

Adran yr Economi a'r Seilwaith
Department for Economy and Infrastructure



Llywodraeth Cymru
Welsh Government

This document is an update to the 'Proof of Evidence – Engineering Design' document. It contains an update following the addition of the eastbound off-slip in the DRAFT SUPPLEMENTARY (NO. 2) SCHEME ORDER and a general update on the sections related to the Magor Services Area.

Scheme Evidence Update

Ben Sibert, BEng CEng FICE MIStructE MCIHT

Welsh Government, Engineering Design

Document Reference: WG 1.5.5

Contents

| | | |
|------|---|----|
| 1. | Author | 3 |
| 2. | Scope and Purpose of this Proof of evidence | 4 |
| 3. | SCHEME EVIDENCE UPDATE | 7 |
| 3.1. | The Eastbound Off-Slip Road | 7 |
| 3.2. | Rest Areas | 8 |
| 3.3. | Conclusions – Rest Areas | 11 |

Appendix A - Rest Area Frequencies and Access

1. AUTHOR

- 1.1 I am Benjamin Sibert. I am a Director of Ove Arup and Partners Ltd (Arup), a multi-disciplinary consultancy. My professional qualifications are set out in my main Proof of Evidence and are not repeated here.
- 1.2 The evidence which I have prepared and provided in this Proof of Evidence has been prepared and is given in accordance with the guidance of my professional institution and I confirm that the opinions expressed are my true and professional opinions.

2. SCOPE AND PURPOSE OF THIS PROOF OF EVIDENCE

2.1 This Proof of Evidence provides updated evidence for the Welsh Government's Scheme as modified by the March 2017 draft Orders Supplement to include proposals for an eastbound off-slip road at Junction 23A.

2.2 This evidence supersedes my previous evidence in respect of all matters concerning the rest area. The following sections of my main evidence are thus withdrawn to be replaced with this evidence:

Ben Sibert Engineering Main Evidence (WG 1.5.1)

Sections 4.46 to 4.62

Sections 6.28 to 6.34

Ben Sibert Engineering Main Evidence Summary (WG 1.5.2)

Sections 3.16 to 3.18, 4.10 to 4.11

Ben Sibert Engineering Main Evidence Appendices (WG 1.5.3)

Appendix B – Motorway Rest Areas

2.3 Aspects of my evidence interface with the evidence of other witnesses including Matthew Jones (WG1.1.6), Bryan Whittaker (WG1.2.6) and Stephen Bussell (WG1.3.5).

2.4 For simplicity of reference, throughout my evidence I will refer to the following abbreviations:

- a) draft Compulsory Purchase Order (Doc. 2.1.5) as the "CPO";
- b) the draft Side Roads Order (Doc. 2.1.3) as the "SRO";
- c) the Environmental Statement and its Supplements (Docs. 2.3.2, 2.4.4, 2.4.14 and 2.5.1) as the "ES";
- d) the Design Manual for Roads and Bridges (Doc. 6.1.8) as the "DMRB".

2.5 My evidence is presented in the following structure, with a detailed contents provided at the start of the document.

1. Author
2. Scope and Purpose of this Proof of Evidence
3. Scheme Evidence Update

Appendix A – Rest Area Frequencies and Access

3. SCHEME EVIDENCE UPDATE

3.1. The Eastbound Off-Slip Road

3.1.1. The Welsh Government published a supplement to the draft Orders in March 2017 to include an additional Eastbound off-slip road at Junction 23A, affording a direct connection for eastbound traffic on the proposed new motorway. These supplementary proposals are described in PLI document 2.5.17.

3.1.2. To summarise the key features that make up the changes in the supplement:

- a) a new slip road with single lane cross section, diverging from the mainline to the north of the Llandeenny railway bridge, which would remain as in the original proposals;
- b) modifications to the size and position of the roundabout between the A4810 and the B4245 west of Magor, to which the supplementary slip road would connect;
- c) a route for non-motorised users of the B4245 would change from a grade separated route passing under the A4810 using an existing bridge and would be replaced by an at-grade route with signal-controlled crossing points of the proposed slip road and the A4810 Steelworks Access Road south of the roundabout.

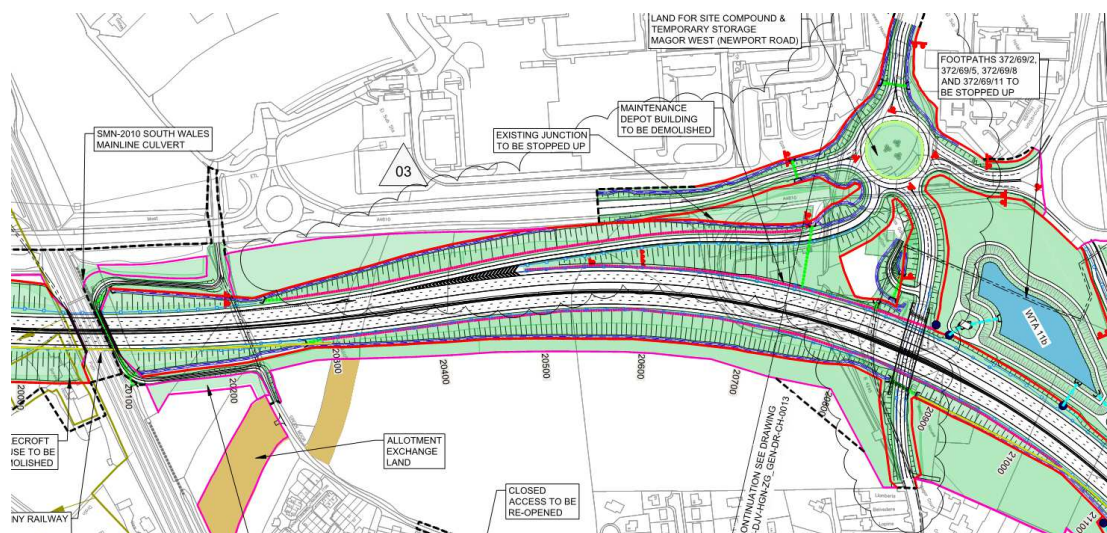


Figure 1 - General Arrangement Drawing Extract Showing March 2017 Supplementary Slip Road at Junction 23A

3.1.3. Refer also to the Alignment and Junctions Report Supplement 3 (Doc. 2.5.5) for more technical details of the highway layout, including drawings.

3.2. Rest Areas

3.2.1. This section of my evidence replaces my previous evidence contents for all matter concerning the Magor rest area from documents WG 1.5.1, 1.5.2 and 1.5.3.

3.2.2. The requirements for the frequency of rest areas on the motorway and trunk road network are given in TD 69/07. TD 69/07 states that a rest area may include some but not all of the facilities associated with a service area. If there is a Motorway Service Area (MSA) along a section of motorway, then the MSA serves the purpose of a rest area and there is no other guidance with regard to MSAs in DMRB. I shall therefore use the term rest area interchangeably with MSA.

3.2.3. Within the extents of the Scheme is the existing rest area at Magor Junction 23A. This rest area provides service area facilities and is operated by Roadchef, who have objected to the draft Orders (OBJ0026). Roadchef are the lessee of the land the freehold of which

is owned by Rontec who have also objected to the draft Orders (OBJ 0292).

- 3.2.4. The existing rest area at Magor is accessed indirectly from the M4 motorway at J23A where motorway users leave the motorway via the Junction slip roads and access via the grade separated J23A gyratory.
- 3.2.5. Access to the rest area at J23A Magor would be provided in the Scheme layout from the proposed new motorway, the M48, the A4810 and the reclassified M4.
- 3.2.6. I have included in Appendix A to this evidence, drawings showing the routes motorway users would make to and from the J23A Magor rest area in the existing and proposed arrangements.
- 3.2.7. The recommendations for the frequency of rest areas as part of a route strategy are given in paragraph 8.3 and 2.6 of TD 69/07 which states: “.....rest areas should be provided in addition to lay-bys, at not more than 45km intervals and at no more than 30 minutes driving time apart,....”. I note that 45km is equal to 28.0 miles.
- 3.2.8. The distances between rest areas along the M4 motorway both at present and with the Scheme would be as given in the schedule with accompanying drawings in Appendix A to this evidence. Bryan Whittaker will cover journey times associated with the rest area in his evidence (WG 1.2.6).
- 3.2.9. I have also included in Appendix A to this evidence drawings M4CaN-DJV-HGN-ZG-GEN-SK-CH-0043 – Existing rest areas along the M4/M5 and drawing M4CaN-DJV-HGN-ZG-GEN-SK-CH-0044 – rest areas along the M4/M5 with the Scheme.
- 3.2.10. The eastbound route between rest areas on the M4 motorway at Magor and Leigh Delamere would be 33.1 miles / 53.2km. This journey would be 0.2 miles / 0.3km greater than the existing situation

and would be 5.1 miles, 8.2km greater than the recommendations of TD 69/07.

- 3.2.11. Access to the rest area at Magor would be similar (or identical) to the existing situation from all routes. Eastbound traffic on the new M4 would access via the eastbound off-slip road at Junction 23A. West bound traffic would use the new, west bound free flow link and the existing Junction 23A slip road.
- 3.2.12. Exits from the rest area would be similar or identical for all routes except those to the proposed new motorway. Eastbound travellers would exit and join the motorway through Junction 23. Westbound travellers would have three options:
- a) Via Junction 23
 - b) Via the A4810 and Glan Llyn Junction
 - c) Via the reclassified M4.
- 3.2.13. As indicated by forecast journey times in Mr Whittaker's Proof of Evidence (WG 1.2.6), the fastest route for journeys continuing on the M4 further west than Junction 30, for example, would be to use the reclassified M4. The journey times for options a) and b) above have been forecast to be similar within a matter of a few seconds and around 2 minutes longer than c).
- 3.2.14. The spacing between rest areas on the M4 at Magor and Leigh Delamere is presently 32.9 miles / 52.9km with both eastbound and westbound journeys being similar; 4.9 miles, 7.9km greater than the recommendations of TD 69/07. With the Scheme, the eastbound route would be 33.1 miles / 53.2km; 0.2 miles / 0.3km greater than the existing situation and 5.1 miles, 8.2km greater than the recommendations of TD 69/07. The westbound journey from Leigh Delamere to Magor would experience negligible difference.

3.3. Conclusions – Rest Areas

- 3.3.1. The distance between rest areas on the M4 motorway at Magor and at Leigh Delamere is presently greater than that recommended. With the proposed new motorway in place, this journey would be 33.1 miles / 53.2km; 0.2 miles, 0.3km greater than the existing situation and would be 5.1 miles / 8.2km greater than the recommendations of TD 69/07.
- 3.3.2. I note that the exceedance of the recommendations of TD 69/07 does not constitute a departure from standards because clause 2.6 provides guidance, not mandatory requirements in a black solid box outline and the document provides only recommendations.
- 3.3.3. I acknowledge that traffic travelling eastbound or westbound on the M4 would experience a more indirect exit from the rest area than present. All other access routes (arrivals and departures) to the rest area would be similar to existing conditions with changes in journey time and distance ranging from insignificant up to approximately 300m due to the need to pass through Junction 23. Bryan Whittaker has explained in his evidence (WG 1.2.6).
- 3.3.4. The Scheme would provide comprehensive advance sign information to inform drivers of both the distances to other rest areas and how to access Magor rest area.
- 3.3.5. If a traveller needs to make a stop, the facilities to make that stop would be provided together with advance information signs to direct them to the rest area. The traveller would also be provided with comprehensive advance sign information for access to allow them to make the decision on whether to stop or not. The eastbound off-slip at Junction 23A and the westbound free flow link from Junction 23 to Junction 23A, make it very simple for travellers to exit the motorway to visit the rest area.

- 3.3.6. My opinion is that the Scheme provides access routes to and from the rest area at Junction 23A Magor to allow travellers to stop should they need to or wish to.

Appendix A –Area Frequencies and Access

Drawing M4CaN-DJV-HGN-ZG-GEN-SK-CH-0043 – Existing Rest Areas along the M4/M5.

Drawing M4CaN-DJV-HGN-ZG-GEN-SK-CH-0044 – Rest Areas along the M4/M5 with the proposed Scheme.

File Note M4CaN-DJV-GEN-ZG-GEN-FN-TR-0004 – Schedule of Frequencies of Rest Areas.

File Note

Project title M4 Corridor around Newport

cc

File reference

M4CaN-DJV-GEN-ZG_GEN-FN-TR-0004

Prepared by Alex Whatley

Date

1 June 2017

Subject Schedule of Frequencies of Motorway Rest Areas on the M4/M5

1 Introduction

This File Note summarises in the table in Section 2, distances between Motorway Rest Areas on the motorway network within 50 miles/80km of the Scheme.

The existing situation figures have been calculated using the route planner function of Google Maps on 20th September 2016. Start/end locations have been determined by utilising the Google Maps search function for each rest area.

The proposed situation gives distances between rest areas, with the Scheme including the supplements to the draft Orders. Journeys in black text are those not affected by the proposed Scheme and have been calculated using the route planner function of Google Maps as described above. Journeys in red text are those affected by the proposed Scheme and have been calculated using both Google Maps and the Scheme layout plans.

This file note does not provide details of journey times, which will be provided from the traffic forecasting model.

Google's route planner function has been used as a comparison basis due to the extent of rest areas within 50 miles/ 80 km being remote from the Scheme.

File Note

2 Frequency of Rest Areas

| | Existing | | Proposed | | |
|---|--------------|---------------|--------------|---------------|---|
| | Distance (m) | Distance (km) | Distance (m) | Distance (km) | Comment |
| M4 Westbound | | | | | |
| Membury Services West to Leigh Delamere Services West | 28.3 | 45.5 | 28.3 | 45.5 | Remote from the Scheme |
| Leigh Delamere Services West to Aust Services | 24.1 | 38.8 | 24.1 | 38.8 | Remote from the Scheme |
| Aust to Magor Services | 11.5 | 18.5 | 11.6 | 18.7 | Changes due to the new route through J23. |
| Leigh Delamere Services West to Magor Services | 32.9 | 52.9 | 32.9 | 52.9 | No significant change: free flow link around J23. |
| Magor Services to Cardiff Gate Services via existing M4 | 16.0 | 25.7 | 16.0 | 25.7 | No change to existing route length. |
| Magor Services to Cardiff Gate Services via J23 | N/A | N/A | 17.7 | 28.6 | New route |
| Cardiff Gate Services to Cardiff West Services | 9.4 | 15.1 | 9.4 | 15.1 | Remote from the Scheme |
| Cardiff West Services to Sarn Park Services West | 12.9 | 20.8 | 12.9 | 20.8 | Remote from the Scheme |
| Sarn Park Services West to Swansea West Services | 25.8 | 41.5 | 25.8 | 41.5 | Remote from the Scheme |
| M5 Northbound onto M4 Westbound | | | | | |
| Taunton Deane Services North to Bridgewater Services | 11.7 | 18.8 | 11.7 | 18.8 | Remote from the Scheme |
| Bridgewater Services to Sedgemoor Services North | 12.9 | 20.8 | 12.9 | 20.8 | Remote from the Scheme |
| Sedgemoor Services North to Gordano Services | 19.3 | 31.1 | 19.3 | 31.1 | Remote from the Scheme |
| Gordano Services to Magor Services | 16.7 | 26.9 | 16.7 | 26.9 | No significant change: free flow link around J23. |
| M5 Southbound onto M4 Westbound | | | | | |
| Strensham Services South to Gloucester Services South | 18.3 | 29.5 | 18.3 | 29.5 | Remote from the Scheme |
| Gloucester Services South to Michaelwood Services South | 14.7 | 23.7 | 14.7 | 23.7 | Remote from the Scheme |
| Michaelwood Services South to Aust Services | 14.5 | 23.3 | 14.5 | 23.3 | Remote from the Scheme |
| Michaelwood Services South to Magor Services | 23.3 | 37.5 | 23.3 | 37.5 | No significant change: free flow link around J23. |
| M4 Eastbound | | | | | |
| Swansea West Services to Sarn Park Services | 25.2 | 40.6 | 25.2 | 40.6 | Remote from the Scheme |

File Note

1 June 2017

| | Existing | | Proposed | | |
|---|--------------|---------------|--------------|---------------|--|
| | Distance (m) | Distance (km) | Distance (m) | Distance (km) | Comment |
| East | | | | | |
| Sarn Park Services East to Cardiff West Services | 12.6 | 20.3 | 12.6 | 20.3 | Remote from the Scheme |
| Cardiff West Services to Cardiff Gate Services | 9.2 | 14.8 | 9.2 | 14.8 | Remote from the Scheme |
| Cardiff Gate Services to Magor Services via existing M4 | 16.0 | 25.7 | 16.0 | 25.7 | No change to existing route length. |
| Cardiff Gate Services to Magor Services via Magor Eastbound Offslip | N/A | N/A | 14.6 | 23.5 | New route |
| Magor services to Aust Services | 11.2 | 18.0 | 11.2 | 18.1 | No significant change: dedicated east bound lane around the north of J23 gyratory. |
| Aust Services to Leigh Delamare Services East | 24.1 | 38.8 | 24.1 | 38.8 | Remote from the Scheme |
| Magor Services to Leigh Delamere Services East | 32.9 | 52.9 | 33.1 | 53.2 | Increase in journey distance as a result of route through traffic signalised J23 to the M4 motorway. |
| Leigh Delamere Services East to Membury Services East | 28.2 | 45.4 | 28.2 | 45.4 | Remote from the Scheme |
| M4 Eastbound onto M5 Northbound | | | | | |
| Magor Services to Michaelwood Services North | 22.7 | 36.5 | 22.9 | 36.8 | Increase in journey distance as a result of route through traffic signalised J23 to the M4 motorway. |
| Michaelwood Services to Gloucester Services North | 15.1 | 24.3 | 15.1 | 24.3 | Remote from the Scheme |
| Gloucester Services North to Strensham Services North | 19.1 | 30.7 | 19.1 | 30.7 | Remote from the Scheme |
| Aust Services East to Michaelwood services North | 13.9 | 22.3 | 13.9 | 22.3 | Remote from the Scheme |
| M4 Eastbound onto M5 Southbound | | | | | |
| Magor Services to Gordano Services | 16.4 | 26.4 | 16.6 | 26.7 | Increase in journey distance as a result of route through traffic signalised J23 to the M4 motorway. |
| Gordano Services to Sedgemoor Services South | 19.4 | 31.2 | 19.4 | 31.2 | Remote from the Scheme |
| Sedgemoor Services South to Bridgewater Services | 13.1 | 21.1 | 13.1 | 21.1 | Remote from the Scheme |
| Bridgewater Services to Taunton Deane Services South | 11.8 | 19.0 | 11.8 | 19.0 | Remote from the Scheme |

File Note

1 June 2017

3 Details of overall detour for users of Magor rest area

3.1 Introduction

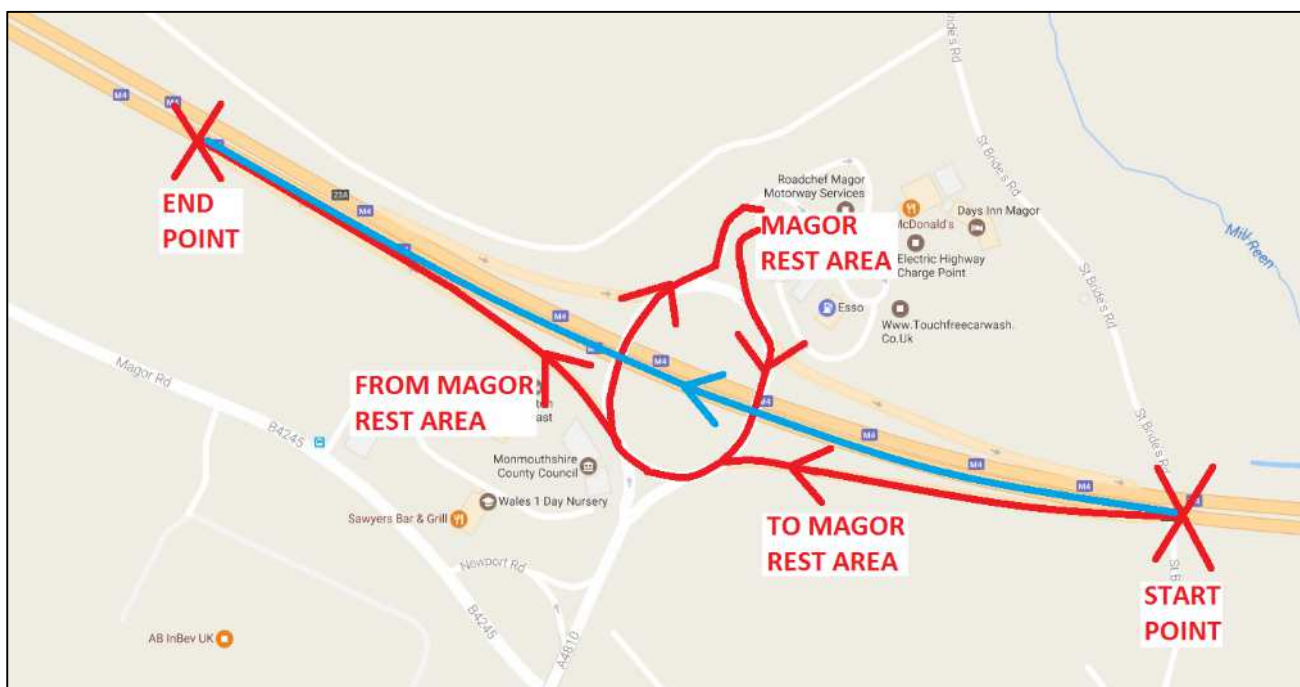
This section identifies the overall detour off the motorway that a traveller would need to make to visit the Magor rest area, both for the existing and proposed layouts.

For the proposed layout, two agrees options for the westbound traveller are given here: via Junction 23 and via the reclassified M4.

3.2 Existing Layout

3.2.1 Existing Westbound Route (Access & Egress via J23A)

A westbound traveller on the existing motorway accessing Magor rest area via Junction 23A westbound offslip and egressing via Junction 23A westbound onslip (red route below) would need to make an additional detour of 0.85km compared to a traveller carrying straight through on the existing motorway (blue route below).



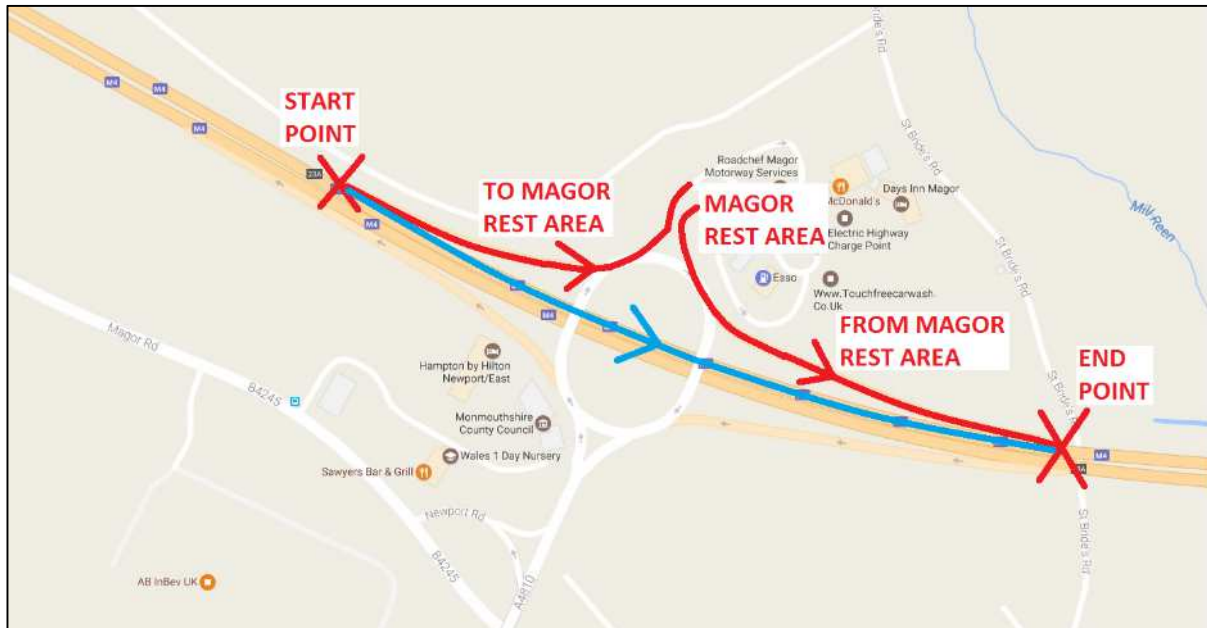
Existing westbound route to/from Magor rest area via Junction 23A

3.2.2 Existing Eastbound Route (Access & Egress via J23A)

File Note

1 June 2017

An eastbound traveller on the existing motorway accessing Magor rest area via Junction 23A eastbound offslip and egressing via Junction 23A eastbound onslip (red route below) would need to make an additional detour



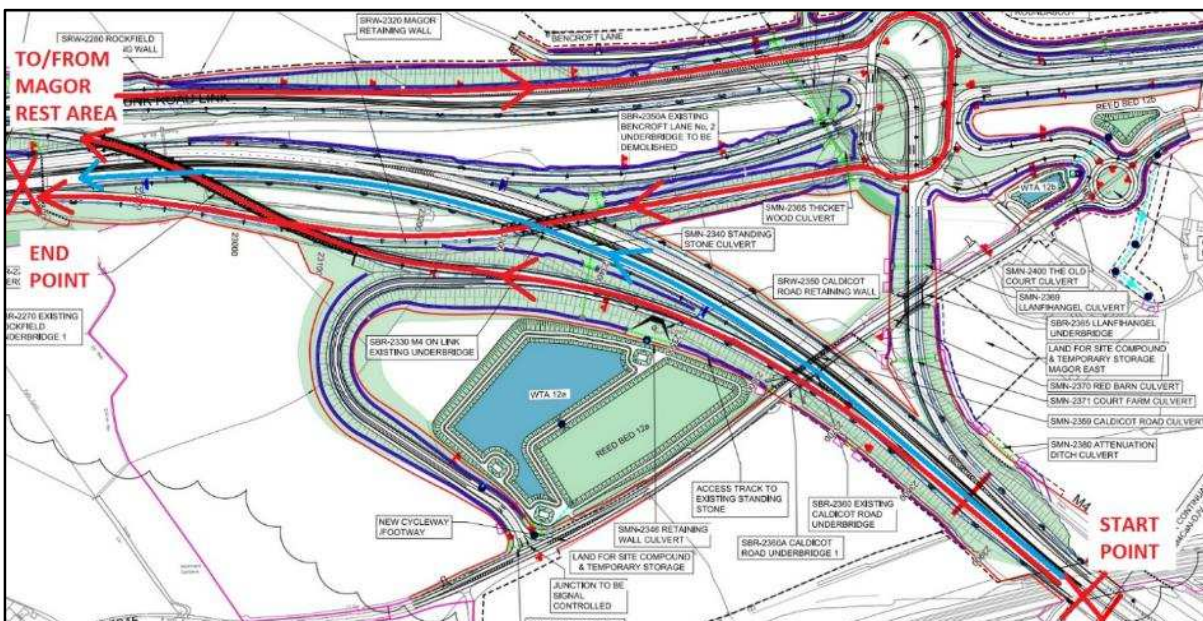
of 0.45km compared to a traveller carrying straight through on the existing motorway (blue route below).

Existing eastbound route to/from Magor rest area via Junction 23A

3.3 Proposed Layout

3.3.1 Proposed Westbound Route (Access & Egress via J23)

A westbound traveller on the proposed new motorway accessing Magor rest area via Junction 23 and egressing via Junction 23 (red route below) would need to make an additional detour of 6.5km compared to a traveller carrying straight through on the proposed new motorway (blue route below).



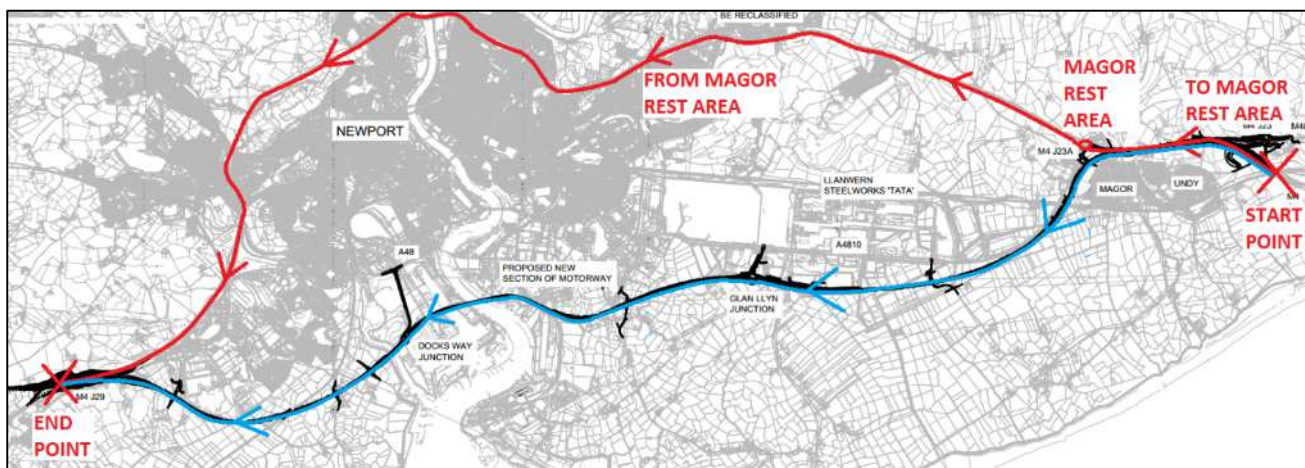
Proposed westbound route to/from Magor rest area via Junction 23

File Note

1 June 2017

3.3.2 Proposed Westbound Route (Access via J23 & Egress via Reclassified M4)

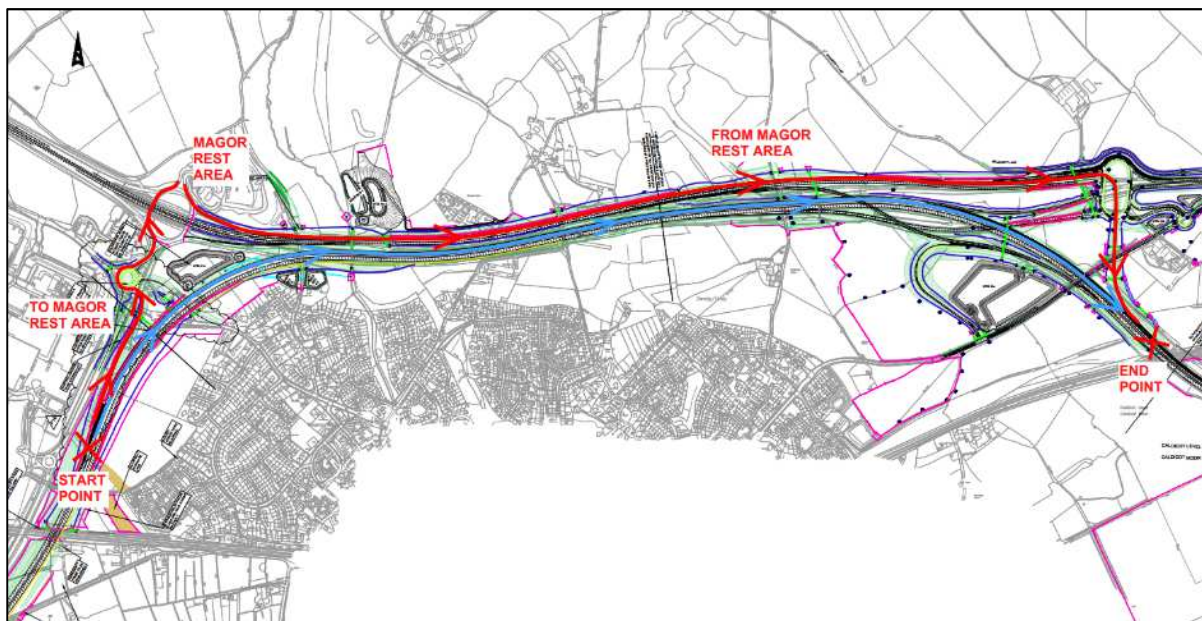
A westbound traveller on the proposed new motorway accessing Magor rest area via Junction 23 and egressing via the reclassified M4 (red route below) would experience no significant change of access and egress to the existing situation. The exit route via the reclassified M4 is forecast to be the quickest route to the M4 west of junction 29 and would involve travelling an additional 3.8km compared to a traveller carrying straight on through on the proposed new motorway (blue route below).



Proposed westbound route to/from Magor rest area via Junction 23 and existing M4

3.3.3 Proposed Eastbound Route (Access via Magor Eastbound Offslip & Egress via J23)

An eastbound traveller on the proposed new motorway accessing Magor rest area via Magor Eastbound Offslip and egressing via Junction 23 (red route below) would need to make an additional detour of 1.0km compared to a traveller carrying straight through on the proposed new motorway (blue route below).



Proposed eastbound route to/from Magor rest area via Magor Eastbound Offslip and Junction 23

File Note

1 June 2017

3.4 Summary of Detours to Magor Rest Area

The table below provides access and egress distances for Magor rest area for the existing and proposed layouts.

Measured distances for the existing layout have been calculated using the route planner function of Google Maps. Start/end locations at the MSA have been determined using the Google Maps search function. Start/end locations at the motorway correspond to the start/end of the slip road nosing. Screenshots from Google Maps are included in Appendix B.

Measured distances for the Published draft Scheme and Supplement have been determined using AutoCAD drawings. Start/end locations at the MSA correspond to those used for the existing situation measurements using Google Maps. Start/end locations at the motorway correspond to the start/end of the slip road nosing. Screenshots are included in Appendix B.

The table also provides measured values of 'distance without stopping' for each situation. This is the distance along the motorway between the start of the access and the end of the egress from the MSA, i.e. the distance a road user would travel along the motorway if they were not stopping at the MSA. Subtracting this value from the 'total distance off the motorway' measurement gives a value for 'total detour', i.e. the additional distance travelled by a road user stopping at the MSA compared to one travelling straight through on the motorway without stopping.

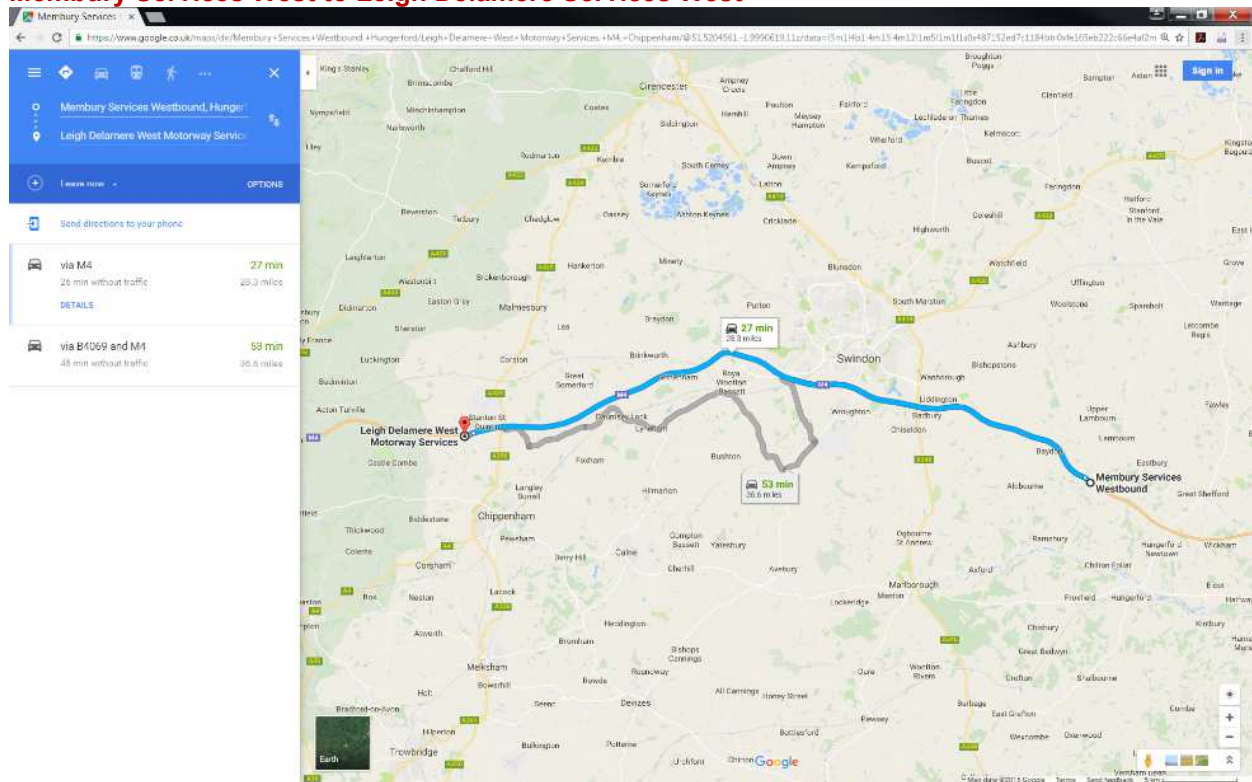
| | Distance (m) | |
|---|--------------|-----------|
| | Westbound | Eastbound |
| Existing Layout | | |
| Access | 850 | 500 |
| Egress | 850 | 650 |
| Total distance off the motorway | 1700 | 1150 |
| Distance without stopping | 850 | 700 |
| Total detour | 850 | 450 |
| WG Published draft Scheme (including Supplement Magor EB offslip) – westbound egress via J23 | | |
| Access | 3500 | 1100 |
| Egress (WB & EB via J23) | 4300 | 3500 |
| Total distance off the motorway | 7800 | 4600 |
| Distance without stopping | 1300 | 3600 |
| Total detour | 6500 | 1000 |
| WG Published draft Scheme (including Supplement Magor EB offslip) – westbound egress via reclassified M4 | | |
| Access | 3500 | 1100 |
| Egress (WB via existing M4; EB via J23) | 21300 | 3500 |
| Total distance off the motorway | 24800 | 4600 |
| Distance without stopping | 21030 | 3600 |
| Total detour | 3770 | 1000 |

File Note

1 June 2017

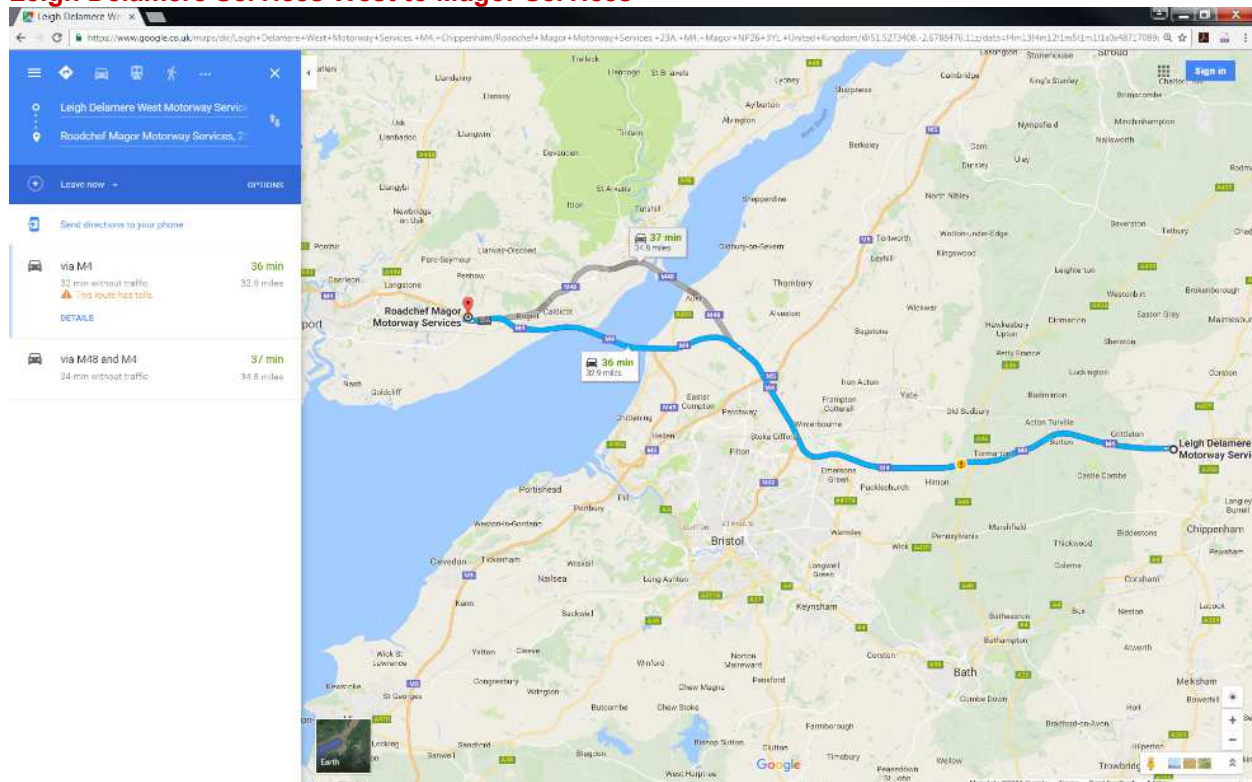
Appendix A – Screenshots of Route Calculations (Google Maps Route Planner)

Membury Services West to Leigh Delamere Services West



Map data ©2016 Google

Leigh Delamere Services West to Magor Services

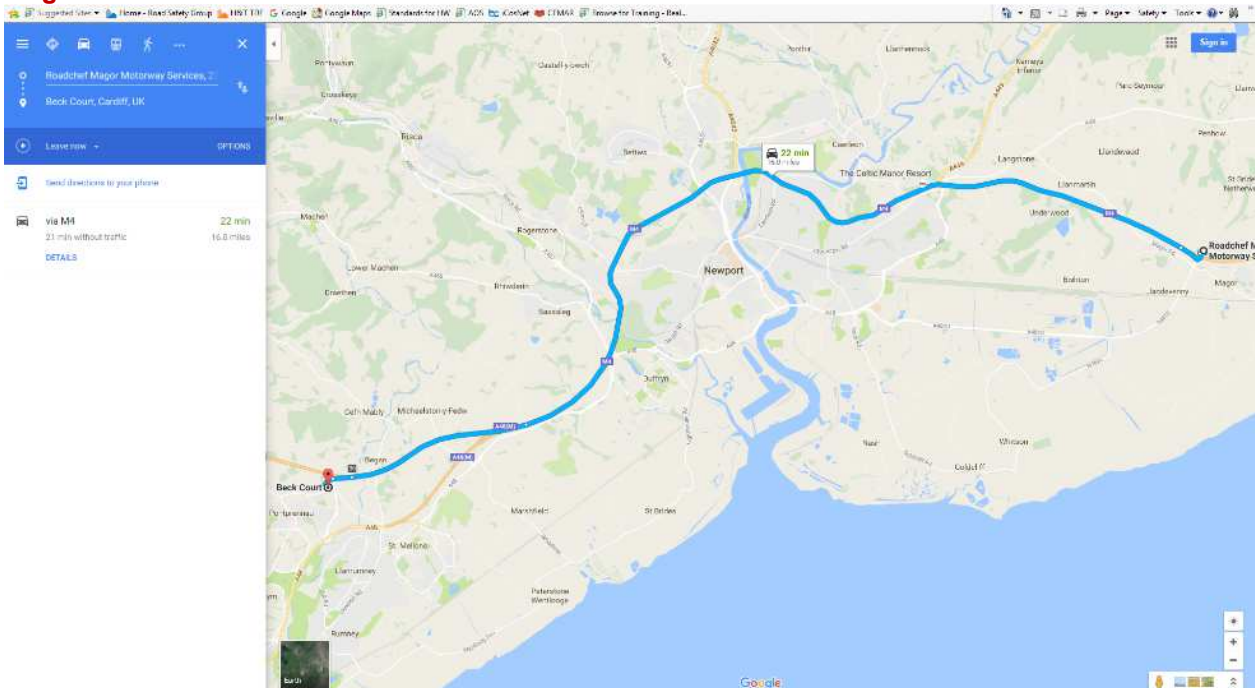


Map data ©2016 Google

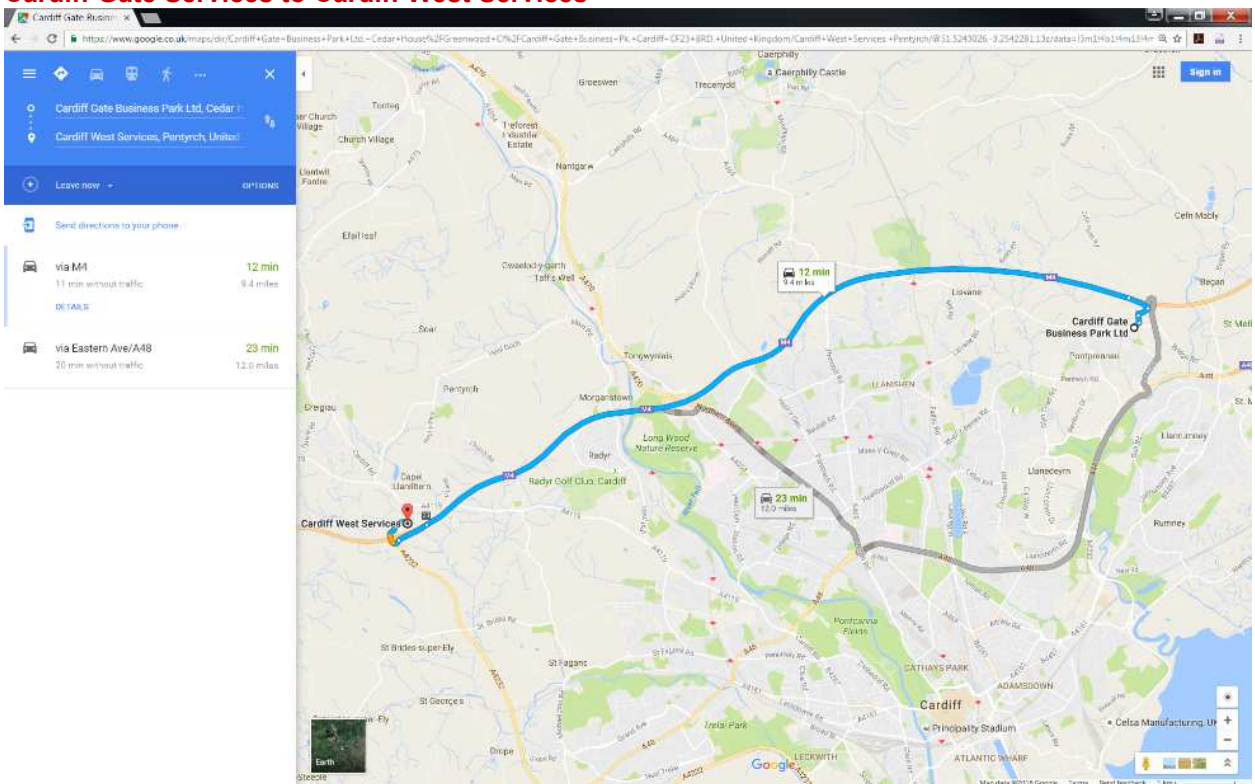
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Magor Services to Cardiff Gate Services



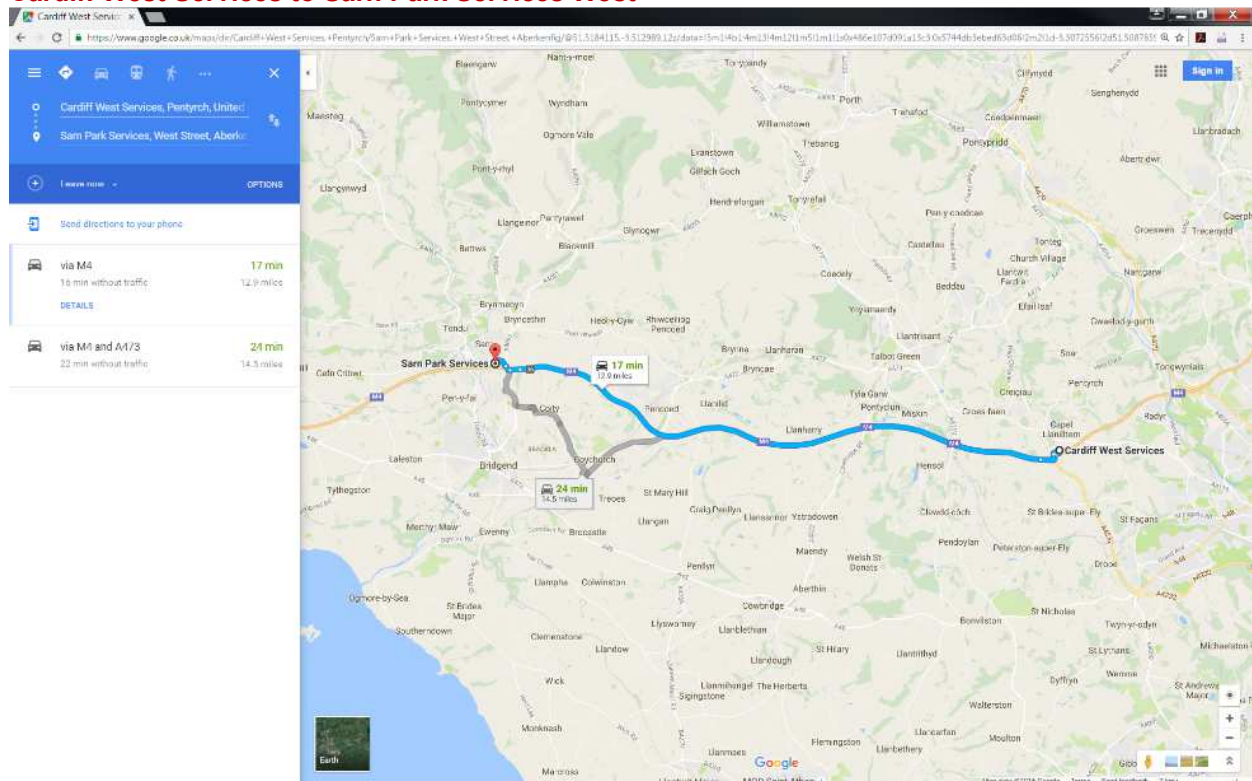
Cardiff Gate Services to Cardiff West Services



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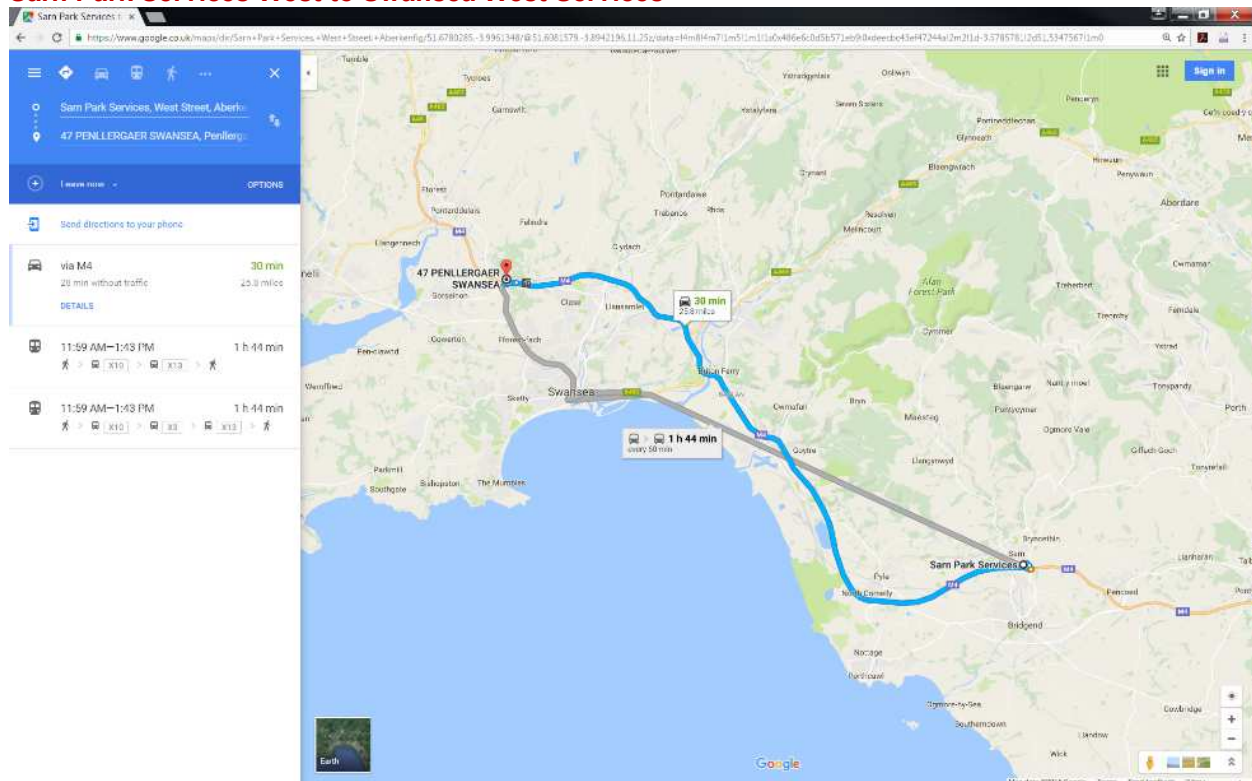
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Cardiff West Services to Sarn Park Services West



Map data ©2016 Google

Sarn Park Services West to Swansea West Services

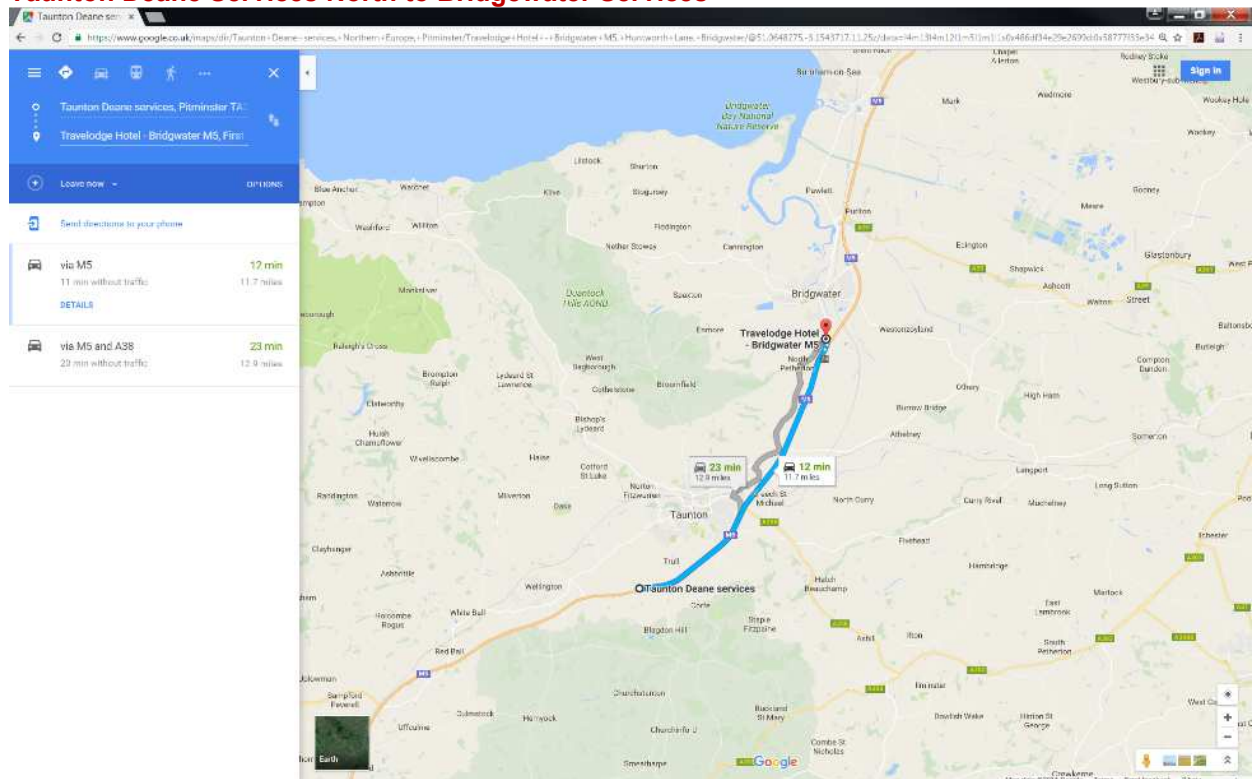


Map data ©2016 Google

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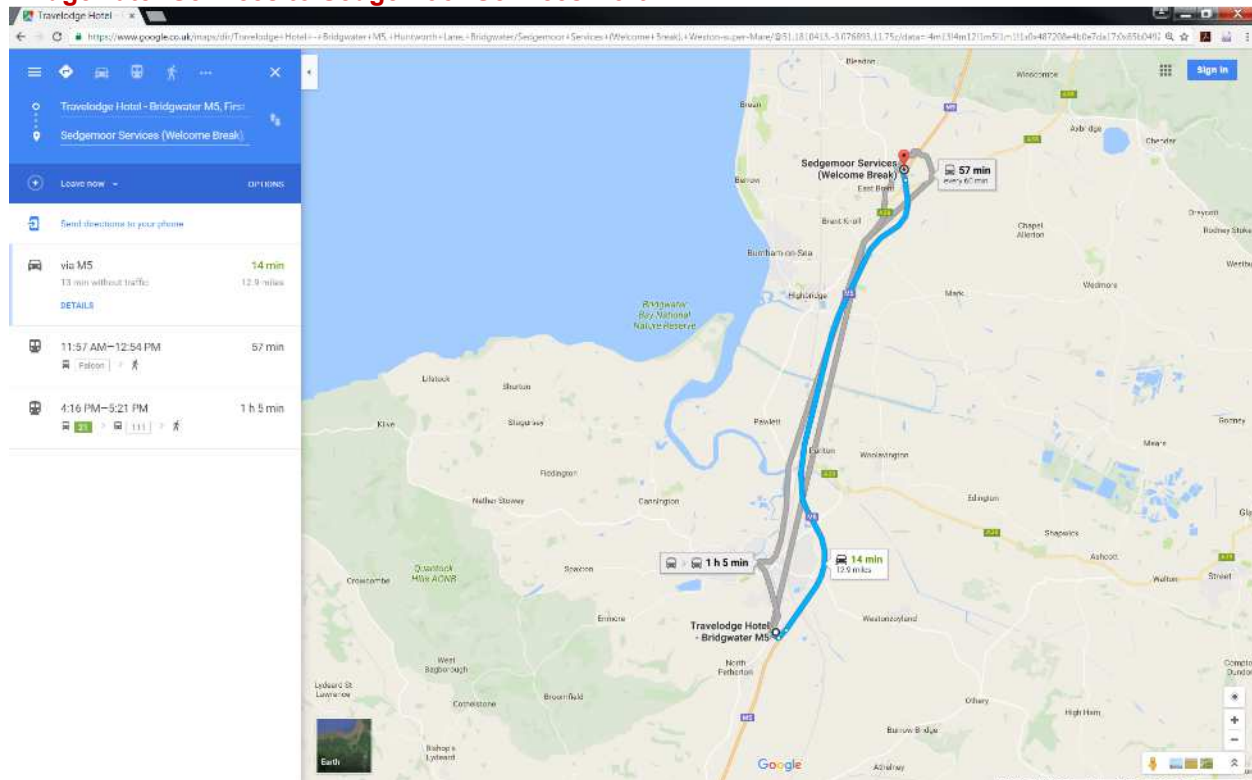
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Taunton Deane Services North to Bridgewater Services



Map data ©2016 Google

Bridgewater Services to Sedgemoor Services North

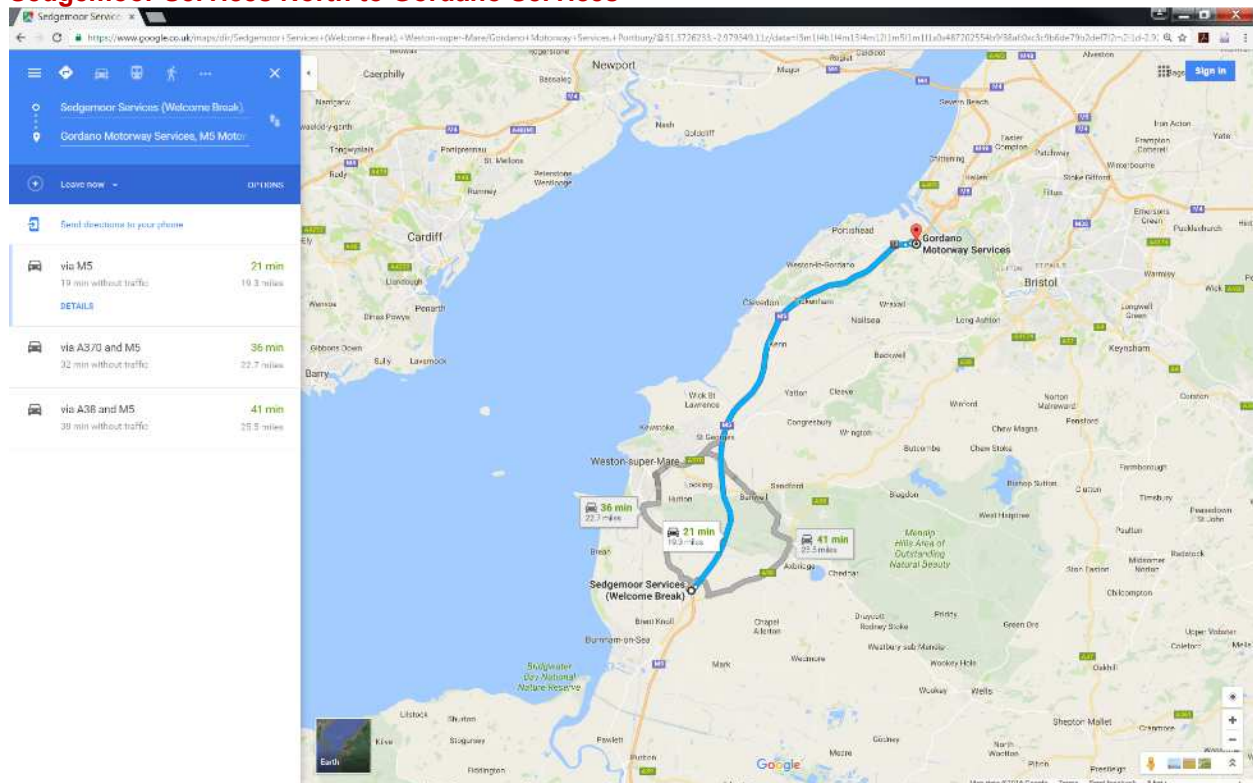


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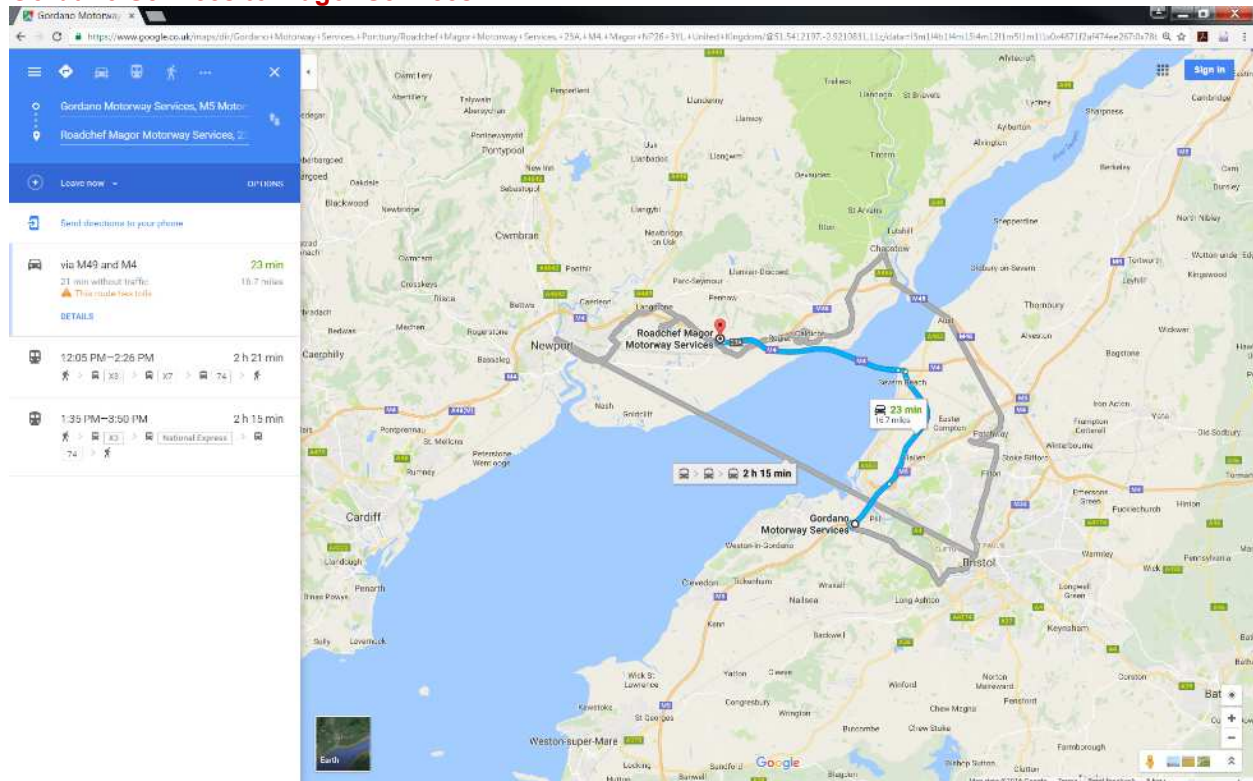
1 June 2017

Sedgemoor Services North to Gordano Services



Map data ©2016 Google

Gordano Services to Magor Services

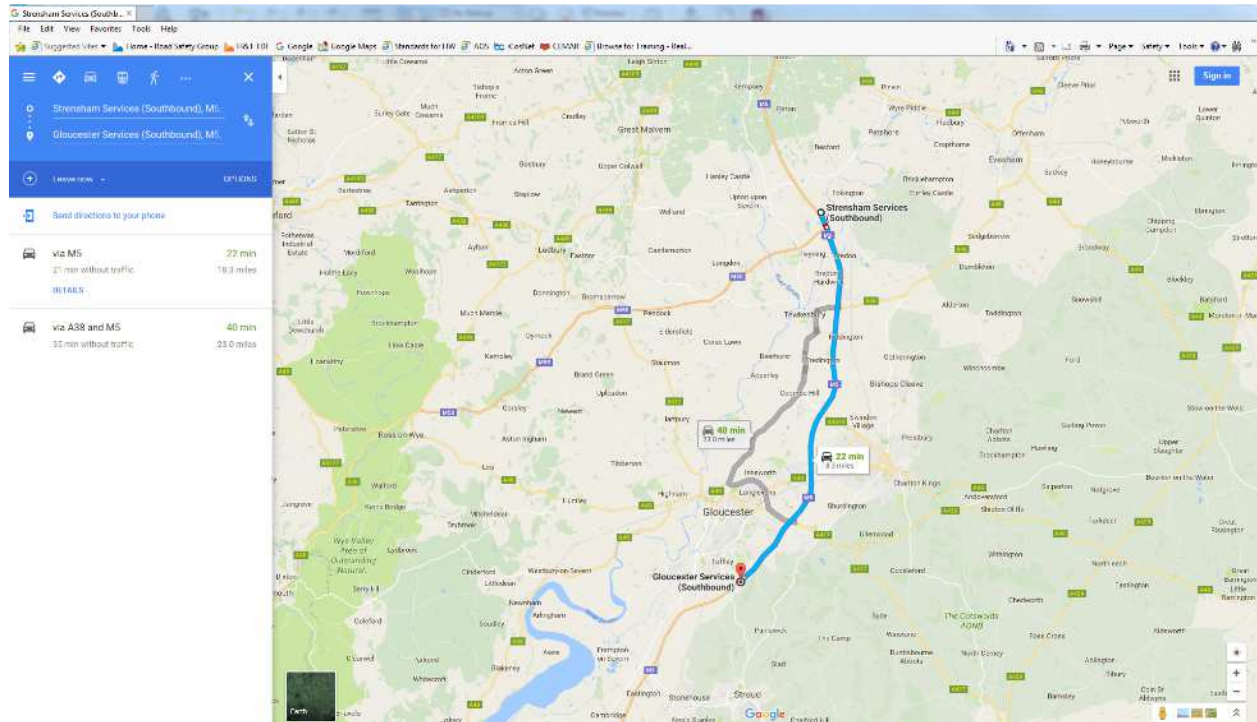


Map data ©2016 Google

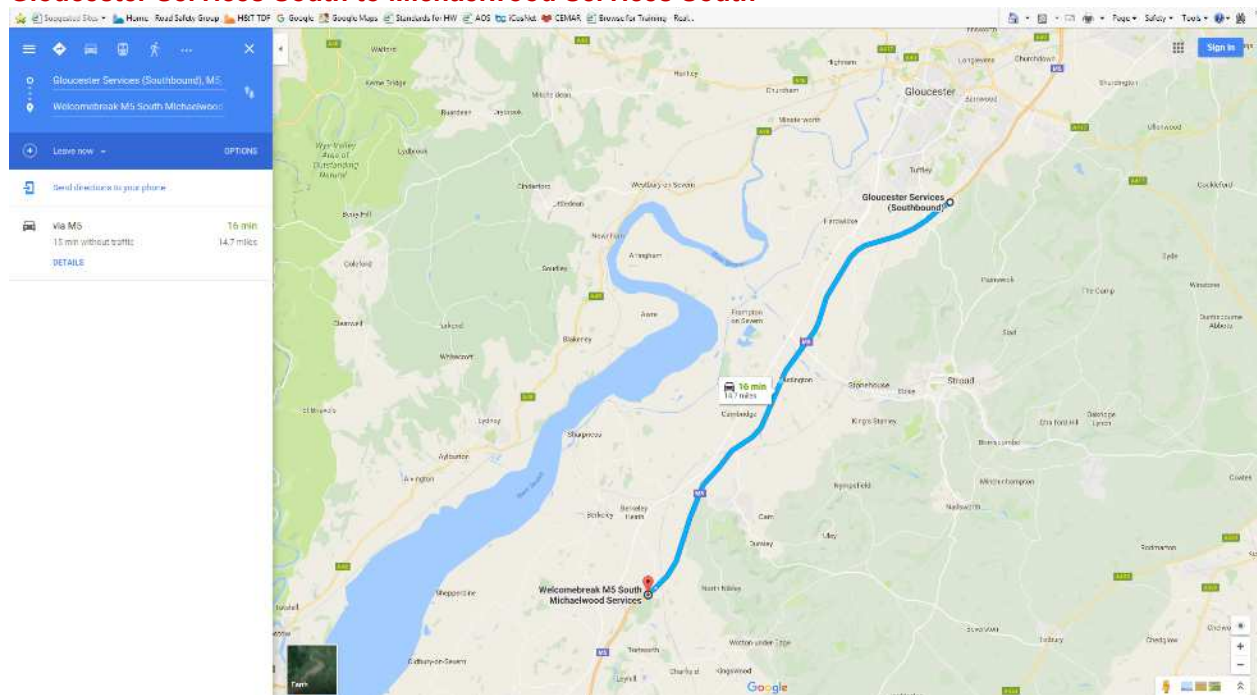
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Strensham Services South to Gloucester Services South



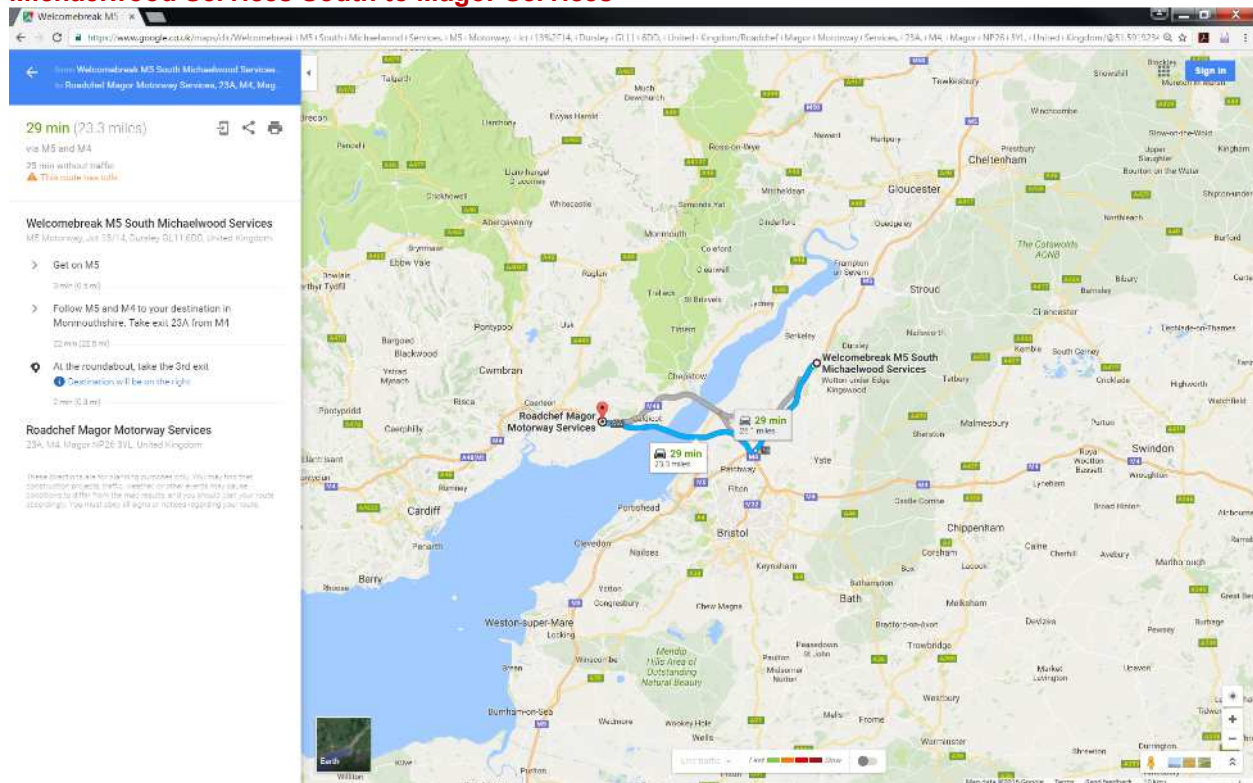
Gloucester Services South to Michaelwood Services South



File Note

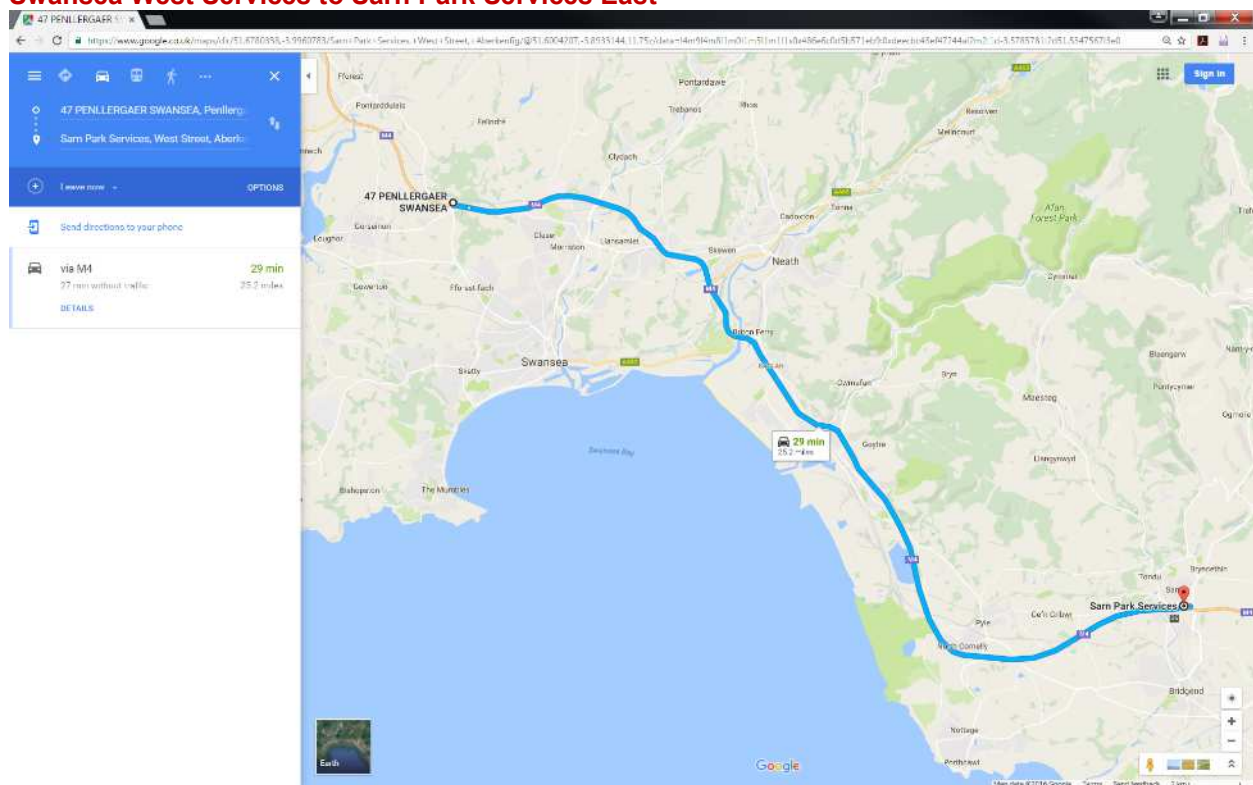
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Michaelwood Services South to Magor Services



Map data ©2016 Google

Swansea West Services to Sarn Park Services East

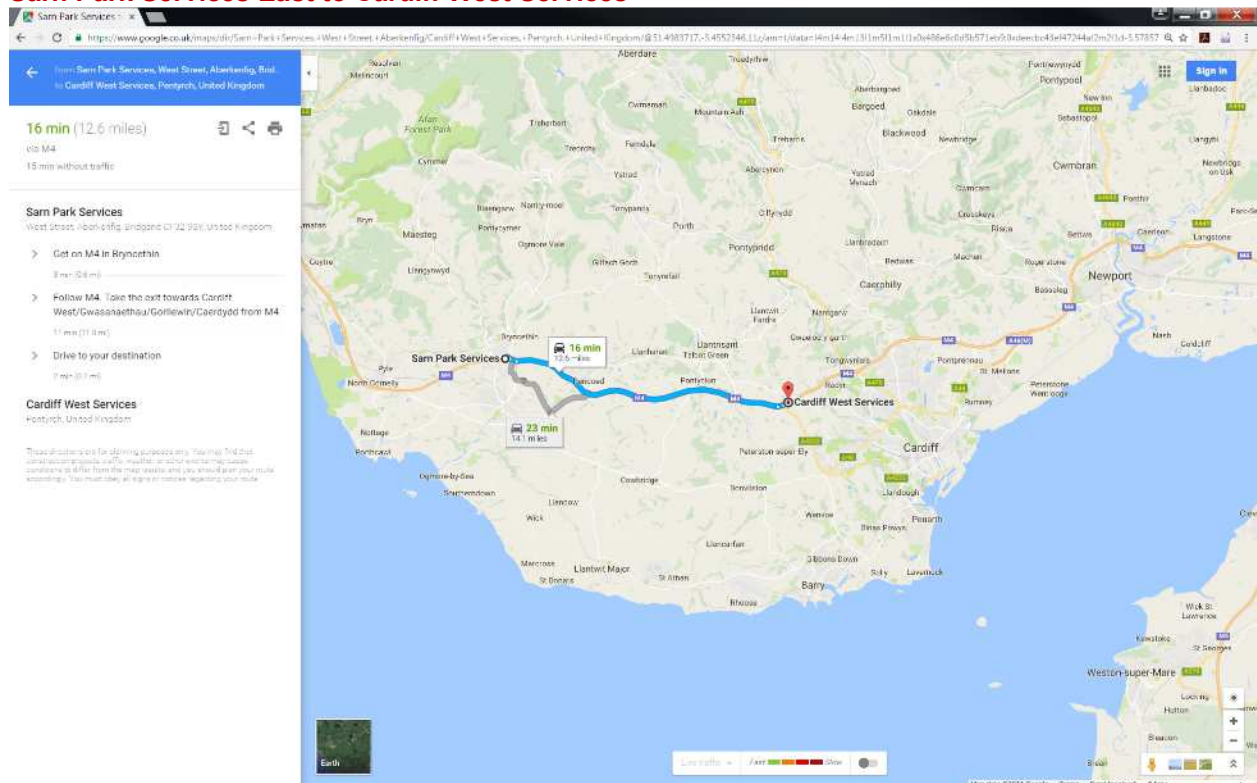


Map data ©2016 Google

File Note

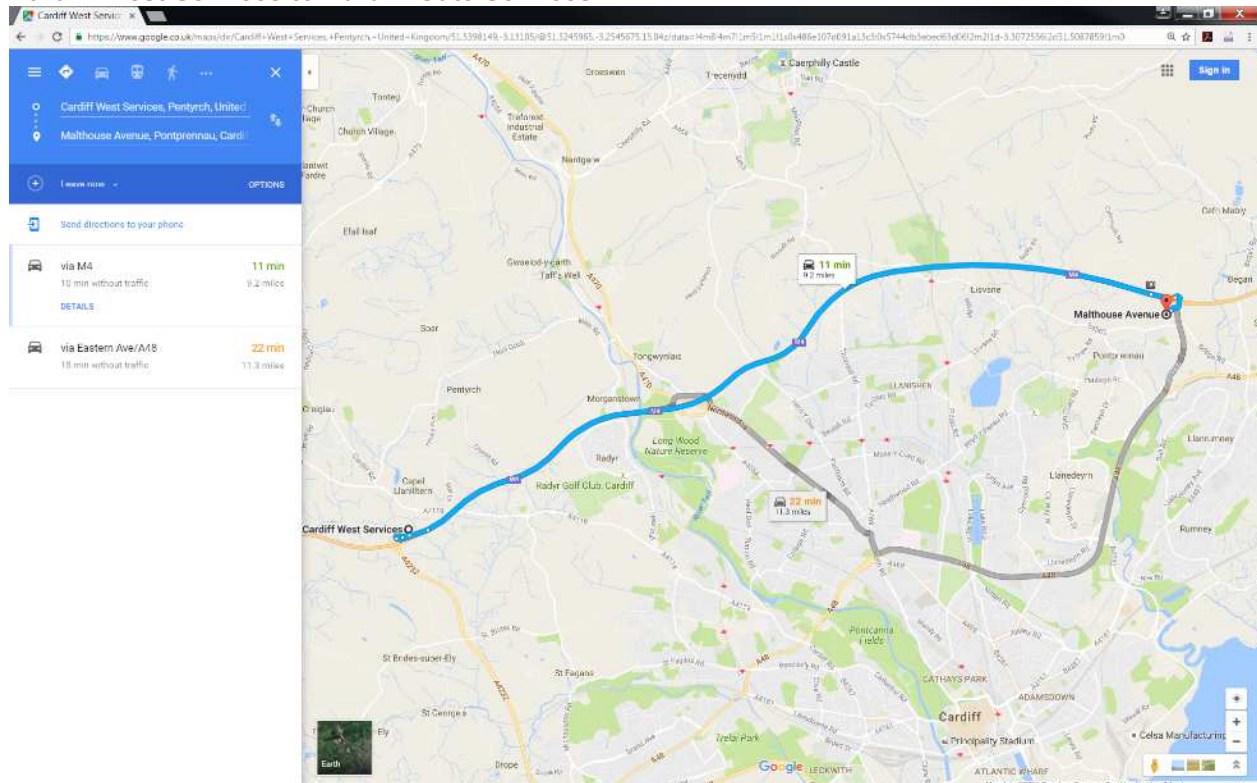
1 June 2017

Sarn Park Services East to Cardiff West Services



Map data ©2016 Google

Cardiff West Services to Cardiff Gate Services

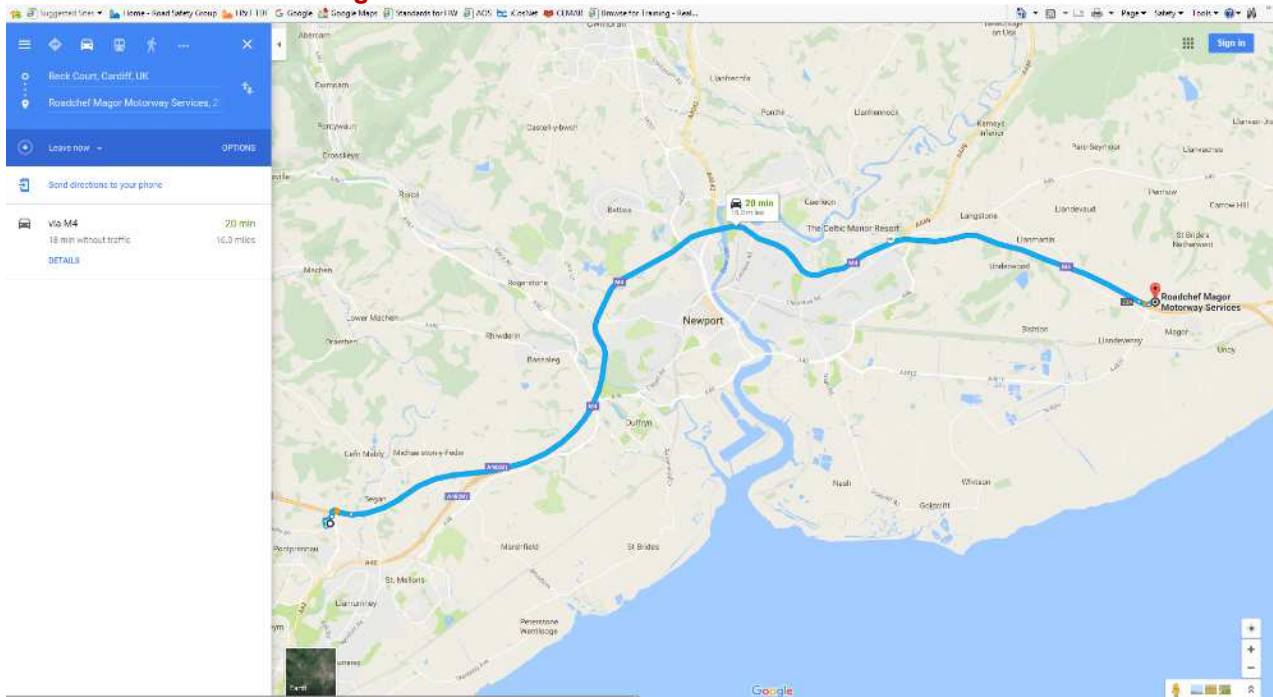


Map data ©2016 Google

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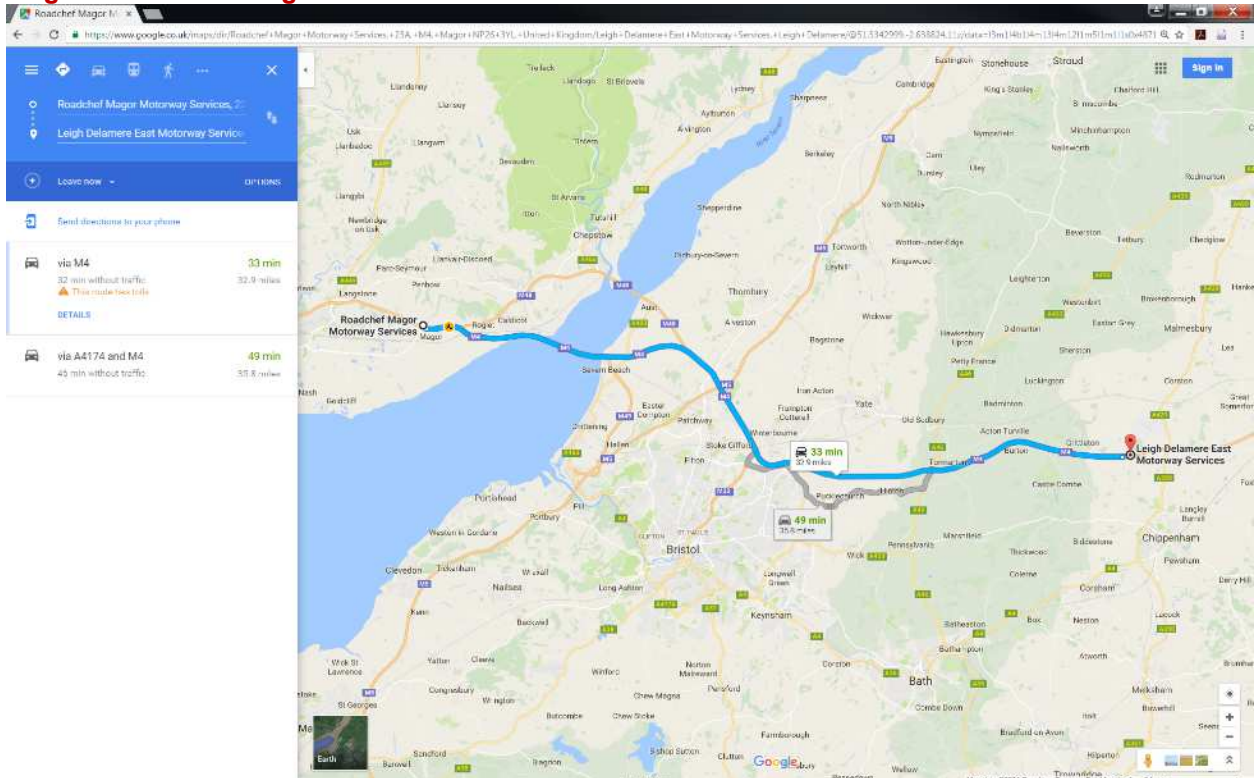
1 June 2017

Cardiff Gate Services to Magor Services



Map data ©2016 Google

Magor Services to Leigh Delamere Services East

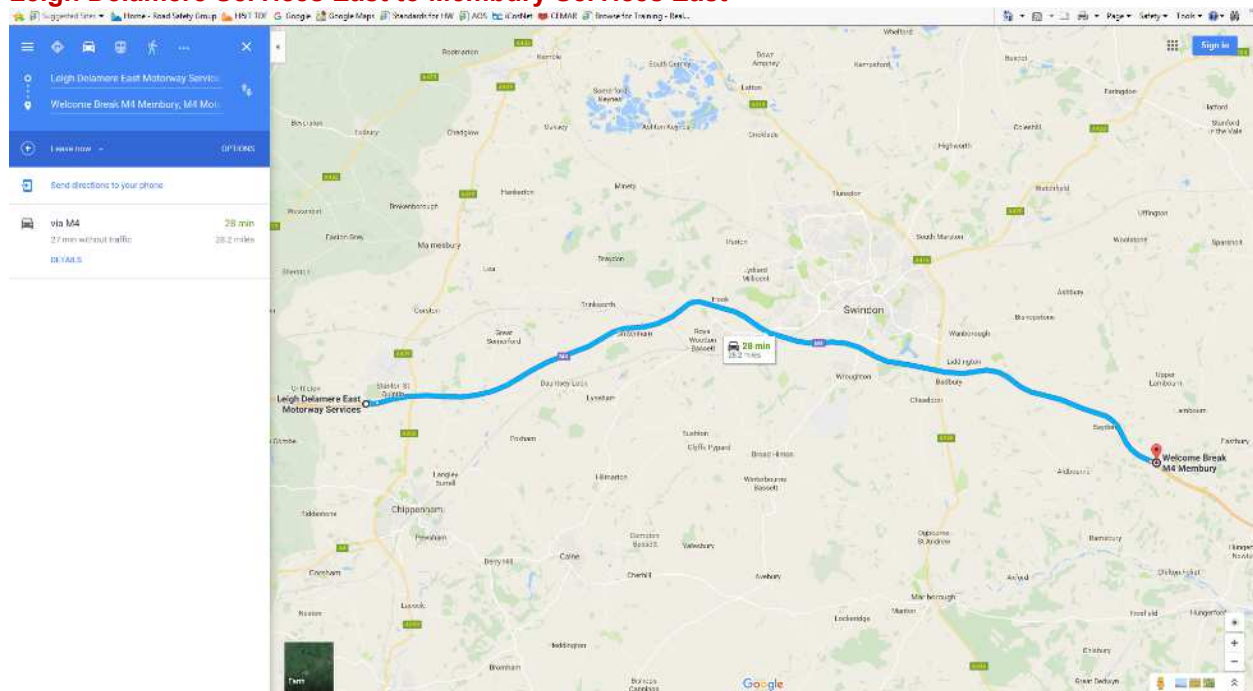


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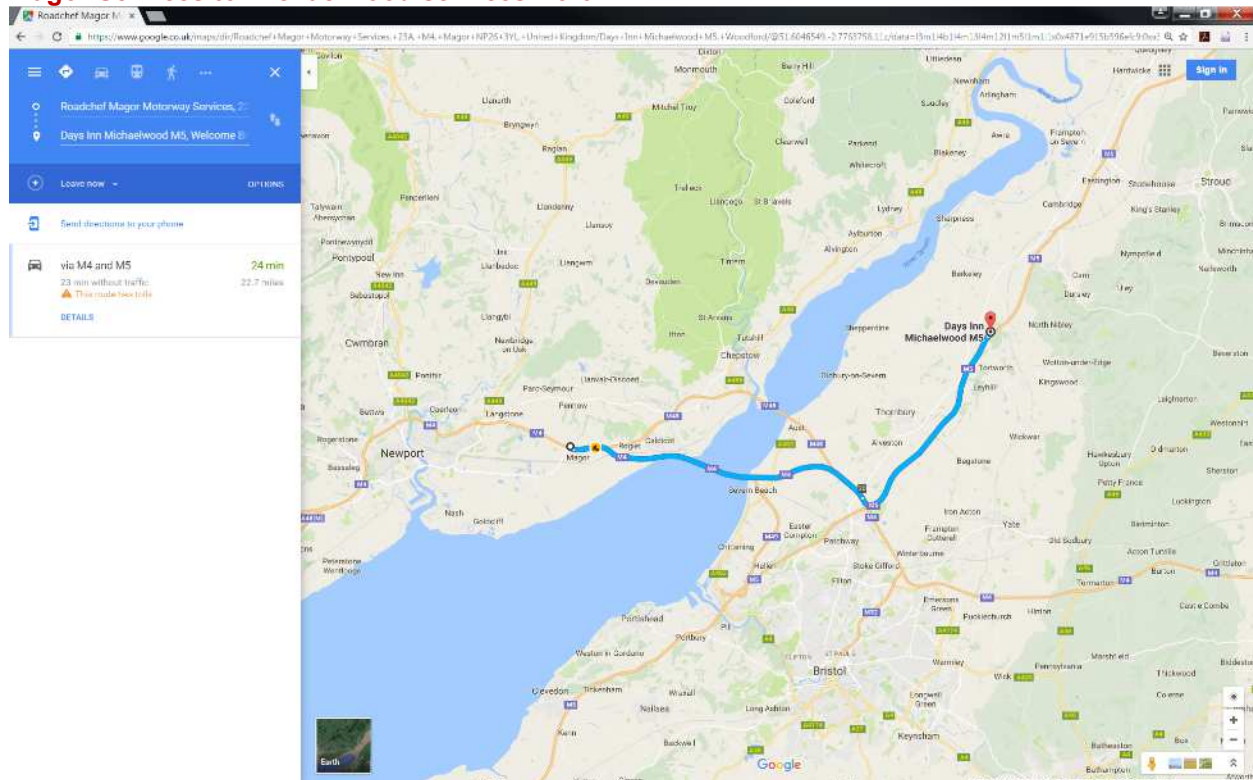
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Leigh Delamere Services East to Membury Services East



Map data ©2016 Google

Magor Services to Michaelwood services North

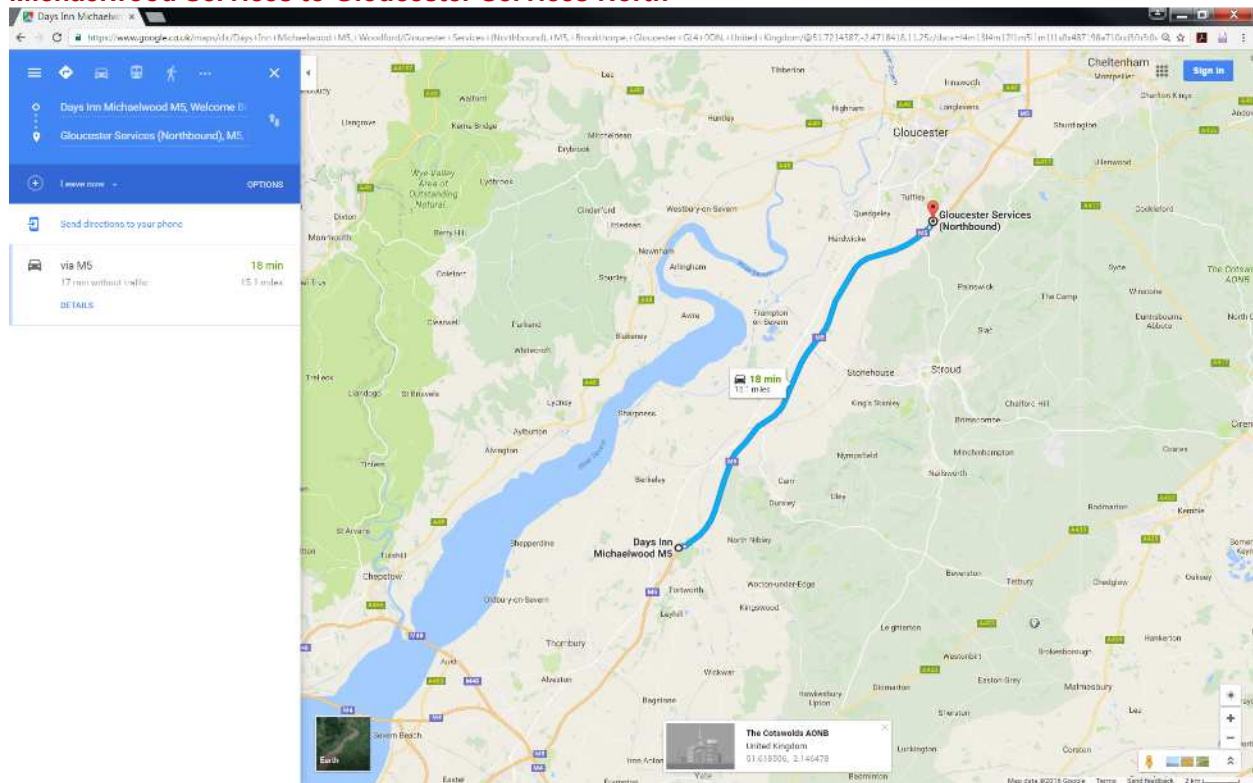


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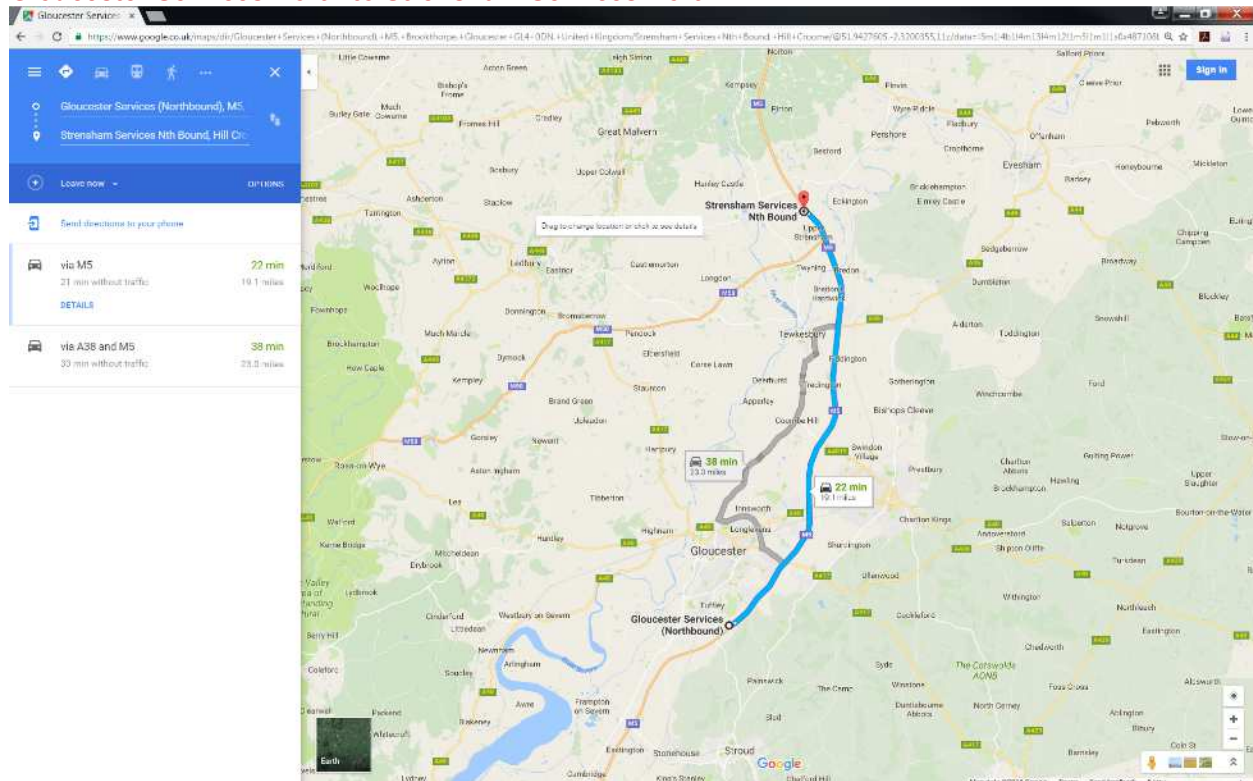
1 June 2017

Michaelwood Services to Gloucester Services North



Map data ©2016 Google

Gloucester Services North to Strensham Services North

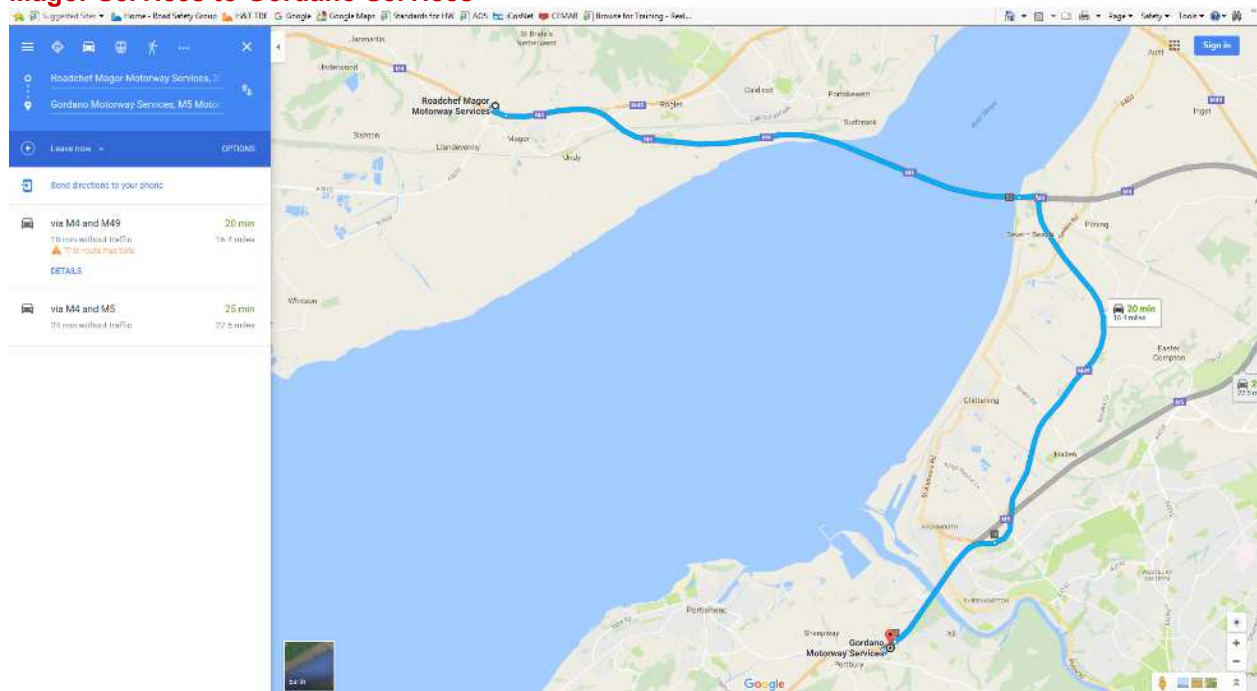


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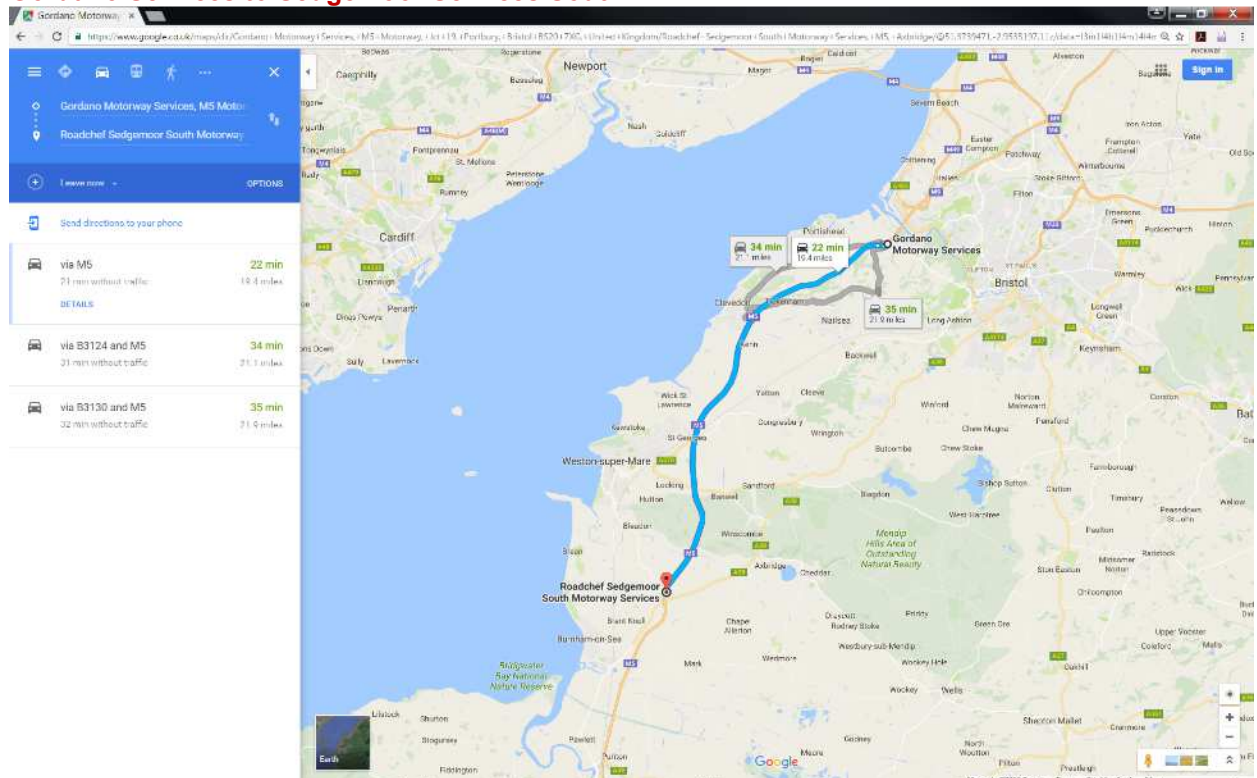
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1 June 2017

Magor Services to Gordano Services



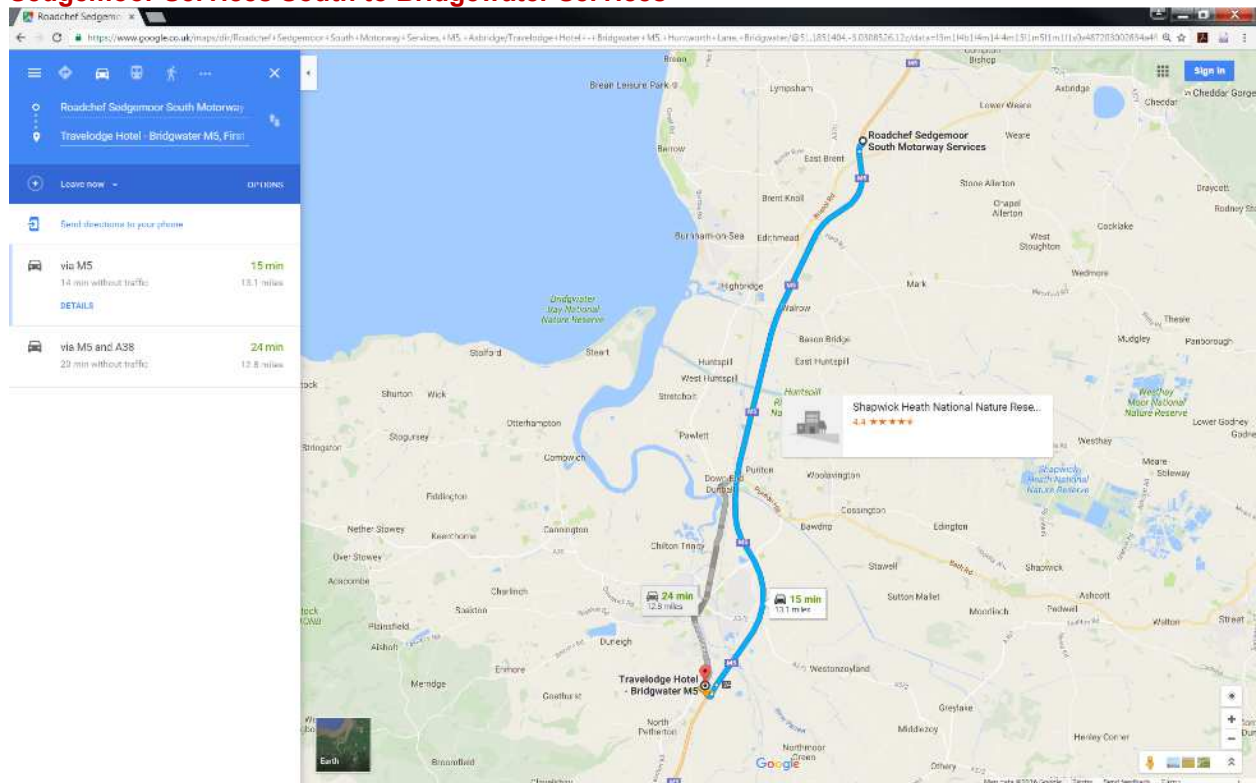
Gordano Services to Sedgemoor Services South



File Note

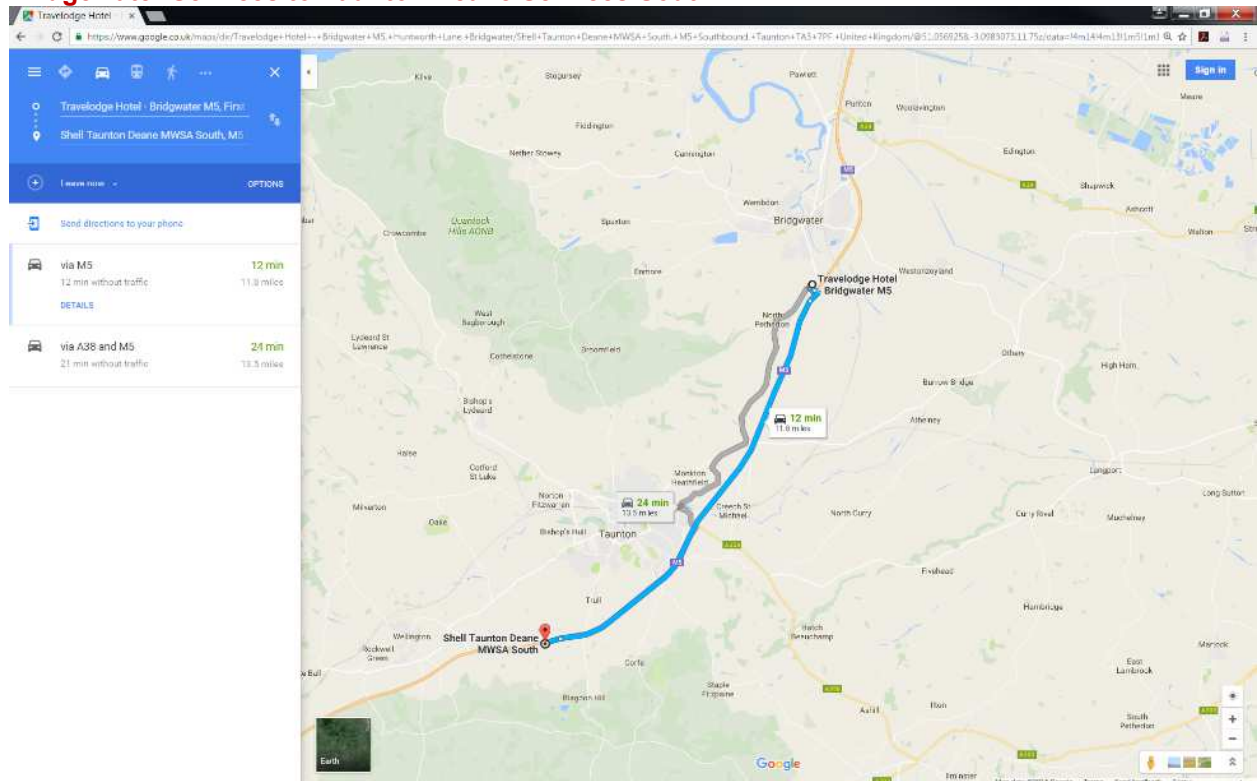
1 June 2017

Sedgemoor Services South to Bridgewater Services



Map data ©2016 Google

Bridgewater Services to Taunton Deane Services South

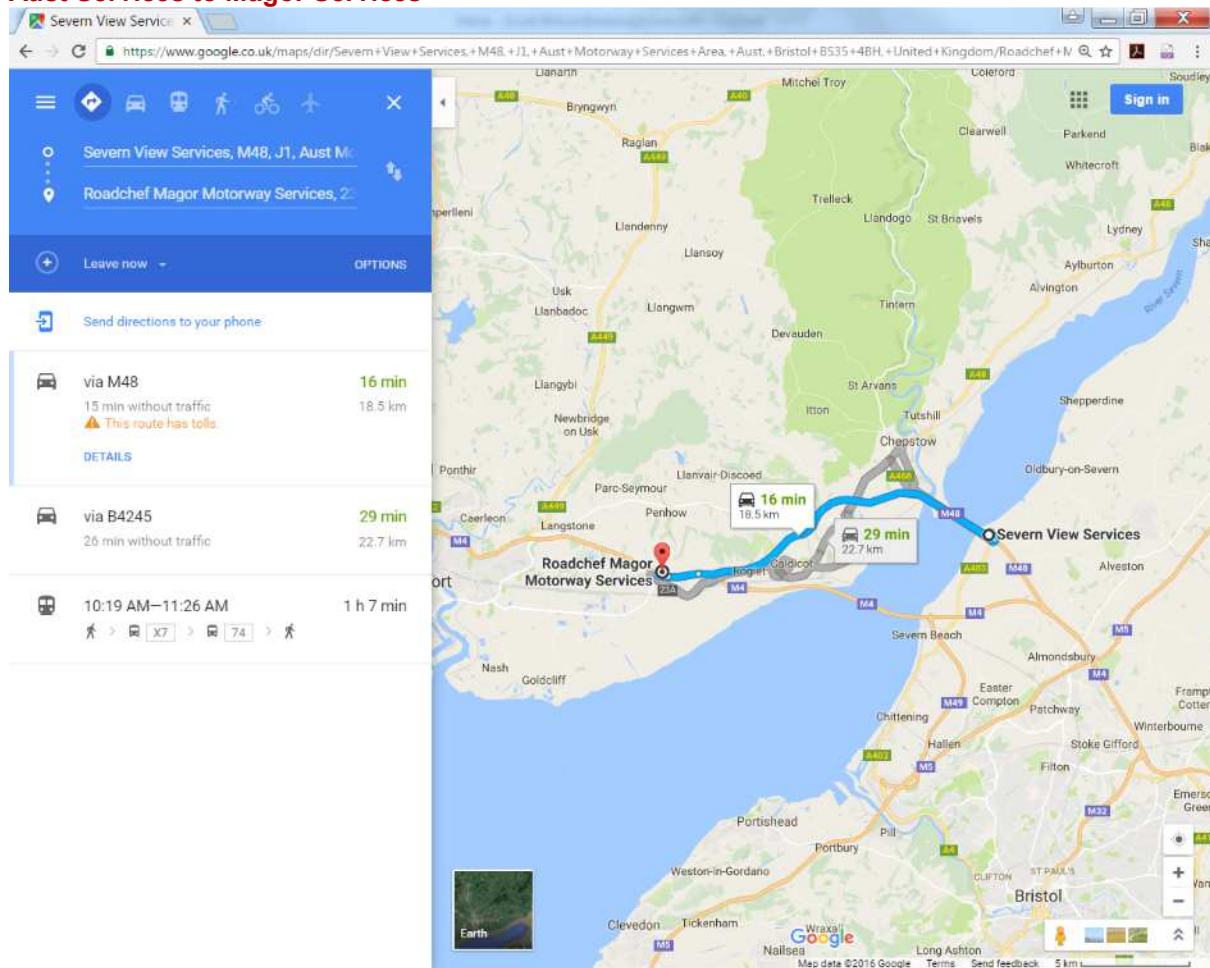


Map data ©2016 Google

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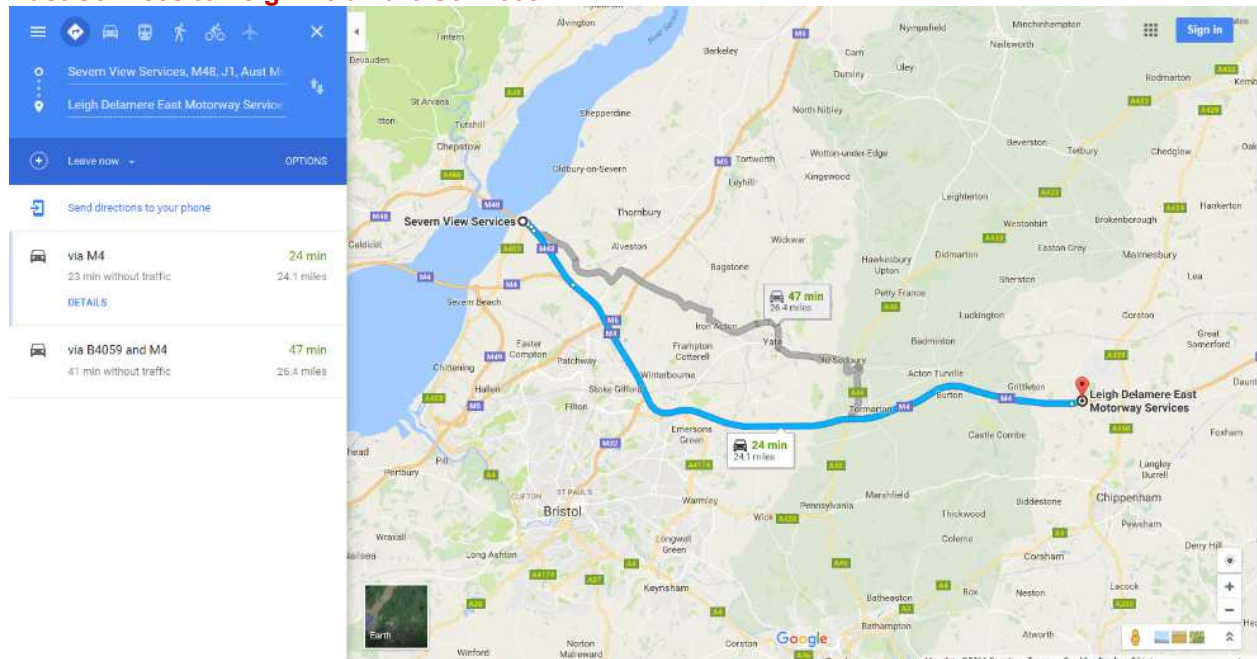
1 June 2017

Aust Services to Magor Services



Map data ©2016 Google

Aust Services to Leigh Delamere Services

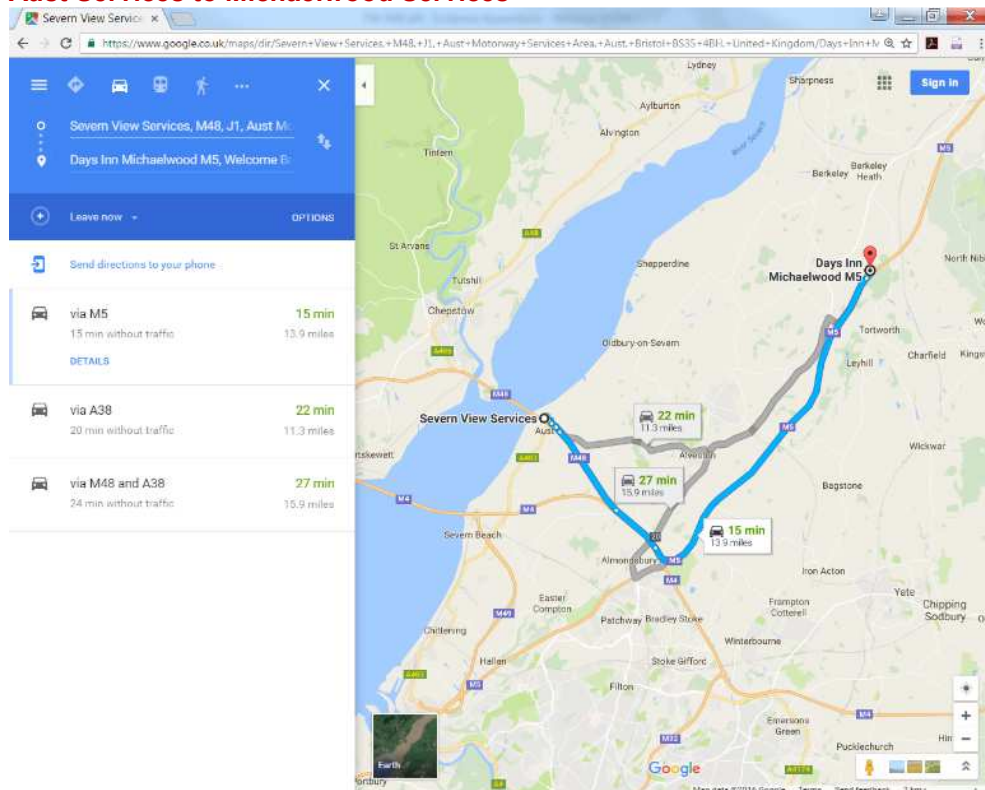


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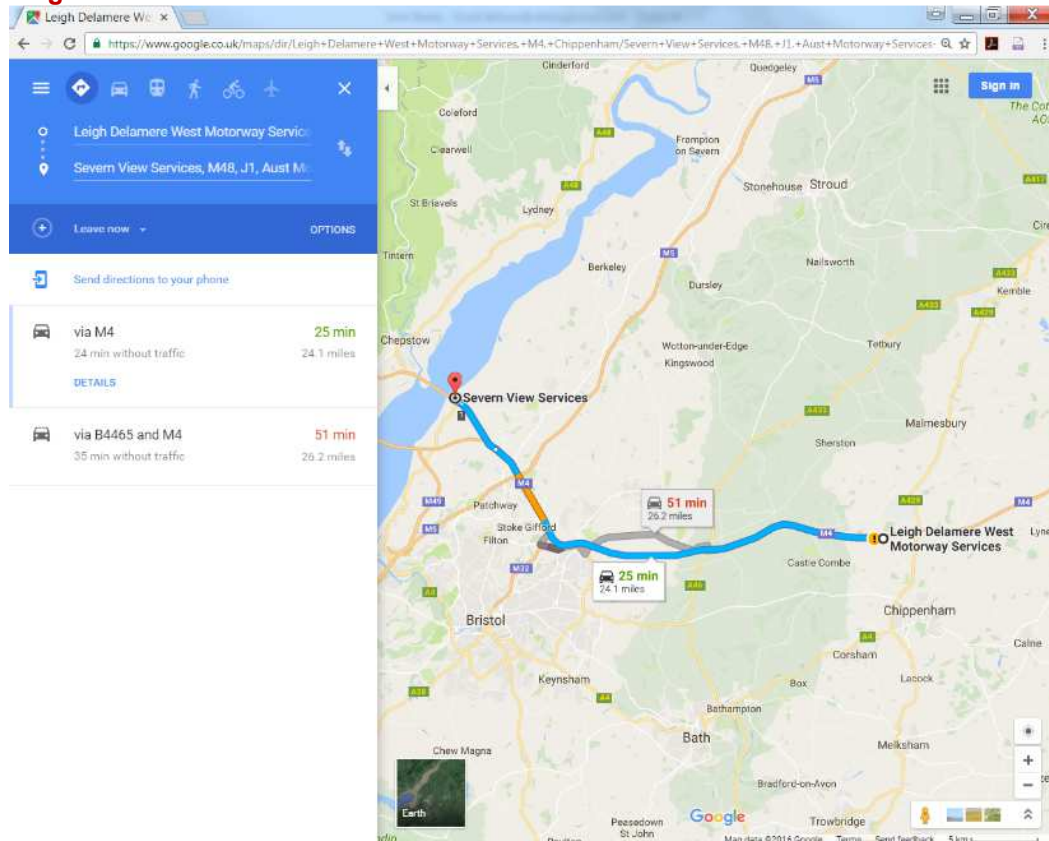
1 June 2017

Aust Services to Michaelwood Services



Map data ©2016 Google

Leigh Delamare Services to Aust Services

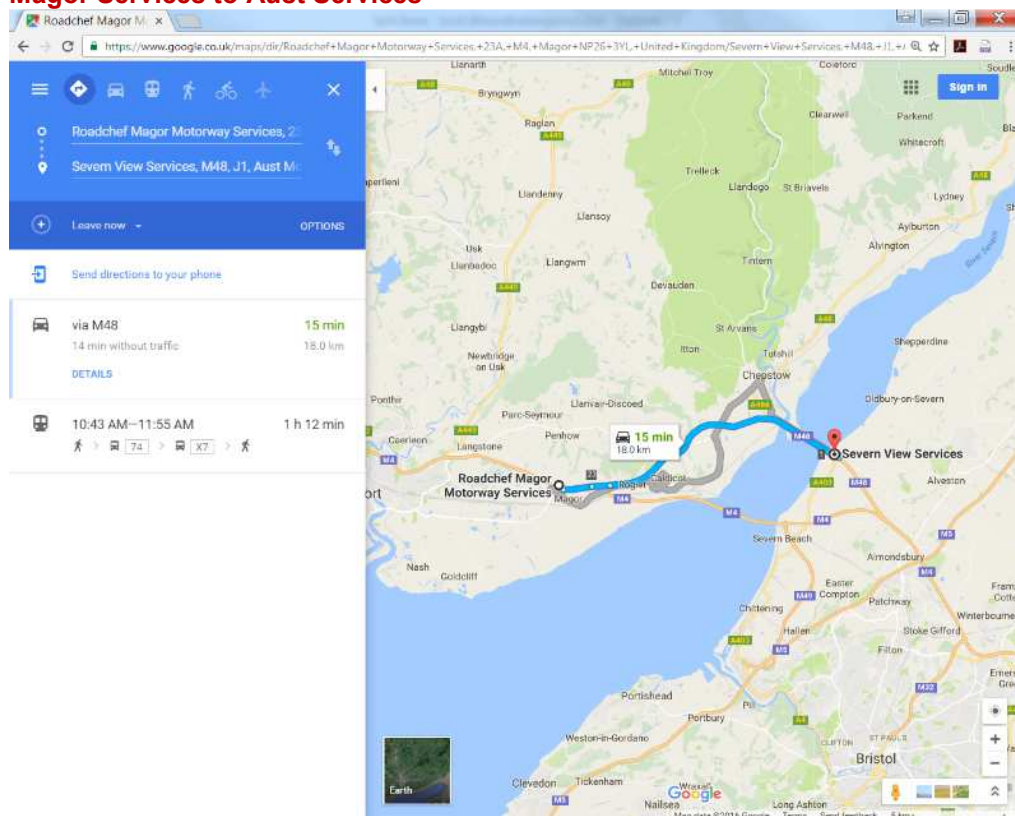


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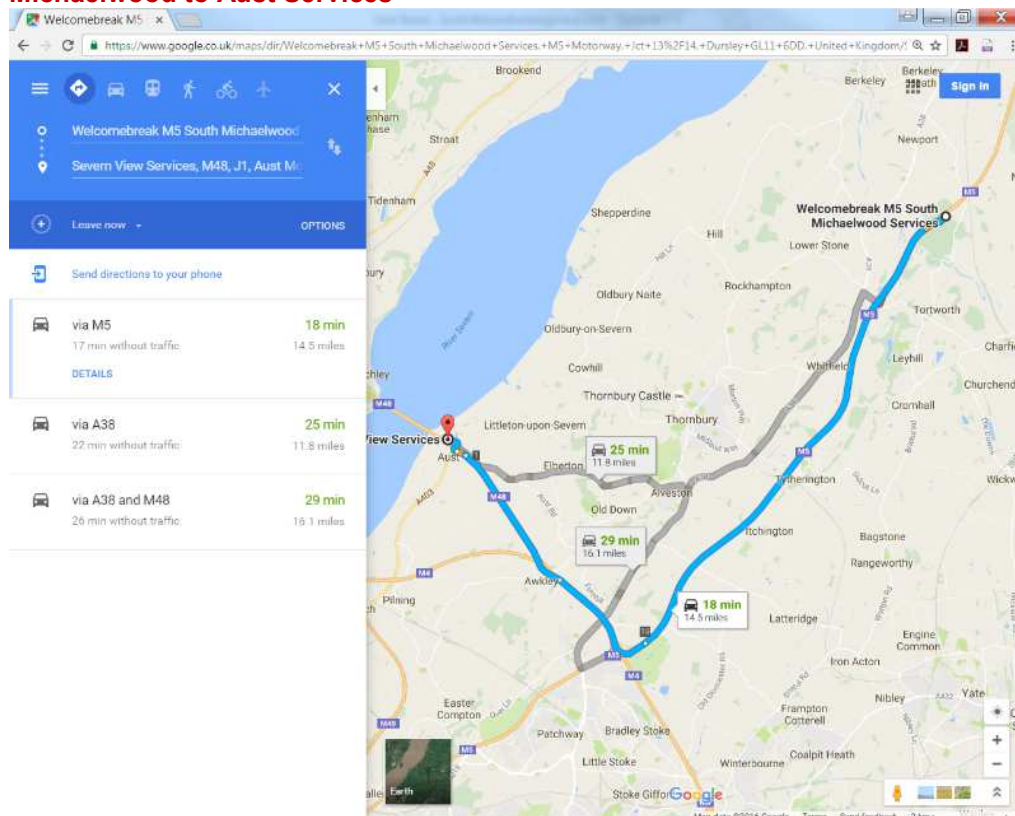
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Magor Services to Aust Services



Map data ©2016 Google

Michaelwood to Aust Services



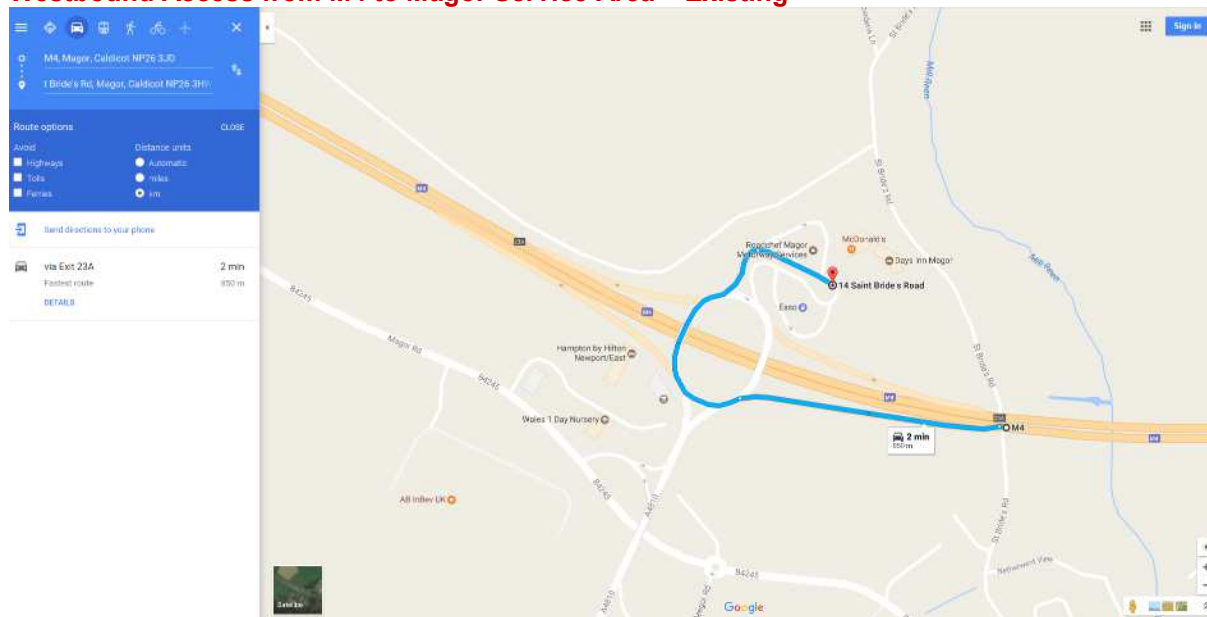
Map data ©2016 Google

File Note

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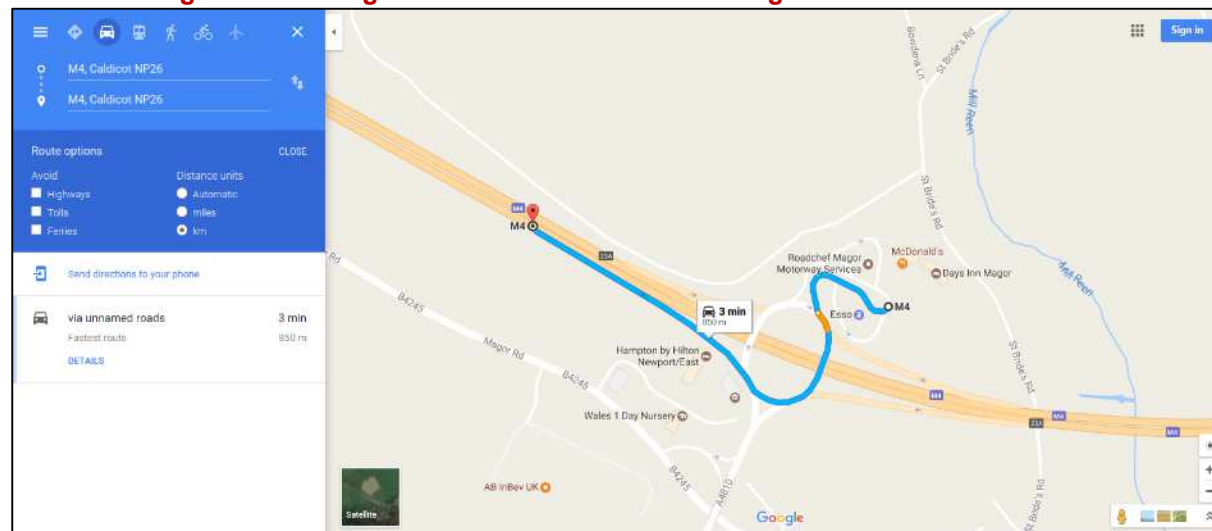
Appendix B – Screenshots of Route Measurements to Magor Rest Area

Westbound Access from M4 to Magor Service Area – Existing



Map data ©2017 Google

Westbound Egress from Magor Service Area to M4 – Existing

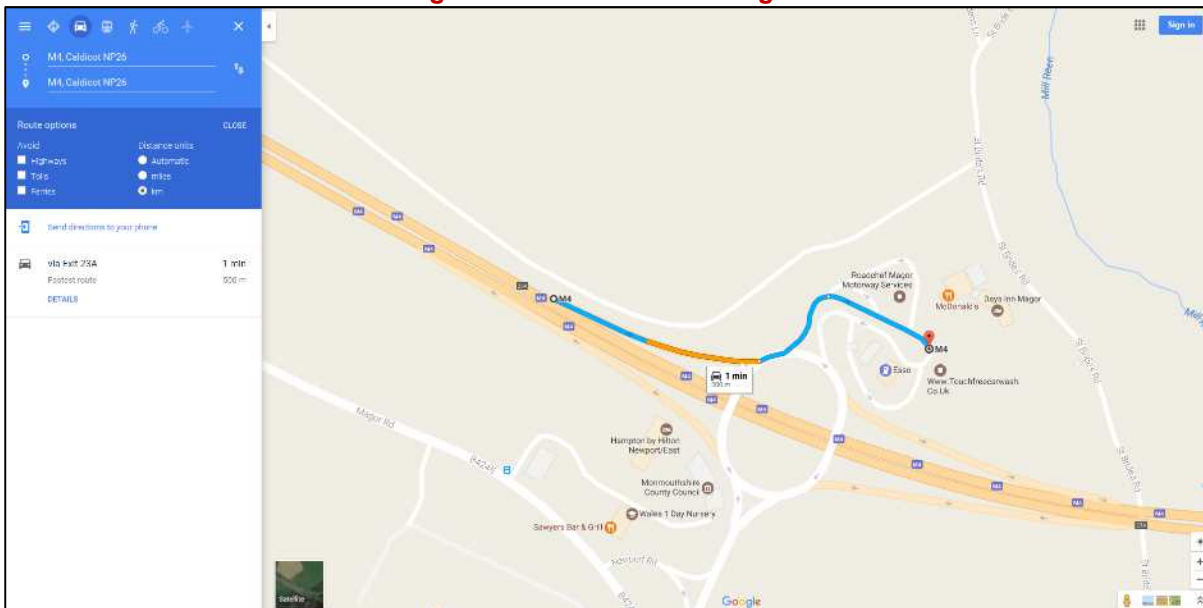


Map data ©2017 Google

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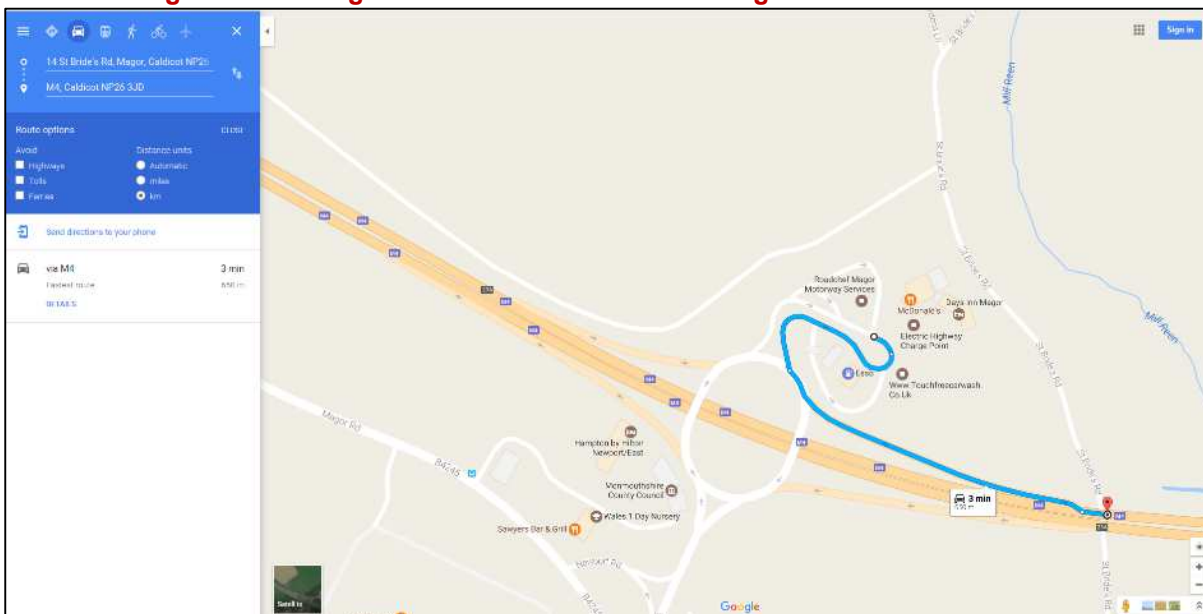
1 June 2017

Eastbound Access from M4 to Magor Service Area – Existing



Map data ©2017 Google

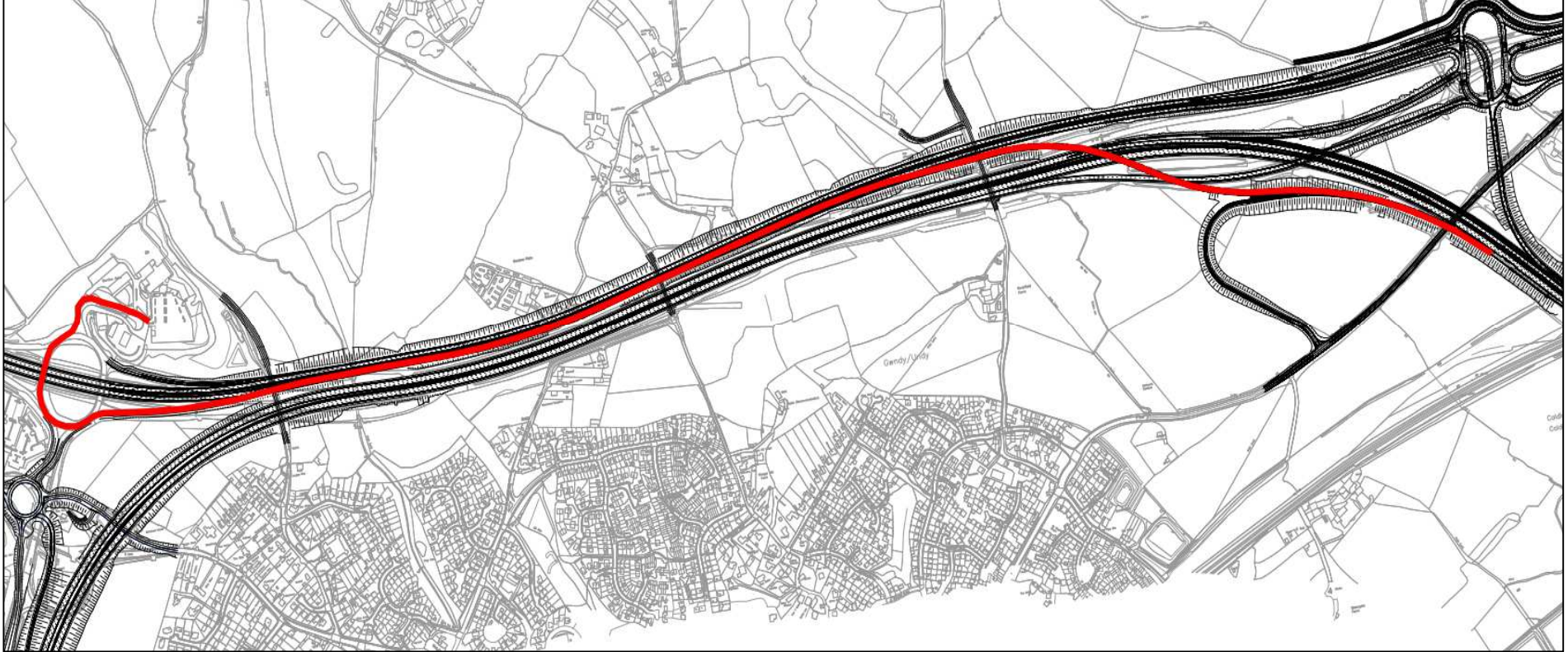
Eastbound Egress from Magor Service Area to M4 – Existing



Map data ©2017 Google

File Note

Westbound Access from M4 to Magor Service Area via J23 – WG Proposal



File Note

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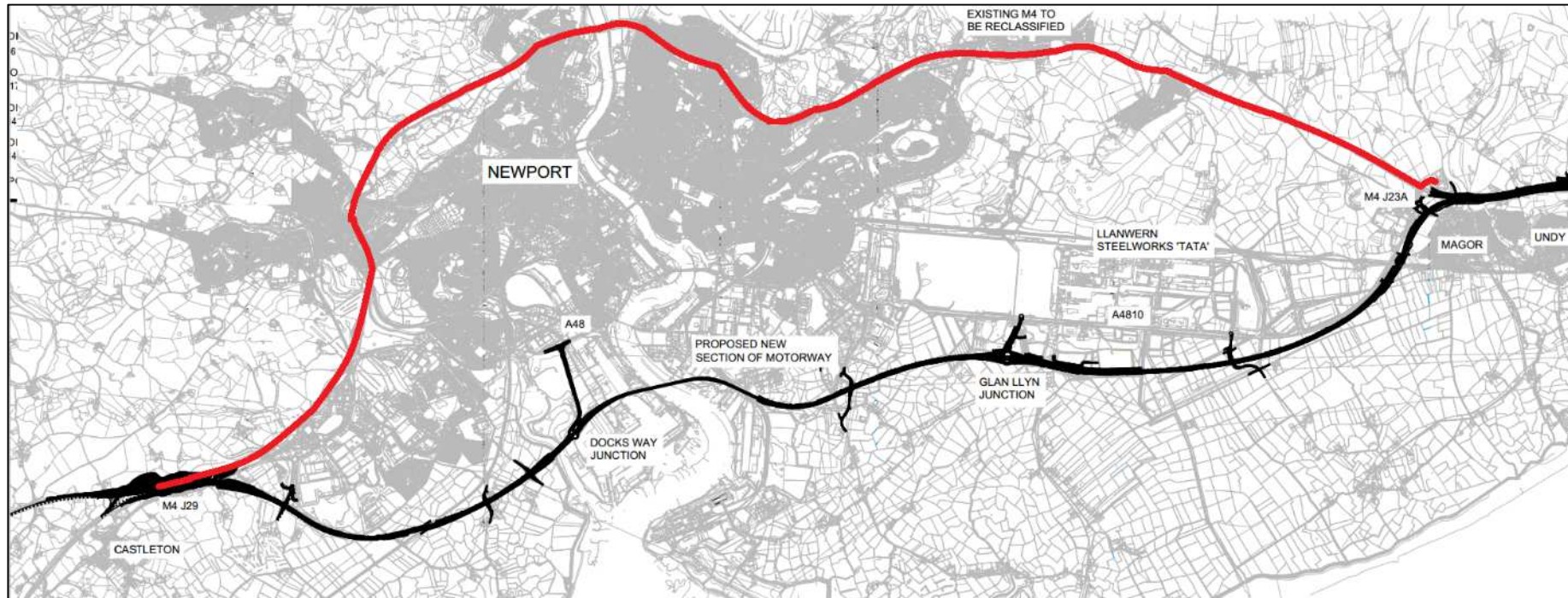
Westbound Egress from Magor Service Area to M4 via J23 – WG Proposal



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Westbound Egress from Magor Service Area to M4 via reclassified M4 – WG Proposal



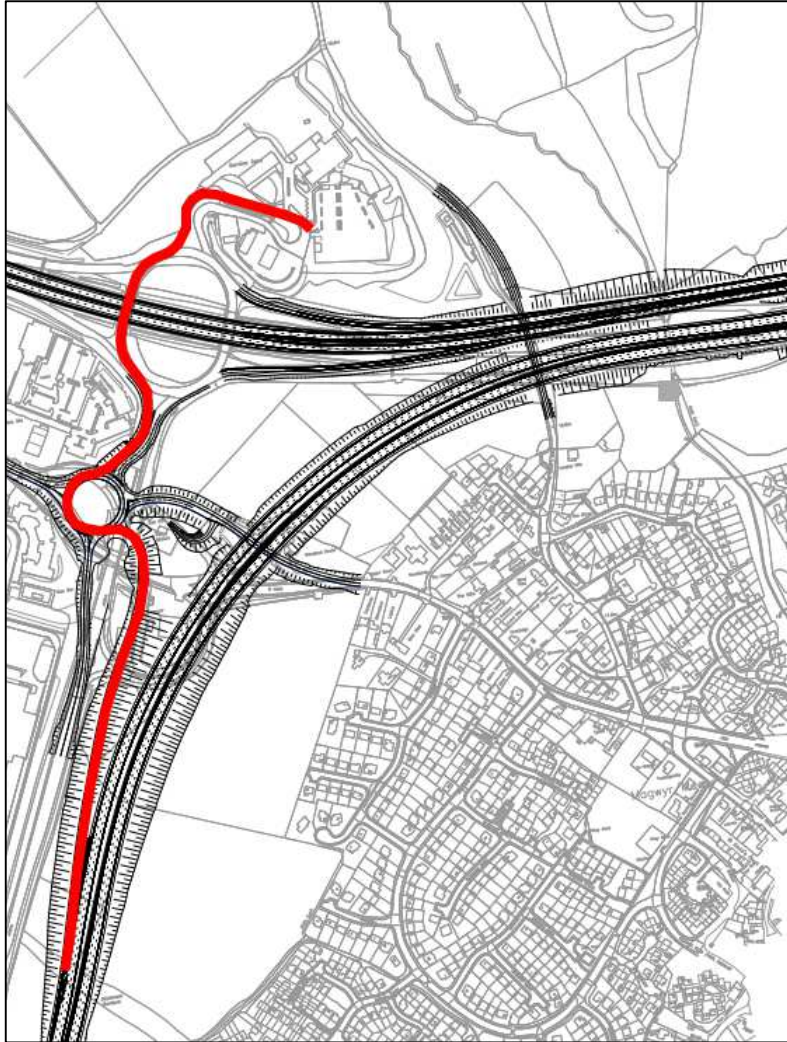
File Note

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Eastbound Access from M4 to Magor Service Area via Magor Eastbound Offisip – WG Proposal

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Eastbound Egress from Magor Service Area to M4 via J23 – WG Proposal



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1 June 2017

DOCUMENT CHECKING

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| | Prepared by | Checked by | Approved by |
| Name | Alex Whatley | Ben Butler | Ben Sibert |
| Signature |  |  | <div> Invalid signature</div> <div>X </div> <div>Ben Sibert Design Project Manager Signed by: Ben Sibert</div> |