M25 South-West Quadrant Strategic Study

Stakeholder Reference Group
26 February 2018
<table>
<thead>
<tr>
<th>Time</th>
<th>Item</th>
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<tbody>
<tr>
<td>09:45 – 10:25</td>
<td>Welcome, Introduction and Study Evidence</td>
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<tr>
<td>10:25 – 12:00</td>
<td>Options Presentation and Roundtable – Part 1</td>
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<tr>
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<td>- Demand management</td>
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<td>- Improve M25 efficiency</td>
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<td>- Improve public transport</td>
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<td>(11:00 – Tea / Coffee)</td>
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<td>12:00 – 1:20</td>
<td>Options Presentation and Roundtable – Part 2</td>
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<tr>
<td></td>
<td>- Improve local road network</td>
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<td>- Improve strategic road network</td>
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<td>(12:20 – Lunch)</td>
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<td>1:20 – 2:00</td>
<td>Summary, Q&amp;A</td>
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‘Early work in progress – options presented are in development and are not necessarily supported by DfT or Highways England’
Philip Andrews
Deputy Director RIS Futures and RIS2
Department for Transport

Trevor Pugh
Strategic Director, Environment and Infrastructure
Surrey County Council

“Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England”
Kevin Harvey
Project Manager, Strategic Road Network Improvements Strategy
Highways England

‘Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England’
RIS 1 Schemes
Projects started in RIS1 and are in the process of development including M25 J10 – 16 Smart Motorway and M25 Junction 10 Wisley.

Strategic Studies
Strategic studies looking in detail at large scale and transformational projects including the M25 South West Quadrant which reported interim findings in March 2017.

Route Strategies
Audit of pressures, needs and opportunities across the whole of the network. Main channel through which interested groups can put the case for or against particular improvements and actions.
‘The M25 South-West Quadrant is the busiest part of the network. We are commissioning a study to plan for its future, supporting local people, strategic travellers and those using Heathrow.

It will need to look at all options, including different modes and extra capacity, to make sure the route is resilient for the generation to come’ (RIS Overview)
M25 South West Quadrant Strategic Study
Stage 3 Report

‘Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England’
Scheme objectives

- Boost economic growth and prosperity
- Improve transport conditions
- Improve environmental conditions

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Conclusions of study to date:

- Directly adding capacity to the M25 SWQ not feasible
- Road pricing rejected due to lack of capacity away from the M25 to absorb diverted trips
- Conditions better where alternative capacity exists away from M25

Recommendation:

- Instead of widening the existing M25, attention should be given to reducing traffic demand and providing parallel capacity to relieve the pressure on the M25.

‘Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England’
Tom Wilson
Project Manager, Reducing the need to travel, local roads and public transport
Department for Transport

‘Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England’
Two separate packages of work to understand, in detail, the viable options to reduce the need to travel and reduce the pressure on the M25SWQ.

Package A - Strategic Road Network Improvement Options
- Making best use of capacity on the M25SWQ
- Improvements to the Strategic Road Network

Package B - Reducing the need to travel, local road and public transport options
Guiding principles

• Options that will have a lasting and meaningful impact on traffic conditions, which can keep people and goods moving efficiently for a generation to come

• The level of ambition should be consistent with Highways England’s strategic vision to transform the SRN by 2040 – mile a minute speeds

• Must deliver a step change in the way in which people make their travel choices, and have due regard to innovation and technology developments
Current work

- Reducing the need to travel
- Making the most efficient use of the M25
- Enabling more journeys to be made by sustainable modes

Enhance road infrastructure to improve route choice away from the M25

Decision tree

Is this value for money and sufficient to meet the target?

Yes

Local road network

Yes

Strategic road network

Yes

Recommended projects

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In October 2015, Government announced its preference for the provision of additional airport capacity in the South East through a new Northwest runway at Heathrow Airport.

Following this, Government embarked on the development of an Airports National Policy Statement (NPS) on which it has conducted two public consultations and begun the necessary Parliamentary process for its designation. The most recent consultation closed in December 2017 and Government are currently considering all responses received.

The M25 SWQ is used for a range of journeys. Addressing issues on the M25 SWQ is important regardless of possible airport expansion at Heathrow Airport.

The study does not seek to address specific surface access transport impacts of potential airport expansion at Heathrow Airport expansion. However, sensitivity tests will be undertaken to ensure an understanding of the compatibility of options.
Richard Smith
Strategic Road Network Improvements Strategy
WSP

Jane Robinson
Reducing the need to travel, local roads and public transport
Atkins

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Economic context

Economic clusters (>10,000 employees; >1,000 in knowledge intensive or transport dependent sectors)

- Use of M25SWQ by commuters

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Economic context

- Significant housing and employment growth is proposed in the study area.
- This will place increasing pressure on the M25 and other transport networks.
- Growth will need to be supported by investment in transport infrastructure, and by the development of sufficient good quality and affordable housing in the right locations.

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Problems, issues, opportunities

Travel patterns

Travel Distances
- 0 – 30 miles – 21%
- 30 – 60 miles – 36%
- 60+ miles – 43%

Proportion of trips on M25SWQ with an origin and/or destination within the study area:

- Ext-Ext: 22%
- Int-Int: 33%
- Int-Ext: 45%

Journey Purpose / Type

% by Purpose:
- Employers Business: 9%
- Commute: 20%
- Other: 46%
- LGV: 15%
- HGV: 10%

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Problems, issues, opportunities

Travel patterns

Top M25SWQ movements within the study area

Top M25SWQ movements to / from the study area

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Strategic roads – movements

- Pattern of longer distance movements on the strategic road network
- A relatively high proportion of longer distance movements, including HGV
- Routes converge on the section between junction 12 and 15

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Strategic roads - resilience

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<tr>
<th></th>
<th>Clockwise</th>
<th>Anticlockwise</th>
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<tr>
<td>Hours</td>
<td>% of total time</td>
<td>Hours</td>
</tr>
<tr>
<td>Below 40mph</td>
<td>1441</td>
<td>734</td>
</tr>
<tr>
<td>Below 50mph</td>
<td>1572</td>
<td>839</td>
</tr>
<tr>
<td>Below 60mph</td>
<td>1932</td>
<td>1692</td>
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- Reduced speed – typical conditions
- Lack of resilience on M25 SWQ following congestion events and incidents

An incident occurs at 1:30pm

Low speed conditions for 7 hours

Speed recovers to normal conditions at 8:30pm

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Issues and opportunities

Rail – Factors influencing choice of M25SWQ use over rail

Generic factors:
- Trip chaining, the need to carry heavy luggage, or personal preferences

Specific to study area:
- Predominantly radial network focused on trips to/from central London
- Orbital journey times by rail are not competitive, limited frequency, need to interchange in London or use bus for part of the journey.
- Peak period crowding on some routes, particularly those involving Central London interchange
- Some residential areas and some key destinations are remote from the rail network.

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Demand exceeds capacity on parts of:

- South Western Main Line
- Brighton Main Line into Victoria
- Windsor Lines via Richmond into Waterloo
- Great Western Main Line into Paddington
- Some routes into Reading

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Bus – Factors influencing choice of M25SWQ over bus

- High levels of car ownership and dense rail network in most of study area suppresses demand for bus travel.
- Congestion leads to low speeds and unreliability.
- As a result most bus routes focus on short-distance journeys.
- Exceptions focus on Heathrow:
  - National Express and Megabus coach networks
  - Express links to Reading, Oxford, Woking
  - Strategic bus links to Croydon and Harlow
- No cross-Heathrow movement

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Local roads - Issues

- Extensive local road network, managed by relevant local authorities
- Up to 21% of trips on the M25SWQ are less than 30 miles in length, often involving use of 1-2 junctions (‘short hop’)
- Decisions to use the M25SWQ rather than the local road network for short trips are likely to be complex:
  - Lack of good quality routes
  - Longer journey times
  - Known pinch-point locations
  - Habitual behaviour or personal preference
- A significant proportion of the local and strategic network already operates at or near to capacity. Significant congestion spots both within and outside the M25SWQ.
- Significant growth in demand is forecast over the next few decades, which will increase levels of congestion on the local road network.
Jon Harris
TDM and freight, ITPP

Richard Smith
M25 efficiency, WSP

Graham James
Rail and Bus, Atkins CH2M JV

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Options – part 1

- Reducing the need to travel
- Making the most efficient use of the M25
- Enabling more journeys to be made by sustainable modes

Breakout Session 1

Enhance road infrastructure to improve route choice away from the M25

- Local road network
  - Yes
  - No
- Strategic road network
  - Yes
  - No

Recommended projects

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• High levels of car ownership leads to ‘think car’ approach to travel – particularly for orbital movements.

• ‘Relative’ congestion versus ‘absolute’ congestion levels - driver tolerance.

• For public transport to work effectively, the ‘last mile’ needs to also work – role of active travel.

• Generally consistent approach to conventional workplace and school travel planning. School travel plans have a role to play but generally indirectly.

• Securing travel plans within the planning process is variable and a missed opportunity (residential).

• PTP programmes with proven track record.

• Commuter behaviour has only one dimension –’ in work’. Business and ‘freight-causing’ decision making are critical.

• Any TDM approach needs to look at: Reduce, Retime, Reroute, Remode.

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Strategic use of TDM - key success themes

Area wide travel planning
- Critical mass ‘target’ without relying on subsidy to make things happen
- Focus on missing zones
- Expand remit to cover freight behaviour including retail centres

Stronger integration with the planning process
- Residential Travel Plans
- Trip banking philosophy
- Personalised travel planning including .com behaviour
- 4Rs philosophy vital - reduce, retime, reroute, remode

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Strategic use of TDM - key success themes

**Stretching business / organisation travel planning**
- Review the whole business and trip types
- Include supply chain and delivery approach
- Diversify to cover major event venues (Legoland, Ascot etc)

**Station travel planning**
- More aggressive use of the STP tool to manage growth
- Build on previous STP work - Woking, Basingstoke, Haslemere, Gatwick, Crawley
- Making the last mile easier and active travel the first choice - using the ‘local’ station

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• **Congestion and journey time delay/unreliability** are the biggest issues.

• ‘**White van**’ movements are a key challenge across the area.

• Linkage between residential travel planning/TDM and freight isn’t evident - **freight strategy development**.

• Focus on key logistics parks as ‘easy wins’ but home delivery and ‘express’ order fulfilment are the biggest structural challenges.

• Abortive deliveries a key concern with spare capacity for smarter use of delivery points. Drivers instructed to stay ‘on line’ as default.

• SME / independent retail sector has generally been invisible in terms of freight education but a key target.

• **Business to business (B2B)** demand for goods growing but **business to customer (B2C)** demand is exponential - .com consumer patterns.

• To make an impact on ‘freight’ solutions have to cover the **whole family of freight types**.

• Challenges of **housing growth** and **construction management planning** across the SWQ – especially outside of Greater London.

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Freight and logistics - key success themes

- Better **integration of ‘freight’** into PTP and business travel planning and business support (LEPs role).
- Target **SME sector** for changes in procurement thinking and practice.
- Target **.com sector** and **consumer behaviour** (linked to station travel plans, development design and residential travel plans).
- Focus on **reduce and retime** – including more widespread use of Quiet Delivery Strategies.
- Appropriate use of **consolidation tools**.
- **Freight Advice Programme** and **Construction Management support**.
- Use of **technology** for last mile and smart delivery management to businesses and to homes (advance bay booking, secure drop devices etc).
- **Logistics industry and professional bodies** as key part of the solution (RHA, FTA, CILT, Chambers of Commerce).

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Options – M25 efficiency

M25 efficiency

- Traffic Management Centre for cross-authority co-ordination of traffic lights, VMS advisory signs and slip road access
- New technology for communications between vehicles and road-side infrastructure

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Smart Motorway

- Consistent with and building upon the form of provision proposed as part of the RIS1 proposals
- Further roll-out of all lane running on main carriageway and at junctions
- Key technological interventions – short, medium, longer term including area-wide co-ordination
- Strong evidence for reliability improvement

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Options – rail

Existing situation

- Mainly radial network
- Limited orbital connections
- Complex orbital rail+bus trips…
- …or travel via Central London
- Usually not time-competitive with car

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OLD OAK COMMON LINKS
- Harness existing & potential rail schemes
- E.g. Chiltern Line to Old Oak Common
- Draws-in HS2 connections
- What else is possible?

AIRPORT AREA INTERCHANGE
- Harness existing & potential schemes
- E.g. Heathrow Western / Southern Access
- What else is possible?
- Rail + intermediate-modes?

INTERMEDIATE-MODE LINKS
- For shorter orbital trips & local links
- Light rail, Bus Rapid Transit, etc
- Could help address other local transport needs

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‘Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England’
Options – bus

Issues

• High levels of car ownership and dense rail network in most of study area suppresses demand for bus travel.

• Congestion leads to low speeds and unreliability.

• Most bus routes focus on short-distance journeys. Exceptions focus on Heathrow.

• No cross-Heathrow movement.

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Strategic choices

- **Upgrade existing bus and coach links**
  - Reduce journey times with bus priority, improve frequencies
  - Targeted at Heathrow

- **New strategic bus and coach links**
  - Introduce links between areas of high demand
  - Quality bus corridors / Bus Rapid Transit / High Occupancy Vehicle Lanes

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First and last mile connections

- Complement rail and strategic bus links
- New technologies offer new opportunities – MAAS, on-demand services (e.g. Arriva Click)
- May help to provide an alternative to car where densities are lower or volumes on flows are low
- Opportunities exist at trip-end to convert private business shuttles to public bus services

Strategic Park & Ride sites

- Capture trips at point of entry to M25
- Services to key destinations

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Breakout Session 1

(Following tea and coffee break)
Breakout Session 1

- What are the problems, issues, and opportunities associated with these approaches?
- How effective are these approaches likely to be in relieving pressure on the M25SWQ?
- Are there specific schemes in your area which would be effective at relieving pressure on the M25SWQ?

‘Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England’
Jane Robinson
Local roads
Atkins / CH2M JV

Richard Smith
Strategic roads
WSP

‘Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England’
Moving Britain Ahead

Options – part 2

- Reducing the need to travel
- Making the most efficient use of the M25
- Enabling more journeys to be made by sustainable modes

Is this value for money and sufficient to meet the target?

Breakout Session 2

Enhance road infrastructure to improve route choice away from the M25

Local road network

Recommended projects

Strategic road network

Yes

No

Yes

No

Yes

‘Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England’
Potential role of local roads

- Potential to improve the quality of the local road network to cater for local trips, and to improve the resilience of the overall network.
- Local road options will need to be of sufficient quality and capacity to be attractive to drivers currently using the M25SWQ for short trips.
- Proposed Major Road Network likely to provide the most appropriate alternative local routes. Focused on the middle tier of the busiest and most economically important local A roads.
- Interventions which help unlock new housing and employment sites are likely to be more deliverable.

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Strategic choices

- Natural hierarchy of interventions:
  - Junction improvements – signalisation of existing priority controlled junctions, ITS upgrades to existing junctions
  - Upgrades to existing highway network – largely dualling existing highways, although some upgrade of D2AP (dualled 2 lane) to D3AP (dualled 3 lane)
  - New highway links – to provide additional local linkage and to provide more direct routes whilst avoiding the M25, and potentially unlock new development sites

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Options – Local roads

Deliverability challenge

- Need to avoid encouraging strategic traffic onto minor roads and avoid sensitive built-up areas.
- Large number of barriers and constraints:
  - Physical barrier and constraints – Heathrow, numerous town centres, historic properties (Hampton Court, Windsor Castle)
  - Natural and artificial water courses – River Thames and tributaries, reservoirs
  - Environmentally protected land – Green Belt, AONB
- Accident rates tend to be higher on local roads, but potential to address existing safety and resilience issues.
- Risk that creating better routes will simply attract more traffic to use the M25SWQ.

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‘Moving Britain Ahead’

Options – Local roads

Potential role of local road schemes

Just under 30 local road schemes identified so far, for further review. From initial phase of work and other studies.

Predominantly outside M25.

What potential is there to encourage greater use of local roads for trips starting and / or finishing inside the M25?
Strategic roads

- Expressway standards
- Potential ‘outer’ and ‘inner’ corridors for improvement
- Identification of risks, issue and opportunities relating to major highway infrastructure
- Establish scope of schemes for option identification

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Strategic roads

- M40 (Handy Cross) to M4 (Junction 8 / 9)
- Online widening and junction improvements

No specific scheme or alignment is defined; the information is provided to articulate the type of infrastructure that may be considered within broad corridors only.

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Strategic roads

- M4 (Junction 8 / 9) to M3
- Potential for online and offline routes

**Routes West of Bracknell**
Potential to explore a new route to the west away from central Bracknell, re-joining A322 to the south of Bracknell

**A322 corridor**
Area of environmental constraint

**A322**
Online widening of the existing route and grade separation or rationalisation

**Routes East of Bracknell**
Potential to explore a new route to the east away from central Bracknell, re-joining A322 to the south of Bracknell

**M4**
Use of existing online route or provision of more direct offline route

**M3 Junction 3**
Increased capacity, opportunity to provide further grade separation

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No specific scheme or alignment is defined; the information is provided to articulate the type of infrastructure that may be considered within broad corridors only.

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Strategic roads

- M3 (Junction 3) to Guildford
- Online or offline route improvements and potential tunnel

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Strategic roads

- Inner route - A40 to M25
- Online or offline route improvements and tunnelling

No specific scheme or alignment is defined; the information is provided to articulate the type of infrastructure that may be considered within broad corridors only.

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Breakout Session 2

(Following lunch)

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Breakout Session 2

- What are the problems, issues, and opportunities associated with these approaches?
- How effective are these approaches likely to be in relieving pressure on the M25SWQ?
- Are there specific schemes in your area which would be effective at relieving pressure on the M25SWQ?

‘Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England’
Jeremy Bloom
Network Planning Director
Highways England

‘Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England’
Philip Andrews
Deputy Director RIS Futures and RIS2
Department for Transport

Jeremy Bloom
Network Planning Director
Highways England

Trevor Pugh
Strategic Director, Environment and Infrastructure
Surrey County Council

‘Early work in progress – options presented are in development are not necessarily supported by DfT or Highways England’
Thankyou

M25SWQuadrant@highwaysengland.co.uk

Deadline for comments:
16 March 2018