

Transport Evidence Review

## Regulation 19 consultation on the emerging draft West Berkshire Local Plan Review to 2039 – Transport Evidence Review

**Prepared for Bucklebury Parish Council**

**By YES Engineering Group Limited**

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## Revision History

Revision N°	Prepared By	Description	Date

## Document Acceptance

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# 1 Introduction

YES Engineering Group Limited was appointed by Bucklebury Parish Council to review the transport related evidence submitted with the West Berkshire Council emerging Local Plan specially with regards to a proposed allocated site south of the parish, as set out in Policy SP17 (North East Thatcham Strategic Site Allocation). Within the transport evidence the site is referred to as THA20.

West Berkshire Council (WBC) is currently undertaking a Local Plan Review (LPR), with the new Local Plan covering the period up to 2039. The new Local Plan will provide the overarching principles that will guide future development in the district. It will replace the existing West Berkshire Local Plan Core Strategy 2016-2026 and Housing Sites Allocations Development Plan Document 2026.

The current Local Plan is in place until 2026 and a review is currently taking place to extend it through to 2039. The review is expected to take until the end of 2023.

The Regulation 19 consultation draft of the Local Plan included the identification of a preferred housing site at North East Thatcham (NET). This was identified as a strategic residential site for approximately 1,500 dwellings. Additionally, the proposed site will include:

- Local centres providing local retail facilities and small-scale employment for community use (approximately 1,100 sq. metres Class E and F2);
- 450 sq. metres GP Surgery to be offered to the Buckinghamshire, Oxfordshire and Berkshire West Integrated Care Board or other such appropriate body;
- Early years provision;
- A 2.5 FE primary school on site and sports infrastructure requirements of the school, land to be provided and build costs to be met by the applicant;
- Secondary provision - Land to meet the impact of the development. The nature and cost of the mitigation will be informed by a feasibility study, undertaken at the applicants expense and prepared in collaboration with the Council and local stakeholders;
- 1,200 sq m community indoor facility to be used for sport and community uses with a variety of room sizes (currently use classes E and F);
- Outdoor formal and informal sports pitches and areas to meet the identified need of the development;
- Open space to meet the needs of the development in accordance with Policy DM41;

As discussed further within this document the transport evidence considers an allocation of some 2,500 dwellings on the proposed site.

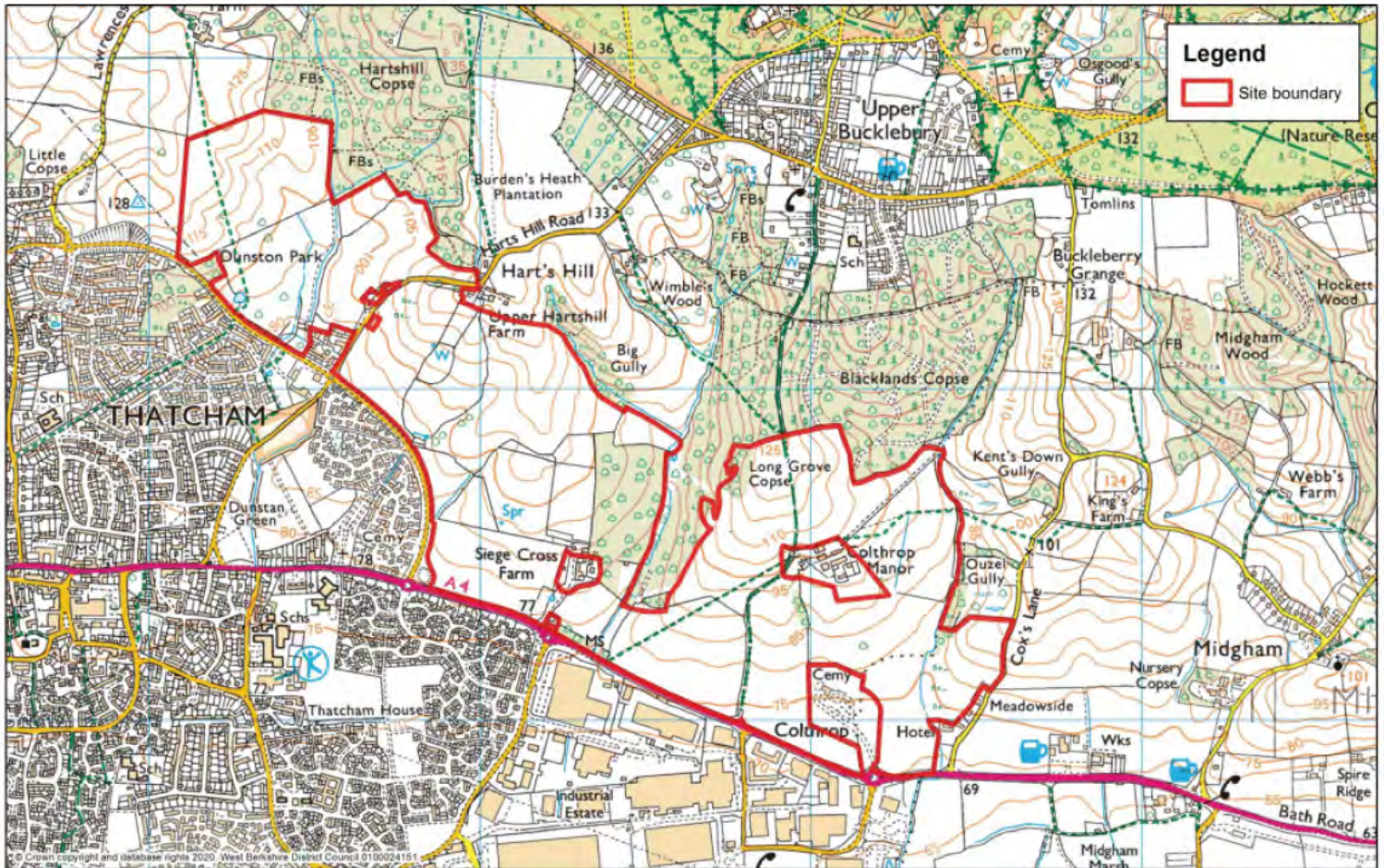
The main focus of this report is concerned with the impact of, and potential mitigation package required for the possible strategic development site at North East Thatcham (reference SP17/THA20), as this is the main preferred site being pursued by the Council as part of the Local Plan Review.

## 1.1 Description of the proposed Site (SP17/THA20)

Four large sites to the North- East of the Thatcham Northern Distributor Road and the A4 London Road at Colthrop were originally submitted separately through the Housing and Economic Land Availability Assessment (HELAA) process, these sites were subsequently submitted together by the four parties as a single site. This forms a proposed strategic housing site at North East Thatcham referred to as site SP17/THA20.

The site, as identified in **Figure 1.1** below, is allocated for a residential-led development comprising approximately 2,500 dwellings.

**Figure 1.1 – Location of the Site (SP17/THA20)**



The site is located within the administrative area of the West Berkshire District Council (WBC) which is a unitary authority and forms both the Local Planning Authority and Highway Authority.

The parish of Bucklebury lies immediately north of the proposed site.

## 1.2 Scope of the Transport Evidence Review

Following this introduction, the report is structured as follows.

**Section 2.0, Existing Conditions:** Describes the local highway network, existing public transport network and local amenities and considers the anticipated car level ownership and method of travel for future residents.

**Section 3.0, Policy:** Describes the existing and emerging policy applicable to the proposed site.

**Section 4.0, Review of Evidence Base for SP17/THA20:** Reviews all the evidence that has been produced so far to support the allocation of SP17/THA20 and the robustness of the evidence.

**Section 5.0, Summary and Conclusions:** Provides a summary of the report and draws together its conclusions.

## 2 Existing Conditions

### 2.1 Existing Road Network

When considering the suitability of the proposed site, it is important to consider the suitability of the location in transport terms. Bucklebury itself is a small rural parish in West Berkshire, situated between the A4 and the M4 and between Newbury and Reading. The present population is around 2350. It is widely spread across the many individual hamlets.

As shown in **Figure 1.1**, site SP17/THA20 lies immediately south of Upper Bucklebury, north of Thatcham and is linked via Harts Hill Road/Floral Way. Harts Hill Road is rural in nature, subject to a speed limit of 40mph, without footways or street lighting, with numerous tight bends and relatively steep in gradient (as defined by the plentiful contour lines).

At the northern end of Harts Hill Road it links with Broad Lane. Broad Lane ultimately connects with Theale (M4) towards the east and Chieveley (M4) to the west. Broad Lane becomes particularly rural towards the west and speed limit increases to 60mph, with no footways or lighting.

To the south of the proposed site, runs the A4 (strategic highway network) which links Newbury in the west to Reading in the east. The road is subject to a speed limit of 40mph and there are limited formal crossing points. The A4 itself creates severance of the site SP17/THA20 from Thatcham rail station to the south for pedestrians and cyclists as it is difficult to cross this busy strategic road.

The local road network within Bucklebury consists entirely of unclassified roads (rural roads), mostly without pavements or kerbstones, all single carriageway or single track, with few passing places, are generally narrow winding country lanes with hedgerows or soft verge edges. Consequently, any increase in traffic on these roads need to be assessed as it may present safety implications.

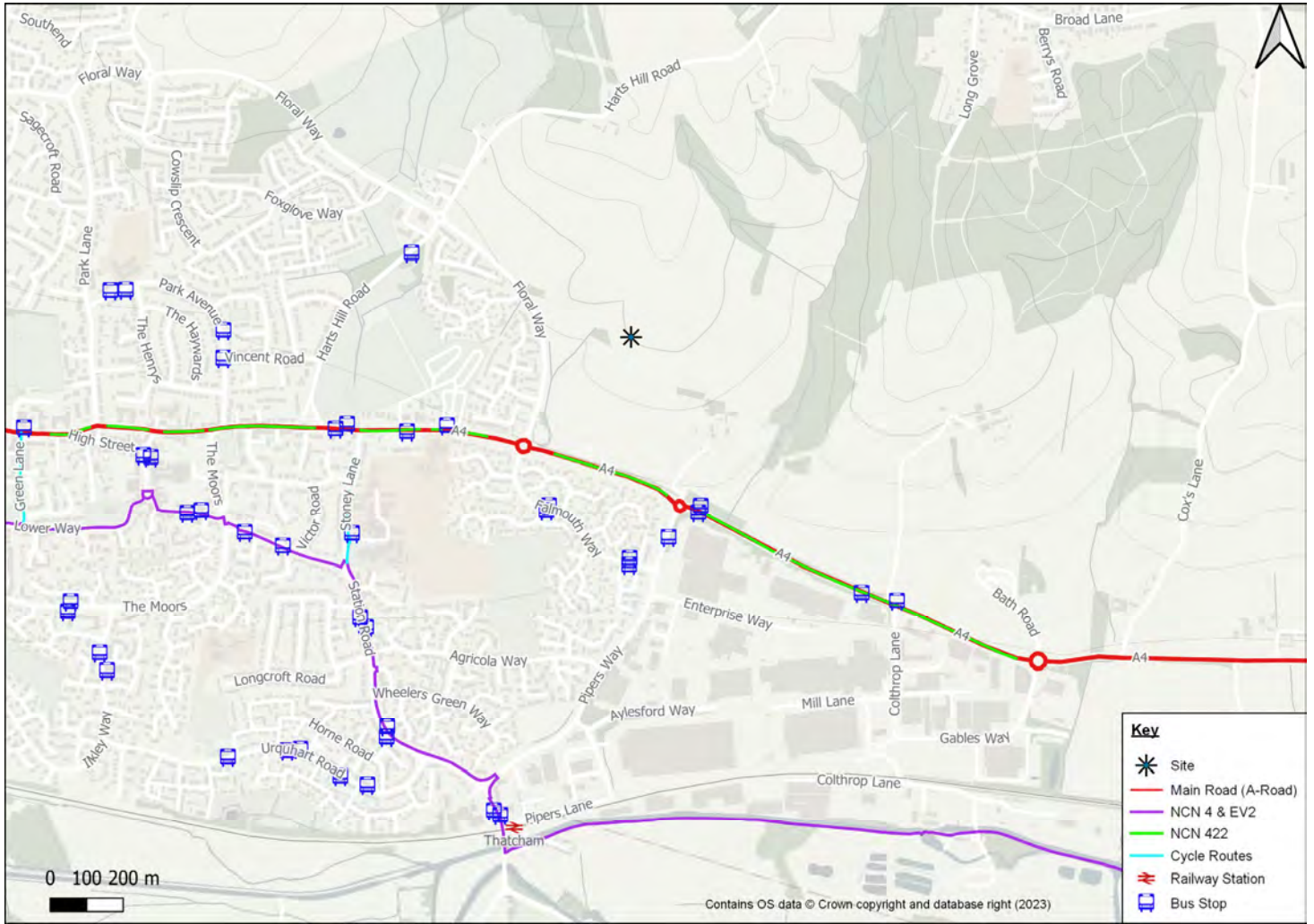
Two roads run east/west, one from Thatcham, through the two main Parish centres, Upper Bucklebury and Chapel Row and on to Theale and Reading, and a second from Hermitage to Chapel Row through Marlston and Bucklebury Village. Most of the remaining lanes join these two roads on a north/south axis serving the small and scattered enclaves of houses throughout the area.

The two principal roads serve two functions: primarily for local movements to and from the Parish and adjoining Parishes (most residents work outside) and secondly they have come to be used as a through road for traffic between Hermitage / Newbury / Thatcham and Pangbourne / Theale / M4 and Reading.

### 2.2 Existing Public Transport

**Figure 2.1** demonstrates there is very limited public transport within the vicinity of SP17/THA20. This will increase the need to travel by private car.

**Figure 2.1 – Existing Public Transport**

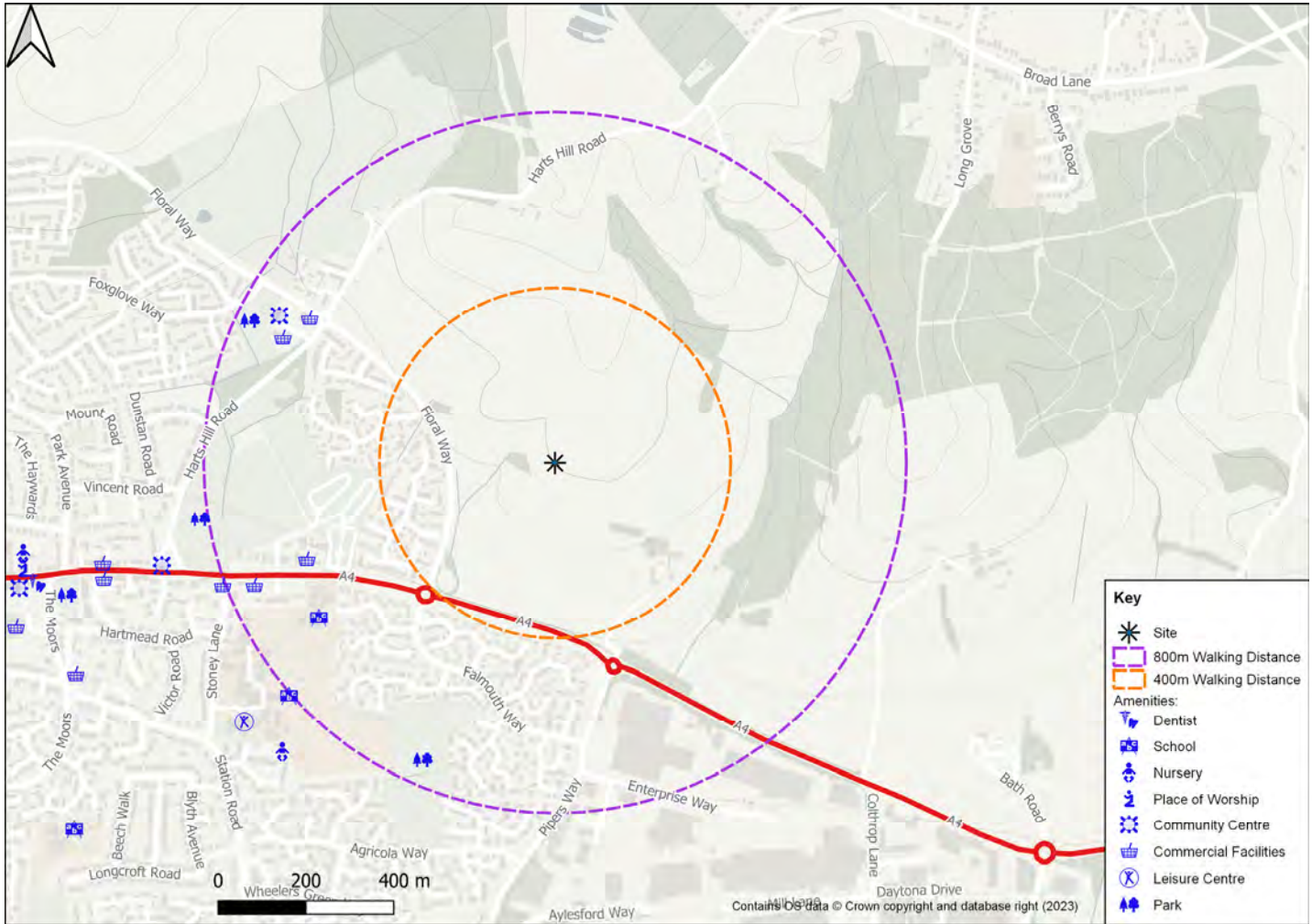


### 2.3 Existing Amenities

**Figure 2.2** demonstrates there is very limited amenities within the vicinity of SP17/THA20. This will increase the need to travel by private car to visit local facilities.



**Figure 2.2 – Existing Amenities**



## 2.4 Anticipated Car Ownership Levels and Method of Travel

The 2021 Census data for car availability was obtained for the 2021 Super Output Area – Middle Layer (E02003383: West Berkshire 017), where the SP17/THA20 site resides. This information is set out in **Table 2.1** below. The full census data is presented in **Appendix A**.

**Table 2.1 – 2021 Census Data – Car Availability West Berkshire Super Output Middle Layer**

Cars or Vans	Houses	Number of cars per Household
No car or van	278	1.6
1 car or van in household	974	
2+ cars or vans in household	1,080	
3+ cars or vans in household	432	
<b>Total</b>	<b>2,764</b>	

**Table 2.1** above shows that the average car ownership per households within the West Berkshire Area is 1.6 cars which reflects the rural location of the Site with limited access to local facilities and public transport options. When the local car ownership level of 1.6 is applied to the proposed 2,500 new homes, this would lead to the generation of 4,007 additional vehicles.

The West Berkshire Super Output Middle Layer Census data was also examined to establish the profile of residents' method of travel to work. This information is attached at **Appendix A** and set out in **Table 2.2** below. The 2011 Census Data has been examined as it is noted that the 2021 Census was undertaken during the Covid-19 lockdown period where a large percentage of the population worked from home so does not provide a robust assessment.

**Table 2.2 – 2011 Census Data - Method of Travel to Work (West Berkshire Super Output Middle Layer)**

Main Mode	2011 Data Number of People of Employment Age	2011 Data Percentage Trips
Work mainly at or from home	228	5%
Underground, metro, light rail, tram	1	0%
Train	202	4%
Bus, minibus or coach	95	2%
Taxi	9	0%
Motorcycle, scooter or moped	42	1%
Driving a car or van	2,768	55%
Passenger in a car or van	196	4%
Bicycle	142	3%
On foot	275	5%
Other method of travel to work	14	0%
Not in employment	1,089	22%
<b>Total</b>	<b>5,061</b>	<b>100%</b>

It can be seen in **Table 2.2** above, that over half of the working population (55%) in the West Berkshire area use the car as a means to drive to work. It can therefore be assumed that the proposed new homes would create a significant amount of additional traffic within peak rush hours on the local rural roads which is discussed in Section 4 of this report.

## 3 Planning Policy

### 3.1 Introduction

When looking at the suitability of the proposed site 'SP17/THA20', it is useful to consider transport policy pertinent to the proposals.

The site 'SP17/THA20' falls within the jurisdiction of West Berkshire Council which is a unitary authority, and as such is both the Local Planning Authority and the Local Highway Authority for the District. The Council is responsible for producing both the Local Plan and the Local Transport Plan (LTP) which specifically addresses transport issues; and there are strong links between these two forward planning documents.

A summary of the applicable policy and a discussion of how the proposed SP17/THA20 site complies is provided below:

### 3.2 West Berkshire Core Strategy – 2006 – 2026

#### Policy CS 13 Transport

Development that generates a transport impact will be required to\*:

- Reduce the need to travel. Improve and promote opportunities for healthy and safe travel.
- Improve travel choice and facilitate sustainable travel particularly within, between and to main urban areas and rural service centres.
- Demonstrate good access to key services and facilities.
- Minimise the impact of all forms of travel on the environment and help tackle climate change.
- Mitigate the impact on the local transport network and the strategic road network.
- Take into account the West Berkshire Freight Route Network (FRN). Prepare Transport Assessments/Statements and Travel Plans to support planning proposals in accordance with national guidance.

\*Development proposals may not need to fulfil each bullet point. The supporting text below clarifies the types and scale of development which will be required to meet the specific parts of this policy.

5.82 West Berkshire Council is a unitary authority, and as such is both the Local Planning Authority and the Local Highway Authority for the District. The Council is responsible for producing both the Local Plan and the Local Transport Plan (LTP) which specifically addresses transport issues; and there are strong links between these two forward planning documents. An Infrastructure Delivery Plan identifies the key infrastructure projects required to support the delivery of the Core Strategy, and infrastructure that is critical to the delivery of the Core Strategy is set out in Appendix D. The LTP is supported by an Implementation Plan which sets out how schemes and initiatives will deliver the LTP, and this will be updated annually.

5.86 Improving travel choice is a key way of working towards a modal shift away from single occupancy car use in favour of more sustainable travel (walking, cycling, bus and rail travel, car sharing). Improving sustainable travel choice within and between the main urban areas and rural service centres of West Berkshire and key destinations in neighbouring authorities will help to facilitate regular journeys for example to work and education. All development will be required to show how it improves travel choice and reduces the use of single occupancy cars.

5.87 The nature of West Berkshire poses a significant challenge for accessibility to key services and facilities. Residential development should seek to demonstrate good accessibility by: locating where there is already good access to key services and facilities; contributing towards improving connections between communities and key services and facilities.

5.88 The quality of the environment is a key factor in the attractiveness of West Berkshire, and the part that changing travel behaviour can play in reducing carbon emissions is recognised in the Council's Climate Change Strategy. West Berkshire's air quality is strongly linked to transport, so where air quality becomes a cause for concern, the Council will seek to manage it through transport related measures. All development will be required to demonstrate how it minimises the impact of travel on the environment and helps to tackle climate change.

5.89 The Council is responsible for the local highway, cycle and walking, and public right of way networks. The Highways Agency is responsible for the strategic road network (SRN) which, in West Berkshire, comprises the M4 and the A34. All development proposals will be required to demonstrate that they do not adversely affect these networks or that they can mitigate the adverse impact. Where a Transport Assessment for a significant development illustrates that there will be an impact on the capacity of the SRN, the developer will need to undertake detailed traffic modelling in accordance with national guidance. Developers will need to work with the Council and the Highways Agency to establish a suitable mitigation package. Junctions that are likely to require such attention during the life of the plan up to 2026 are (but not exclusively):

- Junction 12 of the M4.
- Junction 13 of the M4.
- A34 / A343 junction.

5.90 The Council has established a preferred Freight Route Network (FRN) for West Berkshire which identifies a hierarchy of routes that should be used for freight movements to, through and within the District. Development which results in freight movements, including construction traffic should take into consideration the FRN.

5.91 Transport Assessments / Statements and Travel Plans are vital to support planning proposals so that the impact of the proposed development can be assessed and mitigated. All development which meets the thresholds set out in national guidance will be required to prepare the appropriate Transport Assessments / Statements and Travel Plans.

5.92 Standards for parking provision will be related to levels of accessibility. The basis for this will be established through the Local Transport Plan, and subsequently a Supplementary Planning Document (SPD) will be prepared.

### **3.3 West Berkshire Local Transport Plan Freight Strategy – November 2014**

The identification and implementation of a freight routing network was identified as a high priority delivery element in the previous LTP Freight Strategy. As a result the Council undertook a review of freight movements in the District and from this developed a draft freight route network which was sent out for public consultation in 2007. Revisions were made following the consultation and the network and its associated maps were formally adopted by the Council in February 2009.

The 2009 West Berkshire Freight Route Network (FRN) as shown in Appendix A consists of a series of preferred freight routes that aim to show HGV drivers and businesses the most appropriate routes to use in the District. In addition there are two further detailed maps covering the Newbury/Thatcham and the Calcot/Tilehurst areas. It should be noted that the routes in the FRN are advisory in nature and have been produced to help freight operators and drivers to plan their routes and deliveries in the District.

The hierarchy of the freight routes shown on the FRN maps is as follows;

- Strategic Lorry Routes: For through HGV movements based on the M4 and A34 passing through the District.
- District Access Routes: The main access routes from the SRN to key freight destinations - largely based on the 'A' roads that provide access to the main areas of industrial and commercial activity.

- Local Access Routes: Accesses to local sites only and are not intended for through HGV movements. Some of these routes may contain restrictions that further limit HGV movement. These comprise 'A' roads not on routes linking main industrial areas, 'B' roads, and some minor routes.

The FRN maps also show those routes and local communities that are unsuitable for HGV traffic. These include the locations of signed width, height, and weight restrictions that prevent the use of HGVs, and those routes which are signed "Unsuitable for HGVs" (typically rural single track routes).

### 3.4 Local Transport Plan for West Berkshire 2011 - 2026

#### Local Transport Goals 2011-2026

- To improve travel choice and encourage sustainable travel;
- To support the economy and quality of life by minimising congestion and improving reliability on West Berkshire's transport networks;
- To maintain, make best use of and improve West Berkshire's transport networks for all modes of travel;
- To improve access to services and facilities;
- To improve and promote opportunities for healthy and safe travel;
- To minimise energy consumption and the impact of all forms of travel on the environment

#### Key Issue – Congestion

Peak time congestion is frequently experienced at key junctions within the District, as well as on the M4. The Council, with its partners, will need to explore ways of making best use of transport networks through better management and increased choice to the benefit of the economy, environment, and local communities.

Although widespread congestion is not experienced throughout the local road network in West Berkshire, localised congestion regularly occurs during peak times around key junctions in the main urban areas. The concentration of journeys for work and school contribute to these congestion hotspots which often cause delays and inconvenience to local residents and businesses, as well as causing poor air quality and road safety concerns. Congestion is considered to be an important local issue, being consistently cited in the Council's annual residents' surveys as an issue that needs improving in the local area.

As identified previously, West Berkshire is a relatively prosperous District, with a high level of car ownership and usage that is in excess of the South East and national averages. Rapid population growth, housing, and employment in the last few decades, as well as the proximity to other larger urban areas, have seen an increase in demand for travel and a reliance on journeys made by the private car. Furthermore, car dependency is more prevalent in the large number of rural communities in the District where travel choices are often extremely limited.

#### Key Issue – Accessibility

Access to services and facilities is a major issue for those without access to a car, particularly from rural communities. Young people and the over-65s are identified as groups in particular that have the poorest transport provision for their needs where car use is not an option or public transport is not convenient.

### Key Issue – Carbon Reduction and Climate Change

Climate change is widely regarded as the most serious environmental challenge of the 21st century. The Council will need to develop a transport system that will seek to reduce local transport-based carbon emissions, and to develop networks that will have greater resilience to the impacts of climate change.

### Key Issue – Highway Network

Good performance of the highway network is crucial for the District and its economy, which will become more of a challenge with increased demand for travel. The Council will need to make best use of the network through better traffic management and maintenance of the highway asset.

The M4 and A34 strategic routes are the responsibility of the Highways Agency (HA). All other parts of the highway network, from the busy A4 and A339 corridors through to country lanes, are the responsibility of the Council. This includes the management and maintenance of the network, for which the operations are outlined in the Network Management Plan.

## **3.5 West Berkshire Local Plan Review 2022 – 2039 – Proposed Submission – January 2023**

The emerging West Berkshire local Plan (WBLP) sets out the strategy for housing and employment growth within West Berkshire for the period to 2039. A key component of the strategy is the proposed allocation of a major development at North East Thatcham on site SP17/THA20 comprising 2,480 dwellings and 189 jobs; the largest single allocation within the WBLP.

### Policy DM42

Transport Infrastructure Proposals for new development will be expected to demonstrate the type and level of travel activity likely to be generated. In order to assist in tackling the climate emergency, this travel activity will be expected to be minimised by the design of developments that support low levels of travel with a focus on local journeys that can be made sustainably. Developments will be required to be supported through a range of infrastructure associated with different transport modes. New development will only be supported where the relevant transport infrastructure is delivered in a timely manner. Where required, new developed will be expected to make a contribution to the provision or improvement of a range of transport infrastructure. This transport infrastructure will specifically, but not exclusively, include the following:

- a. Connections and improvements to local pedestrian, cycle and equestrian networks, including access to public transport routes;
- b. Walking, cycling and equestrian infrastructure identified in relevant Local Cycling and Walking Infrastructure Plans;
- c. Secure cycle and motorcycle parking;
- d. Improvements to passenger facilities across a range of transport interchanges;
- e. Provision of real time passenger information at bus stops along key bus routes;
- f. New or improved passenger transport services;
- g. Improvements to the safety and operational capacity of the local road network;
- h. Works to allow the re-use of former railway line alignments as walking, cycling, and equestrian routes; and

i. Provision of electric vehicle charging points and associated infrastructure.

12.94 The NPPF states that transport issues should be considered at the earliest stage of development proposals, so that the potential impact on transport networks can be addressed, that opportunities from existing and proposed infrastructure are realised, and that opportunities to improve walking, cycling and public transport are identified and pursued. At all stages, proposals should consider the need of reducing the need to travel, especially during the working day. Where possible, services and facilities should be located within an acceptable walking distance and cycling distance of new places of employment or residences.

12.95 The development and delivery of transport infrastructure will need to contribute to the aims of Policy SP23 and relevant Council strategies and plans, such as the West Berkshire Environment Strategy, July 2020 and the Local Transport Plan. There is a need for development to assist in the provision of deliverable measures that will contribute towards modal shift to sustainable modes of travel for residents and employees of both new development, and if possible, for existing communities.

12.96 The Council actively seeks to further develop walking, cycling, and equestrian networks in the District to encourage more travel by sustainable modes. As part of this, Local Cycling and Walking Infrastructure Plans (LCWIPs) identify specific walking and cycling improvements on key corridors. These are largely centred on the urban areas with one covering Newbury and Thatcham urban area and the other including the Eastern Urban Area. For the latter plan the Council has partnered with Reading and Wokingham Borough Councils in the development of a LCWIP for the wider Reading urban area. The LCWIPs will be used to inform the Council's own future investment strategies and CIL funding bids as well as to guide the delivery of the most appropriate walking, cycling, and equestrian infrastructure to support new development.

12.97 The Council as both local planning and local highway authority will need to ensure that development proposals will not result in an unacceptable impact for any user of both the local and strategic road networks.

12.98 Whilst it is anticipated that the majority of development will be focused in existing urban areas and within settlement boundaries, it is important that improvements are also sought to encourage sustainable leisure and recreational opportunities in the rural areas of the District. Specifically this could include opportunities to replace that part of the former Didcot, Newbury & Southampton railway line to provide between Hermitage and Hampstead Norreys, a route for both leisure and potentially commuter use, incorporating existing minor roads and bridle ways as a walking, cycling, and equestrian route. Opportunities at other locations, including use of the Kennet and Avon Canal towpath, will be sought where applicable).

12.99 The provision of electric vehicle charging points and associated infrastructure supports the need for readiness for the banning the sale of new petrol, diesel or hybrid cars in the UK, which will occur during the lifetime of the plan, by 2030. While the provision of such infrastructure will be mandated in developments, developers will be encouraged to go further to help achieve a comprehensive public charging network in public car parks, supermarkets and retail parks, railway stations, and where is safe to do so, at petrol filling stations. The provision of such infrastructure is essential to contribute towards the achievement of a zero carbon West Berkshire by 2030.

### 3.6 Summary

Congestion has already been raised by WBC as a Key Issue and is consistently cited in the Council's annual residents' surveys as an issue that needs improving in the local area. The district has a high level of car ownership and usage that is in excess of the South East and national averages. Rapid population growth, housing, and employment in the last few decades, as well as the proximity to other larger urban areas, have seen an increase in demand for travel and a reliance on journeys made by the private car. The development at SP17/THA20 is located within a rural setting

with very limited access to public transport. As such it is expected that the development would only add to the already congested roads and is at odds to the Local Transport Goals to minimise congestion on the transport networks.

The additional traffic created by SP17/THA20 would create a greater level of vehicles including servicing vehicles on the country roads which do not have dedicated footways or cycle lanes for safe pedestrian/cycle movement. This is therefore contrary to Policy DM42 of the Emerging Local Plan and the Local Transport Goals to promote opportunities for healthy and safe travel. The surrounding country roads are also designated as 'unsuitable for HGVs' within the West Berkshire Local Transport Plan Freight Strategy dated November 2014.



## 4 Review of Evidence Base for the allocation of SP17/THA20

### 4.1 Background Context

The emerging West Berkshire local Plan (WBLP) sets how many new homes are required and where they should be constructed for the period to 2039. It also looks at employment needs and finds opportunities for future growth. It will also identify the places where growth should be limited.

As shown in **Figure 1.1** the proposed site allocation SP17/THA20 is located on the boundary of Bucklebury Parish and comprises of some 1,500 dwellings as well as various community facilities (the largest single allocation within the WBLP). As discussed below the transport evidence considers an allocation of some 2,500 dwelling on the proposed site. As such the proposals are likely to have significant implications for the road network within the local community.

The WBLP is supported by an evidence base and relies on three principal documents related to transport as set out below to justify the location of SP17/THA20 in transport terms:

- WBSTM Local Plan Forecasting Report (March 2022).
- Phase 2 Transport Assessment (July 2021); and
- Phase 1 Transport Assessment (December 2020).

The summary within the WBSTM Local Plan Forecasting Report states “General increases in Local Plan traffic demand though the corridor, as well as THA20 site traffic directly accessing the A4 in this area, is likely to cause some displacement onto wider routes away from the A4, through local villages such as Upper Bucklebury”. However, the additional movements displaced through Upper Bucklebury and local highway network has not been quantified and given the scale/location of development this could be significant.

In view of this, Bucklebury Parish Council (BPC) has instructed YES Engineering to undertake a review of the evidence base to assess the basis of the modelling results and to identify any areas of concern that would necessitate an objection to the emerging Local Plan.

### 4.2 Phase 1 Transport Assessment (December 2020)

This report outlines the first phase of the Transport Assessment work that has been undertaken, including outputs from transport modelling using the Council’s strategic transport model and confirms that all sites were assessed in terms of accessibility and proximity to local pedestrian, cycle and public transport (bus and rail) networks and accessibility to everyday services and facilities. This included determining accessibility to local centres, education, employment, services and facilities.

However as set out in Section 2, site SP17/THA20 is located in an area where there is currently limited facilities and active Travel measures (Travel Plans etc..) are likely to be difficult to encourage given the steep topography in the area and distance to the rail station. Local census data set out in Section 2 confirms the overwhelming majority of residents travel by car despite the presence of Thatcham Rail Station.

The report confirms that the council used three separate traffic models to support the Local Plan Review.

- **West Berkshire Strategic Transport Model (WBSTM) 2017** – a district-wide transport model with separate models for AM peak hour, inter-peak and PM peak hour.
- **Newbury 2017 VISSIM model** – Local model focussing on the highway network in central Newbury for the AM and PM peaks.

- **Thatcham 2018 VISSIM** – Local model cordoned around the Thatcham urban area for the AM and PM peaks.

The modelling outcomes are presented as ‘Level of Service’ results based on categories of delay and graded from ‘A’ to ‘F’ with ‘A’ representing the lowest delays as set out below in **Table 4.1**.

**Table 4.1 – VISUM Level of Service Results**

VISUM Level of Service Category	Mean delay per vehicle	
	Un-signalised junction	Signalised junction
A	0 – 10 sec	0 – 10 sec
B	10 – 15 sec	10 – 20 sec
C	15 – 25 sec	20 – 35 sec
D	25 – 35 sec	35 – 55 sec
E	35 – 50 sec	55 – 80 sec
F	50 + sec	80 + sec

Whilst no local junctions within Bucklebury parish are considered, Table’s 5.2 – 5.4 within the report confirm that the A4 corridor (south of Bucklebury) suffers significant delays at various junctions along its route. It follows that delays on the A4 will be further exacerbated by any development of THA20 and likely to cause displacement onto wider routes away from the A4, through local villages such as Upper Bucklebury (the impact has not been considered).

### 4.3 Phase 2 Transport Assessment (July 2021)

The Phase 2 report follows on from the Phase 1 report which identified some junctions and links that would be affected by the proposed Local Plan growth. These were particularly focussed near to the proposed strategic North East Thatcham site, indicating delays and congestion occurring around key junctions along the A4 corridor, with through traffic diverting onto unsuitable routes.

The assessment confirms that “The main focus of this report is concerned with the impact of and potential mitigation package required for the possible strategic development site at North East Thatcham (HELAA reference THA20)”.

Paragraph of the Phase 2 report states “The use of standard TRICS rates however, is not suitable for the NET site, which is a large, strategic development site comprising four co-joining land parcels. The size of the site will result in several proposed access points onto the highway network on both Floral Way and the A4 to the north and east of Thatcham”. It is unclear why the TRICS database (the industry standard method of assessing trips to and from a site) would not be suitable, large sites within the site would include other local facilities/attractions affecting the need to drive.

Paragraph 3.4 goes on to confirm that a set of revised trip rates has been developed specifically for the SP17/THA20 site based on 2011 Census data for employment and mode of travel for existing Thatcham wards. However, no details are provided to show how these were calculated or what the resulting trips are, and it could be argued that census data is remote of the SP17/THA20 with easier access to Thatcham rail station for example, thus underestimating the trip rates. Sites from the TRICS database can be used to assess other similar site to provide a more reliable model.

Furthermore, the Census data only assesses the vehicle movements associated with work journeys, whereas the TRICS data encapsulates other trips such as to schools, shops, recreation, etc. The Census data will therefore underestimate the number of trips that would be added to the highway network.

Paragraph 3.10 declares that highway mitigation measures are required at key junctions along the A4 corridor and that further modelling will be required to assess their impacts alongside other non-highway mitigation measures.

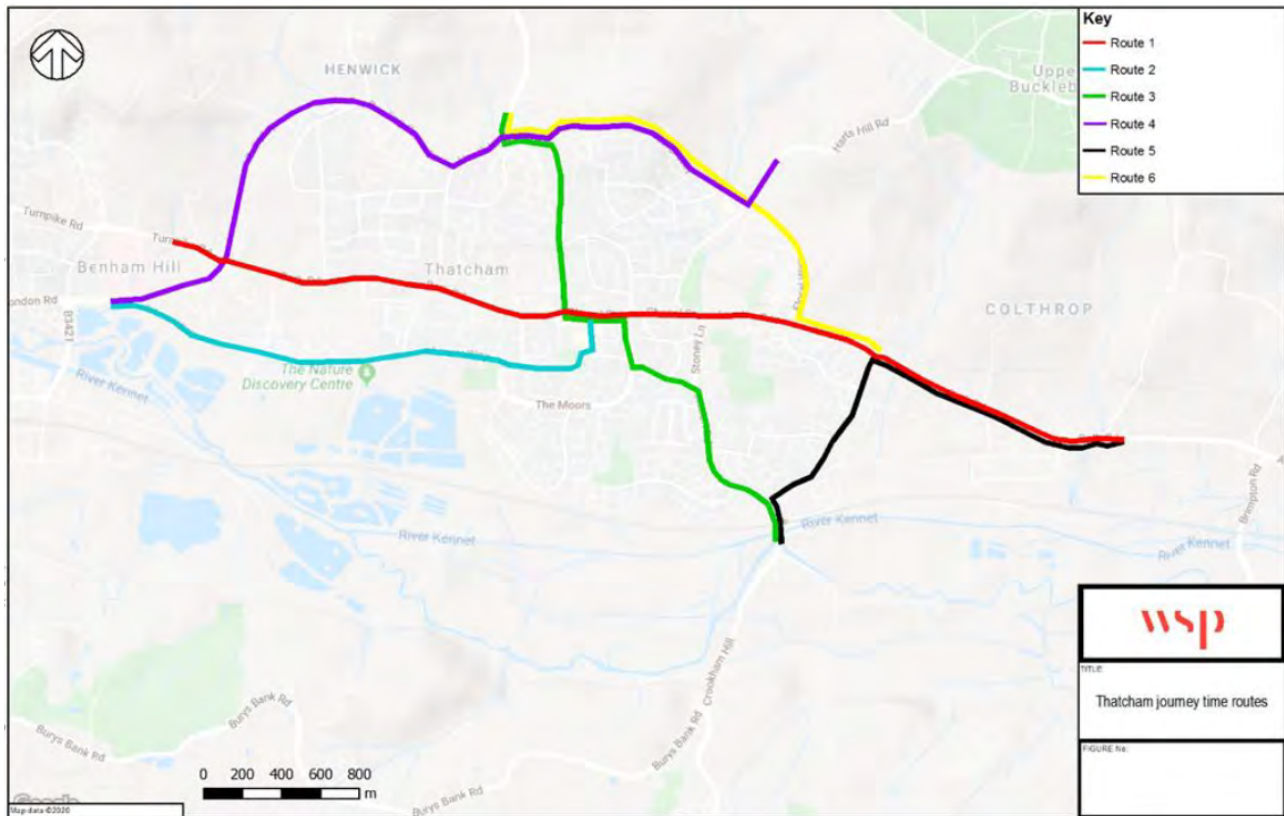
Paragraph 3.42 confirms that “the results from the WBSTM and Thatcham local VISSIM models suggest that there will be a significant increase in traffic on the local road network” and states that there is a need to develop a package of non-highway based mitigation measures (as set out previously this may be difficult to achieve due its location). There are no modelling results from the WBSTM for the highway network in Bucklebury parish despite the Phase 1 report confirming that congestion occurs around key junctions along the A4 corridor, with through traffic diverting onto unsuitable routes. It would seem a significant oversight not to consider the impact of additional traffic through Bucklebury when the safety of the road network could be compromised.

Paragraph 3.44 talks of the importance of developing excellent pedestrian and cycle links. However, as set out in Section 2, the site SP17/THA20 is located in a difficult location due to the topography (the entire site is on a steep hill) and it is unrealistic to assume a significant shift to sustainable modes of travel over and above car as confirmed by the census data.

Concept junction improvements are set out in Appendix A of the report which essentially provide greater capacity at junctions along the A4 purely to facilitate the increase in traffic from site SP17/THA20. However, providing extra capacity would be in contrary to West Berkshire Core Strategy Policy CS 13 to mitigate the impact on the local transport network and the strategic road network. Additionally, this would essentially try and push further traffic onto the A4 and as set out in the modelling results the A4 corridor is already significantly congested and would inevitably result in traffic diverting onto unsuitable routes (through Bucklebury).

Journey times are assessed within the Phase 2 report and the routes are set out in Appendix C of the report. For convenience the map has been reproduced below in **Figure 4.1** below.

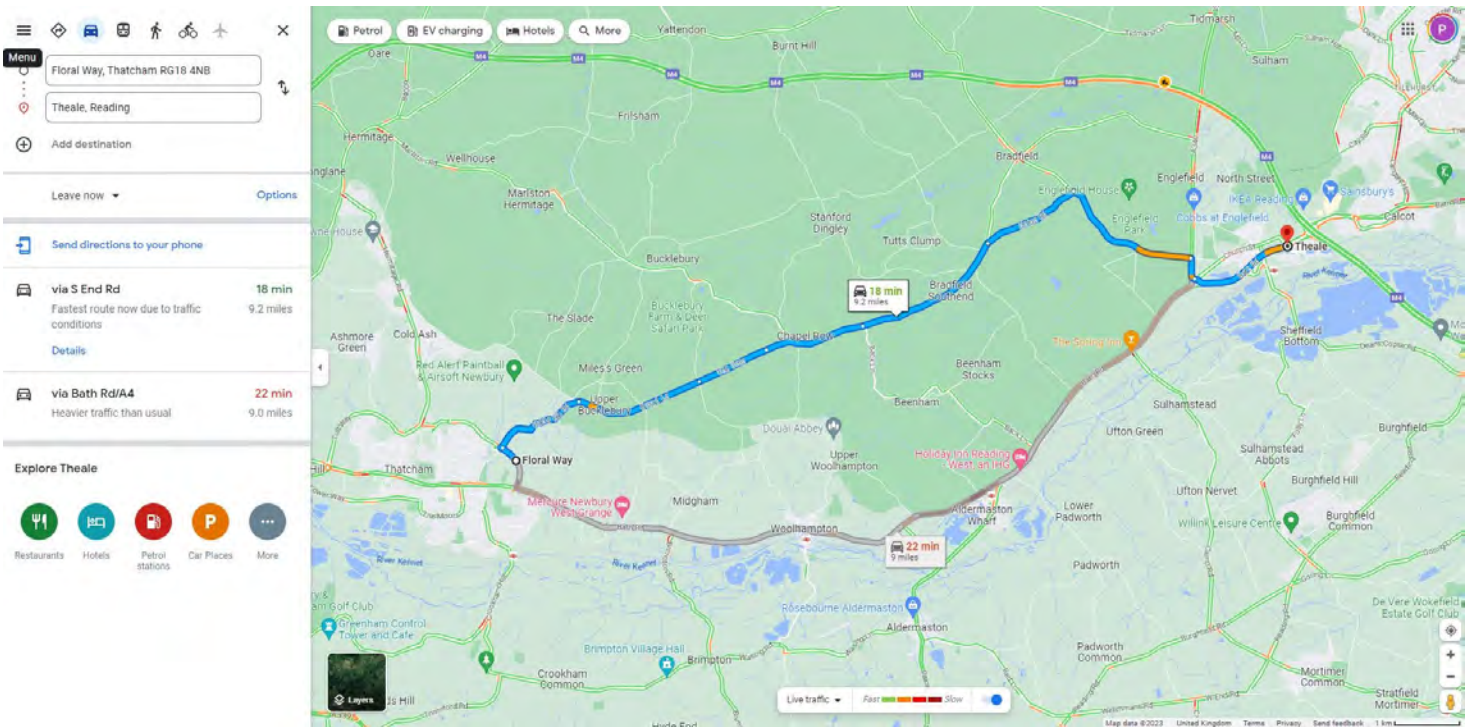
**Figure 4.1 - Journey Times Assessed**



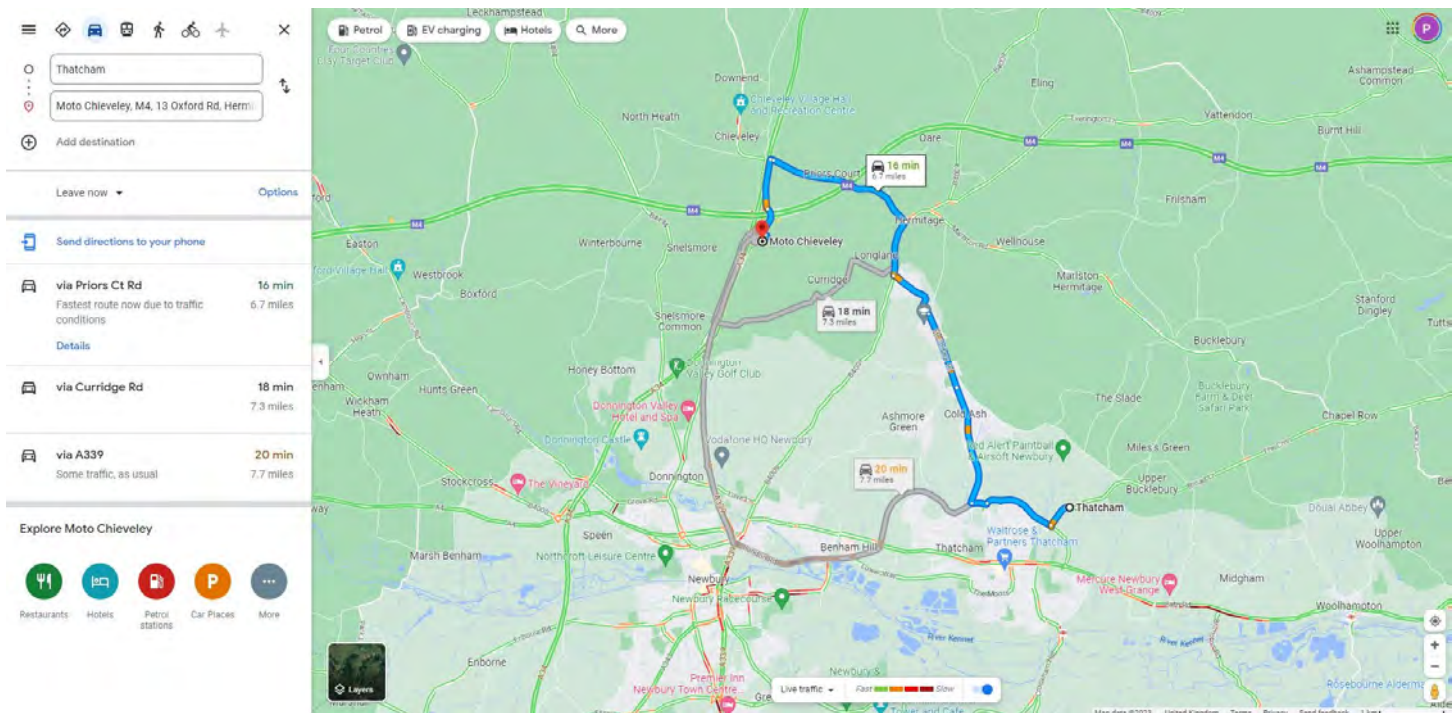
It is clear from the journey time map that an assessment of the most convenient routes for future residents of site SP17/THA20 has not been considered. As set out in the Phase 1 report existing congestion on the A4 will be exacerbated forcing drivers to see alternative routes. As shown in **Figures 4.2 & 4.3** below, interrogation of google maps confirms the most likely route for future residents heading either to Reading or north to M4 Chieveley junction would actually be via Harts Hill

Road or Cold Ash Lane as this provide the quickest route, this will be further exacerbated by any increase of traffic on the A4.

**Figure 4.2 – Journey Time towards Reading**



**Figure 4.3 – Journey Time Towards M4 Chieveley**



Further journey time analysis during the AM and PM peak hours was undertaken over a 2 week period from 10<sup>th</sup> February to 23<sup>rd</sup> February 2023 to assess the most desirable routes for those travelling east (towards Reading) or west towards M4 Chieveley. As shown within **Appendix B**, it is demonstrated that the quickest route in each direction is via Harts Hill Road or via Cold Ash Lane. The impact on these routes has not been assessed which is a fundamental flaw within the modelling assessment.

Whilst the Phase 2 report confirms mitigation measures will be required to reduce car dependency for SP17/THA20, they cannot reduce the congestion (which already exists) to such levels that the most desirable route will no longer be heading north either via Harts Hill Road or Cold Ash Lane. This situation already occurs, and the Phase 1 report has confirmed that these roads are unsuitable. Therefore, the location of THA20 is fundamentally wrong as traffic will need to divert off the strategic network and non-highway based mitigation measures are almost impossible to achieve due to its location/topography. The A4 itself creates severance of the site SP17/THA20 from Thatcham rail station as it will be extremely difficult for pedestrians/cyclists to cross this strategic road, whilst any formal crossing points will cause further delay on the road network (pushing drivers to use local routes).

#### **4.4 WBSTM Local Plan Forecasting Report (March 2022)**

WBSTM Local Plan Forecasting Report models a range of scenarios in the district under 2037 travel conditions, to help inform the selection of sites to be included in the 2037 West Berkshire Local Plan (WBLP).

Paragraph 1.2.3 states "One of the largest sites is the 'North East Thatcham' (THA20) site. Following the production of the S1R2 (with Local Plan) model, potential mitigation measures were assessed in two stages:

- Mitigation 1 – demand management, which applies a reduction in car traffic demand to/from the THA20 model zones to reflect potential impacts of bus improvements and active travel measures.
- Mitigation 2 – as Mitigation 1, with highway mitigation which includes proposed highway improvements on the network around the THA20 site to reduce congestion and wider impacts of the Local Plan traffic demand."

Paragraph 2.4.8 confirms trip generation for SP17/THA20 is derived from Technical Note and included in Appendix C of the Forecasting Report. 2011 Census data for employment and mode of travel for existing Thatcham wards. However, it could be argued that census data is remote of the SP17/THA20 and easier access to Thatcham rail station for example, thus underestimating the trip rates.

This methodology ignores all other journey reasons, including shopping, education, leisure etc.. and result total trip generation for the site SP17/THA20 is likely to be underestimated. It is unclear why the TRICS database (the industry standard method of assessing trips to and from a site) would not be suitable, large sites within the site would include other local facilities/attractions affecting the need to drive. Consequently, it is not considered that the trip rates present a robust assessment of the potential trips associated with SP17/THA20.

Further within the report at paragraph 5.2.7 it states "reduction factors have been applied to the THA20 car traffic demand to reflect a reasonable assumption of the potential impacts of active travel measures and improved bus services that are expected with the THA20 development:

- Car demand to/from THA20 reduced by 5% for active travel measures (trips within 10km)
- Car demand to/from THA20 reduced by 20% for bus proposals (to/from Thatcham town centre and rail station)"

To assume a 25% shift in car borne trips in this location is unrealistic given its remote location and difficult topography. Clearly any new bus routes would travel along longer routes to pick up the maximum number of passengers as the bus stops need to be within 400m of all the new residents, and also be subject to delays and congestion heading south from SP17/THA20 onto the A4 which has been documented within the submitted evidence as significantly congested. The use of bus is

therefore a mitigation that would be unattractive, even for local journeys and no evidence has been supplied to justify such reduction. No information has been provided by a bus operator to indicate the journey times between SP17/THA20 and Thatcham and railway station so the considerable reduction in car borne trips is not justified.

Cycling is unlikely to a realistic mitigation measure for the average resident due to the steep topography as demonstrated by Census data. The A4 itself creates severance of the site SP17/THA20 from Thatcham rail station as it will be extremely difficult for pedestrians/cyclist to cross this strategic road, whilst any formal crossing points will cause further delay on the road network (pushing traffic to use local routes). A trip rate selected from the TRICS database using a similar located site would encompass those traveling by sustainable means without the need for making assumptions, and in this case a totally unrealistic reduction of 25%.

### Trip Distribution

Section 3 of the Technical Note included within Appendix C of the Forecasting Report sets out the likely trip distribution for trips resulting from the development. This distribution is then used to allocate trips from the land parcels onto the highway network. Journey to work data (ONS Data Set: WU03EW) has been used to establish the likely trip destinations of those living in the site. Based on the data the following route allocations have been used in the analysis.

Route	A4 Newbury	A4 Reading	S	N
Distribution	36.4%	30.4%	23.9%	9.3%

Paragraph 5.3 within the TN confirm “it is proposed that there would be an internal route provided within the site to enable ease of movements for all modes along a centralised corridor. This would mean that areas of the development would be able to travel internally within the site without using the local highway network external to the site. this would allow the future residents to choose a more optimal location to exit the site based on their need ultimate end destination, such as residents living to the west of the site, travelling internally to exit on the A4 near Gables Way for eastbound travel”. Given the existing delays and congestion already observed and set out in the Phase 1 report it is extremely unlikely that this is the most likely route future residents would take travelling eastbound when analysis set out above confirms the most desirable/fastest route is generally to the north via Hart Hill Road (which has not been assessed).

Section 6 within the TN present the proposed traffic flows from each of the proposed access point. However, there is no assessment of vehicles travelling north from the Harts Hill Access, which as demonstrated is the most desirable route for those residents travelling toward Reading or north towards the M4.

Junction modelling was undertaken at the following locations and the impact through Bucklebury was not considered despite it being the most desirable route for those travelling towards Reading or the M4:

- Floral Way / Harts Hill Road
- A4 / Floral Way
- A4 / Pipers Way
- A4 / Colthrop Lane
- A4 / Gables Way.

## 5 SUMMARY AND CONCLUSIONS

### 5.1 Summary

- a YES Engineering Group Limited was appointed by Bucklebury Parish Council to review the transport related evidence submitted with the West Berkshire Council emerging Local Plan specially with regards to a proposed allocated site (SP17/THA20) south of the parish.
- b Phase 1 Transport Assessment report identified some junctions and links that would be affected by the proposed Local Plan growth. These were particularly focussed near to the proposed strategic North East Thatcham site, indicating delays and congestion occurring around key junctions along the A4 corridor, with through traffic diverting onto unsuitable routes.
- c Concept junction improvements are set out in Appendix A of the Phase 2 report which essentially provides greater capacity at junctions along the A4 corridor purely to facilitate the increase in traffic associated with development of SP17/THA20. However, providing extra capacity would be in contrary to West Berkshire Core Strategy Policy CS 13 to mitigate the impact on the local transport network and the strategic road network.
- d Journey time analysis during the AM and PM peak hours was undertaken over a 2-week period from 13<sup>th</sup> to 24<sup>th</sup> February 2023 to assess the most desirable routes for those travelling east (towards Reading) or west towards M4 Chieveley . As shown within **Appendix B** it is demonstrated that the quickest route in each direction is via Harts Hill Road or via Cold Ash Lane rather than the strategic network (A4). The impact on these routes has not been assessed which is a fundamental flaw within the modelling assessment.
- e Whilst the Phase 2 report confirms other mitigation measures will be required to reduce car dependency for SP17/THA20, however they cannot reduce the congestion (which already exists) to such levels that the most desirable route will no longer be heading north either via Harts Hill Road or Cold Ash Lane. This situation already occurs, and the Phase 1 report has confirmed that these roads are unsuitable. Therefore, the location of SP17/THA20 is fundamentally wrong as traffic will need to divert off the strategic network and non-highway based mitigation measures are almost impossible to achieve due its location/topography.
- f The A4 itself will create severance of the site SP17/THA20 from Thatcham rail station for pedestrian/cycle activity as it will be extremely difficult to cross this strategic road, whilst any formal crossing points will cause further delay on the road network.
- g Congestion has been raised by WBC as a Key Issue and is consistently cited in the Council's annual residents' surveys as an issue that needs improving in the local area. The district has a high level of car ownership and usage that is in excess of the South East and national averages. Rapid population growth, housing, and employment in the last few decades, as well as the proximity to other larger urban areas, have seen an increase in demand for travel and a reliance on journeys made by the private car. The development at SP17/THA20 is located within a rural setting with very limited access to public transport. As such it is expected that the development would only add to the already congested roads and is at ends to the Local Transport Goals to minimise congestion on the transport networks.
- h The WBSTM report confirms "Traffic flows increase (compared to the Reference Case) on major roads such as the A34, A339, A4, Bury's Bank Road/Crookham Hill and the Broad Lane, as a result of increased traffic demand generated by the preferred Local Plan sites. There is a consistent re-assignment of traffic in all Local Plan scenarios (compared to the Reference Case) due to naturally increased demand and congestion in the town centre in particular, though local roads in general seem to demonstrate low levels of highway demand increases across all Local Plan scenarios. General increases in Local Plan traffic demand though the corridor, as well as THA20 site traffic directly accessing the A4 in this area, is likely to cause some displacement onto wider routes away from the A4, through local villages such as Upper Bucklebury". As set out in Section 2, the

routes of Bucklebury are unsuitable (no footways, no lighting, high speed, tight bends) for an increase in traffic flows and would create highway safety issues for existing residents.

- i The trip rate criteria can be considered unreliable, whilst the a trip rate reduction of 25% due to mitigation measures is wholly unrealistic.
- j NPPF paragraph 111 states that 'development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.'. As demonstrated within this report the impacts are serve and as acknowledged in the WBSTM report (point h above), site SP17/THA20 is likely to cause displacement onto wider routes away from the A4, through local villages such as Upper Bucklebury. The Phase 1 Transport Assessment described these routes as undesirable and critically the impact has not been assessed within any of the evidence presented in support of the emerging local plan. Additionally, there are fundament flaws within the trip assessment and distribution.

## 5.2 Conclusions

In summary it can be concluded that allocation of site SP17/THA20 based on the transport evidence is unsound for the following reasons:

- The trips rates are unreliable and not robust.
- The trip distribution is unrealistic (evidence suggests that traffic will be diverted from the A4).
- The mitigation measures are improbable at best (with little or no evidence).
- The location of site means car borne will dominate.
- Highway network in the vicinity of SP17/THA20 is already over capacity.
- No assessment has been made of the routes most likely to be affected by an increase in traffic.
- Increase in traffic through Bucklebury will pose highway safety issues.



## Appendices

## Appendix A – Census Data

## QS701EW - Method of travel to work

ONS Crown Copyright Reserved [from Nomis on 27 February 2023]

population	All usual residents aged 16 to 74
units	Persons
date	2011
rural urban	Total

### Method of Travel to Work

#### msoa2011:E02003383 : West Berkshire 017

All categories: Method of travel to work	5,061
Work mainly at or from home	228
Underground, metro, light rail, tram	1
Train	202
Bus, minibus or coach	95
Taxi	9
Motorcycle, scooter or moped	42
Driving a car or van	2,768
Passenger in a car or van	196
Bicycle	142
On foot	275
Other method of travel to work	14
Not in employment	1,089

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.

## TS045 - Car or van availability

ONS Crown Copyright Reserved [from Nomis on 27 February 2023]

population	All households
units	Households
date	2021

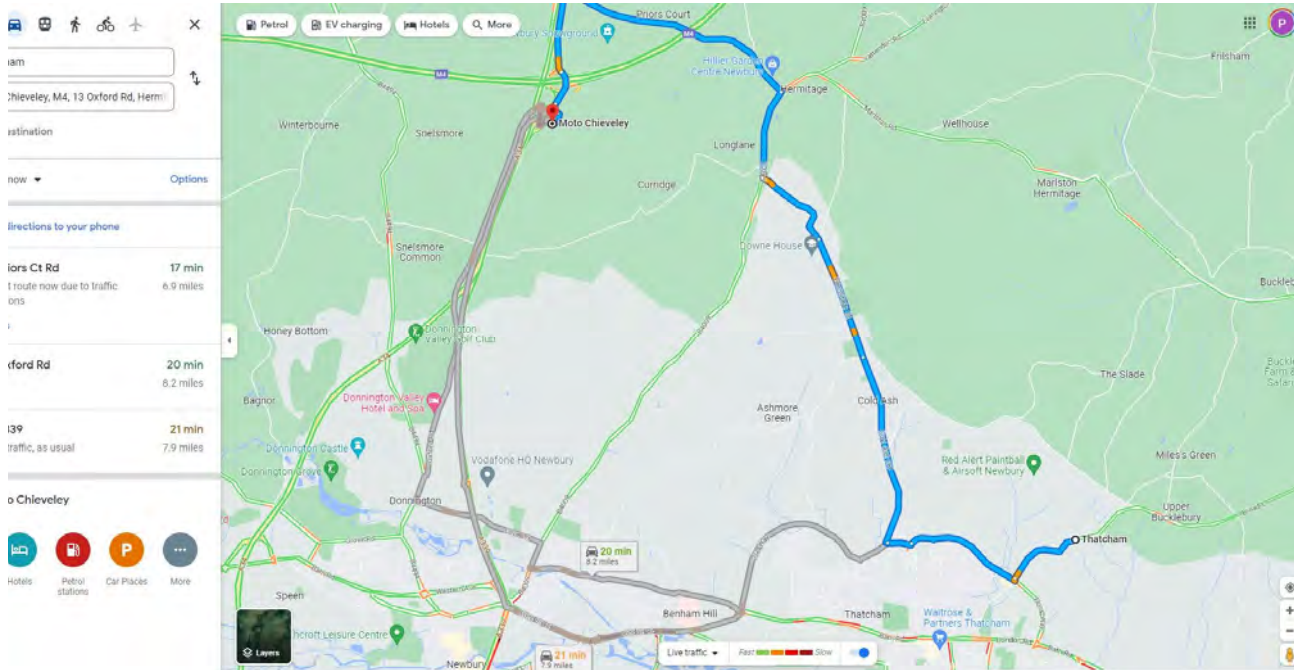
### **Number of cars or vans** **msoa2021:E02003383 :** **West Berkshire 017**

Total: All households	2,764
No cars or vans in household	278
1 car or van in household	974
2 cars or vans in household	1,080
3 or more cars or vans in household	432

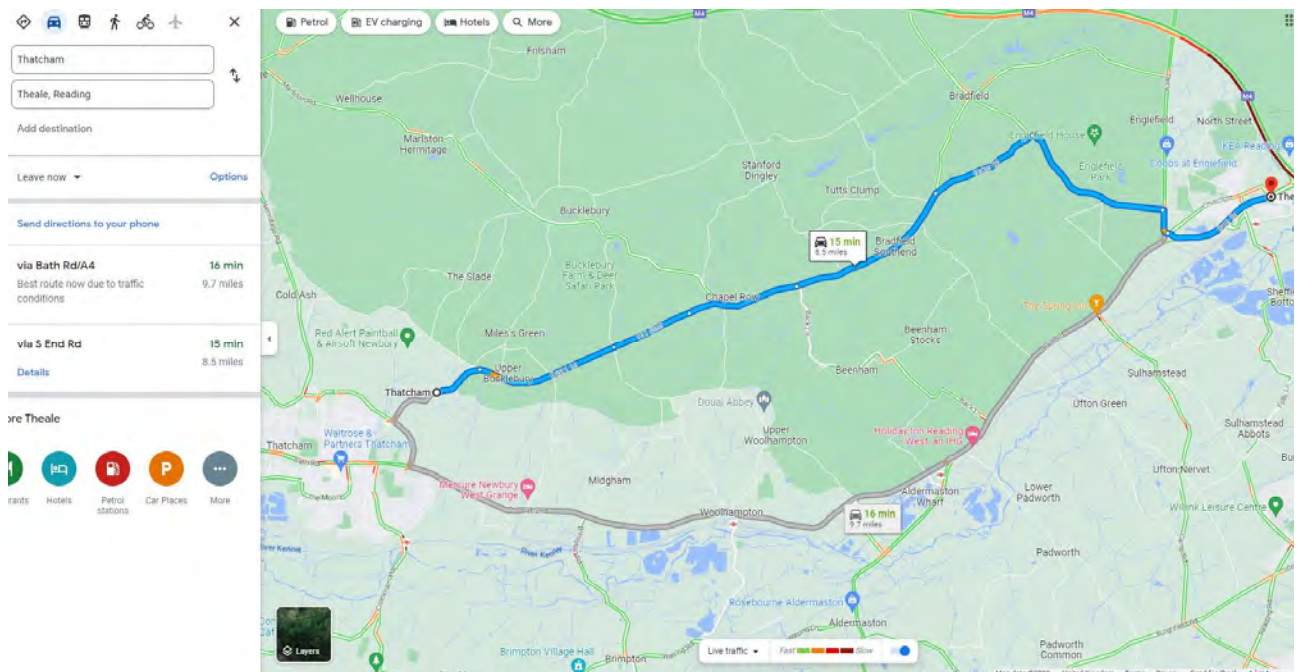
In order to protect against disclosure of personal information, records have been swapped between different geographic areas and counts perturbed by small amounts. Small counts at the lowest geographies will be most affected.

## Appendix B – Journey Times

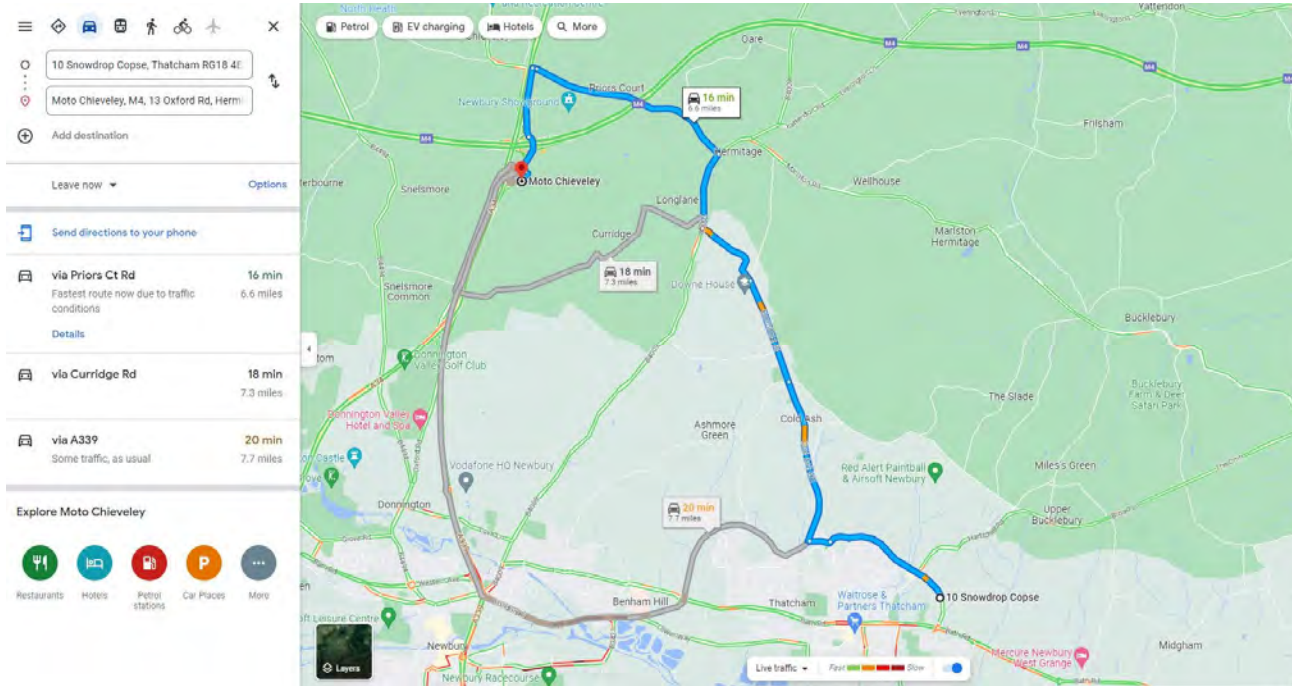
## Journey Times Towards M4 Chieveley, PM Peak Hour – 10/02/2023



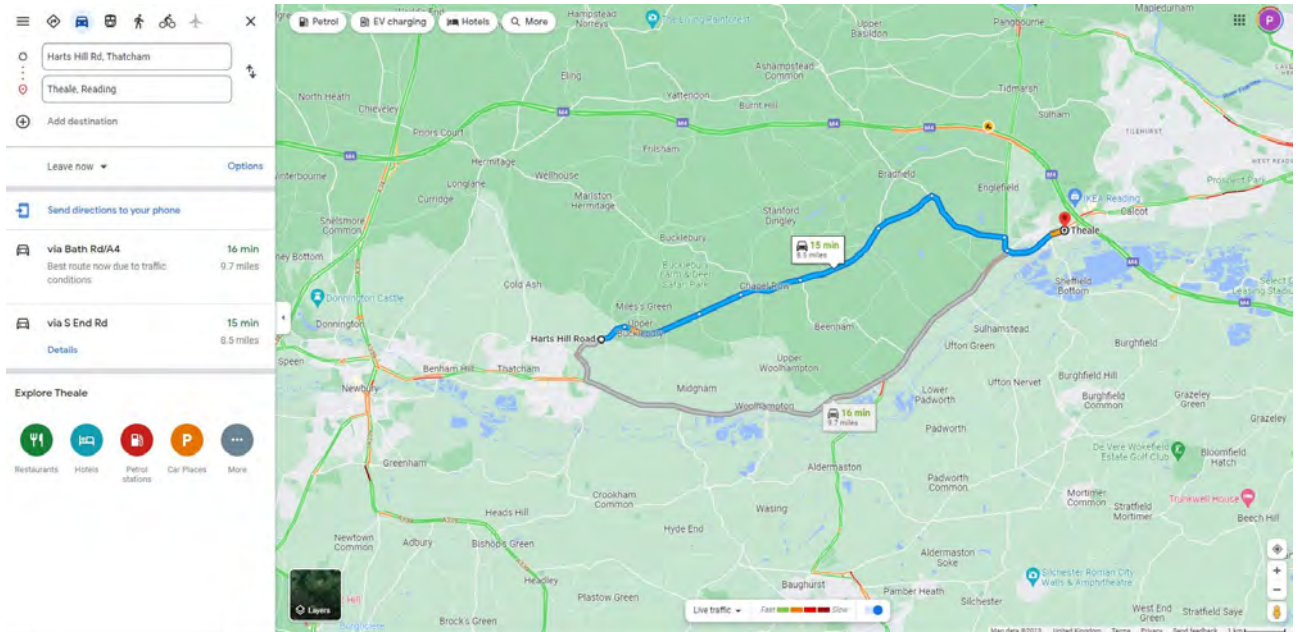
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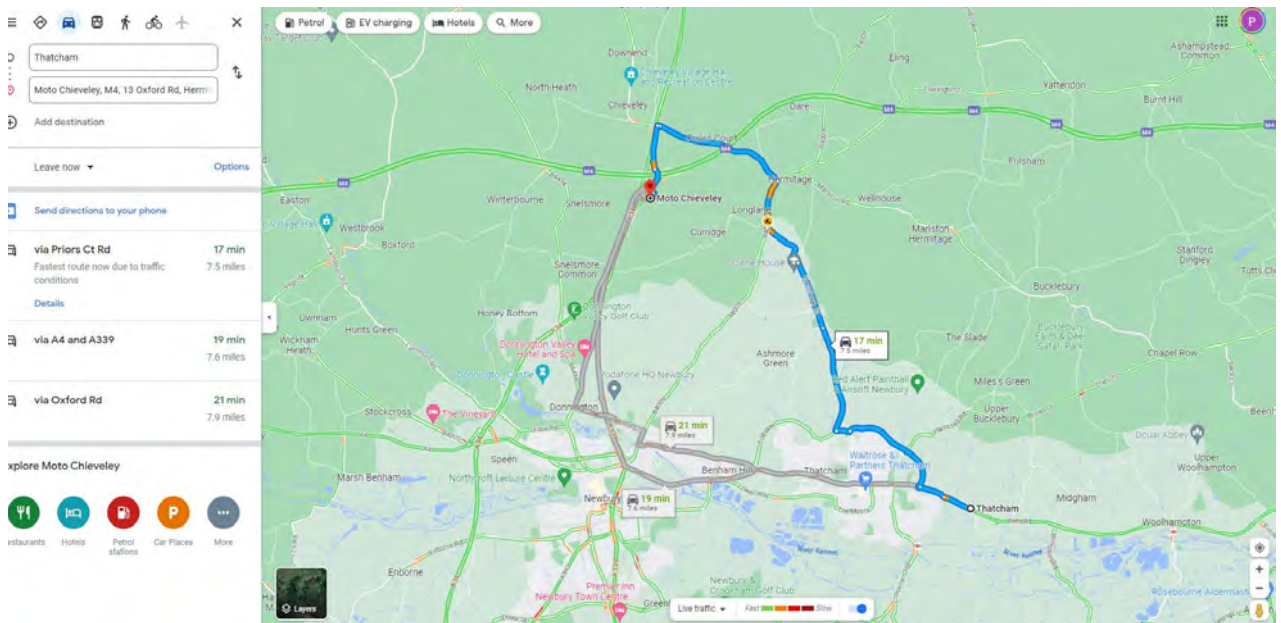
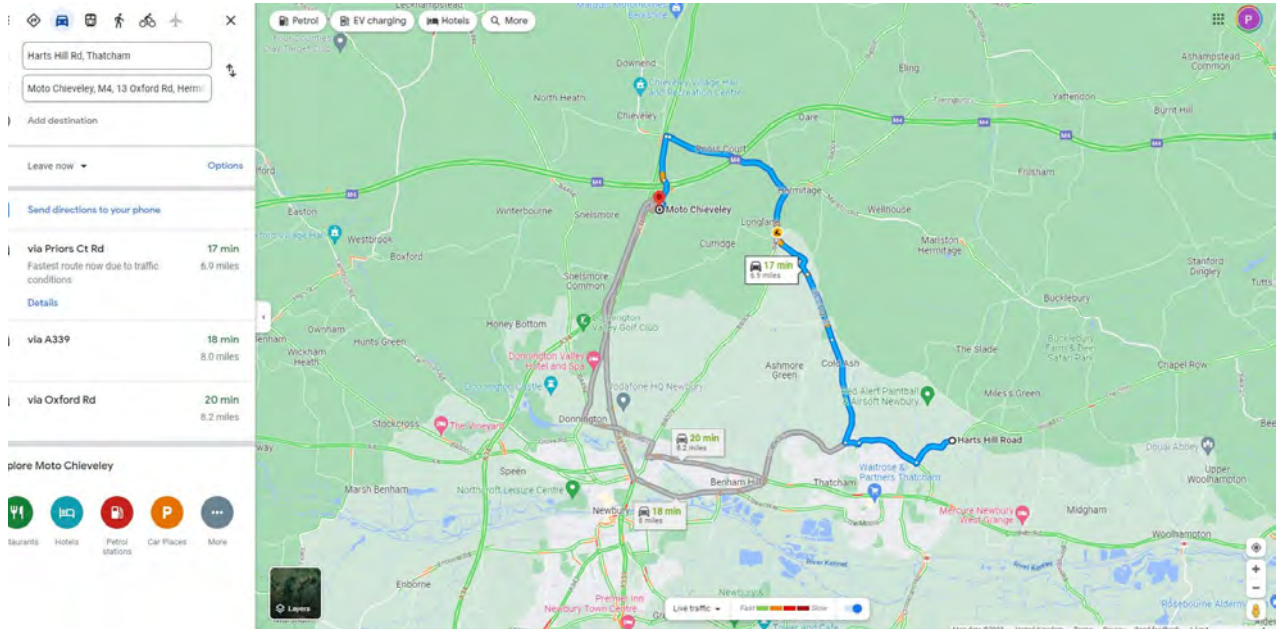
## Journey Times Towards M4 Chieveley, PM Peak Hour – 13/02/2023



## Journey Times towards Reading, PM Peak Hour – 13/02/2023

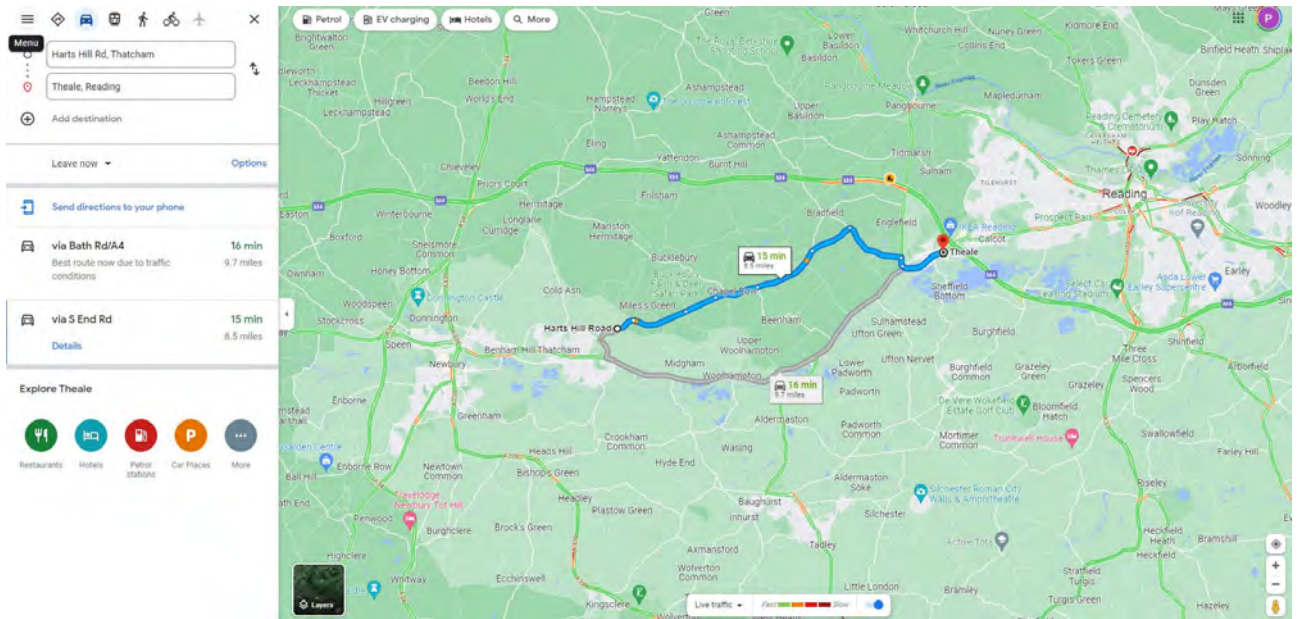


## Journey Times Towards M4 Chieveley, AM Peak Hour – 14/02/2023

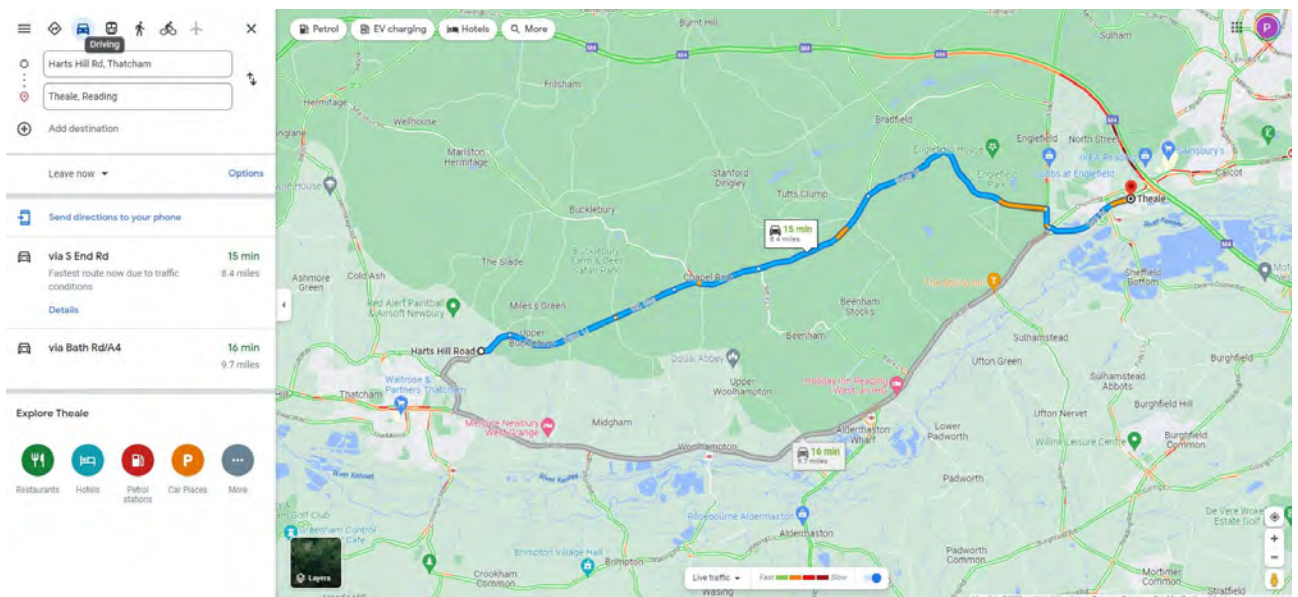




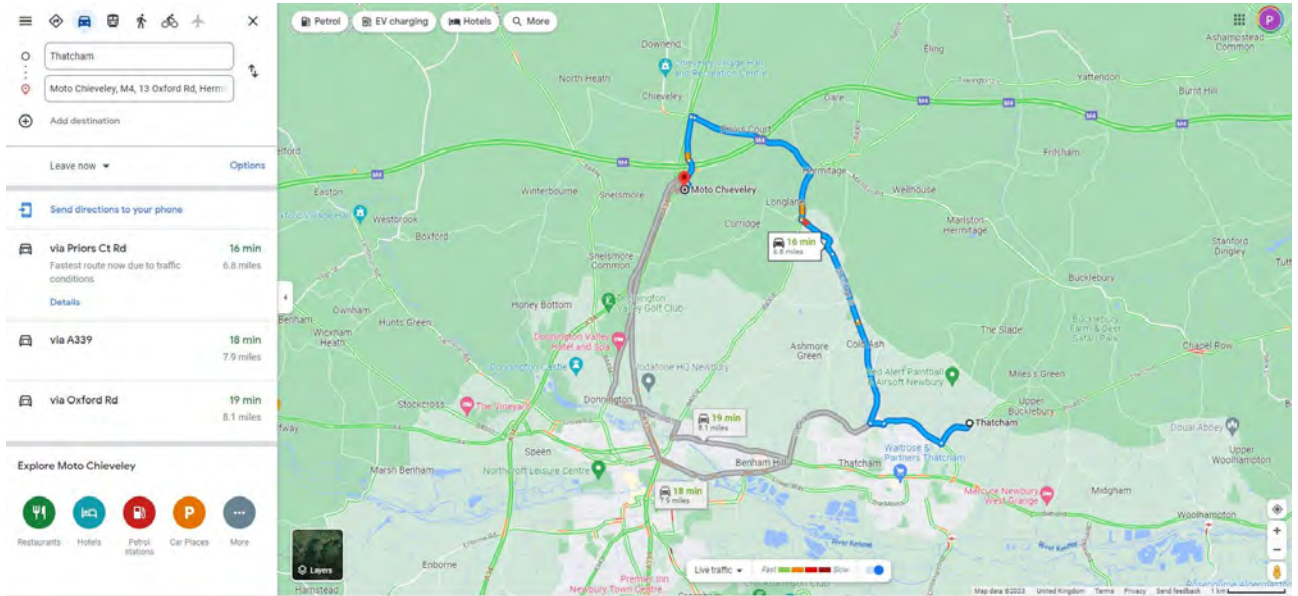
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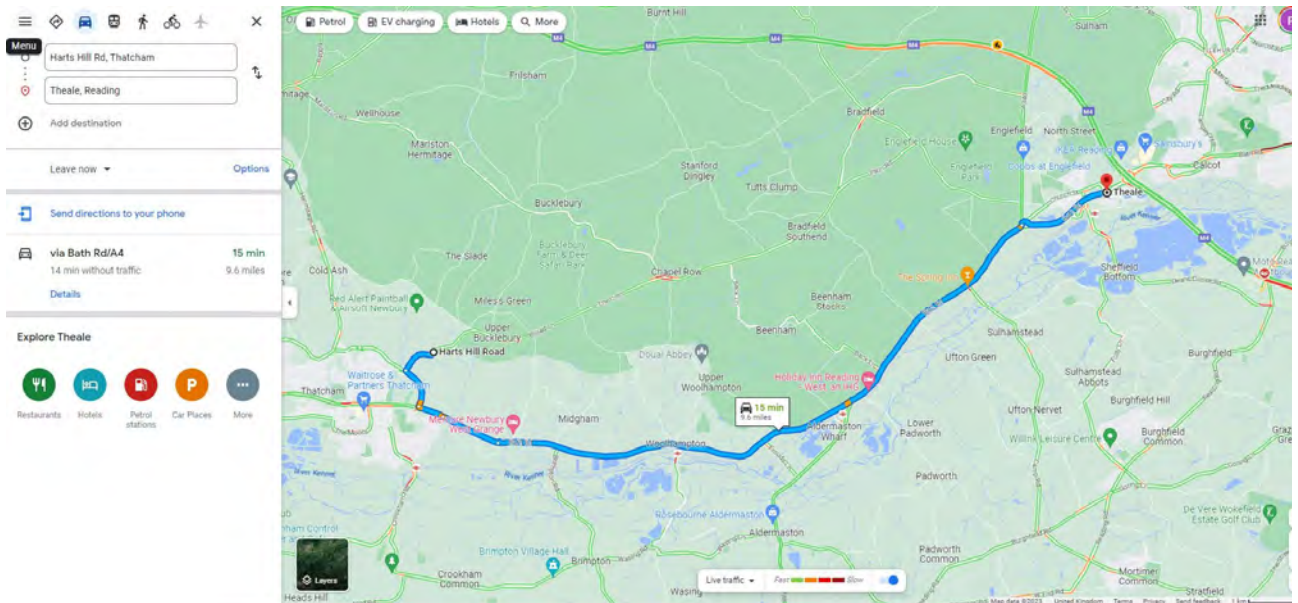
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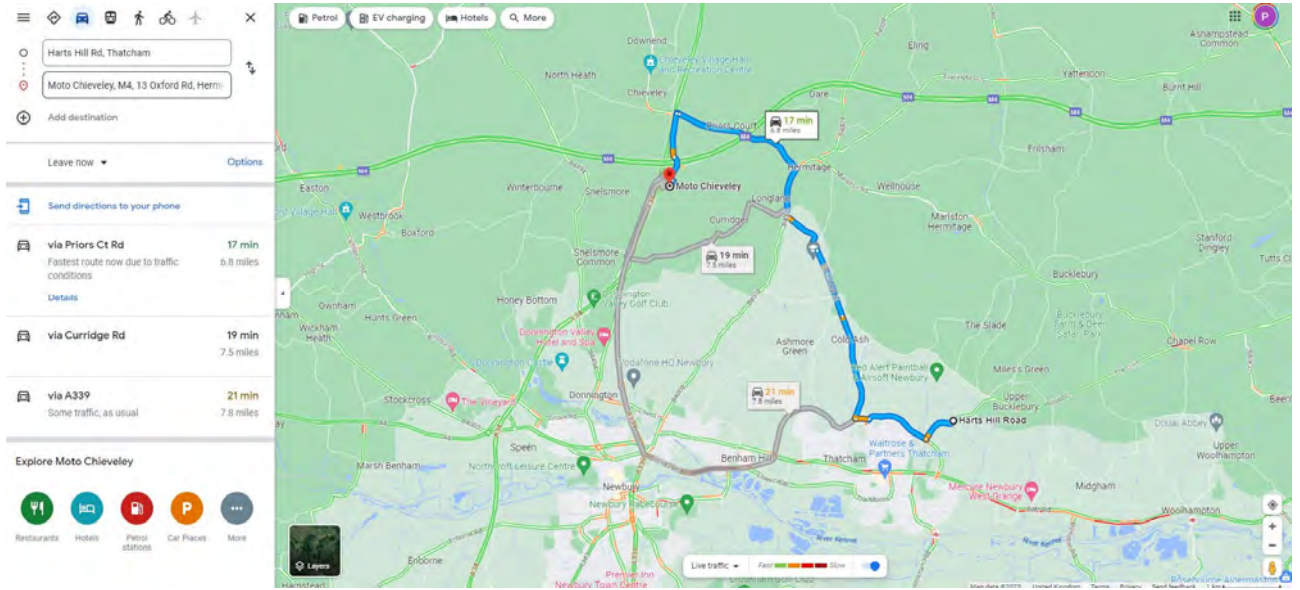
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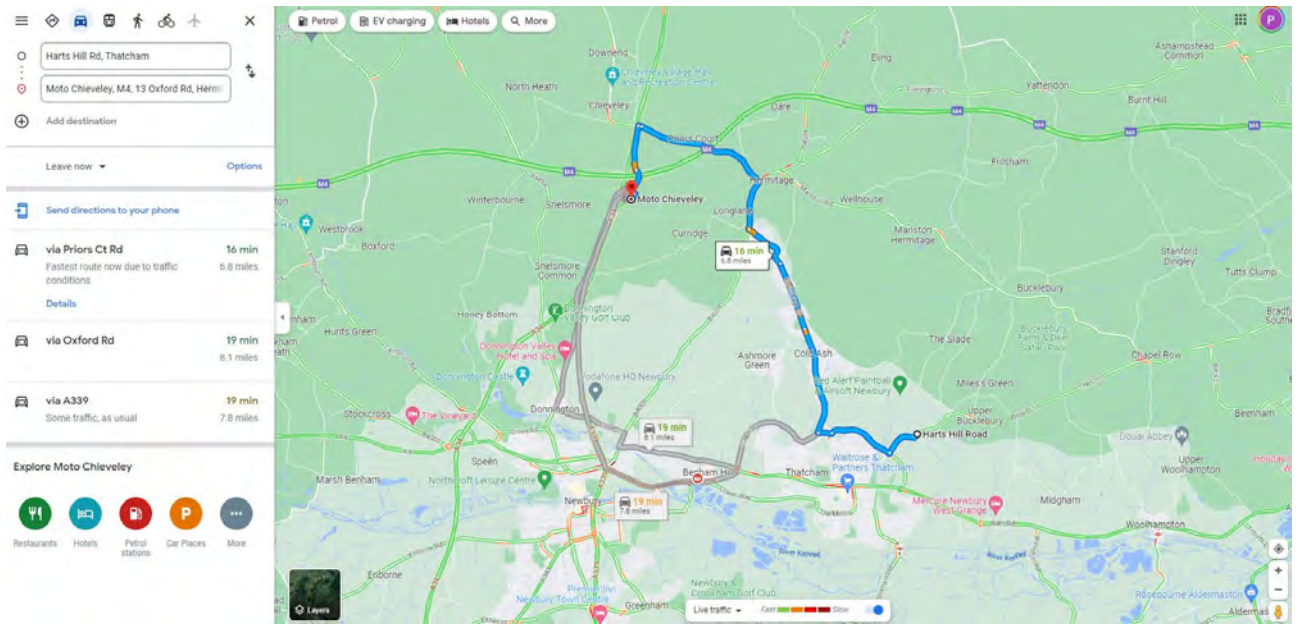
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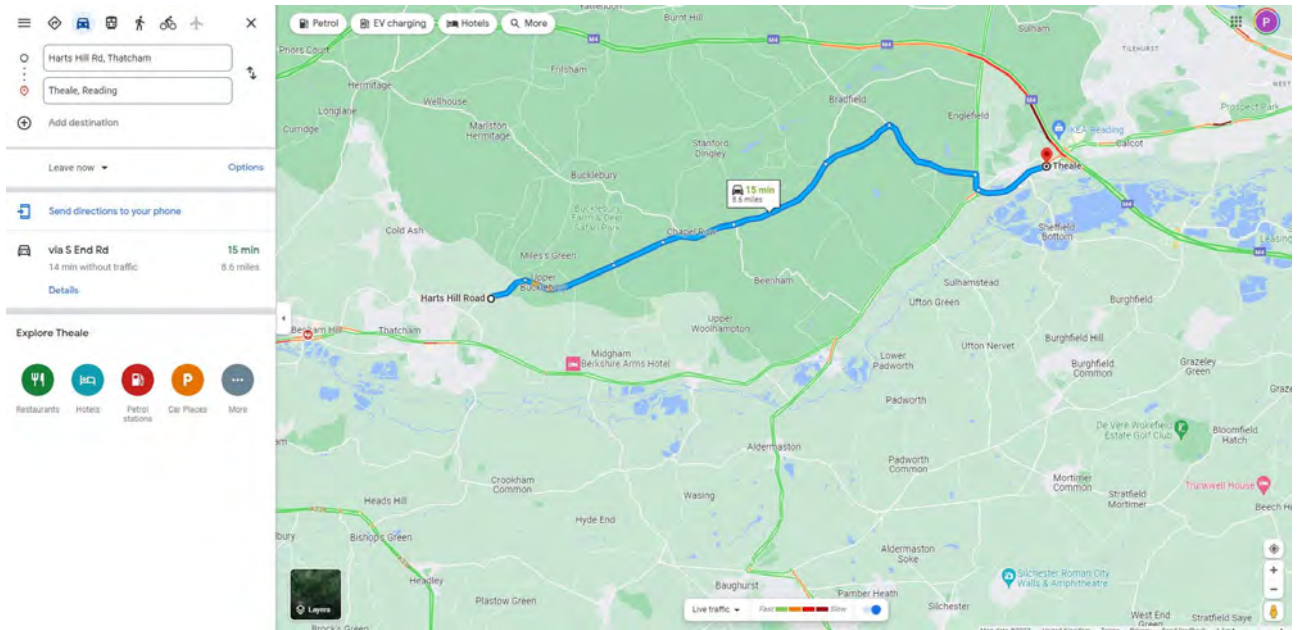
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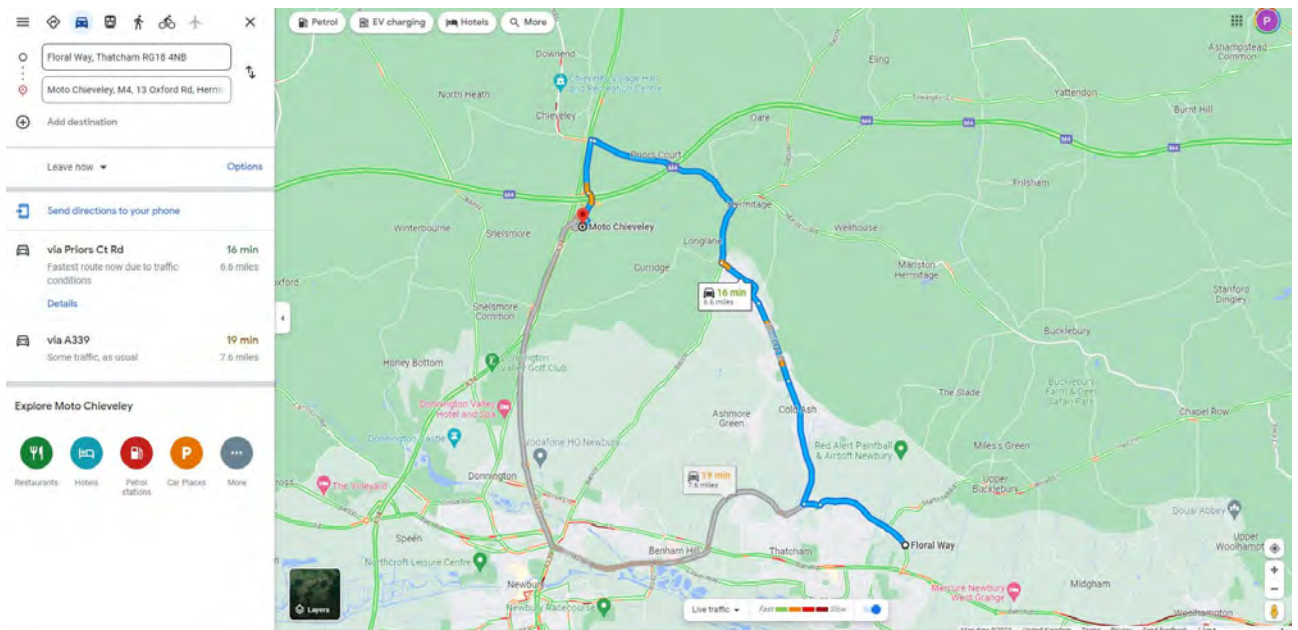
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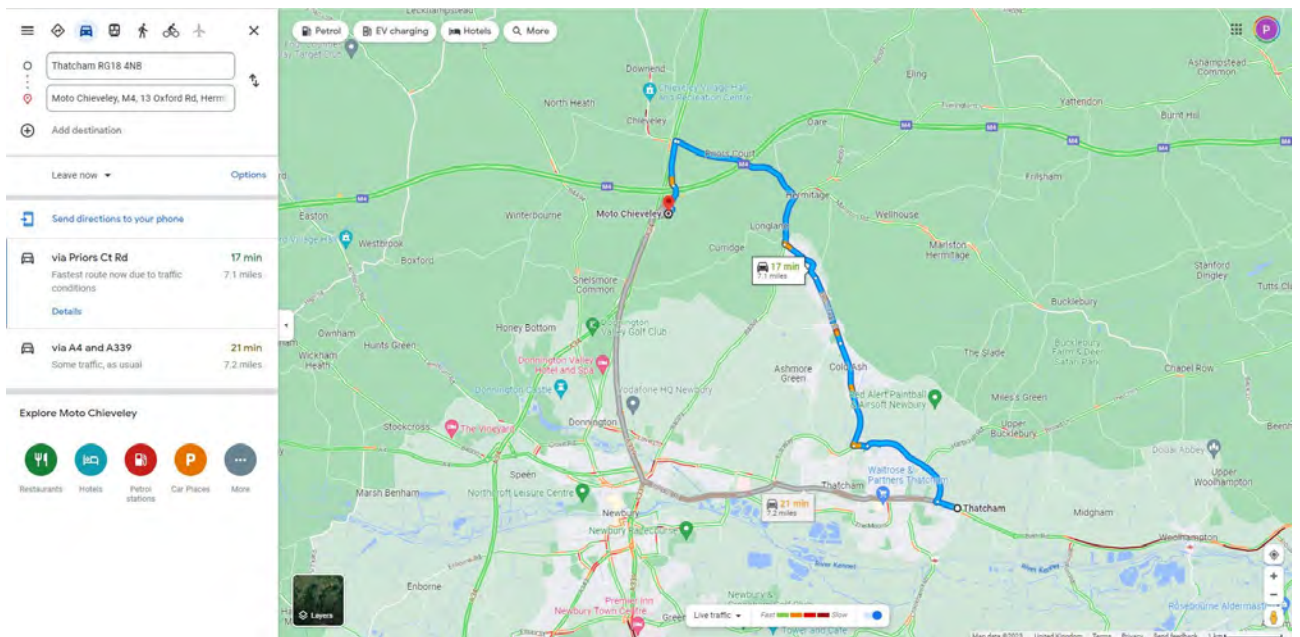
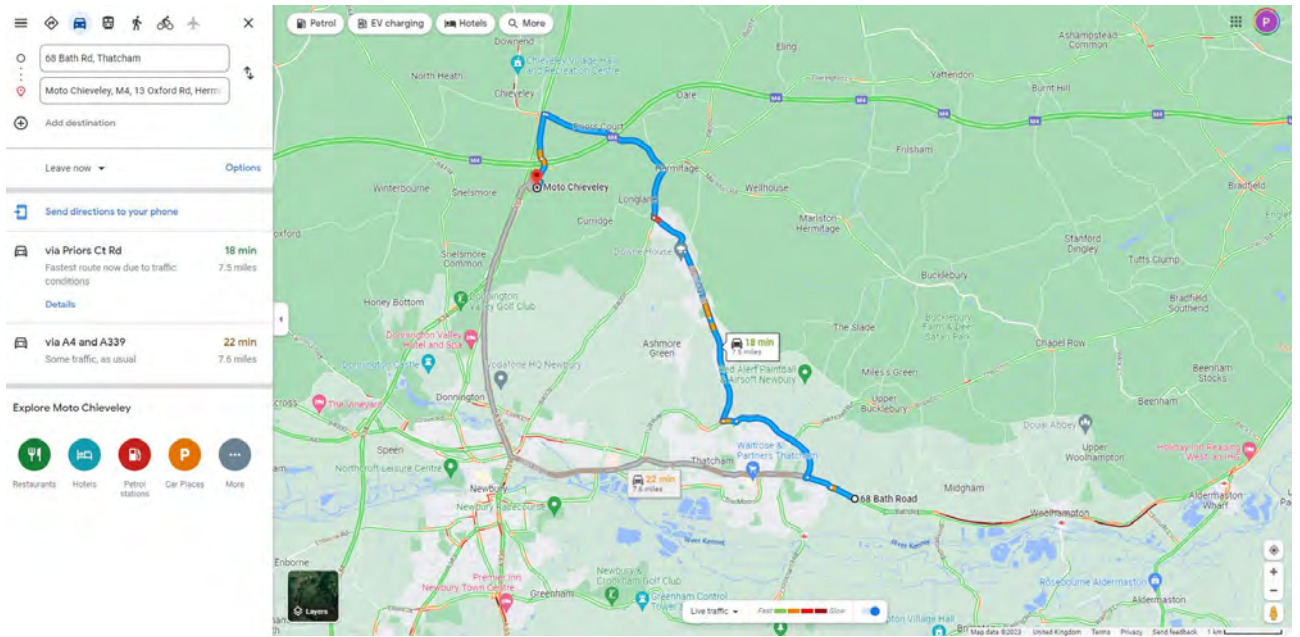


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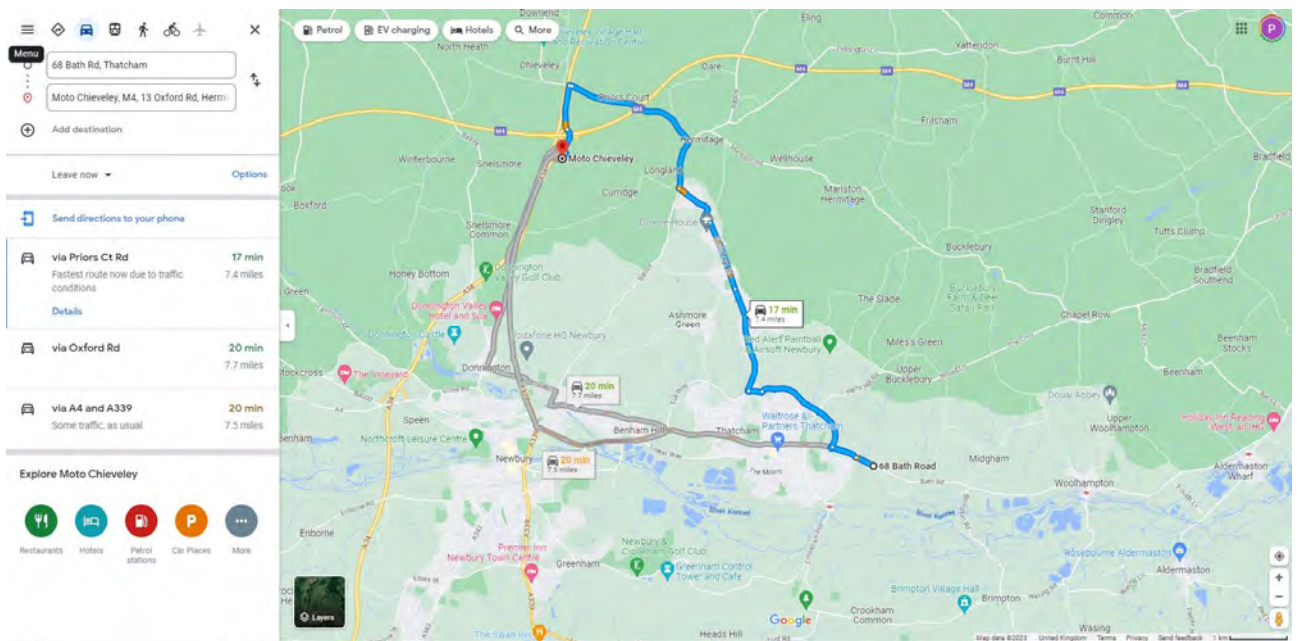
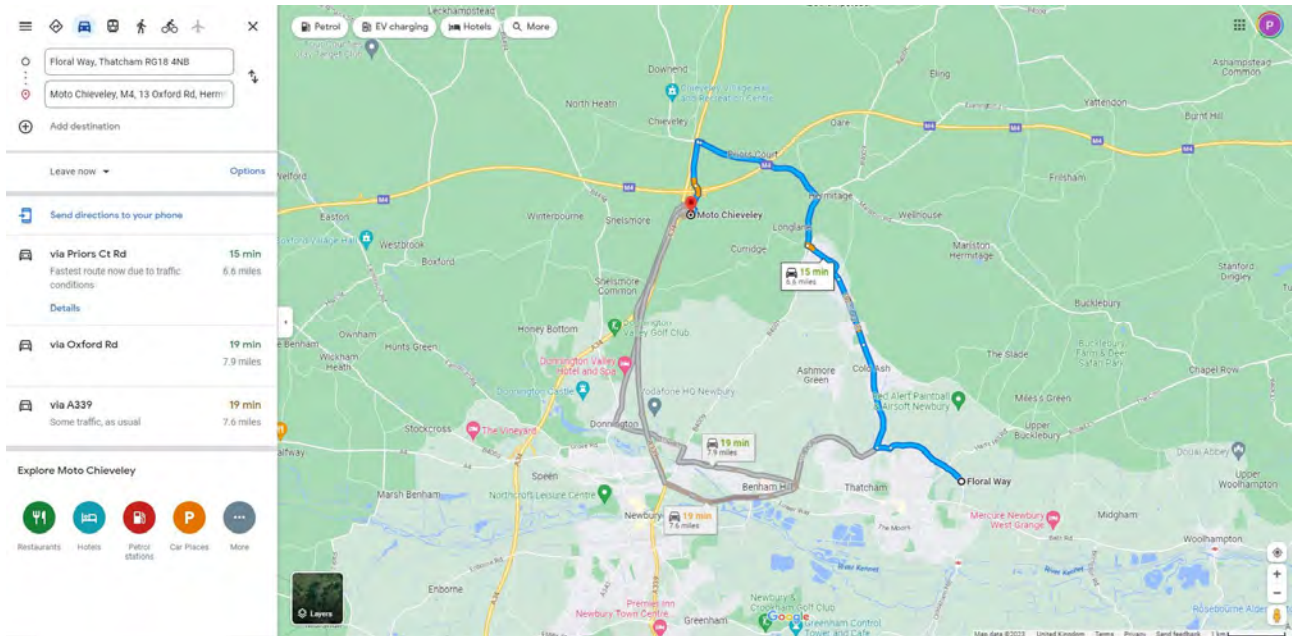


## Journey Times towards M4 Chieveley, AM Peak Hour – 20/02/2023

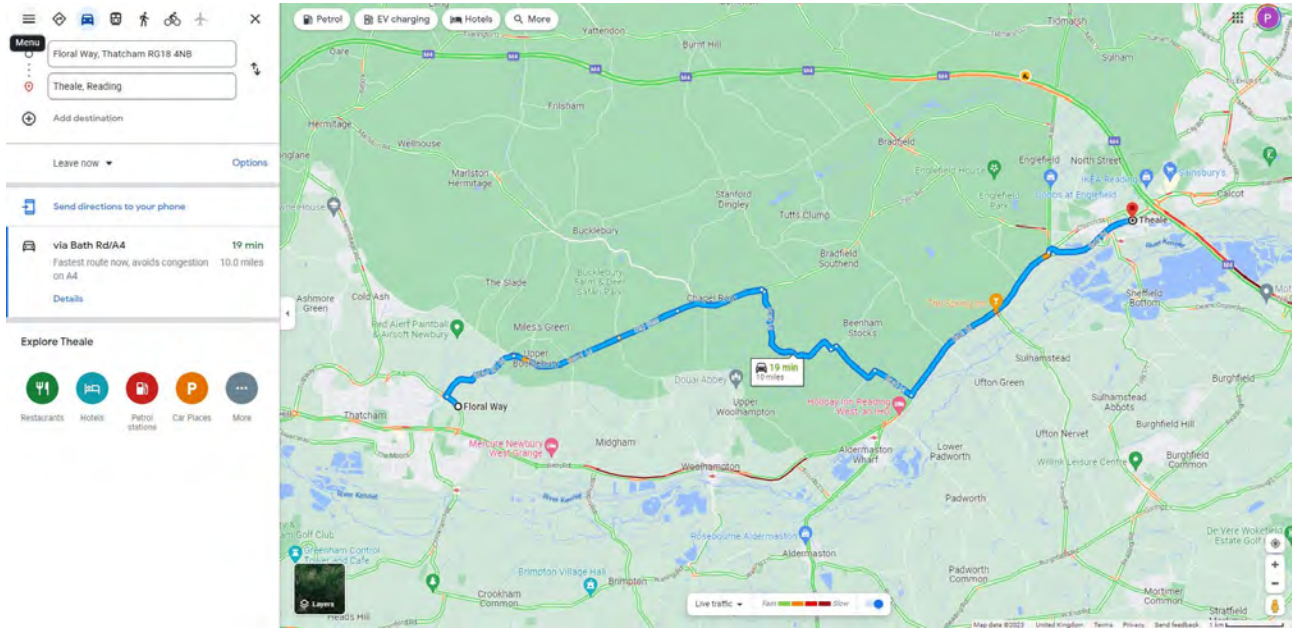




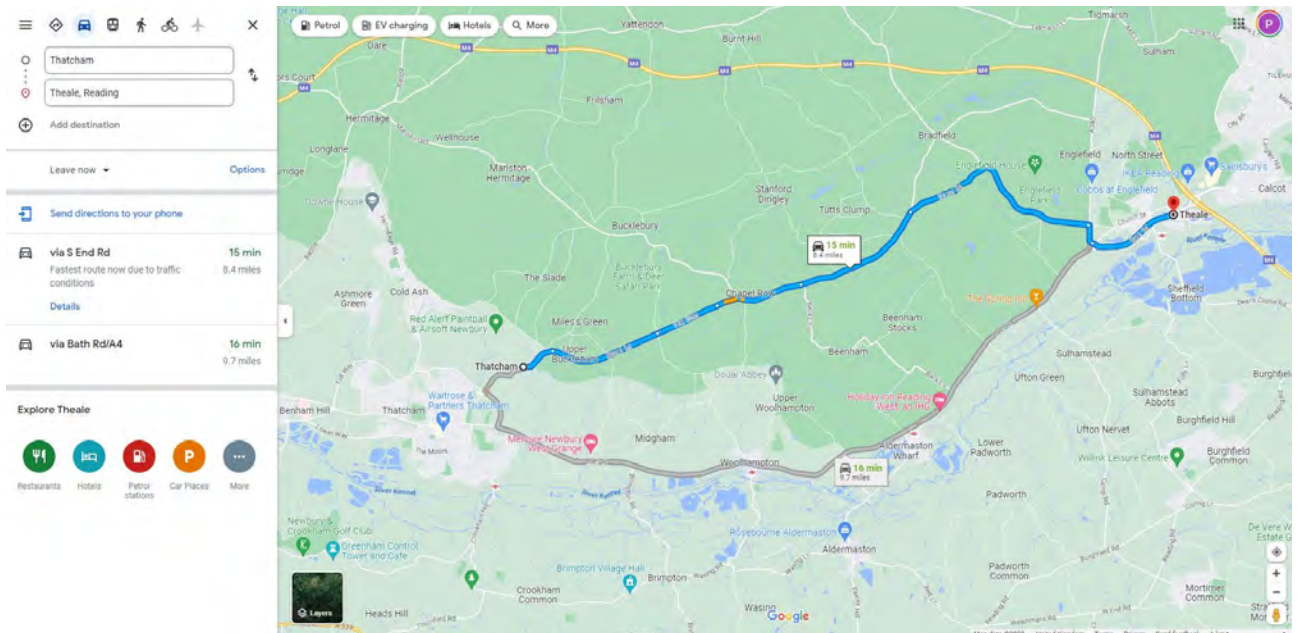
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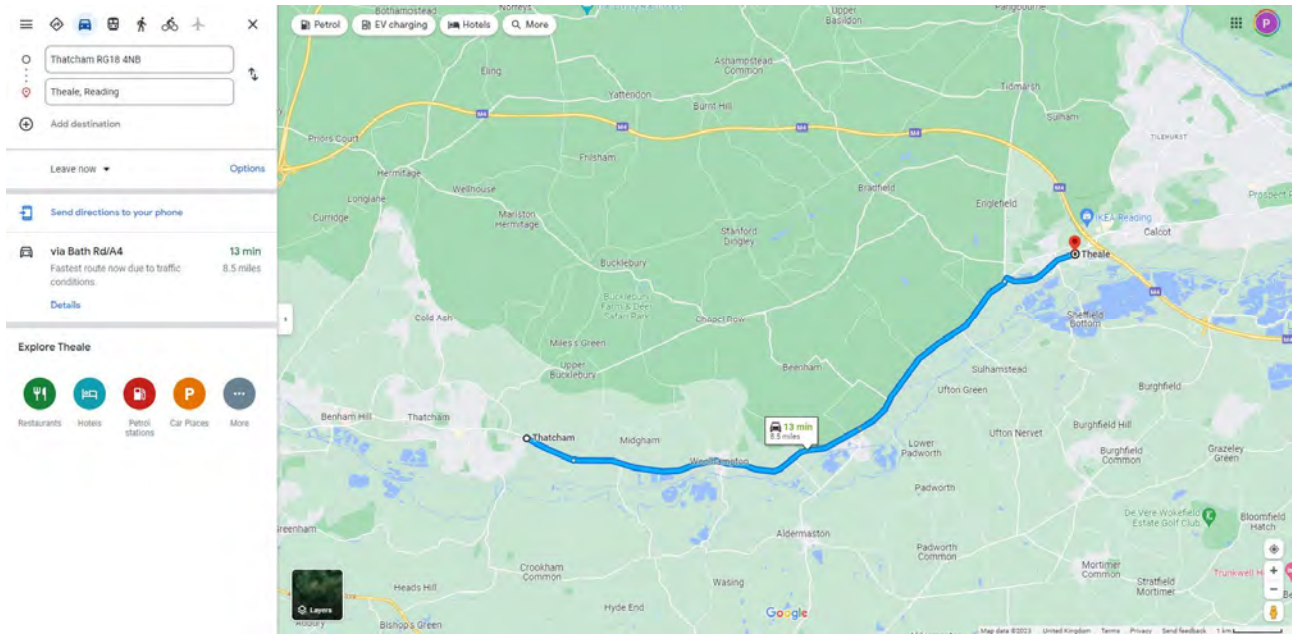


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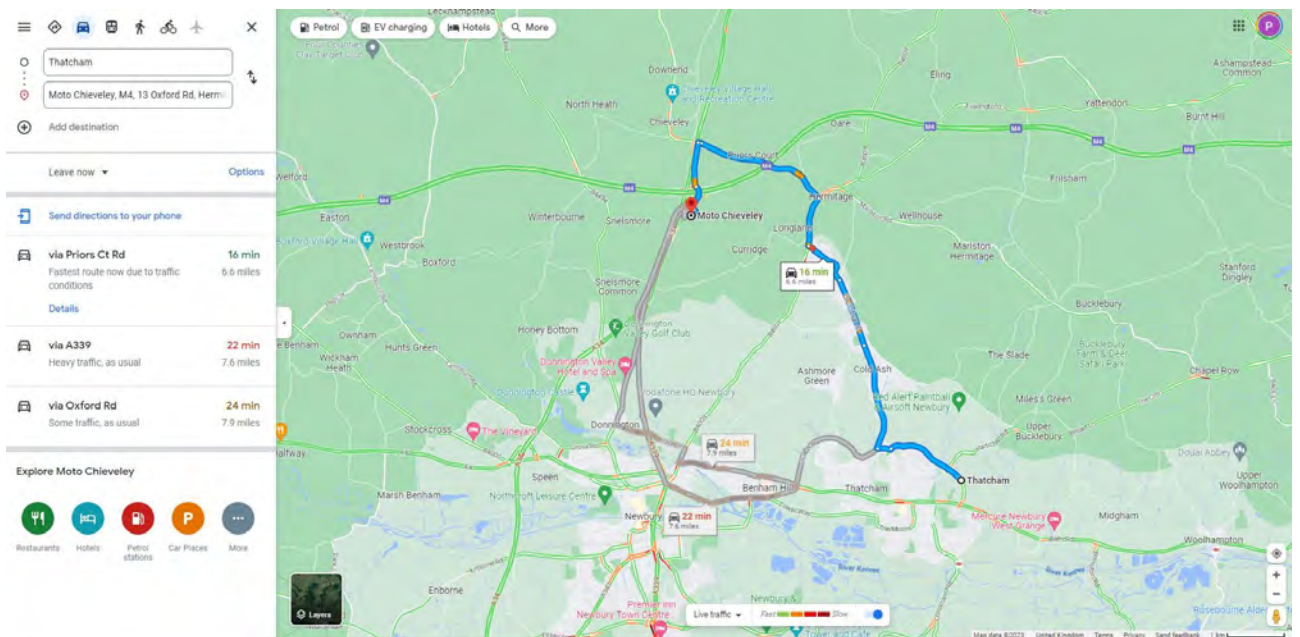


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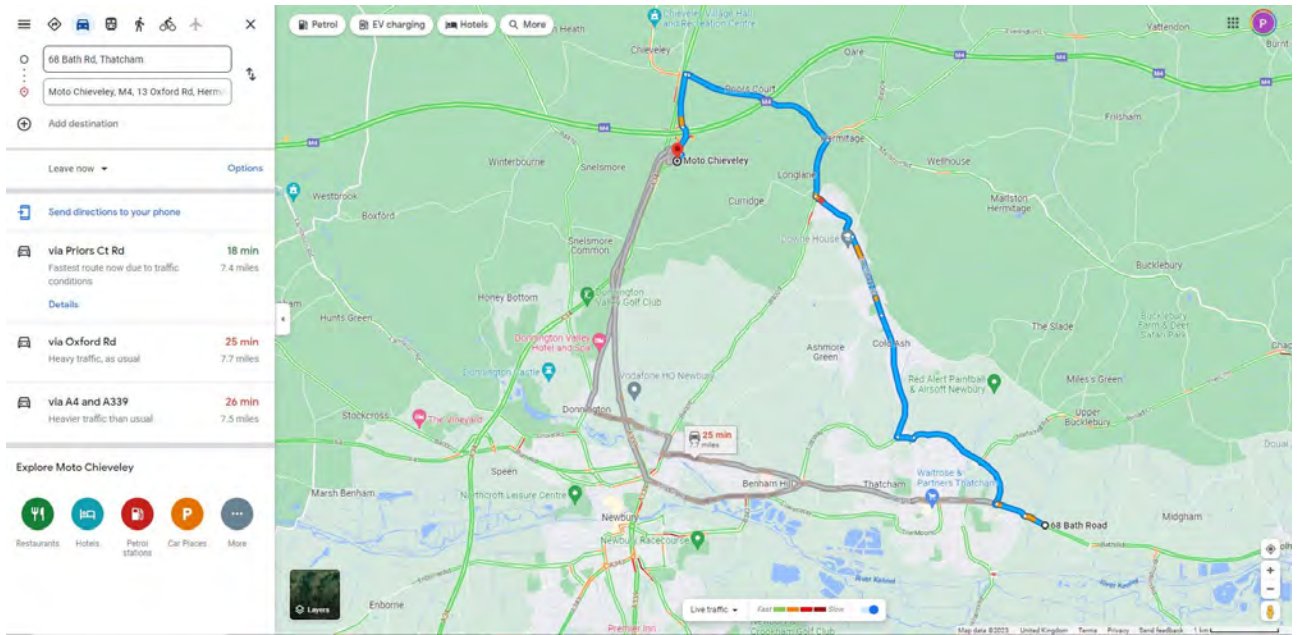




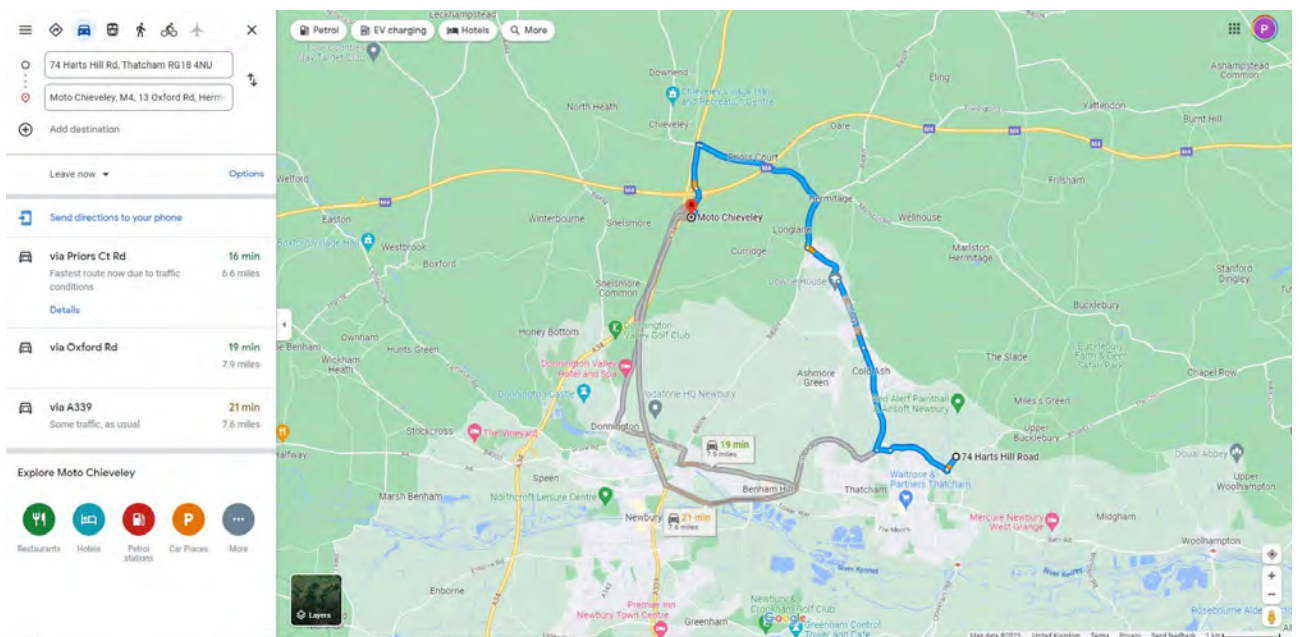
**Journey Times towards M4 Chieveley, AM Peak Hour – 21/02/2023**



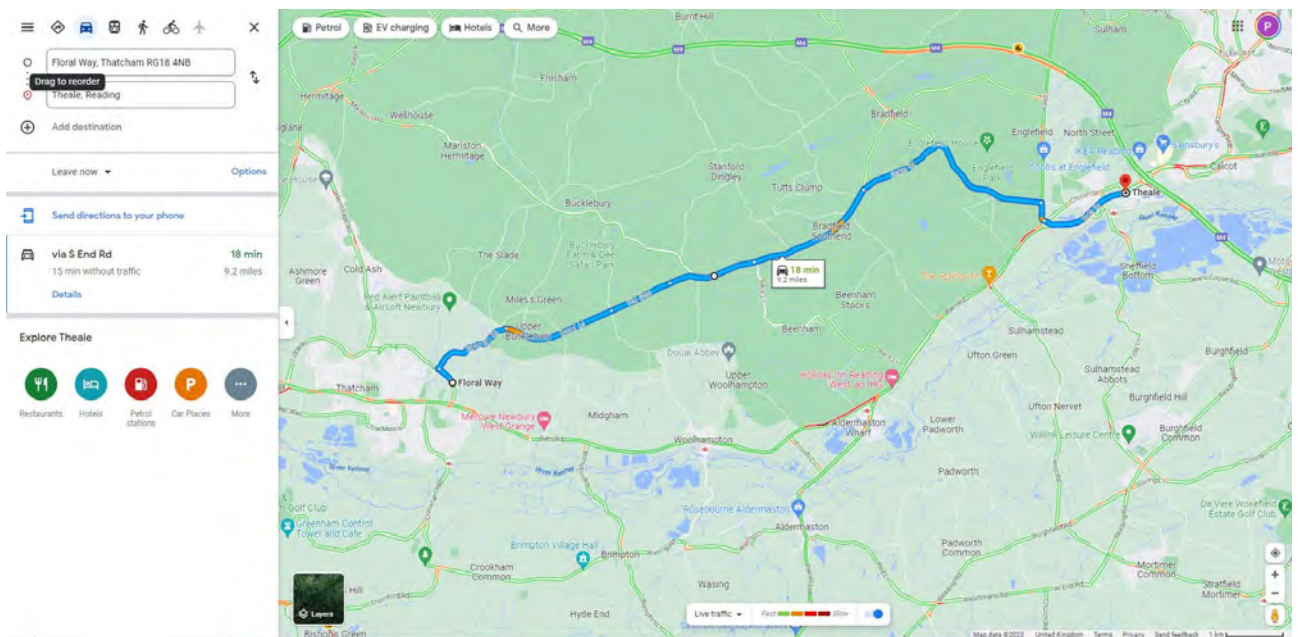
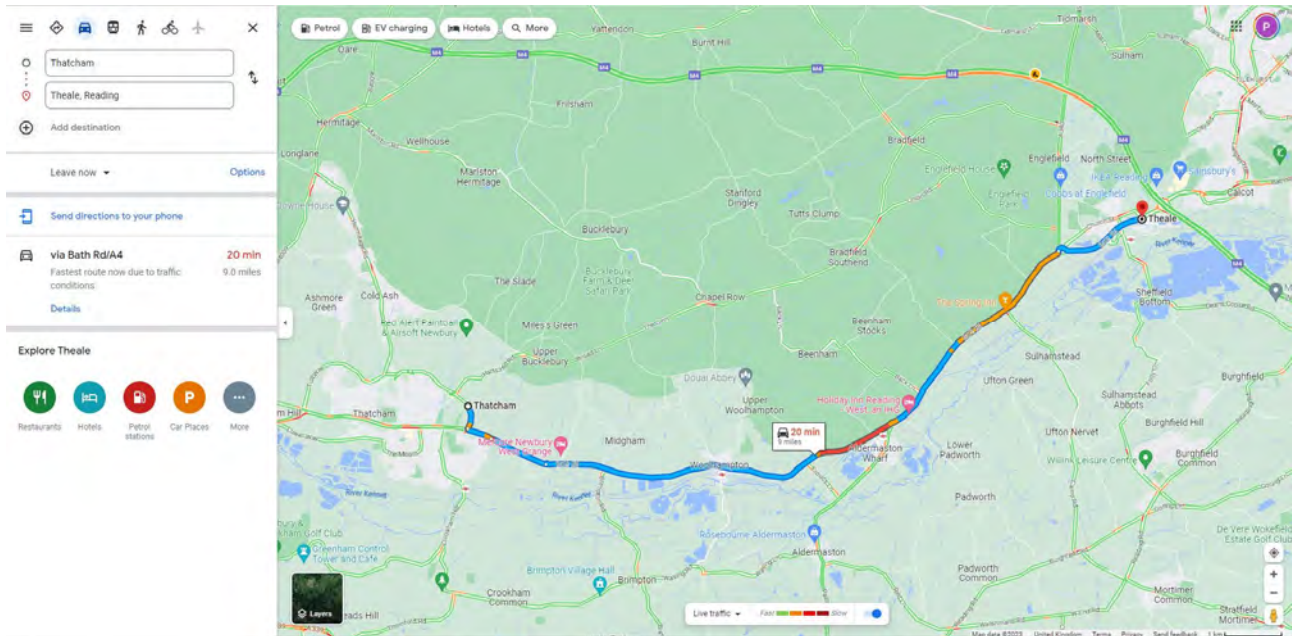


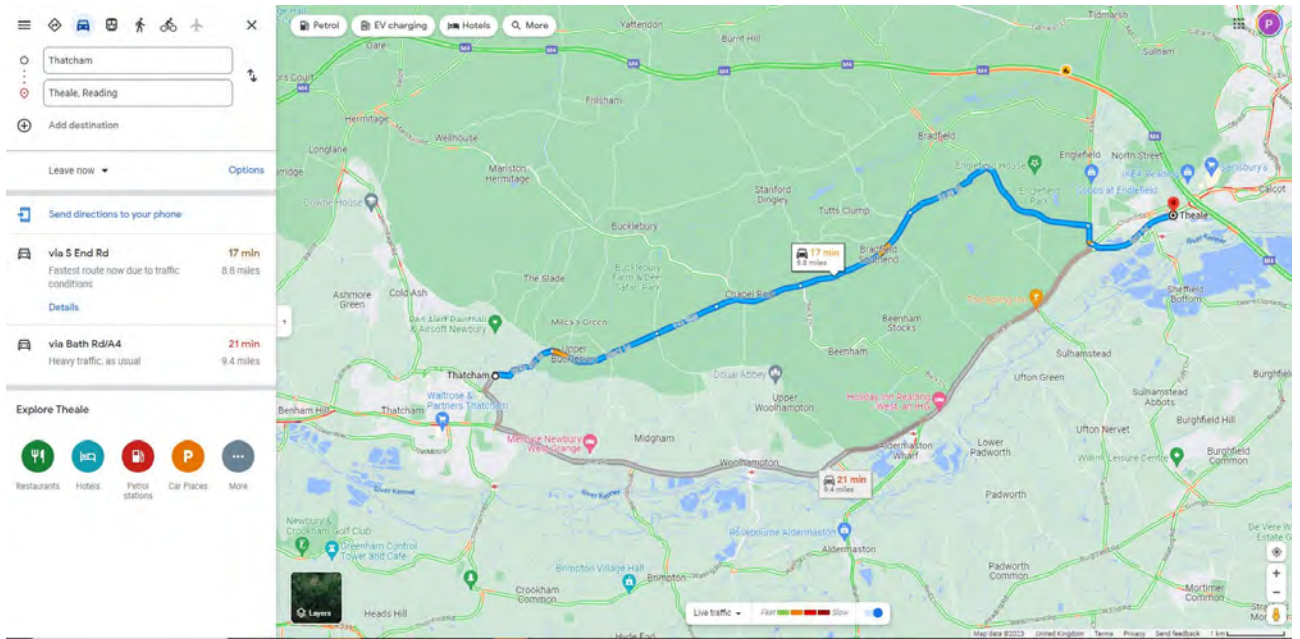


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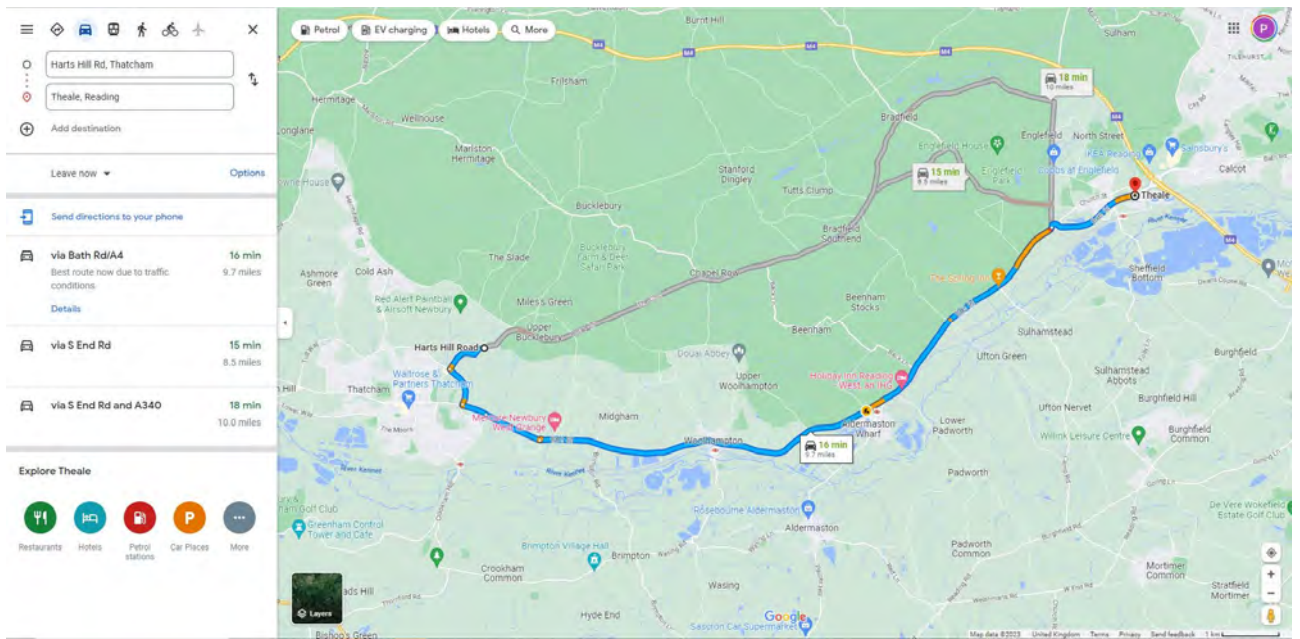


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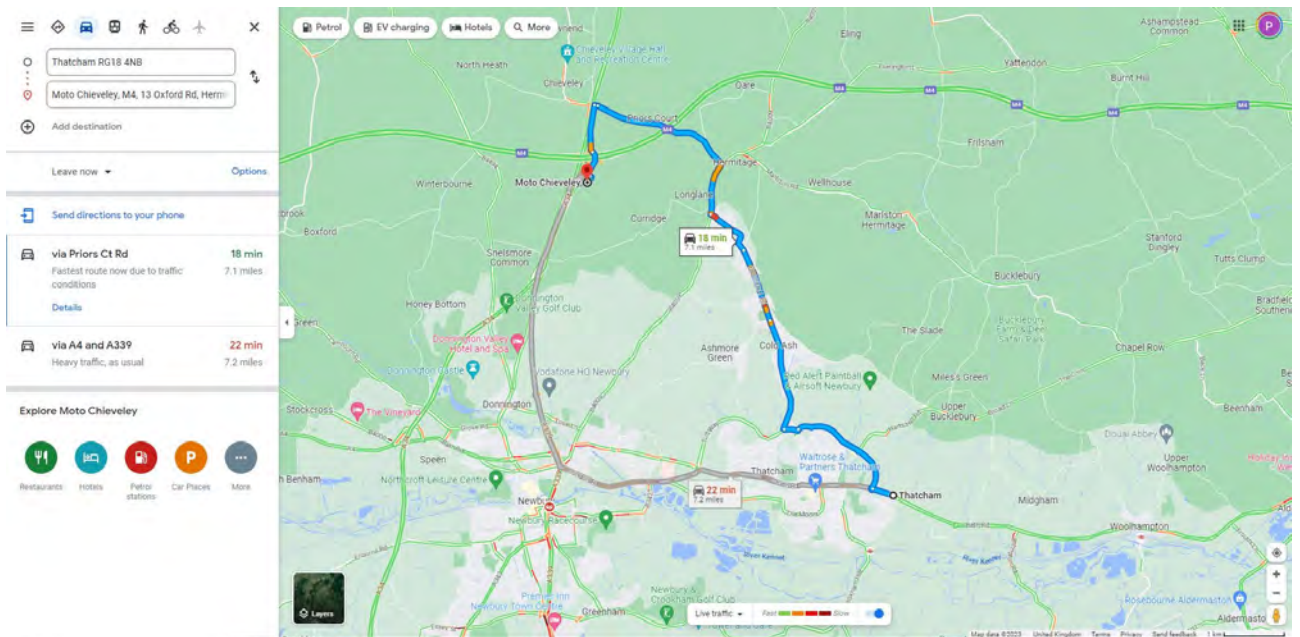
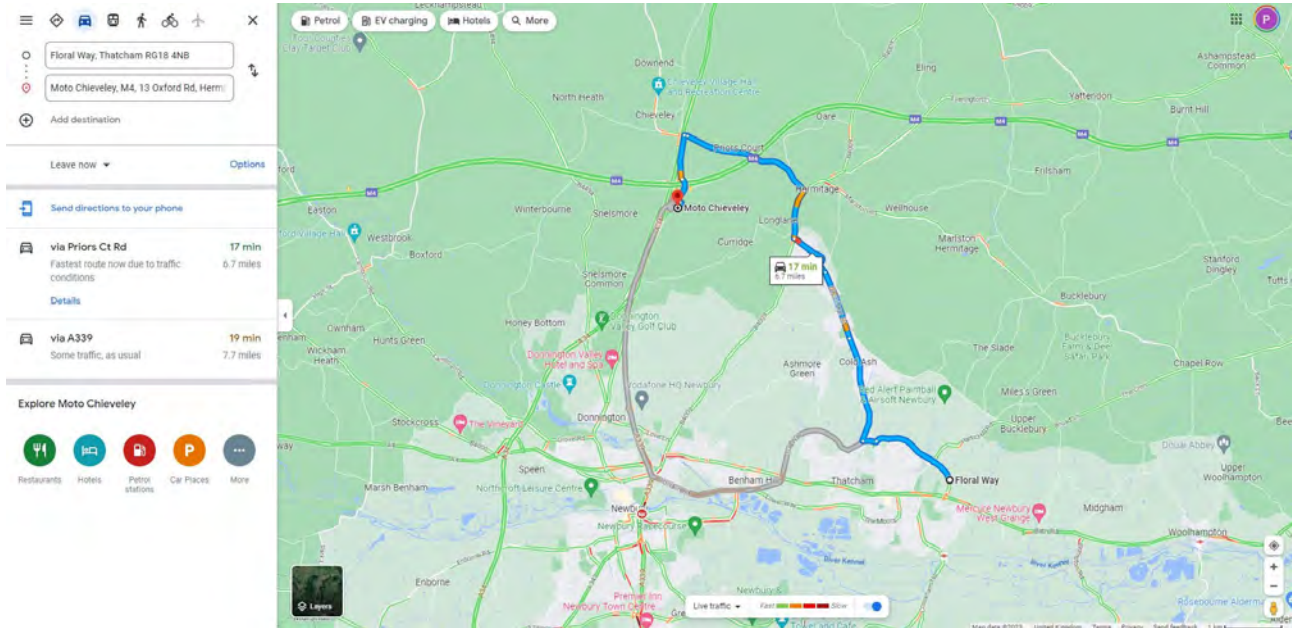




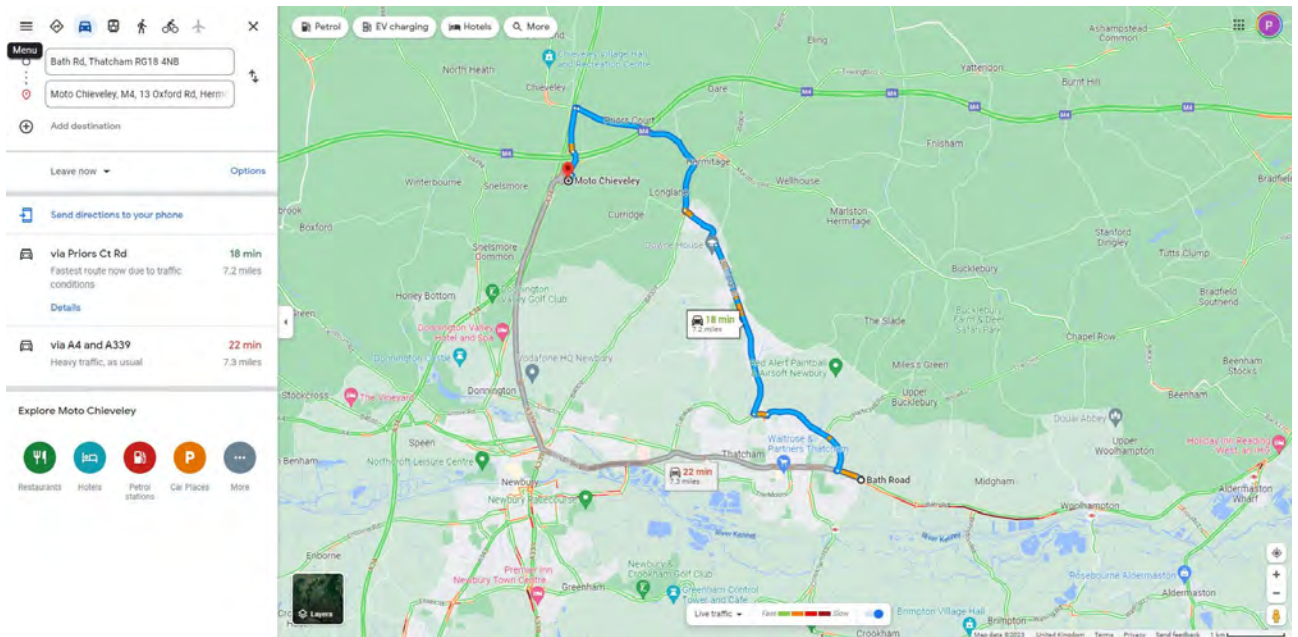
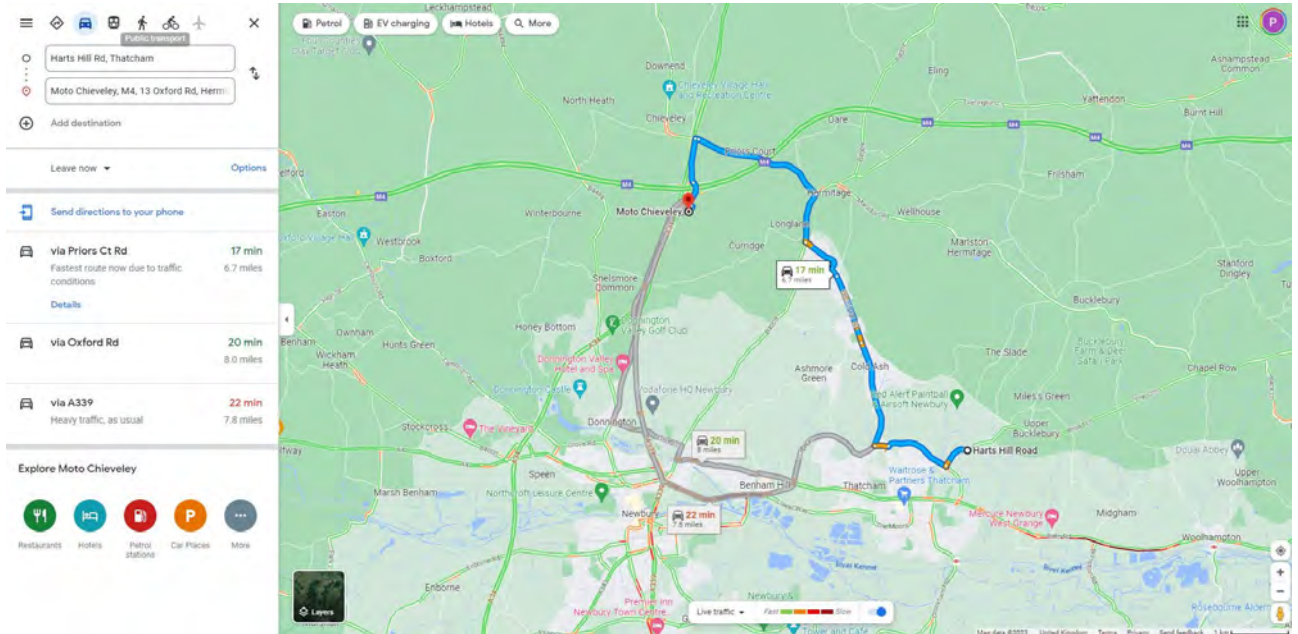
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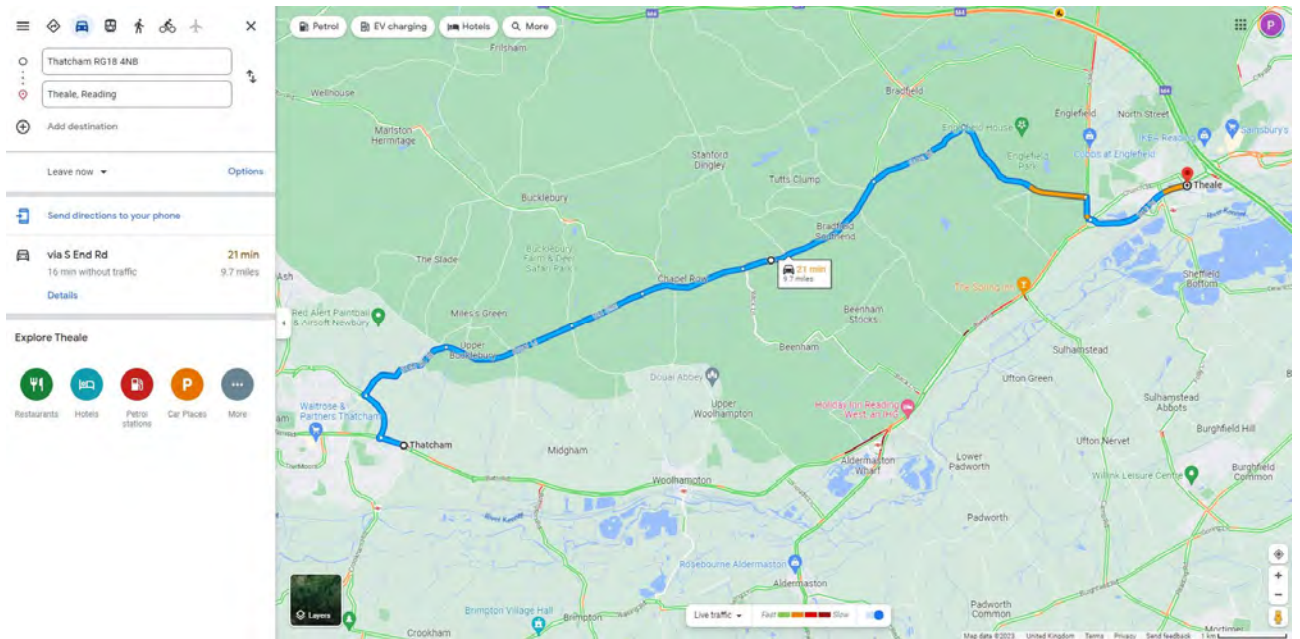
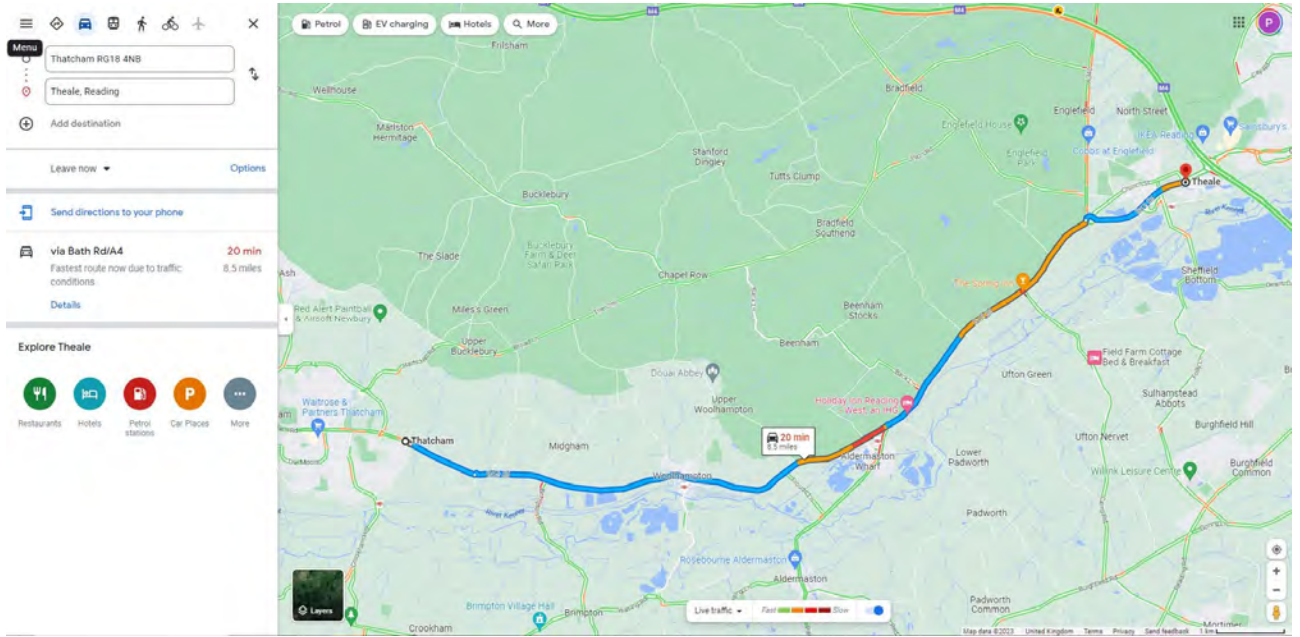
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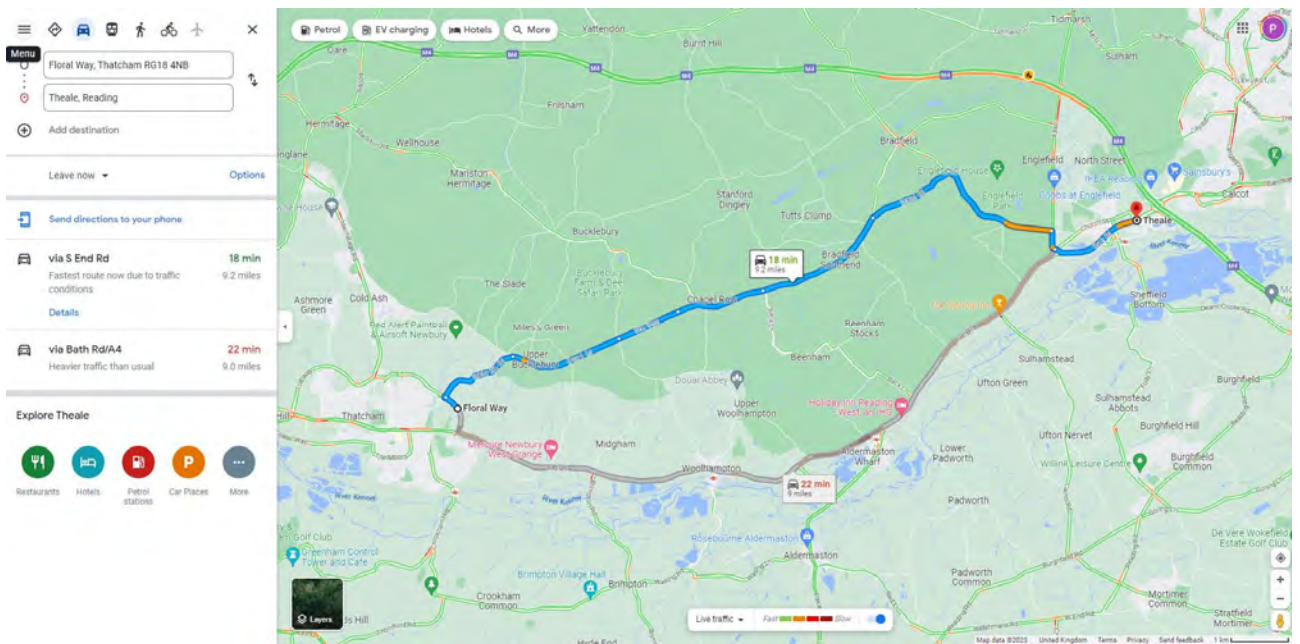
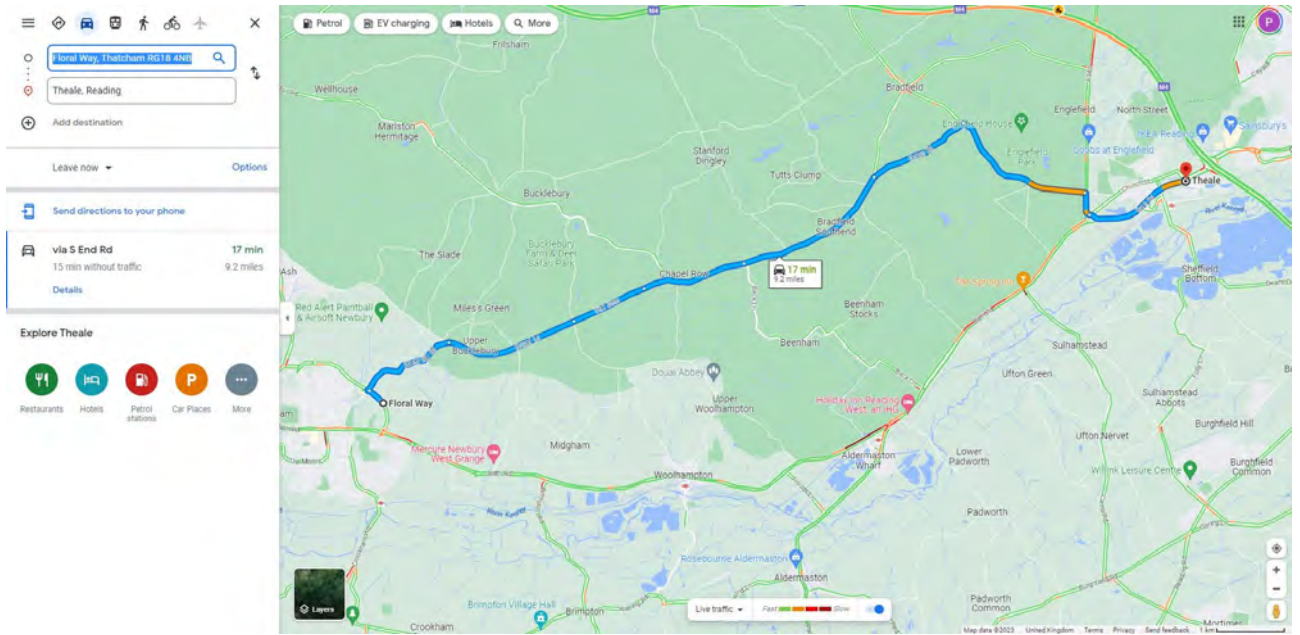


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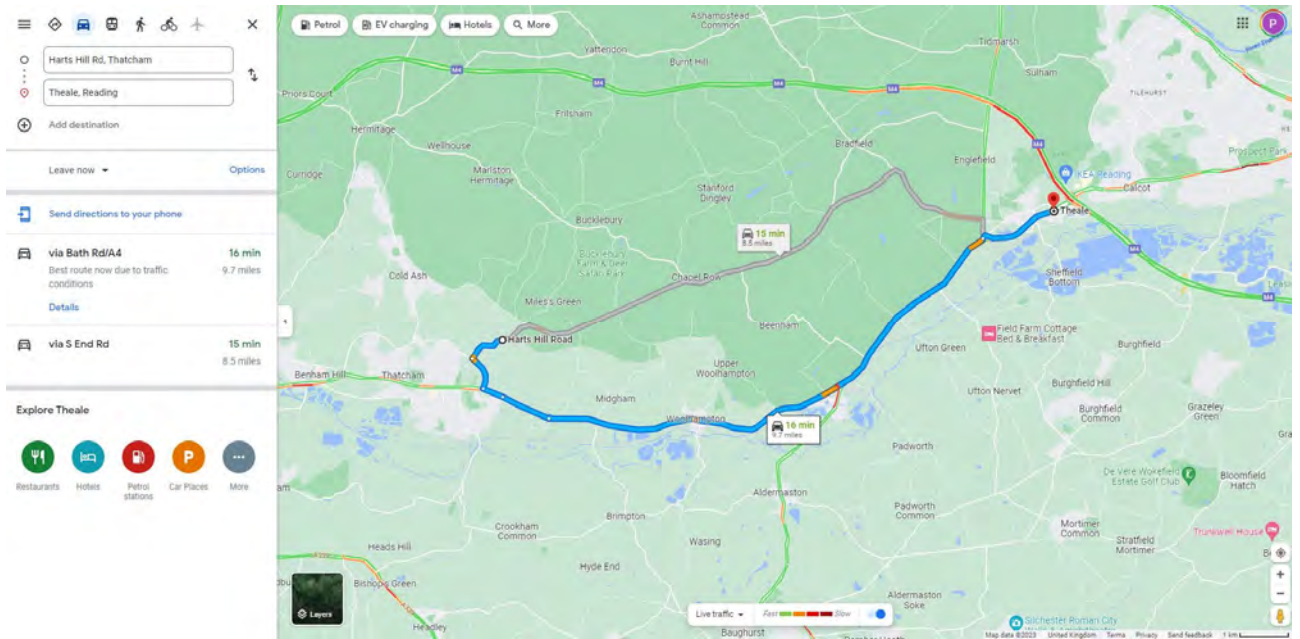


## Journey Times towards Reading, AM Peak Hour – 22/02/2023

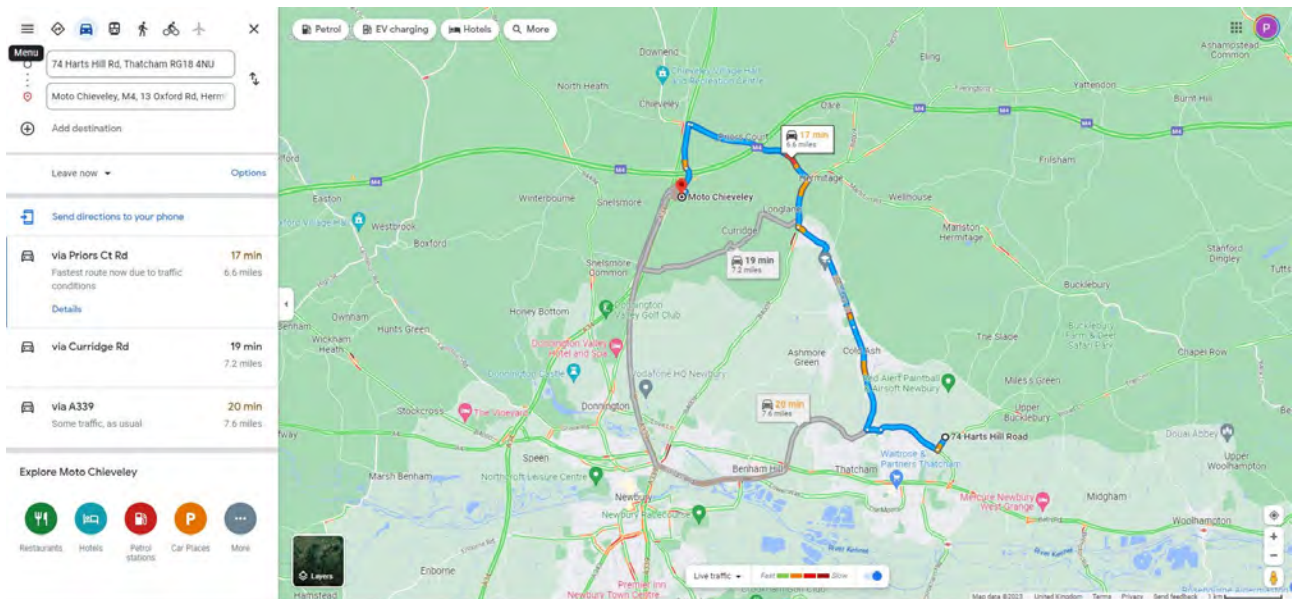




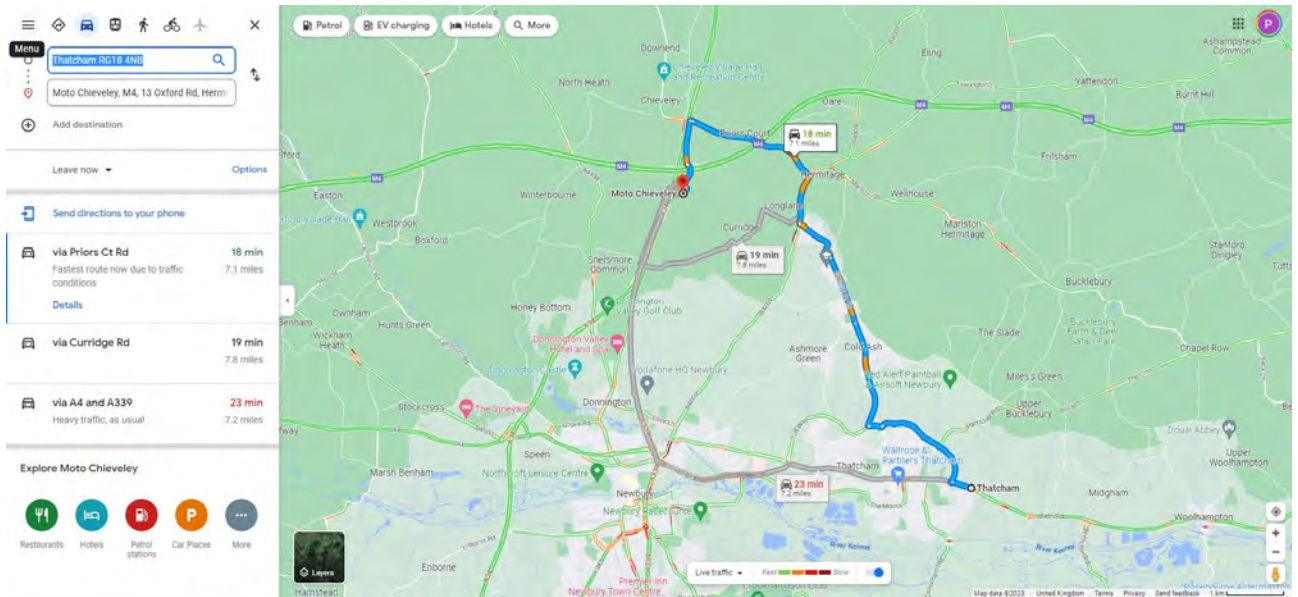
### Journey Times towards Reading, PM Peak Hour – 22/02/2023



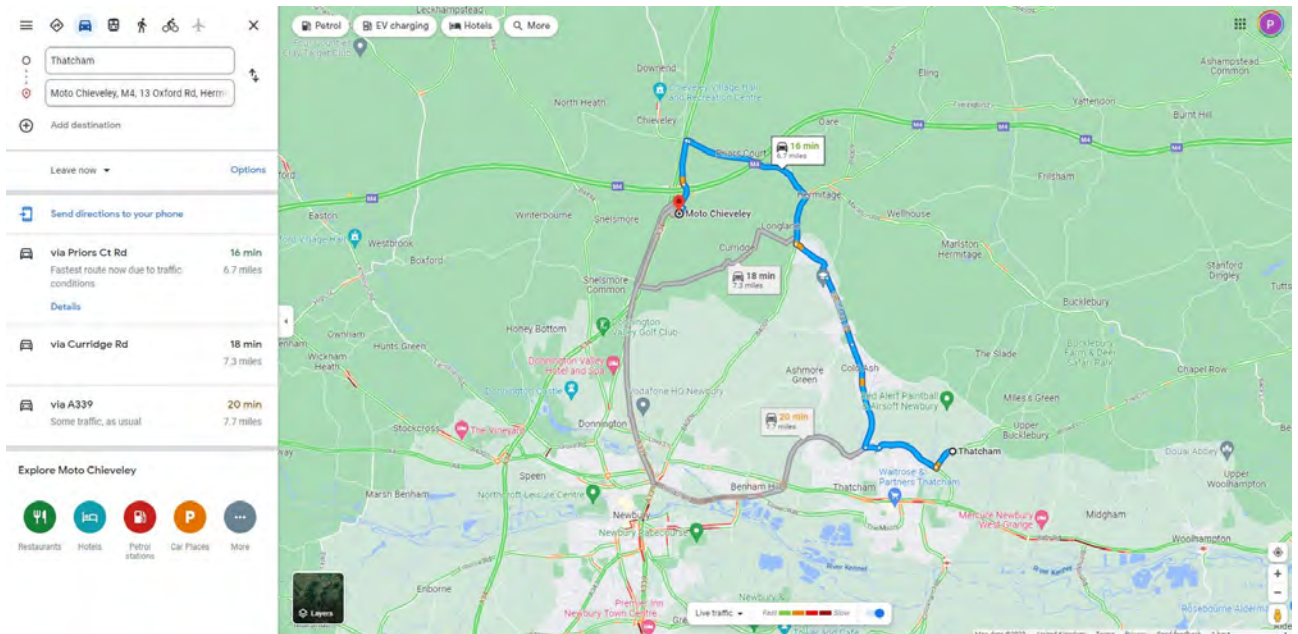
### Journey Times towards M4 Chieveley, AM Peak Hour – 23/02/2023

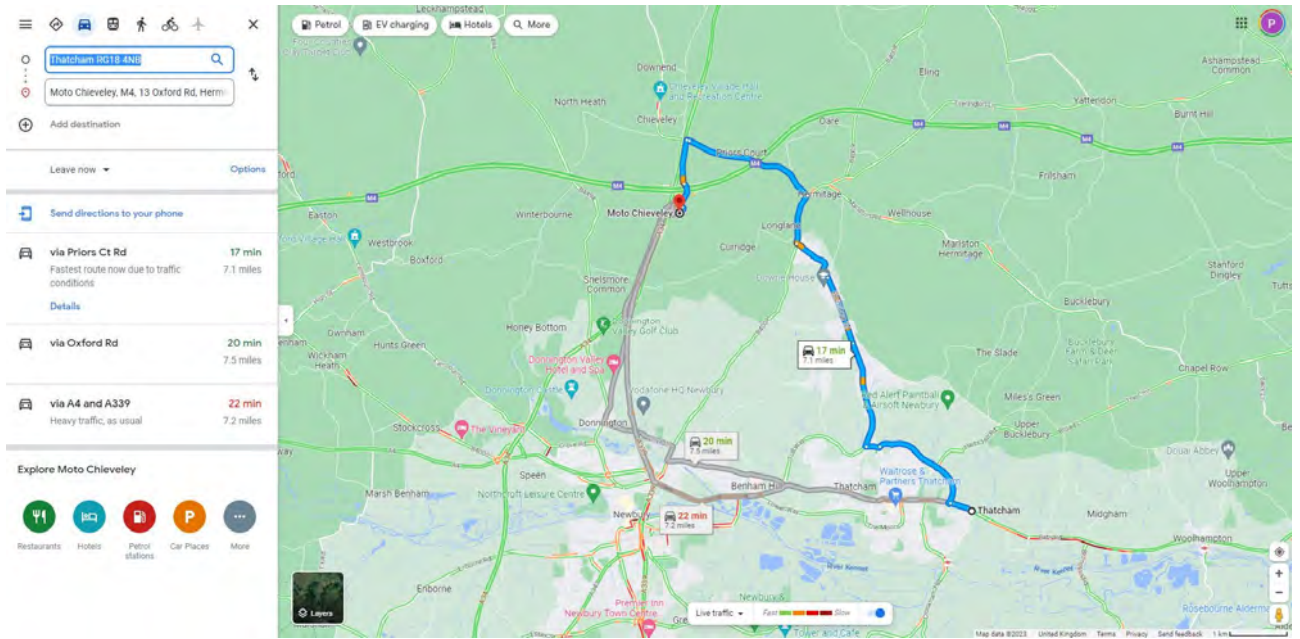




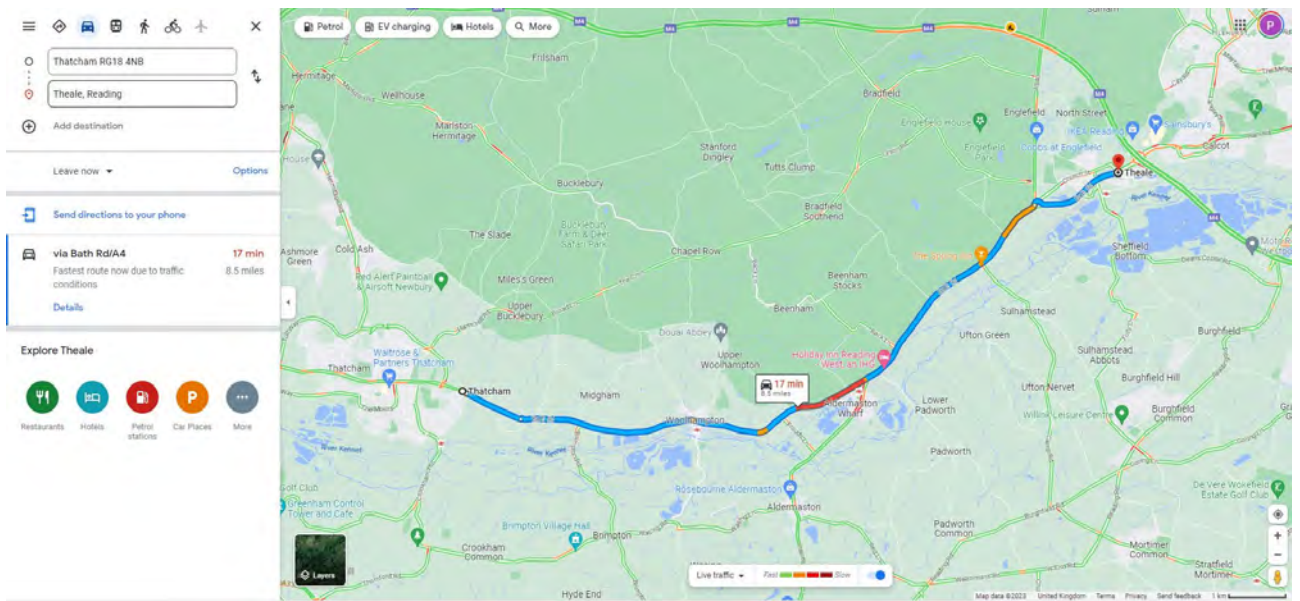


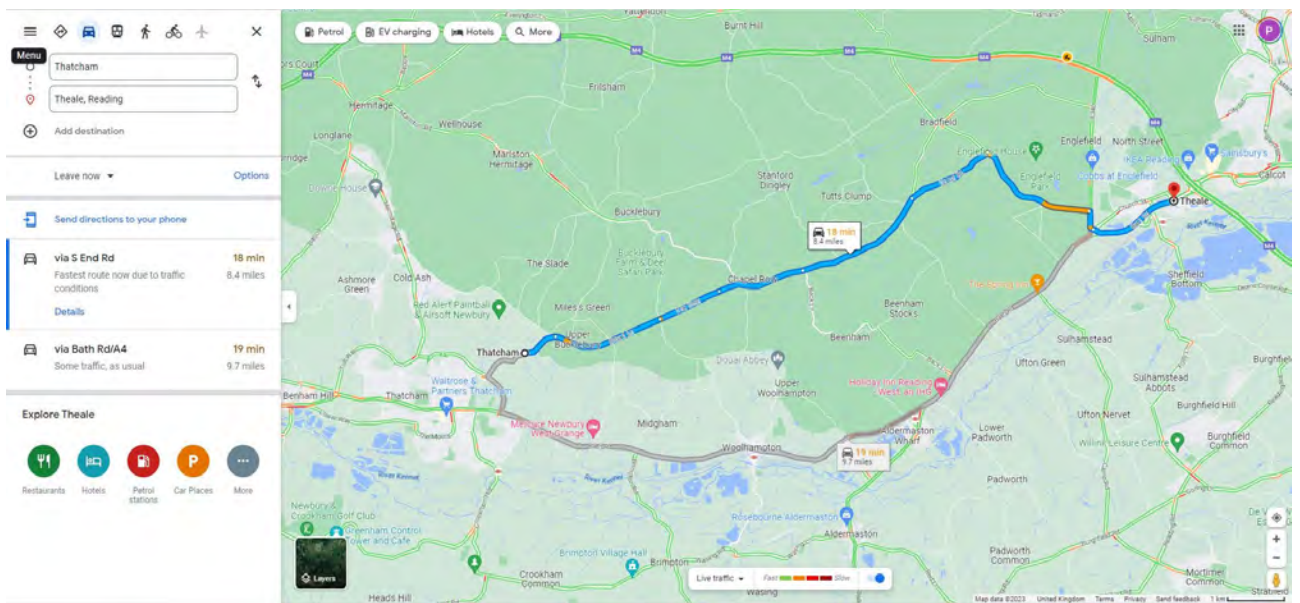
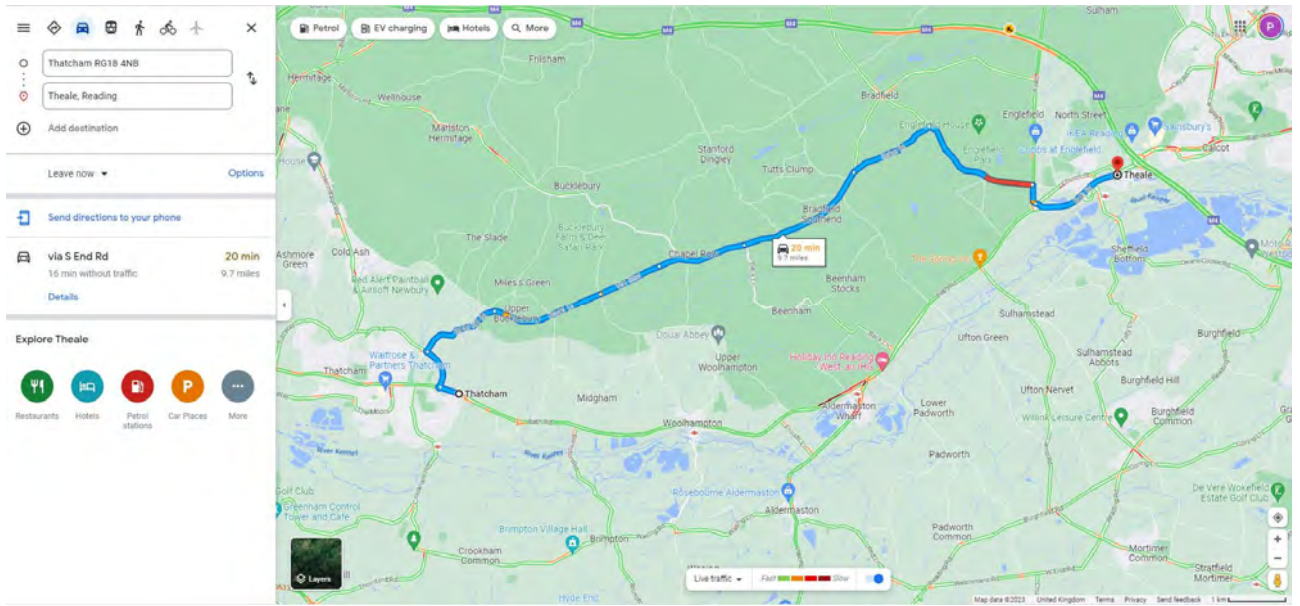
**Journey Times Towards M4 Chieveley, PM Peak Hour – 23/02/2023**





**Journey Times towards Reading, AM Peak Hour – 23/02/2023**





## Journey Times towards Reading, PM Peak Hour – 23/02/2023

