Impact Assessment

Tavistock railway and pedestrian/cycle route (trail)

Impact Assessment completed by:	Responsible officer:
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Date prepared: 19.06.2014	
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1. Background

1.1 Title:

The Tavistock railway and pedestrian/cycle route (trail) project.

1.2 Description:

The County Council has long had an aspiration to reopen the Tavistock to Bere Alston railway. This project has moved closer to delivery through its inclusion as critical infrastructure required to improve transport options along the A386 in the West Devon planning policy. The railway is a vital part of wider sustainable development of proposed development south of Callington Road in Tavistock. Providing the railway to Bere Alston will link with the existing Tamar Valley line to Plymouth.

Alongside the project to deliver a railway between Tavistock and Bere Alston, the County Council also has an aspiration improve links between Tavistock and the Tamar Trails via an off-road pedestrian and cycle route. Original suggestions had been to provide the route alongside the railway however engineering constraints mean that delivering it parallel to the railway will not be possible and therefore diversions of the trail will be required.

1.3 Service users:

The proposed railway could be used by the general public. Due to its location, it is anticipated that the majority of users, particularly on the services to Plymouth, will come from Tavistock. It will however provide an important link to the wider area, helping to connect a relatively peripheral area with the national rail network.

A key objective of the scheme is to improve accessibility and travel options between Tavistock, Bere Alston and Plymouth, opening up greater job opportunities for those living in Tavistock and the surrounds, particularly those without a car. In addition, the railway will allow additional travel options for those living in Plymouth wishing to access Dartmoor, Tavistock and the World Heritage Site for recreational purposes. This may be a particular benefit for disadvantaged communities in Plymouth who may not have access to a car but may live close to existing stations in the west of the city.

The railway will be accessible for all with the station catering for the accessibility needs of all users. In this context, it will be include car and cycle parking, it will be served by bus and pedestrian routes and the station will be compliant with standards required through the Disability and Discrimination Act (1995).

The trail will be open to the wider public. Designs will aim to ensure that it is accessible for as many groups as possible. However, due to the nature of the topography in the area which is very steep, some sections may not be suitable for families or disabled users. Further consideration to accessibility will be made during the design process.

1.4 Describe any reasons for change and intended aims and benefits:

The rail project has a number of objectives which include economic, environmental and social themes:

- Deliver development in Tavistock;
- Facilitate employment growth in Tavistock as the largest market town in West Devon;
- Minimise traffic on the A386 and minimise journey times;
- Provide a sustainable and attractive alternative for people travelling between Tavistock, Bere Alston and Plymouth;
- Ensure improved options for commuting, employment, leisure and education trips;
- Deliver a sustainable link from Plymouth to the Cornish Mining World Heritage Site at Tavistock;
- Improve access to Dartmoor; and
- Improve rural access for less affluent communities in Plymouth.

The railway scheme cost estimate is £17m however with contingencies and risks included, the final is projected to be approximately £26m. A cost benefit analysis of the scheme has identified a benefit to cost ratio of 2.72. This is likely to increase as projected costs and contingencies reduce.

A number of options for improving transport links between Tavistock and Plymouth have been considered. Such options include various highway and public transport schemes which have varying costs, benefits and challenges. The options are discussed in an Options Assessment Report which concludes that the railway proposal is the most appropriate scheme.

A number of options for providing a trail between Tavistock and the Tamar Trails have been considered. This pre-feasibility work did not include detailed cost estimates but did conclude that a link partially along the canal then to the Trails Centre at Gulworthy would be the most appropriate route in terms of delivery feasibility. Such a route may cost

approximately £2m to deliver.

1.5 Overlap with other policies, services etc:

The County Council has had an aspiration to deliver the railway for a number of years. It was included as a project in the 1999 and 2004 Structure Plans and is specifically identified as critical infrastructure in the adopted West Devon Core Strategy.

Transportation policy support for the railway is provided through the 2011 Devon and Torbay Local Transport Plan. The Implementation Plan identifies the Tavistock to Bere Alston Railway as one of the Targeted Capital Investments in the Market and Coastal Town and Rural Devon Programme for specific investment. The scheme is ranked highly by the Local Enterprise Partnership (LEP) and is in the list for a major scheme funding contribution.

The County Council has a requirement to deliver a pedestrian and cycle route between Tavistock and the Tamar Trails as committed through the Tamar Valley Mining Heritage Project which was supported by a grant from the Heritage Lottery Fund,

1.6 The following stakeholders have been involved in this assessment:

Ongoing engagement on the railway element of the project has included a number of Local Authorities and the rail industry, including:

- West Devon Borough Council
- Plymouth City Council
- Cornwall Council
- Network Rail
- First Great Western
- Devon and Cornwall Rail Partnership.

Discussions on the trail have be held with:

- West Devon Borough Council
- Tamar Valley Area of Outstanding Natural Beauty
- Cornwall and West Devon Mining Landscape World Heritage Site Team
- South West Water

A public consultation on both the railway and trail was held in early 2013. As part of this, discussions were held with all local Town and Parish Councils. A number of public exhibitions were held and approximately 450 responses were received. Further consultation will be held in future as the scheme develops.

1.7 The following research or guidance has been referred to, or advice sought, in order to inform the assessment:

The discussions and consultations referred to have been used to inform the development of both the railway and trail. Some initial advice on this assessment has been sought from the Equalities Representative for the Planning, Transportation and Environment Group. Further, more detailed discussions will be required as the project progresses.

1.8 Options Appraisal

Recommended/preferred option(s):

A draft Options Assessment Report has been produced to inform the development of the rail project. This document considers the options available, the advantages, disadvantages, costs and deliverability. This report recommends the railway as the most appropriate transport intervention on the Tavistock to Plymouth railway corridor.

Pre-feasibility of the potential trail options identified a route to the Trails Centre as the most appropriate option.

2. Analysis

2.1 Social impacts

Giving Due Regard to Equality and Human Rights

The local authority must consider how people will be affected by the service, policy or practice. In so doing we must give due regard to the need to:

- Eliminate unlawful discrimination, harassment and victimisation
- Advance equality of opportunity and
- Foster good relations.

We must take into account the protected characteristics of age, disability, gender, gender reassignment, pregnancy and maternity, marriage and civil partnership, sexual orientation, race, and religion and belief (where relevant).

This means considering how people with different needs get the different services they require and are not disadvantaged, and facilities are available to them on an equal basis in order to meet their needs; advancing equality of opportunity by recognising the disadvantages to which protected groups are subject and considering how they can be overcome.

We also need to ensure that human rights are protected. In particular, that people have:

- A reasonable level of choice in where and how they live their life and interact with others (this is an aspect of the human right to 'private and family life').

- An appropriate level of care which results in dignity and respect (the protection to a private and family life, protection from torture and the freedom of thought, belief and religion within the Human Rights Act and elimination of discrimination and the promotion of good relations under the Equality Act 2010).
- A right to life (ensuring that nothing we do results in unlawful or unnecessary/unavoidable death).

The Equality Act 2010 and other relevant legislation does not prevent the Council from taking difficult decisions which result in service reductions or closures for example, it does however require the Council to ensure that such decisions are:

- Informed and properly considered with a rigorous, conscious approach and open mind, taking due regard of the effects on the protected characteristics and the general duty to eliminate discrimination, advance equality and foster good relations.
- Proportionate (negative impacts are proportionate to the aims of the policy decision)
- Fair
- Necessary
- Reasonable, and
- Those affected have been adequately consulted.

	In what way is this characteristic relevant, or not relevant, to the service, policy or practice?
Age:	The age of potential rail and trail users may affect their ability to easily access the future railway station and the trail. However, designs will be progressed taking account of specific needs to minimise such issues.
Disability:	The disability of potential rail and trail users may affect their ability to access and use the rail services and some sections of the trail. Designs will be progressed taking account of specific needs in accordance with the Disability Discrimination Act.
Gender/Sex (men and women):	The gender or sex of potential rail or trail users should not be of relevance to the rail or trail project.
Marriage and civil partnership:	The marital status of potential rail or trail users should not be of relevance to the rail or trail project.
Pregnancy and maternity:	Pregnancy and maternity could affect the ability of potential trail users to access and use the routes. Designs will be progressed taking account of specific needs.
Race/ethnicity:	The race/ethnicity of potential rail or trail users should not be of relevance to the rail or trail project.

Religion/belief:	The religions and beliefs of potential rail or trail users should not be of relevance to the rail or trail project.
Sexual orientation:	The sexual orientation of potential rail or trail users should not be of relevance to the rail or trail project.
Trans-gender/gender identity:	The gender identity of potential rail or trail users should not be of relevance to the rail or trail project.
Other (e.g. socio-economic, general health and wellbeing, human rights, safeguarding):	The rail project has a specific objective of improving accessibility for groups who are economically disadvantaged. Services will be designed in order to ensure the widest practicable benefits in this regard. The rail project also aims to improve sustainability of travel which will have indirect health and well-being benefits resulting from reduced vehicle emissions. The trail project will improve the opportunities for an active and healthy lifestyle for all.
Overall degree of relevance to equality:	Medium
Geographic areas affected:	**Tavistock, Plymouth, eastern Cornwall, wider West Devon.**

2.1.1 **Positive impacts:**

As transport projects, the objectives of both the rail and trail are to improve accessibility to jobs, education and leisure destinations by a variety of modes. This will improve the ability of wider groups to access services and minimise the disadvantages of rural access which is currently largely dependent on car travel. The scheme will have potential benefits to all members of society, however will provide particular opportunities for economically disadvantaged groups.

2.1.2 **Negative impacts and mitigations or justification:**

As with all transport schemes, there will be some negative impacts. In particular, the railway will require land to be acquired and there will be implications for those living and working near the station as a result of noise and vibration.

In terms of the trail, there may be some sections which are unsuitable for use by all groups as a result of local topography and the nature of existing trails to which the proposal will link. As far as possible, such impacts will be mitigated through more detailed feasibility and design considerations.

It is acknowledged that both projects will have environmental impacts. For the rail project,

these will be assessed in detail on an iterative basis through Environmental Impact Assessment. In terms of the trail project further consideration will be required through the necessary planning consents process.

2.3.4 **Neutral impacts:**

Gender

No evidence that men or women, boys or girls will be affected differently.

Race

No evidence that Minority Ethnic groups people will be significantly affected by the proposals.

Religion/belief

No evidence to believe that the proposals will have an impact dependent on religion, nor belief.

Sexual Orientation and Gender Identity

No evidence to believe that the proposals will have an impact dependent on sexual orientation or gender identify.

2.2 Economic impacts

	In what way is this factor relevant, or not relevant, to the service, policy or practice?
Impact on knowledge and skills:	Positive impact on access to knowledge and skills.
Impact on employment levels:	Positive impact on employment levels and potential support to delivery of additional employment sites.
Impact on local business:	Positive impact on local businesses.

2.2.1 **Positive impacts:**

Knowledge and skills
The rail project will facilitate access to educational establishments in Plymouth for those living in Tavistock and wider, rural West Devon.

Impact on employment levels
The rail project will facilitate access to additional employment opportunities for those living in Tavistock, Bere Alston, Plymouth and the wider area.

Impact on local business Improved connectivity from the rail project will help to support investment in businesses, particularly in Tavistock which will benefit from a new connection to the national rail network. An addition to the pedestrian and cycle network may help to support the local tourism industry and the existing facility/business at the Trails Centre.

2.2.2 **Negative impacts and mitigations or justification:**

Impact on local business Additional options to travel between Tavistock and Plymouth could mean that those businesses currently relying on local labour for their workforce may struggle to attract labour if the workforce has a wider choice of employment in Plymouth. This impact could however be offset by the potential for these businesses to secure employees from a wider area as facilitated by the railway.

2.3 Environmental impacts

2.3.1 The policy or practice does not require the identification of environmental impacts using this Impact Assessment process because it is subject to (please select and proceed to Section 2.3, otherwise complete table below):

	Devon County Council's Environmental Review Process for permitted development highway schemes.
X (trail)	Planning Permission under the Town and Country Planning Act (1990).
	Strategic Environmental Assessment under European Directive 2001/42/EC "on the assessment of the effects of certain plans and programmes on the environment".

The trail will be subject to planning permission under the Town and Country Planning Act (1990) and therefore a detailed environmental assessment is not considered necessary here.

The rail project is governed by the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 which apply the EU directive on the assessment of the effects of certain public and private projects on the environment (the Environmental Impact Assessment Directive. The aim of Environmental Impact Assessment is to protect the environment, however the scope of the assessment being undertaken to support the rail project will consider economic and social themes. The Environmental Statement which will be prepared will include significant detail. As such, it is considered that more detailed appraisal as part of this Impact Assessment is not required. However, some strategic considerations have been set out in the following section for completeness.

	In what way is this factor relevant, or not relevant, to the service, policy or practice?
Reduce waste, and send less waste to landfill:	Designs for the railway and trail will be undertaken on the basis of waste minimisation and minimising the amount of waste sent to landfill.
Conserve and enhance biodiversity (the variety of living species):	Designs for the railway and trail will be informed by the requirements of mitigating impact on, and where possible, enhancing, biodiversity.
Safeguard the distinctive characteristics, features and special qualities of Devon's landscape:	Designs for the railway and trail will be informed by the requirements of mitigating landscape impact.
Conserve and enhance the quality and character of our built environment and public spaces:	Designs for the railway and trail will be informed by the requirements of mitigating impact on the built environment.
Conserve and enhance Devon's cultural and historic heritage:	Designs for the railway and trail will be informed by the requirements of mitigating impact on cultural heritage, in particular the Cornwall and West Devon Mining Landscape. One of the key objectives of both the rail and trail schemes is to provide additional access to this asset.
Minimise greenhouse gas emissions:	Both the railway and trail will provide additional options for transport and recreation using more sustainable modes of transport which will help to minimise the emission of greenhouse gases. This is a particular aim of the rail project.
Minimise pollution (including air, land, water, light and noise):	The railway will provide an additional option for transport using more sustainable modes avoiding the A386. This will help to manage air quality on the corridor. There may be some minor, localised, negative air quality impacts resulting from the trains themselves and also access to stations.
Contribute to reducing water consumption:	N/A
Ensure resilience to the future effects of climate change (warmer, wetter winters; drier, hotter summers; more intense	The rail project will provide an additional link between Tavistock and the wider West Devon area (including western Dartmoor) to Plymouth and the national rail network. This will improve the resilience of the area by reducing the reliance on the limited number of existing

storms; and rising sea level):	transport routes.
Other (please state below): Flooding	 Designs for the railway and trail will be informed by the requirements of managing flood risk impact.

2.3.2 **Positive impacts:**

To be assessed in more detail through the Environmental Impact Assessment process.

2.3.3 **Negative impacts and mitigations or justification:**

To be assessed in more detail through the Environmental Impact Assessment process.

2.4 Combined Impacts

2.4.1 **Linkages or conflicts between social, environmental and economic impacts:**

To be assessed in more detail through the Environmental Impact Assessment process and further assessments.

2.4.2 **'Social Value' of planned commissioned/procured services:**

Environmental, economic and social wellbeing will be improved through:

- Management of transport related greenhouse gas emissions and localised environmental considerations.
- Improved access to employment and education.
- Improved access to recreational destinations.

In preparing designs for the rail and trail project, the standard County Council procurement rules will be followed. In work undertaken to date, care has been taken to select the services of local consultants due to their sound local knowledge and because of the local benefits this provides through the provision of local employment.

2.4.3 **Potential impacts on partner agencies:**

The delivery of the railway would have a particular impact on West Devon Borough Council and the rail industry. Discussions are ongoing to ensure that requirements of Partner Agencies are accommodated in the project. In particular, the railway will support significant

development in Tavistock for which the Borough Council is responsible. The railway will also ensure additional patronage on the Tamar Valley Line to secure the future of the branch in future. Design work on the infrastructure is being undertaken with specific input from Network Rail who will eventually take responsibility for the asset. Timetable development is being jointly developed by the County Council and the current franchisee for the area.

The delivery of the trail will have a particular impact on West Devon Borough Council, the Tamar Valley AONB and South West Water. Discussions have been started with these organisations and will continue in future to inform the design process. The additional trail will provide additional visitors to the AONB, a principle supported by the AONB Partnership. The trail may affect the ongoing maintenance of a section of canal towpath by South West Water. Designs will ensure that such an impact is managed to acceptable levels.

3. Actions and risk management

3.1 **Actions:**

Further management of impacts will be developed as the rail and trail projects progress in future. A monitoring process will be a vital component of this work.

3.2 **How will you monitor the actual impacts of recommendations/decisions (consider what service user monitoring and consultation is necessary)?:**

Ongoing assessment, particularly through the Environmental Impact Assessment process for the railway and potential planning process for the trail will ensure negative impacts are mitigated.

Ongoing engagement, and formal consultation, with appropriate groups in relation to both the railway and trail will be held in future to inform the development of the projects.

3.3 Risk assessment

Inherent risk (mark an X in one box).

The risk **without** mitigating actions in place/prior to any changes.

The risk appraised here is one of worsening inequalities without the railway and trail in place.

Severity						
Catastrophic	5					
Major	4					
Moderate	3				X	
Minor	2					
Negligible	1					
		1 Rare	2 Unlikely	3 Possible	4 Likely	5 Almost certain

Likelihood (in a 5 year timeframe)

Current risk (mark an **X** in one box).

The risk **with** mitigating actions/changes in place.

The risk appraised here is one of worsening inequalities with the railway and trail in place.

Severity						
Catastrophic	5					
Major	4					
Moderate	3					
Minor	2		X			
Negligible	1					
		1 Rare	2 Unlikely	3 Possible	4 Likely	5 Almost certain

Likelihood (in a 5 year timeframe)

Connections From Tavistock to Plymouth
Option Assessment Report

DRAFT

June 2014

[4th Draft Report]

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1.1 Location and Description

1.1.1 Tavistock is the largest settlement in West Devon; the town itself had a population of 12,800 in 2011, whilst the wider area has a population of approximately 30,000 including the smaller population centres of Bere Ferrers and Buckland Monachorum and the rural hinterland within the shopping and education catchment areas of Tavistock. The dominant commuting pattern is between Tavistock and Plymouth along the A386 which experiences significant traffic flows and congestion, particularly in the peak hours.

1.1.2 Large scale development is planned for the town in the period up to 2026 as set out in the West Devon Core Strategy. Two areas are allocated, one for 750 homes and one for 13 hectares of employment space. These developments are likely to add significant pressure to the highway network.

1.1.3 A variety of intervention options have been considered to mitigate development impact and support economic growth in the town. Through the evidence submitted by Devon County Council to the West Devon Core Strategy Examination in Public, the intervention being pursued is that of reinstating the railway between Tavistock and Bere Alston where the existing line then links to Plymouth. The railway project is one of the targeted capital investment projects within the Market and Coastal Towns and Rural Areas capital programme in the Devon and Torbay Local Transport Plan.

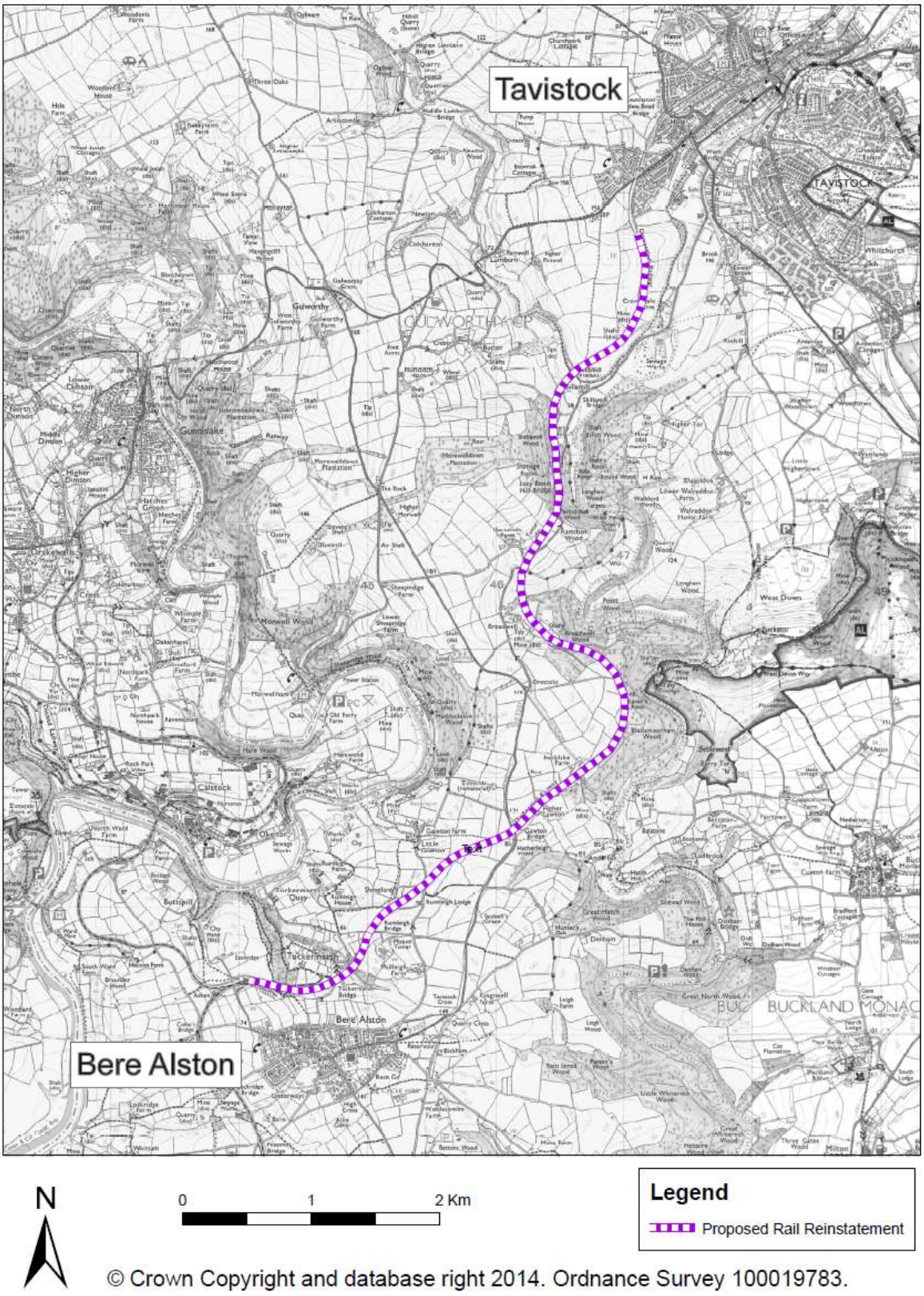
1.1.4 The Tavistock to Bere Alston rail scheme has been submitted to the Heart of the South West Local Transport Board (HoSWLTB) and has been included in the 2015-19 implementation programme. This report considers the effectiveness of providing various transport schemes to improve transport provision between Tavistock and Plymouth. Before undertaking a detailed assessment of the scheme, and pursuing a Business Case application, it is necessary to carry out a comprehensive review of the scheme options. There is a need to review the existing data and consider some of the engineering aspects of the individual scheme options. This Option Assessment Report has been undertaken to form a comprehensive assessment of the options and a recommended way forward.

1.1.5 As well considering strategic interventions to improve access to Tavistock, support growth and minimise traffic on the A386, the County Council also has a commitment to provide an additional cycle and pedestrian link between Tavistock and the Tamar Valley heritage area. The original position was that this would be delivered along the former rail corridor to Bere Alston. However, a number of issues have arisen which mean that this strategy needs to be reconsidered.

1.1.6 Work is now being undertaken to assess the potential to deliver a route to the Tamar Trails Centre near Gulworthy. Options for this route are considered in this report, however such a scheme should be regarded as complementary to a strategic intervention which would be required to support development in Tavistock.

1.1.7 In this context, the potential to be able to provide a pedestrian and cycle route along the former rail corridor is discussed in this report in order to provide context.

Figure 1: Former Tavistock to Bere Alston Railway Corridor



1.2 Purpose of this Report

1.2.1 This Option Assessment Report (OAR) documents the Stage 1 process of identifying the need for a transport intervention and the process of option development and selection (reference WebTAG Transport Appraisal Process, old Unit 2.1.1).

1.2.2 The OAR aims to address the following requirements (reference WebTAG old Unit 2.1.2C):

- Present a sound body of analysis to provide evidence of the problems and challenges, framed within the context of the Government's goals and challenges for transport;
- Clearly state the study objectives and intended outcomes, and enough information to facilitate an understanding of the links between issues and context and the final statement of objectives;
- Define the future 'without intervention' scenario, considering potential scenarios;
- Document the process of option generation, sifting, and assessment. Decisions made on discarded options should be recorded, along with supporting evidence;
- Document the results of the subsequent assessment of potential options against the Option Assessment Framework. Evidence should be presented in relation to Strategic Case, the Value for Money Case, the Delivery Case, the Financial Case and the Commercial Case.
- Summarise the headline results across all options considered and provide conclusions on the comparative performance of options;
- Identify the better performing option(s) to be taken forward for further, more detailed Stage 2 appraisal as part of a Business Case submission to the Heart of the South West (HotSW) Local Transport Board (LTB).

1.2.3 This version of the report is a draft. Further amendments may be required following discussion with the LTB.

1.3 Other Reports

1.3.1 This report forms part of a family of documents which will support the Value for Money (VfM) assessment of the scheme(s) recommended. Such reports are a requirement if levering in funding through the LTB. The reports (in chronological order) are as follows:

- **Option Assessment Report – identifies the need for scheme(s), their objectives and the process for generating options. Also provided is the methodology for assessing alternatives and the recommendations on the scheme(s) to be taken forward to detailed appraisal;**
- Appraisal Specification Report – compiled to inform decision makers and stakeholders on how the economic, environmental, social and operational assessments will be undertaken and how they will be supported by the traffic modelling work, taking account of budgetary, programme, political, environmental and spatial constraints;

- Transport and Economics Report – provides the data, methodology and results for rail passenger forecasting model, documents the methodology and results of the future year traffic forecasts and details the approach taken to assess the monetised costs and benefits of the scheme;

- Appraisal Summary Table (AST) Report – The methodology for completing the AST table and the source for all entries.

1.3.2 Note that it is likely that further reports will be produced individually if more than one scheme is recommended to be taken forward to Stage 2 for further work.

2 Current and Future Transport Issues

2.1 Main Issues

2.1.1 Tavistock is the largest settlement in West Devon with a population of approximately 12,800 (Census, 2011). Groups covering the ages of 20 to 59 account for 5700 people which equates to 47% of the town population (Census, 2011). Unemployment rates stand at 2.1% of the working age population, slightly less than the County-wide proportion. This compares to a national unemployment rate of 4.0% (Census, 2011). Employment development in Tavistock has been relatively slow.

2.1.2 The economy of West Devon is made up primarily of low added value sectors such as tourism, agriculture and service industries in a traditional small firm rural economy. Average annual earnings here are approximately £14,800, around 30% less than the national average of £21,200 (Economy Delivery Plan of the South Hams and West Devon[1]).

2.1.3 The principal objective of an intervention between Tavistock and Plymouth is to support development and economic growth in Tavistock by improving travel options between Tavistock and Plymouth. This will also improve the potential for employment investment in the town, particularly at the development allocation on Plymouth Road. In addition, an appropriate intervention will facilitate travel to Plymouth to underpin continued employment growth in the city. Any intervention will therefore specifically play a role in promoting infrastructure to connect with markets, one of the four strategic priorities of the Local Enterprise Partnership (LEP) as identified in their Business Plan. This is also articulated in the LEP Strategic Economic Plan priority as the need for 'creating the conditions for growth by improving our infrastructure and services to underpin growth'[2].

2.1.4 The A386 is the strategic transport corridor between Tavistock and Plymouth. As such, the description of the transport network focuses primarily on the strategic transport conditions between the two settlements, considering road conditions, bus usage and rail. The County Council is also pursuing the delivery of a pedestrian and cycle route between Tavistock and the Tamar Valley Trails. The outcome of the assessment of options is included in this report.

[1] http://www.westdevon.gov.uk/CHttpHandler.ashx?id=1178&p=0
[2] http://www.heartofswlep.co.uk/sites/default/files/user-88/SEP-%20Final%20draft%2031-03-14-website.pdf

2.2 Description of the Transport Network

A386

2.2.1 As already identified, Plymouth is a significant commuting destination for people living in Tavistock, with 987 people from Tavistock working in Plymouth. This equates to 20% of the Tavistock workforce working in Plymouth. Commuting patterns are shown in more detail in Table 1.

Table 1: Travel to Work Destinations from Tavistock (2001 Census)

Employment Location	Number of People	%
Tavistock	2646	55
Plymouth	987	20
South Hams	161	3
Other West Devon	504	10
Exeter	76	2
Other Devon	97	2
Out of Devon	373	8
Total	4,844	100

2.2.2 Further analysis of commuting patterns shows that car-use is the dominant mode for those travelling to from Tavistock to Plymouth for work. Those driving equates to 817 people which, when added to the 73 travelling as car passengers, provides a total travelling by car of 890. This represents 90% of the total commuting trips between Tavistock and Plymouth. Commuting behaviour by mode is shown in Table 2.

Table 2: Travel to Work between Tavistock and Plymouth by Mode (2001 census)

Mode	Number of People	%
Driver	817	83
Passenger	73	7
Bus	55	6
Other (motorcycle, walk, cycle, taxi)	42	4
Total	987	100
Total car use	890	90

2.2.3 In order to travel by car or bus between Tavistock and Plymouth it is necessary to use the A386, a distance of 24km. There is currently no appropriate alternative route for either car or bus. The A386 is a two-lane single carriageway between Tavistock and Roborough roundabout on the northern border of Plymouth, which in parts is of a very poor standard. From Roborough roundabout to Woolwell roundabout it is dual carriageway, then a mixture of dual and single carriageway to Derriford roundabout. From Derriford to the A38 Manadon interchange it is dual carriageway.

2.2.4 The A386 between Tavistock and Plymouth is relatively heavily trafficked in the context of its poor standard, with two-way, 12 hour flows along the corridor of approximately 10,000 vehicles. An Automatic Traffic Count undertaken in 2012 identified a 12 hour

flow of approximately 5,000 vehicles southbound and approximately 5,300 northbound. The overwhelming majority of these vehicles are car trips. Southbound, cars account for 92% of the trips and northbound cars account for 93%.

2.2.5 In addition to significant traffic flows, the capacity of the A386 is also constrained. The varying standard of the highway along the corridor means that the capacity varies. The capacity of road is lowest on the section between Tavistock and Yelverton, and more particularly between Grenofen and Horrabridge; this section of highway is approximately 3km in length.

2.2.6 This section of the route has a tortuous alignment, particularly around Horrabridge. The various steep gradients, vegetation, sharp bends and narrow widths of the road result in poor forward visibility and low capacity. Capacity is reduced further in sections where widths are limited to less than 6m which require HGVs and buses to travel slowly when passing each other. Traffic capacity can also be impeded by slow agricultural vehicles and breakdowns.

2.2.7 There are also capacity constraints on the northern section of the A386 within Plymouth, particularly south of Woolwell roundabout towards the George Park and Ride and beyond. This part of the A386 acts as a significant pinch point on the corridor although Plymouth City Council are planning an improvement.

Table 3: A386 Capacity & Demand

Section	Link length (km)	Carriage-way	Width (m)	Capacity Q_C	Design Capacity 85% Q_C	Year Design Capacity Exceeded
Tavistock-Yelverton	9.3	Single	6.0-7.3	1020	870	Before 2026
Yelverton-Roborough	5.9	Single	6.5-7.3	1180	1000	Already
Roborough-Woolwell	1.0	Dual	14.6	3260	2770	After 2026
Woolwell-Derriford	2.1	Single/ Dual	7.3-14.6	1630	1390	Already
Derriford-A38.Manadon	2.2	Dual	14.6	3260	2770	Already

Notes: All capacities are vehicles per hour per direction
Capacities are based on minimum road width in each section and % heavy vehicles at peak times

2.2.8 Due to the constraints on the network and the significant flows, design capacities are already being exceeded resulting in variable and unreliable journey times on the A386. 2012 ANPR survey data showed AM peak journey times between Tavistock and Plymouth city centre varying between 29 minutes and 40 minutes and between 28 minutes and 47 minutes in the reverse direction in the PM peak.

2.2.9 Unreliable journey times do not only affect car travel. Although bus services run regularly between Tavistock and Plymouth, the weight of traffic affects journey times for buses. Peak travel times on school days are around 10 minutes longer than in off peak times in the AM peak southbound.

2.2.10 Finally, the section of A386 from Roborough to Tavistock has been recognised as having accident problems, and a cluster of accidents led to the implementation of a casualty and severity reduction scheme between 2007 and 2008 along the stretch from Roborough to Yelverton. In the period 2005 to 2009 there were on average 22 injury accidents per year or a rate of 0.474 personal injury accidents per million vehicle kms, which is close to the national average for older single carriageway roads.

2.2.11 Up to date accident data has been examined to consider the current safety record of the A386. This has shown that there have been an average of 11.8 collisions per year on the A386 between Drakes Statue in Tavistock and Yelverton and 6.8 collisions per year between Yelverton and the edge of the administrative area of Plymouth. Of the 18.6 average collisions per year, 1.4 resulted in fatalities or serious injuries. Comparative collision analysis showed that in 2013 the A386 between Tavistock and Yelverton was the 42nd worst performing road (about average) and the A386 between Yelverton and Plymouth the 35th (within the worst performing quartile) out of 138 A-road route sections in Devon. The annual rate of 18.6 injury accidents per year is lower than in the 2005 to 2009 period and below the national average rate. Automatic traffic count data between 2008 and 2012 on the A386 at Roborough shows 2% average daily growth and slight reductions in the peak hours.

Walking & Cycling

2.2.12 Devon County Council and Plymouth City Council have invested in walking and cycling infrastructure in Tavistock and Plymouth respectively. In particular Devon County Council has invested significantly in the local pedestrian and cycle links in Tavistock.

2.2.13 Drakes Trail directly links Tavistock to Plymouth and is part of National Cycle Route 27 and the Devon Coast to Coast route. However, due to the strategic nature of the A386 corridor and the distance involved, walking and cycling do not feature significantly in trips between Tavistock and Plymouth. Depending on cycling speed it would take approximately 82 minutes to cycle the 20.5km between Tavistock and Manadon assuming an average cycling speed of 15 km/hour.

Bus Services

2.2.14 Tavistock is relatively well served by bus services. Services link Tavistock to the following main local cities, towns and villages:

- Plymouth;
- Bere Ferrers and Bere Alston;
- Callington; and
- Launceston.

2.2.15 Tavistock is also served by the town bus service, the First Bus 89 service, which runs approximately hourly.

2.2.16 Of all the bus services, services between Tavistock and Plymouth are the most frequent. The 83, 83A, 84 and 86 services run approximately every twenty minutes. In particular, these services provide access to the north of Plymouth where significant development has taken place in recent years. Derriford Hospital and Tamar Valley Science Park are two examples of such growth. The Tavistock to Plymouth service has a timetabled journey time of approximately 60 minutes in the peak (average speed of 24 km/hour) and 50 minutes in the inter peak (average speed of 29 km/hour)

although these times are variable as they are affected by congestion on the route; for example, at peak travel times on school days journeys are at least 10 minutes longer than in off peak times in the AM peak southbound.

2.3 Future Development Growth

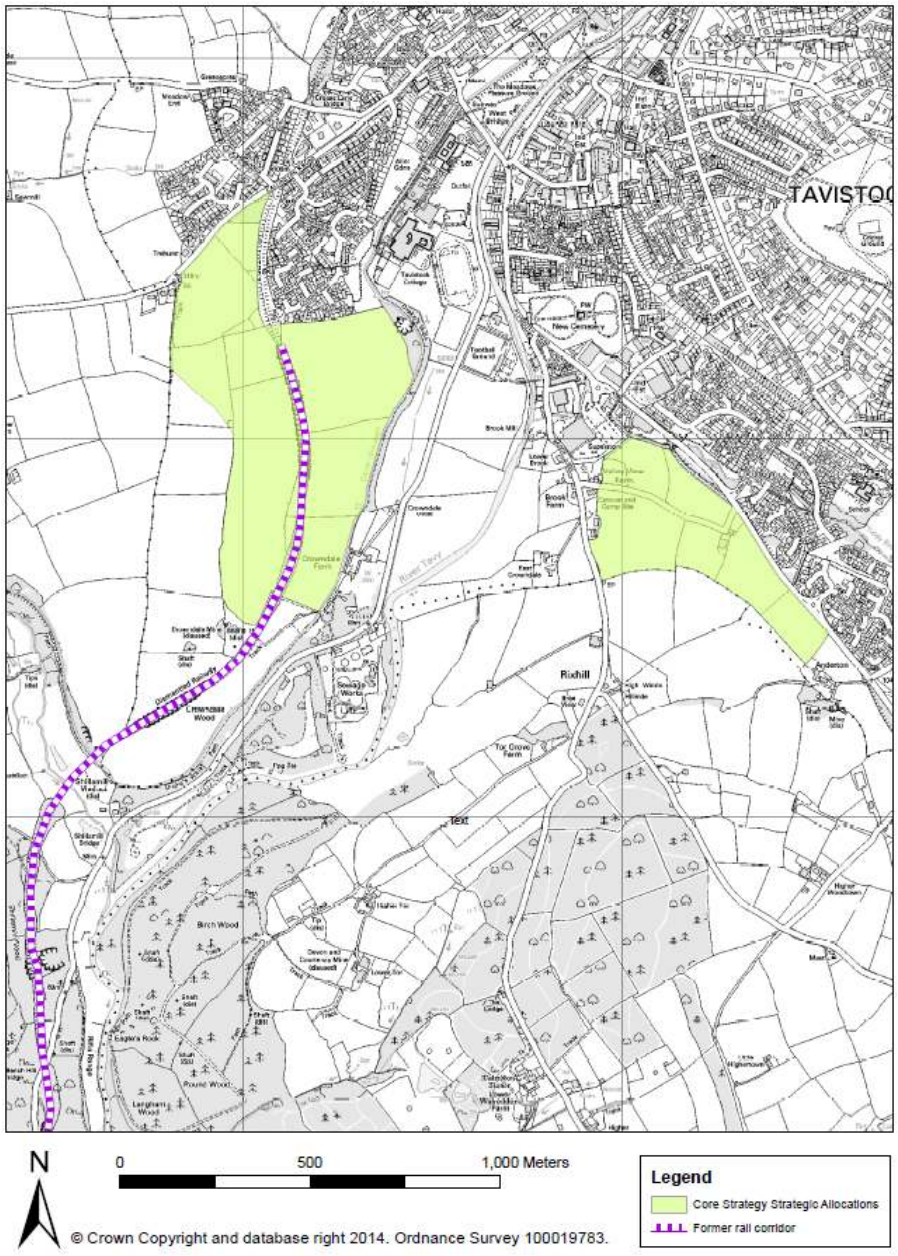
2.3.1 The adopted West Devon Core Strategy has identified areas of land in the south and south-west of Tavistock to be developed for a mixture of 750 new homes, employment units, open space and other facilities that are anticipated to be needed by the community, including a primary school. These allocations include two sites. The western site off Callington Road which includes the former railway corridor has been considered appropriate for the residential and community facilities. The other site off Plymouth Road to the south is considered more appropriate for employment development. This site has an area of 13ha and will provide the major employment development in the town.

2.3.2 The County Council provided significant evidence in the preparation of the Core Strategy. The allocations for Tavistock were considered to offer the most appropriate strategy for the town to provide the residential and employment development required. Concentrating development in two strategic areas allows for coherent planning and delivery of infrastructure and community facilities.

2.3.3 A particular issue in Tavistock is the impact which development trips would have on the A386. Given the close functional relationship between Tavistock and Plymouth, development in the town will generate additional vehicular trips on the A386. Allocations on the southwestern side of the town would have less of an impact on the town centre than development sites elsewhere as trips would not have to cross town to reach Plymouth. In addition, the provision of larger sites can be planned comprehensively to ensure the necessary infrastructure is delivered to mitigate development impacts. Finally, residential development close to the former railway line offers the potential for significant use of a reinstated rail service or other potential transport infrastructure on this route to minimise traffic on the A386.

2.3.4 The development allocations are shown in Figure 2.

Figure 2: Allocated Development Sites in Tavistock



2.4 Future Transport Network Operation without Intervention

A386

2.4.1 The West Devon Core Strategy covers a period from 2006 until 2026. As such, this is considered to be the future year. Future traffic flows on the A386 have been assessed by adjusting current traffic flows, applying TEMPRO growth factors and assuming development takes place in West Devon and Plymouth. Assuming potential growth factors of approximately 25% (TEMPRO adjusted to Core Strategy housing), future year flows have been identified. Growth in flows between 2008 and 2026 is shown in Table 4.

Table 4: 2008 & 2026 Traffic Flows on the A386

Section of A386	Two-Way Traffic Flow (50th highest hourly flow)	
	2008	2026
Tavistock to Yelverton	1,250	1,540
Yelverton to Roborough	2,030	2,520
Roborough to Woolwell	2,540	3,150

2.4.2 These figures have been used to consider the potential traffic demand conditions in 2026. In the future demand is forecast to exceed capacity on three sections of the A386. These are:

- Woolwell to Derriford;
- Derriford to the Manadon Interchange; and
- Yelverton-Roborough.

2.4.3 During much of the day demand will rarely fall significantly below the 85% highway capacity. This is likely to result in increased queuing and stop/start conditions, as well as reduced journey time reliability.

2.4.4 These stop-start conditions are also likely to significantly affect average speeds on the corridor. Although the national speed limit (96 kph) applies on the corridor, average speeds in 2026 will be decrease from approximately 68kph to 52kph.

2.4.5 The 50th highest hour forecast flows for 2026 have been used to represent peak traffic flows and are given in Figure 3. On only one section, Roborough-Woolwell, are flows well below 85% capacity. On the northern section between Tavistock-Yelverton flows are approximately at 85% capacity. The individual sections are discussed in more detail below.

2.4.6 On the section between Yelverton-Roborough, demand flows are slightly above capacity. This is likely to result in further peak spreading, and slightly increased disruption on the road network.

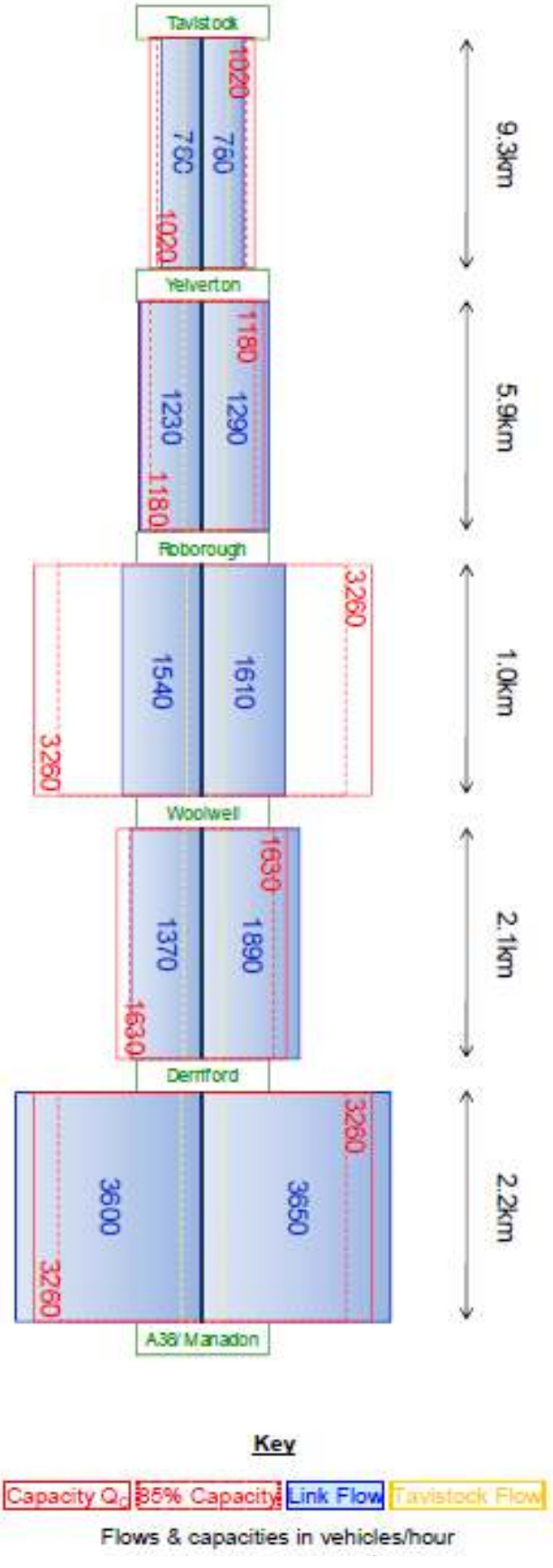
2.4.7 On the section from Derriford to Woolwell (northbound) flow is at 85% capacity. Flows on other sections south of Woolwell exceed capacity, which means that not only is there likely to be increased peak spreading, but journey time reliability will reduce in those areas that are over-capacity. In addition, the road is likely to be more sensitive to disruption. There is also likely to be increased queuing at junctions, particularly in the Plymouth area.

2.4.8 Further analysis of demand/capacity has been undertaken using average weekday hourly flows. There would be a limited amount of spare capacity on the A386 between Tavistock and Yelverton. Nevertheless, due to the character of this section of the route, traffic conditions and speeds are likely to remain poor. This is particularly the case at the narrowest, windiest and hilliest sections. The route will remain sensitive to disruption through events such as roadworks and breakdowns, and this will be exacerbated as flows approach capacity.

2.4.9 In the section Yelverton-Roborough, average weekday flows exceed capacity (Qc) in the peak direction for one or two hours a day. The 50th highest hour flow also exceeds

capacity, by 4% northbound and 9% southbound. It is likely that peak spreading will have to increase to accommodate the traffic.

Figure 3: 2026 Forecast Peak Traffic Flows



2.4.10 On the dual carriageway section between Roborough-Woolwell, capacity would be more than sufficient for demand. Flows on the two southernmost sections, from Woolwell to Derriford and Derriford to the Manadon Interchange show the A386 to be close to or over capacity for much of the day. This is particularly the case for the section from Derriford-Manadon Interchange, where flows would be rarely much below 85% capacity through the main part of the day, while for four hours (three hours southbound, one hour northbound) they would exceed capacity. Due to the persistent high flows through the main part of the day there is no scope for significant peak spreading.

2.4.11 This road capacity analysis shows that the A386 corridor is likely to come under significant stress in future years, resulting in poor journey time reliability which could have adverse impacts on the Tavistock economy as it loses its important link with Plymouth for jobs, services and tourism. The analysis supports the case for providing an alternative and more reliable long term link between the settlements than the A386.

Bus Services

2.4.12 As expressed in preceding chapters, the level of traffic on the A386 corridor is anticipated to rise to and exceed capacity on several sections by 2026. Whilst it may be possible to provide some level of bus priority within the city, buses will largely be subject to the same delays as the private car, particularly on the stretch between Tavistock and Plymouth. It is therefore likely that bus journey times will increase further from the present day. Analysis has suggested that AM peak bus journey times will increase by approximately ten minutes in the period up to 2026. With this increase, average journey times by bus will potentially be approximately 80 minutes.

Rail

2.4.13 Without an intervention on this corridor, there would be no rail services to Tavistock. People wishing to travel from Tavistock by rail would continue to access services at either Bere Alston or Plymouth. Access to Tavistock by rail would require a change to bus services or car at Bere Alston.

Demand management

2.4.14 Devon County Council supports a programme of 'smarter choice' interventions such as travel planning for workplaces, new development, schools and communities to make better use of the transport network. As information technology develops, and in particular as the use of smart phone technology increases, the County Council will develop its use to improve and personalise transport information.

2.4.15 The County Council has a firm commitment towards demand management for new developments. This will include the residential and employment developments in Tavistock. To ensure that these developments are sustainable, appropriate masterplanning and design will enable new residents and employees to use smarter ways of travelling. Residential, personalised and school travel plans will also form part of the planning requirements for new developments, to encourage new residents to make sustainable trips from day one.

2.4.16 Travel planning for work places has particular potential for success. Workplace parking for new developments can also help to generate income for reinvesting in the transport system. This has already been achieved at existing key employment sites at County Hall, the University of Exeter and the Royal Devon and Exeter Hospital and should be rolled out and applied to employment developments in Tavistock.

2.4.17 It should be noted that the rural hinterland served by Tavistock means that car use will continue to play a role in travel to the town.

Walking and cycling

2.4.18 Tavistock already has a significant network of local and sub-regional pedestrian and cycle routes. In particular, there are various routes linking residential areas with vital community facilities such as schools and the town centre. The town is also on the Drakes Trail which links Tavistock to Plymouth. Effective additions to, and use of, these routes will ensure that car use is minimised where appropriate.

2.4.19 This route, which is predominantly off-road and flat along long sections, has the potential to remove some trips from the A386. However the commuting distance between Tavistock and Plymouth means that in reality this link is unlikely to have a significant impact on the number of vehicles on the highway. The commuting distance between Tavistock and Plymouth is between approximately 20 and 25km, a distance which is considered too long for most commuting. This is shown by analysis undertaken by Transport for London which suggests that trips with a distance of more than 8km are not considered appropriate for cycling[3]. In addition the route is not suitable for regular commuting, especially in the winter, as it does not have asphalt surfacing and is unlit.

[3] Source: http://www.tfl.gov.uk/assets/downloads/analysis-of-cycling-potential.pdf.pdf

3 Potential Improvements

3.1 Transport Strategy

3.1.1 As already identified, there are a number of key issues with regard to travel between Tavistock and Plymouth. Traffic conditions on the A386 are a particular concern.

3.1.2 The strategic objectives for interventions on the A386 corridor are identified as follows:

- Deliver development in Tavistock;
- Facilitate employment growth in Tavistock as the largest market town in West Devon;
- Minimise traffic on the A386 and minimise journey times;
- Provide a sustainable and attractive alternative for people travelling between Tavistock, Bere Alston and Plymouth;
- Ensure improved options for commuting, employment, leisure and education trips;
- Deliver a sustainable link from Plymouth to the Cornish Mining World Heritage Site at Tavistock;
- Improve access to Dartmoor; and
- Improve rural access for less affluent communities in Plymouth.

3.1.3 In addition to these objectives, the Heart of the South West Local Enterprise Partnership identifies four strategic priorities in its Business Plan. The priority with particular relevance to transport projects is:

> Promote infrastructure to Connect with Markets: By making the case for the critical infrastructure which will allow South West businesses to access opportunities and compete effectively.

3.1.4 The LEP Strategic Economic Plan also identifies the following priority:

> Creating the Conditions for Growth - Improving our infrastructure and services to underpin growth.

3.1.5 The delivery of improved transport links between Tavistock and Plymouth will underpin economic growth in both settlements and support employment generation. Transportation infrastructure improvements and the associated economic benefits will also cascade benefits to the wider West Devon area. This will be particularly important as a largely rural area will be opened to wider markets through improved communications and connectivity and an improved association with Plymouth as a large, recognisable economic centre.

3.2 Option Development

3.2.1 Broad strategic options for improving access between Tavistock and Plymouth have been considered. These are:

- Highway improvements to the A386;
- Provision of improved bus services along existing highways;
- Re-instatement of the railway between Tavistock and Bere Alston to provide a link to Plymouth;
- Provision of light rail along the former rail alignment;
- Provision of a tram/train system on the former rail alignment;
- Provision of a guided bus-way along the former rail alignment;
- Provision of regular bus service along the former alignment; and
- Provision of a highway route along the former alignment.

3.2.2 These options were considered at a high level in the context of their potential to meet objectives, environmental issues and deliverability. Further consideration of this high level discussion is included in Appendix A.

3.2.3 Capacity improvements along the A386 would be particularly challenging to deliver as a result of the local environment. Improvements would require the removal of significant hedgerows and deciduous trees. Improvements would also be likely to have significant impacts on landscape of Dartmoor which, as a National Park, has a national designation to protect its environmental quality.

3.2.4 The assessment, as part of the Local Plan allocation, identified that the most appropriate intervention is to reopen the railway line between Tavistock and Bere Alston. As the process of considering alternatives is further refined all other options have been re-evaluated along with the rail re-instatement option.

3.2.5 In addition to the objectives set out for intervention on the Tavistock to Plymouth corridor, the rail project will also deliver two other significant benefits. These are:

- Connecting Tavistock to the national rail network; and
- Improving the connectivity of Bere Alston.

3.2.6 Linking Tavistock to the national rail network will have a significant impact on the ability of the town to attract inward investment of economic and employment growth.

4 Development of Options

4.1 Schemes to be Taken Forward for Assessment

4.1.1 The scheme options identified in the previous section will have varying impacts and will fulfil the scheme objectives to different extents. An initial sifting assessment has considered the extent to which the options will meet the desired objectives together with local, regional and national priorities, programmes and strategies. All of the identified scheme options have been taken forward for more detailed assessment.

4.1.2 Further work has been carried out on identifying highway improvements on the A386. This work has been used to refine the A386 highway option.

4.2 Tavistock Rail

4.2.1 The 9km (5.5 mile) long railway between Tavistock and Bere Alston was built by the Plymouth, Devonport and South Western Junction Railway (PD&SWR) as part of a line to connect Tavistock and Plymouth and was opened in 1890. It was operated by the London & South Western Railway (LWSR) until grouping in 1923 and then became part of the Southern Railway. It was closed in 1968.

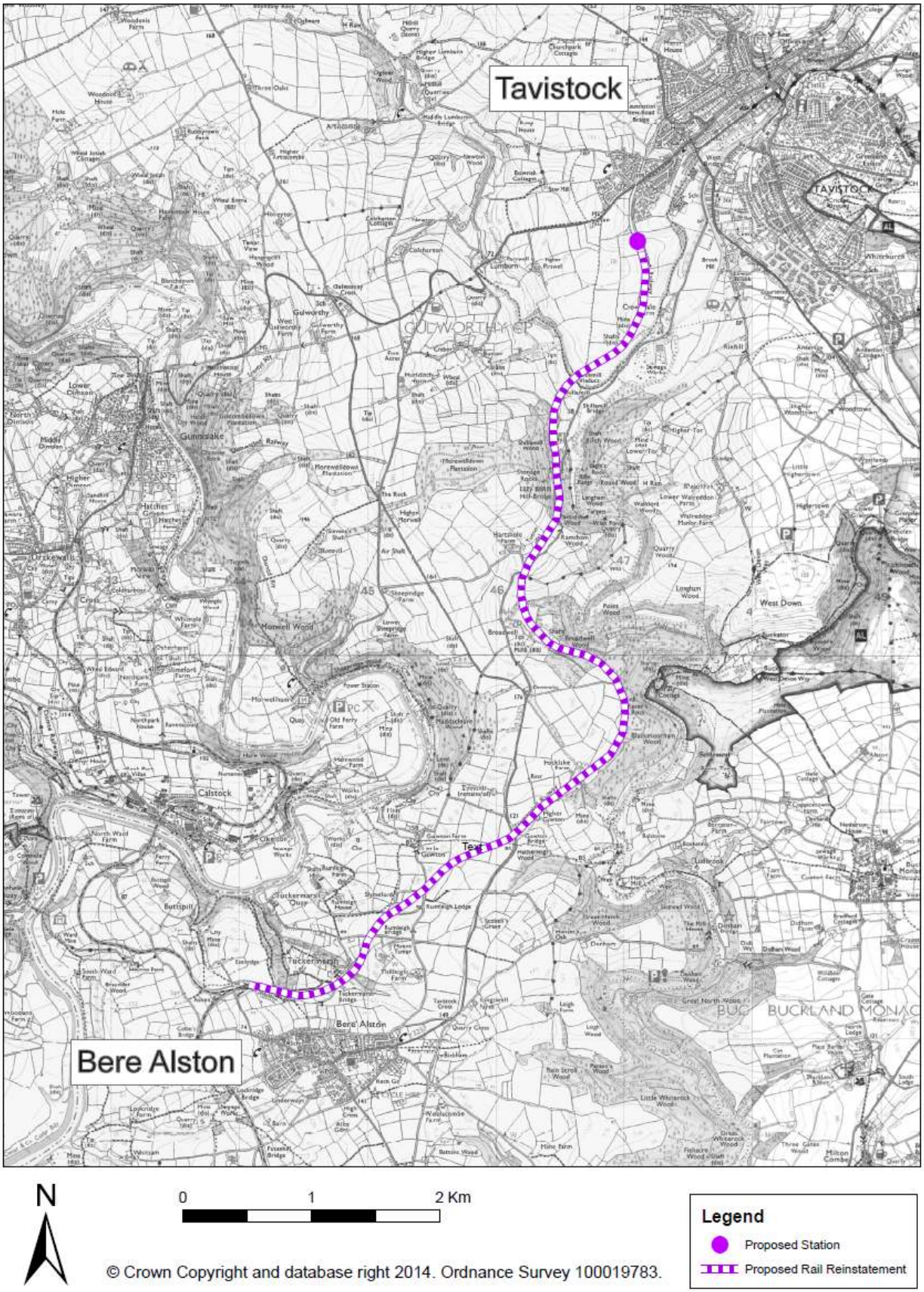
4.2.2 The formation between Callington Road, Tavistock, and Bere Alston is largely intact and offers the opportunity to provide the reinstatement of the railway along the corridor. The former rail corridor is shown by Figure 4.

4.2.3 The reuse of the Bere Alston to Tavistock rail corridor has moved closer to delivery through its inclusion as critical infrastructure required to improve transport options along the A386 in the adopted West Devon Core Strategy. The railway would be a vital part of wider sustainable development of an allocated site south of Callington Road in Tavistock and would be partially funded by a national house-builder who would be providing the new residential development. The railway would play a key role in mitigating the impact of development. The allocated site in the Core Strategy is currently the subject of a planning application from Bovis Homes for up to 750 homes, a primary school site, car park, small retail unit and rail related development.

4.2.4 Alongside the project to deliver a railway to Tavistock and Bere Alston, the County Council has also had an aspiration to improve links between Tavistock and the Bere Peninsular and Tamar Trails via an off-road trail. Where possible this could be provided alongside the railway. Engineering constraints which have emerged through rail related investigations mean that delivering the trail alongside the railway may not be possible and therefore alternative routes will be required.

4.2.5 Devon County Council has also underlined the importance of the rail project by identifying it for investment over the next fifteen years in the Local Transport Plan. Plymouth City Council has also supported the project through the Plymouth Local Transport Plan. The County Council is also looking to provide a pedestrian and cycle route between Tavistock and the Tamar Trails. It would not be possible to viably and safely provide a pedestrian and cycle route along the former rail corridor if a railway was reinstated on this alignment.

Figure 4: Rail Route Alignment



4.2.6 The provision of the railway would link Tavistock to the national rail network to improve the potential for employment investment in the town, particularly at the development allocation on Plymouth Road. In addition, the railway would facilitate travel to Plymouth to underpin continued employment growth in the city.

4.2.7 The Tavistock to Bere Alston Railway project would minimise additional traffic on the A386 between Tavistock and Plymouth. The rail service would provide an attractive option for travel to Plymouth, particularly the city centre. This would help to meet demand for employment, retail, leisure and education trips, whilst complimenting existing bus services and park and ride services to the north of the city.

4.2.8 Initial considerations of train operations alongside Network Rail and First Great Western suggest that a 75 minute headway service between Tavistock and Plymouth with a connecting shuttle service between Gunnislake and Bere Alston would provide the most efficient operations consistent with the expected level of passenger demand. At present the Gunnislake to Plymouth service has a 2 hourly headway.

4.2.9 The reinstatement of the rail line, associated engineering works, station works at Tavistock and Bere Alston and land are estimated to cost £26 million (from a base cost of £17 million). Depending on funding, the station may open from 2020 onwards. Cost risks will become lower as designs advance and there is a low risk of capital cost increase given the reasonable risk and optimism bias allowances.

4.2.10 There are few uncertainties. The new station fits well with local and national objectives and has the support of key stakeholders within the rail industry as well as West Devon Borough Council and Plymouth City Council. Demand forecasting is being undertaken and initial Transport User Benefit Analysis undertaken with the scheme potentially showing a high Value for Money rating.

4.3 Light Rail

4.3.1 Light rail transit (LRT) would be an alternative to heavy rail providing the potential for more flexibility in the possibility of extension as a street running tram into Tavistock town with frequent stops. The use of LRT on the Tamar line would be very expensive. As LRT would not be allowed to come in direct contact with a Network Rail service, in particular due to crash worthiness concerns, the LRT option could only take the form of a shuttle service between Bere Alston and Tavistock or between Bere Alston, Tavistock and Gunnislake. Due to the scale of the project, replacing the existing heavy rail infrastructure with LRT would not be appropriate.

4.3.2 The transfer to rail at Bere Alston would be a major deterrent to using LRT. As well as additional waiting and transfer time, passengers dislike changing vehicles and finding another seat which has been found to be very significant in choosing to use public transport.

4.3.3 Light rail vehicles are much lighter than a heavy rail vehicle of comparable length and are normally powered by 750V DC electric power. Light rail vehicles are compatible with standard track gauge and a variety of rail profiles. Due to the lower axle load of these lightweight electric vehicles it is not unusual for a smaller earthworks / ballast formation both in terms of footprint and depth to be proposed in order to save cost. However, the final trackwork must be capable of supporting maintenance and construction vehicles in addition to the light rail vehicles. As most of the formation is already in place, in this case the savings would be small. The additional cost and lack of further patronage resulting from an extension into Tavistock would make such an extension impracticable.

4.3.4 Potential cost savings would not be realised for the following reasons. The rail vehicles may be more expensive than for heavy rail due to the need for spares. Station costs would not necessarily be lower as the lower cost of the new station stop at Tavistock may be more than offset by modifications at Bere Alston and possibly Gunnislake to accommodate the lower floor vehicles. The engineering costs of reinstating the rail route would be similar but there would be additional costs and delivery uncertainty of providing the electricity supply and a depot for the light rail vehicles; this is a particular issue in the West Devon area as there are no existing tram networks.

4.3.5 In summary, the overall cost of the LRT option would be greater than the heavy rail option and has been estimated based on a rate of £13.6 million per mile for existing UK LRT schemes (Manchester Metrolink Phase 1, Sheffield Supertram, Midland Metrolink, Croydon Tramlink, Sunderland extension to Tyne & Wear Metro and Nottingham Express Transit – Green Light for Light Rail, DfT, 2011). Since these schemes are in urban areas with large infrastructure costs and this rate represents twin tracks with two way operation on high frequencies, 60% of this rate is considered appropriate for the single track rural reinstatement and for the lower frequency operation envisaged between Tavistock and Bere Alston. These assumptions give an estimated capital cost of £45 million.

4.3.6 The width of the track for LRT would potentially allow a pedestrian and cycle trail to be delivered alongside for parts of the route. However, the tunnel would still present width constraints and the need for an alternative route for at least some of the corridor.

4.4 Tram-Train

4.4.1 Tram-Trains differ from trams and LRT because they are able to operate on rail tracks alongside heavy rail services as well as on segregated tram networks. Trams and LRT cannot operate with other heavy rail vehicles, primarily due to concerns regarding their lower crashworthiness. Tram-Train allows other heavy rail services to continue to operate, providing the disadvantage from any loss to passenger and freight users is acceptable.

4.4.2 The Tram-Train option would enable a direct Tavistock to Plymouth rail service to be provided without the need, as for LRT, to change to heavy rail at Bere Alston. However there are few advantages in using Tram-Trains between Bere Alston and Tavistock. The former rail route would be used in the same way as for heavy rail and there would be no requirement for intermediate stops. The Tram-Train could be extended into Tavistock with street running but the required demand to justify the additional costs would not be achievable in a small town such as Tavistock.

4.4.3 Also the overall cost of Tram-Trains would be higher than LRT option. More rail vehicles would be needed as they would run from Tavistock to Plymouth and replace the existing rail units. Network Rail would require additional signalling on the main line between Bere Alston and Plymouth and additional communications equipment in the rail vehicles.

4.4.4 Tram-Trains would require additional onboard systems, operator / driver training, maintenance costs and additional safety case or approvals processes. These additional costs and potential programme delay risks would be unlikely to be justified by the potential to access a wider passenger demand.

4.4.5 Despite the clear advantages of the Tram-Train option there are large risks associated with feasibility and deliverability. There are only a few examples in operation throughout the world and past proposals in the UK have always been rejected on

safety grounds. A pilot project in South Yorkshire is nearing opening but it is a trial and it will take time to decide if the concept can be implemented elsewhere. In particular, it will be necessary to understand the issues with operating from main lines onto tramways, to determine industry costs for tram-train operation, to understand changes required in standards to enable operation and to gauge passenger perception.

4.4.6 The width of the track for the Tram-Train could vary between that required for traditional heavy rail and that required for LRT. As such the potential to be able to provide a parallel pedestrian and cycle route would vary. However, an alternative alignment would certainly be required through the tunnel.

4.5 Guided Bus

4.5.1 Physically or electronically guided buses could provide a feeder service to rail services at Bere Alston. They would run along a dedicated guideway on the former rail route and would have the advantage of being able to operate as a normal bus off the guideway and so could penetrate into Tavistock to pick up and drop off passengers.

4.5.2 Guided bus generally provides rail-like characteristics of a segregated route with rail-like qualities of speed and smooth running at a much lower overall cost than rail or LRT, although the existing rail formation and Tamar line rail service would negate the cost advantage.

4.5.3 Buses can be guided electronically or, as in the Cambridge busway, run at speeds of around 60mph in a concrete, 2.6m wide 'guideway' consisting of a running surface and a low upstand. There are small guide wheels on the side of the buses, which run along the inside of the upstand to keep the wheels within the guideway. The buses can be a special fleet but potentially any bus with guide wheels and steering modifications could be used.

4.5.4 The Cambridge guided bus was chosen as it was found to be around a fifth of the cost of constructing a similar light or heavy rail project and would also have a larger passenger capacity. The guided busway system also requires less land with only enough hard surface for the wheels required and this also means that surface run-off and drainage is less of a problem. The surface of the guideway is critical as a smooth, rail-quality ride is required. As a result, the Cambridge busway was constructed from pre-cast concrete sections laid on suitable foundation material.

4.5.5 For a guided bus between Tavistock and Bere Alston it is likely that the vehicle costs would be significantly lower than for heavy rail, LRT or Tram-Trains and guideway costs would be lower than for providing rail or LRT tracks. Construction cost estimates are based on the Cambridge guided bus cost of £4.5 million per km for twin guideways. Given the low frequency of the rail service it might be possible to operate on a single guideway in which case construction costs could almost halve, to approximately 60%, giving an estimated cost of £24 million. In either case there would also be costs in reinstating the route, embankments, bridges etc. as well as land acquisition costs.

4.5.6 The provision of a guided bus option would still require an interchange at Bere Alston Station at which point passengers would transfer to rail services. This would be likely to result in reduced patronage as such a change in mode reduces the attractiveness of the option.

4.5.7 The width of the busway would potentially allow the provision of a pedestrian/cycle route along the same corridor.

4.6 Bus Link

4.6.1 Conventional buses could provide a feeder service to rail services at Bere Alston. A road of around 4m in width with 5.5m wide emergency / passing places would be constructed on the former rail route. A wider right of way would be needed than for the rail-based or guided bus options and there would not be sufficient remaining width to include a pedestrian/cycleway.

4.6.2 The transfer to rail at Bere Alston would be a major deterrent to using the bus link. As well as additional waiting and transfer time, passengers dislike changing vehicles and finding another seat which has been found to be very significant in choosing to use public transport. In addition, bus travel can be considered a less attractive than rail-based modes.

4.6.3 It has been considered whether there would be an advantage in extending such a bus service into town to pick up further passengers. Although this would potentially increase the patronage of the service, such an extension would not be subject to one of the key benefits of the route along the former railway corridor; that of guaranteed journey times. Because an extension to the route would need to be provided on road, the potential for it to be delayed would increase. This means that further slack would need to be built into the timetable, undermining the benefits of extending the service to elsewhere in the town.

4.6.4 Costs would be much lower than the rail based or guided bus options, although crash barriers and other safety features would be needed on embankments and at structures, and are estimated at around £11 million excluding vehicles.

4.6.5 The width of the highway for a bus route would potentially allow the provision of a pedestrian/cycle route along the same corridor.

4.7 Road Link

4.7.1 A road link between Tavistock and Bere Alston could be delivered along the rail corridor. This would provide an uncongested route specifically between the two settlements, potentially allowing guaranteed journey times. This would provide a direct link to the station at Bere Alston to increase patronage on existing rail services.

4.7.2 It would be possible to construct a 6m single carriageway two way road on the former rail route without the need to widen the formation. The road would provide access from Tavistock to a rail park and ride site at Bere Alston as well as a road link between Tavistock and Bere Alston. There would not be sufficient width to include a pedestrian/cycleway as well as the road.

4.7.3 Construction costs, at around £15 million, would be higher than for the bus link due to the need for a car park at Bere Alston station. Costs would be much lower than for the other options on the former rail route as no public transport provision and operating and maintenance costs would be needed.

4.7.4 In terms of deliverability and cost, a potential highway link along the former rail corridor would have some merit. However, it would not achieve a number of the key objectives of an intervention in the area.

4.7.5 One of the principal issues would be that it would have limited impact on increasing the sustainable access options between Tavistock and Bere Alston as car journeys would be likely to account for the majority of trips along the route. This would affect those

wishing to travel from Tavistock to Bere Alston and Plymouth and those wishing to travel from Plymouth and Bere Alston to Tavistock. On this latter point, sustainable access to the World Heritage Site would remain largely unchanged.

4.7.6 A further issue with this option would be the potential environmental impact. Although largely unconstrained highway access between Tavistock and Bere Alston would potentially increase patronage of the existing rail services which would have some carbon benefit, it would still accommodate car journeys and thus would have less significant carbon reduction benefits than the options based on sustainable modes. There would also be significant, local environmental issues associated with establishing what would be a new road through the Tamar Valley AONB and over the World Heritage Site at the canal. The potentially continual car journeys along the route would also extend the impact of the scheme when compared to the intermittent timings of the public transport options, increasing the effects on tranquillity and potentially biodiversity.

4.7.7 The width of the highway may potentially allow the provision of a pedestrian/cycle route along the same corridor.

4.8 A386 Highway Improvements

4.8.1 The County Council has carried out a pre-feasibility study to consider the potential for highway improvements to the A386 corridor to mitigate development impact on the highway and improve journey times between Tavistock and Plymouth. The aim was to determine the feasible range of improvements that can be made to the road route.

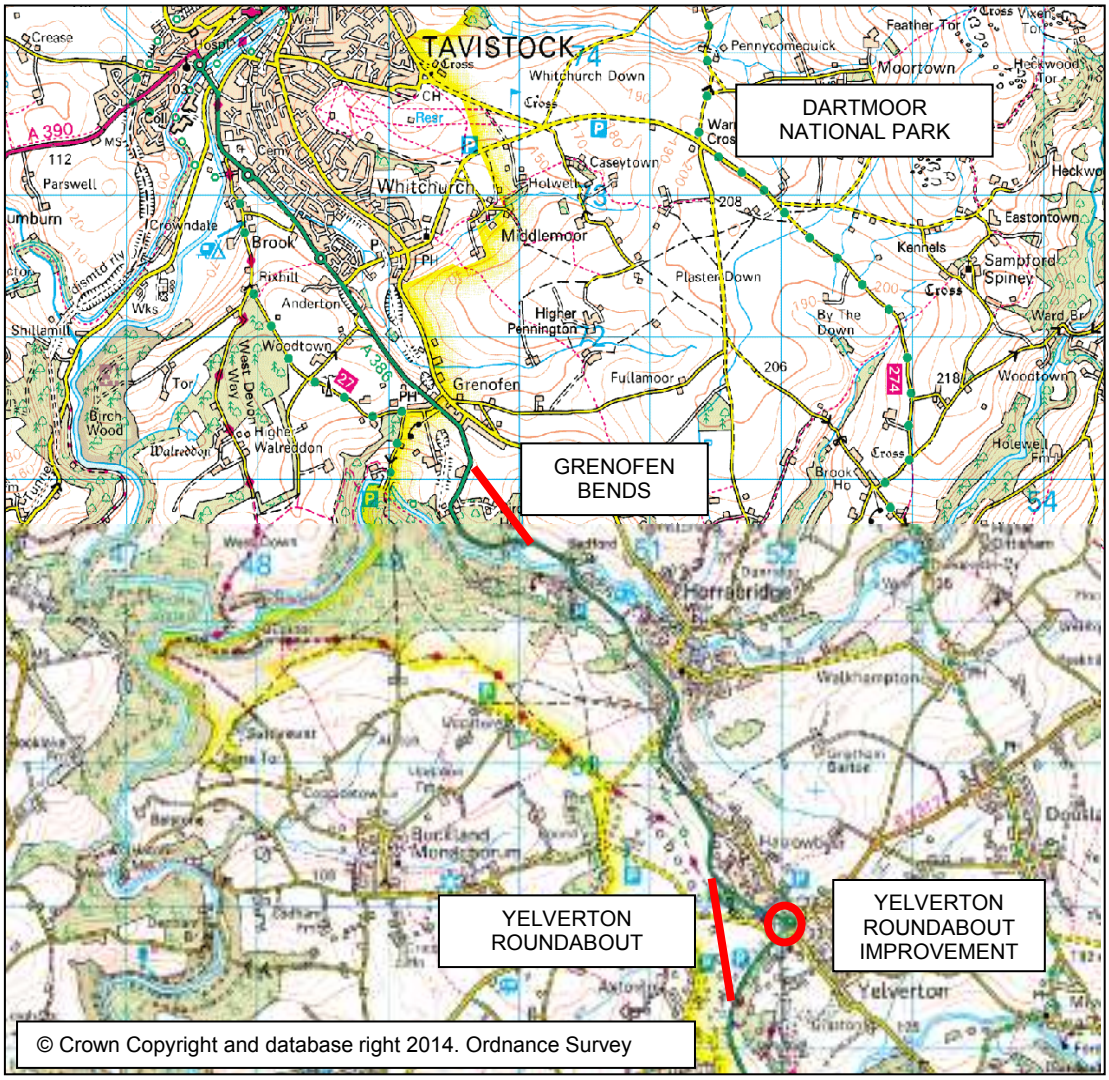
4.8.2 This scheme would complement the highway schemes that Plymouth City Council have submitted to the Heart of the South West Local Transport Board. These are firstly improvements to the A386 in the north of Plymouth between Woolwell Roundabout and The George Junction to two lanes in each direction. The second scheme is widening between Derriford Roundabout and William Prance Road where Derriford Roundabout would be converted to a signalised junction and improved bus priority, pedestrian and cycling facilities provided.

4.8.3 Analysis of journey time data identified traffic speeds in the peak hours of 20mph or more below the speed limit at Yelverton roundabout, the one mile of bends at Grenofen and the one mile section between Grenofen and Whitchurch. The low speeds are caused by high levels of traffic compared with capacity causing reduced speeds from the platooning of traffic and speed / flow effects on road sections and increased queuing and delay at junction resulting from more interaction with higher levels of conflicting traffic.

4.8.4 It has been assumed that a large scale scheme (such as a new route, long sections of widening or significant bypasses) would not be deliverable along the corridor as a result of the significant environmental constraints in the area.

4.8.5 Various, smaller scale improvement options to increase capacity and speeds have been identified as per Figure 5. The most effective of these would be a bypass of Yelverton and a bypass of the bends at Grenofen. These two schemes have an indicative base cost of £8.3 million and would save about 2.5 minutes at peak times when speeds are lowest, representing a 17% decrease in journey time between Tavistock and Plymouth.

Figure 5: A386 Highway Improvements



4.8.6 The provision of additional northbound and southbound lanes at the Yelverton roundabout instead of a bypass of the roundabout would be less costly but less effective in reducing delays. Base costs would be around £4.9 million with the Grenofen bends bypass and time savings would be about 2 minutes at peak times when speeds are lowest, representing a 12% decrease in journey time between Tavistock and Plymouth.

4.8.7 The bypass of the bends at Grenofen would provide most of the reduced journey time but a bypass, or even an online improvement delivering comparable capacity, would seriously damage hedgerows, deciduous woodland and wildlife habitat. Such improvements are not likely to prove feasible given that much of this section lies within Dartmoor National Park and is therefore subject to a very high level of environmental protection.

4.8.8 Highway improvements on the A386 would only serve to deliver more traffic, more quickly into Plymouth, exacerbating congestion, air quality, road noise and road safety issues. The highway improvement option would not fit well with the government and local objectives of sustainable transport in reducing car travel and increasing public

transport, nor the wider accessibility objectives of improving access options to the World Heritage Site and Dartmoor.

4.8.9 The provision of improvements to the A386 would allow the provision of a pedestrian/cycle route along the former rail corridor.

4.9 A386 Bus Services

4.9.1 Existing bus services between Tavistock and Plymouth re shown in Figure 6. Bus services between Tavistock and Plymouth have limited potential for improvement. Whilst journey times could be shortened by introducing direct express, limited-stop services, this may not be popular with those needing to be picked up en route. The current routes serving Derriford Hospital and Plymouth station would need to be retained in order to serve those destinations conveniently.

4.9.2 The increased use of bus lanes in Plymouth would help minimise journey times but on the A386 north of Plymouth bus travel will always be subject to road congestion and potential disruption from breakdowns or slow moving agricultural vehicles. Buses will therefore struggle to be able to match rail or car journey times into central Plymouth.

4.9.3 The County Council has carried out an interview survey of bus passengers on Tavistock services. This identified that 9% of daily trips had both origin and destination in locations which could be reached from existing rail stations and 6% where there would be a potential for the journey or part of the journey to be made by rail.

4.9.4 Bus travel was found to be cheaper than likely rail fares and bus frequencies are high at around 4 per hour. Against this rail travel would be considerably quicker with a Tavistock to Plymouth journey time of 28 to 33 minutes compared with 49 minutes for the lowest timetabled bus journey and up to 70 minutes in the AM peak on school days.

4.9.5 The attractiveness of the shorter rail journey time will be largely offset by the lower bus fares and using total generalised costs of travel between Tavistock and Plymouth it was estimated that total daily transfers from bus to the Tavistock rail option could amount to between 4%, and 6%, or an average of 30 passengers in each direction per working day.

4.9.6 The bus survey showed that there would only be a small transfer to rail from existing bus services if the railway were to be reinstated. Buses and rail would offer largely complementary services, buses serving north Plymouth and Mutley Plain, and rail serving the city centre and west Plymouth including St Budeaux and the naval dockyards. The improvement of bus services therefore should not be seen as an alternative to the rail option. Because buses and rail serve different locations, there is in fact little competition and both rail and bus options would fit well with the government and local objectives of sustainable transport in reducing car travel and increasing public transport.

4.9.7 The provision of improved bus services along the A386 would allow the provision of a pedestrian/cycle route along the former rail corridor.

Figure 6: Bus Services Between Tavistock & Plymouth[4]

4.10 Tavistock – Tamar Trails Pedestrian/Cycle Route

4.10.1 As already identified, there are plans to provide a pedestrian and cycle route between Tavistock and the Tamar Trails area. In 2006, the County Council stated the intention of providing such a route along the former rail corridor. Further work has now identified that this will be extremely challenging to deliver and may make the provision of other transport modes along the corridor undeliverable and unviable. As such, the provision of an alternative route to the Trails via the Trails Centre is now being investigated.

4.10.2 The public transport options along the rail corridor would provide a sustainable link to Tavistock from Plymouth and Bere Alston for leisure travel and would help support pedestrian and cycle provision in the area providing integrated and sustainable transport. This is particularly important given the World Heritage Site status of

[4] Source: Devon County Council Interactive Bus Map.
Available at: http://www.cartogold.co.uk/Devon_Transport/Devon.htm

Tavistock and the investment which is being made towards leisure routes for pedestrian and cycle access in the wider Tamar Trails area.

4.10.3 An assessment of the pedestrian/cycle route alignment options between Tavistock and the Tamar Trails area has been carried out and some of the principal options are included in this report because of the close association with the transport options along the Tavistock to Bere Alston rail corridor as described above.

4.10.4 The County Council has carried out a pre-feasibility assessment of a range of pedestrian/cycle routes options between Tavistock, the Tamar Trails area at Gulworthy, and the mountain biking facility at the Gawton Gravity Hub further to the south. This work identified that a link to the Trails Centre is the most appropriate.

4.10.5 The route options between Tavistock, and the Tamar Trails Centre area are shown on Figure 7 and a brief assessment of each of the route sections is given in Table 5. This report does not consider the assessment of the route options to the Gawton Gravity Hub. Although this facility does comprise an access to the Trails, the main focus is the Trails Centre and thus it is considered appropriate to focus on this route in detail here.

4.10.6 The preferred route, Option A, is highlighted on Figure 7 and comprises:

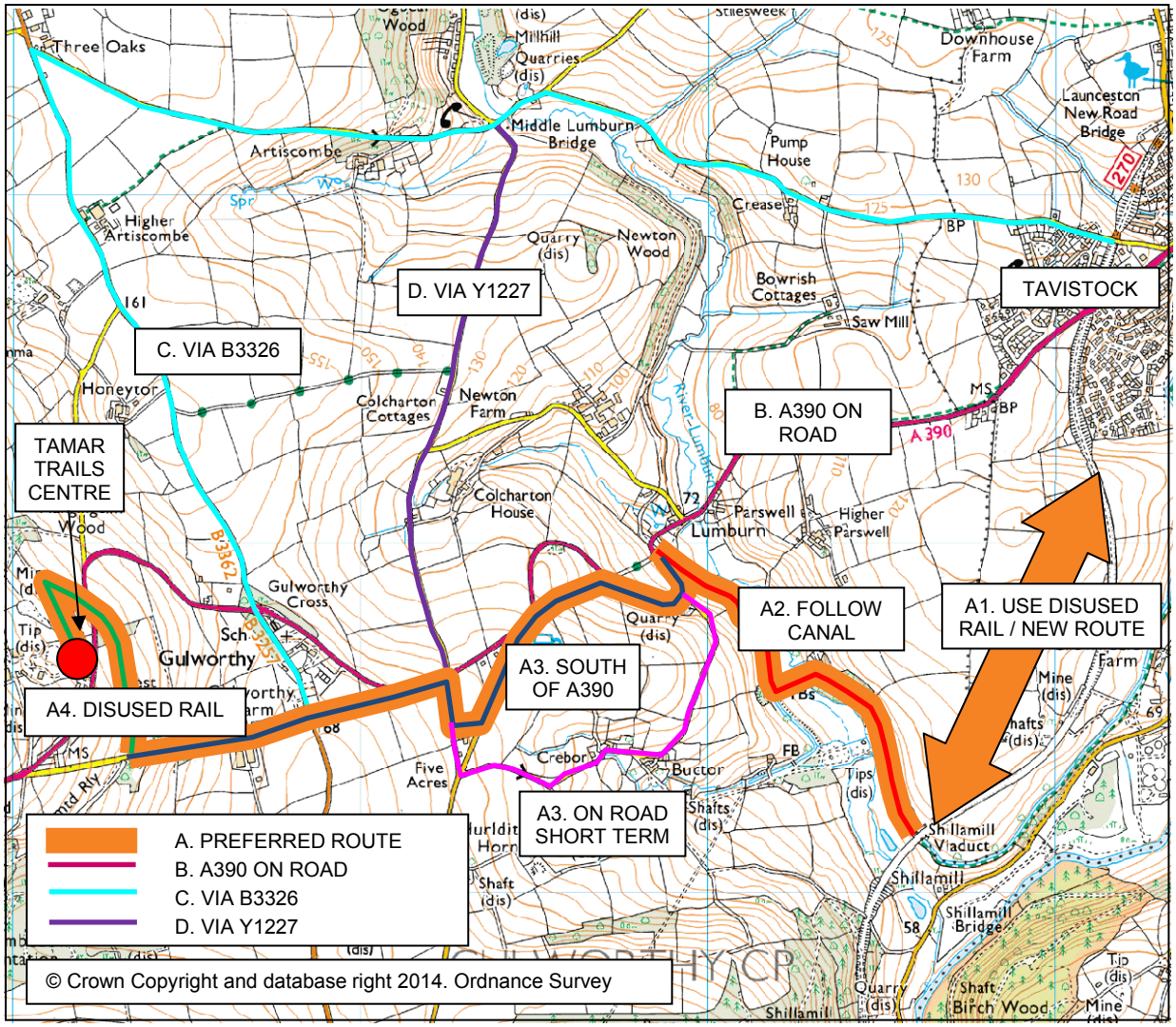
- Section A1 - Between Tavistock and Shillamill Viaduct a combination of the use of the disused rail corridor and a new route yet to be identified;
- Section A2 – Between Shillamill Viaduct and the A390 follows the canal and existing Public Rights of Way;
- Section A3 - A new off road route south of the A390 reverting to the minor road west of the Y1227, with the use of minor roads further to the south in the shorter term;
- Section A4 – Existing route which follows another disused rail route to the mines area and the Tamar Trails Centre.

4.10.7 Further work on developing the pedestrian and cycle route will need to be undertaken as the railway project also develops.

Table 5: Comparison of Pedestrian/Cycle Route Options

Option / Section	Advantages	Disadvantages
A. Preferred Route:		
A1. Utilise Disused Railway	Off road rural route Steady gradient Sections of land already in Council ownership	Safety measures required if rail reinstated Challenges of accommodating both the rail and pedestrian route on the same corridor Cost implications for the railway
A2. Follow Canal	Level, mostly wide enough Rural, picturesque, avoids roads Improved access to the canal (World Heritage Site) and existing interpretation installations Uses existing pathway	Safety issues with adjacent canal Widening difficult on some sections due to steep embankments Cycles on existing footpath The need to ensure the route is sensitive to the heritage characteristics of the canal The need to ensure that maintenance requirements of the canal are safeguarded
A3. South of A390, Y1109	Off road rural route New, purpose built Use of existing, quiet road (Y1208) in short term	Land acquisition required Length of time to fund and build
A4. Disused Railway	Off road rural route Steady gradient Already in place	N/A: already in place.
B. A390 On Road:		
A390 On Road	Shortest route Little work required to implement.	Fast, steep, winding, not conducive for combined use Not accessible to all due to steep gradients and potential safety issues. Little space to widen in 600m valley section between Tavistock and Parswell road
C. Via B3362:		
On road Y1217, C704, B3362, A3 (part) & A4	30mph limit & traffic calming possible on some sections Limited works to make route accessible Potential to improve an existing section of road	Not accessible to all due to steep gradients. Delivery of traffic calming required on 60 mph B3362 On street parking from Gulworthy Cross to Gulworthy Farm Indirect route
D. Via Y1227:		
On Road Y1217, Y1227, A3 (part) & A4	Shorter than Route C 30mph limit on some sections	Poor visibility, dense vegetation, widening & traffic calming required on some sections of Y1227 Traffic slowed by required one-way section near Gulworthy Farm Indirect route

Figure 7: Option for the pedestrian and cycle route between Tavistock and the Trails Centre



5 Assessment of Options

5.1 Rail Corridor Options

5.1.1 Comparison of the costs of the public transport options within the former rail route, Table 6, shows that the LRT and Tram-Train options would be considerably more expensive than the heavy rail scheme for both capital and operating costs. The guided bus construction cost could be comparable to rail provided a single guideway is feasible. Both bus options would be more expensive to operate than rail (£1 million per year with two buses) because of the reduced marginal cost of extending the existing rail operation.

5.1.2 The rail and Tram-Train options would integrate with existing rail services and provide a direct Tavistock to Plymouth service for the highest demand corridor combined with a shuttle service from Gunnislake.

5.1.3 There would be significant risks to costs, timescale and deliverability with the introduction of new forms of public transport in the case of LRT, Tram-Train and guided bus.

5.1.4 The rail, LRT and Tram-Train options often have better customer perceptions than bus whilst they also have higher vehicle capacities with a longer useful life.

5.1.5 The highway option has a higher capital cost than the bus link due to the cost of a car park at Bere Alston but would only require public money to finance maintenance costs. Parking charges at the station car park could provide a revenue stream. However the scheme would not meet central and local government sustainability objectives and there would be over riding environmental constraints.

5.1.6 Overall, the rail option was considered to be most cost effective public transport scheme and would attract the highest passenger demand.

5.2 Strategic Assessment

5.2.1 The options were also considered at a strategic level in the context of their potential to meet objectives, environmental issues and deliverability as shown in Table 7.

5.2.2 Only the rail and Tram-Train options would provide a direct Tavistock-Plymouth service so fully fulfilling the local and strategic objectives. The transfer to rail at Bere Alston would be a major deterrent to using the LRT, guided bus and bus options as well as the road link option. As well as additional waiting and transfer time, passengers dislike changing vehicles and finding another seat which has been found to be very significant in choosing to use public transport. This could reduce patronage to 60% of the direct rail service number of passengers for LRT and guided bus and to less than 50% for the bus option (figures estimated from the LOGIT mode choice relationship, calibrated for the Gunnislake rail line.

5.2.3 The LRT, Tram-Train and guided bus options would be likely to be undeliverable because of the high cost, delivery uncertainties and the long timescales required for the introduction of new public transport modes.

5.2.4 Highway capacity improvements along the A386 would be particularly challenging to deliver because of environmental issues. Improvements would require the removal of significant hedgerows and deciduous trees. Improvements would also be likely to have significant impacts on landscape of Dartmoor National Park.

5.2.5 Bus improvements in the A386 corridor have been shown not to be in competition with rail as different geographical areas are largely served, but this option is limited in effectiveness as important scheme objectives are not met.

5.2.6 The rail option would have the highest patronage and fully fulfil the local and strategic objectives. It would be deliverable as it extends the existing railway and does not involve the introduction of a new mode with associated complications and risks.

5.2.7 For these reasons the strategic assessment concluded that the most appropriate intervention is to reopen the railway line between Tavistock and Bere Alston. In addition to the objectives set out for intervention on the Tavistock to Plymouth corridor, the rail project will also deliver the significant benefits of connecting Tavistock to the national rail network and improving the connectivity of Bere Alston. Linking Tavistock to the national rail network will have a significant impact on the ability of the town to attract inward investment and economic and employment growth.

Table 6: Comparison of Options on Rail Corridor

Item	Indicative Construction Cost	Indicative Operating Cost	Capacity	Passenger Demand
Rail	£26m (DCC detailed estimate)	£0.7m / yr (DCC estimate)	2 Car DMU - 320 passengers	279,000 passengers per year in 2020 opening year
LRT	£45m (UK LRT, DfT)	£2.9m to £4.9m / yr (UK LRT)	2 Car LRV - 190 passengers	Approx. 60% of rail
Tram-Train	£45m+ as LRT plus extra vehicles, signalling & communications on main line	£2.9m to £4.9m / yr (UK LRT)	2 Car LRV - 190 passengers	Same as rail
Guided Bus	£24m (Cambridge Guided Bus)	£1m / yr (DCC estimate)	80 passengers per vehicle	Approx. 60% of rail
Bus	£11m (DCC estimate)	£1m / yr (DCC estimate)	80 passengers per vehicle	Approx. 44% of rail
Highway	£15m (DCC estimate)	-	-	Approx. 60% of rail

Table 7: Strategic Assessment

Scheme Option	Performance Against Local Objectives								Strategic Environmental Impact	Local Environmental Impact (Disused Rail & A386 Corridors)	Deliverability
	Deliver development	Minimise traffic on the A386 and minimise journey times	Provide a sustainable, attractive alternative for people travelling between Tavistock, Bere Alston and Plymouth	Ensure improved options for commuting, employment, leisure and education trips	Deliver a sustainable link from Plymouth to the Cornish Mining World Heritage Site at Tavistock	Improve access to Dartmoor	Improve rural access for less affluent communities in Plymouth	Facilitate employment growth in Tavistock as the largest market town in West Devon			
Disused Rail Route Options:											
Heavy Rail	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
LRT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Tram-Train	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	X
Guided Bus	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bus	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓✓
Highway	✓	✓	X	✓	X	✓	X	✓	X	X	✓✓
A386 Corridor Improvements:											
Highway	✓	X	X	X	X	✓	X	✓	X	X	X
Bus	X	✓	X	✓	X	✓	✓	X	✓	✓	✓✓

Note: ✓✓ denotes high level of contribution to achievement of objective

✓✓ denotes low level of contribution to achievement of objective

X denotes no contribution to achievement of objective (including neutral and negative impact)

5.3 EAST Assessment

5.3.1 The Early Assessment and Sifting Tool (EAST) has been used to assess the options as it is consistent with Transport Business Case principles and provides a clear and consistent comparison of scheme options. The EAST methodology is a standard tool promoted by the Department for Transport.

5.3.2 Details of the assessment of each option are included in APPENDIX A and a summary of the resulting scores (higher scores are more beneficial) is given in

5.3.3 Table 8 and Figure 8. The assessment is for the impacts in the operational phase of the options. Weightings have been assigned to reflect the importance of individual impacts and criteria.

5.3.4 It should be noted that the scores included within the EAST assessments and

5.3.5 Table 8 take into account the potential patronage of each option. For example, the scores for carbon emissions consider the numbers of trips which may be undertaken for each mode. This means that the scores for the fixed-rail transport options (rail, tram-train and light rail) differ, even though 'per trip' the carbon savings for these similar modes may be comparable.

5.3.6 Comparison of the performance of the options shows the following main differences:

- Tavistock Rail scores highest on the Strategic Impacts followed by the Tram-Train option as it also would provide a direct Tavistock-Plymouth rail service. Other options within the former rail corridor have lower scores because they all involve a change of mode of transport to rail at Bere Alston. The A386 Highway and Bus options have the lowest scores;

- Tavistock Rail also scores highest on the Economic Impacts followed by the Tram-Train option. Other schemes are not far behind apart from the A386 Highway Improvements and Road Link options which score poorly;

- Tavistock Rail and the A386 Bus Improvements score highest on the Managerial and Financial Impacts with other options performing poorly on the Managerial Impacts due to high costs and uncertainties related to introducing new modes of transport;

- Tavistock Rail also scores highest on the Commercial Impacts followed by the Tram-Train option. The highway options perform poorly and LRT, Guided Bus and Bus Link options have lower scores because the indirect journeys requiring a transfer of mode would reduce patronage and revenue.

5.3.7 The Tavistock Rail option performs best in all the 4 of the 5 impact categories and in 14 of 18 criteria in total, with a total weighted score of 249. Tavistock Rail performs considerably better than other options in the most important Strategic and Economic impacts categories.

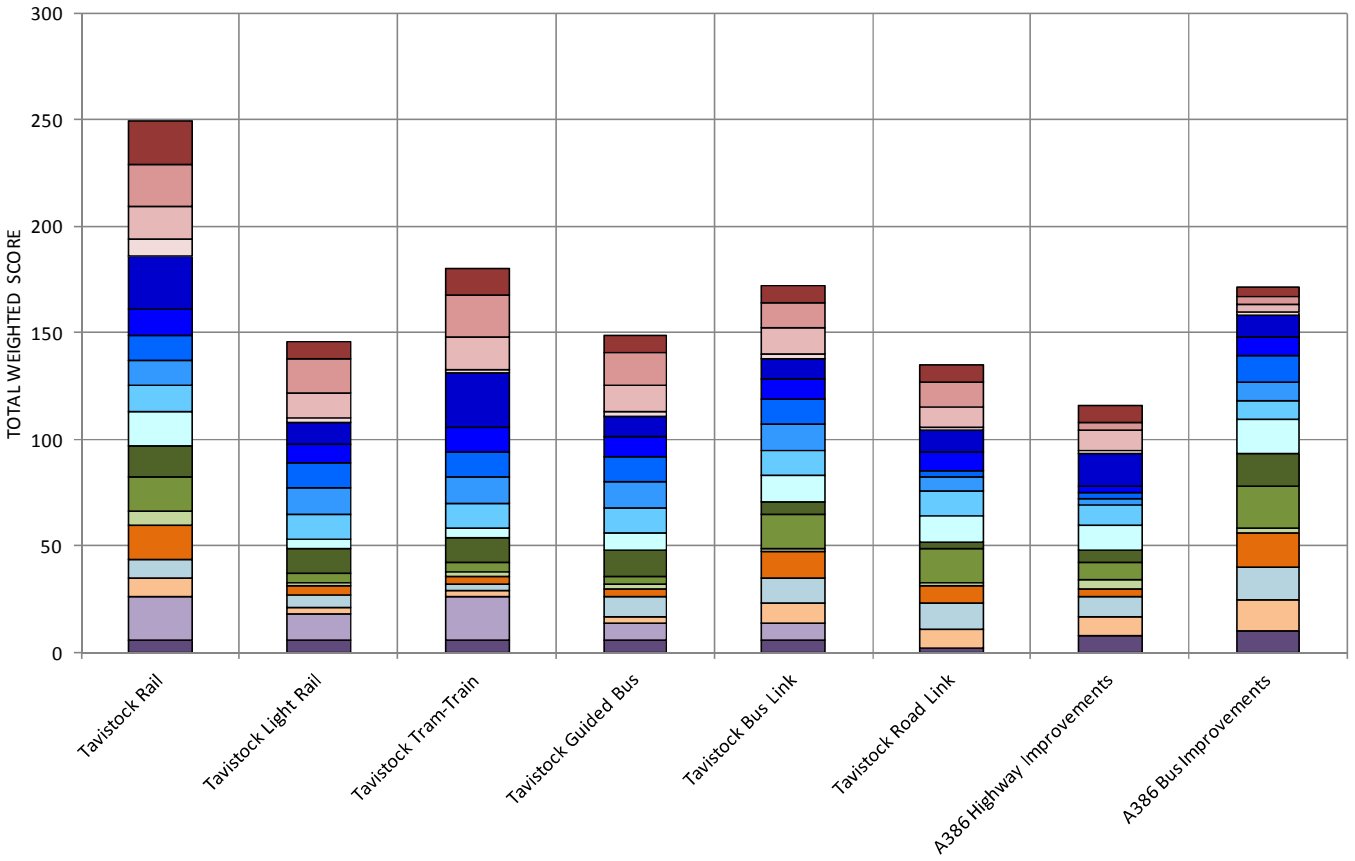
5.3.8 The total weighted score of 249 for the Tavistock Rail option is considerably higher than the next best Tram-Train option with a score of 180. This is followed by the Bus Link option and the A386 Bus Improvements option which does not fully meet the objectives and should be regarded as a complementary rather than competitive scheme as described earlier. The Guided Bus and LRT options are next and then the Road Link and the A386 Highway Improvements option with the lowest score of 116.

Table 8: EAST Option Assessment Summary

Impacts	Score From EAST Assessment								Weighting
	Tavistock Rail	Tavistock Light Rail	Tavistock Tram-Train	Tavistock Guided Bus	Tavistock Bus Link	Tavistock Road Link	A386 Highway Improvements	A386 Bus Improvements	
STRATEGIC									
Scale of impact	5	2	3	2	2	2	2	1	4
Fit with wider transport and government objectives	5	4	5	4	3	3	1	1	4
Fit with other objectives	5	4	5	4	4	3	3	1	3
Degree of consensus over outcomes	4	1	1	1	1	1	1	1	2
Weighted Total	63	38	49	38	34	31	23	13	
ECONOMIC									
Economic Growth	5	2	5	2	2	2	3	2	5
Carbon emissions	4	3	4	3	3	3	1	3	3
Socio-distributional impacts	4	4	4	4	4	1	1	4	3
Local environment	4	4	4	4	4	2	1	3	3
Well being	4	4	4	4	4	4	3	3	3
VfM Category	4	1	1	2	3	3	3	4	4
Weighted Total	89	59	77	63	67	52	45	65	
MANAGERIAL									
Public acceptability	5	4	4	4	2	1	2	5	3
Practical feasibility	4	1	1	1	4	4	2	5	4
Supporting evidence	3	1	1	1	1	1	2	1	2
Weighted Total	37	18	18	18	24	21	18	37	
FINANCIAL									
Affordability	4	1	1	1	3	2	1	4	4
Capital cost	3	2	1	3	4	4	3	5	3
Overall cost risk	3	1	1	1	3	3	3	5	3
Weighted Total	34	13	10	16	33	29	22	46	
COMMERCIAL									
Flexibility of option	3	3	3	3	3	1	4	5	2
Generated income	5	3	5	2	2	0	0	0	4
Weighted Total	26	18	26	14	14	2	8	10	
TOTAL WEIGHTED	**249**	**146**	**180**	**149**	**172**	**135**	**116**	**171**	

Note: Weighted total = sum of score x weighting for each impact
e.g. weighted score for economic impacts of Tavistock rail = 5x4+5x4+5x3+4x2 = 63

Figure 8: Summary Comparison of Options

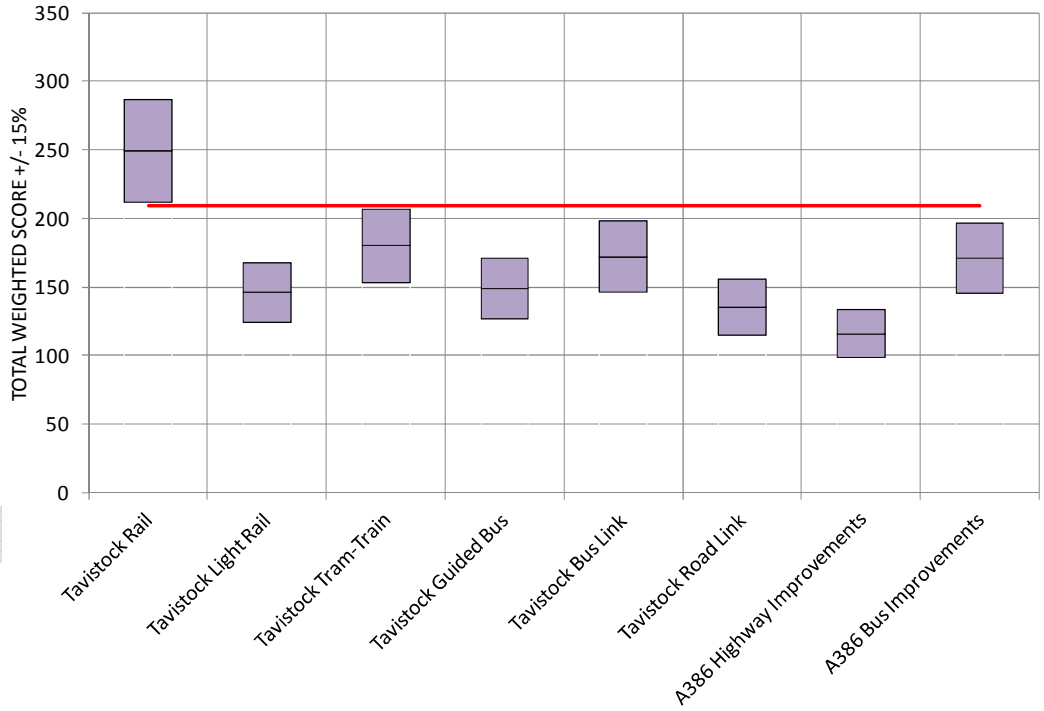


5.4 Conclusions & Recommendations

5.4.1 The option assessment has clearly shown that Tavistock Rail is overwhelmingly the most suitable, economic, feasible and effective scheme. In addition, linking Tavistock to the national rail network will have a significant impact on the ability of the town to attract inward investment, economic and employment growth.

5.4.2 Tavistock Rail performed best against 14 of the 18 impact criteria and had significantly higher scores than the next best option. In addition, there was no clear cut second option as can be seen from Figure 9 which shows that, apart from Tavistock Rail, all the options overlap a +/- 15% range of their weighted scores. Thus the scores of all the options, apart from Tavistock Rail, can be regarded as being similar, within a variation of +/- 15% which is considered a realistic range for EAST scoring.

Figure 9: EAST Weighted Scores – +/-15% Range



5.4.3 Consequently it is recommended that only Tavistock Rail is taken forward to Stage 2 of the scheme development process. All other options showed similar, and significantly lower, performance and therefore none stood out as being as effective as Tavistock Rail in fulfilling local and strategic objectives, providing value for money and being as feasible and deliverable.

Early Assessment and Sifting Tool (EAST)

Option Name/No.	**Tavistock Rail**
Date	28/03/2014
Description	The delivery of a new rail station at Tavistock and associated extension of the Plymouth to Bere Alston line onward to Tavistock. Reinstatement of the line will provide an additional route into Plymouth City Centre and provide relief to the A386 corridor. The railway will unlock development which includes 750 homes in an urban extension adjacent to the railway (which will provide a substantial contribution towards the cost of the railway). Within Plymouth it will assist in supporting development in the Northern Corridor by providing relief to the A386, therefore supporting growth aspirations of the city.

Strategic

Identified problems and objectives	The A386 corridor is constrained due to its alignment within Plymouth, where single carriageway sections are difficult to improve, and north of Yelverton, where there are significant environmental constraints. In particular, the route goes through Dartmoor National Park and a number of villages. It is the only significant route into Plymouth from Tavistock and West Devon but is congested, particularly within the city. A significant quantity of development is planned on the A386, also known as the northern corridor into Plymouth, and there is a limit to how this can be accommodated. To allow additional growth at Tavistock it is important that an alternative, sustainable route is provided for travel into Plymouth. The railway provides this alternative, and will minimise the number of private vehicle trips from Tavistock made along the corridor, helping to accommodate growth along the whole route. The rail project would also provide a sustainable link to Tavistock from Plymouth for leisure travel. This is particularly important given the World Heritage Site status of Tavistock, the presence of Dartmoor and the additional investment which is being made towards leisure routes for pedestrian and cycle access through the Tamar Trails. The rail project would help support these wider sustainable transport projects. It would not be possible to provide a pedestrian and cycle route and railway along the former railway corridor.	
Scale of impact	5. High	The option will minimise private vehicle trips on the A386 between Tavistock and Plymouth which will unlock growth in Tavistock. The rail journey time from Tavistock to Plymouth is expected to be 28 minutes which is much quicker than bus and about the same time as current car journeys although increasing congestion is expected to increase car journey times considerably.

Fit with wider transport and government objectives	5. High	The station would not negatively impact on other transport modes and will make better use of the local rail network by opening up new travel opportunities that will increase demand, reduce per passenger subsidy on the Tamar Valley Line as a whole and work towards better use of under-used rail infrastructure.
Fit with other objectives	5. High	Scheme provides good fit with government and local objectives in LTP and West Devon planning policy.
Key uncertainties	There are few uncertainties. The new station and railway fits well with local and national objectives, by improving the quality of alternatives to the private car, by making better use of existing transport assets, and by supporting economic growth. The rail project benefits from the support of key stakeholders within the rail industry (including Network Rail, First Great Western and Devon and Cornwall Rail Partnership) and key Local Authorities in the area (West Devon Borough Council, Plymouth City Council and Cornwall Council).	
Degree of consensus over outcomes	4	DCC is working jointly with Network Rail and First Great Western to develop the scheme and is working with the Devon and Cornwall Rail Partnership to consider the impact of the scheme on the Tamar Valley line and how the two routes should be developed in future.

Economic

Economic growth	**5. Green**	By re-connecting Tavistock to the national rail network there are possible wider economic benefits. The scheme is identified as critical infrastructure within the West Devon Core Strategy and is therefore needed to allow strategic development in Tavistock to take place. It will also support development elsewhere on the A386 including the northern corridor within Plymouth.
Carbon emissions	**4. Amber/green**	Minimise vehicle trips on the congested A386 corridor reducing journey times and delay
Socio-distributional impacts and the regions	**4. Amber/green**	Improved accessibility from Tavistock to Plymouth and in the deprived Devonport area.
Local environment	**4. Amber/green**	Limited adverse effects on the rail corridor, significant benefits with traffic reduction on the A386.
Well being	**4. Amber/green**	Potential to develop walking and cycling links in association with the scheme, improved access to World Heritage Site and Dartmoor, allow greater access for

		leisure.
Expected VfM category	2. High 2-4	Initial economic assessment carried out.

Managerial

Implementation timetable	6. 5-10 years	Business case 2014/2015, development consent 2016/17, procurement & design 2017, construction 2019/20, opening early 2020s
Public acceptability	5. High	Consultation undertaken in 2013 shows high level of public support.
Practical feasibility	4	Engineering feasibility carried out and has not identified any unexpected challenges, some land acquisition required.
What is the quality of the supporting evidence?	3	Initial demand forecasts updated with interview data. GRIP2 feasibility carried out. GRIP 3 report due to be prepared by summer 2014.
Key risks	Medium risk that condition of structures and mine workings worse than expected, Low risk that DfT, TOC do not support, development consent not given and costs escalate.	

Financial

Affordability	4	LTP funds available to ensure scheme is ready for delivery.
Capital Cost (£m)	04. 10-25	Approximate capital cost at Q1 2015, including 15% risk and 25% optimism bias
Revenue Costs (£m)	01. None	It is expected that the scheme will lead to a substantial reduction in the subsidy per passenger required on the Tamar Valley Line as a whole.
Cost profile	£0.4m 2015/16, £0.4m 2016/17, £7.5m 2019/20, £17.8m 2020s.	
Overall cost risk	3	
Other costs		

Commercial

Flexibility of option	3	Some scope for scaling up or down in the design speed, design loads for structures and rolling stock lengths, rationalisation and phasing of station facilities and reduction of facilities at Bere Alston.

Where is funding coming from?	£17m developer contributions from development in Tavistock, £9m LTB	
Any income generated? (£m)	Yes	05. 25-50

Early Assessment and Sifting Tool (EAST)

Option Name/No.	**Tavistock Light Rail**
Date	28/03/2014
Description	The delivery of a LRT link between Tavistock and Bere Alston to connect with the existing rail line to Plymouth. LRT on the former rail route will provide an additional route into Plymouth City Centre and provide relief to the A386 corridor. The scheme will unlock development which includes 750 homes in an urban extension adjacent to the former railway. Within Plymouth it will assist the delivery of development in the Northern Corridor by providing relief to the A386, therefore supporting growth aspirations of the city.

Strategic

Identified problems and objectives	The A386 corridor is constrained due to its alignment within Plymouth, where single carriageway sections are difficult to improve, and north of Yelverton, where there are significant environmental constraints. In particular, the route goes through Dartmoor National Park and a number of villages. It is the only significant route into Plymouth from Tavistock and West Devon but is congested particularly within the city. A significant quantity of development is planned on the A386, also known as the northern corridor into Plymouth, and there is a limit to how this can be accommodated. To allow additional growth at Tavistock it is important that an alternative, sustainable route is provided for travel into Plymouth. The LRT connection to the rail line provides this alternative, and will reduce the number of private vehicle trips from Tavistock made along the corridor, helping to accommodate growth along the whole route. The LRT/rail project would also provide a sustainable link to Tavistock from Plymouth for leisure travel. This is particularly important given the World Heritage Site status of Tavistock, the presence of Dartmoor and the additional investment which is being made towards leisure routes for pedestrian and cycle access through the Tamar Trails. The project would help support these wider sustainable transport projects. It would not be possible to provide a pedestrian and cycle route and LRT along the full length of the former railway corridor – the tunnel would provide width constraints.	
Scale of impact	2	The option will reduce private vehicle trips on the A386 between Tavistock and Plymouth which will unlock some growth in Tavistock. The combined LRT/rail journey time from Tavistock to Plymouth will not be as quick as for the rail option due to the interchange at Bere Alston.
Fit with wider transport and government objectives	4	The scheme would not negatively impact on other transport modes and will make better use of the local rail network by opening up new travel opportunities that will increase demand, reduce per

		passenger subsidy and work towards better use of under-used rail infrastructure.
Fit with other objectives	4	Scheme provides good fit with government and local objectives in LTP and West Devon planning policy.
Key uncertainties	Major uncertainties due to new and untried mode in this area, high cost, lack of consultation with stakeholders.	
Degree of consensus over outcomes	1. Little	No consultation with stakeholders.

Economic

Economic growth	**2. Red/amber**	The indirect LRT/rail connection will reduce possible wider economic benefits and the extent to which strategic development in Tavistock and elsewhere will take place.
Carbon emissions	**3. Amber**	Reduced vehicle trips on the congested A386 corridor reducing journey times and delay
Socio-distributional impacts and the regions	**4. Amber/green**	Improved accessibility from Tavistock to Plymouth and in the deprived Devonport area.
Local environment	**4. Amber/green**	Limited adverse effects on the former rail corridor, significant benefits with traffic reduction on the A386.
Well being	**4. Amber/green**	Potential to develop walking and cycling links in association with the scheme. Improved access to World Heritage Site and Dartmoor, allow greater access for leisure.
Expected VfM category	5. Poor <1	High capital and operating costs will reduce VfM.

Managerial

Implementation timetable	7. 10+ years	New mode justification and funding process will delay implementation.
Public acceptability	4	Consultation yet to be carried out but good level of public support expected.
Practical feasibility	1. Low	Engineering, operational and financial feasibility likely to be problematic.
What is the quality of the supporting evidence?	1. Low	None

Key risks	High risk that DfT, TOC would not support, development consent not given and costs escalate.

Financial

Affordability	1. Not affordable	High costs unlikely to be covered by LTB, central government and developers.
Capital Cost (£m)	05. 25-50	Based on existing UK LRT schemes.
Revenue Costs (£m)	Unknown	It is likely that high levels of subsidy will be required.
Cost profile	Unknown	
Overall cost risk	1.High risk	
Other costs		

Commercial

Flexibility of option	3	Little scope for scaling up or down due to high proportion of fixed items of track, power supply and depot. Potential extensions into Tavistock town centre are unlikely to be practicable.
Where is funding coming from?	Developers, LTB and DfT.	
Any income generated? (£m)	Yes	03. 5-10

Early Assessment and Sifting Tool (EAST)

Option Name/No.	**Tavistock Tram-Train**
Date	28/03/2014
Description	The delivery of a Tram-Train between Tavistock and Plymouth running on new track on the former rail route and on existing rail track from Bere Alston. Will provide an additional route into Plymouth City Centre and provide relief to the A386 corridor. The scheme will unlock development which includes 750 homes in an urban extension adjacent to the former railway. Within Plymouth it will assist development in the Northern Corridor by providing relief to the A386 therefore supporting growth aspirations of the city.

Strategic

Identified problems and objectives	The A386 corridor is constrained due to its alignment within Plymouth, where single carriageway sections are difficult to improve, and north of Yelverton, where there are significant environmental constraints. In particular, the route goes through Dartmoor National Park and a number of villages. It is the only significant route into Plymouth from Tavistock and West Devon but is congested particularly within the city. A significant quantity of development is planned on the A386, also known as the northern corridor into Plymouth, and there is a limit to how this can be accommodated. To allow additional growth at Tavistock it is important that an alternative, sustainable route is provided for travel into Plymouth. The Tram-Train will provide this alternative, and will minimise the number of private vehicle trips from Tavistock made along the corridor, helping to accommodate growth along the whole route. The Tram-Train project would also provide a sustainable link to Tavistock from Plymouth for leisure travel. This is particularly important given the World Heritage Site status of Tavistock, the presence of Dartmoor and the additional investment which is being made towards leisure routes for pedestrian and cycle access through the Tamar Trails. The project would help support these wider sustainable transport projects. It would not be possible to provide a pedestrian and cycle route and tram-train along the full length of the former railway corridor – the tunnel would provide width constraints, however, depending on traditional heavy rail requirements, it may not be possible to run the two in parallel along other sections.	
Scale of impact	3	The option will minimise private vehicle trips on the A386 between Tavistock and Plymouth which will unlock growth in Tavistock. The Tram-Train journey time from Tavistock to Plymouth is expected to be 28 minutes which is much quicker than bus and about the same time as current car journeys although increasing congestion is expected to increase car journey times considerably.

Fit with wider transport and government objectives	5. High	The scheme would not negatively impact on other transport modes and will make better use of the local rail network by opening up new travel opportunities that will increase demand, reduce per passenger subsidy and work towards better use of under-used rail infrastructure.
Fit with other objectives	5. High	Scheme provides good fit with government and local objectives in LTP and West Devon planning policy.
Key uncertainties	Major uncertainties due to new and untried mode, running light rail vehicles on the heavy rail network, high cost, lack of consultation with stakeholders.	
Degree of consensus over outcomes	1. Little	No consultation with Network Rail, TOC and other stakeholders.

Economic

Economic growth	**5. Green**	By re-connecting Tavistock to the national rail network there are possible wider economic benefits. Rail provision is critical infrastructure within the West Devon Core Strategy and is therefore needed to allow strategic development in Tavistock to take place. It will also support development elsewhere on the A386 including the northern corridor within Plymouth.
Carbon emissions	**4. Amber/green**	Minimise vehicle trips on the congested A386 corridor reducing journey times and delay
Socio-distributional impacts and the regions	**4. Amber/green**	Improved accessibility from Tavistock to Plymouth and in the deprived Devonport area.
Local environment	**4. Amber/green**	Limited adverse effects on the reinstated rail line, Significant benefits with traffic reduction on the A386.
Well being	**4. Amber/green**	Development of walking and cycling trails with the railway, improved access to World Heritage Site.
Expected VfM category	5. Poor <1	High capital and operating costs reduce VfM.

Managerial

Implementation timetable	7. 10+ years	New mode justification and funding process would delay implementation.

Public acceptability	4	Consultation yet to be carried out but good level of public support expected.
Practical feasibility	1. Low	Engineering, safety, operational and financial feasibility likely to be problematic.
What is the quality of the supporting evidence?	1. Low	None
Key risks	High risk that DfT, TOC do not support, development consent not given and costs escalate.	

Financial

Affordability	1. Not affordable	High costs unlikely to be covered by LTB, central government and developers.
Capital Cost (£m)	06. 50-100	Based on existing schemes.
Revenue Costs (£m)	Unknown	It is likely that high levels of subsidy will be required.
Cost profile	Unknown	
Overall cost risk	1.High risk	
Other costs		

Commercial

Flexibility of option	3	Little scope for scaling up or down due to high proportion of fixed items of track, power supply and depot.
Where is funding coming from?	Developer, LTB and DfT.	
Any income generated? (£m)	Yes	05. 25-50

Early Assessment and Sifting Tool (EAST)

Option Name/No.	**Tavistock Guided Bus**
Date	28/03/2014
Description	The delivery of a guided bus link between Tavistock and Bere Alston to connect with the existing rail line to Plymouth. Guided bus on the former rail route will provide an additional route into Plymouth City Centre and provide relief to the A386 corridor. The scheme will unlock development which includes 750 homes in an urban extension adjacent to the former railway. Within Plymouth it will assist development in the Northern Corridor by providing relief to the A386 therefore supporting growth aspirations of the city.

Strategic

Identified problems and objectives	The A386 corridor is constrained due to its alignment within Plymouth, where single carriageway sections are difficult to improve, and north of Yelverton, where there are significant environmental constraints. In particular, the route goes through Dartmoor National Park and a number of villages. It is the only significant route into Plymouth from Tavistock and West Devon but is congested particularly within the city. A significant quantity of development is planned on the A386, also known as the northern corridor into Plymouth, and there is a limit to how this can be accommodated. To allow additional growth at Tavistock it is important that an alternative, sustainable route is provided for travel into Plymouth. The guided bus connection will provide this alternative, and will reduce the number of private vehicle trips from Tavistock made along the corridor, helping to accommodate growth along the whole route. The guided bus project would also provide a sustainable link to Tavistock from Plymouth for leisure travel. This is particularly important given the World Heritage Site status of Tavistock, the presence of Dartmoor and the additional investment which is being made towards leisure routes for pedestrian and cycle access through the Tamar Trails. The project would help support these wider sustainable transport projects. It would be possible to provide a pedestrian and cycle route and guided bus along the former railway corridor.

Scale of impact	2	The option will reduce private vehicle trips on the A386 between Tavistock and Plymouth which will unlock some growth in Tavistock. The combined guided bus/rail journey time from Tavistock to Plymouth will not be as quick as for the rail option due to the interchange at Bere Alston.

Fit with wider transport and government objectives	4	The scheme would not negatively impact on other transport modes and will make better use of the local rail network by opening up new travel opportunities that will increase demand, reduce per passenger subsidy and work towards better use of under-used rail infrastructure.
Fit with other objectives	4	Scheme provides good fit with government and local objectives in LTP and West Devon planning policy.
Key uncertainties	Major uncertainties due to new and untried mode, high cost, lack of consultation with stakeholders.	
Degree of consensus over outcomes	1. Little	No consultation with stakeholders.

Economic

Economic growth	**2. Red/amber**	The indirect guided bus/rail connection will reduce possible wider economic benefits and the extent to which strategic development in Tavistock and elsewhere will take place.
Carbon emissions	**3. Amber**	Reduced vehicle trips on the congested A386 corridor reducing journey times and delay
Socio-distributional impacts and the regions	**4. Amber/green**	Improved accessibility from Tavistock to Plymouth and in the deprived Devonport area.
Local environment	**4. Amber/green**	Limited adverse effects on the former rail corridor, significant benefits with traffic reduction on the A386.
Well being	**4. Amber/green**	Potential to develop walking and cycling links in association with the scheme. Improved access to World Heritage Site and Dartmoor, allow greater access for leisure.
Expected VfM category	4. Low 1-1.5	High capital and operating costs will reduce VfM.

Managerial

Implementation timetable	7. 10+ years	New mode justification and funding process will delay implementation.
Public acceptability	4	Consultation yet to be carried out but a reasonable level of public support

		expected.
Practical feasibility	1. Low	Engineering, operational and financial feasibility likely to be problematic.
What is the quality of the supporting evidence?	1. Low	None
Key risks	High risk that DfT, development consent not given and costs escalate.	

Financial

Affordability	1. Not affordable	High costs unlikely to be covered by LTB, central government and developers.
Capital Cost (£m)	04. 10-25	Based on UK guided bus schemes.
Revenue Costs (£m)	Don't know	It is likely that subsidy will be required.
Cost profile	Unknown	
Overall cost risk	1.High risk	
Other costs		

Commercial

Flexibility of option	3	Little scope for scaling up or down due to high proportion of fixed items of track. Could be some kind of link to wider bus services in Tavistock.
Where is funding coming from?	Developer, LTB but DfT would need to provide most of cost.	
Any income generated? (£m)	Yes	02. 0-5

Early Assessment and Sifting Tool (EAST)

Option Name/No.	**Tavistock Bus Link**
Date	28/03/2014
Description	The delivery of a bus link between Tavistock and Bere Alston to connect with the existing rail line to Plymouth. Conventional bus on the former rail route will provide an additional route into Plymouth City Centre and provide relief to the A386 corridor. The scheme will unlock development which includes 750 homes in an urban extension adjacent to the scheme. Within Plymouth it will assist development in the Northern Corridor by providing relief to the A386 therefore supporting growth aspirations of the city.

Strategic

Identified problems and objectives	The A386 corridor is constrained due to its alignment within Plymouth, where single carriageway sections are difficult to improve, and north of Yelverton, where there are significant environmental constraints. In particular, the route goes through Dartmoor National Park and a number of villages. It is the only significant route into Plymouth from Tavistock and West Devon but is congested particularly within the city. A significant quantity of development is planned on the A386, also known as the northern corridor into Plymouth, and there is a limit to how this can be accommodated. To allow additional growth at Tavistock it is important that an alternative, sustainable route is provided for travel into Plymouth. The bus connection will provide this alternative, and will reduce the number of private vehicle trips from Tavistock made along the corridor, helping to accommodate growth along the whole route. The bus project would also provide a sustainable link to Tavistock from Plymouth for leisure travel. This is particularly important given the World Heritage Site status of Tavistock, the presence of Dartmoor and the additional investment which is being made towards leisure routes for pedestrian and cycle access through the Tamar Trails. The rail project would help support these wider sustainable transport projects. It would be possible to provide a pedestrian and cycle route and bus link along the former railway corridor.	
Scale of impact	2	The scheme will reduce private vehicle trips on the A386 between Tavistock and Plymouth which will unlock some growth in Tavistock. The combined bus/rail journey time from Tavistock to Plymouth will not be as quick as for the rail option due to the interchange at Bere Alston.
Fit with wider transport and government objectives	3	The scheme would not negatively impact on other transport modes and will make better use of the local rail network by opening up new travel opportunities that will increase demand, reduce subsidy and work towards better use of under-

		used rail infrastructure.
Fit with other objectives	4	Scheme provides good fit with government and local objectives in LTP and West Devon planning policy.
Key uncertainties	Few uncertainties with conventional buses.	
Degree of consensus over outcomes	1. Little	No consultation with stakeholders.

Economic

Economic growth	**2. Red/amber**	The indirect bus/rail connection will reduce possible wider economic benefits and the extent to which strategic development in Tavistock and elsewhere will take place.
Carbon emissions	**3. Amber**	Reduced vehicle trips on the congested A386 corridor reducing journey times and delay
Socio-distributional impacts and the regions	**4. Amber/green**	Improved accessibility from Tavistock to Plymouth and in the deprived Devonport area.
Local environment	**4. Amber/green**	Limited adverse effects on the former rail corridor, significant benefits with traffic reduction on the A386.
Well being	**4. Amber/green**	Potential to develop walking and cycling links in association with the scheme. Improved access to World Heritage Site and Dartmoor, allow greater access for leisure.
Expected VfM category	3. Medium 1.5-2	Lower costs but lower patronage.

Managerial

Implementation timetable	6. 5-10 years	Not developed yet.
Public acceptability	2	Consultation yet to be carried out.
Practical feasibility	4	Conventional bus operation.
What is the quality of the supporting evidence?	1. Low	Scheme yet to be developed.

Key risks	Main risk is that the scheme is at the early stage of development and feasibility has not been proved.	

Financial

Affordability	3	Lower costs than rail scheme but funding for bus scheme could be more difficult.
Capital Cost (£m)	04. 10-25	Broad cost estimate
Revenue Costs (£m)	Unknown	It is likely that subsidy will be required.
Cost profile	Unknown	
Overall cost risk	3	
Other costs		

Commercial

Flexibility of option	3	Buses can be scaled up or down but construction of the road on the disused rail route is fixed.
Where is funding coming from?	Developer and LTB.	
Any income generated? (£m)	Yes	02. 0-5

Early Assessment and Sifting Tool (EAST)

Option Name/No.	**Tavistock Road Link**
Date	28/03/2014
Description	The delivery of a road link between Tavistock and Bere Alston to connect with the existing rail line to Plymouth. The scheme will provide an additional route into Plymouth City Centre and provide relief to the A386 corridor. The scheme will unlock development which includes 750 homes in an urban extension adjacent to the scheme. Within Plymouth it will assist development in the Northern Corridor by providing relief to the A386 therefore supporting growth aspirations of the city.

Strategic

Identified problems and objectives	The A386 corridor is constrained due to its alignment within Plymouth, where single carriageway sections are difficult to improve, and north of Yelverton, where there are significant environmental constraints. In particular, the route goes through Dartmoor National Park and a number of villages. It is the only significant route into Plymouth from Tavistock and West Devon but is congested particularly within the city. A significant quantity of development is planned on the A386, also known as the northern corridor into Plymouth, and there is a limit to how this can be accommodated. To allow additional growth at Tavistock it is important that an alternative, sustainable route is provided for travel into Plymouth. The road link and rail park and ride at Bere Alston would go some way to provide this alternative, and would minimise the number of private vehicle trips from Tavistock made along the A386, helping to accommodate growth along the whole route. It would be possible to provide a pedestrian/cycle route and highway along the former railway corridor.	
Scale of impact	2	The option will reduce private vehicle trips on the A386 between Tavistock and Plymouth which will unlock some growth in Tavistock. The combined road/rail journey time from Tavistock to Plymouth will not be as quick as for the rail option due to the interchange at Bere Alston.
Fit with wider transport and government objectives	3	The scheme would not negatively impact on other transport modes and will make better use of the local rail network by opening up new travel opportunities that will increase demand, reduce subsidy and work towards better use of under-used rail infrastructure.
Fit with other objectives	3	Scheme provides some fit with government and local objectives in LTP and West Devon planning policy.

Key uncertainties	Few uncertainties with road and park & ride scheme.	
Degree of consensus over outcomes	1. Little	No consultation with stakeholders.

Economic

Economic growth	**2. Red/amber**	The indirect road/rail connection will reduce possible wider economic benefits and the extent to which strategic development in Tavistock and elsewhere will take place.
Carbon emissions	**3. Amber**	Reduced vehicle trips on the congested A386 corridor reducing journey times and delay
Socio-distributional impacts and the regions	**1. Red**	Limited benefit for non-car owners.
Local environment	**2. Red/amber**	Adverse effects along the disused rail route with general traffic. Limited benefits with traffic reduction on the A386.
Well being	**4. Amber/green**	Potential to develop walking and cycling links in association with the scheme. Improved access to World Heritage Site and Dartmoor, allow greater access for leisure.
Expected VfM category	3. Medium 1.5-2	Lower costs but lower patronage.

Managerial

Implementation timetable	6. 5-10 years	Not developed yet.
Public acceptability	1	Consultation yet to be carried out but a considerable level of public opposition expected.
Practical feasibility	4	Conventional highway works.
What is the quality of the supporting evidence?	1. Low	Scheme yet to be developed.
Key risks	Main risk is environmental and sustainability objections to converting a disused rail line to a road.	

Financial

Affordability	2	Lower costs than rail scheme but funding

		for new road scheme may not be available.
Capital Cost (£m)	04. 10-25	Broad cost estimate
Revenue Costs (£m)	Don't know	There will be road maintenance costs but no revenue.
Cost profile	Unknown	
Overall cost risk	3	
Other costs		

Commercial

Flexibility of option	1. Static	Construction of the road on the disused rail route cannot be scaled.
Where is funding coming from?	Developer and LTB.	
Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST)

Option Name/No.	**A386 Highway Improvements**
Date	28/03/2014
Description	The delivery of highway improvements on the A386 between Tavistock and Plymouth. The scheme will provide additional capacity and improved journey times on key sections and junctions.

Strategic

Identified problems and objectives	The A386 corridor is constrained due to its alignment within Plymouth, where single carriageway sections are difficult to improve, and north of Yelverton, where there are significant environmental constraints. In particular, the route goes through Dartmoor National Park and a number of villages. It is the only significant route into Plymouth from Tavistock and West Devon but is congested particularly within the city. A significant quantity of development is planned on the A386, also known as the northern corridor into Plymouth, and there is a limit to how this can be accommodated. Improvements to the A386 will help to accommodate growth along the whole route. It would be possible to provide a pedestrian and cycle route along the former railway corridor if improvements to the A386 were implemented.	
Scale of impact	2	The option will allow additional private vehicle trips on the A386 between Tavistock and Plymouth which, although small, will unlock some growth in Tavistock.
Fit with wider transport and government objectives	1. Low	The scheme would not fit with national and local government objectives to reduce car travel and encourage public transport use.
Fit with other objectives	3	Scheme meets some government and local objectives in LTP and West Devon planning policy.
Key uncertainties	Major uncertainty of road improvements in Dartmoor National Park.	
Degree of consensus over outcomes	1. Little	No consultation with stakeholders.

Economic

Economic growth	**3. Amber**	The limited extent of the improvements and additional A386 traffic will reduce possible wider economic benefits and the extent to which strategic development in Tavistock and elsewhere will take place.
Carbon emissions	**1. Red**	Increased vehicle trips on the congested A386 corridor with only limited highway improvements will increase overall emissions.
Socio-distributional impacts and the regions	**1. Red**	No benefit for non-car owners.
Local environment	**1. Red**	Adverse effects of highway improvements within Dartmoor National Park and increase in traffic on the A386.
Well being	**3. Amber**	Additional car trips will cause deterioration in well being.
Expected VfM category	3. Medium 1.5-2	Expected to be average.

Managerial

Implementation timetable	7. 10+ years	Not developed yet.
Public acceptability	2	Some opposition expected.
Practical feasibility	2	Conventional highway works but feasibility in doubt.
What is the quality of the supporting evidence?	2	Pre-feasibility completed but scheme yet to be developed.
Key risks	Main risk is environmental and sustainability objections of highway improvements in Dartmoor National Park.	

Financial

Affordability	1	Lower costs than rail scheme but funding for road scheme in Dartmoor National Park unlikely.
Capital Cost (£m)	04. 10-25	Broad cost estimate
Revenue Costs (£m)	01. None	
Cost profile	Unknown	
Overall cost risk	3	
Other costs		

Commercial

Flexibility of option	4	Can be scaled up or down as improvements are on separate road sections.
Where is funding coming from?	Developer and LTB.	
Any income generated? (£m)	No	

Early Assessment and Sifting Tool (EAST)

Option Name/No.	**A386 Bus Improvements**
Date	28/03/2014
Description	The delivery of bus improvements in the A386 corridor between Tavistock and Plymouth. The scheme will provide additional capacity and improved journey times.

Strategic

Identified problems and objectives	The A386 corridor is constrained due to its alignment within Plymouth, where single carriageway sections are difficult to improve, and north of Yelverton, where there are significant environmental constraints. In particular, the route goes through Dartmoor National Park and a number of villages. It is the only significant route into Plymouth from Tavistock and West Devon but is congested particularly within the city. A significant quantity of development is planned on the A386, also known as the northern corridor into Plymouth, and there is a limit to how this can be accommodated. Improvements to bus services on the A386 will help to accommodate growth along the whole route. It would be possible to provide a pedestrian and cycle route along the former railway corridor if improvements to the A386 bus services were implemented.	
Scale of impact	1. Small impact	The option will help to minimise additional private vehicle trips on the A386 between Tavistock and Plymouth which although small will unlock some growth in Tavistock.
Fit with wider transport and government objectives	1. Low	The scheme would fit with national and local government objectives to reduce car travel and encourage public transport use to a very limited extent.
Fit with other objectives	1. Low	Scheme meets government and local objectives in LTP and West Devon planning policy to a very limited extent.
Key uncertainties	No major uncertainties.	
Degree of consensus over outcomes	1. Little	No consultation with stakeholders.

Economic

Economic growth	**2. Red/amber**	The limited extent of the improvements and additional A386 traffic will reduce possible wider economic benefits and the extent to which strategic

		development in Tavistock and elsewhere will take place.
Carbon emissions	**3. Amber**	Limits the increase of vehicle trips on the congested A386 corridor but emissions reduction will be small.
Socio-distributional impacts and the regions	**4. Amber/green**	Improved accessibility from Tavistock to Plymouth especially the Hospital and north Plymouth.
Local environment	**3. Amber**	Some benefits with traffic reduction on the A386.
Well being	**3. Amber**	Increased walking associated with bus travel.
Expected VfM category	2. High 2-4	Expected to be high.

Managerial

Implementation timetable	5. 2-5 years	Can be implemented quickly.
Public acceptability	5. High	Objections not expected.
Practical feasibility	5. High	Additional bus services with no or limited physical works.
What is the quality of the supporting evidence?	1. Low	Scheme yet to be developed.
Key risks	Benefits of improved bus services not achieved due to increasing congestion on the A386.	

Financial

Affordability	4	Initial subsidy might be needed.
Capital Cost (£m)	02. 0-5	Broad cost estimate
Revenue Costs (£m)	Don't know	Additional costs for increased frequency, subsidy not expected in long term.
Cost profile	Unknown	
Overall cost risk	5. Low risk	
Other costs		

Commercial

Flexibility of option	5. Dynamic	Can be easily scaled up or down.
Where is funding coming from?	Developer and LTB.	
Any income generated? (£m)	No	