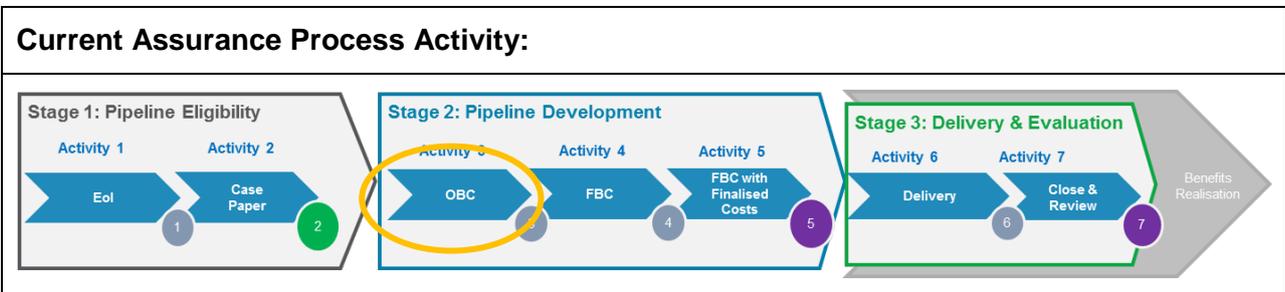


Section A: Scheme Summary

Name of scheme:	LPTIP: A65 Signals Scheme
PMO scheme code:	Dft-LPTIP-002f
Lead organisation:	Leeds City Council
Senior responsible officer:	Gary Bartlett, Leeds City Council
Lead promoter contact:	Joel Dodsworth, Leeds City Council
Case officer:	Ian McNichol, Combined Authority
Applicable funding stream(s) – Grant or Loan:	Grant - Leeds Public Transport Improvement Programme (LPTIP)
Growth Fund Priority Area (if applicable):	Priority 4 Infrastructure for Growth
Approvals to date:	Decision Point 2 indicative LPTIP Programme Approval of £183.266 million from the Combined Authority Board 29 June 2017, with each scheme to individually come forward through the assurance process. The A65 Signals Scheme was not referenced in the LPTIP Strategic Outline Case and has been included in the programme by the LPTIP Bus Infrastructure Package Board.
Forecasted full approval date (decision point 5):	February 2020
Forecasted completion date (decision point 6):	March 2021
Total scheme cost (£):	£1.209 million
Combined Authority funding (£):	£0.956 million from LPTIP
Total other public sector investment (£):	£253,000 from S106 contributions from Leeds City Council

Total other private sector investment (£):	N/A
Is this a standalone project?	Yes
Is this a programme?	No
Is this project part of an agreed programme?	Yes- LPTIP Corridor Package



Scheme Description:

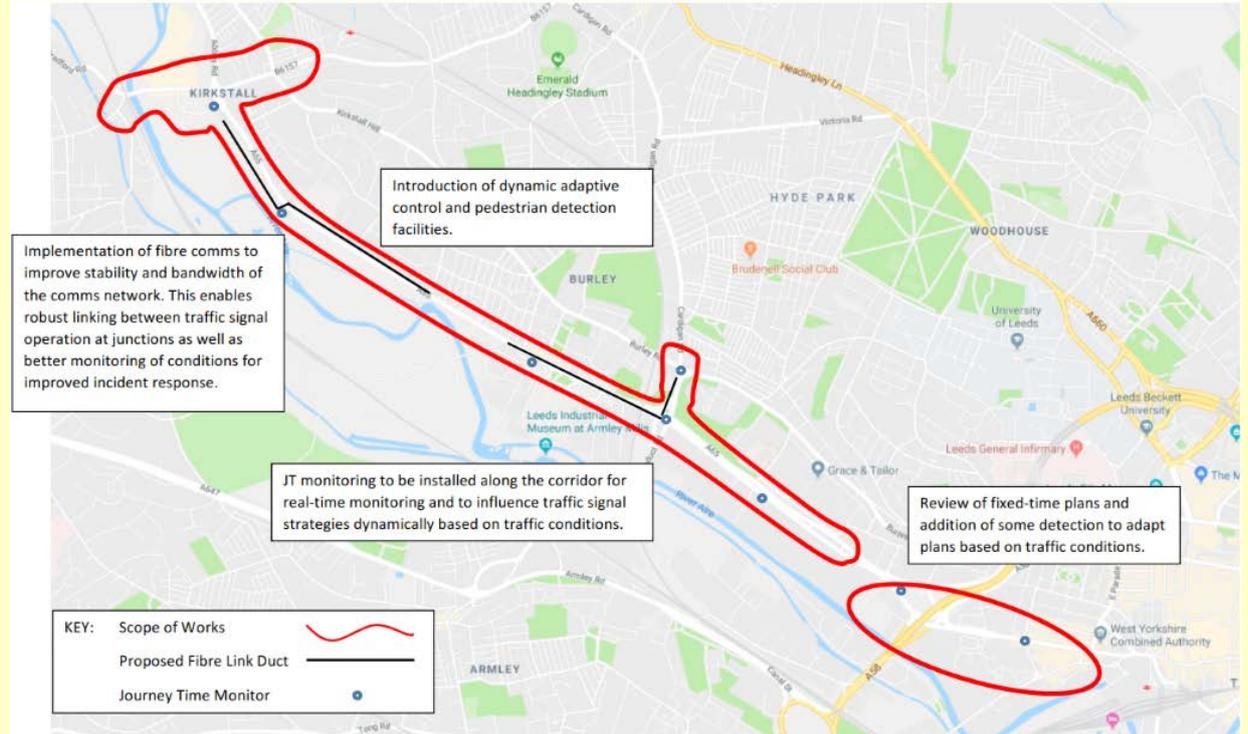
The A65 Signals Scheme (also known as the “A65 inner section signal responsiveness project”) is an extension of the existing (and previously approved) scheme that Leeds City Council has been developing using funding from the National Productivity Investment Fund (NPIF), and the scheme will complement the existing A65 Quality Bus Corridor (also funded from central government). The NPIF scheme was originally envisaged as a “kick-start” to the long-term strategy of implementing adaptive traffic signal control on strategic routes across Leeds to enhance the benefits of the Leeds Public Transport Investment Programme (LPTIP).

The scheme entails the installation of dynamic adaptive control (MOVA - Microprocessor Optimised Vehicle Actuation) and Split Cycle Offset Optimisation Technique (SCOOT) adaptive control at signalised junctions along the A65 Corridor, as well as fibre-optic communication between sites, along the inner section of the A65 between the junction with the B6157 (including Savins Mill and Wyther Lane) and the Inner Ring Road (A58). As part of the scheme the signals inside the Inner Ring Road will be reviewed and signals plans updated.

Detailed Scheme Description

The single option which is presented in the outline business case proposes the upgrade of all the existing fixed-time junctions and pedestrian crossings along the A65 (in the scheme area shown in **Figure A1**) being upgraded to dynamic adaptive MOVA control with a SCOOT (including BusSCOOT) strategy applied during the peak periods (and as required outside of peak periods) in order to maximise the efficient movement of general traffic and buses along the corridor.

Figure A1 – Scheme Proposal



The scope of the scheme includes 11 junctions between the A65 junction with the A58 and the junctions in the vicinity of Kirkstall Forge, all of which currently operate on fixed time plans:

- B6157 Leeds and Bradford Road / Wyther Lane;
- B6157 Bridge Road / Retail Access;
- B6157 Bridge Road / Savins Mill Way;
- B6157 Kirkstall Lane / A65 Commercial Road;
- A65 Commercial Road / Savins Mill Way;
- B6157 Kirkstall Lane / Kirkstall Hill;
- A65 Kirkstall Road / Unnamed Road Exit;
- A65 Kirkstall Road / Unnamed Road Entry;
- A65 Kirkstall Road / Burley Place / Willow Road;
- Burley Road / Willow Road / Cardigan Road; and
- A65 Kirkstall Road / Fire Station Exit.

A review of fixed-time plans and the addition of some detection to adapt plans based on traffic conditions is also proposed for junctions between the A58 and King Street inside the Inner Ring Road.

The scheme will include the introduction of “virtual bus triggers” (as are being rolled out across Leeds by the LCC UTM team) which will input to the “BusSCOOT” system.

Fibre-optic communications and journey time monitoring (using Bluetooth technology) will be implemented along the A65 corridor. No upgrades are intended to the junction with the A58 Inner Ring Road or to junctions inside the A58, but the fixed time plans at these junctions will be reviewed and detection included at these junctions where it would provide benefit.

Consideration of Alternative Options / Approaches

Leeds Council is currently trialling using RTEM detectors which consider different user classes to provide different levels of prioritisation in MOVA. This does not apply during SCOOT operation as SCOOT is currently not capable of making use of the additional information in its optimiser. The potential benefits have therefore not been considered for the proposed scheme. Video detection (as is being rolled out in the city centre) may be considered at a future point but requires a different control strategy and needs further investigation which falls outside of the scope of this scheme.

Business Case Summary:

Strategic Case	<p>The scheme is well linked to the regional economic and transport policy and plans, both in the wider city region and locally in Leeds. The scheme is aligned with tackling transport challenges identified in the SEP that are currently hampering economic growth, business productivity and environmental issues related to congestion and over-reliance on the private car.</p> <p>The strategic aim of the LPTIP programme is to reverse the declining trend in bus patronage by addressing congestion (and delays to buses) which is a key driver for this trend. The scheme objectives are to achieve 'good growth', enabling social inclusion and better economic outcomes for some of the most deprived areas in Leeds.</p>
Commercial Case	<p>The Commercial Case for the A65 Signals Scheme provides evidence that the proposed scheme can be procured, implemented and operated in a viable and sustainable way.</p> <p>The procurement strategy builds on existing experience in the development, design and delivery of the NPIF scheme in Leeds, with procurement planned through existing arrangements. Leeds City Council is well placed to deliver the improvements on time and within budget.</p> <p>The signal improvements along the corridor (in the area) will reduce journey time delays and improve the quality of the transport network, leading to increases in the proportion of trips using bus as a mode of travel. The scheme will complement the previous public investment in the A65 Quality Bus Corridor and the investment on adjacent corridors and city centre gateways as part of the LPTIP programme.</p> <p>Analysis of SCOOT applications have found benefits worldwide. Most recently Transport for London (TfL) demonstrated that SCOOT delivers a 12-15% reduction in vehicle delay. TfL show that use of Bus SCOOT delivers an additional 5% reduction in bus delay. Additionally, studies have shown that reduction in stop-start traffic as a result of SCOOT reduces pollutant emissions by 3 to 8%.</p>
Economic Case	<p>The Economic Case provides evidence of how the scheme is predicted to perform, in relation to its stated objectives, identified problems and targeted outcomes. Only a single option has been considered, as had been agreed with the Feasibility and Assurance team prior to submission. The single option considered represents an extension of the NPIF scheme.</p>

	<p>The Economic Case determines if the proposed A65 Signals Scheme is a viable investment, utilising the appraisal elements and methodology set out in the Appraisal Specification Report (ASR). The approach therefore quantifies the following:</p> <ul style="list-style-type: none"> • General traffic user benefits – travel time; • Bus user benefits – travel time; • New bus user benefits (induced by journey time reductions) - travel time; • Decongestion benefits (marginal external costs) resulting from mode shift to bus – travel time, VOC, accidents, greenhouse gases, noise, local air quality and indirect taxation. <p>The appraisal excludes quantification of the following:</p> <ul style="list-style-type: none"> • Journey time reliability benefits; • Journey time delay reductions to users of other bus services which use only part of the corridor; • Journey time reductions for all side road movements (not all side road impacts have been quantified); • Air quality benefits from reduced vehicle idling; • No weekend or evening journey time delay reduction benefits. <p>The economic appraisal for the A65 Signals Scheme comprises an assessment of the overall, net, monetised, economic worth of the scheme.</p> <p>The scheme has been appraised at a programme level to demonstrate the benefit cost ratio and value for money. The programme has a High value for money proposition with a benefit cost ratio (BCR) of 3.01:1. The net present value of benefits is £1.83 million. There are significant benefits to both bus and general traffic journey times. The BCR reflects a high value for money category, and the sensitivity tests undertaken indicate that this categorisation is robust.</p>
<p>Financial Case</p>	<p>The Financial Case for the A65 Signals scheme provides a breakdown of the expected project cost components and the time profile for the transport investment. It considers if these capital costs are affordable from public accounts at the times when the costs will arise.</p> <p>The total project outturn capital cost for the preferred option at outline business case is £1.209 million, 79.1% of which is to be funded through the Combined Authority LPTIP funding stream. The remainder is to be funded through Leeds Council in the form of S106 contributions. The scheme cost includes inflation to the year of spend, and 5% contingencies in the build-up of the base cost together with a risk allowance of 15% to inform the final cost for the financial case. An additional cost of £25,000 has been included for monitoring and evaluation.</p> <p>Finally, the Financial Case reviews the risks associated with the scheme investment and examines possible mitigation. The scheme is very “scalable” and can be adapted if certain elements cost more than estimated at outline business case stage.</p>
<p>Management Case</p>	<p>The Management Case outlines how the proposed scheme and its intended outcomes will be delivered successfully. It emphasises the successful delivery of the existing NPIF scheme and other previous schemes delivered by Leeds Council.</p>

The Management Case also gives assurances that the scheme content, programme, resources, impacts, problems, affected groups and decision makers, will all be handled appropriately, to ensure that the scheme is ultimately successful. Clarification provided following submission sets out that the project will be managed as part of an overarching programme of work known as the Leeds Public Transport Investment Programme (LPTIP). The A65 Signals Scheme sits within the management and governance structures established to support the delivery of the LPTIP programme, therefore comprising of both programme and scheme management procedures and processes to ensure effective, on-time, on-budget scheme delivery.

The Management Case outlines the scheme programme which scopes and defines key project elements, allowing the project manager to ensure important milestones, key tasks on critical path and any project dependencies/ constraints do not hinder the delivery of the scheme.

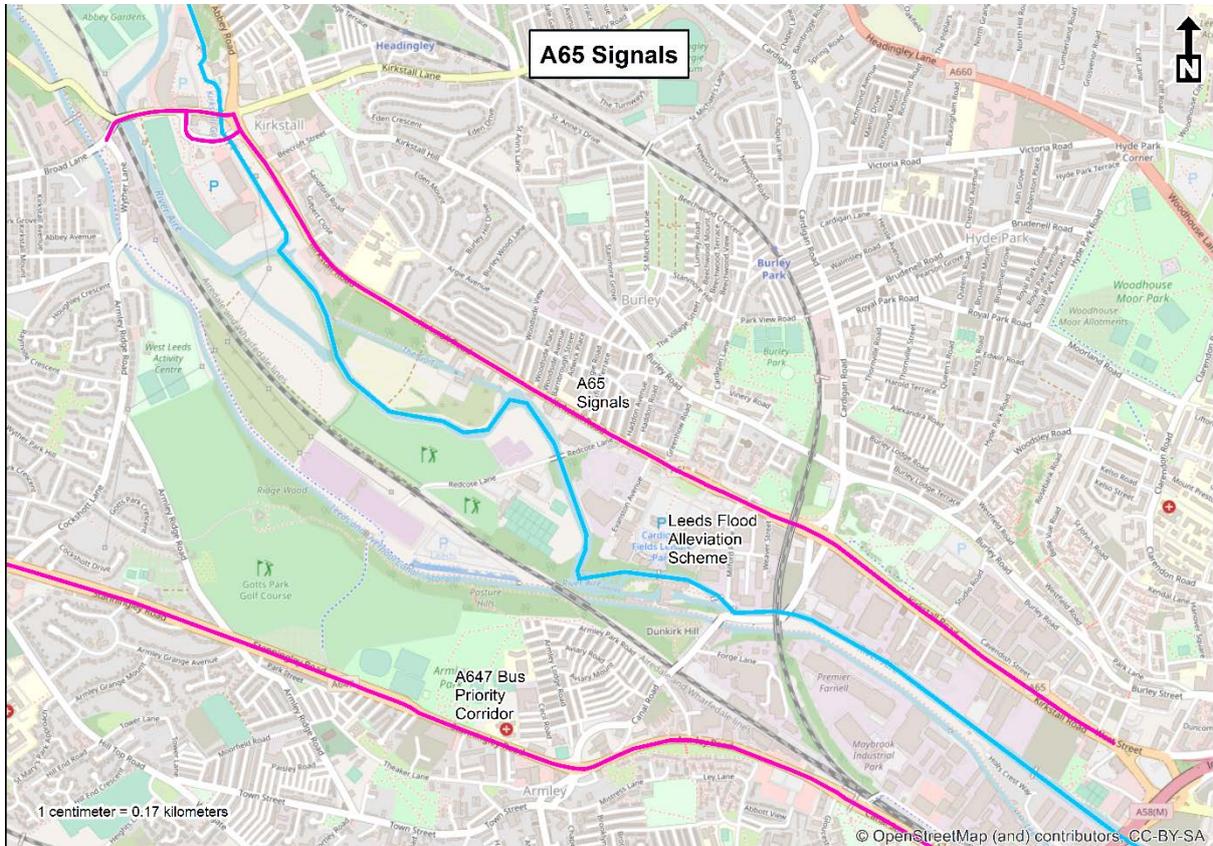
The management case demonstrates that the following components have been appropriately assessed at this Outline Business Case (OBC) stage:

- Project planning;
- Governance structure;
- Delivery constraints and risk management;
- Communications and stakeholder management;
- Monitoring and evaluation;
- Benefits realisation and assurance.

Alongside this, scheme risks are continuously monitored throughout the project lifetime. Risk identified are updated on a minimum monthly basis at Package Board meetings, as the project progresses. Each identified risk is assessed in terms of its impact on cost, time and quality. The probability of the risk occurring was also estimated. Where possible risks identified have risk allowances determined and these have been used in the costing exercise to determine an appropriate level of contingency.

Location map:

The following location map shows the scheme in relation to the other Combined Authority funded schemes in the surrounding area.



Please note, depending on the level of scheme development the location and scope of the schemes indicated here are indicative only.

For further information on Combined Authority schemes across the Leeds City Region please refer to: <https://www.westyorks-ca.gov.uk/economy/leeds-city-region-infrastructure-map/>