

M55 Heyhouses Link Road Risk Assessment Guideline (RAG) (24 August 2017)

Likelihood		Risk Score				
Very High	5	5	10	15	20	25
High	4	4	8	12	16	20
Medium	3	3	6	9	12	15
Low	2	2	4	6	8	10
Very Low	1	1	2	3	4	5
		1	2	3	4	5
		Very Low	Low	Medium	High	Very High
		Impact				

KEY:

	High Threat
	Medium Threat
	Low Threat

Risk			Initial Risk Impact				Mitigation	Mitigated Risk		
Risk ID	Date	Description	Probability/Impact	Cost Impact	Programme Impact	Owner Action	Action/Mitigation/Progress	Probability	Cost	Time
1	24th Aug	Delays in agreeing solution with HE and Blackpool on gantrie/signing and its funding	10	£ 140,000	Delays start		Update programme, additional requirements			
2		Delays in receiving the consents for structures	2		Delays start		Update programme			
3		Delays in receiving consents from EA	2		Delays start		Update programme and limit project delays			
4		Delays in varying planning conditions as a result of reaching agreement with EA current working restrictions	9		Delays start, changes project duration, influences construction approach		Update programme and limit project delays			
5		Delays in availability of specialist items (pre-cast structures)	6	£ 50,000	None if ordered in advance, potential delays during construction		Use another supplier (premium attached)			
6		Delays in awarding tender result in estimated unit costs being out of date	6	£ 250,000	Delays start		Update programme and limit project delays			
7	24th Aug	Further changes to the drainage strategy on southern section of link road	8	£ 200,000	Could delay completion		Update programme			
8	24th Aug	Electric costs (diversions/protection) exceed paid informal Kensington discussions	20	£ 220,000	Possible start/during construction delays		Further mitigation required, possible update of programme (44% contingency)			
9	24th Aug	BT costs exceed the paid (C3 Budget Cost) C4 Detail Cost	25	£ 616,000	Possible start/during construction delays		Further mitigation required, possible update of programme (15% contingency)			
10		Agreements with utilities delays programme	10		Delays could impact on start		Update programme and limit project delays			
11	24th Aug	Delivery of utility diversions/protection results in programme delays	12	£ 100,000	Possible start/during construction delays		Update programme and limit project delays, abortive works			
12		Delivery of new road section within the constrained existing highway boundary (width, utilities, poor ground conditions, excavating below water table), results in additional time/materials/plant/change in construction approach	25	£ 100,000	Delays could impact on programme		Increased cost of delivering new section of road, update programme			
13		Working constraints on Whitehills roundabout	12		Influences management on the local network and possible delays to deliveries during peaks					
14		Moss sluice and branch drain, significant working constraints (width, utilities, poor ground conditions, excavation below water table)	16	£ 60,000	Some construction delays due to abortive works		20% increase in cost to mitigate (exclude structure costs)			

15	13th July	Influence of drainage on ground water protection zones	3	£	40,000	None		Additional materials required and the use of a lining			
16		Ground settlement takes longer than anticipated	3			Delays programme and road construction		Programme to be adjusted			
17		Surcharge requires additional materials	9	£	200,000	Delays as a result of the need for additional materials		5% increase in materials and compaction			
18	26th Sept	Agreements required with adjacent land owners to satisfy access requirements, over sailing, or specific requirements for NATS	12	£	500,000	if known in advance, no programme delay		Alternative construction method required			
19		Poor weather conditions results in project delays	12			Influences construction assume 3 month overall project delay		Assumed 3 month delay			
20		Poor weather conditions results in greater materials on haul road	20	£	40,000	Limited programme delay until haul road is usable		20% increase in materials			
21		Poor weather conditions requires additional water pumping or increases duration of water pumping or modifications to watercourse diversions	15	£	100,000	Poor weather could slow down construction and incur programme delays		Use of additional pumping equipment or for extended period of time			
22		Poor ground conditions requires additional temporary haul roads to deliver structures, additional equipment, plant or materials, as well as hire additional plant	16	£	250,000	Poor weather could slow down construction and incur programme delays		Construct additional, haul road, use additional materials and plant			
23		Imported materials cannot be provided by nearest quarry	9	£	180,000	No programme impact if known in advance		5% premium of imported materials			
24		Imported material cannot be provided at rate required resulting in delay	9	£	60,000	Construction delays		Assumed a 3month project delay			
25		Excavated earth (with additives) is not suitable for reuse	6	£	1,000,000	Some programme delay as additional handling is required and requires Kensington support		Addition 25% of materials need to be imported and compacted. Unsuitable earth to be removed and usable on the Kensington site			
26		Safety audits require additional work	4	£	100,000	Post construction		Additional road markings, signing and other minor changes			
27		Low performance of (sub contractors)	4	£	100,000	Some programme delay		responsibility of main contractor, additional contractors or replace.			
28		Further accommodation works required	4	£	250,000	Could delay start of construction		Fencing, car parking, drainage, temporary ponds			
29		Further design required during contract	4	£	25,000	None, if known in advance		have design consultants available when required			
30		Part 1 claims exceeding budget	2	£	162,500	Post construction		ensure full consideration is given to dwellings impacted on			
31	13th July	Delay in EA approval	5			Could delay in securing funds and subsequently project start					
32	18th July	Local highway changes as a result of road reclassification	8	£	170,000	None, for link road construction		Deliver necessary changes to corridor, prior to road reclassification			
33	24th Aug	Additional works to satisfy consents	6	£	570,000			uplift structures costs by 44%			
34	25th July	Business cases for funds are not successful. Risk of clawback of the LEP contribution as a result of delay in housing delivery.	10			Not apportioned at this stage		The project does not proceed as planned until other funding sources are secured			

Outcome of the Risk Assessment Workshop (implications and further discussion required, with those responsible)

35		HCA funding decision will influence the HE gap funding. (HE capped at £5m); risk if one fails both fail					Dave Wild				
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36		Funding timetable not adhered to; lose funding				Neil Stevens				
37		Funding gap met by LCC - risks not accurately managed								
38		Delay due to poor communication between project stakeholders				Neil Stevens				
39		Delay due to discharging of planning conditions. (eg restricted working times, ecological constraints)				Neil Stevens				
40		Additional land take may be required to construct the scheme								
41		Proximity of the scheme to fracking sites and the potential impact of protester action				LCC Comms				
42		Environment Agency - Permanent discharge consents not approved (1 of 3 made)					Query if the EA have been consulted on outline proposals to date.			
43		Environment agency - Temporary discharge consents not approved				Contractor				
44		Accommodation works scope not defined				Paul Freeman				
45		Part 1 claims not quantified				Paul Freeman				
46		Unidentified land ownership eg Anna's Road private or adopted				Peter Liversidge	see 18			
47		Confidence in the works information				WA LCC				
48		New signs can't be accommodated on the existing M55 gantries				John Gatheral				
49		Minimum bridleway specifications are not met by the current design				Ros Paulson Paul Freeman				
50		Bridleway user groups object to changes in bridleways				Ros Paulson				
51		Diversion of bridleways not following correct legal order				Ros Paulson Paul Freeman				
52		Temp closures of PROW - 6 week notice				Contractor				
53		Uncontrolled crossing - bridleways users might object				Ros Paulson Paul Freeman				
54		Protection of NATS services - can the current design be built				Peter Liversidge				
55		Sound mound may be impractical to build and impact NATS/airfield				Peter Liversidge	Consultation required			

56		Haul road methodology not included in the existing mitigation / habitat assessments				Neil Stevens				
57		NATS sensitivity - access/communications/power/private supplies				Peter Liversidge				
58		Chainage 200 to 353 - Footway runs off on to private land				WA				
59		Opportunity - Scope to reduce width of North Houses Lane and Wild Lane to 3m (reducing whole life cost liability)				Peter Liversidge & Neil Stephens				
60		Drainage design and future maintenance - options to be finalised, currently with LCC for review.				John Gatheral				
61		Programme risk on utility diversions				Neil Stephens/ Contractor				
62		Maintaining access to adjacent land and properties during construction				Contractor				
63		Programme time for predicted settlement to occur and level of confidence				WA	Settlement has been modelled and that predicted period added into proposed programme. Predicted rates to be included within WI. WA to advise of confidence levels within the model and therefore risk of exceeding predictions and potential delay			
64		Imported fill volume and impact on the wider road network of deliveries				Neil Stephens				
65		Suitability of site won materials for reuse.				WA				
66		Increased earthworks/groundworks scope				WA				
67		Condition of the existing Wild Lane				Peter Liversidge	Has the section to be incorporated into the works been assessed for condition? Does it have to be reconstructed/ can it be reused? Will it be suitable for NMU use?			
68		Archaeology risk				Peter Liversidge	Suggestion - could this archaeology be dealt with in advance of construction to mitigate risk of delay?			
69		Statutory undertaker diversions and methodology agreement				WA	C4 estimates being sought for BT - what about other services. What has been discussed about restrictions to working methods, if anything?			
70		Ecological mitigation conditions need discharging in advance; residual issued to be clearly included within WI				Peter Liversidge & WA				
71		Existing Ecological surveys have a finite life - 2 to 3 years - risk of missing a new survey within season				Neil Stevens				
72		Risk of delay due to protected species (breeding birds/water voles/bats)				Neil Stevens(with advice from S Manchester)				
73		Restriction on working times and areas - any changes may require an updated habitat regs assessment & may impact programme				WA	Ensure restriction clear within WI			
74		May be timing restrictions on sluice / drainage works (fish, spawning etc.)				WA	Confirm with EA/ advice from S Manchester			

