

## Full Business Case (Stage 2 Commit to Construct)

<b>Project/Programme Name:</b>	Harwell Link Road Section 1 – B4493 to A417 (Science Vale – City Deal)
<b>Total Capital Budget:</b>	£11.649m
<b>Divisions Affected:</b>	Hendreds & Harwell Didcot East & Hagbourne
<b>Purpose of this report:</b>	This report requests approval to increase the budget by £0.349m and to contractually commit to construction of this project.

### Sign-off & Approval

*In preparing this report input must be obtained from the following:*

Responsible Owner	Name	Date
<b>Service Manager/ Client / Project Sponsor (Contributor/ Author)</b>	Paul Fermer / Helen Powdrill	July 2016
Delivery Team Representative / Project Manager (Contributor)	Mark McCappin	July 2016
Service Finance Business Partner or Senior Financial Adviser (Contributor)	Rob Finlayson/Matthew Barlow	July 2016
The Capital Finance Team (Contributor)	Kathryn Goldsby-West	July 2016
Other Contributors as applicable (e.g. developer funding, asset strategy)		

*Final approval as per the Financial Procedure Rules must be obtained from:*

Approval Level Required	Name	Date
Over £5m - Cabinet/ On behalf of Cabinet (Leader of the Council)	Cabinet	19 <sup>th</sup> July 2016

## **1 Description & Objectives of the Proposal / Desired Outcomes & Business**

### **Benefits**

The Harwell Link Road Section 1 – B4493 to A417 scheme is being progressed through Oxfordshire County Council's City Deal and is part of a package of measures outlined in the Science Vale Transport Strategy to improve connectivity and reduce congestion. This scheme is one of the transport projects to support Access to the Enterprise Zone.

Building a new road from the B4493 to the A417 on the eastern side of the A34 is the part of a route strategy to link Didcot to Harwell Oxford campus. The element of the route strategy to improve the existing road over Hagbourne Hill commenced in October 2016. The scheme will provide a route from housing development west of Didcot (Great Western Park and Valley Park) to Harwell Oxford Campus thus improving access to the Enterprise Zone and support delivery of planned housing growth as identified in the Local Transport Plan and emerging Local Plans.

The scheme will:

- increase the capacity of the local road network,
- relieve Harwell village of through traffic by 250 trips per hour,
- reduce journey time by 45 second,
- provide greater route choice, and
- relieve capacity constraints elsewhere on the network.

The Harwell Link Road has been promoted by Oxfordshire County Council for many years, and was included in the Southern Central Oxfordshire Transport Strategy (SCOTS) from 2009. Development of the Vale of White Horse Local Plan, has led OCC to conduct detailed feasibility and preliminary design work for a new road running from the B4493 Wantage Road to the A417 Reading Road as close to the eastern side of the A34 as is practicable. This alignment is closely related to the proposed residential development area of Valley Park. The residential development will provide a spine road through the site from the A4130 to the B4493 to access the Harwell Link Road.

## **2 Updated Project Scope**

The Stage 1 Business Case approved by Cabinet in October 2014 outlined the preferred option to be progressed through detailed design to delivery as set out in "*Harwell Link Road Section 1 B4493 to A417 Feasibility Study*" (Revision 3, May 2014, Appendix A).

### **Preferred Scheme:**

- The provision of a new 1.1km link road between the B4493 and the A417 immediately to the east of the existing A34, providing one 50pmh general traffic lane in each direction. This is forecast to reduce the number of vehicles through Harwell by 250 per hour and average journey times by 45 seconds.
- The proposal includes roundabout junctions at either end.
- A diversion of a bridleway "The Driftway" along the eastern edge of the new link road.
- Provision of a 3.0m wide segregated footway and cycleway along the length

of the road to support alternative modes of travel.

- Provision of a new balancing pond to attenuate the flow of run-off from the new road.
- New hedgerow along the length of the road and planting 190 trees, together with creation of woodland areas and wetland habitat creation around the attenuation pond to support the environmental strategy.
- With reference to future development, it is acknowledged that access to Valley Park and/or land south of Didcot will need to be taken in the future from the Harwell Link Road. A design for a strategic junction midway along the link has shown how this could be achieved and the design has been future-proofed to enable this.

Detailed design of the preferred option identified in the Feasibility Study and the Stage 1 Business Case has been completed and early contractor engagement with a view to procure through the Midlands Highway Alliance using Galliford Try as preferred supplier has been commenced.

### **3 Estimated Cost & Proposed Funding Plan**

The construction cost quoted in the table below is the estimate produced by the consultant. The target cost submitted by the Contractor on 1 July 2015 was £8,285,013. To mitigate against the risk of exceeding the budget, a quantified risk register of £399,429 plus a contingency of £957,347 has been allowed. Details are included within Appendix C.

The scheme will be funded under the City Deal programme funding envelope using grant and prudential borrowing to be repaid using future business rate growth income. The target cost for construction has returned as higher than expected at the preliminary design stage, therefore the total project cost, including contingency provisions, has increased from £11.300m to £11.649m. An increase in budget of £0.349m is therefore requested, which will be contained within the overall programme borrowing requirement agreed by the LEP.

Summary of capital cost:

	Stage 1 £000	Stage 2 £000
A: Cost of feasibility and preliminary design (previously released at Stage 0b)	420	719
B: Estimated cost of detailed design, procurement & enabling works (previously released at stage 1)	715	914
<b>C: Estimated delivery / construction cost (requested to be committed at stage 2)</b>	<b>6,842</b>	<b>8,660</b>
D: Contingency ( <i>Project – 10% of design &amp; construction, and Quantified Risk Register - Appendix E</i> )	3,079	1,356 (Project - 957 /

		QRA - 399)
<b>Total</b>	<b>11,300</b>	<b>11,649</b>

The estimated annual expenditure profile for the project is as follows, the full cost forecast is included within Appendix D:

Year	Previous Years	2016/17	2017/18	2018/19	Contingency
£000	1,098	3,436	5,753	6	1,356

### Revenue Implications:

Below are indicative maintenance and replacement costs over a 30 year period based on our current asset management policies and best practice. Further information is included in Appendix F.

The additional costs are expected to be funded through additional Maintenance Block Grant as a result of increased highway length, and more generally through growth resulting in greater income from Council Tax.

Work type	Capital maintenance (over 30 years)	Revenue maintenance (over 30 years)
Safety barrier	£165,000	£6,000
Drainage maintenance		£29,700
Gabion retaining wall	£26,400	£6,000
Carriageway maintenance	£1,000,000	
High friction surfacing	£37,500	
Maintenance of footway/ cycleway	£33,750	
Maintenance of bridleway	£30,000	
Signs & lines		£3,000
Signals	£36,000	£60,000
Street lighting	£30,525	£30,000
Landscaping		£24,000
Total (over 30yrs)	£1,359,175	£158,700
Total (average annual cost)	£45,306	£5,290

#### **4 Project Delivery Timetable & Procurement Plan**

The procurement and construction of the project is a year later than the programme set out in the Stage 1 Business Case, this is due to drawn-out and complex discussions and negotiations with developers and landowners over the purchase of land required to build the scheme.

Procurement is being progressed in line with the Major Scheme Procurement Strategy, and has been undertaken through the Midlands Highway Alliance Framework using Galliford Try as preferred supplier.

The Contract will be an NEC3 Contract Option C Target Cost with Activity Schedule. The benefits of the contract mean that the contractor is only paid for the work undertaken and any risk is shared between the Client and Contractor with percentage shares split for both cost overrun and underspend.

The current programme estimates that construction will comment in September 2016, on the proviso that the land acquisition required has been completed.

Activity	Start Date	Finish Date	Milestone/decision point & scheduled technical gateways
Feasibility & Preliminary Design	Jan 2014	Aug 2014	Approval of stage 1 BC
Public Consultation	July 2014	Aug 2014	
Detailed Design	Sept 2014	Dec 2015	
Planning Application	July 2014	Apr 2015	Planning Permission granted 29 April 2015, subject to Conditions.
Procurement	Feb 2016	July 2016	Approval of stage 2 BC
Construction	Sept 2016	Sept 2017	

#### **5 Risks, Constraints, Dependencies and Exclusions**

Following a joint risk workshop with the designer and contractor a risk register has been produced. The key risks have been highlighted in the table below, the full risk register is available in Appendix E.

Description of areas or sources of risk and impact on project	Mitigation	Owner
Costs and time delays associated with acquisition of land could lead to delays in start of construction.	Engagement and negotiation with landowners is ongoing	OCC
Inability to temporarily close bridleway requires route to be		OCC

maintained through works		
Traffic disruption requires additional mitigation	Discussion with Network Management to identify possible issues.	OCC
Increase in earthworks quantities above that allowed for in the estimate.	Issue to be discussed further with the contractor.	OCC
Engineering problems due to difficult geotechnical conditions and/or groundwater (exceeding those allowed for)	Desk-study and ground investigation has been undertaken in order to design out any issues	OCC

## **6 Communication & Consultation**

A public consultation, tabling the outline design for three City Deal schemes, took place from 7th July to 4 August 2014. The outline scheme was available to view on Oxfordshire County Council's website and at three public exhibition events held in the Science Vale area.

The exhibitions were attended by around 300 people and numerous written responses have been received at those events, by email, through the online consultation portal and by post. All responses received are currently being analysed and a consultation report will be produced by the end of September 2014, which will be published on the website and publicised.

Planning permission was submitted on 31 October 2014 and approved on 30 April 2015.

Oxfordshire County Council Communications Officer and Galliford Try Public Liaison representative are working together to produce a communications plan for the scheme. This will identify key stakeholders and consultation for the remaining stages of the scheme, this will involve public exhibitions being held prior to construction and regular key stakeholder meetings during the construction of the project.

## **7 Project Governance**

This project will be managed in accordance with the corporate governance and decision making processes of Oxfordshire County Council. The scheme will be managed through the Major Projects Board reporting progress and escalating issues or decisions as appropriate to the County Council's Capital and Asset Management Board (CAPB).

The management and quality control of the scheme comes through a system of 6 Gateway checks on the continued design of the scheme (project initiation, feasibility, preliminary design, final design, procurement and construction) and a 4-stage approval process for the developing business case for the scheme (Concept Development/Commit to Investigate, Project Development/Commit to Invest, Project Delivery/Commit to Spend, and Project Closure/Client Acceptance).

Details on the delivery structure are included in Appendix G.

## **8 Supporting Documents**

### **Appendix A - Feasibility Report**

App A Harwell Feasibility Rev 3 – *available on request due to size*

### **Appendix B - Service & Equalities Impact Assessment**



App B HLR Service &  
Community Impact As

### **Appendix C – Construction Estimate/ Target Cost Summary**



App C HLR  
Construction cost sun

### **Appendix D – Cost Forecast**



App D Cost  
Forecaster HARWELL

### **Appendix E - Project Risk Register**



App E Harwell  
QRA.pdf

### **Appendix F – Revenue Implications**



App F Harwell  
revenue implications.

### **Appendix G - Project Governance Framework**



Appendix F - Project  
Governance.docx