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## 2.1 1 Reading - South Reading MRT Phase 1

### 2.1.1.1 Lead organisation

Reading Borough Council

### 2.1.1.2 Contact details (name, email, telephone number)

Ruth Leuillette, Deputy Head of Highways & Transport, Reading Borough Council,  
[Ruth.Leuillette@reading.gov.uk](mailto:Ruth.Leuillette@reading.gov.uk), 0118 937 2069

### 2.1.1.3 Brief description of the project and the main activities within it

South Reading MRT would provide a series of bus priority measures on the A33, resulting in reduced journey times and improved reliability for public transport on the main corridor into Reading. It would connect the Mere oak Park & Ride facility south of M4 junction 11 (funded and planned for delivery in 2014/15) to existing businesses and business parks, the planned Green Park railway station, further commercial development, Madejski stadium, new additional residential development, central Reading and Reading Station. Phase 1 of the scheme runs between M4 junction 11 to A33 junction with Longwater Avenue (Green Park).

### 2.1.1.4 Location of the project:

South Reading

Local Authority: Reading Borough Council

Parliamentary Constituency: Reading West

Postcode: RG2

## Rationale for the project and strategic fit

### 2.1.1.5 How will the project contribute to the delivery of Thames Valley Berkshire's Strategic Economic Plan (SEP)?

A key objective of the SEP is to enhance urban connectivity; this is translated into one of the key themes within the Infrastructure Package. This reflects the polycentric nature of TVB and provides a stronger economic focus. This scheme will contribute to the functionality of Reading in connectivity terms, making key employment and development sites in central Reading and on the A33 corridor more accessible on a sustainable basis. In addition, it provides a key north-



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south spine to the proposed wider TVB Mass Rapid Transit/Bus Rapid Transit network and enhanced access to/from south Reading to Reading Station.

#### **2.11.6 How does the project fit within the Programmes and Packages outlined in the SEP?**

This project is part of the Infrastructure Package: Enhancing Urban Connectivity. It also contributes to Unlocking Housing Development and Encouraging Vibrant Town Centres.

#### **2.11.7 What is the rationale for the project?**

The scheme will improve access to Reading from the south – specifically the A33 corridor, which connects the town centre to major employment locations, the M4 and major housing developments. It will increase overall trip capacity and reduce congestion on this key transport corridor.

The A33 corridor carries high volumes of traffic between the M4/A33 and town centre providing access to over 50,000 town centre jobs. The route is also the main access for the major south Reading employment area of 10,000 jobs and 1,600 homes.

There is planned growth of some 7,500 jobs and 1,500 homes along the corridor, further three strategic development locations are planned south of the M4 junction 11 (2,500 homes), South Wokingham (2,500 homes) and North Wokingham (1,500 homes), which have planning obligations to the delivery of express bus or mass rapid transit services. Around 50% of the traffic on this corridor is forecast to be associated with planned development by 2026.

The A33 is busy throughout the day, but particularly during AM and PM peak periods when employees arrive and leave the business units and parks along the corridor and when there are high levels of traffic into Reading town centre.

Reading Borough Council and the business parks along the A33 have made significant investment in expanding the bus services along the corridor, delivering high-quality, low noise and low emission bus services (approx 600,000 trips per annum).

The current level of congestion has resulted in the need to add extra vehicles during the peak periods and reduce the peak period frequency to offset the impact of high journey time variability. These services would benefit from this scheme through reduced journey times and enhanced reliability.

This scheme is a long established element of Reading's strategy to deliver economic growth and housing and has been included in Reading's three Local Transport Plans and Core Strategy.



#### 2.11.8 What market failures will it address? What is the evidence?

The private sector will not advance a project of this nature without public subsidy. The private sector is unable to progress a scheme themselves as it is located on the public highway.

#### 2.11.9 What other options have been considered?

Implementing the full South Reading MRT scheme in a single phase has been discounted at this stage due to the higher costs of implementation. Therefore a phased approach to delivery has been identified to ensure the key benefits of the scheme can be achieved in a realistic and earlier timeframe. Future phases of the scheme will be further developed for implementation outside the period of this plan.

#### 2.11.10 What would be the consequences of a "do nothing" option?

Congestion on the network would continue to increase and economic growth would be limited. In addition, there is a risk that existing businesses would consider relocating out of the TVB area and possibly elsewhere in Europe.

#### 2.11.11 Which partner organisations are involved in, and committed to, the project?

Reading Borough Council

### Value for money

#### 2.11.12 What outputs will the project deliver that are attributable to LGF and other funding sources?

The preparation of a full business case is required to understand the detailed and wider benefits of the scheme, but in the interim, the benefits of transferring the existing bus services to this uncongested route have been calculated using a logit model (explained in para 14 below).

The (conservative) calculation of benefits has been compared with the scheme costs (with 20% optimism bias applied) over a 60-year appraisal period, which results in a BCR of 2.55. This BCR does not include wider economic benefits, journey ambience, health and absenteeism and social inclusion.

This scheme could generate a potential increase in GVA of £11.1m by accommodating growth in population jobs (assumed GVA per head value of £32,798 based on ONS data for Berkshire). This has been calculated on the basis of development planned in Reading's Core Strategy only and is therefore a conservative figure.



It is expected that 161,500 users (one way) per annum will use the scheme in the first year, increasing to 172,740 by year 5. The scheme will result in journey time savings of over 7,000 hours per annum inbound in year 1.

Outputs		2015/ 16	2016/ 17	2017/ 18	2018/ 19	2019/ 20	2020/ 21	Later
Houses (units)	LGF		54	54	54	54	54	
	Other public sector (specify ESIF, etc.)							
	Private sector		13	13	13	13	13	
	Total		67	67	67	67	67	
Jobs	LGF		187	187	187	187	187	
	Other public sector (specify ESIF, etc.)							
	Private sector		47	47	47	47	47	
	Total		234	469	703	937	1172	
Employment floorspace (sq m)	LGF		4,493	4,493	4,493	4,493	4,493	
	Other public sector (specify ESIF, etc.)							
	Private sector		1,123	1,123	1,123	1,123	1,123	
	Total		5,616	5,616	5,616	5,616	5,616	
Businesses created	LGF		1	1	1	1	1	
	Other public sector (specify ESIF, etc.)							
	Private sector		0	0	0	0	0	
	Total		1	1	1	1	1	
MRT trips per annum	LGF		129,200	131,360	133,600	135,880	138,192	
	Other public sector (specify ESIF, etc.)							
	Private sector		32,300	32,840	33,400	33,970	34,548	
	Total		161,500	164,200	167,000	169,850	172,740	
Journey time savings per annum (inbound)	LGF		5,650	5,746	5,844	5,944	6,045	
	Other public sector (specify ESIF, etc.)							
	Private sector		1,413	1,437	1,461	1,486	1,511	
	Total		7,063	7,183	7,305	7,430	7,556	



### 2.11.13 How have these outputs been estimated?

A logit model has been used to determine the likely patronage of the park & ride with and without the MRT Phase 1 in place. The logit model compares the generalised cost of using public transport along the route against drive time and calculating the potential mode change and the use of park & ride with and without the MRT route. The logit model has been calibrated against existing park & ride sites within the Reading area. The 'in-scope' demand, i.e. those that potentially could transfer to park & ride is based on trips passing the site from the south along the A33 (taken from the Reading SATURN model) who have a destination in the town centre and excluding a proportion of trips that do not have to pay for parking at their destination. The value for money assessment has been based on the assumption that the Mere oak Park & Ride site (funded and planned for delivery in 2014/15) will already be operational. Trips to Green Park have not been included in the assessment at this stage.

The BCR has been calculated using the journey time benefits of new and existing users of the park & ride service. New users would experience a benefit if the journey time is less than the car trip and existing users would benefit from a quicker journey time as a result of the MRT scheme.

Other items included are the additional revenue from park & ride users, decongestion benefits as a result of the removal of some vehicles from the road network due to mode change to park and ride and other external cost benefits such as noise, air quality and accident savings. These have all been calculated based on the number of car trips removed from the highway network.

### 2.11.14 What wider outcomes will be achieved in TVB? Please quantify these if possible

This is a strategic corridor within the TVB providing the main radial route to Reading, linking the M4 Junction 11 with Reading town centre and access to the core employment areas, residential areas and planned development alongside the A33.

The scheme will increase capacity and reduce congestion on the network, contributing to sustained economic growth across TVB. The scheme will realise additional benefits to those currently being delivered through the A33 Pinch Point scheme through enhanced public transport journey time savings, and will increase the attractiveness and success of Mere oak Park & Ride (funded and planned for delivery in 2014/15) with improved reliability and reduced journey times.



**2.11.15 To what extent are these outputs (and downstream outcomes/impacts) likely to be additional? What is the basis for this assessment?**

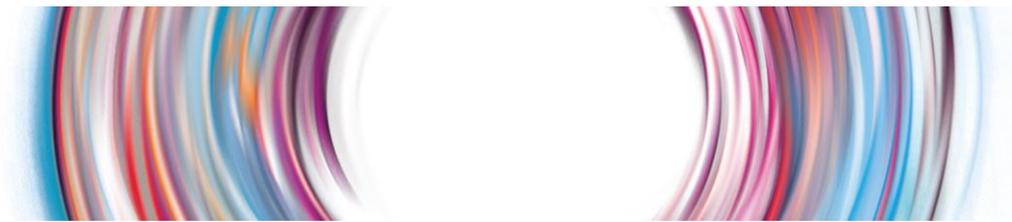
The journey time savings are additional outputs. It is possible that some new jobs and housing might be delivered without the route however constraints to accessibility will affect the job market and attractiveness of housing in the area. The outputs only reflect a proportion of planned development in Reading and are therefore considered a conservative estimate of additionality for TVB.

Further outputs that would be considered in a full business case (i.e. not calculated in this interim assessment of costs and benefits) are:

- Potential increases in bus usage and journey time savings to/from employment along the A33
- Wider economic benefits (estimated at £11.1m, when considering only development planned in Reading Core Strategy)
- Journey ambience
- Health and absenteeism
- Social inclusion

**2.11.16 What is the nature of the resourcing package that is proposed (e.g. balance between loans and grants, etc.)?**

The proposed resourcing package is 80% LGF and 20% private sector funding. In addition, there have been significant contributions from the local authorities to progress scheme development to date.



### 2.11.17 What is the funding package through which the project will be delivered?

Source	Year	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
LGF	Capital	£2.96m					
Other public sector							
1							
2							
3							
Private sector	<i>S106</i>	£0.74m					
1							
2							
3							

## Deliverability and risks

### 2.11.18 How secure are the funding contributions from elsewhere?

Private sector contributions will be achieved through S106 and/or CIL agreements from development sites on the A33 corridor. The scheme is deliverable within the 2015/16 financial year.

### 2.11.19 What are the key project milestones?

The key project milestones include:

- Preliminary design (including all associated surveys) - Completed
- Detailed design - In progress
- Statutory consultation
- Procurement of a contractor
- Construction
- Open to bus operators (March 2016)



### 2.11.20 What are the proposed arrangements for project management?

A project steering group will be established to coordinate works and monitor progress. The role of the steering group will be to adhere to and consider project manager and working group reports, update project risks and oversee and manage all key decisions on the programme.

A detailed project programme will be developed for the scheme and a project management manual will be produced and used as a live document by the team as one management tool.

Governance protocols will include appropriate progress reports to Local Authority Councillors and the appropriate TVB LEP meetings.

Any funding awarded to this project from the LGF process will be managed on behalf of the LEP by Berkshire Local Transport Body. The BLTB operates a DfT-approved Assurance Framework which governs the release of project funds.

### 2.11.21 What are the principal risks linked to the project's delivery, and what actions will be (or have been) taken to mitigate and manage these?

Risk	Likelihood (H / M / L)	Severity (H / M / L)	Mitigating actions
1. Objections through the Planning and consultation Process	L	L	Outline work has progressed. Scheme within highway or safeguarded land. The principle of MRT has been consulted upon through preparation of various policy documents. Detailed transport assessment work is planned.
2. Utility diversions and surface water drainage alterations	M	M	Utility searches are being progressed.

### List of supporting information and evidence

There is a dedicated webpage at <http://www.reading.gov.uk/council/strategies-plans-and-policies/TransportStrategy/strategic-economic-plan/> which gives access to all the relevant supporting information for this project.

Business Case Documentation, Reading Borough Council, 2014

Scheme Drawings, Reading Borough Council, 2014



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## 2.12 Reading - South Reading MRT Phase 2

**2.12.1 Lead organisation:** Reading Borough Council

**2.12.2 Contact details** (name, email, telephone number)

Ruth Leuillette, Deputy Head of Highways & Transport, Reading Borough Council,  
[Ruth.Leuillette@reading.gov.uk](mailto:Ruth.Leuillette@reading.gov.uk), 0118 937 2069

**2.12.3 Brief description of the project and the main activities within it**

South Reading MRT would provide a series of bus priority measures on the A33, resulting in reduced journey times and improved reliability for public transport on the main corridor into Reading. It would connect the MereOak Park & Ride facility south of M4 junction 11 (funded and planned for delivery in 2014/15) to existing businesses and business parks, the planned Green Park railway station, further commercial development, Madejski stadium, new additional residential development, central Reading and Reading Station. Phase 2 of the scheme runs between the A33 junctions with Longwater Avenue (Green Park) and Island Road.

**2.12.4 Location of the project:**

South Reading

Local Authority: Reading Borough Council

Parliamentary Constituency: Reading West

Postcode: RG2

### Rationale for the project and strategic fit

**2.12.5 How will the project contribute to the delivery of Thames Valley Berkshire's Strategic Economic Plan (SEP)?**

A key objective of the SEP is to enhance urban connectivity; this is translated into one of the key themes within Package 2. This reflects the polycentric nature of TVB and provides a stronger economic focus. This scheme will contribute to the functionality of Reading in connectivity terms, making key employment and development sites in central Reading and on the A33 corridor more accessible on a sustainable basis. In addition, it provides a key north-south spine to the proposed wider TVB MRT/BRT network and enhanced access to/from south Reading to Reading Station.



### 2.12.6 How does the project fit within the Programmes and Packages outlined in the SEP?

This project is part of the Infrastructure Package: Enhancing urban connectivity. It also contributes to Unlocking Housing Development and Encouraging Vibrant Town Centres.

### 2.12.7 What is the rationale for the project?

The scheme will improve access to Reading from the south – specifically the A33 corridor, which connects the town centre to major employment locations, the M4 and major housing developments. It will increase overall trip capacity and reduce congestion on this key transport corridor.

The A33 corridor carries high volumes of traffic between the M4/A33 and town centre providing access to over 50,000 town centre jobs. The route is also the main access for the major south Reading employment area of 10,000 jobs and 1,600 homes.

There is planned growth of some 7,500 jobs and 1,500 homes along the corridor, further three strategic development locations are planned south of the M4 junction 11 (2,500 homes), South Wokingham (2,500 homes) and North Wokingham (1,500 homes), which have planning obligations to the delivery of express bus or mass rapid transit services. Around 50% of the traffic on this corridor is forecast to be associated with planned development by 2026.

The A33 is busy throughout the day, but particularly during AM and PM peak periods when employees arrive and leave the business units and parks along the corridor and when there are high levels of traffic into Reading town centre.

Reading Borough Council and the business parks along the A33 have made significant investment in expanding the bus services along the corridor, delivering high-quality, low noise and low emission bus services (approx 600,000 trips per annum).

The current level of congestion has resulted in the need to add extra vehicles during the peak periods and reduce the peak period frequency to offset the impact of high journey time variability. These services would benefit from this scheme through reduced journey times and enhanced reliability.

This scheme is a long established element of Reading's strategy to deliver economic growth and housing and has been included in Reading's three Local Transport Plans and Core Strategy.



#### 2.12.8 What market failures will it address? What is the evidence?

The private sector will not advance a project of this nature without public subsidy. The private sector is unable to progress a scheme themselves as it is located on the public highway.

#### 2.12.9 What other options have been considered?

Implementing the full South Reading MRT scheme in a single phase has been discounted at this stage due to the higher costs of implementation. Therefore a phased approach to delivery has been identified to ensure the key benefits of the scheme can be achieved in a realistic and earlier timeframe. Future phases of the scheme will be further developed for implementation outside the period of this plan.

#### 2.12.10 What would be the consequences of a "do nothing" option?

Congestion on the network would continue to increase and economic growth would be more limited. In addition, there is a risk that existing businesses would consider relocating out of the TVB area and possibly elsewhere in Europe.

#### 2.12.11 Which partner organisations are involved in, and committed to, the project?

Reading Borough Council

### Value for money

#### 2.12.12 What outputs will the project deliver that are attributable to LGF and other funding sources?

The preparation of a full business case is required to understand the detailed and wider benefits of the scheme, but in the interim, the benefits of transferring the existing bus services to this uncongested route have been calculated using a logit model (explained in para 14 below).

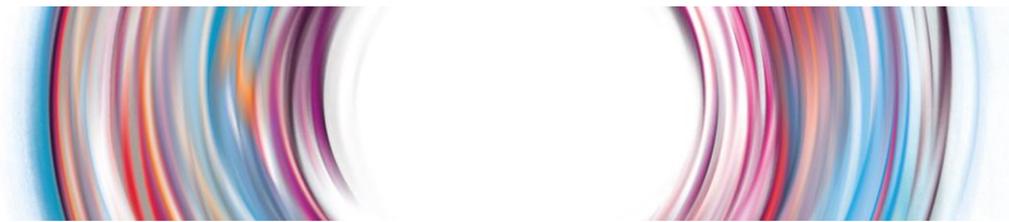
The (conservative) calculation of benefits has been compared with the scheme costs (with 20% optimism bias applied) over a 60-year appraisal period, which results in a BCR of 2.96. This BCR does not include wider economic benefits, journey ambience, health and absenteeism and social inclusion.

This scheme could generate a potential increase in GVA of £7.8m by accommodating growth in population jobs (assumed GVA per head value of £32,798 based on ONS data for Berkshire). This has been calculated on the basis of development planned in Reading's Core strategy only and is therefore a conservative figure.



It is expected that 303,000 users (one way) per annum will use the scheme in the first year, increasing to 324,000 by year 5. The scheme will result in journey time savings of over 5,000 hours per annum inbound in year 1.

Outputs		2015/ 16	2016/ 17	2017/ 18	2018/ 19	2019/ 20	2020/ 21	Later
Houses (units)	LGF			38	38	38	38	38
	Other public sector (specify ESIF, etc.)							
	Private sector			10	10	10	10	10
	Total			48	48	48	48	48
Jobs	LGF			133	133	133	133	133
	Other public sector (specify ESIF, etc.)							
	Private sector			33	33	33	33	33
	Total			166	166	166	166	166
Employment floorspace (sq m)	LGF			3,187	3,187	3,187	3,187	3,187
	Other public sector (specify ESIF, etc.)							
	Private sector			797	797	797	797	797
	Total			3,984	3,984	3,984	3,984	3,984
Businesses created	LGF			0	1	0	1	0
	Other public sector (specify ESIF, etc.)							
	Private sector			0	0	0	0	0
	Total			0	1	0	1	0
MRT trips per annum	LGF			242,341	246,461	250,650	254,912	259,245
	Other public sector (specify ESIF, etc.)							
	Private sector			60,585	61,615	62,663	63,728	64,811
	Total			302,926	308,076	313,313	318,640	324,056
Journey time savings per annum (inbound)	LGF			4,008	4,077	4,146	4,216	4,288
	Other public sector (specify ESIF, etc.)							
	Private sector			1,002	1,019	1,036	1,054	1,072
	Total			5,010	5,096	5,182	5,270	5,360



### 2.12.13 How have these outputs been estimated?

A logit model has been used to determine the likely patronage of the park & ride with and without the MRT Phase 1 in place. The logit model compares the generalised cost of using public transport along the route against drive time and calculating the potential mode change and the use of park & ride with and without the MRT route. The logit model has been calibrated against existing park & ride sites within the Reading area. The 'in-scope' demand, i.e. those that potentially could transfer to park & ride is based on trips passing the site from the south along the A33 (taken from the Reading SATURN model) who have a destination in the town centre and excluding a proportion of trips that do not have to pay for parking at their destination. The value for money assessment has been based on the assumption that the Mere oak Park & Ride site (funded and planned for delivery in 2014/15) will already be operational. Trips to Green Park have not been included in the assessment at this stage.

The BCR has been calculated using the journey time benefits of new and existing users of the park & ride service. New users would experience a benefit if the journey time is less than the car trip and existing users would benefit from a quicker journey time as a result of the MRT scheme.

Other items included are the additional revenue from park & ride users, decongestion benefits as a result of the removal of some vehicles from the road network due to mode change to park and ride and other external cost benefits such as noise, air quality and accident savings. These have all been calculated based on the number of car trips removed from the highway network.

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This is a strategic corridor within the TVB providing the main radial route to Reading linking the M4 Junction 11 with Reading town centre and access to the core employment areas, residential areas and planned development alongside the A33.

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The proposed resourcing package is 80% LGF and 20% private sector funding. In addition, there have been significant contributions from the local authorities to progress scheme development to date.



2.12.17 What is the funding package through which the project will be delivered?

Source	Year	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
LGF	Capital		£1.52m				
Other public sector							
1							
2							
3							
Private sector	<i>S106</i>		£0.38m				
1							
2							
3							

Deliverability and risks

2.12.18 How secure are the funding contributions from elsewhere?

Private sector contributions will be achieved through S106 and/or CIL agreements from development sites on the A33 corridor. The scheme is deliverable within the 2016/17 financial year.

2.12.19 What are the key project milestones?

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