

Burnley - Pendle - Hyndburn Growth Deal Risk Register - Junction 13 Package

Impact

	Min	Exp	Max
1	10000	15000	20000
2	25000	35000	45000
3	55000	65000	75000
4	85000	95000	105000
5	115000	125000	140000

PROBABILITY							
75%	Almost Certain	5	5	10	15	20	25
50%	Likely	4	4	8	12	16	20
25%	Possible	3	3	6	9	12	15
10%	Unlikely	2	2	4	6	8	10
1%	Rare	1	1	2	3	4	5
		IMPACT	Insignificant	Minor	Moderate	Major	Catastrophic
Colour Key		1	2	3	4	5	
CRITICAL RISK		Cost	<£25-75K	£100K to £150k	£175k to £225k	£250k to £300k	.£325k to £400k
HIGH RISK		Time	<1weeks	1 to 2 weeks	2 to 3 weeks	3 to 4 weeks	➤ 4 weeks
MEDIUM RISK		Quality					
LOW RISK		Reputation	Criteria to be decided	Criteria to be decided	Criteria to be decided	Criteria to be decided	Criteria to be decided

New Risk No	Description	Risk Owner	Risk Type	Example/Consequence	Comments/Mitigation	Impact	Prob	Prob %	Risk	Time (weeks)	Min. Cost (£k)	Expected Cost (£k)	Max Cost (£k)	Approx Quantification Output			Amendments from previous revision
														P x Min	P x Exp	P x Max	
	Land and Legal																
	Legal																
	Land and Landowners																
	Land ownership issues at junction	LCC		Transfer or access to land not in LCC ownership delayed/not agreed	pre-implementation discussions with Estates and District/landowners	3	1	1	3		55000	65000	75000	550	650	750	
	Strategic																
	Financial contributions shortfall			local contributions delayed or not forthcoming	early discussions and agreement on contributions from all parties.	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Design Baseline																
	DMRB revisions	LCC		Updates may be made during detailed design stages - Changes may have to be made/ will take time and increase design cost		2	1	1	2		25000	35000	45000	250	350	450	
	Topo survey anomalies	LCC		Confusion/ inability to produce detailed design - Times delays/ increased cost		2	1	1	2		25000	35000	45000	250	350	450	
	Late information from 3rd parties	LCC		Essential information not received - Cause time delays and potential increase re-design costs		3	2	10	6		55000	65000	75000	5500	6500	7500	
	Engineering: Roads																
	Alignment Detailed design																
	Design errors	LCC		General design errors, calculations/ incorrect measurements could cause errors - Incur delays due to rectifying errors, potential financial implications		1	2	10	2		10000	15000	20000	1000	1500	2000	
	Inadequate notice of road space booking	LCC		Other scheme has priority - Delayed start	Pre discussions with Network co ordination and early submission of all notices.	2	1	1	2		25000	35000	45000	250	350	450	
	Stage 2 safety audit	LCC		Additional design work creating additional construction work - Increasing cost and increasing time in design and construction	ST 2 SA to be carried out as soon as detailed design completed so any re-design can be completed before construction stage.	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Engineering: Structures																
	Structures Detailed Design																
	Bridges			increased cost / delay due to unforeseen repairs - remedial work	Identify affected structures and carry out early assessment	2	1	1	2		25000	35000	45000	250	350	450	
	Statutory undertakers																
	Statutory undertaker design delay	LCC		Delay in design - may cause delays and cost implications	All utility Companies contacted at design stage and provided with GPR survey and construction plans to minimise risk. Trial holes in critical areas to be dug early in the construction phase to identify potential problems.	3	2	10	6		55000	65000	75000	5500	6500	7500	
	Stats cost greater than estimates	LCC		Inaccurate estimate		2	3	25	6		25000	35000	45000	6250	8750	11250	
	Stats performance delay	LCC		Underperformance for contractors, unforeseen issues/ additional works - Time delay and increased cost	preplanning, and, liaison meeting with Main Contractor to minimise delay	4	4	50	16		85000	95000	105000	42500	47500	52500	
	Environment - Landscape and Ecology																
	Specific management plans	LCC		Management plans for sensitive areas (ponds, woodland, est.) may mean consent/ licences form EA, NE - Time and cost implications	In hand	2	1	1	2		25000	35000	45000	250	350	450	
	Invasive plants	LCC		Invasive weeds like, Japanese Knot weed, Himalayan Balsam est. - Require further works causing delays and incurring costs	potential observed in reports by Jacobs adjacent but not on site	3	3	25	9		55000	65000	75000	13750	16250	18750	

	Birds nesting (Timing conflict)	LCC		Ground nesting birds appear on cleared site, birds nesting in trees (due to time of year) - Delayed start, pushing programme back, cost implications on lost time	Trees and shrubs could be removed before works commence if necessary	3	1	1	3		55000	65000	75000	550	650	750	
	Pollution events	Contractor		Site runoff, fuel spills, materials spilt/ lost into watercourse/ and or ground - possibility of find's/ costly clean up/ time delays/ other cost implications	Onus put on Contractors. Close supervision required	2	1	1	2		25000	35000	45000	250	350	450	
	Archaeology																
	Unexpected archaeological finds	LCC		Site clearance and/ or excavation may lead to archaeological discoveries - May cause major time delays due to investigation and increase cost due to delay or extra works	Prior consultation and discussions with archaeological experts to determine the size of the risk	2	1	1	2		25000	35000	45000	250	350	450	
	Construction/ Contractual																
	Adverse weather risk	LCC		Strong winds, heavy rainfall, flooding est. - Delays to works, loss/ damage to material/ equipment, financial loss and costs	Some adverse weather is to be anticipated and allowed for	3	2	10	6		55000	65000	75000	5500	6500	7500	
	Employer's change and inconsistency in the works information	LCC		Staff leaving, new staff taking on job - may lead to changes due to opinion , misunderstanding est. - Cause of dispute with contractor/ other staff, delays on works and costs due to delays and misunderstandings	records to be kept and consistency of staff were possible	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Restricted working hours	Contractor		Working hours may be restricted due to residential properties limiting the works that can be done at night, causing delays. Possibility to increase number of labours to make up for restricted hours, increased costs.	Accounted for and built into the contract documents	2	1	1	2		25000	35000	45000	250	350	450	
	Access to site for materials/ plant	LCC		Limited access due roads unable to accommodate large/ oversized loads, road safety issues, abnormal loads unable to access site est. - Potential cause for delays if materials cannot be delivered, costs incurred with finding alternative methods of delivering materials.	Sites are easily accessible with easy acces to Motorway	2	1	1	2		25000	35000	45000	250	350	450	
	Working in close proximity to residential/ private property	LCC		Risk of trespass, encroaching onto private land/ possibility of damage, potential delays and costs regarding despots	Establish fenced site boundaries early on	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Requirements to maintain pedestrian access through works	Contractor		Public footpaths/ rights of way lead through site - May cause H&S issues, potential for delays and extra costs for accommodating measures	Public footpaths to be diverted or closed as necessary	3	1	1	3		55000	65000	75000	550	650	750	
	Timely submissions and processing of Traffic Regulation Orders (TRO's) or temporary TRO's	LCC		Late submission/ incorrect submission of TRO's or TTRO'/ slow processing of docs - Cause delays to works and potentially incur costs	All necessary Orders to be applied for in good time	1	2	10	2		10000	15000	20000	1000	1500	2000	
	Unforeseen services	LCC		Discovery of services that were not identified by surveys or the statutory undertakers - Delays in discovering owner, possible devotions/ protection works, costs and delays		3	3	25	9		55000	65000	75000	13750	16250	18750	
	Traffic signs, road markings & signals	LCC		Shortage of posts, sign plates, delay in making signs, unforeseen issues in erecting signs on site - Delays to works, costs and time implications		2	3	25	6		25000	35000	45000	6250	8750	11250	
	Ground Conditions																
	Bill of Quantities																
	Financial Processes																
	Extraordinary material/ fuel price increase	LCC		Various reasons leading to material/ fuel dramatic price increase		1	1	1	1		10000	15000	20000	100	150	200	
	Unexpected rise in insurance costs	LCC		Rise in insurance costs - Higher than expected premiums		1	1	1	1		10000	15000	20000	100	150	200	
	Stage 3 safety audit	LCC		Carried out after completion of works. May identify additional works		2	3	25	6		25000	35000	45000	6250	8750	11250	
TOTAL COST (£K)														£121,350	£148,150	£174,950	

Burnley - Pendle - Hyndburn Growth Deal Risk Register - Junction 12 Package

Impact

	Min	Exp	Max
1	10000	15000	20000
2	25000	35000	45000
3	55000	65000	75000
4	85000	95000	105000
5	115000	125000	140000

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		IMPACT	Insignificant	Minor	Moderate	Major	Catastrophic
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CRITICAL RISK		Cost	<£25-75K	£100K to £150k	£175k to £225k	£250k to £300k	.£325k to £400k
HIGH RISK		Time	<1weeks	1 to 2 weeks	2 to 3 weeks	3 to 4 weeks	> 4 weeks
MEDIUM RISK		Quality					
LOW RISK		Reputation	Criteria to be decided	Criteria to be decided	Criteria to be decided	Criteria to be decided	Criteria to be decided

														Approx Quantification Output			Amendments from previous revision
New Risk No	Description	Risk Owner	Risk Type	Example/Consequence	Comments/Mitigation	Impact	Prob	Prob %	Risk	Time (weeks)	Min. Cost (£k)	Expected Cost (£k)	Max Cost (£k)	P x Min	P x Exp	P x Max	
	Land and Legal																
	Legal																
	Land and Landowners																
	Land ownership issues at junction	LCC		Transfer or access to land not in LCC ownership delayed/not agreed	pre-implementation discussions with Estates and District/landowners	3	3	25	9		55000	65000	75000	13750	16250	18750	
	Strategic																
	Financial contributions shortfall			local contributions delayed or not forthcoming	early discussions and agreement on contributions from all parties.	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Design Baseline																
	DMRB revisions	LCC		Updates may be made during detailed design stages - Changes may have to be made/ will take time and increase design cost		2	1	1	2		25000	35000	45000	250	350	450	
	Topo survey anomalies	LCC		Confusion/ inability to produce detailed design - Times delays/ increased cost		2	1	1	2		25000	35000	45000	250	350	450	
	Late information from 3rd parties	LCC		Essential information not received - Cause time delays and potential increase re-design costs		3	2	10	6		55000	65000	75000	5500	6500	7500	
	Engineering: Roads																
	Alignment Detailed design																
	Design errors	LCC		General design errors, calculations/ incorrect measurements could cause errors - Incur delays due to rectifying errors, potential financial implications		1	2	10	2		10000	15000	20000	1000	1500	2000	
	Inadequate notice of road space booking	LCC		Other scheme has priority - Delayed start	Pre discussions with Network co ordination and early submission of all notices.	2	1	1	2		25000	35000	45000	250	350	450	
	Stage 2 safety audit	LCC		Additional design work creating additional construction work - Increasing cost and increasing time in design and construction	ST 2 SA to be carried out as soon as detailed design completed so any re-design can be completed before construction stage.	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Engineering: Structures																
	Structures Detailed Design																
	Statutory undertakers																
	Statutory undertaker design delay	LCC		Delay in design - may cause delays and cost implications	All utility Companies contacted at design stage and provided with GPR survey and construction plans to minimise risk. Trial holes in critical areas to be dug early in the construction phase to identify potential problems.	3	2	10	6		55000	65000	75000	5500	6500	7500	
	Stats cost greater than estimates	LCC		Inaccurate estimate		2	3	25	6		25000	35000	45000	6250	8750	11250	
	Stats performance delay	LCC		Underperformance for contractors, unforeseen issues/ additional works - Time delay and increased cost	preplanning, and, liaison meeting with Main Contractor to minimise delay	4	2	10	8		85000	95000	105000	8500	9500	10500	
	Environment - Landscape and Ecology																
	Specific management plans	LCC		Management plans for sensitive areas (ponds, woodland, est.) may mean consent/ licences form EA, NE - Time and cost implications	In hand	2	1	1	2		25000	35000	45000	250	350	450	
	Invasive plants	LCC		Invasive weeds like, Japanese Knot weed, Himalayan Balsam est. - Require further works causing delays and incurring costs	Nothing observed during numerous surveys and reports by Jacobs	1	1	1	1		10000	15000	20000	100	150	200	

	Birds nesting (Timing conflict)	LCC		Ground nesting birds appear on cleared site, birds nesting in trees (due to time of year) - Delayed start, pushing programme back, cost implications on lost time	Trees and shrubs could be removed before works commence if necessary	3	1	1	3		55000	65000	75000	550	650	750	
	Pollution events	Contractor		Site runoff, fuel spills, materials spilt/ lost into watercourse/ and or ground - possibility of find's/ costly clean up/ time delays/ other cost implications	Onus put on Contractors. Close supervision required	2	1	1	2		25000	35000	45000	250	350	450	
	Archaeology																
	Unexpected archaeological finds	LCC		Site clearance and/ or excavation may lead to archaeological discoveries - May cause major time delays due to investigation and increase cost due to delay or extra works	Prior consultation and discussions with archaeological experts to determine the size of the risk	2	1	1	2		25000	35000	45000	250	350	450	
	Construction/ Contractual																
	Adverse weather risk	LCC		Strong winds, heavy rainfall, flooding est. - Delays to works, loss/ damage to material/ equipment, financial loss and costs	Some adverse weather is to be anticipated and allowed for	3	2	10	6		55000	65000	75000	5500	6500	7500	
	Employer's change and inconsistency in the works information	LCC		Staff leaving, new staff taking on job - may lead to changes due to opinion , misunderstanding est. - Cause of dispute with contractor/ other staff, delays on works and costs due to delays and misunderstandings	records to be kept and consistency of staff were possible	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Restricted working hours	Contractor		Working hours may be restricted due to residential properties limiting the works that can be done at night, causing delays. Possibility to increase number of labours to make up for restricted hours, increased costs.	Accounted for and built into the contract documents	2	1	1	2		25000	35000	45000	250	350	450	
	Access to site for materials/ plant	LCC		Limited access due roads unable to accommodate large/ oversized loads, road safety issues, abnormal loads unable to access site est. - Potential cause for delays if materials cannot be delivered, costs incurred with finding alternative methods of delivering materials.	Sites are easily accessible with easy acces to Motorway	2	1	1	2		25000	35000	45000	250	350	450	
	Working in close proximity to residential/ private property	LCC		Risk of trespass, encroaching onto private land/ possibility of damage, potential delays and costs regarding despots	Establish fenced site boundaries early on	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Requirements to maintain pedestrian access through works	Contractor		Public footpaths/ rights of way lead through site - May cause H&S issues, potential for delays and extra costs for accommodating measures	Public footpaths to be diverted or closed as necessary	3	1	1	3		55000	65000	75000	550	650	750	
	Timely submissions and processing of Traffic Regulation Orders (TRO's) or temporary TRO's	LCC		Late submission/ incorrect submission of TRO's or TTRO/ slow processing of docs - Cause delays to works and potentially incur costs	All necessary Orders to be applied for in good time	1	1	1	1		10000	15000	20000	100	150	200	
	Unforeseen services	LCC		Discovery of services that were not identified by surveys or the statutory undertakers - Delays in discovering owner, possible devotions/ protection works, costs and delays		3	3	25	9		55000	65000	75000	13750	16250	18750	
	Traffic signs, road markings & signals	LCC		Shortage of posts, sign plates, delay in making signs, unforeseen issues in erecting signs on site - Delays to works, costs and time implications		2	3	25	6		25000	35000	45000	6250	8750	11250	
	Ground Conditions																
	Bill of Quantities																
	Financial Processes																
	Extraordinary material/ fuel price increase	LCC		Various reasons leading to material/ fuel dramatic price increase		1	1	1	1		10000	15000	20000	100	150	200	
	Unexpected rise in insurance costs	LCC		Rise in insurance costs - Higher than expected premiums		1	1	1	1		10000	15000	20000	100	150	200	
	Stage 3 safety audit	LCC		Carried out after completion of works. May identify additional works		2	3	25	6		25000	35000	45000	6250	8750	11250	
TOTAL COST (£K)														£85,750	£107,950	£130,150	

Burnley - Pendle - Hyndburn Growth Deal Risk Register - Junction 9 Package & Rose Grove A646/A679 signal junction

Impact			
	Min	Exp	Max
1	10000	15000	20000
2	25000	35000	45000
3	55000	65000	75000
4	85000	95000	105000
5	115000	125000	140000

PROBABILITY							
75%	Almost Certain	5	5	10	15	20	25
50%	Likely	4	4	8	12	16	20
25%	Possible	3	3	6	9	12	15
10%	Unlikely	2	2	4	6	8	10
1%	Rare	1	1	2	3	4	5
		IMPACT	Insignificant	Minor	Moderate	Major	Catastrophic
Colour Key			1	2	3	4	5
CRITICAL RISK		Cost	<£25-75K	£100K to £150k	£175k to £225k	£250k to £300k	.£325k to £400k
HIGH RISK		Time	<1weeks	1 to 2 weeks	2 to 3 weeks	3 to 4 weeks	> 4 weeks
MEDIUM RISK		Quality					
LOW RISK		Reputation	Criteria to be decided	Criteria to be decided	Criteria to be decided	Criteria to be decided	Criteria to be decided

New Risk No	Description	Risk Owner	Risk Type	Example/Consequence	Comments/Mitigation	Impact	Prob	Prob %	Risk	Time (weeks)	Min. Cost (£k)	Expected Cost (£k)	Max Cost (£k)	Approx Quantification Output			Amendments from previous revision
														P x Min	P x Exp	P x Max	
	Land and Legal																
	Legal																
	Planning permission			Planning permission may be reired for North car park - possible delays		3	3	25	9		55000	65000	75000	13750	16250	18750	
	Land and Landowners																
	Land ownership issues at junction	LCC		Transfer or access to land not in LCC ownership delayed/not agreed	pre-implementation discusions with Estates and District/landowners	3	3	25	9		55000	65000	75000	13750	16250	18750	
	Strategic																
	Financial contributions shortfall			local contributions delayed or not forthcoming	early discussions and agreement on contributions from all parties.	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Design Baseline																
	DMRB revisions	LCC		Updates may be made during detailed design stages - Changes may have to be made/ will take time and increase design cost		2	1	1	2		25000	35000	45000	250	350	450	
	Topo survey anomalies	LCC		Confusion/ inability to produce detailed design - Times delays/ increased cost		2	2	10	4		25000	35000	45000	2500	3500	4500	
	Late information from 3rd parties	LCC		Essential information not received - Cause time delays and potential increase re-design costs		3	2	10	6		55000	65000	75000	5500	6500	7500	
	Engineering: Roads																
	Alignment Detailed design																
	Design errors	LCC		General design errors, calculations/ incorrect measurements could cause errors - Incur delays due to rectifying errors, potential financial implications		1	2	10	2		10000	15000	20000	1000	1500	2000	
	Inadequate notice of road space booking	LCC		Other scheme has priority - Delayed start	Pre discussions with Network co ordination and early submission of all notices.	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Stage 2 safety audit	LCC		Additional design work creating additional construction work - Increasing cost and increasing time in design and construction	ST 2 SA to be carried out as soon as detailed design completed so any re-design can be completed before construction stage.	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Engineering: Structures																
	Structures Detailed Design																
	Statutory undertakers																
	Statutory undertaker design delay	LCC		Delay in design - may cause delays and cost implications	All utility Companies contacted at design stage and provided with GPR survey and construction plans to minimise risk. Trial holes in critical areas to be dug early in the construction phase to identify potential problems.	3	3	25	9		55000	65000	75000	13750	16250	18750	
	Stats cost greater than estimates	LCC		Inaccurate estimate		2	3	25	6		25000	35000	45000	6250	8750	11250	
	Stats performance delay	LCC		Underperformance for contractors, unforeseen issues/ additional works - Time delay and increased cost	preplanning, and, liaison meeting with Main Contractor to minimise delay	4	2	10	8		85000	95000	105000	8500	9500	10500	
	Environment - Landscape and Ecology																
	Specific management plans	LCC		Management plans for sensitive areas (ponds, woodland, est.) may mean consent/ licences form EA, NE - Time and cost implications	In hand	3	2	10	6		55000	65000	75000	5500	6500	7500	

	Invasive plants	LCC		Invasive weeds like, Japanese Knot weed, Himalayan Balsam est. - Require further works causing delays and incurring costs	Nothing observed during numerous surveys and reports by Jacobs	1	1	1	1		10000	15000	20000	100	150	200	
	Consent from, Natural England, Environments Agency est.	LCC		Potential delays in gaining consent, consent refused - May cause delays or prevent works from starting/ progressing, incurring cost implications.	Pre-submission to NE sought	2	1	1	2		25000	35000	45000	250	350	450	
	Presence of Endangered Species	LCC		Potential delay to works		3	1	1	3		10000	15000	20000	100	150	200	
	Contractors/ workers may breach licence requirements	Contractor		Finds, works stopped by EA/ NE est. - Cause for delay, cost implications regarding fines and delay	Onus put on Contractors. Close supervision required	4	1	1	4		85000	95000	105000	850	950	1050	
	Birds nesting (Timing conflict)	LCC		Ground nesting birds appear on cleared site, birds nesting in trees (due to time of year) - Delayed start, pushing programme back, cost implications on lost time	Trees and shrubs could be removed before works commence if necessary	3	1	1	3		55000	65000	75000	550	650	750	
	Pollution events	Contractor		Site runoff, fuel spills, materials spilt/ lost into watercourse/ and or ground - possibility of find's/ costly clean up/ time delays/ other cost implications	Onus put on Contractors. Close supervision required	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Failed planting/ seeding	Contractor		Failure to prior/ post mitigation works for wildlife, late orders of large number of plants Could cause time delays and costs due to reseeding/ replanting	Ensure orders placed in time. Works could be completed during maintenance period.	2	1	1	2		25000	35000	45000	250	350	450	
	Archaeology																
	Unexpected archaeological finds	LCC		Site clearance and/ or excavation may lead to archaeological discoveries - May cause major time delays due to investigation and increase cost due to delay or extra works	Prior consultation and discussions with archaeological experts to determine the size of the risk	2	2	10	2		25000	35000	45000	2500	3500	4500	
	Construction/ Contractual																
	Adverse weather risk	LCC		Strong winds, heavy rainfall, flooding est. - Delays to works, loss/ damage to material/ equipment, financial loss and costs	Some adverse weather is to be anticipated and allowed for	3	2	10	6		55000	65000	75000	5500	6500	7500	
	Employer's change and inconsistency in the works information	LCC		Staff leaving, new staff taking on job - may lead to changes due to opinion , misunderstanding est. - Cause of dispute with contractor/ other staff, delays on works and costs due to delays and misunderstandings	records to be kept and consistency of staff were possible	2	2	10	4		25000	35000	45000	2500	3500	4500	
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	Bill of Quantities																
	Financial Processes																
	Extraordinary material/ fuel price increase	LCC		Various reasons leading to material/ fuel dramatic price increase		1	1	1	1		10000	15000	20000	100	150	200	

	Unexpected rise in insurance costs	LCC		Rise in insurance costs - Higher than expected premiums		1	1	1	1		10000	15000	20000	100	150	200	
	Stage 3 safety audit	LCC		Carried out after completion of works. May identify additional works		2	3	25	6		25000	35000	45000	6250	8750	11250	
TOTAL COST (£K)														£127,200	£158,550	£189,900	

Burnley - Pendle - Hyndburn Growth Deal Risk Register - Burnley town centre Junctions

Impact

	Min	Exp	Max
1	10000	15000	20000
2	25000	35000	45000
3	55000	65000	75000
4	85000	95000	105000
5	115000	125000	140000

PROBABILITY							
75%	Almost Certain	5	5	10	15	20	25
50%	Likely	4	4	8	12	16	20
25%	Possible	3	3	6	9	12	15
10%	Unlikely	2	2	4	6	8	10
1%	Rare	1	1	2	3	4	5
		IMPACT	Insignificant	Minor	Moderate	Major	Catastrophic
Colour Key			1	2	3	4	5
CRITICAL RISK		Cost	<£25-75K	£100K to £150k	£175k to £225k	£250k to £300k	.£325k to £400k
HIGH RISK		Time	<1weeks	1 to 2 weeks	2 to 3 weeks	3 to 4 weeks	> 4 weeks
MEDIUM RISK		Quality					
LOW RISK		Reputation	Criteria to be decided	Criteria to be decided	Criteria to be decided	Criteria to be decided	Criteria to be decided

New Risk No	Description	Risk Owner	Risk Type	Example/Consequence	Comments/Mitigation	Impact	Prob	Prob %	Risk	Time (weeks)	Min. Cost (£k)	Expected Cost (£k)	Max Cost (£k)	Approx Quantification Output			Amendments from previous revision
														P x Min	P x Exp	P x Max	
	Land and Legal																
	Legal																
	Land and Landowners																
	Land ownership issues at junction	LCC		Transfer or access to land not in LCC ownership delayed/not agreed	pre-implementation discussions with Estates and District/landowners	3	2	10	6		55000	65000	75000	5500	6500	7500	
	Strategic																
	Financial contributions shortfall			local contributions delayed or not forthcoming	early discussions and agreement on contributions from all parties.	2	1	1	2		25000	35000	45000	250	350	450	
	Design Baseline																
	DMRB revisions	LCC		Updates may be made during detailed design stages - Changes may have to be made/ will take time and increase design cost		2	1	1	2		25000	35000	45000	250	350	450	
	Topo survey anomalies	LCC		Confusion/ inability to produce detailed design - Times delays/ increased cost		2	2	10	4		25000	35000	45000	2500	3500	4500	
	Late information from 3rd parties	LCC		Essential information not received - Cause time delays and potential increase re-design costs		3	2	10	6		55000	65000	75000	5500	6500	7500	
	Engineering: Roads																
	Alignment Detailed design																
	Design errors	LCC		General design errors, calculations/ incorrect measurements could cause errors - Incur delays due to rectifying errors, potential financial implications		1	2	10	2		10000	15000	20000	1000	1500	2000	
	Inadequate notice of road space booking	LCC		Other scheme has priority - Delayed start	Pre discussions with Network co ordination and early submission of all notices.	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Stage 2 safety audit	LCC		Additional design work creating additional construction work - Increasing cost and increasing time in design and construction	ST 2 SA to be carried out as soon as detailed design completed so any re-design can be completed before construction stage.	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Engineering: Structures																
	Structures Detailed Design																
	Statutory undertakers																
	Statutory undertaker design delay	LCC		Delay in design - may cause delays and cost implications	All utility Companies contacted at design stage and provided with GPR survey and construction plans to minimise risk. Trial holes in critical areas to be dug early in the construction phase to identify potential problems.	3	2	10	6		55000	65000	75000	5500	6500	7500	
	Stats cost greater than estimates	LCC		Inaccurate estimate		2	3	25	6		25000	35000	45000	6250	8750	11250	
	Stats performance delay	LCC		Underperformance for contractors, unforeseen issues/ additional works - Time delay and increased cost	preplanning, and, liaison meeting with Main Contractor to minimise delay	4	2	10	8		85000	95000	105000	8500	9500	10500	
	Environment - Landscape and Ecology																
	Pollution events	Contractor		Site runoff, fuel spills, materials spilt/ lost into watercourse/ and or ground - possibility of find's/ costly clean up/ time delays/ other cost implications	Onus put on Contractors. Close supervision required	2	1	1	2		25000	35000	45000	250	350	450	
	Archaeology																
	Construction/ Contractual																
	Adverse weather risk	LCC		Strong winds, heavy rainfall, flooding est. - Delays to works, loss/ damage to material/ equipment, financial loss and costs	Some adverse weather is to be anticipated and allowed for	3	2	10	6		55000	65000	75000	5500	6500	7500	



	Employer's change and inconsistency in the works information	LCC		Staff leaving, new staff taking on job - may lead to changes due to opinion , misunderstanding est. - Cause of dispute with contractor/ other staff, delays on works and costs due to delays and misunderstandings	records to be kept and consistency of staff were possible	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Restricted working hours	Contractor		Working hours may be restricted due to residential properties limiting the works that can be done at night, causing delays. Possibility to increase number of labours to make up for restricted hours, increased costs.	Accounted for and built into the contract documents	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Access to site for materials/ plant	LCC		Limited access due roads unable to accommodate large/ oversized loads, road safety issues, abnormal loads unable to access site est. - Potential cause for delays if materials cannot be delivered, costs incurred with finding alternative methods of delivering materials.	Sites are easily accessible with easy acces to Motorway	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Working in close proximity to residential/ private property	LCC		Risk of trespass, encroaching onto private land/ possibility of damage, potential delays and costs regarding despots	Establish fenced site boundaries early on	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Requirements to maintain pedestrian access through works	Contractor		Public footpaths/ rights of way lead through site - May cause H&S issues, potential for delays and extra costs for accommodating measures	Public footpaths to be diverted or closed as necessary	3	2	10	6		55000	65000	75000	5500	6500	7500	
	Timely submissions and processing of Traffic Regulation Orders (TRO's) or temporary TRO's	LCC		Late submission/ incorrect submission of TRO's or TTRO'/ slow processing of docs - Cause delays to works and potentially incur costs	All necessary Oders to be applied for in good time	1	2	10	2		10000	15000	20000	1000	1500	2000	
	Unforeseen services	LCC		Discovery of services that were not identified by surveys or the statutory undertakers - Delays in discovering owner, possible devotions/ protection works, costs and delays		3	3	25	9		55000	65000	75000	13750	16250	18750	
	Traffic signs, road markings & signals	LCC		Shortage of posts, sign plates, delay in making signs, unforeseen issues in erecting signs on site - Delays to works, costs and time implications		2	3	25	6		25000	35000	45000	6250	8750	11250	
	Ground Conditions																
	Bill of Quantities																
	Financial Processes																
	Extraordinary material/ fuel price increase	LCC		Various reasons leading to material/ fuel dramatic price increase		1	1	1	1		10000	15000	20000	100	150	200	
	Unexpected rise in insurance costs	LCC		Rise in insurance costs - Higher than expected premiums		1	1	1	1		10000	15000	20000	100	150	200	
	Stage 3 safety audit	LCC		Carried out after completion of works. May identify additional works		2	3	25	6		25000	35000	45000	6250	8750	11250	

TOTAL COST (£K)
£88,950
**£113,350**
£137,750



	Bill of Quantities															
	Financial Processes															
	Extraordinary material/ fuel price increase	LCC		Various reasons leading to material/ fuel dramatic price increase		1	1	1	1		10000	15000	20000	100	150	200
	Unexpected rise in insurance costs	LCC		Rise in insurance costs - Higher than expected premiums		1	1	1	1		10000	15000	20000	100	150	200
	Stage 3 safety audit	LCC		Carried out after completion of works. May identify additional works		2	3	25	6		25000	35000	45000	6250	8750	11250
TOTAL COST (£K)														£31,100	£41,150	£51,200

Burnley - Pendle - Hyndburn Growth Deal Risk Register - Junction 7 Package

Impact

	Min	Exp	Max
1	10000	15000	20000
2	25000	35000	45000
3	55000	65000	75000
4	85000	95000	105000
5	115000	125000	140000

PROBABILITY							
75%	Almost Certain	5	5	10	15	20	25
50%	Likely	4	4	8	12	16	20
25%	Possible	3	3	6	9	12	15
10%	Unlikely	2	2	4	6	8	10
1%	Rare	1	1	2	3	4	5
		IMPACT	Insignificant	Minor	Moderate	Major	Catastrophic
Colour Key			1	2	3	4	5
CRITICAL RISK		Cost	<£25-75k	£100k to £150k	£175k to £225k	£250k to £300k	.£325k to £400k
HIGH RISK		Time	<1weeks	1 to 2 weeks	2 to 3 weeks	3 to 4 weeks	> 4 weeks
MEDIUM RISK		Quality					
LOW RISK		Reputation	Criteria to be decided	Criteria to be decided	Criteria to be decided	Criteria to be decided	Criteria to be decided

New Risk No	Description	Risk Owner	Risk Type	Example/Consequence	Comments/Mitigation	Impact	Prob	Prob %	Risk	Time (weeks)	Min. Cost (£k)	Expected Cost (£k)	Max Cost (£k)	Approx Quantification Output			Amendments from previous revision
														P x Min	P x Exp	P x Max	
	Land and Legal																
	Legal																
	Land and Landowners																
	Land ownership issues at junction	LCC		Transfer or access to land not in LCC ownership delayed/not agreed	pre-implementation discussions with Estates and District/landowners	4	3	25	12		85000	95000	105000	21250	23750	26250	
	Strategic																
	Financial contributions shortfall			local contributions delayed or not forthcoming	early discussions and agreement on contributions from all parties.	3	2	10	6		55000	65000	75000	5500	6500	7500	
	Design Baseline																
	DMRB revisions	LCC		Updates may be made during detailed design stages - Changes may have to be made/ will take time and increase design cost		2	2	10	4		25000	35000	45000	2500	3500	4500	
	Topo survey anomalies	LCC		Confusion/ inability to produce detailed design - Times delays/ increased cost		3	2	10	6		55000	65000	75000	5500	6500	7500	
	Late information from 3rd parties	LCC		Essential information not received - Cause time delays and potential increase re-design costs		3	3	25	9		55000	65000	75000	13750	16250	18750	
	Engineering: Roads																
	Alignment Detailed design																
	Design errors	LCC		General design errors, calculations/ incorrect measurements could cause errors - Incur delays due to rectifying errors, potential financial implications		2	2	10	4		25000	35000	45000	2500	3500	4500	
	Inadequate notice of road space booking	LCC		Other scheme has priority - Delayed start	Pre discussions with Network co ordination and early submission of all notices.	2	3	25	6		25000	35000	45000	6250	8750	11250	
	Stage 2 safety audit	LCC		Additional design work creating additional construction work - Increasing cost and increasing time in design and construction	ST 2 SA to be carried out as soon as detailed design completed so any re-design can be completed before construction stage.	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Engineering: Structures																
	Structures Detailed Design																
	Statutory undertakers																
	Statutory undertaker design delay	LCC		Delay in design - may cause delays and cost implications	All utility Companies contacted at design stage and provided with GPR survey and construction plans to minimise risk. Trial holes in critical areas to be dug early in the construction phase to identify potential problems.	3	3	25	9		55000	65000	75000	13750	16250	18750	
	Stats cost greater than estimates	LCC		Inaccurate estimate		2	2	10	4		25000	35000	45000	2500	3500	4500	
	Stats performance delay	LCC		Underperformance for contractors, unforeseen issues/ additional works - Time delay and increased cost	preplanning, and, liaison meeting with Main Contractor to minimise delay	4	2	10	8		85000	95000	105000	8500	9500	10500	
	Environment - Landscape and Ecology																
	Archaeology																
	Unexpected archaeological finds	LCC		Site clearance and/ or excavation may lead to archaeological discoveries - May cause major time delays due to investigation and increase cost due to delay or extra works	Prior consultation and discussions with archaeological experts to determine the size of the risk	2	0	FALSE	2		25000	35000	45000	0	0	0	
	Construction/ Contractual																
	Adverse weather risk	LCC		Strong winds, heavy rainfall, flooding est. - Delays to works, loss/ damage to material/ equipment, financial loss and costs	Some adverse weather is to be anticipated and allowed for	3	2	10	6		55000	65000	75000	5500	6500	7500	

	Employer's change and inconsistency in the works information	LCC		Staff leaving, new staff taking on job - may lead to changes due to opinion , misunderstanding est. - Cause of dispute with contractor/ other staff, delays on works and costs due to delays and misunderstandings	records to be kept and consistency of staff were possible	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Restricted working hours	Contractor		Working hours may be restricted due to residential properties limiting the works that can be done at night, causing delays. Possibility to increase number of labours to make up for restricted hours, increased costs.	Accounted for and built into the contract documents	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Access to site for materials/ plant	LCC		Limited access due roads unable to accommodate large/ oversized loads, road safety issues, abnormal loads unable to access site est. - Potential cause for delays if materials cannot be delivered, costs incurred with finding alternative methods of delivering materials.	Sites are easily accessible with easy acces to Motorway	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Working in close proximity to residential/ private property	LCC		Risk of trespass, encroaching onto private land/ possibility of damage, potential delays and costs regarding despo	Establish fenced site boundaries early on	2	1	1	2		25000	35000	45000	250	350	450	
	Requiremets to maintain pedestrian access through works	Contractor		Public footpaths/ rights of way lead through site - May cause H&S issues, potential for delays and extra costs for accommodating measures	Public footpaths to be diverted or closed as necessary	3	1	1	3		55000	65000	75000	550	650	750	
	Timely submissions and processing of Traffic Regulation Orders (TRO's) or temporary TRO's	LCC		Late submission/ incorrect submission of TRO's or TTRO'/ slow processing of docs - Cause delays to works and potentially incur costs	All necessary Oders to be applied for in good time	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Unforeseen services	LCC		Discovery of services that were not identified by surveys or the statutory undertakers - Delays in discovering owner, possible devotions/ protection works, costs and delays		3	3	25	9		55000	65000	75000	13750	16250	18750	
	Traffic signs, road markings & signals	LCC		Shortage of posts, sign plates, delay in making signs, unforeseen issues in erecting signs on site - Delays to works, costs and time implications		2	2	10	4		25000	35000	45000	2500	3500	4500	
	Ground Conditions																
	Bill of Quantities																
	Financial Processes																
	Extraordinary material/ fuel price increase	LCC		Various reasons leading to material/ fuel dramatic price increase		1	1	1	1		10000	15000	20000	100	150	200	
	Unexpected rise in insurance costs	LCC		Rise in insurance costs - Higher than expected premiums		1	1	1	1		10000	15000	20000	100	150	200	
	Stage 3 safety audit	LCC		Carried out after completion of works. May identify additional works		2	3	25	6		25000	35000	45000	6250	8750	11250	
TOTAL COST (£K)														£123,500	£151,800	£180,100	



	Unexpected archaeological finds	LCC		Site clearance and/ or excavation may lead to archaeological discoveries - May cause major time delays due to investigation and increase cost due to delay or extra works	Prior consultation and discussions with archaeological experts to determine the size of the risk	2	1	1	2		25000	35000	45000	250	350	450	
	Construction/ Contractual																
	Adverse weather risk	LCC		Strong winds, heavy rainfall, flooding est. - Delays to works, loss/ damage to material/ equipment, financial loss and costs	Some adverse weather is to be anticipated and allowed for	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Employer's change and inconsistency in the works information	LCC		Staff leaving, new staff taking on job - may lead to changes due to opinion , misunderstanding est. - Cause of dispute with contractor/ other staff, delays on works and costs due to delays and misunderstandings	records to be kept and consistency of staff were possible	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Restricted working hours	Contractor		Working hours may be restricted due to residential properties limiting the works that can be done at night, causing delays. Possibility to increase number of labours to make up for restricted hours, increased costs.	Accounted for and built into the contract documents	2	1	1	2		25000	35000	45000	250	350	450	
	Access to site for materials/ plant	LCC		Limited access due roads unable to accommodate large/ oversized loads, road safety issues, abnormal loads unable to access site est. - Potential cause for delays if materials cannot be delivered, costs incurred with finding alternative methods of delivering materials.	Sites are easily accessible with easy access to Motorway	2	1	1	2		25000	35000	45000	250	350	450	
	Working in close proximity to residential/ private property	LCC		Risk of trespass, encroaching onto private land/ possibility of damage, potential delays and costs regarding despoits	Establish fenced site boundaries early on	2	2	10	4		25000	35000	45000	2500	3500	4500	
	Timely submissions and processing of Traffic Regulation Orders (TRO's) or temporary TRO's	LCC		Late submission/ incorrect submission of TRO's or TTRO'/ slow processing of docs - Cause delays to works and potentially incur costs	All necessary Orders to be applied for in good time	1	1	1	1		10000	15000	20000	100	150	200	
	Unforeseen services	LCC		Discovery of services that were not identified by surveys or the statutory undertakers - Delays in discovering owner, possible devotions/ protection works, costs and delays		3	2	10	6		55000	65000	75000	5500	6500	7500	
	Traffic signs, road markings & signals	LCC		Shortage of posts, sign plates, delay in making signs, unforeseen issues in erecting signs on site - Delays to works, costs and time implications		1	2	10	2		10000	15000	20000	1000	1500	2000	
	Ground Conditions																
	Bill of Quantities																
	Financial Processes																
	Extraordinary material/ fuel price increase	LCC		Various reasons leading to material/ fuel dramatic price increase		1	1	1	1		10000	15000	20000	100	150	200	
	Unexpected rise in insurance costs	LCC		Rise in insurance costs - Higher than expected premiums		1	1	1	1		10000	15000	20000	100	150	200	
	Stage 3 safety audit	LCC		Carried out after completion of works. May identify additional works		2	2	10	4		25000	35000	45000	2500	3500	4500	

TOTAL COST (£K) £47,000 £59,200 £71,400