

Stage 2 – Full Business Case/ Project Approval (Commit to Spend/ Contract)

DIVISIONS AFFECTED:

TOTAL CAPITAL BUDGET:

£4.607m increasing to
£6.407m

APPROVAL NO:

H205

Programme/ Project: A423 Southern and Eastern Bypass Improvements

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Author: Mike Collins/Phil Raven

Programme / Project Manager: Phil Raven

Sponsor: John Disley

Budget Holder: John Disley

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**Distribution: Dave Husband, Mark Kemp, Jim Daughton,
John Murray**

1 Sign-off & Approval

The input must be obtained from the following:

Responsible Owner	Name	Date	Relevant Signature
Service Manager/ Client (Contributor)	Peter Brown John Disley		
Strategy or Delivery Team Representative working on project development/ delivery (Author)	Phil Raven		
Service Finance Business Partner or Management Accountant in Consultation with E&E Finance Business Partner (Contributor - checks against the Business Strategy & revenue implications)	Mathew Barlow		
The Capital Finance Team (Contributor - checks against the capital programme & cost of capital financing)	Kathryn Goldsby-West		
Other Technical Contributors (Please list below)			

The final approval must be obtained from one of the following:

Approval Level	Name	Date	Relevant Signature
Cabinet/ On behalf of Cabinet (over £5m) [Leader of the Council]	Councillor Ian Hudspeth		

A423 Southern and Eastern Bypass Improvements

EXECUTIVE SUMMARY

This Stage 2 report describes the road and bridgeworks proposed to be carried out on the A423 Southern and Eastern Bypass and is seeking allocation of an additional £1.800m capital funding and approval to proceed to commit to spend on the construction of the works.

Road works

This section of the Oxford Ring Road suffers from traffic congestion. Early work undertaken on the 'Access to Oxford' project identified that an integrated package of schemes directed at improving the roundabout capacity at Heyford Hill Roundabout, Kennington Roundabout, and Hinksey Hill Interchange was the best way forward.

Heyford Hill Roundabout was improved in 2011 and it is essential to complete the proposed improvements at Kennington Roundabout and Hinksey Hill Interchange if the full improvement in capacity on this section of the ring road is to be realised.

The proposed improvements at Kennington Roundabout will convert the existing roundabout to a 'hamburger style' layout. A new carriageway for eastbound traffic will pass over the central island providing a more direct route through the junction. For westbound traffic the carriageway will be widened in the roundabout area to provide a segregated two lanes carriageway for traffic travelling towards the A34 and a further two lanes for traffic wishing to make turning movements at the roundabout and travel into Oxford via the Abingdon Road.

All movements on the roundabout and at the merge of multi-lane carriageways will be signal controlled.

The proposed improvements at Hinksey Hill Interchange will provide a dedicated slip-lane from the A423 (Oxford southern by-pass) straight on to the A34 southbound slip, removing the need for this traffic to go through the traffic lights at the roundabout. Widening of the existing carriageway in to the central reservation area will be carried out to maintain a two lane approach in to the roundabout as before.

Bridgeworks

Essential maintenance to the Isis, Weirs, Kennington Rail and Kennington Road Bridges to replace the waterproofing and the bridge joints has been identified in order to preserve the integrity of the bridge structures.

A high level of traffic management is required to undertake both the roadworks and the bridgeworks. In order to reduce the traffic impact on the Ring Road the roadworks and bridgeworks have been combined in to one contract and will be carried out at the same time.

BACKGROUND

The Kennington Roundabout and Hinksey Hill Interchange schemes were part of a programme of schemes that was originally developed within the former Access to Oxford project; an integrated package of measures to tackle congestion on the A34 and around the Oxford Ring Road focussed at the Northern and Southern approaches.

The original highway schemes identified within this bid included the following main elements;

- **A34 Journey Time Reliability Measures:** more effective use of road space on the A34 to be utilised using the latest active traffic management techniques such as variable speed limits and variable message signs and targeted infrastructure improvements.
- **Oxford Northern Approaches Improvements:** Tackling congestion around the Wolvercote, Pear Tree, and Cutteslowe to improve traffic flow and journey time reliability.
- **Oxford Southern Approaches Improvements:** Tackling congestion around the Littlemore, Heyford Hill, Kennington and Hinksey Hill Roundabouts to improve traffic flow and journey time.

The bid also included schemes to increase capacity at Oxford Rail station and enhance the Oxford-Bicester service.

In 2007, Oxfordshire County Council had its "Access to Oxford" bid included in the Regional Transport Board's 2011-16 transport funding programme with a funding allocation of £62 million to deliver a variety of schemes. Unfortunately, the Regional Transport Board withdrew the funding in October 2010.

Following this, the County Council took a decision to reallocate the £3.25 million that it had originally identified for the development of the WebTAG business case required for the bid, and use it to implement elements of the proposed southern approaches schemes at Hinksey Hill, Kennington and Heyford Hill Roundabouts.

Just prior to this decision, Sainsbury's submitted an application to expand their store and also sought improvements to the layout of Heyford Hill Roundabout. Following negotiations, agreement was reached for Sainsbury's to deliver the majority of the proposed improvements at Heyford Hill. The County Council also allocated a budget for Heyford Hill Roundabout of £475k to cover the risk of any further additional work required following Sainsbury's improvement. However, this risk has been removed now the scheme is complete and has resulted in a final funding of £30k for the scheme.

The Kennington Roundabout and Hinksey Hill Interchange were originally taken forward in the capital programme as one project but the Capital Asset and Programme Board (CA&PB) asked for them to be split. The funding split was based on preliminary design estimates for each scheme, but detailed design identified potential issues with both sites and whilst Kennington Roundabout was re-designed to reduce the budget implications this

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was not possible for Hinksey Hill. In order to overcome these financial issues approval was granted by the CA&PB in August 2012 to deliver the schemes as one package for the available budget of £2.896M.

In developing the design for Kennington Roundabout and in discussion with Thames Water, the impact and remedial measures required to deal with an existing 24" water main were identified in May 2012. The detailed design proceeded on the basis that a diversion to Thames Water plant was not required. However, in September 2012 Thames Water informed Oxfordshire County Council that a full diversion was now required. This delayed the start of the works by 12 months.

In May 2013 a report was submitted to CA&PB seeking additional funding to cover the increase in Thames Water diversion costs and inflation to the works costs due to delay.

Approvals were subsequently given to this increase and the budget was raised to £3,477,000 to deliver the combined scheme.

With the enforced delay due to the Thames Water diversion works, the start date for the Kennington and Hinksey Hill Roundabout improvements now impacted on the programmed start for maintenance works to the Isis and Weirs Mill Bridges.

Isis and Weirs Mill Bridges were initially identified for future carriageway maintenance following claims for vehicular damage due to the deterioration of the bridge deck carriageway surface. Repairs to the carriageway were carried out but more extensive pot holing of the carriageway has occurred. Further inspection of the bridges has identified the need to improve the bridge joints and overall waterproofing so as to maintain the bridges integrity and limit future ingress of water.

A budget of £840,000 was included in the capital programme to cover these works with a programmed start date of Summer 2014. The commission for design and construction of these works was released in September 2013.

Initial assessment of the bridgeworks identified that the carriageway width was only 7.3 metres and carrying out the works with only a lane closure was considered too dangerous on safety grounds. This resulted in the need for a contraflow system to be established with crossover locations at each end. The A423 Southern and Eastern Bypass has limited locations that are suitable for establishing a crossover. Whilst a crossover site to the east of Isis Bridge is easy to establish the crossover site to the west would have to be between the Hinksey Hill Interchange and Kennington Road Bridge. An additional £290,000 funding from the bridges structural maintenance annual programme was transferred as part of the February 2014 Capital Programme update approved by Council.

An opportunity was therefore identified to utilise the traffic management and include maintenance bridgeworks on the Kennington Road and Rail Bridges as part of the works. Inspection of the Kennington Rail and Road Bridges revealed that they were in the same condition and in need of re-waterproofing, resurfacing and new bridge joints.

A budget increase of £300,000 was approved by Cabinet to cover these bridgeworks.

DESCRIPTION OF THE PROJECT

The performance of Heyford Hill Roundabout, Kennington Roundabout, and Hinksey Hill Interchange are all closely linked. Heyford Hill Roundabout was improved in 2011 and it is essential to complete the improvements at Kennington Roundabout and Hinksey Hill Interchange if the full improvement in capacity on the Southern Bypass is to be realised.

Kennington Roundabout Improvement

The scheme will convert the existing roundabout to a 'hamburger style' layout. A new carriageway for eastbound traffic will pass over the central island providing a more direct route through the junction. For westbound traffic the carriageway will be widened in the roundabout area to provide a segregated two lanes carriageway for traffic travelling towards the A34 and a further two lanes for traffic wishing to make turning movements at the roundabout and travel into Oxford via the Abingdon Road.

All movements on the roundabout and at the merge of multi-lane carriageways will be signal controlled.

The existing cycle provisions via the subways will be maintained. Where the new eastbound carriageway crosses the cycle route, a new subway structure will be provided. Existing street lighting will be replaced with LED lighting to reduce electricity consumption and future maintenance costs of the light units.

The layout of the scheme is shown in Figure 1.

Figure 1 – Kennington Roundabout Proposed Layout



Hinksey Hill Interchange

The scheme will provide a dedicated slip-lane from the A423 (Oxford southern by-pass) straight on to the A34 southbound slip, removing the need for this traffic to go through the traffic lights at the roundabout. Widening of the existing carriageway in to the central reservation area will be carried out to maintain a two lane approach in to the roundabout as before.

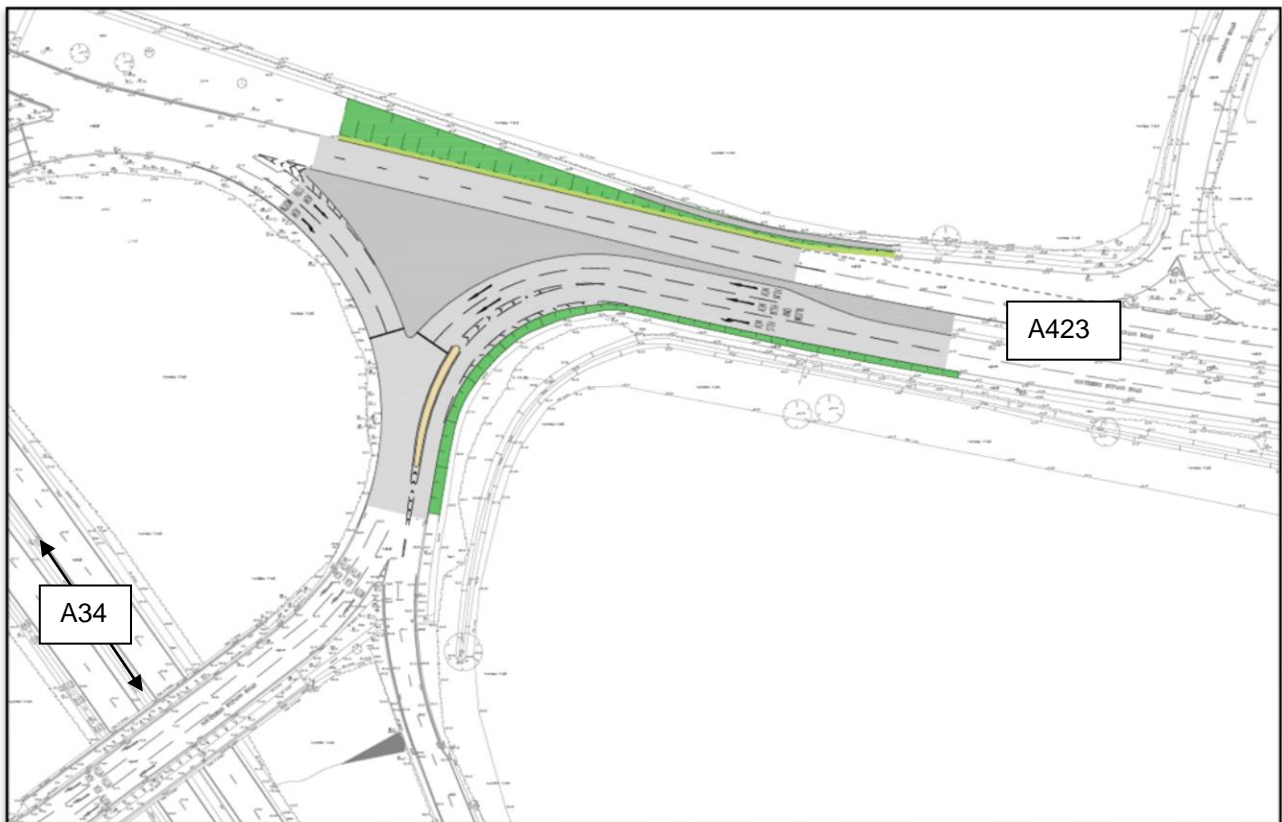
The cost and impact of the scheme has been designed to miss underground statutory services and not to encroach on land controlled by the Highways Agency.

The Highways Agency and their network managers EM Highways have been consulted throughout the design process. To mitigate their concerns regarding the impact of the scheme on the traffic flow of the A34 a 'metering' signal has been introduced on the slip road route. This will enable the regulation of traffic onto the A34 southbound slip road should the level of traffic lead to merge congestion. These signals can also be used during an incident on the network to help manage the situation.

The overall benefits of the scheme will reduce delay and congestion for vehicles on this approach and generally enable the operation of the junction to be improved.

The layout of the scheme is shown in Figure 2.

Figure 2 – Hinksey Hill Interchange Proposed Layout



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No	Key Milestones until Project Completion	Start Date	Finish Date
1	Approval of Stage 2 Business Case	April 2014	May 2014
2	Cabinet Decision / Approval to Task Order Construction		May 2014
3	Construction	June 2014 (TBC)	30 Nov 2014

EXPECTED BUSINESS BENEFITS & CONTRIBUTION TO THE COUNCIL'S BUSINESS STRATEGY

The southern approaches currently suffer from heavy congestion and prolonged journey times during the peak times. This is stifling employment growth within Oxford, particularly around east Oxford, which has wider implications for employment and housing growth in the county as a whole.

It was identified that alterations were required collectively at Heyford Hill, Kennington and Hinksey Hill Roundabouts to address congestion and journey time problems on the southern approaches. The close proximity of these junctions and the interaction of traffic between them mean all three junctions need to be improved to deliver improvements on this part of the network.

The improvements planned at Kennington Roundabout and Hinksey Hill Interchange is essential to make full use of the recent improvements made at Heyford Hill, particularly the case for westbound traffic.

The investment in this infrastructure will also be enhanced by the County Council's sustainable travel policies. The improvements proposed will help to reduce journey times for bus services currently going through the junctions, improve access to Redbridge Park and Ride, and provide an improved journey time for vehicles travelling to Oxford and destinations beyond. The improvement schemes will have the following strategic benefits:

- Facilitate existing businesses in their operations by reducing delays caused by congestion;
- Contribute to planning positively for future economic growth in Oxfordshire;
- Contribute to planning positively for future housing development in Oxfordshire;
- Enhance Oxfordshire's transport network and enable improvements to key transport links between Oxford, particularly the eastern arc of Oxford, and the southern part of the county;
- Will enable the council to promote a sustainable travel network.

SUMMARY OF OPTIONS CONSIDERED AND REASONS FOR RECOMMENDED OPTION

Kennington Roundabout

In developing options for Kennington Roundabout the design objectives were to harmonise its capacity with that of the adjacent junctions, namely Heyford Hill and Hinksey Hill, remain within existing highway limits and be economically viable.

Modelling of the network revealed that the current roundabout layout at Kennington would

not provide sufficient capacity to cope with the potential out-flows from both Hinksey Hill and Heyford Hill Roundabouts following improvement. It showed a deficiency in capacity westbound on the A423 of some 600vph and 1100vph during the morning and evening peak hour respectively. Similar capacity deficiencies were identified eastbound on the A423 numbering some 400vph and 700vph during the morning and evening peak hour respectively.

To address this deficiency a series of modifications of the roundabout geometry were tested using the model to identify what actions improved the entry capacity. The outputs showed the following design features would be beneficial:

- Provision of a left-turn slip/by-pass lane for vehicles travelling westbound along the A423;
- Increasing the entry flare length on the A423 eastbound entry (from 46m to 70m);
- Increasing the entry flare length on the Abingdon Road entry (from 23m to 42m).

Another consideration in the scheme design was the scope for upgrading the mode of signal control. Given the capacity-critical nature of the roundabout the introduction of a dynamic and reactive signal control system such as MOVA would be beneficial in improving capacity and optimising delays. The provision of the necessary detection system for MOVA was therefore incorporated in the design.

The development of options for the roundabout began by incorporating the physical changes identified above and incorporating MOVA in to the design. This was Option A and is shown below. The next progression in the design was to see if a second by-pass lane could be accommodated for westbound traffic on the A423. To achieve this the following alterations were made to Option A:

- The removal of the flare catering for the Southern Bypass Road right turn movement to Abingdon Road;
- A revision of the approach marking on Abingdon Road such that right turn traffic is catered for in the offside lane only;
- A reduction in the southbound circulatory arm from two to one lane; and
- Merging of the offside lane with the westbound single lane exit from the roundabout circulatory section in order to maintain two lanes away from the junction.

The resulting layout (Option B) is shown below.

A modelling analysis was carried out to determine the improvement Option A and Option B would provide compared to the existing Kennington Roundabout layout.

The results showed that Option A would provide an improvement in Practical Reserve Capacity (PRC) of 11 per cent in the morning peak hour and 20 per cent in the evening peak hour, with the latter generated mainly by the proposed westbound slip road/avoider lane which caters for the dominant movement in this period.

For Option B it showed a slight reduction in PRC of about -3 per cent in the morning peak hour and -4 per cent in the evening peak hour compared with the existing situation.

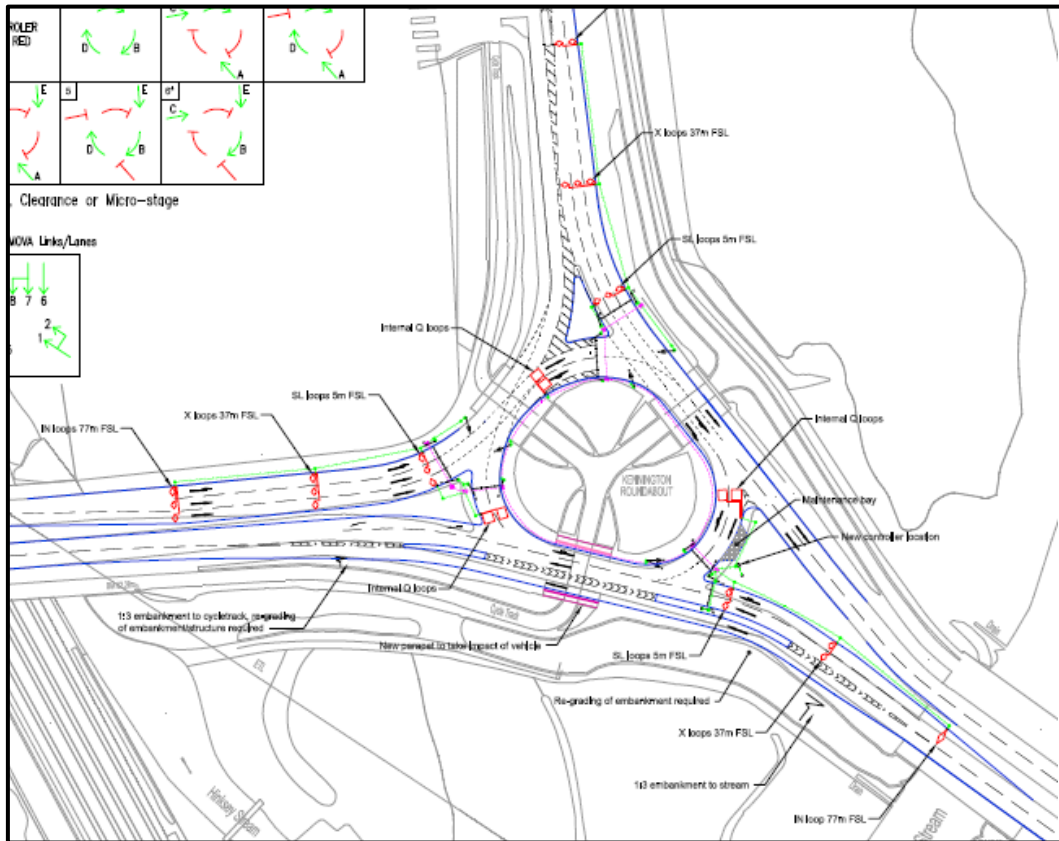
The resulting analysis showed that the overall performance of Option A in capacity terms proves to be better than Option B even with the dual bypass lane for west bound traffic.

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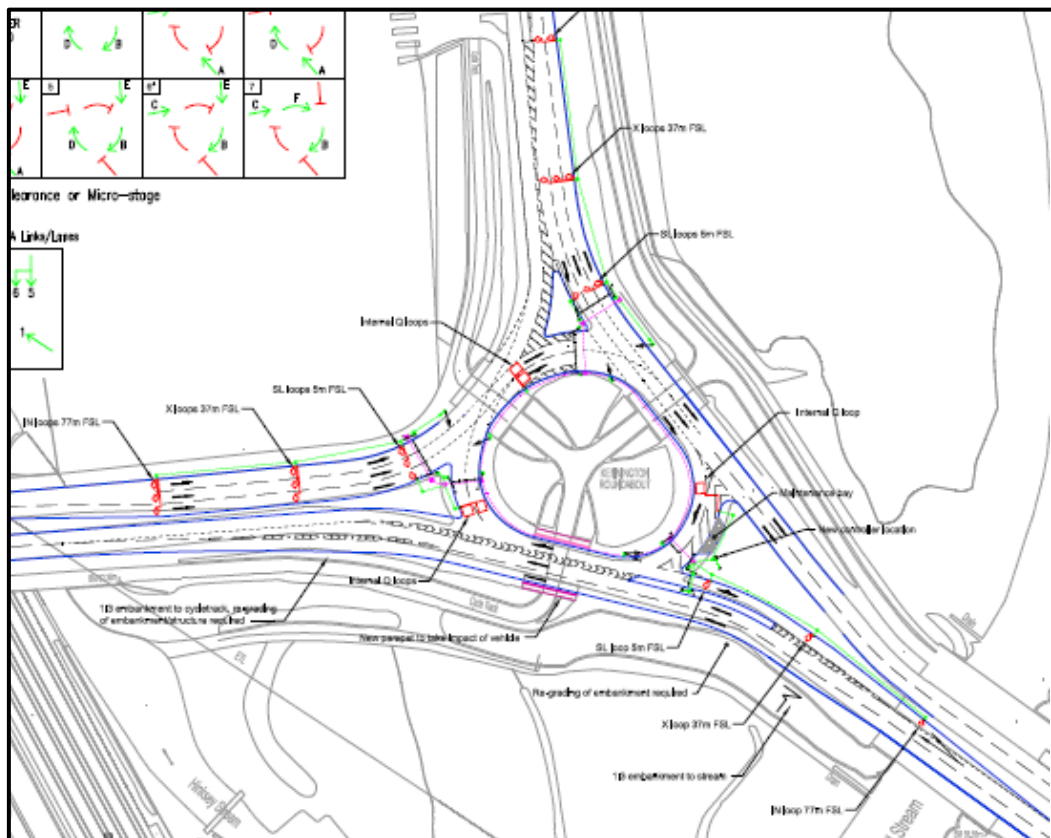
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Option A



Option B

The next stage in the design development was to look at the provision of an eastbound route through the central island to produce a 'hamburger' style appearance and seek to restore the previously identified deficiency in entry capacity.

Initially three hamburger layout concept options for Kennington Roundabout were analysed:

- Option C (2+2) -This first option is a signalised 'hamburger' roundabout with bypass sections for the A423 eastbound and westbound traffic. The '2+2' description relates to the design providing the A423 westbound traffic with a two-lane bypass, with two lanes on the adjacent westbound circulatory section. This option also includes a give-way arrangement between the eastbound circulatory traffic which gives priority to traffic approaching the roundabout from Abingdon Road;
- Option D (2+1) – The second option is a signalised 'hamburger' roundabout with bypass sections for the A423 eastbound and westbound traffic. The '2+1' description relates to the design providing the A423 westbound traffic with a two-lane bypass, with a single lane provided on the adjacent westbound circulatory section; This option would close the route for eastbound circulatory traffic at the north of the roundabout;
- Option E (1+2) – The third option is the same as D. The only difference is that the A423 westbound traffic in this design is provided with a one-lane bypass, with two lanes provided on the adjacent westbound circulatory section.

Model analysis of these layouts showed the largest improvement in Practical Reserve Capacity (PRC) was Option C with 12 per cent in the morning peak hour and 34 per cent in the evening peak hour. However it would be difficult to merge-down the two lanes of the segregated A423 westbound bypass lane, as well as the two exit lanes from the roundabout, to two lanes before the railway bridge to the west of Kennington roundabout. To resolve this conflict signal control would have to be provided to manage the conflict between these two arms. The final option modelled was:

- Option F (2+2) plus signal control on westbound exit – The final option tested was the Option C layout with signal control provided to manage the conflict between the two-lane A423 segregated bypass lanes and the two lane exit from the roundabout.

The modelling analysis of this option showed that with the additional signals there was a slight reduction in PRC of 1 per cent in the morning peak and just 3 per cent in the evening peak compared to original Option 2+2. The layout for Option F is shown below.

Selected Option

The development of the design to improve Kennington Roundabout has been driven by model analysis to identify a layout that will return the best operational improvement over existing. The results have shown that Option F (2+2) plus signal control on westbound exit provides the best Practical Reserve Capacity (PRC) of all the options considered with an improvement in PRC of 11 per cent in the morning peak hour and 31 per cent in the evening peak hour. The higher PRC during the evening peak hours means that this layout is better equipped to cope with future increases in traffic volumes. This layout also has the

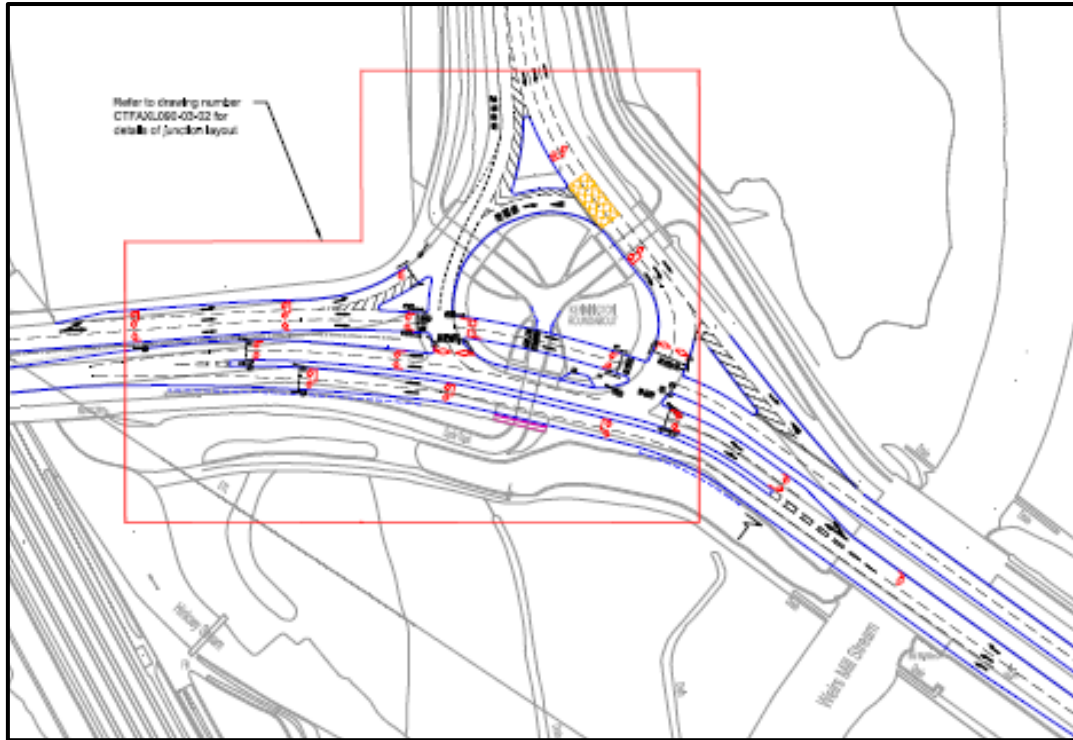
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advantage that it provides two lanes for the dominant westbound bypass movement, albeit with exit signalling, and reinforces the continuity of the Southern Bypass Road through the provision of the 'hamburger' through link.



Option F

A further benefit of the westbound exit signalling is that it provides a control mechanism to meter the outflow of traffic towards Hinksey Hill and manage congestion on the approach to this junction and connections onto the A34. It would also generate gaps in the westbound flow of traffic to enable the A423/Kennington Road junction to operate effectively.

Therefore Option F has been taken forward as the preferred layout for improvement of the Kennington Roundabout.

RISKS AND ASSUMPTIONS

No	Description of areas or sources of risk and impact on project	Mitigation	Owner
1	Unchartered utilities within construction works	Obtain known plant location details from utilities. GPR survey carried out of certain areas. Carry out CAT & Genny trace/trial holes before excavation.	Skanska

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No	Description of areas or sources of risk and impact on project	Mitigation	Owner
		Advance diversion of water main	
2	Ecology impact and required mitigation	<p>Surveys to be undertaken ahead of scheme and early ground clearance works to take place.</p> <p>Advance orchid translocation programmed.</p>	Skanska
3	Project exceeds budget due to Target Cost rising and contribution to pain at maximum	<p>Contract documents to be robust and all potential risks identified at tender stage.</p> <p>Risk register produced and early contractor involvement to apportion where the risk lies (Client/Contractor).</p> <p>Appoint Skanska as main contractor to enable ECI, single delivery team and quick resolution of site issues.</p>	Skanska
4	Works by TWUL are affordable and complete within main works tender period	<p>Early liaison with utility to provide advance diversion works to main works programme.</p> <p>Advance payment for design service to allow C4 to be produced</p>	<p>Skanska</p> <p>TWUL/OCC</p>
5	Issues/Delays in obtaining Highways Agency roadspace/approvals	<p>Ongoing consultation with Highways Agency to agree final designs and roadspace booking.</p> <p>Some constraints imposed by Highways Agency need to be escalated where they conflict with scheme programme.</p>	Skanska/OCC
6	Impact of scheme on highway network – negative publicity and conflict with other highway schemes	<p>Ongoing engagement with Network Management team to ensure conflicts with other schemes minimised</p> <p>Programmed communications in advance/during construction to ensure roadusers/businesses etc are informed of delays.</p>	Skanska/OCC

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No	Description of areas or sources of risk and impact on project	Mitigation	Owner
7	Delay in scheme start due to Thames Water works or internal approvals due to shortfall in budget	Christmas Embargo and Westgate scheme mean end of November start date is still the target. Consider costs of acceleration/changes to scheme to shorten project programme.	Skanska/OCC

SERVICE & STAFFING IMPLICATIONS

The proposed scheme will result in minor reduction in the maintenance requirements for this section of the highway asset. New lighting and signal equipment should deliver improved levels of reliability. LED lighting is being implemented on Kennington Roundabout which will deliver energy savings, as well as reduced maintenance.

The bridge maintenance works on the 4 bridges will prevent water ingress which is currently causing significant deterioration of the deck/substructures. Therefore the works should reduce the extent of future maintenance works to these elements.

OTHER TECHNICAL IMPLICATIONS

Network Management/Highways Agency (HA)

Hinksey Hill Interchange (except the A34 entry and exit slips, and bridges) is OCC Highway but the signals are the responsibility of the HA. However OCC are currently responsible for the operation of the traffic lights at Hinksey Hill.

The operation of the 'metering' signals is being agreed between HA and OCC, including protocols for incident management led from the OCC network management centre.

As a result of the interface of the scheme with the HA network, the signal design and temporary traffic management is subject to approval by the HA. Recent discussions have been held to resolve outstanding technical issues, and ensure this is approved to allow the construction to proceed. A Section 6 Agreement is required with the Highways Agency for the works to the signals and this is being progressed as a matter of urgency with the Highways Agency.

Environmental & Planning Implications

There are no planning implications but there are potential environmental implications. The ecological survey identified orchids which require translocation to another area of the site prior to the start of the works. This has now been completed as advance works due to restrictions on timing of this work.

ICT Implications

None

Equalities Impact Assessment

The scheme will have a positive impact on bus services in the vicinity following completion of the works. There is also no permanent impact to any pedestrian or cycle routes.

Therefore it is not considered necessary to complete an EIA.

LEGAL IMPLICATIONS (INCLUDING PROCUREMENT RELATED ISSUES)

The legal implications in the development of this project are minimal.

Design and supervision services of main works

The project management, design and contract document preparation of the scheme are provided by Skanska under the existing Transport Services contract.

Procurement

A target price has been submitted by Skanska under the OCC Highways Partnership Contract, which includes a full breakdown to demonstrate the assumptions made, subcontract prices, preliminaries build up etc, in order to demonstrate value for money.

Land Acquisition

The design has remained within the existing highway boundary therefore no land purchase is required to implement the scheme.

A licence is being finalised with Oxford City Council for use of a compound area within Redbridge Park & Ride.

After completion

The new traffic signal equipment will be 'handed over' to the HA to maintain with the rest of the traffic signals at Hinksey Hill Interchange.

FINANCIAL IMPLICATIONS & AFFORDABILITY

Budget Shortfall

The target cost developed for the scheme has resulted in there being a significant budget shortfall for the scheme, of approximately £1.500m (excluding acceleration costs). Refer to separate budget summary spreadsheet in Appendix B.

The reasons identified for the budget being exceeded are as follows:

- The cost of the preliminaries have increased, especially traffic management costs, equating to an increase of approx. £950k. When looking to incorporate the bridgeworks part of the project into the main scheme it was envisaged that the bridgeworks could be undertaken within the roundabout works traffic management. However after further detailed development of the design it was established that the traffic management was more complex and required a contraflow in order to construct the works safely. This included construction of 2 crossovers. The budget allocated for the bridgeworks was therefore insufficient to cover the additional costs associated with the more complex traffic management requirements.
- Temporary matrix signs have also been included in the target cost based on recent discussions with the network management team, but are relatively high cost. Traffic Management costs (including crossover construction and temporary VMS signs) accounts for £640k of the scheme costs). Further advance works have been required – including relocation of protected orchids, and trial holes to allow completion of the crossover design. The other reason for the increase in prelims costs is the constrained site with a number of separate phases, which leads to an

extended programme, and therefore a higher proportion of preliminaries than was originally allowed for.

- Certain works items have increased significantly in cost, leading to an overall increase in works cost = £420k. The original estimate has been built up using SPONS Price Book, a nationally recognized database of construction price information for the UK. However since this estimate was completed in 2011/12, there has been a significant improvement in market conditions, particularly within the highways sector, which has led to significant increases in subcontract costs over the last 18 months.
- The Thames Water main diversion issues have delayed the overall project by over 18 months. This has led to an increase in project management and abortive design costs as changes were required to the design as a result of the Thames Water requirements.
- Various payments have had to be made to third parties (approx. £28k) e.g. Highways Agency, Network Rail, utilities, Oxford City Council for consultation/approval with respect to their asset and use of the Park & Ride site as a compound area.

The construction target price has been developed with obtaining a minimum of 3 subcontract prices from Skanska's supply chain for each major element of work, to ensure that competitive market rates have been obtained. Whilst there are variances, generally subcontract prices have been relatively consistent. These have been submitted as part of the target cost breakdown to OCC to allow full review of the build-up of the target cost.

Some changes to the design have occurred during the development of the detailed design of the scheme, e.g. additional areas of surfacing. However these only account for a relatively small amount (approx. £100k).

It should be noted that the shortfall only allows for a 5% contingency/risk allocation, other than which has been included within the construction target price (i.e. identified risks being transferred to Skanska). However this does not cover any costs associated with acceleration of the project programme or alternative working constraints (refer to discussion below).

The following options have been considered to reduce this budget shortfall:

- Remove the bridgeworks from the scheme and avoid the need for contraflow. However this would still leave urgent works uncompleted, and would cost more to implement as a separate scheme. This would also create additional disruption to road users.
- Different arrangements for the Kennington junction – other options have been considered for the junction (see separate discussion on these within this report). However a redesign at this stage would cause major issues with the programme, and reduce the benefits gained from the scheme.
- An alternative structure type has been considered to reduce this timescale – however this will not lead to an overall reduction in programme as other items are on the critical path, and the risk of not completing the design/approval process is high given the short mobilization to starting construction of the subway.
- Conventional tendering of construction contract – the contract could be let to conventional tender, but this would lead to major issues with the programme, and

may not necessarily lead to any reduction in overall cost. Any savings which may be delivered in tender cost is likely to be reduced by increased supervision costs and compensation events. The current target cost has been largely built up through a series of subcontract packages for which multiple quotes have been obtained to demonstrate that competitive market rates are being achieved.

- Further value engineering proposals to be identified in conjunction with key supply chain during the project – alternative suppliers or materials etc may be proposed which could lead to cost savings during the works.

Sources of additional project funding have been reviewed:

- Extending the scope of the works to include resurfacing of adjacent stretches of the ring road, using DfT Severe Weather Recovery funding. This is being investigated, but it is not yet known if this is of sufficient priority to allocate funds from this budget. This could be completed with minimal impact on the overall programme, as resurfacing would be completed whilst the bridge maintenance works are being undertaken under contraflow, which would justify meeting a proportion of the existing TM costs from the Severe Weather Grant and reducing the funding shortfall slightly.
- Developer funding – no further sources of developer funding have been identified.
- Following closure of the 2013/14 accounts, around £1.0m of underspends and unrequired contingencies on the 2013/14 highways structural maintenance programme have been identified and returned to corporate capital reserves.
- The remainder will be met from corporate capital programme contingencies. However, as this project is part of the City Deal programme, the expenditure on this scheme will be claimed against the City Deal grant funding in 2014/15. The City Deal funding cannot meet the increased cost of this scheme, it just defers the requirement for the Council to use its own resources until a later date when the second phase of the Oxford Science Transit scheme is delivered.

Programme Implications

A key issue in this decision is the impact on the overall project programme. The current programme is based on a project start date of 6 May 2014, and a completion date of 30 November 2014. The programme developed by Skanska gives a 2 week float to this milestone date. However with the start date being delayed whilst Thames Water complete their advance works and budget shortfall solutions are approved, this puts considerable pressure on the completion date. Any further delay to the award of the project may lead to the programme 'window' being missed.

In order to achieve the completion date a task order needs to be issued by 8th May 2014, to allow mobilisation to commence and a start date on site of 7th June 2014. This is 5 weeks behind the original target cost programme.

By adopting a 6 day working week for the whole programme the completion date can be maintained, which will retain a limited period of float (2.5 weeks) and a 4 week mobilisation period.

However the adoption of this accelerated programme will lead to additional costs. This could be in the order of £10k for every additional day during each working week. This is only a very approximate figure and would form part of a fully priced Compensation Event

that would need significant input from Skanska's supply chain. Based on a 30 week programme, this equates to an acceleration cost in the region of £300k.

The completion date was set due to the compound area in Redbridge P&R needing to be vacated by this date - the Westgate Development should have started and the Redbridge P&R is part of the mitigating efforts for the loss of the Westgate Car Park. There is also a Christmas embargo period, to minimise impact on shoppers during this period, and other works taking place next year which will impact on the network.

If works are extended beyond the end of November, an alternative compound area is likely to be required, which will incur the additional costs of moving the compound and any additional rent due.

The target cost and programme is based on the following traffic management constraints:

- Off-peak daytime working on the first phase of the project (lane closures on A423 and Hinksey roundabout);
- Series of approx. 5no overnight road closures on sections of resurfacing of the Hinksey roundabout;
- Daytime weekday working during contraflow phase of project (maintenance works to structures and most of work to Kennington Roundabout).

Revenue Implications

No significant revenue implications.

Maintenance implications

As stated earlier the scheme will deliver reduced maintenance costs in certain areas. In particular:

- LED Street Lighting at Kennington, which will lower energy consumption and increase life of lighting units;
- New signal equipment at both junctions, extending the duration to future replacement;
- The bridge maintenance works on the 4 bridges will prevent water ingress which is currently causing significant deterioration of the deck/substructures. Therefore the works should reduce the extent of future maintenance works to these elements.

There will be certain areas where there is a small increase in maintenance requirements:

- Combined kerb/drainage units need to be cleared at regular intervals to maintain efficiency of drainage system.
- New subway structure introduced to carry existing cycle route under the new 'hamburger' lane, requiring future inspections/maintenance.

Kennington Roundabout and Hinksey Hill Interchange Improvement scheme

OCC- Capital Governance

Stage 2- Full Business Case

Date: April 2014

A consultation process began back in early 2009 when stakeholder groups including bus operators, taxi companies, motorcyclist, cyclist and pedestrian groups were asked to identify the problems associated with the Access to Oxford project, specifically the southern approaches which included Kennington and Hinksey roundabouts.

Locations and times of particular problems with queuing, safety issues resulting from poor lane markings and layout, and improvements that could be made to the surface and signage of cycle tracks near to Kennington Roundabout, were identified.

Consultation specifically on the Kennington & Hinksey project was undertaken in May 2012.

Consultation has also taken place with the Highways Agency, as detailed elsewhere in this report.

A communication exercise is planned in the run up to construction which involves the following activities:

- Update to the project website page, with regular updates on the works;
- Letter drop to local stakeholders to include nearby businesses, adjacent residents, bus companies, local authorities, emergency services, hauliers association;
- Stakeholder meetings with particular stakeholders e.g. bus companies;
- Press release and media coverage;
- VMS signs in advance of works to advise of start date, and use during works, particularly during key changes in TM phasing/overnight road closures;
- Regular email bulletins, to internal and external stakeholders.

RECOMMENDATIONS

To approve the release of funding (including additional £1.800m budget allocation) to enable implementation of the A423 Southern and Eastern Bypass Improvement scheme.

Report by

Project Leader for Director for Transport

Report Authors & Contributors

Phil Raven (Project Manager)

Mike Collins (Principal Engineer)

Background Papers

Accompanying appendices listed below.

Appendix A – Resource Appraisal Form

Please see attached.

Appendix B – The Latest Cost Plan

Not used.

Appendix C – The Updated Stage 1 Form –

Not used