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Maidenhead Station Transport Assessment Update

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1 Introduction

1.1 General

Atkins has been commissioned by Crossrail to undertake a review and provide an update of the original Transport Assessments (TA) undertaken at Maidenhead station as part of the Crossrail Environmental Statement (Volume 8c, Chapter 2, Route Window 25). The purpose of the update is to assess any potential changes to the likely significant permanent impacts identified in the original TA, resulting from revised passenger demand forecasts or design changes. There will not be a revised Environmental Statement prepared following this Transport Assessment update.

1.2 Structure of the Report

The Crossrail criteria for permanent impact assessment are presented in Volume 8a of the Crossrail Environmental Assessment.

Subsequently, the remainder of this report is structured as follows:

- Section 2 presents an updated assessment of **Maidenhead Station**, taking account of revised passenger number forecasts and design changes; and
- Section 3 presents a summary of the updated assessment.

2 Maidenhead Station

2.1 Baseline Conditions

2.1.1 Station Context

The station is situated at the southern edge of Maidenhead town centre, approximately 2 kilometres north of junction 8 of the M4. The station includes a supervised ticket office (Monday to Friday between 0600 and 2100 hours, Saturday between 0645 and 2100 hours, and Sunday between 0700 and 2100 hours), self-service ticket machines, toilet facilities and refreshment facilities. The main station entrance is situated to the north of the building off Station Approach, which forms the circulatory of a dedicated surface car park. Step free access to the ticket hall is provided from Station Approach, and both stepped and lift access is provided to the platforms.

There is a secondary access into the station south of the building off Shoppenhangers Road, which also provides step free access to the platforms via passenger lifts. Passengers are also able to use a subway and a set of steps to access the platforms and station facilities.

The station sits on the junction of the Great Western Mainline and the Marlow branch line, typically linking the station to London Paddington to the east (up to 6 trains an hour), Marlow and Henley on Thames to the North (1 train an hour) and Reading (up to 4 trains an hour) and Oxford (up to 2 trains an hour) to the west. There are also infrequent services that terminate at

During the preparation of the original TA Strategic Rail Authority (SRA) data for 2001 was used to establish the modal share for passengers entering and leaving the station in the morning peak period (0700 to 1000) on a typical weekday. These data are presented in Table 2.2.

Mode	2001 Mode Split %		2001 Person Trips		Future Mode Split %	
	In	Out	In	Out	In	Out
Bus	3	4.4	57	33	7	4.4
Park & Ride	28.9	0	549	0	24	0
Taxi	1.6	4.4	30	33	2	4.4
Drop Off	23.9	2.3	455	17	24	2.3
Cycle	4.4	0.8	84	6	6	0.8
Walk	38.2	88.1	726	661	37	88.1
Total	100	100	1,901	750	100	100

Table 2.1 AM Peak Period (0700 to 1000 Hours) Maidenhead Station Usage and Modal Split (2001) and Future mode split

Table 2.1 demonstrates that according to the survey the vast majority of people using Maidenhead either travel to the station on foot, use park and ride or get dropped off. There have not been any notable initiatives to cause a modal shift in passengers travelling to the station, and so the modal split presented in Table 2.1 is considered representative. However, the baseline against which the impacts of an operational Crossrail in 2016 can be assessed is the situation in 2016 without Crossrail. Table 2.2 presents both the original 2016 without Crossrail baseline used in the original TA and a revised baseline calculated for the purposes of this update. The methodology for the revised (future) mode split is contained in the original TA.

	2016 (Hybrid Bill)	2016 (JST Revised)	Net Change
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	In	Out	2-way	In	Out	2-way	In	Out	2-way
Bus	161	42	203	126	83	209	-35	+41	+6
Park & Ride	552	0	552	554	0	554	+2	0	+2
Taxi	46	42	88	50	62	112	+4	+20	+24
Kiss & Ride	552	21	573	653	19	671	+101	-2	+98
Cycle	138	7	145	111	15	126	-27	+8	-19
Walk	851	838	1,689	1,026	1,701	2,727	+175	+863	+1,038
Total	2,300	950	3,250	2,520	1,880	4,400	+220	+630	+1,150
Vehicles	1,011	551	1,562	1,115	653	1,769	+104	+102	+207

Table 2.2 Comparison of Original and Revised Person Trip Forecasts Without Crossrail, AM Peak Period (0700 to 1000 Hours), 2016 (using future mode split)

2.1.2 Highway Network

Station Approach forms the one way circulatory route around the station forecourt car park, and adjoins the A308 King Street via two priority junctions (an entrance and exit). The A308 King Street is a two-laned dual carriageway, with the station car park accesses adjoining the northbound carriageway in a left-in, left-out arrangement.

The A308 King Street passes under the rail line adjacent to the station, leading into A308 Braywick Road to the south. It connects with Stafferton Way, providing access to a retail park, and Rushington Avenue, leading to a residential estate, at a large 4-armed roundabout. The A308 Braywick Avenue continues southwards, linking to the A308(M) at Braywick roundabout approximately 1.7 kilometres south of the station. The A308(M) provides a direct link to junction 8 of the M4.

To the north the A308 King Street leads into Grenfell Road and the A308 Grenfell Place, which connects to the town centre road network including the one-way streets of Broadway and Queen Street via two signalised junctions. A further 200 metres north, the A308 connects to the A4 at a large roundabout, which aside from the M4, serves as the primary vehicular link between Maidenhead and Slough. The A308 continues north providing access to the residential areas north of Maidenhead town centre.

Grenfell Road links to the residential areas west of the town centre, and also provides access to Silco Drive approximately 200 metres west of the station. Silco Drive serves a number of light industrial units and a surface car park associated with the train station.

The southern access to the station opens onto Shoppenhangers Road, which adjoins the A308 Braywick Road via a signalised junction, immediately south of the rail bridge. Vehicles can only turn left out of Shoppenhangers Road onto the A308.

Access to the third surface car park at the station adjoins Shoppenhangers Road approximately 170 metres west of the station. Shoppenhangers Road connects to residential areas south west of Maidenhead town centre, and adjoins the A404(M) approximately 1.5 kilometres south west of the station. The A404(M) provides a direct link to junction 8 of the M4

2.1.3 Car Parking

There are three surface car parks associated with the station, situated on the station forecourt, Shoppenhangers Road (south of the rail line) and Silco Drive (north of the rail line). The car

parks provide a total of 389 parking spaces, available 24 hours a day. The car parks are currently managed by APCOA (UK) Ltd, and the charges are presented in Table 2.3.

Car park	Daily rate	Daily rate (after 1000 hours and at weekends)
Maidenhead station forecourt	£6.90	£4.10
Shoppenhangers Road	£5.70	£3.40
Silco Drive	£4.60	£2.80

Table 2.3 Car parking tariffs at Maidenhead station

There are also a number of multi-storey car parks situated in Maidenhead town centre, within comfortable walking distance from the station.

On-street parking opportunities within the vicinity of the station are limited due to the town centre location of the station, and the majority of streets are within Controlled Parking Zones. Those that are not either contain double yellow lines where parking is prohibited, or restricted parking bays (restricted to 1 hour).

2.1.4 Taxis

Taxis wait outside the main station entrance on Station Approach and to the rear on Shoppenhangers Road. On Shoppenhangers Road the taxi bays are located within bus laybys on either side of the carriageway, each accommodating room for one to two taxis at a time.

2.1.5 Loading/Dropping Off

There is formal no loading/drop off area at Maidenhead Station; however there is space for passengers to informally use Station Approach and Shoppenhangers Road as drop off points.

2.1.6 Local Bus Services

A set of bus stops, associated laybys and sheltered seating, are located outside the Shoppenhangers Road entrance to the station. They are served by Route 4/4C, an infrequent service (5 per weekday) linking Maidenhead to Shurlock Road and White Waltham, and Route 7/7s which links Maidenhead to Woodlands Park at a frequency of up to three buses an hour.

Bus stops are also located on the A308, either side of the dual carriageway. The northbound stop is located on Grenfell Road and to access the stop rail passengers are required to walk around the office building opposite the station entrance, amounting to a walk of approximately 150 metres. The bus stop is also served by Route 4/4C, as well as Route 5 (connecting to Cranbrook Drive and Farmers Way at 1 bus an hour), Route 6 (connecting to Bray, Fifield and Windsor at 1 bus an hour), Route 78 (connecting to Barming and Aylesford 5 buses per day), 53 (connecting to Wrexham Park Hospital, Bracknell and Binfield at 1 bus an hour), 127 (a Saturday only service connecting to Reading and Twyford) and 239 (connecting to Hurley and Henley, with 4 buses per day).

The southbound stop, located approximately 130 metres from the station entrance is only served by Route 4/4C and Route 53. Access to the stop from the train station is indirect due to the location of the crossing points on King Street, situated at the junction with Queen Street and the junction with Shoppenhangers Road.

There are also bus stops available in Maidenhead town centre, which are served by the majority of bus routes in the area.

2.1.7 Pedestrian Facilities

There is a paved area outside the station entrance off Station Approach forming the station forecourt. It links to a narrow footway bordering the southern side of Station Approach which

connects to the footway bordering the A308 King Street. A wider, more suitable footway also borders the northern side of Station Approach, which connects to the station forecourt at the western end of the car park. The northern footway also connects to the footway bordering the northbound carriageway of the A308 King Street.

Footways border both sides of the A308, and controlled crossings are provided at the junction with Shoppenhangers Road and Queen Street providing connectivity to the town centre and other destinations east of the station. Opportunities to cross away from the formal crossings are limited due to the kerbed central reserve on the section of the A308 King Street that runs past the station. The footways in this area are designated as shared cycle / footways.

Footways also border Shoppenhangers Road and a zebra crossing is provided approximately 40 metres west of the rear stations entrance. The northern footway provides a direct link to the Shoppenhangers Road car park.

Passengers accessing from the station from the Silco Drive car park are able to use the footway bordering the A308 and Grenfell Road, however only a single narrow footway is provided along Silco Drive itself.

2.1.8 Cycle Facilities

There are a number of cycle parking provisions at Maidenhead station accommodating a total of 158 bikes, situated adjacent to the main entrance on the station forecourt, adjacent to the rear access on Shoppenhangers Road and within the station on platform 5. Two thirds of the parking is in the forecourt and on platform and is in the form of sheltered cycle racks. The cycle parking underneath the railway arches on the south side of Shoppenhangers Road is Sheffield Stands in locked areas.

In terms of cycle routes, there is shared cycle/footway bordering both sides the A308 King Street within the vicinity of the station, and Shoppenhangers Road is part of the National Cycle Network route 4. National Cycle Network route 4 is part of the long distance cycle route between Reading and London, and is an on-road facility along Shoppenhangers Road, meaning it shares the carriageway with generally traffic. There is currently no signage that demarcates Shoppenhangers Road as a route suitable for cyclists.

2.2 Assessment of Design Changes and Revised Passenger Numbers

2.2.1 Previous Assessment: Crossrail Environmental Statement 2005

The impacts identified in the previous assessment are shown in Table 2.4. The table is taken from the Crossrail Environmental Statement, Volume 8C, Chapter 2. Tables 2.3.

Potential Impact		Significance	Committed Mitigation	Residual Impact	
				Description	Significance
<u>Parking and Loading</u>					
OT6d	Loss of 114 station car parking spaces	Significant	None	Loss of 114 station car parking spaces	Significant

Table 2.4 Permanent Impacts at Maidenhead station (Crossrail ES Volume 8c)

2.2.2 Design Changes

The design changes since the ES Assessment have an effect on the traffic and transport impacts, in that there will no longer be a loss of car parking spaces.

2.2.3 Revised Passenger Numbers

In 2005 it was predicted that there would be 3,251 passengers using Maidenhead Station during a weekday AM peak period (0700 to 1000 hours) when Crossrail services became operational.

The revised passenger forecasts for Crossrail predict that there will be a total of 4,540 passengers using Maidenhead Station, of which 2,610 passengers will be arriving at the station to use departing rail services, and 1,930 leaving the station after using arriving services. This amounts to an increase in the forecast number of passengers with Crossrail by a total of 1,289 in the AM peak period.

The revised number of overall passengers has been allocated to each mode of travel, based on the modal split in the baseline assessment, ref. CRL1-XRL-T3-RST-CR001-00014. The results for the AM peak period are presented in Table 2.5. The PM peak is expected to be the reverse of these numbers.

	2016 (Hybrid Bill)			2016 (JST Revised)			Net Change		
	In	Out	2-way	In	Out	2-way	In	Out	2-way
Bus	184	42	226	131	85	215	-54	+43	-11
Park & Ride	472	0	472	561	0	561	+89	0	+89
Taxi	46	42	88	52	64	116	+6	+22	+28
Kiss & Ride	598	21	619	653	19	672	+55	-2	+53
Cycle	150	7	157	115	15	130	-35	+8	-27
Walk	851	838	1,689	1,099	1,747	2,845	+248	+909	+1,156
Total	2,301	950	3,251	2,610	1,930	4,540	+309	+980	+1,289
Vehicles	983	589	1,572	1,124	656	1,780	+142	+67	+209

Table 2.5 Predicted Passengers Revised 2016 Passenger Numbers with Crossrail (0700 – 1000 Hours)



For the purposes of assessing the likely significant impacts that would arise with Crossrail using the revised passenger demand forecasts the comparison is between 'without Crossrail' 2016 (revised) and 'with Crossrail 2016 (revised).

The following Table 2.6 presents the results of the traffic impact assessment update using the revised passenger demand forecasts. To ensure a robust and thorough update, the assessment is made against the whole suite of significance criteria used to assess impacts for the Crossrail ES.

Potential Impact	Impact Description & Assessment	Significance	New Significant Impact?
Traffic levels and delays to vehicle occupants			
OT1a A 10 per cent increase in morning peak hour two-way traffic levels on the adjoining highway and exceeding the highway capacity on non-congested links.	The revised passenger numbers show an increase of 142 vehicles compared to the ES assessment. This amounts to an increase of 47 vehicles an hour, or just under 1 vehicle a minute. This not considered significant enough to change the original conclusions.	Not significant -	No
OT1b Traffic to or from the station development exceeds 5 per cent of the morning peak hour two-way traffic flow on the adjoining highway where traffic congestion exists or will exist, or in another <i>sensitive</i> area (defined as schools, hospitals or other community facilities).	The revised passenger numbers show an increase of 142 vehicles compared to the ES assessment. This amounts to an increase of 47 vehicles an hour, or just under 1 vehicle a minute. This not considered significant enough to change the original conclusions.	Not significant	No
OT1c Increased traffic levels that exceed 30 per cent of the off-peak-hour two-way traffic on the adjoining highway in congested or non-congested conditions.	The revised passenger numbers show an increase of 142 vehicles compared to the ES assessment. This amounts to an increase of 47 vehicles an hour, or just under 1 vehicle a minute. This not considered significant enough to change the original conclusions.	Not significant	No
OT1d A 5 per cent decrease in morning peak-hour modelled traffic link speeds (over future baseline flows) for congested areas (defined as junction approaches running at an average of 85 per cent of capacity during the peak hour) on an individual highway link.	Traffic speed has not been assessed as part of the revised assessment. The net increase in vehicle numbers is not considered significant enough to have a material bearing on traffic speeds.	Not significant	No
OT1e A 10 per cent decrease in morning peak-hour modelled traffic link speeds in non-congested areas.	Traffic speed has not been assessed as part of the revised assessment. The net increase in vehicle numbers is not considered significant enough to have a material bearing on traffic speeds.	Not significant	No
OT1f A 30 per cent decrease in off-peak modelled traffic link speeds in congested or non-congested areas.	Traffic speed has not been assessed as part of the revised assessment. The net increase in	Not significant	No



Potential Impact	Impact Description & Assessment	Significance	New Significant Impact?
	vehicle numbers is not considered significant enough to have a material bearing on traffic speeds.		
OT1g There will be a permanent increase in journey length of 1250 metres.	There are no alterations to the immediate highway network as part of Maidenhead Station improvements; therefore no increase in journey length is expected.	Not significant	No
Public transport			
OT2a A 20 per cent change in journey times (an increase or decrease) on bus links.	No changes in bus journey times are expected.	Not significant	No
OT2b A permanent change in journey distance of more than 400 metres.	No changes in bus journey distances are expected.	Not significant	No
OT2c A change (an increase or decrease) in representative journey times of more than 10 per cent.	There will be an improved journey time for passengers using the Crossrail service	Significant -	Yes
Pedestrian delay and loss of amenity			
OT3a A predicted permanent increase of more than 10 per cent in the 12-hour weekday two-way traffic flow; <i>and</i> <ul style="list-style-type: none"> • the increase will be more than 40 vehicle movements a day; <i>and</i> • there will be over 100 two-way movements of pedestrians per 12-hour average weekday; <i>and</i> • the vulnerability of the pedestrian is 'high'. 	The increase in vehicular traffic will be low over a 12 hour period; however there will be an increase in pedestrian footfall by approximately 6 passengers a minute. This is not considered to significant enough to change the original conclusion.	Not significant	No
OT3b A predicted permanent increase of more than 30 per cent in the 12-hour weekday two-way traffic flow; <i>and</i> <ul style="list-style-type: none"> • the increase is more than 40 vehicle movements a day; <i>and</i> • there will be between 50 and 100 two-way movements of 	The increase in vehicular traffic will be low over a 12 hour period, however the increase in pedestrian footfall means that there may be an increased pedestrian vulnerability.	Not significant	No

Potential Impact	Impact Description & Assessment	Significance	New Significant Impact?
pedestrians per 12-hour average weekday; <i>and</i> • the vulnerability of the pedestrian is 'high'.			
OT3c A predicted permanent increase of more than 30 per cent in the 12-hour weekday two-way traffic flow; <i>and</i> • the increase will be more than 40 vehicle movements a day; <i>and</i> • there will be over 100 two-way movements of pedestrians per 12-hour average weekday; <i>and</i> • the vulnerability of the pedestrian is 'moderate'.	The increase in vehicular traffic will be low over a 12 hour period, however the increase in pedestrian footfall by approximately 6 passengers a minute, means that there may be an increased pedestrian vulnerability. It is not considered to significant enough to change the original conclusion.	Not significant	No
OT3d A predicted permanent increase in journey length of more than 250 m for pedestrians; <i>and</i> • there will be over 100 two-way movements of pedestrians per 12-hour average weekday.	There will be no increase in pedestrian journey lengths.	Not significant	No
OT3e A predicted permanent increase in journey length of more than 500 m for pedestrians; <i>and</i> • there will be between 50 and 100 two-way movements of pedestrians per 12-hour average weekday.	There will be no increase in pedestrian journey lengths.	Not significant	No
OT3f A predicted permanent increase in journey length of more than 1000 m for pedestrians; <i>and</i> • there will be less than 50 two-way movements of pedestrians per 12-hour average weekday.	There will be no increase in pedestrian journey lengths.	Not significant	No
<u>Cyclist delay and loss of amenity</u>			
OT4a a predicted permanent increase of more than 10 per cent in 12-hour weekday two way traffic flow; <i>and</i> • the increase will be more than 40 vehicle movements a day; <i>and</i>	The increase in vehicular traffic will be low over a 12 hour period, and whilst there will be a marginal increase in cycle activity at the station, the revised numbers show a marginal decrease compared to the original Crossrail	Not significant	No



Potential Impact	Impact Description & Assessment	Significance	New Significant Impact?
<ul style="list-style-type: none"> • there will be over 100 two-way movements of cyclists per 12-hour average weekday; <i>and</i> • the vulnerability of the cyclist is 'high'. 	ES.		
<p>OT4b a predicted permanent increase of more than 30 per cent in 12-hour weekday two way traffic flow; <i>and</i></p> <ul style="list-style-type: none"> • the increase is more than 40 vehicle movements a day; <i>and</i> • there will be between 50 and 100 two-way movements of cyclists per 12-hour average weekday; <i>and</i> • the vulnerability of the cyclist is 'high'. 	The increase in vehicular traffic will be low over a 12 hour period, and whilst there will be a marginal increase in cycle activity at the station, the revised numbers show a marginal decrease compared to the original Crossrail ES.	Not significant	No
<p>OT4c A predicted permanent increase of more than 30 per cent in 12-hour weekday two-way traffic flow; <i>and</i></p> <ul style="list-style-type: none"> • the increase will be more than 40 vehicle movements a day; <i>and</i> • there will be over 100 two-way movements of cyclists per 12-hour average weekday; <i>and</i> • the vulnerability of the cyclist is 'moderate'. 	The increase in vehicular traffic will be low over a 12 hour period, and and whilst there will be a marginal increase in cycle activity at the station, the revised numbers show a marginal decrease compared to the original Crossrail ES.	Not significant	No
<p>OT4d A predicted permanent increase in journey length of more than 750m; <i>and</i></p> <ul style="list-style-type: none"> • there will be over 100 two-way movements of cyclists per 12-hour average weekday. 	The journey length for cyclists will not be affected by the Crossrail scheme.	Not significant	No
<p>OT4e A predicted permanent increase in journey length of more than 1250m for cyclists; <i>and</i></p> <ul style="list-style-type: none"> • there will be less than 100 two-way movements of cyclists per 12-hour average weekday. 	The journey length for cyclists will not be affected by the Crossrail scheme.	Not significant	No
<u>Station and interchange impacts</u>			



Potential Impact	Impact Description & Assessment	Significance	New Significant Impact?
<p>OT5 Impacts that may be caused by additional Crossrail passengers arriving and departing at stations have been assessed using professional judgement, taking account of:</p> <ul style="list-style-type: none"> • local transport conditions at each station; <i>or</i> • forecast additional Crossrail passengers; <i>or</i> • the resulting increases in passengers arriving and departing on foot, by bicycle, by car and by bus and taxi. <p>Impacts that it is considered will not be able to be mitigated by local improvement measures are reported as significant impacts.</p>	<p>The revised forecast passenger numbers show an increase of 1,289 passengers over the course of the AM peak period compared to the Crossrail ES. This amounts to an increase of 430 per hour, or up to 7 passengers a minute in the peak hour. This is not considered significant enough to change the original conclusion</p>	Not significant	No
<u>Parking and loading</u>			
<p>OT6a A loss of special-use on-street or off-street spaces, including spaces for disabled persons, buses, taxis, doctors, ambulances, police vehicles and car club bays.</p>	<p>As part of the GRIP 4 design proposals two short stay accessible parking bays are to be provided on Horn Lane immediately outside the station entrance.</p>	Not significant	No
<p>OT6b Any predicted increase in on-street parking demand in the vicinity of the station.</p>	<p>There is no on-street parking loss expected from the Crossrail scheme</p>	Not significant	No
<p>OT6c A loss of private car parking.</p>	<p>There is no loss of private car parking expected from the Crossrail scheme.</p>	Not significant	No
<p>OT6d Any loss of off-street station car parking.</p>	<p>The original ES identified a loss of 114 car parking spaces. The current design proposals, revised since the Crossrail ES, do not result in any loss of parking, and therefore the significant impact will no longer arise.</p>	Not significant	No
<u>Waterways</u>			
<p>OT7 Permanent loss of, or prevention of access to, moorings or waterside or waterborne</p>	<p>No waterways are impacted upon by the Crossrail scheme.</p>	Not significant	No



Potential Impact	Impact Description & Assessment	Significance	New Significant Impact?
<p>facilities or closure of a route with a diversion distance of more than 1000 m, considering the level of use and local circumstances.</p> <p>Note: impacts on waterside pedestrians, cyclists, mobility impaired persons and equestrians are assessed in relation to the vulnerable road user criteria.</p>			
<u>Accidents and safety</u>			
<p>OT8 Those junctions that have experienced more than ten personal injury accidents in a three year period ending in 2003 or 2004 for which data is available: <i>or</i></p> <ul style="list-style-type: none"> • links for which data is available that have experienced an average of more than ten personal injury accidents per 100-metre length in a three-year period ending in 2003 or 2004; <i>and</i> • the junctions or links would be subject to an increase of 10 per cent or more in the total 12-hour weekday traffic flow. 	There may be an increase in vulnerability for pedestrian incidents, resulting from the increase in pedestrian activity in the area.	Not significant	No

Table 2.6 Revised Impact Assessment at Maidenhead Station

The results of the revised assessment show that there is a new significant impact is expected on journey time, with a significant reduction to the journey time from Maidenhead to London. In addition to this, there is no longer a significant impact on parking expected from the Crossrail scheme, as there will be no loss of car parking at the station.

2.3 Mitigation of Significant Impacts

Table 2.7 below presents the updated likely significance of permanent impacts at Maidenhead Station.

Potential impact		Significance	Committed Mitigation	Residual Impact	
				Description	Significance
Public Transport					
OT2c	Improved journey time.	Significant	N/a	No mitigation required.	Significant

Table 2.7 Revised Impact Assessment

The Crossrail ES and original TA identify the likely significant impacts based on passenger demand forecasts available at the time of the Hybrid Bill. The assessment of these likely significant impacts has been updated to take into account the revised passenger demand forecasts issued to Crossrail in 2010 by the Project Sponsors (DfT and TfL). The assessment update shows that the new likely significant impact as a result of Crossrail amounts to a positive impact from a reduction in journey time. There is no longer a significant impact on car parking, as there will not be a loss of parking resulting from the Crossrail scheme.

No mitigation is therefore required at Maidenhead station.

2.4 Other Measures

Suggested measures that will improve the traffic and transport at Maidenhead Station are presented for each mode of travel below. These are transport improvements that will improve the station as a whole, as well as transport in the borough in general, and are not necessarily associated with any Crossrail impact.

2.4.1 Private car

Measures that reduce the need to travel to the station by car through improvements to alternative means of access will be implemented. There are new cycle parking facilities being provided and an improved pedestrian environment with the provision of an attractive paved station forecourt area. This will contribute to reducing the increase vehicular traffic associated with the station, and on-street car parking in surrounding areas.

2.4.2 Pedestrians

It would be beneficial to rationalise the signal timings at the junctions on the A308 to ensure that the pedestrian crossings are efficiently included within the signal cycle times.

There is no wayfinding scheme in operation around Maidenhead Station, so pedestrians have no clear direction in terms of access routes to the station, access to facilities, or to other modes of transport from the station exits.

There is a lack of a crossing point outside the station across Braywick Road. There are plans for improvements but a direct link to the southbound stops on Braywick Road. These could be incorporated with bus measures – see below.

A wayfinding strategy could be developed for the immediate station surroundings, as well as inside the station. It should provide information on links to surrounding areas such as pedestrian links to key residential areas and interchange information such as bus stop locations. This would be important for Crossrail interchange with local bus services.

The Legible London system is a pedestrian wayfinding system based on best practice and extensive research, and is designed specifically for London. It has been implemented in many boroughs of London, and examples are shown in Figure 2.1 Wayfinding Signage Example.



Figure 2.1 Wayfinding Signage Example

2.4.3 Cyclists

It should be noted that additional cycle parking is being provided at the station. It would be beneficial to consider improving the cycle lane provision around the station, in particular on Shoppenhangers Road where there are no markings indicating that there it is part of a Sustrans National Cycle Network route.

2.4.4 Taxi

A wayfinding scheme would benefit interchange with taxis by directing passengers to the appropriate location for taxi services. Taxi services may be more popular as they may give a more seamless journey, given the emphasis on journey and frequency from Crossrail

There have been some concerns raised about the effects of the taxis on Shoppenhangers Road because they do prevent buses accessing the stop. One option would be to give the entire lay-by over to taxis and have the bus stop stopping on the running lane. This would have to be west of the station (the footway to the east is narrow) and it would be possible to relocate the zebra crossing somewhat west with little obvious dis-benefit to pedestrians.

2.4.5 Kiss and Ride

The general transport improvements in terms of information at the station and wayfinding will encourage the use of other modes of travel and so there are no other general transport improvements suggested for Kiss and Ride.

2.4.6 Interchange with Bus

The implementation of a wayfinding and signage strategy would benefit bus users, by guiding passengers directly to appropriate bus stops. It would also be beneficial to improve the information afforded to passengers.

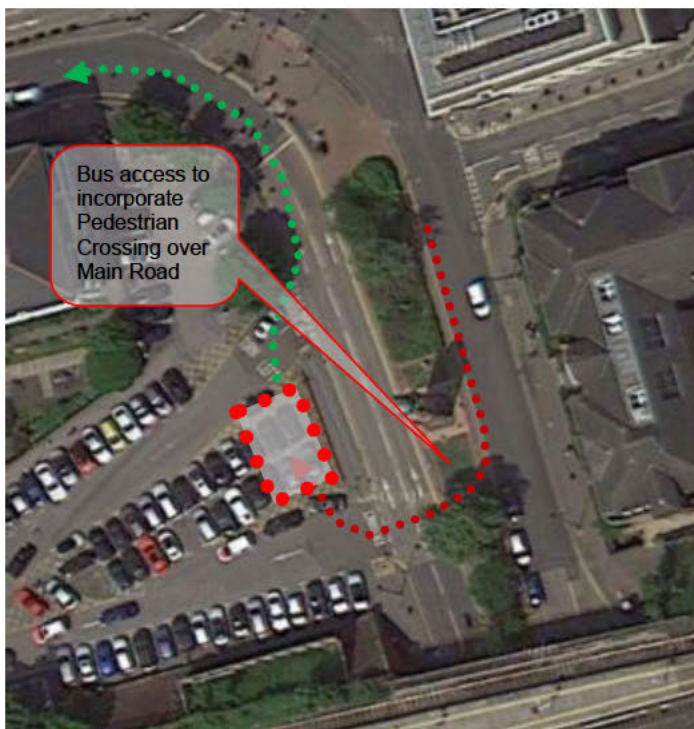
The bus stops around Maidenhead station should be fitted with Real Time Information capabilities, which enable passengers to know exactly how long they will be waiting for their bus and this could be integrated with Real Time Information boards within the station, improving passenger experience at the interchange.

The feasibility of relocating stops closer to the station should also be considered, to provide passengers transferring between bus and rail with a quicker and easier interchange.

There is not a good interchange with the station or, from our local enquiries, little likelihood of one without also providing standing space for buses. One option for this would be to provide stands in the car park outside the station – a similar arrangement occurs elsewhere such as with East Finchley in London. Bus routing through the town centre could then be as shown below.



The station and stand access could then be.



East Finchley



3 Summary

An assessment of the revised passenger numbers and design changes at the Crossrail Station in Maidenhead has been undertaken and any new significant impacts identified. The assessment has been based on the Crossrail Permanent Impact Assessment Criteria as presented in Volume 8a of the Crossrail Environmental Assessment.

The revised assessment has shown that the only new impact is a positive impact resulting from improved journey times due to better connectivity between Maidenhead and central London. There is no longer a significant impact on parking at Maidenhead, as identified in the original Crossrail ES, as there is no longer a significant loss of parking resulting from the Crossrail scheme. There are no new impacts resulting from the revised passenger demand forecasts and they are not considered significant enough to have a material bearing on the original Crossrail ES conclusions. No mitigation is required at Maidenhead station.