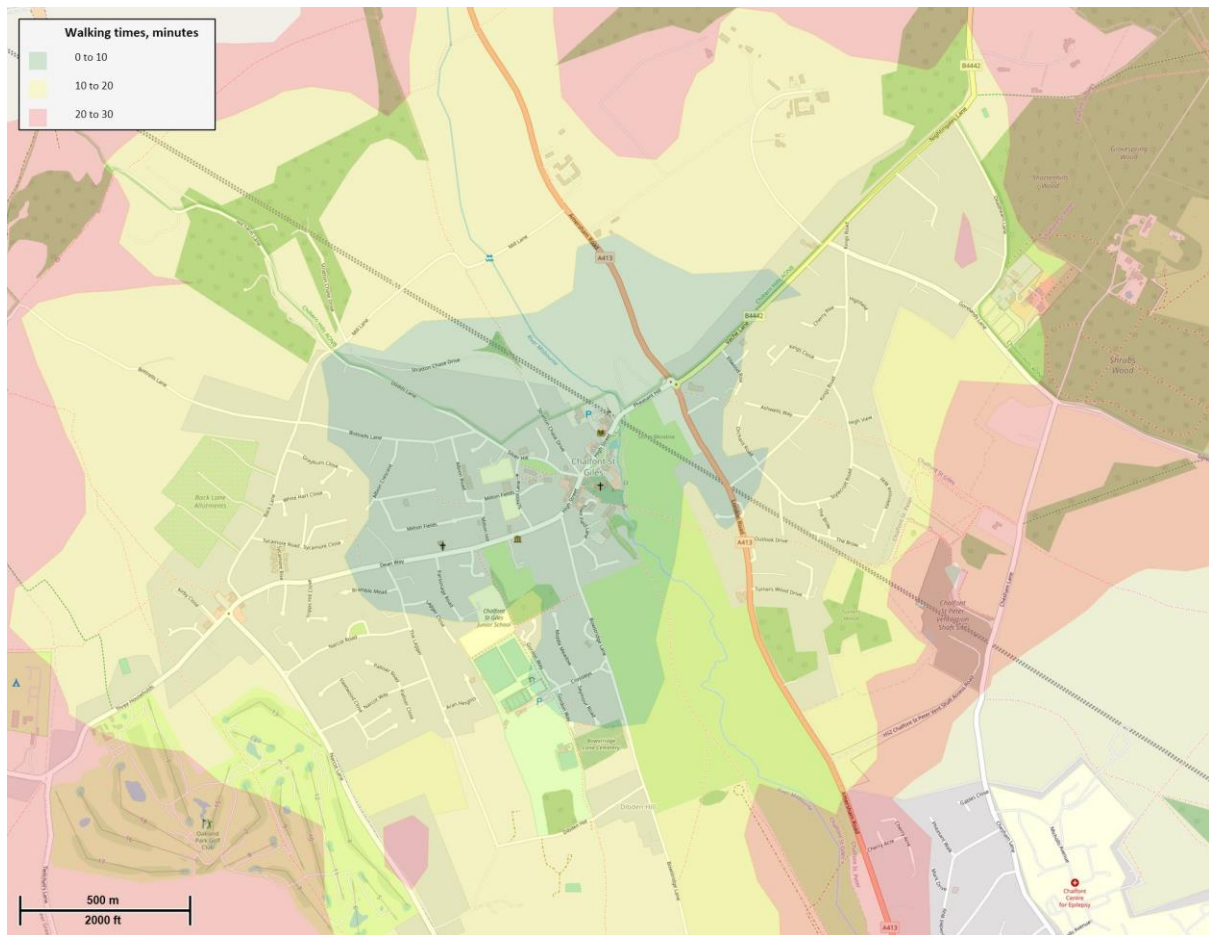


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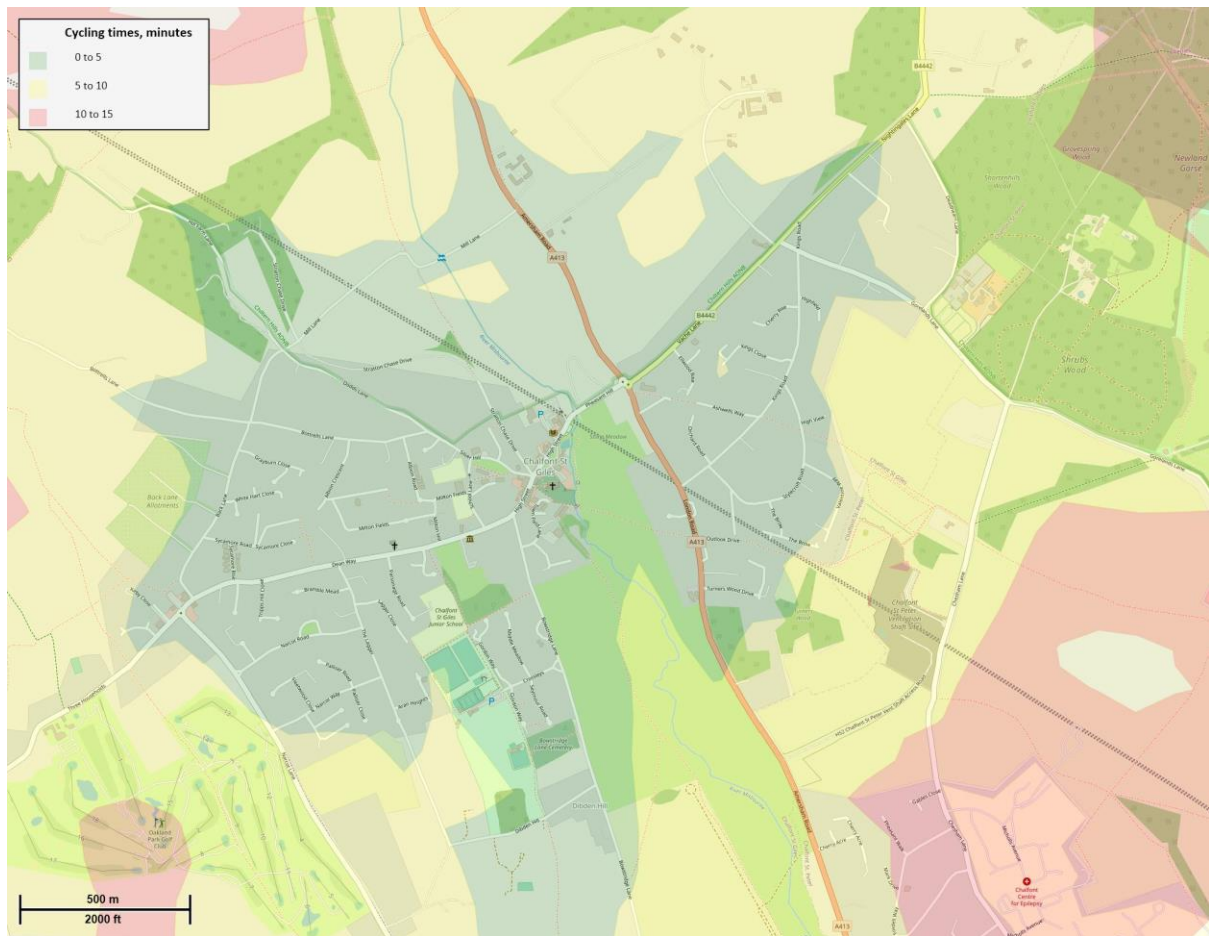


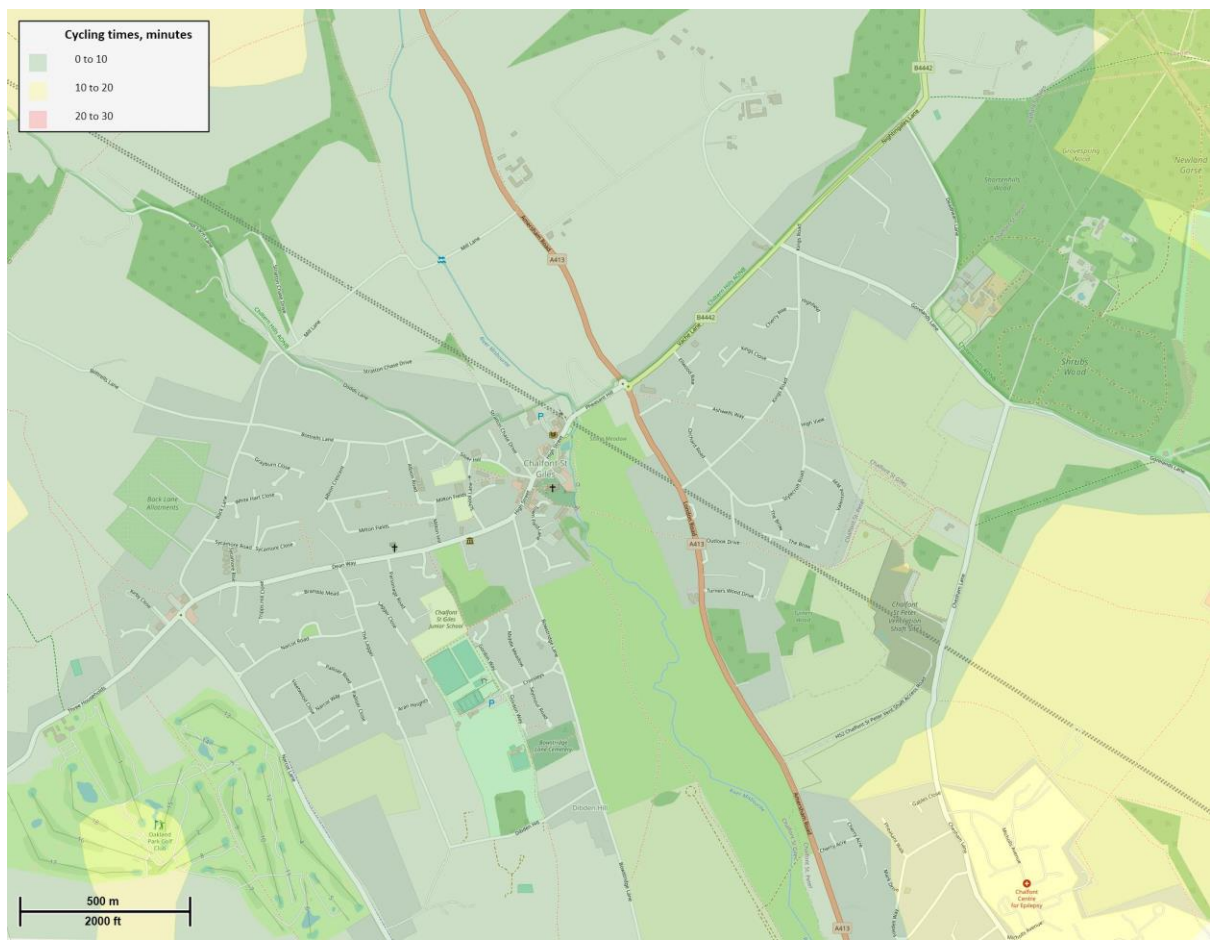
Chalfont St Giles

Walking

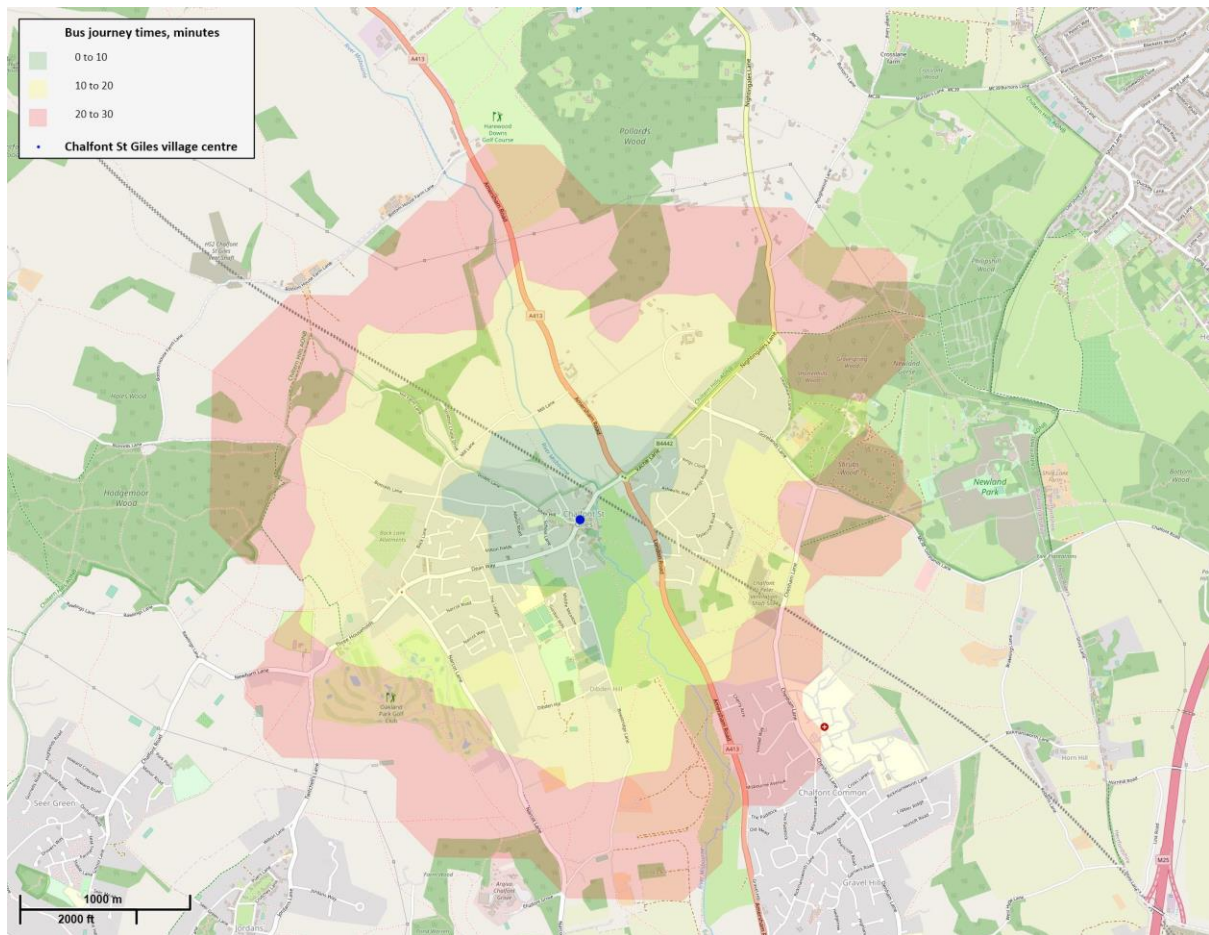


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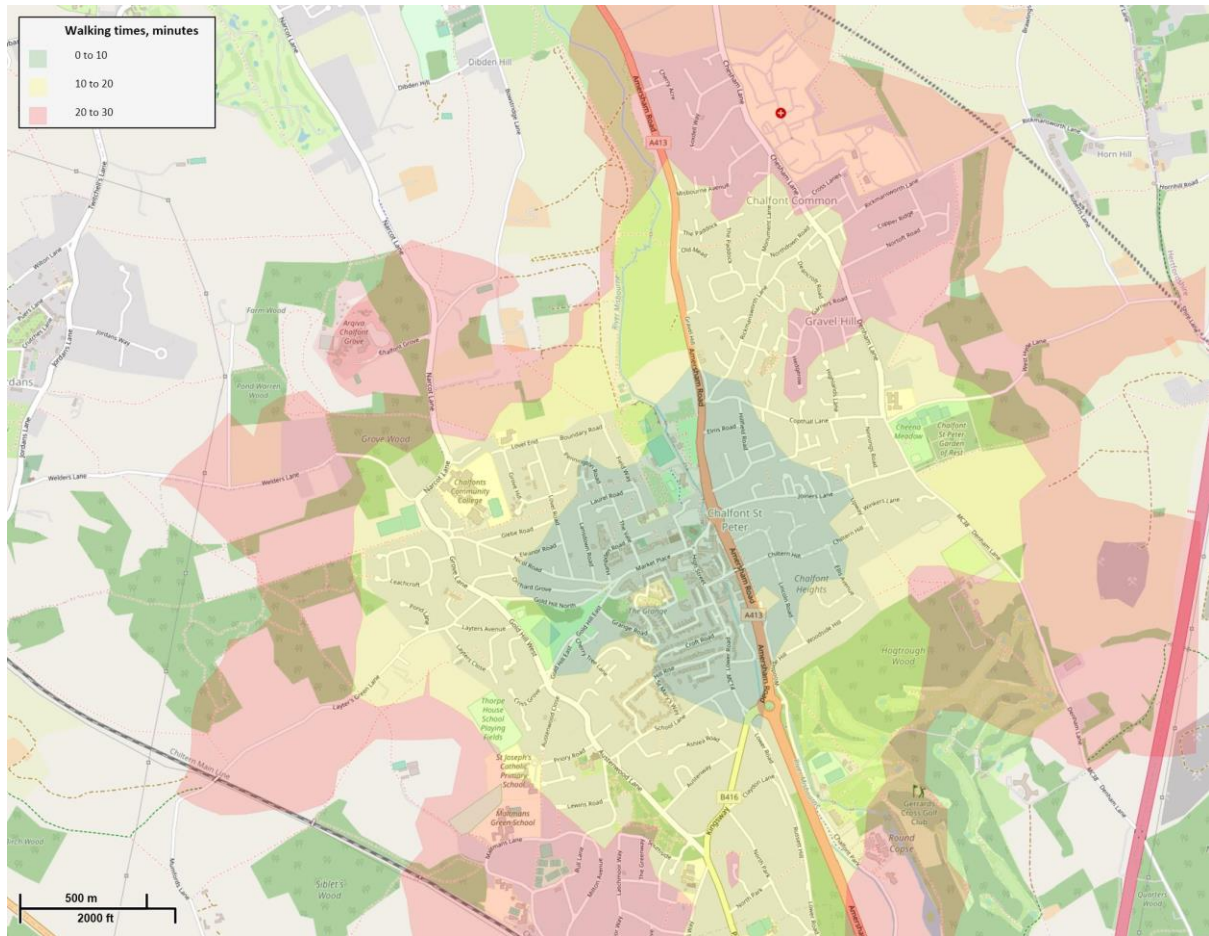




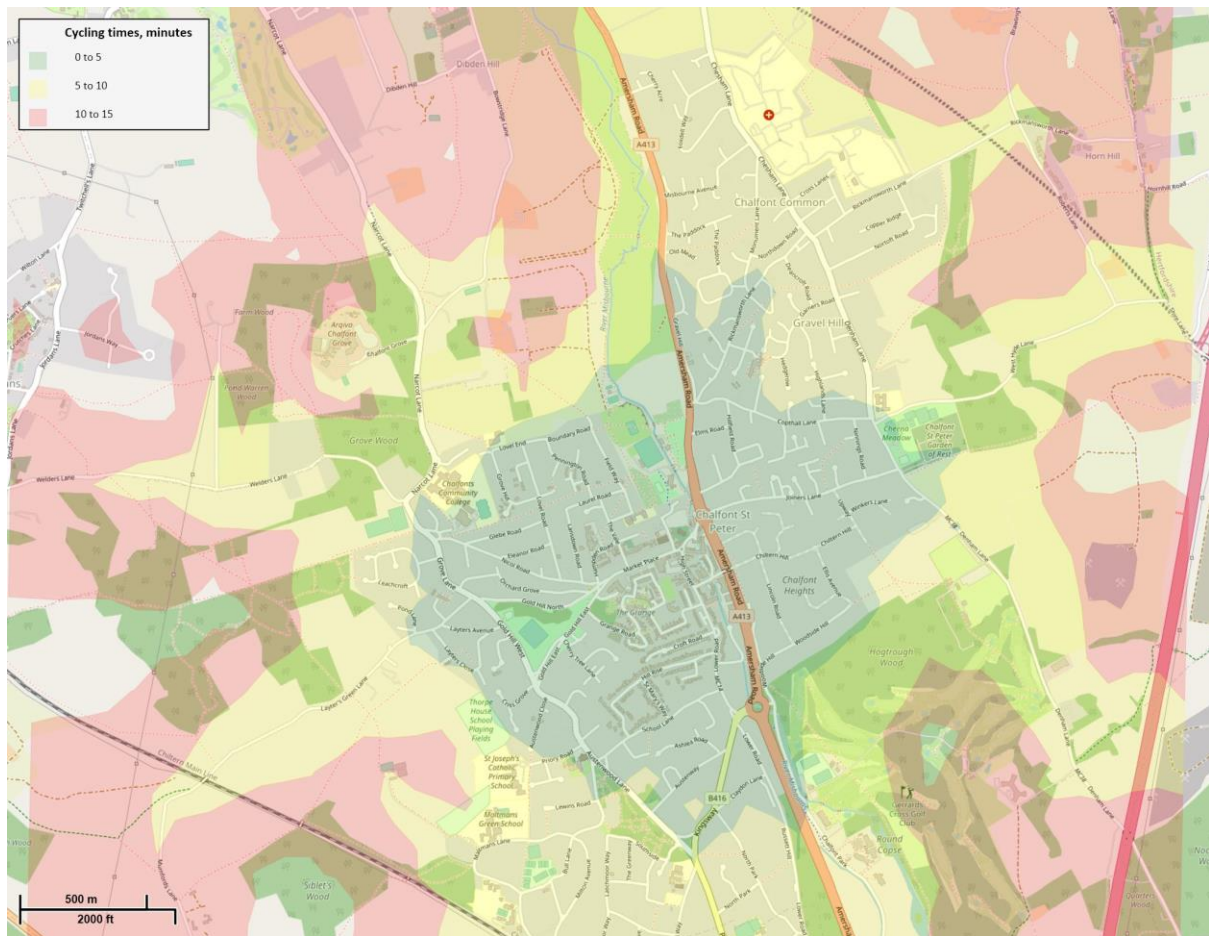
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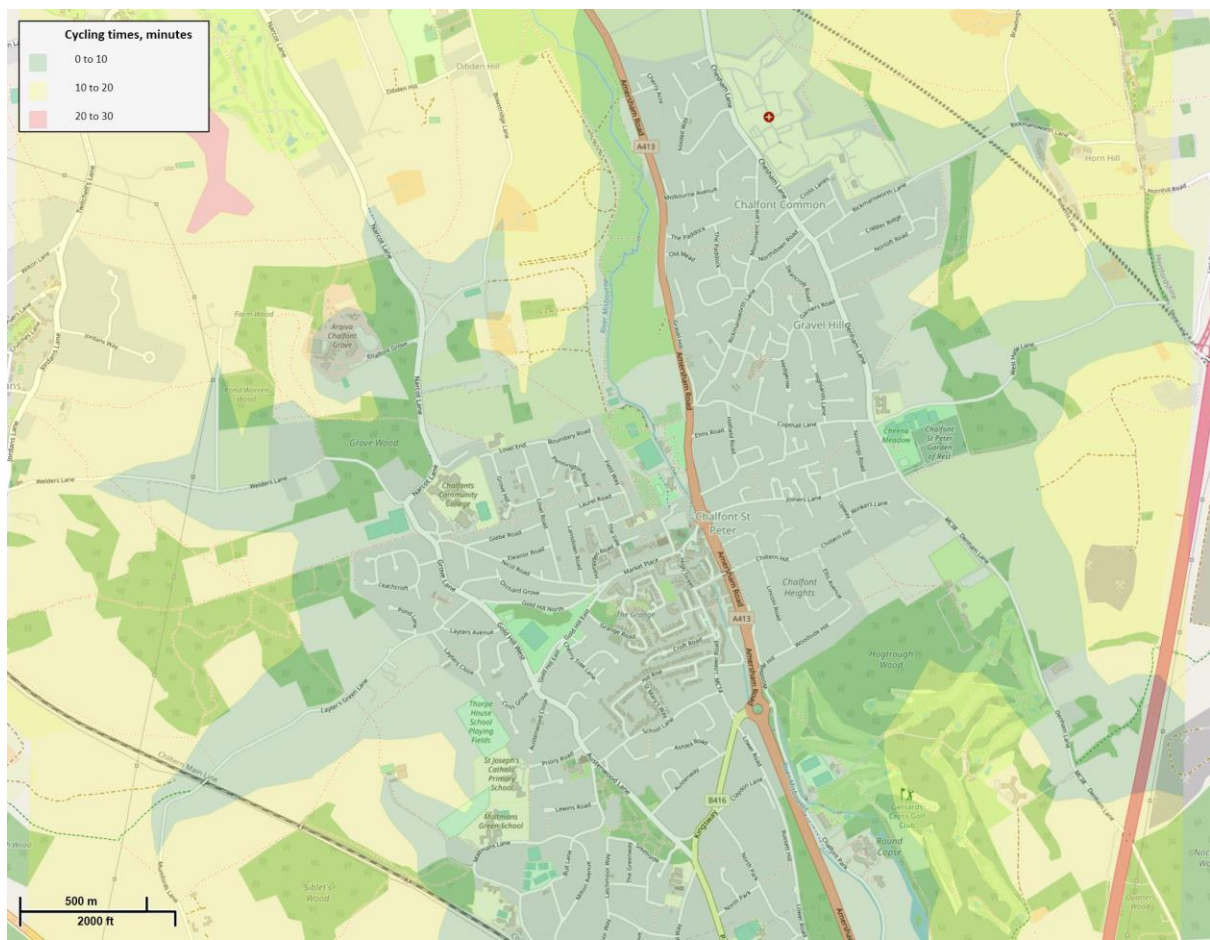


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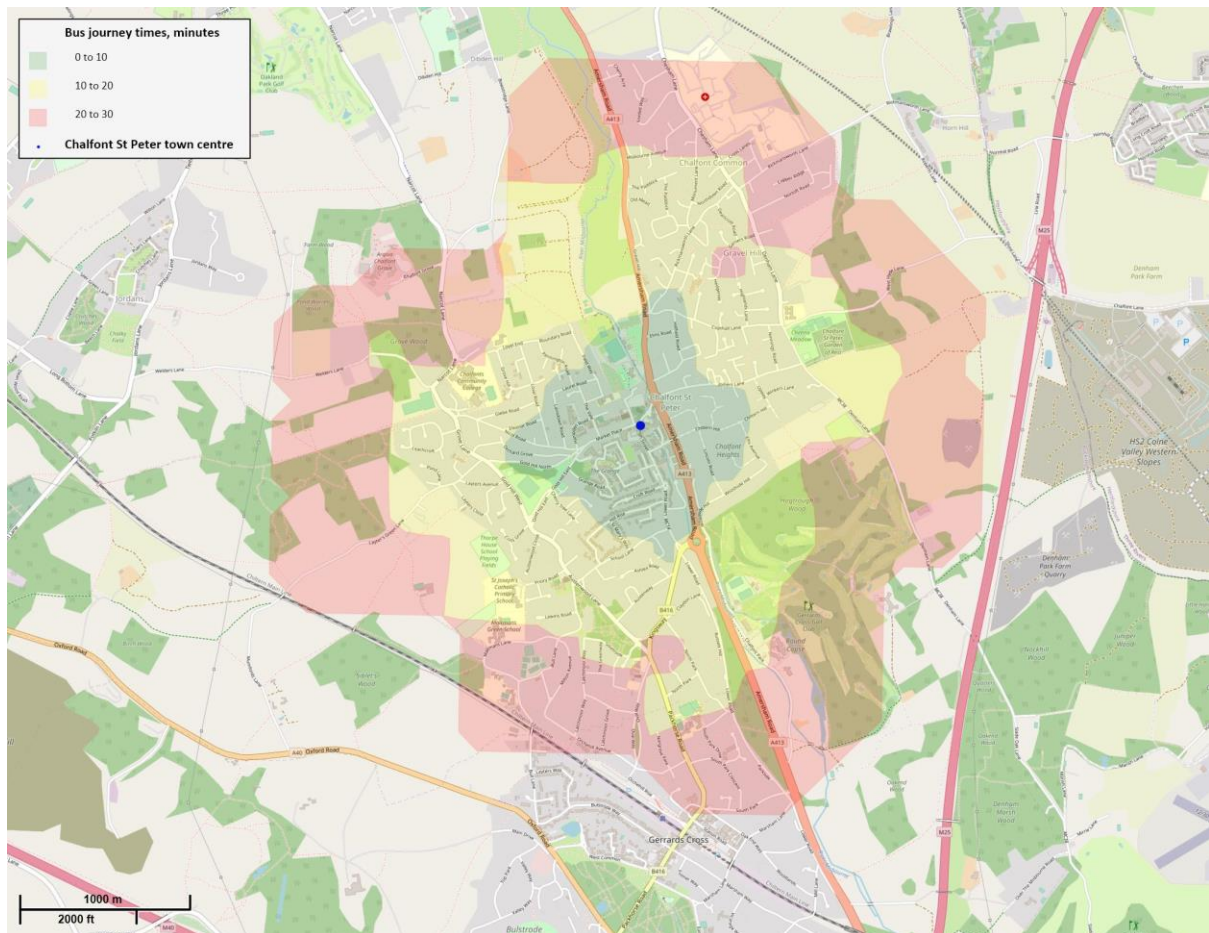


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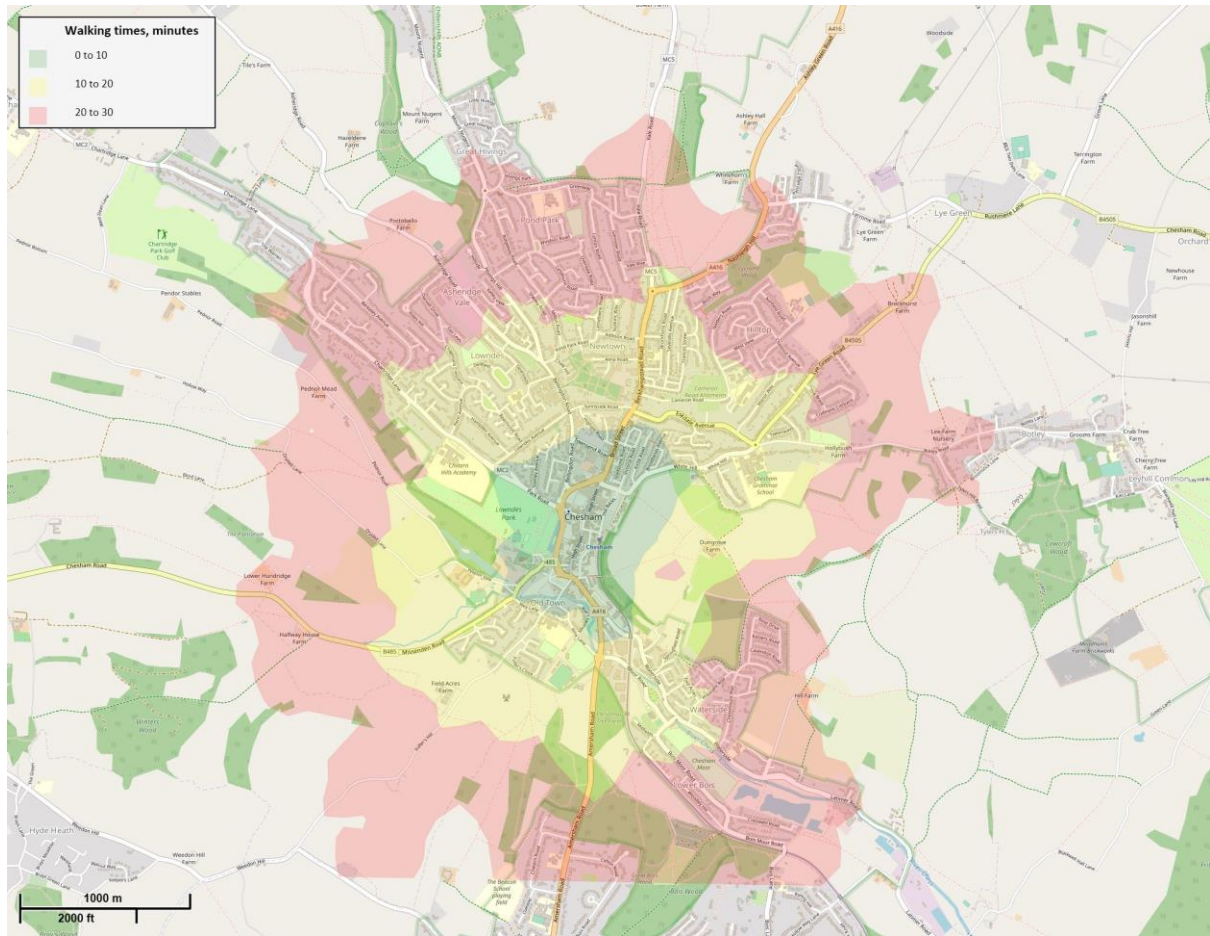


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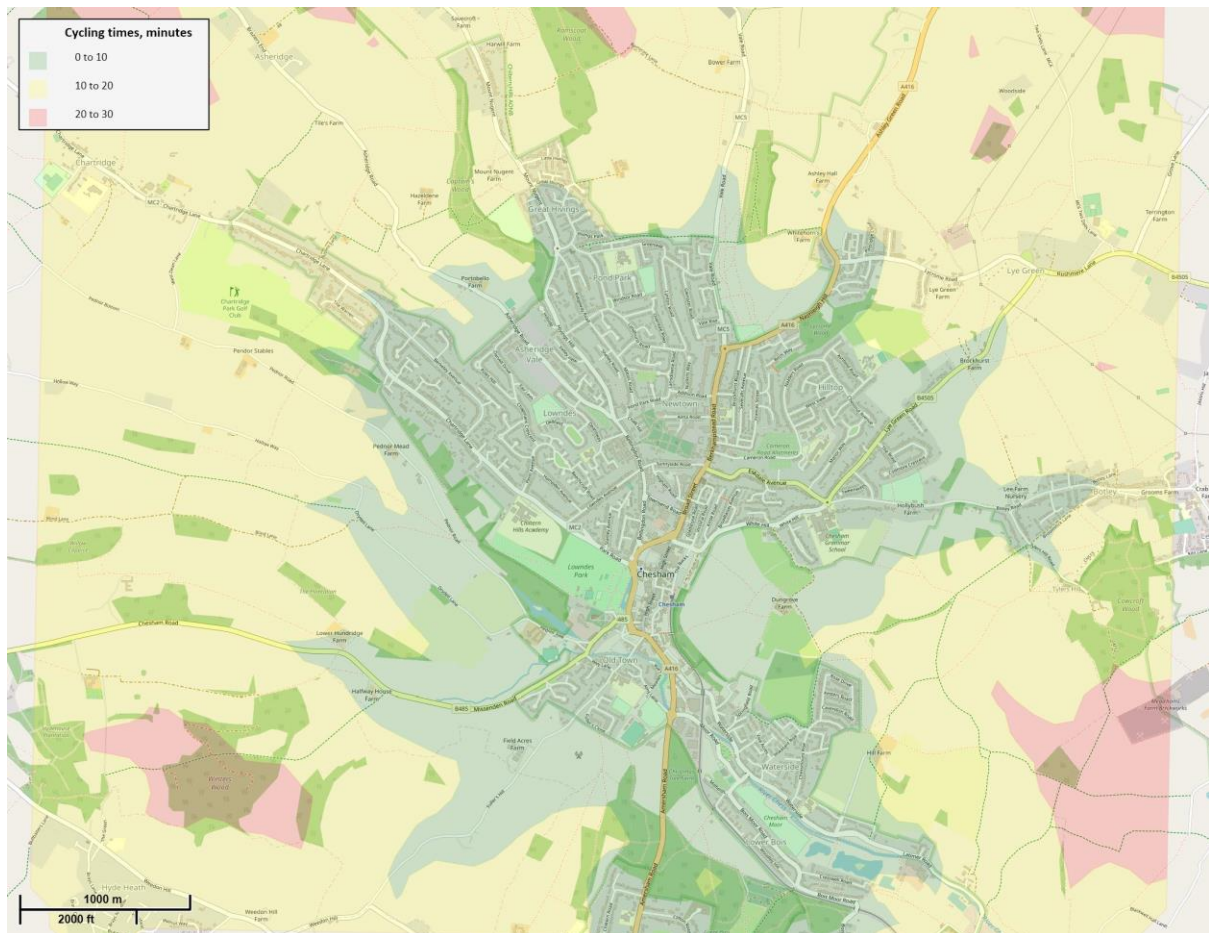


Chesham

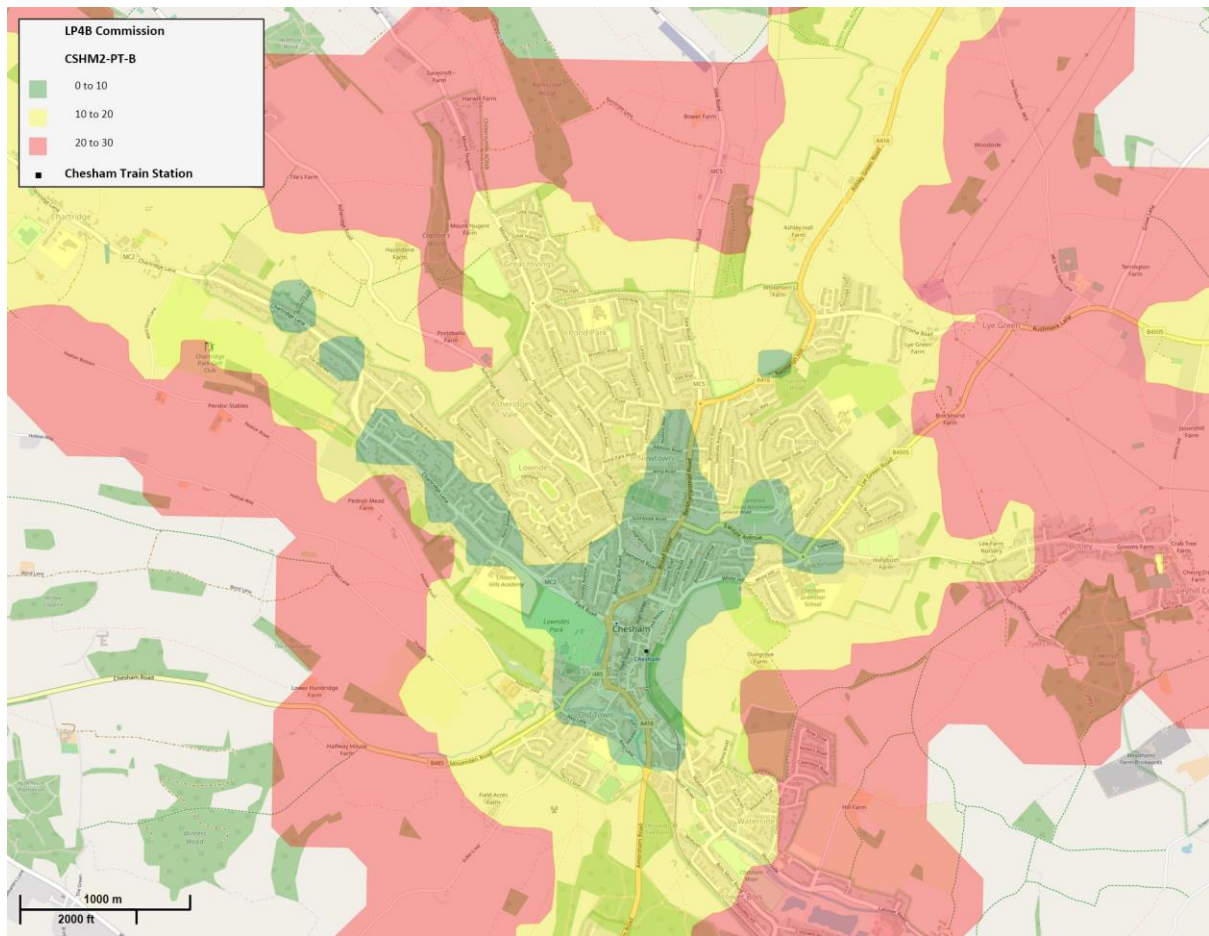
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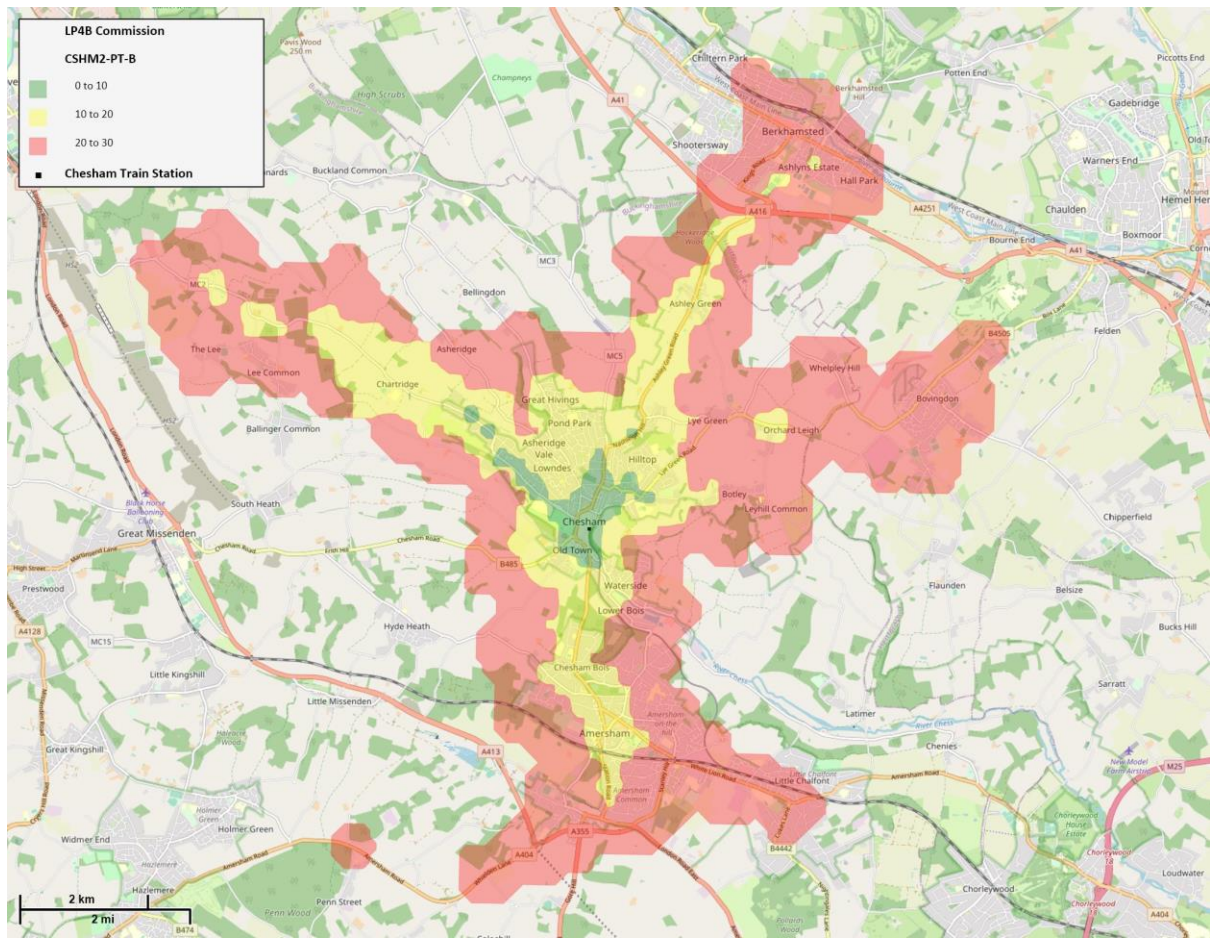


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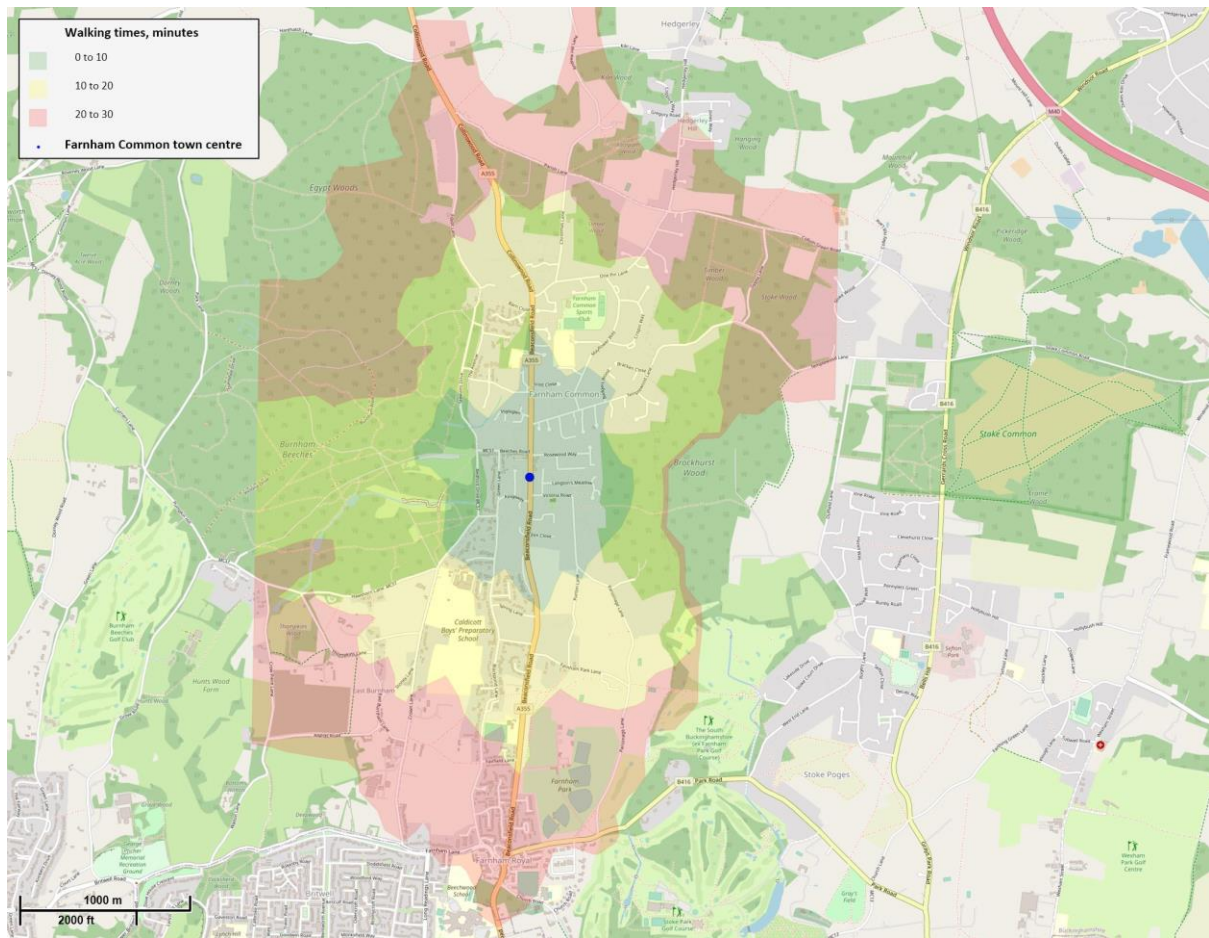


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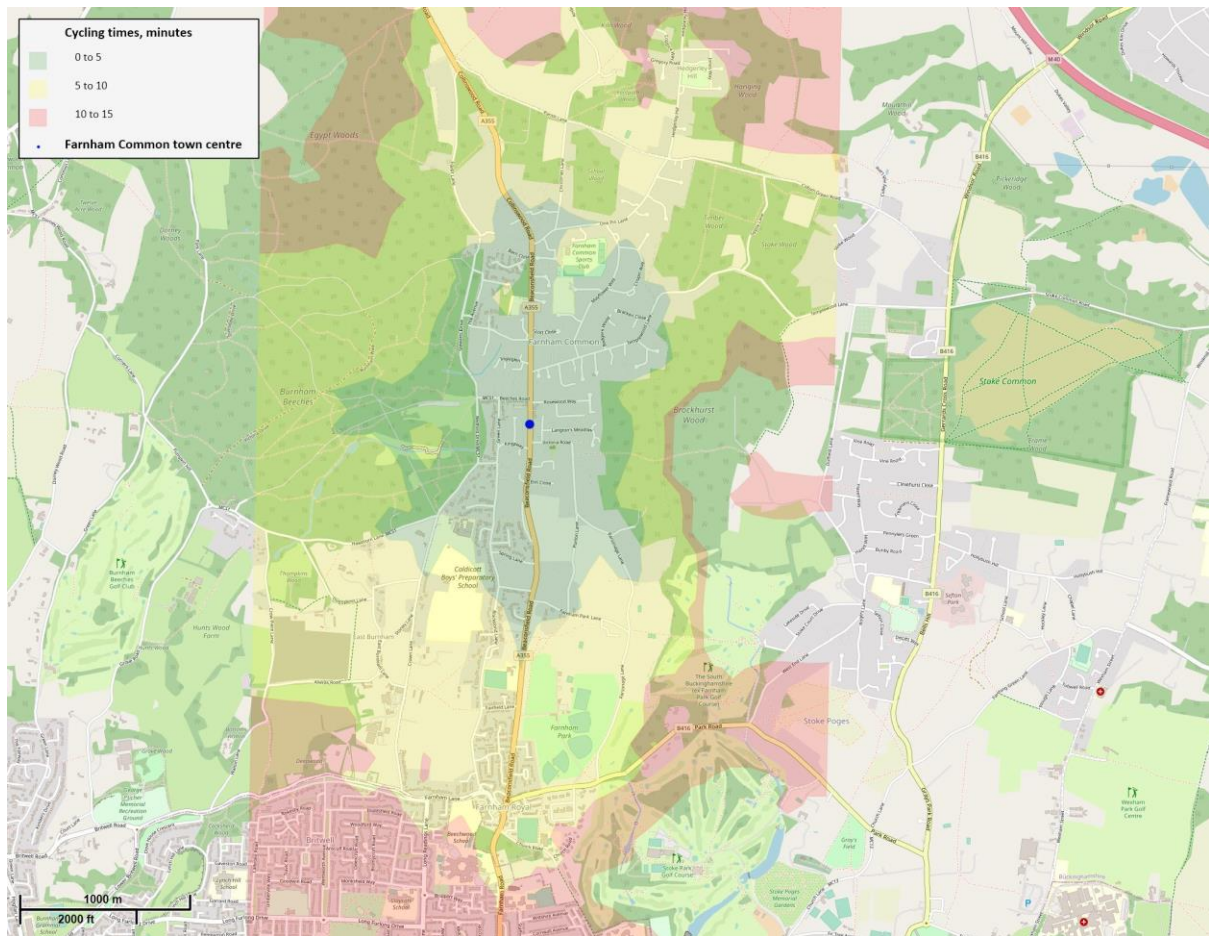


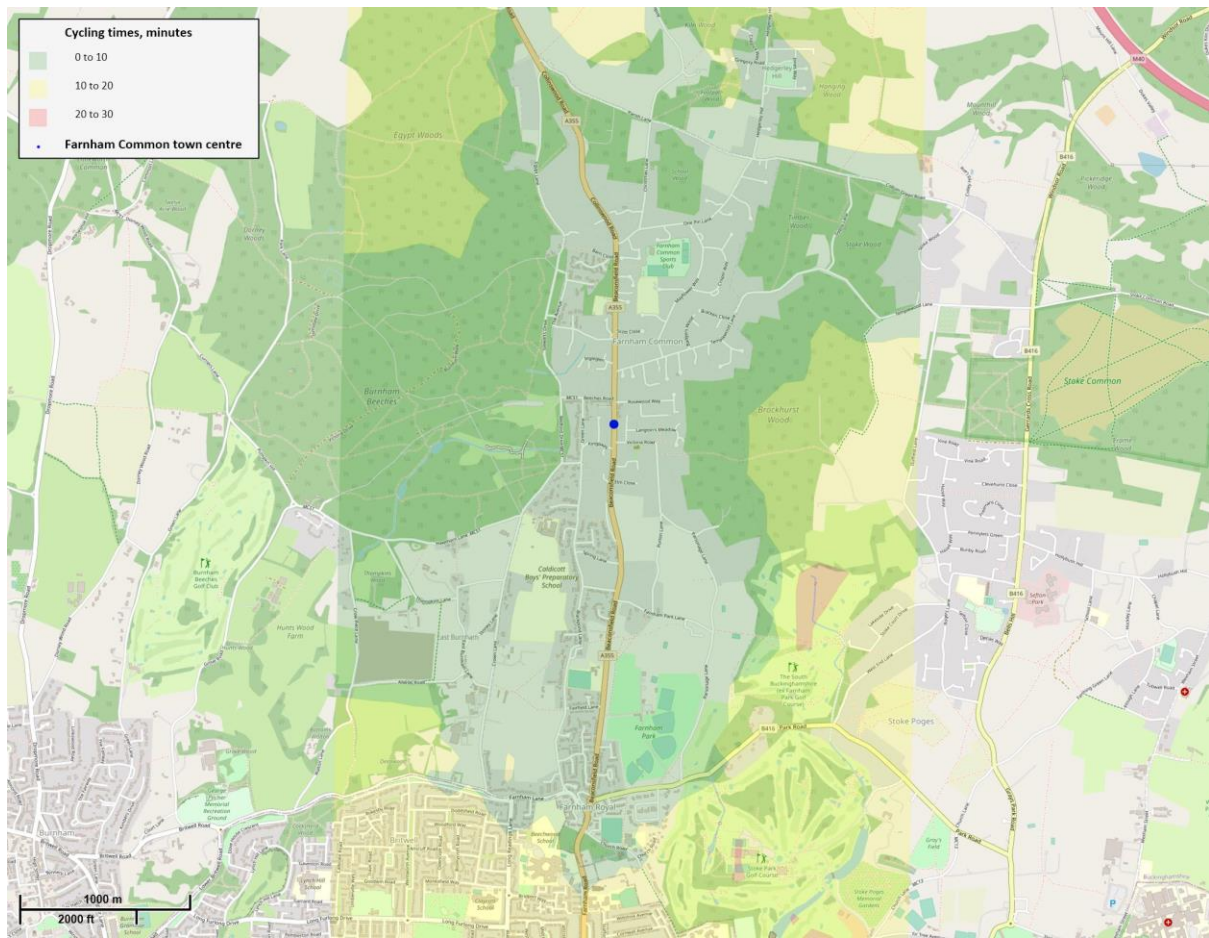


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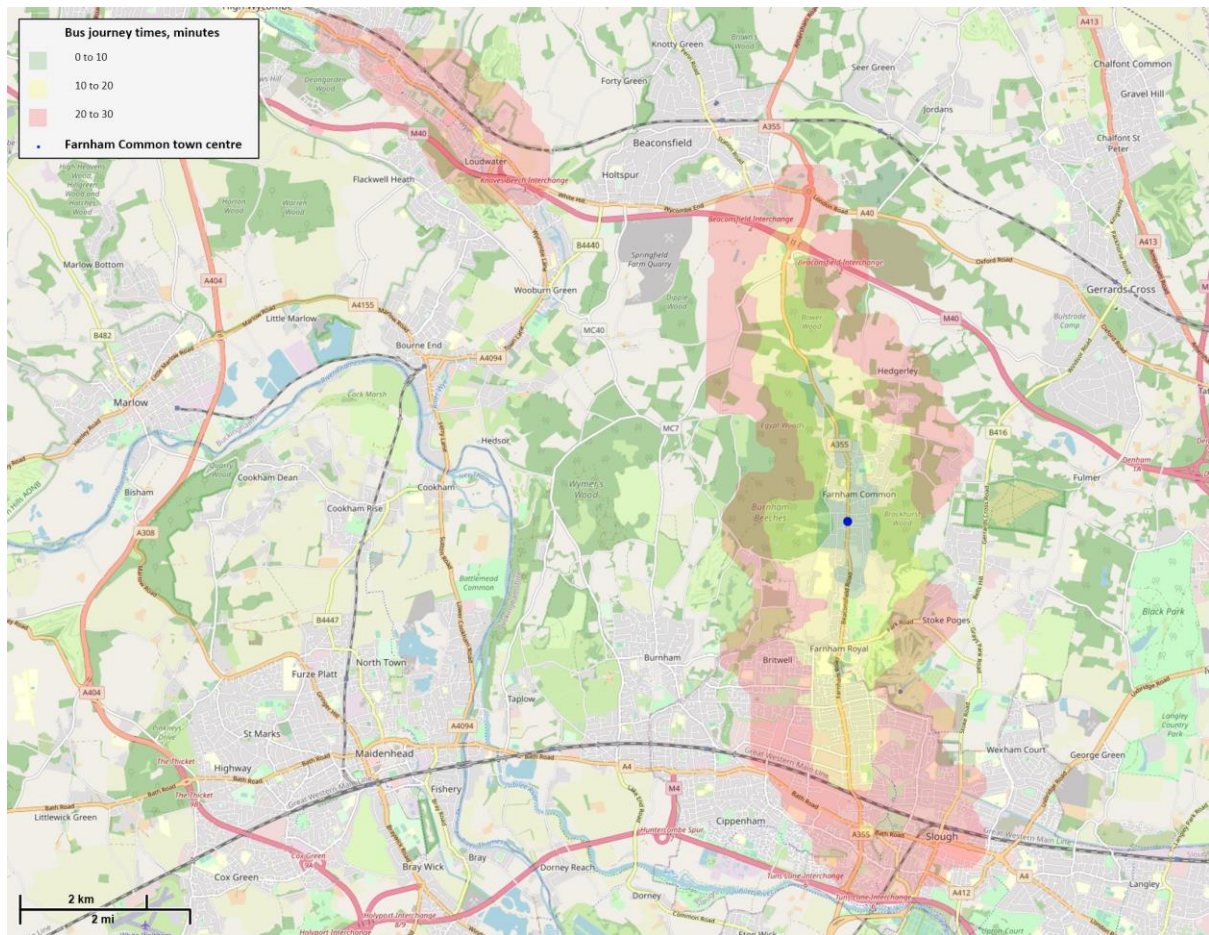


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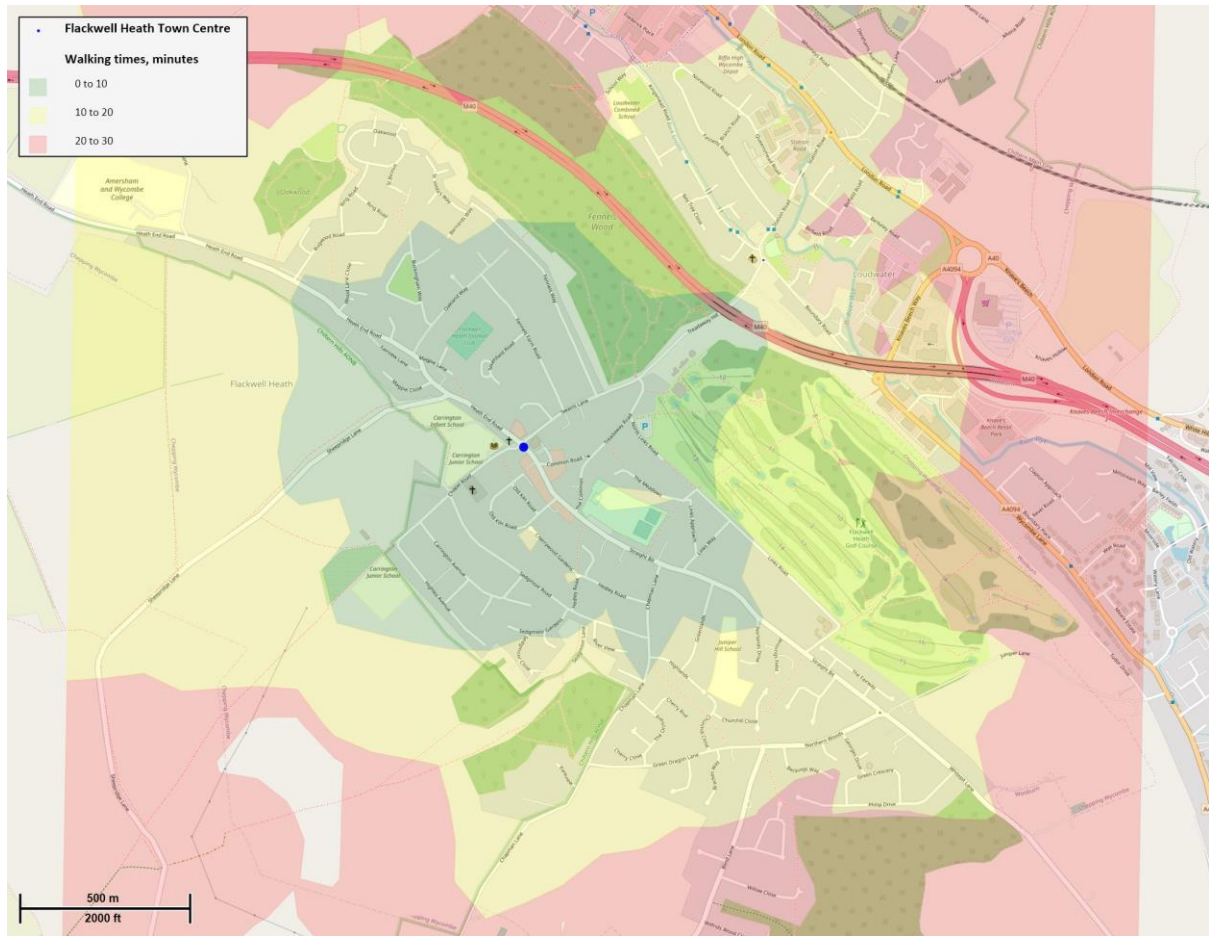




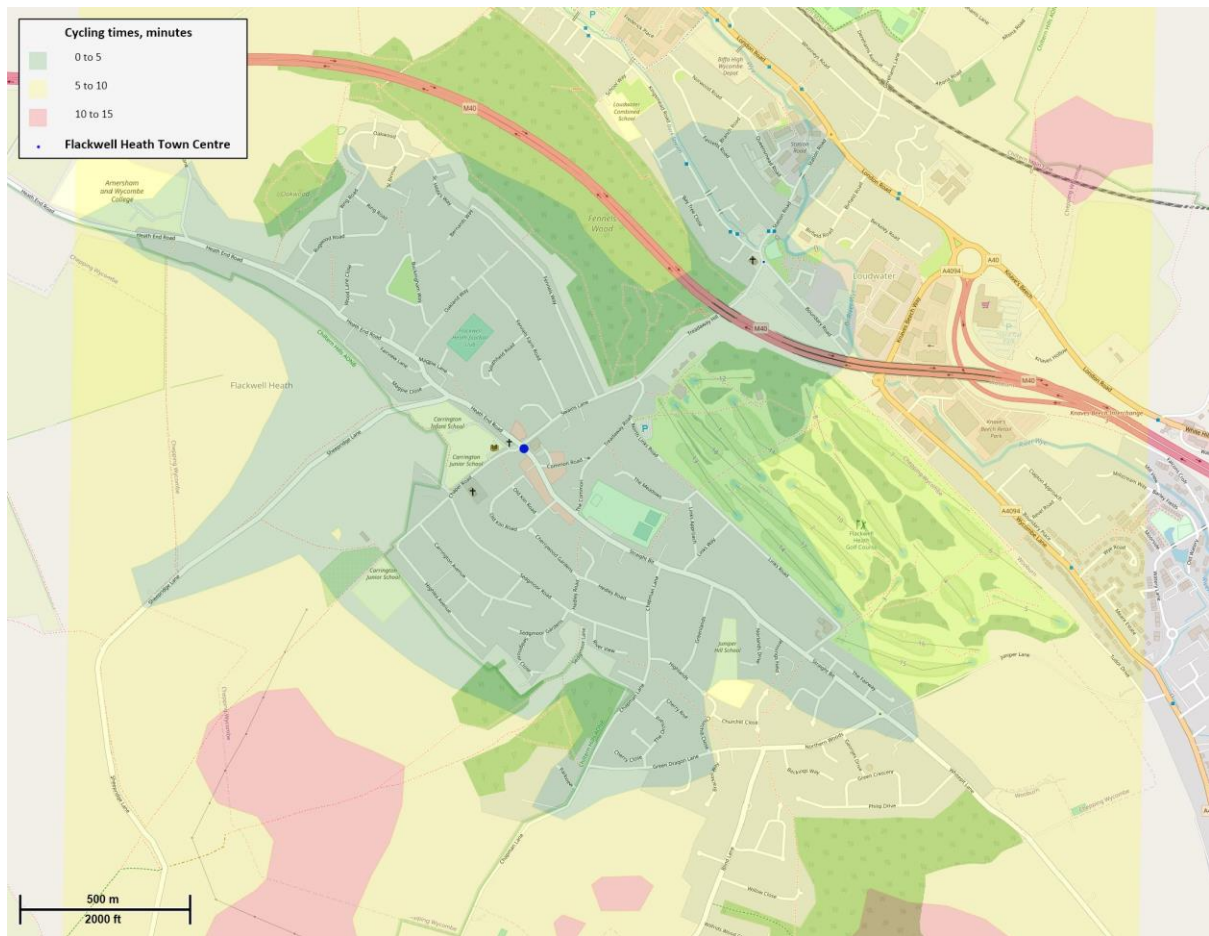
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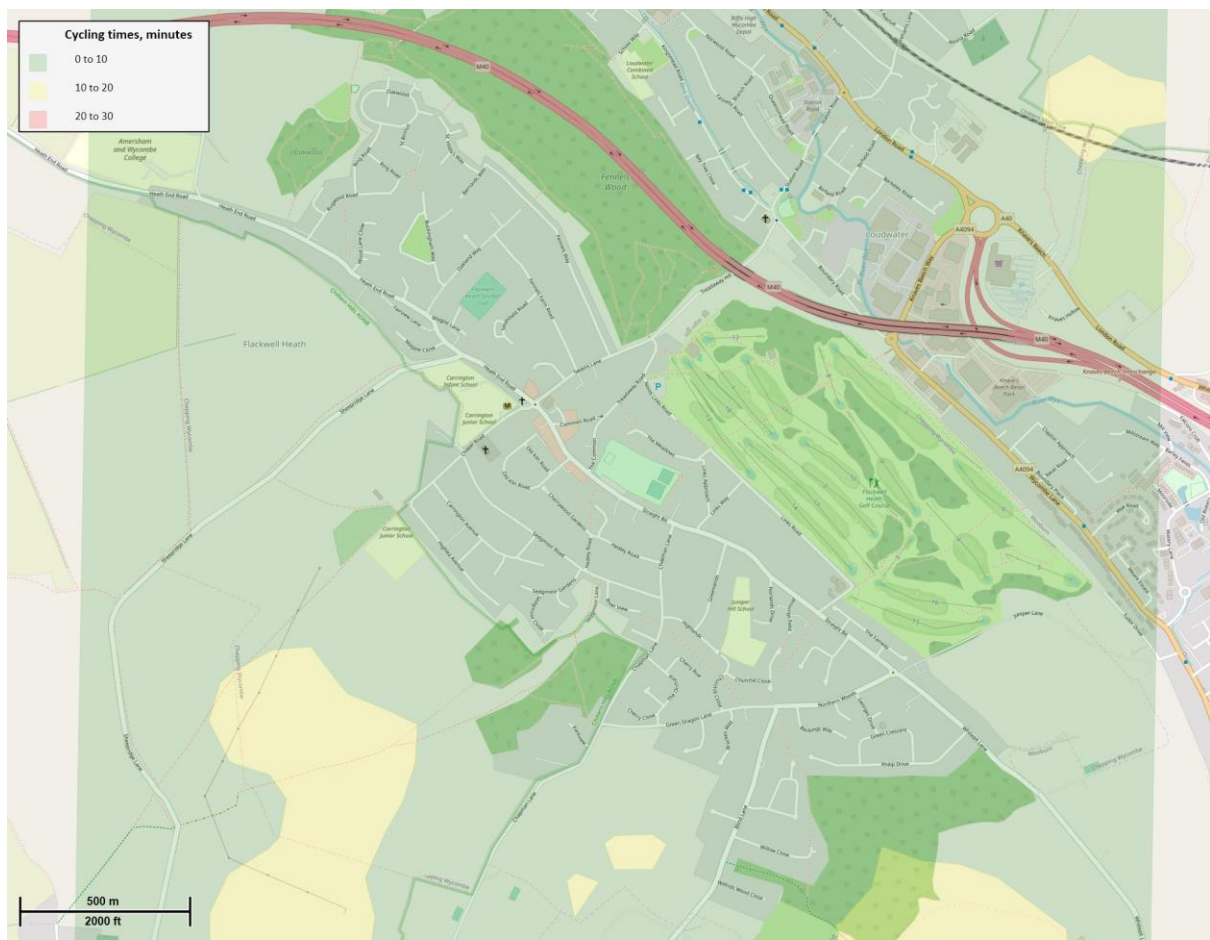


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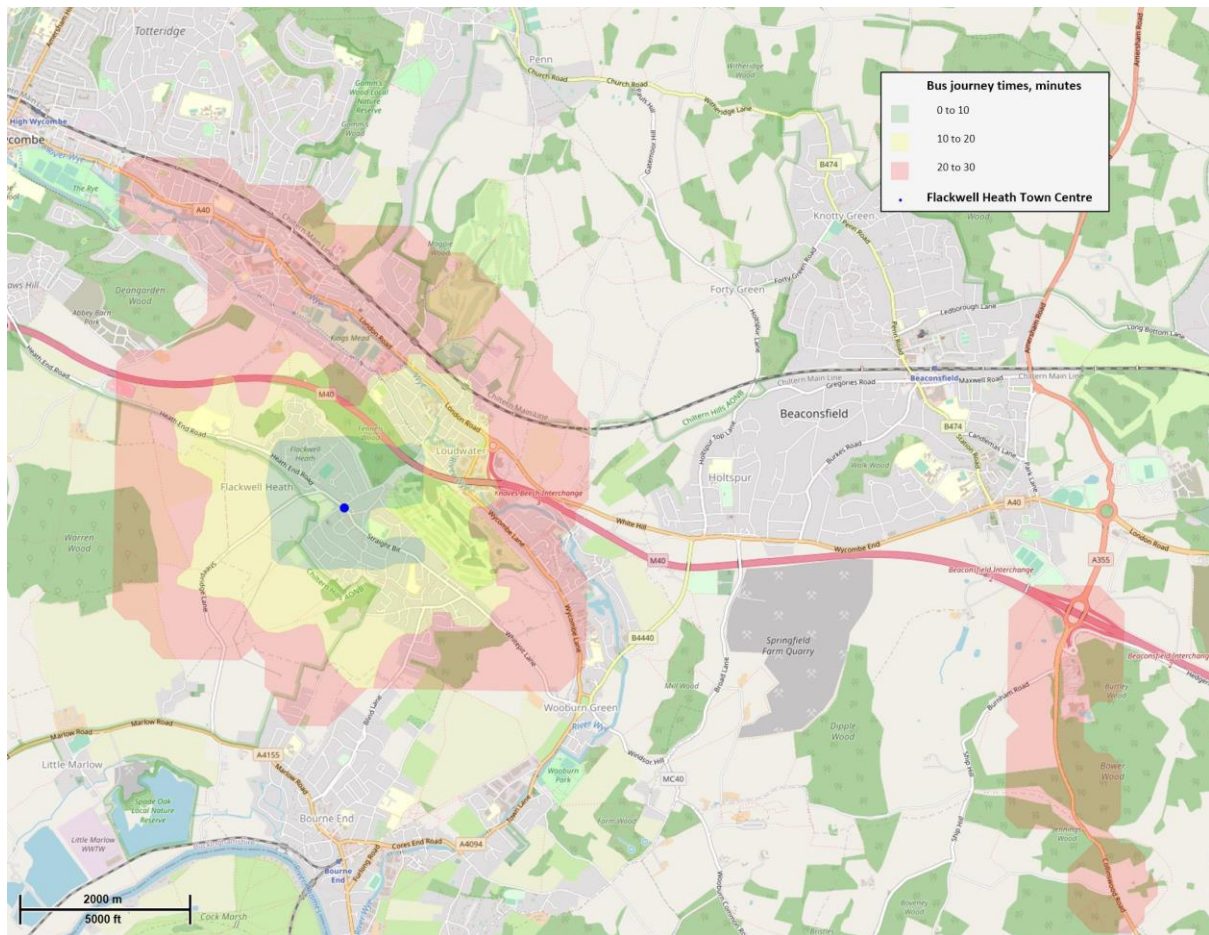


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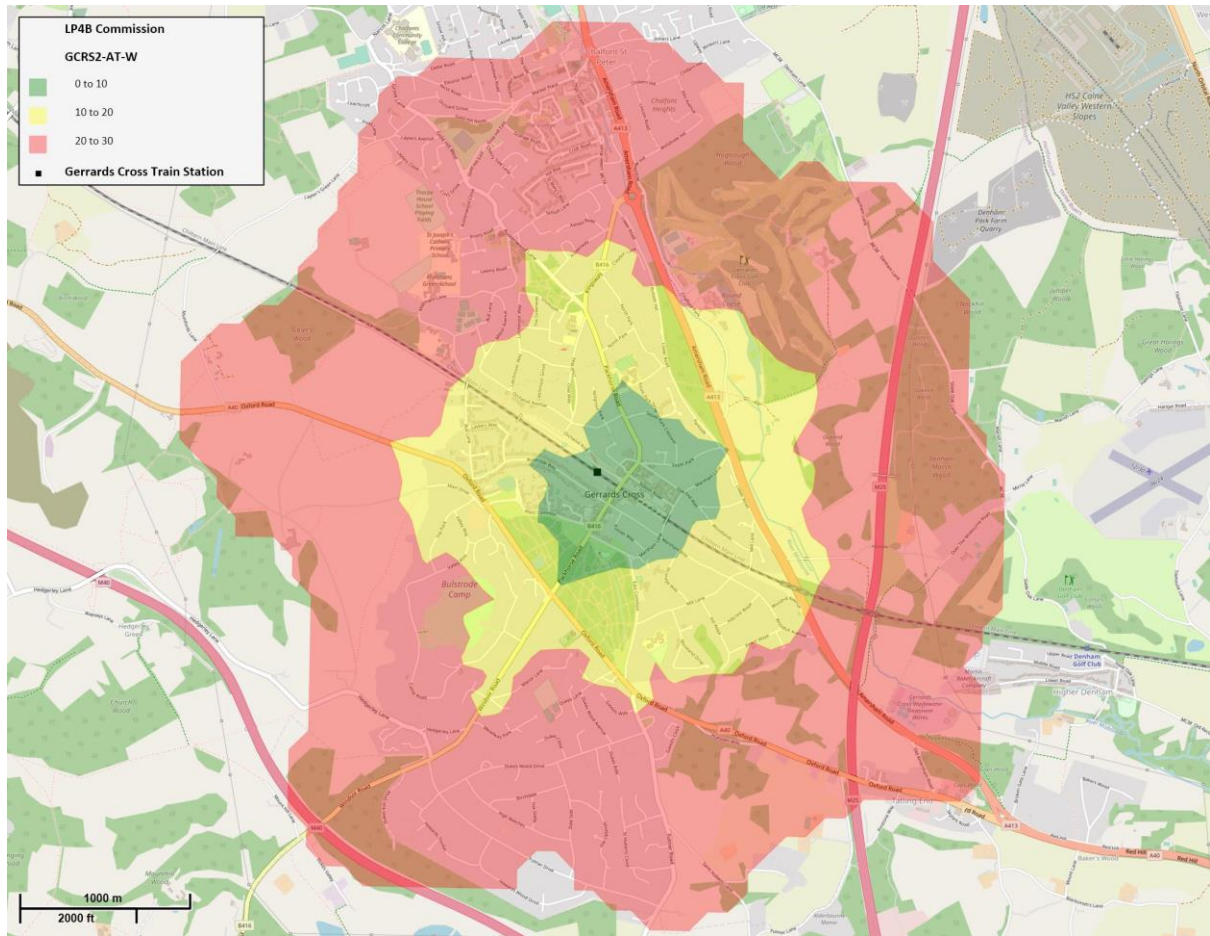


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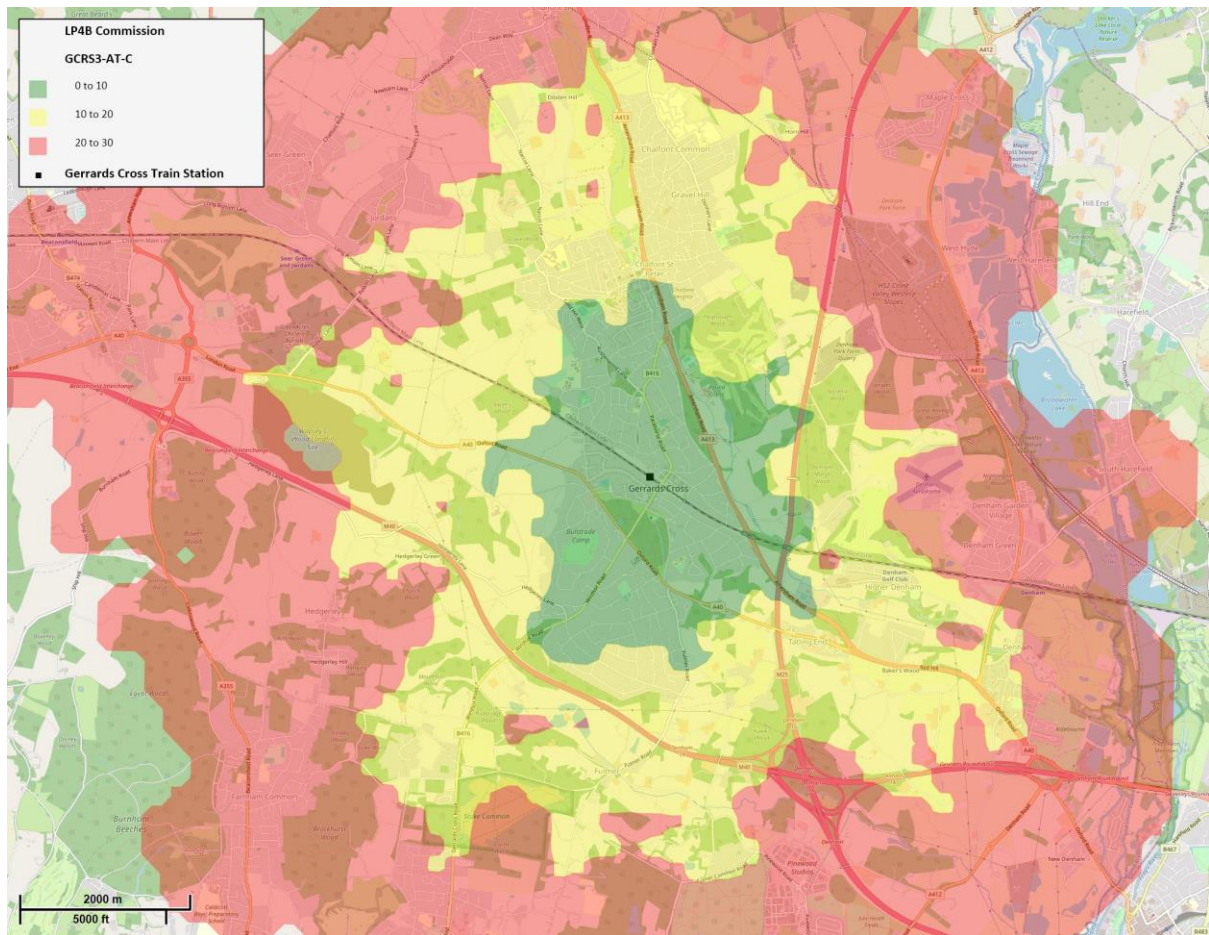


Gerrards Cross

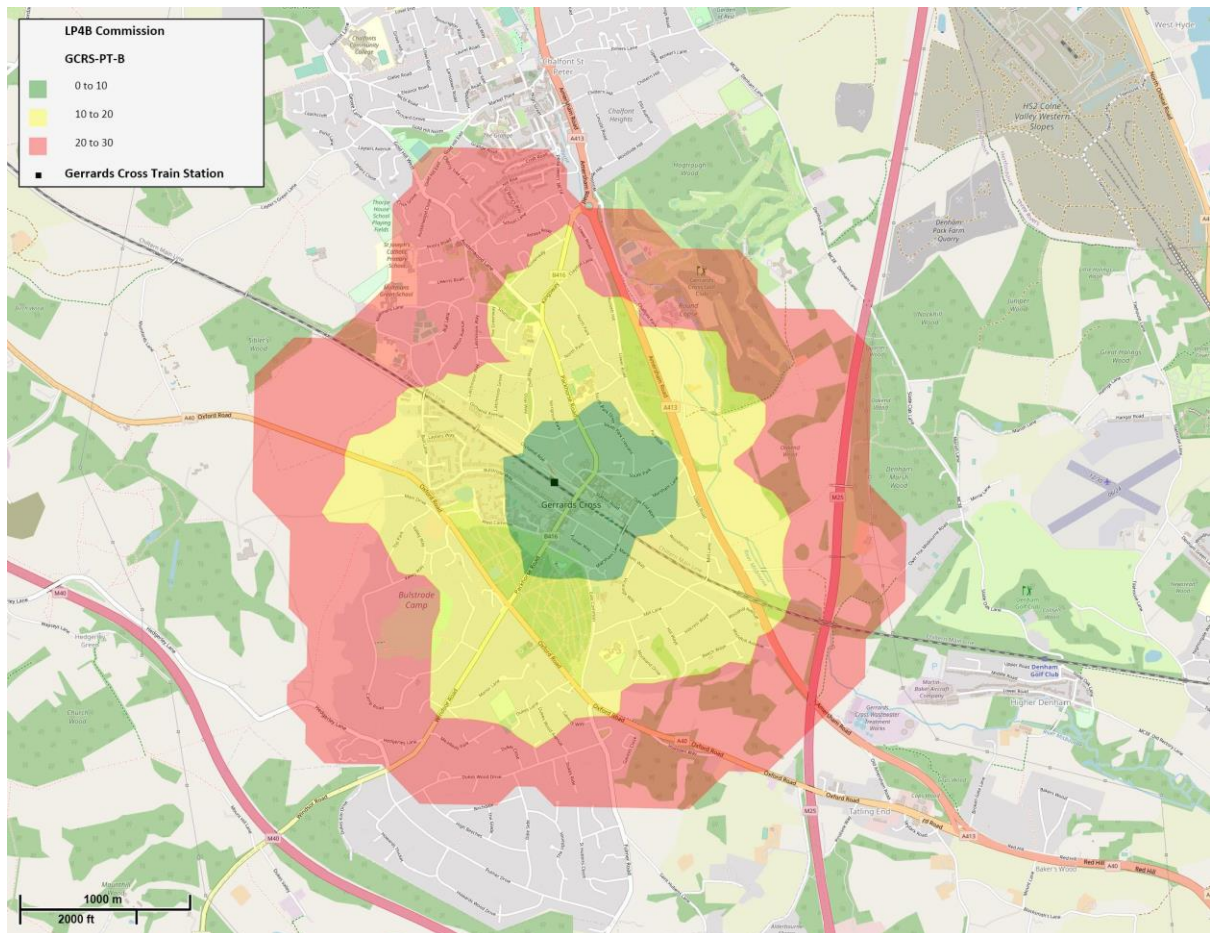
Walking



Cycling

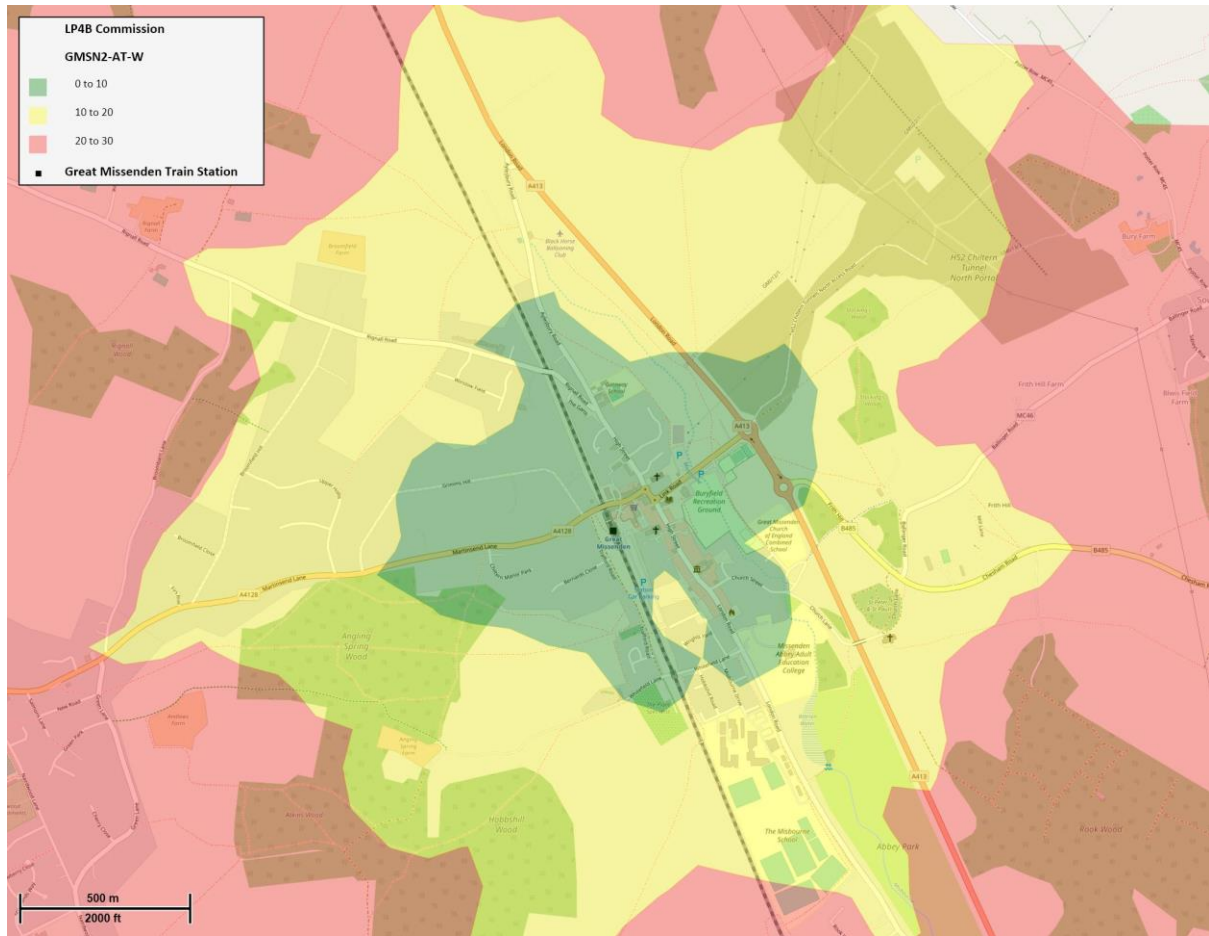


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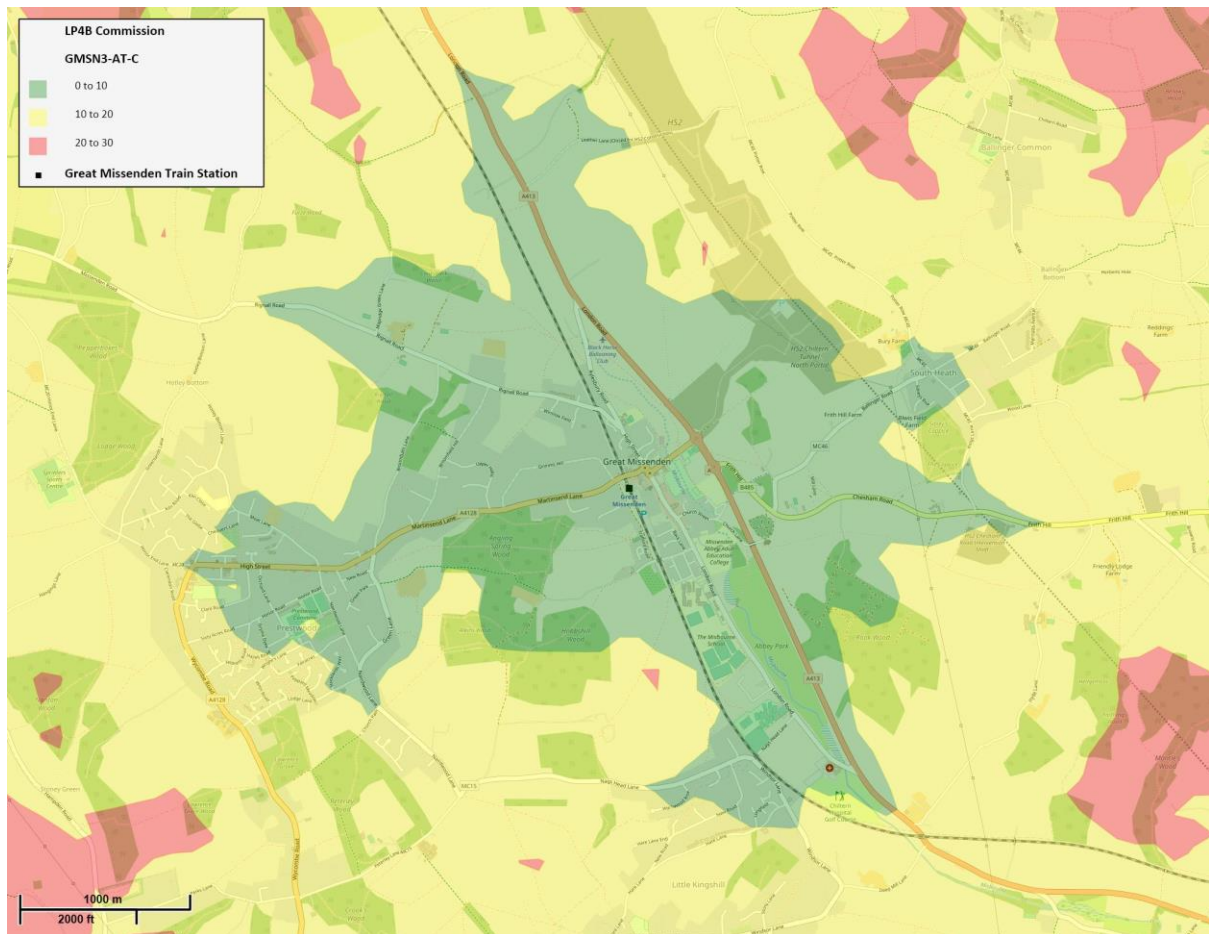


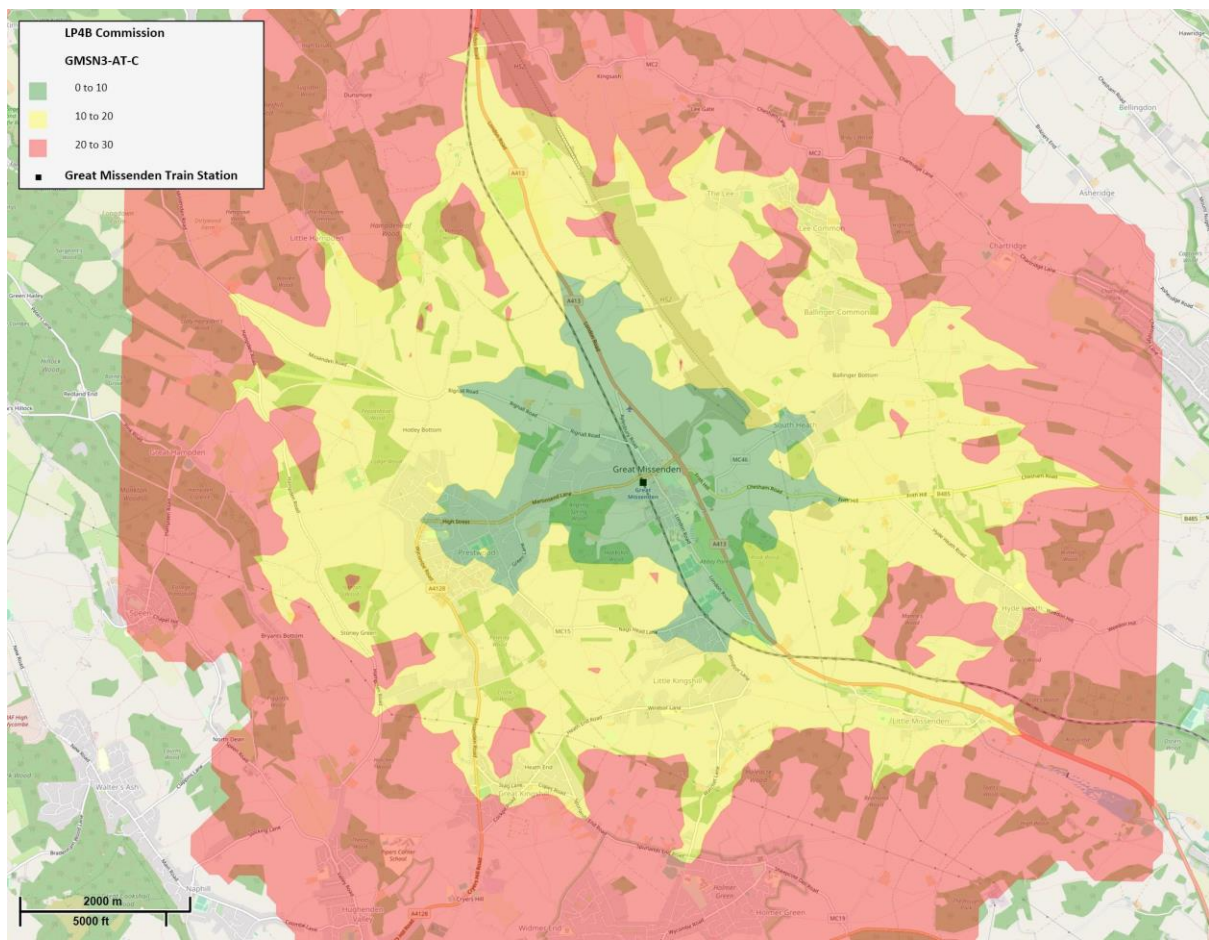
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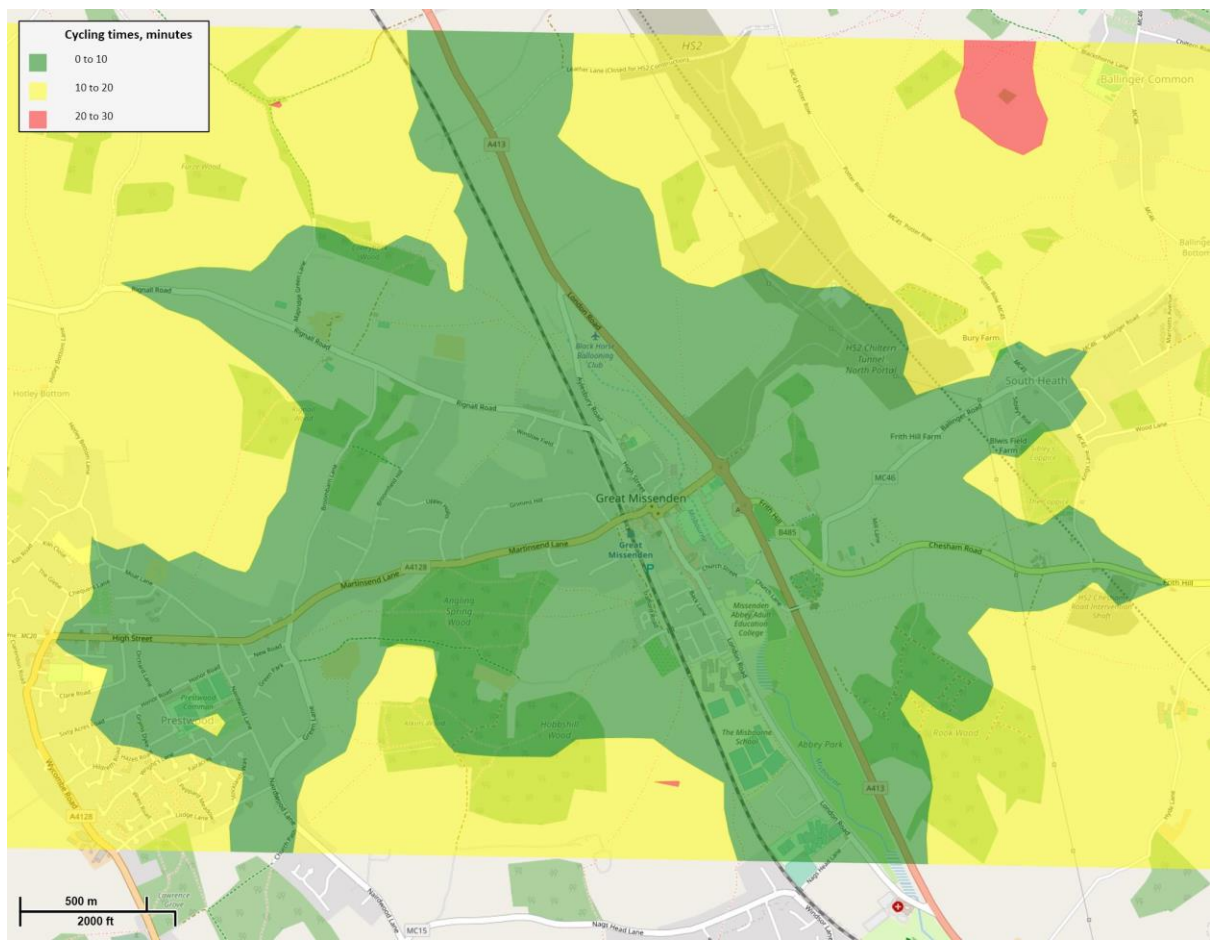
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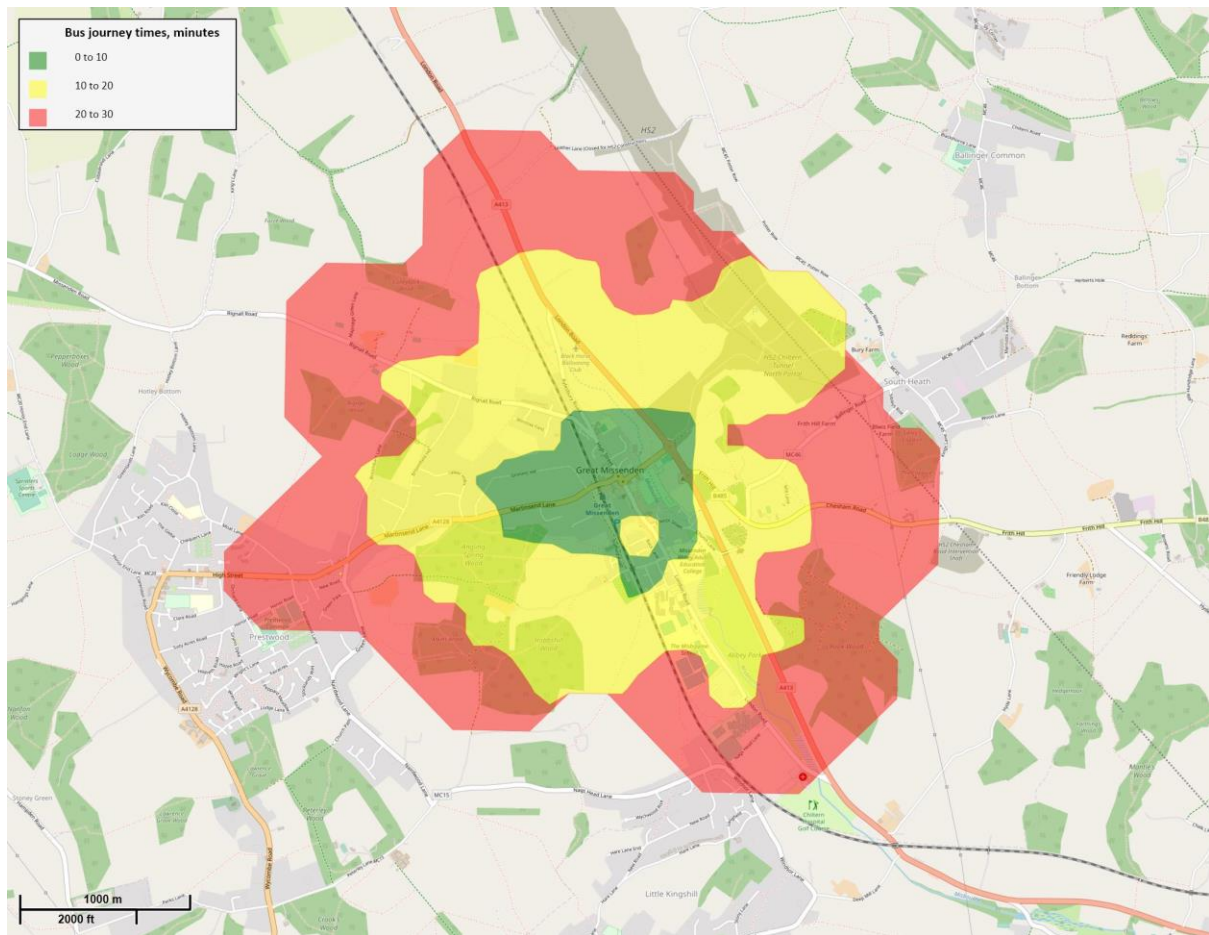
Cycling





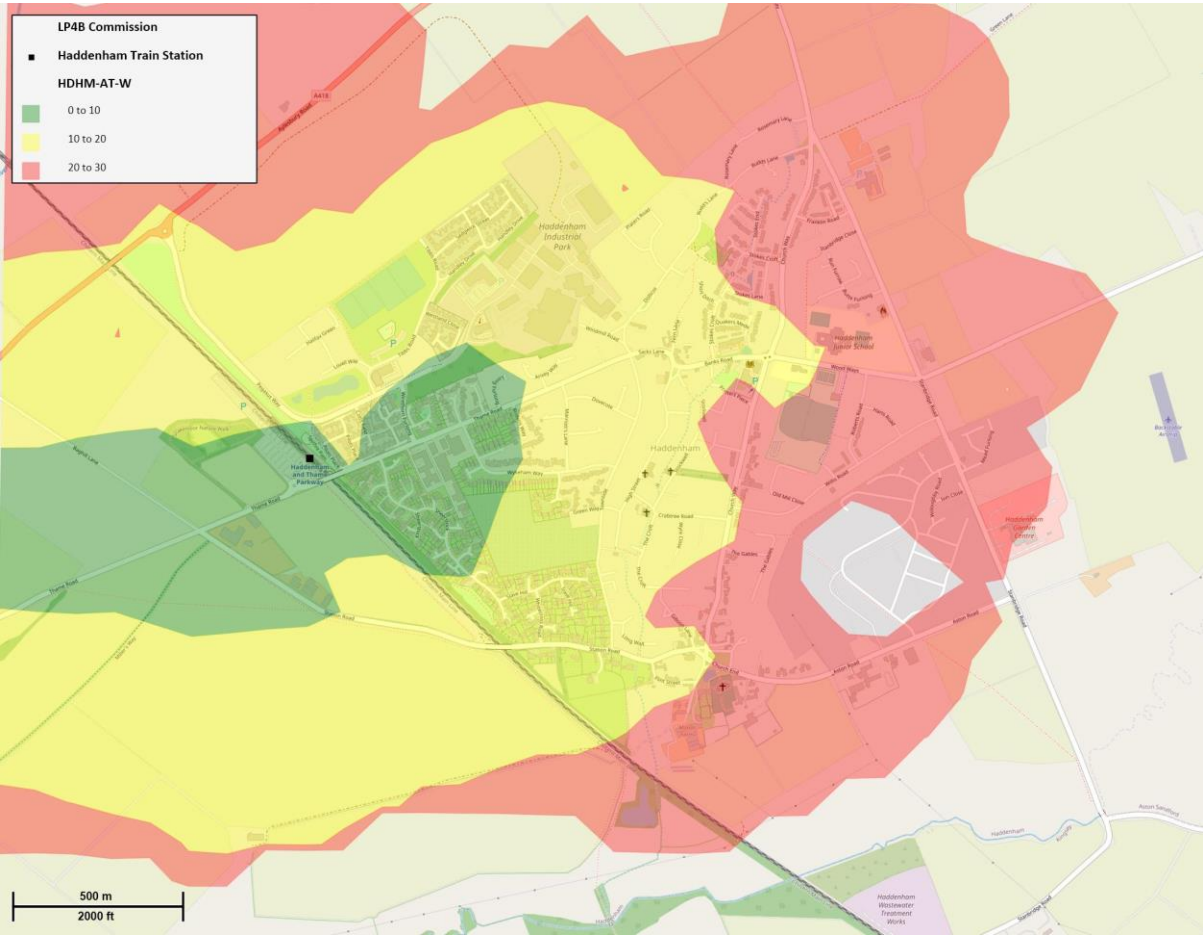


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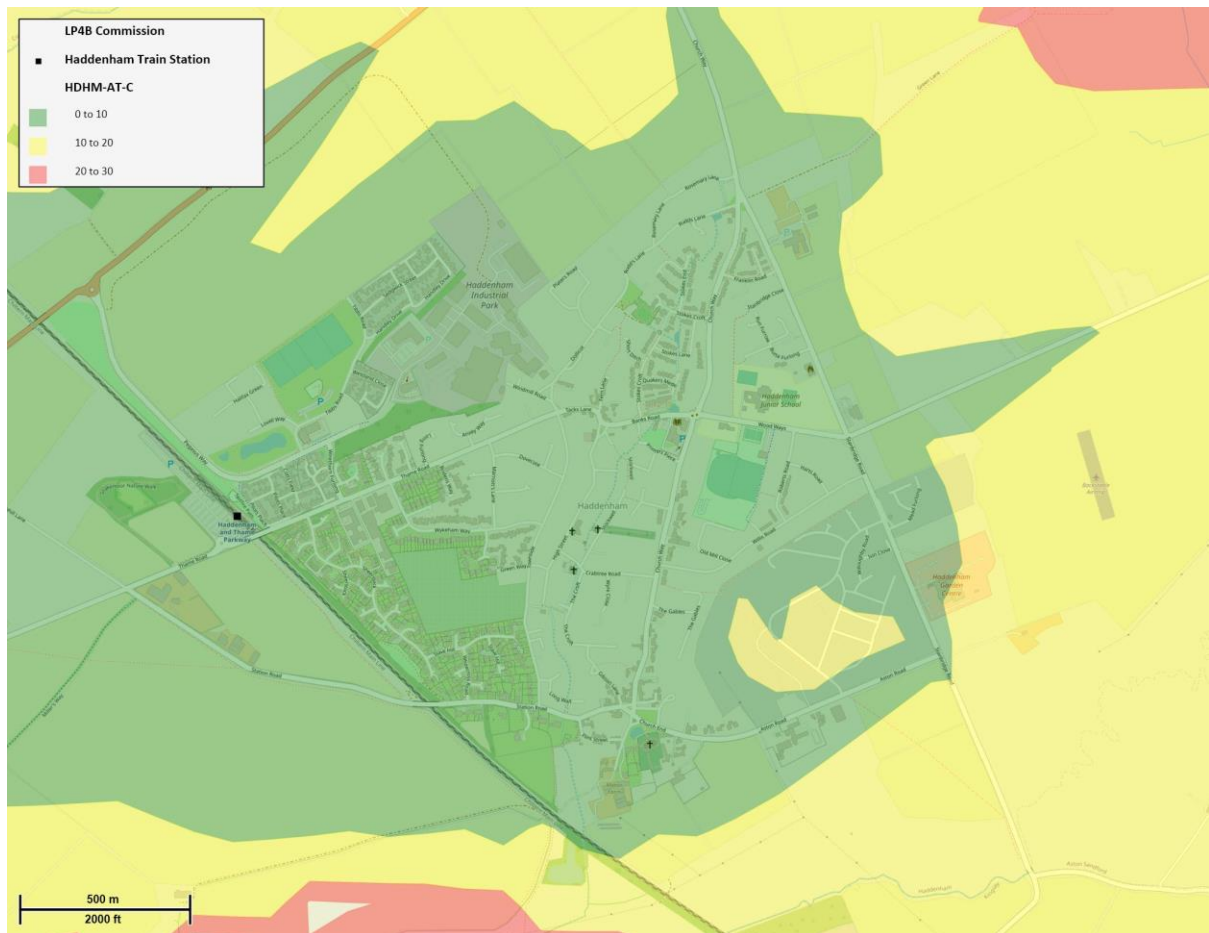


Haddenham

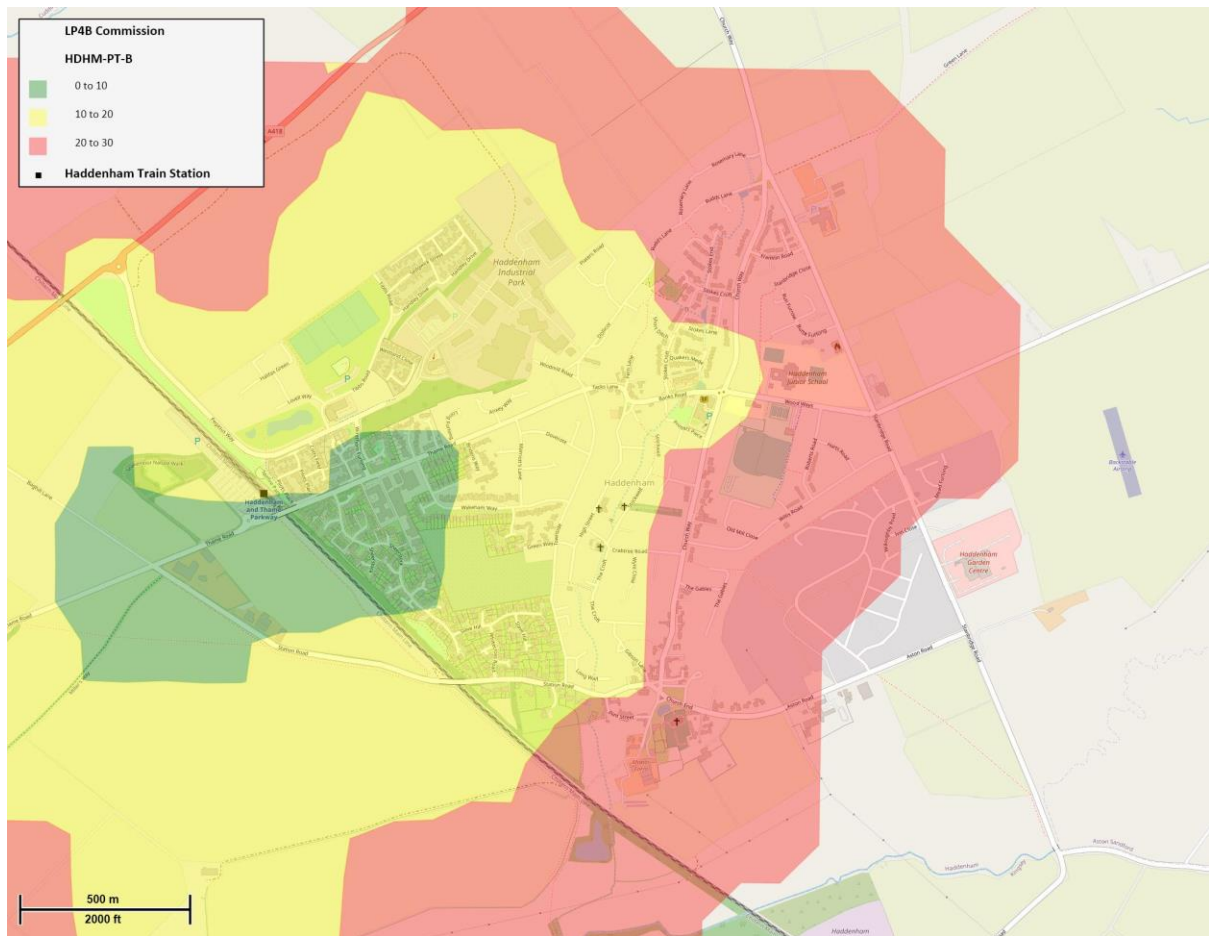
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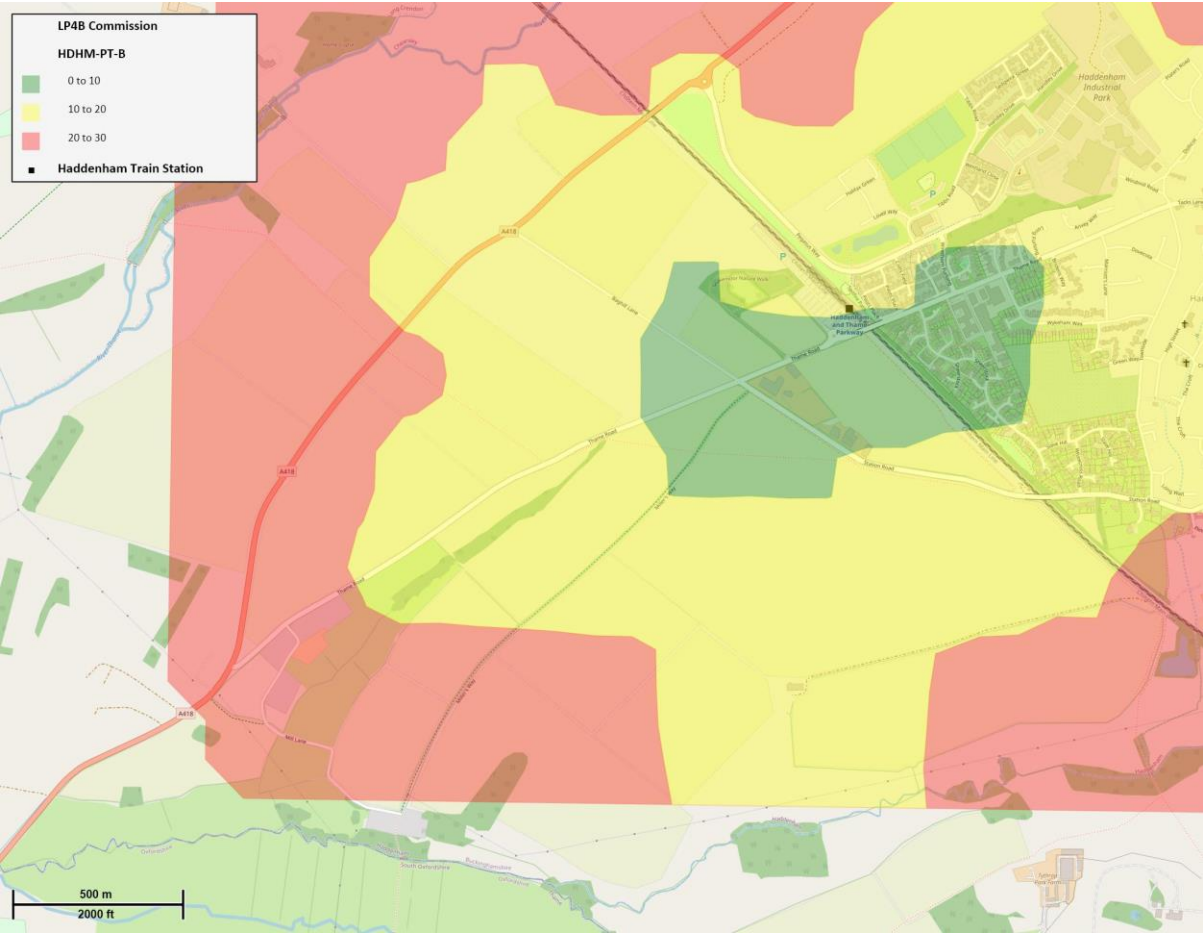


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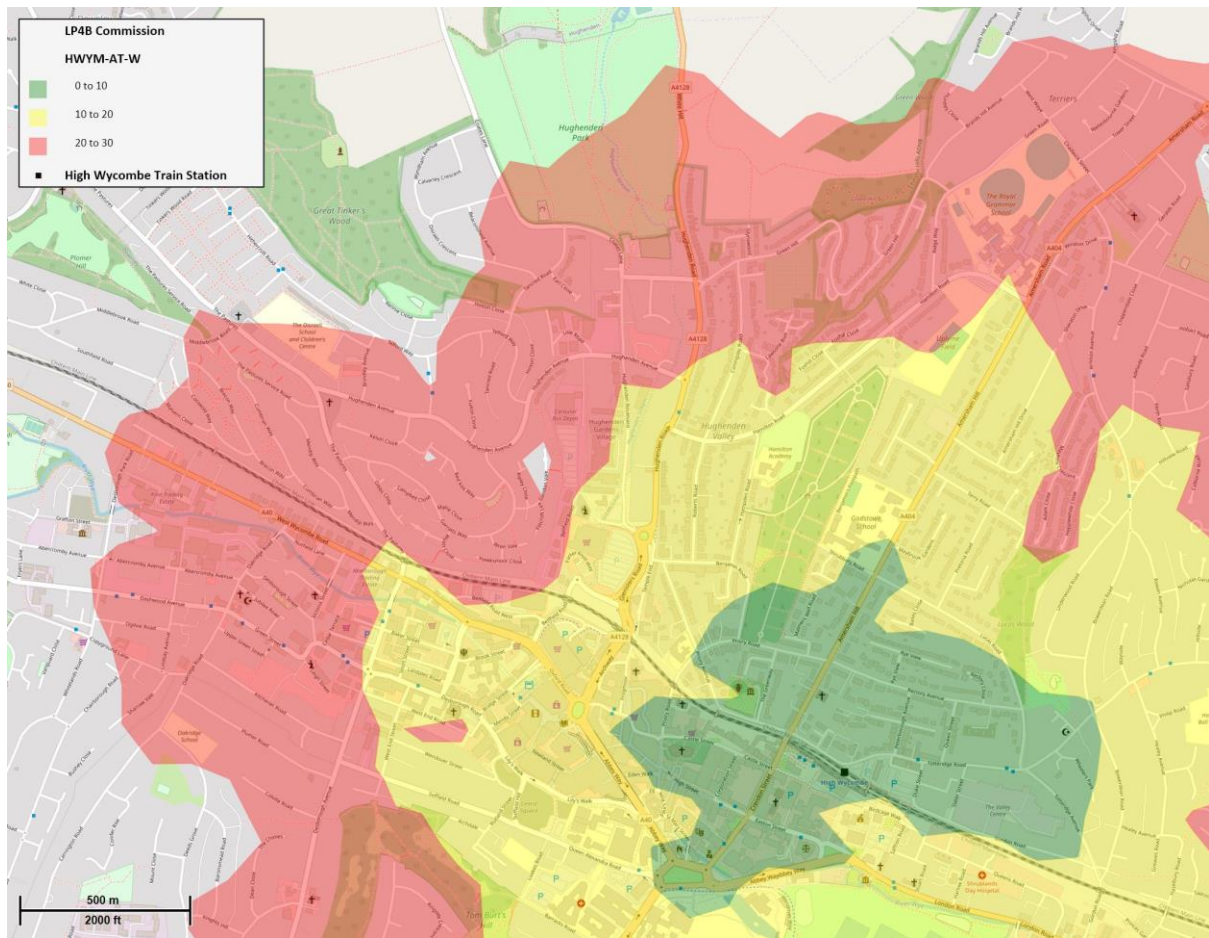
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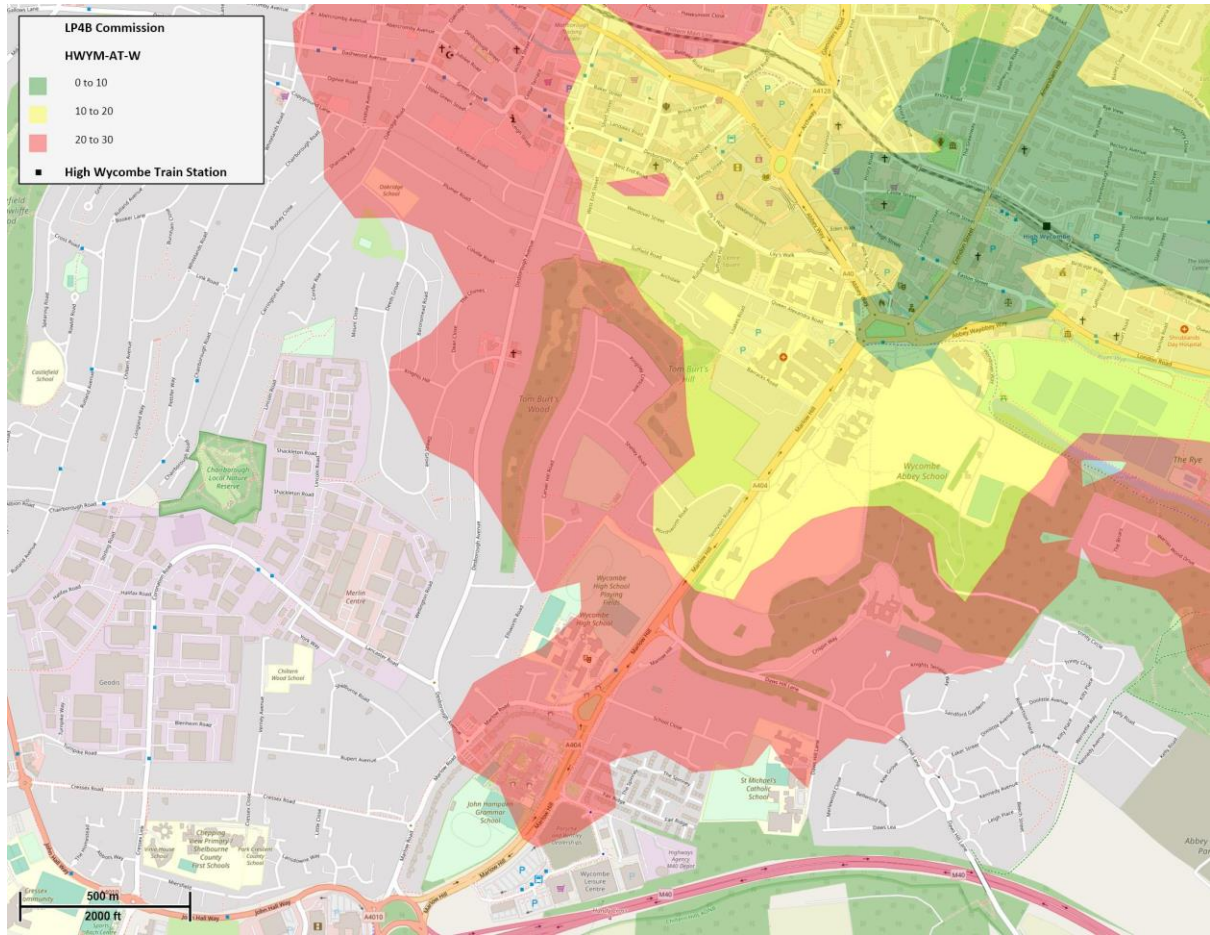


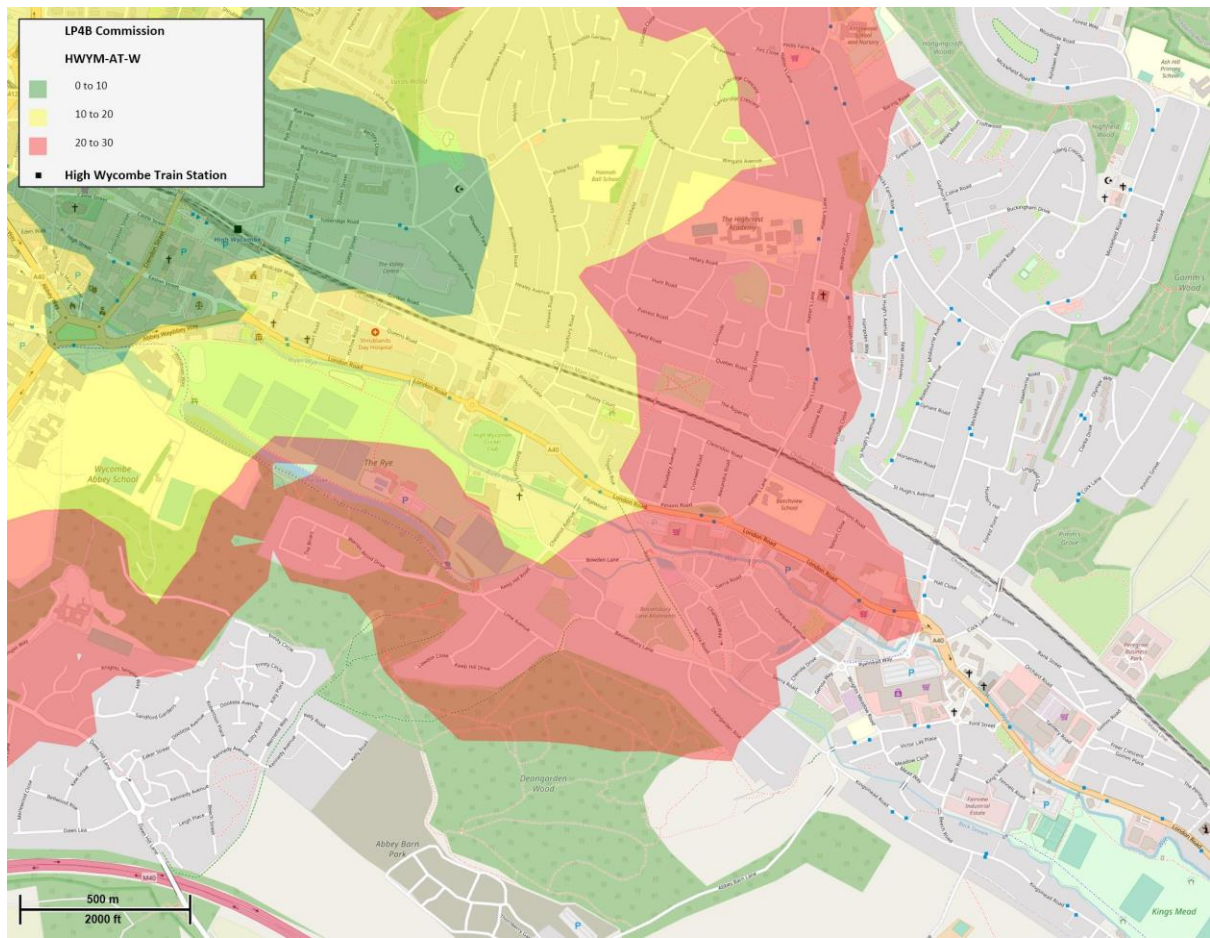


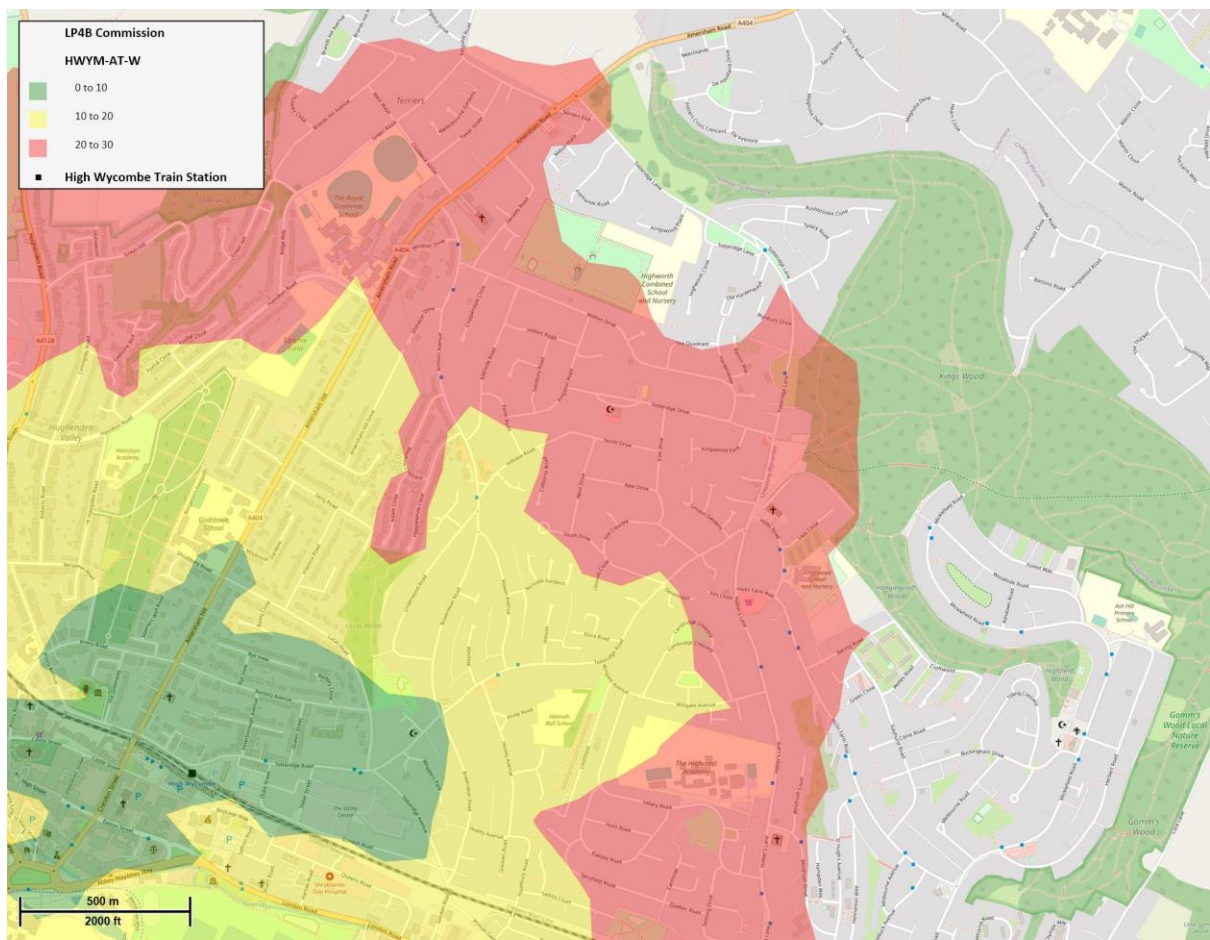
High Wycombe

Walking

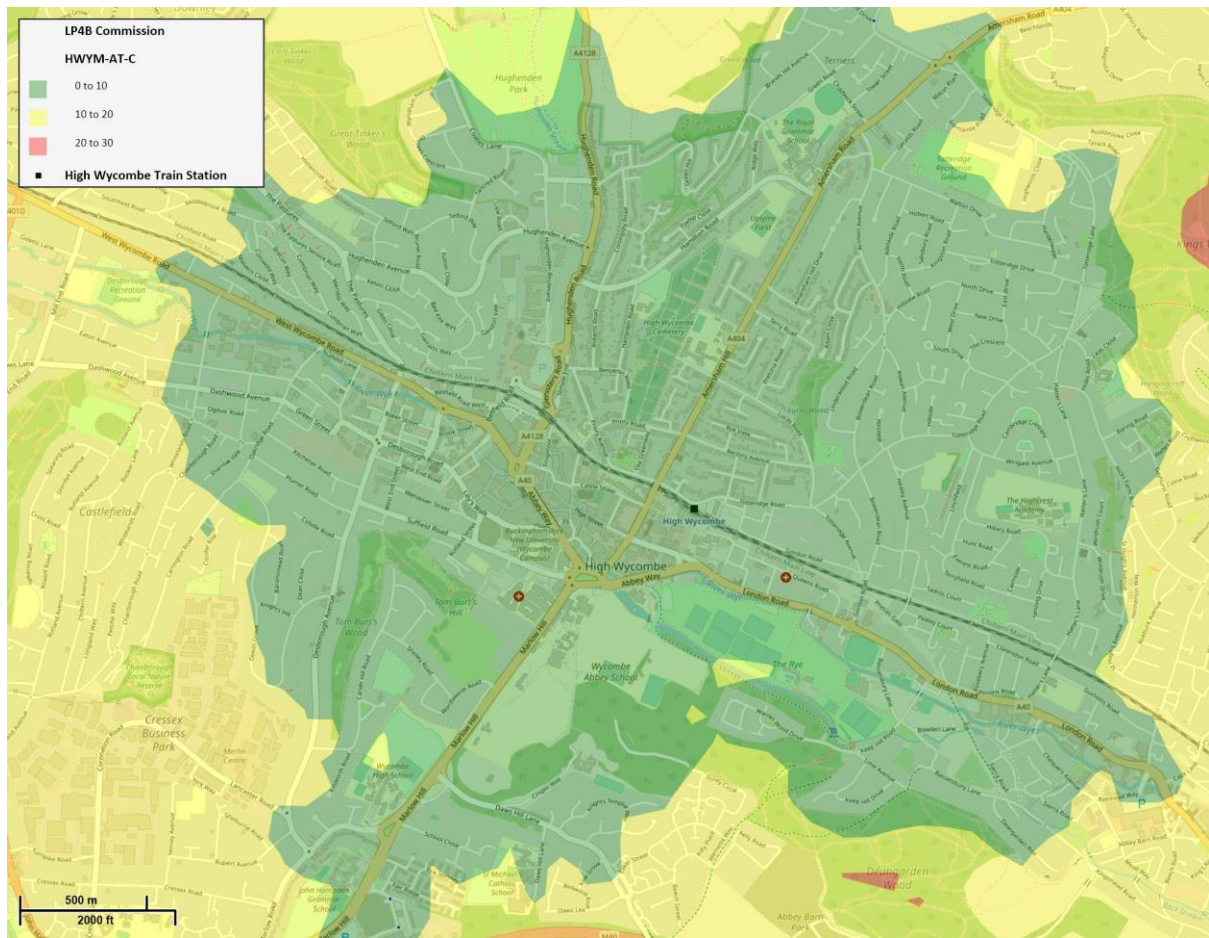


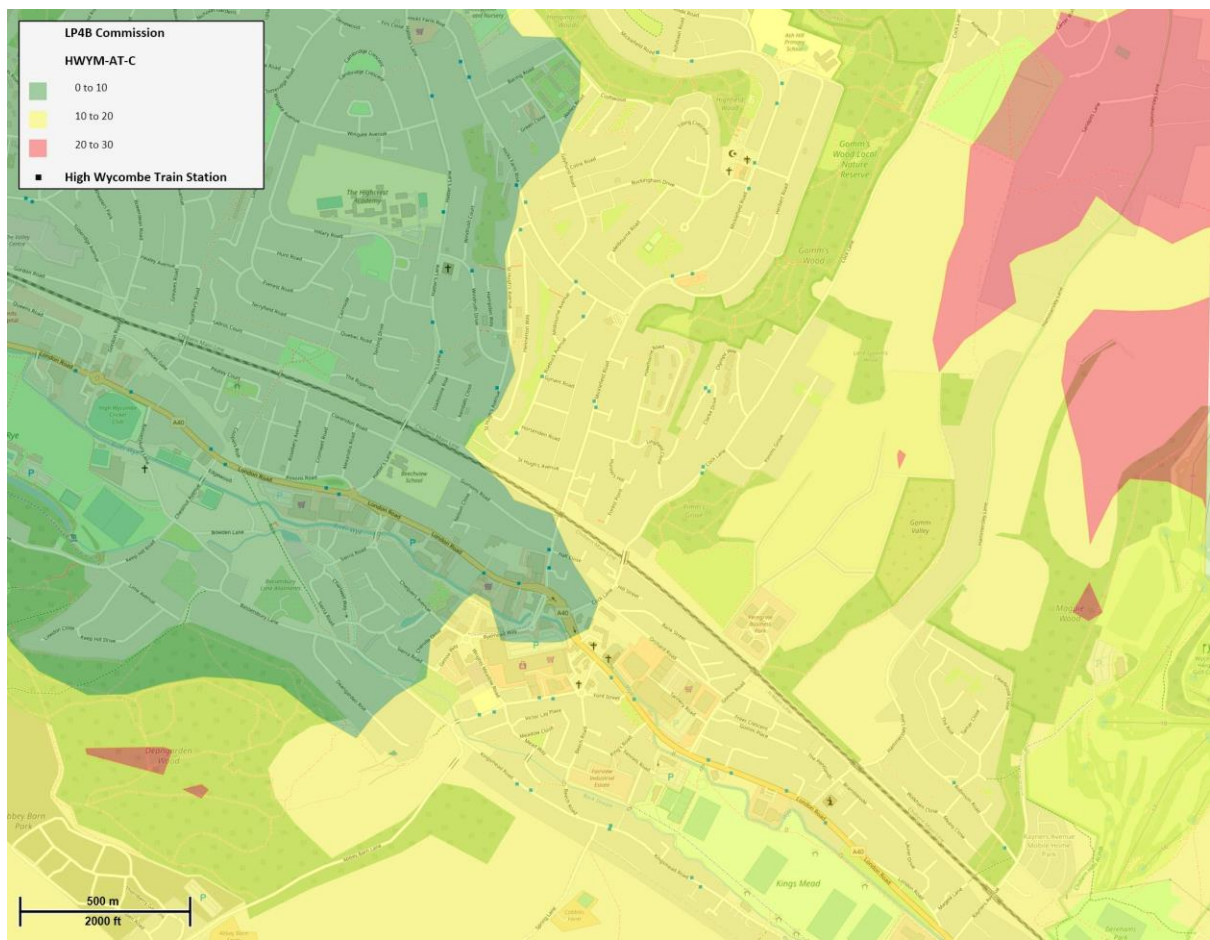


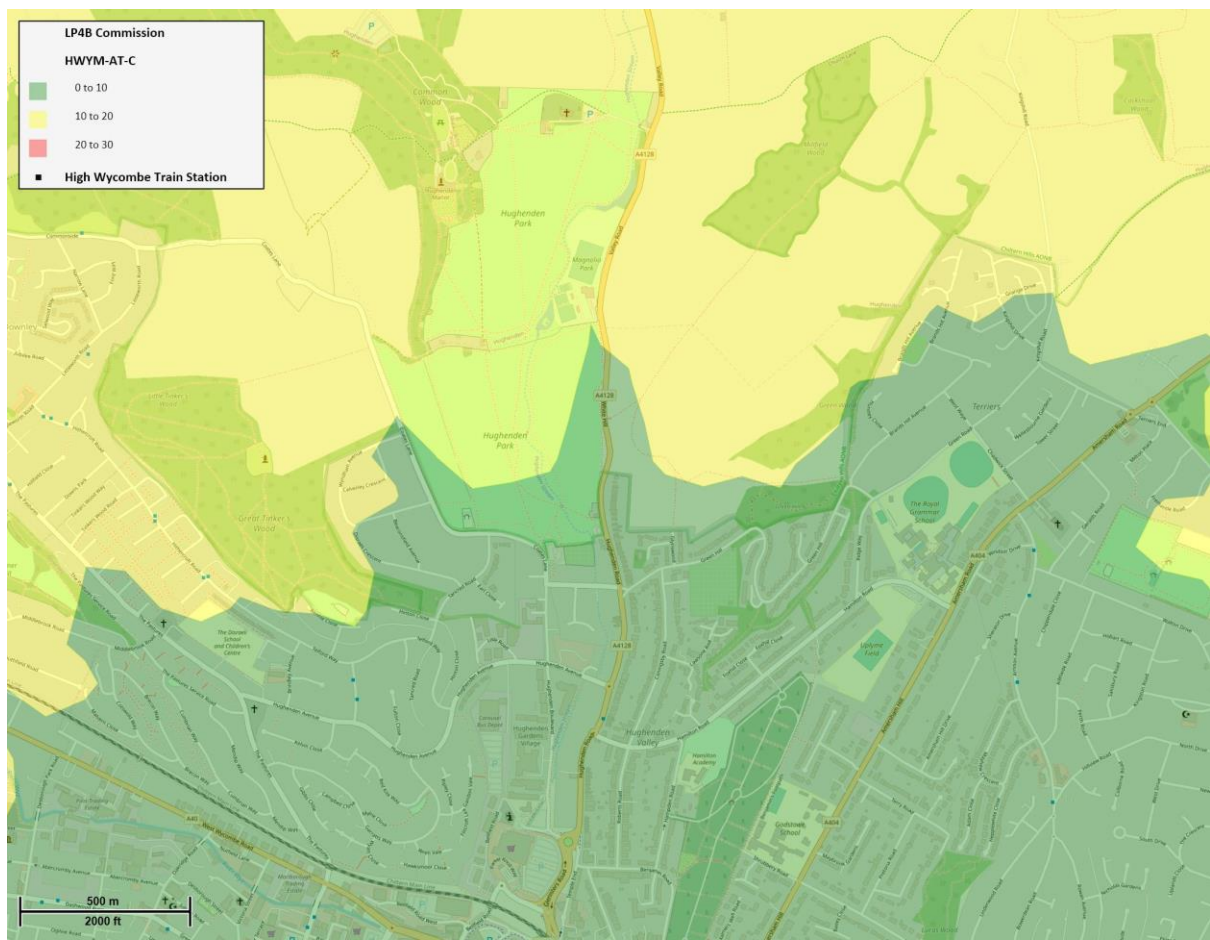


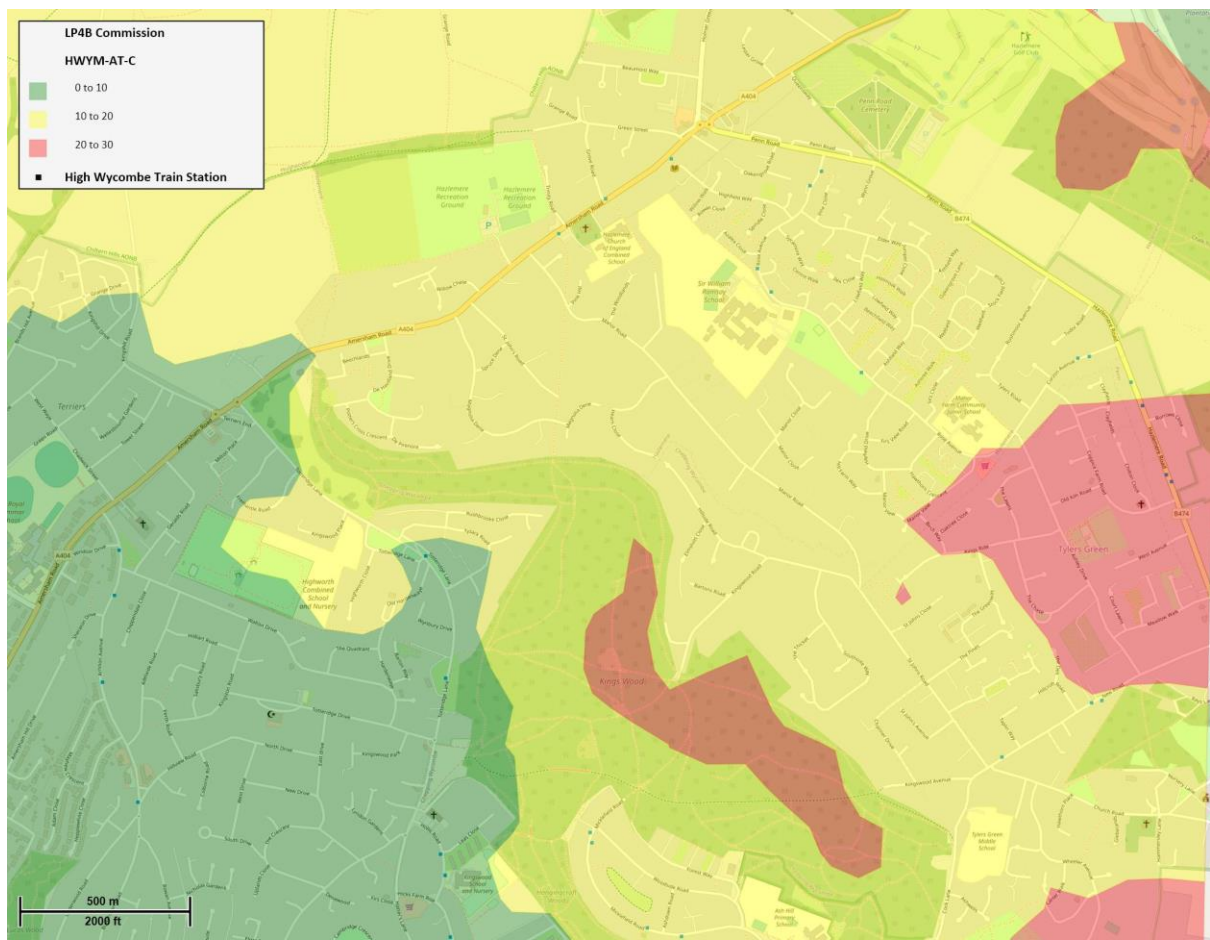


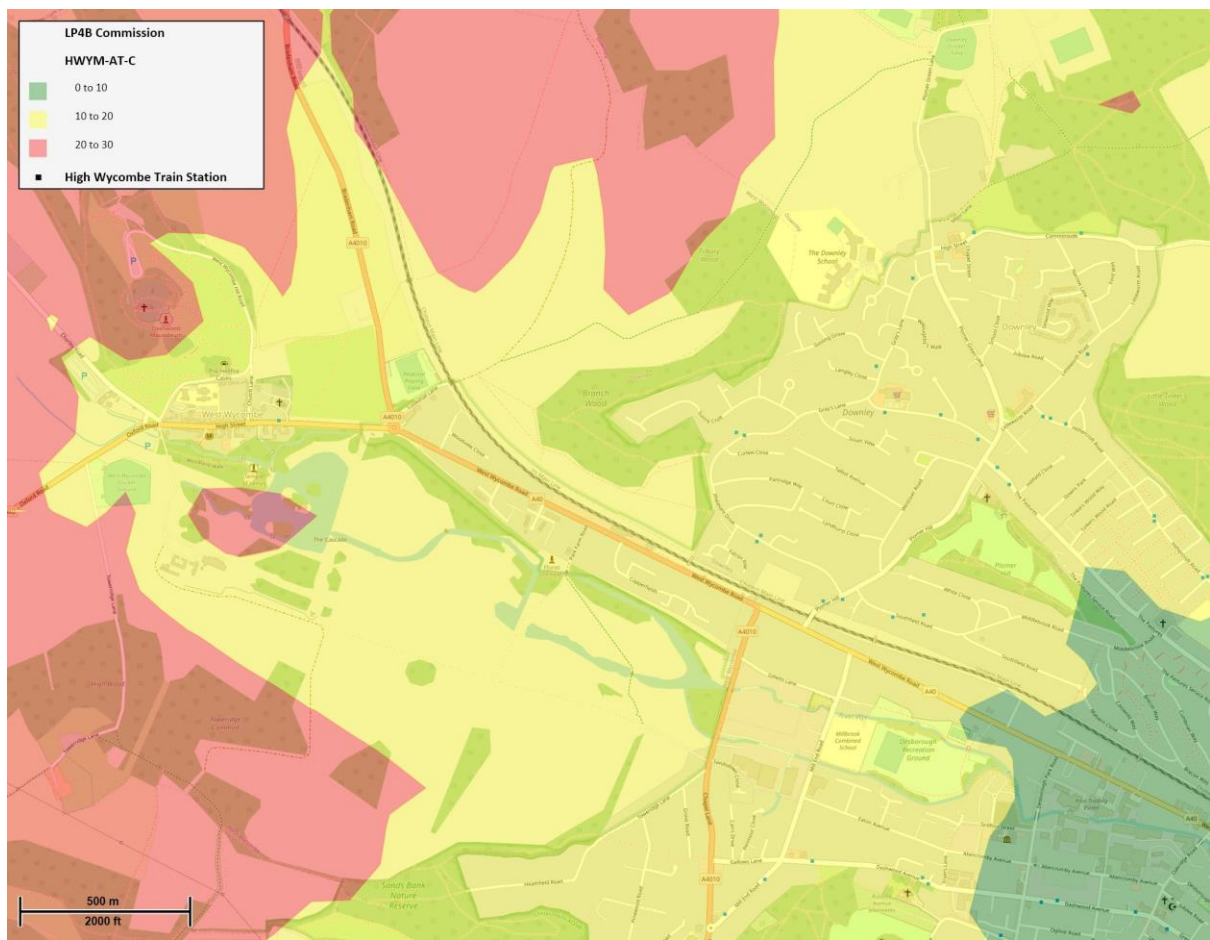
Cycling

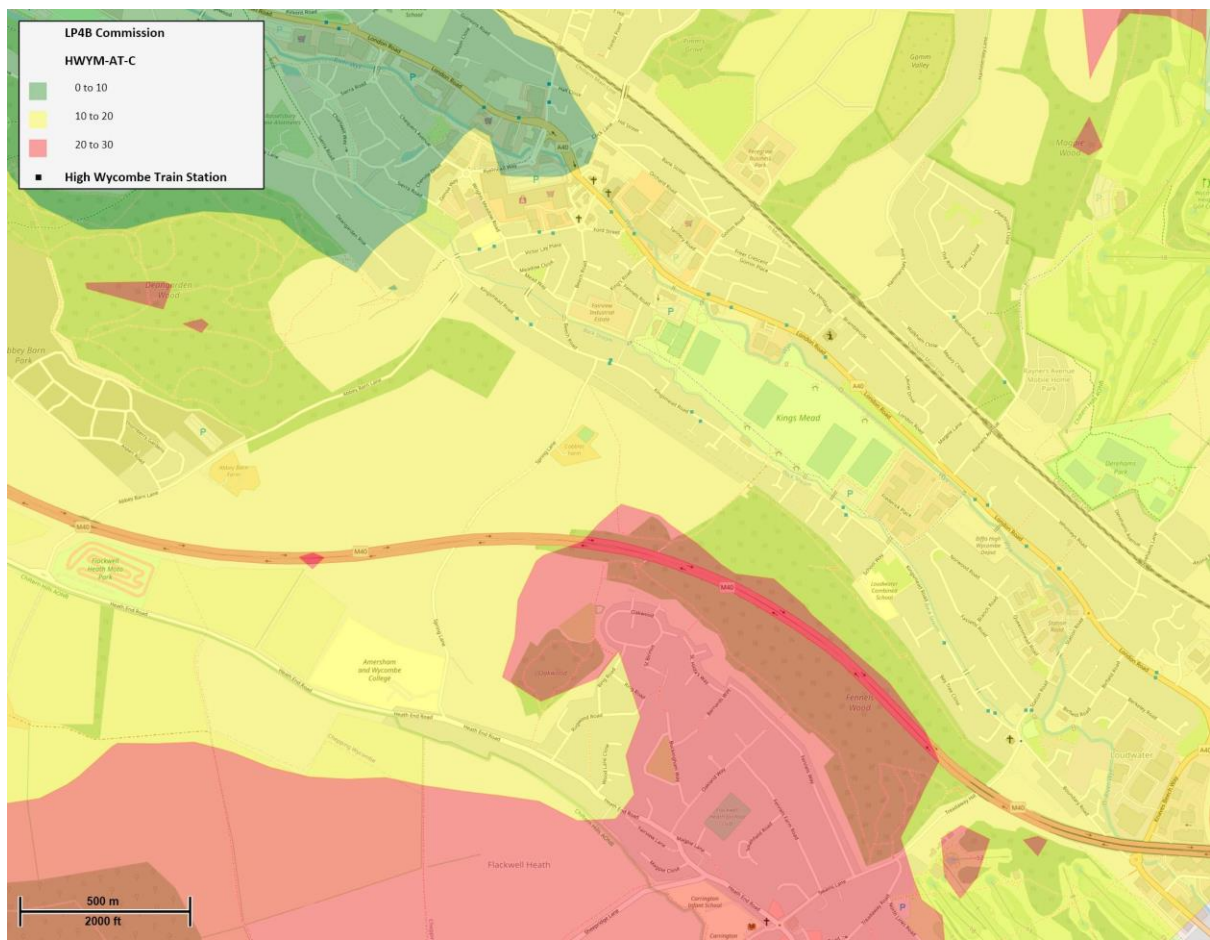


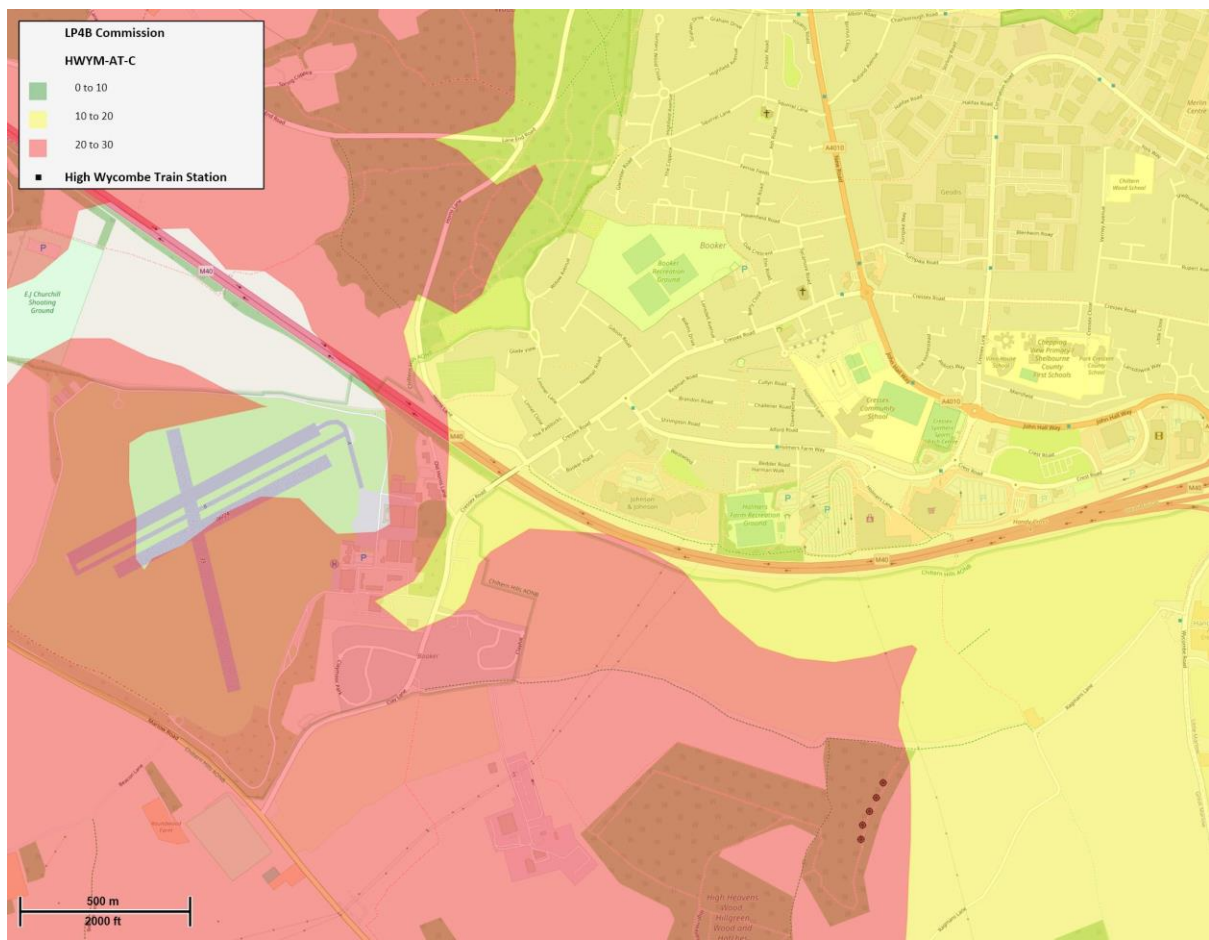


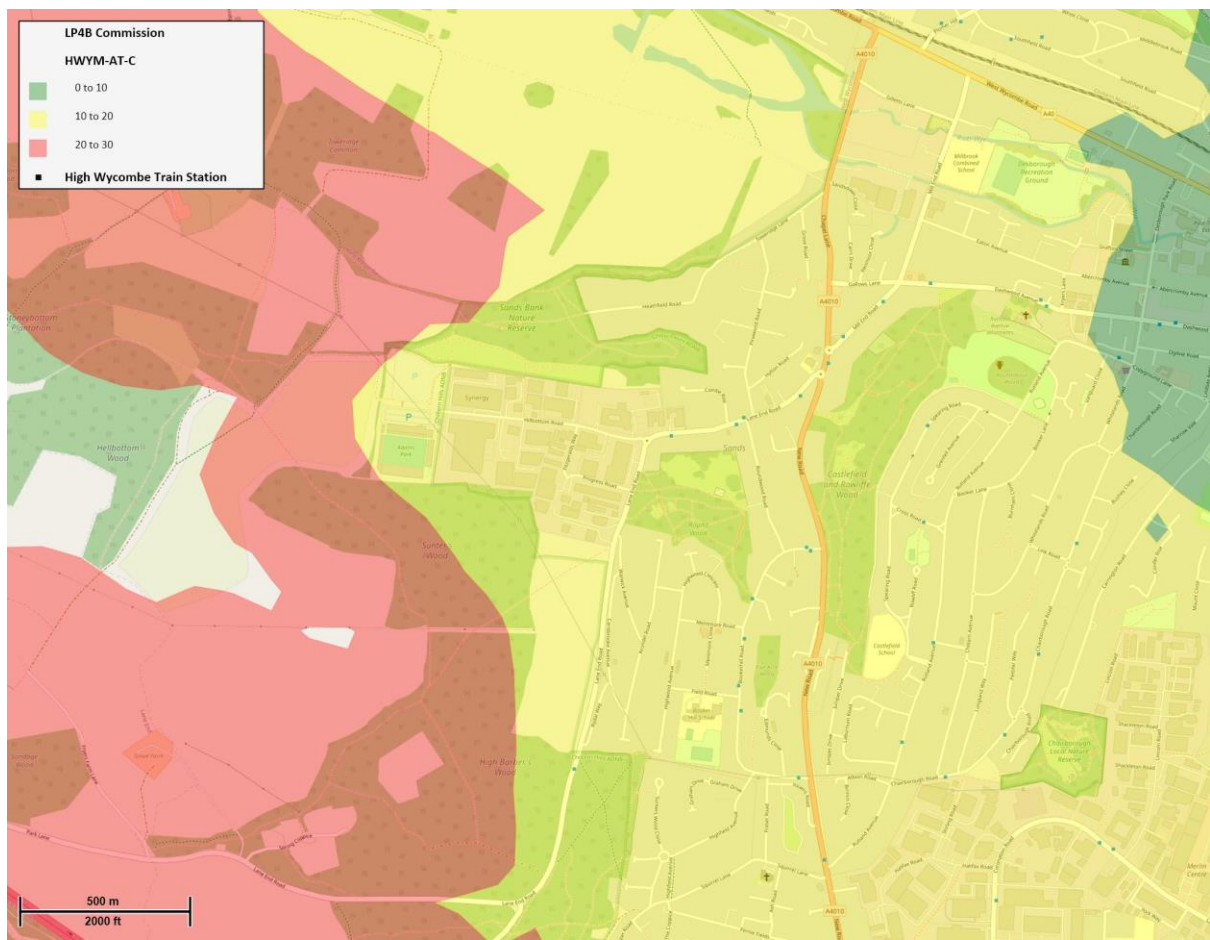


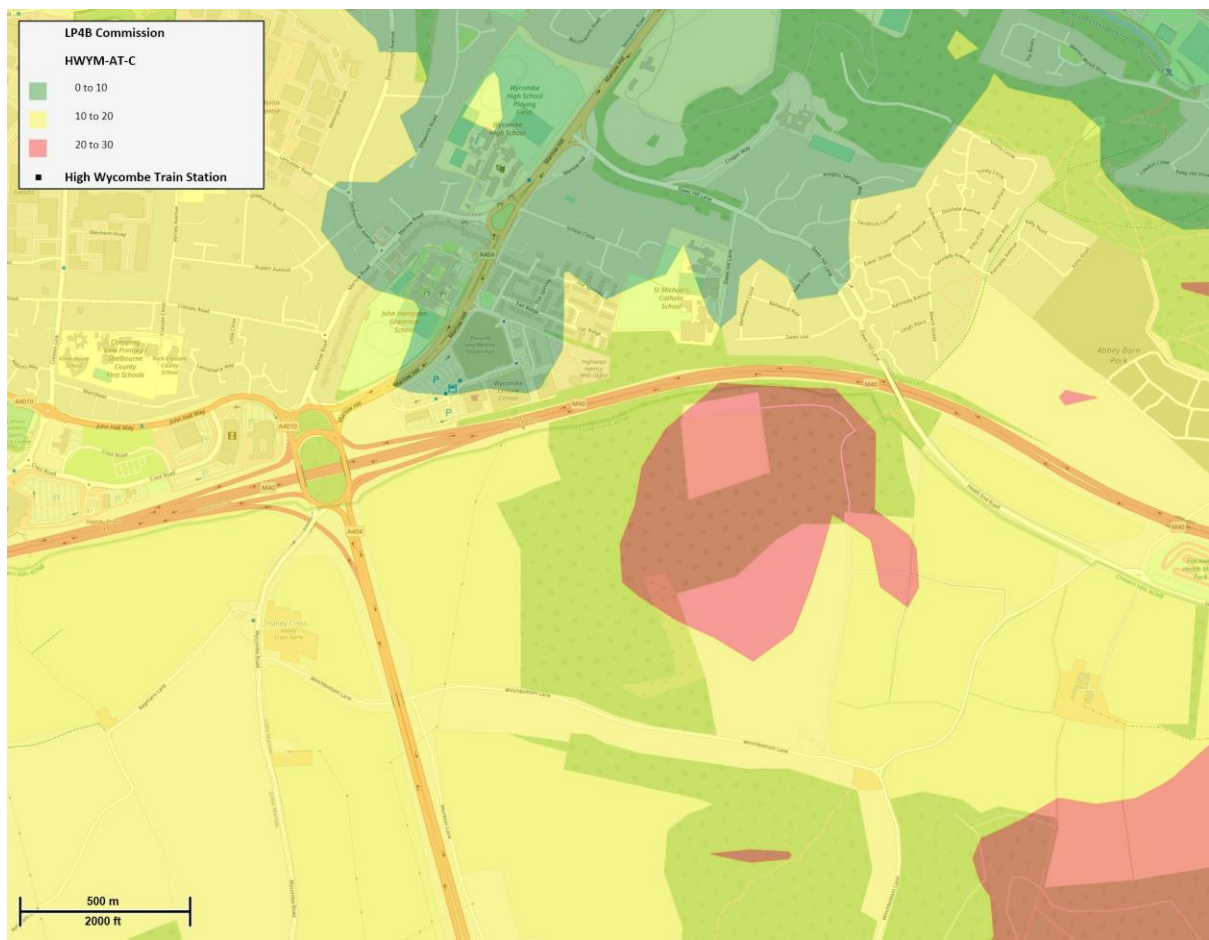




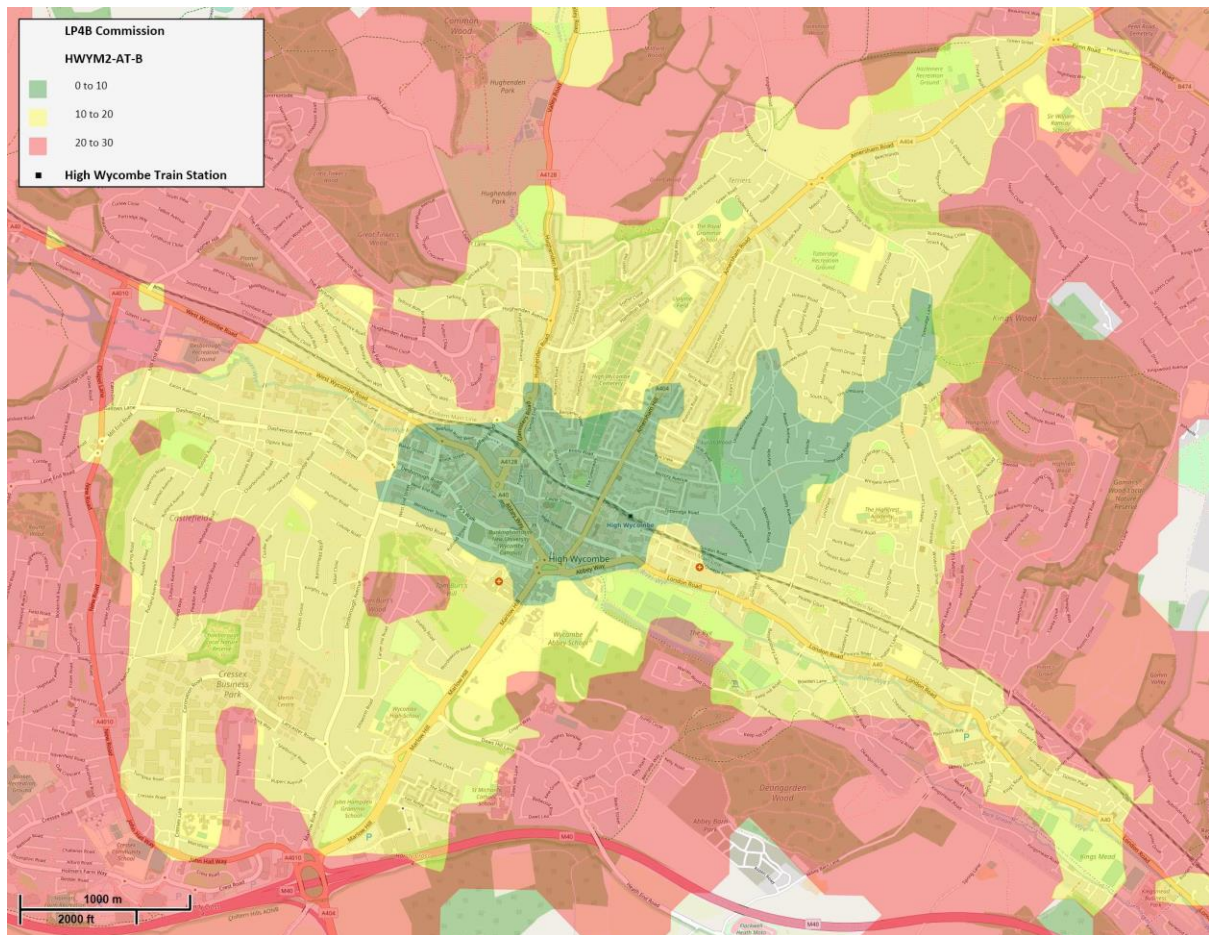


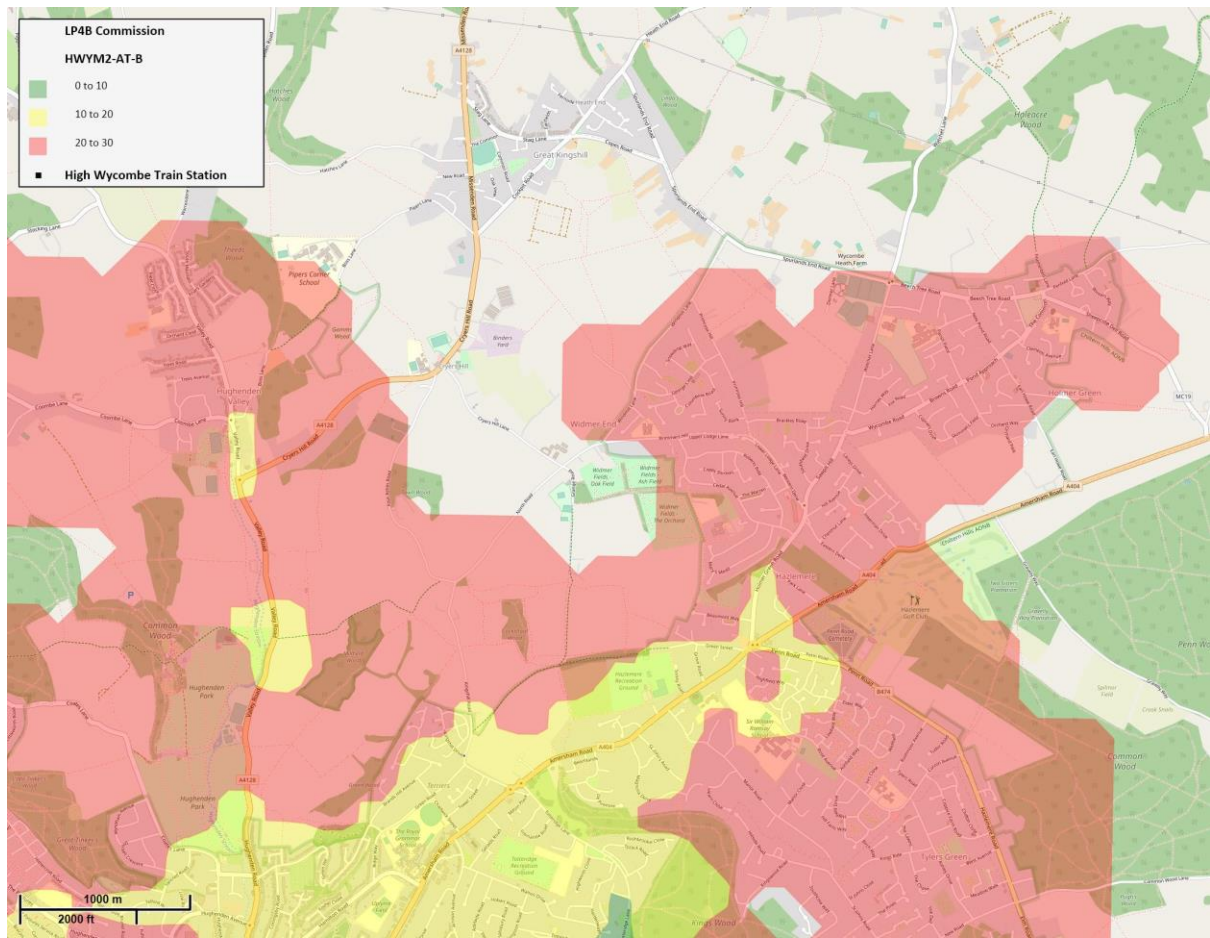


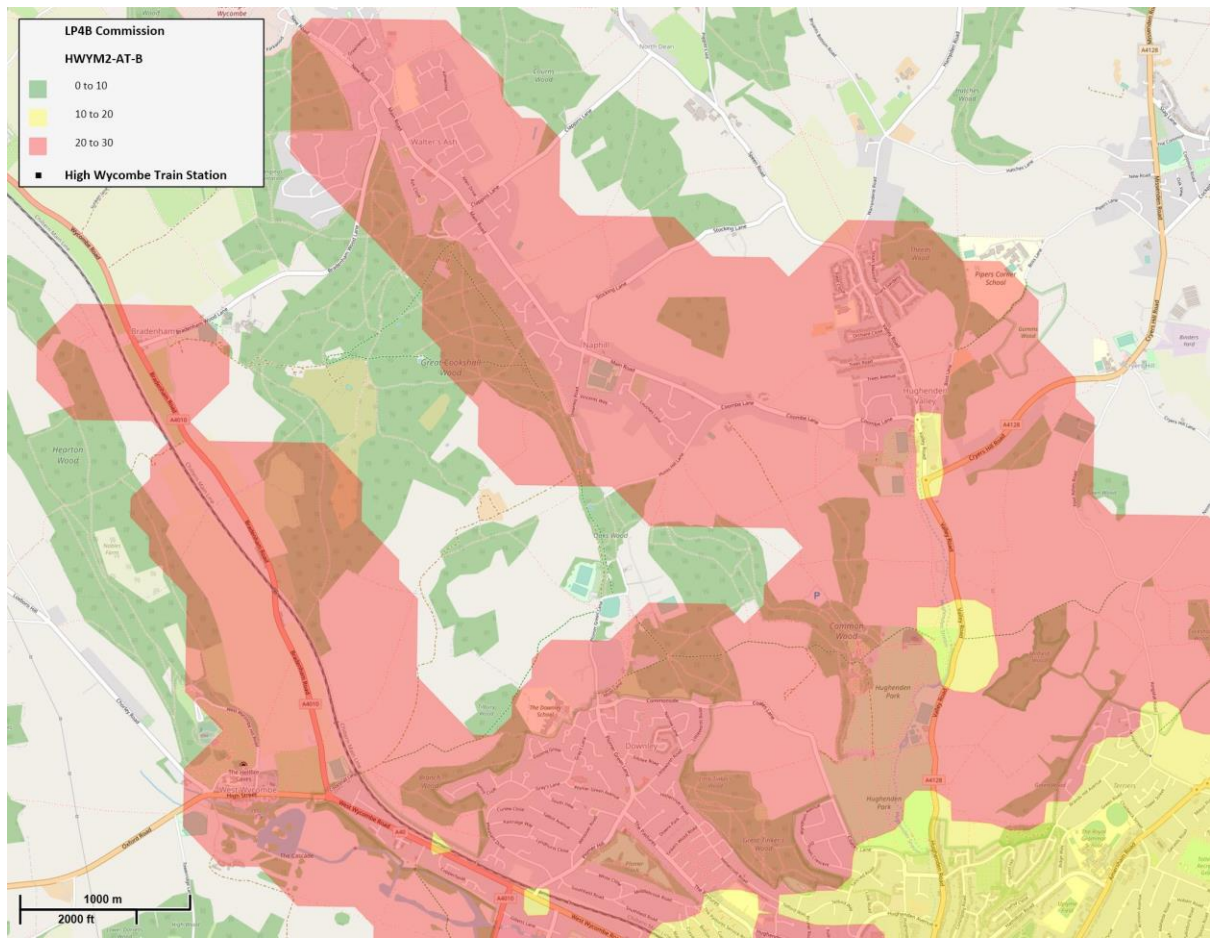


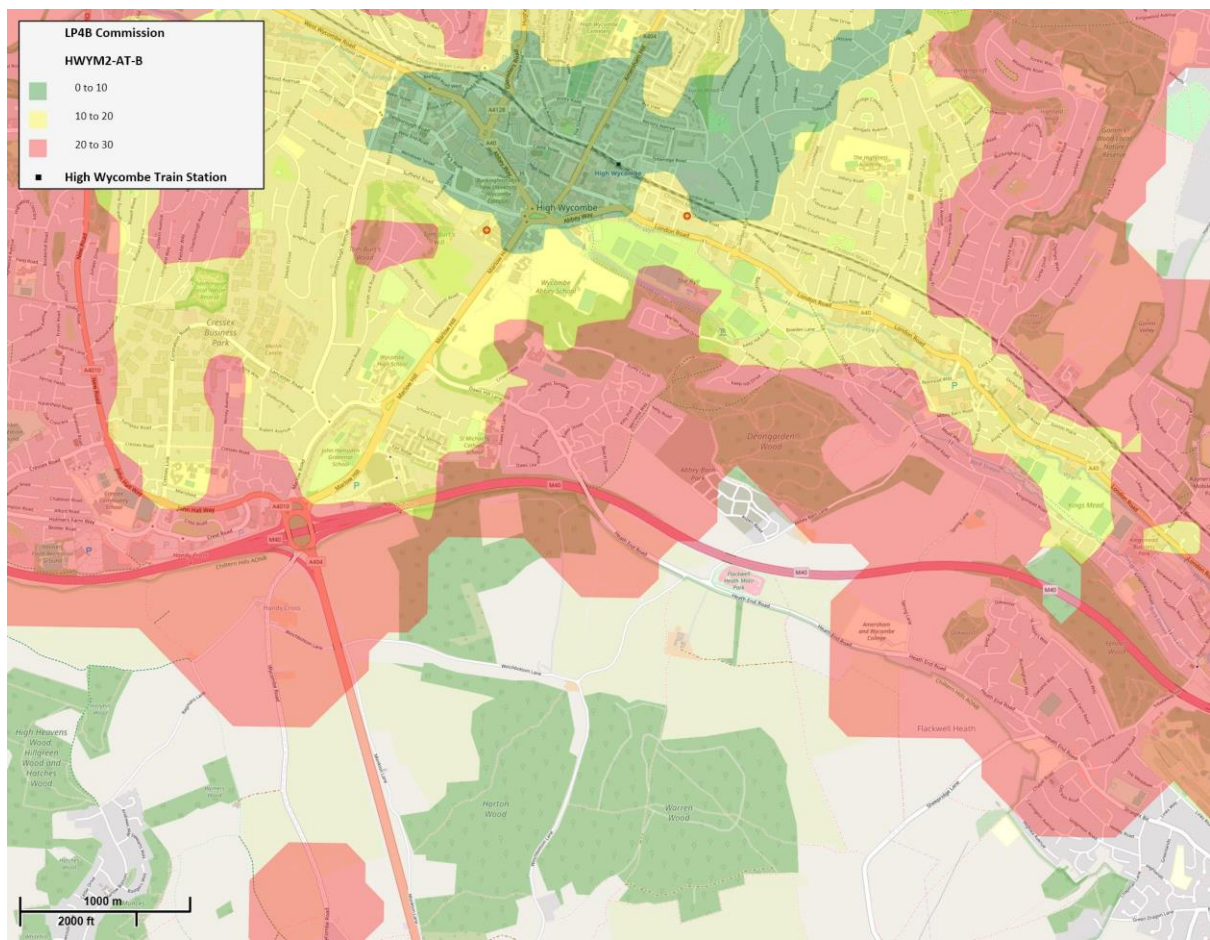


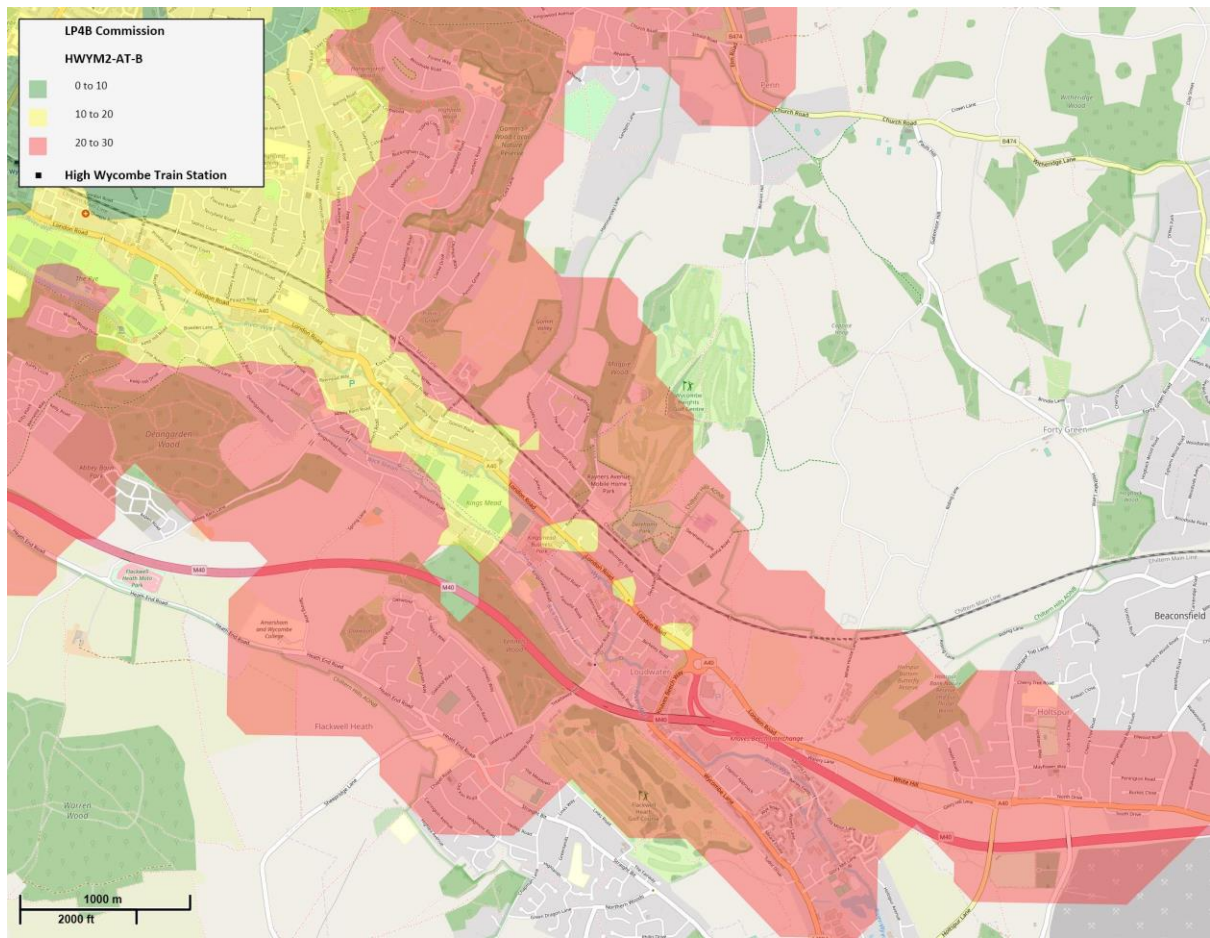
Bus

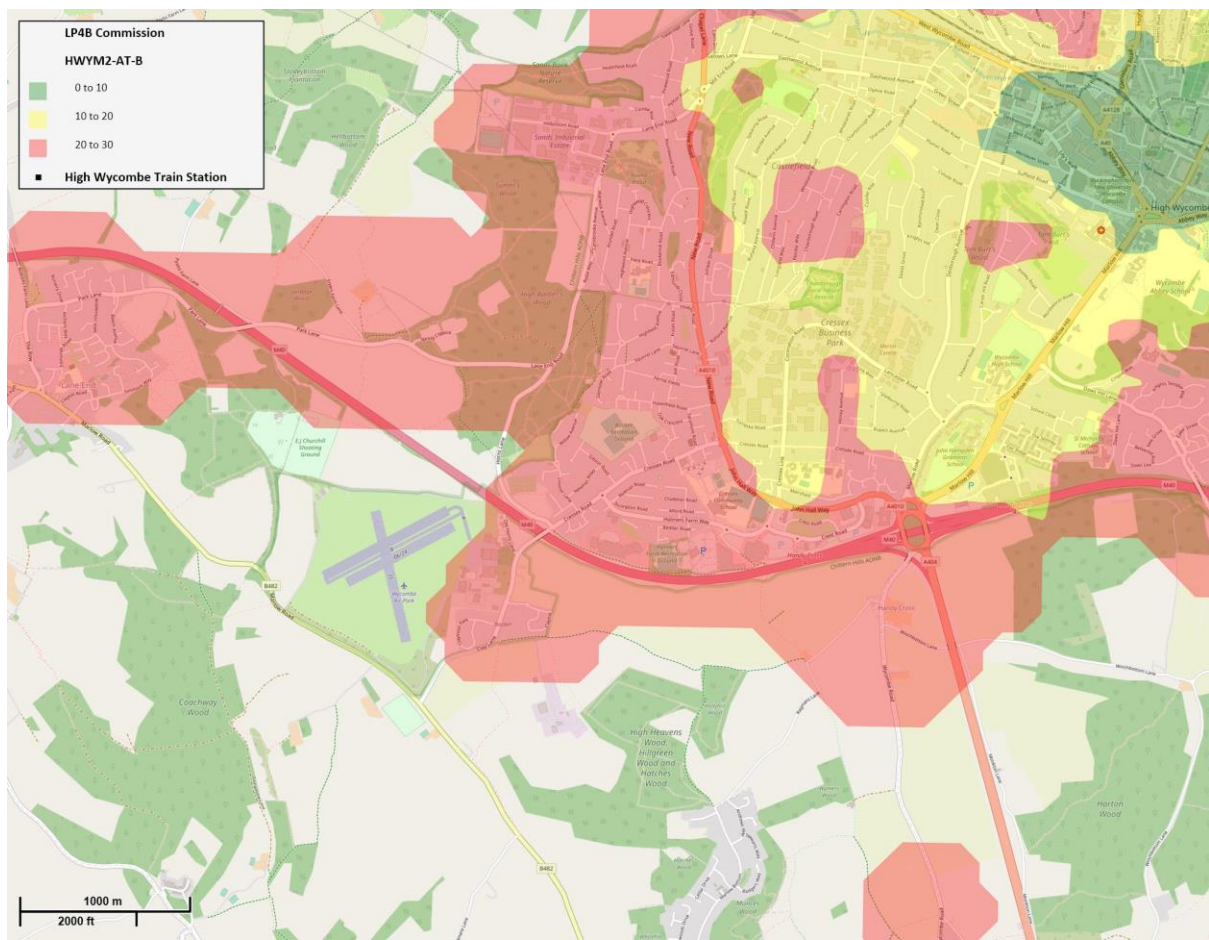


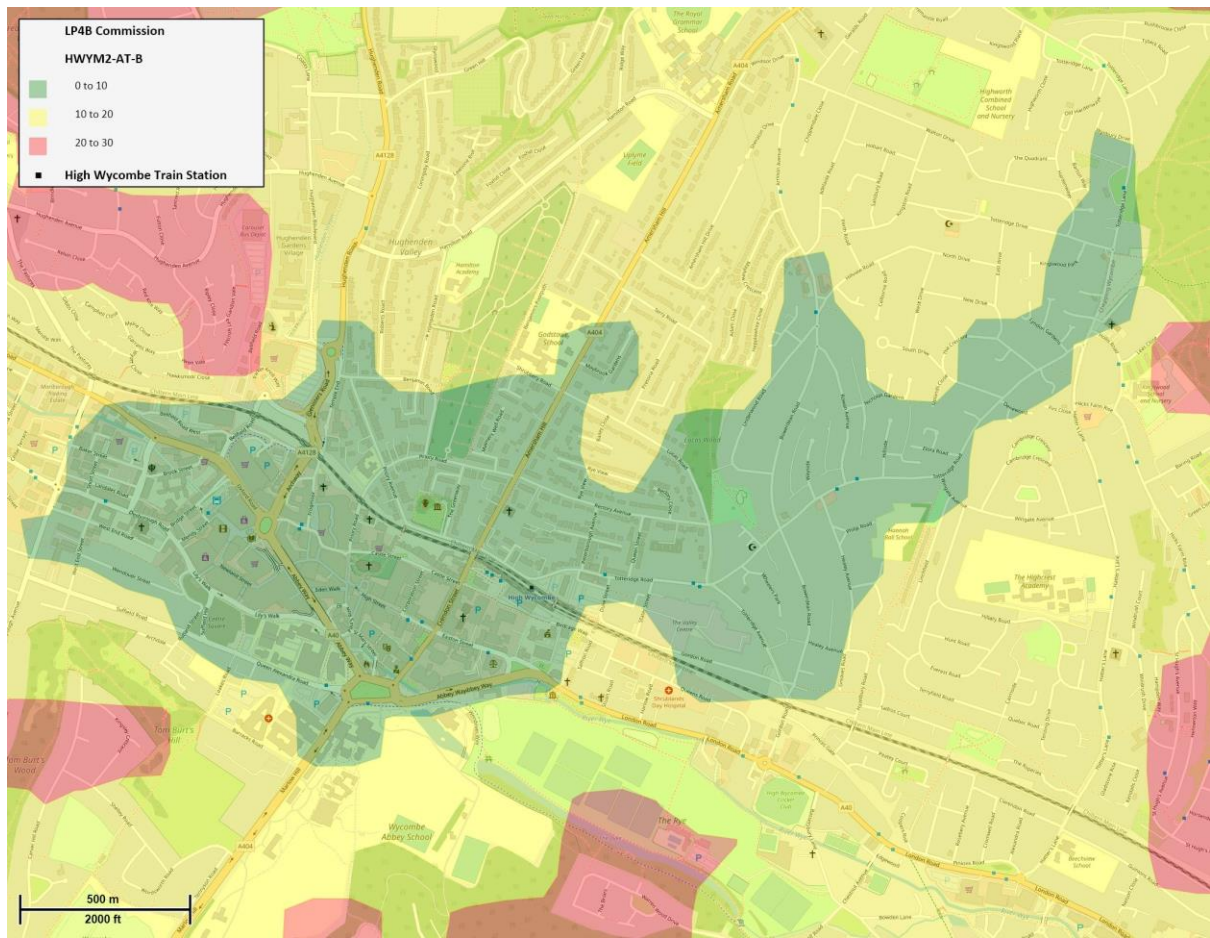


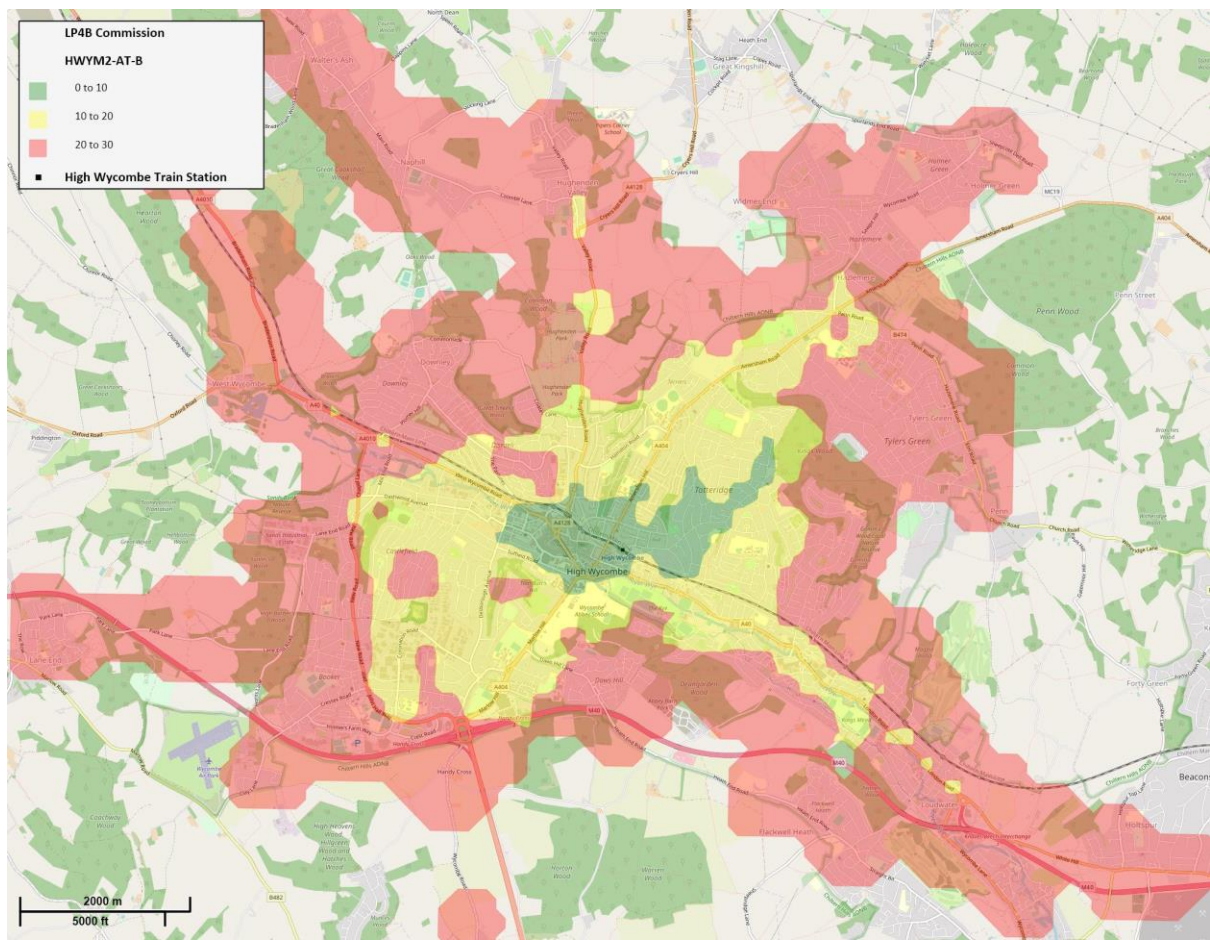






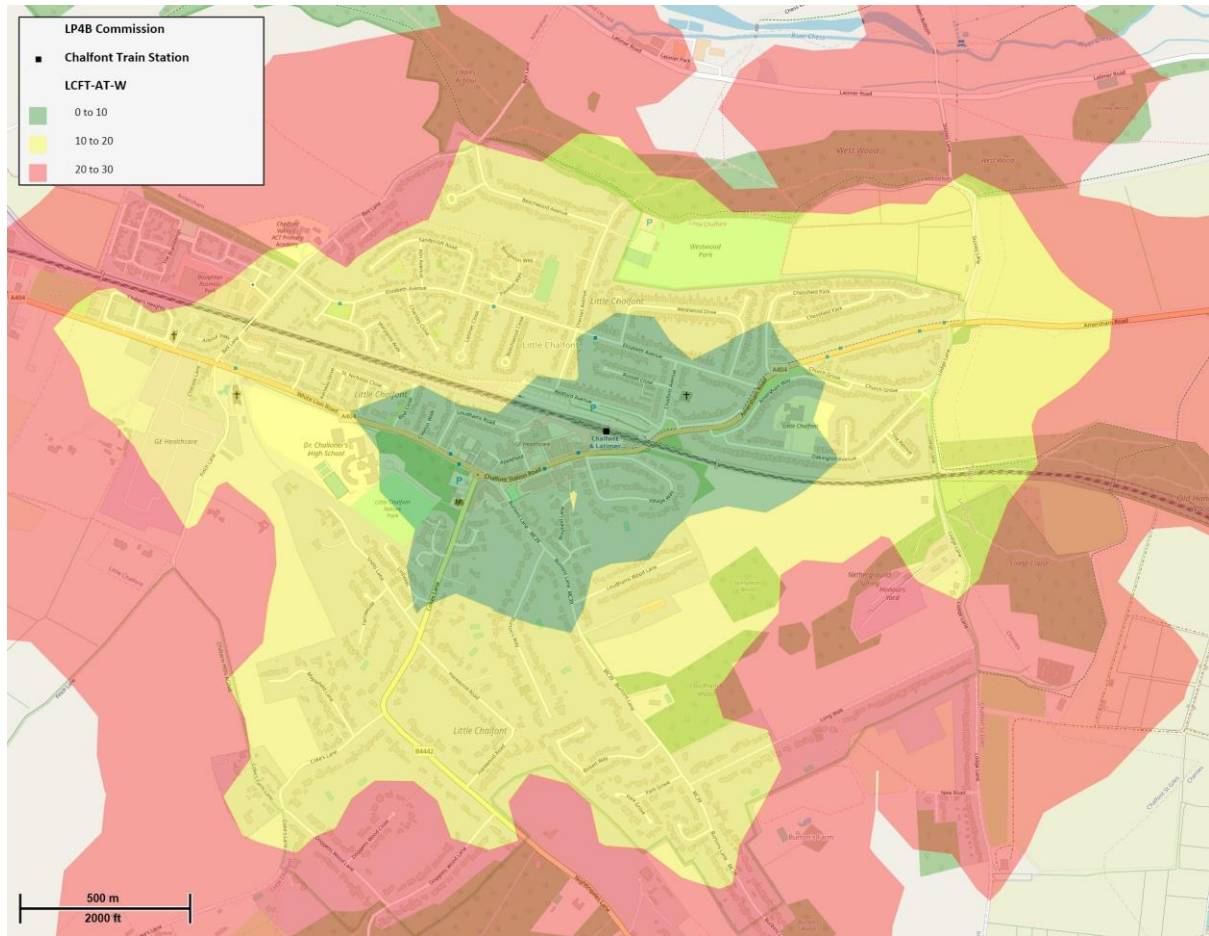




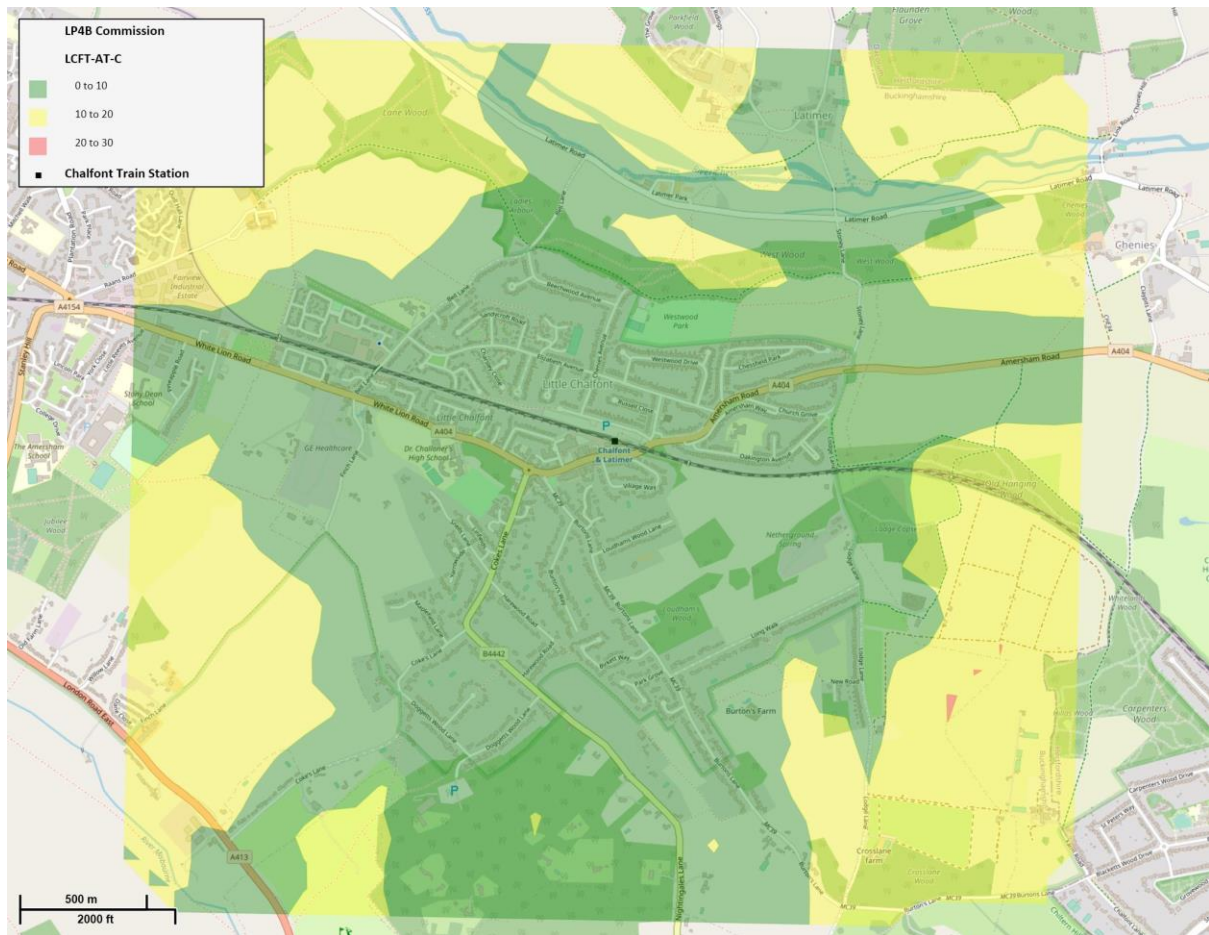


Little Chalfont

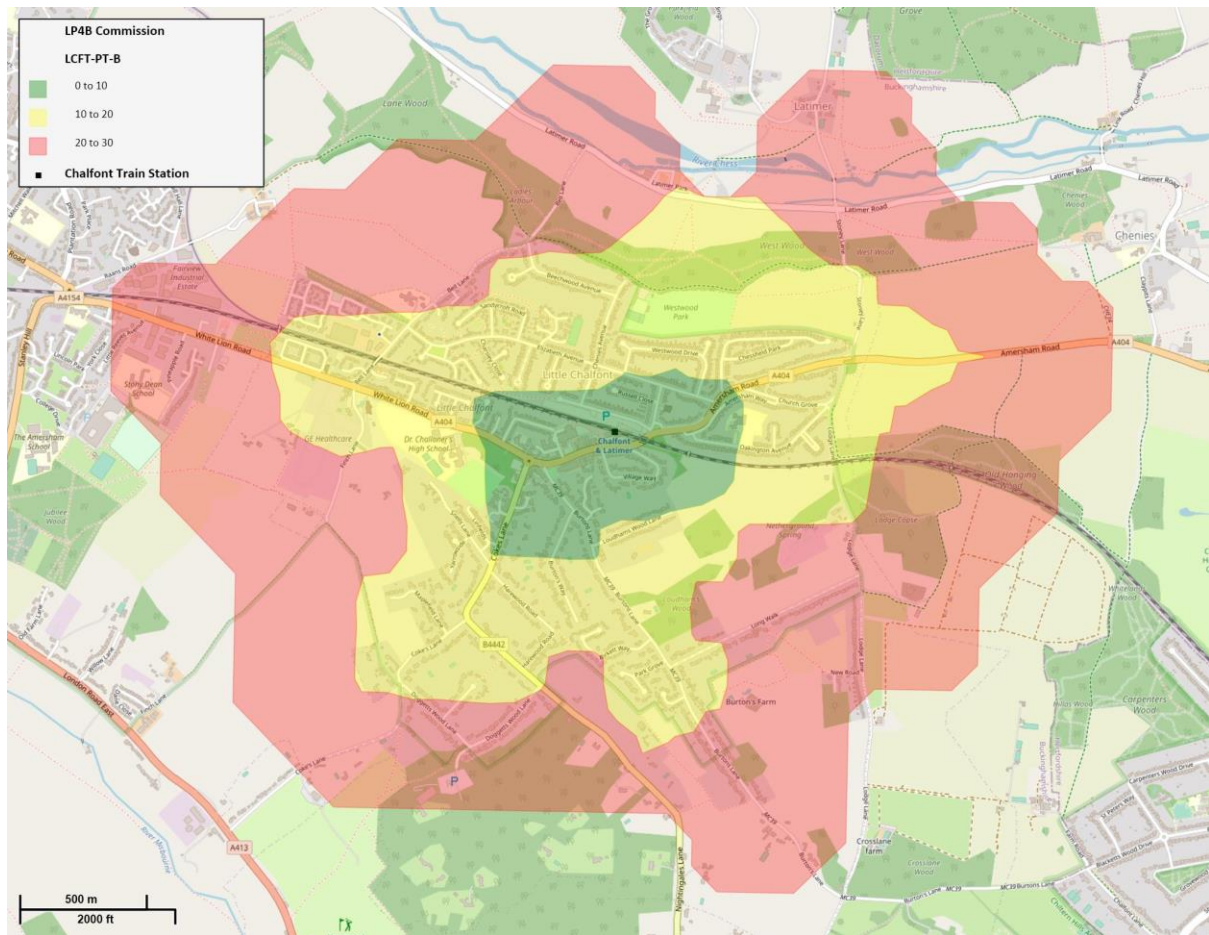
Walking



Cycling

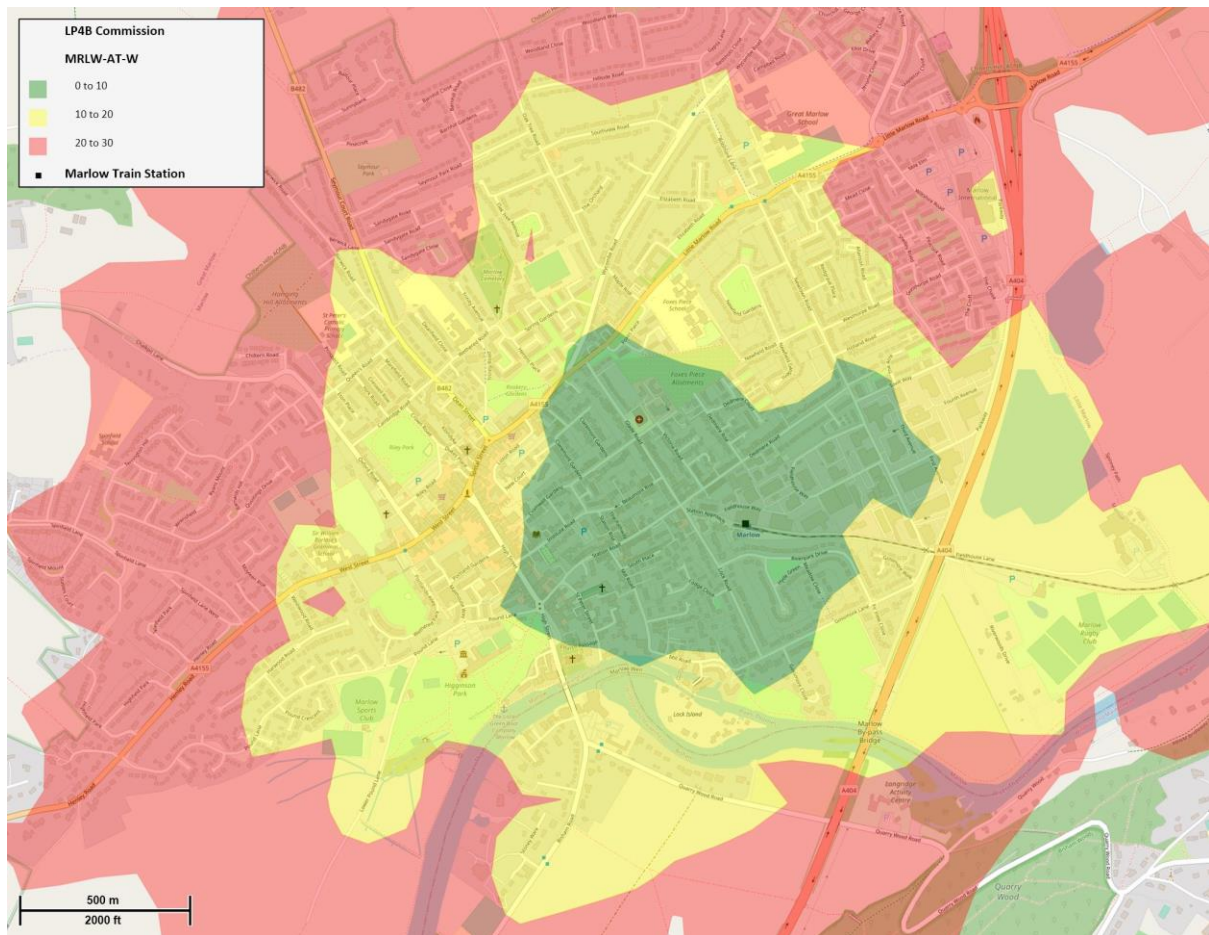


Bus

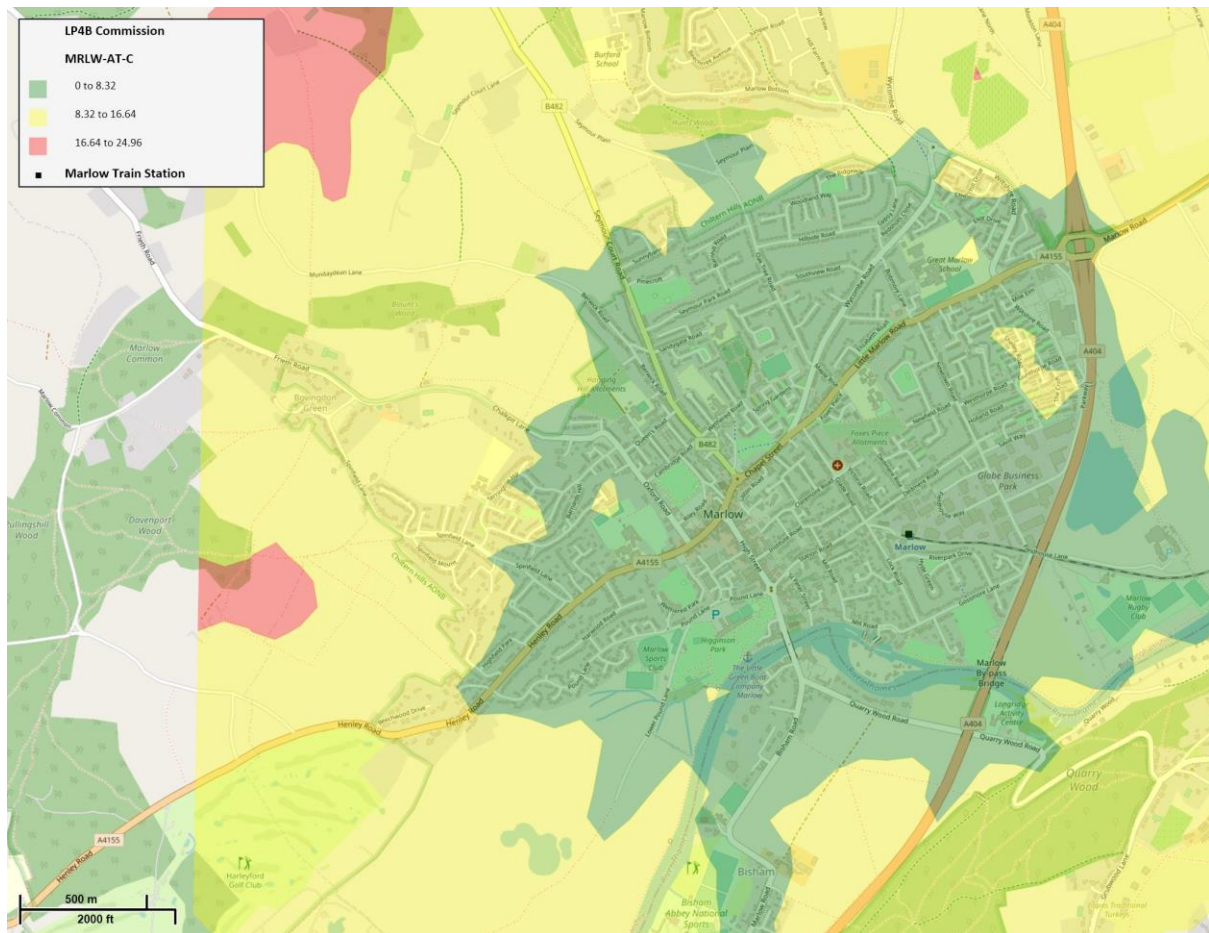


Marlow

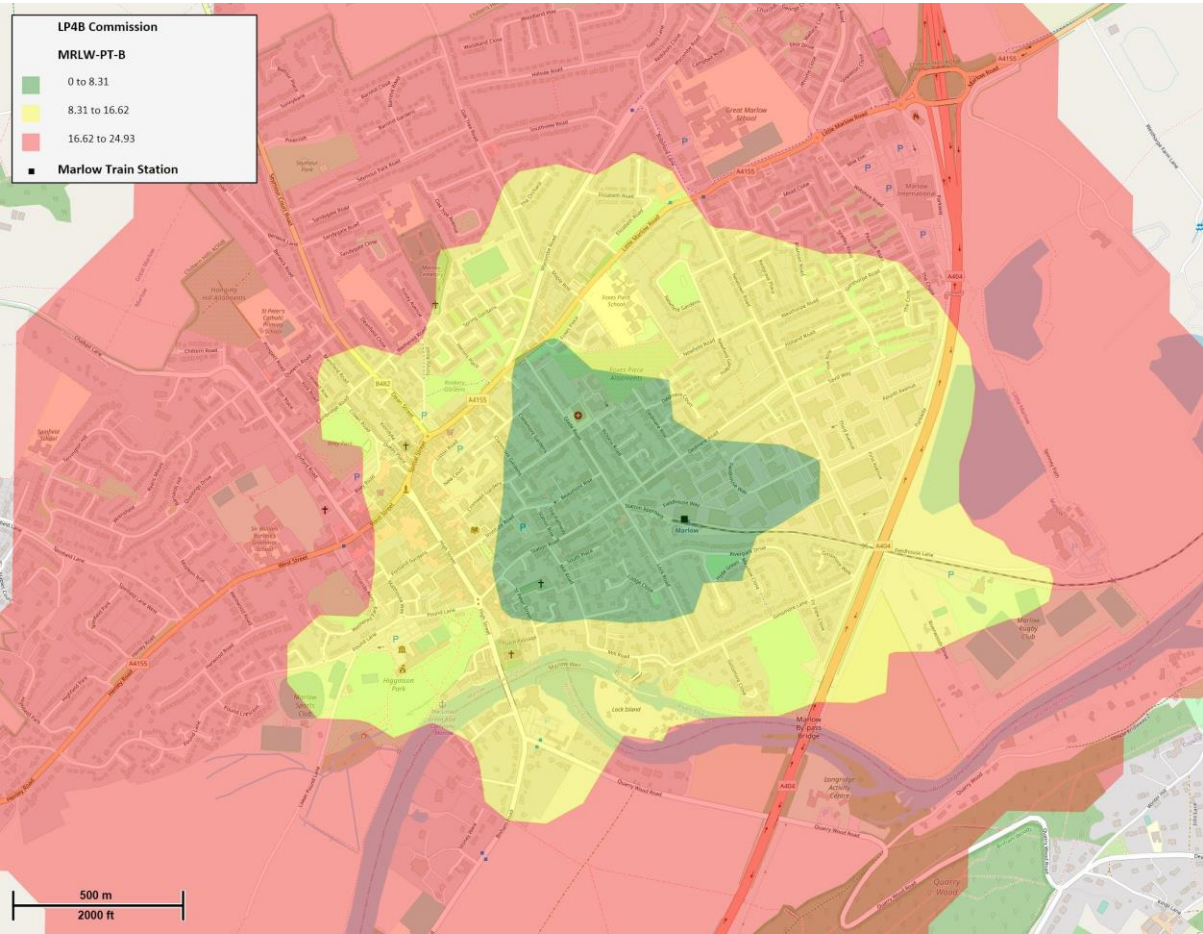
Walking



Cycling

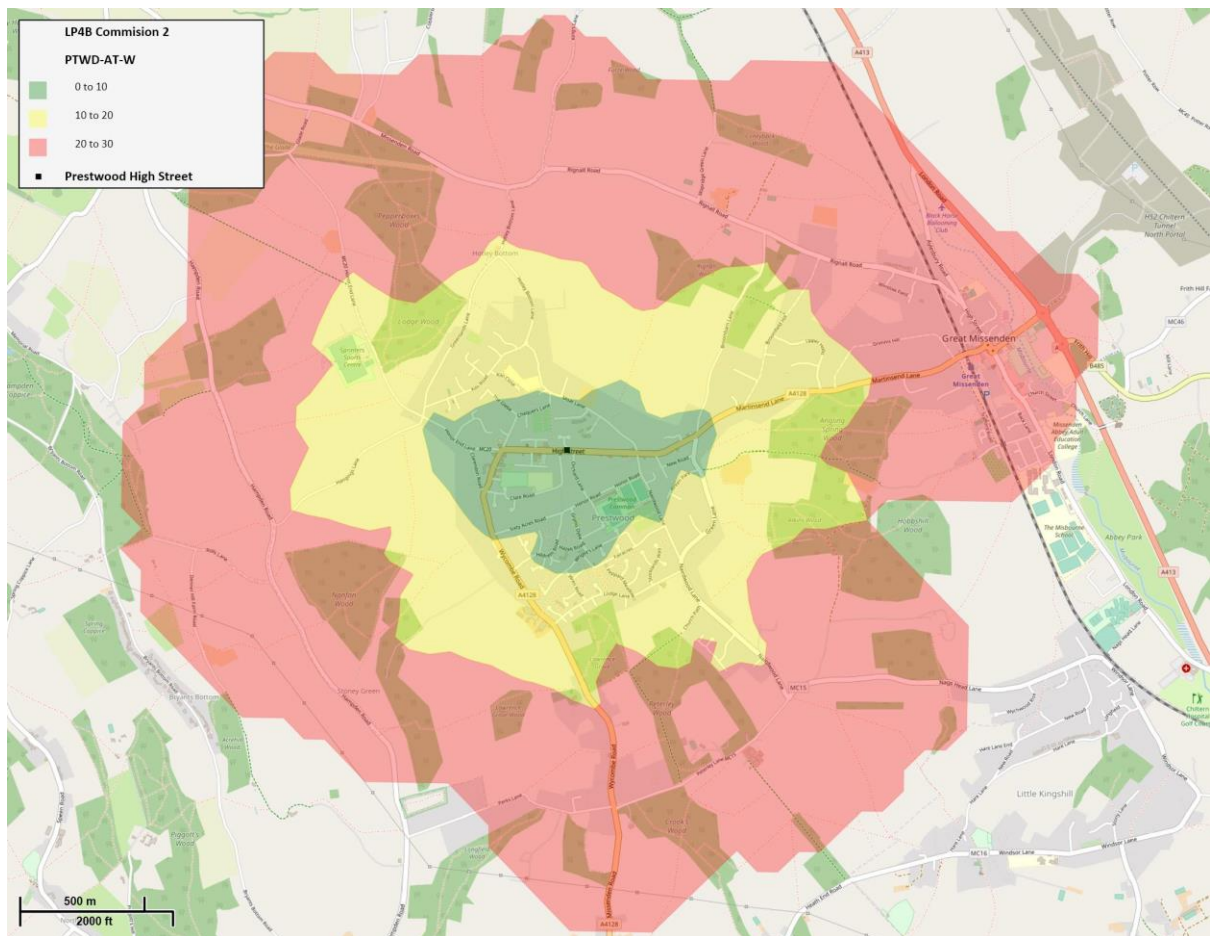


Bus

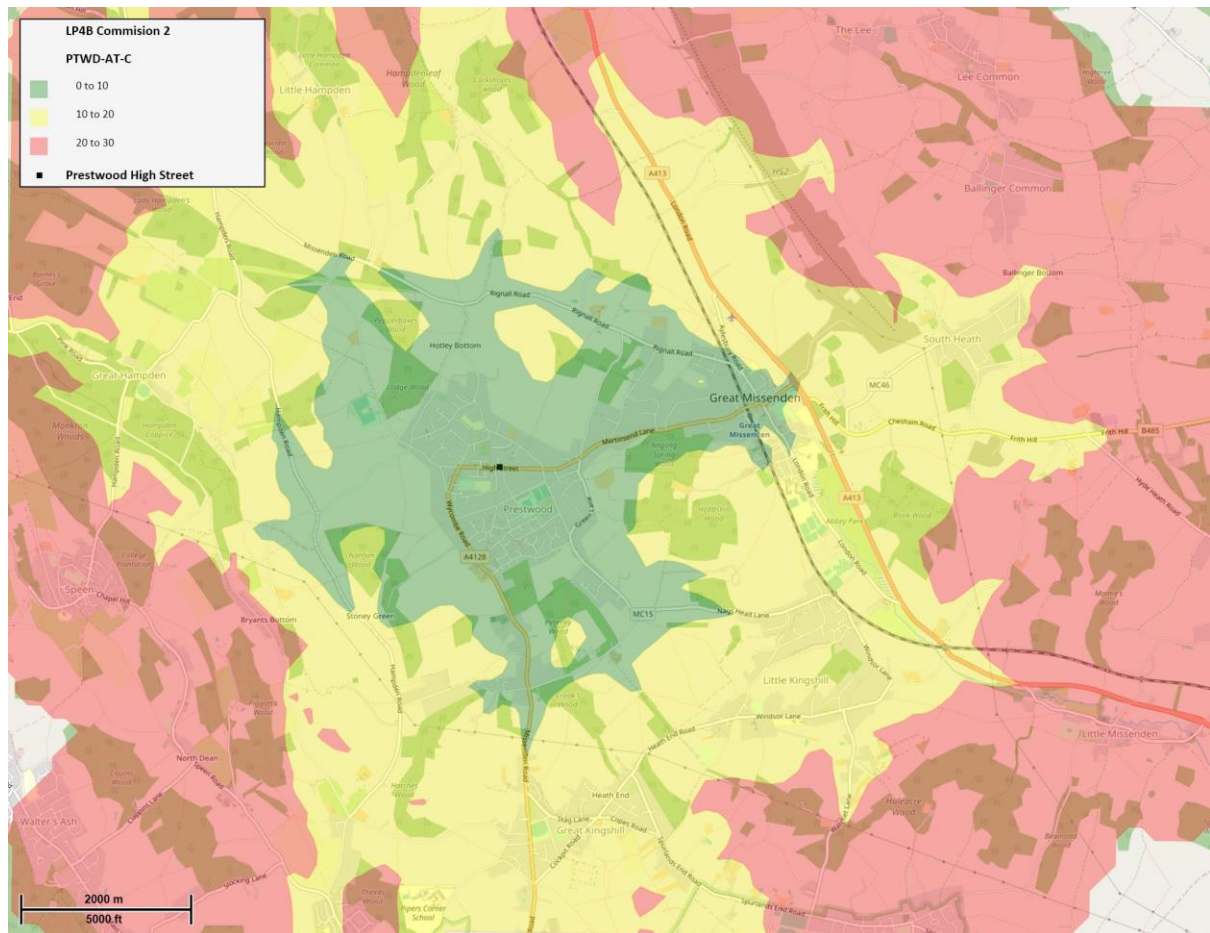


Prestwood

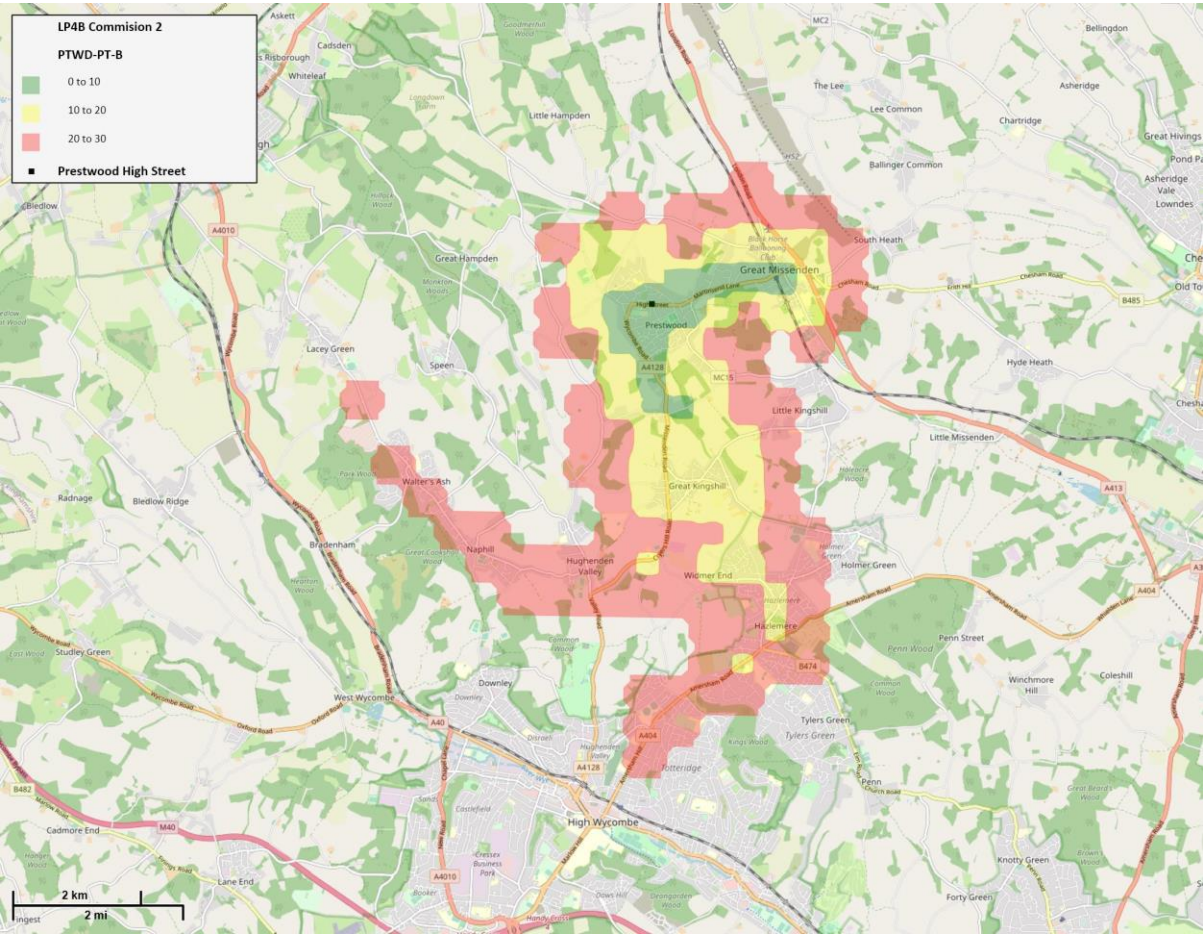
Walking



Cycling

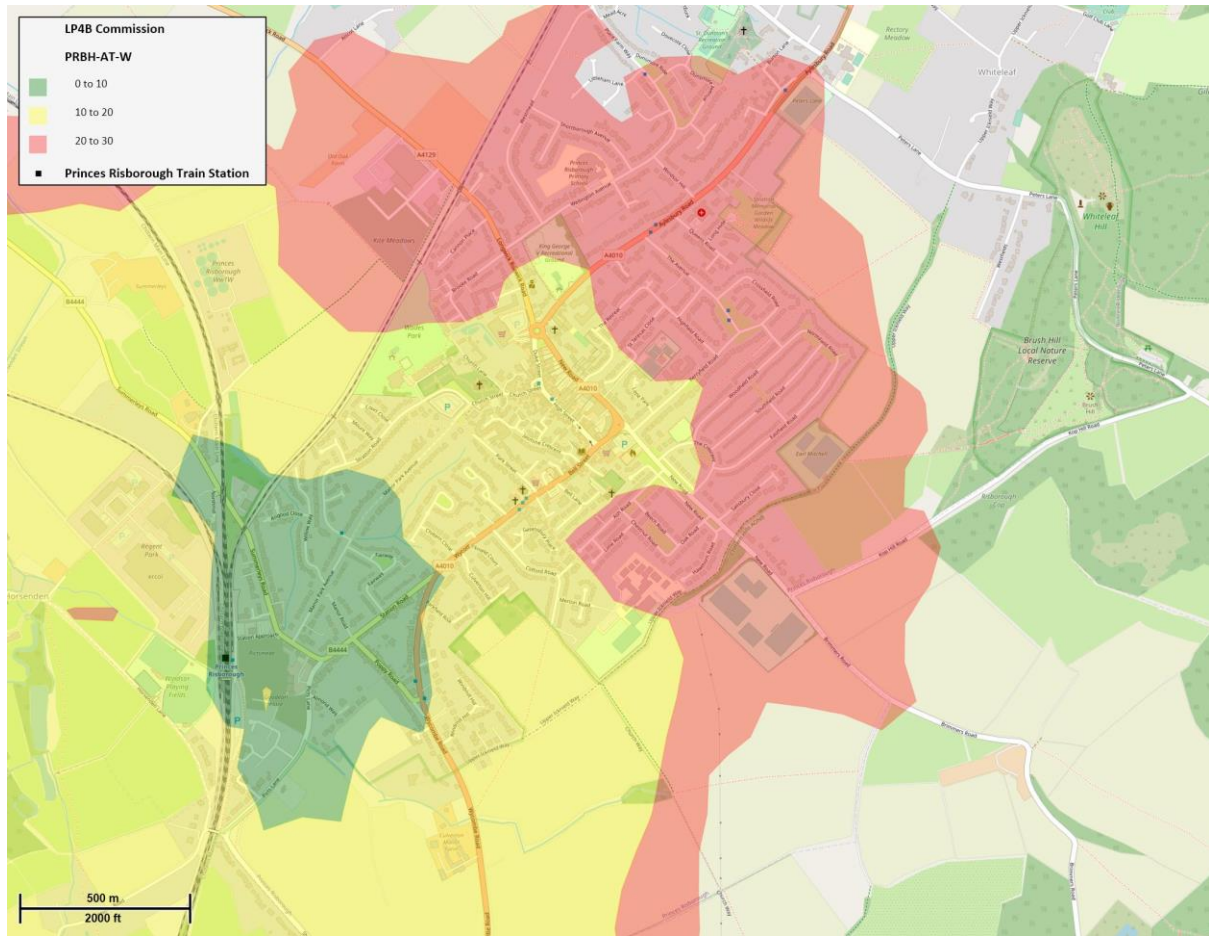


Bus

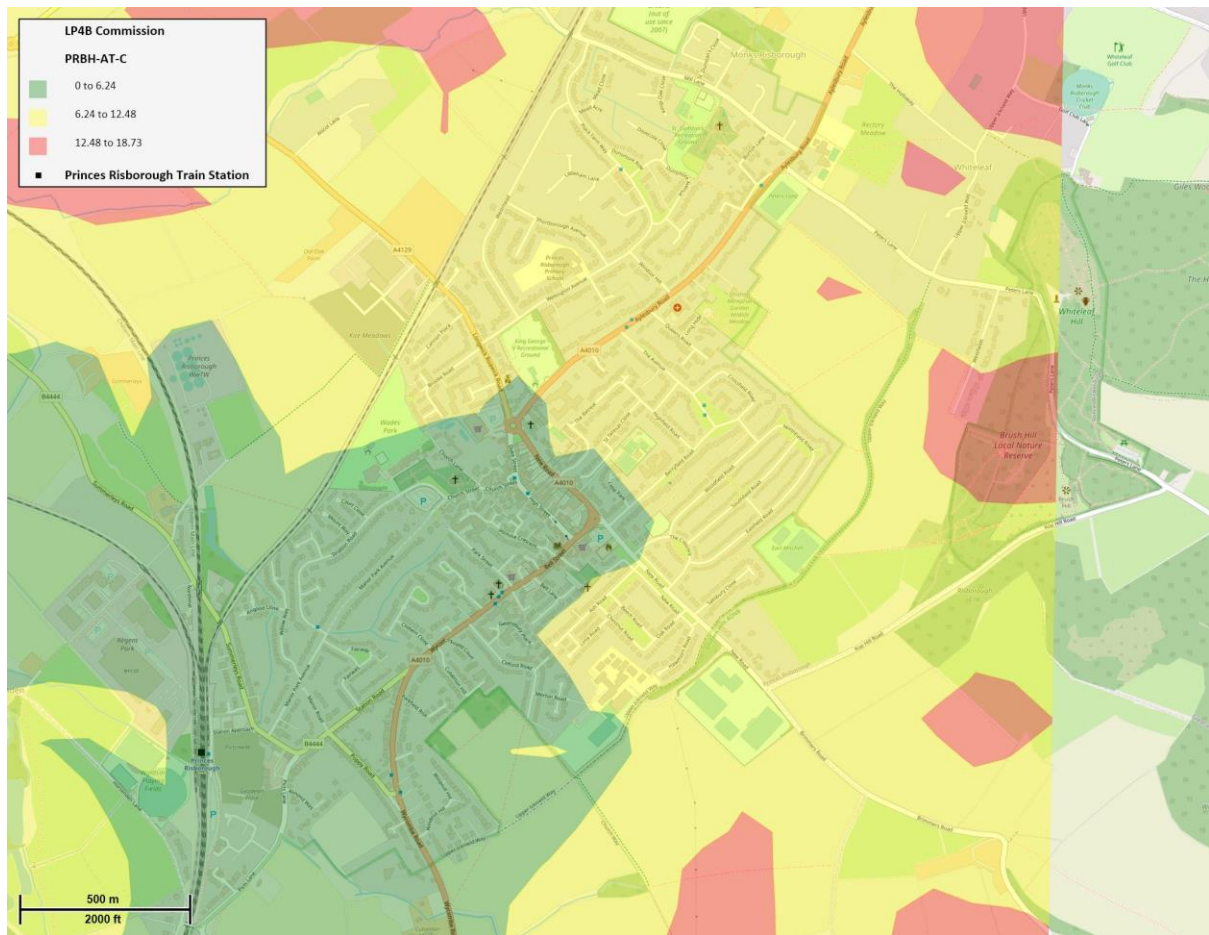


Princes Risborough

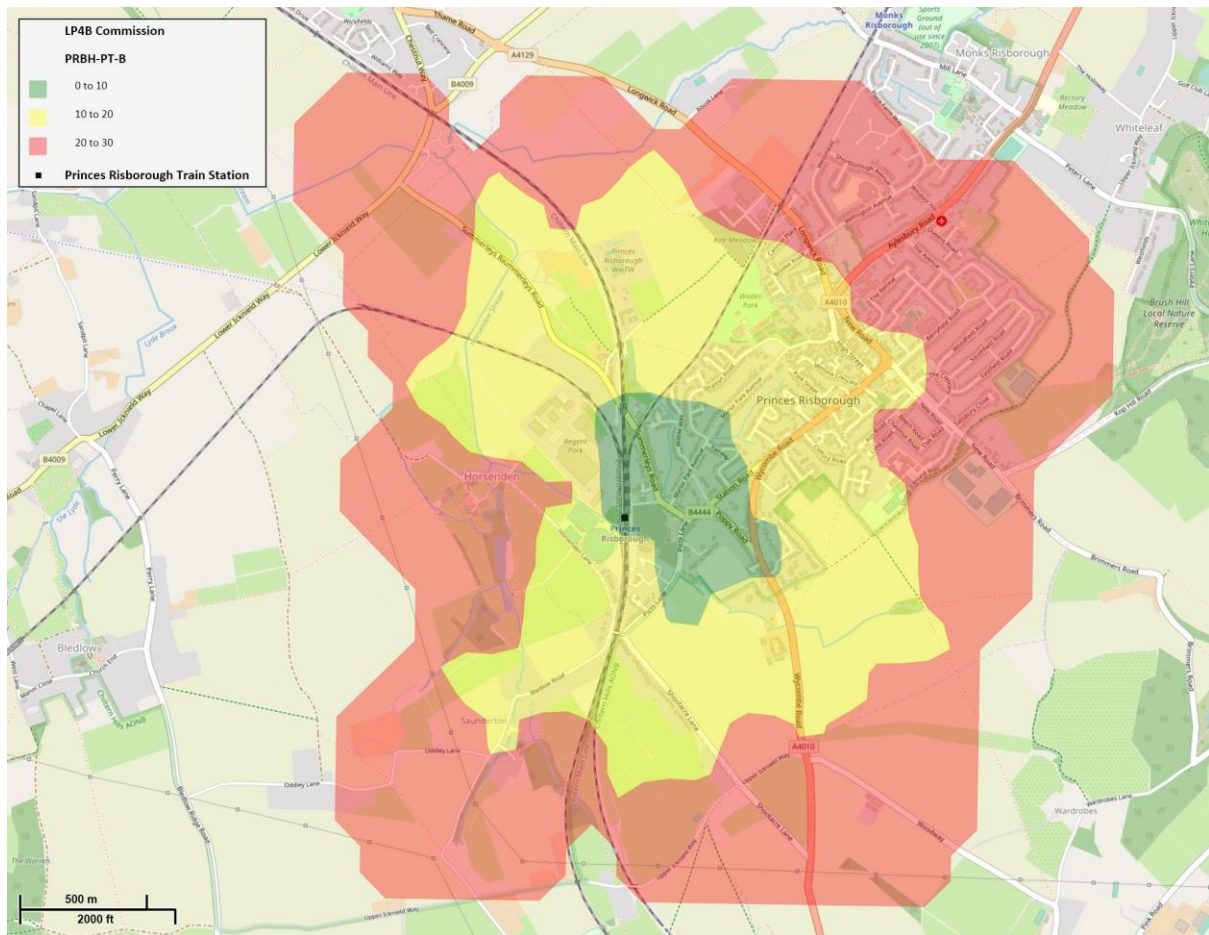
Walking



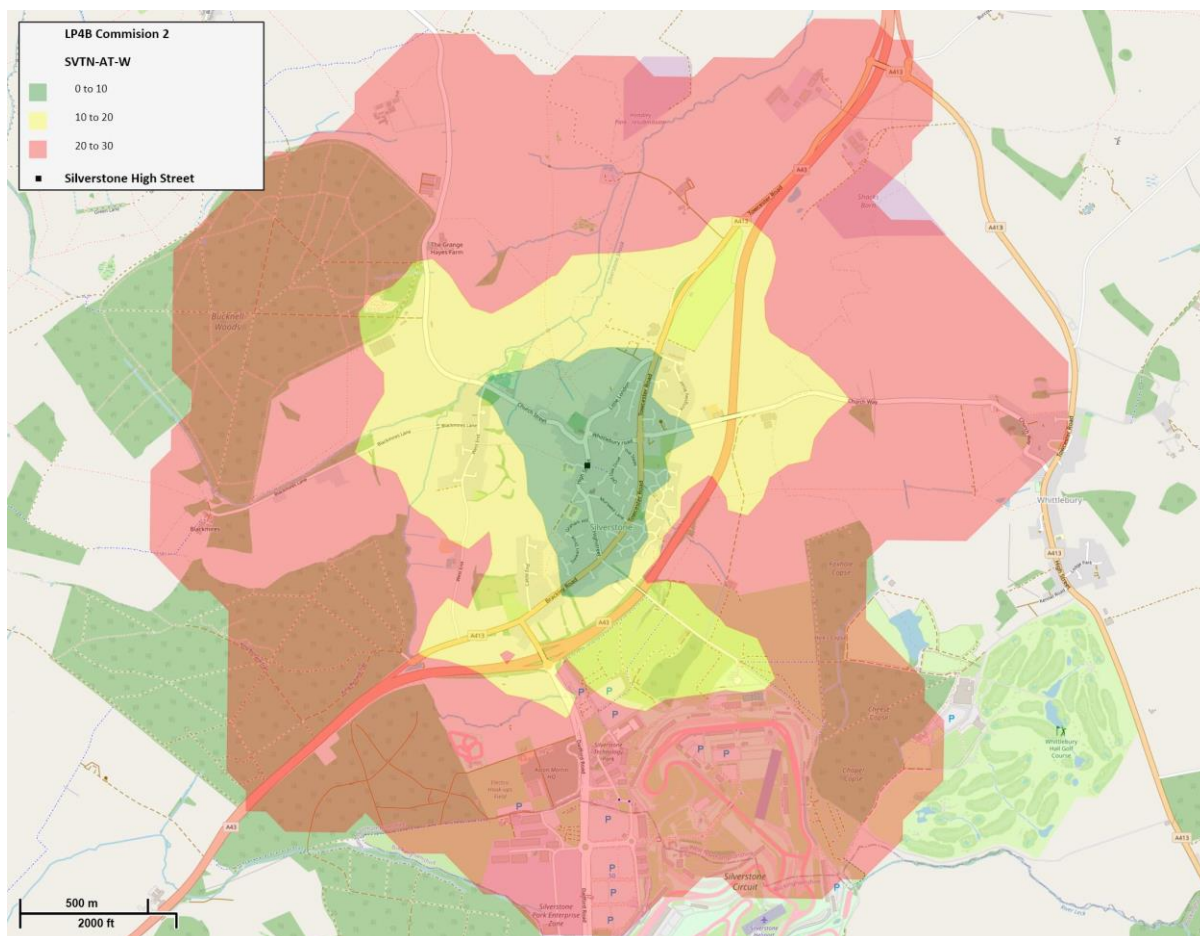
Cycling



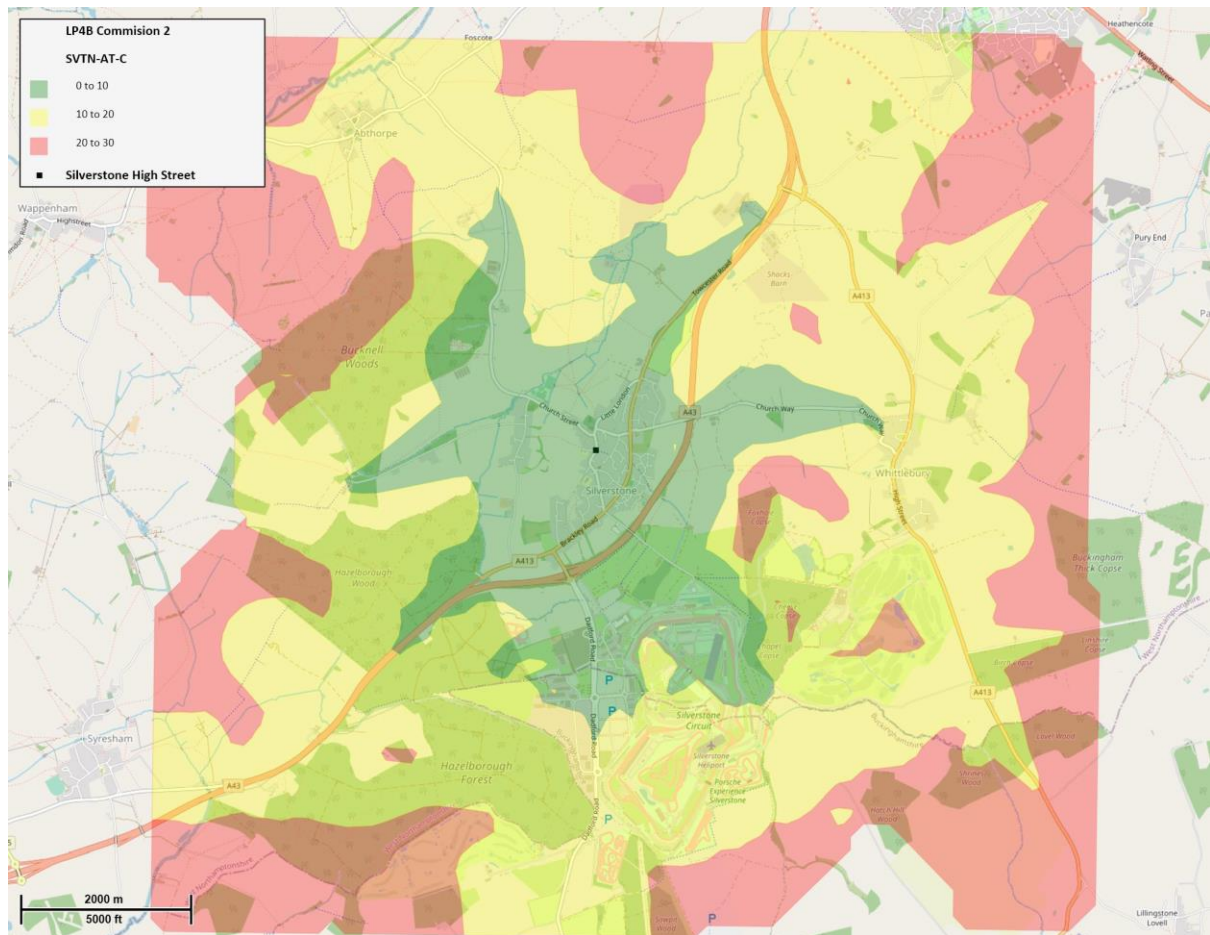
Bus



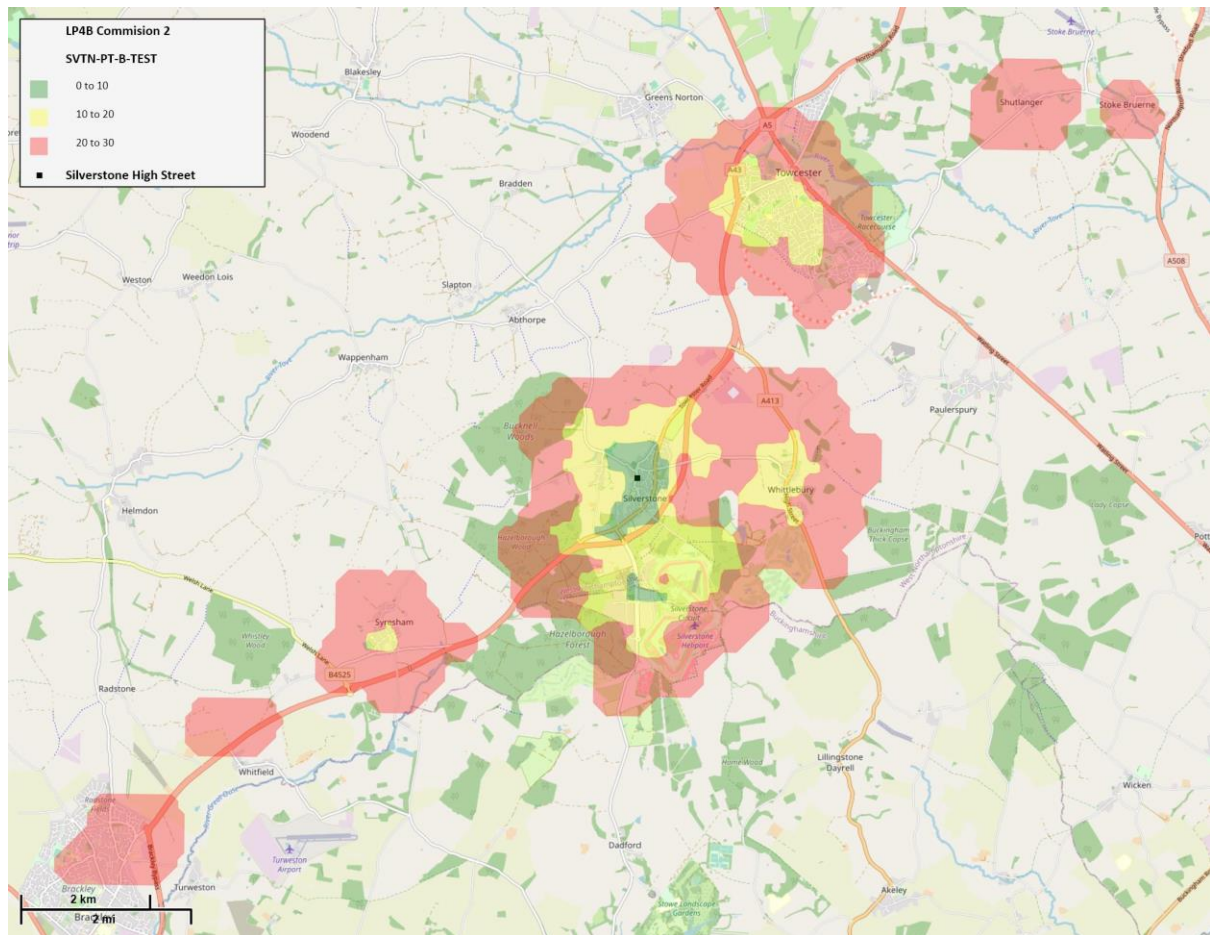
Walking



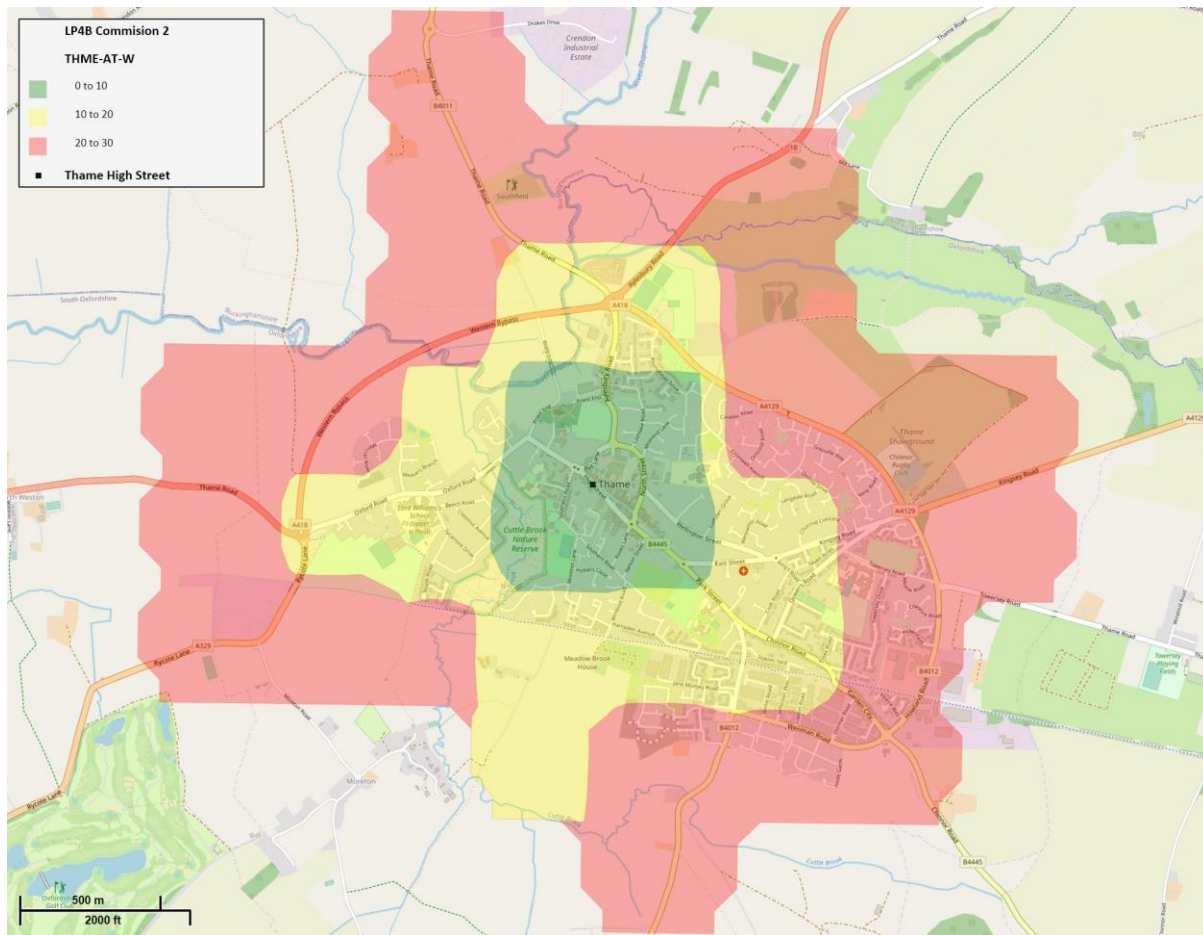
Cycling



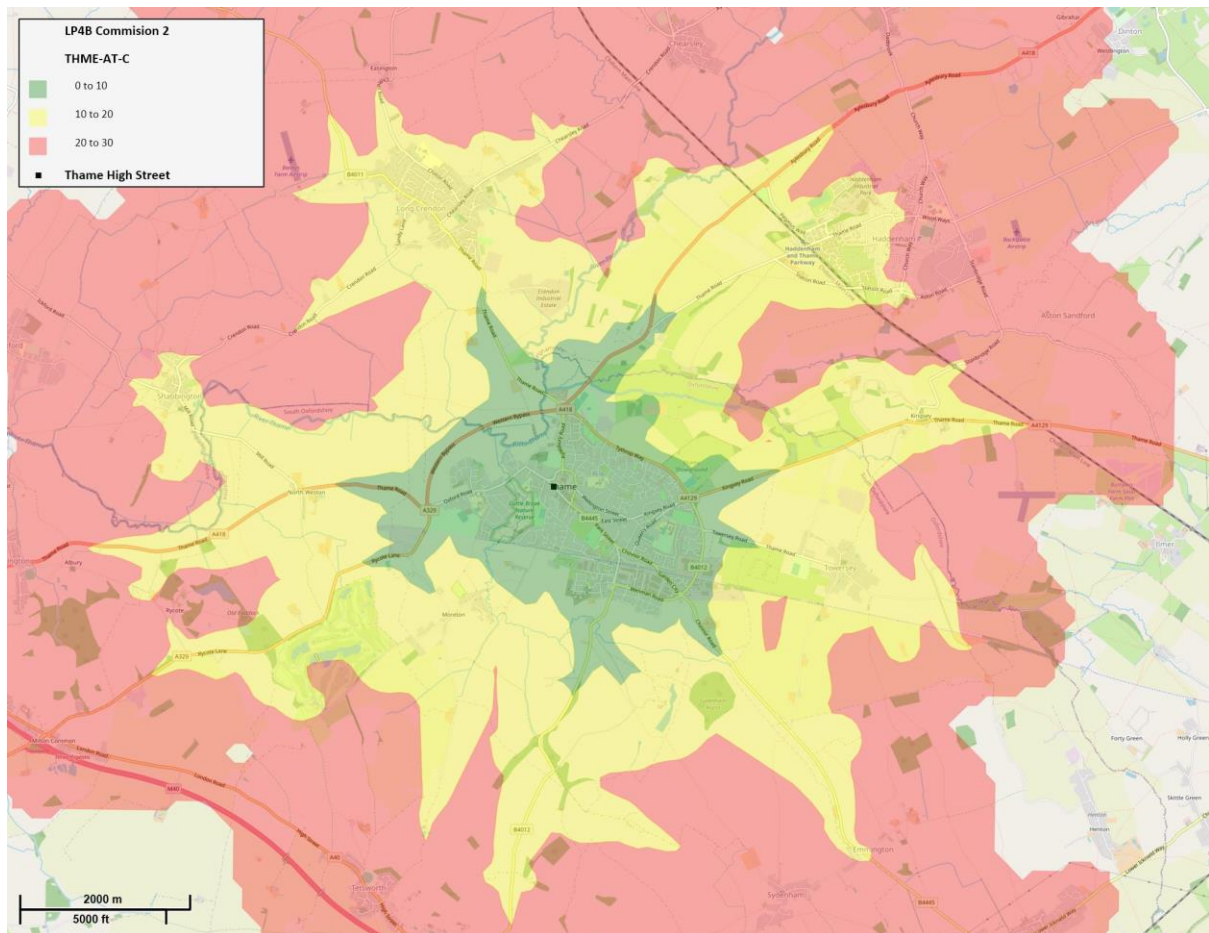
Bus



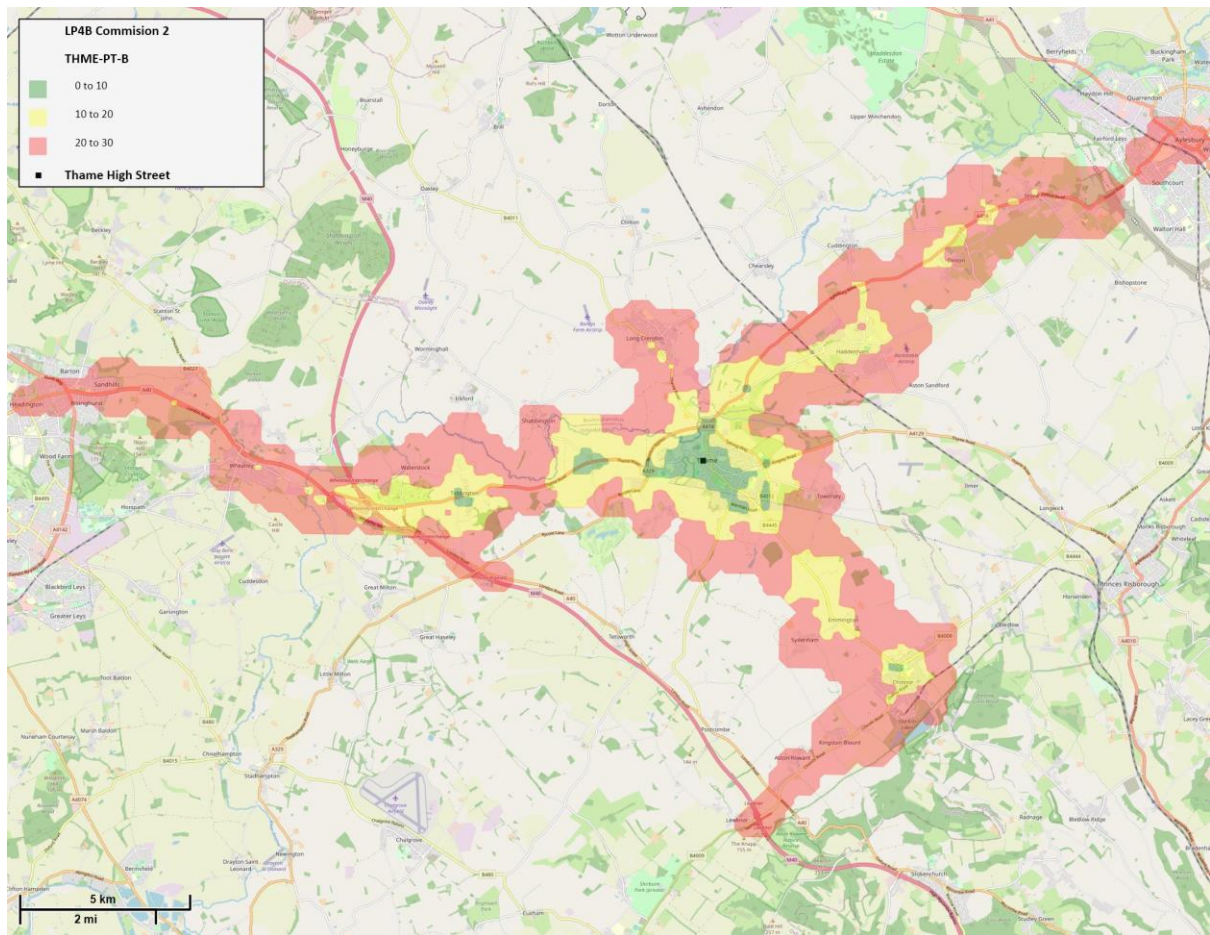
Walking



Cycling

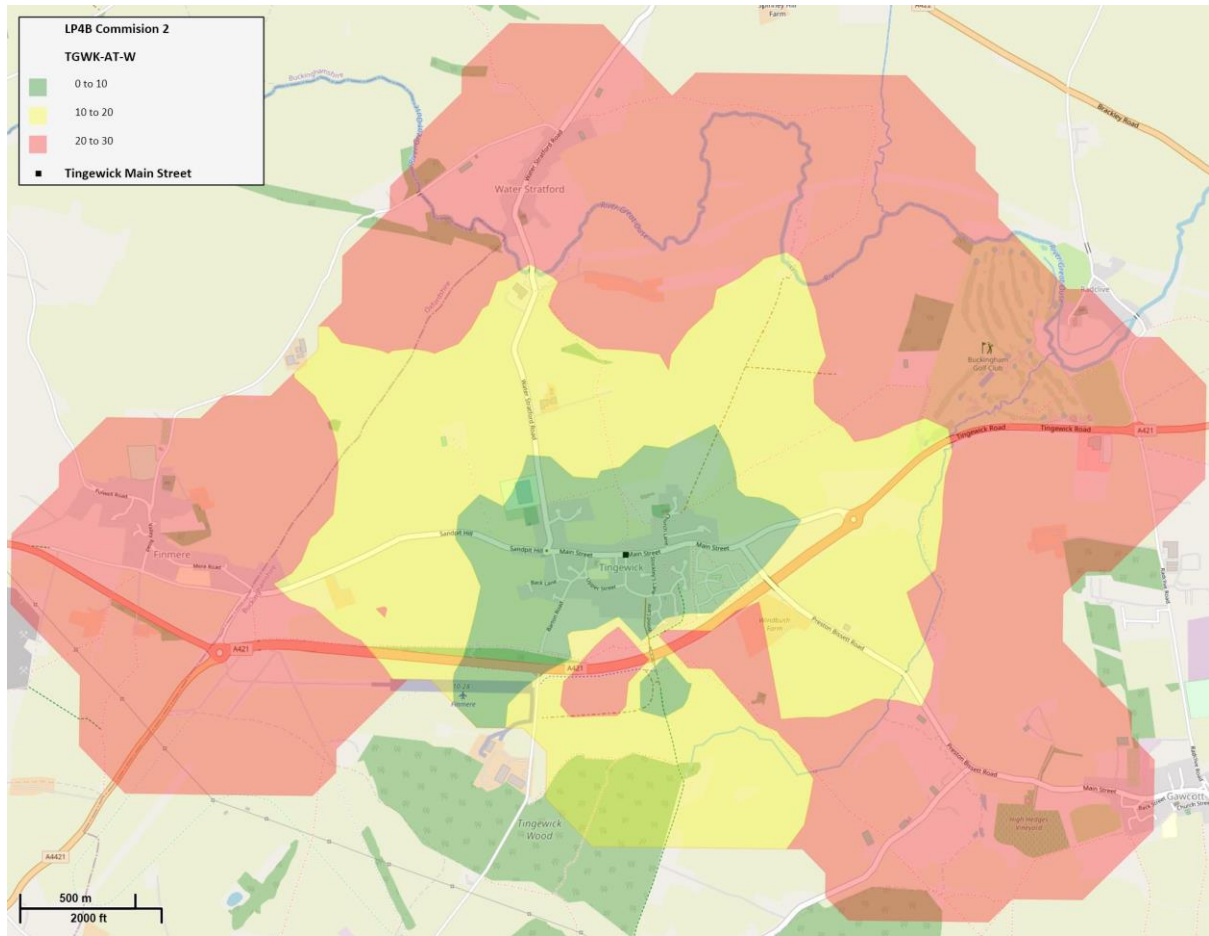


Bus

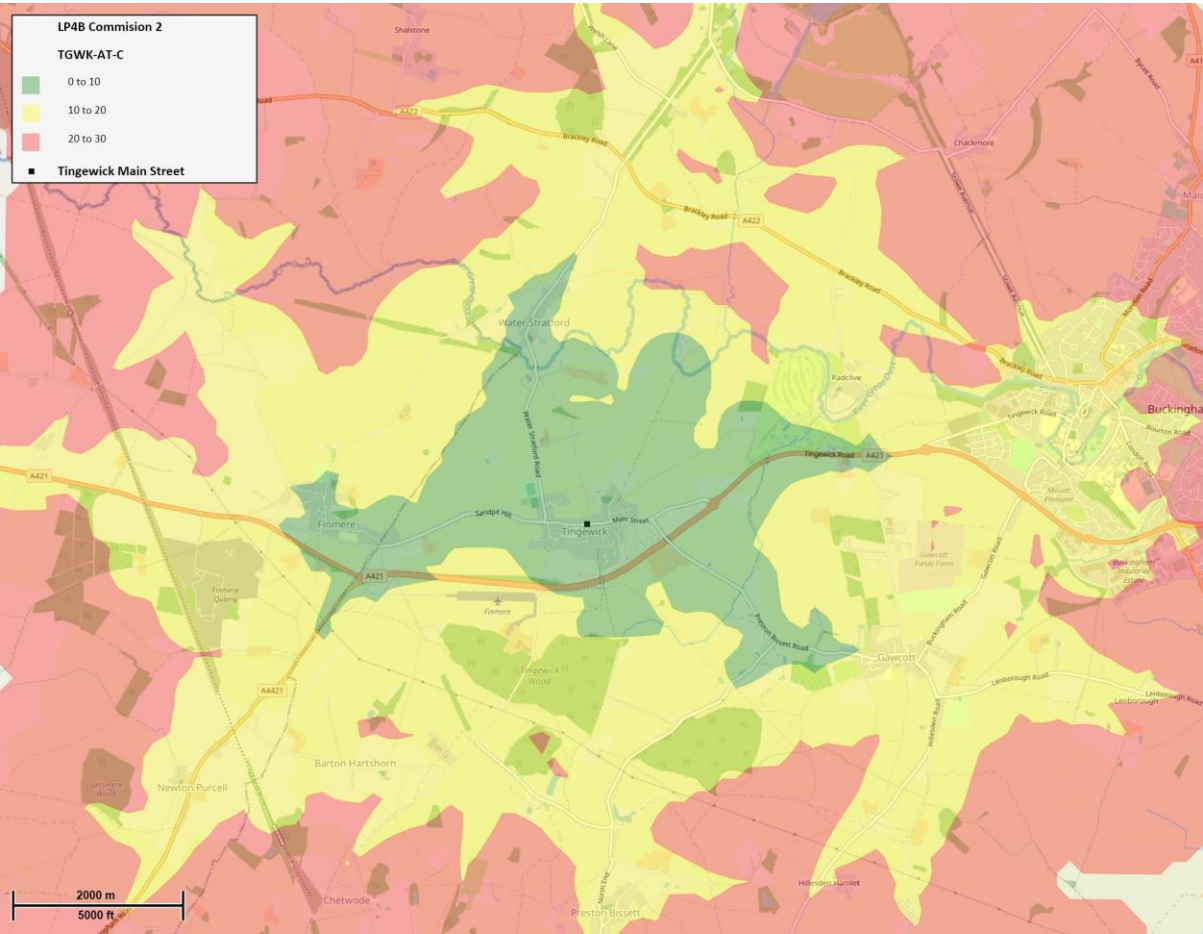


Tingewick

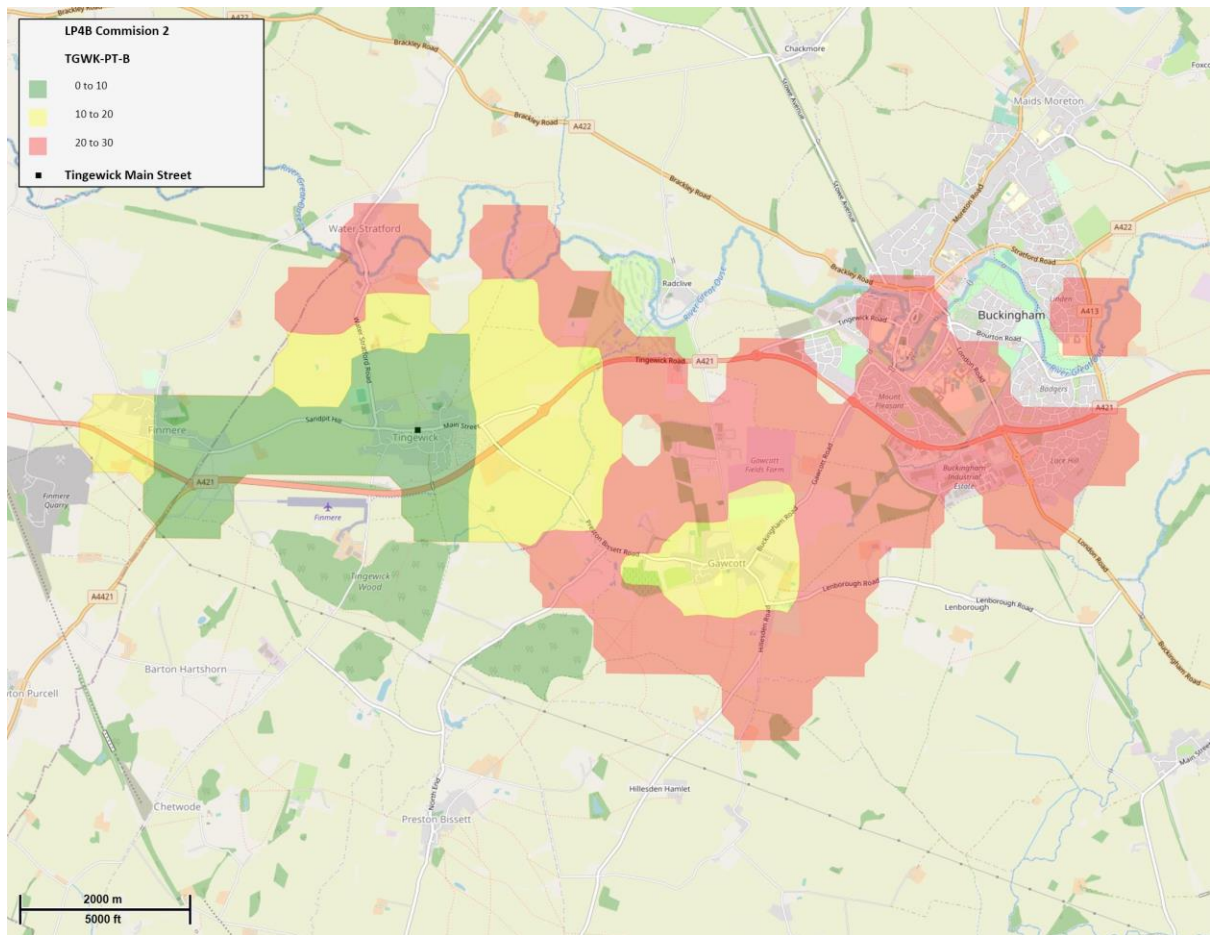
Walking



Cycling

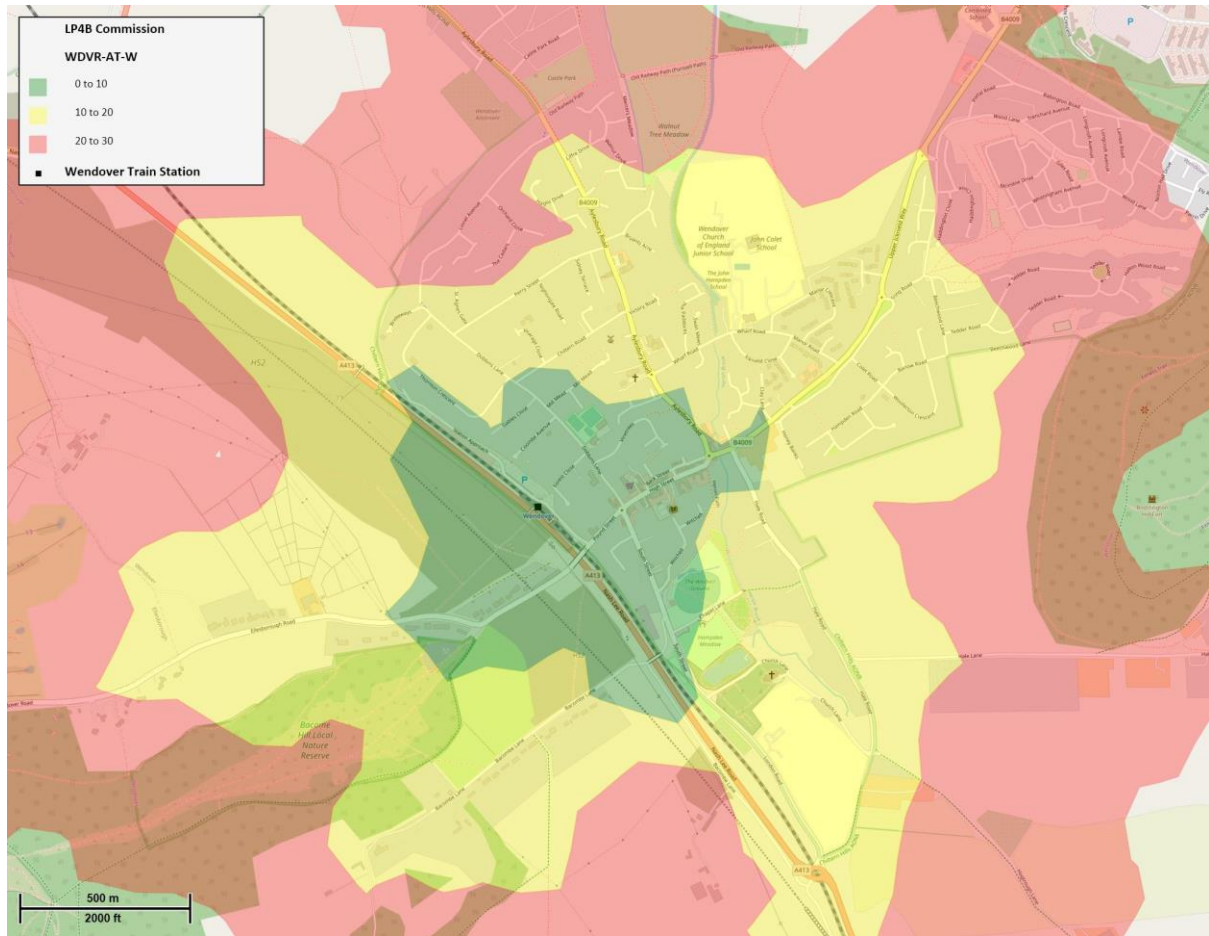


Bus

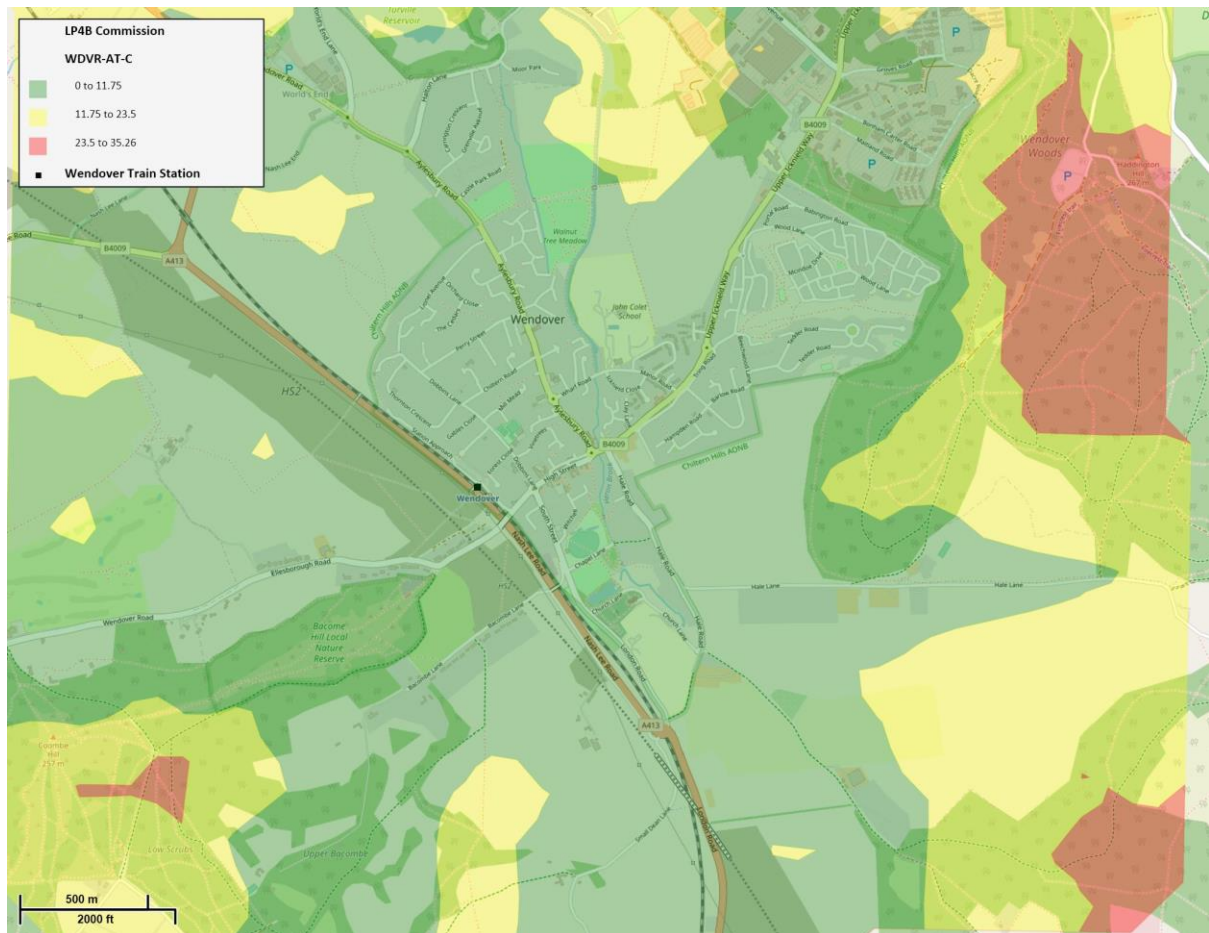


Wendover

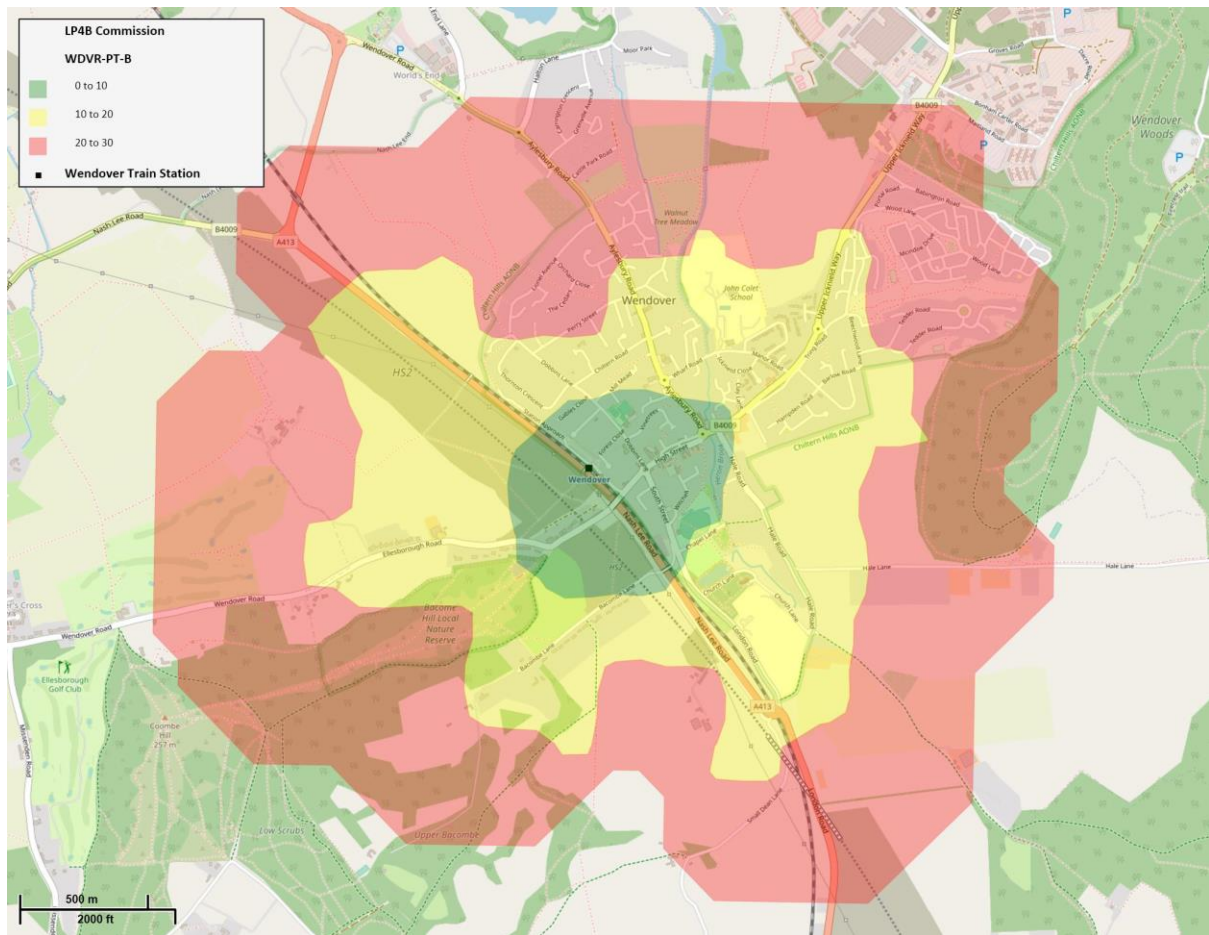
Walking



Cycling

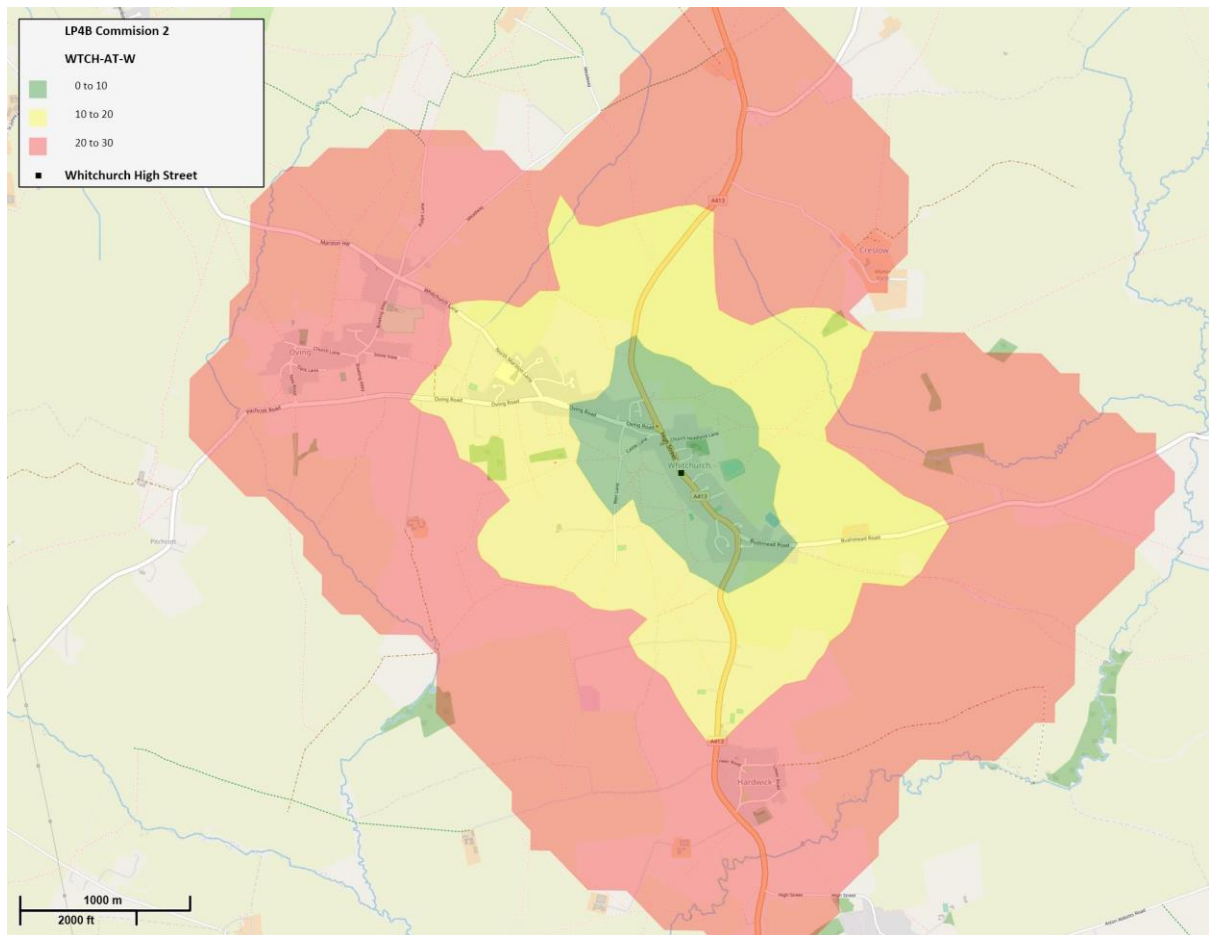


Bus

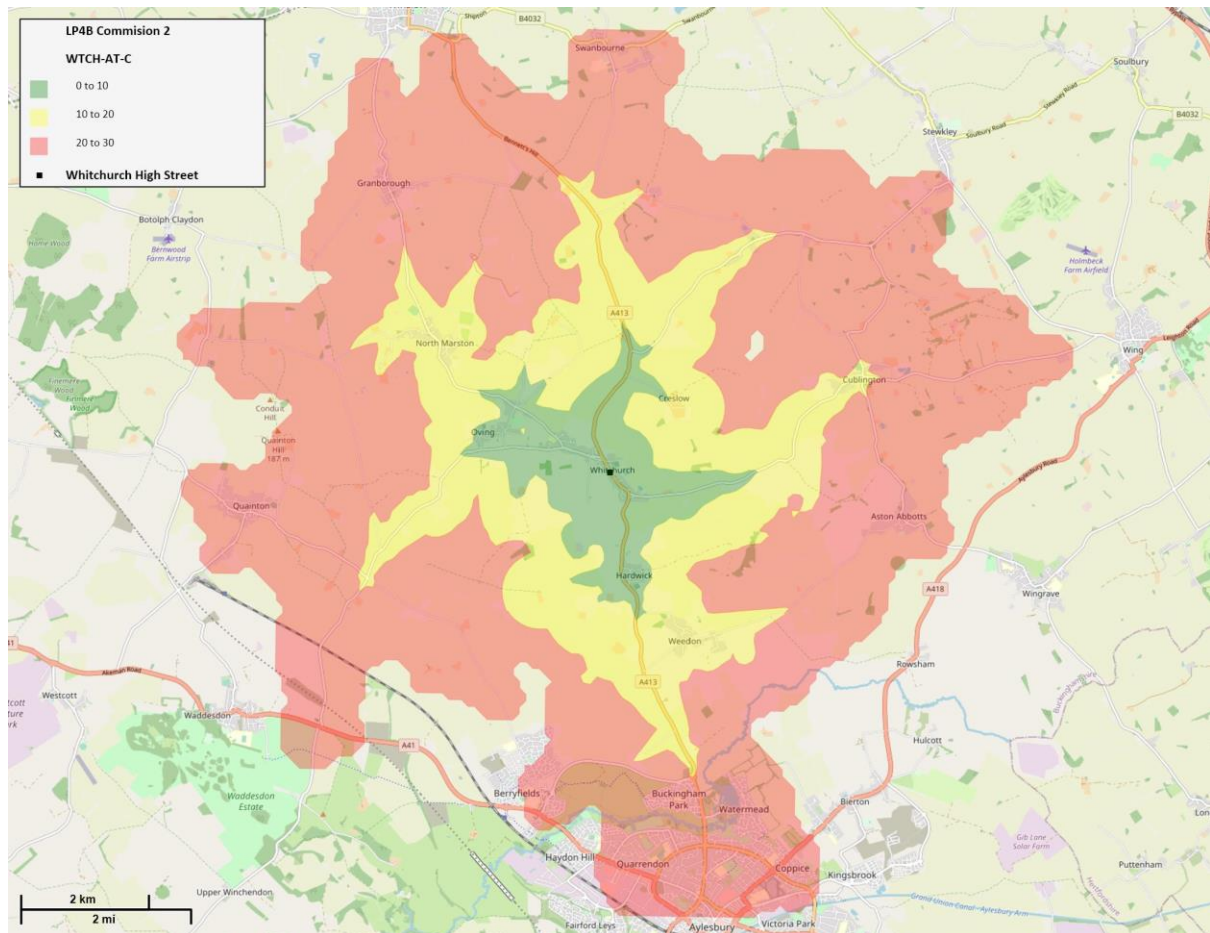


Whitchurch

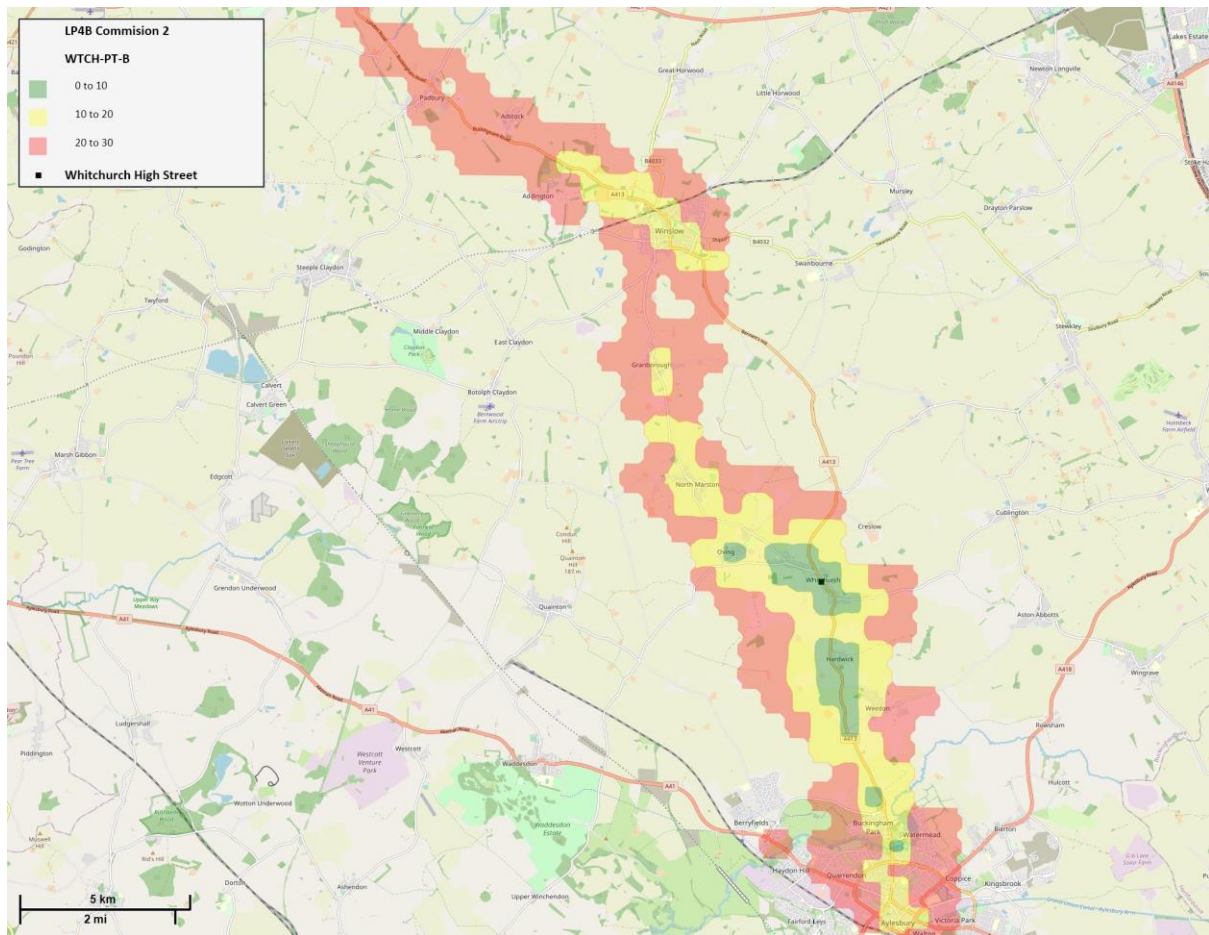
Walking



Cycling

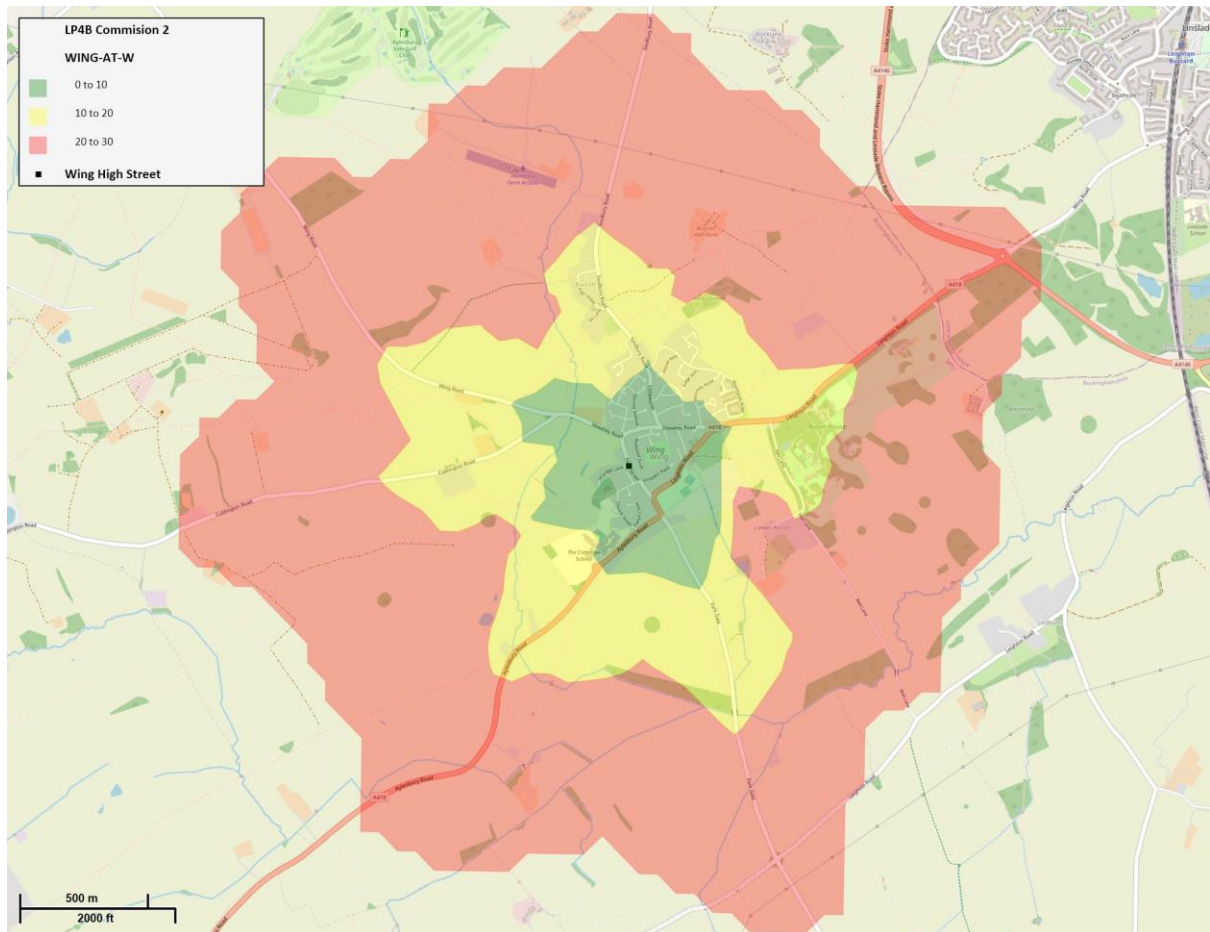


Bus

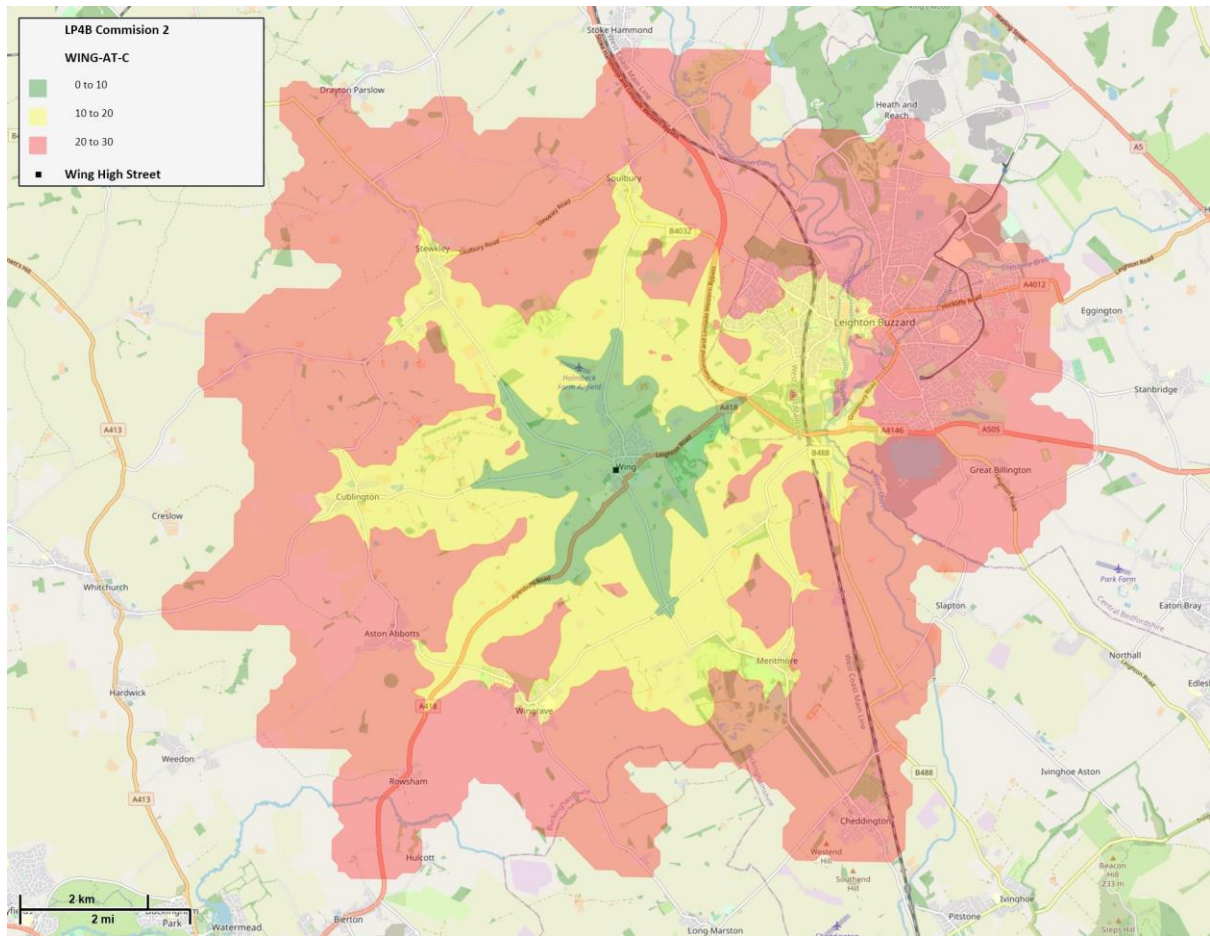


Wing

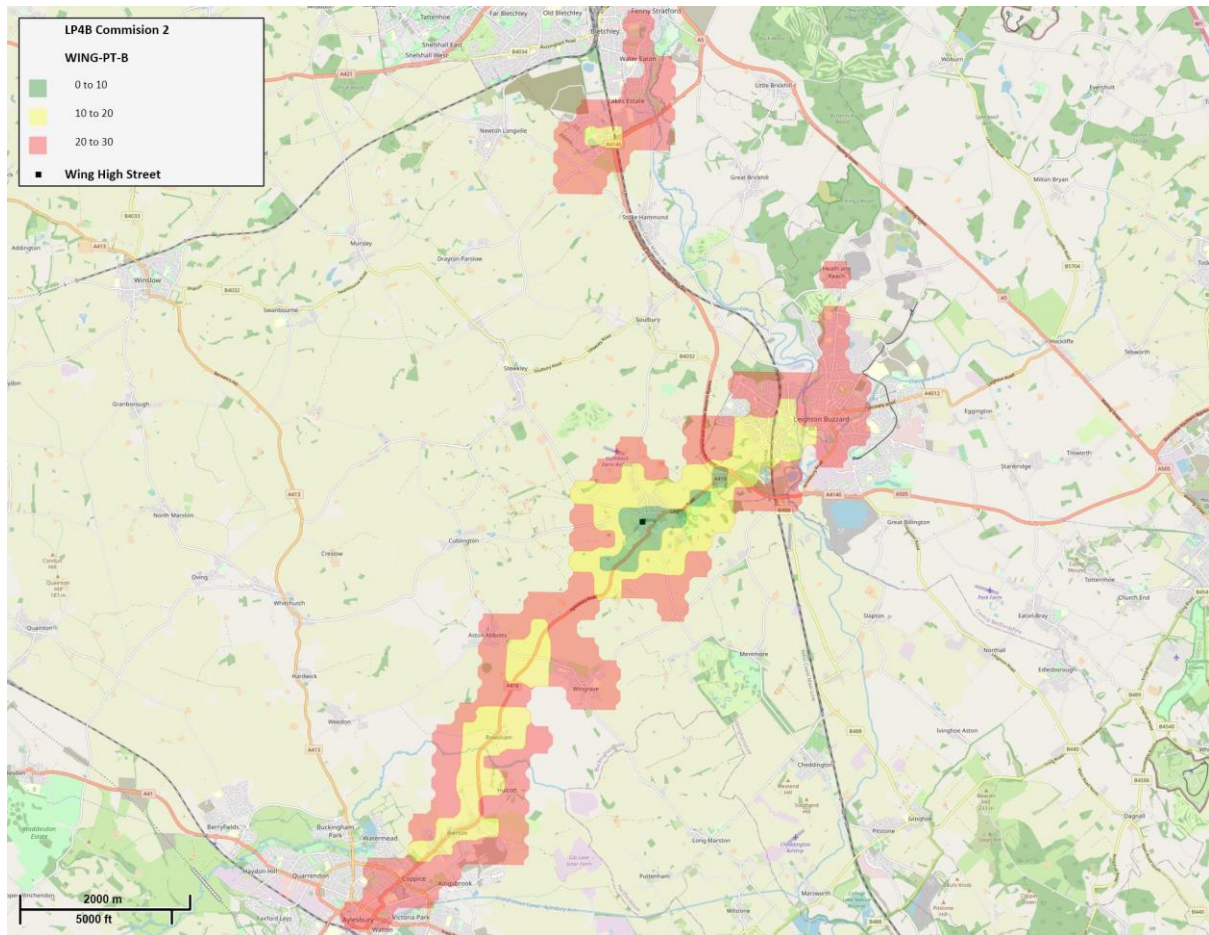
Walking



Cycling

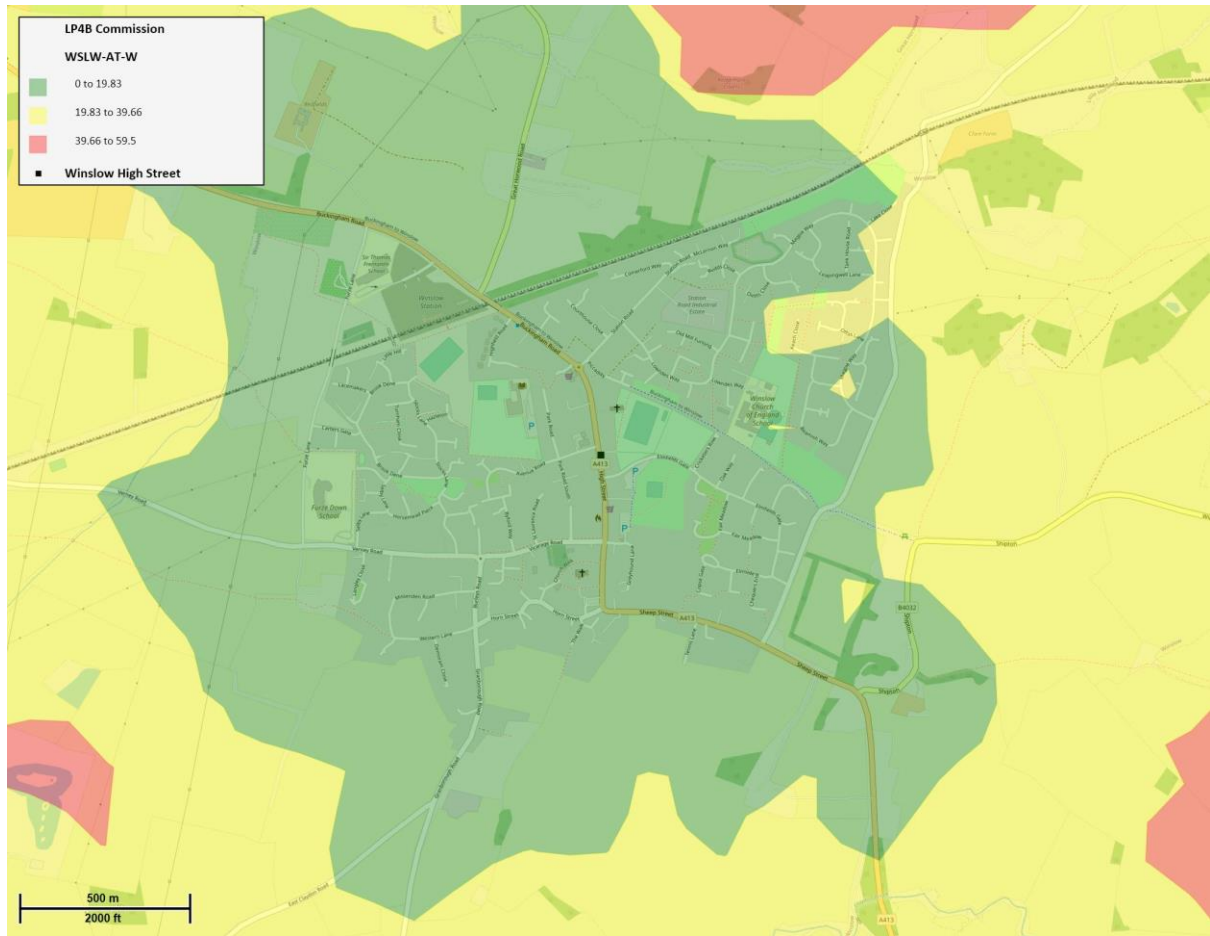


Bus

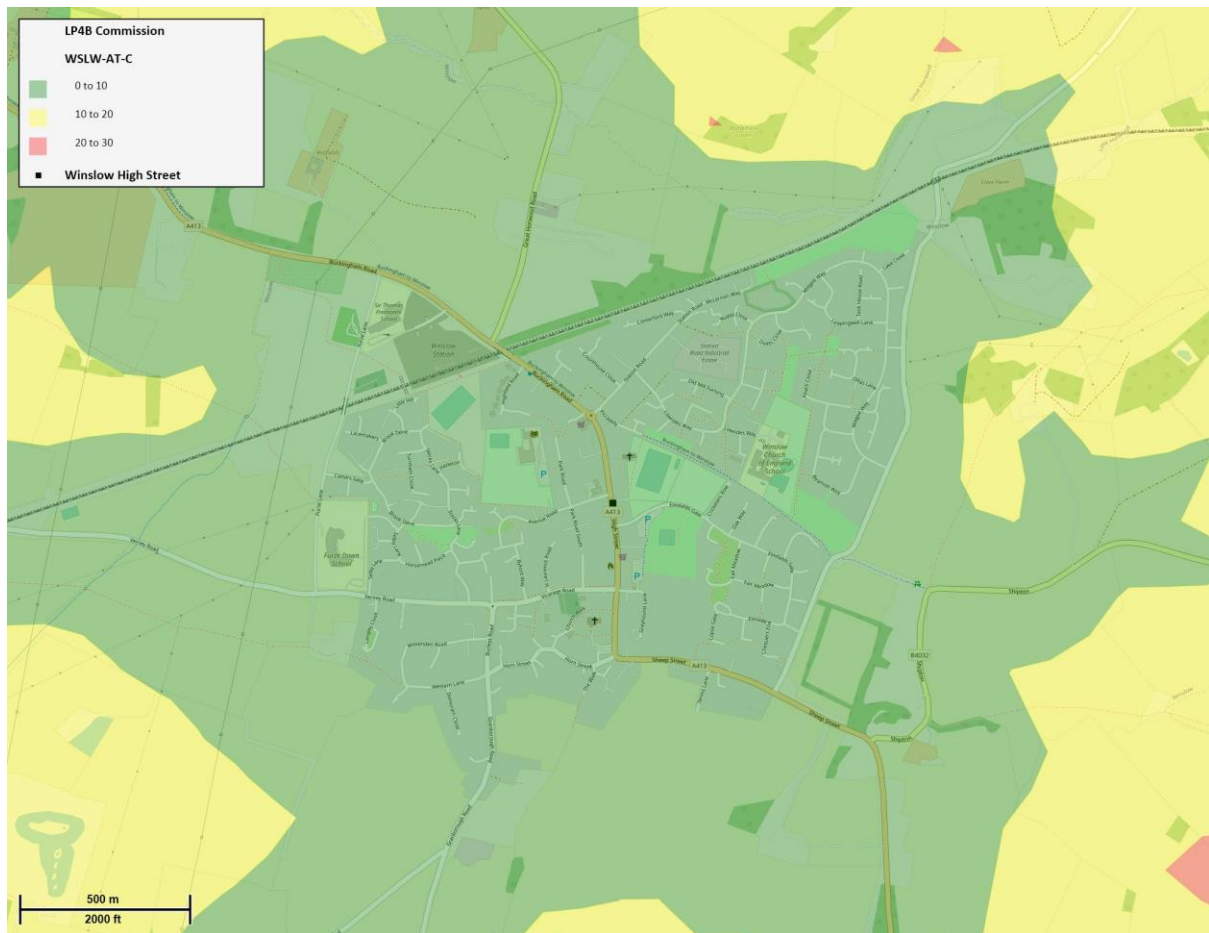


Winslow

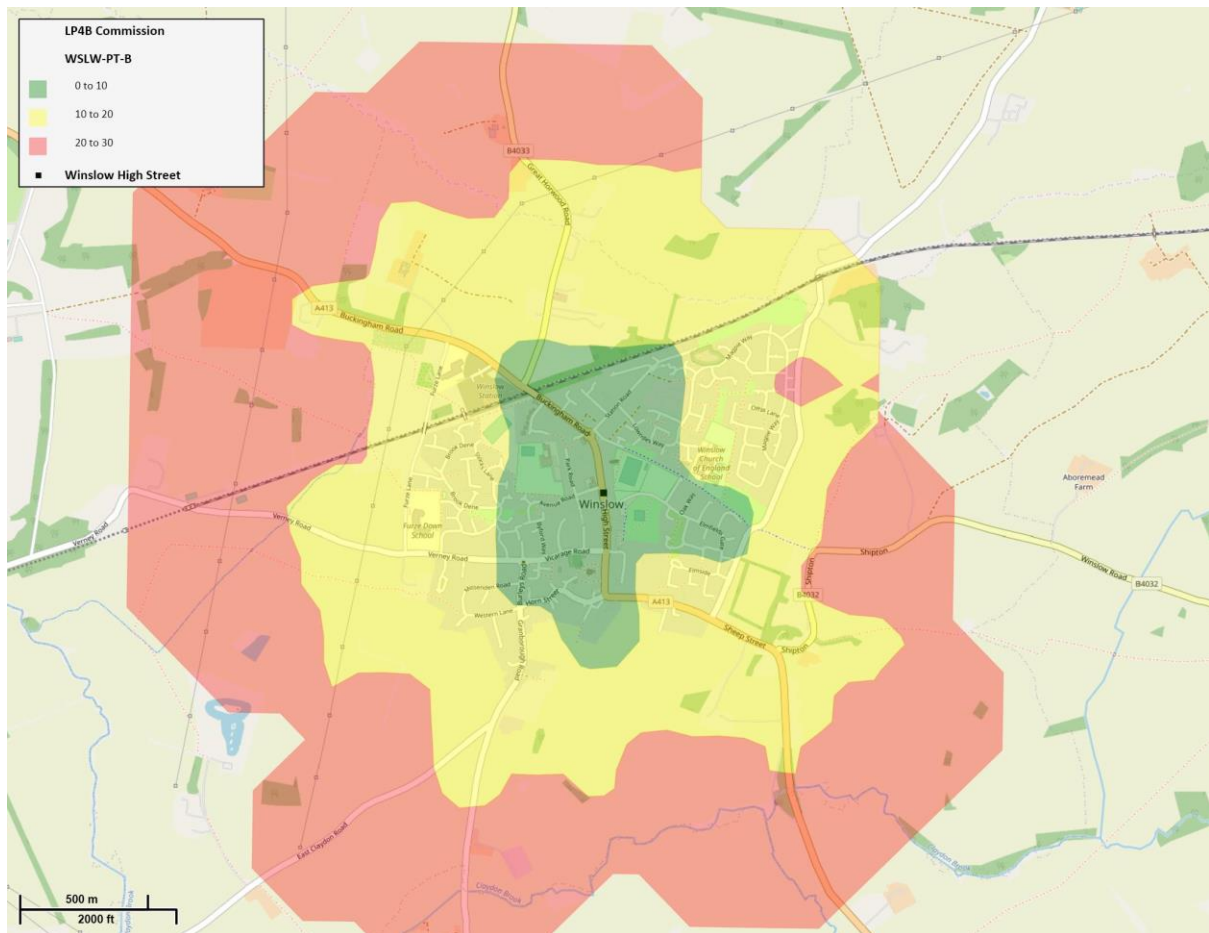
Walking



Cycling



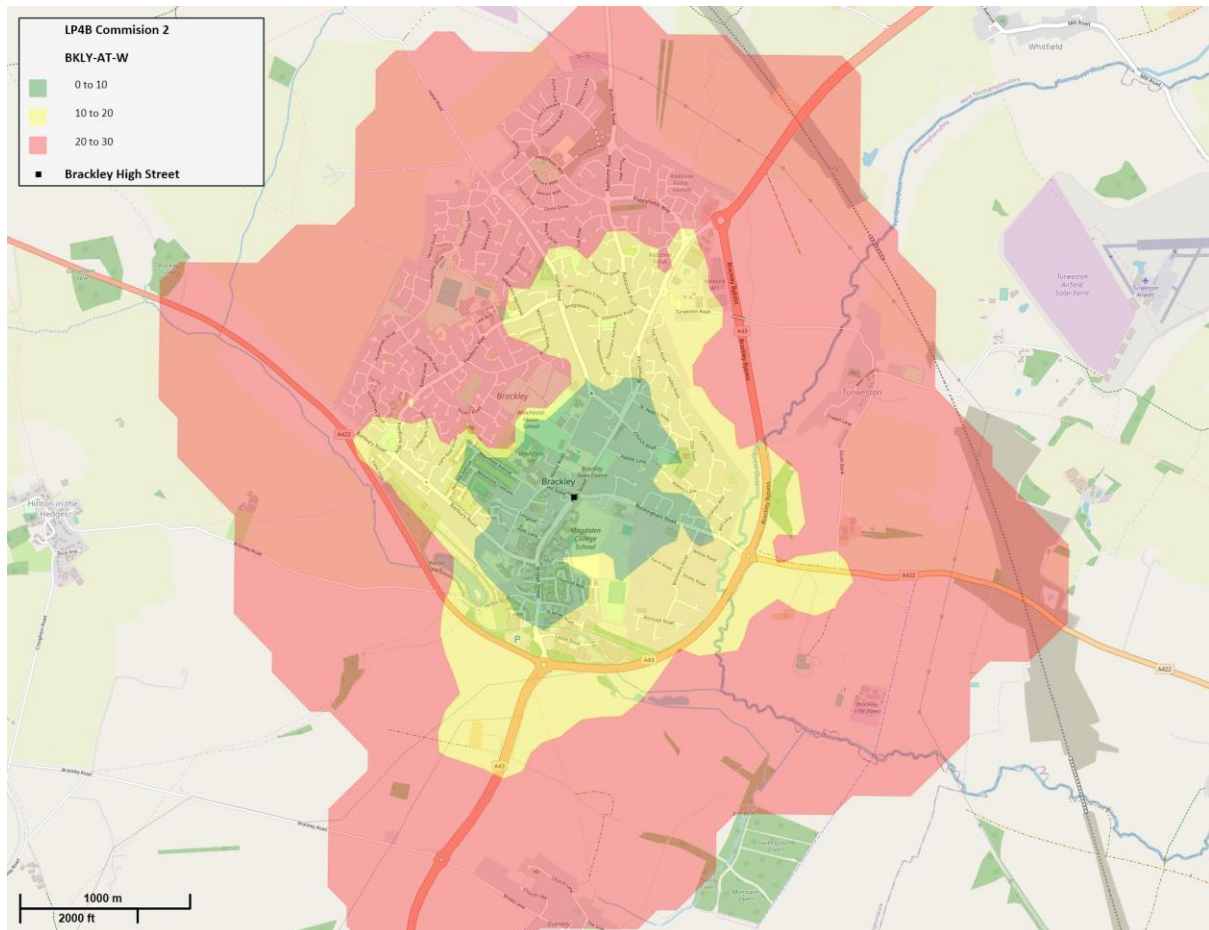
Bus



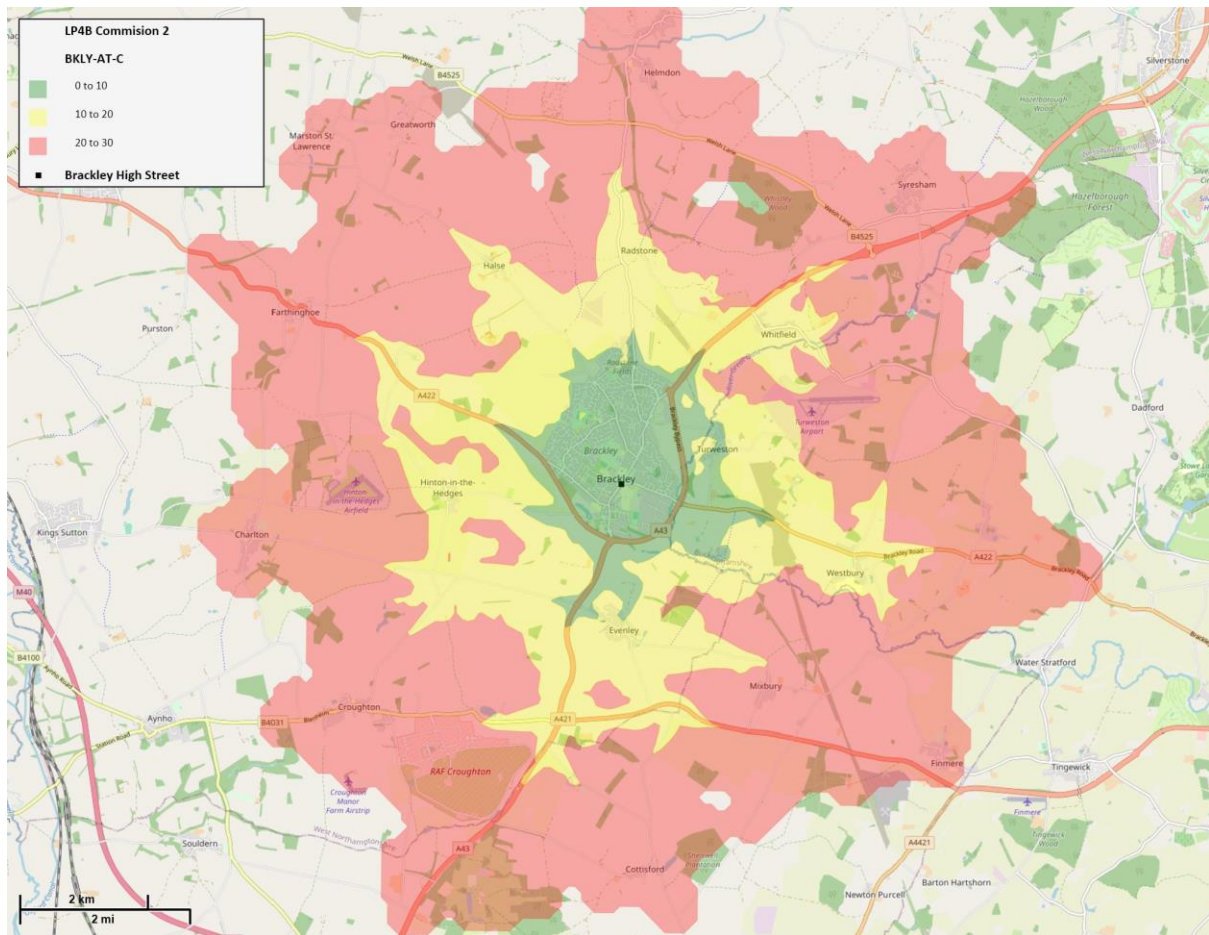
Neighbouring settlements

Brackley

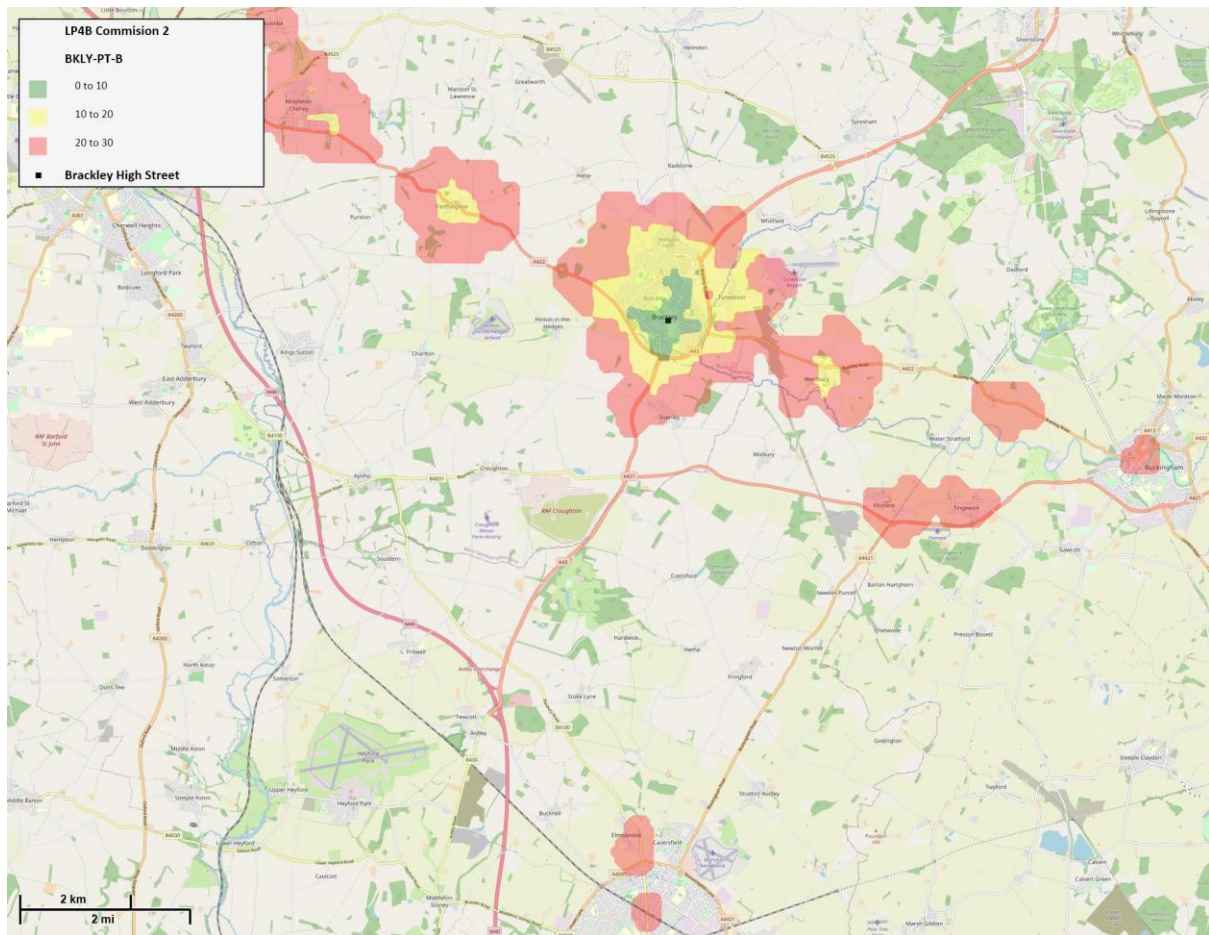
Walking



Cycling

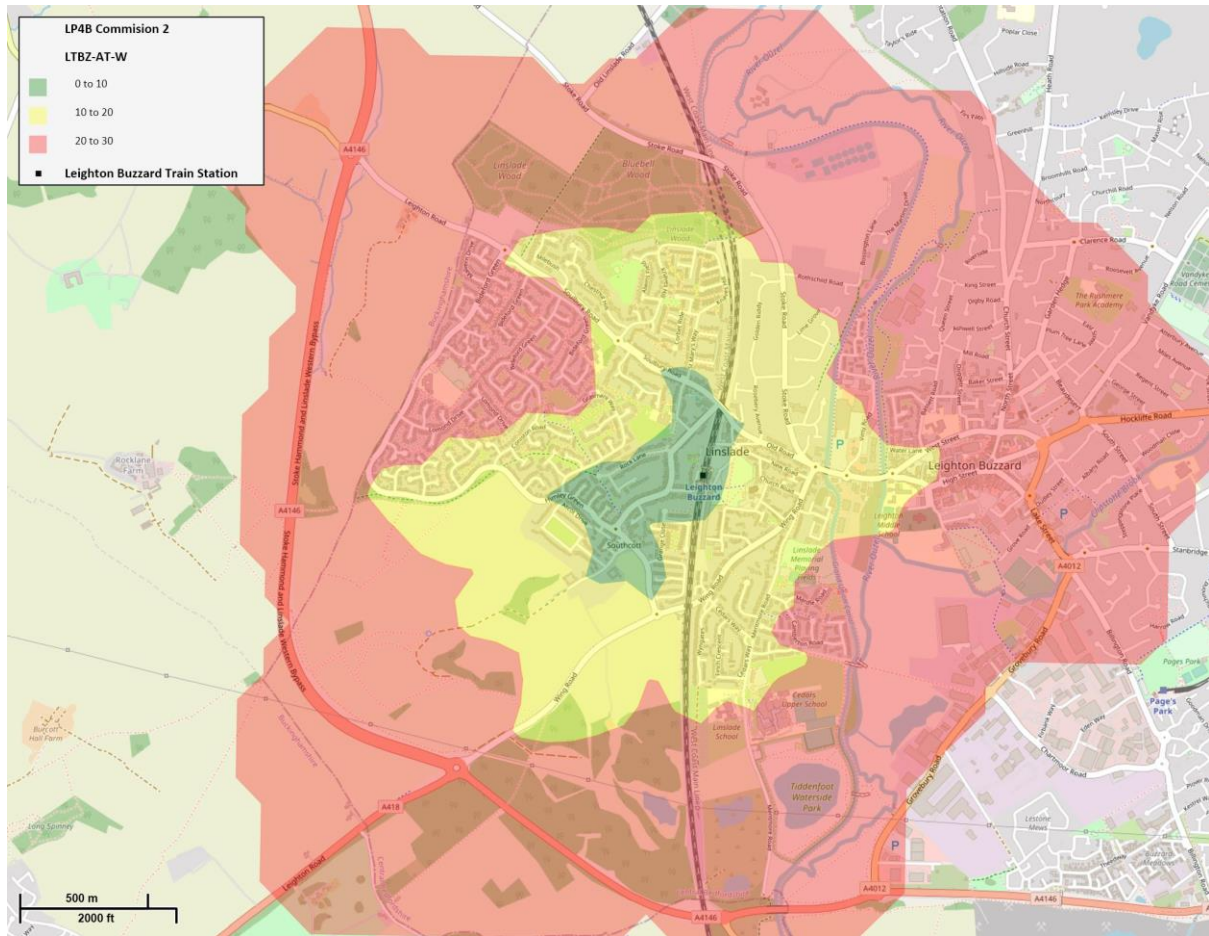


Bus

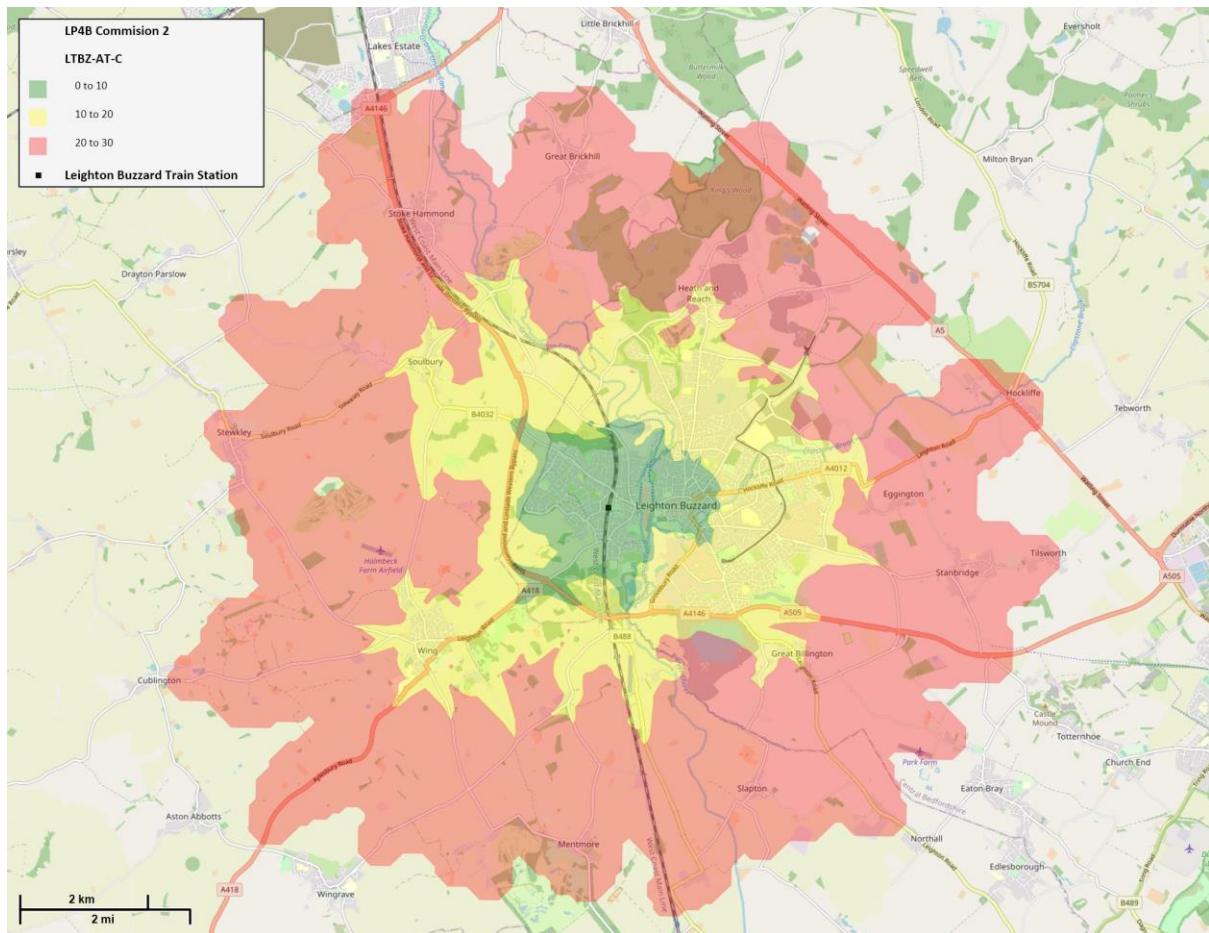


Leighton Buzzard

Leighton Buzzard - Walking



Leighton Buzzard - Cycling



Leighton Buzzard - Bus

