

Table 1: Appraisal Summary Table

Option Markham Moor		Description Grade separated junction provided on the A1 at Markham Moor(A1/A57/A638).	Problems Congestion at the roundabout causes queuing and delays to the A1 traffic during peak periods. The existing junction and approaches suffer from road traffic accidents (70 personal injury accidents recorded in 5 years Jan 2000 - Dec 2004).	Present Value of Costs to Public Accounts £11.6m
OBJECTIVE	SUB-OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE ASSESSMENT	ASSESSMENT
ENVIRONMENT	Noise	Noise reductions at Walnut View (up to 8dB), Sibthorpe Kennels (up to 5 dB), Rosalie (up to 5 dB) and at others to the south of junction. No noise increases at any properties.	Number of people bothered by noise: Do minimum : 30.3 Do something : 28.2	Estimated Population Annoyed by Noise would be reduced by 2.1
	Local Air Quality	General improvement.	Slight general improvement in air quality at 8 properties; the remaining are not expected to be measurably affected.	PM ₁₀ : -34 NO ₂ : -87
	Greenhouse Gases	Slight reduction	2007: Do Nothing 4100 t Do Something 3900 t	Slight benefit
	Landscape	The junction improvements will be confined to an area already influenced by large scale commercial developments and lighting. Land take will be largely confined within the area of the existing roundabout with associated vegetation loss and a slight increase in wider landscape character impacts, particularly to the north and south. There will be adverse changes in views to the residential properties to the southeast and northwest largely due to the elevated bridge and associated lighting. Full cut off lighting will be provided to mitigate the impacts. The adjacent commercial developments and proposed landscape mitigation measures will screen many of the wider impacts although the elevated structures, including lighting will be difficult to mitigate fully.	N/A	Slight adverse
	Townscape	N/A	N/A	N/A
	Heritage of Historic Resources	There will be an adverse effect on the setting of 3 nationally important Listed Buildings and 2 buildings of local historic interest, all of which are less than 500 metres from the proposed embanked over bridge. There are no known sites of archaeological interest within the scheme footprint. Due to the limited new land take in previously undisturbed ground it is highly unlikely that as yet unknown archaeological remains lie within the proposed scheme footprint.	N/A	Moderate adverse
	Biodiversity	Loss of the SINC and other orchid populations within the proposed scheme is mitigated by the translocation. The benefits here offset some of the effects giving an overall score of slight adverse.	N/A	Slight adverse
	Water Environment	No significant effect on river water quality from road drainage or from accidental spillage. No discharge to groundwater.	N/A	Neutral
	Physical Fitness	The scheme would speed up A1 traffic thereby disadvantaging users of the at-grade bridle crossing (West Drayton 2 & 2A) approximately 1km north west of the junction. Lower traffic volumes and dedicated crossing space at the junction would reduce the severance effect of the A1 for a small number of non-motorised users. The existing and latent demand for crossing the A1 is considered to be low.	N/A	Slight Beneficial
	Journey Ambience	Travellers would benefit from improved views. Once constructed the new junction layout would reduce traffic congestion and segregate local traffic from A1 traffic. These changes would reduce fear of accident and frustration currently felt by a large number of travellers.		Large Beneficial
SAFETY	Accidents	The number of personal injury accidents will reduce as will the number of casualties.	PIA's and casualty savings over 60 years	
			Central Growth	
			PIAs	369.5
Slight			477.1	
	Serious	18.0		
	Fatal	0.6		
	Security	Less delay and queuing at the junction will reduce exposure to crime	n/a	Neutral
ECONOMY	Public Accounts	Construction and maintenance (dis)benefits have not been assessed.	Central Govt PVC £11.65m Local Govt PVC £0	PVC £11.65m
	Transport Economic Efficiency: Business Users & Transport Providers	The scheme will reduce geometric and queuing delays associated with the Markham Moor roundabout. Reduced journey times for through traffic on the A1 will be achieved.	Users PVB £88.09m Providers PVB -£0.034m Other PVB £0.000(CG)	PVB £88.09m
	Transport Economic Efficiency: Consumers	The scheme will reduce geometric and queuing delays associated with the Markham Moor roundabout. Reduced journey times for through traffic on the A1 will be achieved.	Users PVB £44.48m	PVB £44.48m
	Reliability	More reliable journey times	N/A	Moderate beneficial
	Wider Economic Impacts	N/A	Serves designated regeneration area – NO Development depends on scheme - NO	N/A
ACCESSIBILITY	Option values	No change	N/A	N/A
	Severance	Improvement especially for local communities	N/A	Moderate beneficial
	Access to the Transport System	No change	N/A	Neutral
INTEGRATION	Transport Interchange	N/A	N/A	Neutral
	Land-Use Policy	The revised junction would not directly reduce the need to travel but would contribute to planning policy by promoting sustainable transport choices for those crossing the A1. Land-take and diversion of A1 traffic would have an adverse effect on local businesses at the junction however reducing congestion would contribute to wider economic and environmental policy objectives. The adverse environmental impacts can be mitigated to comply with planning policy. Overall more policies are facilitated than hindered.	N/A	Beneficial
	Other Government Policies	The scheme would be of limited benefit to people without access to a car by providing a safer crossing of the A1. The scheme is consistent with Government aims to invest in transport infrastructure, to improve the competitiveness and productivity of the UK economy and is consistent with the Highways Agency's environmental policy.		Beneficial