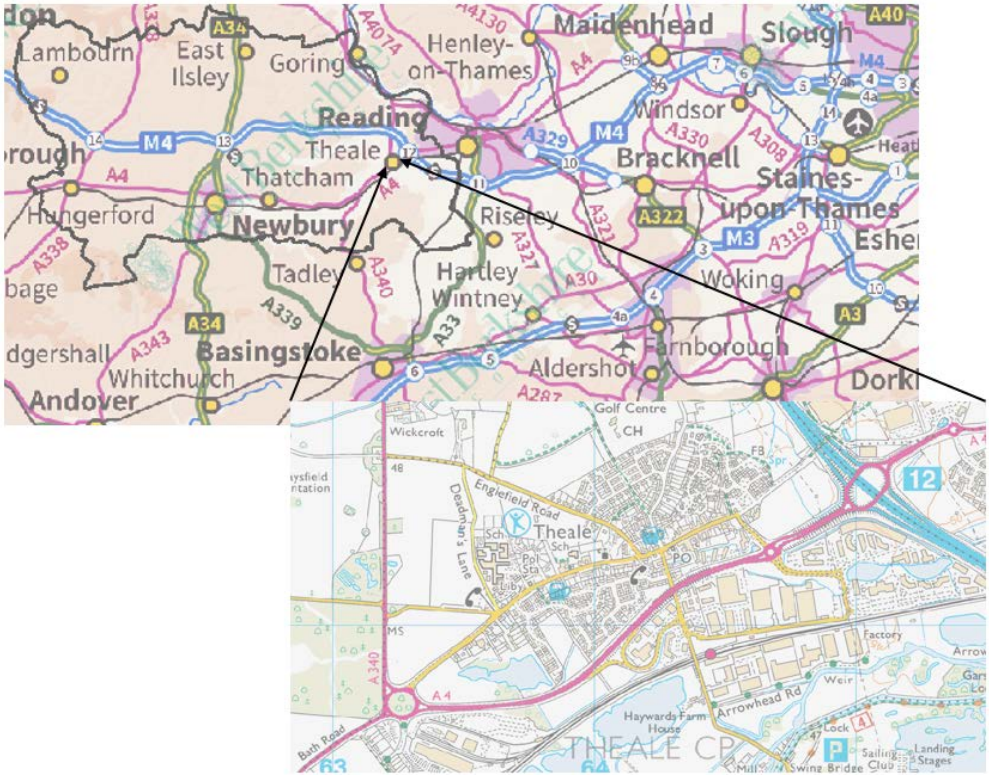
Theale Railway Station Upgrade Scheme

Appraisal Specification Report (December 2019, *updated May 2020*)



HM Government

Thames Valley Berkshire LOCAL ENTERPRISE PARTNERSHIP

GWR

West Berkshire COUNCIL

Appraisal Specification Report
for
Theale Railway Station Upgrade Scheme

1. Introduction

1.1 The Berkshire Local Transport Body (BLTB) is responsible for the management of the major transport scheme funding for the Thames Valley Berkshire Local Enterprise Partnership (TVB LEP) area. Great Western Railway (GWR) and West Berkshire Council (WBC) are jointly promoting a scheme to upgrade facilities at Theale Railway Station. The scheme has been granted Programme Entry Stage status and is subject to the submission of a satisfactory business case before it can formally receive full funding approval from the BLTB.

Purpose of Report

1.2 The purpose of this Appraisal Specification Report (ASR) is to identify appropriate methodologies for the various elements of appraisal required for the Major Scheme Business Case (MSBC). It will provide a basis and reference for the work undertaken and ensure that all parties, including the TVB LEP's independent assessors, are aware of the methods, assumptions, timescales and risks.

1.3 The methodologies outlined in this report are consistent with the Transport Appraisal Process as stated in Section 2.12.2 of the Department for Transport's Transport Appraisal Guidance (TAG), these being as follows;

- Proposed approach to modelling and forecasting;
- The proposed methodology for assessing each of the sub-impacts presented within the Appraisal Summary Table (AST);
- Proposed level of design or specification which will inform the cost estimation, and how better cost information will be obtained.

1.4 In addition and in accordance with the TAG requirements, an Appraisal Specification Summary Table (ASST) is included at the end of the ASR at section 5.

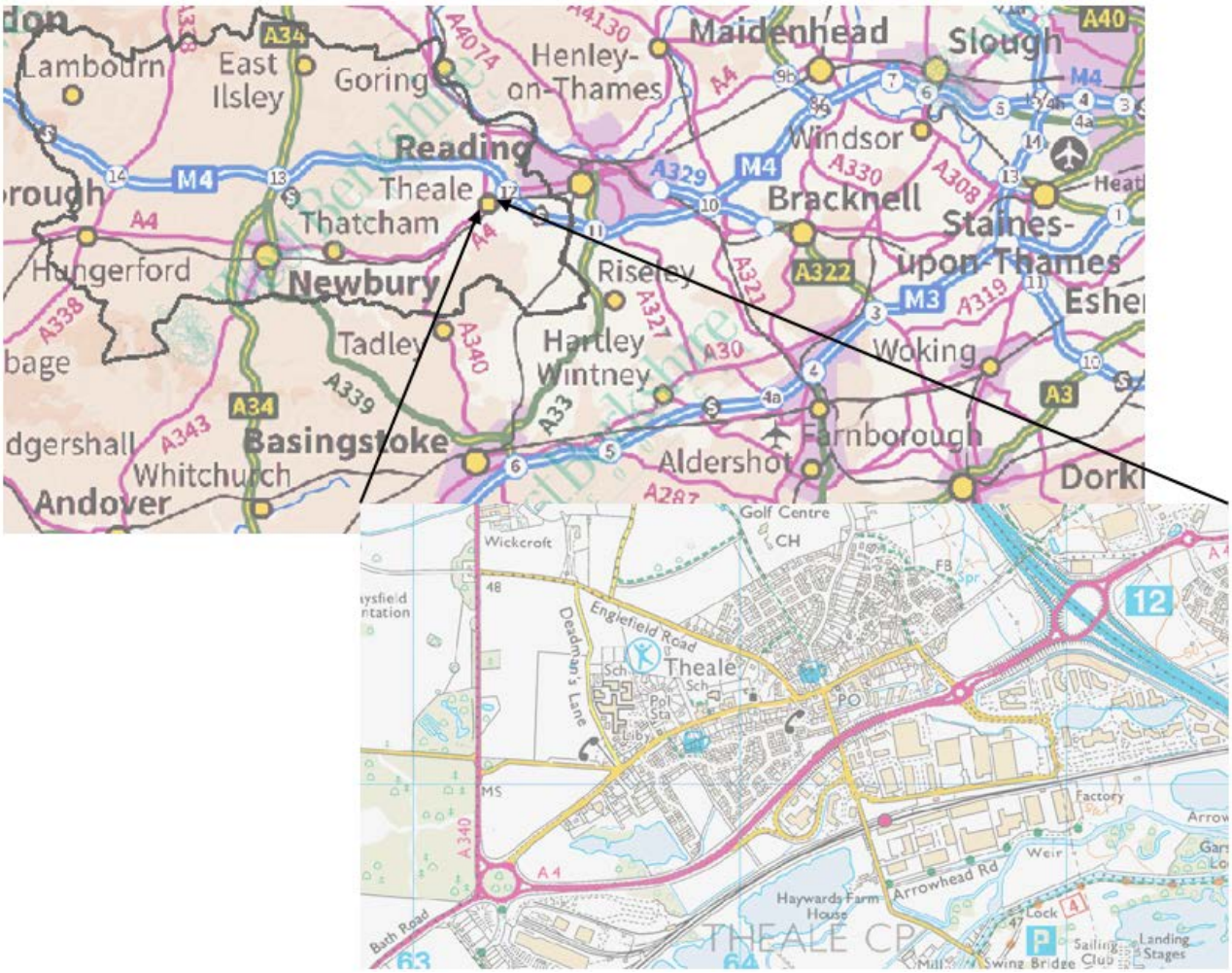
Scheme Location and Description

1.5 Theale Station is located in West Berkshire within the Thames Valley Berkshire LEP area. The station is within close walking distance of the centre of Theale, the A4 Theale bypass, industrial estates and the Arlington Business Park. The location is shown in Figure 1.0.

1.6 Electrification of the Berks & Hants line between Reading and Newbury was completed in early 2019, which has allowed new electric and bi-mode trains to operate local and longer distance services along the line. These new trains have brought significant benefits to passengers through greater seating capacity and comfort.

1.7 The station is due to have a new footbridge with lifts provided by Network Rail through the Department for Transport's (DfT's) "Access for All" fund, with a commitment for this to be delivered by the end of the current Network Rail Control Period (i.e. March 2024). The location of the new footbridge is due to be further east down the station platform than the current access to platforms via steps and a walkway adjacent to the road bridge (Station Road). The provision of the new footbridge and lifts will allow the station platforms to become fully accessible for the first time.

Figure 1.0 – Theale Station Location



1.8 A new station building was provided in 2014 as part of the Reading area Local Sustainable Transport Fund project. This is located at the eastern end of the station car park. Although delivered on site, the building has yet to be commissioned largely as a result of uncertainties surrounding the delivery of the Network Rail "Access for All" footbridge closeby, and requires minor internal improvements, to ensure that it is compliant with current railway disability access standards, enable it to be brought into service. When open, it will provide:

- New ticket office with accessible ticket window
- New retail space
- Provision of toilets

1.9 The opening of the station building would contribute to the overall aim of upgrading Theale Station and allow it to become a park and rail facility with the majority of journeys expected to be in the direction of central Reading and London.

1.10 By bringing the new station building into operational use, it will allow the station to be better orientated to the new NR station footbridge, due to be completed by the end of 2022. The intention is that the new station building will be brought into use in conjunction with the new footbridge and lifts becoming operational. As part of this, revised arrangements will be required for passenger interchange and pedestrian, cycle and vehicular movements in the station car park. Great Western Railway have identified a package of further improvements that can be incorporated into the upgrade of the station to meet the needs of travellers in the future. This element of the scheme will deliver:

- New 100 space covered, secure cycle parking area
- Attractive forecourt area around new station building, with improved drop-off points, taxi rank, bus stands, and pedestrian/cycle movement within car park
- Increased car parking capacity of around 111 spaces with an additional deck on existing car park
- Provision of electric vehicle charging points, plus passive provision for the addition of future points to meet anticipated future demand

2. Objectives of the Scheme

2.1 Four main objectives have been identified to directly address the key problems and issues identified by the project, and to guide the desired outcomes. They have been developed to align with the local policies of WBC as co-scheme promoter, the TVB LEP Strategic Economic Plan, and the Government's national planning and transport policies.

2.2 Table 2.0 below outlines the desired outcome for each of the four objectives for the project.

Table 2.0 – Scheme Objectives and Desired Outputs & Outcomes for the Theale Station Upgrade Project

Objective	Desired Outputs & Outcomes
1) Improve passenger interchange facilities and enhance the appearance of the station.	*Outputs* • Undertake works to allow new station building to be brought into use and to ensure that it is compliant with current rail industry standards. • Provision of new retail facility at the station. • Delivery of new covered, secure cycle parking facility for up to 100 bicycles with improved CCTV. • Improved interchange with drop-off zones and clear, safe walking/cycling routes through the station car park. • Delivery of improved local walking and cycling routes to the station, including improvements to Wayfinding signing. *Outcomes*

	• Opening of new ticket office building (including retail space) • Increased number of walking and cycling trips to the station. • Increased safety on Brunel Road and Station Road, particularly for pedestrians and cyclists. • Sustain local business parks by providing a more attractive and user-friendly station. • Achieve improved passenger satisfaction levels with station facilities. •
2) To enable the station to be a gateway for journeys to central Reading.	*Outputs* • Provision of increased level of car parking spaces to accommodate increased demand. *Outcomes* • To enable the station to become a Park and Rail facility for access to regional service centres. • Assist in relieving congestion on the M4 and key routes into central Reading. • .
3) To provide a fully accessible stations that allows ease of access for all rail users	• *Outputs* • Modifications to new ticket office to include facilities for disabled customers. • Provision of a clearer, safer walking/cycling route through station car park to/from new station building and new "Access for All" footbridge. • Enhanced station lighting to current standards. *Outcomes* • Enables station to become fully accessible for all rail users. • Improved safety through better segregation of vulnerable users. • Greater assurance for rail users in terms of personal safety.
4) Deliver enhancements that minimise the carbon footbridge of the station.	*Outputs* • Provision of infrastructure (including passive provision) to support the charging of plug-in vehicles. • Incorporation of solar panels as part of the improvements to the station. *Outcomes* • Rail users with plug-in vehicles will be able to charge their vehicles at the station. • Enables the station to become part of the UK's ULEV charging network in line with the "Road to Zero" strategy. • Contribute to reducing the carbon footprint of the station and the wider rail industry.

3. Challenges and Issues

3.1 The need for improvements at Theale Railway Station has been talked about for a number of years. We are now in a position where funding has been allocated through the DfT's "Access for All" project for the delivery of a new footbridge with passenger lifts at the station, with a commitment for this to be delivered in the current NR Control Period, and a programmed completion date by the end of 2022.

3.2 Table 3.0 below provides a summary of the main issues facing passengers using Theale Station. Many of these have been identified through engagement with local stakeholders and through meetings between WBC and GWR.

Table 3.0 – Issues Summary Table

Issue identified	Opportunities for addressing the issue
No step-free access to main station platforms	This is to be addressed through the construction of the new footbridge with lifts to be delivered by Network Rail's "Access for All" project.
New station building provided in 2014, but as yet not in use	The project provides an opportunity to bring this facility into use for the benefit of customers by undertaking the modifications required to allow it to be compliant with current rail industry standards..
Lack of **customer facilities** at the station	The new station building will provide improved customer facilities, such as an improved ticket purchasing environment, toilets, plus WiFi coverage for the station.
Lack of **retail facilities** at the station and surrounding area	The new station building includes space for a retail unit, which can be used once the building becomes operational.
Lack of **facilities** for disabled passengers	In addition to the new accessible footbridge, improvements will be made to the new station building to provide an accessible ticket desk and accessible toilet, appropriate number of disabled parking spaces and compliant walking route to access the station platforms and forecourt.
Lack of secure **cycle parking** facilities	A new secure, covered cycle parking areais to be provided for around 100 cycles with CCTV coverage.
Conflict between car park users and pedestrians/cyclists in station car park	A new forecourt area will be provided around the new station building which will include a safe walking & cycling route between the new station building and the NR footbridge.
Existing car park currently at or near to **capacity**	Provision of additional deck on existing car park capacity to increase car parking by around 111 spaces.
Safe connections to local walking and cycling network	Improvements will be made on local highway and footway network on Brunel Road and Station Road to ensure safe walking and cycling access.
To enable the station to become a **Park & Rail** facility for journeys into central Reading	This can be achieved through the opening of the new station building and the provision of increased number of car parking spaces at the station.
Lack of **electric vehicle chargepoints** for customers using plug-in vehicles	Electric vehicle chargepoints, plus passive provision for further points to accommodate future demand will be included as part of the car park enlargement proposals.
Reduce **carbon footprint** of the station	Design will review the energy efficiency of the station and aim to incorporate the addition of photo-voltaic panels and provision of electric vehicle chargepoints.

3.3 The scheme proposed is extremely positive in the way that it helps to address all of the issues identified in Table 3.0. The following section discusses the ways in which the scheme will be assessed to demonstrate the benefits that it will bring.

4. Appraisal Methodology

4.1 This section sets out the ways in which various aspects of the scheme will be assessed within the Full Business Case. It discusses the approach and the guidance it will follow and covers economic appraisal, environmental impacts, social impacts and public accounts impacts.

Economic Appraisal

4.2 The economic appraisal is being developed in a proportionate manner and to be consistent with the DfT's guidance set out in WebTAG, which aligns with HM Treasury's Green Book guidance. Our approach is informed by extensive experience of developing station enhancement funding cases encompassing a wide range of enhancements to stations and their local area.

4.3 Scheme options have been prepared and assessed with a resulting preferred option being developed, as will be described in the Strategic Case. The scheme will be completed in 2022.

Scheme Costs

4.4 For the economic appraisal the cost inputs will encompass:

- Capital cost estimates provided by GWR's cost advisors
- Capital cost expenditure profile provided by GWR's cost advisors
- Change in station operating costs advised by GWR
- Change in car park operating costs advised by GWR

As a station project the appropriate Optimism Bias uplift will be between 4% and 51% (TAG A1.2).

Scheme Benefits

4.5 The benefits for the scheme can be categorised as financial or socio-economic, which encompasses environmental impacts. These may be quantifiable or qualitative benefits and will be presented in the Economic Case and the AST. Our assessment of benefits will be consistent with industry practice and a pragmatic treatment of the data available. No demand modelling is being undertaken as part of the appraisal.

4.6 Table 4.0 below sets out the benefit streams we anticipate capturing, subject to finalisation of the preferred scheme, availability of data a materiality of impact. The impacts for the natural environment have been scoped out due to urban nature of the scheme location.

Table 4.0 – Summary of benefit streams for economic appraisal			
Benefit	**Delivered by**	**Beneficiaries**	**Guidance***
Station user experience	Improved facilities, e.g. opening of new ticket office, TVMs, toilets, retail unit	Station users	TAG A5-3 rail appraisal, TAG A4-1 social impact appraisal, PDFH Section 8.1
	Improved security, e.g. additional station CCTV, cycle hub	Station users	TAG A5-3 rail appraisal, TAG A4-1 social impact appraisal, PDFH Section 8.1
Interchange experience	Improved facilities and environment, e.g. cycle hub, drop-off points, clear walking/cycling route	Station users	TAG A4-1 social impact appraisal
Safety	Reduction in accidents due to new forecourt layout and step-free access to platforms	Station users	TAG A4-1 social impact
Car park revenue	Increased car park capacity and demand	SFO/DfT	-
Station rental revenue	Retail unit	SFO/DfT	-
Rail fare revenue	Increased rail demand due to station improvements	SFO/DfT	TAG A5-3 rail appraisal, PDFH Section 8.1
Environmental externalities	Mode shift to rail due to station improvements. Carbon reduction due to energy efficiency and green energy measures such as PV panels and EVCPs	Society	TAG A5-4 marginal external costs
*The latest versions of the TAG units will be used (with any forthcoming changes incorporated where appropriate).			

4.7 The data sources we have identified to use for the benefits forecasting include:

- ORR stations entries and exits data (including disaggregation by ticket type)
- Rail passenger yield and average trip distance
- Car parking surveys
- Cycle parking surveys
- Station slips, trips and falls records
- PV/EVCP data

4.8 Additionally, GWR is able to provide passenger growth forecasts for Theale Station, which will be applied.

Appraisal assumptions

4.9 The appraisal will be consistent with WebTAG with appraisal taken from the TAG Data Book, e.g. discount rate, discount and price base year. We propose to use a 30-year appraisal period reflecting the nature of the enhancements to the station and its surroundings. The rule of a half will be applied to new users.

Environmental Impacts

4.10 An assessment of environmental impacts consistent with WebTAG will be undertaken to determine how the scheme will affect the environmental indicators set out in the Appraisal Summary Table.

4.11 The following topics and methodologies to be considered are:

- Noise, Air Quality and Greenhouse Gases - If completed, the scheme is likely to generate some additional traffic movements on the local road network in the immediate vicinity of the station as a result of the increase in car parking proposed. However, it is likely that any such increase will not result in significant changes to the redistribution of traffic on the local highway network, nor will it result in increased exposure for sensitive receptors as any increases are likely to occur on routes to/from the A4 Theale bypass. An examination of these topics will be undertaken to determine the potential impacts arising from the potential car journeys to be made by other modes.
- Townscape and Heritage of Historic Resources - A desktop study of these two topics will be undertaken to understand the baseline position and to qualitatively assess the impact of the scheme. Professional planning advice will be sought where appropriate.

4.12 Given that the scheme is wholly within an urban setting and is wholly contained with the current station lease area, it is recognised that the Landscape and Biodiversity topics do not need to be applied to this scheme.

Social Impacts

4.13 Social impact assessments consistent with WebTAG will also be undertaken to determine how the scheme will affect the social impact indicators outlined in the Appraisal Summary Table.

4.14 A qualitative assessment of each of the specified indicators will be undertaken where appropriate. This will discuss the expected impact of the scheme on all strands of the population, and will be supplemented by the quantitative data relevant to the particular social impact (as specified in the ASST and outlined in paragraph 4.15 below). It should be noted that for some of the specified impacts; it is considered that there will be no change from the existing situation.

4.15 The following topics and methodologies to be considered are:

- Commuting & Other Users:
- Physical activity; this will include application of the HEAT tool where appropriate.
- Accidents; the assessment will examine the slip, trips and falls data collected by the train operator within the station area.

- Security; improvements will be subject to a design review/audit in terms of safety.

4.16 In terms of the Affordability indicator; the delivery of the scheme will not affect the cost of rail fares, nor will it influence the cost of car parking at the station.

Public Accounts Impacts

4.17 The implications of the Theale Station Upgrade Scheme on the public accounts will be set out in terms of the draw on public funding of the delivery of the scheme, any new operational and maintenance costs and changes in tax revenues.

4.18 The tax adjustment factor and market price adjustments will be incorporated into the economic appraisal of the scheme and the calculation of the BCR will be consistent with WebTAG.

4.19 The split of the cost of the scheme will be made clear in the Financial Case in terms of which funding streams are a draw on the public purse. The cost information is based on the draft designs which have moved on in detail from the initial design work undertaken at the option appraisal and initial feasibility stages. Cost estimates will be refined as more detailed work takes place as the scheme progresses. In addition any new or alternative funding streams that can be drawn upon to help deliver the scheme will be used to reduce the cost to the public purse. The LEP will be kept informed of progress in relation to these elements and any other ways in which the value for money of the scheme can be improved.

5. Appraisal Specification Summary Table

5.1 The Appraisal Summary Specification Table (ASST) is included below and provides information of the general approach to appraisal of the scheme.

Table 5.0 – Appraisal Specification Summary Table – Theale Railway Station Upgrade Project

Impacts	Sub-impacts	Estimated impact	Level of uncertainty	Proposed proportionate appraisal methodology	Reference to evidence and rationale in support of proposed methodology	Type of Assessment Output (Qualitative / Quantitative / Monetary / Distributional)
Economy	Business users & transport providers	**Positive**	**Medium**	**Rail and station car parking revenue. Provision of new retail unit**	**WebTAG and past experience based on size and scope of project**	Quantitative / Monetary
	Reliability impact on Commuting and Other users	**Neutral**	**Medium**	**Qualitative professional judgement**	**TAG A5-3 Rail Appraisal**	Qualitative
	Regeneration	**Not assessed**	**Not assessed**	**Not assessed**	**Not assessed**	Not assessed
	Wider impacts	**Not assessed**	**Not assessed**	**Not assessed**	**Not assessed**	Not assessed
Environmental	Noise	**Assumed neutral**	**Low**	**Qualitative professional judgement (and HW externalities estimate)**	**No significant change in traffic flows or speeds are expected as a result of the scheme**	Qualitative
	Air Quality	**Assumed neutral**	**Low**	**Qualitative professional judgement (and HW externalities estimate)**	**No significant change in traffic flows or speeds are expected as a result of the scheme**	Qualitative
	Greenhouse gases	**Assumed neutral**	**Low**	**Qualitative professional judgement (and HW externalities estimate)**	**No significant change in traffic flows or speeds are expected as a result of the scheme**	Qualitative
	Landscape	**Not assessed**	**Not assessed**	**Not assessed**	**Not assessed**	Not assessed
	Townscape	**Assumed neutral**	**Low**	**Qualitative professional judgement**	**WebTAG and past experience based on size and scope of the project**	Qualitative
	Heritage of Historic resources	**Not assessed**	**Not assessed**	**Not assessed**	**Not assessed**	Not assessed
	Biodiversity	**Not assessed**	**Not assessed**	**Not assessed**	**Not assessed**	Not assessed
	Water Environment	**Assumed neutral**	**Low**	**Qualitative professional judgement**	**Drainage elements to be reviewed by qualified local authority officers**	Qualitative
Social	Commuting and Other users	**Positive**	**Medium**	**Rail, station car parking. New retail unit.**	**WebTAG and past experience based on size and scope of project.**	Quantitative / Monetary

	Reliability impact on Commuting and Other users	**Positive**	**Low**	**Qualitative professional judgement**	**WebTAG and past experience based on size of project**	Qualitative
	Physical activity	**Slight positive**	**Medium**	**Qualitative professional judgement + application of HEAT**	**WebTAG and past experience based on size and scope of project**	Qualitative
	Journey quality	**Positive**	**Medium**	**Qualitative professional judgement**	**WebTAG and past experience based on size and scope of project**	Quantitative / Monetary
	Accidents	**Slight positive**	**Medium**	**COBALT (TAG Data Book) Station slips/falls data**	**WebTAG**	Quantitative / Monetary
	Security	**Slight positive**	**Low**	**Design review/audit**	**TAG A4-1 social impact appraisal, PDFH section 8.1**	Qualitative
	Access to services	**Slight positive**	**Low**	**Qualitative professional judgement**	**WebTAG and past experience based on size and scope of the project**	Qualitative
	Affordability	**Neutral**	**Low**	**Qualitative professional judgement**	**WebTAG and past experience based on size and scope of the project**	Qualitative
	Severance	**Neutral**	**Low**	**Qualitative professional judgement**		
	Option values	**Neutral**	**Low**	**Qualitative professional judgement**	**No change from existing situation**	Qualitative
Public Accounts	Cost to Broad Transport Budget	**Moderate negative**	**Medium**	**Cost to public purse**	**WebTAG**	Quantitative / Monetary
	Indirect Tax Revenues	**Slight negative**	**Medium**	**Tax revenue changes (for example as a result of modal change from car to rail)**	**WebTAG**	Quantitative / Monetary