

Option: A428 Caxton Common to Hardwick Preferred Route.		Description: Offline dualling of A428 between Caxton Gibbet roundabout and the existing dual carriageway at Hardwick. Scheme is divided by 2km of dualling provided by Cambourne developer.	Problems: Congestion in base year (2001) peak hours - AADT 20,800 vehicles. With development of Cambourne, flows are predicted to increase to AADT 34,000 by 2006. In practise this would be limited to 30,700 by the capacity of the existing single carriageway road, increasing congestion.	Present Value Cost £45.85m
OBJECTIVE	SUB-OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE MEASURE	ASSESSMENT
Environment	Noise	In 15 th year after opening: Slight decrease in population annoyed across region. Any future proposed housing developments have not been considered.	Estimated population annoyed in 15 th year after opening; Do Minimum – 140 With scheme – 117	Net difference in estimated population annoyed in 15 th year after opening with scheme compared to Do Minimum:-23
	Local Air Quality	Although congestion is reduced, the benefits are outweighed by the increase in traffic flow along this route if the scheme is constructed. Do Nothing flows are limited by the capacity of the existing road.	Total number of properties where air quality is improved = 61, worsened = 217	Diff in PM ₁₀ (2006) =79 Diff in NO ₂ (2006) =1065
	Greenhouse Gases	Reduction in congestion is offset by higher speeds and traffic flows with the scheme resulting in an increase in emissions.	-	Total increase in CO ₂ emissions=8,950 tonnes/year
	Landscape	Part of route impacts on Area of Best Landscape and Cambridge Green Belt. Severance of field patterns and boundary hedgerows/ditches and removal of some woodland/hedgerow vegetation, some of which is covered by Tree Preservation Orders (TPOs). Landtake/severance of agricultural land. Substantial planting proposed as part of mitigation.	-	Slight adverse
	Townscape	Not relevant to this scheme.	-	-
	Heritage of Historic Resources	No designated sites directly impacted. Moderate beneficial effect on the setting of Grade II Listed milepost. Direct impact on a variety of known (non-designated) archaeological sites. Passes through area of known archaeological potential and ground disturbance would possibly encounter unrecorded archaeology. However, it is expected that adverse impacts could be mitigated.	-	Neutral
	Biodiversity	Impact on protected species; loss of habitat & disruption of movement routes. Loss of mature hedgerows & trees & species rich verge. Fragmentation of local wildlife corridors resulting in adverse effect on hedgerow/ditch continuity. Reduction in size of areas of secondary woodland.	-	Slight adverse
	Water Environment	Non-main river and aquifer present. Effects from road drainage minor or negligible.	-	Neutral
	Physical Fitness	Encourages cycling /walking as removal of trunk road traffic will reduce flows on local road. Very few cyclists/pedestrians at present. Journeys between villages expected to increase.	Percentage change expected to be large. Not quantifiable.	Not quantifiable.
	Journey Ambience	Scheme will improve standards and therefore traveller care for trunk road traffic and reduce flows on local road, reducing traveller stress for all. Travellers' views relatively unchanged.	-	Beneficial
Safety	Accidents	-	Accident Reduction: Link: 135.4, Junction: 363.7 Casualty Reduction: Fatal: 24, Serious120, Slight 658	PVB: Link: £26,069m, Junction: £13,932m, Total: £40,001m (Central Growth Estimate)
	Security	Security not an issue - few areas currently not visible. Laybys will be more visible/ improved.	-	Slight beneficial
Economy	Transport Economic Efficiency	-	Total Veh-Hrs Saved: 581,518 PCU-hrs in Opening Year AM Peak Journey Time Change: EB 13min 27s, WB 3min 17s Interpeak Journey Time Change: EB 1 min 53s, WB 1min 52s	NPV: £140.93m (Central Growth estimate)
	Reliability	-	2006 AM Peak - DM Stress: Old Route (125%), DS Stress: Old Route (87.5%), New Route (100%) 2021 AM Peak - DM Stress: Old Route (125%) DS Stress:Old Route (100%), New (100%)	Slight Beneficial
	Wider Economic Impacts	-	Serves designated regeneration area?	No
Accessibility	Option Values	Road improvement so no alternative option provided with this scheme.	-	-
	Severance	Very few pedestrians, cyclists or equestrians at present. Crossings of new trunk road will be grade separated and traffic on current road will reduce reducing severance.	-	Slight beneficial
	Access to Transport System	Not directly applicable to scheme. No change in access from existing.	-	Neutral
Integration	Transport Interchange	Not relevant to this scheme.	-	-
	Land-Use Policy	Structure Plan identifies scheme as a 'New Trunk Road Scheme'. Scheme also identified in Local Transport Plan and meets policies aimed at improving highway network. Impacts Area of Best Landscape, Cambridge Green Belt and encroaches 'best and most versatile' agricultural land adversely affecting related policies. Results in loss of woodland/hedgerow vegetation, some with TPOs, would have adverse impact on policies aimed at protecting landscape, vegetation& wildlife	-	Neutral
	Other Government Policies	Scheme listed in RPG for East Anglia as a priority scheme. No other identified impacts.	-	Beneficial