

ES AST:M25 Sect. 4 Final (Oct 2007)		Description: M25 J27-30 Illustrative Design widening from dual 3 to dual 4 lane motorway	Problems: Traffic and congestion	Present Value Cost £337.1M
OBJECTIVE	SUB OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE MEASURE	ASSESSMENT
ENVIRONMENT	Noise	213 properties have been considered. 7 properties would have an increase of 1-3 dB(A), 160 properties would have a decrease of 1-3dB(A), 6 properties would have decrease of 3-5dB(A) & 40 properties would have no change in noise levels in the year 2027 due to low noise surfacing.	Total people annoyed: DM = 443, DS = 451, Scheme annoys 8 more people	PVB (Residential)= £-90,568 (disbenefit)
	Local Air Quality	Scheme has overall low adverse impact due to relatively low increases in traffic flows & speeds & low number of properties within 50m of Scheme. All AQ Strategy objectives expected to be achieved with & without the Scheme in opening year (2012) & subsequent years. The majority of properties affected by the Scheme are on the Brentwood bypass, where increase in pollutant concentration is marginal (<0.01ug/m3 average for NO2). AQ objectives are met in all 9 AQMAs in 2012.	Changes in PM ₁₀ : 170 properties improvement; 134 properties deterioration; 841 properties no change. Changes in NO ₂ : 1118 properties experience deterioration	PM ₁₀ = 4.93 NO ₂ = 19.82
	Greenhouse Gases	The Scheme results in net increase in carbon emissions over the 60 year appraisal period, compared to the Do-Minimum scenario due to more vehicles. The increase is less than 0.03%.	Carbon Emissions change (tonnes) 60 year = 142,894. Opening yr = 1,783	Net Present Value of Emissions (60 yrs) = - £4.944m
	Landscape	The M25 landscape value ranges from ordinary-good (J27-28), poor-good (J28-29), poor-ordinary (J29-30). Loss of screening & increased surfacing, earthworks, gantries & structures all negatively impact on landscape. The no. of lighting columns would increase but with better spillage control.		Slight Adverse
	Townscape	No Townscape features would be affected as settlements are well separated from the road		Neutral
	Heritage	Slight adverse impacts to 15 known archaeological sites & areas of general archaeological potential. Slight adverse impacts to 98 listed buildings. Neutral impacts to 2 Scheduled Ancient Monuments, 4 Registered Parks and Gardens, 8 Conservation Areas and 4 Historic Woodlands.		Slight Adverse
	Biodiversity	Scheme would result in slight beneficial impacts for River Roding, other amphibians, otters, water voles & common aquatic invertebrates as a result of improved motorway drainage. Slight adverse impacts to bats & birds from increase in habitat edge effects & changes in noise/light pollution.	N/A	Slight adverse
	Water Environment	No additional floodplain land utilised by the scheme. Despite an increased highway area additional flow attenuation & treatment included as part of the scheme would result in slight beneficial impacts		Slight beneficial
	Physical Fitness	The Scheme would have no direct effect on the activity duration of pedestrians and cyclists because there are no changes to existing NMU facilities.	Journeys of >30 mins/day = 0 people Total no. people walking/cycling: N/A	Neutral
	Journey Ambience	The Scheme would affect >10,000 people. It does not provide additional or impact on existing traveller facilities. Traveller views would be worsened. Driver stress would be reduced overall as a result of improvements in route uncertainty.		Large Beneficial
SAFETY	Accidents	The existing M25 has a better accident record than the national average rate, which has been used to assess the widened motorway. There is a consequential increase in the number of accidents.	Accidents +1999, Deaths +30, Serious injuries. +174, Slight injuries +3225	PVB -£80.1M
	Security	Slight beneficial impact on security due to improved surveillance/signage/landscaping.	0 users affected	Slight Beneficial
ECONOMY	Consumers, Business & Exchequer Costs	The widening scheme produces benefits to users of £687M. Business user benefits account for nearly ¾ of the total, the remaining ¼ being consumer benefits. Exchequer costs total £377M offset by increased indirect tax revenues of £40.5M.		PVB £686.7M PVC £337.1M NPV £349.6M BCR 2.04
	Reliability	Incident-related reliability impacts of around £89 million have been estimated.		PVB £88.9M
	Wider Economic Impacts	The assessment of the transport spin-off benefits suggests the widening of the M25 in Section 4 would not have a significant impact on job creation. The calculated value of -74 is insignificant within the context of the current job climate in the Thames Gateway Region.		Neutral
ACCESSIBILITY	Option Values	The Scheme would not result in any new option values.		Neutral
	Severance	No change in severance as there is no change in routes used to connect community facilities.	0 people affected	Neutral
	Access to transport system	Access to the Transport System would not be affected by the Scheme.		Neutral
INTEGRATION	Tran. Interchange	There are no Transport Interchange variables with the Scheme.		Neutral
	Land-Use Policy	8 transport and 1 countryside policy would be supported by the Scheme. 8 transport and 5 countryside policies would be hindered by the Scheme.		Neutral
	Other Gov Policies	Key policies on preservation of archaeology (PPG15, PPG16), preservation of land, air & water (PPS23) & improvement of noise (PPG24) hindered. Key policy on pollution control (PPG25) helped.		Neutral