

# Report to Cabinet Member for Transportation

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**Decision to be taken on or after 31 October 2019**

**Decision can normally be implemented at least  
3 working days after decision has been signed.**

**Cabinet Member Report No. T30.19**

**Title:** A418 Oxford Road Corridor Improvements

**Date:** 23 October 2019

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**Local members affected:** Cllr. Raj Khan  
Cllr. Anders Christensen  
Cllr. Niknam Hussain  
Cllr. Steven Lambert

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## Summary

To address congestion and support economic growth a number of improvements along the A418, Oxford Road were identified, and formed part of a successful National Productivity Investment Funding bid to Government in 2017.

Key Objectives: The funding was secured against a suite of measures along the A418 corridor which aim to ease urban congestion, improve air quality, enable the future delivery of development sites and build resilience into the transport network.

Scope of project: This will be achieved through a combination of local junction improvements, sustainable transport improvements and the introduction of new technology to allow smarter management of the corridor (as shown in the scheme plan/ Appendix A).

Work has been underway since 2017 to introduce a number of the improvements set out in the funding bid to realise the benefits as soon as possible. This has comprised installation and preparatory works for a number of new corridor technologies including:

1. Installation of chamber, ducting, and loop boxes; carriageway duct crossing across A418 (Mill Lane – pedestrian crossing and west side of Friarage Road).
2. Installation of chamber, ducting, and carriageway loop boxes on the south side footway of A418 Oxford Rd – North East of A41 Gatehouse Road.



To help improve traffic flow and ease congestion, a number of junction upgrades and cycleway improvements are also proposed along the A418 Oxford Road Corridor, comprising;

- **A418/ Fowler Road/ Churchill Avenue crossroads** – Carriageway widening, improved signal timings and construction of a new shared use footway and cycleway.
- **Pearson Close/ Thame Road South cycleway connectivity** – Construction of a new shared use footway and cycleway to link into the existing Gemstones routes, Improvements to uncontrolled crossing facilities, including new signs and tactile paving.
- **Sir Henry Floyd Grammar School and Aylesbury College** – Installation of a new traffic island and part-time traffic signals, and signal coordination with Fowler Road/ Churchill Avenue.

These junction changes formed part of a public engagement exercise carried out in July 2019. The purpose of this report is to set out the status of the project and recommendations for next steps to the Cabinet Member for Transportation.

### **Recommendations:**

#### **That the Cabinet Member:**

- 1 Agrees to delegate to Head of Highways Infrastructure Projects and A418 Project Board authority to progress the implementation of A418 Oxford Road Corridor Improvement project and award of a contract to Transport for Buckinghamshire.**
- 2 Approves the implementation of the scheme and junction modifications proposed as part of the A418 Oxford Road Corridor Improvement project.**
- 3 Approves the conversion of the footway/s into a cycle track as set out in Appendix A.**

#### **A. Narrative setting out the reasons for the decision**

- 1.1 Identified as a major growth area in Buckinghamshire, Aylesbury's transport links are critical to the economy and managing congestion with the expected increase in population. With transport outlined as a key factor in delivering the County Council's vision of making the county 'a great place to live and work', targeted improvements to the A418 Oxford Road corridor has been identified.
- 1.2 The A418 is a strategic route through Aylesbury connecting Leighton Buzzard and Milton Keynes to the east the M40 and Oxford to the west. The A418 corridor is currently heavily congested, particularly at peak times, resulting in unreliable journey times. It is also expected that new developments nearby and HS2 construction will impact congestion further.
- 1.3 The 1.5km section of the A418 covered by this project enters Aylesbury from a south westerly direction from the M40. The corridor stretches from the Coldharbour Way roundabout at its southern end to the A41/A418 roundabout junction in Aylesbury town centre at its northern end. The A418 corridor is the primary access to the Aylesbury College and 600-student University Technical College (UTC) site. Improved access to

the site will incentivise the continuing growth of the College, with associated skills benefits for a range of sectors, both nationally and locally.

- 1.4 In October 2017 it was announced that BCC's £2.19M bid to the National Productivity Investment Fund (NPIF) was successful. Alongside this, £0.5M from local developer contributions was allocated as match funding. Funding was secured against a suite of measures along the A418 corridor which aim to ease urban congestion, improve air quality, enable the future delivery of development sites and build resilience into the transport network. This will be achieved through a combination of local junction improvements, sustainable transport improvements and the introduction of new technology to allow smarter management of the corridor.
- 1.5 The main objectives of the project are to:
  - ease urban congestion (improve journey times and journey time reliability)
  - encourage increased sustainable travel (encourage walking and cycling)
  - unlock economic growth and job creation opportunities
  - improve air quality
  - improved ability to manage traffic flows on the A418 when there is an incident on the highway network
- 1.6 The A418 Corridor Improvement project comprises junction improvements; introduction of new technology to reduce traffic delays and ease congestion; and improvements to walking, cycling and public transport facilities. The improvement of walking and cycling facilities will make sustainable transport a more attractive option. The installation of new and upgrade of existing technology will allow smarter management of flows and the ability to manage traffic during incidents on the network. In combination, this will improve journey time reliability, smooth traffic flow (reduction in stops and starts) and reduce queuing; with an expected benefit to local air quality. Alongside these improvements upgrades to pedestrian crossings, additional Closed Circuit Television (CCTV) cameras, Real Time Passenger Information (RTPI) units, upgraded permanent Variable Message Signs (VMS) and additional links to the Urban Traffic Control (UTC) room will be installed. The full suite of proposed improvements is as set out in the scheme plan in Appendix A.
- 1.7 The benefits related to the improvement of traffic flow through the introduction of enhanced traffic signal timings and co-ordination will help to increase the throughput of traffic on this heavily congested corridor. This is in line with Buckinghamshire County Council's (BCC's) current Local Transport Plan 4 (LTP4) (2016-2036) Policy 2 that states that BCC will work to improve connectivity and reliability of Buckinghamshire's transport network, stimulate economic growth and promote safer more sustainable growth. It is aligned with Policy 7 that states BCC will work to give Buckinghamshire's people and businesses the certainty of journey times that they need.
- 1.8 To determine the effectiveness of the proposed improvements, feasibility studies were undertaken on the proposals set out in the original bid to ensure the most effective solutions were being progressed.

- 1.9 Arcady<sup>1</sup> and LinSig<sup>2</sup> local junction model software was used to assess preferred scheme options; Arcady software allowing investigation of roundabout layouts, and LinSig software for layouts that are signalised.
- 1.10 The impact of these scheme options was assessed using 2026 forecast year traffic flows and modelled to determine junction performance and the outputs used alongside the changes in journey time to evaluate the monetary benefits of the proposed improvements.
- 1.11 The final modelling results (see table 1 & figure 1 below) show that the NPIF scheme offers a substantial benefit in journey time and journey time reliability along the corridor when assessing against both the base line modelling and do-nothing scenario. These results provide confidence that when implemented, the NPIF scheme package will provide a benefit to the A418 corridor.

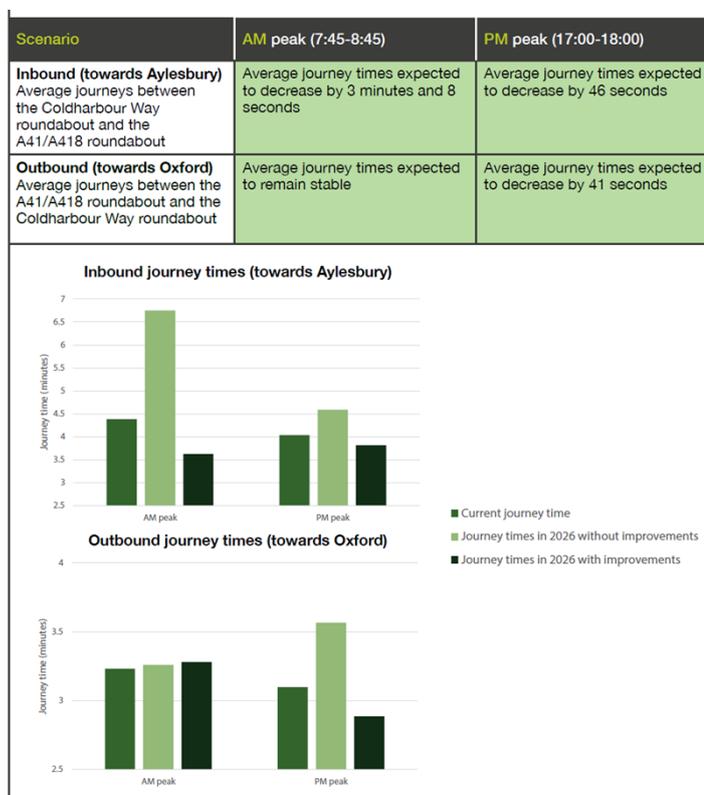
Table1: Summary of Journey Reliability and Monetised Benefits

AM	Westbound	Eastbound
Journey time for current situation	3 min 14 sec	4 min 24 sec
Journey time forecast 2026 without scheme	3 min 16 sec	6 min 45 sec
Journey time forecast 2026 with scheme	3 min 17 sec	3 min 37 sec
<b>Saving due to scheme</b>	<b>-1 sec</b>	<b>3 min 8 sec</b>
<b>Monetised benefits (GBP)</b>	<b>-£7,794</b>	<b>£296,031</b>
PM	Westbound	Eastbound
Journey time for current situation	3 min 6 sec	4 min 2 sec
Journey time forecast 2026 without scheme	3 min 34 sec	4 min 35 sec
Journey time forecast 2026 with scheme	2 min 53 sec	3 min 49 sec
<b>Saving due to scheme</b>	<b>41 sec</b>	<b>46 sec</b>
<b>Monetised benefits (GBP)</b>	<b>£62,144</b>	<b>£77,200</b>
<b>Total monetised benefits (GBP)</b>	<b>£427,582</b>	

Figure1: Summary of expected Journey Time Savings in 2026

<sup>1</sup> Arcady – Traffic modelling for predicting capacities, queues, delays (both queueing and geometric) and accident risk at roundabouts.

<sup>2</sup> LinSig – Traffic Modelling Software tool to model traffic capacities and queuing at signalised junctions.



1.12 The junction improvements are programmed to commence in November 2019. Works are expected to be carried out for up to 10 months concluding by summer 2020. To minimise delays and disruption, the construction programme will make use of off peak working and a combination of school holidays and overnight works where possible.

## B. Other options available

1.13 The proposals listed in table 2 are considered to be the most effective and feasible options for meeting the objectives of the NPIF.

1.14 Investigation was undertaken to establish the preferred option for 10 of the 14 schemes proposed within the original NPIF project. A feasibility study was undertaken at each site (as set out in Appendix B) and assessed against criteria including: improving safety, encourage walking and cycling, increasing capacity and normalising and reducing journey times through and along the A418. The study reviewed the original bid options against additional options, and reviewed and assessed each against a range of criteria covering economic, environmental and social impacts, resulting in a single recommended option as set out in table 2.

Table 2 provides a summary of the recommended design options to be taken forward future development.

Scheme Name/Number	Description	Actions Taken	Recommendation
<b>Site 2</b> Pearson Avenue/ Thames Rd Footpath Link	New shared path between Pearlway and Pebbleway routes on Pearson Avenue and Thames Road South including two informal road crossings	Site Visit Design Option Cost Estimate	Option 1

<b>Scheme Name/Number</b>	<b>Description</b>	<b>Actions Taken</b>	<b>Recommendation</b>
<b>Site 3</b> A41/ Fowler Road Junction	Extension of Fowler Road left turn flare lane Extension of Churchill Road flare lane to tie-in with two lane provision south of Hartwell end. New shared path link between A418 toucan crossings and Fowler Road bus stop	Collision Data Review Utility and Land searches Swept Path Analysis Topographical Survey Underground Utility Survey Pavement Cones Alternate Design Options Traffic Modelling Cost Estimate	Option 3

1.15 In addition to the NPIF scheme bid options set out above, the A41/A418 Roundabout scheme option was investigated but discounted due to the limited benefits that it offered in comparison to the large cost and disruption of construction.

1.16 No other options were deemed feasible or considered as a part of the report

### **C. Resource implications**

1.17 In October 2017, £2.19M National Productivity Investment Fund was secured against 14 proposed measures along the A418 corridor. Alongside this, £0.5M of local developer contributions was allocated as match funding.

1.18 Table 3 below sets out the funding sources, expenditure to date and project budget. It is important that the project is delivered within the available resource envelope set out below, as any expenditure in excess of this will need to be funded from the County Council's capital programme.

Table 3: Funding sources, expenditure and project budget

	<b>17/18 (Actual)</b>	<b>18/19 (Actuals)</b>	<b>19/20 (Budget)</b>	<b>20/21 (Budget)</b>	<b>Total (£)</b>
<b>DfT NPIF</b>	-	398,354	792,646	1,000,000	<b>2,191,000</b>
<b>s106 design</b>	13,773	-	-	-	<b>13,773</b>
<b>S106 construction</b>	-	-	-	486,227	<b>486,227</b>
<b>Total (£)</b>	<b>13,773</b>	<b>398,354</b>	<b>792,646</b>	<b>1,486,227</b>	<b>2,691,000</b>

1.19 Expenditure to date has comprised professional fees for feasibility and modelling studies and design work, as well as approximately £0.5M for enabling works and technology improvements (crossing refurbishments, CCTV, ANPR and VMSs). These works have been undertaken within the original budget.

1.20 Future works, including the main junction works at Fowler Road/ Churchill Avenue crossroads, Aylesbury College roundabout and Pearson Close/ Thame Road South cycleway, are predicted to be within budget, but further work will be done to refine scheme estimates and a project board decision will be taken in due course to authorise.

### **D. Value for Money (VfM) Self-Assessment**

1.21 Traffic flows from the junction modelling data have been used alongside the changes in journey time demonstrated by the scheme proposals to evaluate the monetary benefits

of implementing the proposed scheme improvements. The annual monetised benefits for the journey time savings, as a result of implementing the junction interventions and the crossing signal time improvements, are shown below in the table below. The scheme represents very good value for money repaying the initial investment in 6 years.

Table 4: Annualised monetised journey savings from scheme implementation

	AM	PM
Westbound	-£1,164	£68,567
Eastbound	£299,297	£80,624
Total	£446,874	

- 1.22 The proposed scheme has been subject to a series of cost reduction exercises through review of both the design (early contractor involvement, risk workshops, programming, value engineering etc.) and pre-construction stage (restricted working hours, traffic management plan review and construction cost reviews). Further opportunities to reduce costs will be explored as the programme develops.
- 1.23 Effectiveness – The proposed scheme design has been subject to feasibility study, informal key stakeholder engagement, a statutory formal consultation process, design reviews and safety audits to ensure the scheme is safe, effective and fit for purpose.
- 1.24 Economy – The scheme proposed will provide reduced journey times along the A418 and improved journey time reliability. It is well recognised that these outputs support economic growth and employment opportunities.

## **E. Equalities and Diversity**

- 5.1 Under section 149(1) of the Equality Act 2010 (EA 2010) the County Council must, in the exercise of its functions have due regard to the need to:-
- eliminate discrimination, harassment, victimisation and other conduct prohibited by the EA 2010;
  - advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;
  - foster good relations between persons who share a relevant protected characteristic and persons who do not share it.
- 5.2 Relevant protected characteristics are: age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex, sexual orientation.
- 5.3 The improvements already carried out and those being proposed as described in this report will address congestion along Oxford Road and, in doing so, support a growing economy. Throughout the implementation of the scheme the County Council is having due regard to the duty under section 149(1) of the EA 2010.

## **F. Legal implications**

- 1.25 The consultations that have been carried out meet with BCC's guidance on minimum periods for consulting with the public (4 weeks).
- 1.26 A Notice of Intent for legal conversion of the existing footway to shared use cycleway will be implemented with notices placed along the route

## **G. Property implications**

- 1.27 Works for the majority of the scheme proposals are to be undertaken on the public Highway and we are working with the College to establish necessary licensing requirements to undertake and maintain equipment on their site.
- 1.28 We have received confirmation from Aylesbury Vale District Council that the scheme proposals are within permitted development rights.

## **H. Unitary Council**

- 1.29 The Council is working collaboratively with colleagues at Aylesbury District Council on the A418 project and updates are provided to Aylesbury Garden Town project, particularly with respect to planned future Gemstone Cycleway improvements.

## **I. Other implications/issues**

- 1.1 None

## **J. Feedback from consultation, Local Area Forums and Local Member views**

- 1.2 The consultation for the A418 Oxford Road Improvements started on Wednesday 10<sup>th</sup> July and closed on Friday 9<sup>th</sup> August 2019, involving a public exhibition (Thursday 18<sup>th</sup> July), c1,900 leaflets delivered to local residents and businesses and promotion through local media, social media and e-bulletins. A member briefing was held in advance of the consultation with invitations to both District and County Council members.
- 1.3 In total there were 183 responses to the consultation, with a number of comments and suggestions. An analysis of the responses received through the consultation has been undertaken and is presented in the consultation summary in Appendix C. The key issues raised along with the steps taken to investigate and address where appropriate are summarised below:

### **1.4 Aylesbury Ring Road:**

**Concern:** *Improving oxford road isn't the solution to the problem. You need to provide a relief road from the Oxford Road to the Aylesbury road A413. This would reduce use of the Oxford Road therefore it wouldn't need improving, and also reduce congestion on the south eastern approaches to Aylesbury.*

**Response:** A link road around Aylesbury is one of the main objectives of the Aylesbury transport strategy to mitigate congestion and expected population and traffic increases arising from proposed new developments. Work is ongoing to implement the link roads with sections already in place and others on site or in development. The funding for this project is being provided from a DfT grant specifically for this project and therefore can not be allocated to other uses. However, proposals to improve cycling and public transport infrastructure complement ongoing BCC work to encourage modal shift and reduce congestion.

**Action/Amendments To The Scheme:** None.

#### 1.5 TA Centre:

**Concern:** Removal of the bus stop by TA Centre near Roundabout inconveniences potential users having to walk to/from College or Friarage Road stops.

**Response:** Usage of the bus stop is currently low and the advantages to bus services of removing the bus lane so that they can access the roundabout outweigh the benefits and delays resulting from use of this bus stop.

**Action/Amendments To The Scheme:** None.

#### 1.6 Gatehouse Road:

Feedback on the proposed staggered Gatehouse Road pedestrian crossing was received and further work is being undertaken to investigate alternative options. This proposal will now be subject to a separate report.

### K. Local Member comments

- 2.1 All Local members were emailed a draft copy of the report on the 15<sup>th</sup> October 2019. A response was received from Councillor Steven Lambert supporting the combined improvements for Fowler Road and Churchill Avenue.

### L. Communication issues

- 2.2 As there is a high level of local interest in this scheme and potential for congestion and delays during construction, it will be important to keep local residents and stakeholders updated on future plans and progress. A communications plan has been developed to ensure that information and e-bulletins are shared in a timely fashion, the project's website will be regularly updated with relevant information and activities concerning the project as well as the use of social media, press releases and on-site static and variable message signs.

## **M. Progress Monitoring**

- 2.3 During the construction stage, it is anticipated that the Project Manager will be updated on day to day activities regarding the delivery plan, reporting to the A418 Oxford Road Project Board regularly against project milestones and project progress. A programme of pre and post scheme monitoring and evaluation will be undertaken to determine the effectiveness of the scheme in meeting the project's objectives and reported at the scheme's project board on completion.

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### **Background Papers**

Appendix A	Scheme overview plan
Appendix B	Feasibility report
Appendix C	Consultation summary

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### ***Your questions and views***

*If you have any questions about the matters contained in this paper please get in touch with the Contact Officer whose telephone number is given at the head of the paper.*

*If you have any views on this paper that you would like the Cabinet Member to consider, or if you wish to object to the proposed decision, please inform the Democratic Services Team by 5.00pm on 30 October 2019. This can be done by telephone ( to 01296 382343) or e-mail to [democracy@buckscc.gov.uk](mailto:democracy@buckscc.gov.uk)*