

# Wilmslow

## Part 1: Baseline Analysis Report

This report aims to provide an insight of transport in Wilmslow, East Cheshire. The data of this analysis is gathered from the UK Census 2011 and the Cheshire East Council, the datas are programmed by ArcGIS Pro. This is because the census data are collected and provided by the Government, making it a dependable source. Transport is the movement of people or goods from one place to another (Cambridge Dictionary, n.d.). Transport although can prosper cities in many ways, however several problems arised which caused complicated transport infrastructure within Wilmslow. This report outlines the topics of traveling to work and commuting, car ownership and public transport infrastructure under the theme of transport in Wilmslow.

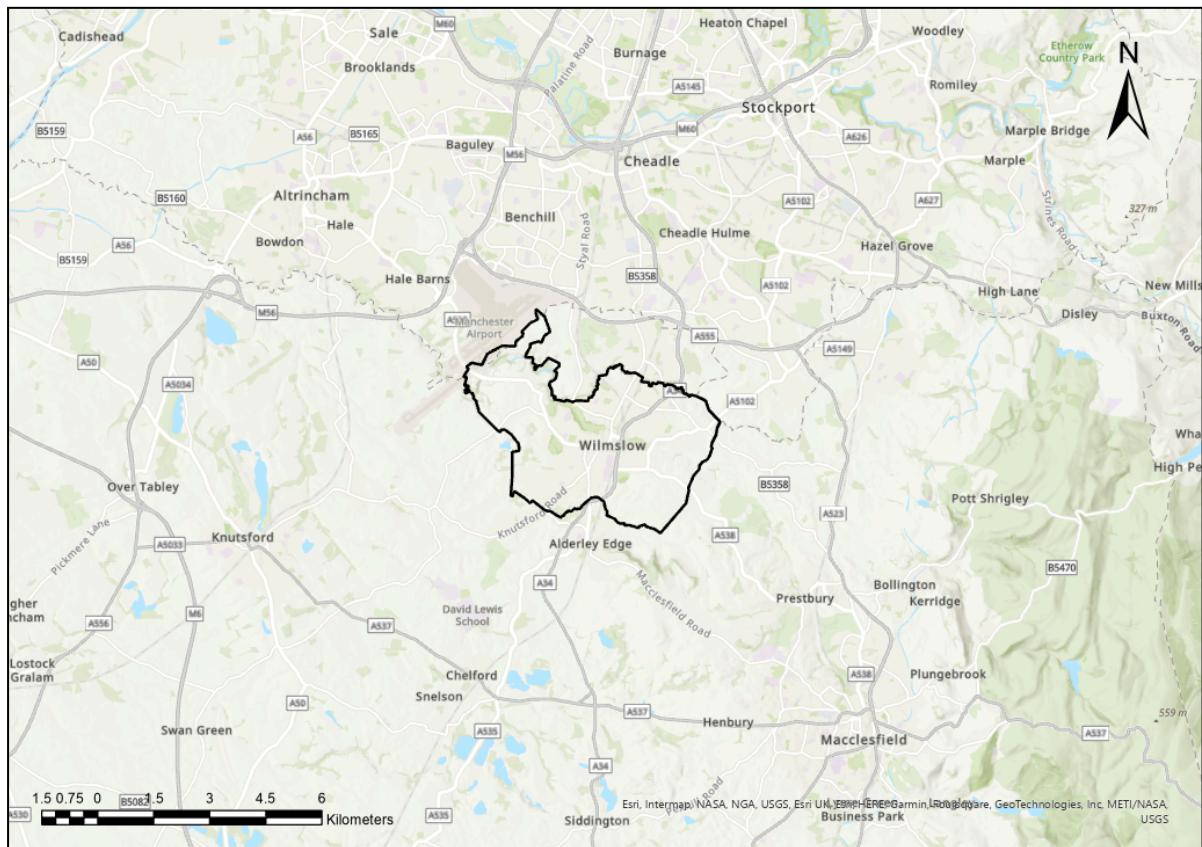


Figure 1. Study Area: Wilmslow

Wilmslow is a town with a beneficial location in the south of Manchester, just 10 miles away from Manchester city centre. It is located within Cheshire East in Cheshire, North West England. Wilmslow houses a population of 24,497 according to the census 2011. The town is a sought after location, well known for its high quality housing.

# **Public Transport Infrastructure**

Wilmslow has several different types of public transport infrastructure available for its citizens. It has good transport links to its surrounding areas which includes Manchester and Stockport, where M60 and M56 motorways are easily accessible. Many residents work in other areas outside Wilmslow, causing a significant amount of commuter flow into areas in Manchester, Stockport, Trafford and the town of Macclesfield. Overall, Wilmslow's public transport infrastructure may not be as extensive as those in larger cities, however there are a variety of choices to travel within town areas or nearby destinations.

## **Types of transport available and used**

### **Bus Network**

The main public transport available and used by the people of Wilmslow is by bus. It has a number of bus routes available, and the main bus operator in Wilmslow is by Stagecoach Manchester. Wilmslow owns 16 bus routes and has 96 bus stops spreaded amongst the residential settlements inside the town. Bus services play an important role to connect local users to services such as employment and school. However the bus patronage has been declining in recent years where it experienced a fall of 22% between 2009 and 2016 (Cheshire East Council, 2019).

### **Train Network**

Other than buses, the train is also a networking transport that is used very often. The Wilmslow Railway Station is the hub for both local and national services, it is served by a number of train operators and provides train services to many areas, connecting Wilmslow to other towns and cities in the region such as Manchester, direct services to different towns such as Liverpool, Birmingham and London. The Wilmslow Station Car Park only provides over a hundred car parking spaces for its users. The station is used by not only its residents but also residents in the nearby towns,

### **Air Network**

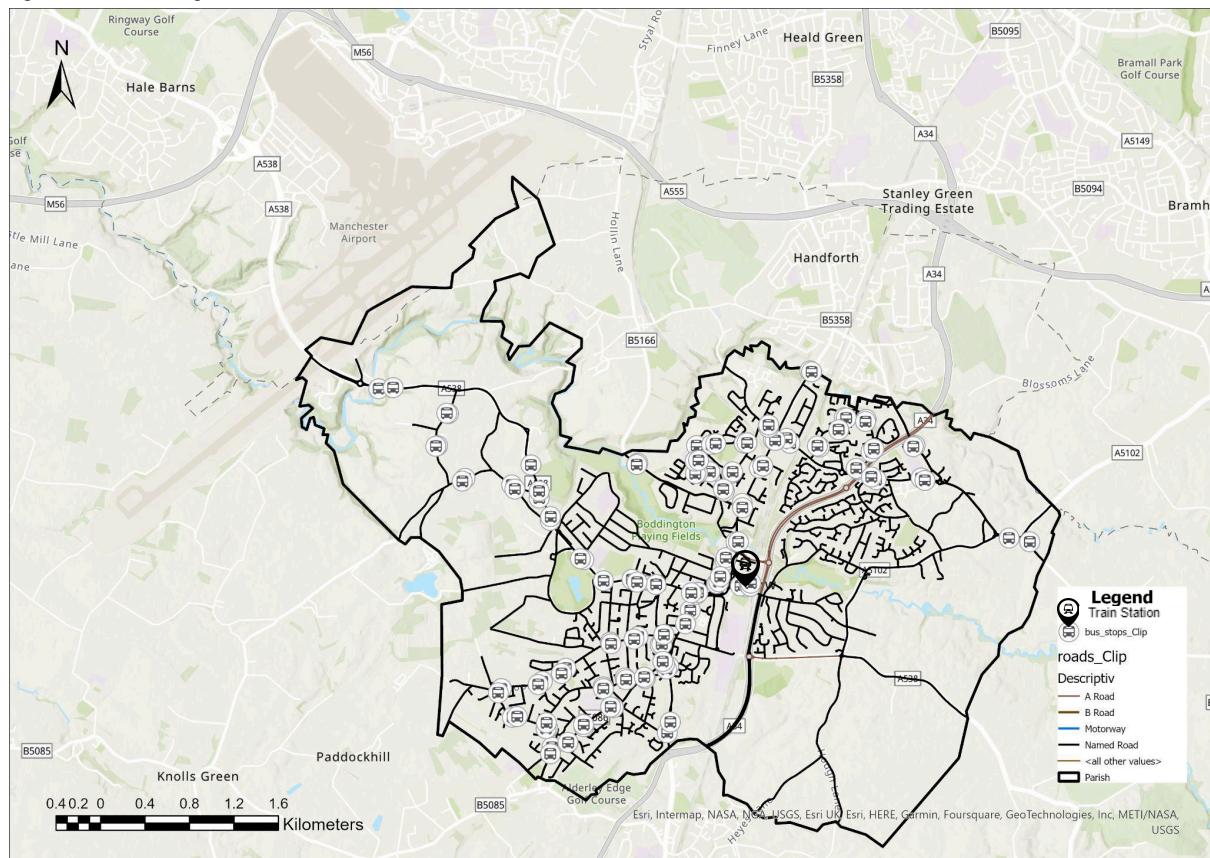
One beneficial fact about Wilmslow is that the Manchester Airport is located side by side of the geographical location of the town, with only approximately 3 miles away. It is easily accessible through public transport within town areas or by car. Manchester Airport the third busiest airport in the United Kingdom, it is a well developed air network for both domestic and international air travels where it handles 120,000 tons of air travel by many different airlines that connects North England to 160 destinations in the world (Manchester Airport Group, 2023), including countries in Asia.

## **Spatial distribution of transport networks**

The transport network in Wilmslow is shown in Figure 2, it is mainly composed of roads and rail connections with little provision for cycling and walking. It illustrates all the bus stops that are currently available, they are mainly concentrated in the north and south of Wilmslow where the majority of the residential areas are based. Other than buses, Figure 2 also presents the location of

Wilmslow Railway Station and the main roads in Wilmslow. The town is well connected to other areas through major roads and rail links, making it convenient to reach other destinations.

Figure 2. Public Transport Infrastructure in Wilmslow



## Efficiency of transport networks

The efficiency of transport networks differs depending on the mode of transportation and times of the day. As mentioned previously there are several bus services that operate in Wilmslow, the bus network generally operates efficiently with reliable and frequent services. However, bus uses can be affected particularly by congestions on the main routes in the town centre. The train network can get busy and delays do occur during peak hours .

The road network impacts on the efficiency of transport networks in Wilmslow. The highway networks are especially significant amongst residents, employees and visitors, as they rely on these extensive road networks to travel to, from and within towns (Cheshire East Council, 2019). There are several major routes passing through the town, the roads can be congested during peak travel times, especially close to the key junctions motorways of A34 and A538.

## Car Ownership

Wilmslow is an affluent town with relatively high car ownership, where 40% of households own 2 or more cars (Cheshire East Council, 2019). According to the UK Government's Department for Transport there are approximately 82% of households in Cheshire East in 2019 that own at least one car, where in census 2011 the national average of car ownership was 73%. However the town centre has a rather lower car ownership per household in comparison to other areas in Wilmslow due to the absence of residential buildings.

### Cars per household

Figure 3 shows car ownership and household buildings in Wilmslow. The household buildings show where most residents are based in the town, and the ownership of cars correlates with where residential areas are. Most residential areas are concentrated in the north and southern parts of the town.

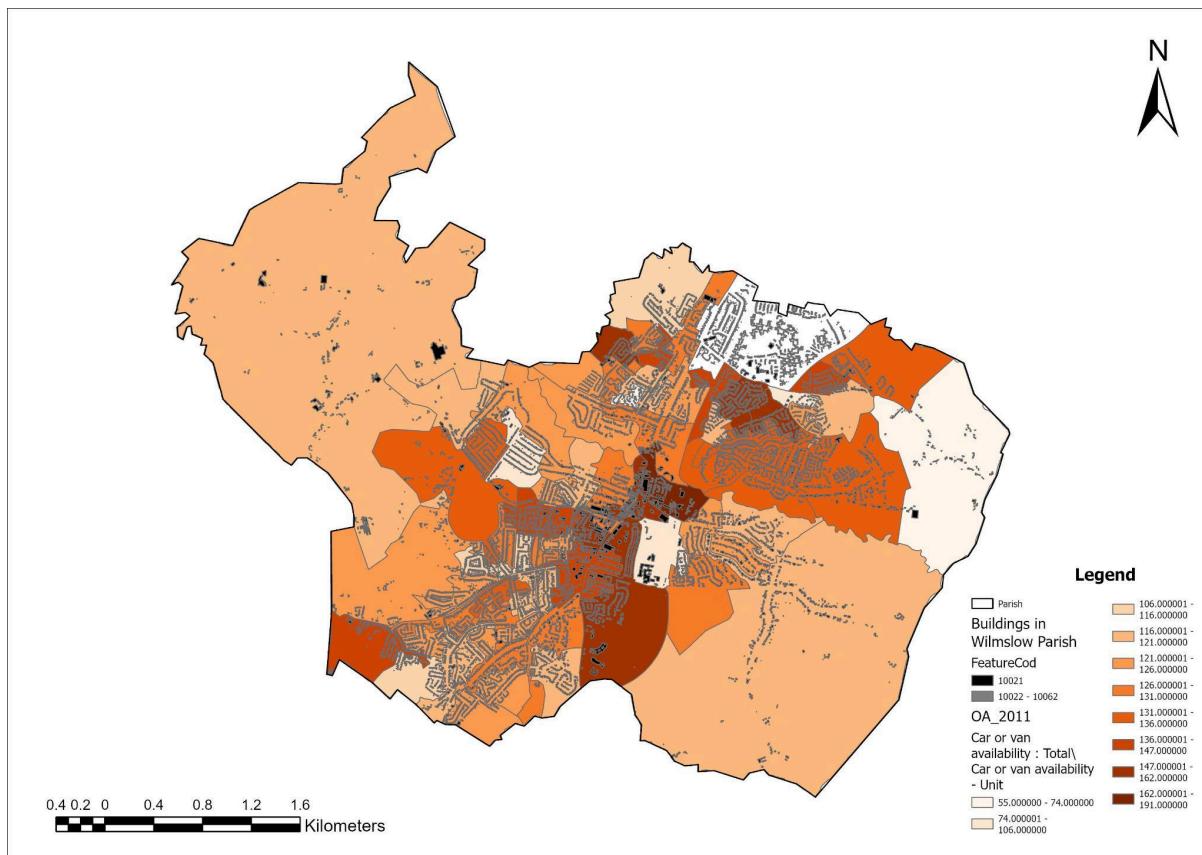


Figure 3. Car Ownership and Household Buildings in Wilmslow

### Reason for use

Cars are a popular choice of primary transportation by people in Wilmslow for many reasons. Firstly, it provides convenience for owning a car compared to using public transportation. It offers users a greater flexibility and ability to choose to travel at any time. Other than that there are limited transport options in Wilmslow. There are buses and trains services available, however these services may not be as frequent to provide the convenience people require. Lastly, Wilmslow is popular for commuting to

work in nearby cities. In some cases, public transport may not be a cost-effective or practical option for commuting, leading to people choosing to drive alternatively.

## Parking Availability

The parking availability is an important aspect of Wilmslow's transport infrastructure, as this can impact on its residents, visitors and businesses. Parking lots and multi storey car parks are mostly located near to the public facilities in Wilmslow, where charges for fees may be required unless it is privately owned. Parking availability may be challenging due to high demands in parking which can contribute to disruptions of travel flows within the town when searching for a parking slot.

## Travel to work and commuting

The legal working age in the United Kingdom is for any individuals over 16 years old. Commuting refers to the travel distance of one between home and work on a regular basis. Table 1 shows the types of transport people use to travel to work. With the strong public transport infrastructure available and easily accessible inside the towns, it is recorded that only 8% of the people in Wilmslow chose to travel to work by public transport, while the 92% of others have indicated in the census 2011 that they have chosen to travel to work by driving a car or van. This due to the high percentage of car ownership within the population of Wilmslow.



Table 1: Travel to work

## Methods of commuting

The common methods of commuting are by car, bus or train. In Wilmslow's situation, as mentioned previously most chose to drive to work. The following Figure 4 and 5 shows the usage of public transport to travel to work and the usage of driving a car or van to work. The people who travelled to work are mainly gathered on the side of the town centre of Wilmslow. Figure 4 describes data with the

overview of public transport including bus, train, etc. Figure 5 outlines the roads network with the data of those who travel to work by driving a car or van under the unit of persons.

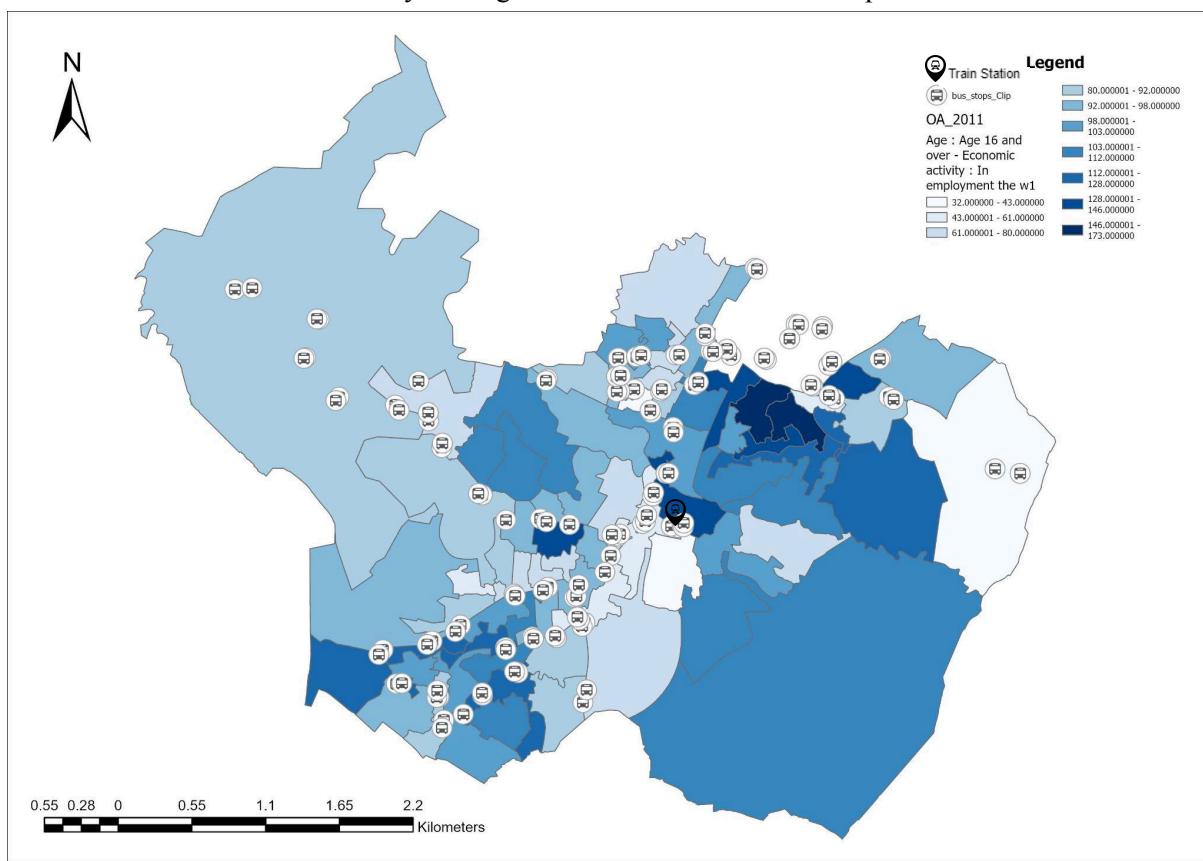


Figure 4. Train and Bus station locations; Aged 16 or over, Travel to work by: train; underground; metro; light rail; tram; bus; minibus or coach in Wilmslow

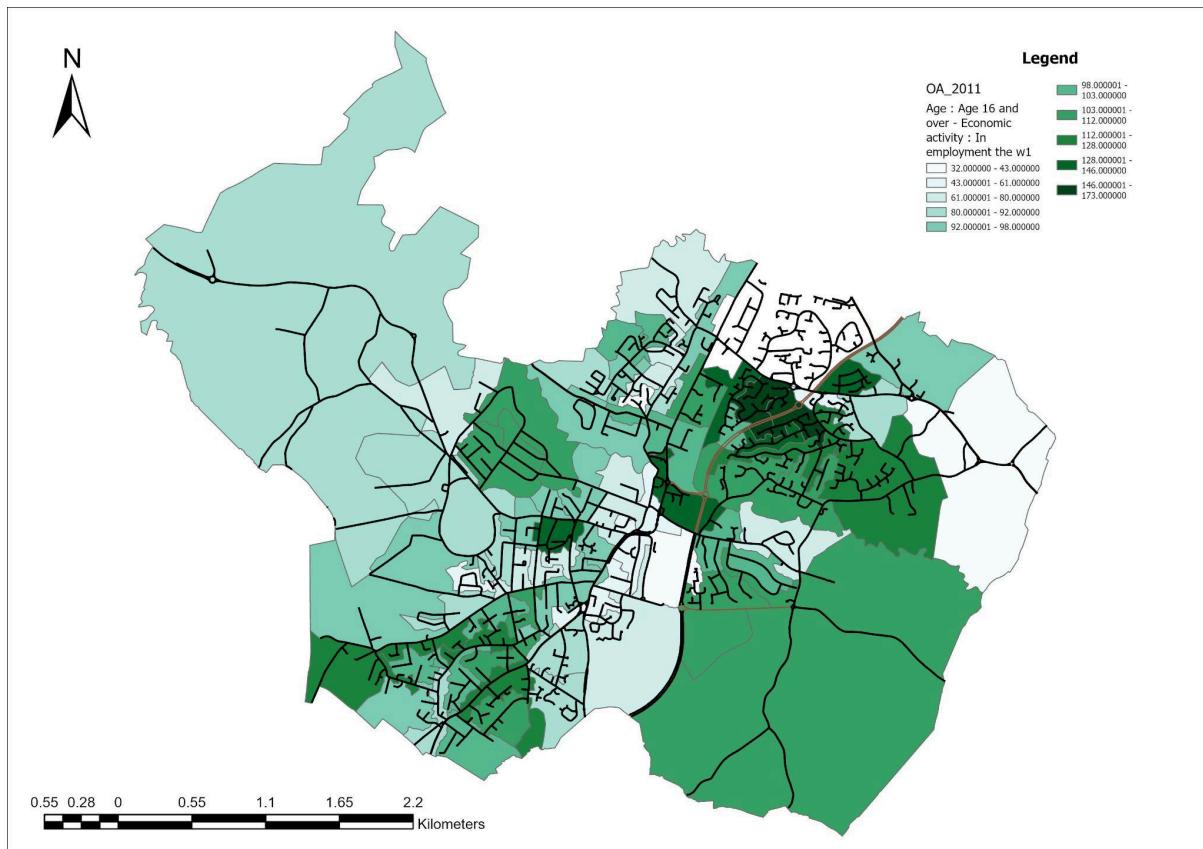


Figure 5. Age 16 or over, Travel to work by: car or van in Wilmslow

### Average commute length

Commuting lengths can vary depending on various factors, such as mode of transport, destination and personal preferences. According to the Transport Statistics Great Britain provided by the UK Government, the average usual commuting time is 27 minutes in the UK in 2021 (GOV.UK, 2022).

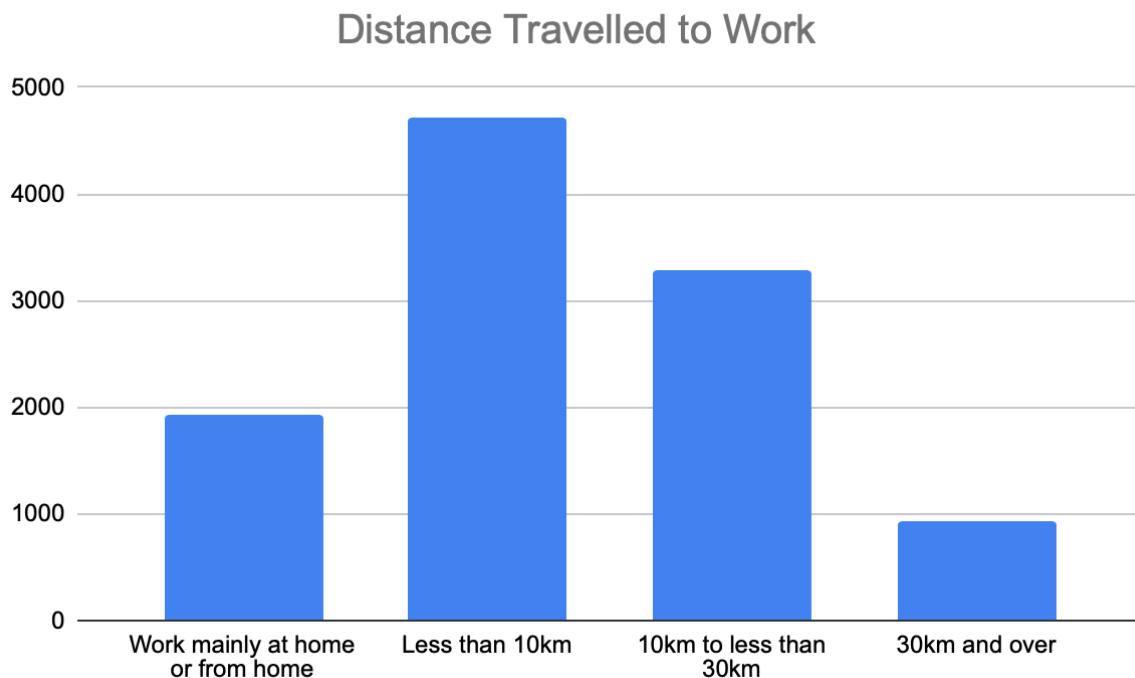


Table 2: Commuting distance and Average number of people who travel to work

The Table 2 above shows the number of people who travel to work in different groups of commuting distance. 1,927 people in Wilmslow work mainly at home or from home which requires no need to commute. From census 2011, 4,715 people in Wilmslow commute less than 10km away, 3,291 people travel between 10km to less than 30km to work and 923 people commute for 30km or over. From the data provided, 8,929 people out of 10,856, 82% are required to use transport to commute to work.

### Congestion and travel flow

The congestion and travel flow has been an issue for Wilmslow particularly during the peak travel times. The congestion on the main roads of A34 and A538 can lead to severe delays for motorists, car users and bus passengers. This can be problematic during rush hours where people travel to and back from work. The main reasons are primarily related to the town road networks as well as the high volume of traffic passing through the area. To a certain extent, the high rate of car ownership can contribute to congestion and travel flow issues. This does not only affect the transport situation, it is also a concerning issue by the local residents about the impact of air quality as well as noise pollution for the local environment.

## **Conclusion**

To conclude, the transportation issues in Wilmslow can be described as a complex one. Some may argue that the current transport infrastructure is sufficient, however there are also improvements that can be made. Wilmslow has a variety of transportation options available, however in general it has a relatively poor and complicated transport infrastructure in comparison with other areas of the country, where the town experiences a substandard travel flow caused by the high car ownerships among households. Next steps, to solve the problems, the local government council should intervene, for example promote alternatives such as cycling and walking infrastructures, implementations of traffic management measures or investments in public transport. Such a comprehensive strategy would be beneficial in addressing the challenges the town and its community is facing. Encouragement in more sustainable options in reducing the amount of reliance on cars in towns, introducing measures to reduce traffic congestions and improving travel flow can be aimed. All things considered, changes in transport systems can be directly involved or require involvement of the local community, it is important to ensure the needs and priorities of Wilmslow's residents have to be taken into account.

Word Count: 1929 words

# Part 2: Proposal Report



Figure 1: Image of cars running through the town of Wilmslow

## Introduction

The proposal report is an extension on my previous Baseline Analysis which it aims to address and overcome transportation systems in Wilmslow. This report will outline the key transport issues in Wilmslow and will mainly cover the identification of problems and proposal solutions to the key issues.

## Key Issues

The key issues of the transport system in Wilmslow is mainly due to the high percentage of car ownership within the town. Although Wimslow owns a public transport system as well as a train station, the dependency on on specific type of private transportation option can also create a big impact on the public transport services that is already in place. This had lead to issues such as high congestion levels on roads and reduced the usage of public transport by the local residents.

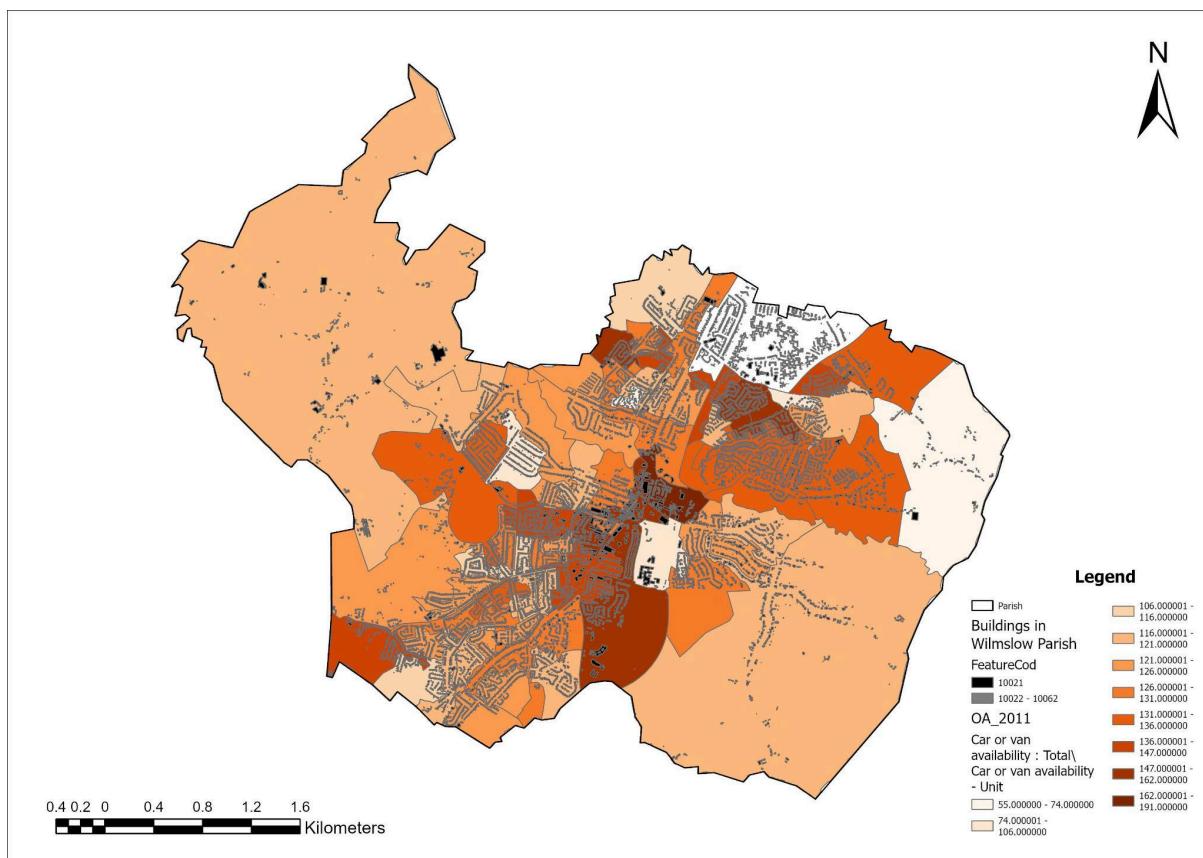


Figure 2: Map showing car ownership and household distribution in Wilmslow

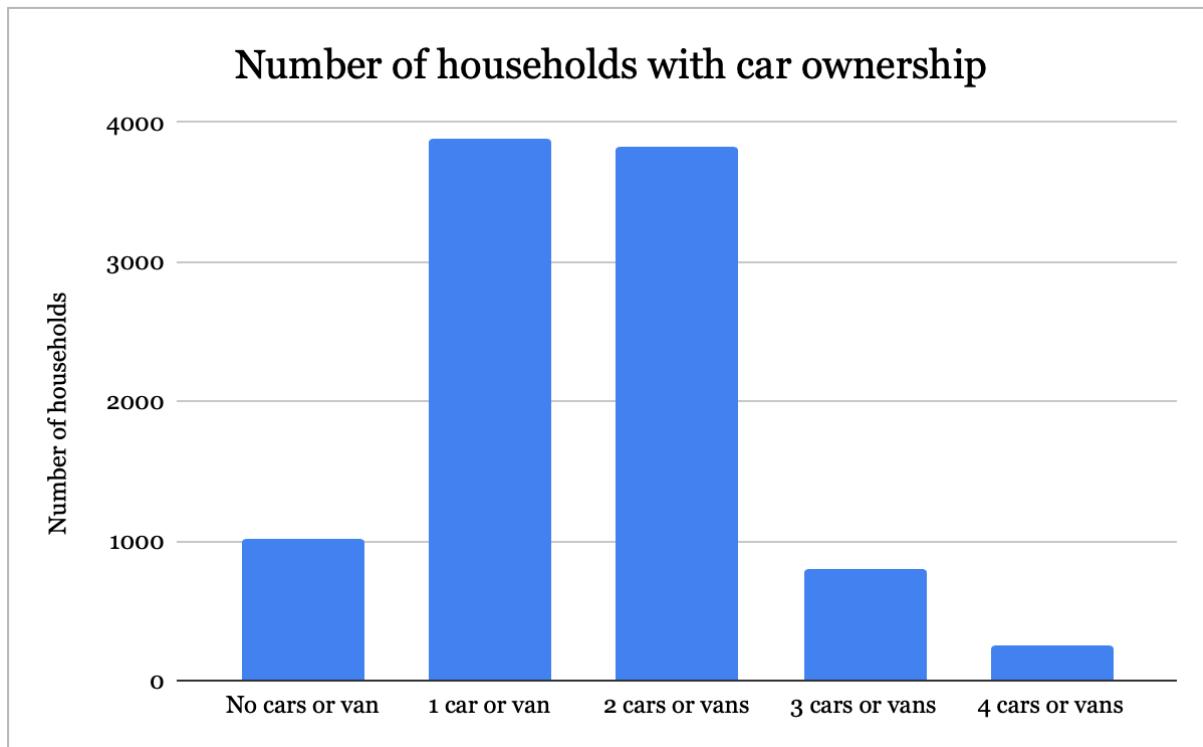


Figure 3: Chart showing the number of household with car ownership in Wilmslow - Data from Infuse Census 2011

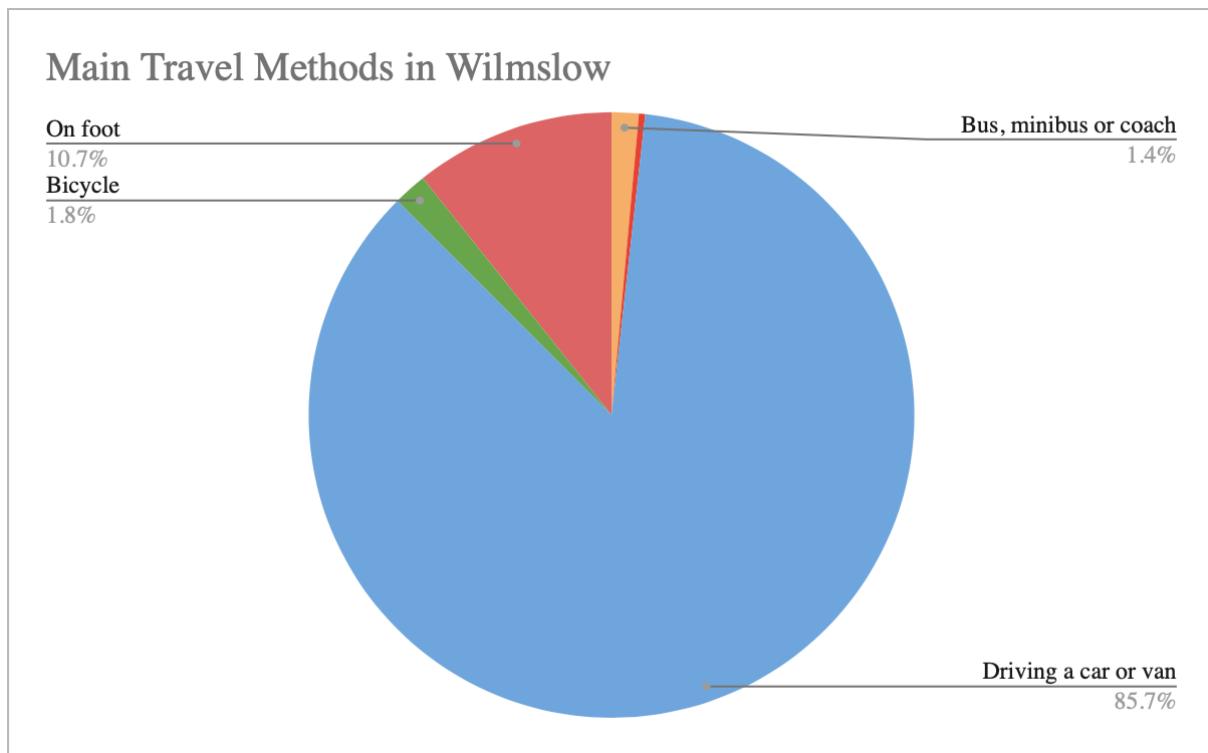


Figure 3: Pie chart of the percentage of people who travel to work by bus, minibus or coach, on foot, bicycle, or driving a car or van - Data from Infuse Census 2011

The car ownership in Wilmslow is closely related with the location where households are distributed. The high levels of car ownership suggests that people are reliant on traveling by car which affects the provision of local public transport. 92% of Wilmslow's residents commute to work through driving their own cars where only 8% of the people uses other methods of public transport such as by train or by bus. The low demand of public transport required by residents further lower the supply of the service.

## Proposal Suggestions

### Proposal 1

In order to solve the previously mention issues, the amount reliance on cars have to be reduced. This can be done by improving pedestrian areas and cycling paths. Improvement and recreation work done on pedestrian and cycling friendly paths can encourage people to use these alternatives for travelling short distances. This proposal is a two-prolonged approach as it does not only resolve the problem of overreliant on car uses, on the other hand it's a healthy moderate- intensive physical activity that can reduce the risk of getting chronic diseases (iConnect Consortium, 2012). Walking and cycling has a broad influence in public health which brings both physical and psychological benefits to people (Cambra and Moura, 2020). Therefore, recreating pedestrian infrastructures and pedestrian experience can attract and increase walking volumes which also improve environmental conditions. However the safety of users have to be take into account, where engineering works should be done with additional signs and potentially traffic directions to make sure users are within a safe margin.

## **Proposal 2**

The implementation of car clubs can help address the problem of parking spaces. Car clubs are car rental services for short term that does not require owning a car, members can have access to any cars that are parked locally. It is a cost effective alternative rather than privately owning a car. According to CoMoUK2021's car club report, 27% of the respondents indicated that the reason for joining the car club membership is money saving and 75% of them agreed the fact that joining a car club membership can save money than owning a car themselves (Gov.UK, n.d.). This can fulfill irregular travel needs of households as a pay as you drive service in local designated parking spaces. Other than a money saving option, it can be beneficial to local communities through objectives of achieving net zero emissions, improving air quality, increasing vehicles occupancy rates and a sustainable transportation option that can fill the gaps of public transport provision (Gov.UK, n.d.). As this can reduce the rates of car ownership, meaning there will be less cars running through towns so reduced parking pressures and congestions.

## **Proposal 3**

The introduction of a travel card can reduce the reliance on private cars travelling. A travel card can act as a monthly travel subscription. Commuting by driving a car to and from work is extremely popular among the population in Wilmslow. By introducing a travel card, it can provide a better fare charge with a discounted fare in each trip as an overall. Wilmslow owns 14 bus routes and 96 bus stops within the town, suggesting there is guarantee for easy and convenient travels around the town. Other than a discounted fare, a travel card records one's travel history which can gain travel rewards, for example cash rebate, which can increase the incentives of people to purchase a travel card and adopt this as their main travel option. A rise in travel card purchases suggests that there will be more passenger demand on the public transports which will cause the travel companies to increase frequencies as there are higher reliabilities in public transport services, making public transport a more attractive travel option.

## **Conclusion**

To conclude, Wilmslow's high car ownership issue can be addressed through the previously mentioned proposals that are aimed to change travel behaviours. Proposal 1 is aimed to change travel behaviours of people, however the implementation of the proposal requires work with the local government which may cause time lags. In Figure 3, it shows that the next popular alternative apart from driving is on foot and bicycle, showing that there is potential for success of the proposal if implemented properly. Travel modes are habitual, habits are behaviours that have been repeating frequently therefore cannot be easily changed in a short period of time. However humans are rational, rewards and a more cost effective travelling method may incentivise them to switch to other travelling option, therefore Proposal 2 and 3 is definitely achievable plan. As the overall number of cars travelling around may be significantly reduced through the adaptation of the potential proposals as listed above, this will simultaneously solve the pollution levels arose by congestions.

Word Count: 1002 words

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