

## **Risk Management Strategy**

The Council operates a robust risk management approach by creating a Risk Register for each of its capital projects, as in the attached Staveley Regeneration Route Risk Register.

Project specific risks have been identified, their impact on the project's cost, time and quality aspects considered and likely impact evaluated. The probability as to whether the risk is likely to occur is assessed to give each item a risk ranking. The risk ranking is colour coded to quickly identify each item's degree of risk to the project - from black (critical) to green (low).

The project team's approach for dealing with each risk item is then recorded as the 'Proposed Response Action'. A snap shot as to the current status of the risk mitigation, in line with the response action, is also recorded so progress can be tracked. The risks are reviewed by the project team on a monthly basis with new risks being added, progress on existing risks being reviewed and updated, and any risks that have been resolved closed out. The estimated costs for dealing with the risk and identification as to which of the project team is best suited to deal with the risk are also reviewed. This process enables a likely cost for each risk item to be agreed, with the summation of these amounts creating an overall Project Risk Budget.

When reviewing the Project Risk Register, the Council has decided to take ownership of the contamination risk (item 3) and the risk associated with working adjacent to a live canal (item 11) within the construction cost estimate rather than the risk budget. This approach provides a truer picture of the likely construction cost rather than mitigating the risk through the risk register. This has generated a potential project 'Opportunity', whereby if the contaminated soil can be disposed of onsite rather than being taken to tip, the Council would avoid the landfill charge and make a cost saving.

**Staveley Regeneration Route - Phase 1 - Risk Register**

**Staveley Regeneration Route - Phase 1  
Project Risk Log**

Risk No (Identifier)	Date Raised	Risk Type - category	Reference Programmed activity	Full Description of Risk (including impact)	Cost Impact Score	Time Impact Score	Quality Impact Score	Highest Impact Score	Probability Score	Risk Ranking	Proposed Response Action (countermeasure)	Current Position	Action Owner	Date Last Reviewed	Next Review	Status (open/closed)	Minimum Range Cost £	Maximum Range Cost £	Most Likely Cost £	Probability %	Risk Amount £
1	June '17	Environmental	Protected Species	Ecology issues from invasive species (known to exist nearby the site)	H	H	VL	H	H	16	To take action appropriate to whatever invasive species are found over the site prior to work commencing on site i.e.. Burying knotweed pulling up Himalayan Balsam before seed pods form Trim back Giant Hogweed or pay for contamination to be removed from site with appropriate licenses/consents.	Invasive species are known to exist in the site area. An ecology survey would be needed to confirm the location and extent before determining whether action was required. Budget to be established to commission surveys - estimated at £6k.	DCC	June '17	TBA	Open	£ 6,000	£ 100,000	£ 100,000	80%	£ 80,000
2	June '17	Environmental	Protected Species	Ecology issues from protected species (water voles thought to be present and bird nesting season to be avoided)	M	M	VL	M	H	12	Avoid the bird nesting season or undertake preliminary site clearance works so bird nesting unlikely to be a problem. Provide alternative habitat for water voles, trap and move to new location under appropriate license and consent	Undertake ecology survey to identify protected species and follow up actions	DCC	June '17	TBA	Open	£ 6,000	£ 50,000	£ 50,000	80%	£ 40,000
3	June '17	Environmental	Contamination	Site is on a former chemical works so contamination is thought to be present but no idea as to what or to what degree	VH	H	VL	VH	H	20	Identify types and degree of contamination in the area of the works and determine remediation strategy.	IMD site is known to be contaminated given previous uses (Chemical Works). <b>DCC has assumed that they will bear this risk and has made provision within the cost estimate for contaminated soil to be removed from site - hence, no value on this risk item.</b>	DCC	June '17	TBA	Closed	£ 50,000	£ 908,016	£ -	0%	£ -
4	June '17	Environmental	Ground Conditions	Ground conditions are worse than expected requiring deeper foundations i.e. additional excavation, capping and sub-base or more specialist ground stabilisation works	H	M	H	H	M	12	Undertake ground investigation to determine soil parameters and design accordingly	Some GI information available from previous investigation adjacent to the site that may be applicable. Access from within DCC. Determine the scope of a more detailed GI and instruct work.	DCC	June '17	TBA	Open	£ 30,000	£ 300,000	£ 250,000	80%	£ 200,000
5	June '17	Environmental	Coal Workings	Coal workings are known to have occurred over the site via open cast and shafts.	VH	M	M	VH	VH	25	Undertake coal authority search and determine mine locations/remediation undertaken. Then liaise with the Coal Authority for any further remediation.	Coal Authority search to be undertaken - suggest this is done with the GI.	DCC	June '17	TBA	Open	-	£ 100,000	£ 100,000	100%	£ 100,000
7	June '17	Environmental	Archaeology	Archaeological remains may be located on the site which prevents the road from being built or delays it from commencing	L	L	VL	L	VL	2	Determine if any significant archaeology is present	The area has been worked for many years so the soils are heavily disturbed or overlain with new works. Instruct a desk top Archaeological survey to determine the potential for further investigations.	DCC	June '17	TBA	Open	£ 3,000	£ 4,000	£ 4,000	100%	£ 4,000
8	June '17	Environmental	Deep Foundations	Deep foundations from previous buildings/uses may be present beneath the route of the spur	M	M	VL	M	M	9	Determine the presence of any deep foundations and whether they pose a risk to the spur or can be buried.	Undertake desk top research to determine if buildings have been located on this part of the site. Undertake a walk over survey to determine if any foundations or base slabs are present. Determine the scope of any further investigation work	DCC	June '17	TBA	Open	£ 5,000	£ 10,000	£ 10,000	50%	£ 5,000
9	June '17	Client	EA Structure Consent	EA discussions take longer than expected or DCC fails to get approval through the bespoke structure application	M	M	M	M	M	9	We don't know what type of structure the EA will accept. Current structures have a 20m span with bridge abutments. A similar design is thought possible for the new structure although the alignment has not been surveyed.	Engage with the EA to determine their conditions for the form of the new structure and develop proposals accordingly.	DCC	June '17	TBA	Open	£ 15,000	£ 30,000	£ 20,000	50%	£ 10,000
10	June '17	Client	AIP Consent from Adopting Authority	AIP is delayed or is not achieved prior to work commencing	M	M	M	M	M	9	DCC is likely to be both the designer and the adopting authority so close liaison between the designer and the approver is anticipated.	DCC to determine how the bridge should be procured - internal or external; then to brief the work.	DCC	June '17	TBA	Open	£ 15,000	£ 30,000	£ 20,000	50%	£ 10,000
11	June '17	Environmental	Canal Interests	Depending on the alignment/adoption requirements, the work may impact on canal interests	H	M	H	H	VH	20	Determine the alignment and canal trust's position. Likely to need a structure to retain the road embankment and limit encroachment. Screening wall or feature also likely to be required.	Undertake alignment check once a detailed topographical survey is undertaken. Current alignment shows possible encroachment over a 50 - 80 length. <b>DCC's current position is take on this risk and make provision within the construction cost estimate - hence no value on this risk item.</b>	DCC	June '17	TBA	Closed	£ 15,000	£ 300,000	£ -	0%	£ -
12	June '17	Design Technical	Drainage Design	Seeking Environment Agency consent for surface water discharges to local watercourses and compliance with planning consent conditions Risk: A delay in approval affects the discharge of pre-start conditions and potentially the start of the contract	M	M	VL	M	M	9	Seek consent from the EA to discharge surface water prior to main works commencement. Note that compliance and discharge of relevant planning conditions also to be addressed.	DCC to engage with the EA in preliminary discussions about discharge locations and any flow mitigation requirements. Note that some work has been undertaken for a previous route which may be able to be used for this project - see Peter Storey.	DCC	June '17	TBA	Open	£ 10,000	£ 30,000	£ 20,000	50%	£ 10,000
13	June '17	Design Technical	Drainage Design	Flood Risk Assessment may restrict the form of the spur or bridge structure involving more or more complex structures. Impact: Increased costs associated with structures and their foundations	L	L	VL	L	L	4	DCC to work with the LLFA and EA about the possibilities of the areas flooding and scope the design of the works accordingly.	A FRA is yet to be commissioned. Once completed discussions can be held with the EA/LLFA.	DCC	June '17	TBA	Open	£ 20,000	£ 250,000	£ 150,000	10%	£ 15,000
14	June '17	Design Technical	Utilities	Lack of utility supply to the site which prevents development	L	L	L	L	L	4	DCC will not be acting as a developer and therefore no utility provision, except for street lighting, will be required.	Only street lighting to be provided. Corridor for utility installations to occur within the shared cycleway and adjacent verge for utility installation.	DCC	June '17	TBA	Open	-	-	£ -	10%	£ -
15	June '17	Design Technical	Foul Drainage Design	Lack of foul drainage connections nearby the site.	VL	VL	VL	VL	VL	1	DCC will not be acting as a developer and therefore no foul water provision will be required.	No foul water provision to be made as part of the spur installation	DCC	June '17	TBA	Open	-	-	£ -	10%	£ -

### Staveley Regeneration Route - Phase 1 - Risk Register

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16	June '17	Design Technical	Highway Departures	DCC does not accept the departures from standard required for the highway.	L	L	M	M	L	6	Seek acceptance by DCC of the departures or consideration of a reduced design speed. Work closely with DCC designers and Head of Highways to manage the message of the departures against DCC overall ambitions for the project. More safety measures may be required as a consequence.	No design work yet undertaken so the need for departures is not known. Undertake a preliminary design and complete RSA1 to inform of any departures.	DCC	June '17	TBA	Open	-	-	-	50%	-
17	June '17	Health & Safety	Construction Activity	Unforeseen Statutory Undertakers found on site impacting design and/or construction. <b>Impact:</b> Risk of injury or death. Additional cost of statutory undertakers' diversion. Delay to construction programme.	M	M	L	M	M	9	Obtain details of undertakers' plant so that all hazards can be identified. Place orders for affected plant and include appropriate information in the contract documentation to warn of protection measures while working around/in the vicinity of existing/new services.	1. Obtain Statutory Undertakers records (Minimum C2) and review alongside preliminary design. 2. Prepare Statutory Undertakers report highlighting potential diversions and arrange meeting with Statutory Undertakers to scope likely diversions. Investigate mitigation measures (e.g. alignment changes) 3. Consider undertaking Ground Penetrating Radar Survey to considerably reduce risk of unplanned diversions.	DCC	June '17	TBA	Open	£ -	£ 100,000	£ 50,000	50%	£ 25,000
18	June '17	Stakeholder	Pre-Planning Exhibition	Insufficient time to prepare and promote the works locally and with partner organisations prior to submitting a planning application.	VH	VH	M	VH	VH	25	Try and avoid the need to undertake a pre-planning exhibition	Seek consent not to undertake a pre-planning exhibition. May result in public backlash.	DCC	June '17	TBA	Open	-	£ -	£ -	100%	£ -
19	June '17	Stakeholder	Planning Consent	Insufficient time to get supporting documents and preliminary design ready to submit for planning application.	M	H	H	H	VH	20	Undertake preliminary design and supporting information to make a planning application	Need to engage planning support. Need to engage with planning authority about what they need/level of detail. Need to commence preliminary highway design.	DCC	June '17	TBA	Open	-	£ 15,000	£ 15,000	100%	£ 15,000
20	June '17	Stakeholder	Planning Conditions	Pre-start planning conditions are not discharged prior to construction works commencing Effect: delays and costs if the contractor is awarded the contract but is delayed from starting	H	H	H	H	VH	20	Aim to get all pre-start and detail conditions discharged prior to the award of the construction tender	See previous risk item. Pursue early determination by the planners (may not need full consultation period to enable a decision to be made)	DCC	June '17	TBA	Open	-	£ 30,000	£ 30,000	100%	£ 30,000
21	June '17	Stakeholder	Unauthorised occupation of the site (travellers etc.)	Unauthorised occupation of the land. Effect: Delays while court orders acquired and potential increase in preliminary costs for site protection	L	L	L	L	L	4	Keep site secure and monitor throughout the construction period. Remove vegetation at the last possible moment and erect a suitable barrier in its place to prevent entry.	Site is currently protected and land beyond is not suitable for caravanners.	DCC	June '17	TBA	Open	£ 1,000	£ 15,000	£ 7,500	50%	£ 3,750
22	June '17	Stakeholder	Cost estimate is in excess of the project budget	The budget is insufficient to cover the project costs - highway and utility works combined Effect: New budget sources need to be found causing delay	VL	VL	VL	VL	VL	1	Project to be supported from Council Budgets - identified reserves from the Staveley Brimington Route	No action needed	DCC	June '17	TBA	Closed	£ -	£ -	£ -	0%	£ -
24	June '17	Stakeholder	Heads of Terms for Land Transfers	An Agreement is needed to define land contributions from stakeholders. Risk: Agreement is not achieved Effect: Delays the realisation of the whole project	L	L	VL	L	L	4	Approval in Principle already secured	AIP to be formalised.	DCC	June '17	TBA	Open	£ 5,000	£ 5,000	£ 5,000	20%	£ 1,000
25	June '17	Stakeholder	Land transfer	Land Transfer needs to made to DCC prior to work commencing if government funding route used	M	VH	VL	VH	M	15	Dedication or transfer agreement needs to be completed prior to work commencing	Corporate Procurement to engage with land owners and their agents to agree the terms of any land transfer	DCC	June '17	TBA	Open	£ -	£ -	£ -	80%	£ -
26	June '17	Stakeholder	Contract Award	Contract award is delayed resulting in claims for additional costs due to inflationary effects	L	L	VL	L	L	4	Ensure that contract award is correctly programmed to minimise inflationary effects	No immediate action as on programme	DCC	June '17	TBA	Open	£ 200,000	£ 200,000	£ 200,000	20%	£ 40,000
27	June '17	Client	Cabinet Approvals	Repeated Cabinet approvals can slow the procurement of the project	M	M	VL	M	M	12	Seek a waiver from cabinet for repeated referral for decisions	Service Director to sound out cabinet for such a proposal and draft a cabinet report to seek consent.	DCC	June '17	TBA	Open	£ -	£ -	£ -	50%	£ -
28	June '17	Commercial	Contract Award	The timeframe does not favour a traditional design - tender - construction approach to project delivery	L	M	L	M	L	6	Procure a Design and Build contract	MHA MSF2 contractor offers a direct route for this type of service but no member authority has yet used it to this extent. Alternatively, a design and build tender would need to be drafted and tendered through DCC procurement with associated time constraints.	DCC	June '17	TBA	Open	£ -	£ -	£ -	50%	£ -
29	June '17	Commercial	Financing Design Work	MHA MSF2 contract normally engages contractors for small elements of design which they are able to fund knowing that the project will be proceeding. The previous risk item is a different approach and the contractors will need certainty that they will get paid for any design work.	L	L	L	L	L	4	Money will need to be available to fund design even though certainty of grant funding is not assured.	Money for design is secured through revenue budgets	DCC	June '17	TBA	Open	£ -	£ -	£ -	20%	£ -
<b>Opportunities</b>																					
R1	June '17	Environmental	Contaminated Arisings	Potential for the contaminated soil to be retained on site to create levelled plots, landscaping or as part of the earth embankment subject to soil engineering characteristics being known	H	M	M	H	M	9	Determine soil characteristics and level of contamination. Can the material be used in the embankment? If not, agree with adjacent land owner to dispose of soil on their site thereby avoiding disposal and land fill tax.	Awaiting soil investigation report and details of contaminants and concentration levels. Negotiate with land owner(s) about disposal on their adjacent land.	DCC	June '17	TBA	Open	£ -	£ 908,016	£ -	0%	£ -

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Percentage of total Max. risk cost **£ 588,750**