



Tees Valley Network Management: Phase 1

Project Summary



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1. Background

What is the Tees Valley Network Management Project?

- 1.1. The strategic road network provides vital connectivity for the Tees Valley, as shown in Figure 1. Although some parts are subject to short term congestion at peak periods, the network generally provides good access between the main centres, the port and airport and our major regeneration sites.
- 1.2. But as the economic recovery gathers pace, there is a need to develop realistic proposals for future improvements that will support major development sites. There is the increasing possibility of conflict between the desire for development and the statutory planning and development control processes that are required.
- 1.3. To make the most of future opportunities, the Tees Valley needs a strategic road network that supports, rather than inhibits, economic growth. For the last three years, the Tees Valley Authorities and the Highways Agency have been working to prepare a joint plan that brings together development proposals and the required transport improvements within a clear forward programme, backed up by ways to fund the required schemes.
- 1.4. The work done in preparing the plan shows that development pressures on the trunk road network, primarily the A66, A19 and A174, will be made worse by the continued use of the strategic network by predominantly local trips. This means that there is a need to better manage the interaction between the trunk and local road networks (and indeed the public transport networks), making best use of the capacity that exists before building new infrastructure.
- 1.5. This is the reasoning behind the **Tees Valley Network Management** project – a package of highway improvements designed to provide sufficient capacity across the strategic road network over the next 10 - 15 years.
- 1.6. Measures being examined within the project include:
 - Urban Traffic Management and Control (UTMC) – a system for co-ordinating traffic signals across the Tees Valley to help manage variations in traffic demand;
 - Information – better information on journey options and choice as well as incidents, before starting off via the internet, and once on route, both by the internet and using variable message signs;
 - Use of variable speed limits to reduce “stop/start” manoeuvres and help ease congestion on strategic routes; and
 - Selective highway infrastructure improvements to allow development to take place.

What is in Phase 1?

1.7. Within the next three years, there is a planned expansion in housing numbers across the Tees Valley which will result in an increase in car travel on the strategic network, particularly at peak periods. To offset the impact of this additional traffic, traffic signals will be provided on some of the slip roads on the A19 and A66, a technique known as 'ramp metering'.

1.8. The slip roads where the signals will be provided are as follows:

- A19/A1130 Mandale Interchange - northbound;
- A66 Teesside Park Interchange – eastbound;
- A19/A1046 Portrack Interchange – southbound;
- A19/A139 Billingham Bottoms Interchange – southbound; and
- A19/A1027 Norton Interchange – southbound.

These locations are shown in Figure 2, alongside the main sites identified for new housing developments.

1.9. The signals will operate at peak times when the traffic flows on the A19 and A66 are heavy. Traffic is released to join the main route when there is a gap in the traffic flow. This reduces the build up of congestion and improves overall journey times for all traffic.

1.10. Traffic signals have been provided on some arms of the A19/A174 Parkway Interchange, and are planned at the A19/A689 Wynyard Interchange. Although not part of Phase 1 of the project, these signals will also help to regulate the volumes of traffic joining the A19 at peak times and help reduce congestion.

2. Making Phase 1 Happen

What will be done at each slip road?

- 2.1. The ramp metering system uses part-time signals on the slip road to control, or 'meter', the rate at which vehicles can join the main carriageway. During busy periods, signals split the merging traffic into 'platoons' and release just a few vehicles at a time. This prevents merging and mainline traffic from bunching together and creating a bottleneck which delays everyone.
- 2.2. Traffic conditions are monitored and signal timings are constantly updated, The system also monitors the slip road to ensure that queues do not back up onto the surrounding local roads.
- 2.3. The traffic signals themselves will not operate all the time – most likely at peak periods.

How much will it cost?

- 2.4. The work is estimated to cost around £4 million.
- 2.5. As more detailed design work is done, a more up-to-date cost estimate will be available in late 2010.

Where is the funding coming from?

- 2.6. The Government made funding available in 2008 for housing growth sites through the Community Infrastructure Fund. The first phase is funded entirely from this source, as announced in August 2009.

What are the expected benefits?

- 2.7. The scheme offers a cost effective method of mitigating the impact of the additional housing sites on the strategic road network that could otherwise result in the need for costly junction/link capacity works and/or result in some sites being unable to be delivered. It will support the delivery of around 2,600 new homes by 2016.
- 2.8. The scheme will provide benefits to all users, through reduced journey times, as well as providing improved reliability and reducing accidents along the affected section of the A19 and A66 by maintaining the main flow on the trunk roads.
- 2.9. Forecast savings in journey times of over 270 vehicle hours in 2021 are predicted in each peak period, meaning that the benefits are expected to outweigh the costs by a factor of over three times.

What are the main risks?

- 2.10. The biggest single risk is cost. If the revised cost estimates at the end of the more detailed design stage exceed the funding available from the main source, then there will be a need to either apply for additional funding, or to prioritise those elements that are considered greater value for money.
- 2.11. There is a risk that significant public sector funding cuts from the latter part of 2010 onwards may reduce the budget available, but this will be managed through negotiations at a regional level on the safeguarding of the allocations already made for the project.
- 2.12. Outline designs and preliminary site surveys for each site have been prepared to determine whether there are any obstacles to the installation of the necessary equipment and signs. This has shown that there are no major impediments.

Who is leading the project?

- 2.13. The project is being led by Tees Valley Unlimited, a partnership between the five Tees Valley Authorities, regional regeneration agencies and business leaders to drive forward the future development of the Tees Valley economy.
- 2.14. The technical development work is being managed by the Highways Agency, who will also commission the construction work for the project.

When will we see the improvements?

- 2.15. Work to install the signals is expected to start in Autumn 2010 and be complete by early 2011. There will then be a period of testing before the traffic signals become operational by the end of March 2011.

Will there be lots of disruption?

- 2.16. Much of the construction work will take place alongside the existing slip roads and so traffic can continue to use them. There will inevitably be times when some roads are closed for a short period overnight and in these cases, diversion routes will be put in place. Work will be scheduled to keep disruption to a minimum and will be publicised well in advance.
- 2.17. As well as information displays at the stations themselves, passengers can keep up to date with the progress of the works on the Tees Valley Unlimited transport portal – www.connectteesvalley.com.

What will happen next?

- 2.18. Tees Valley Unlimited and the Highways Agency will continue to manage the progress on Phase 1 of the project and will publicise the scheme in more detail and set out what it means in practice for local people as construction

draws near. Please look out for local information on the times and locations for any future events.

- 2.19. A more detailed project update will be provided in late 2010 as the detailed design process draws to its conclusion and an implementation plan has been prepared, showing the order of installation of signals at the five ramp metering sites.

3. Future Phases

What about the remainder of the Tees Valley Network Management project?

- 3.1. UTMC equipment is being provided as part of the Tees Valley Bus Network Improvements project alongside this scheme – an updated system is due to be in place by 2012 that will link directly to the ramp metering signals.
- 3.2. Improvements to information through the www.connectteesvalley.com portal are underway and will be complete for a wider roll-out in September 2010, and the Highways Agency has recently put up two new variable message signs on the A19 either side of the A689 Wynyard Interchange.
- 3.3. Further improvements are being considered in more detail throughout the remainder of 2010 to feed into a revised long term national transport strategy, planned for 2012.

What about future extensions?

- 3.4. There are no plans to implement ramp metering at any other sites across the Tees Valley, although this situation will be kept under review as congestion increases at other pinch points on the network and more evidence comes in of the benefits of the first phase.

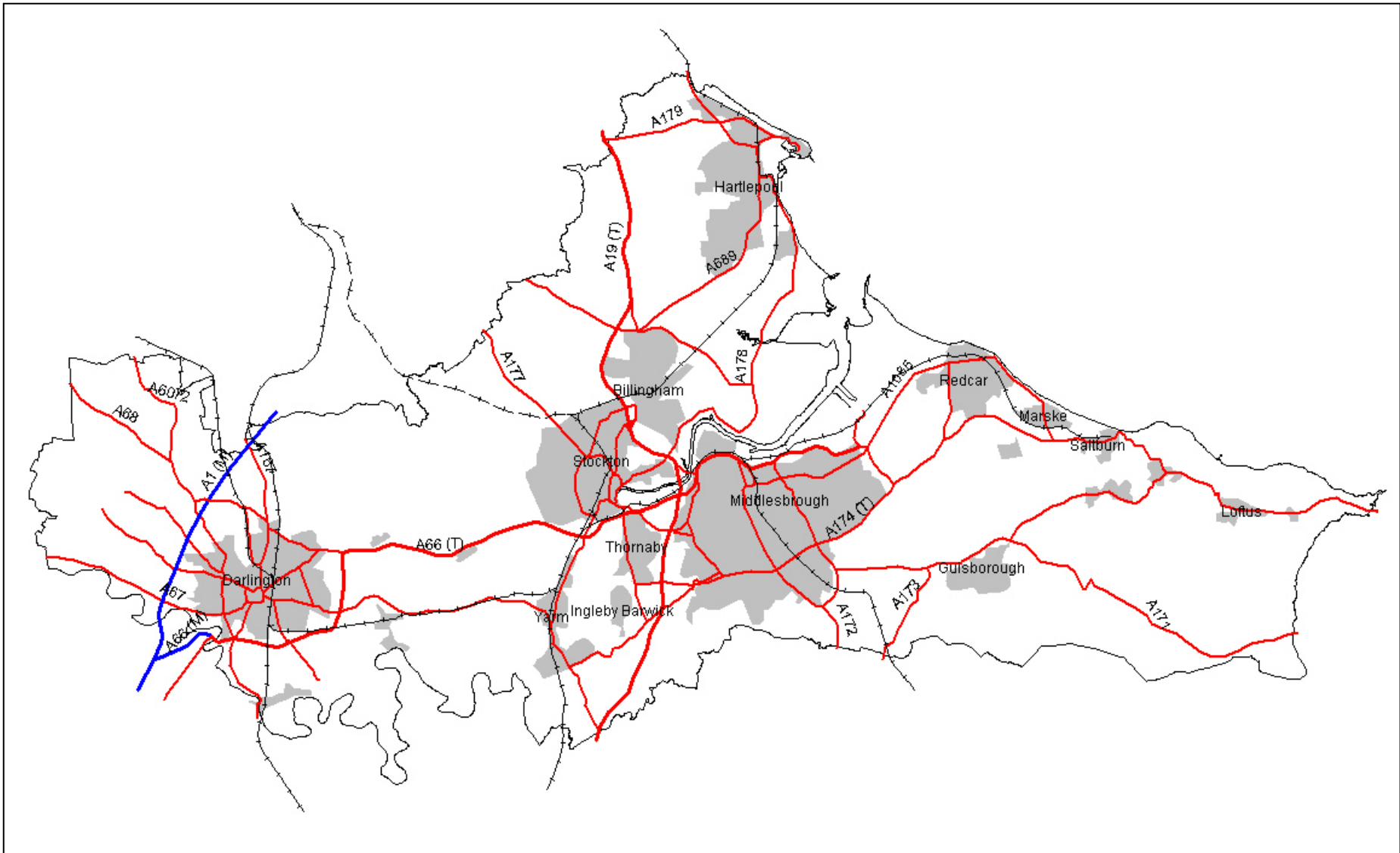


Figure 1

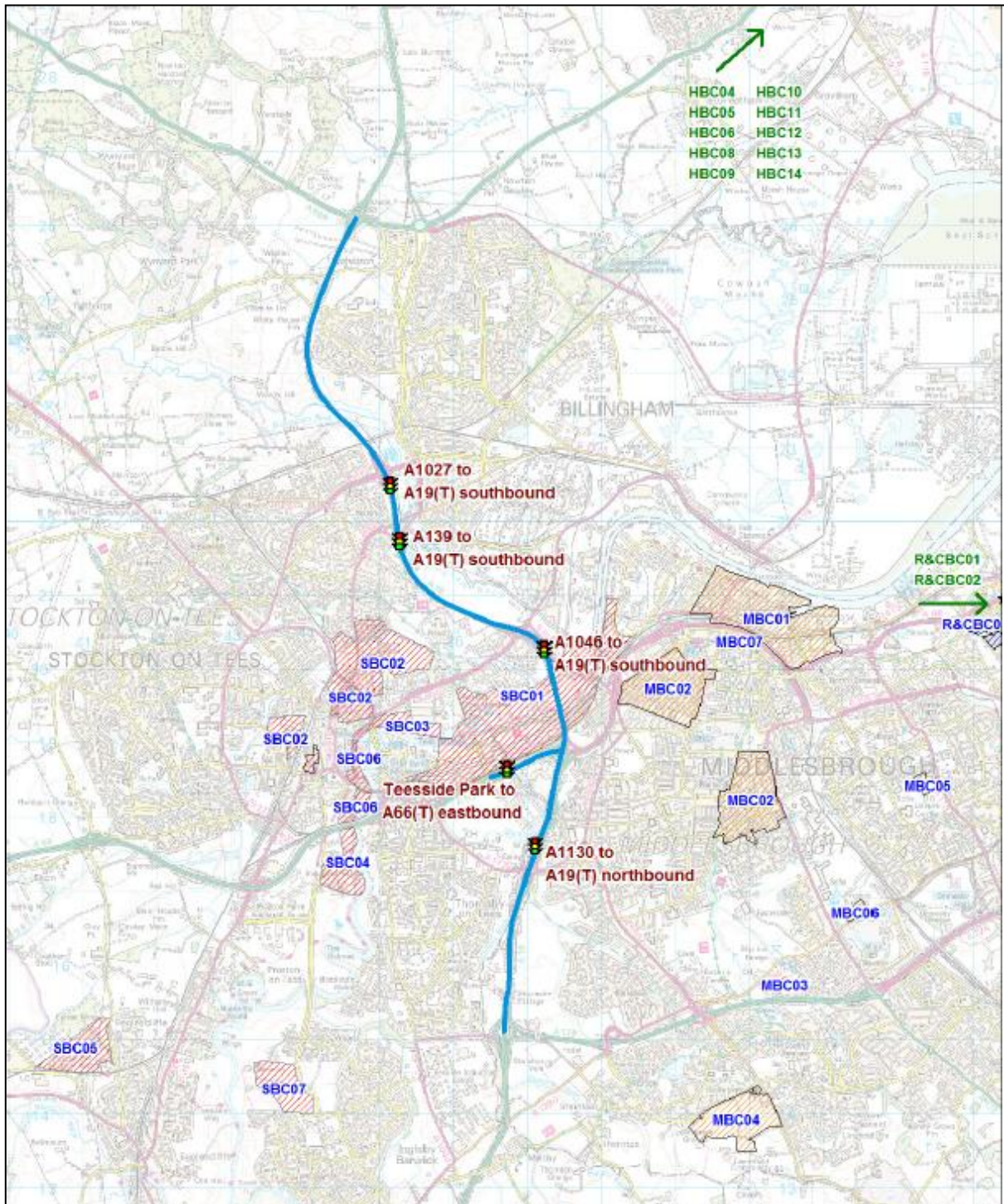


Figure 2



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