

Appraisal Summary Table

Option:	Design Layouts Revision F	Description: Dual Two Lane Carriageway	Problems: Traffic congestion in the Dunstable Area	Present Value of Costs to Public Accounts £134.8m
OBJECTIVE	SUB-OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE ASSESSMENT	ASSESSMENT
ENVIRONMENT	Noise	For the Scheme design year the adoption of the Scheme results in a negligible decrease in the number of people annoyed by road traffic noise. Number of properties experiencing noise levels > 68 dB LAeq,18h:- Do Minimum 660 Do Something 377 A small number of properties and groups of properties within the Scheme Corridor will experience noise increases as a result of the Scheme, including Thorn Farm, Oakwell Park, Calcutt Lodge and Grove Farm. The northern fringe of Houghton Regis will experience noise increases, whilst the southern fringe of Chalton will experience noise decreases. Other properties around J11A on the M1 will experience noise decreases. Outside of the Scheme Corridor, properties adjacent to a number of road links will experience increases and decreases in noise levels as a result of changes in traffic flows. Properties within the Scheme Corridor, away from the M1, will likely experience increases in night-time noise levels similar to the daytime increases.	People annoyed by noise – Published Scheme vs Do Minimum 2029. Total Population in Assessment 40,889 Do Minimum: 3,985 annoyed Published Scheme: 3,878 annoyed Change in population annoyed (Year 15) = -106	5037 properties experience an increase in noise level; 2323 properties experience no change in noise level; and 9966 properties experience a decrease in noise level. (ranked as neutral) PVB (Residential) = +£4.52m
	Local Air Quality	The A5-M1 Link road alignment is likely to change the route of traffic within the study area, with an associated reduction in emissions within urban areas as vehicles currently along congested roads within Dunstable make use of the new link road. The area near M1 Junction 11 has been declared an Air Quality Management Area (AQMA) for NO ₂ by Luton BC and currently comprises 431 dwellings. An area in Dunstable has also been declared an AQMA for NO ₂ . The Scheme will cause a worsening of an existing exceedance at 1 property within the AQMA in Luton and an improvement at receptors within the Dunstable AQMA, such that there would be an overall improvement in the level of achievement of the annual mean Limit Value for nitrogen dioxide within the AQMAs. Properties outside the AQMAs but within 200m of the Scheme experience air quality levels within UK Air Quality Objectives with or without the Scheme.	PM ₁₀ : 9,715 properties "losers"; 0 properties negligible change; 34,936 properties "winners" NO ₂ : 9,646 properties "losers"; 0 properties negligible change; 35,005 properties "winners"	PM10: -1,100 NO2: -4,492
	Greenhouse Gases	The assessment is based on the TUBA output reported in the Economic Appraisal undertaken in June 2008. It reported TUBA output for the assessment year of 2014. The assessment indicates that the Scheme would result in a net benefit due to lower emissions per kilometre travelled by vehicles due to more efficient fuel usage by Light Duty Vehicles (LDVs) and Heavy Duty Vehicles (HDVs).	Total change in carbon emissions in Scheme Opening Year = -1,864 T. Total change in carbon emissions for Whole Appraisal Period = -121,715 T.	NPV: +£5.24m
	Landscape	The A5-M1 Link is within the Chilterns Joint Character Area and would cross two Landscape Character Area's, Settled and Farmed Clay Vales (Eaton Bray) and Rolling Chalk Farmland (Houghton Regis-Luton). Hedgerows lost would be compensated with new native hedgerows. The roundabouts at the A5, A5120, plus the Sundon Road Overbridge and M1 Junction 11A roundabouts would be lit as would the section of carriageway between the Thorn Farm overbridge and the Icknield Way footbridge. The majority of the carriageway however would not be lit. Locally, views of the new road on embankment, the incline to the required height over the existing M1 motorway and overbridges at Thorn Farm, Icknield Way, Grove Farm, Footpath 23 and Sundon Road would be intrusive. Mitigation planting would integrate these structures into the local landscape.		Moderate Adverse
	Townscape	The Scheme is rural and does not pass through a Townscape setting; however, it should reduce congestion and thus bring some improvements to townscape character on Dunstable High Street.		Slight Beneficial
	Heritage of Historic Resources	The scheme crosses a multi-period archaeological landscape. Adverse impacts on 8 archaeological sites (Bronze Age, Iron Age/Romano-British and medieval settlement sites) would be mitigated by appropriate investigation and recording. Adverse impact on the setting of the Thorn Spring Scheduled Ancient Monument would be mitigated by landscape planting and appropriate highway lighting design. Further setting impacts would occur at 3 historic unlisted buildings, 1 area of Ancient Woodland and 1 historic landscape character zone which are to be mitigated through landscape design. The demolition of 2 undesignated 20th Century motorway structures would be mitigated by appropriate recording.		Slight Adverse
	Biodiversity	The Scheme would not result in any direct or indirect impacts on statutory or non-statutory designated sites of nature conservation. The Scheme would result in loss of habitat and fragmentation to grassland and hedgerows. The effects on the only watercourse, Ouzel Brook, are anticipated to have some benefits, however, a neutral outcome is predicted. For Scarce Arable Flora (SAF), there will be adverse impacts as a result of the Scheme land take and the lack of options to mitigate on site. By fifteen years after opening, the Scheme would have an overall Neutral effect on the majority of ecological features of the area, due to the increased semi-natural habitats and greater diversity. However, due to the uncertainty of mitigation within the footprint of the Scheme for SAF the overall assessment score is Slight Adverse.		Slight Adverse
	Water Environment	Watercourse and major unconfined chalk aquifer present and close to potable groundwater abstraction Source Protection Zone in the east. The site is mainly a greenfield site, with runoff from existing roads in the area passing into the drainage network with no attenuation/treatment. The proposed provision of attenuation and pollution containment facilities would mitigate the impact on water quality and hydrology in the area from the new road. Scheme situated in Flood Zone 1 and has negligible impact upon floodplains.		Neutral
	Physical Fitness	The Scheme requires diversions of existing public rights of way across new overbridge. Some NMU journey times anticipated to increase. Though the maximum increase in journey length is >1km, it is unlikely that this would be a significant change in the majority of journey lengths. The usage of PRoWs is so low that it is unlikely that there would be a significant change in the number of NMUs using the PRoW network.	Change in number of cyclists and pedestrians making journeys of more than 30 minutes as a result of the scheme = 0	Slight Adverse
Journey Ambience	The A5-M1 Link would provide a shorter, higher speed route to the M1, with views of comprehensive landscaping and better driving conditions (i.e. signage, lighting and road surface). The overall effect on travellers' views would be neutral. There would be a beneficial effect on driver stress as enhanced highway design will lead to a reduced fear of potential accidents, and improved capacity of the road network locally with connections to the A5, A5120 and the M1 (new Junction 11A).		Large Beneficial	
SAFETY	Accidents	Accident assessment has been undertaken using the M1 Local Area Model and COBA. The number of personal injury accidents (PIA's) saved relates to the whole road network within the Local Model Area.	PIA's saved 998; Casualties saved - Fatal: 22, Serious: 196, Slight: 1,269	PVB £54.1m
	Security	Provision of one number lay-by with good visibility from the trunk road and an emergency telephone. A general reduction in congestion will reduce potential crime relating to stopped or slow moving vehicles. Lighting is proposed at junctions where vehicles will be moving more slowly.		Slight Beneficial
ECONOMY	Public Accounts	The 2006 Q2 construction prices and expenditure profile are discounted to a 2002 present value year in 2002 market prices (£ millions). Capital investment outturn costs of £161.6 million (2006 Q2) were supplied by HA in September 2009. PVC value includes maintenance costs.	Broad Transport Budget £101.2m; Wider Public Finances £28.9m;	PVC £134.8m
	TEE: Business Users & Transport Providers	The appraisal was derived using the M1 Local Area Model and the TUBA Program for a 60-year period. Values are 2002 market prices discounted to a 2002 present value year (£ millions).	Users PVB, Transport Providers PVB £263.2m, Other PVB £0.0m	PVB £263.2m
	TEE: Consumers	The appraisal was derived using the M1 Local Area Model and the TUBA Program for a 60-year period. Values are 2002 market prices discounted to a 2002 present value year (£ millions).	Users PVB £301.7m	PVB £301.7m
	Reliability	This new link road scheme will relieve the A5 High Street in Dunstable and some local highways of traffic flow. Consequently there will be a benefit to journey reliability in the surrounding area.		Slight Beneficial
	Wider Economic Impacts	Although an EIR has been undertaken, it has not been possible to reach any reliable conclusions in relation to the effect of the scheme upon employment levels in the Luton and Dunstable Regeneration Areas. The Scheme is not expected to result in any significant increase in jobs accessible in these Regeneration Areas, based on changes in accessibility. However, the Scheme is likely to speed up the rate of development in north Dunstable.	Change in number of jobs in RA = 0, change in number of RA residents in employment = 0.	Score 0
	Option values	The route is a strategic highway seeking to provide a link within the strategic network, and therefore this sub-objective is not applicable.		Score
ACCESSIBILITY	Severance	The Scheme would result in severance of some existing routes used for physical exercise. Given that diversions would be relatively short in comparison with that required for physical activity, this is not considered to be significant. Indeed improvements to the existing PRoW network would be made through the upgrade of bridleway, which would particularly benefit cyclists. Nevertheless pedestrians and cyclists would be required to undertake exercise in the vicinity of a new dual carriageway, and junctions that have increased in size.	N/A	Moderate Adverse
	Access to the Transport System	The route is a strategic corridor seeking to provide a link within the strategic network, and therefore this sub-objective is not applicable.		
	Transport Interchange	There is no provision for linkages into other transport modes i.e. no bus stops, rail links etc, and therefore this sub-objective is neutral.		Neutral
INTEGRATION	Land-Use Policy	While the Scheme would have some environmental impacts, these would be appropriately mitigated wherever possible, in line with relevant policy. In general the Scheme partly accords and conflicts with planning policy and therefore, in balance, has been assessed as neutral.		Neutral
	Other Government Policies	The Scheme would increase accessibility by road, enabling journey times to decrease, reducing congestion, improving safety and facilitating business efficiencies. These improvements would be conducive to economic growth and enable housing development (with provision of affordable housing units) in the vicinity of the A5-M1 corridor. While the Scheme may improve access to employment, retail and leisure facilities, dependency on the car would not be lessened.		Beneficial