

New Ref	Risk Description	Current controls in place	Likelihood	Risk Owner	Date Reviewed	Consequences	Quantified financial/programme consequences					Risk Status	
							Minimum Event	Minimum Cost (£)	Expected Event	Expected Cost (£)	Maximum Event		Maximum Cost (£)
1. Strategic/Political/Policy													
SBC 1.1	Change in SBC Lead Cabinet Member/Leader results in withdrawal of support for scheme.	The current LCM is signed up to the scheme development. Regular briefing notes for all SBC members will update them on scheme development.	10%	Savio De Cruz		Reputational damage and potential future loss of funding for other schemes.	No change	0	No change	1	Cancellation of scheme loss spend to date	310000	
SBC 1.2	Scheme does not integrate with or complement other transport initiatives, e.g. LSTF.	Staff involved from SBC and Atkins involved and early highlighting of issues should be possible, however it is felt that the scheme is complementary to the A4 LSTF works.	10%	Savio De Cruz		Reputational damage and potential future loss of funding for other schemes.	No change, conflicts resolved	0	No change	0	Cancellation of scheme - loss of spend to date	310000	
SBC 1.3	Local SBC Member(s) oppose scheme in their ward, or alter scheme design/outline benefits	SBC members have given previous backing to the scheme and have been recently re-elected	10%	Savio De Cruz		Reputational damage and potential future loss of funding for other schemes.	No changes required to scheme	0	No change	0	Delay of 2 months and more significant changes to design	50000	
SBC 1.4	Scheme does not integrate with wider policy eg SEP	The scheme has been identified within the Strategic Economic Plan	10%	Savio De Cruz		Reputational damage and potential future loss of funding for other schemes.	No changes required to scheme	0	No change	0	Cancellation of scheme - loss of spend to date	310000	
2. Economic/financial/management													
SBC 2.1	Local authority contribution of is not forthcoming due to pressures on other budgets.	Members are aware that the LTB/LEP have prioritised the scheme which, subject to statutory consents being obtained and design / procurement, will be affordable and delivered within the approved funding envelope. There would be considerable reputational damage if SBC decided to abandon the scheme because of a change in short term funding priorities.	30%	Savio De Cruz		Reputational damage and potential future loss of funding for other schemes.	No change	0	No change	0	Cancellation of scheme loss spend to date	310000	
SBC 2.2	The Regional Growth Fund application is unsuccessful, meaning that the LTB allocation will be re-prioritised to other higher priority schemes.	Members are aware that the LTB/LEP have prioritised the scheme which, subject to statutory consents being obtained and design / procurement, will be affordable and delivered within the approved funding envelope. There would be considerable reputational damage if SBC decided to abandon the scheme because of a change in short term funding priorities.	50%	Savio De Cruz		The scheme will be delayed until such a time as a funding stream can be secured.	No change	0	No change	0	Cancellation of scheme loss spend to date	310000	
SBC 2.3	The tender prices received from the contractors exceed the available budget to construct the scheme.	The current cost estimate is based on a Bill of Materials with appropriate allowances for optimism bias and risk	20%	Savio De Cruz		SBC has to find additional funding to cover cost overruns.	Tender price within budget/risk allowance	0	No change	0			
SBC 2.4	Changes to inflation assumptions (potentially as a result of lack of contractor capacity).	Inflation assumptions are contained within the scheme cost estimates. Assumptions being reviewed against industry predictions at each main stage of cost estimate review.	10%	Savio De Cruz		Potential increase in scheme costs beyond current budget. SBC has to find additional funding.	Inflation predictions below original budget	0	No change	0			
SBC 2.5	SBC is not able to commit enough senior management resource to the project.	A Project Board has been formed to meet on a monthly basis with attendance from all of the senior SBC staff within the "commissioning" structure. Scheme also covered in regular management meetings.	10%	Savio De Cruz			No change	0	No change	0			
SBC 2.6	Delays in construction programme resulting in increased construction administration costs	Ensuring design, investigations, programme and procurement are robust, reducing likelihood of construction delays reduced.	10%	Savio De Cruz			No change	0	3 month delay to programme		6 month delay to programme		
3. Statutory Process/Legal/Land acquisition													
SBC 3.1	Delays in submitting or obtaining the required Traffic Orders, or objections received.	Programme shows timescales for drafting and consultation on Traffic Orders. SBC will have a Traffic Orders team who can undertake the work.											
SBC 3.2	Failure to gain access land to undertake topo, environment etc.												
SBC 3.3	Planning permission for change of use refused.	All land impacted by change of use is within parcel identified as 'Bath Road Widening Line' in policy.	5%				No change	0	No change	0	Cancellation of scheme - loss of spend to date	310000	
4. Design/technical/preparatory works													
a) General													
SBC4.1.1	Inaccuracy of base mapping and land boundary information compared to that used for outline design delay to programme and additional survey costs.	Topographical surveys have been commissioned. The current cost estimate makes allowances for risk associated design changes resulting from more accurate topographical information.		Design team	22/05/2014	Additional expense and delays if boundaries are different to that assumed in the detail design	No impact	0	No significant impact	5000	Delay and additional land costs	15000	Open
SBC4.1.2	Incomplete or late delivery of outputs by design teams	Ongoing programme monitoring. Other resource available where hold ups occur.	10%	Design team	22/05/2014	Delays to overall programme and possibly not submitting BC	No delays occur	0	Minor delays and additional costs	10000	Delay by 2 weeks	20000	Open
SBC4.1.3	Design errors/omissions that could lead to designs being revised and could cause a delay of Business case	Independent Design Reviews. Robust check/approval process.	20%	Design team	22/05/2014	None	No delays occur	0	Minor delays and additional costs	10000	Significant delays and costs	50000	Open
SBC4.1.4	Changes in design standards during scheme leading to rework/delays.	Regular review of any changes to standards. If occurs, apply for departure, unless benefits of applying revised standard.	20%	Design team	22/05/2014	Delays during design stage	No delays occur	0	No delays occur	10000	Significant delays and costs	50000	Open
SBC4.1.5	Increases in statutory undertakers apparatus diversion costs to that assumed at bid stage.	Apply legally for C3 notices for cost update.	5%	Design team	22/05/2014	Additional costs to the over budget of the scheme	No additional costs	0	Minor delays and additional costs	10000	Significant increased costs	20000	Open
SBC4.1.6	At present there are 4 areas under consideration for CPO. Discussions are underway with all landowners but there is a possibility that they can refuse or demand higher prices than what it is worth and subsequently SBC refuses to buy the land.	Design team to minimise the CPO areas required - If that fails then a redesign of this area will be required alternatively: i) Seek alternate solutions and ii) Allow adequate time for CPO process	25%	SBC	22/05/2014	Extra funding required by SBC to purchase the land and possible not being able to raise the amount required. Could potentially stop some areas in the design	No additional costs	0	Minor delays and additional costs	20000	Significant increased costs	40000	Open
SBC4.1.7	Planning applications for the CPO area could take a long time to complete and we run the risk that it could not be completed before construction starts	CPO process ongoing and the programme for this process is well ahead of time.	60%	SBC	26/05/2014	If the land is not converted into highway land in time then it could delay the programme for delivery	No additional costs	0	Minor delays and additional costs	10000	Significant increased costs and programme	50000	Open
SBC4.1.8	Impact on design due to locality of utility services	Identify precise location of services and agree constraints with utility companies at the earliest opportunity - Arrange for trial pits to be completed in the Preliminary design stage	10%	Design team	20.05.2014	There could be delays to the designs and the whole delivery programme	no change	0	no change	10000	Major delay to programme	30000	Open
SBC4.1.9	Long lead times for permanent service diversions	Early liaison with utilities companies to ensure stats get diverted before the construction programme begin.	10%	Design team	20.05.2014	Delay in programme	no change	0	Minor delays and additional costs	5000	Major delay to programme	20000	Open
SBC4.1.10	Unforeseen ground conditions like finding asbestos or and SSSI	Identify the need for further surveys to help identify unforeseen site conditions. Obtain asbestos surveys when purchasing new land	25%	Design team	21.05.2014	minor changes required	no change	0	no change	0	Minor delay to programme	20000	Open
SBC4.1.11	Poor existing asset condition requiring increased remedial works as part of the scheme e.g. drainage, lighting, pavement.	Establish existing asset condition through surveys and due diligence. Early discussions with SBC over contribution towards additional costs of asset repair/replacement.	50%	Design team	21.05.2015	Increased works costs and scheme delays	No charge	0	Minor repairs at SBC cost and some to the scheme	200000	Major remedial problems encountered, leading to extra design required to complete detail designs	500000	Open
SBC4.1.12	Stopping up entry to service road opposite Twickenham Lane could cause current traffic to be diverted to an alternative junctions	Consideration of design options to ensure situation will not be worse than existing layout and the existing traffic will not adversely affect other accesses. In the preliminary design phase traffic counts and the modelling to be completed to assist with the design of this junction and other junction that could be affected.	10%	Design Team	23.05.2014	Existing traffic could be diverted to alternative junctions.	No issues	0	some design changes needed	5000	Minor changes to the designs	10000	Open
b) PH2 Tesco's site													
SBC4.2.1	Carriageway widening at Tesco will have an impact on existing lamp columns due to the overhang road possible being the way when road has been widened	Seek alternate shorter length columns for sale relocation - Consult a lighting designer in the preliminary design stage.	15%	Design team	21.05.2014	delay to programme as alternative lamp columns could have a long lead in time and will require a redesign.	no change	0	Minor change	8000	No impact	20000	Open
SBC4.2.2	Road widening reduces footway width meaning signing will be more difficult to replace on the footway and we could be encroaching onto private land	Current designs do not require a major amount of highway land and we should be designing for shared footway cycle lane of 3m. A 3m wide footway should accommodate all of the signs required within this section	20%	Design team	30/05/2014	Alternative sign designs to be completed and could increase work costs to mitigate the space needed	no change	0	Minor change	5000	Major redesign and bespoke columns to be designed and ordered for construction	20000	Open
SBC4.2.3	Removal of segregated footway draws opposition from Tesco's and other stakeholders within SBC that promotes shares spaces	Current designs do incorporate a shared space and not a segregated footway cycle space as what is there currently.	25%	Design team	30/05/2014	Stakeholders demand the same as the current arrangements and additional designs will be required and a delay in programme	no change	0	Minor change	5000	Major redesign required	10000	Open
c) PH2 Sainsbury's site													
SBC4.3.1	Carriageway widening on the approach to Sainsbury's round about will have an impact on existing subway structure and pedestrian using this subway to cross the road	i) Seek advice from Structures Team on any constraints in filling up this subway and ii) new signal pedestrian crossing proposed near Westham Road	25%	Design team	21.05.2014	Changes to design and delays due to the location of the structure and it cannot be avoided	no change	0	Minor changes required	15000	Major redesigns needed and additional costs the works	50000	Open
SBC4.3.2	Alternative design is to reduce width of central reserve. Issues may be encountered with level difference between opposing lanes of traffic on the A4	Topographical survey have been ordered. When the scheme moves into the preliminary design phase the levels will be reviewed to mitigate and level issues.	25%	Design team	21.05.2014	Changes to design and possible delays due to a complicated design taking longer.	no change	0	Minor changes required	4000	Major redesigns needed and additional costs the works	8000	Open
SBC4.3.3	Road widening reduces footway width meaning relocating existing signing will be more difficult on the footway.	A detail sign design to be completed in the preliminary design stage to ensure the space required will be sufficient for the required signs	20%	Design team	30/05/2014	Alternative sign designs to be completed and could increase work costs to mitigate the space needed	no change	0	Minor change	5000	Major redesign and bespoke columns to be designed and ordered for construction	20000	Open
d) PH2 Upton court to Langley High street widening													
SBC4.4.1	The current design include for a lane widening that potentially have to either remove or relocate mature trees. Some costs have been allowed for but we still run the risk of potentially removing more trees in the detail design	The current designs we looked at minimizing the amount of highway land required and have also utilized the existing footway to the north to minimize the impact on stans and trees.	25%	Design team	23.05.2014	Possible claims, additional maintenance costs of cutting back branches frequently.	No changes	0	Some trees to be removed	30000	Substantial cost for removal of mature trees	75000	Open
SBC4.4.2	Road safety issues regarding buses "sharing" left turn lane.	Apply for stage 1 safety audit when the scheme is in the preliminary design stage	20%	Design team	23.05.2014	Changes to design and delays to the programme as alternative designs need to be completed	No changes	0	Minor changes to scheme design	1000	Minor design changes required.	10000	Open

SBC4.3	Introducing additional risk for roads connecting to northern side. Normal traffic run the risk of running into buses when turning left	Current designs do not allow for a shared bus and vehicle space to help left running vehicles to turn left safely. In the primary design stage a Stage 1 and 2 safety audits will be completed and all safety concerns will be taken on board.	50%	Design team	30/05/2014	Changes to design and delays to the programme as alternative designs need to be completed	No changes	0	Minor changes to scheme design	1000	Minor design changes required.	10000	Open
SBC4.4	Increase in impermeable area will impact on existing drainage infrastructure	A full drainage design should be completed in the preliminary design stage to ensure that the current network will cope with the additional surface water.	70%	Design team	30/05/2014	Existing drainage needs to be replaced and depending on the depth of the services, it could get very expensive. There is also a possibility that we require additional storage space like a detention pond	No changes	0	Minor changes to scheme design	10000	Major design required for the drainage	20000	Open
e) PH1 Do minimum Eastbound option													
SBC4.5.1	Land to be purchased under CPO - There is a risk that the land will not be available at the time when we start the construction works	Early consultation with landowners to establish position and key drivers. Ensure changes in design linked to gaining landowner approval do not increase costs and give support for any developers proposals.	20%	Design Team	23.05.2014	Delay to scheme, additional costs, challenge at examination stage	No issues	0	Some additional changes	10000	Delay to scheme, additional changes at examination stage	100000	Open
e) PH1 Do minimum Westbound option													
SBC4.6.1	At the petrol station close to Leigh road there could be an issue with buses not being able to negotiate through this junction due to the geometry of this junction. There are also very limited amount of space available if a road widening should be required	Current design left this area as it is. If alterations should be made to the geometry of this junction it will be minor amendments.	5%	Design Team	23.05.2014	Land take required and extra expense for SBC to purchase land and possible delays to programme	No issues	0	some design changes needed	5000	Minor changes to the designs to obtain a small area of land.	10000	Open
SBC4.6.2	Increase in impermeable area will impact on existing drainage infrastructure	A full drainage design should be completed in the preliminary design stage to ensure that the current network will cope with the additional surface water.	70%	Design team	30/05/2014	Existing drainage needs to be replaced and depending on the depth of the services, it could get very expensive. There is also a possibility that we require additional storage space like a detention pond	No changes	0	Minor changes to scheme design	5000	Major design required for the drainage	10000	Open
SBC4.6.3	Potential to sever pedestrians by implementing bus lanes and causing a safety concern.	Consideration and care would be taken with the current designs with a few that small changes could be implemented.	50%	Design team	30/05/2014	The detail design does not fit into the existing highway boundary and some footway narrowing and possibly the service road have to be narrowed.	No changes	0	Minor changes to scheme design	5000	Minor changes to the designs	10000	Open
SBC4.6.4	Designs could affect many mature trees that possibly needs to be removed or relocated. Can receive objections from key stakeholders for removing to many trees	Current designs have taken this risk into account and have tried to minimize the amount of trees to be chopped off or relocated	50%	Design team	30/05/2014	More costly to remove or relocate mature trees and could get objections from key stakeholders	No changes	0	Minor changes to scheme design	5000	Minor changes to the designs	10000	Open
5. Environmental													
SBC 5.1	There could be TPO's on the mature trees along the whole route of the A4. This could have severe effects on designs.	Locations to be obtained with all TPO areas along the whole route.	25%	Design Team	23.05.2014	Designs to be revised to avoid affected areas or possible long delays to negotiate removal of trees.	No issues	0	some minor changes to designs	10000	Major delays to programme and designs	50000	Open
7. Procurement													
SBC7.1	Contractors are not interested in the work on offer and do not respond to Q&EU Notice.	Early engagement with contractors interested in scheme. Unlikely to be major issue in current climate.	10%	A Spratt/ S DeCruz		Delay or no build	Normal competition/interest in tenders		No impact		6 month delay		
SBC7.2	Unsuccessful contractor makes a successful challenge under Q&EU Provisions	Diligent review procedure, established over recent projects.	10%	A Spratt/ S DeCruz		Delay and cost	No objection received		No objection received		Objection received 3 month delay		
SBC7.3	Delays in awarding contract due to extended queries on tenders, and tender interviews	Detailed design. Appropriate Tender Period. Full design review of tender documents	10%	A Spratt/ S DeCruz		Delay of award of contract. Reduce Mobilisation/Construction period	Programme not delayed		4 weeks delay to programme		3months delay to programme		
SBC7.4	Ensure all procurement processes are met, notwithstanding funding announcements timelines	Comply with standard procedures, and early review of draft documents	10%	A Spratt/ S DeCruz			Programme not delayed		Programme not delayed		8 weeks delay to programme		
SBC7.5	Delays in awarding contract due to internal SBC approvals.	No decision likely to be needed if tenders within budget, but sign off will be required to allocate funds.	10%	A Spratt/ S DeCruz		Delay in award of contract.	Programme not delayed		Programme not delayed		8 weeks delay to programme		
8. Construction													
SBC8.1	Changes to design (after construction has commenced)	The detailed design for the contract tender documents will provide as much detail as possible on the site conditions and methods of construction; so as to avoid questions about "buildability".	20%	Design team	21.05.2015	Increased costs and delays to the programme as a result of design changes.	Minor changes required (1%)	250,000	Some changes required (3%)	100000	Significant changes required (10%)	250000	Open
SBC8.2	Delay in diversion of known utilities, and changes to utilities in advance of construction.	Adequate planning, liaison and undertaking of works in advance of main programme. Agreement of any utilities work before start of construction	20%	Design team	21.05.2015	Delays to scheme and additional costs if main works are delayed	Design as expected in advance of construction	0	Minor delay due to utility company delaying diversion	100000	Major delay due to critical service not being diverted	250000	Open
SBC8.3	Unknown services struck during construction works incurring delays to programme	GPR survey undertaken to establish location of statutory undertakers' equipment and unmarked services. Digging of trial holes and CAT scans for any advance works. Permit to dig process for main works.	20%	Design team	21.05.2015	Delays to scheme, additional costs of repair and / or re-design (esp. to avoid areas where GCHQ equipment may be located).	Design as expected in advance of construction	0	Minor strikes at contractors cost	0	Major delay due to critical service strike	200000	Open
SBC8.4	Drainage systems struck during construction works incurring delays to programme and additional costs for repair	CCTV surveys and GPR surveys to be undertaken to establish position of services.	10%	Design team	21.05.2016	Delays to the scheme and additional costs as a result of the need to repair equipment.	No clashes/damage as with existing drainage system	0	Minor strikes at contractors cost	0	Major delay due to critical drainage strike	100000	Open
SBC8.5	Problems with structures requiring remedial works and incurring additional costs. There are 2 structures located on the A4 within our section of works.	Establish through investigation extent of work required during design stage. Try to design around the site	50%	Design team	21.05.2015	Increase in scheme capital costs as a result of the need for further strengthening works. However risk will lie with SBC if there are any problems with existing structure	No repairs required	0	Minor repairs at SBC cost and major costs to the scheme	20000	Major problems encountered during construction, could also leading to delays to main works	50000	Open
SBC8.6	Adverse weather (risk of flooding) major snow falls during works etc.) during construction	Programming for construction reflects risks of work during winter months.	30%	Design team	21.05.2015	Increases the construction timescales with potential increase in costs (depending on nature of the contract) and disruption.	Programme not delayed	0	Minor programme delays with minor costs	40000	4 weeks delay	100000	Open
SBC8.7	Higher than expected traffic delays during construction of highway improvements, leading to changes being required during works to TM arrangements.	Advanced planning with HA and SBC Street works team, to agree TM proposals, in relation to known traffic flows, and any measures that can be implemented in event of breakdown. Continued consultation with emergency services due to adjacent the station	20%	Design team	21.05.2015	Additional cost & delay if forced to change working practices post contract. Public reputation damaged.	Programme not delayed	0	Minor changes to publicity and TM required	25000	delays due to forced changes to TM	100000	Open
SBC8.8	Road space /Traffic Management Act. Risk if previous utility's contractor's works over run.	Programming will consider the impact of any necessary utility works (e.g. diversions) as a result of the scheme. Regular liaison with stakeholders to ensure everyone is aware of what is going on.	50%	Design team	21.05.2015	Potential delays to the commencement of works or function of works. Possibly standing costs	Programme not delayed	0	Minor delays to programme	20000	Significant delay due to other roadworks	30000	Open
SBC8.9	Disruption to public transport during the works, and resulting reduction in patronage.	Good public communications during the construction phase of scheme. Early discussion with bus operators and SBC to ensure delays mitigated.	25%	Design team	21.05.2015	Possible increase in scheme costs as a result of compensation claims from bus companies.	No issues	0	Some additional publicity and bus costs	10000	Significant increased costs	30000	Open
SBC8.10	Working restrictions hours as a result of the need to avoid disruption during peak traffic periods and disruption (in particular noise) to adjacent residential properties.	Programming will consider the available number of hours for the different works locations and phases, and ensure that there are enough work hours programmed in. Appropriate TM in place to allow full working where possible. Ensure compliance requirements are included in tender documents.	50%	Design team	21.05.2015	Potential increase in the construction phase of the works beyond what is currently allowed for.	No increased costs	0	Some increase in costs due to additional restrictions	100000	Significant increased costs	200000	Open
SBC8.11	Industrial action.	The chosen contractor will need to demonstrate a good record of industrial relations and staff welfare.	10%	Design team	21.05.2015	Delays to the construction programme as a result of industrial action.	No increased costs	0	No increased costs or delays	0	Delays to completion date	0	Open
SBC8.12	Shortage of materials or skilled labour during local peak in planned construction activity	Contractors risks - additional cost borne by contractor	10%	Design team	21.05.2015	Delays to construction and additional costs	No increased costs	0	No increased costs or delays	0	Delays to completion date	0	Open
SBC8.13	Adverse ground conditions and / or contamination could be discovered - delay to works completion and additional mitigation costs.	Geotechnical surveys are being commissioned. The current cost estimate makes allowances for risk associated with unforeseen ground conditions.	20%	Design team	21.05.2015	Delays and increase in construction costs	No increased costs	0	Some unforeseen ground conditions	50000	Significant additional cost and delays due to contamination and poor ground	100000	Open

