Scheme Impact Pro Forma for Small Project Bids

Scheme type	Scenarios	Time period	Key inputs or performance indicators required for DM and DS scenarios by time period	Supporting information (e.g. maps, technical note)	Additional information (optional) for DM and DS scenarios by time period
Congestion relief road schemes					
e.g. improvements to existing highway	Do-Minimum and Do-Something	Weekday: AM peak hour, average interpeak, PM peak hour, 3-hr AM and PM peak period conversion factors based on local highway and PT data	Number of highway trips (vehicles) affected	Assessment year for the scheme	Vehicle trip purpose proportion
			Total vehicle travelled time (veh-hrs)	Traffic data, modelling assumptions, model validation of key area, cordon location map, traffic impact analysis showing the effect of proposed scheme within affected area	Vehicle proportion (Car, LGV, OGV1&2, PSV)
			Total vehicle travelled distance (veh-km)	Observed and modelled traffic flow, queue and delay on key links/junctions	Average speed for car, LGV, HGV & PSV
			Total network delays (veh-hrs)	Average observed and modelled journey time and speed for vehicles passing through each key	
Congestion relief through public transport, demand management measures and others					
e.g. public transport, alternatives to travel, sustainable measures	Do-Minimum and Do-Something	Weekday: AM peak hour, average interpeak, PM peak hour, 3-hr AM and PM peak period conversion factors based on local highway and PT data	Number of highway trips (vehicles) affected	Assessment year for the scheme	Vehicle trip purpose proportion
			Total vehicle travelled time (veh-hrs)	Traffic data, modelling assumptions, model validation of key area, cordon location map, traffic impact analysis showing the effect of proposed scheme within affected area	Vehicle proportion (Car, LGV, OGV1&2, PSV)
			Total vehicle travelled distance (veh-km)	Observed and modelled traffic flow, queue and delay on key links/junctions	Average speed for car, LGV, HGV & PSV
			Total network delays (veh-hrs)	Average observed and modelled journey time and speed for vehicles passing through each key	
			Number of PT passenger trips on affected routes		PT trip purpose proportion
			Bus journey time on affected routes		
			Total PT travelled time (passenger-hrs)		
			Total PT travelled distance (passenger-km)		
			Number of walking and cycling trips		
			Mode share (number and percentage of trips) in affected area		
Access to development sites					
e.g. improvements to existing highway	Do-Minimum	Weekday: AM peak hour, average interpeak, PM peak hour, 3-hr AM and PM peak period conversion factors based on local highway and PT data. Weekend peak hours would be required for large retail development.		Current use and details of the site, vehicle trip generation and attraction	
	Do-Something (no change in trips to/from development)			Development details (type, size, phases, year) to be unlocked by the improvements	
	Do-Something (including increases in trips to/from development)			Person trip generation and attraction to the development	
				Projected modal split	
				Vehicle trip generation and attraction to the development	
			Number of highway trips (vehicles) affected	Assessment year for the scheme	Vehicle trip purpose proportion
			Total vehicle travelled time (veh-hrs)	Traffic data, modelling assumptions, model validation of key area, cordon location map, traffic impact analysis showing the effect of proposed scheme within affected area	Vehicle proportion (Car, LGV, OGV1&2, PSV)
e.g. link roads from highway to site	Do-Minimum		Total vehicle travelled distance (veh-km)	Observed and modelled traffic flow, queue and delay on key links/junctions	Average speed for car, LGV, HGV & PSV
	Do-Something (including increases in trips to/from development)		Total network delays (veh-hrs)	Average observed and modelled journey time and speed for vehicles passing through each key	

Structural maintenance					
e.g. highways, bridges	Do-Minimum and Do-Something	Weekday: AM peak hour, average interpeak, PM peak hour, 3-hr AM and PM peak period conversion factors based on local highway and PT data	Number of highway trips (vehicles) affected	Assessment year for the scheme	Vehicle trip purpose proportion
			Total vehicle travelled time (veh-hrs)	Traffic data, modelling assumptions, model validation of key area, cordon location map, traffic impact analysis showing the effect of proposed scheme within affected area	Vehicle proportion (Car, LGV, OGV1&2, PSV)
			Total vehicle travelled distance (veh-km)	Observed and modelled traffic flow, queue and delay on key links/junctions	Average speed for car, LGV, HGV & PSV
			Total network delays (veh-hrs)	Average observed and modelled journey time and speed for vehicles passing through each key	
	Do-Something during construction		Total vehicle travelled time (veh-hrs) during construction	Type and duration of traffic management during construction	
			Total vehicle travelled distance (veh-km) during construction		
			Total network delays (veh-hrs) during construction		
			Cost of delay during construction (if QUADRO is used)		
	Do-Minimum and Do-Something during maintenance		Total vehicle travelled time (veh-hrs) during maintenance	Frequency of maintenance per year	
			Total vehicle travelled distance (veh-km) during maintenance	Type and duration of traffic management for maintenance	
			Total network delays (veh-hrs) during maintenance		
			Cost of delay during maintenance (if QUADRO is used)		

Note:

(1) A base or forecast year model could be used for the assessment of the scheme. This depends on the age of base year model and the availability of a forecast year model for the scheme opening year.
(2) Highway and PT trip demand, travelled time and distance matrices should be obtained from the Area of Influence (which may be a set of selected links or cordoned network). Matrix calculation is required by multiplying OD trip demand matrix and time/distance matrix in order to calculate the highway and PT total travelled time/distance. The PT time matrix should include generalised cost components (in-vehicle time, waiting time etc.)
(3) Public transport modes (bus/BRT, rail) should be presented separately.

Scheme Impact Pro Forma for Small Project Bids

Scenario	Input Data / Key Performance Indicators	Unit	AM Peak Hr Weekday	PM Peak Hr Weekday	Inter-Peak Hr Weekday	Nights 19:00-07:00	Sat 07:00-19:00	Sun 07:00-19:00
Do-Minimum	Number of highway trips affected	vehicles	65,031	66,134	53,369			
	Total vehicle travelled time	vehicle-hours	8,760	8,927	7,220			
	Total vehicle travelled distance	vehicle-km	487,381	502,877	420,256			
	Total network delays	vehicle-hours	678	787	438			
	Highway peak period conversion factor	Car Work	2.691	2.787	6.000			
		Car Non-work Commuting	2.295	2.456	6.000			
		Car Non-work Other	2.479	2.931	6.000			
		LGV	3.020	2.969	6.000			
		OGV1 & OGV2	3.125	3.363	6.000			
	Number of PT passenger trips on affected routes	passenger trips						
	Bus journey time on affected routes	minutes						
	Total PT travelled time	passenger-hrs						
	Total PT travelled distance	passenger-km						
	PT peak period conversion factor	-						
	Number of walking and cycling trips	person trips						
	Mode share in affected area							
	- Walking and cycling	person trips						
	- Bus/BRT	person trips						
	- Rail	person trips						
	- Car	person trips						
	- Total	person trips						
Do-Something	Number of highway trips affected	vehicles	68,774	69,444	56,220			
	Total vehicle travelled time	vehicle-hours	9,047	9,242	7,528			
	Total vehicle travelled distance	vehicle-km	502,217	518,203	436,846			
	Total network delays	vehicle-hours	703	854	473			
	Highway peak period conversion factor	Car Work	2.691	2.787	6.000			
		Car Non-work Commuting	2.295	2.456	6.000			
		Car Non-work Other	2.479	2.931	6.000			
		LGV	3.020	2.969	6.000			
		OGV1 & OGV2	3.125	3.363	6.000			
	Number of PT passenger trips on affected routes	passenger trips						
	Bus journey time on affected routes	minutes						
	Total PT travelled time	passenger-hrs						
	Total PT travelled distance	passenger-km						
	PT peak period conversion factor	-						
	Number of walking and cycling trips	person trips						
	Mode share in affected area							
	- Walking and cycling	person trips						
	- Bus/BRT	person trips						
	- Rail	person trips						
	- Car	person trips						
	- Total	person trips						

For Do-Minimum Scenario

Vehicle Category	AM Peak Hr Weekday	PM Peak Hr Weekday	Inter-Peak Hr Weekday
Car Work	5.2%	6.0%	10.4%
Car Non-work Commuting	50.9%	46.2%	19.4%
Car Non-work Other	27.6%	33.0%	49.4%
Average Car	83.7%	85.2%	79.2%
LGV	11.5%	11.8%	14.1%
OGV1 & OGV2	4.7%	2.9%	6.8%
PSV			
All Total	100%	100%	100%
Public Transport			
Bus Work			
Bus Non-work Commuting			
Bus Non-work Other			
Bus Total	0%	0%	0%
Rail Work			
Rail Non-work Commuting			
Rail Non-work Other			
Rail Total	0%	0%	0%

Average Network Speed (kph)	AM Peak Hr Weekday	PM Peak Hr Weekday	Inter-Peak Hr Weekday
Car	53.2	54.7	54.3
LGV	58.5	58.0	60.4
OGV1 & OGV2	71.7	72.5	73.6

For Do-Something Scenario

Vehicle Category	AM Peak Hr Weekday	PM Peak Hr Weekday	Inter-Peak Hr Weekday
Car Work	5.2%	6.0%	10.3%
Car Non-work Commuting	50.6%	46.2%	19.1%
Car Non-work Other	28.7%	33.6%	50.5%
Average Car	84.5%	85.8%	79.9%
LGV	11.1%	11.4%	13.6%
OGV1 & OGV2	4.4%	2.8%	6.5%
PSV			
All Total	100%	100%	100%
Public Transport			
Bus Work			
Bus Non-work Commuting			
Bus Non-work Other			
Bus Total	0%	0%	0%
Rail Work			
Rail Non-work Commuting			
Rail Non-work Other			
Rail Total	0%	0%	0%

Average Network Speed (kph)	AM Peak Hr Weekday	PM Peak Hr Weekday	Inter-Peak Hr Weekday
Car	53.1	54.5	54.1
LGV	59.1	58.0	61.0
OGV1 & OGV2	71.4	72.1	73.4

Woodside Link Pinch Point Bid

Dear Sir / Madam

Ref Woodside Link and our bid for DfT for Local Pinch Point Funding

We would like to confirm that a strategy is in place that is legally compliant and is likely to achieve the best value for money outcome.

It will be procured using The Eastern Highway Alliance Framework contract which Central Bedfordshire Council signed up to for Highway Works and was procured in accordance with NEC 2005 procedures and is EU compliant. The contractors on this framework are Jackson. Tarmac, Eurovia and Osborne.

The contract is based on a priced Schedule of Rates and permits Early Contractor Involvement. Central Bedfordshire intends to procure this work via a mini competition between the contractors. Amey our Highways partner will assist in the design and procurement of the scheme.

Deb Clarke.

Deb Clarke
Assistant Chief Executive, People and Organisation (with responsibility for procurement)
20th February 2013

C Warboys.

Charles Warboys
Section 151 officer
20th February 2013

Central Bedfordshire Council
Priory House, Monks Walk
Chicksands, Shefford
Bedfordshire SG17 5TQ

Telephone 0300 300 8000
Email customer.services@centralbedfordshire.gov.uk
www.centralbedfordshire.gov.uk

Woodside Link Pinch Point Fund Application

Cost probabilities

Cost estimates, £millions	Probability, %	Cumulative Probability %
40.6	0	0
42.0	2	2
43.5	8	10
45.0	12	22
46.6	24	46
48.2	18	64
49.9	15	79
51.7	10	89
53.5	8	97
55.4	3	100

Notes

1. The cost estimates are taken from the cost profile in Section B3.
2. The P50 value is calculated from a pro rata evaluation of the cost values nearest a cumulative probability of 50%.
3. P50 cost value = 46.6 + [(48.2 – 46.6) x (50 – 46) ÷ (64 – 46)]

   = 46.6 + 0.36

   = 46.96 Therefore, P50 cost is £47million.