March 2024

Hertfordshire County Council

St Albans Modal Shift Study

Final draft report

70120547

Introduction & Executive Summary		Part 1 Sustainable travel potential For existing communities	Part 2 Sustainable travel potential for new developments
Appendix A Breakdown of sustainable travel opportunity for existing communities	Appendix B Range of trips by communities with the opportunity to shift by mode	Appendix C Breakdown of sustainable travel propensity for existing communities	Appendix D Breakdown of sustainable travel potential for existing communities

Document Control

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INTRODUCTION

Project overview and executive summary

Introduction

Overview

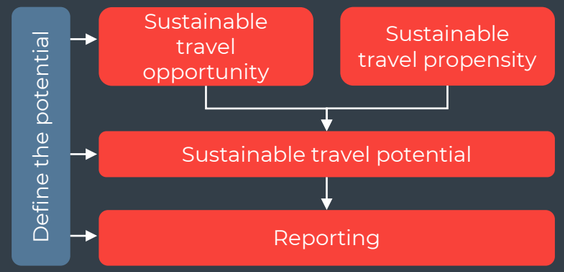
WSP have been commissioned by Hertfordshire County Council (HCC) to undertake a modal shift study for the existing and future communities in St Albans district.

The County Council's Local Transport Plan 2018-2031 (LTP4) seeks to achieve a modal shift away from car use to more sustainable modes such as public transport, walking and cycling.

WSP's sustainable travel analysis provides an evidence-led approach to estimating potential modal shift that can be used in the local plan process.

The final report

This report summarises the key findings on the opportunity and propensity to shift existing car trips to sustainable travel, and the resulting sustainable travel potential for the existing communities and new developments in St Albans district (see Figure 1).



Project aims

The aim of this project is to estimate sustainable travel opportunity, propensity and potential for:

- Task 1 - the existing communities in St Albans district.
- Task 2 - the specified new developments in St Albans district.

Report structure

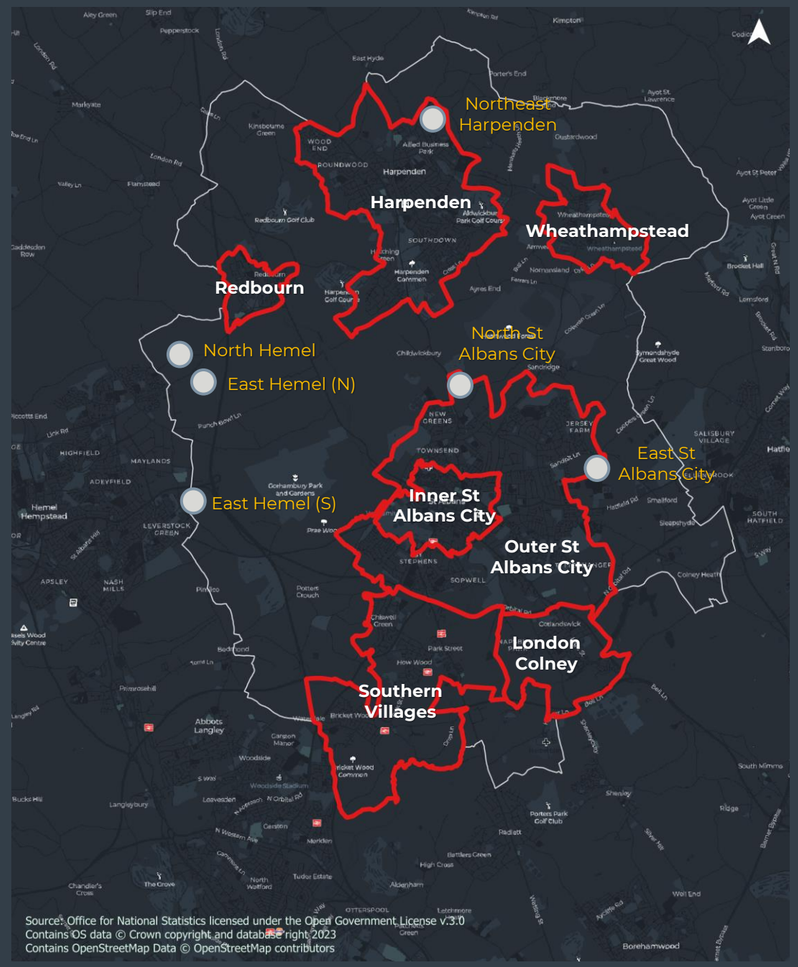
The report is structured as follows:

- Part 1 – Sustainable travel potential for existing communities
- Part 2 – Sustainable travel potential for new developments

Both parts follow the structure of:

- A-Sustainable travel opportunity summarising the number of car trips that could be made by walking, cycling and public transport
- B-Sustainable travel propensity calculating the propensity (or likelihood) of residents to walk, cycle or use public transport
- C-Sustainable travel potential estimates which car trips are likely to switch to walk, cycle or public transport based on the opportunity and propensity.

Figure 1 Study area



The study covers St Albans district and its existing communities, as well as the following new developments: East Hemel (north and south), North Hemel, Northeast Harpenden, North St Albans City, and East St Albans City.

Methodology

Opportunity

What is it?

The sustainable travel opportunity estimates the number of modelled car trips that can switch to sustainable modes (walking, cycling or public transport). It is considered the 'best-case scenario' and does not consider individual travel behaviours – this is covered in propensity.

What did we do?

Existing car journeys were extracted from the 2031 Countywide model (COMET) and alternative route options were provided using the Google API.

Routes for walking, cycling and public transport were compared to the existing driving journey using high and lower mode shift scenarios:

- The high mode shift scenario aims to align to targets set out in the DfT's Gear change (cycling and walking vision), i.e. two miles for walking, five miles for cycling and a maximum public transport journey time of 2.4x the driving alternative.
- The lower mode shift scenario is more conservative and aims for a 15–20 minute neighbourhood – one mile for walking, three miles for cycling and a maximum public transport journey time of 1.5x the driving alternative.

Part 1A and 2A of this report summarises the findings of the **sustainable travel opportunity** analysis for existing communities and new developments.

Propensity

What is it?

The sustainable travel propensity is the likelihood that a resident or household will take a given mode (walking, cycling, bus or rail). It is benchmarked against the England average which is set at 100.

What did we do?

WSP's Mobility Insights survey response bank was used to derive propensities for walking, cycling, public transport (bus and rail), and driving by grouping survey results to the Dominant Experian Mosaic Group.

Responses were categorised into different variables (such as owning a car) and socio-demographic groups (derived from Experian Mosaic), then compared to the England average response.

A weighted average of relevant variables for each mode was calculated to determine propensity and is presented at a model zone level and based on the mix of the Mosaic Groups in that zone.

Part 1B and 2B of this report summarises the findings of the **sustainable travel propensity** analysis for existing communities and new developments.

Potential

What is it?

The sustainable travel potential estimates which car trips are likely to shift to sustainable modes – considering the opportunity and propensity findings.

It is intended to provide a more 'realistic' scenario for estimating the total number of switchable trips.

What did we do?

Outputs from the **opportunity** analysis and the **propensity** analysis were combined to determine **sustainable travel potential**.

For active travel – the Gear Change target of 50% was used as the baseline mode shift for walking and cycling trips for the England average. If propensity was 100 (England average) then 50% of the opportunity trips would shift – with a higher proportion switching if propensity was greater than 100, and the inverse for propensity scores below 100.

Public transport trips were adjusted by comparing the propensity to take public transport to that of driving.

Part 1C and 2C of this report summarises the findings of the **sustainable travel potential** analysis for existing communities and new developments.

Key findings

Existing communities

Up to 33% of existing car trips in St Albans district have the potential to switch to sustainable modes based on existing active and public transport networks / services, and the current socio-demographics / travel behaviour of residents).

- Cycling provides the highest opportunity for mode shift (up to 37% across St Albans district) and is also likely to provide the highest potential for mode shift (once propensities are taken account of) - up to 17% of existing car trips across St Albans district have the potential to switch to cycling.
- Walking has a slightly lower opportunity for mode shift than cycling (up to 35% across St Albans district), but similar potential for mode shift - up to 17% of existing car trips across the district have the potential to switch to walking.
- Public transport has the lowest opportunity (up to 6%) and potential for mode shift - up to 3% of existing car trips in St Albans district have the potential to switch to public transport.

Based on existing socio-demographics and compared to the England average, existing St Albans district residents generally have below average propensities for walking, cycling and bus, but above average propensity for rail and drive. However, Inner St Albans City residents are the exception and have a higher propensity for using sustainable modes.

New developments

Up to 27% of modelled car trips across the assessed St Albans district development zones have the potential to switch to sustainable modes (based on existing active and public transport networks / services, and the likely socio-demographics / travel behaviour of new residents).

- Cycling provides the highest opportunity for mode shift (up to 40% across the development zones) and the highest potential for mode shift - up to 16% of existing car trips across the development zones have the potential to switch to cycling.
- Walking has a lower opportunity for mode shift than cycling (up to 27% across the development zones) and potential for mode shift - up to 11% of existing car trips across the development zones have the potential to switch to walking.
- Public transport has the lowest opportunity and potential for mode shift - less than 1% of existing car trips across the development zones have the potential to switch to public transport. However, this is a worst-case scenario as it is unlikely that the new developments wouldn't have additional public transport provision.

Based on the expected socio-demographics of the new development zones in St Albans district, the new residents will have below average propensities for walking, cycling, bus and rail, but above average propensity to drive, compared to the England average. However, propensities could change if sustainable transport provision is improved.

Next steps

The findings of this study provide an evidence base for identifying and prioritising sustainable travel interventions in St Albans district, both for existing and future communities. The study also highlights the areas and modes where there is a gap between the opportunity and the potential for mode shift, suggesting the need for further improvements in the active and public transport networks, as well as behaviour change initiatives to encourage the use of sustainable modes.

The next steps for HCC and its partners are to:

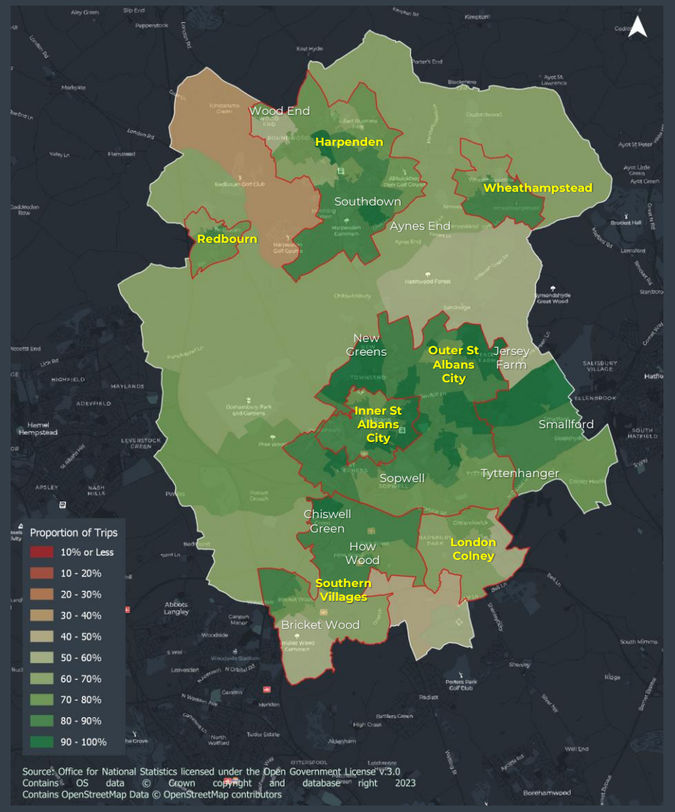
- Review the findings of this study and consider the implications for the local plan process and the LTP delivery.
- Identify and appraise the potential sustainable travel interventions that could increase the opportunity and propensity for mode shift in St Albans district, such as enhanced walking, cycling, bus and rail networks, demand management measures, travel planning and marketing campaigns.
- Engage with the relevant stakeholders, including the local authorities, developers, transport operators and community groups, to secure the support and funding for the delivery of sustainable travel interventions.
- Monitor and evaluate the impact of the sustainable travel interventions on the travel behaviour and outcomes of the existing and future residents in St Albans district.

EXECUTIVE SUMMARY

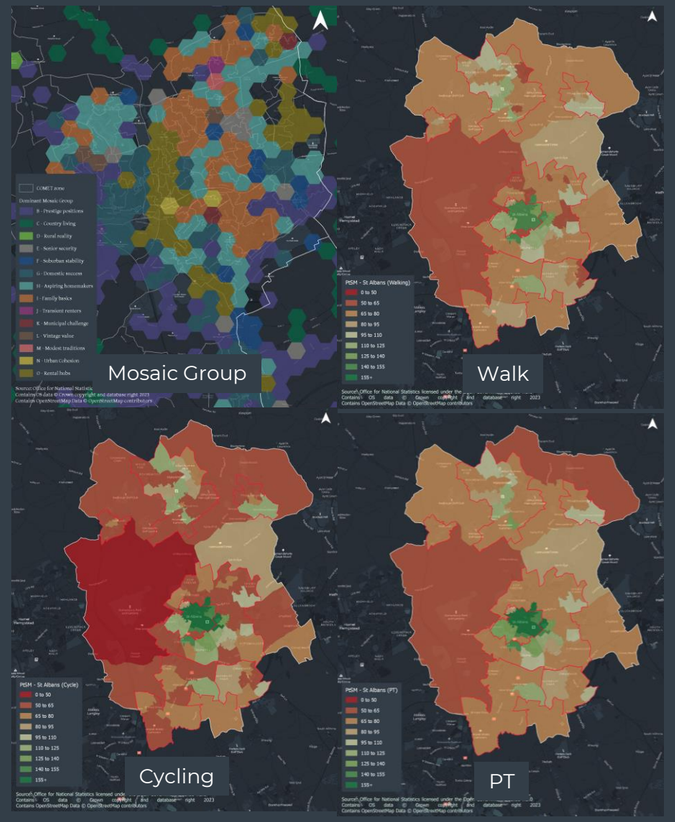
Sustainable travel potential for existing communities

SUSTAINABLE TRAVEL POTENTIAL FOR EXISTING COMMUNITIES

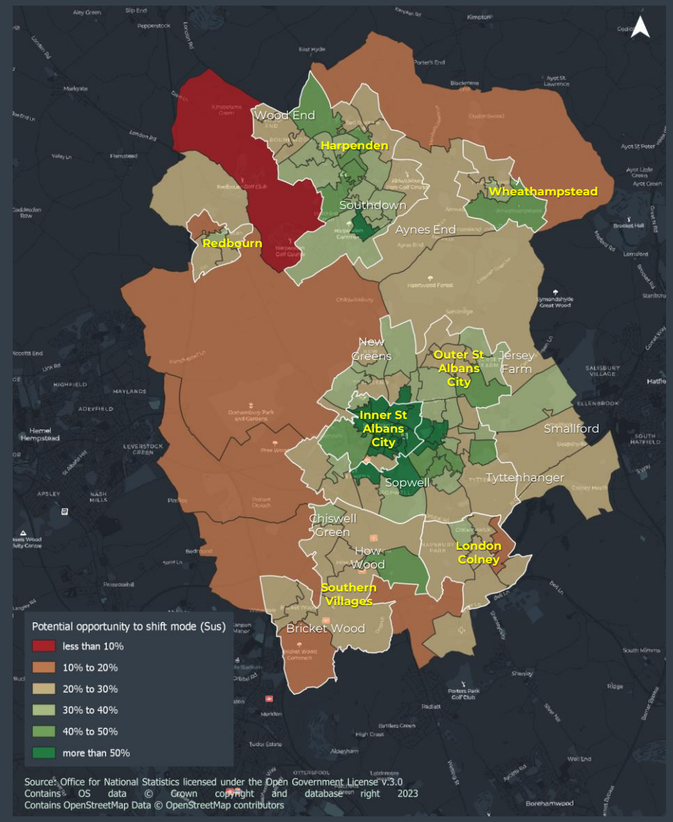
Sustainable travel opportunity



Sustainable travel propensity



Sustainable travel potential



We calculated that:

- Up to 68% of existing car trips across the St Albans district have the opportunity to switch to sustainable modes.
- Outer St Albans City has the highest opportunity - up to 79% of existing car trips have the opportunity to switch, followed by Inner St Albans City (up to 68%), Harpenden (up to 67%), Wheathampstead (up to 66%), Southern Villages (up to 63%), Redbourn (up to 62%) and London Colney (up to 54%).

What did we find:

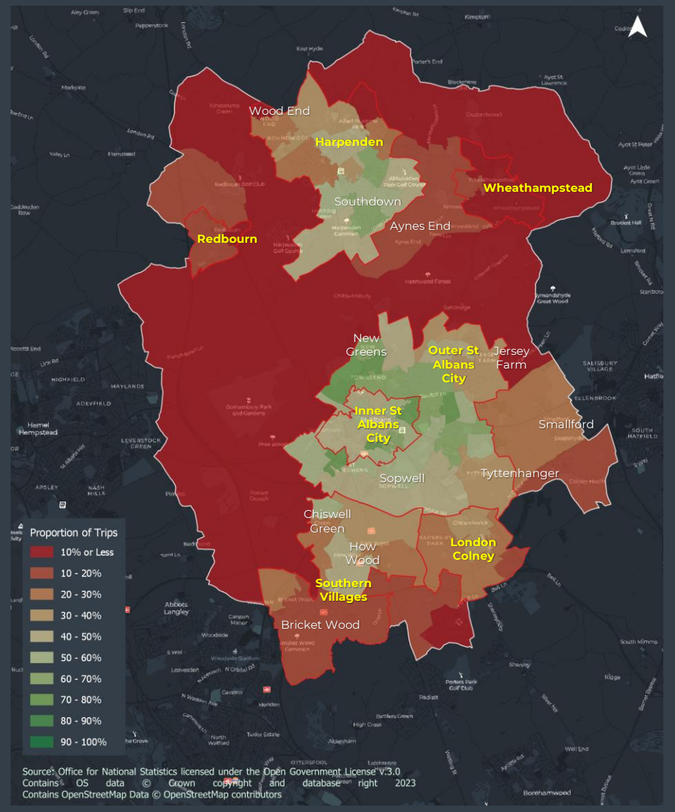
Based on existing socio-demographics, existing St Albans district residents have below average propensities for walking, cycling and bus but above average propensity to use rail and drive. However, Inner St Albans City residents have a high propensity for using sustainable modes. As new development areas are developed, the propensity to use sustainable modes could increase with new residents.

We calculated that:

- Up to 32% of existing car trips across the St Albans district have the potential to switch to sustainable modes.
- Inner St Albans City has the highest potential - up to 47% of existing car trips have the potential to switch, followed by Outer St Albans City (up to 33%), Harpenden (up to 30%), Wheathampstead (up to 27%), Southern Villages (up to 24%), London Colney (up to 22%) and Redbourn (up to 21%).

WALKING POTENTIAL FOR EXISTING COMMUNITIES

Opportunity to walk



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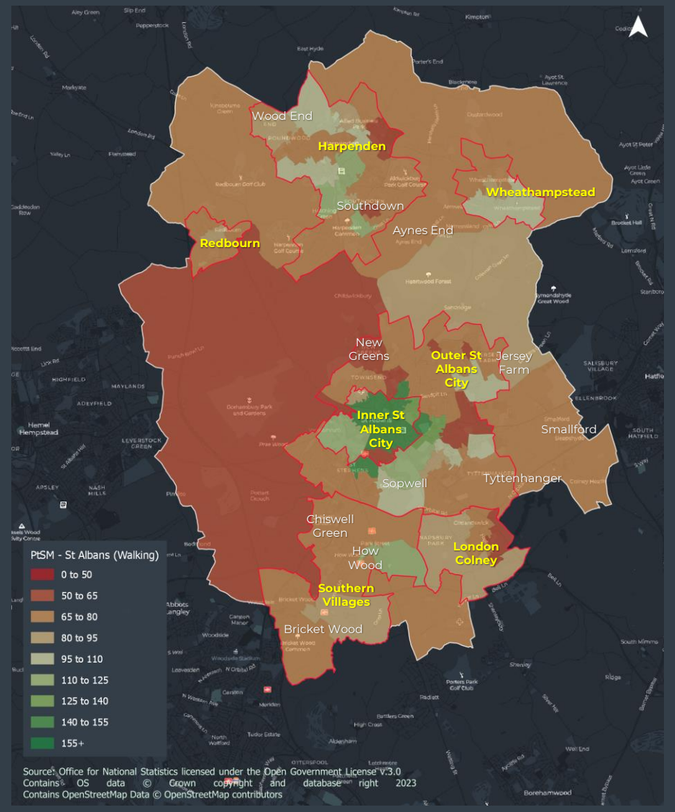
Propensity to walk



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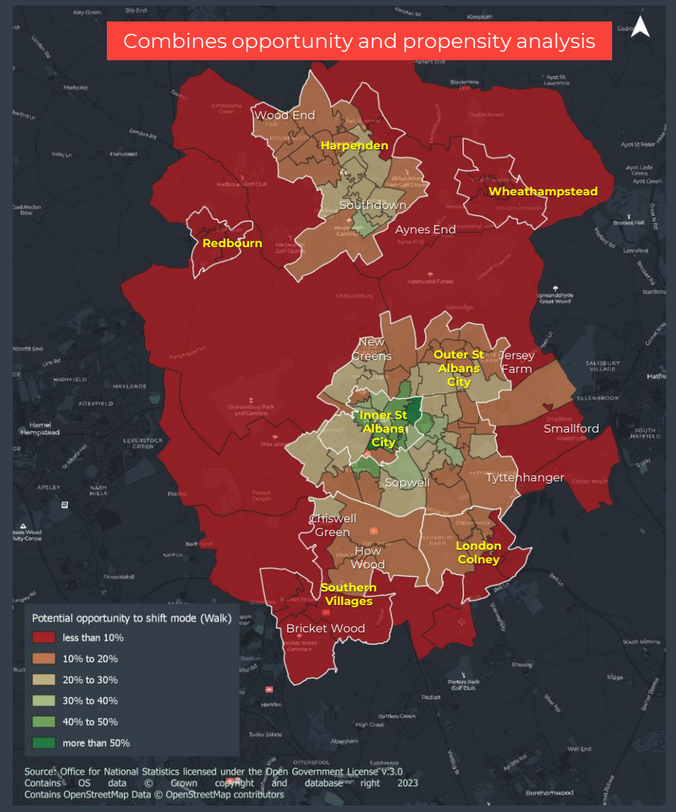
Walking potential



We calculated that:

- Up to 35% of existing car trips across the St Albans district have the opportunity to switch to walking.
- Outer St Albans City has the highest opportunity - up to 49% of existing car trips have the opportunity to switch to walking, followed by Inner St Albans City (up to 42%), Harpenden (up to 34%), London Colney (up to 21%), Southern Villages (up to 21%), Redbourn (up to 10%) and Wheathampstead (up to 7%).

What did we find:

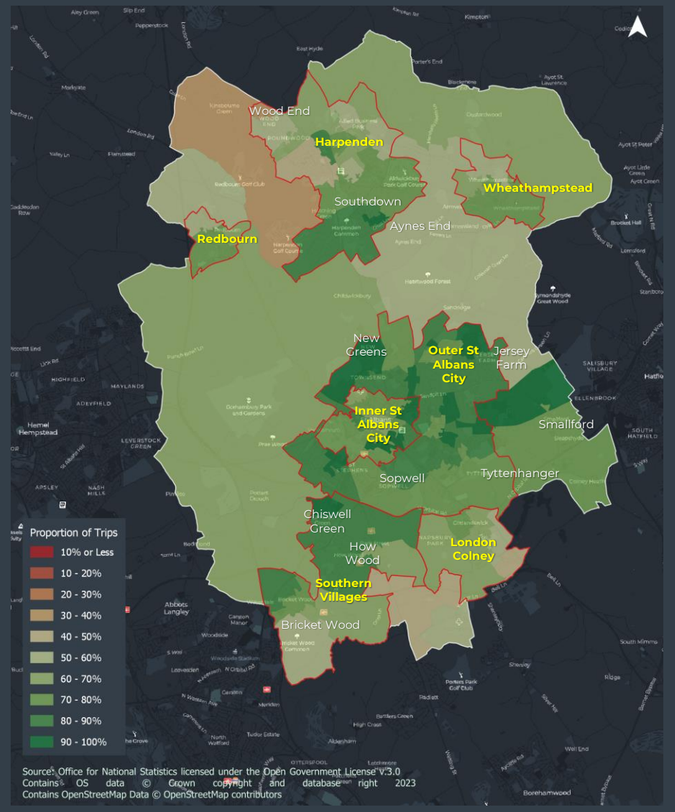
Propensity to walk varies across St Albans district, including the characteristics of the residents and the local infrastructure. The Inner St Albans City has a higher-than-average propensity to walk. These areas may have a higher proportion of residents who prioritise active lifestyles and are more inclined to engage in walking activities for leisure or commuting purposes.

We calculated that:

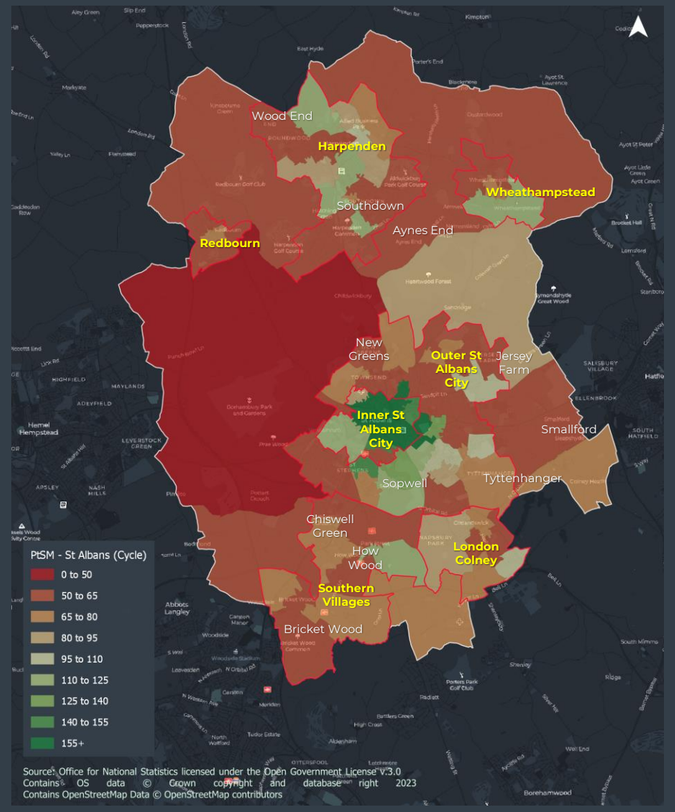
- Up to 17% of existing car trips across the St Albans district have the potential to switch to walking.
- Inner St Albans City has the highest potential - up to 29% of existing car trips have the potential to switch to walking, followed by Outer St Albans City (up to 21%), Harpenden (up to 15%), Southern Villages and London Colney (both up to 8%), Redbourn (up to 4%) and Wheathampstead (up to 3%).

CYCLING POTENTIAL FOR EXISTING COMMUNITIES

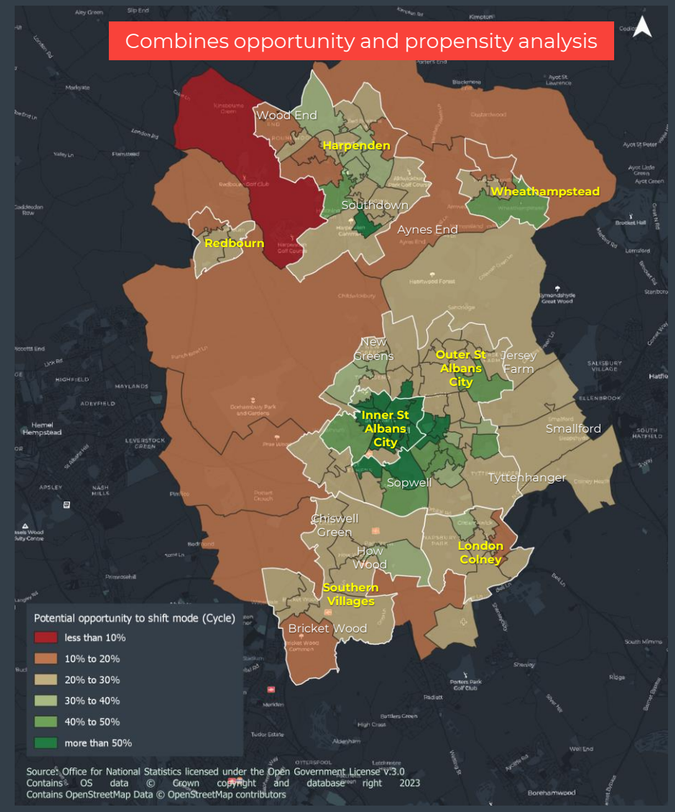
Opportunity to cycle



Propensity to cycle



Cycling potential



We calculated that:

- Up to 37% of existing car trips across the St Albans district have the opportunity to switch to cycling.
- Outer St Albans City has the highest opportunity - up to 52% of existing car trips have the opportunity to switch to cycling, followed by Wheathampstead (up to 50%), Redbourn (up to 45%), Southern Villages (up to 40%), Inner St Albans City and Harpenden (both up to 33%), and London Colney (up to 29%).

What did we find:

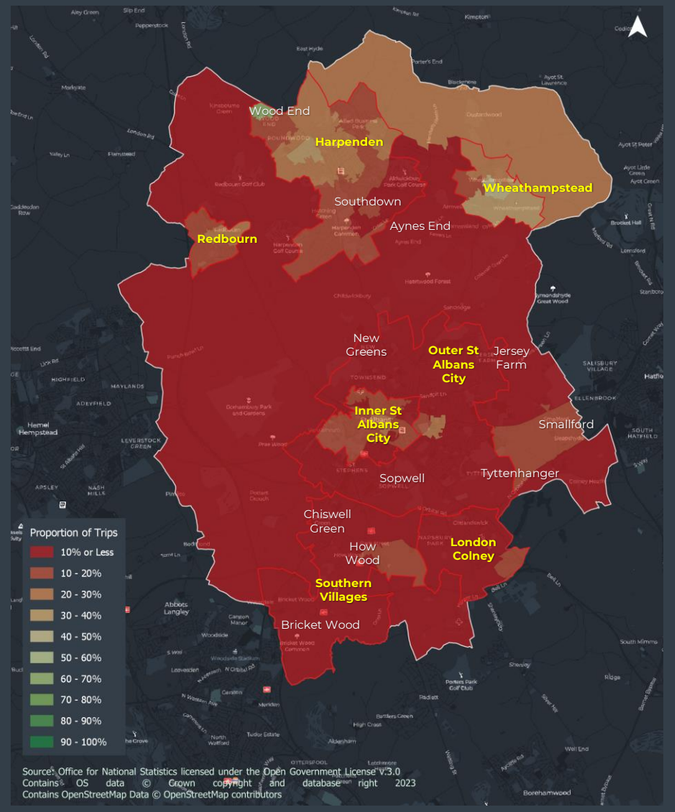
Propensity to cycle varies across St Albans district, including the characteristics of the residents and the local infrastructure. The Inner St Albans City has a higher-than-average propensity to cycle. These areas may have a higher proportion of residents who prioritise active lifestyles, prefer cycling, or find it a convenient means of getting around.

We calculated that:

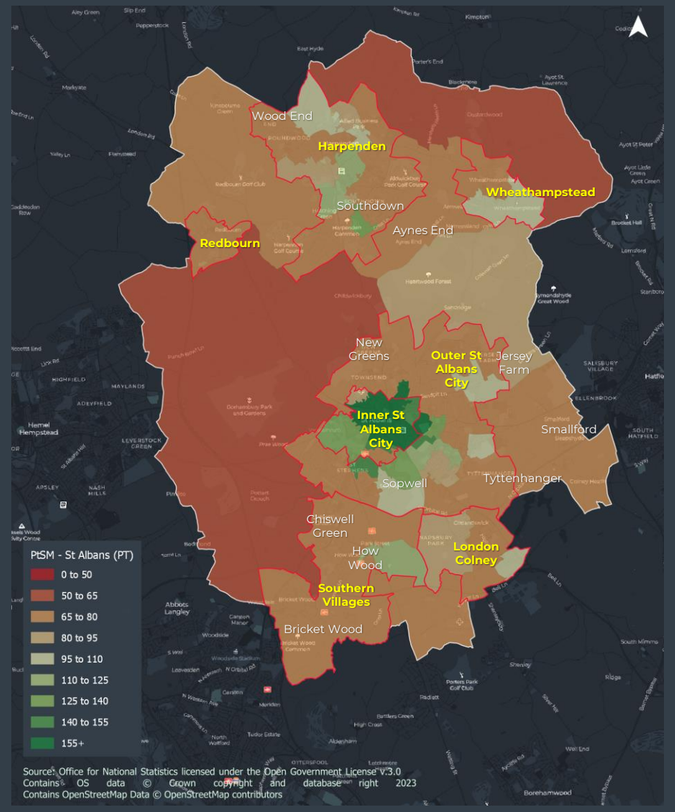
- Up to 17% of existing car trips across the St Albans district have the potential to switch to cycling.
- Inner St Albans City has the highest potential - up to 24% of existing car trips have the potential to switch to cycling, followed by Outer St Albans City (up to 21%), Wheathampstead (up to 20%), Redbourn and Southern Villages (both up to 14%), Harpenden (up to 13%) and London Colney (up to 12%).

PUBLIC TRANSPORT POTENTIAL FOR EXISTING COMMUNITIES

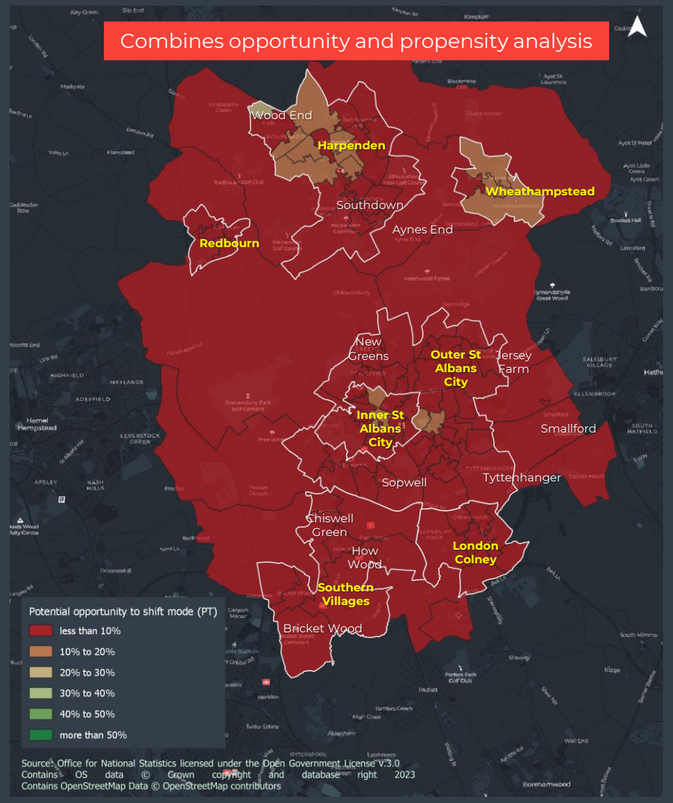
Opportunity to use public transport



Propensity to use public transport



Public transport potential



We calculated that:

- Up to 6% of existing car trips across the St Albans district have the opportunity to switch to public transport.
- Harpenden has the highest opportunity - up to 13% of existing car trips have the opportunity to switch to public transport, followed by Wheathampstead (up to 8%), Inner St Albans City and Redbourn (both up to 7%), London Colney (up to 3%), Outer St Albans City (up to 2%) and Southern Villages (up to 1%).

What did we find:

Propensity to use public transport (which is an average of bus and rail) varies across St Albans district, including the characteristics of the residents and the local transport infrastructure. The Inner St Albans City have a higher-than-average propensity to use public transport. These areas may have a higher proportion of residents who prioritise sustainable transport methods due to personal preferences and/or environmental consciousness.

We calculated that:

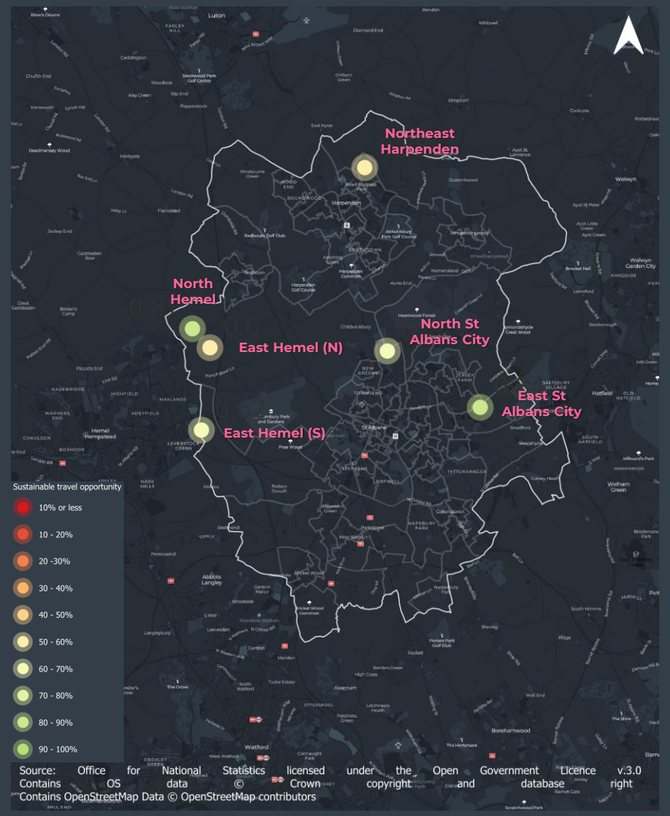
- Up to 3% of existing car trips across the St Albans district have the potential to switch to public transport.
- Harpenden has the highest opportunity - up to 13% of existing car trips have the opportunity to switch to public transport, followed by Inner St Albans City (up to 5%), Wheathampstead (up to 4%), Redbourn (up to 3%) and Outer St Albans City, Southern Villages and London Colney (all up to 1%).

EXECUTIVE SUMMARY

Sustainable travel potential for new developments

SUSTAINABLE TRAVEL POTENTIAL FOR NEW DEVELOPMENTS

Sustainable travel opportunity



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Sustainable travel propensity

Mosaic Group		New developments
B	Prestige Positions	10%
G	Domestic Success	60%
H	Aspiring Homemakers	15%
O	Rental Hubs	15%

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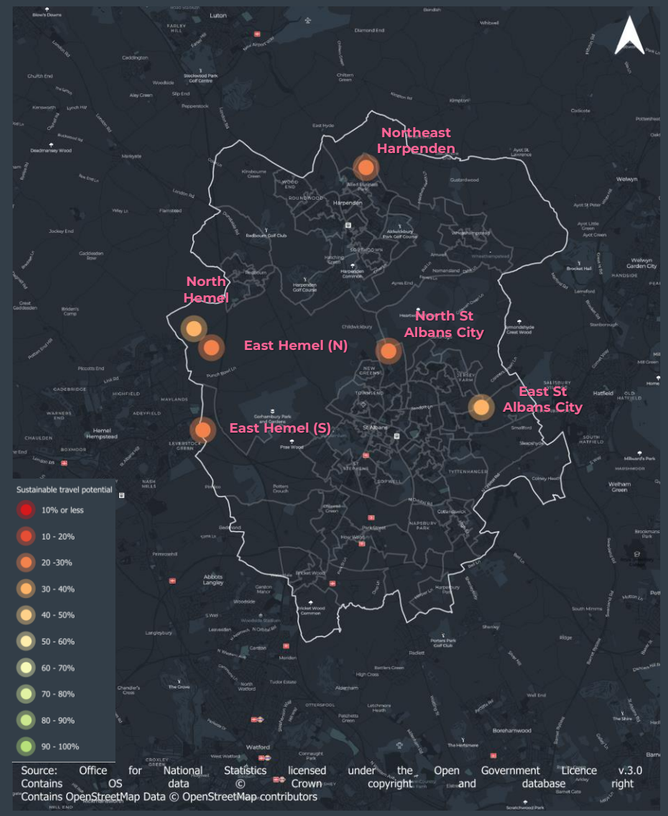
Sustainable travel potential



We calculated that:

- Up to 65% of modelled car trips across the assessed development zones in St Albans district have the opportunity to switch to sustainable modes.
- East St Albans City has the highest opportunity - up to 84% of modelled car trips have the opportunity to switch, followed by North Hemel (up to 81%), North St Albans City (up to 70%), East Hemel (S) (up to 62%), East Hemel (N) (up to 60%) and Northeast Harpenden (up to 58%).

What did we find:

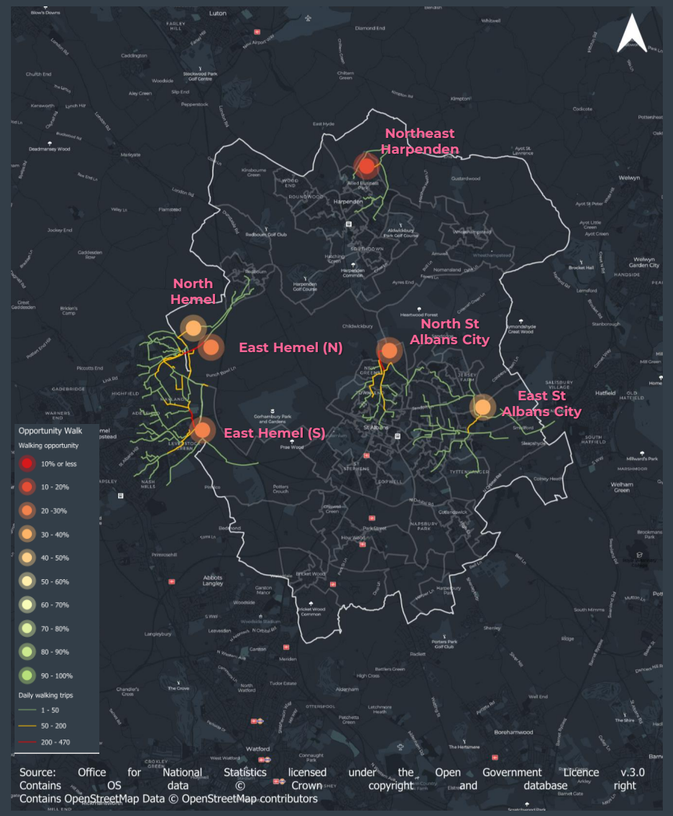
Based on expected socio-demographics of the St Albans district development zones, new residents will have below average propensities for walking, cycling, bus and rail but above average propensity to drive. The Mosaic profile is based on the existing development of Oaklands in St Albans district, proposed housing types (e.g. affordable, social and rental) and validated using similar developments in the wider region. These propensities could change if sustainable travel provision is improved.

We calculated that:

- Up to 27% of modelled car trips across the assessed development zones in St Albans district have the potential to switch to sustainable modes.
- East St Albans City has the highest potential - up to 34% of modelled car trips have the potential to switch, followed by North Hemel (up to 32%), North St Albans City and East Hemel (N) (both up to 28%), East Hemel (S) (up to 25%) and Northeast Harpenden (up to 23%).

WALKING POTENTIAL FOR NEW DEVELOPMENTS

Opportunity to walk



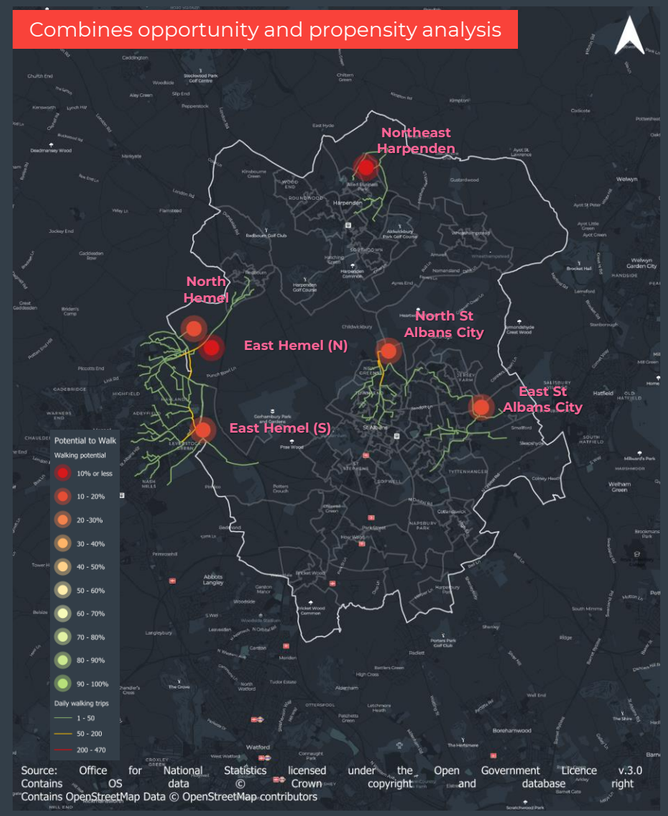
Propensity to walk

Mosaic Group		New developments
B	Prestige Positions	10%
G	Domestic Success	60%
H	Aspiring Homemakers	15%
O	Rental Hubs	15%

Propensity: Walk 80

Walking potential

Combines opportunity and propensity analysis



We calculated that:

- Up to 27% of modelled car trips across the assessed development zones in St Albans district have the opportunity to switch to walking.
- North Hemel has the highest opportunity - up to 35% of modelled car trips have the opportunity to switch, followed by East St Albans City (up to 32%), East Hemel (S) (up to 30%), North St Albans City (up to 27%), East Hemel (N) (up to 25%) and Northeast Harpenden (up to 18%).

What did we find:

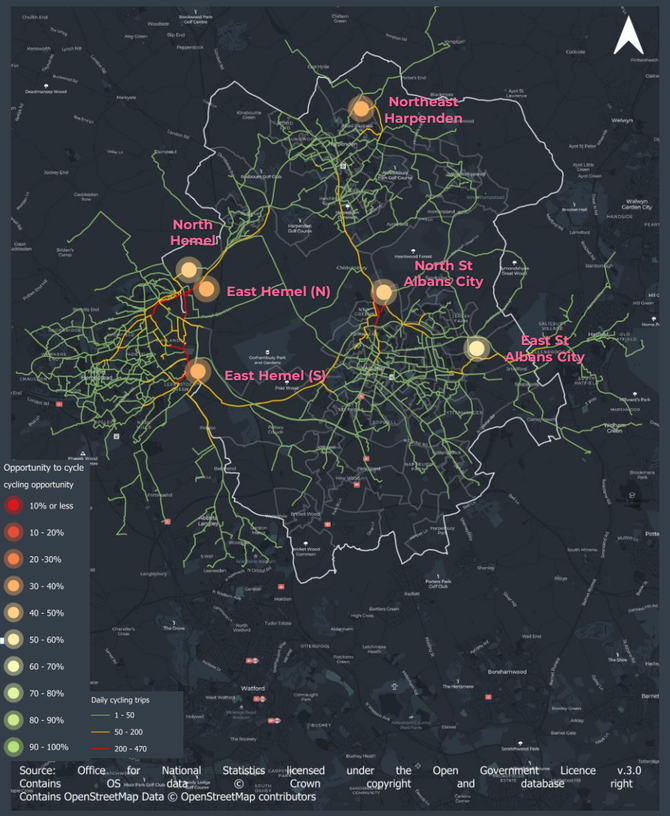
Propensity to walk in the new developments is lower than the England average due to the projected high proportion of the Domestic success mosaic group, who are more likely to be car dependant as they have larger dwellings and higher levels of car ownership. It is worth noting that these propensities could change if walking provision is improved.

We calculated that:

- Up to 11% of modelled car trips across the assessed development zones in St Albans district have the potential to switch to walking
- North Hemel has the highest potential - up to 14% of modelled car trips have the opportunity to switch, followed by East St Albans City (up to 13%), East Hemel (S) (up to 12%), North St Albans City (up to 11%), East Hemel (N) (up to 10%) and Northeast Harpenden (up to 7%).

CYCLING POTENTIAL FOR NEW DEVELOPMENTS

Opportunity to cycle



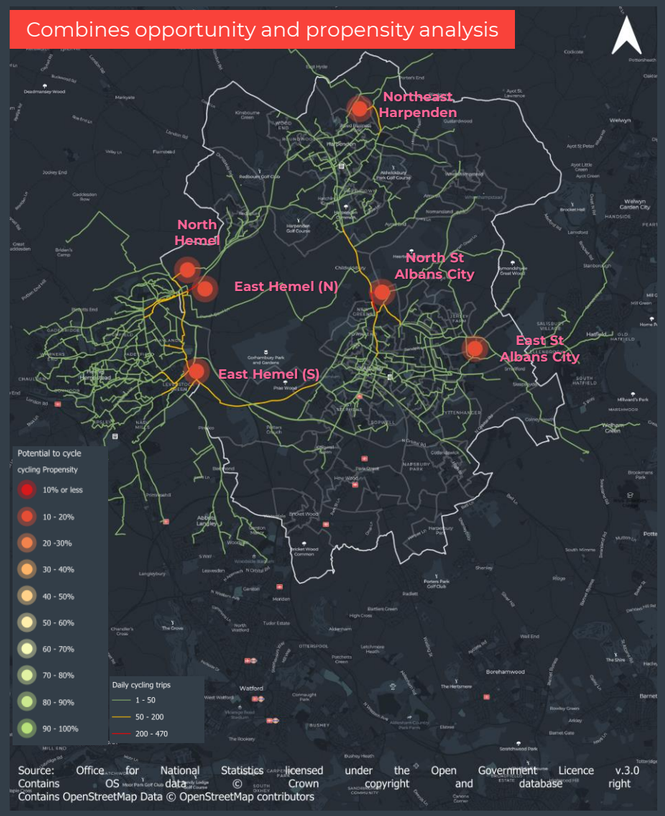
Propensity to cycle

Mosaic Group		New developments
B	Prestige Positions	10%
G	Domestic Success	60%
H	Aspiring Homemakers	15%
O	Rental Hubs	15%

Propensity	
Cycle	80

Cycling potential

Combines opportunity and propensity analysis



We calculated that:

- Up to 40% of modelled car trips across the assessed development zones in St Albans district have the opportunity to switch to cycling.
- East St Albans City has the highest opportunity - up to 63% of modelled car trips have the opportunity to switch, followed by North Hemel (up to 60%), Northeast Harpenden (up to 45%), North St Albans City (up to 42%), East Hemel (N) (up to 41%) and East Hemel (S) (up to 32%).

What did we find:

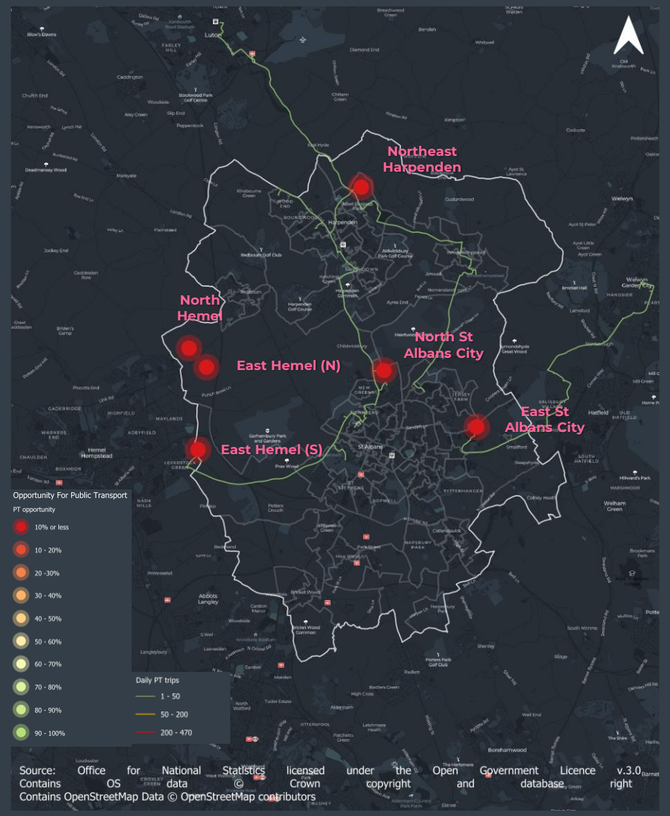
Propensity to cycle in the new developments is lower than the England average due to the projected high percentage of the Domestic success mosaic group, who are more likely to be car dependant as they have larger dwellings and higher levels of car ownership. It is worth noting that these propensities could change if cycling provision is improved.

We calculated that:

- Up to 16% of modelled car trips across the assessed development zones in St Albans district have the potential to switch to cycling.
- East St Albans City has the highest opportunity - up to 25% of modelled car trips have the potential to switch, followed by North Hemel (up to 24%), Northeast Harpenden (up to 18%), North St Albans City (up to 17%), East Hemel (N) (up to 15%) and East Hemel (S) (up to 13%).

PUBLIC TRANSPORT POTENTIAL FOR NEW DEVELOPMENTS

Opportunity to use public transport



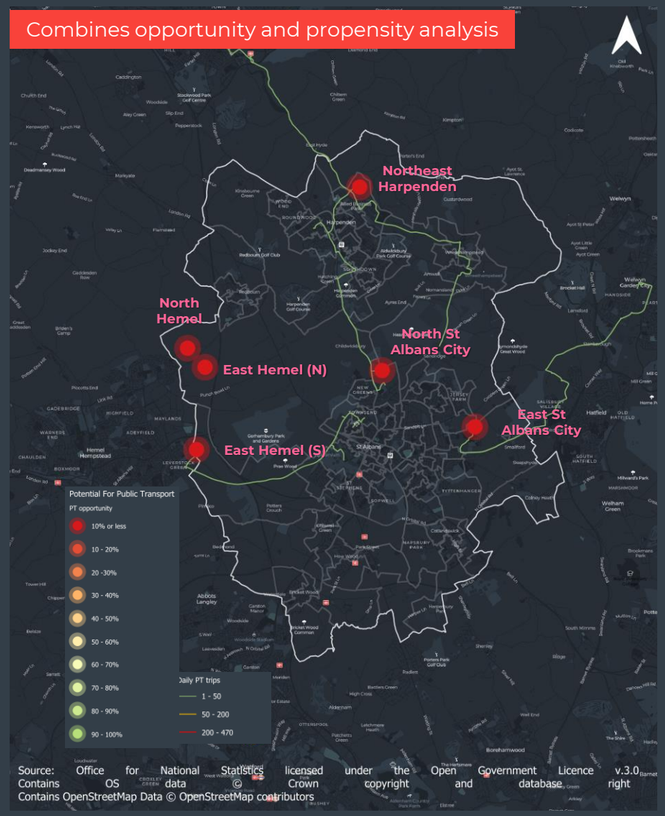
Propensity to use public transport

	Mosaic Group	New developments
B	Prestige Positions	10%
G	Domestic Success	60%
H	Aspiring Homemakers	15%
O	Rental Hubs	15%

	Propensity
Bus	72
Rail	87

Public transport potential

Combines opportunity and propensity analysis



We calculated that:

- Less than 1% of modelled car trips across the assessed development zones in St Albans district have the opportunity to switch to public transport.
- Most of the new development zones have less than 1% opportunity, only East St Albans City (up to 2%) and Northeast Harpenden (up to 6%) has more.
- This is based on existing public transport provision.

What did we find:

Propensity to use public transport (which is an average of bus and rail) in the new developments is lower than the England average due to the projected high percentage of the Domestic success mosaic and preference to use personal vehicles over public transport due to their higher levels of car ownership. It is worth noting that these propensities could change if public transport provision is improved.

We calculated that:

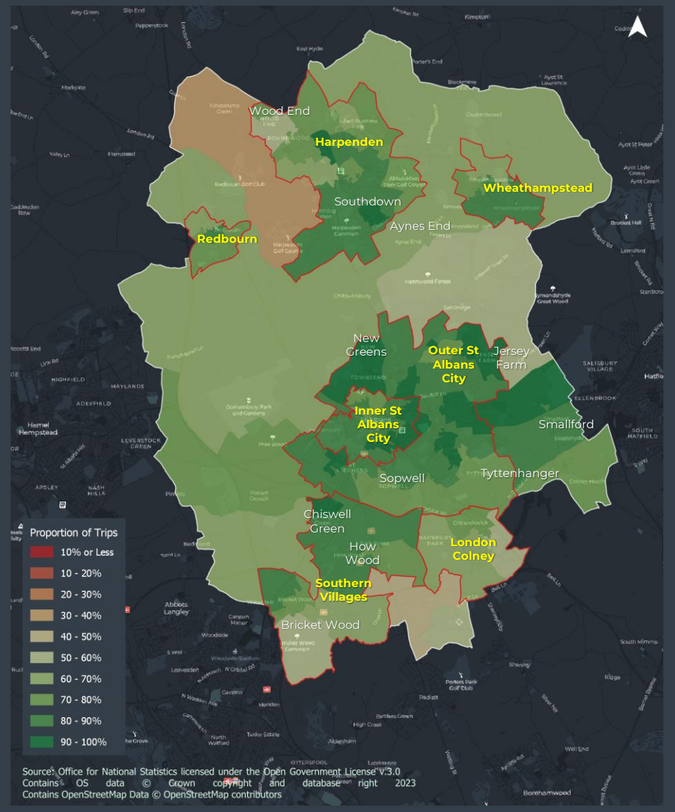
- Less than 1% of modelled car trips across the assessed development zones in St Albans district have the potential to switch to public transport.
- Most of the new development zones have less than 1% potential, only East St Albans City (up to 1%) and Northeast Harpenden (up to 2%) has more.
- This is a worst-case scenario as it assumes that the developments have no new public transport provision.

PART 1

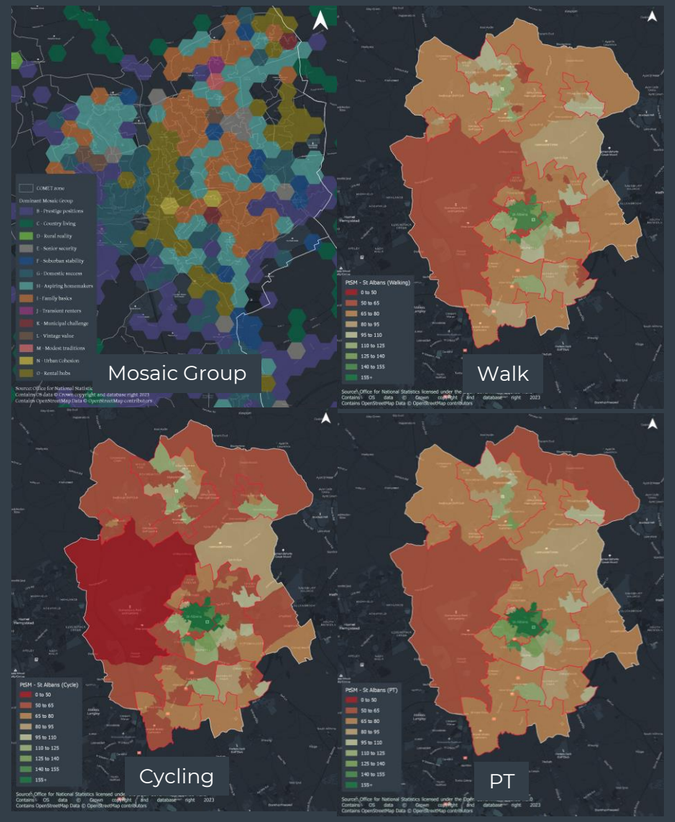
Sustainable travel potential for existing communities

SUSTAINABLE TRAVEL POTENTIAL FOR EXISTING COMMUNITIES

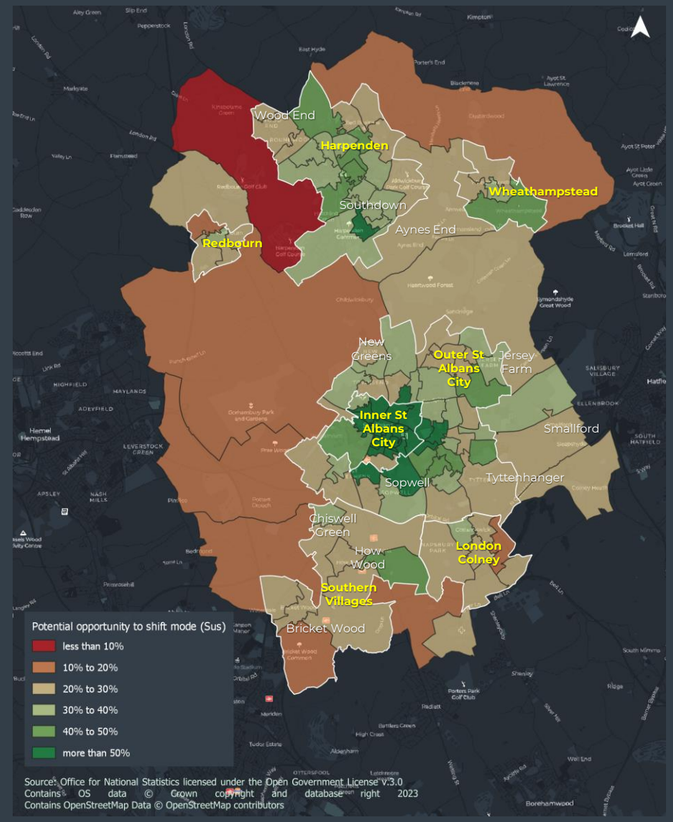
Sustainable travel opportunity



Sustainable travel propensity



Sustainable travel potential



We calculated that:

- Up to 68% of existing car trips across the St Albans district have the opportunity to switch to sustainable modes.
- Outer St Albans City has the highest opportunity - up to 79% of existing car trips have the opportunity to switch, followed by Inner St Albans City (up to 68%), Harpenden (up to 67%), Wheathampstead (up to 66%), Southern Villages (up to 63%), Redbourn (up to 62%) and London Colney (up to 54%).

What did we find:

Based on existing socio-demographics, existing St Albans district residents have below average propensities for walking, cycling and bus but above average propensity to use rail and drive. However, Inner St Albans City residents have a high propensity for using sustainable modes. As new development areas are developed, the propensity to use sustainable modes could increase with new residents.

We calculated that:

- Up to 32% of existing car trips across the St Albans district have the potential to switch to sustainable modes.
- Inner St Albans City has the highest potential - up to 47% of existing car trips have the potential to switch, followed by Outer St Albans City (up to 33%), Harpenden (up to 30%), Wheathampstead (up to 27%), Southern Villages (up to 24%), London Colney (up to 22%) and Redbourn (up to 21%).

PART 1A

Sustainable travel opportunity for existing communities

Sustainable travel opportunity

How many car trips in St Albans district could be made by sustainable modes?

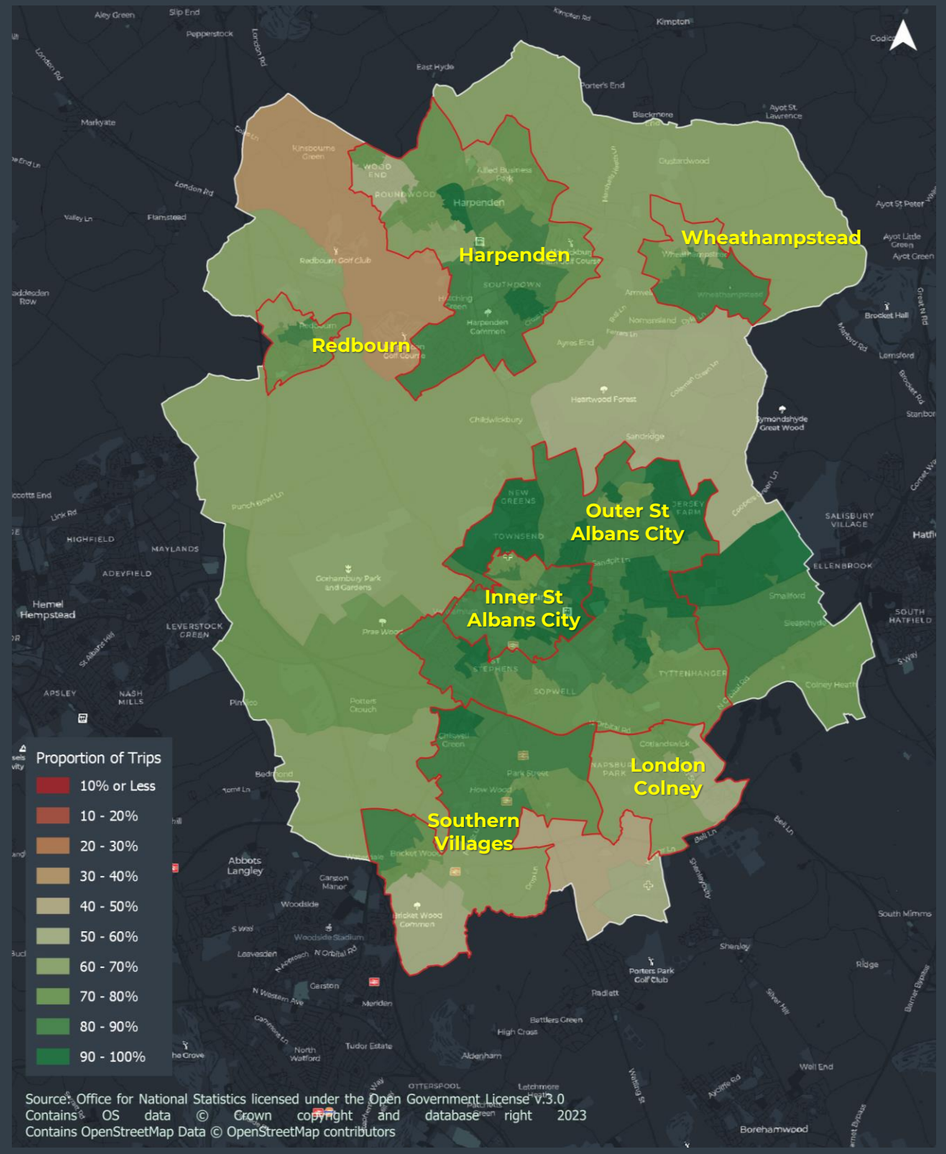
Figure 1.1 shows where in St Albans district there is the largest opportunity for sustainable travel (high scenario), such as Harpenden and Inner / Outer St Albans City and where there may be slightly less opportunity for sustainable travel, such as Redbourn, London Colney and more rural areas. A high and lower scenarios for sustainable travel opportunity have been estimated based on distance and time (see methodology note).

Key findings include:

- 48-68% of existing car trips in St Albans district have the opportunity to shift to sustainable modes. Cycling provides the highest opportunity with 27-37% of car trips able to switch to cycling. 10-35% of car trips could switch to walking and 1-6% to public transport.
- Outer St Albans City has the highest opportunity for car trips to shift to sustainable modes, with 64-79% of trips able to shift.
- Inner St Albans City has the second highest opportunity, with 51-68% of car trips able to shift to sustainable modes. Harpenden has the third highest opportunity with 44-67%
- The more rural areas have a lower sustainable travel opportunity. Wheathampstead has 22-66%, Southern Villages has 38-63%, London Colney has 33-54% and Redbourn has 22-62%.

The following pages break down the sustainable travel opportunity for each existing community by high and lower sustainable travel opportunity scenarios (trips and vehicle kilometres travelled (VKT)).

Figure 1.1 Sustainable travel opportunity in St Albans district (high scenario)



Sustainable travel opportunity

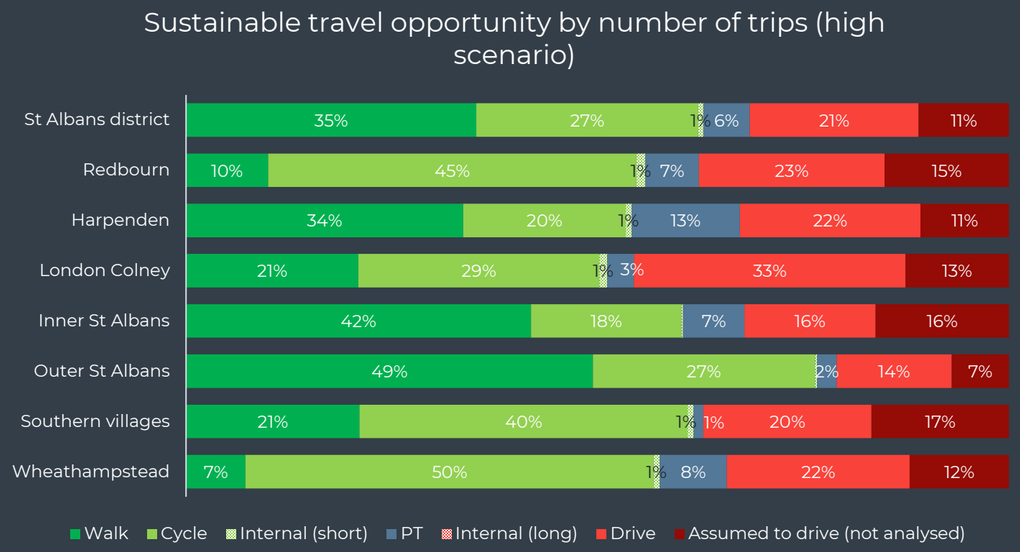
How many car trips in St Albans district could be made by sustainable modes?

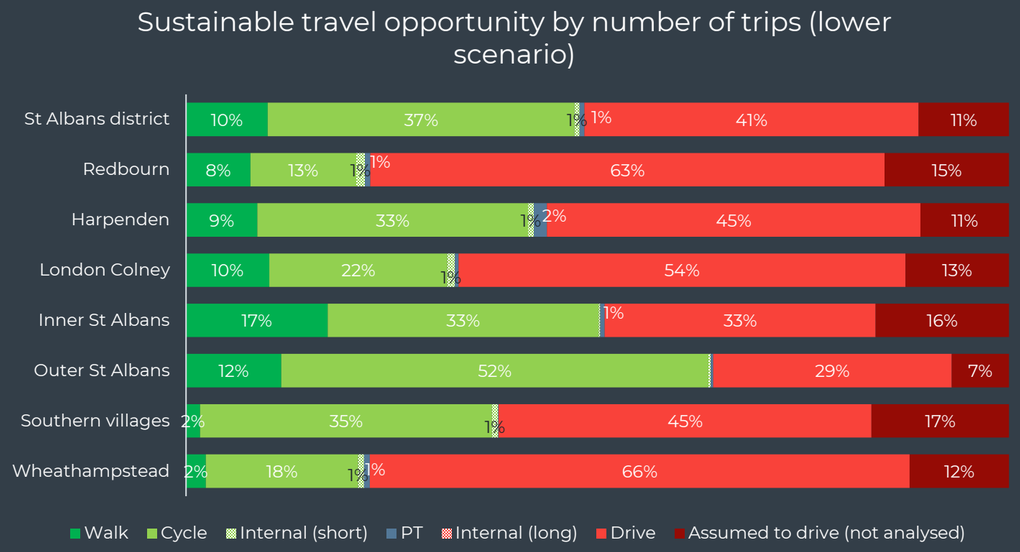
Figure 1.2 shows sustainable travel opportunity by trips (high and lower scenarios) for St Albans district as a whole and the existing communities of Redbourn, Harpenden, London Colney, Inner St Albans City, Outer St Albans City, Southern villages and Wheathampstead. These areas are aligned to COMET zones and the trips are based on the 2031 COMET O-D matrix which includes assumed future growth and development, but with the existing active travel and public transport networks. The intention is to provide a baseline on the number of future trips that could be made by walking, cycling and public transport – in the absence of any new transport network improvements.

- St Albans district – opportunity is between 49-68%, with walking being 10-35%, cycling 27-37% and public transport 1-6%. This results in 32-52% of car trips that could not switch (including not analysed trips assumed to be driven).
- Inner St Albans City – opportunity is between 51-67%, with walking being 17-42%, cycling 18-33% and public transport being 1-7%. This results in 32-49% of car trips that could not switch (including not analysed trips assumed to be driven).
- Outer St Albans City – opportunity is between 64-78%, with walking being 12-49%, cycling 27-52% and public transport being 0-2%. About 21-36% of car trips that could not switch (including not analysed trips assumed to be driven).

Outer St Albans City has a higher opportunity than Inner St Albans City because Outer St Albans City has a higher proportion of shorter trips than Inner St Albans City (54% of trips from Inner are considered 'short', whereas 65% of trips from Outer are considered short) and more densely modelled urban areas are within the cycle range for the outer regions of St Albans (e.g. Hatfield).

Figure 1.2 Mode shift split (trips) by community (high scenario is top and lower scenario is bottom)





Sustainable travel opportunity

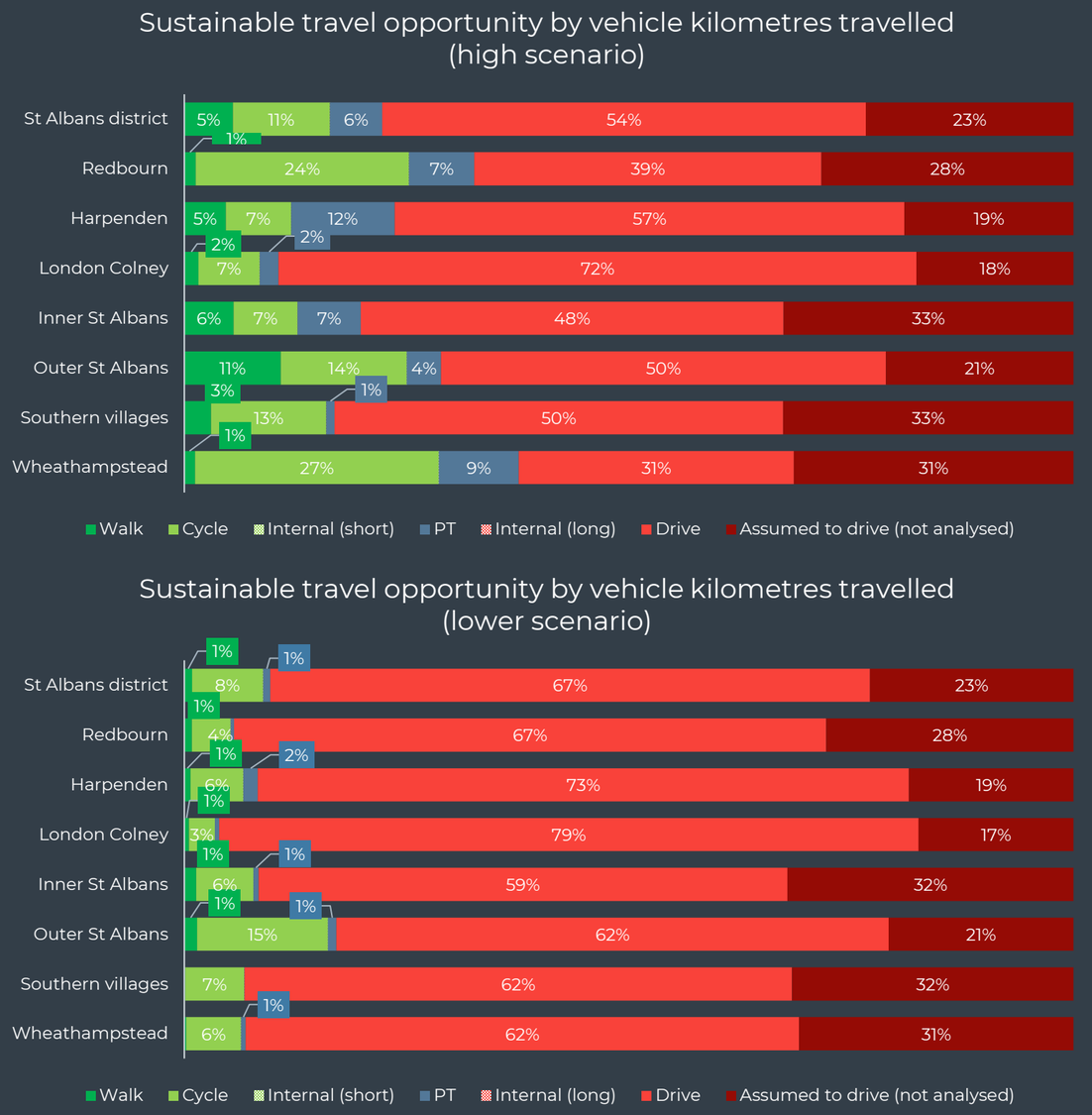
What is the sustainable travel opportunity by vehicle kilometres travelled (VKT)?

Figure 1.3 shows high and lower sustainable travel opportunity based on distance travelled. VKT (or people km) is important to consider as it highlights longer distance journeys, which typically have fewer trips, but can have a large effect on carbon emissions.

- St Albans district – opportunity is between 10-22%, with walking being 1-5%, cycling 8-11% and public transport being 1-6%. This results in 78-90% of car kilometres that would need to be driven (including not analysed trips assumed to be driven).
- Inner St Albans City – opportunity is between 8-20%, with walking being 1-6%, cycling 6-7% and public transport being 1-7%. This results in 80-92% of car kilometres that would need to be driven (including not analysed trips assumed to be driven).
- Outer St Albans City – opportunity is between 17-29%, with walking being 1-11%, cycling 14-15% and public transport being 1-4%. About 71-83% of car kilometres will need to be driven (including not analysed trips assumed to be driven).
- Other communities – highest opportunity is in Wheathampstead (7-38%), followed by Redbourn (6-33%), Harpenden (8-24%), Southern Villages (7-17%) and London Colney (4-11%).

More information on vkt calculations can be found in the Methodology note.

Figure 1.3 Mode shift split (VKT) by community (high scenario is top and lower scenario is bottom)



Sustainable travel opportunity

Walking, cycling and public transport opportunity in St Albans district

Figure 1.4 shows the number of trips that could be walked, cycled or taken by public transport while Figure 1.6, 1.7 and 1.8 shows the proportion of trips that could be taken by each mode across the district.

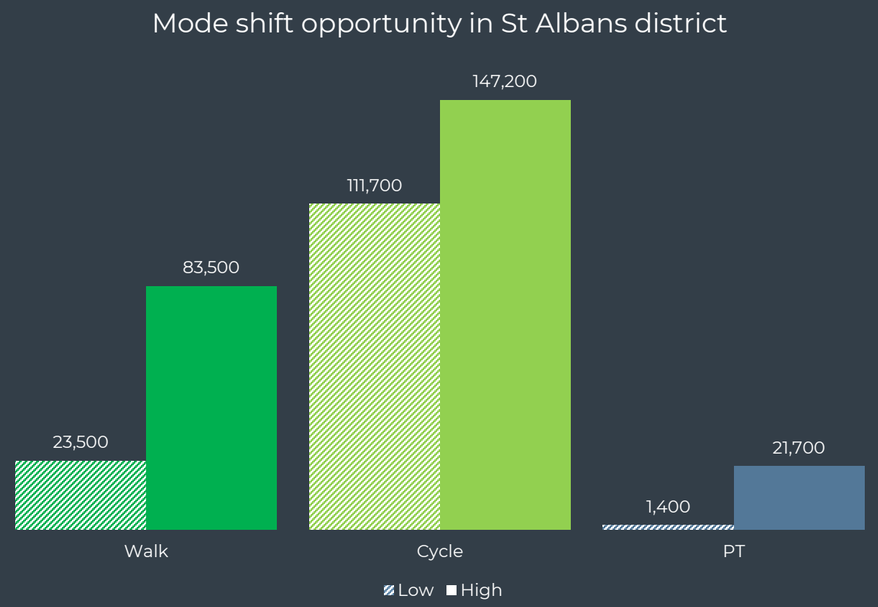
Key findings include:

- Cycling presents the greatest opportunity for mode shift with a range of 111,700 – 147,200 car trips able to be cycled across the district. Generally, cycling opportunity is evenly distributed across the district (with no area showing less than 20% opportunity), though Outer St Albans City sees the largest opportunity with 51,000 – 61,400 cyclable trips.
- Walking opportunity is concentrated more towards the urban areas (such as St Albans and Harpenden), where journeys are likely to be of a smaller distance to nearby zones, with a range of 23,500 – 83,500 trips able to be walked.
- The sustainable travel opportunity for public transport is relatively low across the district, with a range of only 1,400 – 21,700 trips. Most of the study zones show less than 10% opportunity, with zones in Harpenden showing a marginally higher opportunity of 10-20% in comparison with other zones. This is likely to be capturing journeys to nearby Luton.

Figure 1.5 (overleaf) shows the number of trips able to be walked, cycled or taken by public transport across the communities in St Albans district.

A full breakdown of sustainable travel opportunity figures can be found in Appendix A and a detailed list of range of trips with the opportunity to shift by mode table can be found in Appendix B (Table B1).

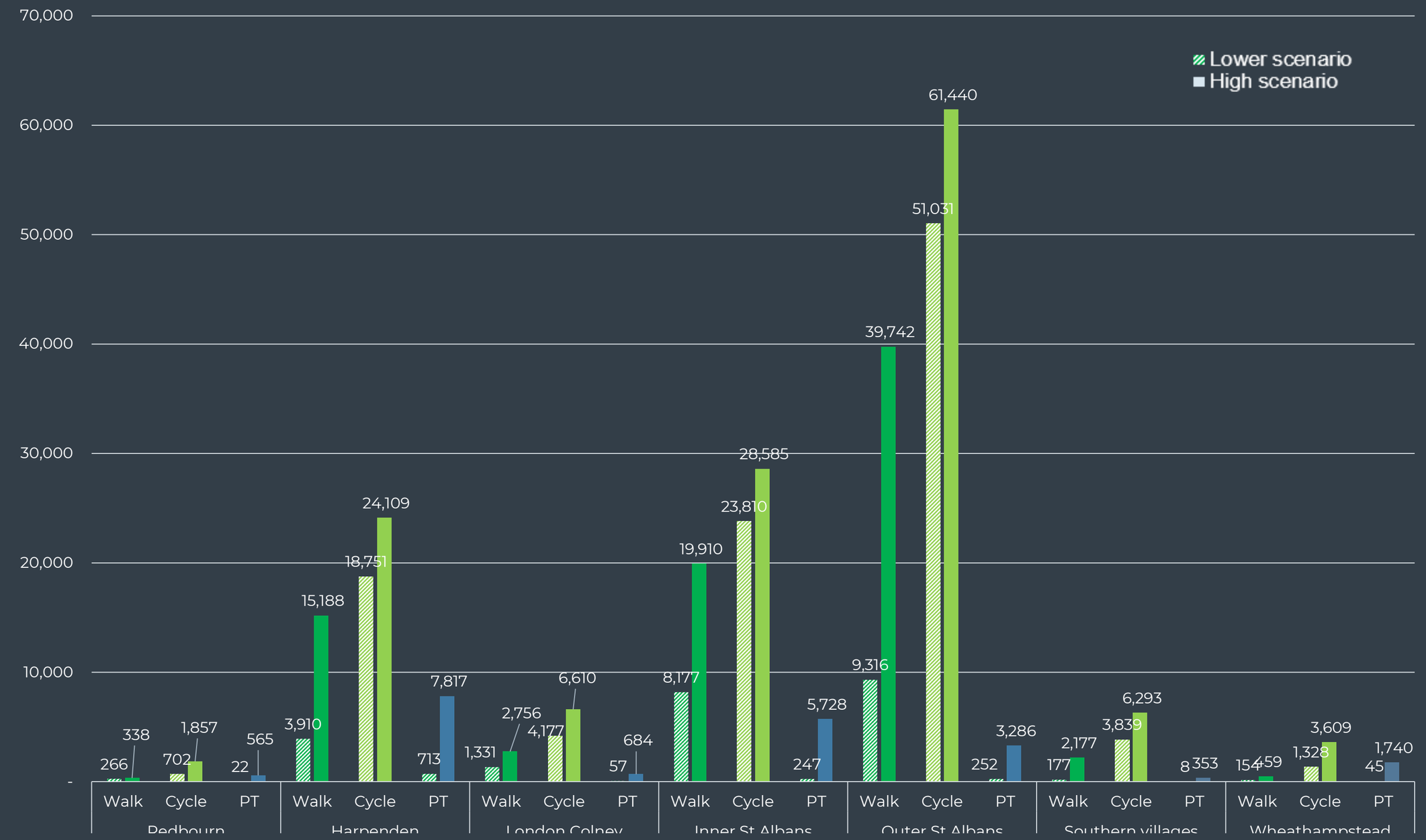
Figure 1.4 Range of trips with the opportunity to shift by mode (St Albans)



	Walking opportunity		Cycling opportunity		PT opportunity
	Main mode	First and last mile*	Main mode	First and last mile*	Main mode
Daily trips	23,500 - 83,500	1,400 – 21,700	111,700 – 147,200	1,400 – 21,700	1,400 – 21,700
Daily people km	27,300 - 169,400	27,400 – 240,200	279,500 – 506,800	27,400 – 240,200	25,000 – 237,400

* Linked to public transport trips

Figure 1.5 Mode shift split (trips) in existing communities under high and lower sustainable travel opportunity scenarios



Sustainable travel opportunity

Walking opportunity in St Albans

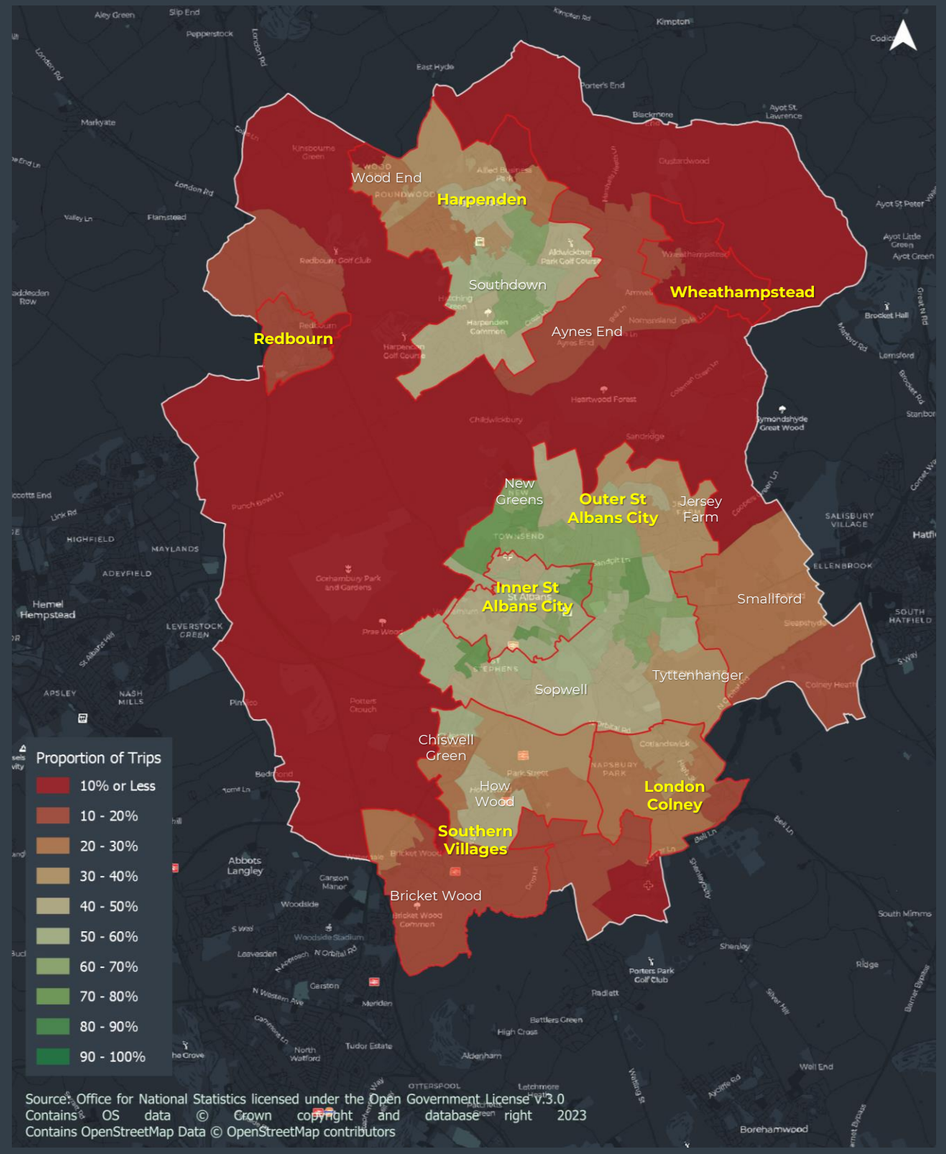
Figure 1.6 sets out the opportunity to walk for St Albans district (high scenario).

Overall, the opportunity for trips to be walked in St Albans district appears inconsistent, with the map being split into large sections of high or low opportunity for walked trips.

Areas of higher opportunity to walk tend to be concentrated in more urban areas such as Inner St Albans City, New Greens in Outer St Albans City and Southdown in Harpenden. This will be because denser areas like these will have a lot more reason for shorter trips to occur as points of interest will all be closer together than in more rural areas.

Generally, the rural areas and villages – particularly Redbourn and Wheathampstead - in St Albans district have very low opportunity for car trips to switch to walking, as shown by the red areas in the map. This is likely due to the areas not being within walking distance to other areas or attractions.

Figure 1.6 Walking opportunity in St Albans (high scenario)



Sustainable travel opportunity

Cycling opportunity in St Albans

Figure 1.7 sets out the opportunity to cycle for St Albans district (high scenario).

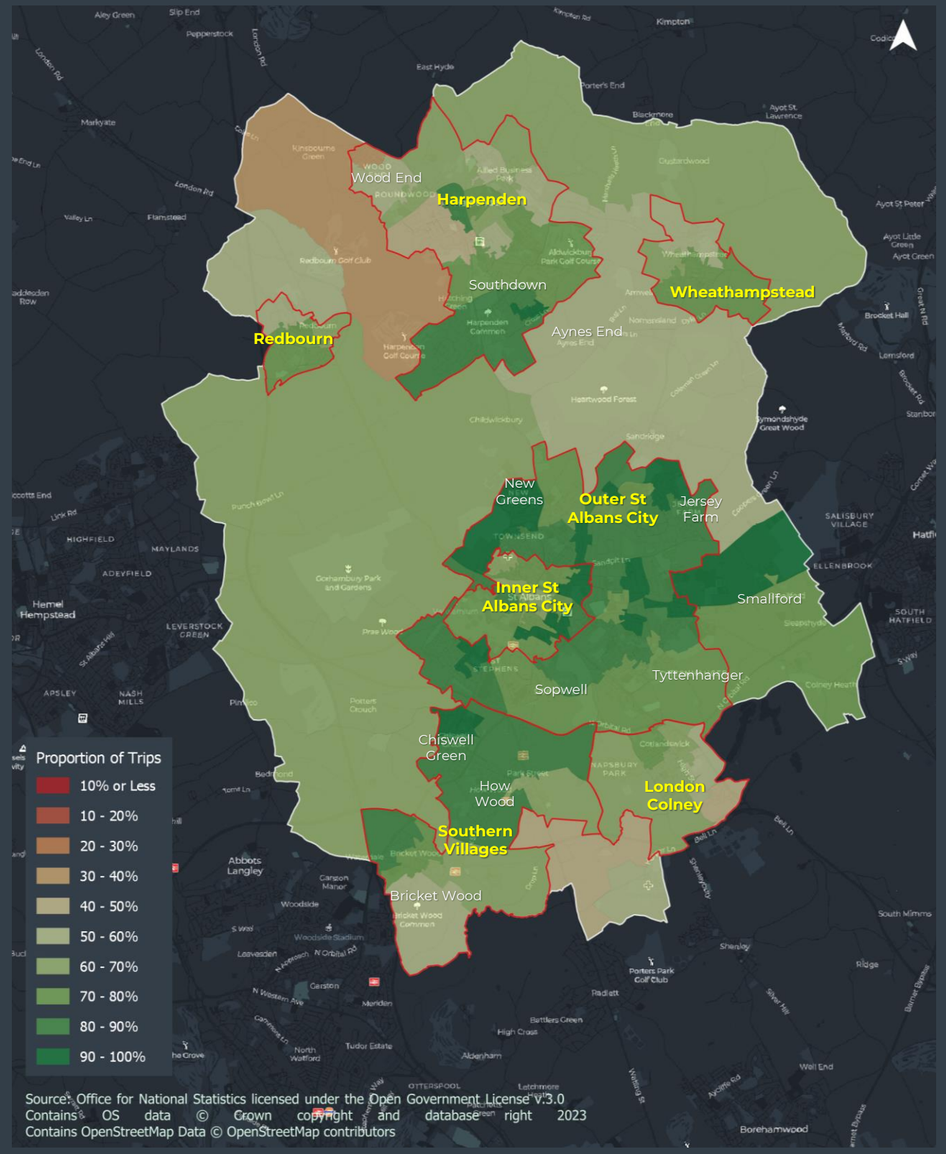
The opportunity to cycle is relatively high in St Albans district with the highest opportunities generally concentrated around denser areas such as zones in Inner St Albans City, Outer St Albans City and Harpenden. This is likely due to them being within a short cycle from the town centres or other attractions.

Rural areas that have a relatively high opportunity to cycle include Smallford to the east of St Albans City, Chiswell Green and How Wood in the Southern Villages, and Wheathampstead. This is likely due to the proximity of these areas to more dense areas (e.g. within a reasonable cyclable distance).

Areas that have a moderate opportunity to cycle include London Colney and Bricket Wood. The rural area between Wood End in Harpenden and Redbourn shows lower opportunity than other rural areas due to limited (and smaller) destinations within a reasonable range for cycling. Furthermore, there is a golf club in this area which may restrict the public right of way.

Outer St Albans City has areas with higher opportunity to cycle than areas in Inner St Albans City. This is likely due to there being a higher proportion of shorter trips in Outer than Inner (54% of trips from Inner are considered 'short', whereas 65% of trips from Outer are considered short) as other denser areas such as Hatfield and Harpenden will be within a reasonable cyclable range to areas in Outer St Albans City, but not to areas in Inner St Albans City. Furthermore, there is less building density in Outer St Albans City.

Figure 1.7 Cycling opportunity in St Albans (high scenario)



Sustainable travel opportunity

Public transport opportunity in St Albans

Figure 1.8 sets out the opportunity to use public transport for St Albans district (high scenario).

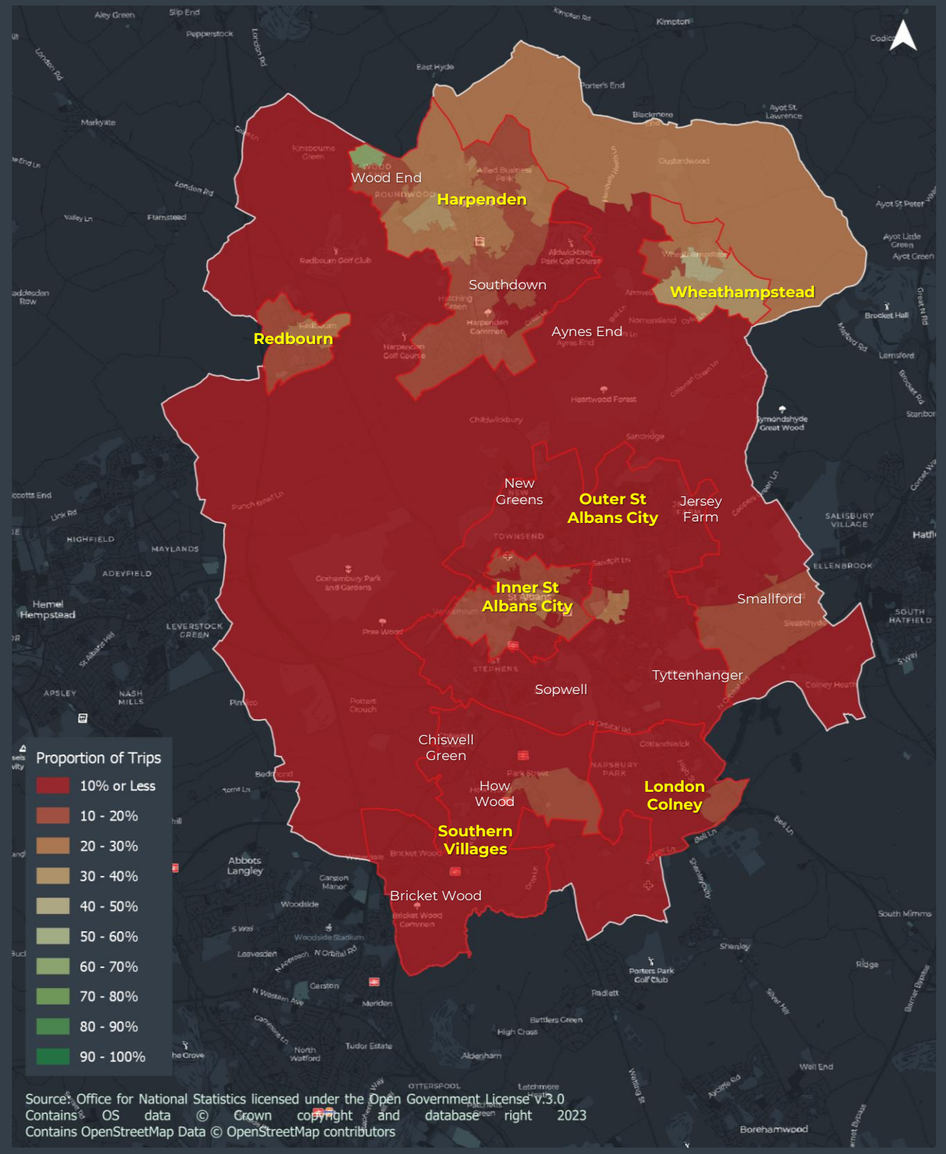
Overall, public transport has lower opportunity than walking and cycling. Most of the study area has 10% or less opportunity for mode shift to public transport.

The main reason that public transport opportunity is not higher in St Albans City (and other more urban areas with public transport options) is because a lot of trips in these areas are dominated by shorter trips and therefore more attractive to cycling or walking. For this reason, we did not run any of the shorter trips through the Google API for the Hemel Hempstead study and therefore they are also not included in this study. For longer trips, where there was public transport analysis, the proportion is higher.

The areas in St Albans district with a slightly higher opportunity for public transport trips relative to the study area include Wheathamsptead. This is likely due to the coach and bus services that link it to Luton and the surrounding urban areas.

For the zone in north Harpenden, the higher opportunity for public transport is likely due to there being only a small number of OD pairs in this area, so any small absolute change could result in a larger percentage change.

Figure 1.8 Public transport opportunity in St Albans (high scenario)



PART 1B

Sustainable travel propensity for existing communities

Sustainable travel propensity

Proportion of household

Table 1.1 sets out the proportion of households for St Albans district and its communities compared to the England average.

This analysis highlights the differences in existing demographics and lifestyles between St Albans district and its communities, and the England average across various categories.

In England, the proportions of households in each Mosaic Group are relatively evenly spread, with Aspiring Homemakers having the highest proportion with 11% and Modest Traditions having the lowest at 4%.

In St Albans district, the proportions of households in each Mosaic Group are less evenly spread. Some Mosaic Groups have little to no households in St Albans district (e.g. Municipal Challenge and Modest Traditions) while a few Mosaic Groups represent a large proportion of households (e.g. Prestige Positions, Domestic Success and City Prosperity account for 76% of households).

The dominant Mosaic Group in St Albans district is Prestige Positions, representing 33% of households. Prestige Positions is also the dominant Mosaic Group of Redbourn (56% of households), Harpenden (57% of households), and Wheathampstead (65% of households).

The overwhelming dominant Mosaic Group in Inner St Albans City is City Prosperity (69% of households), whereas there is more of a mix of Mosaic Groups in London Colney (Domestic Success is the marginal dominant Mosaic Group with 37% of households).

On the next page, Figure 1.9 and Figure 1.10 show the dominant Mosaic Group across St Albans district and Inner / Outer St Albans City at hex level.

Table 1.1 Proportion of households in each Mosaic Group in St Albans, its communities and England

	Mosaic Group	St Albans district	Redbourn	Harpenden	London Colney	Southern Villages	Wheathampstead	Inner St Albans City	Outer St Albans City	England average
A	City Prosperity	**14%**	0%	5%	0%	0%	0%	69%	7%	**5%**
B	Prestige Positions	**33%**	56%	57%	10%	51%	65%	6%	25%	**7%**
C	Country Living	**1%**	0%	0%	0%	0%	0%	0%	0%	**7%**
D	Rural Reality	**0%**	0%	0%	0%	0%	0%	0%	0%	**6%**
E	Senior Security	**4%**	19%	0%	5%	17%	0%	0%	2%	**8%**
F	Suburban Stability	**1%**	12%	0%	11%	0%	0%	0%	0%	**5%**
G	Domestic Success	**29%**	2%	24%	37%	21%	4%	8%	48%	**9%**
H	Aspiring Homemakers	**5%**	11%	1%	19%	9%	10%	2%	2%	**11%**
I	Family Basics	**4%**	0%	0%	16%	0%	20%	2%	5%	**9%**
J	Transient Renters	**0%**	0%	0%	0%	0%	0%	0%	0%	**6%**
K	Municipal Challenge	**0%**	0%	0%	0%	0%	0%	0%	0%	**6%**
L	Vintage Value	**1%**	0%	3%	0%	1%	0%	0%	0%	**6%**
M	Modest Traditions	**0%**	0%	0%	0%	0%	0%	0%	0%	**4%**
N	Urban Cohesion	**1%**	0%	0%	0%	0%	0%	0%	3%	**6%**
O	Rental Hubs	**7%**	0%	8%	3%	3%	0%	12%	7%	**8%**

Figure 1.9 Dominant Mosaic Group for St Albans district

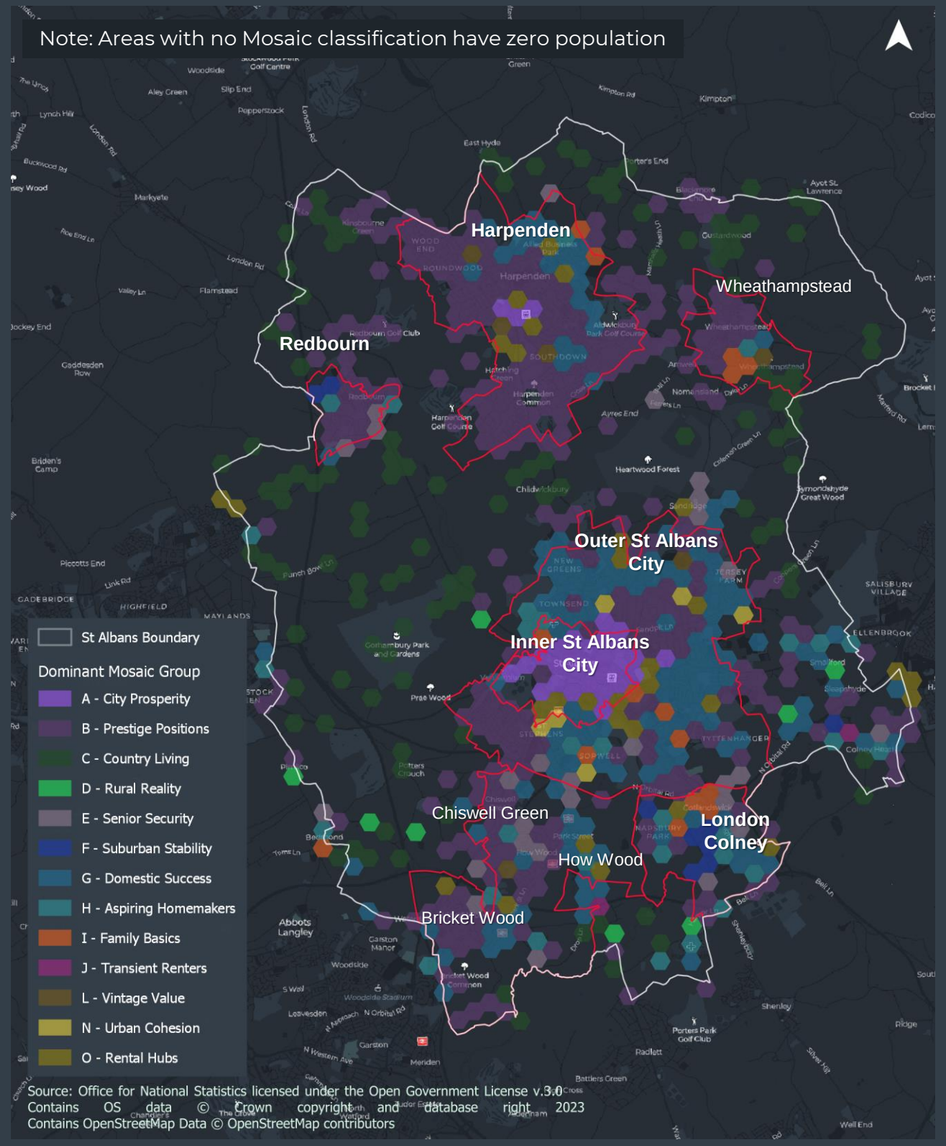
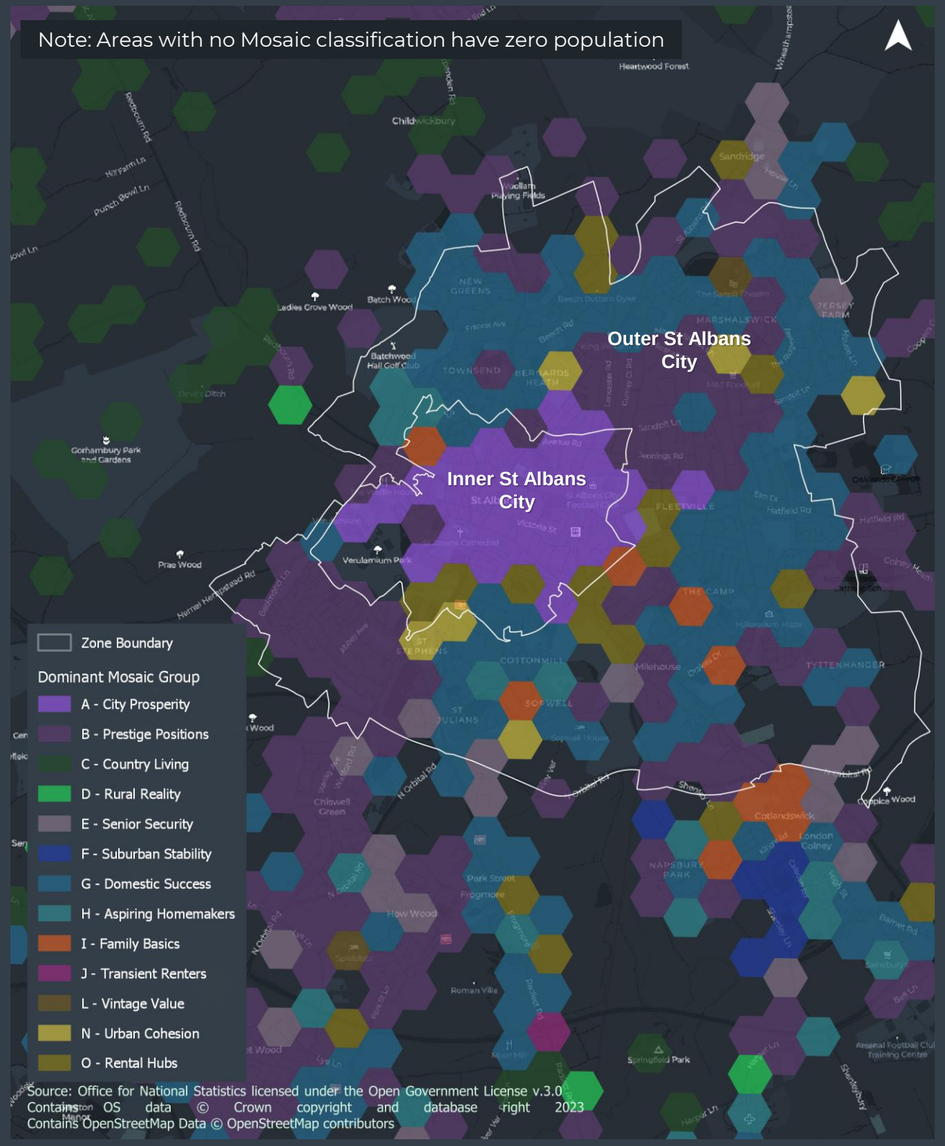


Figure 1.10 Dominant Mosaic Group for Inner and Outer St Albans City



Sustainable travel propensity

Average mode propensity

Table 1.2 sets out the average mode propensity (i.e. average of all trip types) based on the socio-demographics for St Albans district and its communities compared to the England average (which is 100). A score greater than 100 suggests a higher than England average propensity to use that mode, while a value below 100 suggests the opposite.

In general, due to the people living there, **St Albans district is relatively car dependent**, with most communities matching or being greater than the England average of 100, and propensities to take sustainable modes being less than average.

The propensity to take sustainable modes in St Albans district is mostly below the English average with all corresponding propensity scores being below 100 besides the score for rail:

- **Walking** – 91
- **Cycling** – 88
- **Bus** – 85
- **Rail** – 106

Inner St Albans City is the only community to go against this trend – with propensity to walk (139), cycle (148), take bus (148) or rail (174) all being well above the England average. Those living in Inner St Albans City are also less likely to drive than the England average, with a propensity of 87.

The following pages show the propensity to walk, cycle, use bus, use rail and drive across the St Albans district. **Appendix C** provides the same analysis but for each existing community zoomed in.

More information on Mosaic Groups and Mobility Insights survey and how they feed into propensities can be found in the methodology note

Table 1.2 Average propensity for walking, cycling, using bus, using rail and driving (all journey purposes)

Propensity	England average	St Albans district	Redbourn	Harpenden	London Colney	Southern Villages	Wheathampstead	Inner St Albans City	Outer St Albans City
Walk	100	91	75	86	80	80	89	139	85
Cycle	100	88	64	79	79	71	85	148	84
Bus	100	85	63	75	76	67	76	148	78
Rail	100	106	85	98	81	90	87	174	99
Drive	100	100	104	100	109	102	105	87	101

Sustainable travel propensity

Propensity to walk in St Albans

Figure 1.11 sets out the propensity to walk for St Albans compared to the England average at COMET model zone level.

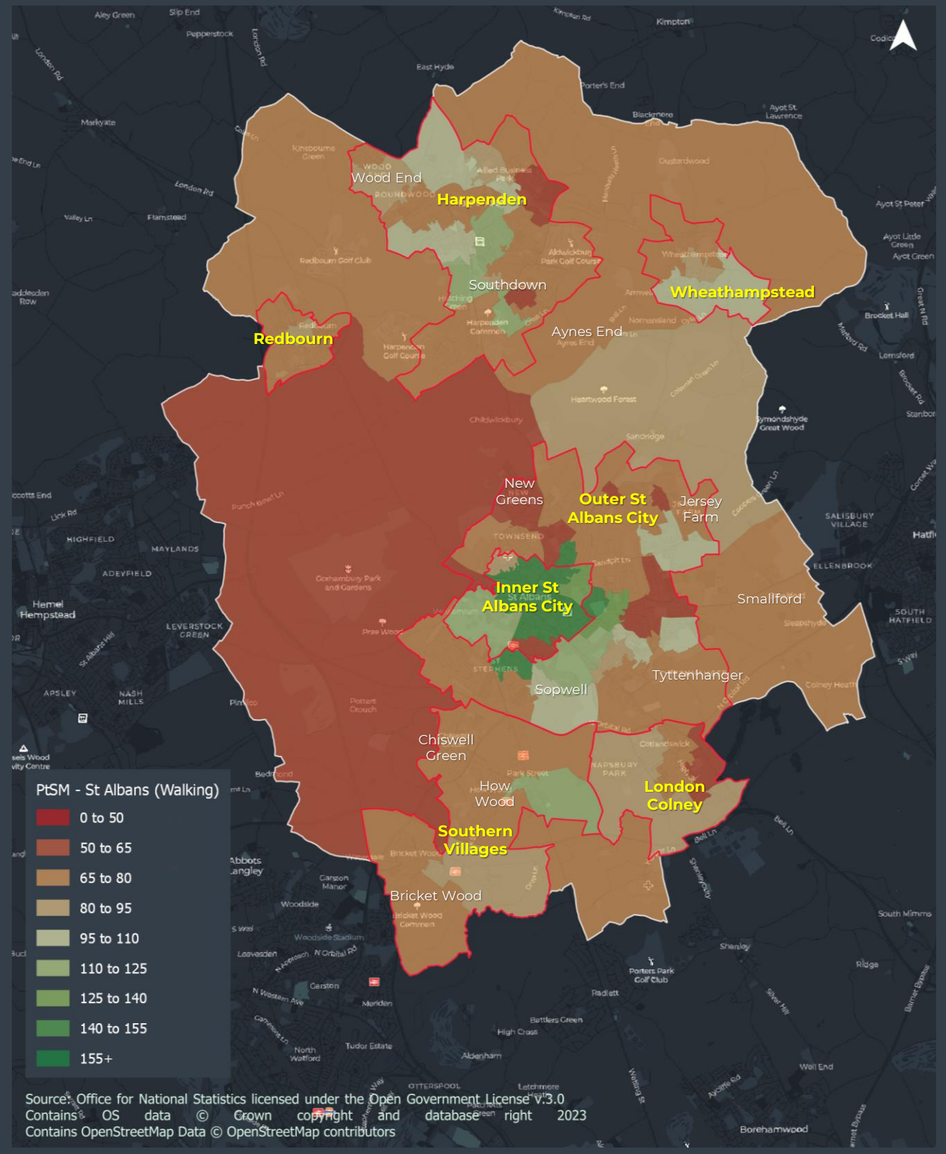
The area with the highest propensity to walk is in Inner St Albans City, with areas such as Harpenden, How Wood and Outer St Albans City also having higher propensities for walking.

Generally, in St Albans district, propensity to walk is 91% of the England average. This indicates that other modes may be preferred within St Albans as a whole. However, as noted in the map, some urban areas such as Inner St Albans have a higher propensity for walking than the England average.

Comparing these regions to the opportunity map, most areas in St Albans that have a higher propensity to walk also have relatively high opportunity for walked trips.

The similarity in areas with higher opportunity and higher propensity for walking could be because having the opportunity available would make people more likely to use this option.

Figure 1.11 Propensity to walk in St Albans



Sustainable travel propensity

Propensity to cycle in St Albans

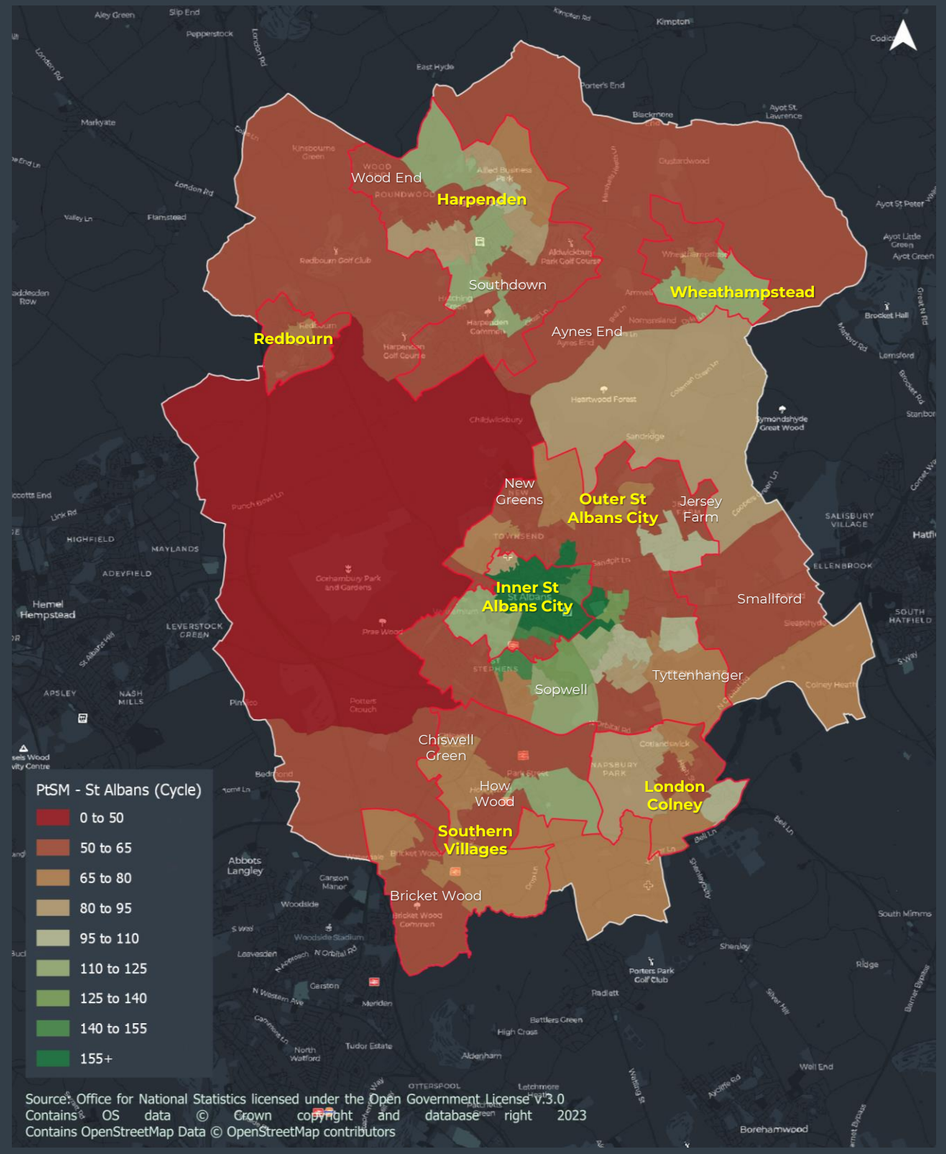
Figure 1.12 sets out the propensity to cycle for St Albans compared to the England average – the average propensity for cycling across St Albans is 88%. In general, cycling has a lower propensity than walking.

The propensities to cycle in major areas of St Albans district are lower than the England average - with the exception of Inner St Albans City which has a significantly higher propensity than the England average. It appears that most of the areas with lower propensities for cycling are the rural areas of St Albans, it's anticipated that most of these areas would be less likely to favour cycling due to the longer distance trips and therefore have more of a preference for driving.

In urban areas such as Inner St Albans City, Wheathampstead, and parts of Outer St Albans City, the propensity to cycle is closer to or above the England average. It's likely that in these areas' destinations such as community facilities, shops and education establishments may be within a shorter distance. These trips are easier to be completed by more active modes such as cycling and therefore would make people more likely to cycle.

The areas in St Albans district with high propensity for cycling match up well with the areas with high opportunity for cycling, meaning a lot of the trips with the opportunity to be cycled would also have the potential to be cycled.

Figure 1.12 Propensity to cycle in St Albans



SUSTAINABLE TRAVEL PROPENSITY

Propensity to use bus in St Albans

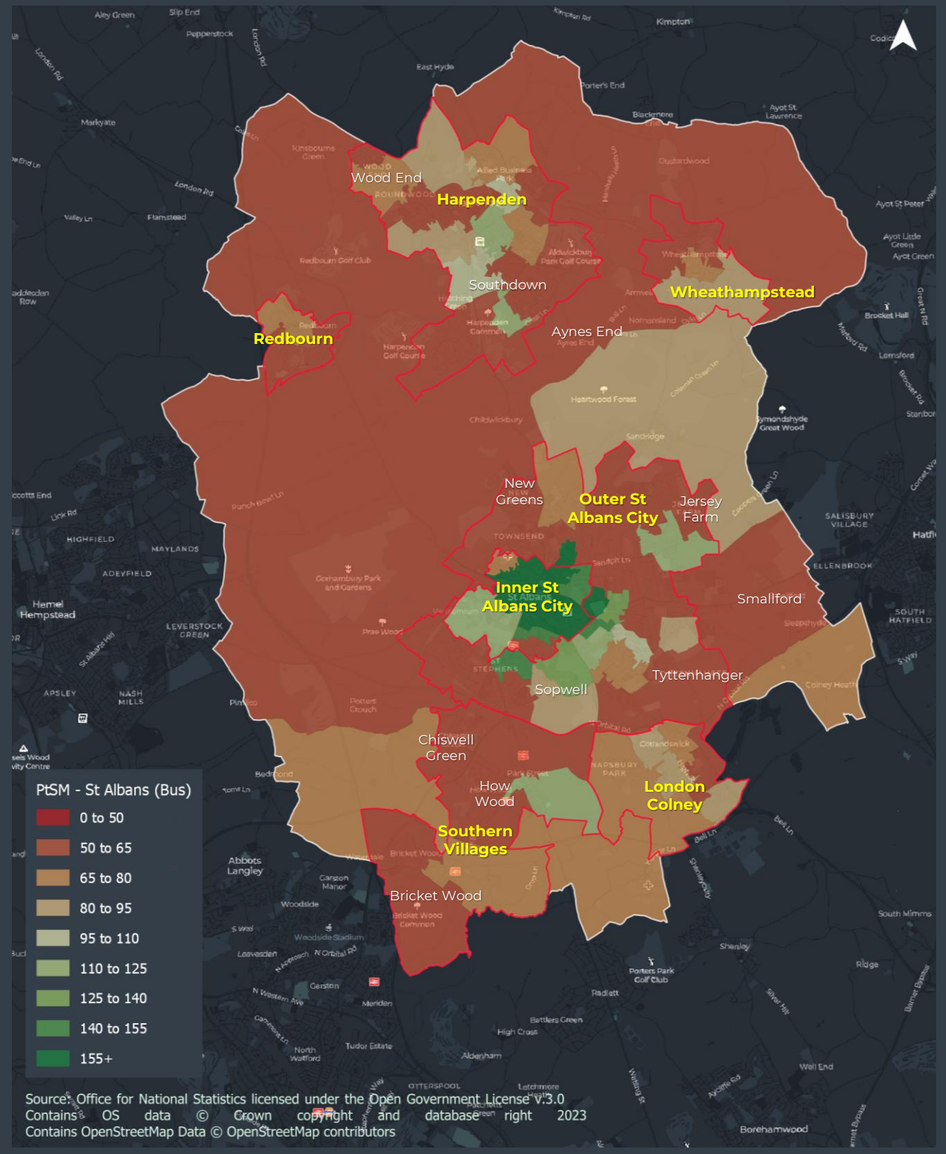
Figure 1.13 sets out the propensity to use bus for St Albans – which is about 85% of the England average.

Within St Albans, the overall propensity to travel by bus is lower than the England average, with most areas having propensity in the range of 50 to 80. This is with the exception of Inner St Albans City which has an average propensity of 148% to use buses.

These figures are supported by the limited opportunity to use public transport at present in St Albans, (with the exception of Inner St Albans City) highlighting an opportunity to increase bus services to better cater to the needs of users.

In a similar pattern to walking and cycling propensity, there is a greater willingness to travel by bus in the more urban areas within St Albans (such as in St Albans City and Harpenden).

Figure 1.13 Propensity to use bus in St Albans



Sustainable travel propensity

Propensity to use rail in St Albans

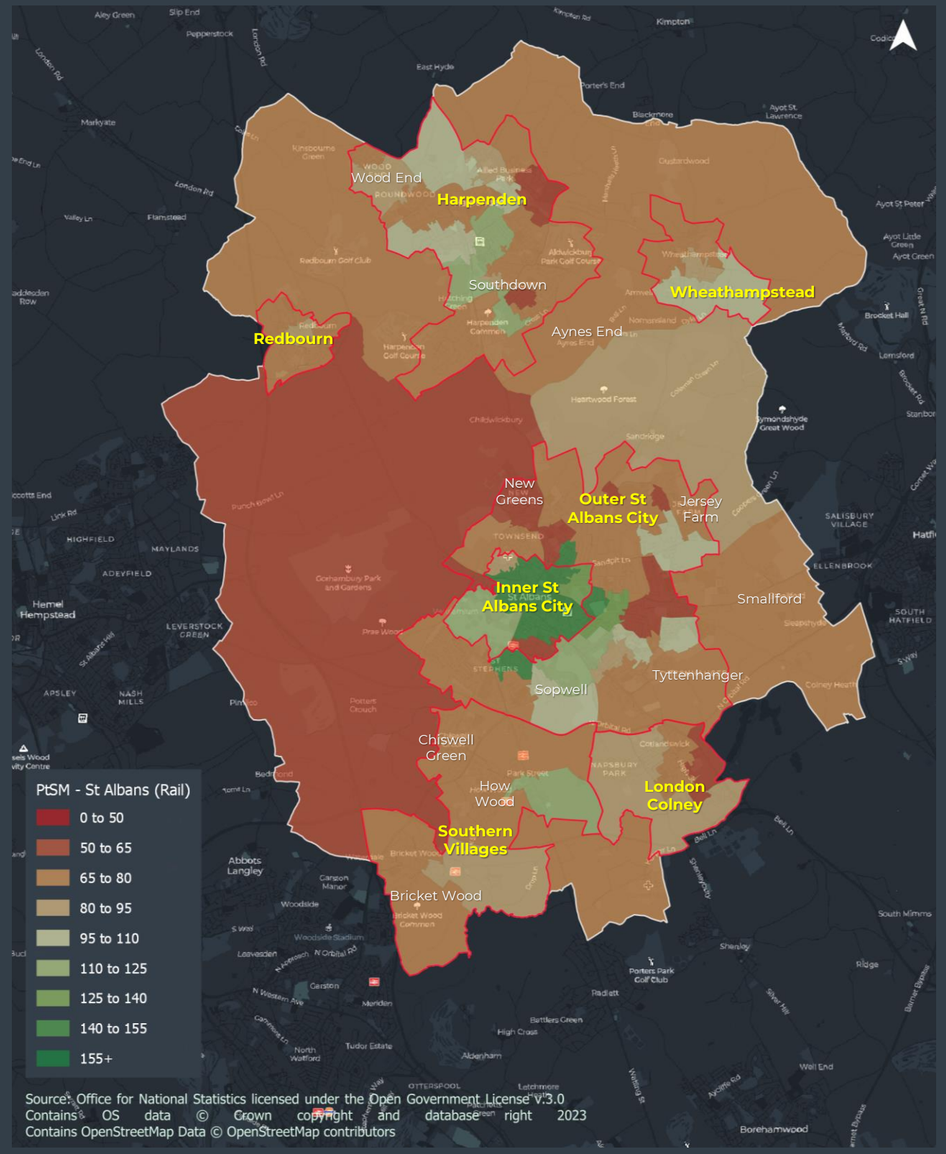
Figure 1.14 sets out the propensity to use rail for St Albans – which is above the England average at about 106% of the England average. This is the mode with the highest average propensity in St Albans. In general, rail has a higher propensity than bus.

Propensity to travel by rail is varied across St Albans district. While most areas have a high propensity for rail travel there is still a large section of St Albans district to the west of St Albans City with lower propensity for rail travel compared with the England average. A lack of rail provision in this area is likely to play a part in the lower propensity, as well as existing demographics and perceptions.

The areas where rail propensity is highest tend to align with the location of the rail stations in these settlements, suggesting that residents do not need to travel far to reach the rail stations. However, many areas without rail stations such as Redbourn, Wheathampstead, and London Colney still have fairly high propensities for rail travel (80% - 90% of the England average).

This data indicates limited potential to use public transport, suggesting that the current public transport network needs to be improved to ensure that the existing communities are better served by public transport.

Figure 1.14 Propensity to use rail in St Albans



Sustainable travel propensity

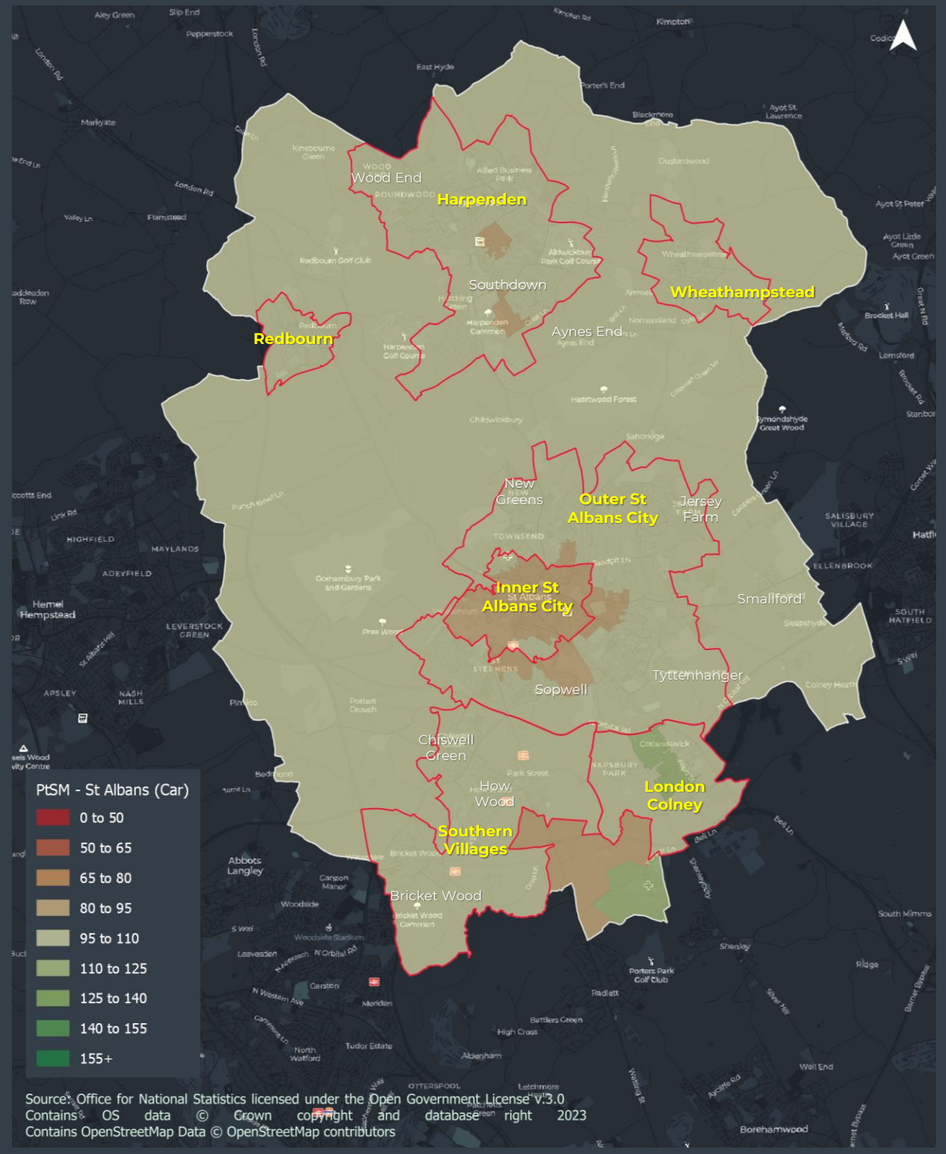
Propensity to use car in St Albans

Figure 1.15 sets out the propensity for car use across St Albans compared to the England average.

Across most of the region, the propensity for driving is roughly equal to the England average – with all major areas besides, Inner St Albans City being slightly above the England average. This highlights the car dependency at present. This could be due to the lack of public transport connectivity or frequency in these areas discouraging people from taking the bus or train instead of driving.

There are pockets of lower-than-average driving propensity in the region, namely in Inner St Albans City. This supports the idea that lack of alternatives to driving could be the cause for the higher propensities towards driving in most areas since Inner St Albans City seems to have the most opportunity to use public transport and make shorter trips that can be walked/cycled.

Figure 1.15 Propensity to use car in St Albans



PART 1C

Sustainable travel potential for existing communities

Sustainable travel potential

What is the likely sustainable travel potential for existing communities?

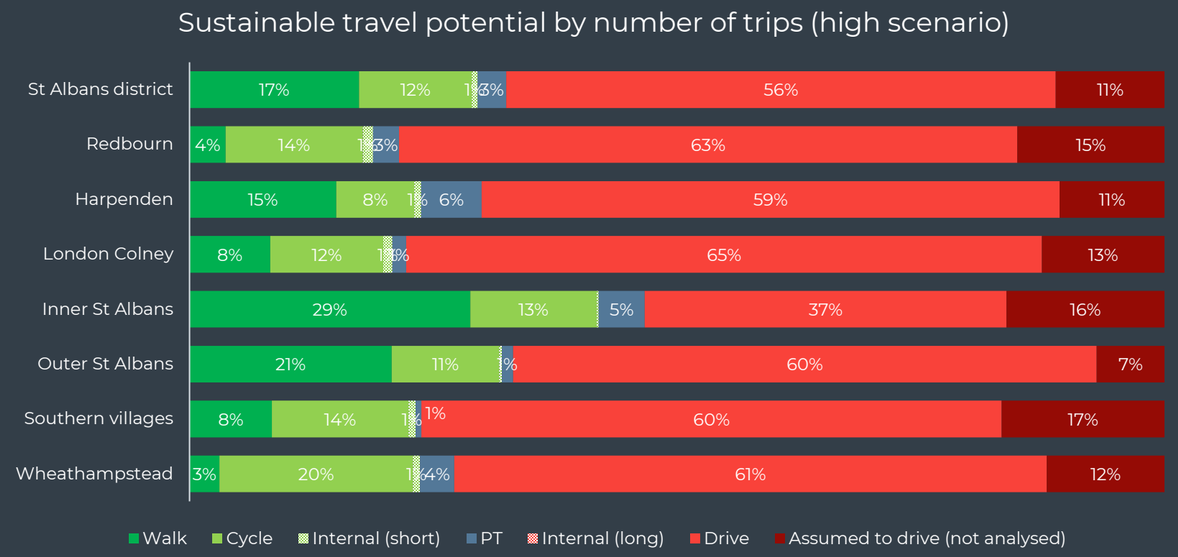
Figure 1.16 shows high and lower sustainable travel potential for trips:

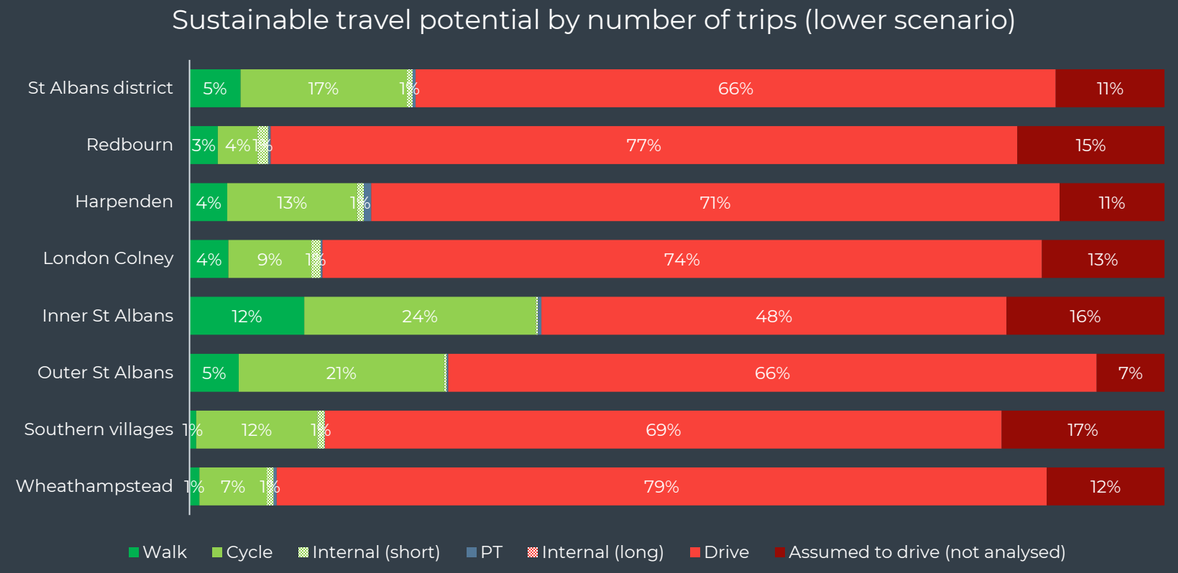
- St Albans district– potential is between 23-32%, with walking being 5-17%, cycling 12-17% (including short internal trips) and public transport up to 3%. Around 68-77% of trips will be driven (including not analysed trips assumed to be driven).

- Inner St Albans City – potential is between 36-47%, with walking being 12-29%, cycling 13-24% (including short internal trips) and public transport up to 5%. Around 53-64% of trips will be driven (including not analysed trips assumed to be driven).

- Outer St Albans City – potential is between 27-33%, with walking being 5-21%, cycling 11-21% (including short internal trips) and public transport up to 1%. Around 67-73% of trips will be driven (including not analysed trips assumed to be driven).

Figure 1.16 Sustainable travel potential by number trips for high (top) and lower (bottom) scenarios





WALKING POTENTIAL

Up to **17%** of trips across St Albans district, **29%** in the Inner St Albans City and **21%** in the Outer St Albans City could be made by walking as the main mode

Redbourn	Main mode	First and last mile*
Daily trips	Around 100	0 - 200
Daily people km	100 - 200	0 - 1,200

Harpenden	Main mode	First and last mile*
Daily trips	1,700 - 6,800	300 - 3,600
Daily people km	2,200 - 14,000	6,100 - 49,400

London Colney	Main mode	First and last mile*
Daily trips	500 – 1,100	0 - 300
Daily people km	600 - 2,000	500 - 1,900

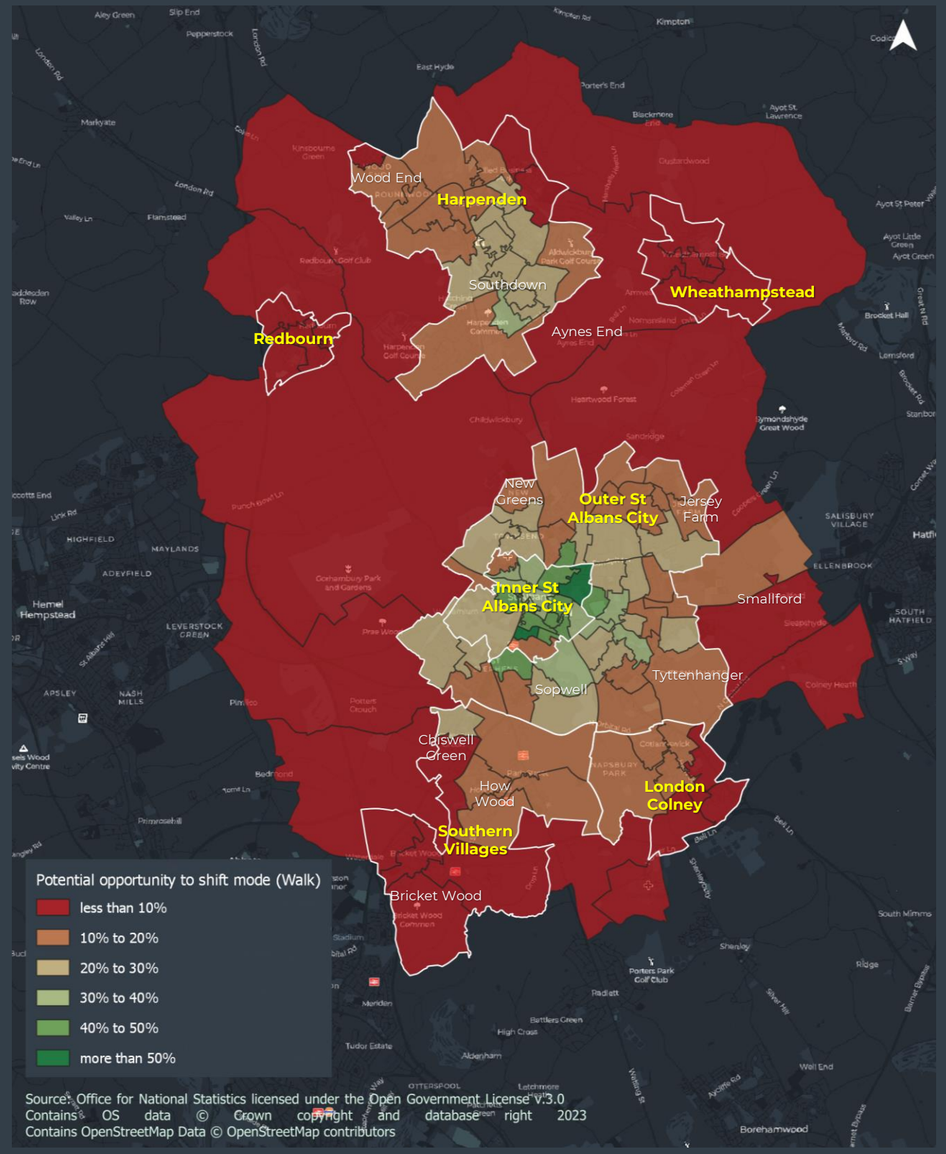
Inner St Albans	Main mode	First and last mile*
Daily trips	5,600 - 13,700	200 - 3,700
Daily people km	6,000 - 25,000	3,800 - 41,400

Outer St Albans	Main mode	First and last mile*
Daily trips	4,000 - 16,700	100 – 1,600
Daily people km	4,900 - 34,700	3,900 - 18,600

Southern villages	Main mode	First and last mile*
Daily trips	100 - 900	0 - 200
Daily people km	100 - 2,000	0 - 2,200

Wheathampstead	Main mode	First and last mile*
Daily trips	100 - 200	0 - 800
Daily people km	100 - 300	100 - 3,400

Figure 1.17 Walking potential in St Albans district (high scenario)



CYCLING POTENTIAL

Up to **12%** of trips across St Albans district, **13%** in the Inner St Albans City and **11%** in the Outer St Albans City could be made by cycling as the main mode

Redbourn	Main mode	First and last mile*
Daily trips	200 - 600	0 - 200
Daily people km	600 - 2,900	0 - 1,200

Harpenden	Main mode	First and last mile*
Daily trips	7,600 - 9,800	300 - 3,600
Daily people km	18,500 - 33,000	6,100 - 49,400

London Colney	Main mode	First and last mile*
Daily trips	1,600 - 2,600	0 - 300
Daily people km	4,200 - 10,300	500 - 1,900

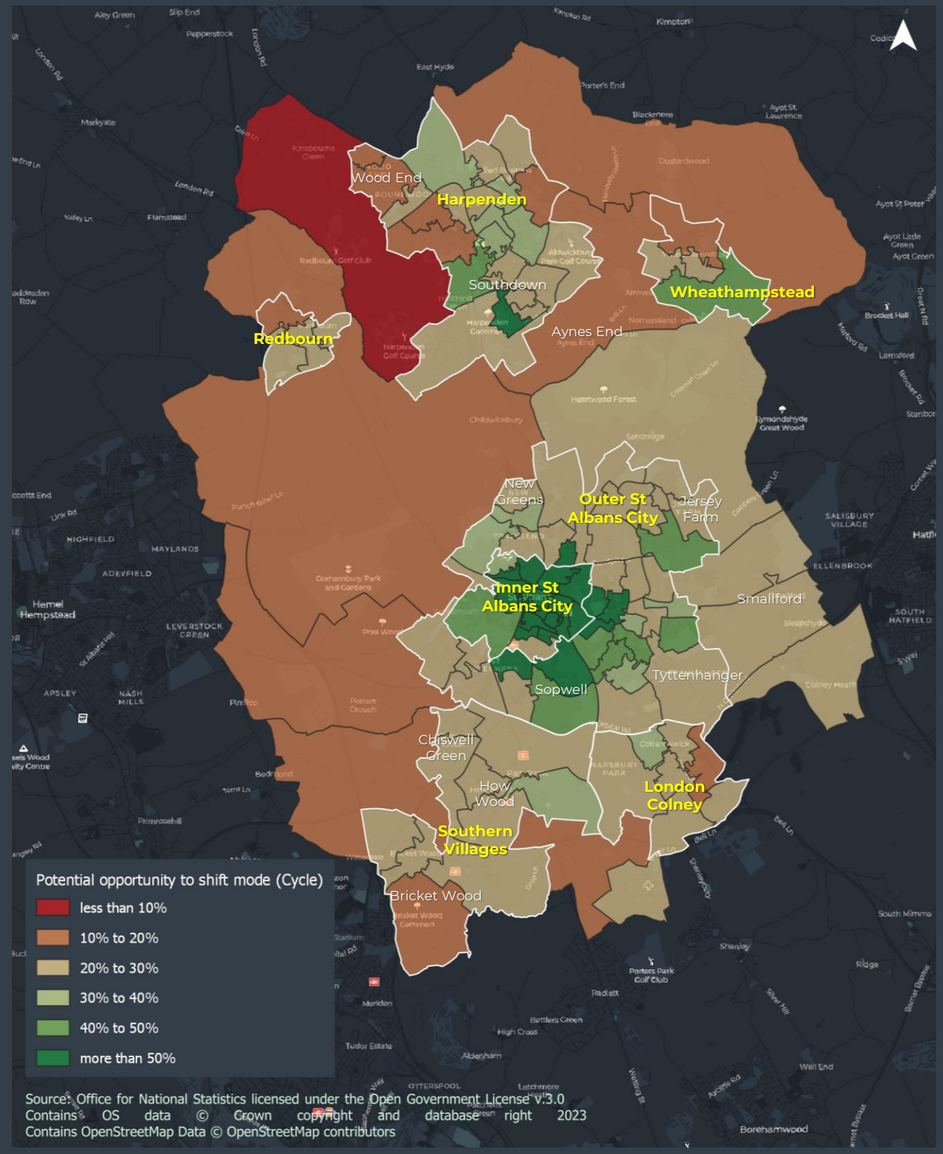
Inner St Albans	Main mode	First and last mile*
Daily trips	17,200 - 20,600	200 - 3,700
Daily people km	37,100 - 60,300	3,800 - 41,400

Outer St Albans	Main mode	First and last mile*
Daily trips	21,000 - 25,300	100 – 1,600
Daily people km	51,500 - 78,800	3,900 - 18,600

Southern villages	Main mode	First and last mile*
Daily trips	1,300 - 2,200	0 - 200
Daily people km	4,200 - 9,500	0 - 2,200

Wheathampstead	Main mode	First and last mile*
Daily trips	500 – 1,400	0 - 800
Daily people km	1,600 - 7,700	100 - 3,400

Figure 1.18 Cycling potential in St Albans (high scenario)



Public transport potential

Up to **3%** of trips across St Albans district, **5%** in the Inner St Albans City and **1%** in the Outer St Albans City could be made by public transport as the main mode

Redbourn	Main mode
Daily trips	0 - 200
Daily people km	100 - 2,100

Harpenden	Main mode
Daily trips	300 - 3,600
Daily people km	5,600 - 43,400

London Colney	Main mode
Daily trips	0 - 300
Daily people km	700 - 3,700

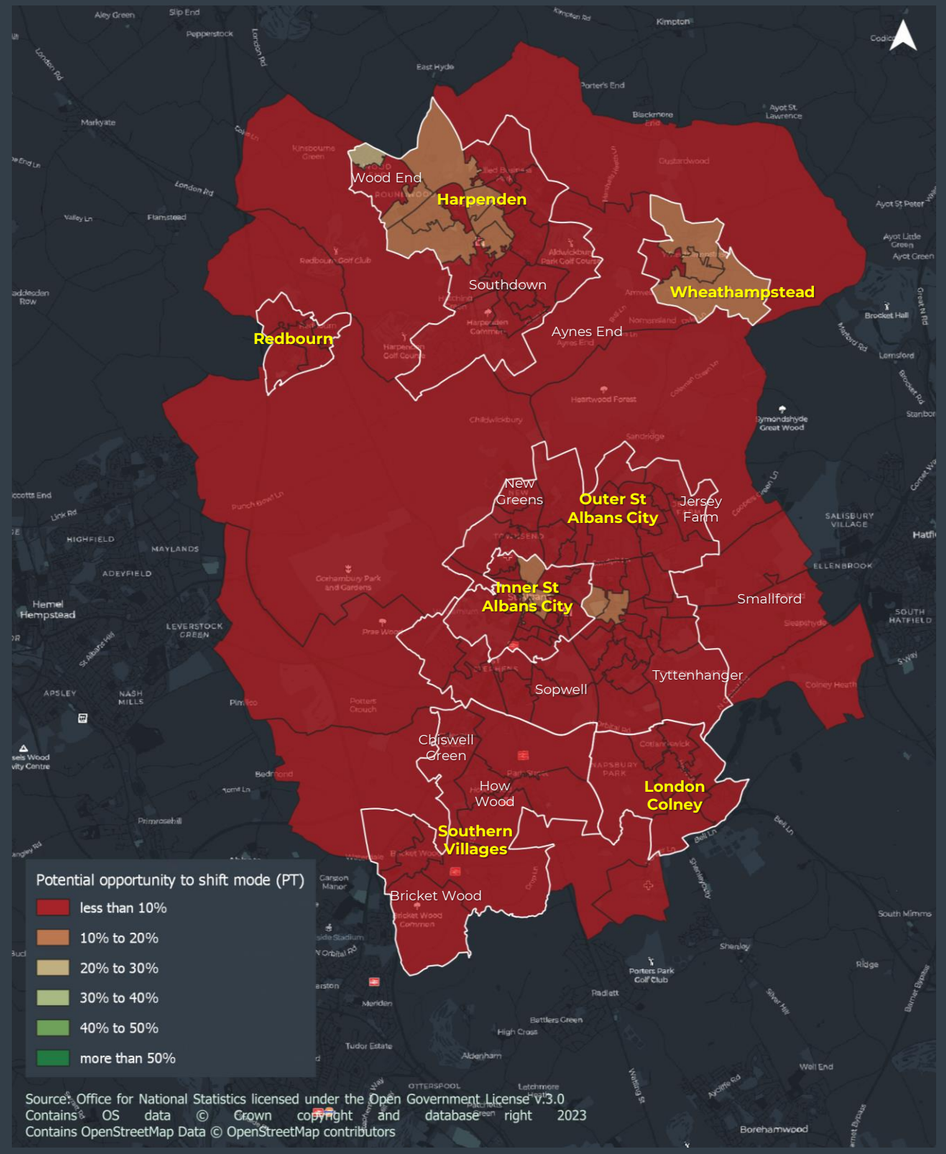
Inner St Albans	Main mode
Daily trips	200 - 3,700
Daily people km	2,700 - 39,300

Outer St Albans	Main mode
Daily trips	100 – 1,600
Daily people km	3,600 - 18,400

Southern villages	Main mode
Daily trips	0 - 200
Daily people km	0 - 1,300

Wheathampstead	Main mode
Daily trips	0 - 800
Daily people km	100 - 6,200

Figure 1.19 Public transport potential in St Albans (high scenario)



Summary and next steps

Findings

This part of the report focuses on understanding the sustainable travel opportunity, propensity and potential for St Albans district to understand its modal shift.

Sustainable travel opportunity

The assessment indicates that based on modelled origin-destination matrices for 2031, current active travel networks and available public transport services – up to 68% of existing car trips in the St Albans district, 68% in the Inner St Albans City and 79% in the Outer St Albans City could be made by sustainable methods - predominantly by active modes.

The walking and cycling opportunity provides detail around where to focus active travel improvements to unlock additional trips and could be used to support the Local Cycling and Walking Infrastructure Plan being developed for St Albans district.

Only about 6% of car trips could reasonably use public transport based on existing services – which suggests an opportunity to improve the network to better match the origins-destinations of users (coverage and frequency) and be more time competitive with driving (speed) – focussed on commuting, education, shopping and personal business trips.

Sustainable travel propensity

This work which is benchmarked to the England average and based on current socio-demographics of the area, shows that while propensity is mixed across St Albans district – there are areas with a higher likelihood to walk, cycle and use public transport. These areas should be prioritised for active and public transport interventions to unlock the potential.

Sustainable travel potential

Based on the findings on the opportunity and propensity work, it is estimated that up to 32% of car trips in the St Albans district, 47% in the Inner St Albans City and 33% in the Outer St Albans City would use sustainable modes. It is noted that this is a worst-case scenario – based on the existing active and public transport options available, as well as the propensities of the current population.

Measures to increase sustainable travel opportunity such as enhanced walking, cycling, bus and rail networks could increase the number of trips that could be made.

Socio-demographic changes with the new development areas could increase the propensity to use active and public transport.

Next part

Part 2 of this report will summarise the findings from Task 2 – sustainable travel opportunity, propensity, and potential for specified new developments in St Albans district. The new developments (with projected number of households) assessed were:

- East Hemel (north) – 1,600 households
- East Hemel (south) – 1,835 households
- North Hemel – 325 households
- Northeast Harpenden – 610 households
- North St Albans City – 1,100 households
- East St Albans City – 511 households

As with Part 1, an average across the assessed new developments will also be set out.

Part 2 follows the same structure as Part 1:

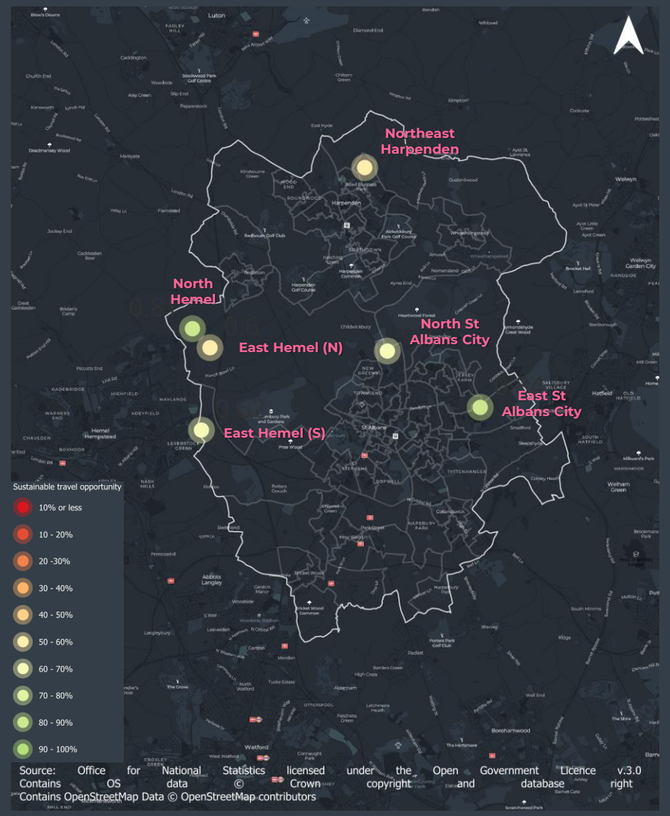
- Part 2A: Sustainable travel opportunity for new developments
- Part 2B: Sustainable travel propensity for new developments
- Part 2C: Sustainable travel potential for new developments

PART 2

Sustainable travel potential for new developments

SUSTAINABLE TRAVEL POTENTIAL FOR NEW DEVELOPMENTS

Sustainable travel opportunity



We calculated that:

- Up to 65% of modelled car trips across the assessed development zones in St Albans district have the opportunity to switch to sustainable modes.
- East St Albans City has the highest opportunity - up to 84% of modelled car trips have the opportunity to switch, followed by North Hemel (up to 81%), North St Albans City (up to 70%), East Hemel (S) (up to 62%), East Hemel (N) (up to 60%) and Northeast Harpenden (up to 58%).

X

Sustainable travel propensity

Mosaic Group		New developments
B	Prestige Positions	10%
G	Domestic Success	60%
H	Aspiring Homemakers	15%
O	Rental Hubs	15%

What did we find:

Based on expected socio-demographics of the St Albans district development zones, new residents will have below average propensities for walking, cycling, bus and rail but above average propensity to drive. The Mosaic profile is based on the existing development of Oaklands in St Albans district, proposed housing types (e.g. affordable, social and rental) and validated using similar developments in the wider region. These propensities could change if sustainable travel provision is improved.

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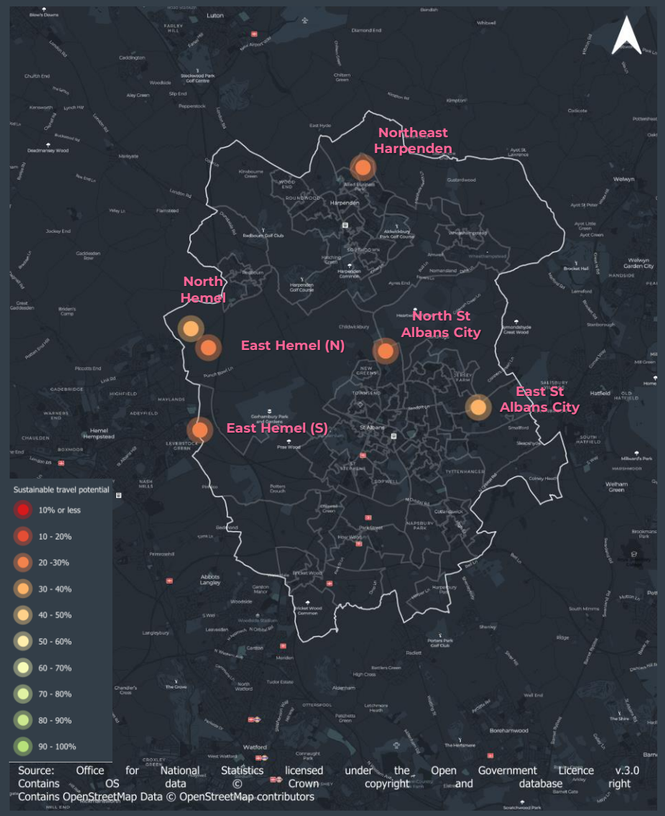
Sustainable travel potential



We calculated that:

- Up to 27% of modelled car trips across the assessed development zones in St Albans district have the potential to switch to sustainable modes.
- East St Albans City has the highest potential - up to 34% of modelled car trips have the potential to switch, followed by North Hemel (up to 32%), North St Albans City and East Hemel (N) (both up to 28%), East Hemel (S) (up to 25%) and Northeast Harpenden (up to 23%).

PART 2A

Sustainable travel opportunity for new developments

Sustainable travel opportunity

How many car trips in St Albans development zones could be made by sustainable modes?

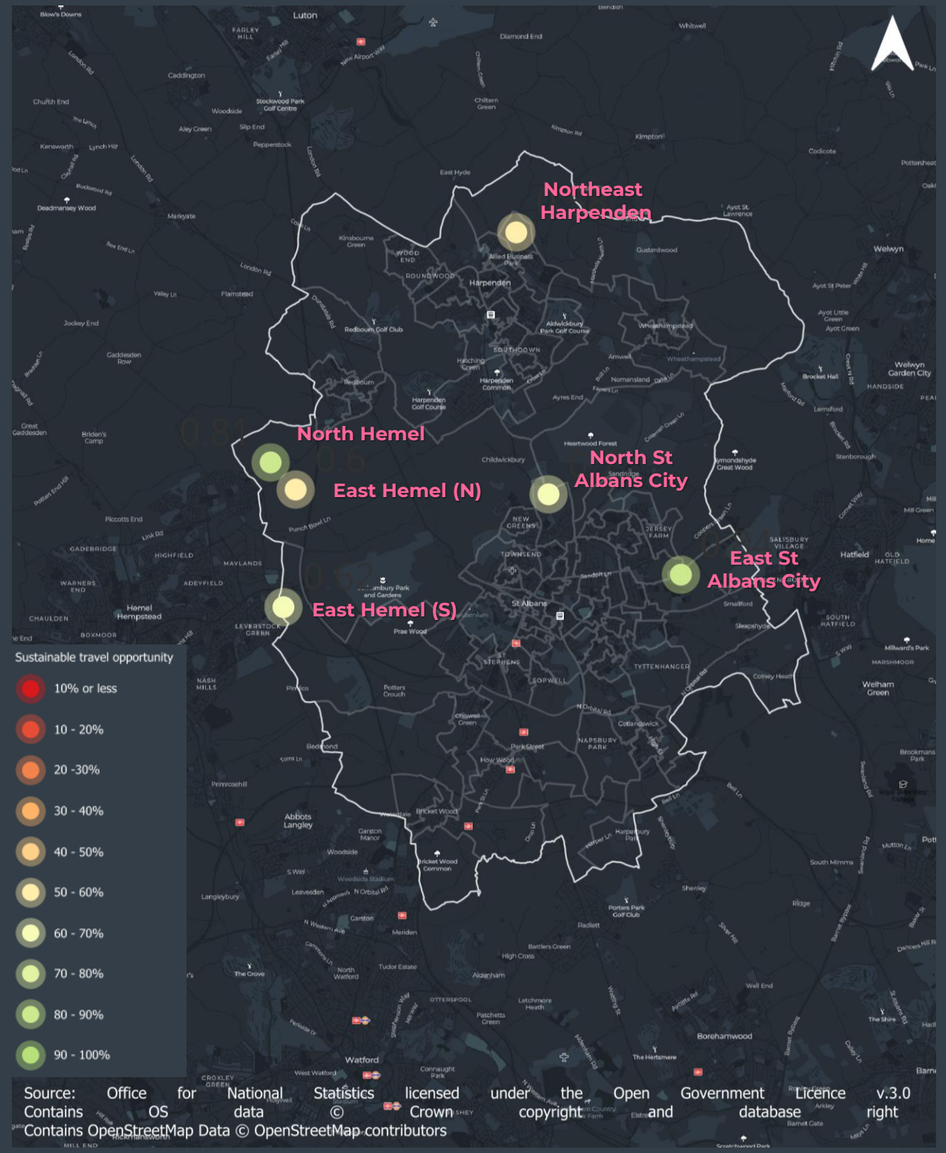
Figure 2.1 shows where the opportunity for modelled car trips to switch to sustainable modes across the different St Albans district development zones (high scenario). East St Albans City and North Hemel have the largest opportunity and Northeast Harpenden has the lowest. A high and lower scenarios for sustainable travel opportunities have been estimated based on distance and time (see methodology note). It is worth noting that these outputs assume no new sustainable transport provision, which is unlikely in reality – and therefore can be seen as a baseline level of opportunity.

Key findings include:

- 46-65% of modelled car trips in the new developments have the opportunity to shift to sustainable modes. Cycling provides the highest opportunity with 37-40% of car trips able to switch to cycling. 6-27% of car trips could switch to walking and less than 1% to public transport
- East St Albans City has the highest opportunity for car trips to shift to sustainable modes, with 67-84% of trips able to shift.
- North Hemel has the second highest opportunity, with 62-81% of car trips able to shift to sustainable modes, and North St Albans city has the third highest with 50-70% opportunity.
- The two East Hemel developments have similar opportunity – the southern development has 41-62% and the northern has 43-60%.
- Northeast Harpenden has the lowest sustainable travel opportunity, with 45-58% of car trips able to switch.

The following pages break down the sustainable travel opportunity for each existing community by high and lower sustainable travel opportunity scenarios (trips and vehicle kilometres travelled (VKT)).

Figure 2.1 Sustainable travel opportunity in St Albans development zones (high scenario)



SUSTAINABLE TRAVEL OPPORTUNITY

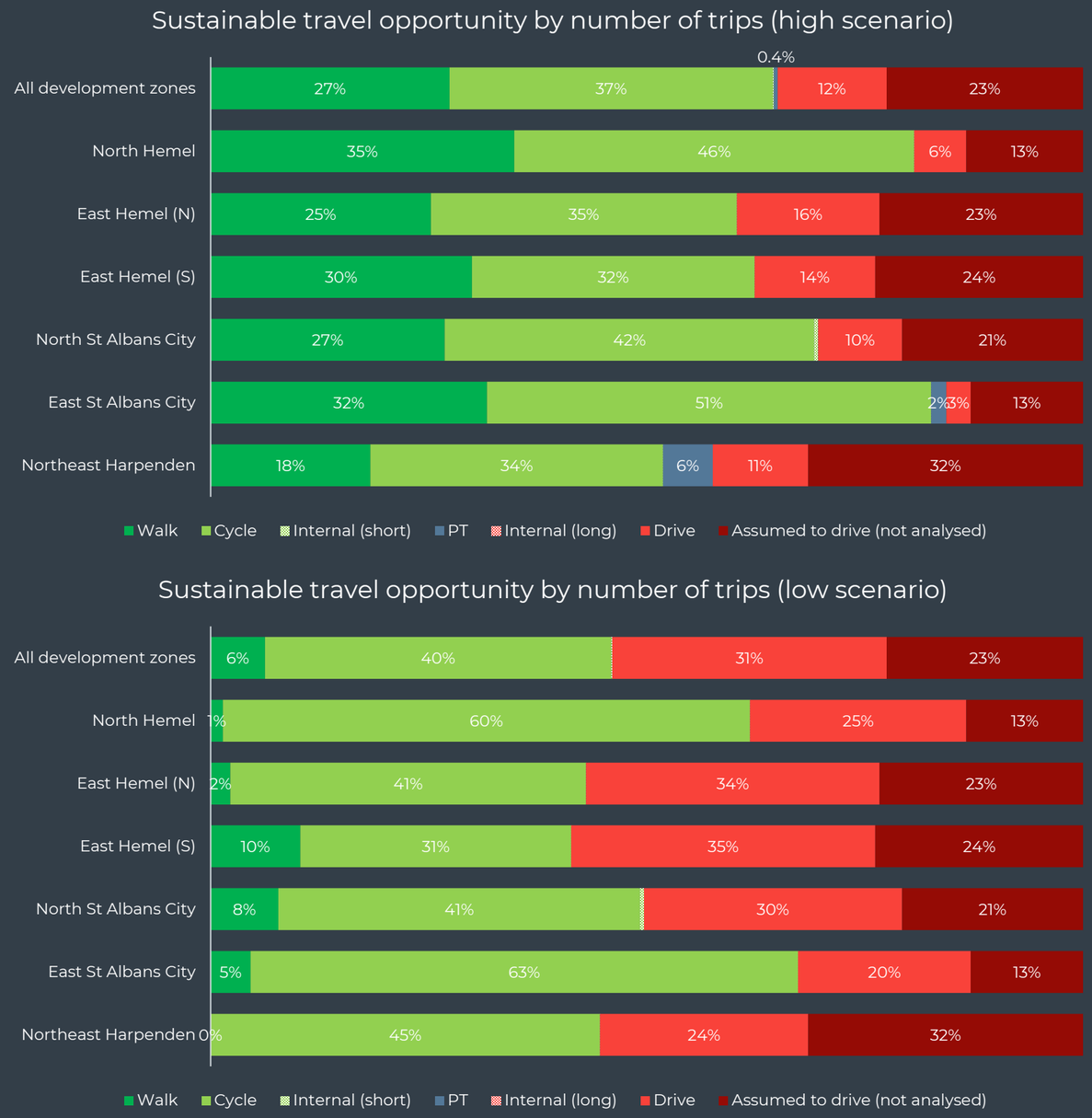
How many car trips in St Albans development zones could be made by sustainable modes?

Figure 2.2 shows the total sustainable travel opportunity by trips (high and lower scenarios) for the assessed developments across St Albans district and individually for each zone. Generally, the development zones with higher opportunity are the ones in closer proximity to more denser areas like Hemel Hempstead and St Albans City.

- All assessed development zones – opportunity is between 46-65%, with walking between 6-27%, cycling 37-40% and public transport less than 1%. This results in 35-54% of car trips that could not switch (including not analysed trips assumed to be driven).
- East St Albans City – opportunity is between 67-85% with walking being 5-32%, cycling 51-63% and public transport being up to 2%.
- North St Albans City – opportunity is between 50-70% with walking being 8-27%, cycling 41-42% and public transport less than 1%
- North Hemel – opportunity is between 62-81%, with walking 1-35%, cycling 46-60% and less than 1% for public transport.
- East Hemel – the northern development has 43-60% opportunity, with walking 2-25%, cycling 35-41% and less than 1% public transport. The southern development has 41-62% opportunity, with walking 10-30%, cycling 31-32% and less than 1% for public transport.
- Northeast Harpenden – opportunity is between 45-58%, with walking up to 18%, cycling 34-45% and up to 6% for public transport.

These areas are aligned to COMET zones and the trips are based on the 2031 O-D matrix which includes assumed future growth and development, but with existing sustainable transport provision. The intention is to provide a baseline on the number of future trips that could be made by sustainable modes – in the absence of any new provision.

Figure 2.2 Mode shift split (trips) by development (high scenario is top and lower scenario is bottom)



SUSTAINABLE TRAVEL OPPORTUNITY

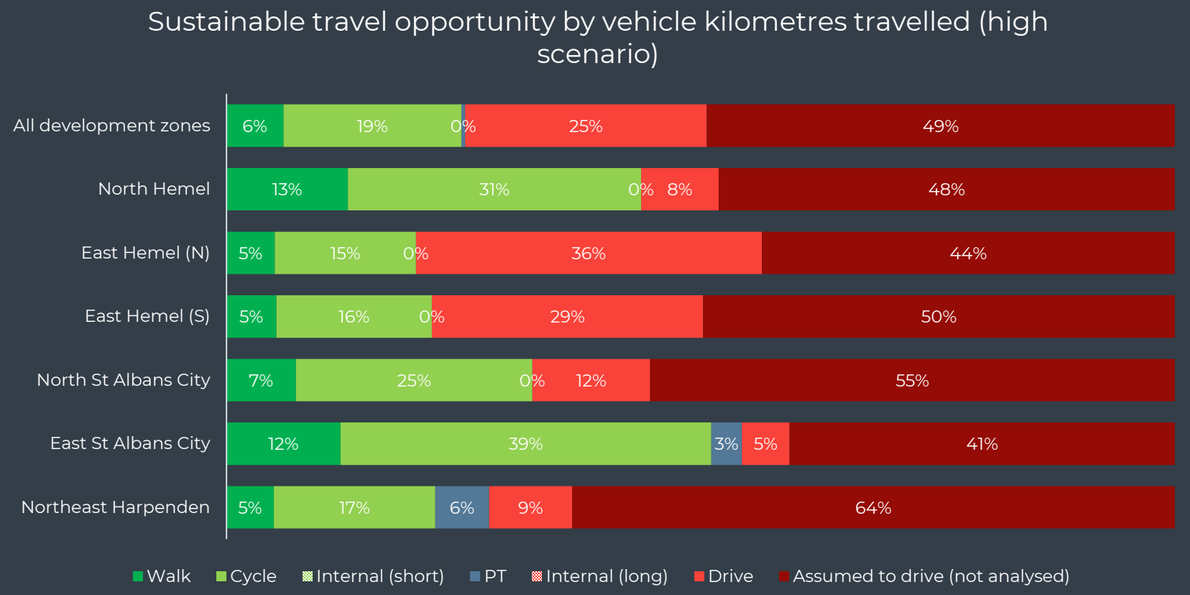
What is the sustainable travel opportunity by vehicle kilometres travelled (VKT)?

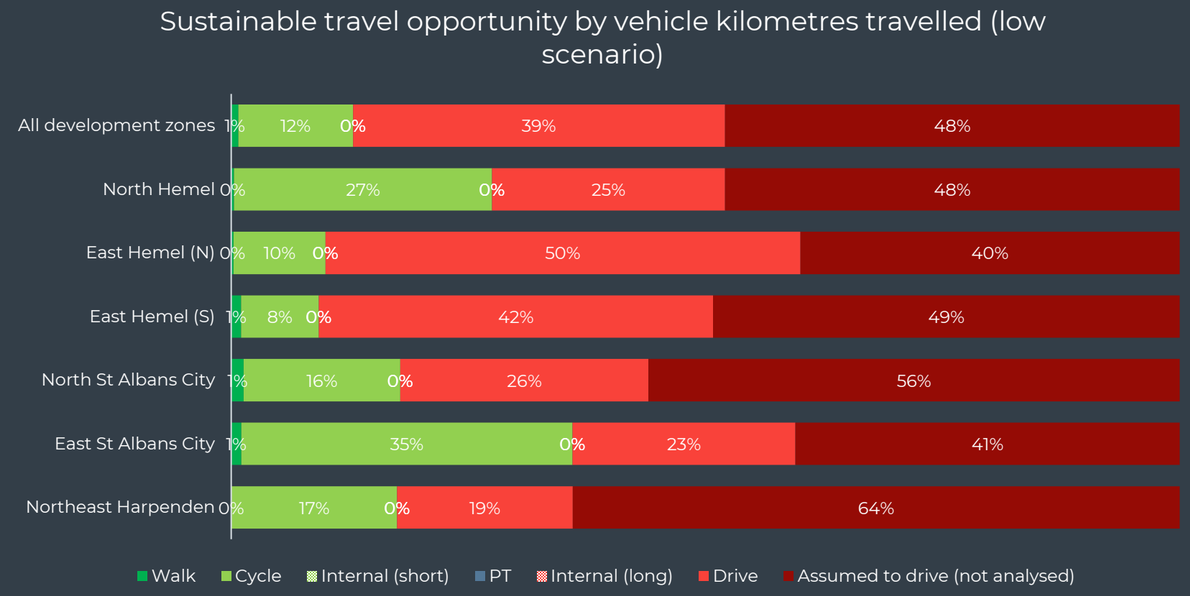
Figure 2.3 shows high and lower sustainable travel opportunity based on distance travelled. VKT (or people km) is important to consider as it highlights longer distance journeys, which typically have fewer trips, but can have a large effect on carbon emissions.

- All assessed development zones opportunity is between 13-25%, with walking being 1-6%, cycling 12-19% and public transport less than 1%. This results in 75-87% of car kilometres that could not switch (including not analysed trips assumed to be driven).
- East St Albans City opportunity is between 36-54% with walking at 1-12%, cycling at 35-39% and public transport up to 3%.
- North St Albans City – opportunity is between 18-32% with walking being 1-7%, cycling 16-25% and public transport less than 1%
- North Hemel opportunity is between 27-44% with walking up to 13%, cycling at 27-31% and less than 1% public transport.
- Northeast Harpenden opportunity is between 17-28% with walking up to 5%, cycling around 17% and up to 6% public transport.
- East Hemel (S) opportunity is between 9-22% with walking at 1-5%, cycling at 8-16% and less than 1% for public transport
- East Hemel (N) opportunity is between 10-20% with walking at up to 5%, cycling at 10-15% and less than 1% for public transport

More information on vkt calculations can be found in the Methodology note

Figure 2.3 Mode shift split (VKT) by new development (high scenario is top and lower scenario is bottom)





Sustainable travel opportunity

Walking, cycling and public transport opportunity in St Albans development zones

Figure 2.4 shows the number of trips that could be walked, cycled or taken by public transport while **Figure 2.6, 2.7 and 2.8** shows the proportion of trips that could be taken by each mode across the district.

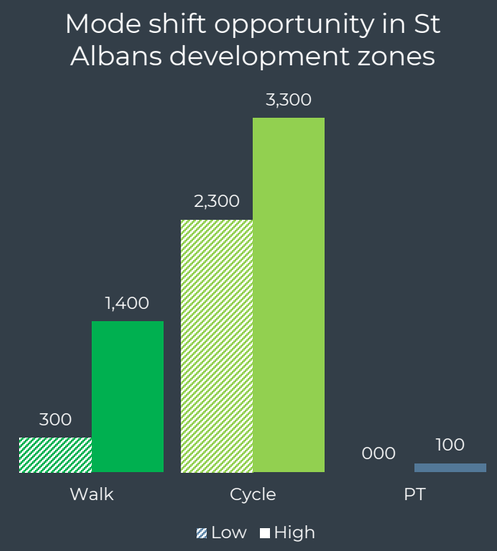
Key findings include:

- **Cycling** presents the greatest opportunity for mode shift with a range of 2,300 - 3,300 modelled car trips able to be cycled across the development zones. Generally, cycling opportunity is evenly distributed across the zones with no zone showing below 30% opportunity.
- **Walking** opportunity is higher is the zones closer to Hemel Hempstead such as North Hemel and East Hemel, followed by zones closer to St Albans such as North and East St Albans where journeys are likely to be smaller distances to nearby urban centres. 300-1,400 such trips are able to be walked.
- **Public transport** opportunity is less than 1% in most zones except East St Albans and Northeast Harpenden with 2% and 6 opportunity, respectively. In terms of daily trips this is between 0 - 100. However, this is based on existing public transport provision.

Figure 2.5 (overleaf) shows the number of trips able to be walked, cycled or taken by public transport across the St Albans development zones.

A detailed list of the range of trips with the opportunity to shift by mode table can be found in **Appendix B (Table B2)**.

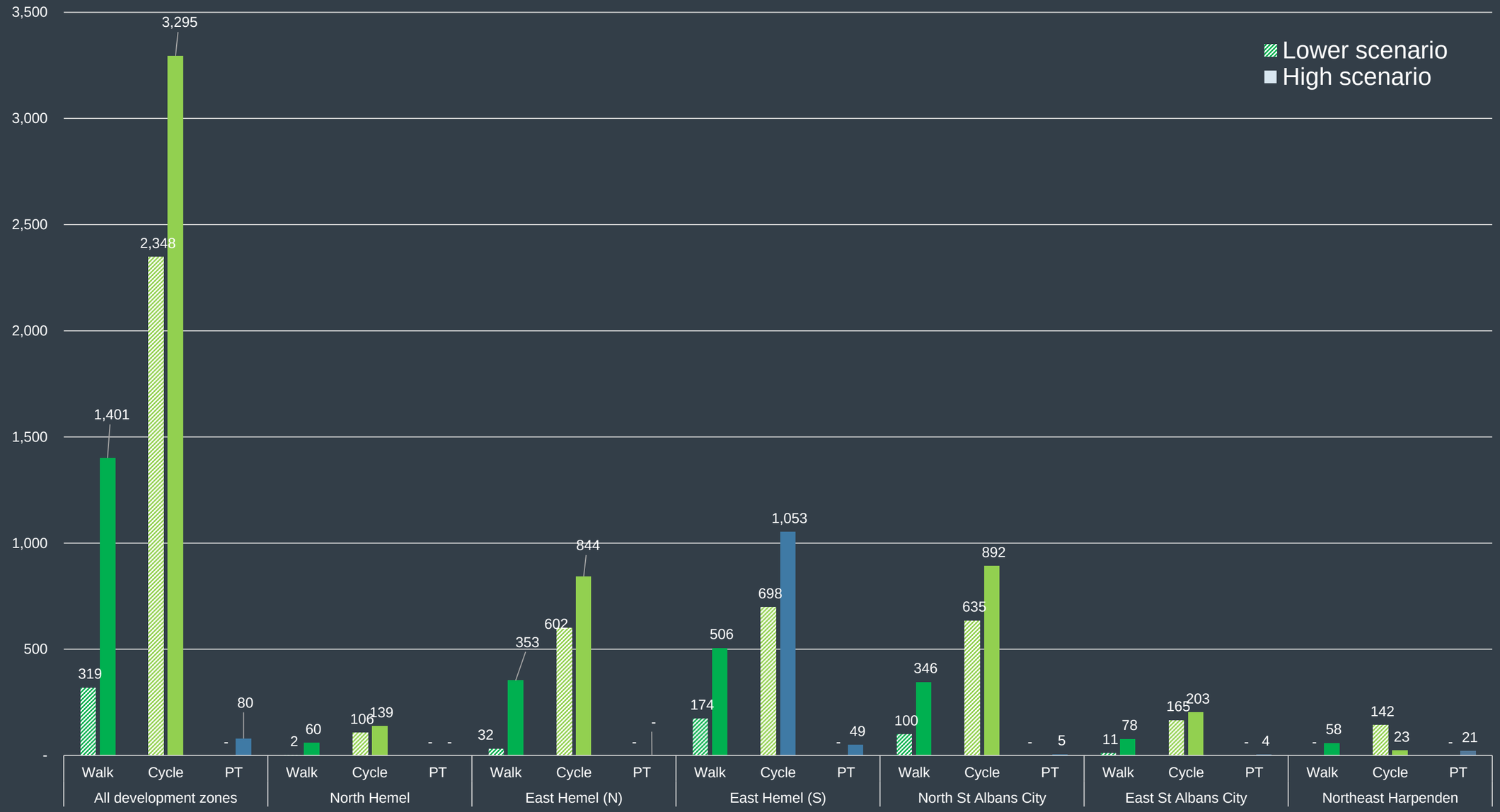
Figure 2.4 Range of trips with the opportunity to shift by mode (St Albans)



	Walking opportunity		Cycling opportunity		PT opportunity
	Main mode	First and last mile*	Main mode	First and last mile*	Main mode
Daily trips	300 - 1,400	0 - 100	2,300 - 3,300	0 - 100	0 - 100
Daily people km	400 - 3,000	0 - 100	6,700 - 12,600	0 - 100	0 - 600

* Linked to public transport trips

Figure 2.5 Mode shift split (trips) in new development zones under high and lower sustainable travel opportunity scenarios



Sustainable travel opportunity

Walking opportunity in St Albans development zones

Figure 2.6 sets out the opportunity to walk for the new development zones in St Albans district (high scenario).

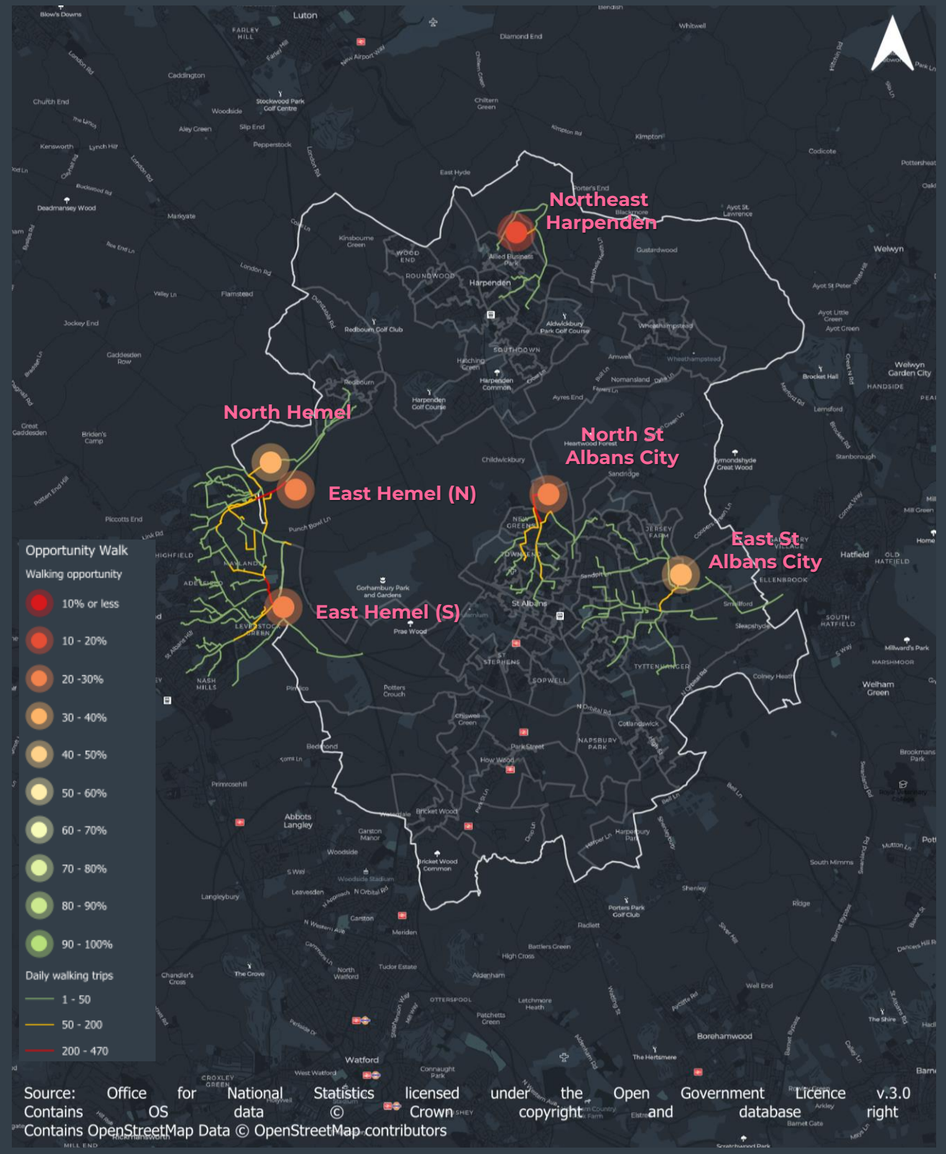
Walking opportunity varies across the six developments, with zones closer to Hemel Hempstead and St Albans City showing higher opportunity.

In the high scenario, walking opportunity is highest in North Hemel with 35% opportunity and routes connecting to Hemel Hempstead having a high trip opportunity between 50-470 trips. Some walking opportunity is also observed from North Hemel to Redbourn with up to 50 trips. However, in the lower scenario – walking opportunity is only 1% which shows that most of the car trips that could switch to walking are between 1-2 miles and only a small number of trips from this zone under 1 mile.

Northeast Harpenden (0-18%) and East Hemel (N) (2-25%) also have a large range for walking opportunity, and a particularly low opportunity for walking in the lower scenario, showing that there are limited number of modelled car trips under 1 mile.

East St Albans City (5-32%), North St Albans City (8-27%) and East Hemel (S) (10-30%) have a higher proportion of modelled car trips under 1 mile, due to their proximity to denser areas such as St Albans City and Hemel Hempstead.

Figure 2.6 Walking opportunity in St Albans (high scenario)



Sustainable travel opportunity

Cycling opportunity in St Albans development zones

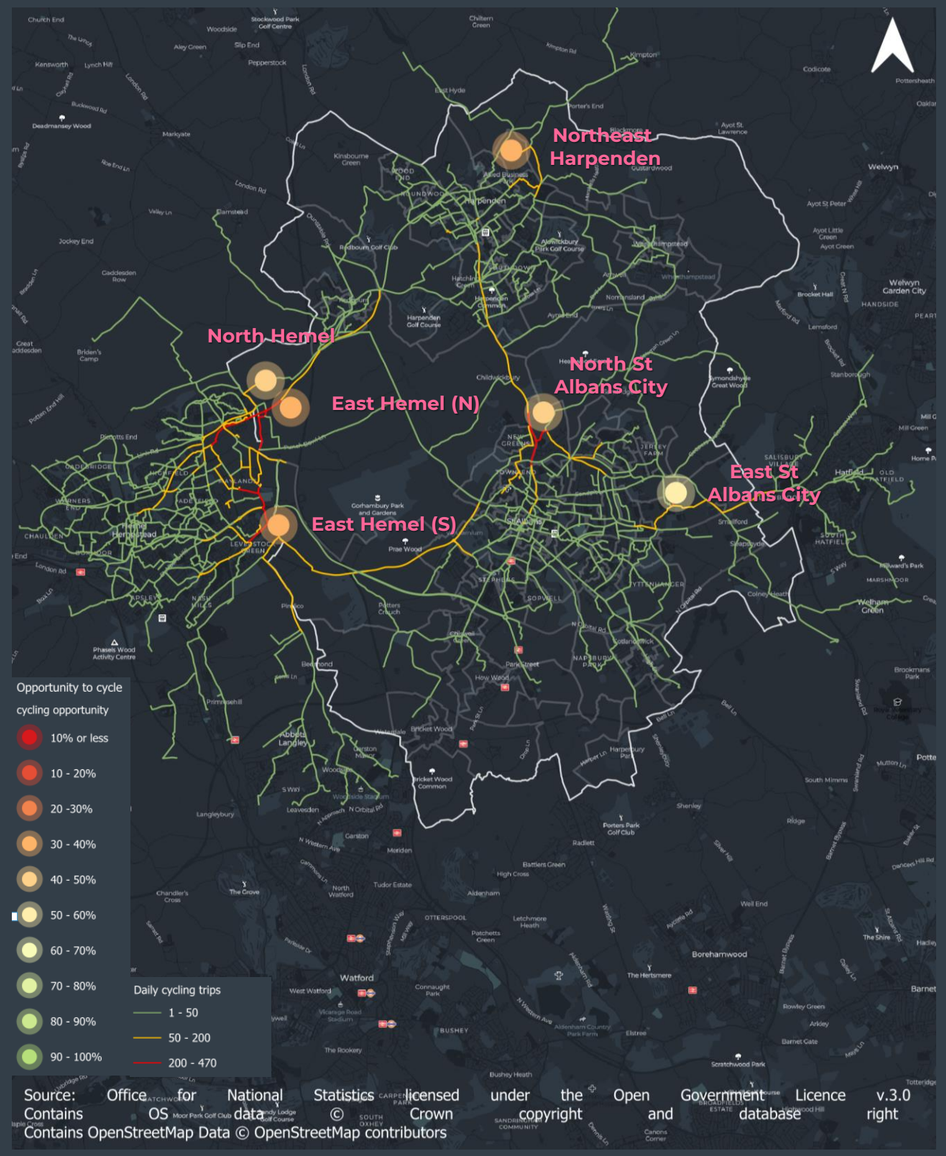
Figure 2.7 sets out the opportunity to cycle for the new development zones in St Albans district (high scenario).

Cycling opportunities across the six developments are higher than walking. The highest opportunity exists in North Hemel, with 46-60% of modelled car trips that could switch to cycling. Perhaps unintuitively, the higher end of the range relates to the lower mode shift scenario here. This is due to trip distance thresholds between walking and cycling, with car trips more than 1 mile not able to switch to walking in the lower scenario, but still able to be cycled. Whereas, in the high scenario, car trips up to 2 miles can be walked – subsequently, reducing the cycling opportunity. This also happens for East Hemel (N), East St Albans City and Northeast Harpenden.

East St Albans City has the second highest cycling opportunity with 51-63% of car trips that could switch to cycling. East Hemel (S) has the lowest opportunity with 31-32%.

Cycling opportunities extend beyond the town centres with 50-200 car trips that could switch to cycling on routes connecting the three denser areas of St Albans City, Hemel Hempstead and Harpenden).

Figure 2.7 Cycling opportunity in St Albans (high scenario)



Sustainable travel opportunity

Public transport opportunity in St Albans development zones

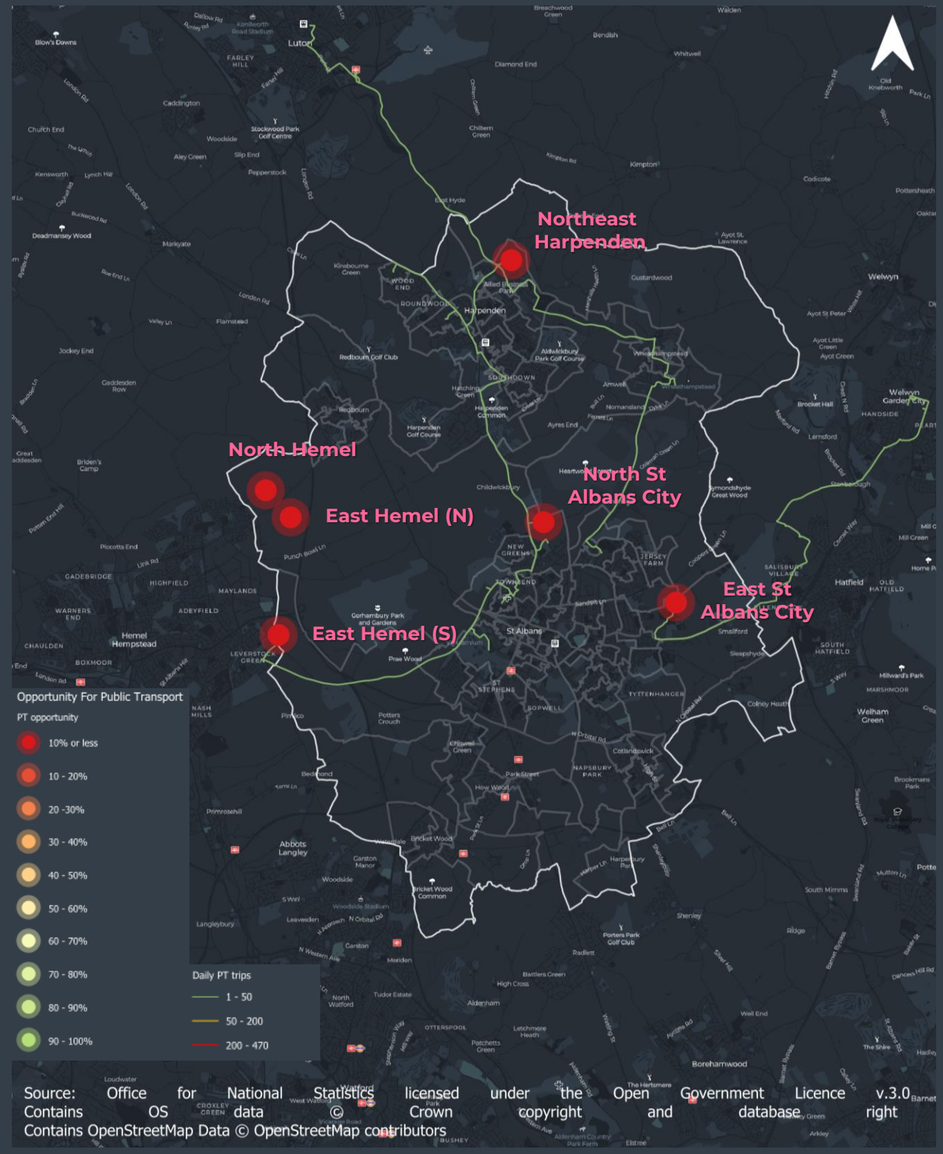
Figure 2.8 sets out the opportunity to use public transport for the new development zones in the St Albans district (high scenario).

Public transport opportunity is very low across the development zones. Northeast Harpenden has some public transport opportunities (up to 6%) with routes to St Albans City (via trains and buses along the A1081) and Luton. East St Albans City also has some opportunities (up to 2%) in public transport opportunity due to connectivity with Welwyn Garden City.

North and East Hemel (N) do not currently have any public transport opportunities and lack connections to Hemel Hempstead. There is an observed public transport connection to St Albans City from East Hemel (South), but very limited opportunity (less than 1%).

However, it should be stressed that this analysis is based on current public transport provision and does not assume any additional infrastructure or services which in reality is unlikely.

Figure 2.8 Public transport opportunity in St Albans (high scenario)



PART 2B

Sustainable travel propensity for new developments

Sustainable travel propensity

Proportion of household

Table 2.1 sets out the proportion of households for St Albans district and the new developments compared to the England average.

This analysis highlights the differences in existing demographics and lifestyles between St Albans district and the new developments, and the England average across various categories.

In England, the proportions of households in each Mosaic Group are relatively evenly spread, with Aspiring Homemakers having the highest proportion at 11% and Modest Traditions having the lowest at 4%.

In St Albans development zones, the proportions of households in each Mosaic Group are different, as they are expected to attract more Aspiring Homemakers, Domestic Success and Rental Hubs households. The Mosaic profiles are based on the existing development of Oaklands in St Albans district, proposed housing types (e.g. affordable, social and rental) and validated using similar developments in the wider region.

The dominant Mosaic Group within the new development zones is assumed to be Domestic Success, representing 60% of households. These households typically have a greater propensity to drive and lower propensity to use sustainable modes than the England average, due to higher incomes, larger dwellings and higher levels of car ownership. Aspiring Homemakers make up 15% of households and have similar propensities to Domestic Success.

Rental Hubs make up 15% of households which typically have a greater propensity to use sustainable modes and a lower propensity to drive than the England average. Prestige Positions make up 10% and these households have a lower propensity to travel in general, with rail and driving propensity just under the England average and lower propensities for walk, cycle and bus.

Table 2.1 Proportion of households in each Mosaic Group in St Albans, its new developments and England

	Mosaic Group	St Albans district	New developments	England average
A	City Prosperity	14%	-	5%
B	Prestige Positions	33%	10%	7%
C	Country Living	1%	-	7%
D	Rural Reality	0%	-	6%
E	Senior Security	4%	-	8%
F	Suburban Stability	1%	-	5%
G	Domestic Success	29%	60%	9%
H	Aspiring Homemakers	5%	15%	11%
I	Family Basics	4%	-	9%
J	Transient Renters	0%	-	6%
K	Municipal Challenge	0%	-	6%
L	Vintage Value	1%	-	6%
M	Modest Traditions	0%	-	4%
N	Urban Cohesion	1%	-	6%
O	Rental Hubs	7%	15%	8%

Sustainable travel propensity

Average mode propensity

Table 2.2 sets out the average mode propensity (i.e. average of all trip types) based on expected socio-demographics for St Albans district development zones compared to the England average (which is 100). A score greater than 100 suggests a higher than England average propensity to use that mode, while a value below 100 suggests the opposite.

In general, based on the expected socio-demographics of new residents, the **St Albans development zones are relatively car-dependent**, with the zones having greater than the England average drive propensity of 100, and propensities to take sustainable modes being less than average.

The propensity to take sustainable modes in St Albans development zones is below the English average with all corresponding propensity scores being below 100 :

- **Walking** – 80
- **Cycling** – 80
- **Bus** – 72
- **Rail** – 87

More information on Mosaic Groups and Mobility Insights survey and how this feeds into propensities can be found in the methodology note.

Table 2.2 Average propensity for walking, cycling, using bus, using rail and driving (all journey purposes)

Propensity	England average	St Albans district	New developments
Walk	100	91	80
Cycle	100	88	80
Bus	100	85	72
Rail	100	106	87
Drive	100	100	104

PART 2C

Sustainable travel potential for new developments

Sustainable travel potential

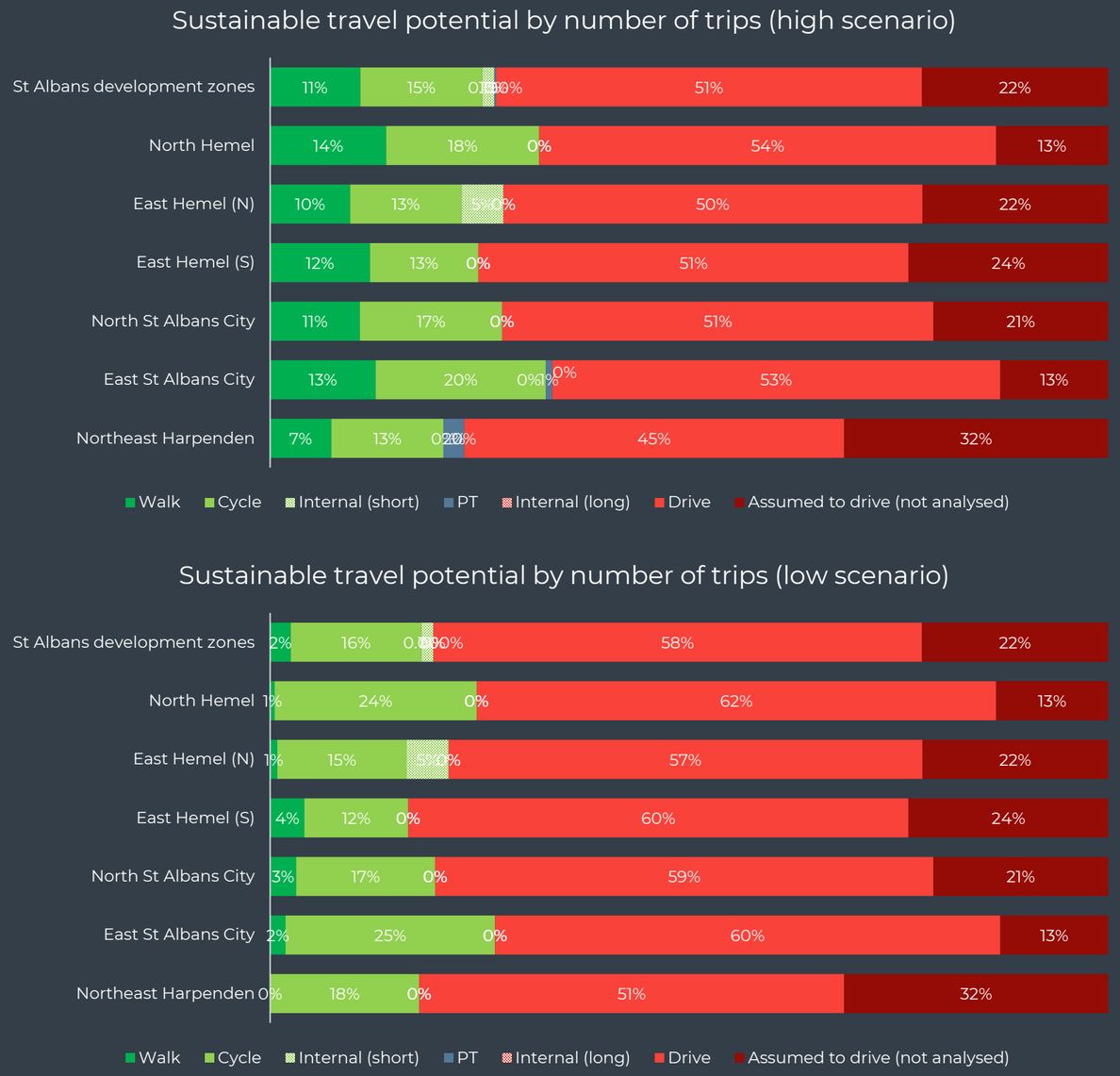
What is the likely sustainable travel potential for the new developments?

Figure 2.9 shows high and lower sustainable travel potential for trips, based on existing provision and expected socio-demographics:

- St Albans development zones – potential is between 19-27% with walking being 2-11%, cycling 15-16% (including short internal trips) and public transport less than 1%. About 73-81% of car trips would not switch (including not analysed trips assumed to be driven)
- East St Albans & North St Albans – potential is highest in East St Albans City at 27-34%, walking being 2-13%, cycling at 20-25% and public transport up to 1%. In North St Albans City, the potential is between 20-28% with 3-11% walking and cycling around 17%. Public transport potential is less than 1%.
- North Hemel & East Hemel – potential is between 25-32% in North Hemel, with walking being 1-14% and cycling at 18-24%. In East Hemel, potential is higher in the northern development with between 21-28% (1-10% walking and 13-15% cycling), compared to 16-25% (4-12% walking and 12-13$ cycling) in the southern development. All Hemel developments have less than 1% potential for public transport.
- Northeast Harpenden – potential is lowest at 18-23%, with walking up to 7%, cycling 13-18% and public transport up to 2%.

This data indicates limited potential to use public transport, suggesting that the current public transport network needs to be improved to ensure that the new developments are better served by public transport.

Figure 2.9 Sustainable travel potential by number trips for high (top) and lower (bottom) scenarios



Walking potential

Up to **11%** of trips across the new developments could be made by walking as the main mode.

North Hemel	Main mode
Daily trips	Less than 50
Daily people km	Up to 100

East Hemel (North)	Main mode
Daily trips	Up to 100
Daily people km	100 - 300

East Hemel (South)	Main mode
Daily trips	100 – 200
Daily people km	100 - 400

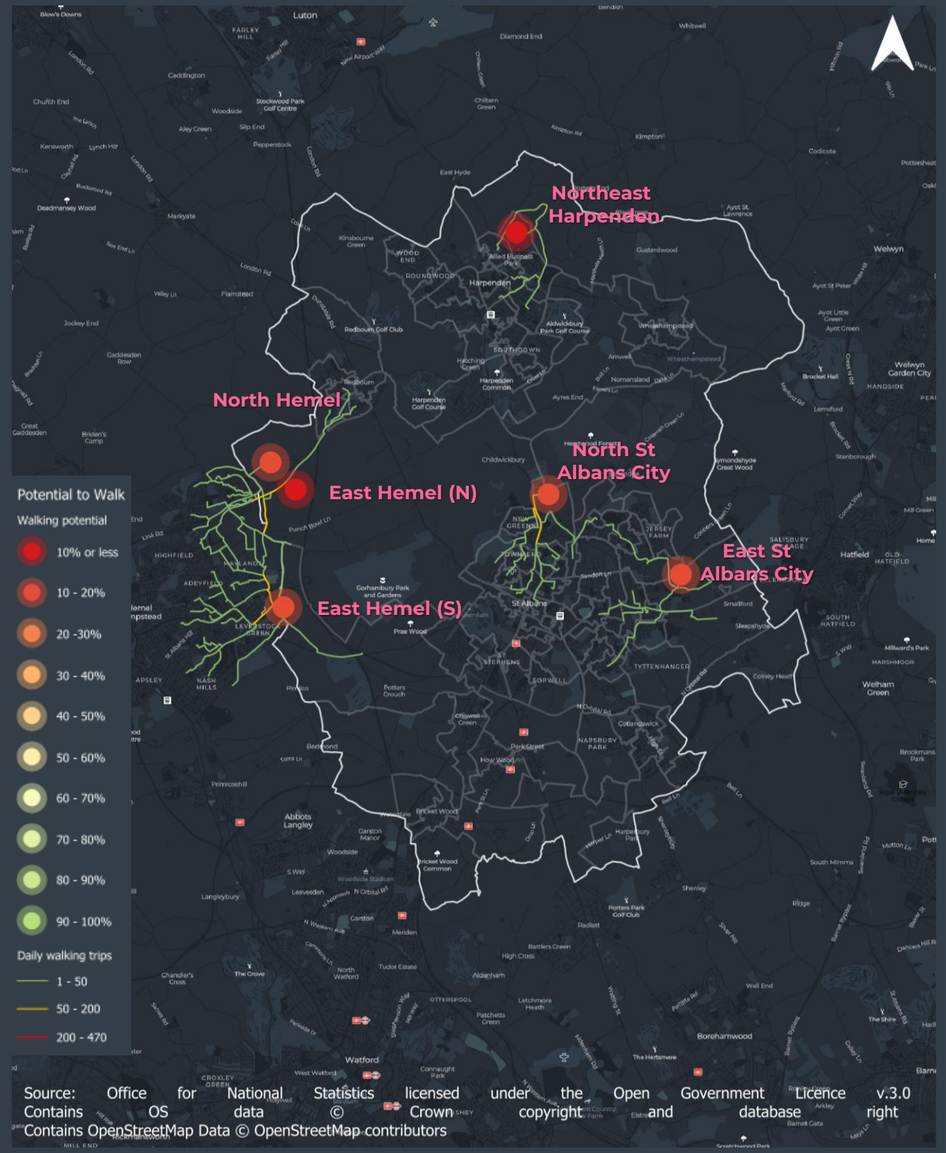
North St Albans City	Main mode
Daily trips	Up to 100
Daily people km	100 - 300

East St Albans City	Main mode
Daily trips	Less than 50
Daily people km	Up to 100

Northeast Harpenden	Main mode
Daily trips	Less than 50
Daily people km	Up to 100

Note – given the limited public transport potential, there is limited potential for additional walk trips through first/last mile to public transport stops.

Figure 2.10 Walking potential in St Albans district (high scenario)



CYCLING POTENTIAL

Up to **16%** of trips across the new developments could be made by cycling as the main mode

North Hemel	Main mode
Daily trips	Up to 100
Daily people km	100 - 200

East Hemel (North)	Main mode
Daily trips	200 – 300
Daily people km	700 – 1,300

East Hemel (South)	Main mode
Daily trips	300 – 400
Daily people km	700 – 1,600

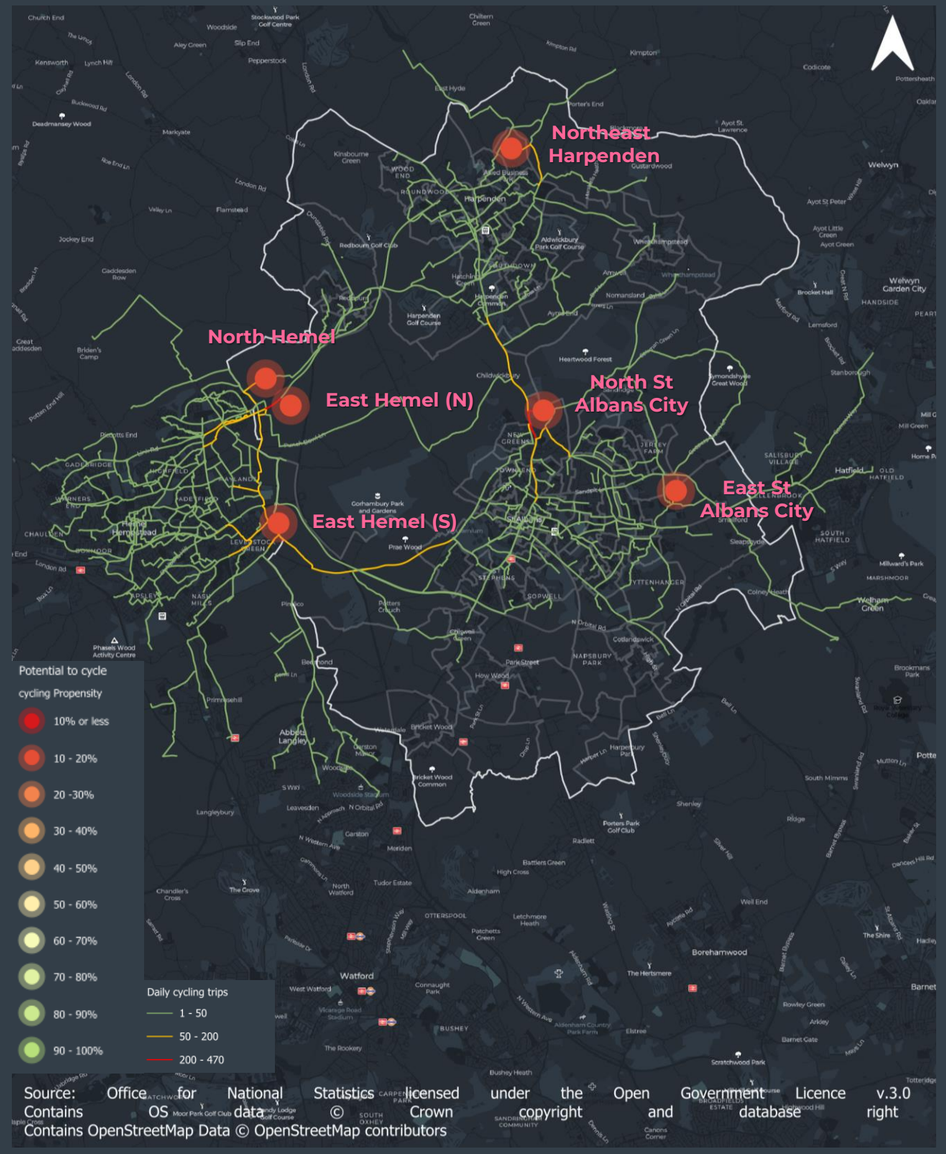
North St Albans City	Main mode
Daily trips	300 - 400
Daily people km	700 – 1,400

East St Albans City	Main mode
Daily trips	Around 100
Daily people km	200 – 300

Northeast Harpenden	Main mode
Daily trips	Around 100
Daily people km	Around 200

Note – given the limited public transport potential, there is limited potential for additional cycle trips through first/last mile to public transport stops.

Figure 2.11 Cycling potential in St Albans (high scenario)



Public transport potential

Less than **1%** of trips across the new developments, 2% in Northeast Harpenden and 1% in East St Albans could be made by public transport as the main mode (based on existing provision)

North Hemel	Main mode
Daily trips	Less than 50
Daily people km	Less than 50

East Hemel (North)	Main mode
Daily trips	Less than 50
Daily people km	Less than 50

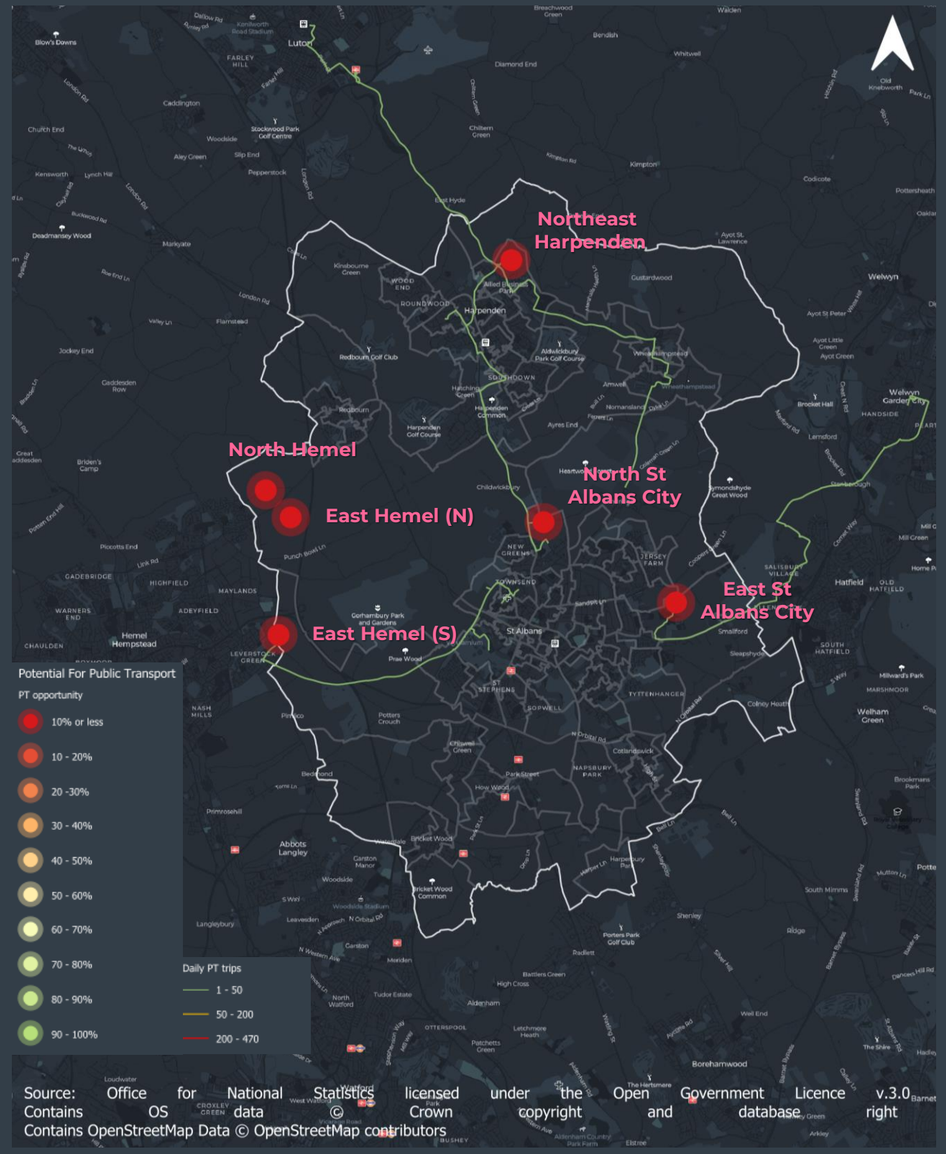
East Hemel (South)	Main mode
Daily trips	Less than 50
Daily people km	Up to 100

North St Albans City	Main mode
Daily trips	Less than 50
Daily people km	Less than 50

East St Albans City	Main mode
Daily trips	Less than 50
Daily people km	Less than 50

Northeast Harpenden	Main mode
Daily trips	Less than 50
Daily people km	Up to 100

Figure 2.12 Public transport potential in St Albans (high scenario)



Summary

Sustainable travel opportunity

Sustainable travel opportunity is the proportion of car trips that could be switched to walking, cycling or public transport based on distance and time criteria.

Based on assumed growth but existing active travel and public transport networks and services:

- Up to 65% of modelled car trips across the assessed St Albans district development zones have the opportunity to switch to sustainable modes.
- Cycling provides the highest opportunity, with up to 40% of car trips able to be cycled across the development zones.
- Up to 27% of modelled car trips could switch to walking
- Less than 1% could switch to public transport.

Sustainable travel propensity

Sustainable travel propensity is the likelihood of using a mode based on the projected socio-demographics and lifestyles of the new development residents.

Based on existing developments, and likely housing proportions, it is expected that St Albans development zone residents will have below average propensities for walking, cycling and bus, but above average propensity for rail and drive, compared to the England average.

The projected dominant Mosaic Group within the new development zones is Domestic Success, representing 60% of the households. This group is more likely to be car-dependent, as they have higher incomes, larger dwellings and more car ownership.

The propensities for walking, cycling, bus and rail in the new development zones are 80, 80, 72 and 87 respectively, while the propensity for drive is 104, based on a scale where the England average is 100.

It is worth noting that propensities can change if sustainable travel options are improved.

Sustainable travel potential

Sustainable travel potential is the combination of opportunity and propensity, indicating the realistic mode shift potential for the new development zones.

Based on assumed growth but existing active travel and public transport networks and services, and expected socio-demographics and travel behaviours:

- Up to 27% of modelled car trips across the assessed St Albans district development zones have the potential to switch to sustainable modes.
- Cycling provides the highest potential, with up to 24% of car trips that have the potential to be cycled across the development zones.
- Up to 14% of modelled car trips have the potential to switch to walking
- Less than 1% would switch to public transport.

Note – not all new developments in St Albans district have been assessed but the findings here can be used to estimate the likely opportunity and potential in other development areas.

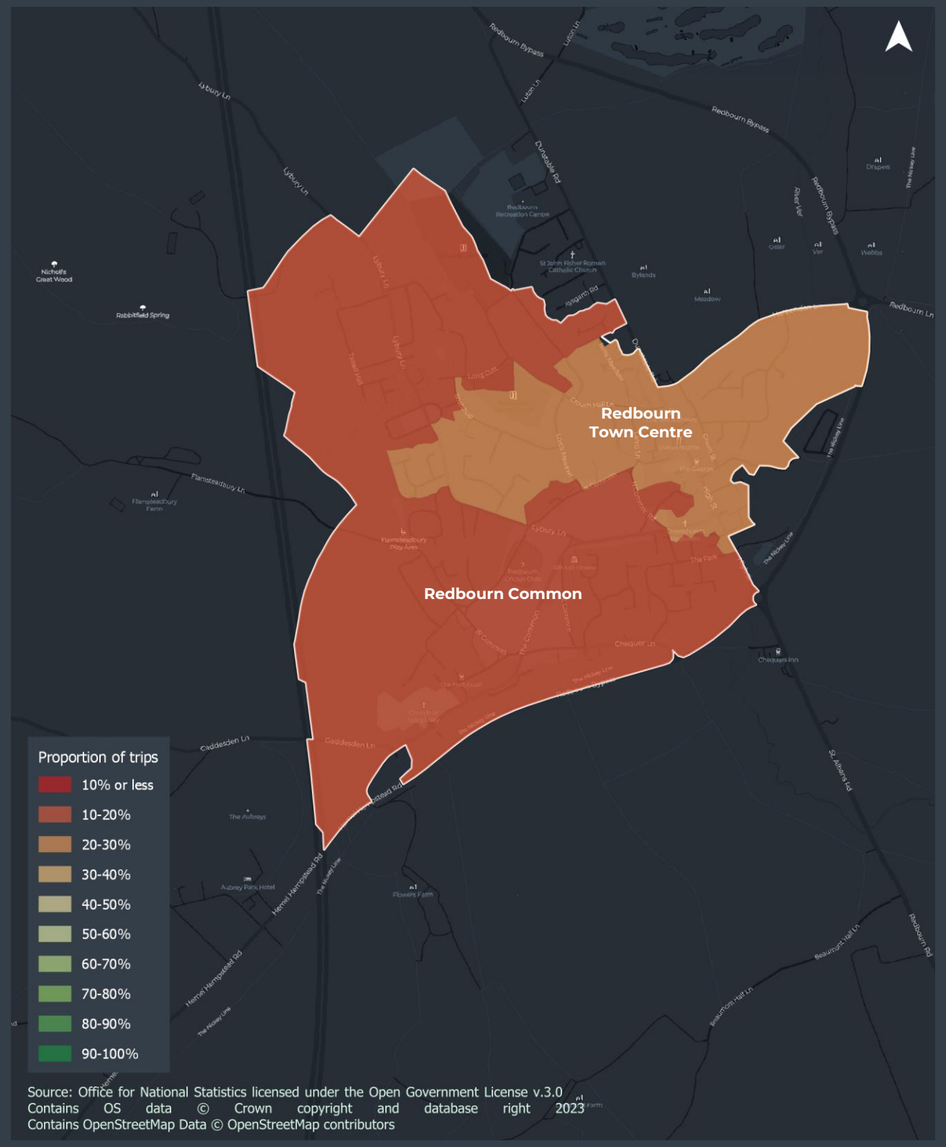
For example, for the new development proposed in West Redbourn – it is likely that this development would have lower mode shift opportunity and potential given it is further away from denser areas such as St Albans City, Hemel Hempstead and Harpenden.

APPENDIX A

Breakdown of sustainable travel opportunity for existing communities

Walking opportunity

Appendix A1 Walking opportunity in Redbourn



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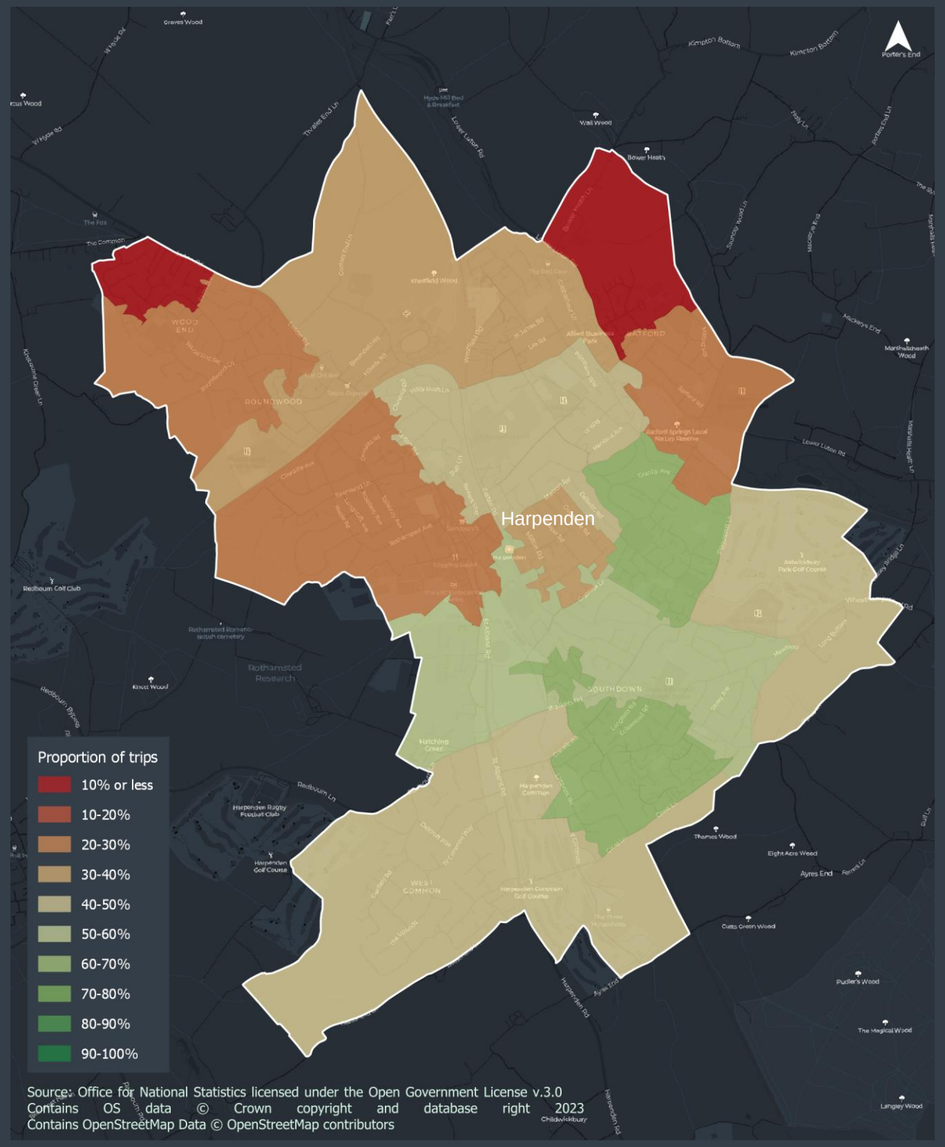
Appendix A2 Walking opportunity in Harpenden



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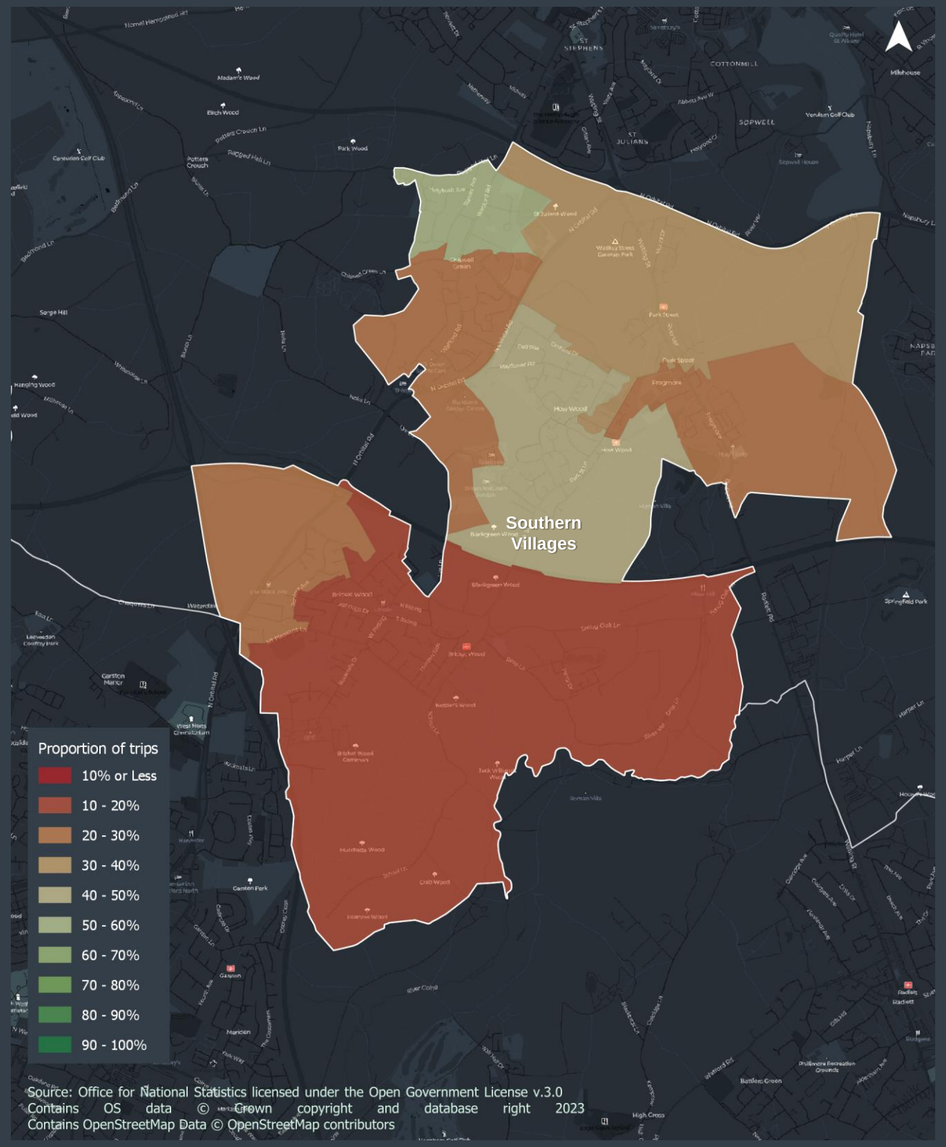
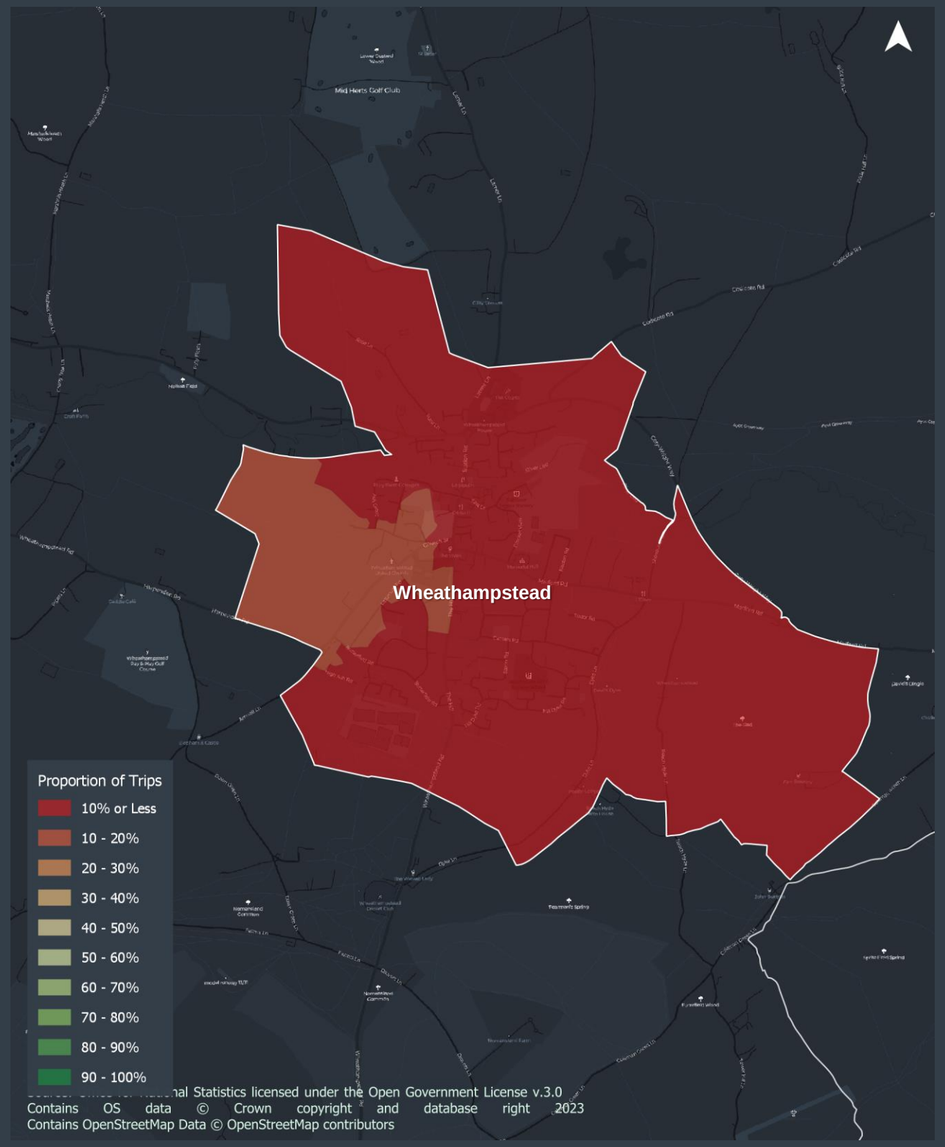
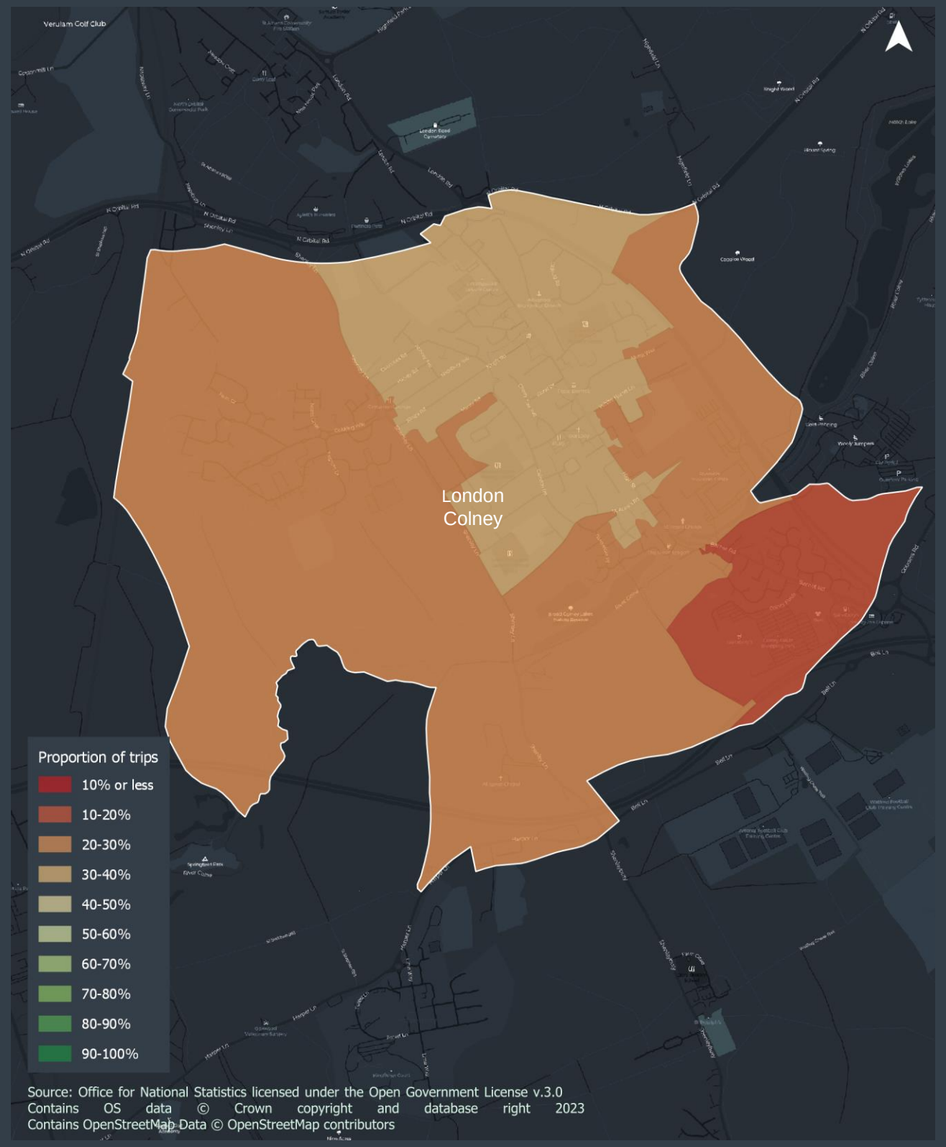
Appendix A3 Walking opportunity in Southern Villages



Appendix A4 Walking opportunity in Wheathampstead



Appendix A5 Walking opportunity in London Colney



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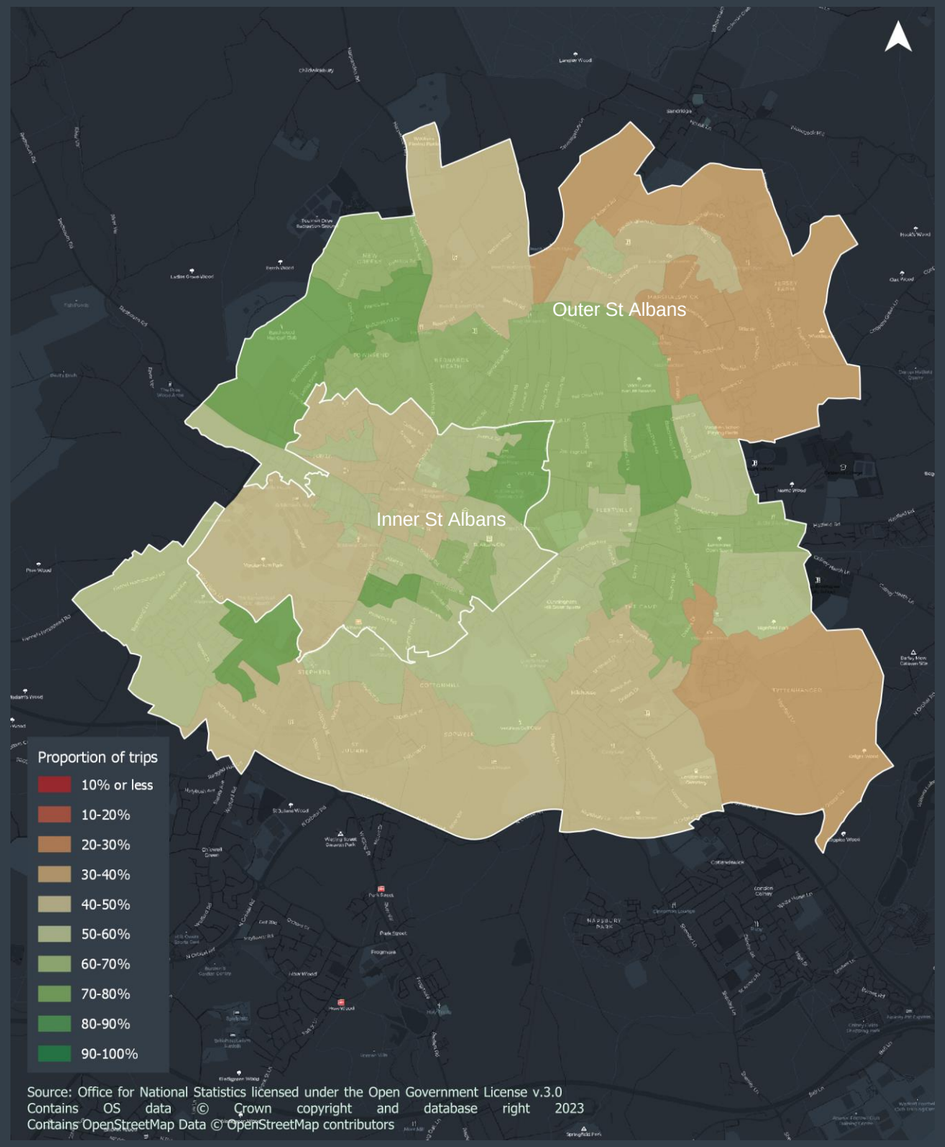
Appendix A6 Walking opportunity in Inner & Outer St Albans



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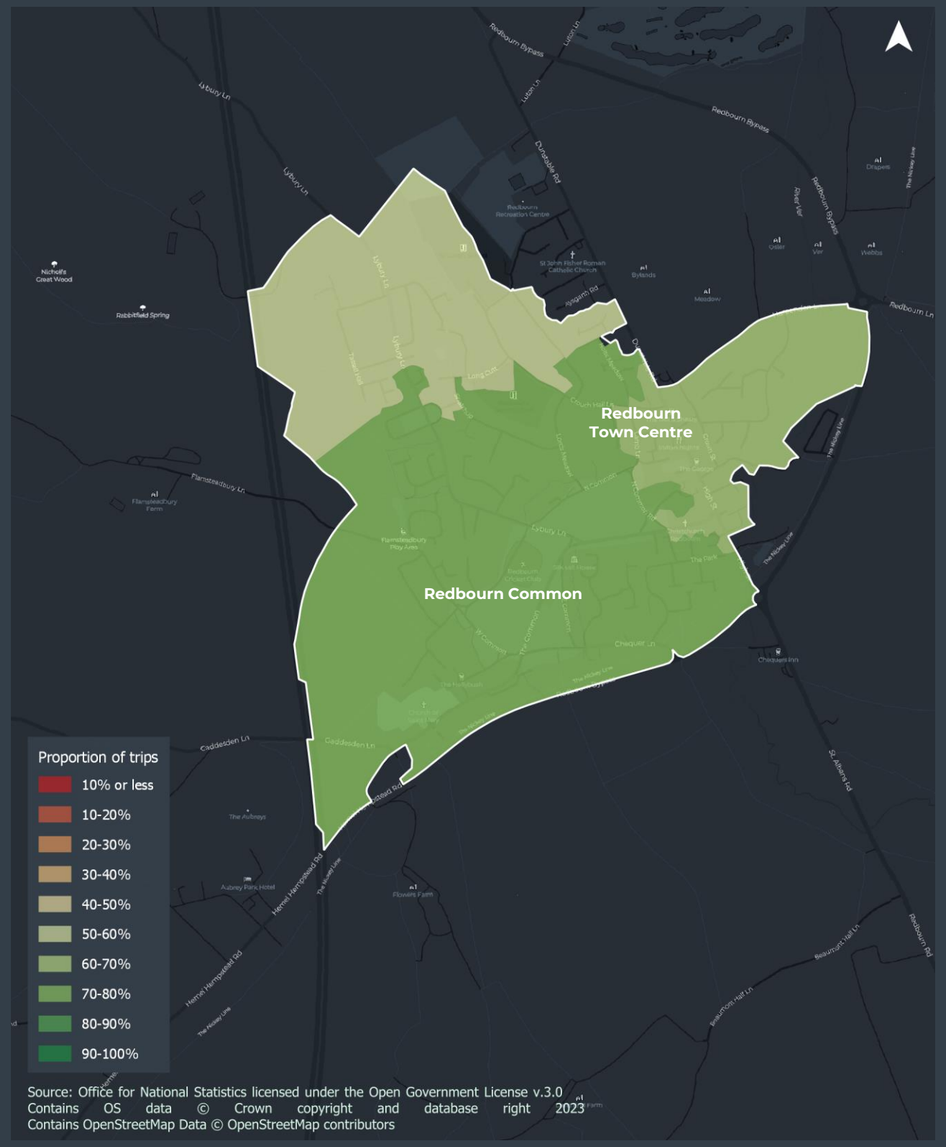
Cycling opportunity

Appendix A7 Cycling opportunity in Redbourn



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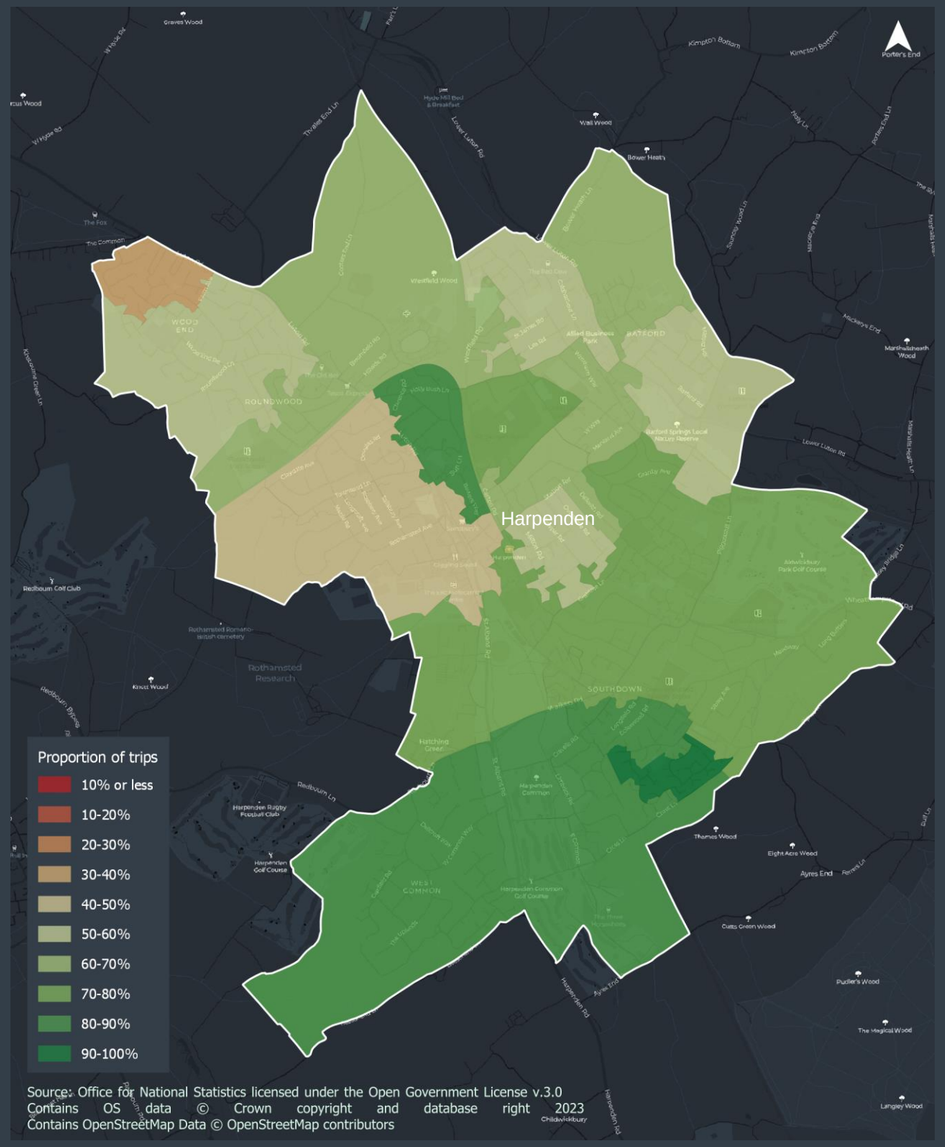
Appendix A8 Cycling opportunity in Harpenden



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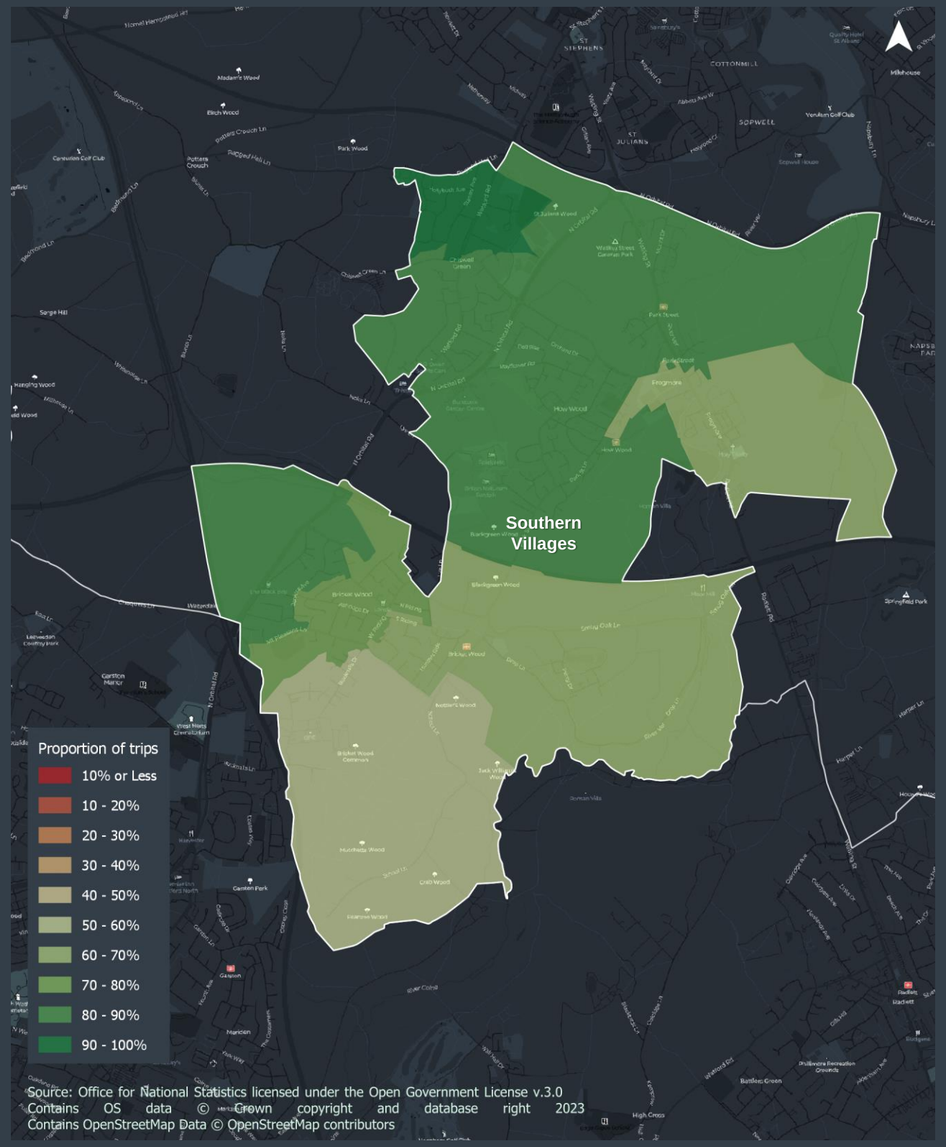
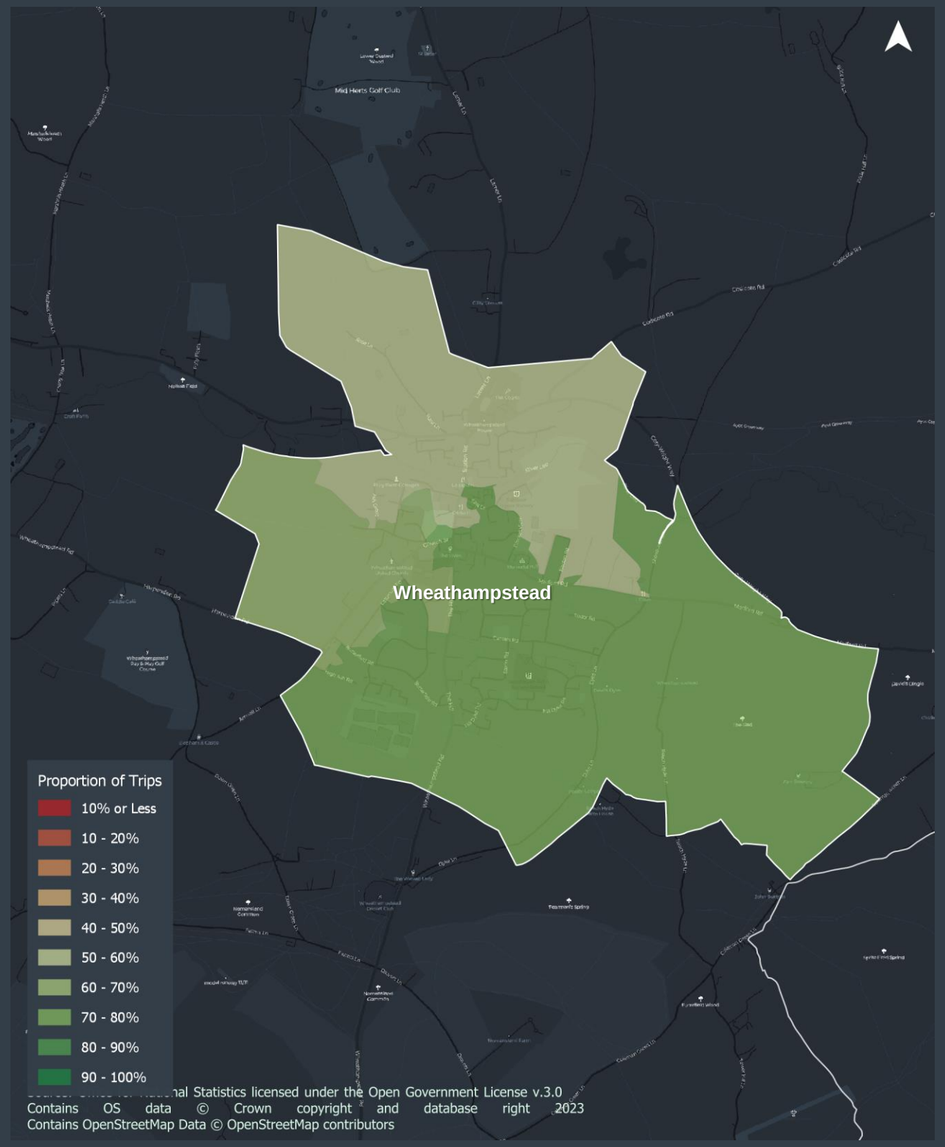
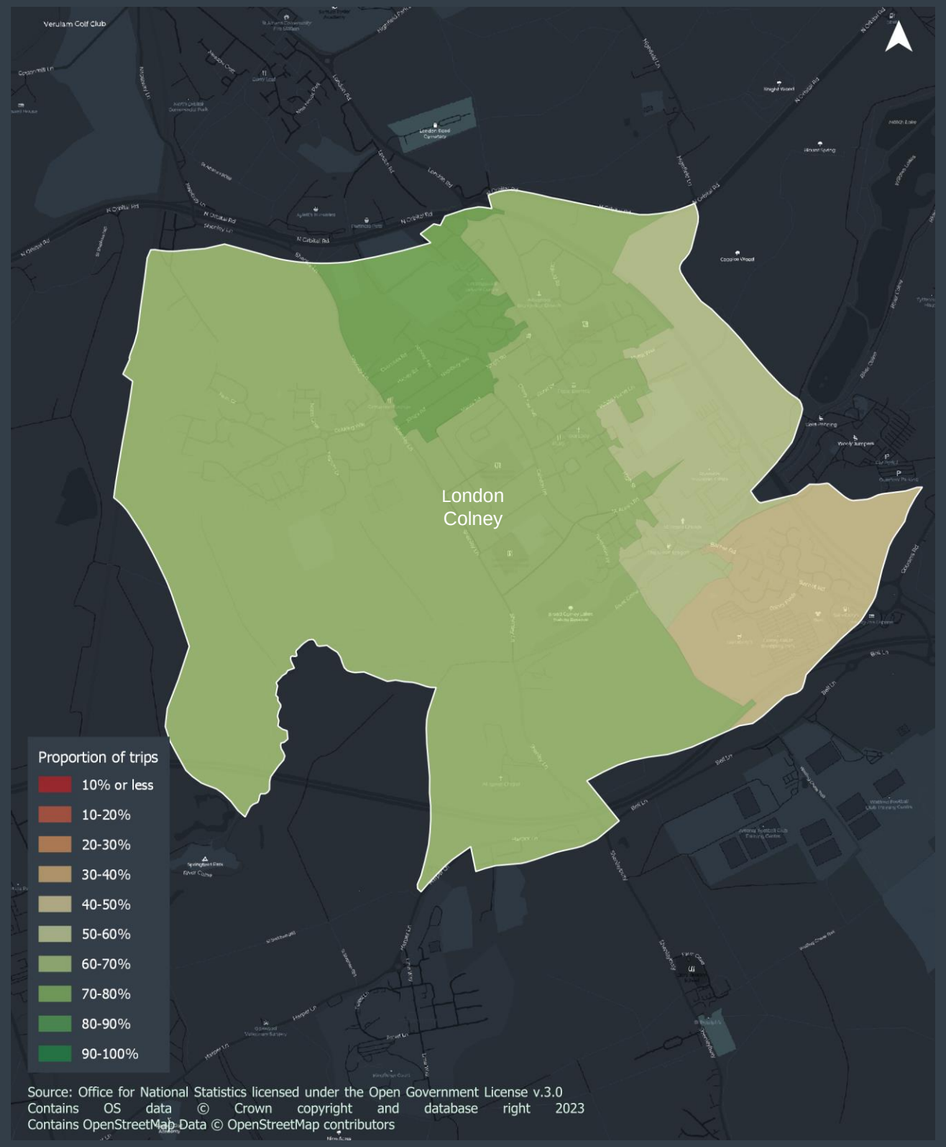
Appendix A9 Cycling opportunity in Southern Villages



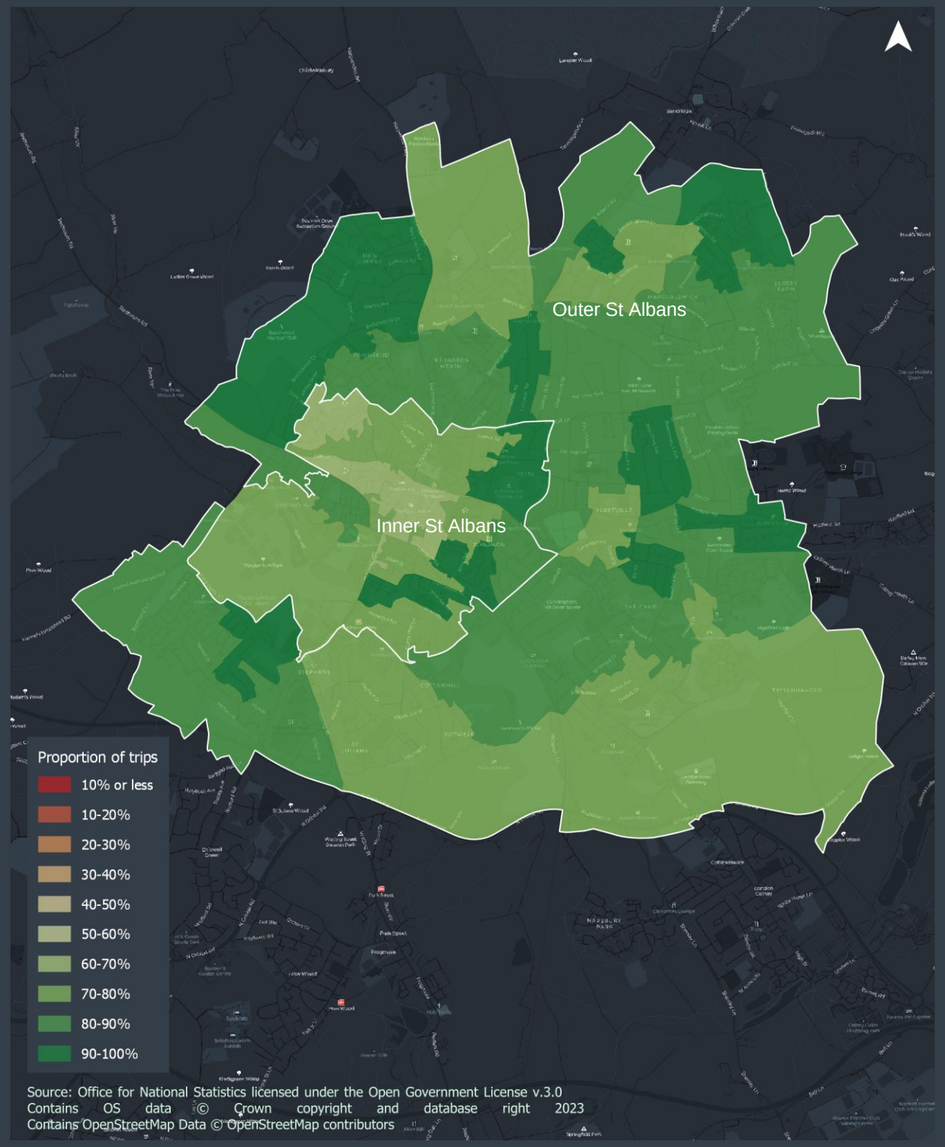
Appendix A10 Cycling opportunity in Wheathampstead



Appendix A11 Cycling opportunity in London Colney

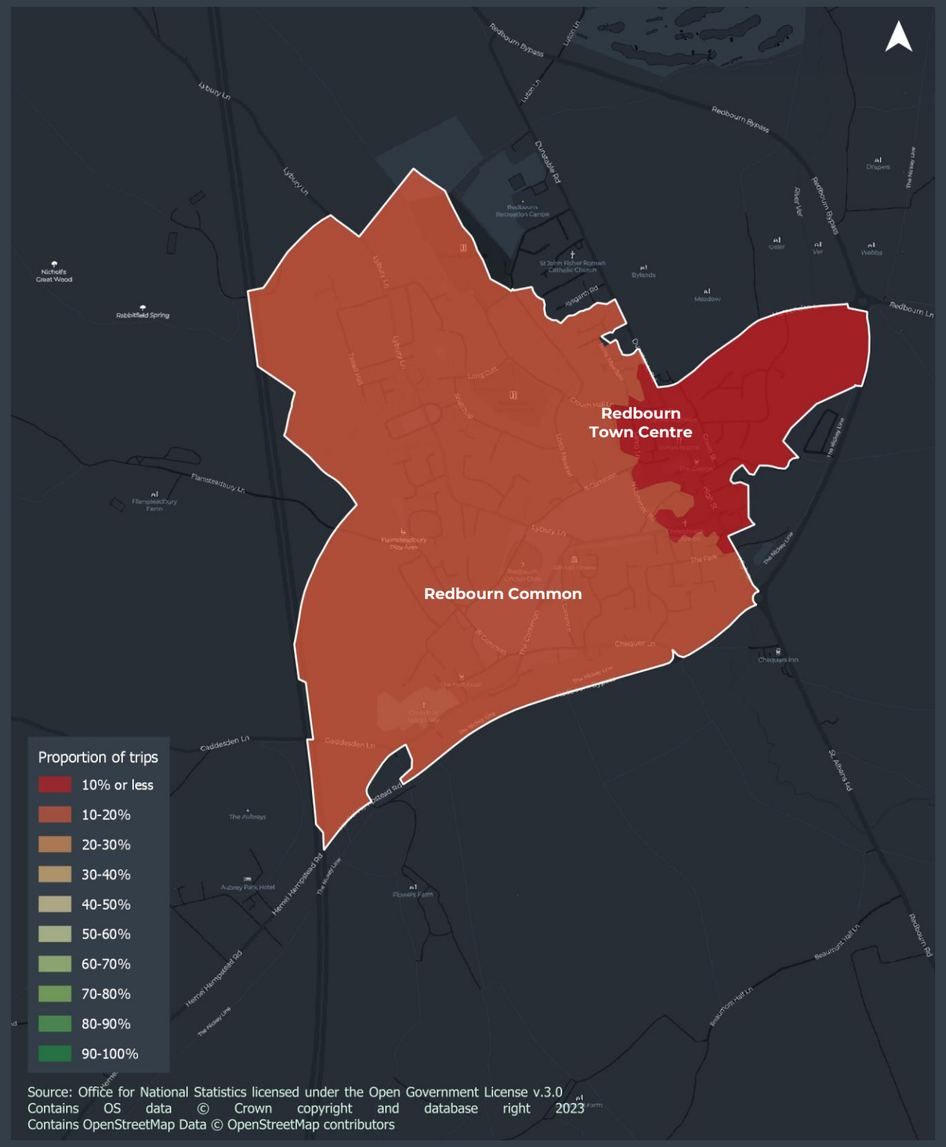


Appendix A12 Cycling opportunity in Inner & Outer St Albans



PT opportunity

Appendix A13 Public transport opportunity in Redbourn



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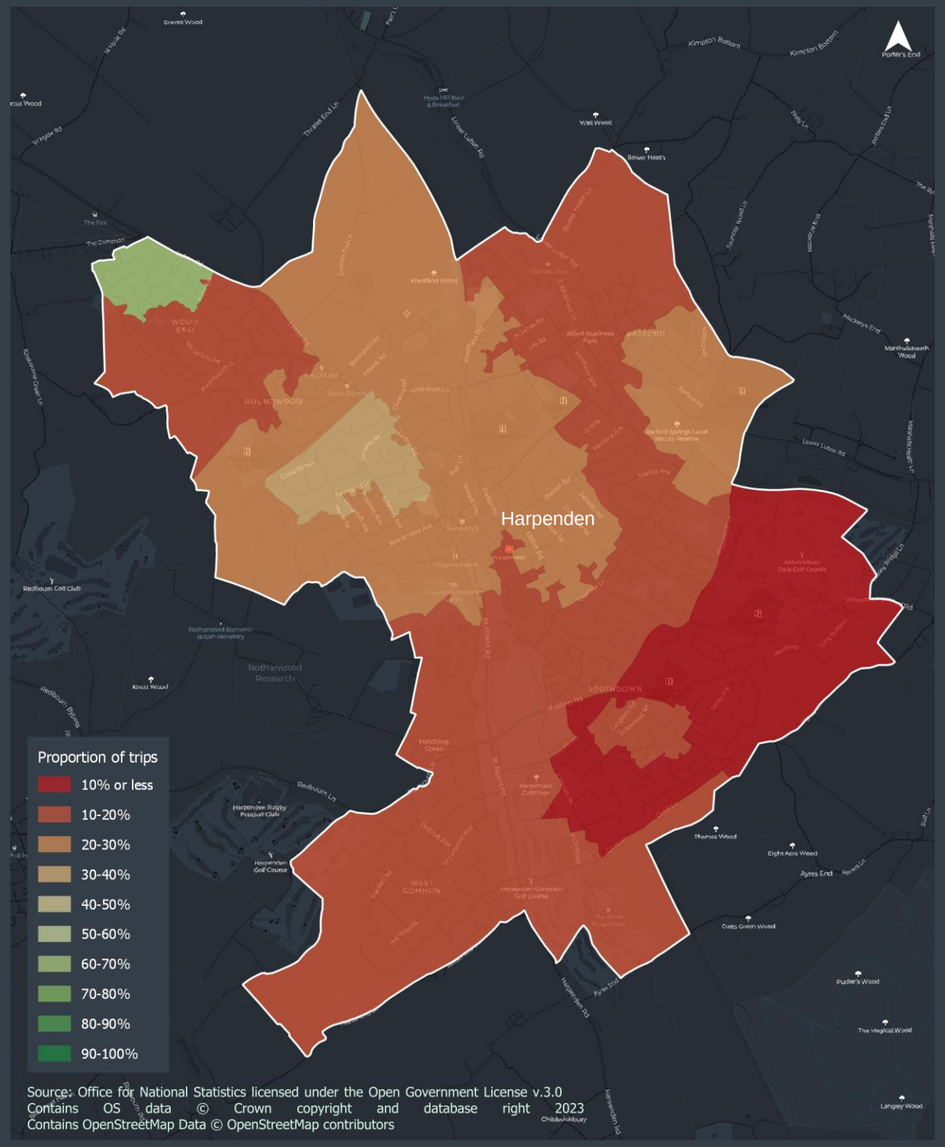
Appendix A14 Public transport opportunity in Harpenden



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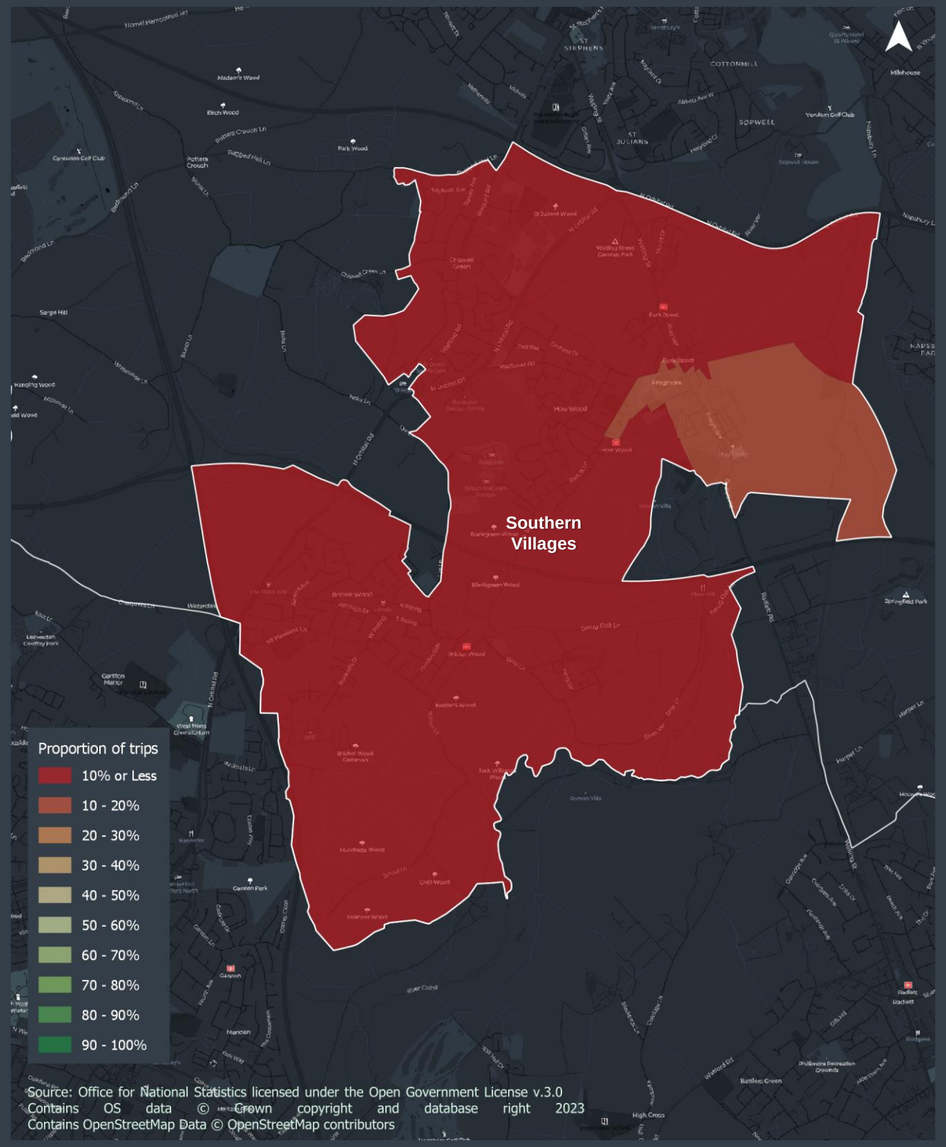
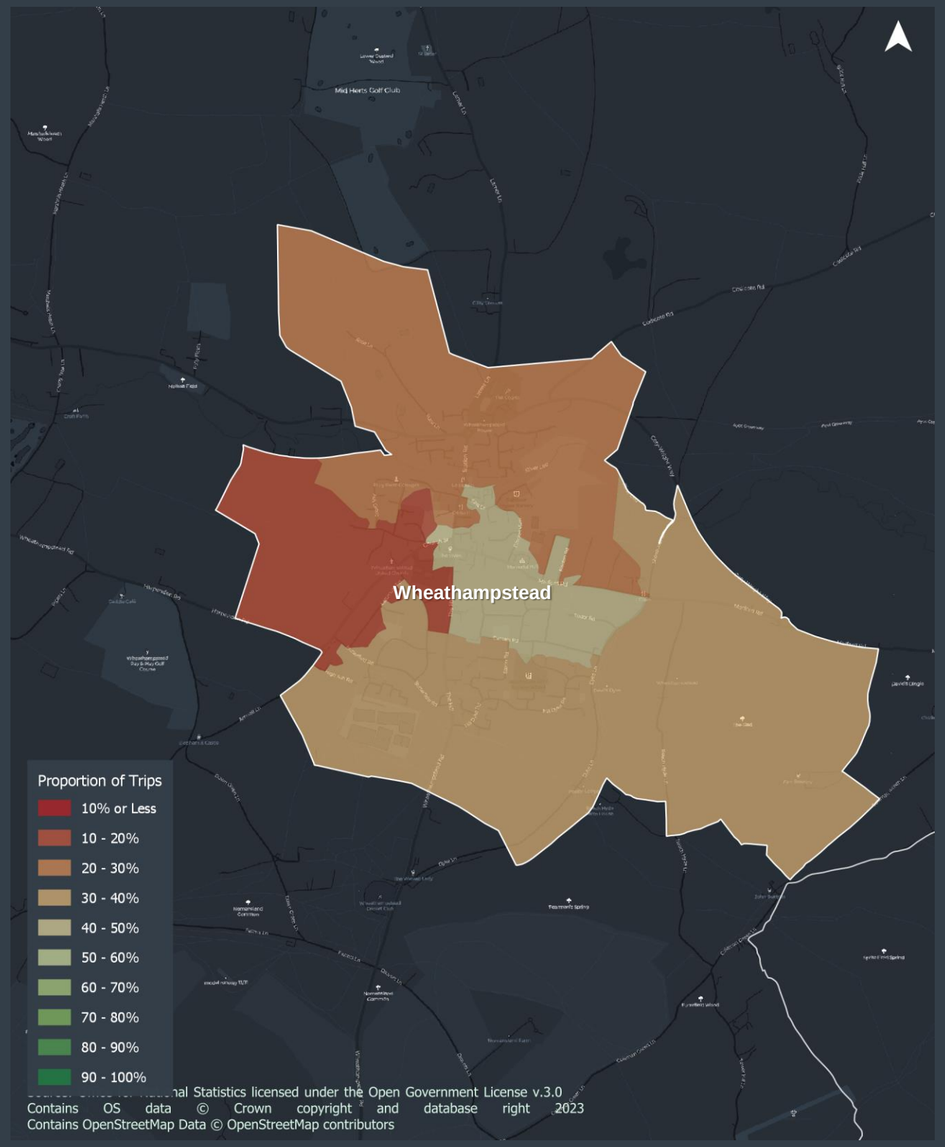
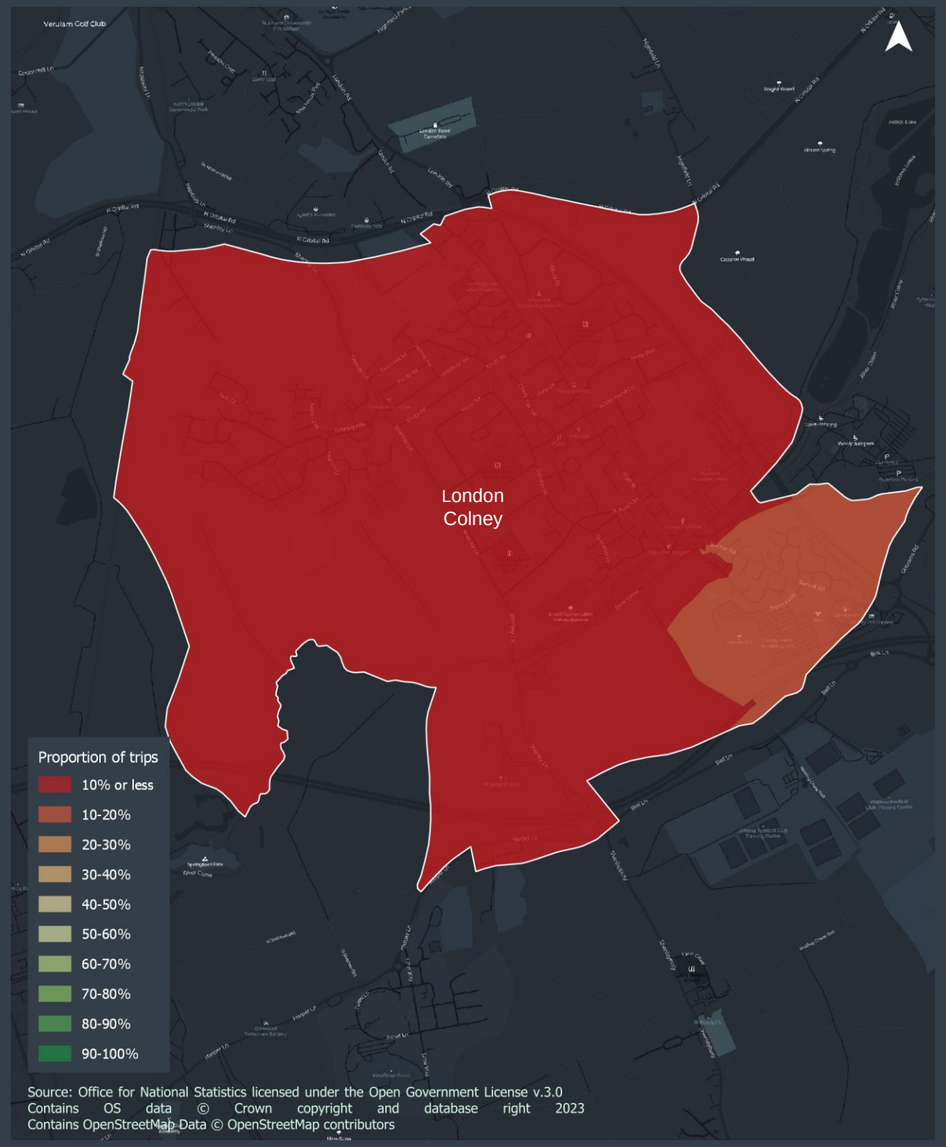
Appendix A15 Public transport opportunity in Southern Villages



Appendix A16 Public transport opportunity in Wheathampstead



Appendix A17 Public transport opportunity in London Colney



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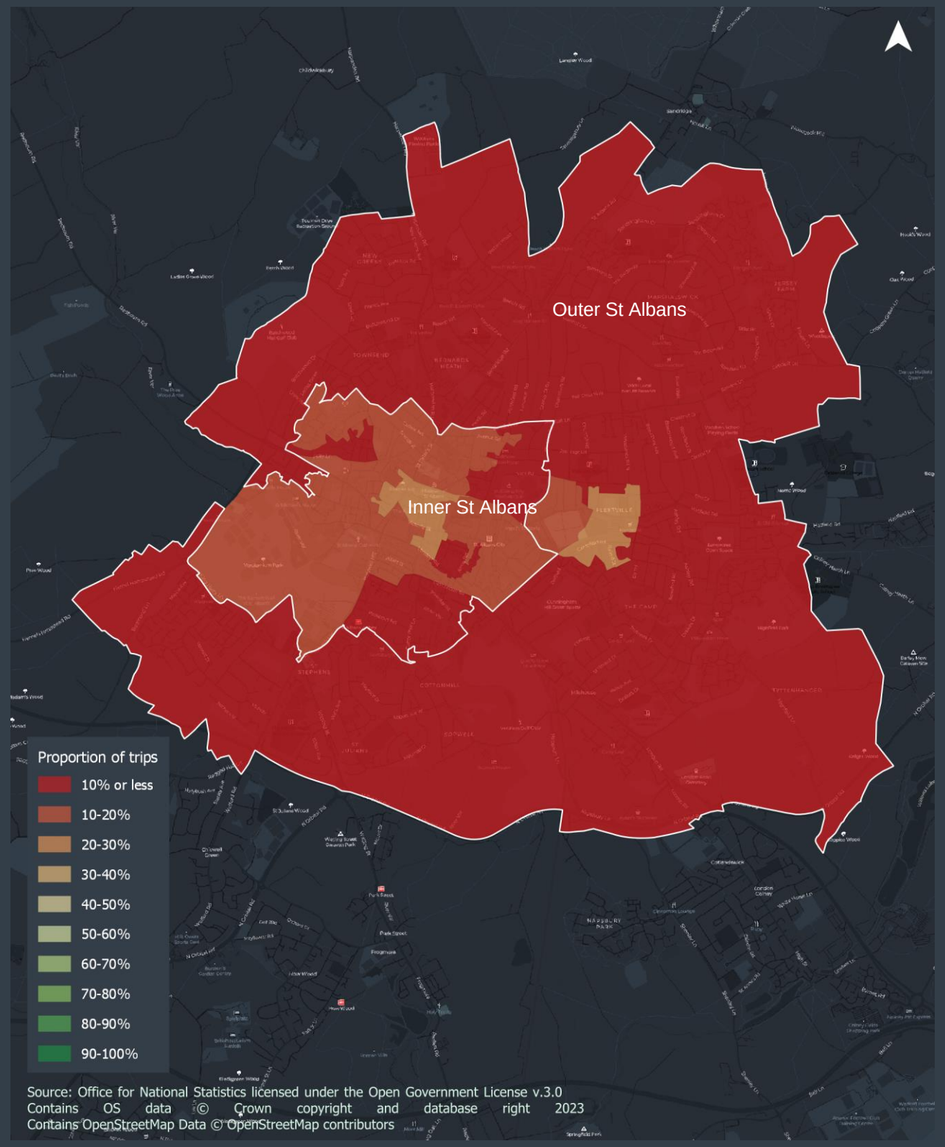
Appendix A18 Public transport opportunity in Inner & Outer St Albans



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APPENDIX B

Range of trips by communities and developments with the opportunity to shift by mode

Appendix B1 Range of trips by communities with the opportunity to shift by mode

	Walking opportunity		Cycling opportunity		PT opportunity
	Main mode	First and last mile*	Main mode	First and last mile*	Main mode
St Albans district					
Daily trips	23,500 - 83,500	1,400 - 21,700	111,700 - 147,200	1,400 - 21,700	1,400 - 21,700
Daily people km	27,300 - 169,400	27,400 - 240,200	279,500 - 506,800	27,400 - 240,200	25,000 - 237,400
Redbourn					
Daily trips	300	0 - 600	700 - 1,900	0 - 600	0 - 600
Daily people km	300 - 500	100 - 2,900	2,000 - 9,400	100 - 2,900	100 - 5,100
Harpenden					
Daily trips	3,900 - 15,200	700 - 7,800	18,800 - 24,100	700 - 7,800	700 - 7,800
Daily people km	4,800 - 31,500	12,100 - 102,500	45,900 - 80,900	12,100 - 102,500	11,200 - 91,600
London Colney					
Daily trips	1,300 - 2,800	100 - 700	4,200 - 6,600	100 - 700	100 - 700
Daily people km	1,600 - 4,900	1,200 - 4,500	10,700 - 26,100	1,200 - 4,500	1,500 - 8,400
Inner St Albans					
Daily trips	8,200 - 19,900	200 - 5,700	23,800 - 28,600	200 - 5,700	200 - 5,700
Daily people km	8,900 - 36,400	5,600 - 65,300	51,600 - 83,500	5,600 - 65,300	4,000 - 61,100
Outer St Albans					
Daily trips	9,300 - 39,700	300 - 3,300	51,000 - 61,400	300 - 3,300	300 - 3,300
Daily people km	11,200 - 83,200	7,900 - 38,700	125,700 - 191,800	7,900 - 38,700	7,300 - 37,900
Southern villages					
Daily trips	200 - 2,200	0 - 400	3,800 - 6,300	0 - 400	0 - 400
Daily people km	200 - 5,100	100 - 4,800	11,800 - 27,200	100 - 4,800	0 - 2,900
Wheathampstead					
Daily trips	200 - 500	0 - 1,700	1,300 - 3,600	0 - 1,700	0 - 1,700
Daily people km	100 - 800	100 - 7,700	4,300 - 19,000	100 - 7,700	300 - 14,200

* Linked to public transport trips

Appendix B2 Range of trips by developments with the opportunity to shift by mode

	Walking opportunity		Cycling opportunity		PT opportunity
	Main mode	First and last mile*	Main mode	First and last mile*	Main mode
St Albans development zones					
Daily trips	300 - 1,400	0 - 100	2,300 - 3,300	0 - 100	0 - 100
Daily people km	400 - 3,000	0 - 100	6,700 - 12,600	0 - 100	0 - 600
North Hemel					
Daily trips	0 - 100	0	100 - 100	0	0
Daily people km	0 - 200	0	300 - 500	0	0
East Hemel (North)					
Daily trips	0 – 400	0	600 – 800	0	0
Daily people km	0 – 800	0	1,800 – 3,200	0	0
East Hemel (South)					
Daily trips	200 – 500	0	700 – 1,100	0	0
Daily people km	200 – 1,000	0-100	1,700 – 4,000	0 - 100	0 - 300
North St Albans City					
Daily trips	100 - 300	0	600 - 900	0	0
Daily people km	100 - 800	0	1,900 - 3,400	0	0
East St Albans City					
Daily trips	0 - 100	0	200 - 200	0	0
Daily people km	0 - 200	0	500 - 800	0	0
Northeast Harpenden					
Daily trips	0 - 100	0	100 - 200	0	0
Daily people km	0 - 100	0	500 - 600	0	0 - 200

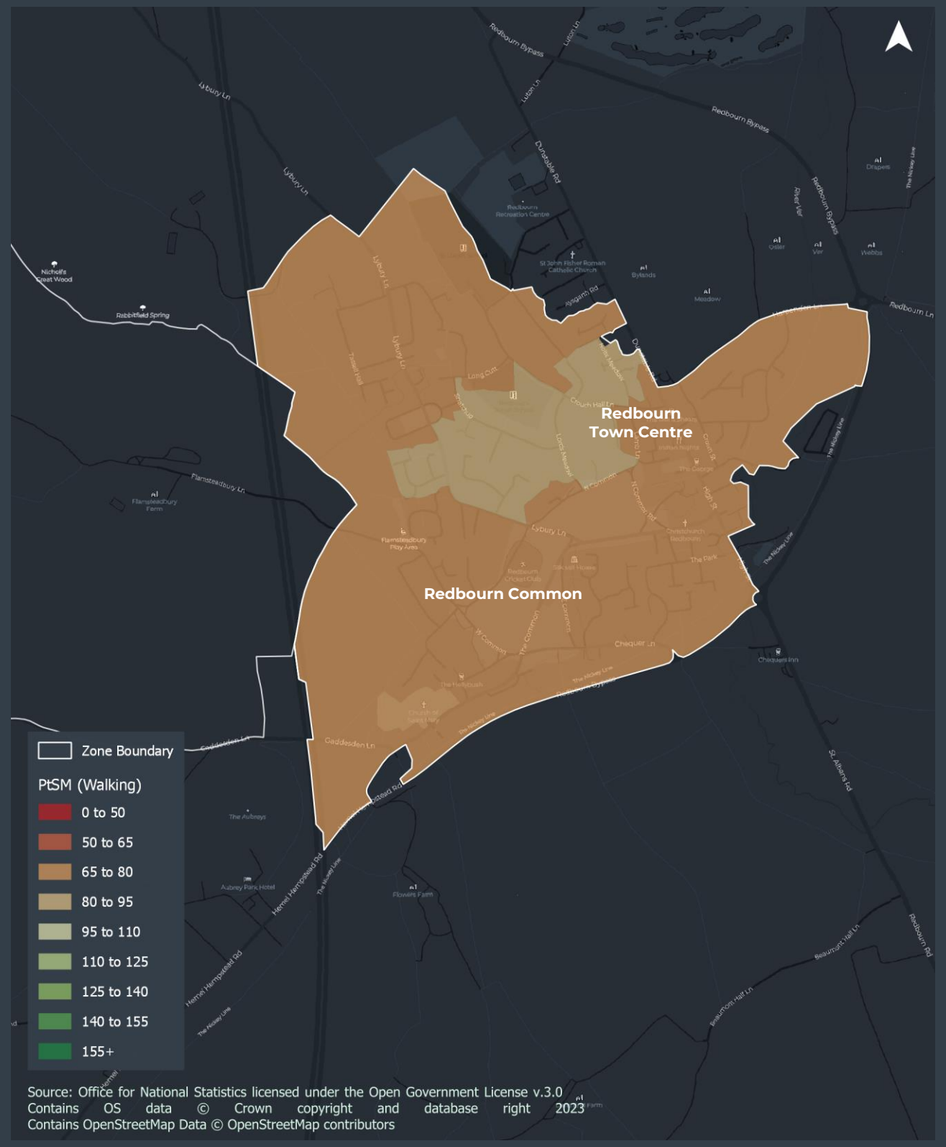
* Linked to public transport trips

APPENDIX C

Breakdown of sustainable travel propensity for existing communities

Walking propensity

Appendix C1 Walking propensity in Redbourn



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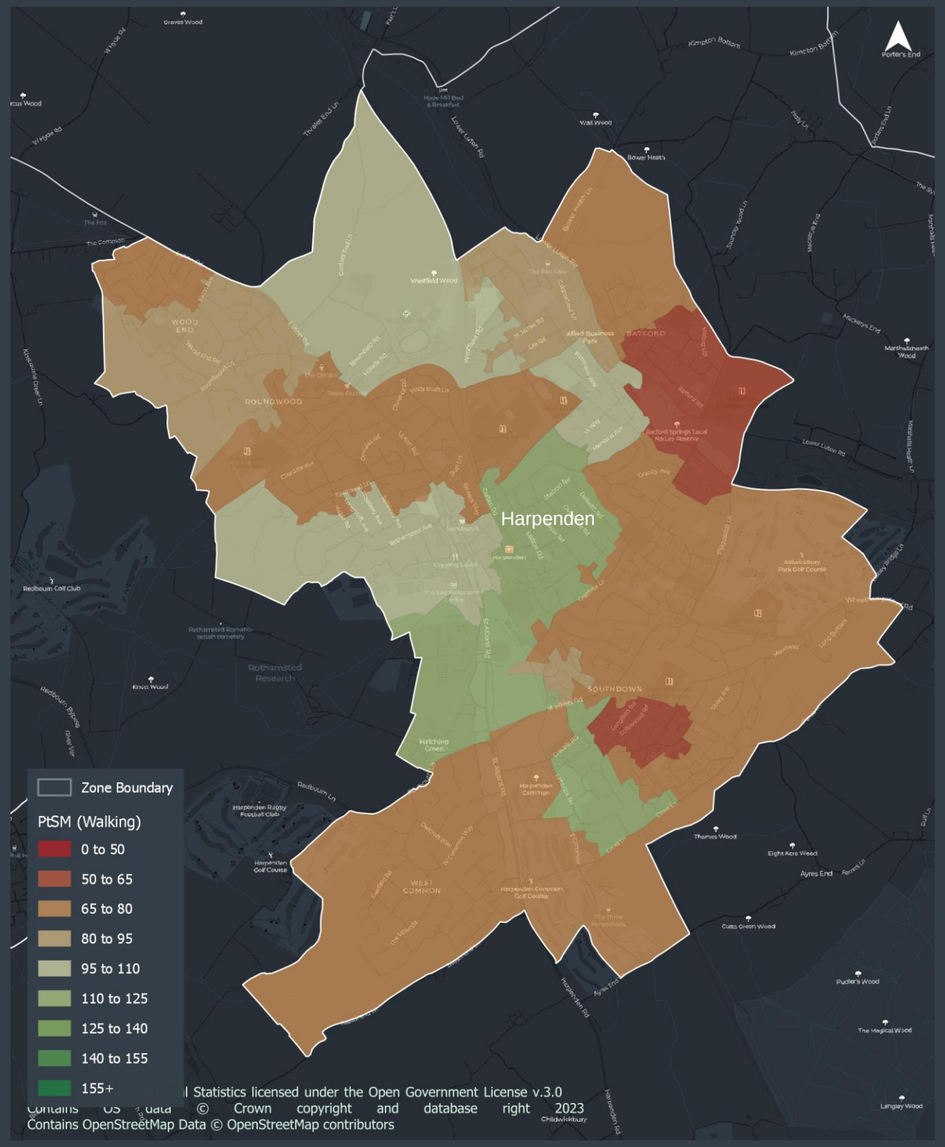
Appendix C2 Walking propensity in Harpenden



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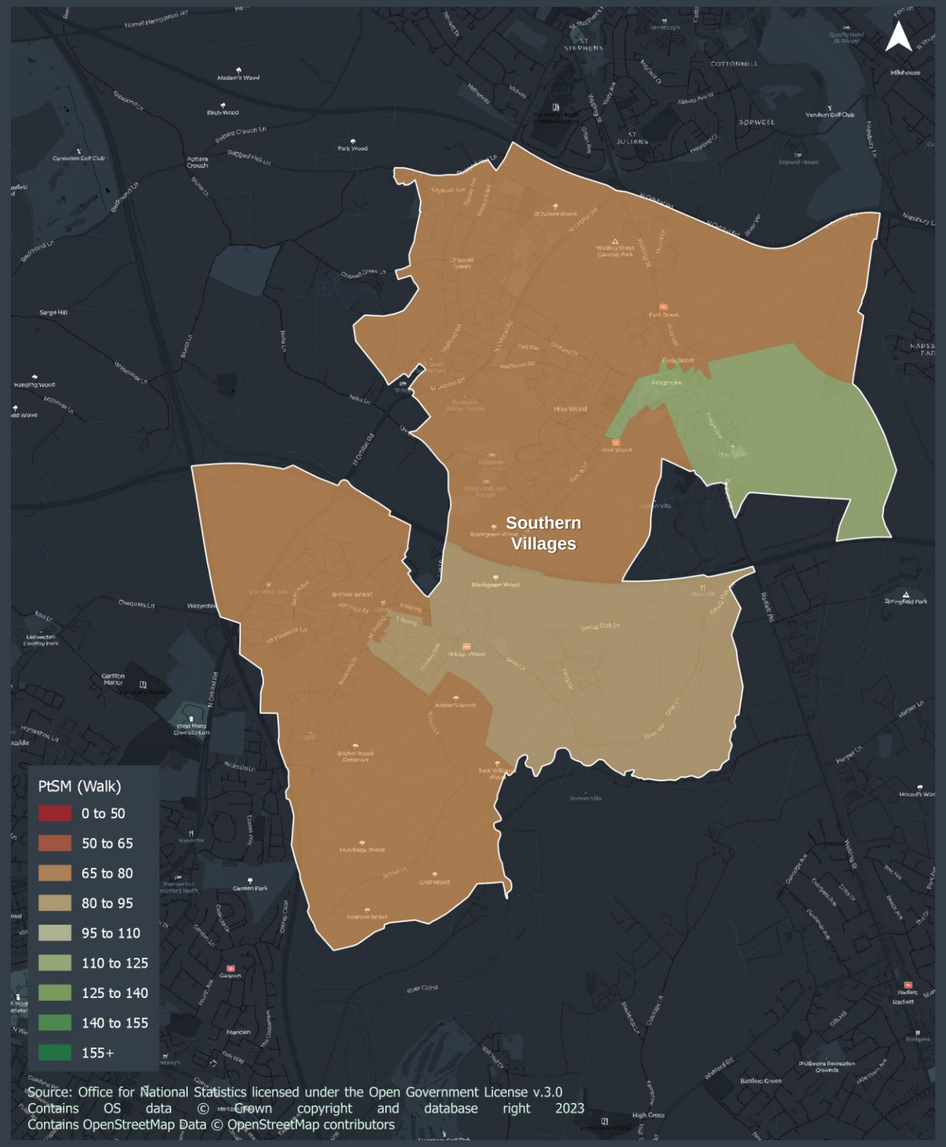
Appendix C3 Walking propensity in Southern Villages



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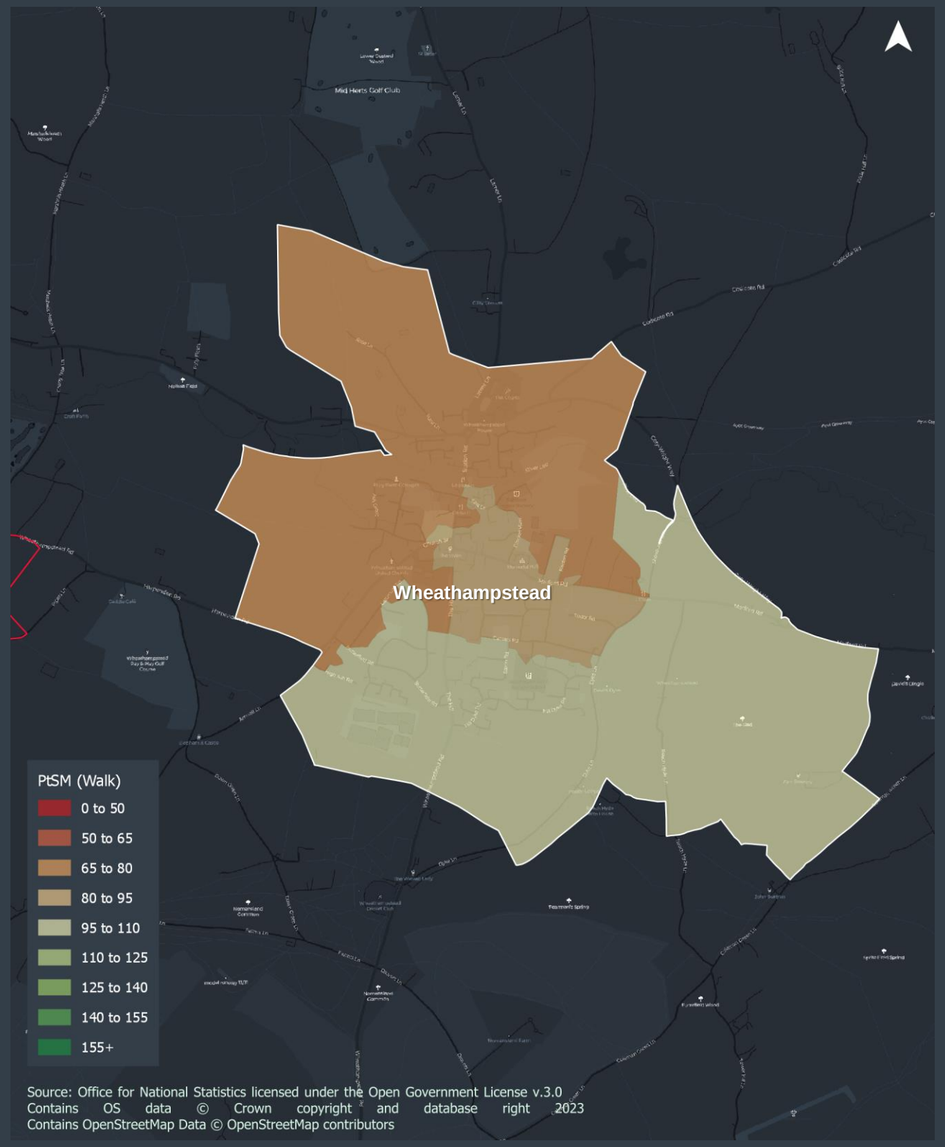
Appendix C4 Walking propensity in Wheathampstead



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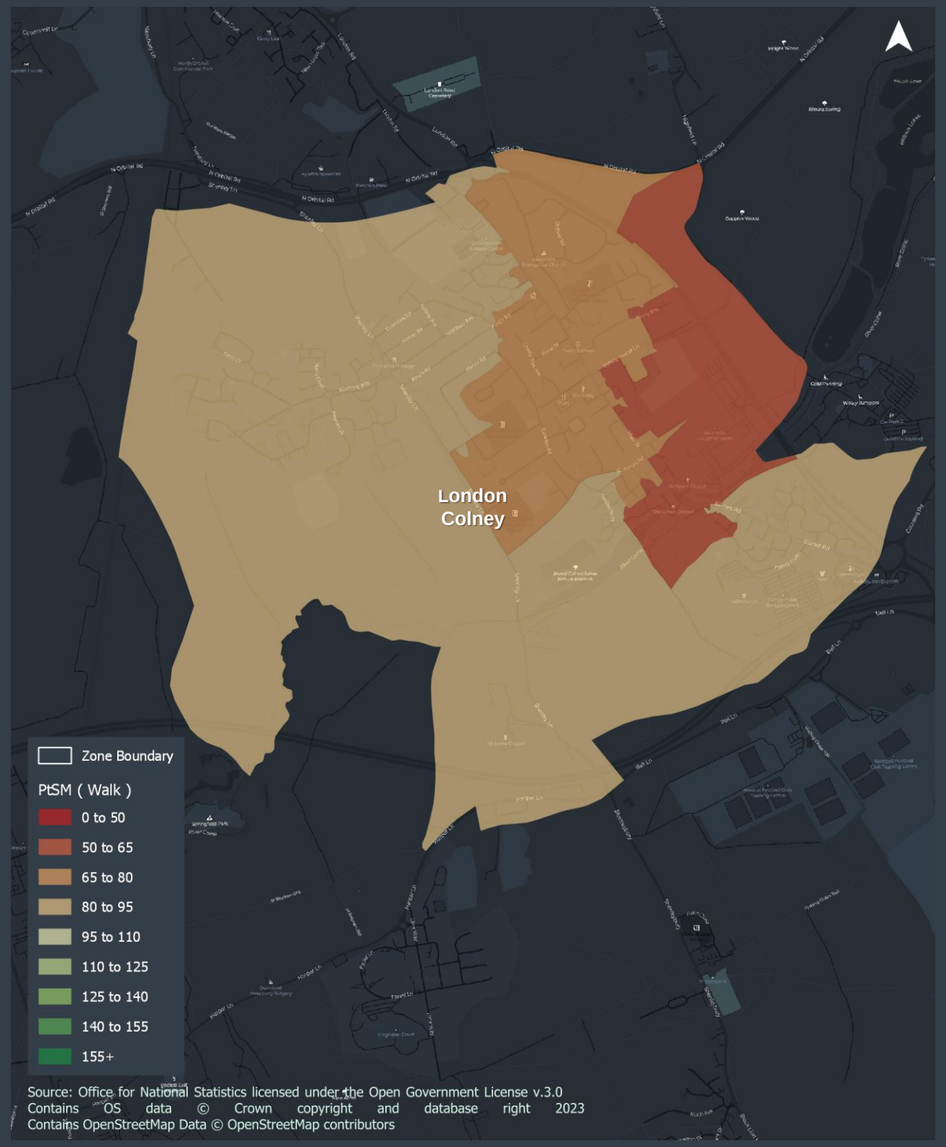
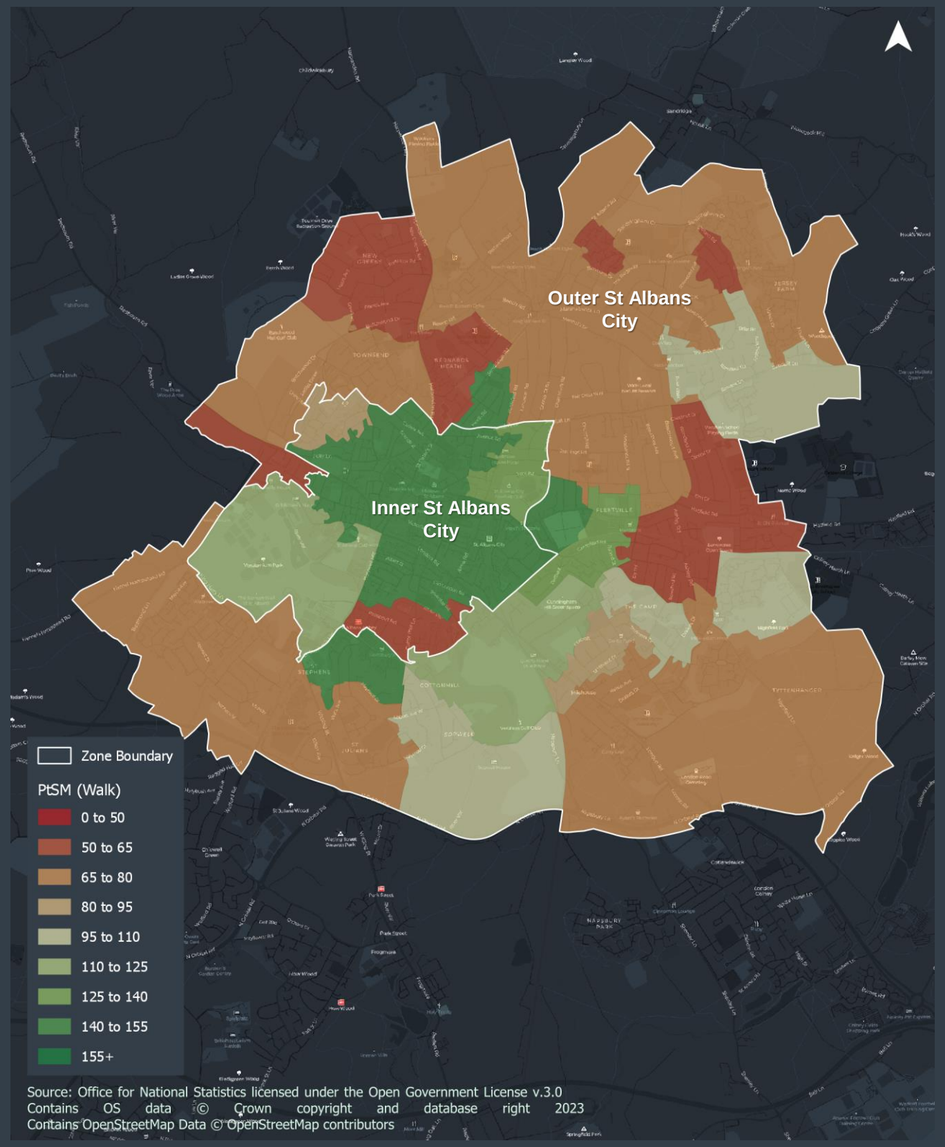
Appendix C5 Walking propensity in London Colney

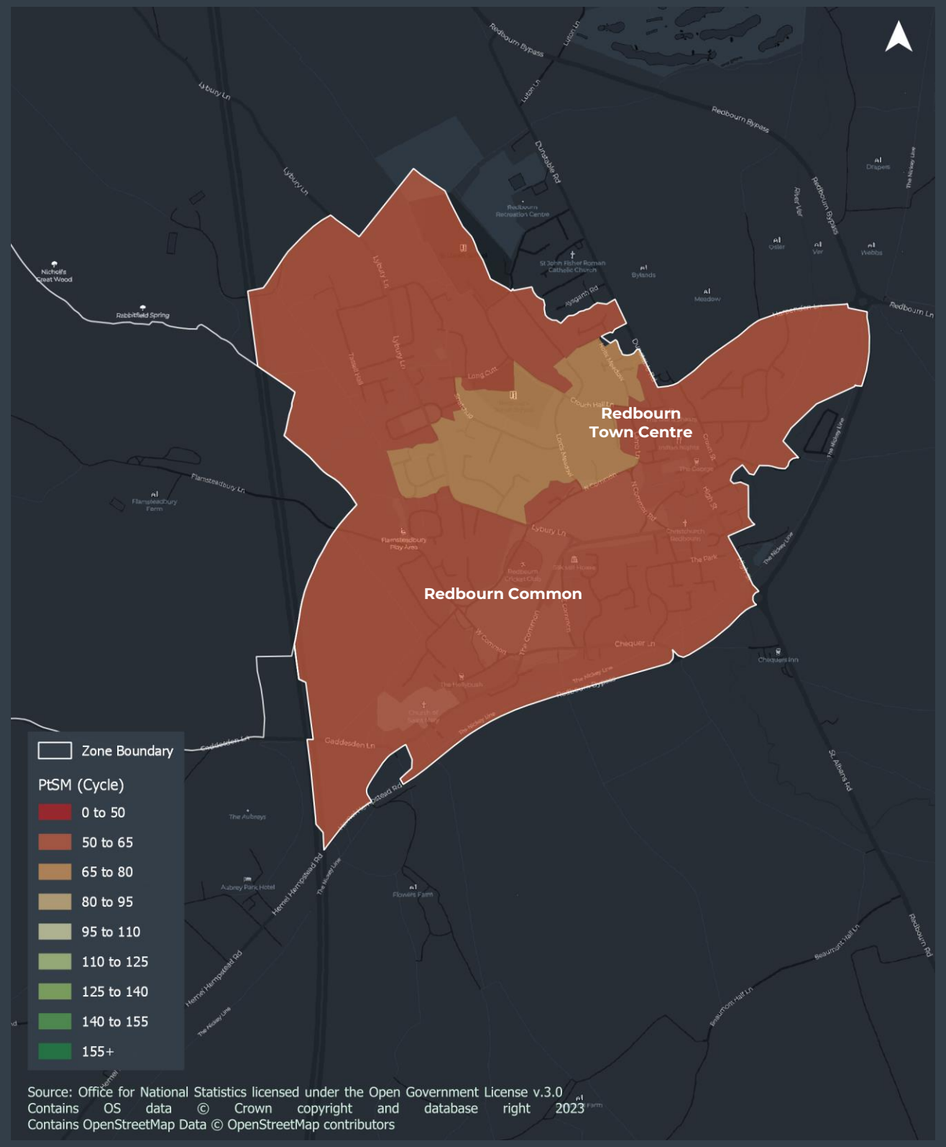


Appendix C6 Walking propensity in Inner & Outer St Albans



Cycling propensity

Appendix C7 Cycling propensity in Redbourn



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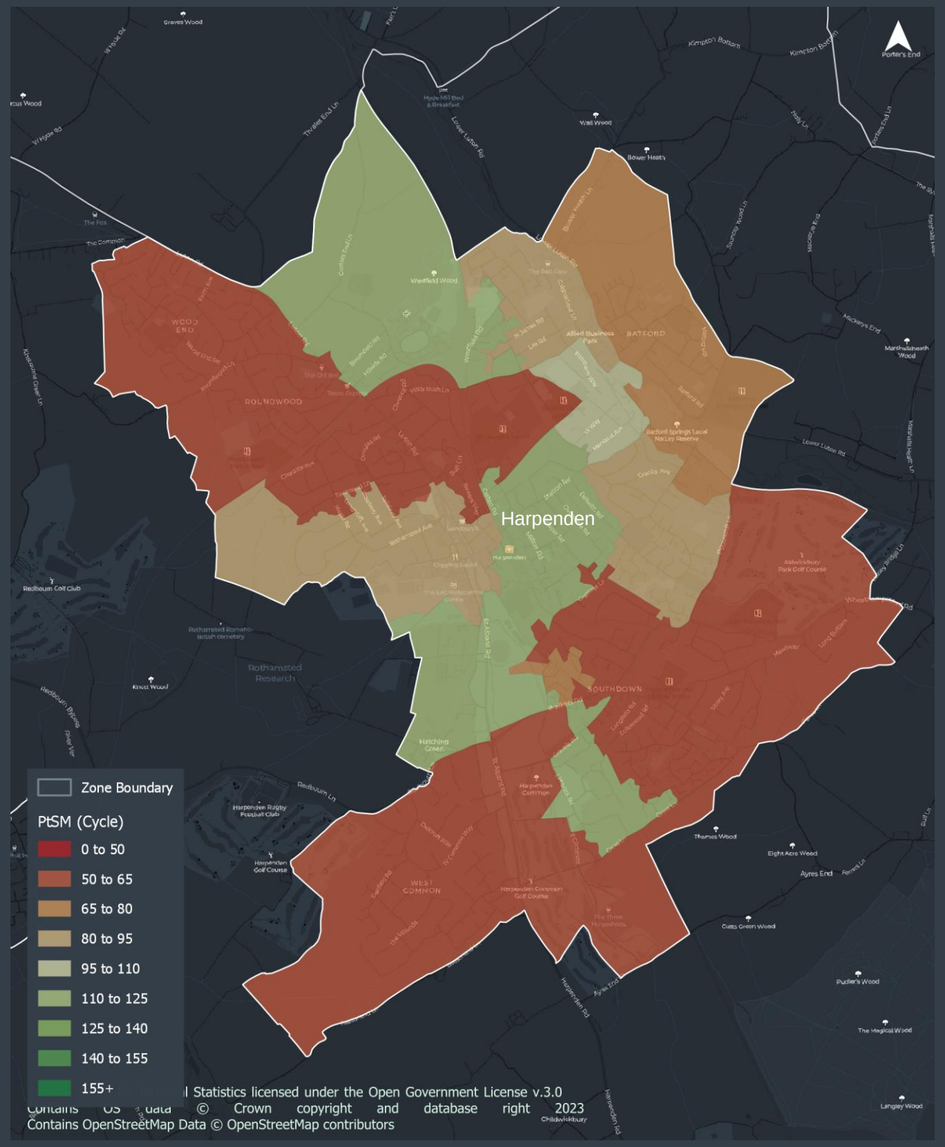
Appendix C8 Cycling propensity in Harpenden



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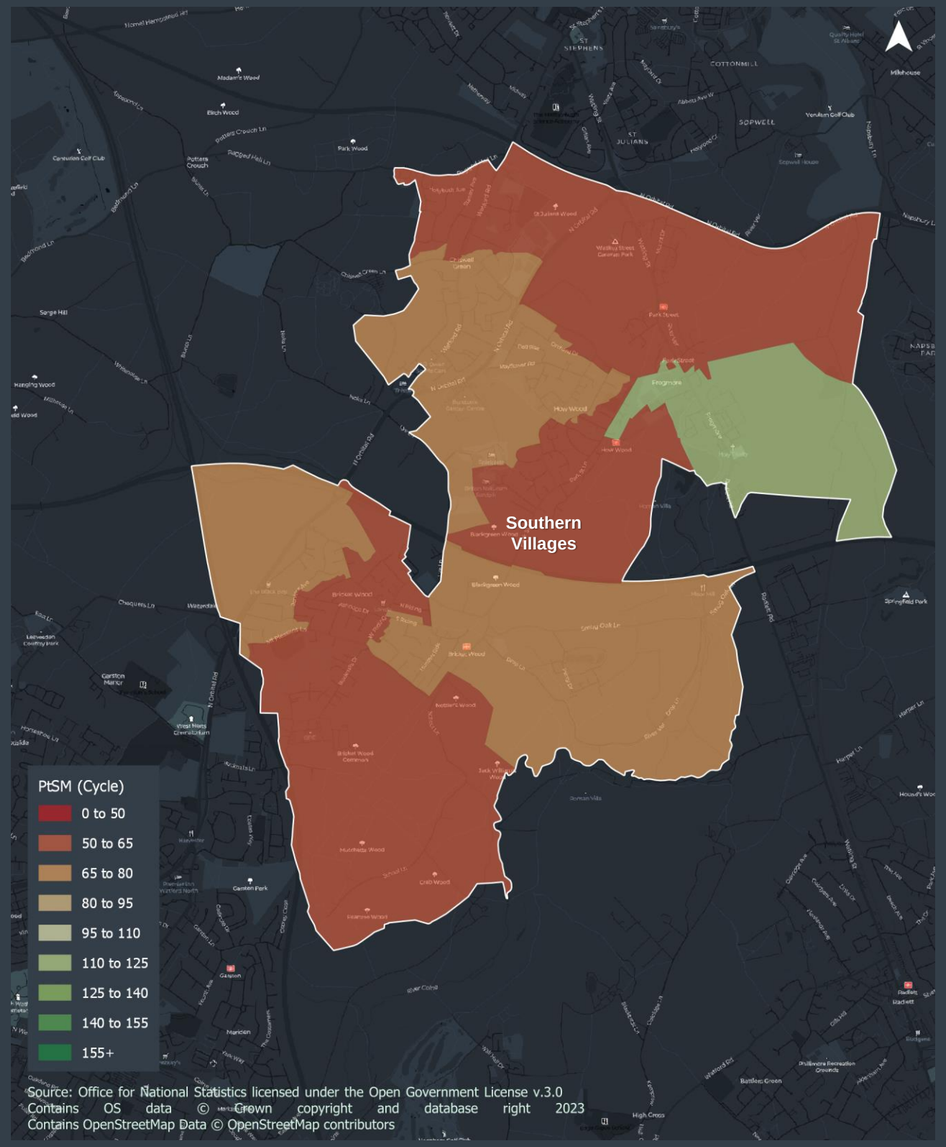
Appendix C9 Cycling propensity in Southern Villages



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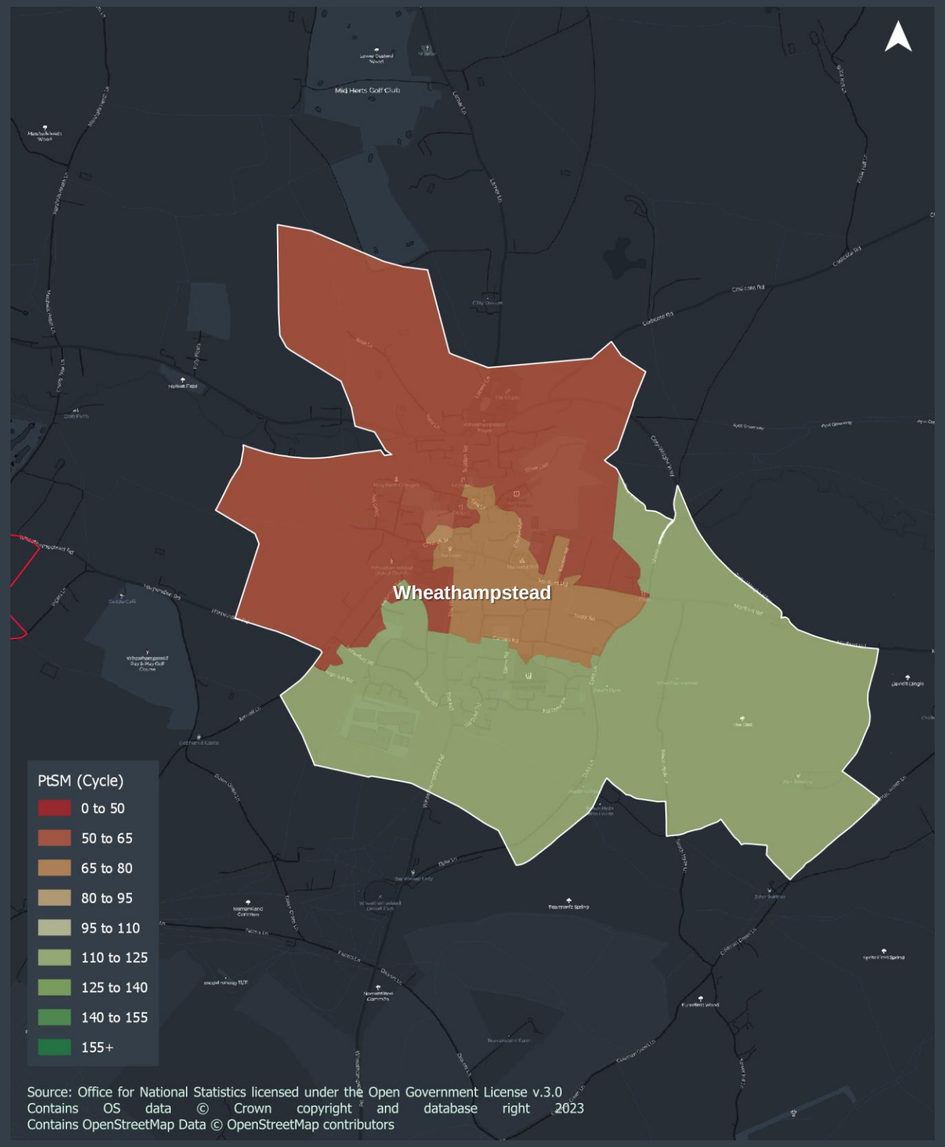
Appendix C10 Cycling propensity in Wheathampstead



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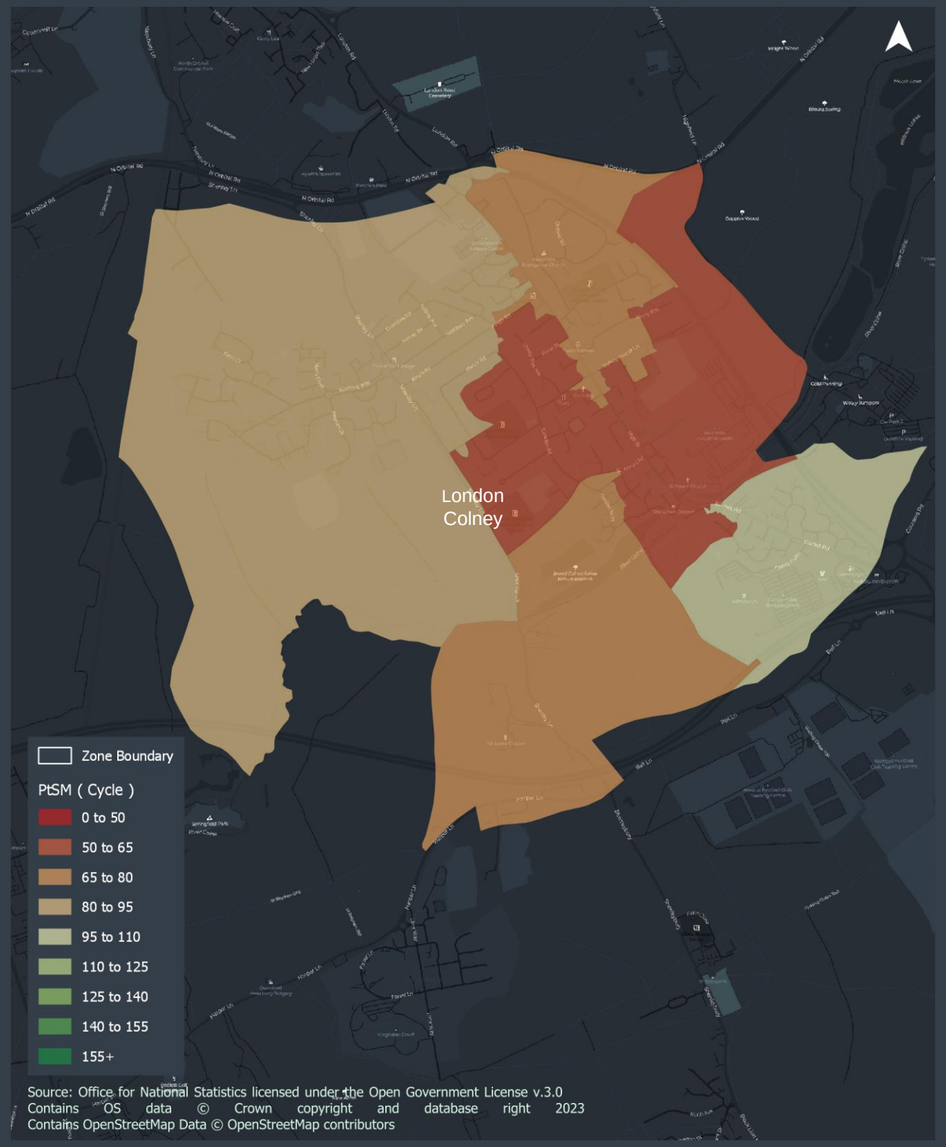
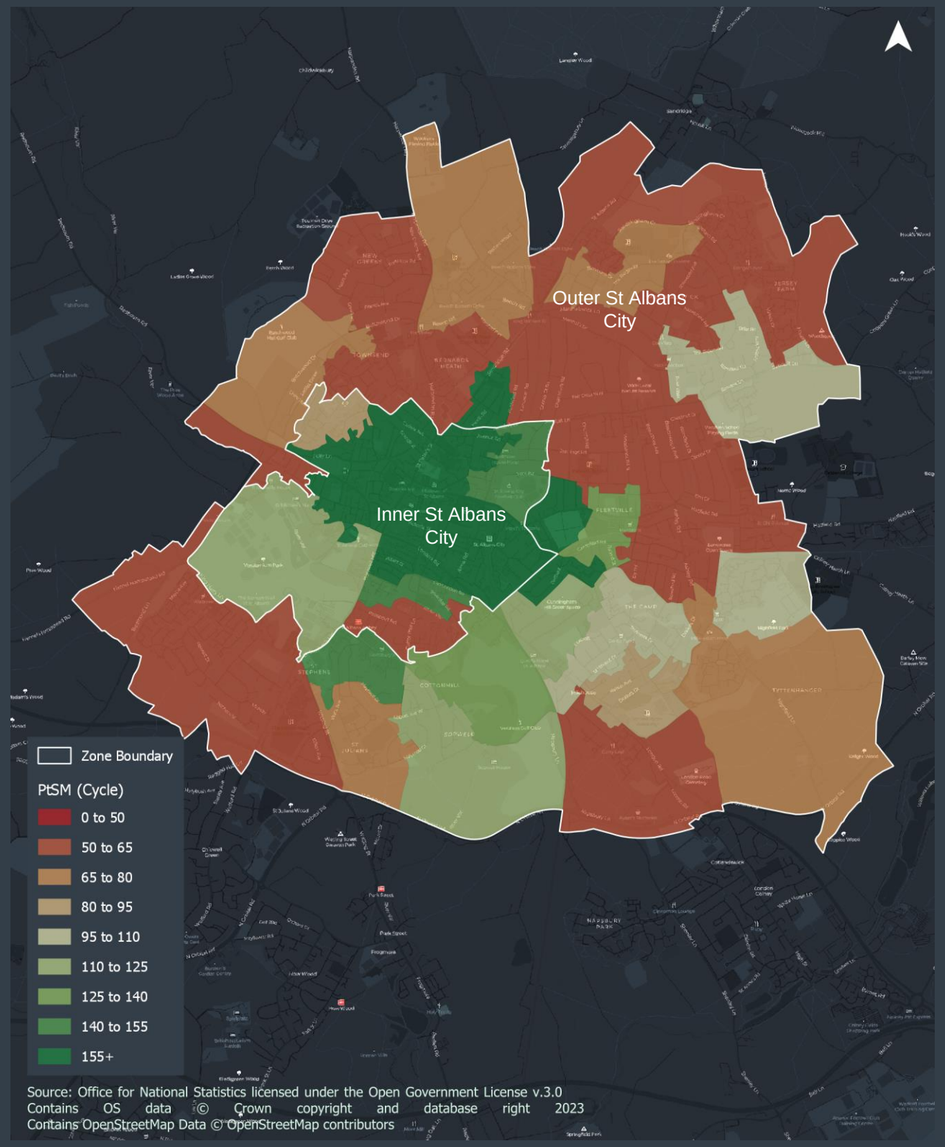
Appendix C11 Cycling propensity in London Colney

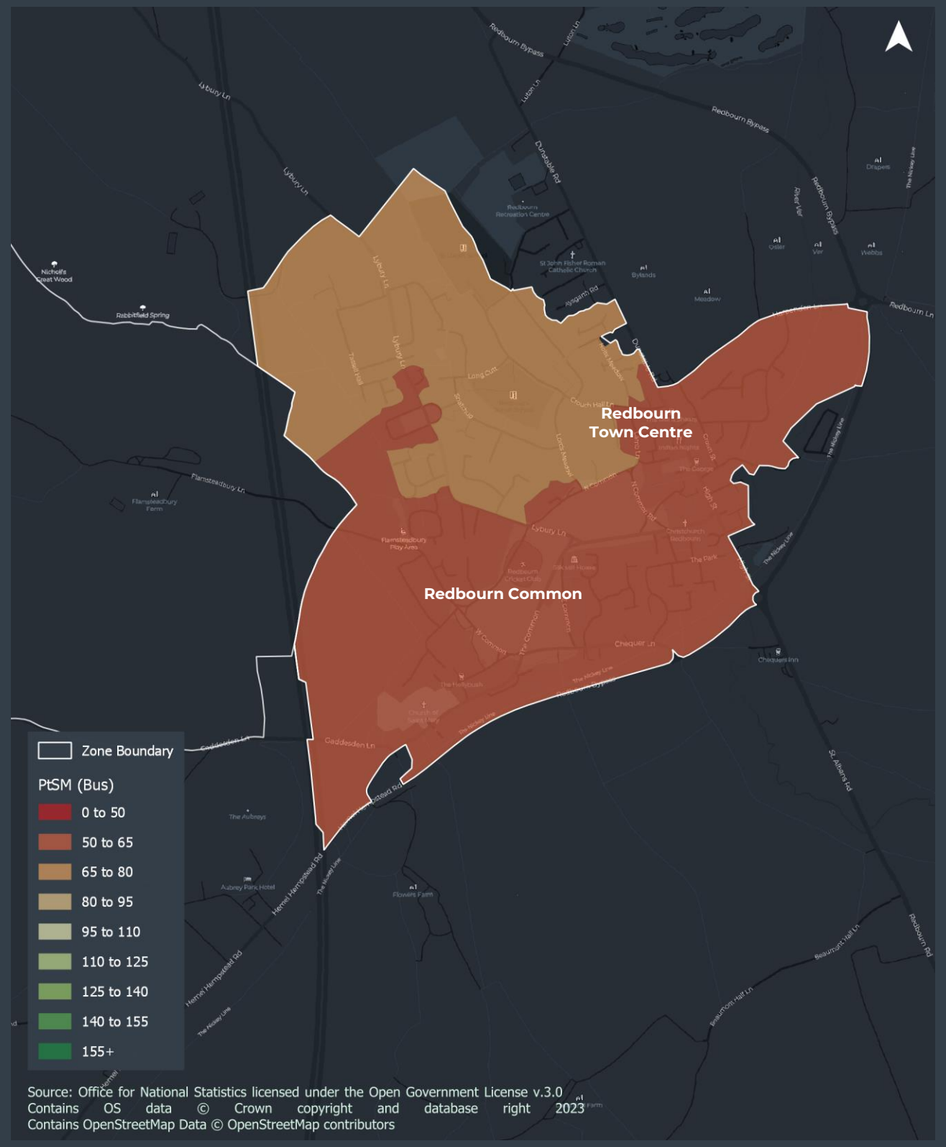


Appendix C12 Cycling propensity in Inner & Outer St Albans



Bus propensity

Appendix C13 Bus propensity in Redbourn



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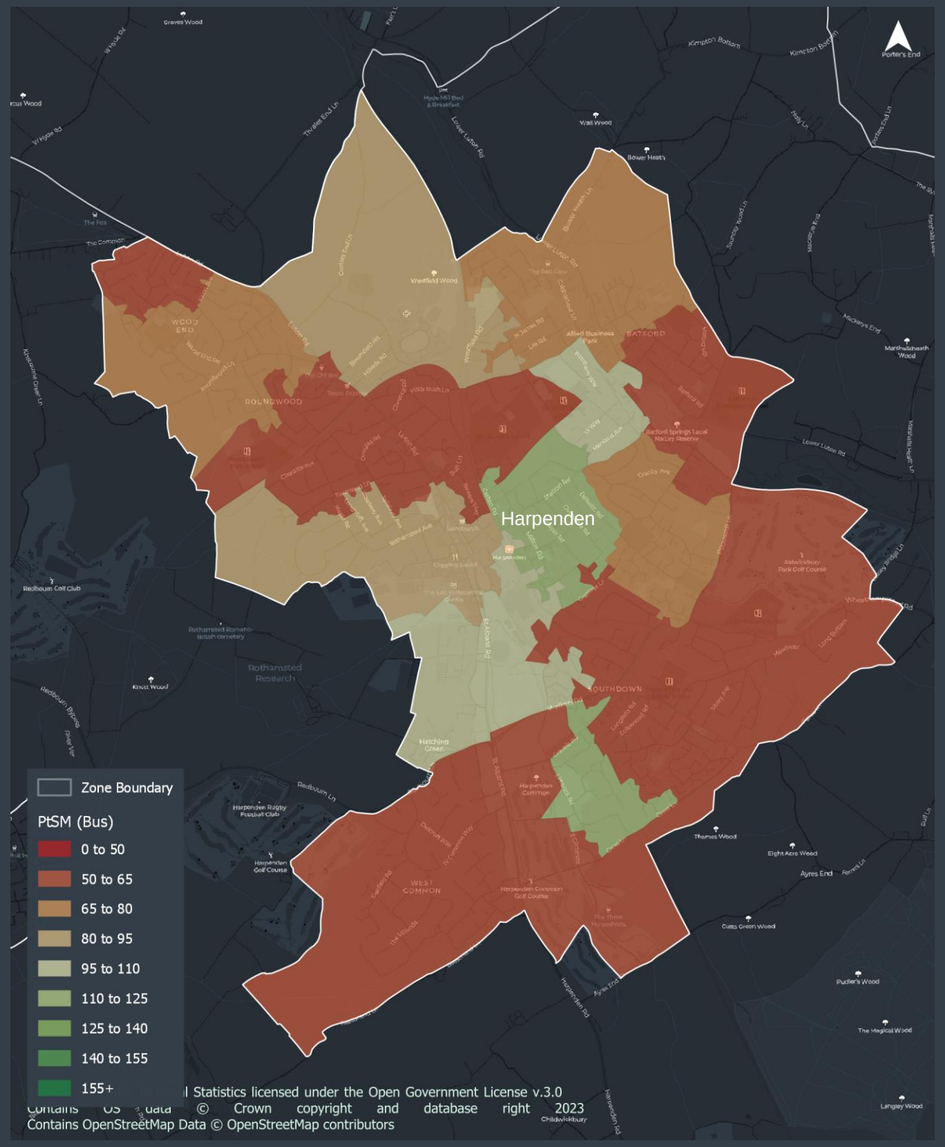
Appendix C14 Bus propensity in Harpenden



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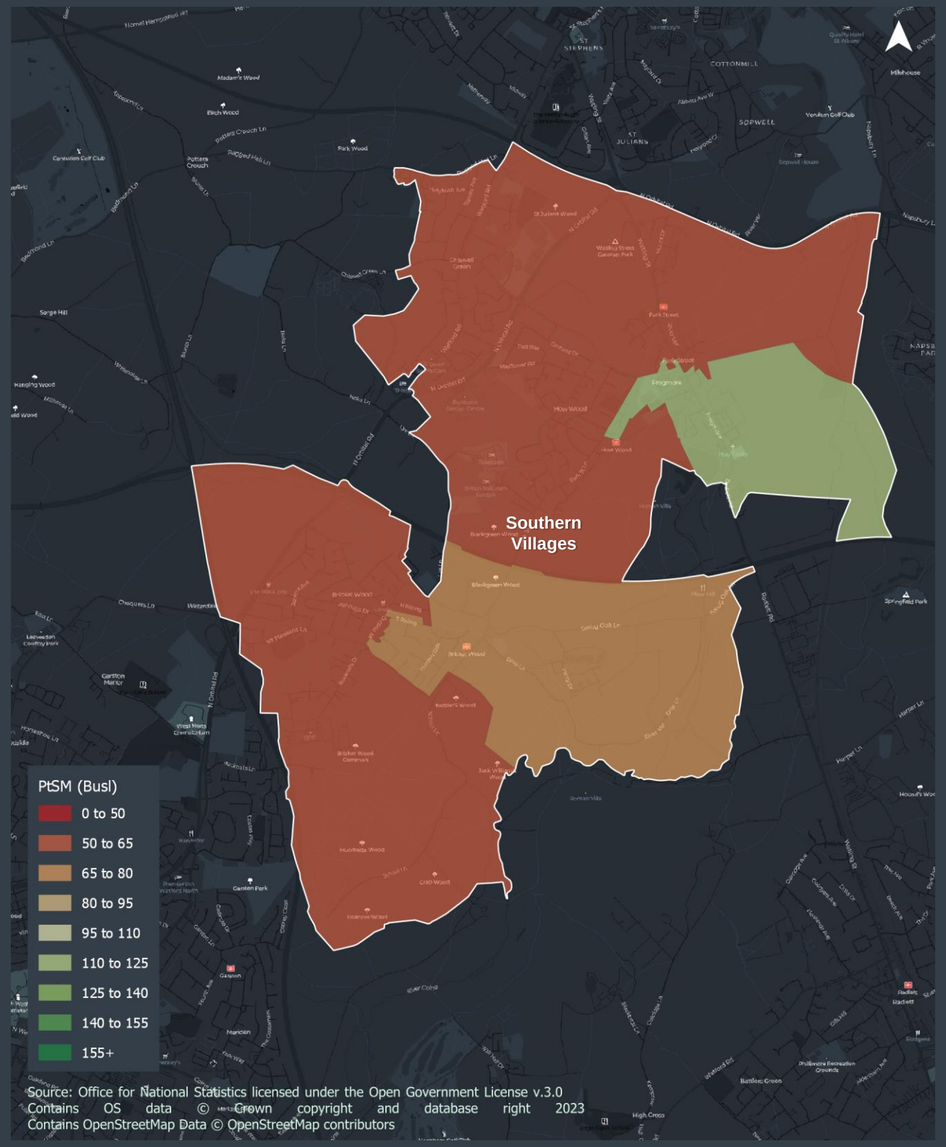
Appendix C15 Bus propensity in Southern Villages



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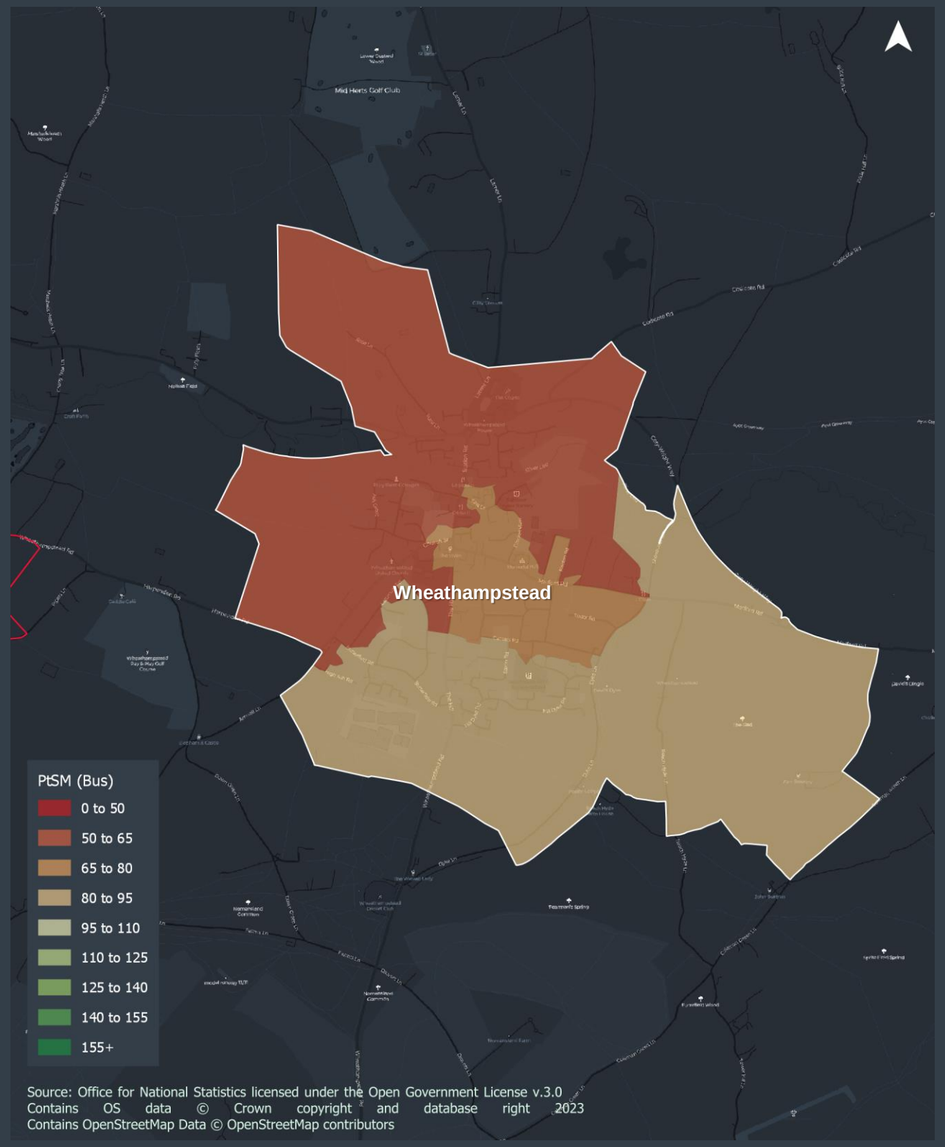
Appendix C16 Bus propensity in Wheathampstead



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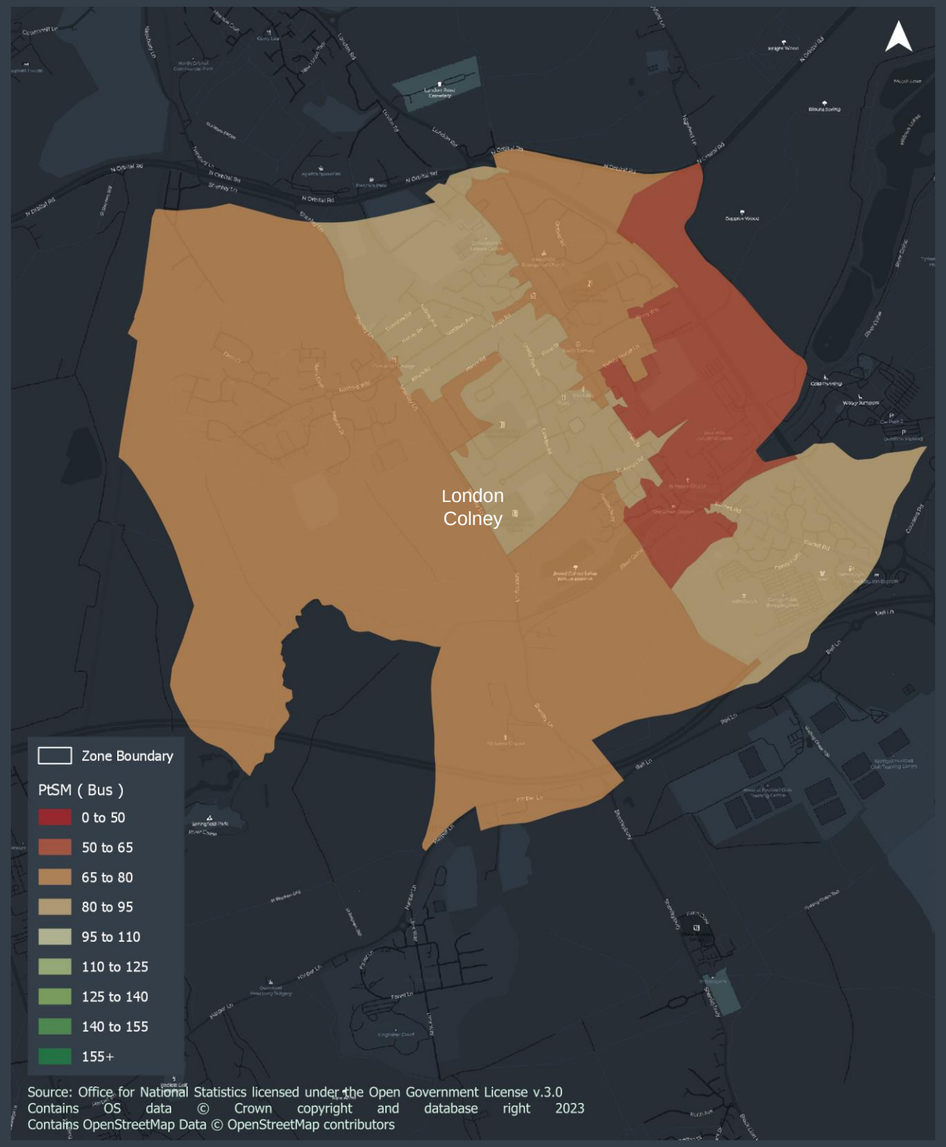
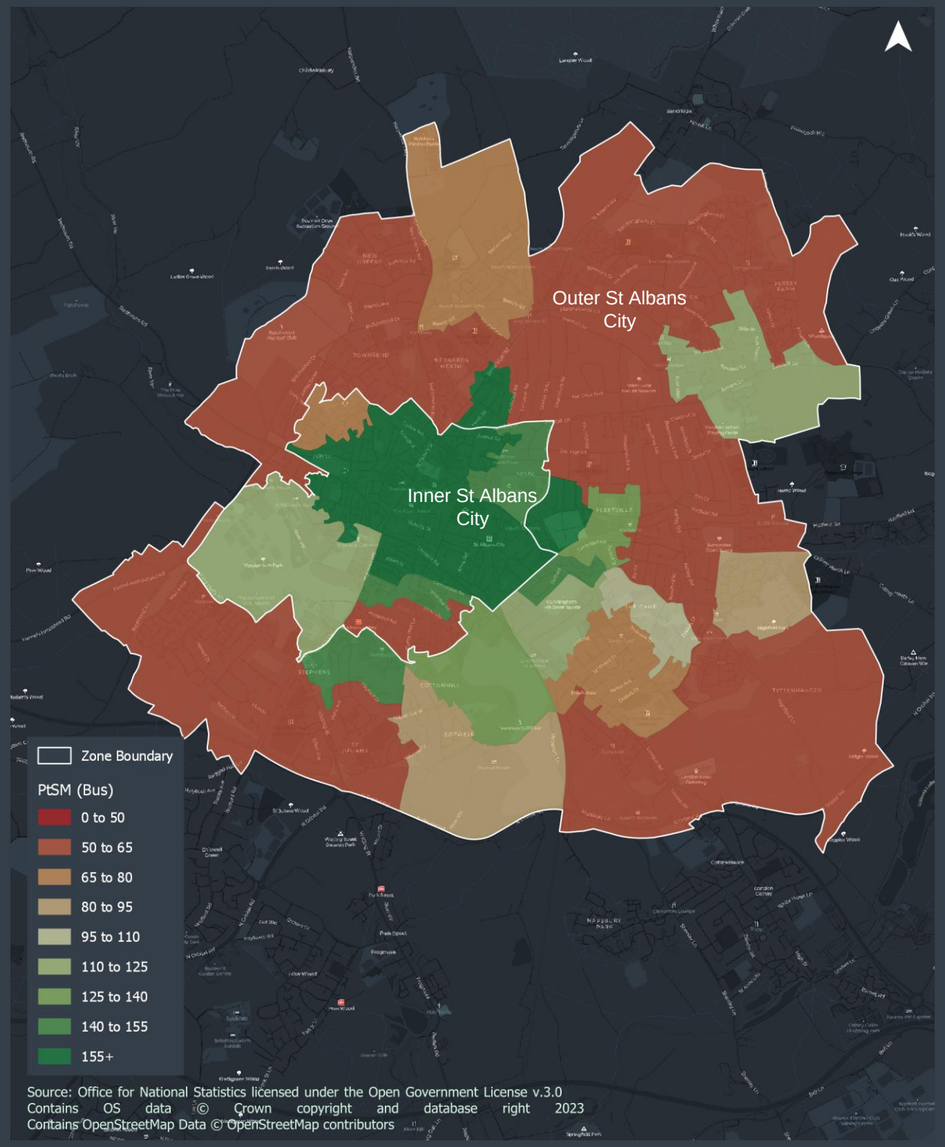
Appendix C17 Bus propensity in London Colney

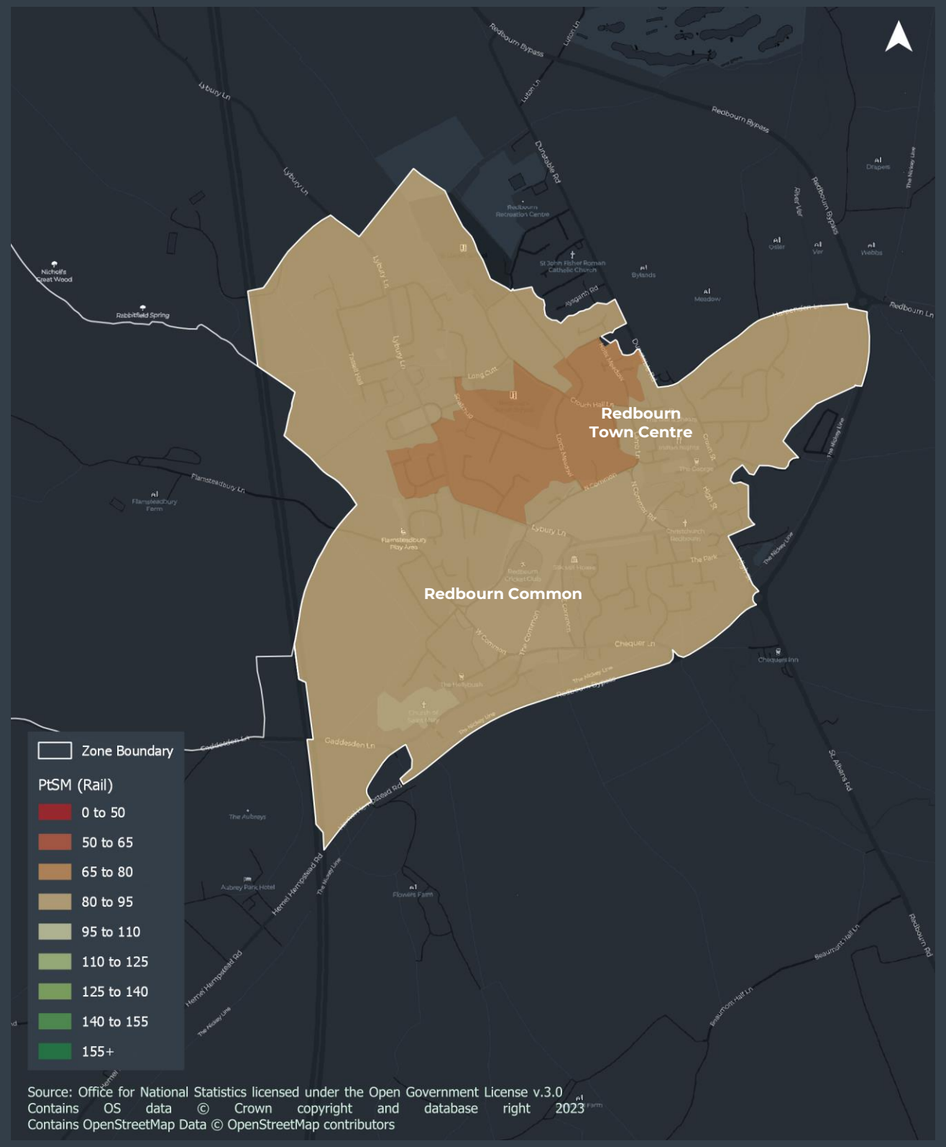


Appendix C18 Bus propensity in Inner & Outer St Albans



Rail propensity

Appendix C19 Rail propensity in Redbourn



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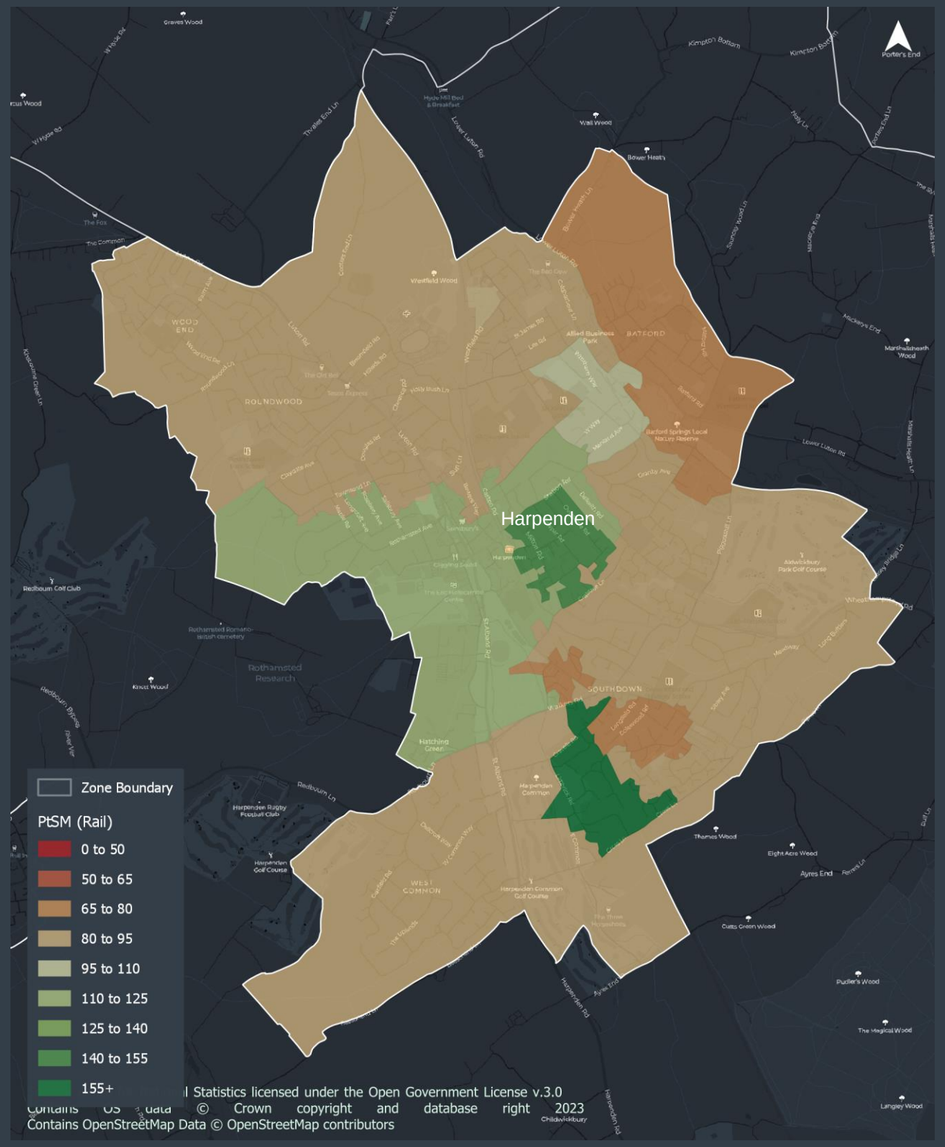
Appendix C20 Rail propensity in Harpenden



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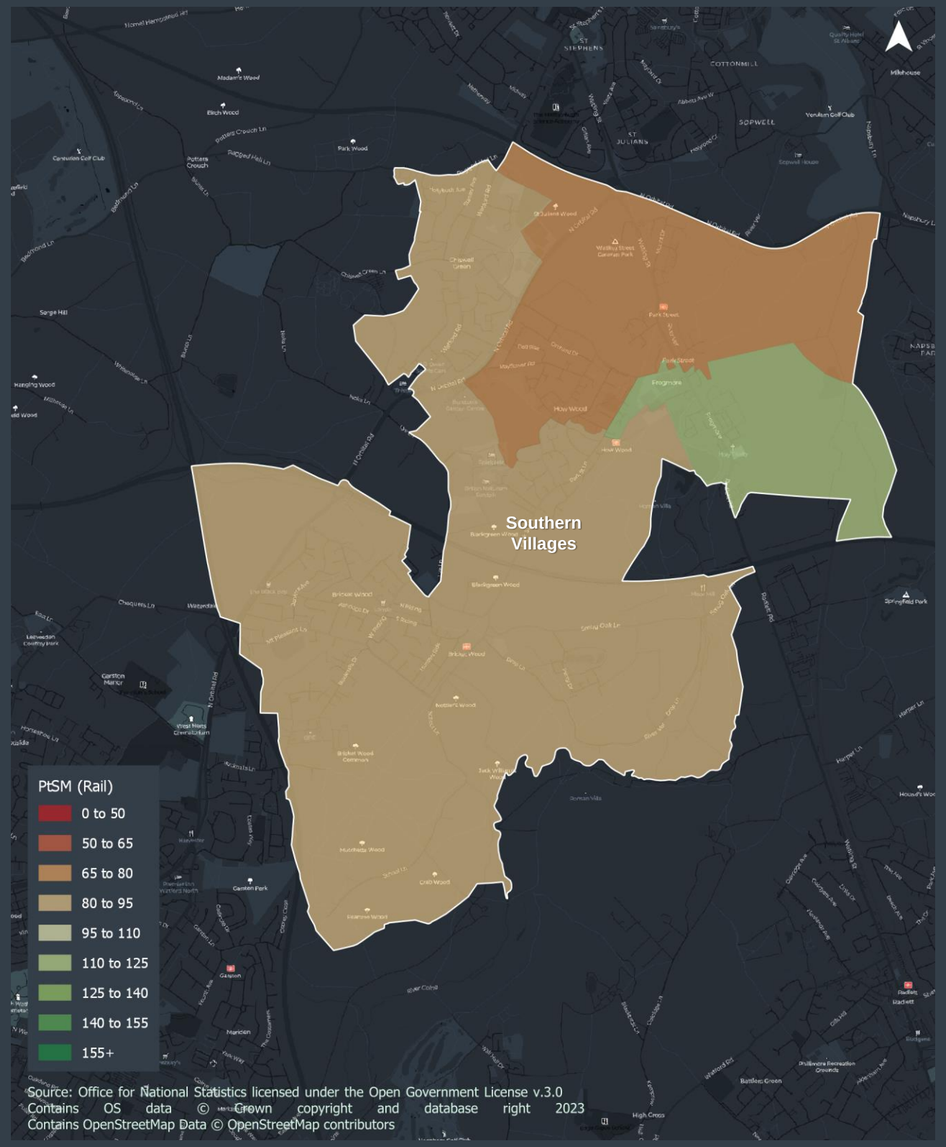
Appendix C21 Rail propensity in Southern Villages



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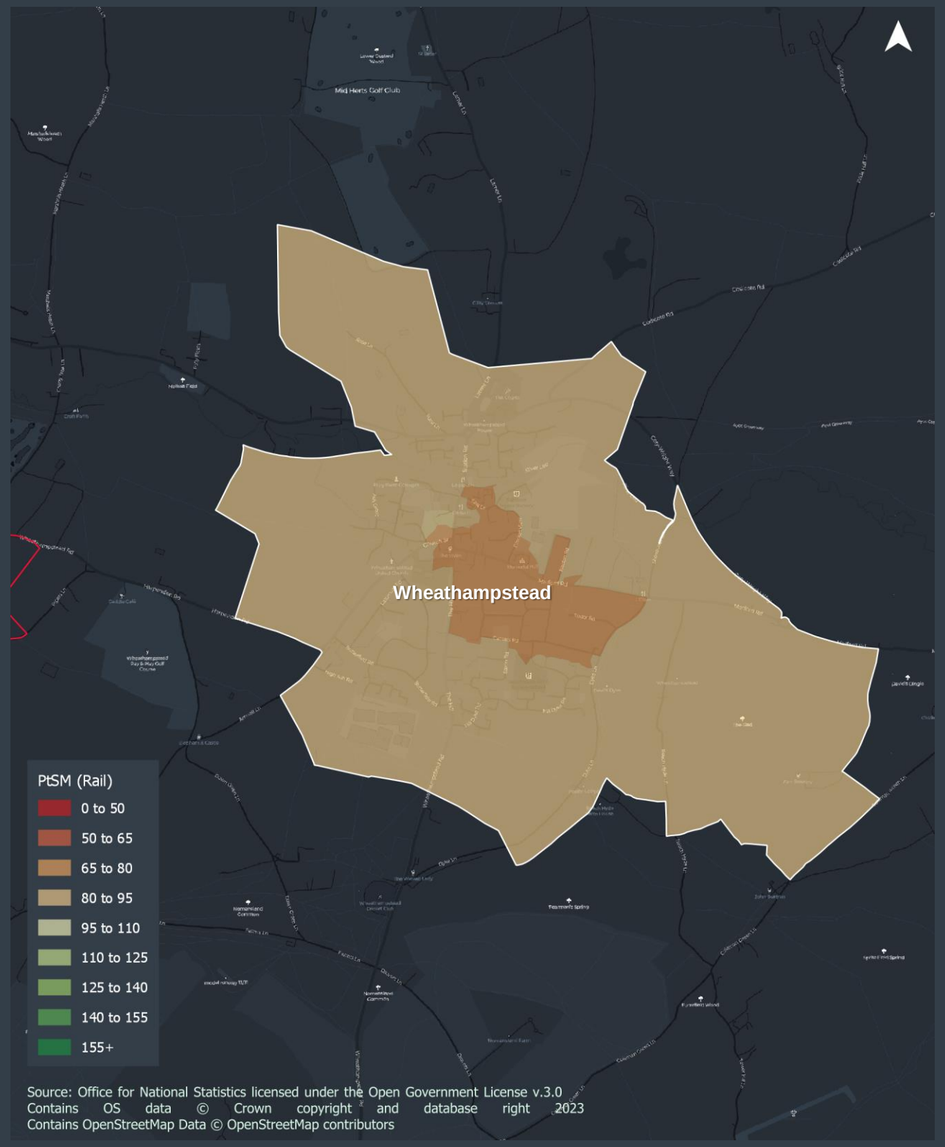
Appendix C22 Rail propensity in Wheathampstead



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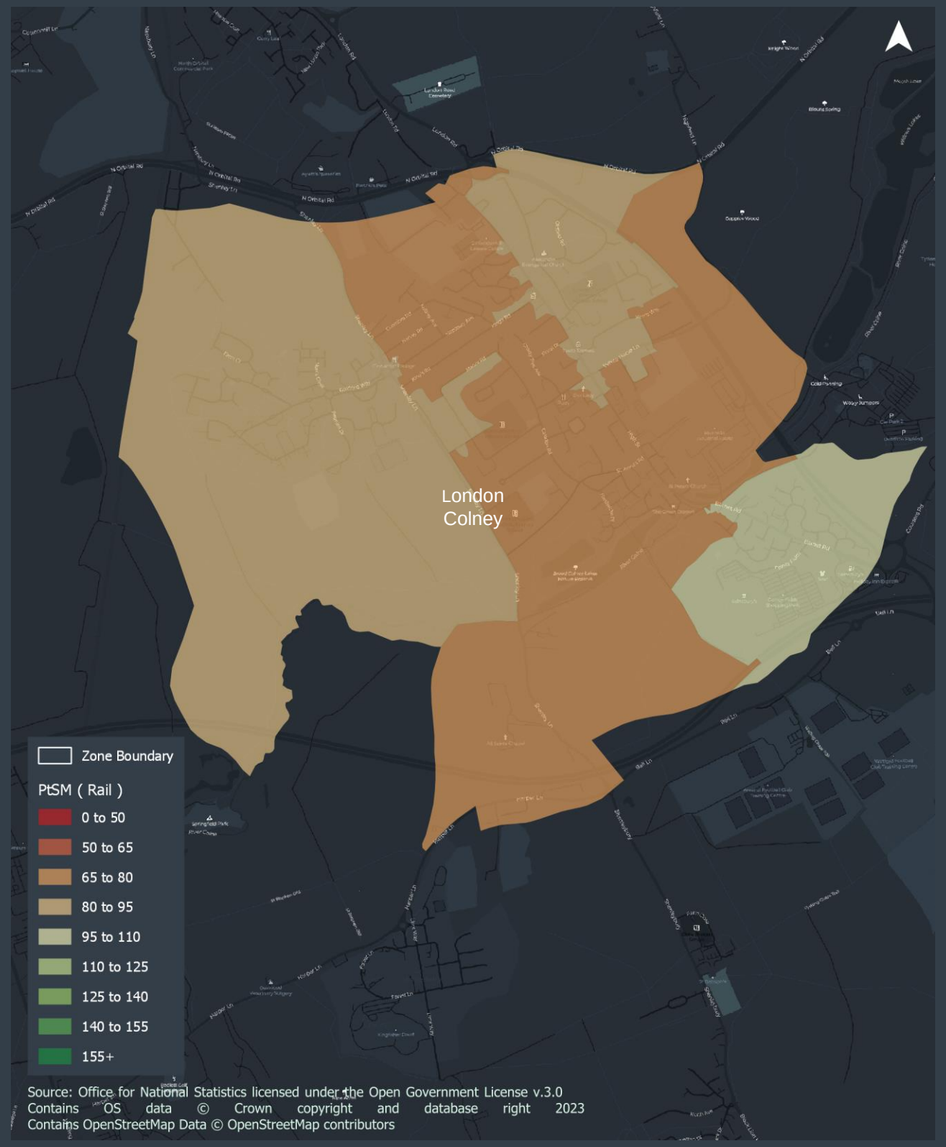
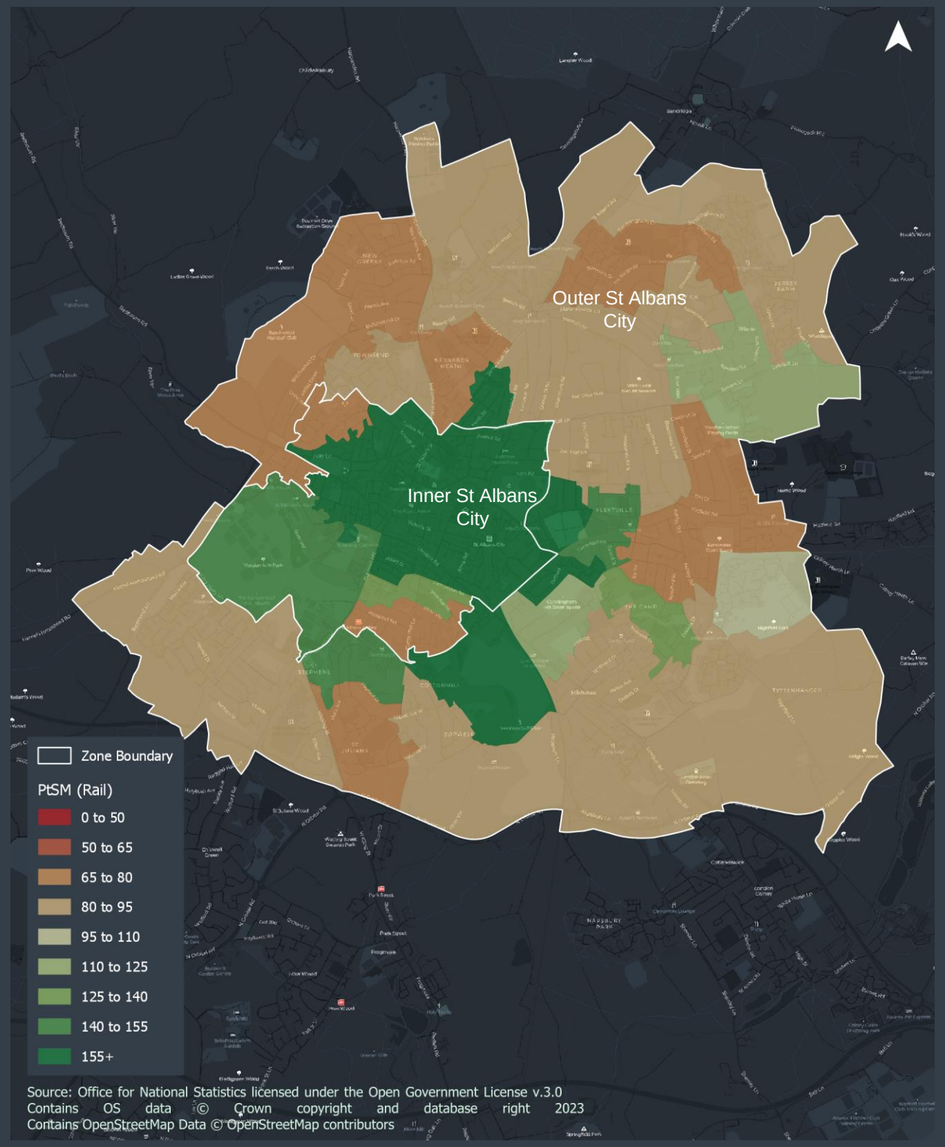
Appendix C23 Rail propensity in London Colney

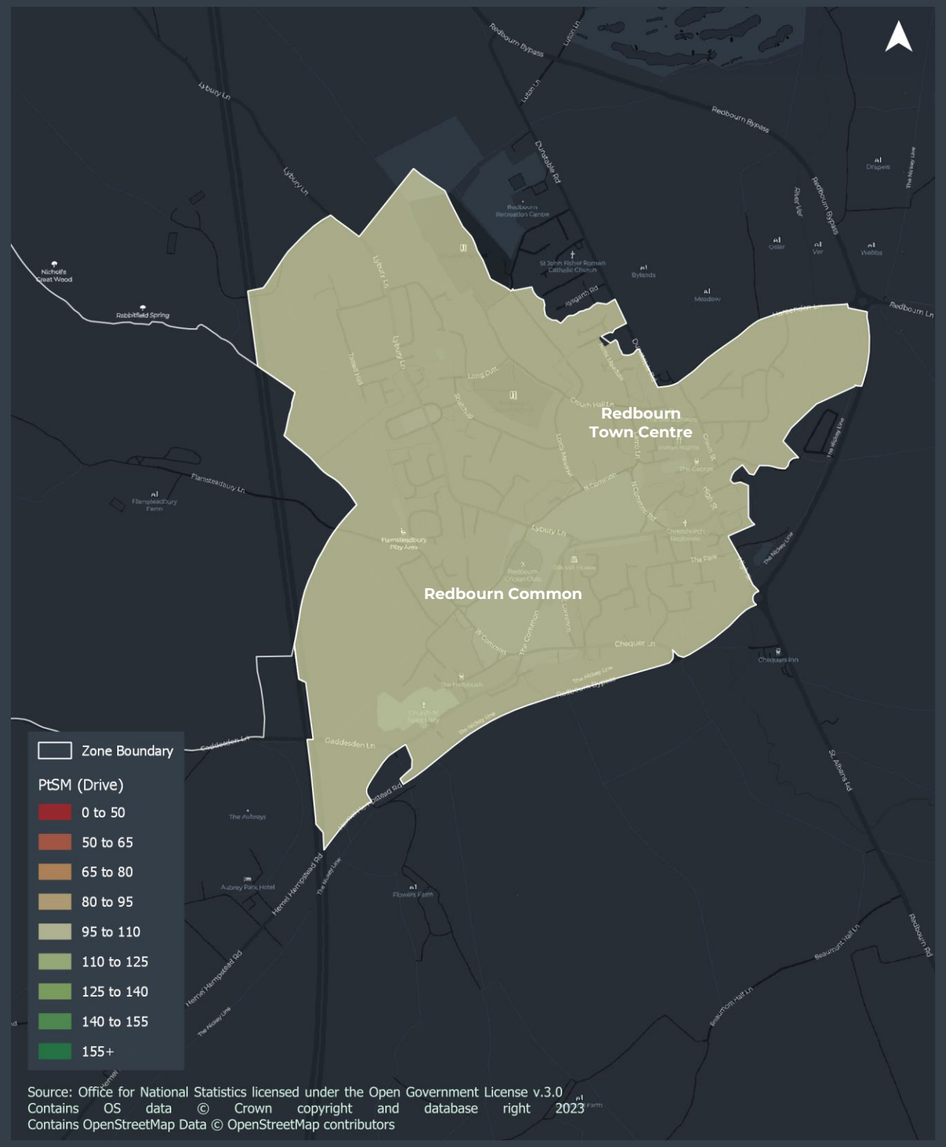


Appendix C24 Rail propensity in Inner & Outer St Albans



Driving propensity

Appendix C25 Driving propensity in Redbourn



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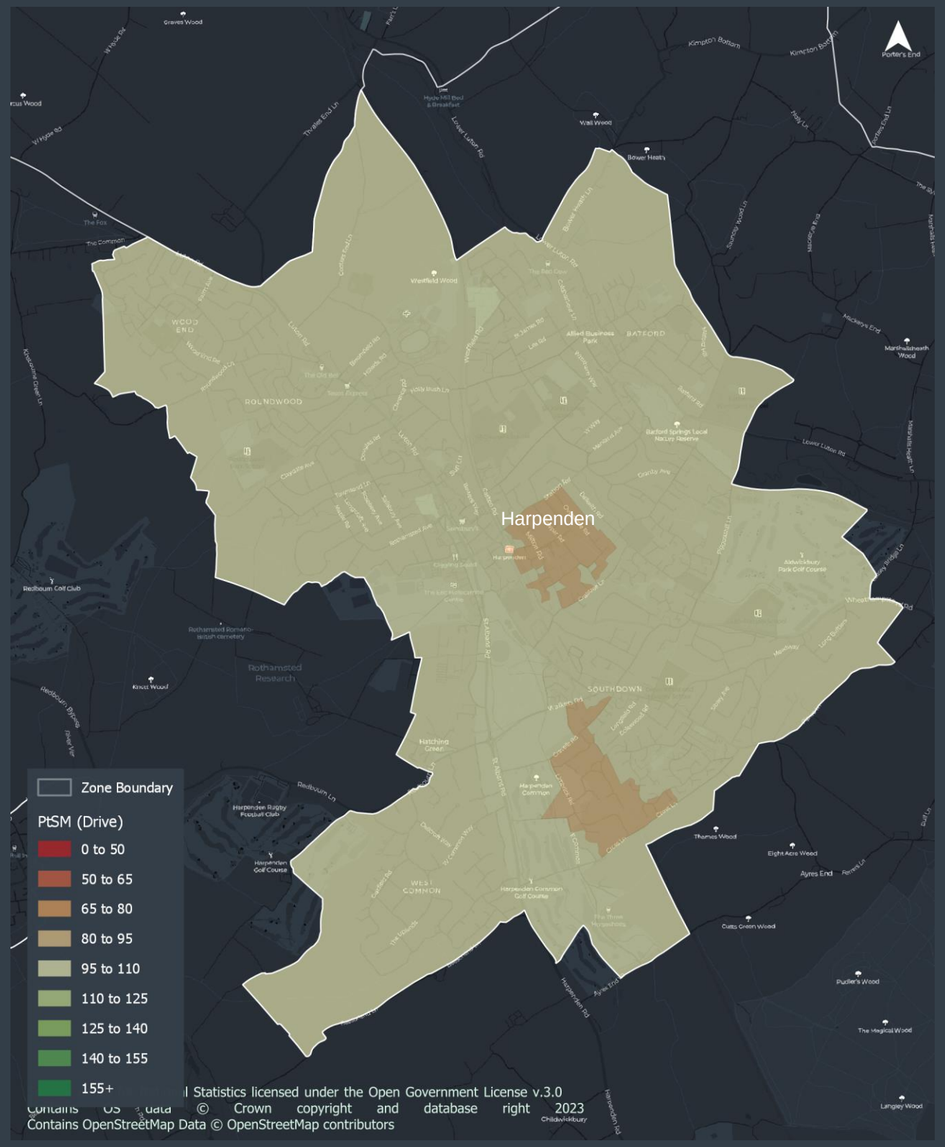
Appendix C26 Driving propensity in Harpenden



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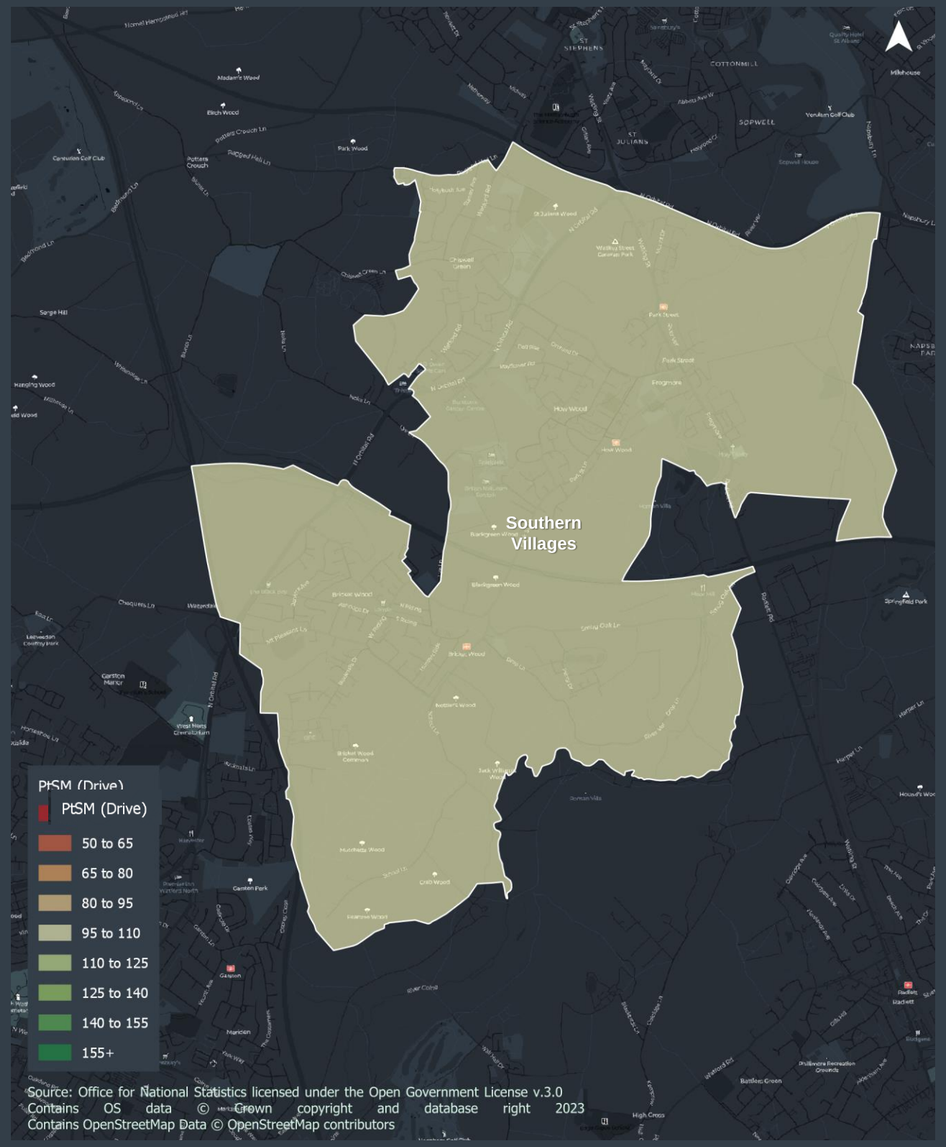
Appendix C27 Driving propensity in Southern Villages



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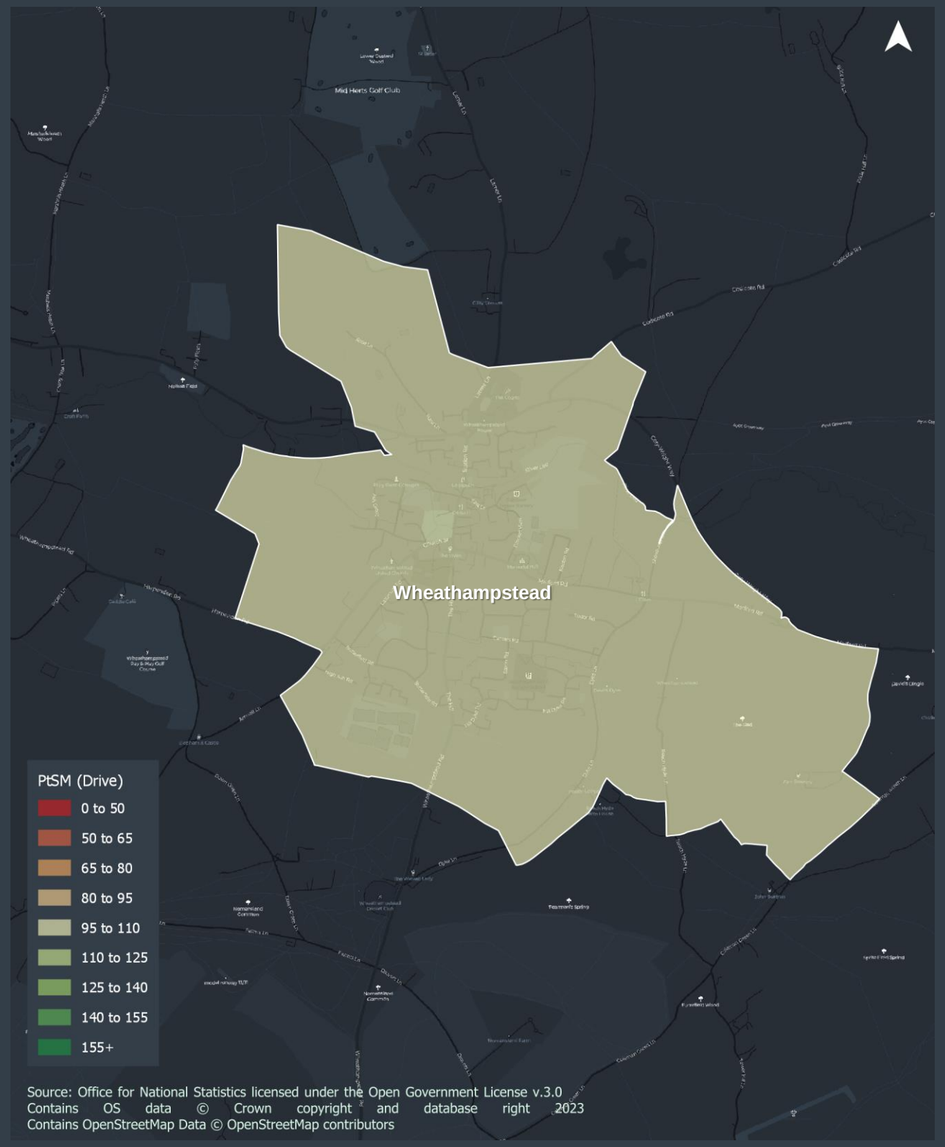
Appendix C28 Driving propensity in Wheathampstead



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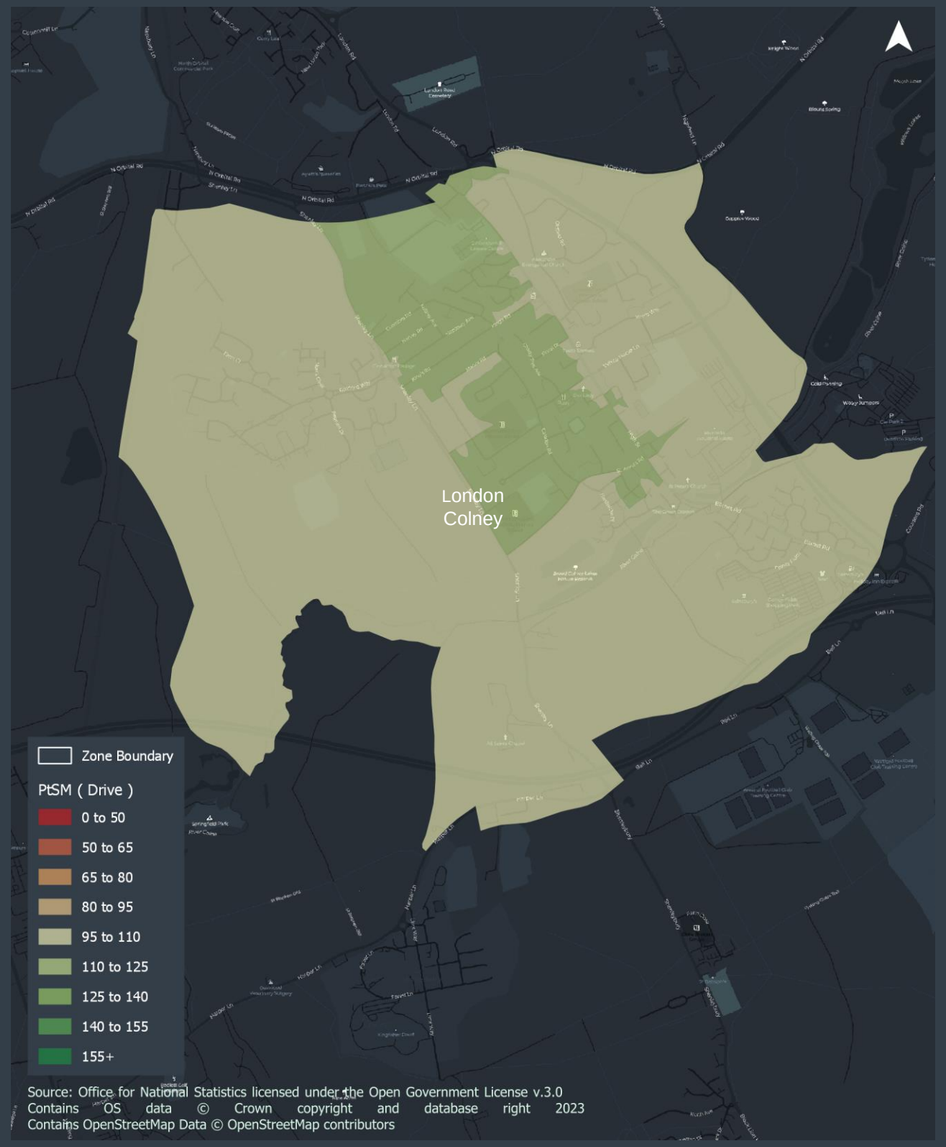
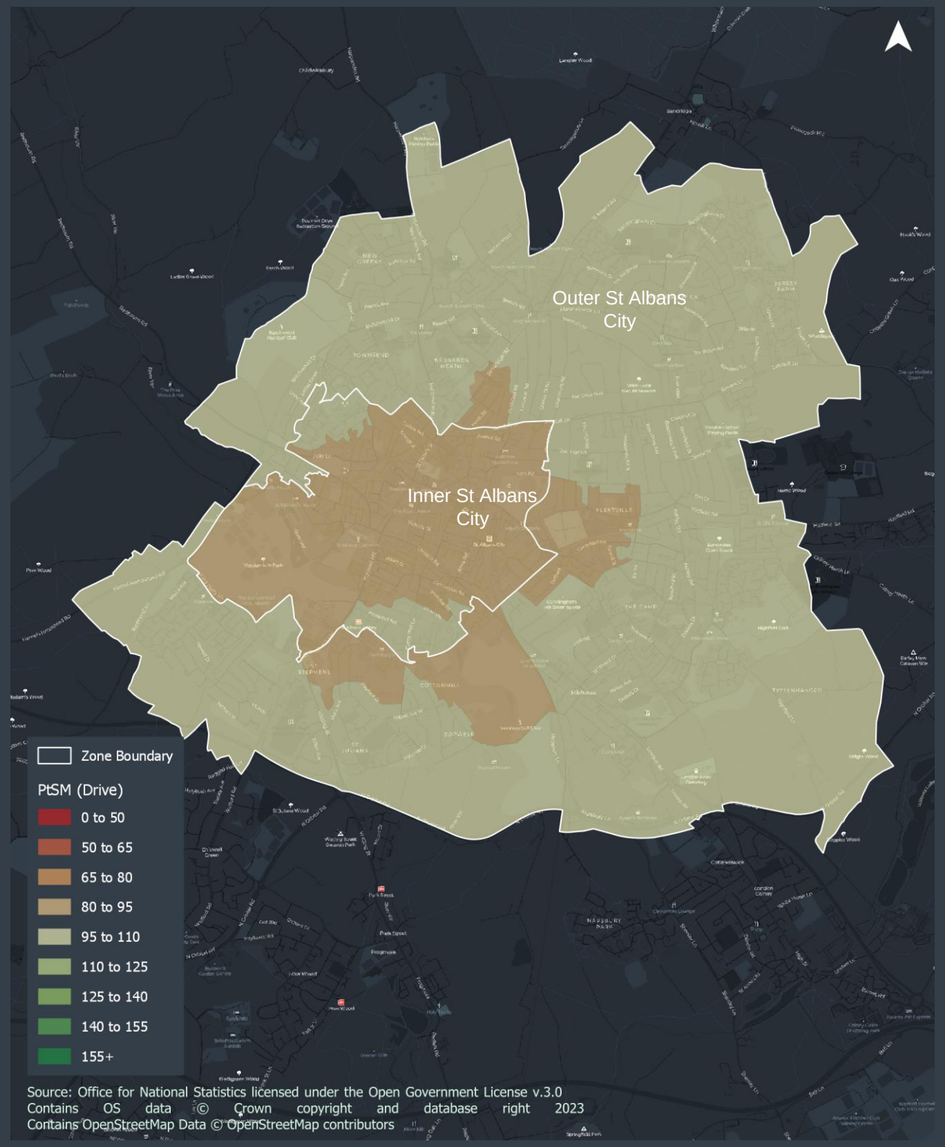
Appendix C29 Driving propensity in London Colney



Appendix C30 Driving propensity in Inner & Outer St Albans

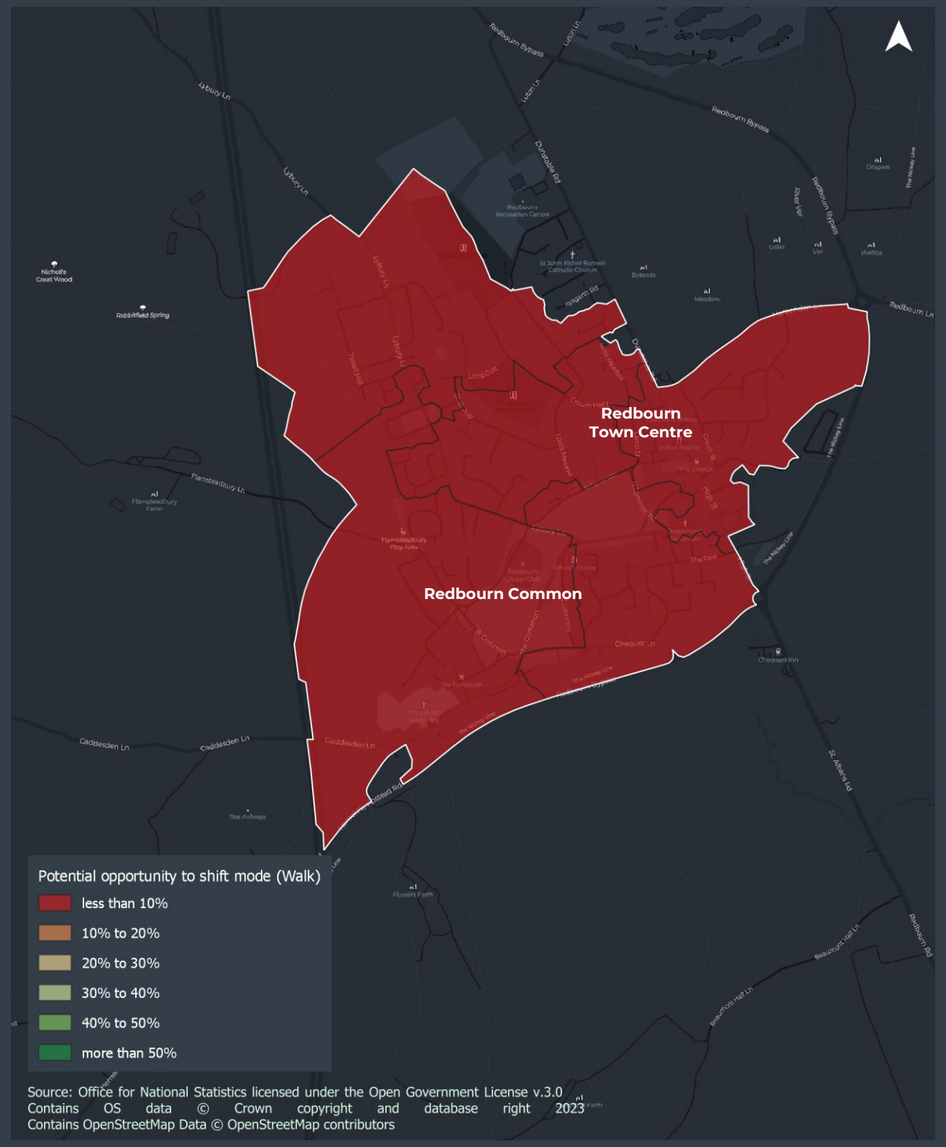


APPENDIX D

Breakdown of sustainable travel potential for existing communities

Walking potential

Appendix D1 Walking potential in Redbourn



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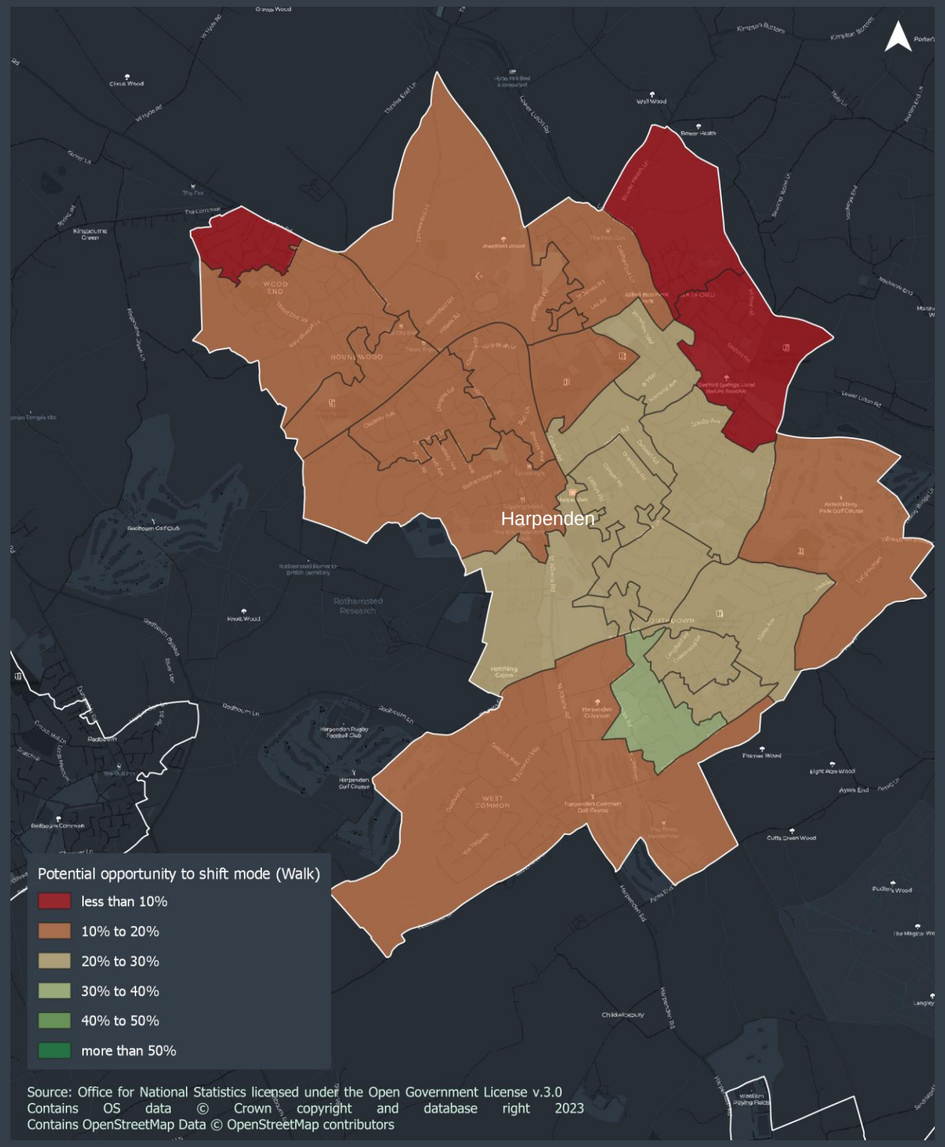
Appendix A1 Walking potential in Harpenden



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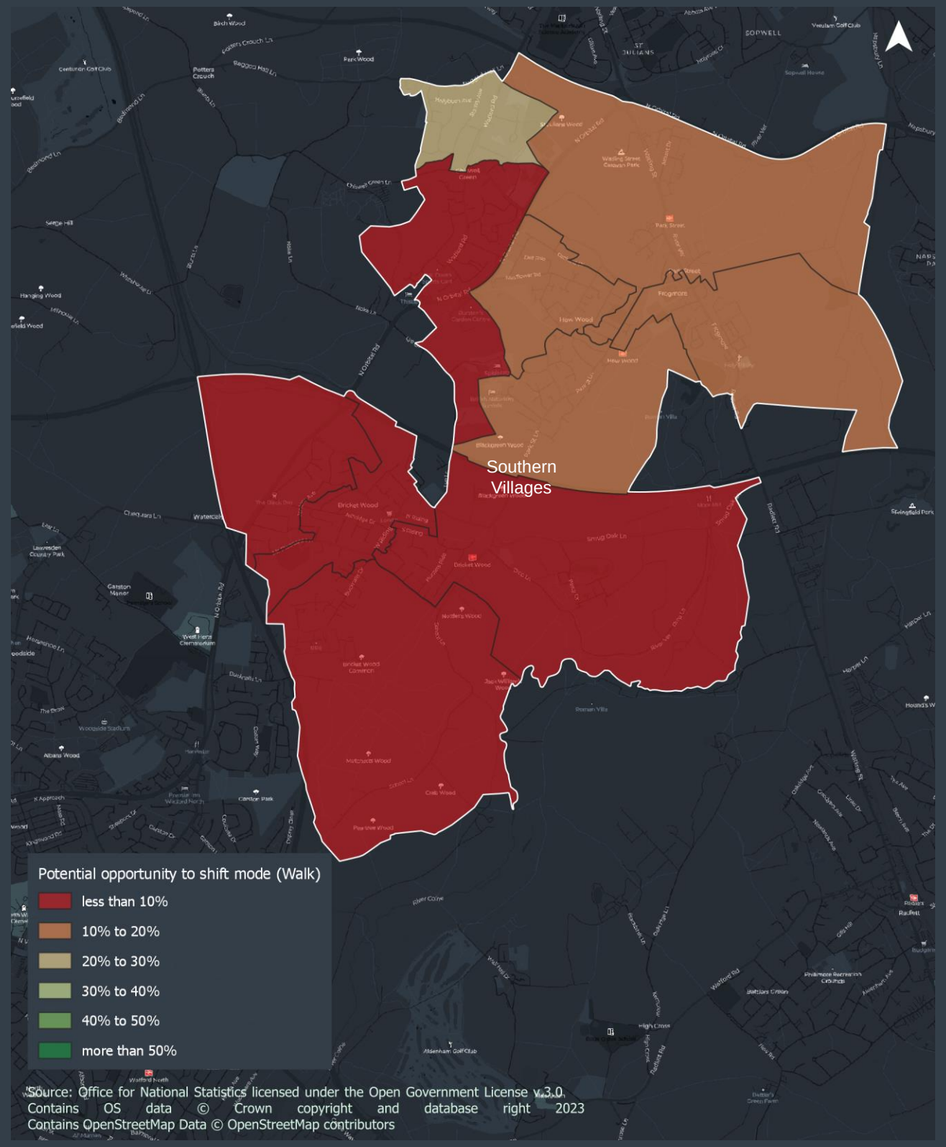
Appendix D3 Walking potential in Southern Villages



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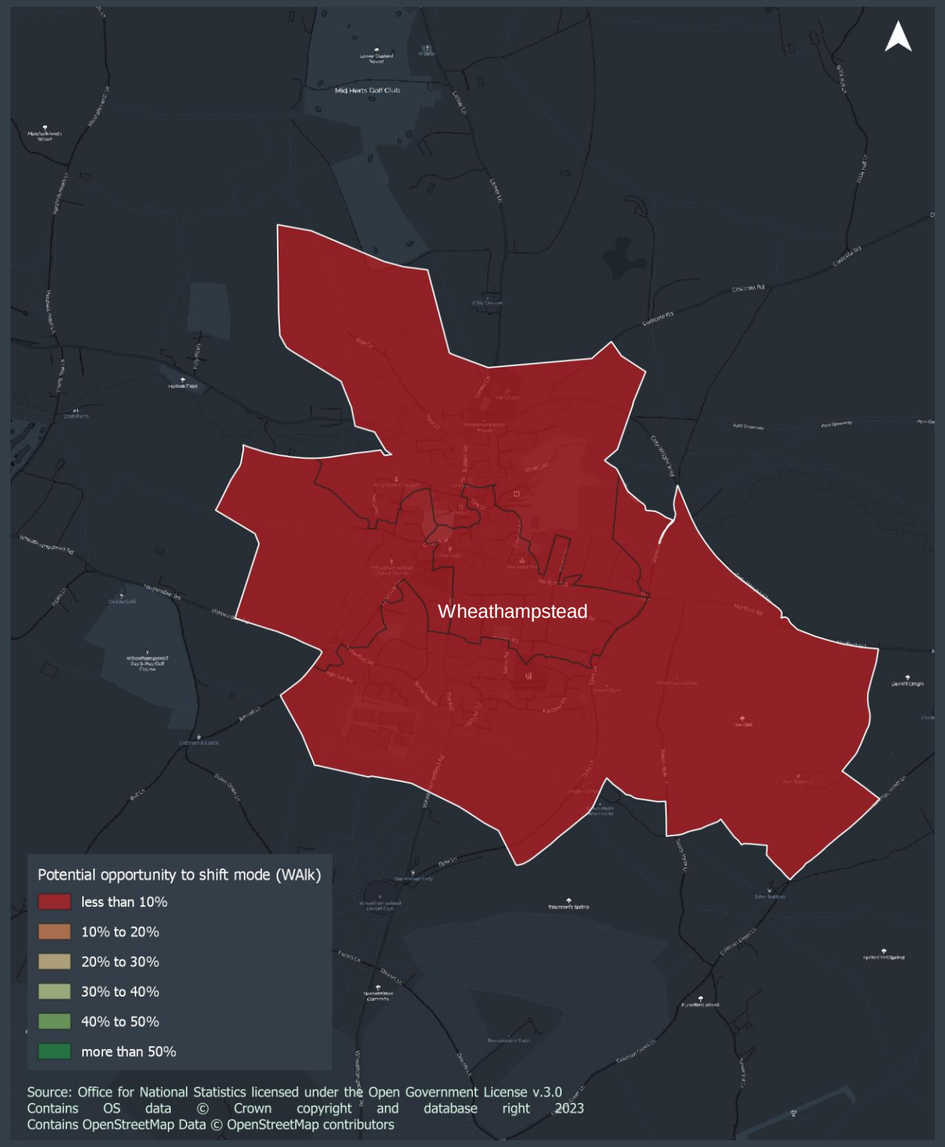
Appendix D4 Walkng potential in Wheathampstead



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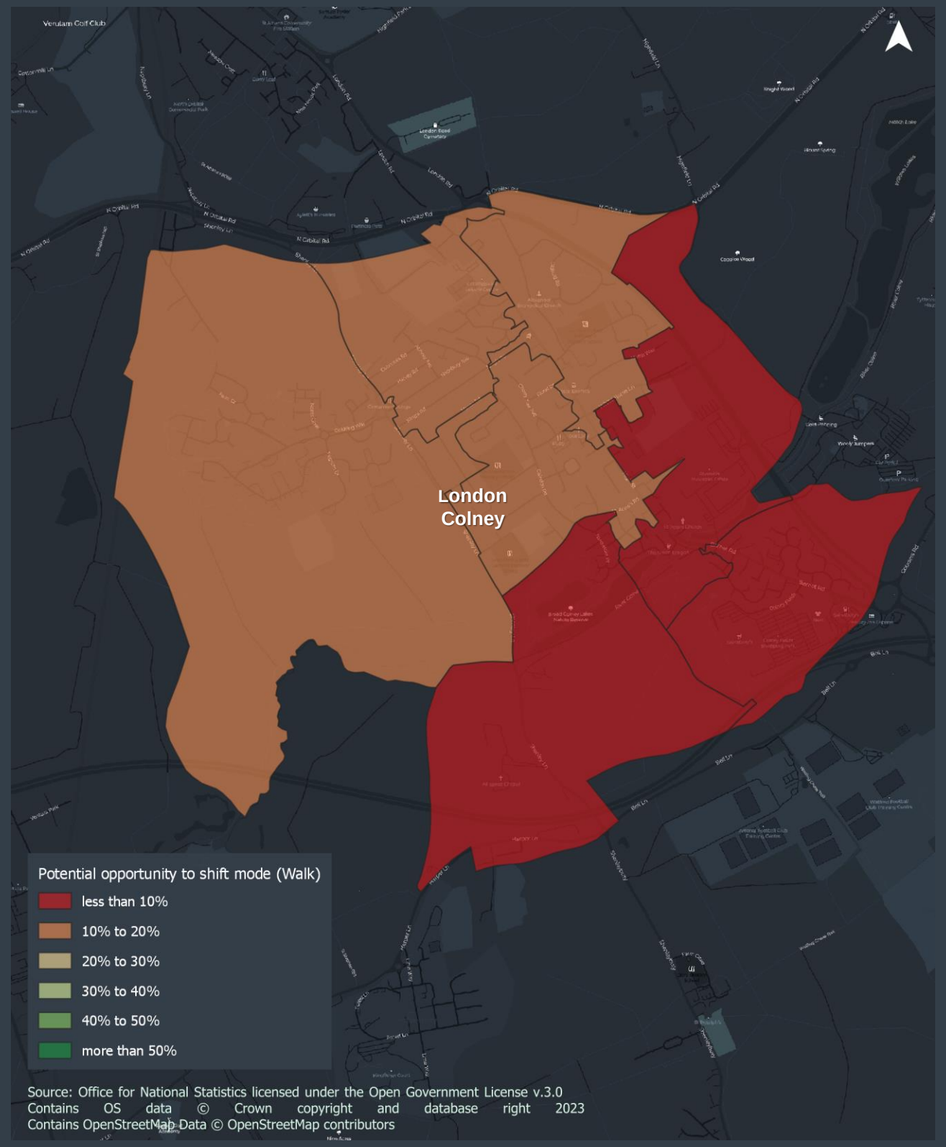
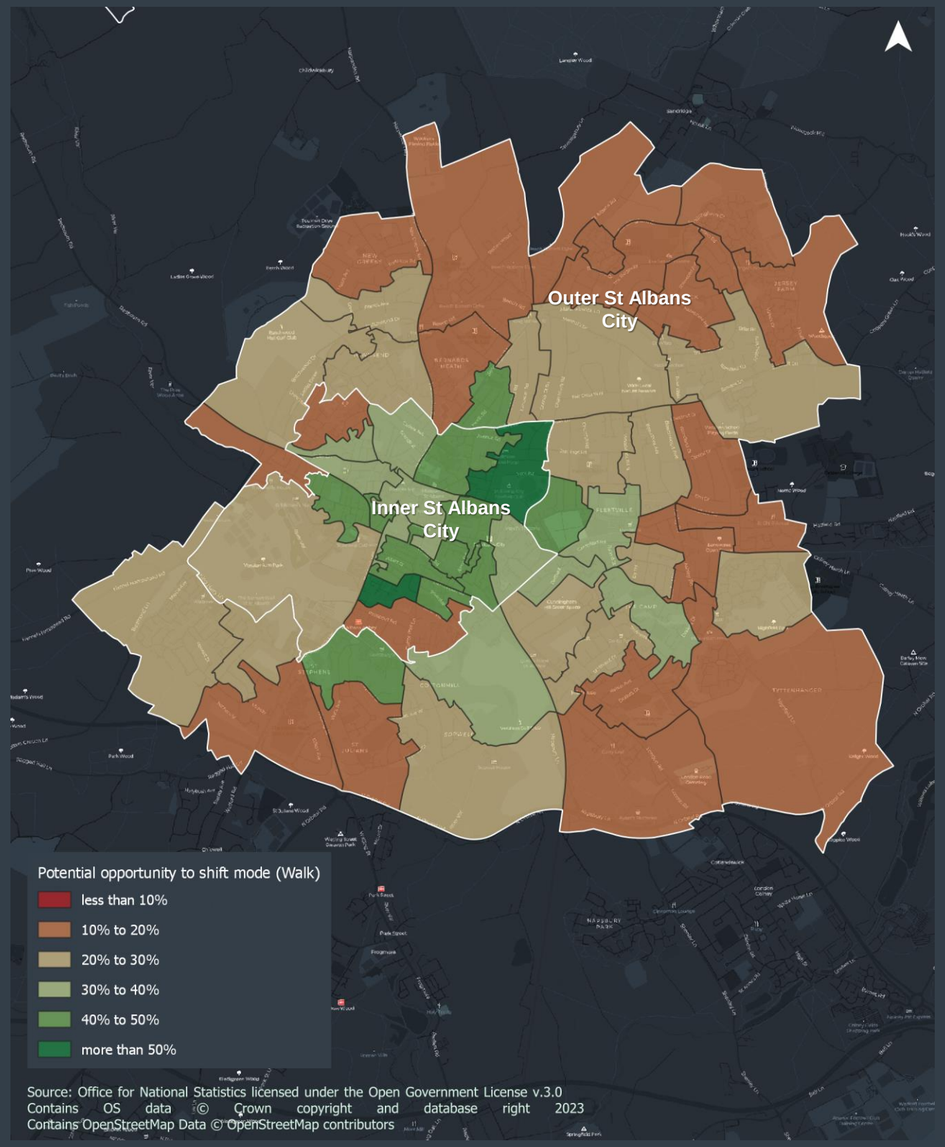
Appendix D5 Walking potential in London Colney

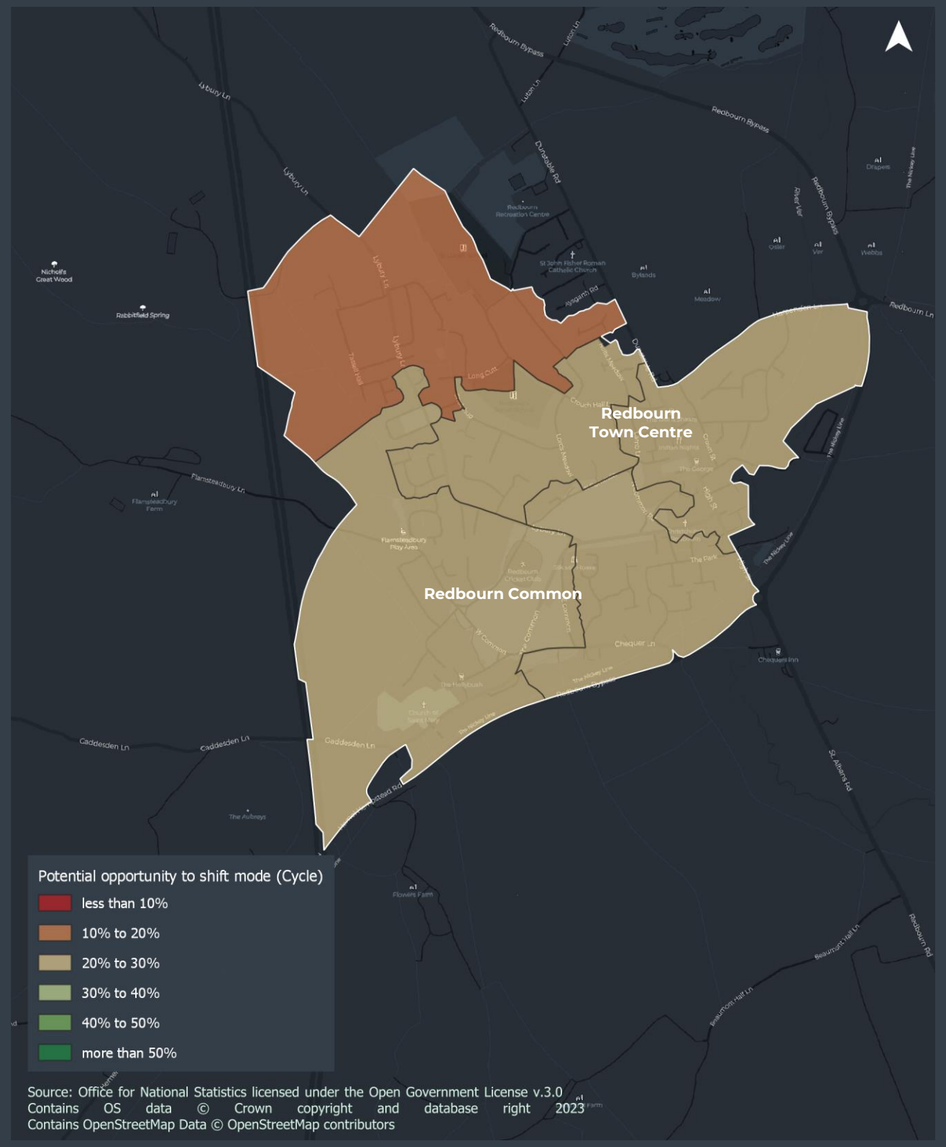


Appendix D6 Walking potential in Inner & Outer St Albans



Cycling potential

Appendix D7 Cycling potential in Redbourn



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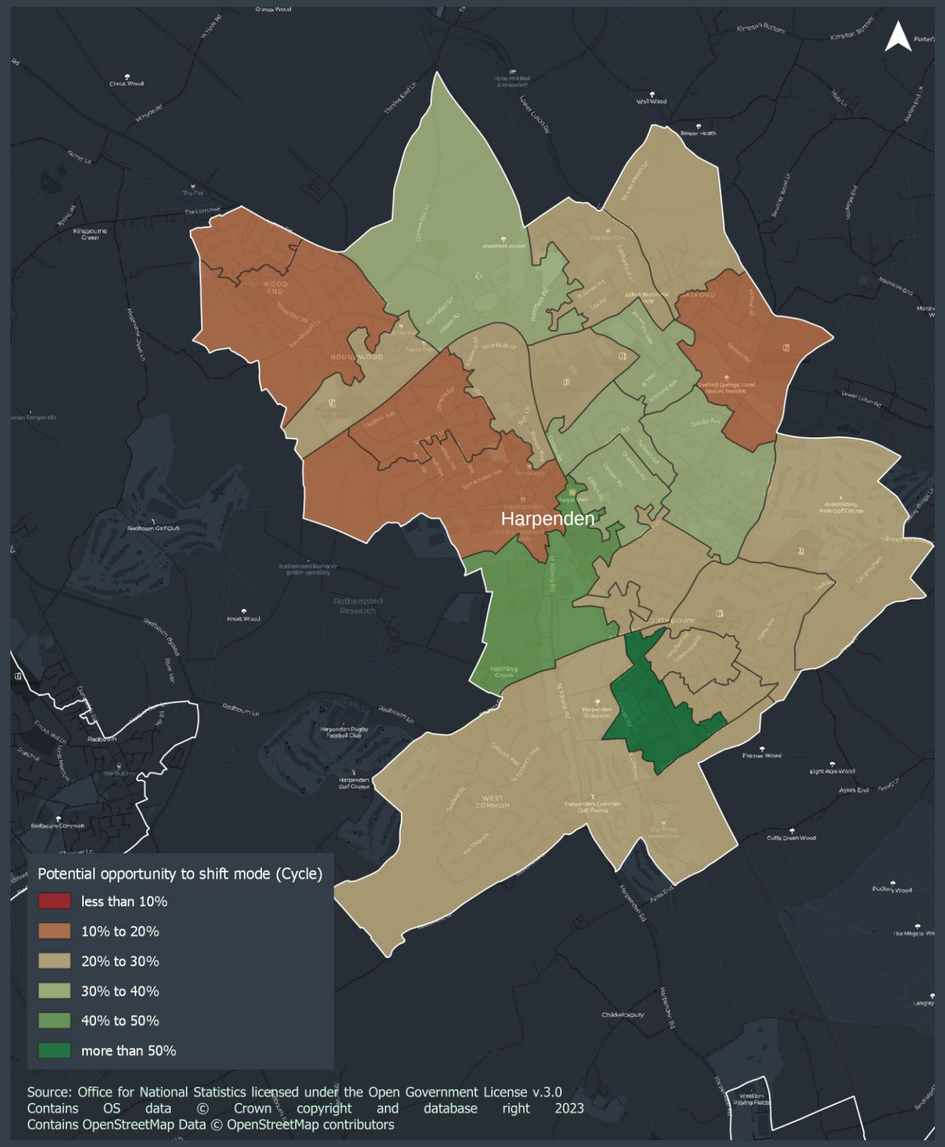
Appendix D8 Cycling potential in Harpenden



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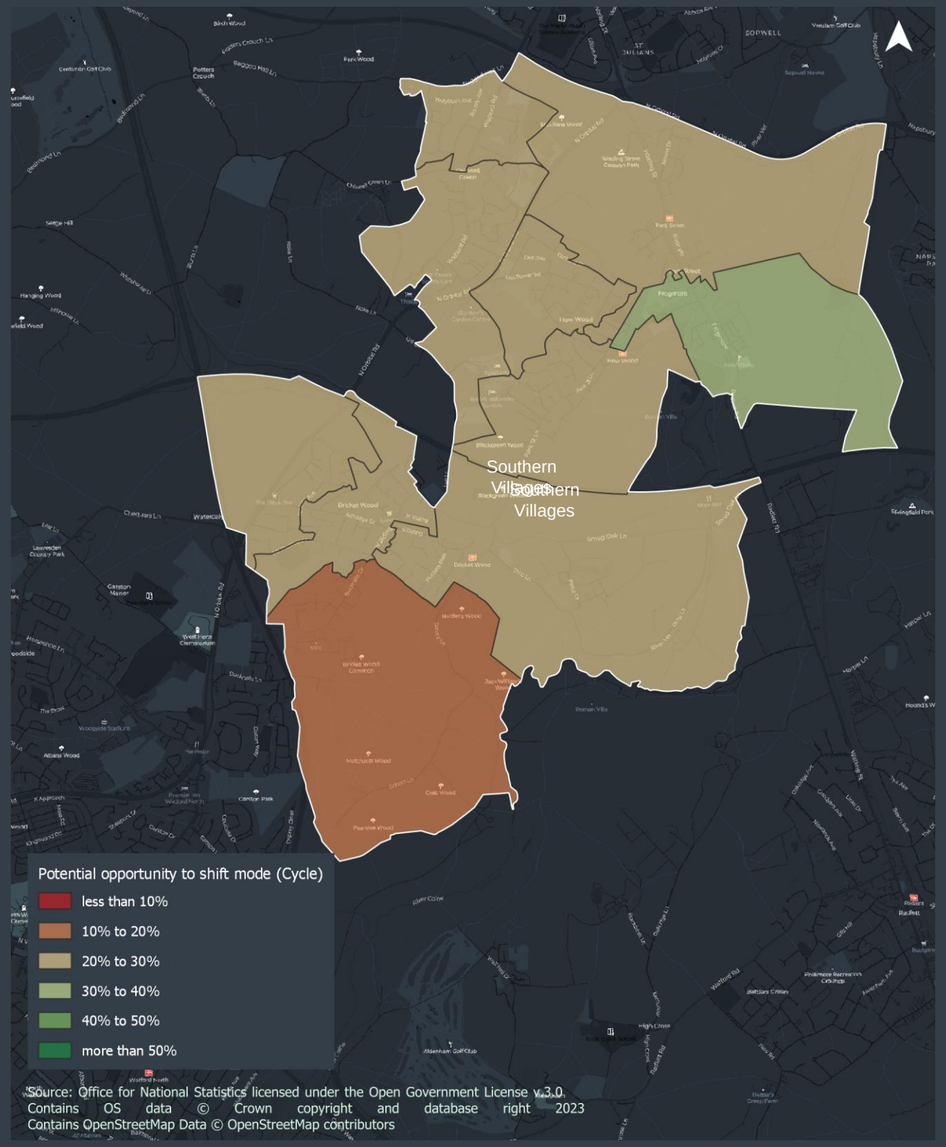
Appendix D9 Cycling potential in Southern Villages



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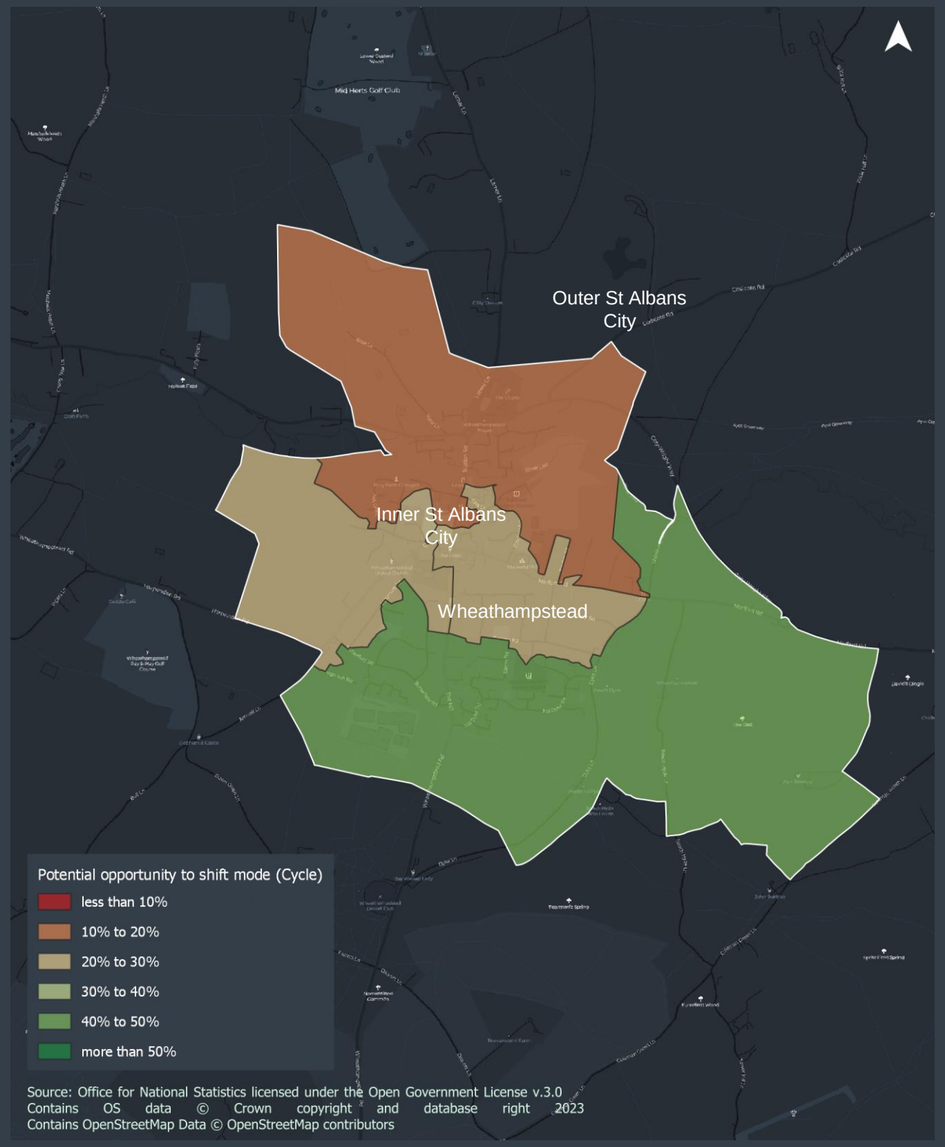
Appendix D10 Cycling potential in Wheathampstead



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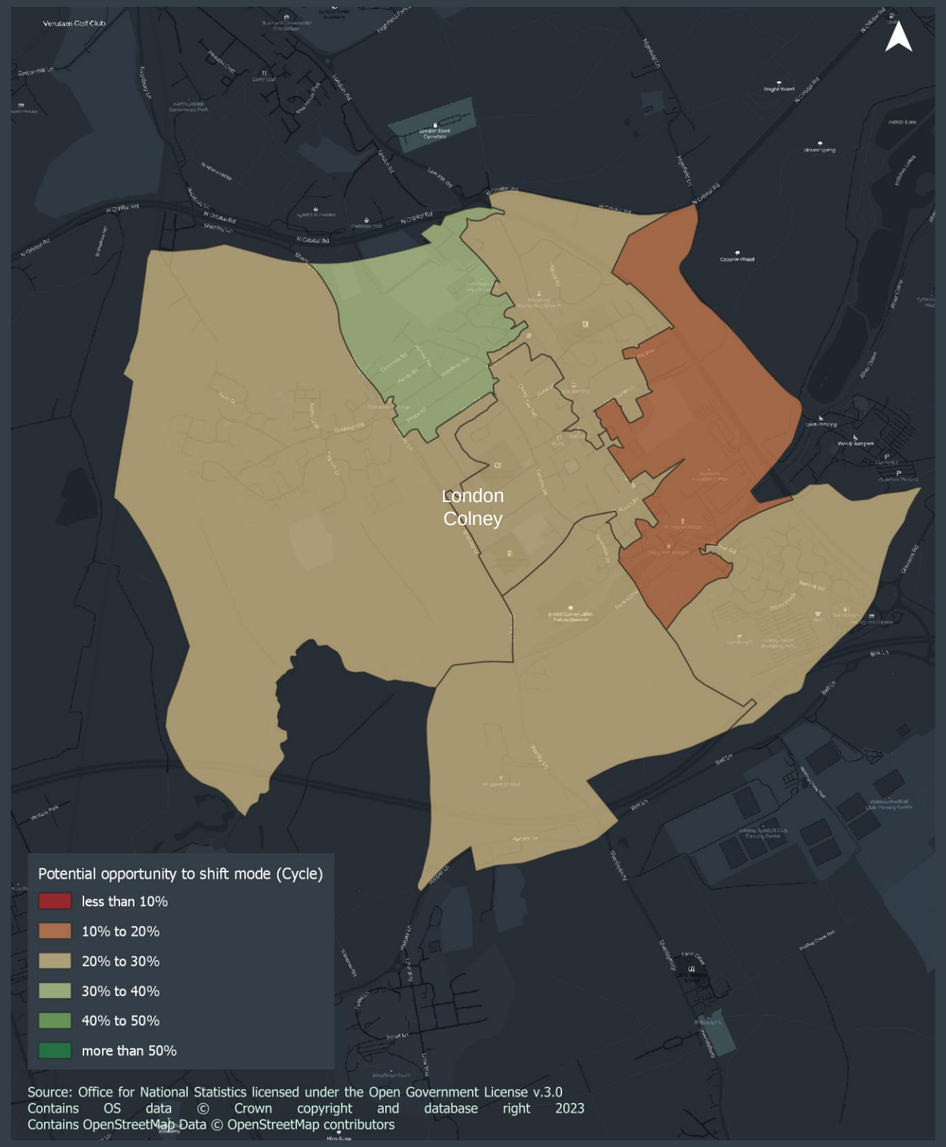
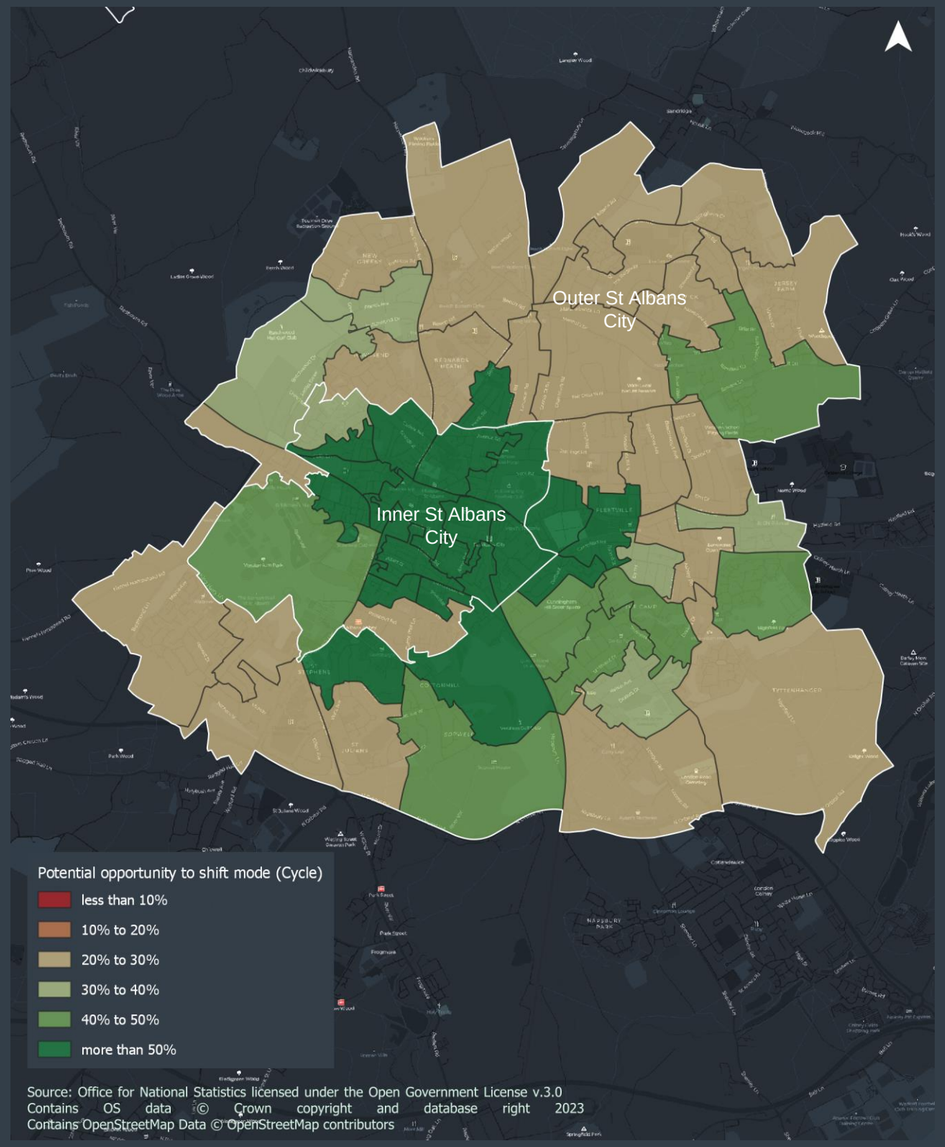
Appendix D11 Cycling potential in London Colney

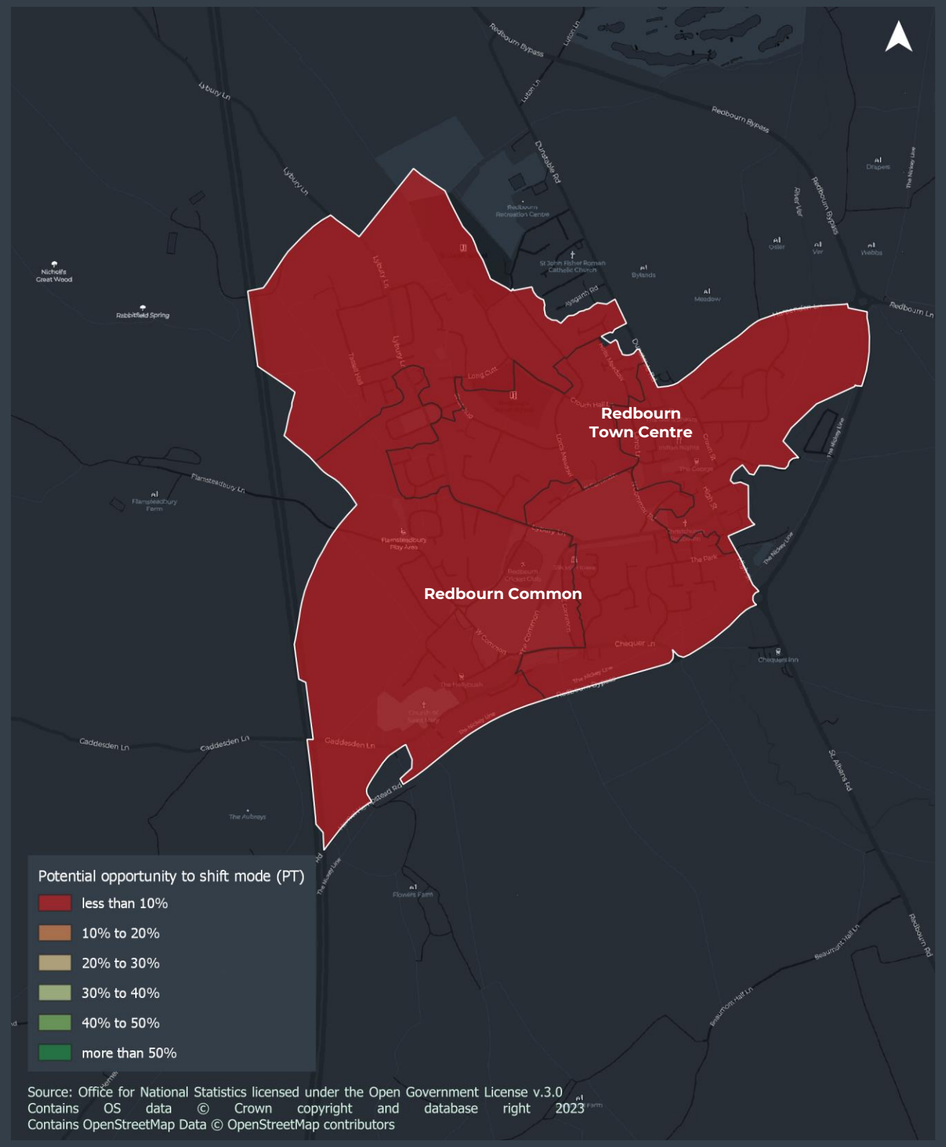


Appendix D12 Cycling potential in Inner & Outer St Albans



Public transport potential

Appendix D13 Public transport potential in Redbourn



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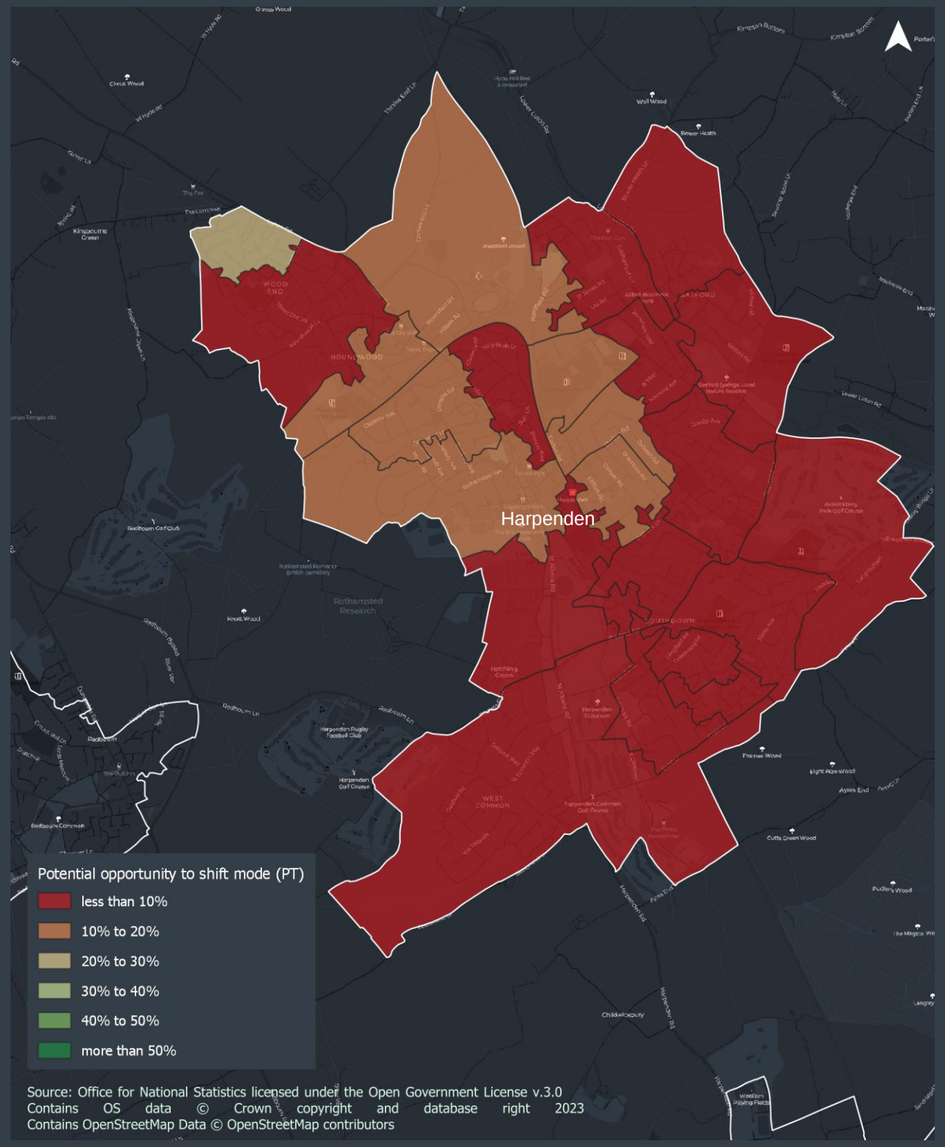
Appendix D14 Public transport potential in Harpenden



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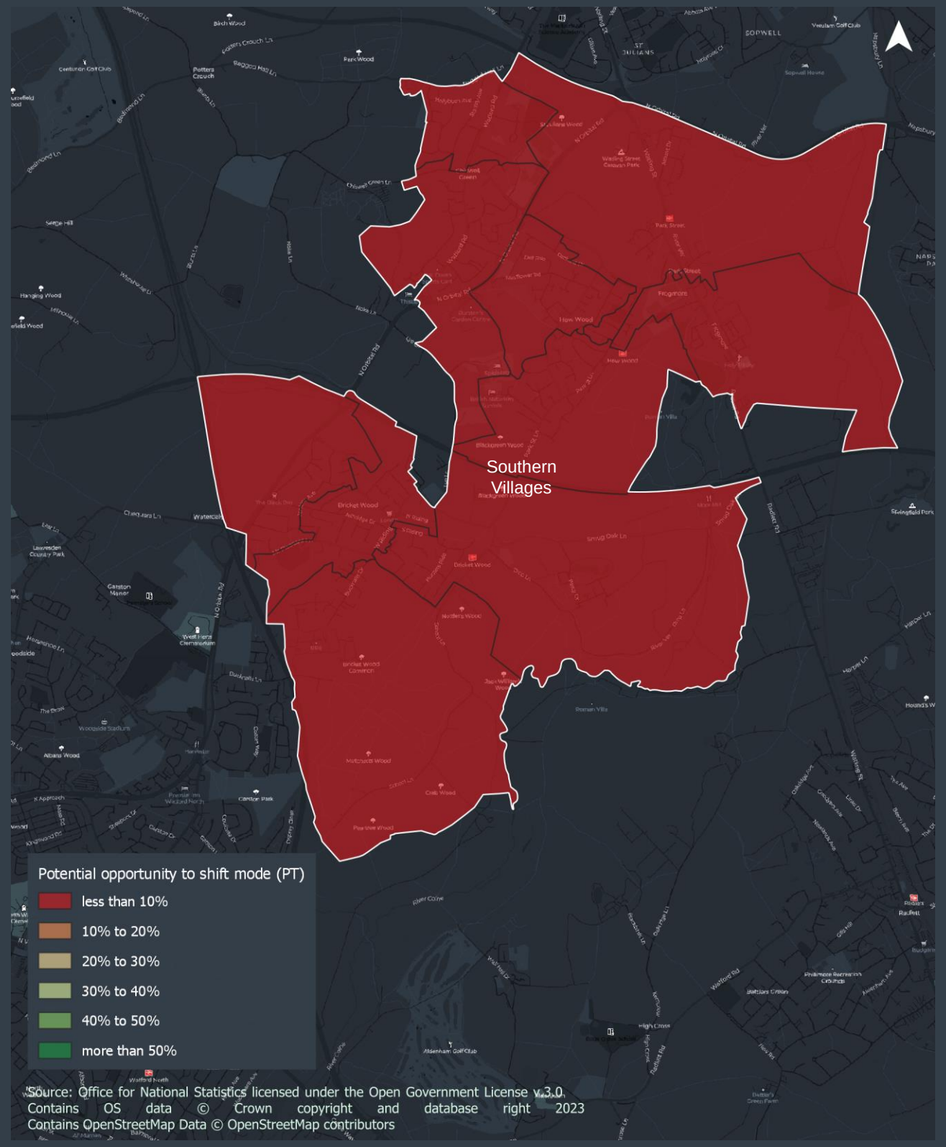
Appendix D15 Public transport potential in Southern Villages



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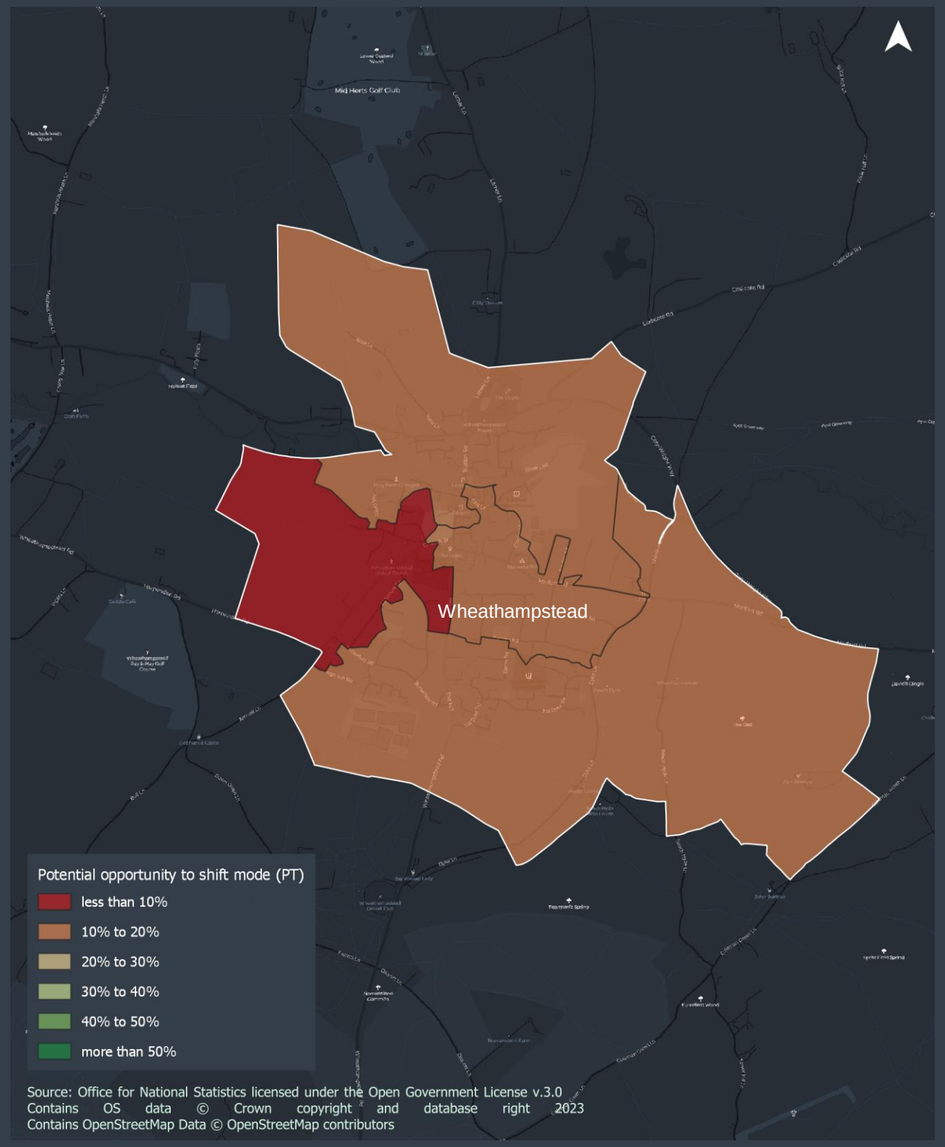
Appendix D16 Public transport potential in Wheathampstead



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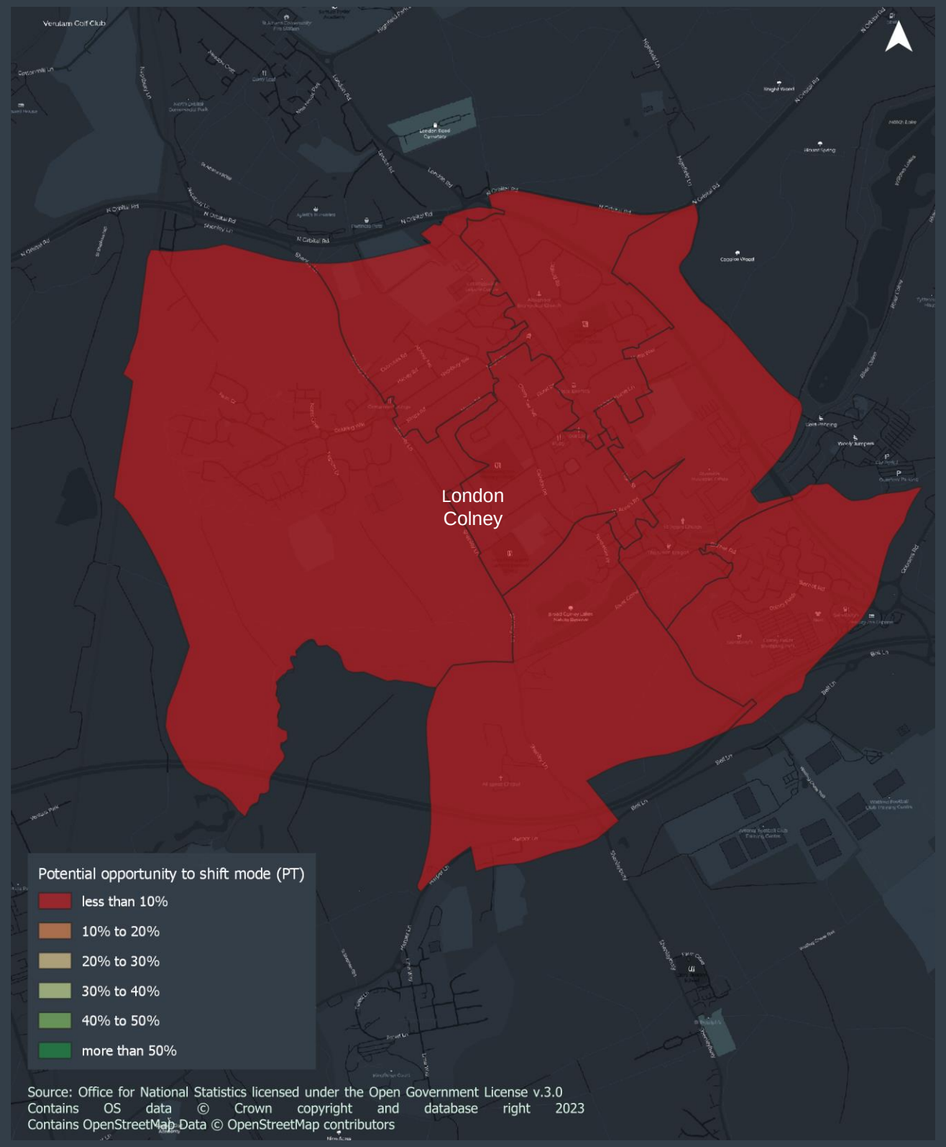
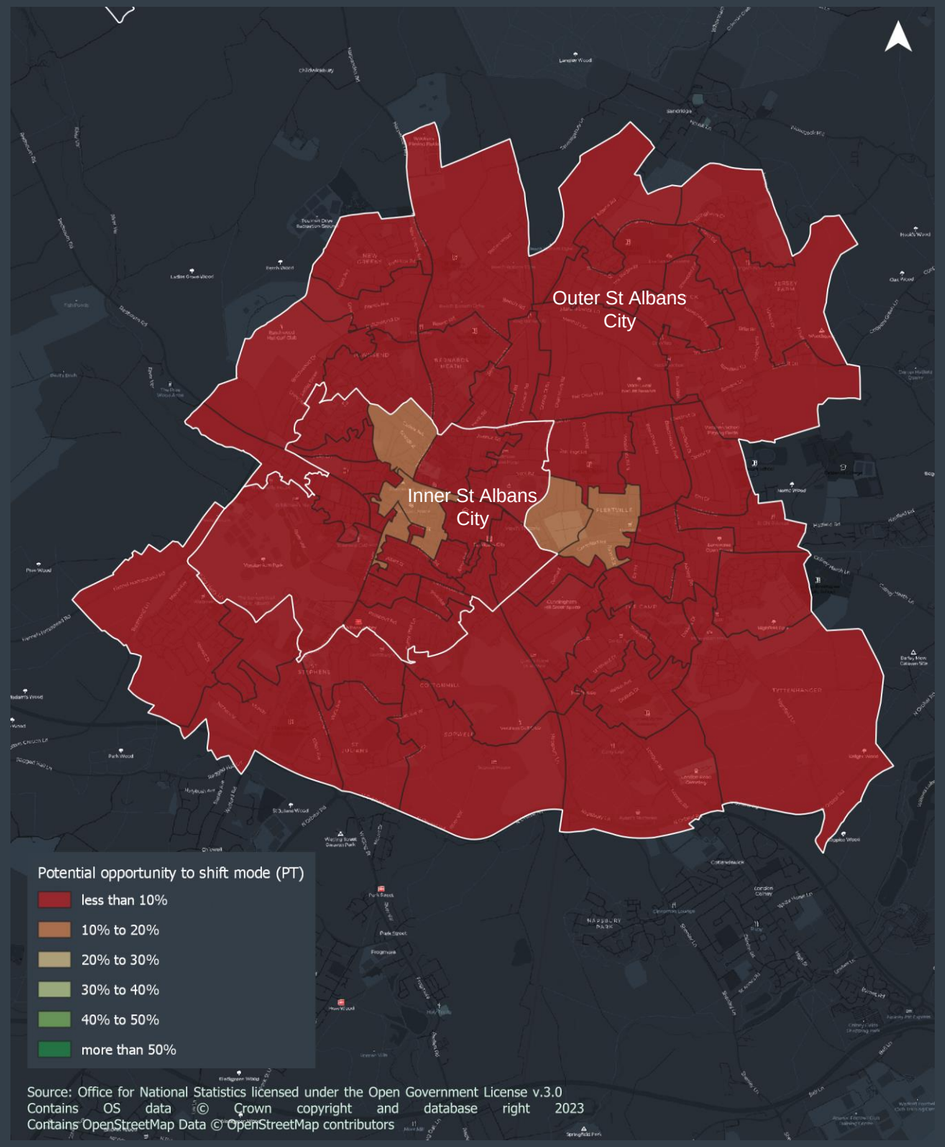
Appendix D17 Public transport potential in London Colney



Appendix D18 Public transport potential in Inner & Outer St Albans



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Let’s create change.