



PRELIMINARY INDICATION OF COST
for

HEATHROW SOUTHERN RAIL ACCESS - M25 JUNCTION 13 TO RUXBURY ROAD JUNCTION
MASTER PLAN CONCEPT

for

RUNWAY INNOVATIONS / HEATHROW HUB LIMITED

Revision: -
Issue Date: 16/06/2014



HEATHROW SOUTHERN RAIL ACCESS (T5 to Ruxbury Rd Junction)
PRELIMINARY INDICATION OF COST
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HEATHROW SOUTHERN RAIL ACCESS (M25 Junction 13 to Ruxbury Rd Junction)

PRELIMINARY INDICATION OF COST

EXECUTIVE SUMMARY

Issue Date: 16.06.14

No	Description	Estimate £	Notes
1	SOUTHERN RAIL ACCESS (M25 Junction 13 to Ruxbury Rd Junction)	460,000,000	
	SUB-TOTAL CONSTRUCTION	460,000,000	
2	PHASING ALLOWANCE (Say at 2%)	10,000,000	
	SUB-TOTAL Incl. PHASING	470,000,000	
3	OTHER DEVELOPMENT COSTS (Including Land Acquisition)	Excluded	
	SUB-TOTAL Incl. OTHER DEVELOPMENT	470,000,000	
4	FEES (Professional, Planning & Building Control) (15%)	70,500,000	
	SUB-TOTAL Incl. FEES	540,500,000	
5	CONTINGENCY : <i>Southern Rail Access</i>	111,000,000	
	SUB-TOTAL CONTINGENCY	650,000,000	
6	INFLATION (Base Date 2Q 2014)	EXCLUDED	
7	OPTIMISM BIAS	EXCLUDED	
	ESTIMATED PROJECT COST TOTAL (Excl. VAT)	£650,000,000	(@2nd Q 2014)

HEATHROW SOUTHERN RAIL ACCESS (M25 Junction 13 to Ruxbury Rd Junction)

PRELIMINARY INDICATION OF COST

SOUTHERN RAIL ACCESS

Issue Date: 16.06.14

No	Description	Quantity	Unit	Rate £	Cost £	Cost £	Risk Factor				Notes
							VH	H	M	L	
							50%	35%	25%	15%	
1.00	<u>SOUTHERN RAIL ACCESS</u>										
1.01	Land										
1.01.1	Purchase				Excluded						
1.01.2	Compensation/ Relocation				Excluded						
1.02	Ecology/ Environmental/ Archaeological					21,000,000					
1.02.1	Ecology - Allowance for mitigation and monitoring of ecological impact	1	item	21,000,000	21,000,000						
1.02.2	Air quality - Allowance for monitoring and mitigation										
1.02.3	Noise - Allowance for noise monitoring and control measures										
1.02.4	Allowance for costs associated with Archaeological										
1.03	Advanced Enabling Works Clearing and Site Preparation					Included below					
1.03.1	Site clearance	1	item		Included						
1.03.2	Protection to retained structures										
1.03.3	Protection to M25										
1.03.4	Demolition/Enabling Works										
1.03.5	Allowance for remediation works										
1.03.6	Allowance for ground stabilisation works										
1.04	Utilities					6,000,000					
1.04.1	Allowance for diversion of existing services	1	item	6,000,000	6,000,000		35%				
1.04.2	Allowance for new off site services										
1.04.3	Allowance for new on site services										
1.04.4	Allowance for new substation.										

HEATHROW SOUTHERN RAIL ACCESS (M25 Junction 13 to Ruxbury Rd Junction)

PRELIMINARY INDICATION OF COST

SOUTHERN RAIL ACCESS

Issue Date: 16.06.14

No	Description	Quantity	Unit	Rate £	Cost £	Cost £	Risk Factor				Notes
							VH	H	M	L	
1.05	M25 Junction 13 to Ruxbury Rd junction (Woking line) 7000m					265,670,000					
1.05.1	Advance/enabling works to include : Clearing and site preparation Protection to retained & listed structures etc. Protection to existing platforms etc. Remediation works Ground stabilising works Protection to NR assets	1	item	30,000,000	30,000,000				25%		
1.05.2	Viaduct (Staine By-pass)	1,100	m	50,000	55,000,000				25%		
1.05.3	Bridge Canal (Colne Brook)	120	m	15,000	1,800,000				25%		
1.05.4	Bridge Road (B376)	150	m	15,000	2,250,000				25%		
1.05.5	River Bridge (Thames)	200	m	20,000	4,000,000				25%		
1.05.6	Viaduct (Egham By-pass)	500	m	50,000	25,000,000				25%		
1.05.7	Rail Bridge (over Egham/Staines line)	150	m	20,000	3,000,000				25%		
1.05.8	Bridge road (B388)	150	m	15,000	2,250,000				25%		
1.05.9	Bridge road (Stroude Road)	150	m	15,000	2,250,000				25%		
1.05.10	Extend existing bridge (Great Fosters location)	100	m	20,000	2,000,000				25%		
1.05.11	Realign Road (B388)	1,000	m	5,000	5,000,000				25%		
1.05.12	Viaduct across M25/M3 junction	1,000	m	50,000	50,000,000				25%		
1.05.13	Minor bridge extend (south of M25/M3 jct)	100	m	20,000	2,000,000				25%		
1.05.14	Connect to main line (Chertsey/Woking line)	1	Item	1,000,000	1,000,000				25%		
1.05.15	Permanent Way including OHLE, signalling, EDE etc. "All-in" - 2x 7000m	14,000	m	4,000	56,000,000					15%	
1.05.16	Embankment	3,000	m	8,000	24,000,000			35%			
1.05.17	NR possession management & TOC compensation	12%			120,000				25%		
1.06	Protection Fence	21,000	m	500	10,500,000	10,500,000			25%		
1.07	Allowance for NR, HEX signalling diagram/control centre	1	item	6,000,000	6,000,000	6,000,000		35%			

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NOTES (Assumptions)

The Cost Estimate is based on the following notes:

- 1 Estimate is based on the level of detail/information provided. Therefore, estimate includes for risks typically transferred to the contractor, but not those risks typically retained by the employer.
- 2 To avoid excessive repetition and multiple statements that appear obvious, certain fundamental assumptions that apply across the project are stated once in the list below. This list also allows a more comprehensive cross-reference with the risk register.
It is generally assumed that :
 - a The project will be fully funded i.e. there are no financial constraints/contribution expectations/ etc.
 - b The works as scoped will be packaged, procured and completed within time and to budget.
 - c The works will deliver the required performance and function.
 - d The operational railway will deliver the required performance and function.
 - e There will be sufficient skilled resources and market capacity to meet Project demand at reasonably competitive prices.
 - f All parties will be reasonable, remain solvent and exercise reasonable skill and care.
 - g All parties will comply with the applicable laws, regulations, standards, contract conditions and conventions and that these constraints will not materially change.
 - i The UK economy and other relevant economies and foreign exchange rates will remain stable.
 - j The project will not suffer from force majeure, protracted legal disputes, ground or property collapse, exceptionally adverse climatic conditions, or significant industrial relations problems.
 - l External influences do not result in significant changes in scope.
- 3 Estimates are compiled from information provided on drawings and meetings.
- 4 Only primary option for the Southern Railway Access has been priced.
- 5 All works associated with the Airport, M25/Road works and Hub site have not been included in this estimate.
- 6 2% provisional allowance for the phasing costs.
- 7 A risk allowance ranging from 15% - 50% has been applied to each item of cost within the detailed estimate based on a high level assessment of probable risk (the risk percentages can be seen within the detailed estimate). We note that this approach is in contrast to the HAL, who we understand have applied a 15% risk allowance to all items.
- 9 Provisional allowances included for all utilities associated works
- 10 Provisional allowances included for all Ecological, Environmental, Flood Control measures.
- 11 Provisional allowance included for works associated with Archaeological and Historical/Listed buildings measures
- 12 All works follow the profile of the land and therefore do not require major excavation/fill
- 13 An allowance of 12% is included to cover NR Possession Management and TOC compensation.
- 14 The connections to and from the utilities do not require any special measures
- 15 Existing Power Capacity - Existing power suppliers will have the necessary capacity to accommodate the demands of the Project.
- 16 Commercial/Over-Site Development - There is no provision for Commercial/Over-Site Development. Any changes to the operational infrastructure to enhance Commercial/Over-Site Development value will be treated as a Scope change to the Project.
- 17 Performance of Existing NR Assets - No works or cost allowances have been included for upgrading the existing rail network to improve its asset condition or maintain its reliability beyond that which to be modified for the benefit of the Project.
- 18 A Spot Allowance is included for items for which there is very little or no information/detail e.g. provision of reversing facility at Staines.
- 19 Railway alignment is a combination of structures (as outlined in the Basis) and raised embankments

NOTES (Assumptions) Continued.

- 20 Replacement and Repair of Existing Assets - Replacement of, or remedial works to, any third party assets required for the construction and/or operation of Phase One, but not forming part of the works (e.g. life-expired track or signalling equipment), will be carried out by the asset owners at their expense and without detriment to the Phase One Construction Programme.
- 21 Access to Works Sites - Access to works sites, including temporary possession of assets and facilities of other parties, will be available to allow the project to proceed in accordance with the programme.
- 22 Standard construction equipment - The project will be constructed using 'standard' construction plant and equipment.
- 23 Unexploded Ordnance (UXB) - There are no express provisions in the scope of the works for dealing with unexploded ordnance that may be encountered during the construction works.
- 24 Construction traffic will not be adversely restricted
- 25 Works by Nominated Undertaker - No additional costs will be incurred if works are not undertaken by the Nominated Undertaker and its contractors
- 26 Excavated Materials - Wherever possible and economically advantageous excavated materials will be re-used on the Project.
- 27 Excavated Materials - Where relevant the estimate contains an allowance (10%) for dealing with contaminated material by local remediation and re-use on the Project.
- 28 Continuous construction and commissioning sequence - The scheme will be constructed and commissioned in one continuous construction sequence i.e. no de-mobilisation and re-mobilisation. The railway will be tested and commissioned in phases.
- 29 Support from Contractors of Third Parties - Where third parties' contractors are required to carry out works to support the Project (e.g. modifications to existing assets and attendance for handover/hand back activities), they will be able to carry out these works as required by the Project programme.

EXCLUSIONS

The Master Planning is based on the following exclusions:

- 1 Hub Works
- 2 Airport Works
- 3 M25/ Road Works South of the M4
- 4 Crossrail mainline grade separation
- 5 Client costs at Heathrow
- 6 The client's corporate, project management and design costs (indirect costs)
- 7 Security screening at new stations - no allowance has been made for significant changes to the current security practices used for long distance inter-urban services in the UK.
- 8 Rolling Stock and associated Ops requirements
- 9 Specific and special power requirements e.g. third rail and OHLE changes
- 10 The powers sufficient to construct, operate and maintain the whole of the works as identified including all associated services.
- 11 Land acquisition costs
- 12 Development Fees and Financing Costs
- 13 Cost of any goods and services provided by the employer
- 14 Costs or allowances associated with risks that will not be transferred to the contractor
- 15 Sustainable improvements/enhancements
- 16 Future statutory changes including Construction Regulations
- 17 Future inflation in rates and prices; costs are based at 2Q14
- 18 Costs of operation or asset management following hand over
- 19 Specific drainage arrangements e.g. grey water harvesting systems, attenuation tanks etc.
- 20 Specific and special measures for reservoir and waterways protections
- 21 Income or expenditure associated with the acquisition or disposal of land and property.
- 22 Income or expenditure associated with potential property development
- 23 Disposal off-site of unusable contaminated material.
- 24 No Cost Recovery for Materials or Plant - There are no allowances in the estimate for residual value of plant and equipment (e.g. value of any salvaged materials).
- 25 Betterment - No allowances have been made in the estimate for recovery of monies from third parties in respect of betterment.
- 26 Cost Sharing - No allowances have been made in the Phase 1 point estimate for recovery of monies from Utilities in respect of 'cost sharing'.
- 27 Archaeological Discoveries - No sums are included in the estimate for expenses associated with the discovery of archaeological remains.
- 28 Section 106 costs
- 29 Section 278 costs
- 30 Value Added Tax
- 31 Levies such as Land Fill Tax, HA contributions
- 32 Fees, third party cost and expenses, statutory and other charges
- 33 Local Authority Adoption costs and commuted sums - roads and public realm to be maintained by developer / community trust

BASIS

The Cost Estimate is based on the following information:

Drawing :

PBA -Heathrow Hub Station Woking Grade Separation/Schematic

PBA -Rail Access Proposal Woking/Staines to T5/CTA - 30021/002/SK50