		Problems: - Congestion & slow journey times in - Reliability and availability of bus ser - Problems caused by traffic - nuisand air quality - Population growth and new housing - Increasing economic growth and pro - Access to Norwich International Airp	vices ce to residents, busy roads, poor development osperity
Noise Qualitative Impact: Approximately 166 properties lie within 300m of the route option. At this stage the traffic information is unavailable determining how many properties lie within 300m of existing roads experiencing an increase or decrease in traffic levels of more than 25%.	Quantitative I Information on stage	mpact: levels of noise is unavailable at this	Assessment: 166 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 53 properties, 4 of which fall within 50m. Impacts of traffic emissions on local air quality are experienced up to 200m from the roadside. It is anticipated that the air quality limits and objectives for PM10 and NO2 will not be breached. The scheme does not pass through an Air Quality Management Zone.	Quantitative I Information on unavailable at	uantities of PM10 and NO2 is	Assessment: 53 properties within 200m of route
Greenhouse Gases Qualitative Impact: With the do-minimum scenario CO2 emissions can be expected to increase. With this route option they will also be expected to increase. The assessment of the size of these increases is still to be carried out.	Quantitative I Information on this stage	mpact: the quantity of CO2 is unavailable at	Assessment: Adverse impact
Landscape Qualitative Impact: The route goes through the Wensum valley which has an open character in this location. Substantial adverse effects would arise on Ringland Hills, the River Wensum valley landscape and on the village setting of Ringland. Substantial visual intrusion would occur for properties in Ringland village. These could not be adequately mitigated.	Quantitative I N/A	mpact:	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.	Quantitative I	mpact:	Assessment: Neutral
Heritage of Historic Resources Qualitative Impact: No ancient monuments or conservation areas are affected. A crop mark of a roman villa is evident from aerial photos of the area. Although the road does not go through the villa site adverse affects are likely due to its proximity to the road. The road may detract from the setting of the Church of St Peter, a grade I listed building, although it is already situated adjacent to the A47.	Quantitative I N/A	mpact:	Assessment: Moderate Adverse
Biodiversity Qualitative Impact: In the locations where the Rivers Tud and Wensum are crossed the river valleys are adversely affected, especially where the road follows the river valley for over 2km. The features of the River Wensum SAC would be adversely impacted upon. A semi- natural ancient woodland would be subject to limited habitat loss. More wide spread habitat fragmentation would occur where the road goes through Ringland Hills, significantly affecting local biodiversity. Protected species are known to be present including otters, bats and water vole.	Quantitative Impact: N/A		Assessment: Severe Adverse
Water Environment Qualitative Impact: The route crosses two water courses, the River Tud and the River Wensum. Without specific measures the consequences of pollution and increased siltation within the river systems are significant. Also without measures in place both flood plains could be adversely affected. Approximately 1km of the road passes over a groundwater protection zone. However, the whole route passes over a major chalk aquifer.			Assessment: Severe adverse
Physical Fitness Qualitative Impact: A footpath/cycleway will be provided along the length of the road which may encourage walking/cycling. This route severs 5 PROWs and a cycleway which may discourage pedestrians/equestrians/cyclists unless suitable crossing points are provided.	Quantitative Impact: Information on numbers of pedestrians, equestrians and cyclists is unavailable at this stage		Assessment: Slight beneficial impact
Journey Ambience Qualitative Impact: Uninterrupted travel on a modern dual carriageway through the countryside provides improved journey ambience. The provision of 2 at grade roundabouts along the route may impact on driver stress.	Quantitative Impact: N/A		Assessment: Large beneficial impact
Accidents Qualitative Impact: By transferring traffic from congested roads within the northern suburbs and surrounding rural lanes and villages onto a modern purpose-built road, it is estimated this option would bring about an annual saving of up to 60 casualties a year.	Quantitative Impact: Information on the number of Personal Injury Accidents over the 30 year assessment period is unavailable at this stage		Assessment: Large beneficial
Security Qualitative Impact: There will be a number of lay-bys at locations minimising security risks. At this stage it is not proposed to provide emergency telephones or lighting in the lay-bys. A footway/cycleway will be provided along the length of the new road but it will not be lit and may be separated from the road by landscaping. Bridges and underpasses will be designed for pedestrian and cyclist use where appropriate.	Quantitative Impact: N/A		Assessment: Neutral
Public Accounts Qualitative Impact:	Quantitative I	mpact:	Assessment: PVC = £176.7M
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:	Quantitative I	mpact:	Assessment: PVB = £369.3M
Transport Economic Efficiency: Consumers Qualitative Impact:	Quantitative I	mpact:	Assessment: PVB = £290.1M
Reliability Qualitative Impact:	Quantitative I	mpact:	Assessment: Large beneficial impact
Wider Economic Impacts Qualitative Impact: The scheme would enhance access to Norwich International Airport, and also aid development around the Norwich Area.	Quantitative I	mpact:	Assessment: Slight beneficial impact
Option Value Qualitative Impact: No new transport options created by this scheme	Quantitative Impact:		Assessment: Neutral
Severance Qualitative Impact: No communities are severed by this route. It severs 5 PROWs and a cycleway.	N/A Quantitative Impact: N/A		Assessment: Slight adverse impact
Access to Transport System Qualitative Impact: May improve public transport through reduced congestion in the northern suburbs. Longer distance bus services may use the NDR to access the best corridor into the city.	Quantitative I N/A	mpact:	Assessment: Slight beneficial impact
Transport Interchange Qualitative Impact: This option would facilitate passenger and freight interchange at Norwich International Airport. It would also enhance access to the Park and Ride sites at the airport and any Park and Ride site proposed on the A1067 corridor.	Quantitative I N/A	mpact:	Assessment: Slight beneficial impacts
Landuse Policies Qualitative Impact: The route will have a positive impact on policies for the development of Norwich airport, environmental improvements to urban areas and the enhancement of public highways. The route will have a negative impact on policies for the protection of landscape, countryside and the environment, mineral resources and land for public use.	Quantitative Impact: N/A		Assessment: Neutral
Other Policies Qualitative Impact: Would support policy objectives by facilitating inter-regional movement, economic growth, reducing peripherality and higher road safety standards. The agricultural land take and loss of trees and natural habitats would conflict with certain objectives.	Quantitative I N/A	mpact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL	SUMMARY TABLES			
Option:	Description:	PVC to Public:	Problems:	
Consultation Western Blue Route	Construction of the 13km long western half of a new dual carriageway with 2 at grade and 2 grade separated junctions.	£67,239,411	 Congestion & slow journey times in Reliability and availability of bus ser 	
	est of the Easton roundabout; northwards across the River Tud; north-eastwards across the of Taverham; close round the north of Thorpe Marriott; south-eastwards south of Horsford to the content of Thorpe Marriott; south-eastwards south of Horsford to the content of Thorpe Marriott; south-eastwards south of Horsford to the content of Thorpe Marriott; south-eastwards south of Horsford to the content of Thorpe Marriott; south-eastwards south of Horsford to the content of the conten		 Problems caused by traffic - nuisan air quality Population growth and new housing Increasing economic growth and pro- Access to Norwich International Airp 	ce to residents, busy roads, poor a development osperity
Noise Qualitative Impact:		Quantitativ	/e Impact:	Assessment:
Approximately 293 properties	lie within 300m of the route option. At this stage the traffic information is unavailable rties lie within 300m of existing roads experiencing an increase or decrease in traffic levels	Information	on levels of noise is unavailable at this	293 properties within 300m of route
experienced up to 200m from	ct: n of 77 properties, 8 of which fall within 50m. Impacts of traffic emissions on local air quality the roadside. It is anticipated that the air quality limits and objectives for PM10 and NO2 w e does not pass through an Air Quality Management Zone.		ve Impact: on quantities of PM10 and NO2 is at this stage	Assessment: 77 properties within 200m of route
	tive Impact: o CO2 emissions can be expected to increase. With this route option they will also be expected to the size of these increases is still to be carried out.	ected Information this stage	ve Impact: on the quantity of CO2 is unavailable at	Assessment: Adverse impact
	act: n the landscape character of Ringland Hills, the River Wensum valley landscape and on the well as substantial visual intrusion which could not be adequately mitigated.	Quantitativ N/A	/e Impact:	Assessment: Severe adverse
Townscape Qualitative Impa No townscape affected.	act:	Quantitativ N/A	ve Impact:	Assessment: Neutral
	ces Qualitative Impact: in the valley landscape would be adversely affected as well as the historic parkland associanservation areas or scheduled ancient monuments affected.	Quantitativ ated N/A	/e Impact:	Assessment: Moderate Adverse
road follows the river valley for natural ancient woodland wou	rers Tud and Wensum are crossed the river valleys are adversely affected, especially where or over 2km. The features of the River Wensum SAC would be adversely impacted upon. A ald be subject to limited habitat loss. More wide spread habitat fragmentation would occur Ringland Hills, significantly affecting local biodiversity. Protected species are known to be		ve Impact:	Assessment: Severe Adverse
pollution and increased siltation	courses, the River Tud and the River Wensum. Without specific measures the consequence on within the river systems are significant. Also without measures in place both flood plains Approximately 1.5km of the road passes over a groundwater protection zone with the whole		<i>v</i> e Impact:	Assessment: Severe adverse
	e Impact: rovided along the length of the road which may encourage walking/cycling. This route seve may discourage pedestrians/equestrians/cyclists unless suitable crossing points are provide		ve Impact: on numbers of pedestrians, equestrians s is unavailable at this stage	Assessment: Slight beneficial impact
provision of 2 at grade rounda	dern dual carriageway through the countryside provides improved journey ambience. The abouts along the route may impact on driver stress.	Quantitativ N/A	/e Impact:	Assessment: Large beneficial impact
	ct: ngested roads within the northern suburbs and surrounding rural lanes and villages onto a is estimated this option would bring about an annual saving of up to 60 casualties a year.	Accidents of	ve Impact: on the number of Personal Injury over the 30 year assessment period is e at this stage	Assessment: Large beneficial
telephones or lighting in the la	: -bys at locations minimising security risks. At this stage it is not proposed to provide emerg ay-bys. A footway/cycleway will be provided along the length of the new road but it will not i ne road by landscaping. Bridges and underpasses will be designed for pedestrian and cycl	be lit	<i>r</i> e Impact:	Assessment: Neutral
Public Accounts Qualitative	Impact:	Quantitativ	ve Impact:	Assessment:
Transport Economic Efficie	ncy: Business Users and Transport Providers Qualitative Impact:	Quantitativ	ve Impact:	PVC = £170.0M Assessment: PVB = £383.2M
Transport Economic Efficie	ncy: Consumers Qualitative Impact:	Quantitativ	ve Impact:	Assessment:
Reliability Qualitative Impac	xt:	Quantitativ	ve Impact:	PVB = £301.1M Assessment: Large beneficial impact
Wider Economic Impacts Q		Quantitativ	ve Impact:	Assessment:
	access to Norwich International Airport, and also aid development around the Norwich Area		(a Impact)	Slight beneficial impact
Option Value Qualitative Im No new transport options created	-	Quantitativ N/A	ие ітраст:	Assessment: Neutral
Severance Qualitative Impa No communities are severed	ct: by this route. It severs a PROW and a cycleway.	Quantitativ N/A	/e Impact:	Assessment: Slight adverse
NDR to access the best corrid	through reduced congestion in the northern suburbs. Longer distance bus services may us dor into the city.			Assessment: Slight beneficial impacts
	litative Impact: Issenger and freight interchange at Norwich International Airport. It would also enhance ac the airport and any Park and Ride site proposed on the A1067 corridor.	Quantitativ	ve Impact:	Assessment: Slight beneficial impacts
Landuse Policies Qualitativ The route will have a positive highways. The route will have and mineral resources.	e Impact: impact on policies for the development of Norwich airport and the enhancement of public e a negative impact on policies for the protection of landscape, countryside and the environ	Quantitativ N/A ment	<i>r</i> e Impact:	Assessment: Neutral
	npact: es by facilitating inter-regional movement, economic growth, reducing peripherality and higl gricultural land take and loss of trees and natural habitats would conflict with certain objecti		/e Impact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL			_	
Option: Consultation Western Orange Route	•	t o Public: 598,035	Problems: - Congestion & slow journey times in - Reliability and availability of bus ser	vices
From the A47 at the Longwa to Ringland Road; north-east	ter junction; north-eastwards across the River Tud to Ringland Lane; north-westwards across the twards to the A1067 immediately west of Taverham; close round the north of Thorpe Marriott; ea astwards between the airport and Horsham St. Faith.		 Problems caused by traffic - nuisand air quality Population growth and new housing Increasing economic growth and product of the pro	ce to residents, busy roads, poo development osperity
Noise Qualitative Impact:		Quantitative I	mpact:	Assessment:
	s lie within 300m of the route option. At this stage the traffic information is unavailable erties lie within 300m of existing roads experiencing an increase or decrease in traffic levels of	Information on stage	levels of noise is unavailable at this	350 properties within 300m of route
Air Quality Qualitative Impa		Quantitative I	•	Assessment:
are experienced up to 200m will not be breached. The sc	m of 98 properties, 11 of which fall within 50m. Impacts of traffic emissions on local air quality from the roadside. It is anticipated that the air quality limits and objectives for PM10 and NO2 theme does not pass through an Air Quality Management Zone.	unavailable at		98 properties within 200m or route
	itive Impact: io CO2 emissions can be expected to increase. With this route option they will also be expected at of the size of these increases is still to be carried out.	Quantitative Information on this stage	mpact: the quantity of CO2 is unavailable at	Assessment: Adverse impact
Landscape Qualitative Imp			mpact:	Assessment:
	ards past Taverham the landscape is attractive because of the views out across the valley. The of very high landscape quality. The route would significantly affect the landscape character and atrusion.	N/A		Severe adverse
Fownscape Qualitative Imp No townscape affected.	pact:	Quantitative I	mpact:	Assessment: Neutral
Heritage of Historic Resou	•	Quantitative I	mpact:	Assessment:
	I in the valley landscape would be adversely affected as well as the historic parkland associated onservation areas or scheduled ancient monuments affected.	N/A		Moderate Adverse
Biodiversity Qualitative Im	nact.	Quantitative I	maat	Assessment:
Where the Rivers Wensum a River Wensum SAC would b	pact: and Tud are crossed by the road the river valleys would be adversely affected. The features of th e adversely impacted upon. Four county wildlife sites would be subject to habitat loss and smaller woodlands would also be affected influencing the local biodiversity.		mpact:	Assessment: Severe Adverse
N				
collution and increased siltat	courses the River Tud and the River Wensum. Without specific measures the consequences of ion within the river systems are significant. Also without measures in place both floodplains could ximately 3km of the road passes over a groundwater protection zone although this is not the		mpact:	Assessment: Severe adverse
Physical Fitness Qualitativ	e Impact:	Quantitative I	mpact:	Assessment:
	rovided along the length of the road which may encourage walking/cycling. This route severs a h may discourage pedestrians/equestrians/cyclists unless suitable crossing points are provided.		numbers of pedestrians, equestrians unavailable at this stage	Slight beneficial impact
provision of 2 at grade round	dern dual carriageway through the countryside provides improved journey ambience. The labouts along the route may impact on driver stress.	Quantitative I N/A	·	Assessment: Large beneficial impact
	ct: ongested roads within the northern suburbs and surrounding rural lanes and villages onto a t is estimated this option would bring about an annual saving of up to 60 casualties a year.		the number of Personal Injury the 30 year assessment period is	Assessment: Large beneficial
Security Qualitative Impact	t: /-bys at locations minimising security risks. At this stage it is not proposed to provide emergency	Quantitative I	mpact:	Assessment: Neutral
elephones or lighting in the l	lay-bys. A footway/cycleway will be provided along the length of the new road but it will not be lit the road by landscaping. Bridges and underpasses will be designed for pedestrian and cyclist			
Public Accounts Qualitative	e Impact:	Quantitative I	mpact:	Assessment: PVC = £175.7M (estimate)
Fransport Economic Efficie	ency: Business Users and Transport Providers Qualitative Impact:	Quantitative I	mpact:	Assessment: PVB = £401.6M (estimate)
Transport Economic Efficie	ency: Consumers Qualitative Impact:	Quantitative I	mpact:	Assessment:
Reliability Qualitative Impa	ct:	Quantitative I	mpact:	PVB = £315.6M (estimate) Assessment: Large beneficial impact
Wider Economic Impacts C	•	Quantitative I	mpact:	Assessment:
	access to Norwich International Airport, and also aid development around the Norwich Area.	N/A	mpaci	Slight beneficial impact
Option Value Qualitative In No new transport options cre	-	Quantitative In N/A	mpau.	Assessment: Neutral
Severance Qualitative Impa This route separates the prop	act: posed housing north of the Tud from Costessey. It severs a PROW and a cycleway.	Quantitative I N/A	mpact:	Assessment: Moderate adverse impact
NDR to access the best corri	t through reduced congestion in the northern suburbs. Longer distance bus services may use th dor into the city.	Quantitative I	mpact:	Assessment: Slight beneficial impacts
	litative Impact: assenger and freight interchange at Norwich International Airport. It would also enhance access Costessey, the airport and any Park and Ride site proposed on the A1067 corridor.	Quantitative In N/A	mpact:	Assessment: Slight beneficial impacts
nighways. The route will have	ve Impact: a impact on policies for the development of Norwich airport and the enhancement of public ve a negative impact on policies for the protection of landscape, countryside and the environmen pusing, waste facilities and mineral resources.	Quantitative In N/A	mpact:	Assessment: Neutral
Other Policies Qualitative I	mpact: ves by facilitating inter-regional movement, economic growth, reducing peripherality and higher agricultural land take and loss of trees and natural habitats would conflict with certain objectives.	Quantitative In N/A	mpact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISA	L SUMMARY TABLES Description:	PVC to	Public	Problems:		
Consultation Western Green Route	Construction of the 10km long western half of a new dual carriageway with 3 at grade and 3 grade separated junctions.	£71,676		 Congestion & slow journey times in Reliability and availability of bus ser 		
From the A1074 500m east	of the A47 interchange; north-eastwards across the River Tud between Old and New Cost ss the River Wensum to the A1067; north-eastwards between Drayton and Hellesdon to the			 Problems caused by traffic - nuisance to residents, busy roads, p air quality 		
	es lie within 300m of the route option. At this stage the traffic information is unavailable erties lie within 300m of existing roads experiencing an increase or decrease in traffic leve		Quantitative I Information on stage	mpact: levels of noise is unavailable at this	Assessment: 536 properties within 300m of route	
experienced up to 200m from	act: Im of 245 properties, 6 of which fall within 50m. Impacts of traffic emissions on local air quant In the roadside. It is anticipated that the air quality limits and objectives for PM10 and NO2 The does not pass through an Air Quality Management Zone.	ality are	Quantitative I Information on unavailable at	uantities of PM10 and NO2 is	Assessment: 245 properties within 200m of route	
	ative Impact: rio CO2 emissions can be expected to increase. With this route option they will also be ex nt of the size of these increases is still to be carried out.	xpected	Quantitative I Information on this stage	mpact: the quantity of CO2 is unavailable at	Assessment: Adverse impact	
	Wensum and Tud valleys the area is of high landscape quality which would be difficult to a also be difficult to mitigate the visual instruction caused by the road, particularly where it		Quantitative I N/A	mpact:	Assessment: Severe adverse	
Townscape Qualitative Imp No townscape affected.	pact:		Quantitative I N/A	mpact:	Assessment: Neutral	
Heritage of Historic Resou No listed buildings, ancient r	rces Qualitative Impact: nonuments or conservation areas are affected.		Quantitative I N/A	mpact:	Assessment: Slight Adverse	
	pact: uld be adversely affected. Protected species such otters and bats are known to be in the a ould also be adversely affected.		Quantitative I N/A	mpact:	Assessment: Severe Adverse	
pollution and increased siltar	courses the River Tud and the River Wensum. Without specific measures the consequent tion within the river systems are significant. Also without measures in place the floodplain on the the River Tud as over 1km of road falls with the floodplain. Approximately 3km	nces of could	Quantitative I N/A	mpact:	Assessment: Severe adverse	
Physical Fitness Qualitativ A footpath/cycleway will be p PROW and a cycleway whic	re Impact: provided along the length of the road which may encourage walking/cycling. This route se h may discourage pedestrians/equestrians/cyclists unless suitable crossing points are pro	evers a	Quantitative Impact: Information on numbers of pedestrians, equestrians and cyclists is unavailable at this stage		Assessment: Slight beneficial impact	
	tive Impact: odern dual carriageway through the countryside provides improved journey ambience. The dabouts along the route may impact on driver stress.		Quantitative Impact: N/A		Assessment: Large beneficial impact	
	act: ongested roads within the northern suburbs and surrounding rural lanes and villages onto it is estimated this option would bring about an annual saving of up to 60 casualties a yea	a r.	Quantitative Impact: Information on the number of Personal Injury Accidents over the 30 year assessment period is unavailable at this stage		Assessment: Large beneficial	
telephones or lighting in the	t: y-bys at locations minimising security risks. At this stage it is not proposed to provide eme lay-bys. A footway/cycleway will be provided along the length of the new road but it will no the road by landscaping. Bridges and underpasses will be designed for pedestrian and cy	ergency ot be lit	Quantitative I N/A	mpact:	Assessment: Neutral	
Public Accounts Qualitativ	re Impact:		Quantitative I	mpact:	Assessment: PVC = £179.7M	
Transport Economic Effici	ency: Business Users and Transport Providers Qualitative Impact:		Quantitative I	mpact:	Assessment: PVB = £400.1M	
Transport Economic Effici	ency: Consumers Qualitative Impact:		Quantitative I	mpact:	Assessment: PVB = £314.4M	
Reliability Qualitative Impa	act:		Quantitative I	mpact:	Assessment: Large beneficial impact	
Wider Economic Impacts (Qualitative Impact: a access to Norwich International Airport, and also aid development around the Norwich Ar		Quantitative I N/A	mpact:	Assessment: Slight beneficial impact	
Option Value Qualitative Ir	npact:		Quantitative I	mpact:	Assessment:	
No new transport options cre Severance Qualitative Imp This route separates Old Co severs a PROW and a cycle	act: Instessey from New Costessey, and Drayton and Taverham from the Norwich urban area.		N/A Quantitative I N/A	mpact:	Neutral Assessment: Severe adverse impact	
Access to Transport Syste May improve public transpor NDR to access the best corr	t through reduced congestion in the northern suburbs. Longer distance bus services may		Quantitative I N/A	mpact:	Assessment: Slight beneficial impacts	
to the Park and Ride sites at	assenger and freight interchange at Norwich International Airport. It would also enhance at Costessey, the airport and any Park and Ride site proposed on the A1067 corridor.	access	Quantitative I N/A		Assessment: Slight beneficial impacts	
highways. The route will have	ve Impact: e impact on policies for the development of Norwich airport and the enhancement of public ve a negative impact on policies for the protection of landscape, countryside and the environ on of the environment from pollution.	с	Quantitative I N/A	mpact:	Assessment: Neutral	
	Impact: ves by facilitating inter-regional movement, economic growth, reducing peripherality and h agricultural land take and loss of trees and natural habitats would conflict with certain obje	nigher	Quantitative I N/A	mpact:	Assessment: Slight beneficial impacts	

		Problems: - Congestion & slow journey times in - Reliability and availability of bus ser - Problems caused by traffic - nuisand air quality - Population growth and new housing - Increasing economic growth and pro- - Access to Norwich International Airp	vices ce to residents, busy roads, poor development osperity
Noise Qualitative Impact: Approximately 138 properties lie within 300m of the route option. At this stage the traffic information is unavailable determining how many properties lie within 300m of existing roads experiencing an increase or decrease in traffic levels of more than 25%.	Quantitative Information c stage	Impact: In levels of noise is unavailable at this	Assessment: 138 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 63 properties, 5 of which fall within 50m. Impacts of traffic emissions on local air quality are experienced up to 200m from the roadside. It is anticipated that the air quality limits and objectives for PM10 and NO2 will not be breached. The scheme does not pass through an Air Quality Management Zone.	Quantitative Information o unavailable a	n quantities of PM10 and NO2 is	Assessment: 63 properties within 200m of route
Greenhouse Gases Qualitative Impact: With the do-minimum scenario CO2 emissions can be expected to increase. With this route option they will also be expected to increase. The assessment of the size of these increases is still to be carried out.	Quantitative d Information of this stage	Impact: In the quantity of CO2 is unavailable at	Assessment: Adverse impact
Landscape Qualitative Impact: The route goes through the Wensum valley which has an open character in this location. Substantial adverse effects would arise on the River Wensum valley landscape and on the village setting of Ringland. Substantial visual intrusion would occur for properties in Ringland village. These could not be adequately mitigated.	Quantitative N/A	Impact:	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.	Quantitative N/A	Impact:	Assessment: Neutral
Heritage of Historic Resources Qualitative Impact: No ancient monuments or conservation areas are affected. The road may detract from the setting of the Church of St Peter, a grade I listed building, although it is already situated adjacent to the A47.	Quantitative N/A	Impact:	Assessment: Slight Adverse
Biodiversity Qualitative Impact: In the locations where the Rivers Tud and Wensum are crossed the river valleys are adversely affected, especially where the road follows the river valley for over 2km The features of the River Wensum SAC would be adversely impacted upon. A semi-natural ancient woodland would be subject to limited habitat loss. A second county wildlife site would be severed by the road. More wide spread habitat fragmentation would occur where the road goes through Ringland Hills and woodland surrounding Royal Hill, significantly affecting local biodiversity. Protected species are known to be present including otters, bats and water vole.		Impact:	Assessment: Severe Adverse
Water Environment Qualitative Impact: The route crosses two water courses the River Tud and the River Wensum. Without specific measures the consequences of pollution and increased siltation within the river systems are significant. Also without measures in place both flood plains could be adversely affected. Approximately 1km of the road passes over a ground water protection zone, with the whole rout passing over a major chalk aquifer.		Impact:	Assessment: Severe adverse
Physical Fitness Qualitative Impact: A footpath/cycleway will be provided along the length of the road which may encourage walking/cycling. This route severs 3 PROWs and a cycleway which may discourage pedestrians/equestrians/cyclists unless suitable crossing points are provided		Impact: n numbers of pedestrians, equestrians s unavailable at this stage	Assessment: Slight beneficial impact
Journey Ambience Qualitative Impact: Uninterrupted travel on a modern dual carriageway through the countryside provides improved journey ambience. The provision of 2 at grade roundabouts along the route may impact on driver stress.	Quantitative Impact: N/A		Assessment: Large beneficial impact
Accidents Qualitative Impact: By transferring traffic from congested roads within the northern suburbs and surrounding rural lanes and villages onto a modern purpose-built road, it is estimated this option would bring about an annual saving of up to 60 casualties a year.		n the number of Personal Injury er the 30 year assessment period is	Assessment: Large beneficial
Security Qualitative Impact: There will be a number of lay-bys at locations minimising security risks. At this stage it is not proposed to provide emergency telephones or lighting in the lay-bys. A footway/cycleway will be provided along the length of the new road but it will not be lift and may be separated from the road by landscaping. Bridges and underpasses will be designed for pedestrian and cyclist use where appropriate.		Impact:	Assessment: Neutral
Public Accounts Qualitative Impact:	Quantitative	Impact:	Assessment: PVC = £181.4M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:	Quantitative	Impact:	Assessment: PVB = £369.3M (estimate)
Transport Economic Efficiency: Consumers Qualitative Impact:	Quantitative	Impact:	Assessment: PVB = £290.1M (estimate)
Reliability Qualitative Impact:	Quantitative	Impact:	Assessment: Large beneficial impact
Wider Economic Impacts Qualitative Impact: The scheme would enhance access to Norwich International Airport, and also aid development around the Norwich Area.	Quantitative N/A	Impact:	Assessment: Slight beneficial impact
Option Value Qualitative Impact: No new transport options created by this scheme	Quantitative	Impact:	Assessment: Neutral
Severance Qualitative Impact: No communities are severed by this route. It severs 3 PROWs and a cycleway.	Quantitative N/A	Impact:	Assessment: Slight adverse impact
Access to Transport System Qualitative Impact: May improve public transport through reduced congestion in the northern suburbs. Longer distance bus services may use th NDR to access the best corridor into the city.	Quantitative	Impact:	Assessment: Slight beneficial impacts
Transport Interchange Qualitative Impact: This option would facilitate passenger and freight interchange at Norwich International Airport. It would also enhance access to the Park and Ride sites at the airport and any Park and Ride site proposed on the A1067 corridor.			Assessment: Slight beneficial impacts
Landuse Policies Qualitative Impact: The route will have a positive impact on policies for the development of Norwich airport, environmental improvements to urban areas and the enhancement of public highways. The route will have a negative impact on policies for the protection of landscape, countryside and the environment, waste facilities and mineral resources.	Quantitative N/A	Impact:	Assessment: Neutral
Other Policies Qualitative Impact: Would support policy objectives by facilitating inter-regional movement, economic growth, reducing peripherality and higher road safety standards. The agricultural land take and loss of trees and natural habitats would conflict with certain objectives.	Quantitative N/A	Impact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL Option:		PVC to Public:	Problems:		
Alternative Western Blue Route	•	£70,718,577	 Congestion & slow journey times in Reliability and availability of bus se 	rvices	
northwards next to the Wensu	est of the Easton roundabout; northwards across the River Tud; north-eastwards across the um Valley to the A1067; wide round the north of Thorpe Marriott; south-eastwards south of en the airport and Horsham St. Faith.		air quality		
Noise Qualitative Impact:		Quantitativ	ve Impact:	Assessment:	
	lie within 300m of the route option. At this stage the traffic information is unavailable ties lie within 300m of existing roads experiencing an increase or decrease in traffic levels		on levels of noise is unavailable at this	133 properties within 300m of route	
experienced up to 200m from	ct: n of 51 properties, 3 of which fall within 50m. Impacts of traffic emissions on local air quality the roadside. It is anticipated that the air quality limits and objectives for PM10 and NO2 w e does not pass through an Air Quality Management Zone.		re Impact: on quantities of PM10 and NO2 is at this stage	Assessment: 51 properties within 200m c route	
	ive Impact: o CO2 emissions can be expected to increase. With this route option they will also be expected of the size of these increases is still to be carried out.	ected Information this stage	re Impact: on the quantity of CO2 is unavailable at	Assessment: Adverse impact	
	ct: In the landscape character of Ringland Hills, the River Wensum valley landscape and on the well as substantial visual intrusion which could not be adequately mitigated.	Quantitativ N/A	re Impact:	Assessment: Severe adverse	
Fownscape Qualitative Impa	act:	Quantitativ N/A	re Impact:	Assessment: Neutral	
	ces Qualitative Impact: in the valley landscape would be adversely affected as well as the historic parkland associanservation areas or scheduled ancient monuments affected.	Quantitativ ated N/A	re Impact:	Assessment: Moderate Adverse	
Biodiversity Qualitative Imp		Quantitativ	re Impact:	Assessment:	
he River Wensum SAC would habitat loss. More wide sprea	ers Tud and Wensum are crossed the river valleys would be adversely affected. The featur d be adversely impacted upon. A semi-natural ancient woodland would be subject to limited ad habitat fragmentation would occur where the road goes through Ringland Hills, significant otected species are known to be present including otters, bats and watervole.	l		Severe Adverse	
collution and increased siltation	courses the River Tud and the River Wensum. Without specific measures the consequence on within the river systems are significant. Also without measures in place both flood plains Approximately 1.5km of the road passes over a ground water protection zone however all th		re Impact:	Assessment: Severe adverse	
Physical Fitness Qualitative A footpath/cycleway will be pr	•	rs 2 Information ided. and cyclists	re Impact: on numbers of pedestrians, equestrians is unavailable at this stage	Assessment: Slight beneficial impact	
	ve Impact: lern dual carriageway through the countryside provides improved journey ambience. The abouts along the route may impact on driver stress.	Quantitativ N/A	re Impact:	Assessment: Large beneficial impact	
	: ngested roads within the northern suburbs and surrounding rural lanes and villages onto a is estimated this option would bring about an annual saving of up to 60 casualties a year.	Accidents of	re Impact: on the number of Personal Injury over the 30 year assessment period is at this stage	Assessment: Large beneficial	
elephones or lighting in the la	bys at locations minimising security risks. At this stage it is not proposed to provide emerg ay-bys. A footway/cycleway will be provided along the length of the new road but it will not l ar road by landscaping. Bridges and underpasses will be designed for pedestrian and cycli	be lit	/e Impact:	Assessment: Neutral	
Public Accounts Qualitative	Impact:	Quantitativ	ve Impact:	Assessment:	
ransport Economic Efficie	ncy: Business Users and Transport Providers Qualitative Impact:	Quantitativ	re Impact:	PVC = £172.8M (estimate) Assessment: PVB = £383.2M (estimate)	
ransport Economic Efficie	ncy: Consumers Qualitative Impact:	Quantitativ	re Impact:	Assessment: PVB = £301.1M (estimate)	
Reliability Qualitative Impac	t:	Quantitativ	re Impact:	Assessment: Large beneficial impact	
Vider Economic Impacts Q The scheme would enhance a	ualitative Impact: access to Norwich International Airport, and also aid development around the Norwich Area	Quantitativ	ve Impact:	Assessment: Slight beneficial impact	
Option Value Qualitative Im	pact:	Quantitativ	ve Impact:	Assessment:	
lo new transport options crea Severance Qualitative Impa lo communities are severed	-	N/A Quantitativ N/A	re Impact:	Neutral Assessment: Slight adverse	
NDR to access the best corric	through reduced congestion in the northern suburbs. Longer distance bus services may us lor into the city.	Quantitativ	re Impact:	Assessment: Slight beneficial impacts	
	itative Impact: ssenger and freight interchange at Norwich International Airport. It would also enhance ac he airport and any Park and Ride site proposed on the A1067 corridor.	Quantitativ	/e Impact:	Assessment: Slight beneficial impacts	
urban areas and the enhance	e Impact: impact on policies for the development of Norwich airport, environmental improvements to ment of public highways. The route will have a negative impact on policies for the protection e environment and mineral resources.	Quantitativ N/A	re Impact:	Assessment: Neutral	
Other Policies Qualitative Ir Nould support policy objectiv	npact: es by facilitating inter-regional movement, economic growth, reducing peripherality and high gricultural land take and loss of trees and natural habitats would conflict with certain objecti	Quantitativ ner N/A ves.	re Impact:	Assessment: Slight beneficial impacts	

		Problems: - Congestion & slow journey times in - Reliability and availability of bus ser - Problems caused by traffic - nuisan air quality	vices ce to residents, busy roads, poor
Horsford to the A140; then eastwards between the airport and Horsham St. Faith.		 Population growth and new housing Increasing economic growth and pre- Access to Norwich International Airplace 	osperity
Noise Qualitative Impact: Approximately 271 properties lie within 300m of the route option. At this stage the traffic information is unavailable determining how many properties lie within 300m of existing roads experiencing an increase or decrease in traffic levels of more than 25%.	Quantitative Information o stage	Impact: n levels of noise is unavailable at this	Assessment: 271 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 87 properties, 10 of which fall within 50m. Impacts of traffic emissions on local air quality are experienced up to 200m from the roadside. It is anticipated that the air quality limits and objectives for PM10 and NO2 will not be breached. The scheme does not pass through an Air Quality Management Zone.	Quantitative Information o unavailable a	n quantities of PM10 and NO2 is	Assessment: 87 properties within 200m of route
Greenhouse Gases Qualitative Impact: With the do-minimum scenario CO2 emissions can be expected to increase. With this route option they will also be expected to increase. The assessment of the size of these increases is still to be carried out.	this stage	n the quantity of CO2 is unavailable at	Assessment: Adverse impact
Landscape Qualitative Impact: Where the route cuts southwards past Taverham the landscape is attractive because of the views out across the valley. The Wensum valley itself is also of very high landscape quality. The route would significantly affect the landscape character and create high levels of visual intrusion.	Quantitative N/A	Impact:	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.	Quantitative	Impact:	Assessment: Neutral
Heritage of Historic Resources Qualitative Impact: The setting of Taverham Hall in the valley landscape would be adversely affected as well as the historic parkland associated with the Hall. There are no conservation areas or scheduled ancient monuments affected. The route also passes close to Beehive Lodge a grade II listed building giving rise to adverse affects on its setting.	Quantitative N/A	Impact:	Assessment: Moderate Adverse
Biodiversity Qualitative Impact: The Rivers Wensum and Tud would be crossed by the road. In these locations the river valleys would be adversely affected. The features of the River Wensum SAC would be adversely impacted upon. Three county wildlife sites would be subject to habitat loss and fragmentation once of which is known to contain at least 3 species scarce to Norfolk. At least three smaller woodlands would also be affected influencing the local biodiversity.	Quantitative N/A	Impact:	Assessment: Severe Adverse
Water Environment Qualitative Impact: The route crosses two water courses the River Tud and the River Wensum. Without specific measures the consequences of pollution and increased siltation within the river systems are significant. Also without measures in place both flood plains could be adversely affected. Approximately 3km of the road passes over a ground water protection zone however all the route falls under a major chalk aquifer.	Quantitative Impact: N/A		Assessment: Severe adverse
Physical Fitness Qualitative Impact: A footpath/cycleway will be provided along the length of the road which may encourage walking/cycling. This route severs a PROW and a cycleway which may discourage pedestrians/equestrians/cyclists unless suitable crossing points are provided.	Quantitative Impact: Information on numbers of pedestrians, equestrians and cyclists is unavailable at this stage		Assessment: Slight beneficial impact
Journey Ambience Qualitative Impact: Uninterrupted travel on a modern dual carriageway through the countryside provides improved journey ambience. The provision of 2 at grade roundabouts along the route may impact on driver stress.	Quantitative Impact: N/A		Assessment: Large beneficial impact
Accidents Qualitative Impact: By transferring traffic from congested roads within the northern suburbs and surrounding rural lanes and villages onto a modern purpose-built road, it is estimated this option would bring about an annual saving of up to 60 casualties a year.	Quantitative Impact: Information on the number of Personal Injury Accidents over the 30 year assessment period is unavailable at this stage		Assessment: Large beneficial
Security Qualitative Impact: There will be a number of lay-bys at locations minimising security risks. At this stage it is not proposed to provide emergency telephones or lighting in the lay-bys. A footway/cycleway will be provided along the length of the new road but it will not be lit and may be separated from the road by landscaping. Bridges and underpasses will be designed for pedestrian and cyclist use where appropriate.	Quantitative Impact: N/A		Assessment: Neutral
Public Accounts Qualitative Impact:	Quantitative	Impact:	Assessment: PVC = £191.8M
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:	Quantitative	Impact:	Assessment: PVB = £401.6M
Transport Economic Efficiency: Consumers Qualitative Impact:	Quantitative	Impact:	Assessment: PVB = £315.6M
Reliability Qualitative Impact:	Quantitative	Impact:	Assessment: Large beneficial impact
Wider Economic Impacts Qualitative Impact: The scheme would enhance access to Norwich International Airport, and also aid development around the Norwich Area.	Quantitative	Impact:	Assessment: Slight beneficial impact
Option Value Qualitative Impact:	Quantitative	Impact:	Assessment:
No new transport options created by this scheme Severance Qualitative Impact: No communities are severed by this route. It severs a PROW and a cycleway.	N/A Quantitative Impact: N/A		Neutral Assessment: Slight adverse
Access to Transport System Qualitative Impact: May improve public transport through reduced congestion in the northern suburbs. Longer distance bus services may use the NDR to access the best corridor into the city.	Quantitative Impact: N/A		Assessment: Slight beneficial impacts
Transport Interchange Qualitative Impact: This option would facilitate passenger and freight interchange at Norwich International Airport. It would also enhance access to the Park and Ride sites at Costessey, the airport and any Park and Ride site proposed on the A1067 corridor.	Quantitative N/A	Impact:	Assessment: Slight beneficial impacts
Landuse Policies Qualitative Impact: The route will have a positive impact on policies for the development of Norwich airport and the enhancement of public highways. The route will have a negative impact on policies for the protection of landscape, countryside and the environment, areas for employment, waste facilities and mineral resources.	Quantitative N/A	Impact:	Assessment: Neutral
Other Policies Qualitative Impact: Would support policy objectives by facilitating inter-regional movement, economic growth, reducing peripherality and higher road safety standards. The agricultural land take and loss of trees and natural habitats would conflict with certain objectives.	Quantitative N/A	Impact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES	VC to Dublic	Problems:		
	VC to Public: 46,104,760	 Congestion & slow journey times in Reliability and availability of bus se 	rvices	
From the A47 at the Longwater junction; north-westwards across the River Tud to Ringland Lane; northwards across the R Ringland Road; northwards next to the Wensum Valley to the A1067; wide round the north of Thorpe Marriott; eastwards s the A140; then eastwards between the airport and Horsham St. Faith.		 Problems caused by traffic - nuisan air quality Population growth and new housing Increasing economic growth and pr Access to Norwich International Air 	g development rosperity	
Noise Qualitative Impact: Approximately 151 properties lie within 300m of the route option. At this stage the traffic information is unavailable	Quantitative I	Impact:	Assessment: 151 properties within 300m	
determining how many properties lie within 300m of existing roads experiencing an increase or decrease in traffic levels of more than 25%.			of route	
Air Quality Qualitative Impact: The route passes within 200m of 66 properties, 6 of which fall within 50m. Impacts of traffic emissions on local air quality a experienced up to 200m from the roadside. It is anticipated that the air quality limits and objectives for PM10 and NO2 will not be breached. The scheme does not pass through an Air Quality Management Zone.		n quantities of PM10 and NO2 is	Assessment: 66 properties within 200m c route	
Greenhouse Gases Qualitative Impact: Nith the do-minimum scenario CO2 emissions can be expected to increase. With this route option they will also be expect o increase. The assessment of the size of these increases is still to be carried out.	ed Unformation or this stage	Impact: the quantity of CO2 is unavailable at	Assessment: Adverse impact	
Landscape Qualitative Impact: Where the route cuts southwards past Taverham the landscape is attractive because of the views out across the valley. The Wensum valley itself is also of very high landscape quality. The route would significantly affect the landscape character ar preate high levels of visual intrusion especially as the road follows the river valley for over 1km. The route also passes hrough the particularly fine wooded area of Ringland Hills.		Impact:	Assessment: Severe adverse	
Fownscape Qualitative Impact: No townscape affected.	Quantitative I N/A	Impact:	Assessment: Neutral	
Heritage of Historic Resources Qualitative Impact: The setting of Taverham Hall in the valley landscape would be adversely affected as well as the historic parkland associate with the Hall. There are no conservation areas or scheduled ancient monuments affected. The route also passes close to Beehive Lodge a grade II listed building giving rise to adverse affects on its setting.	Quantitative I ed N/A	Impact:	Assessment: Moderate Adverse	
Biodiversity Qualitative Impact: The Rivers Wensum and Tud would be crossed by the road. In these locations the river valleys would be adversely affecte The features of the River Wensum SAC would be adversely impacted upon. Three county wildlife sites would be subject to habitat loss and fragmentation once of which is known to contain at least 3 species scarce to Norfolk. At least three smalle woodlands would also be affected influencing the local biodiversity.	1	Impact:	Assessment: Severe Adverse	
Water Environment Qualitative Impact: The route crosses two water courses the River Tud and the River Wensum. Without specific measures the consequences pollution and increased siltation within the river systems are significant. Also without measures in place both flood plains could be adversely affected. Approximately 3km of the road passes over a ground water protection zone, with the whole ro passing over a major chalk aquifer.		Impact:	Assessment: Severe adverse	
Physical Fitness Qualitative Impact: A footpath/cycleway will be provided along the length of the road which may encourage walking/cycling. This route severs PROWs and a cycleway which may discourage pedestrians/equestrians/cyclists unless suitable crossing points are provide		Impact: n numbers of pedestrians, equestrians unavailable at this stage	Assessment: Slight beneficial impact	
Journey Ambience Qualitative Impact: Jninterrupted travel on a modern dual carriageway through the countryside provides improved journey ambience. The provision of 2 at grade roundabouts along the route may impact on driver stress.	Quantitative I N/A	Impact:	Assessment: Large beneficial impact	
Accidents Qualitative Impact: By transferring traffic from congested roads within the northern suburbs and surrounding rural lanes and villages onto a nodern purpose-built road, it is estimated this option would bring about an annual saving of up to 60 casualties a year.		n the number of Personal Injury r the 30 year assessment period is	Assessment: Large beneficial	
Security Qualitative Impact: There will be a number of lay-bys at locations minimising security risks. At this stage it is not proposed to provide emerger elephones or lighting in the lay-bys. A footway/cycleway will be provided along the length of the new road but it will not be and may be separated from the road by landscaping. Bridges and underpasses will be designed for pedestrian and cyclist use where appropriate.	lit	Impact:	Assessment: Neutral	
Public Accounts Qualitative Impact:	Quantitative I	Impact:	Assessment: PVC = £196.9M (estimate)	
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:	Quantitative I	Impact:	Assessment: PVB = £401.6M (estimate)	
ransport Economic Efficiency: Consumers Qualitative Impact:	Quantitative I	Impact:	Assessment: PVB = £315.6M (estimate)	
Reliability Qualitative Impact:	Quantitative I	Impact:	Assessment: Large beneficial impact	
Vider Economic Impacts Qualitative Impact: The scheme would enhance access to Norwich International Airport, and also aid development around the Norwich Area.	Quantitative I N/A	Impact:	Assessment: Slight beneficial impact	
Option Value Qualitative Impact: No new transport options created by this scheme	Quantitative I N/A	Impact:	Assessment: Neutral	
Severance Qualitative Impact: No communities are severed by this route. It severs 2 PROWs and a cycleway.	Quantitative I N/A	Impact:	Assessment: Slight adverse	
Access to Transport System Qualitative Impact: May improve public transport through reduced congestion in the northern suburbs. Longer distance bus services may use NDR to access the best corridor into the city.	the N/A	Impact:	Assessment: Slight beneficial impacts	
Fransport Interchange Qualitative Impact: This option would facilitate passenger and freight interchange at Norwich International Airport. It would also enhance acce o the Park and Ride sites at Costessey, the airport and any Park and Ride site proposed on the A1067 corridor.	Quantitative l ss N/A	Impact:	Assessment: Slight beneficial impacts	
Landuse Policies Qualitative Impact: The route will have a positive impact on policies for the development of Norwich airport and the enhancement of public highways. The route will have a negative impact on policies for the protection of landscape, countryside and the environme areas for employment, waste facilities and mineral resources.	ent, Quantitative I	Impact:	Assessment: Neutral	
Other Policies Qualitative Impact: Nould support policy objectives by facilitating inter-regional movement, economic growth, reducing peripherality and highe oad safety standards. The agricultural land take and loss of trees and natural habitats would conflict with certain objective		Impact:	Assessment: Slight beneficial impacts	

PRELIMINARY APPRAIS	Description:	PVC to P	ublic:	Problems:	
Pylon Route	Construction of the 18km long western half of a new dual carriageway with 4 at grade and 2 grade separated junctions.	£93,473,8	- Reliability and availability of bus ser - Problems caused by traffic - nuisan air guality		
Lane; along Marl Hill Lane	west of the Easton roundabout; north-westwards across the River Tud to Breck Lane; no to the A1067; along the A1067 and across the River Wensum to Deighton Hills; wide rou south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith	nd the north of			ng development prosperity
	: ies lie within 300m of the route option. At this stage the traffic information is unavailable perties lie within 300m of existing roads experiencing an increase or decrease in traffic le	In	uantitative Information on tage	mpact: levels of noise is unavailable at this	Assessment: 187 properties within 300m of route
are experienced up to 200	pact: 00m of 97 properties, 12 of which fall within 50m. Impacts of traffic emissions on local air m from the roadside. It is anticipated that the air quality limits and objectives for PM10 an scheme does not pass through an Air Quality Management Zone.	quality In	uantitative Information on navailable at	uantities of PM10 and NO2 is	Assessment: 97 properties within 200m of route
	itative Impact: nario CO2 emissions can be expected to increase. With this route option they will also be ent of the size of these increases is still to be carried out.	expected In	uantitative l and Information on his stage	mpact: the quantity of CO2 is unavailable at	Assessment: Adverse impact
landscape can fairly easily	npact: pical of a mixed farmland disbursed with hamlets such as Weston Green. On the whole th accommodate a new road. Visual intrusion would be experienced by a small number of p those at Thorpe Marriott, although this impact could be mitigated during detailed design s	e N properties	uantitative l /A	mpact:	Assessment: Moderate adverse
Townscape Qualitative Ir No townscape affected.	npact:		uantitative l /A	mpact:	Assessment: Neutral
There are no ancient mon	purces Qualitative Impact: uments or conservation areas that would be affected. The road may detract from the setti e I listed building although it is already situated adjacent to the A47. The route would imp ge.	ng of the N	uantitative l //A	mpact:	Assessment: Moderate adverse
hedgerows would be lost w	mpact: a substantial area of woodland, part of which is listed as a county wildlife site. A number of which are important in terms of local biodiversity. Protected species such as bats, badgers present within the route corridor. The route would cross the river Wensum SAC although a	of N and	Quantitative Impact: N/A		Assessment: Moderate adverse
would be using an existing	itative Impact: ercourses, the River Tud and the River Wensum, although the crossing over the River We bridge. Without specific measures the consequences of pollution and increased siltation ht. Approximately 1km of the road passes over a groundwater protection zone.	ensum N	Quantitative Impact: N/A		Assessment: Moderate Adverse
Physical Fitness Qualitat A footpath/cycleway will be PROWs and a cycleway w	ive Impact: provided along the length of the road which may encourage walking/cycling. This route shich may discourage pedestrians/equestrians/cyclists unless suitable crossing points are	severs 2 In	Quantitative Impact: Information on numbers of pedestrians, equestrians and cyclists is unavailable at this stage		Assessment: Slight beneficial impact
	tative Impact: nodern dual carriageway through the countryside provides improved journey ambience. T ndabouts along the route may impact on driver stress.		Quantitative Impact: N/A		Assessment: Large beneficial impact
	pact: congested roads within the northern suburbs and surrounding rural lanes and villages ont , it is estimated this option would bring about an annual saving of up to 60 casualties a ye	oa In ear. A	Quantitative Impact: Information on the number of Personal Injury Accidents over the 30 year assessment period is unavailable at this stage		Assessment: Large beneficial
telephones or lighting in th	act: lay-bys at locations minimising security risks. At this stage it is not proposed to provide er e lay-bys. A footway/cycleway will be provided along the length of the new road but it will n the road by landscaping. Bridges and underpasses will be designed for pedestrian and	nergency N not be lit	Quantitative Impact: N/A		Assessment: Neutral
Public Accounts Qualitat	ive Impact:	Q	uantitative l	mpact:	Assessment: PVC = £205.0M
Fransport Economic Efficient	ciency: Business Users and Transport Providers Qualitative Impact:	Q	uantitative l	mpact:	Assessment: PVB = £346.0M
Fransport Economic Effic	ciency: Consumers Qualitative Impact:	Q	uantitative l	mpact:	Assessment: PVB = £271.9M
Reliability Qualitative Imp	pact:	Q	uantitative l	mpact:	Assessment: Large beneficial impact
Wider Economic Impacts The scheme would enhand	Qualitative Impact: ce access to Norwich International Airport, and also aid development around the Norwich.		uantitative l /A	mpact:	Assessment: Slight beneficial impact
Option Value Qualitative No new transport options of	•		uantitative l /A	mpact:	Assessment: Neutral
Severance Qualitative Im			N/A Quantitative Impact: N/A		Assessment: Slight adverse
Access to Transport Sys May improve public transp NDR to access the best co	ort through reduced congestion in the northern suburbs. Longer distance bus services ma		l uantitative l //A	mpact:	Assessment: Slight beneficial impacts
	ualitative Impact: passenger and freight interchange at Norwich International Airport. It would also enhanc at the airport and possibly any Park and Ride site proposed on the A1067 corridor.		uantitative l //A	mpact:	Assessment: Slight beneficial impacts
urban areas and the enhar	tive Impact: ive impact on policies for the development of Norwich airport, environmental improvement neement of public highways. The route will have a negative impact on policies for the prot d the environment and mineral resources.	ts to N	Quantitative Impact: N/A		Assessment: Neutral
	e Impact: ctives by facilitating inter-regional movement, economic growth, reducing peripherality and e agricultural land take and loss of trees and natural habitats would conflict with certain ob	higher N	uantitative l //A	mpact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL Option:		PVC to Public:	Problems:	
Alternative Western Red Route 2		277,267,713	 Congestion & slow journey times in Reliability and availability of bus se 	rvices
	est of the Easton roundabout; northwards across the River Tud to Ringland Lane; north-east; ; eastwards close round the north of Thorpe Marriott; south-eastwards south of Horsford to th ort and Horsham St. Faith.		 Problems caused by traffic - nuisan air quality Population growth and new housing Increasing economic growth and pr Access to Norwich International Air 	g development osperity
Noise Qualitative Impact:		Quantitativ	e Impact:	Assessment:
	s lie within 300m of the route option. At this stage the traffic information is unavailable erties lie within 300m of existing roads experiencing an increase or decrease in traffic levels o		on levels of noise is unavailable at this	139 properties within 300m of route
experienced up to 200m from	act: m of 66 properties, 5 of which fall within 50m. Impacts of traffic emissions on local air quality n the roadside. It is anticipated that the air quality limits and objectives for PM10 and NO2 wi ne does not pass through an Air Quality Management Zone.		e Impact: on quantities of PM10 and NO2 is at this stage	Assessment: 66 properties within 200m c route
	tive Impact: io CO2 emissions can be expected to increase. With this route option they will also be expected to of the size of these increases is still to be carried out.	cted Information this stage	e Impact: on the quantity of CO2 is unavailable at	Assessment: Adverse impact
arise on the River Wensum	act: Wensum valley which has an open character in this location. Substantial adverse effects wou valley landscape and on the village setting of Ringland. Substantial visual intrusion would occ age. These could not be adequately mitigated.		e Impact:	Assessment: Severe adverse
Fownscape Qualitative Imp No townscape affected.	pact:	Quantitativ N/A	e Impact:	Assessment: Neutral
	rces Qualitative Impact: Inservation areas are affected. The road may detract from the setting of the Church of St Per ough it is already situated adjacent to the A47.	Quantitativ ter, N/A	e Impact:	Assessment: Slight Adverse
Biodiversity Qualitative Im		Quantitativ	e Impact:	Assessment:
road follows the river valley f natural ancient woodland wo where the road goes through	vers Tud and Wensum are crossed the river valleys are adversely affected, especially where or over 2km. The features of the River Wensum SAC would be adversely impacted upon. A s uld be subject to limited habitat loss. More wide spread habitat fragmentation would occur r Ringland Hills and woodland surrounding Royal Hill, significantly affecting local biodiversity. In to be present including otters, bats and water vole.	semi-		Severe Adverse
ollution and increased siltat	courses the River Tud and the River Wensum. Without specific measures the consequence ion within the river systems are significant. Also without measures in place both flood plains Approximately 1km of the road passes over a ground water protection zone, with the whole r		e Impact:	Assessment: Severe adverse
	e Impact: rovided along the length of the road which may encourage walking/cycling. This route sever ch may discourage pedestrians/equestrians/cyclists unless suitable crossing points are provid		e Impact: on numbers of pedestrians, equestrians is unavailable at this stage	Assessment: Slight beneficial impact
	tive Impact: dern dual carriageway through the countryside provides improved journey ambience. The labouts along the route may impact on driver stress.	Quantitativ N/A	e Impact:	Assessment: Large beneficial impact
Accidents Qualitative Impa By transferring traffic from co modern purpose-built road, i	ct: ongested roads within the northern suburbs and surrounding rural lanes and villages onto a t is estimated this option would bring about an annual saving of up to 60 casualties a year.	Accidents o	e Impact: on the number of Personal Injury ver the 30 year assessment period is at this stage	Assessment: Large beneficial
elephones or lighting in the	t: /-bys at locations minimising security risks. At this stage it is not proposed to provide emerge lay-bys. A footway/cycleway will be provided along the length of the new road but it will not b the road by landscaping. Bridges and underpasses will be designed for pedestrian and cyclis	e lit	e Impact:	Assessment: Neutral
Public Accounts Qualitativ	e Impact:	Quantitativ	e Impact:	Assessment: PVC = £180.8M (estimate)
ransport Economic Efficie	ency: Business Users and Transport Providers Qualitative Impact:	Quantitativ	e Impact:	Assessment: PVB = £369.3M (estimate)
ransport Economic Efficie	ency: Consumers Qualitative Impact:	Quantitativ	e Impact:	Assessment: PVB = £290.1M (estimate)
Reliability Qualitative Impa	ct:	Quantitativ	e Impact:	Assessment: Large beneficial impact
Wider Economic Impacts G The scheme would enhance	Qualitative Impact: access to Norwich International Airport, and also aid development around the Norwich Area.	Quantitativ N/A	e Impact:	Assessment: Slight beneficial impact
Option Value Qualitative In	npact:	Quantitativ N/A	e Impact:	Assessment:
lo new transport options cre Severance Qualitative Impa lo communities are severed		Quantitativ N/A	e Impact:	Neutral Assessment:
NDR to access the best corr	t through reduced congestion in the northern suburbs. Longer distance bus services may use dor into the city.			Assessment: Slight beneficial impacts
	Ilitative Impact: assenger and freight interchange at Norwich International Airport. It would also enhance acc the airport and any Park and Ride site proposed on the A1067 corridor.	Quantitativ ess N/A	e Impact:	Assessment: Slight beneficial impacts
Irban areas and the enhanc	ve Impact: b impact on policies for the development of Norwich airport, environmental improvements to ement of public highways. The route will have a negative impact on policies for the protection the environment, mineral resources and land for public use.	Quantitativ N/A	e Impact:	Assessment: Neutral
	mpact: ves by facilitating inter-regional movement, economic growth, reducing peripherality and high agricultural land take and loss of trees and natural habitats would conflict with certain objectiv		e Impact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES				
Option: Description: Alternative Pylon Route Construction of the 18km long western half of a new dual carriageway with 4 at grade and 2 grade separated junctions.		Public: 3,058	Problems: - Congestion & slow journey times in - Reliability and availability of bus ser - Problems caused by traffic - nuisand	vices
From the A47 immediately west of the Easton roundabout; north-westwards across the River Tud to Breck Lane; no Lane; along Marl Hill Lane to the A1067; along the A1067 and across the River Wensum to Fakenham Road, Attleb Reepham Road; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastward Horsham St. Faith.	ridge; eastwa	ards to	 Problems caused by traine - Indisance Population growth and new housing Increasing economic growth and pro- Access to Norwich International Airp 	development sperity
Noise Qualitative Impact: Approximately 186 properties lie within 300m of the route option. At this stage the traffic information is unavailable determining how many properties lie within 300m of existing roads experiencing an increase or decrease in traffic le more than 25%.		Quantitative Ir Information on stage	npact: levels of noise is unavailable at this	Assessment: 186 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 99 properties, 9 of which fall within 50m. Impacts of traffic emissions on local air q experienced up to 200m from the roadside. It is anticipated that the air quality limits and objectives for PM10 and N not be breached. The scheme does not pass through an Air Quality Management Zone.	uality are	Quantitative Information on unavailable at	quantities of PM10 and NO2 is	Assessment: 99 properties within 200m of route
Greenhouse Gases Qualitative Impact: With the do-minimum scenario CO2 emissions can be expected to increase. With this route option they will also be to increase. The assessment of the size of these increases is still to be carried out.	expected	Quantitative Ir Information on this stage	npact: the quantity of CO2 is unavailable at	Assessment: Adverse impact
Landscape Qualitative Impact: In landscape terms outside of the enclosed river valleys the landscape is mostly extensive and largely feature less of arable farmland. Visual intrusion would be experienced by a small number of properties close to the road including t Thorpe Marriott, although with this option the route is at least 200m away from properties in Thorpe Marriott.	pen	Quantitative Ir N/A	npact:	Assessment: Moderate adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Ir N/A	npact:	Assessment: Neutral
Heritage of Historic Resources Qualitative Impact: There are no ancient monuments or conservation areas that would be affected. The road may detract from the settir Church of St Peter, a grade I listed building although it is already situated adjacent to the A47. The route would imp grade II listed Morton Lodge.	ng of the	Quantitative Ir N/A	npact:	Assessment: Moderate adverse
Biodiversity Qualitative Impact: The routes passes through a substantial area of woodland, part of which is listed as a county wildlife site. A number hedgerows would be lost that are important in terms of local biodiversity. This option also crosses Triumph and Fox plantations county wildlife site composed of a mixed broadleaved woodland. Protected species such as bats, badge otters are also likely to be present with the route corridor. The route would cross the river Wensum SAC although at existing bridge crossing.	r of burrow rs and	Quantitative Impact: N/A		Assessment: Moderate adverse
Water Environment Qualitative Impact: The route crosses two watercourses, the River Tud and the River Wensum, although the crossing over the River We would be using an existing bridge. Without specific measures the consequences of pollution and increased siltation river systems are significant. Approximately 1km of the road passes over a groundwater protection zone.	ensum	Quantitative Impact: N/A		Assessment: Moderate Adverse
Physical Fitness Qualitative Impact: A footpath/cycleway will be provided along the length of the road which may encourage walking/cycling. This route PROWs and a cycleway which may discourage pedestrians/equestrians/cyclists unless suitable crossing points are	severs 3	Quantitative Impact: Information on numbers of pedestrians, equestrians and cyclists is unavailable at this stage		Assessment: Slight beneficial impact
Journey Ambience Qualitative Impact: Uninterrupted travel on a modern dual carriageway through the countryside provides improved journey ambience. T provision of 4 at grade roundabouts along the route may impact on driver stress.		Quantitative Impact: N/A		Assessment: Large beneficial impact
Accidents Qualitative Impact: By transferring traffic from congested roads within the northern suburbs and surrounding rural lanes and villages on modern purpose-built road, it is estimated this option would bring about an annual saving of up to 60 casualties a ye	to a ear.	Quantitative Impact: Information on the number of Personal Injury Accidents over the 30 year assessment period is unavailable at this stage		Assessment: Large beneficial
Security Qualitative Impact: There will be a number of lay-bys at locations minimising security risks. At this stage it is not proposed to provide er telephones or lighting in the lay-bys. A footway/cycleway will be provided along the length of the new road but it will and may be separated from the road by landscaping. Bridges and underpasses will be designed for pedestrian and use where appropriate.	mergency not be lit	Quantitative Impact: N/A		Assessment: Neutral
Public Accounts Qualitative Impact:		Quantitative Ir	npact:	Assessment: PVC = £206.1M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Ir	npact:	Assessment: PVB = £346.0M (estimate)
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Ir	npact:	Assessment: PVB = £271.9M (estimate)
Reliability Qualitative Impact:		Quantitative Ir	npact:	Assessment: Large beneficial impact
Wider Economic Impacts Qualitative Impact: The scheme would enhance access to Norwich International Airport, and also aid development around the Norwich		Quantitative Ir N/A	npact:	Assessment: Slight beneficial impact
Option Value Qualitative Impact: No new transport options created by this scheme		Quantitative Impact: N/A		Assessment: Neutral
Severance Qualitative Impact: No communities are severed by this route. It severs 3 PROWs and a cycleway.		Quantitative Impact: N/A		Assessment: Slight adverse
Access to Transport System Qualitative Impact: May improve public transport through reduced congestion in the northern suburbs. Longer distance bus services m NDR to access the best corridor into the city.		Quantitative Ir N/A	npact:	Assessment: Slight beneficial impacts
Transport Interchange Qualitative Impact: This option would facilitate passenger and freight interchange at Norwich International Airport. It would also enhanc to the Park and Ride sites at the airport and possibly any Park and Ride site proposed on the A1067 corridor.	e access	Quantitative Ir N/A		Assessment: Slight beneficial impacts
Landuse Policies Qualitative Impact: The route will have a positive impact on policies for the development of Norwich airport, environmental improvemen urban areas and the enhancement of public highways. The route will have a negative impact on policies for the prof landscape, countryside and the environment, waste facilities and mineral resources.	ts to	Quantitative Impact: N/A		Assessment: Neutral
Other Policies Qualitative Impact: Would support policy objectives by facilitating inter-regional movement, economic growth, reducing peripherality and road safety standards. The agricultural land take and loss of trees and natural habitats would conflict with certain of	d higher	Quantitative Ir N/A	npact:	Assessment: Slight beneficial impacts

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Option: Frans Green Route	Description: Construction of the 17km long western half of a new dual carriageway with 4 at grade	PVC to Public: £82,785,480	Problems: - Congestion & slow journey times in Poliability and availability of hus as		
	and 2 grade separated junctions. Lane junction; north-eastwards to Breck Lane; northwards to Ringland Lane; along Marl H		 Reliability and availability of bus se Problems caused by traffic - nuisar air quality 		
	s the River Wensum to Deighton Hills; wide round the north of Thorpe Marriott; south-eas s between the airport and Horsham St. Faith.	twards south of Horsfor	 d - Population growth and new housing - Increasing economic growth and pr - Access to Norwich International Air 	osperity	
Noise Qualitative Impact:		Quantitativ	ve Impact:	Assessment:	
	es lie within 300m of the route option. At this stage the traffic information is unavailable berties lie within 300m of existing roads experiencing an increase or decrease in traffic level and the state of the st		on levels of noise is unavailable at this	163 properties within 300m of route	
Air Quality Qualitative Imp		Quantitativ	•	Assessment:	
are experienced up to 200n will not be breached. The s	Om of 94 properties, 12 of which fall within 50m. Impacts of traffic emissions on local air of n from the roadside. It is anticipated that the air quality limits and objectives for PM10 and scheme does not pass through an Air Quality Management Zone.	d NO2 unavailable	on quantities of PM10 and NO2 is at this stage	94 properties within 200m of route	
	ative Impact: ario CO2 emissions can be expected to increase. With this route option they will also be ant of the size of these increases is still to be carried out.	expected Information this stage	<pre>/e Impact: on the quantity of CO2 is unavailable at</pre>	Assessment: Adverse impact	
Landscape Qualitative Im	pact: ical of a mixed farmland disbursed with hamlets such as Weston Green. On the whole the	Quantitativ	ve Impact:	Assessment: Moderate adverse	
landscape can fairly easily	accommodate a new road. The route passes close to a small number of isolated properties, all of which would experience visual intrusion.				
Townscape Qualitative Im No townscape affected.	pact:	Quantitativ N/A	/e Impact:	Assessment: Neutral	
Heritage of Historic Reso		Quantitativ	/e Impact:	Assessment: Moderate adverse	
Inere are no ancient monu Morton Lodge.	ments or conservation areas that would be affected. The route would impact on the grad			Moderate adverse	
Biodiversity Qualitative In	nnact	Quantitativ	ve Impact [.]	Assessment:	
The route crosses through a which are all important in te such as bats are also likely	a relatively species rich woodland . Other small areas of woodland and hedgerows would rms of biodiversity. Badger setts have been recorded within the route corridor . Protected to be present. The route would cross the river Wensum SAC although at an existing bridge	l be lost N/A I species		Moderate adverse	
crossing.					
proposed improvements wo	er Wensum in the vicinity of an existing river crossing. If construction impacts are mitigat ould be marginally beneficial. Only 600m of the road passes over a groundwater protection	Quantitativeed theN/Aon zone,	/e Impact:	Assessment: Moderate Adverse	
but with adequate measure	s in place the groundwater would not be affected.				
Physical Fitness Qualitati	ve Impact: provided along the length of the road which may encourage walking/cycling. This route s	Quantitativ	ve Impact: on numbers of pedestrians, equestrians	Assessment: Slight beneficial impact	
PROWs and a cycleway wh	ich may discourage pedestrians/equestrians/cyclists unless suitable crossing points are	provided. and cyclists	s is unavailable at this stage		
	ative Impact: odern dual carriageway through the countryside provides improved journey ambience. T dabouts along the route may impact on driver stress.	he N/A	/e Impact:	Assessment: Large beneficial impact	
	act: congested roads within the northern suburbs and surrounding rural lanes and villages ont it is estimated this option would bring about an annual saving of up to 60 casualties a ye	ar. Accidents c	ve Impact: on the number of Personal Injury over the 30 year assessment period is at this stage	Assessment: Large beneficial	
telephones or lighting in the	ct: ay-bys at locations minimising security risks. At this stage it is not proposed to provide en e lay-bys. A footway/cycleway will be provided along the length of the new road but it will the road by landscaping. Bridges and underpasses will be designed for pedestrian and	not be lit	<i>v</i> e Impact:	Assessment: Neutral	
Public Accounts Qualitati	ve Impact:	Quantitativ	re Impact:	Assessment: PVC = £189.8M	
Transport Economic Effic	iency: Business Users and Transport Providers Qualitative Impact:	Quantitativ	ve Impact:	Assessment: PVB = £328.0M	
Transport Economic Effic	iency: Consumers Qualitative Impact:	Quantitativ	ve Impact:	Assessment: PVB = £257.7M	
Reliability Qualitative Imp	act:	Quantitativ	ve Impact:	Assessment: Large beneficial impact	
Wider Economic Impacts The scheme would enhance	Qualitative Impact: e access to Norwich International Airport, and also aid development around the Norwich	Quantitativ Area. N/A	/e Impact:	Assessment: Slight beneficial impact	
Option Value Qualitative I No new transport options c	•	Quantitativ N/A	ve Impact:	Assessment: Neutral	
Severance Qualitative Imp	pact:	Quantitativ	ve Impact:	Assessment:	
No communities are severe	d by this route. It severs 3 PROWs and a cycleway.	N/A		Slight adverse	
Access to Transport Syst May improve public transpo NDR to access the best cor	rt through reduced congestion in the northern suburbs. Longer distance bus services ma	ay use the N/A	ve Impact:	Assessment: Slight beneficial impacts	
Transport Interchange Qu This option would facilitate to the Park and Ride sites a	nalitative Impact: passenger and freight interchange at Norwich International Airport. It would also enhance at the airport and possibly any Park and Ride site proposed on the A1067 corridor.	e access N/A	re Impact:	Assessment: Slight beneficial impacts	
urban areas and the enhan	ive Impact: ve impact on policies for the development of Norwich airport, environmental improvement cement of public highways. The route will have a negative impact on policies for the prote the environment and mineral resources.	s to N/A ection of	/e Impact:	Assessment: Neutral	
Other Policies Qualitative	Impact: tives by facilitating inter-regional movement, economic growth, reducing peripherality and	Quantitativ	ve Impact:	Assessment: Slight beneficial impacts	

PRELIMINARY APPRAIS Option:	Description:	PVC to	Public:	Problems:	
Alternative Frans Green Route	Construction of the 17km long western half of a new dual carriageway with 4 at and 2 grade separated junctions.		94,675 - Congestion & slow journey times in - Reliability and availability of bus set		vices
From the A47 at the Wood Lane junction; north-eastwards to Breck Lane; northwards to Ringland Lane; along Marl Hill Lane to the A10 Ilong the A1067 and across the River Wensum to Fakenham Road, Attlebridge; eastwards Reepham Road; wide round the north of Th Ilarriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.					
	: ties lie within 300m of the route option. At this stage the traffic information is unavai operties lie within 300m of existing roads experiencing an increase or decrease in tra		Quantitative I Information or stage	Impact: In levels of noise is unavailable at this	Assessment: 197 properties within 300m of route
are experienced up to 200	apact: D0m of 103 properties, 9 of which fall within 50m. Impacts of traffic emissions on loo m from the roadside. It is anticipated that the air quality limits and objectives for PN scheme does not pass through an Air Quality Management Zone.		Quantitative Impact: Information on quantities of PM10 and NO2 is unavailable at this stage		Assessment: 103 properties within 200m of route
to increase. The assessm	nario CO2 emissions can be expected to increase. With this route option they will all ent of the size of these increases is still to be carried out.	lso be expected	Quantitative Impact: Information on the quantity of CO2 is unavailable at this stage		Assessment: Adverse impact
	npact: pical of a mixed farmland disbursed with hamlets such as Weston Green. The route ed properties and to the north of Thorpe Marriott, all of which would experience visu		Quantitative I N/A	Impact:	Assessment: Moderate adverse
Townscape Qualitative In No townscape affected.	npact:		Quantitative I N/A	Impact:	Assessment: Neutral
-	ources Qualitative Impact: uments or conservation areas that would be affected. The route would impact on th	e grade II listed	Quantitative I N/A	Impact:	Assessment: Moderate adverse
county wildlife site composion lost which are all importan	mpact: a relatively species rich woodland. This option also crosses Triumph and Foxburro sed of a mixed broadleaved woodland. Other small areas of woodland and hedgero t in terms of biodiversity. Badger setts have be recorded within the route corridor . P otters are also likely to be present. The route would cross the river Wensum SAC al	ws would be Protected	Quantitative Impact: N/A		Assessment: Moderate adverse
proposed improvements w	itative Impact: ver Wensum in the vicinity of an existing river crossing. If construction impacts are vould be marginally beneficial. Only 600m of the road passes over a groundwater pr es in place the groundwater would not be affected.	mitigated the rotection zone,	Quantitative Impact: N/A		Assessment: Moderate Adverse
Physical Fitness Qualita A footpath/cycleway will be PROWs and a cycleway w	tive Impact: e provided along the length of the road which may encourage walking/cycling. This thich may discourage pedestrians/equestrians/cyclists unless suitable crossing poin	route severs 4 ts are provided.	Quantitative Impact: Information on numbers of pedestrians, equestrians and cyclists is unavailable at this stage		Assessment: Slight beneficial impact
	tative Impact: nodern dual carriageway through the countryside provides improved journey ambier ndabouts along the route may impact on driver stress.	nce. The	Quantitative Impact: N/A		Assessment: Large beneficial impact
Accidents Qualitative Im By transferring traffic from modern purpose-built roac	pact: congested roads within the northern suburbs and surrounding rural lanes and villag I, it is estimated this option would bring about an annual saving of up to 60 casualtion	jes onto a es a year.	Quantitative Impact: Information on the number of Personal Injury Accidents over the 30 year assessment period is unavailable at this stage		Assessment: Large beneficial
telephones or lighting in th	act: lay-bys at locations minimising security risks. At this stage it is not proposed to prove lay-bys. A footway/cycleway will be provided along the length of the new road bu n the road by landscaping. Bridges and underpasses will be designed for pedestria	t it will not be lit	Quantitative Impact: N/A		Assessment: Neutral
Public Accounts Qualita	tive Impact:		Quantitative Impact:		Assessment: PVC = £190.9M (estimate)
Fransport Economic Effi	ciency: Business Users and Transport Providers Qualitative Impact:		Quantitative	Impact:	Assessment: PVB = £328.0M (estimate)
Fransport Economic Effi	ciency: Consumers Qualitative Impact:		Quantitative Impact:		Assessment: PVB = £257.7M (estimate)
Reliability Qualitative Im	pact:		Quantitative Impact:		Assessment: Large beneficial impact
Wider Economic Impacts The scheme would enhan	s Qualitative Impact: ce access to Norwich International Airport, and also aid development around the No	prwich Area.	Quantitative Impact:		Assessment: Slight beneficial impact
Option Value Qualitative	•		Quantitative Impact: N/A		Assessment: Neutral
Severance Qualitative Im	•		N/A Quantitative Impact: N/A		Assessment: Slight adverse
Access to Transport Sys May improve public transp NDR to access the best co	ort through reduced congestion in the northern suburbs. Longer distance bus servi	ces may use the	Quantitative I N/A	Impact:	Assessment: Slight beneficial impacts
to the Park and Ride sites	passenger and freight interchange at Norwich International Airport. It would also e at the airport and possibly any Park and Ride site proposed on the A1067 corridor.		Quantitative I N/A	-	Assessment: Slight beneficial impacts
urban areas and the enha	ative Impact: ive impact on policies for the development of Norwich airport, environmental improvincement of public highways. The route will have a negative impact on policies for the difference of the environment, waste facilities and mineral resources.	vements to he protection of	Quantitative Impact: N/A		Assessment: Neutral
	e Impact: ctives by facilitating inter-regional movement, economic growth, reducing peripheral e agricultural land take and loss of trees and natural habitats would conflict with cer		Quantitative N/A	Impact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SI	JMMARY TABLES				
Easton to Morton Route C	rescription: construction of the 18km long western half of a new dual carriageway with 3 at grad nd 2 grade separated junctions.		Public: 3,052	Problems: - Congestion & slow journey times in - Reliability and availability of bus ser	vices
Lane; north-eastwards and acro	of the Easton roundabout; north-westwards across the River Tud to Breck Lane; n iss the River Wensum to the A1067 at the Fakenham Road junction; along the A10 Marriott; south-eastwards south of Horsford to the A140; then eastwards between t	67 and to De	eighton Hills;	 Problems caused by traffic - nuisand air quality Population growth and new housing Increasing economic growth and pro Access to Norwich International Airp 	development sperity
Noise Qualitative Impact:			Quantitative I	npact:	Assessment:
	e within 300m of the route option. At this stage the traffic information is unavailable as lie within 300m of existing roads experiencing an increase or decrease in traffic l		Information on stage	levels of noise is unavailable at this	149 properties within 300m of route
experienced up to 200m from th	f 62 properties, 7 of which fall within 50m. Impacts of traffic emissions on local air e roadside. It is anticipated that the air quality limits and objectives for PM10 and I does not pass through an Air Quality Management Zone.		Quantitative In Information on unavailable at	quantities of PM10 and NO2 is	Assessment: 62 properties within 200m of route
	e Impact: CO2 emissions can be expected to increase. With this route option they will also be f the size of these increases is still to be carried out.	e expected	Quantitative Impact: Information on the quantity of CO2 is unavailable at this stage		Assessment: Adverse impact
arable farmland. Visual intrusion	: ne enclosed river valleys the landscape is mostly extensive and largely feature less n would be experienced by a small number of properties close to the road including npact could be mitigated during detailed design stages of the scheme.		Quantitative Impact: N/A		Assessment: Moderate adverse
Townscape Qualitative Impac No townscape affected.	t:		Quantitative II N/A	npact:	Assessment: Neutral
Church of St Peter, a grade I lis	s Qualitative Impact: Ints or conservation areas that would be affected. The road may detract from the set ted building, although it is already situated adjacent to the A47. Morton Hall's (grac sted by the alignment of the road.		Quantitative In N/A	npact:	Assessment: Moderate adverse
which is listed as a county wildli	et: on the River Wensum SAC. The route passes through a substantial area of woodla fe site. A number of hedgerows would be lost that are important in terms of local b badgers and otters are also likely to be present with the route corridor.		Quantitative Impact: N/A		Assessment: Severe Adverse
to an existing one. Without spe	e Impact: urses the River Tud and the River Wensum with the crossing over the River Wensu cific measures the consequences of pollution and increased siltation within the rive km of the road passes over a groundwater protection zone.		Quantitative Impact: N/A		Assessment: Severe adverse
Physical Fitness Qualitative In A footpath/cycleway will be prov PROWs and a cycleway which i	npact: ided along the length of the road which may encourage walking/cycling. This route may discourage pedestrians/equestrians/cyclists unless suitable crossing points are	e severs 2 e provided.	Quantitative Impact: Information on numbers of pedestrians, equestrians and cyclists is unavailable at this stage		Assessment: Slight beneficial impact
	e Impact: n dual carriageway through the countryside provides improved journey ambience. puts along the route may impact on driver stress.	The	Quantitative Impact: N/A		Assessment: Large beneficial impact
	ested roads within the northern suburbs and surrounding rural lanes and villages or estimated this option would bring about an annual saving of up to 60 casualties a		Quantitative Impact: Information on the number of Personal Injury Accidents over the 30 year assessment period is unavailable at this stage		Assessment: Large beneficial
telephones or lighting in the lay-	as at locations minimising security risks. At this stage it is not proposed to provide obys. A footway/cycleway will be provided along the length of the new road but it will road by landscaping. Bridges and underpasses will be designed for pedestrian an	ill not be lit	Quantitative Impact: N/A		Assessment: Neutral
Public Accounts Qualitative In	npact:		Quantitative Impact:		Assessment: PVC = £181.3M (estimate)
	y: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:		Assessment: PVB = £346.0M (estimate)
	y: Consumers Qualitative Impact:		Quantitative Impact:		Assessment: PVB = £271.9M (estimate)
Reliability Qualitative Impact: Wider Economic Impacts Qua	litative Impact:		Quantitative I	·	Assessment: Large beneficial impact Assessment:
The scheme would enhance ac	cess to Norwich International Airport, and also aid development around the Norwich	n Area.	Quantitative Impact: N/A		Slight beneficial impact
Option Value Qualitative Impa No new transport options create			Quantitative Impact: N/A		Assessment: Neutral
Severance Qualitative Impact: No communities are severed by	this route. It severs 2 PROWs and a cycleway.		Quantitative Impact: N/A		Assessment: Slight adverse
Access to Transport System (May improve public transport th NDR to access the best corridor	rough reduced congestion in the northern suburbs. Longer distance bus services r	nay use the	Quantitative Impact: N/A		Assessment: Slight beneficial impacts
Transport Interchange Qualita This option would facilitate pass to the Park and Ride sites at the	ative Impact: enger and freight interchange at Norwich International Airport. It would also enhar e airport and possibly any Park and Ride site proposed on the A1067 corridor.	ice access	Quantitative I N/A	npact:	Assessment: Slight beneficial impacts
urban areas and the enhancem	mpact: upact on policies for the development of Norwich airport, environmental improveme ent of public highways. The route will have a negative impact on policies for the pro environment and mineral resources.	nts to otection of	Quantitative Impact: N/A		Assessment: Neutral
	act: by facilitating inter-regional movement, economic growth, reducing peripherality ar icultural land take and loss of trees and natural habitats would conflict with certain o		Quantitative In N/A	npact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISA			Deckloser	
Option: Wood Lane Route	Description: Construction of the 17km long western half of a new dual carriageway with 4 at grade and 2 grade separated junctions.	PVC to Public: £86,201,042	Problems: - Congestion & slow journey times in - Reliability and availability of bus se	rvices
the A1067; along the A106	Lane junction; north-eastwards following Wood Lane to Weston Longville; north-eastwards a 7 and across the River Wensum to Deighton Hills; wide round the north of Thorpe Marriott; s en eastwards between the airport and Horsham St. Faith.			g development osperity
Noise Qualitative Impact:			ive Impact:	Assessment:
	es lie within 300m of the route option. At this stage the traffic information is unavailable perties lie within 300m of existing roads experiencing an increase or decrease in traffic levels		n on levels of noise is unavailable at this	251 properties within 300m of route
The route passes within 200m of 127 properties, 24 of which fall within 50m. Impacts of traffic emissions on local air quality		ality Informatio	ive Impact: n on quantities of PM10 and NO2 is e at this stage	Assessment: 127 properties within 200m of route
	tative Impact: ario CO2 emissions can be expected to increase. With this route option they will also be expense of these increases is still to be carried out.		i ve Impact: n on the quantity of CO2 is unavailable at	Assessment: Adverse impact
the whole the landscape ca along very rural road. The r Marriott, all of which would	pact: bical of a mixed farmland disbursed with hamlets such as Weston Green and Weston Longvi an fairly easily accommodate a new road, although the section between the A47 and the A11 route passes close to a small number of isolated properties and properties to the north of Th experience visual intrusion. However, the most severe visual intrusion will occur to properties b Longville which are difficult to mitigate due to the close proximity of the road.	le. On N/A 067 is orpe	ive Impact:	Assessment: Moderate adverse
Townscape Qualitative In No townscape affected.	npact:	Quantitat	ive Impact:	Assessment: Neutral
Heritage of Historic Reso	urces Qualitative Impact:		ive Impact:	Assessment:
No ancient monuments or o	conservation areas are affected. A number of buildings within Western Longville are listed. versely affected. The route would impact on the grade II listed Morton Lodge.			Moderate adverse
important in terms of biodiv	npact: wo county wildlife sites. Other small areas of woodland and hedgerows would be lost which rersity. Badger setts have be recorded within the route corridor . Protected species such as b t. The route would cross the River Wensum SAC although at an existing bridge crossing.	are all N/A	ive Impact:	Assessment: Moderate adverse
proposed improvements we	tative Impact: rer Wensum in the vicinity of an existing river crossing. If construction impacts are mitigated buld be marginally beneficial. Only 600m of the road passes over a groundwater protection : is in place the groundwater would not be affected.	the N/A	ive Impact:	Assessment: Moderate Adverse
Physical Fitness Qualitation A footpath/cycleway will be PROWs and a cycleway whether the provide the provided the provide	ive Impact: provided along the length of the road which may encourage walking/cycling. This route sev nich may discourage pedestrians/equestrians/cyclists unless suitable crossing points are pro	ers 2 Informatio	ive Impact: n on numbers of pedestrians, equestrians ts is unavailable at this stage	Assessment: Slight beneficial impact
	ative Impact: nodern dual carriageway through the countryside provides improved journey ambience. The ndabouts along the route may impact on driver stress.	Quantitat N/A	ive Impact:	Assessment: Large beneficial impact
	pact: congested roads within the northern suburbs and surrounding rural lanes and villages onto a it is estimated this option would bring about an annual saving of up to 60 casualties a year.	Informatio Accidents	ive Impact: n on the number of Personal Injury over the 30 year assessment period is e at this stage	Assessment: Large beneficial
telephones or lighting in the	ct: ay-bys at locations minimising security risks. At this stage it is not proposed to provide emer e lay-bys. A footway/cycleway will be provided along the length of the new road but it will no n the road by landscaping. Bridges and underpasses will be designed for pedestrian and cyc	gency N/A	ive Impact:	Assessment: Neutral
Public Accounts Qualitat	ive Impact:	Quantitati	ive Impact:	Assessment: PVC = £191.1M (estimate)
Transport Economic Effic	eiency: Business Users and Transport Providers Qualitative Impact:	Quantitat	ive Impact:	Assessment: PVB = £328.0M (estimate)
	eiency: Consumers Qualitative Impact:		ive Impact:	Assessment: PVB = £257.7M (estimate)
Reliability Qualitative Imp	pact:	Quantitat	ive Impact:	Assessment: Large beneficial impact
Wider Economic Impacts The scheme would enhance	Qualitative Impact: e access to Norwich International Airport, and also aid development around the Norwich Are		ive Impact:	Assessment: Slight beneficial impact
Option Value Qualitative	•	Quantitati N/A	ive Impact:	Assessment: Neutral
Severance Qualitative Im			ive Impact:	Assessment: Severe adverse impact
Access to Transport Syst May improve public transpondent NDR to access the best co	ort through reduced congestion in the northern suburbs. Longer distance bus services may		ive Impact:	Assessment: Slight beneficial impacts
Transport Interchange Qu This option would facilitate to the Park and Ride sites a	Jalitative Impact: passenger and freight interchange at Norwich International Airport. It would also enhance a at the airport and possibly any Park and Ride site proposed on the A1067 corridor.		ive Impact:	Assessment: Slight beneficial impacts
urban areas and the enhan	tive Impact: we impact on policies for the development of Norwich airport, environmental improvements to cement of public highways. The route will have a negative impact on policies for the protect of the environment and mineral resources.	N/A	ive Impact:	Assessment: Neutral
	• Impact: tives by facilitating inter-regional movement, economic growth, reducing peripherality and hi • agricultural land take and loss of trees and natural habitats would conflict with certain object	gher N/A	ive Impact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES Option: Description:	F	VC to Public:	Problems:	
Sandy Lane Route Construction of the 20km long western half of a		101,379,965	- Congestion & slow journey times in	
and 2 grade separated junctions. From the A47 east of the Sandy Lane junction; northwards following Sandy La along Hockering Road to the A1067; along the A1067 and across the River W Marriott; south-eastwards south of Horsford to the A140; then eastwards betw	ensum to Deighton Hills; wide round the nor		 Reliability and availability of bus set Problems caused by traffic - nuisan air quality Population growth and new housing Increasing economic growth and pr Access to Norwich International Air 	ce to residents, busy roads, poo g development osperity
Noise Qualitative Impact: Approximately 324 properties lie within 300m of the route option. At this stage determining how many properties lie within 300m of existing roads experiencir more than 25%.			Impact: n levels of noise is unavailable at this	Assessment: 324 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 140 properties, 23 of which fall within 50m. I are experienced up to 200m from the roadside. It is anticipated that the air qu will not be breached. The scheme does not pass through an Air Quality Mana	ality limits and objectives for PM10 and NO2		n quantities of PM10 and NO2 is	Assessment: 140 properties within 200m of route
Greenhouse Gases Qualitative Impact: With the do-minimum scenario CO2 emissions can be expected to increase. Note to increase. Note to increase increases is still to be carried to increase.	, , , ,	cted Information or this stage	Impact: In the quantity of CO2 is unavailable at	Assessment: Adverse impact
Landscape Qualitative Impact: Landscape features are typical of a mixed farmland disbursed with hamlets su whole the landscape can fairly easily accommodate an improved standard of r Wensum at Lenwade where the valley landscape is of high quality. The route p properties, Weston Hall and to the north of Thorpe Marriott all of which would	oad. The exception to this is within the passes close to a small number of isolated f		Impact:	Assessment: Moderate adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative N/A	Impact:	Assessment: Neutral
Heritage of Historic Resources Qualitative Impact: There are no ancient monuments or conservation areas that would be affected Weston Hall, a grade II listed building. The integrity of the historic parkland of setting in the wider landscape would deteriorate due to its proximity to the new listed Morton Lodge.	Weston Hall would not be affected, however		Impact:	Assessment: Moderate adverse
Biodiversity Qualitative Impact: The route crosses through the Wensum valley for over 1km at Lenwade. This of woodland, hedgerows and marshy meadow would be lost which are all impo species such as bats and otters are also likely to be present.			Impact:	Assessment: Severe Adverse
Water Environment Qualitative Impact: The route will cross the River Wensum at an existing river crossing. If constru improvements would be marginally beneficial. The majority of the route passes Norwich with it source of water.	nction impacts are mitigated the proposed s over the major chalk aquifer supplying	Quantitative N/A	Impact:	Assessment: Moderate Adverse
Physical Fitness Qualitative Impact: A footpath/cycleway will be provided along the length of the road which may energy and a cycleway which may discourage pedestrians/equestrians/cyclis	ncourage walking/cycling. This route severs ts unless suitable crossing points are provic	Quantitative s 2 Information or and cyclists is	Impact: n numbers of pedestrians, equestrians s unavailable at this stage	Assessment: Slight beneficial impact
Journey Ambience Qualitative Impact: Uninterrupted travel on a modern dual carriageway through the countryside proprovision of 5 at grade roundabouts along the route may impact on driver stress		Quantitative N/A	Impact:	Assessment: Moderate beneficial impact
Accidents Qualitative Impact: By transferring traffic from congested roads within the northern suburbs and su modern purpose-built road, it is estimated this option would bring about an an			n the number of Personal Injury er the 30 year assessment period is	Assessment: Large beneficial
Security Qualitative Impact: There will be a number of lay-bys at locations minimising security risks. At this telephones or lighting in the lay-bys. A footway/cycleway will be provided alon and may be separated from the road by landscaping. Bridges and underpasse use where appropriate.	g the length of the new road but it will not be	e lit	Impact:	Assessment: Neutral
Public Accounts Qualitative Impact:		Quantitative	Impact:	Assessment: PVC = £212.8M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers	roviders Qualitative Impact: Quantitative Impact:		Assessment: PVB = £318.8M (estimate)	
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative	Impact:	Assessment: PVB = £250.6M (estimate)
Reliability Qualitative Impact:		Quantitative	Impact:	Assessment: Large beneficial impact
Wider Economic Impacts Qualitative Impact: The scheme would enhance access to Norwich International Airport, and also	aid development around the Norwich Area.	Quantitative Impact: h Area. N/A		Assessment: Slight beneficial impact
Option Value Qualitative Impact: No new transport options created by this scheme		Quantitative N/A	Impact:	Assessment: Neutral
Severance Qualitative Impact: No communities are severed by this route. It severs 2 PROWs and a cyclewa	у.	Quantitative N/A	Impact:	Assessment: Slight adverse impact
Access to Transport System Qualitative Impact: May improve public transport through reduced congestion in the northern subu NDR to access the best corridor into the city.	urbs. Longer distance bus services may use	e the N/A	Impact:	Assessment: Slight beneficial impacts
Transport Interchange Qualitative Impact: This option would facilitate passenger and freight interchange at Norwich Inter to the Park and Ride sites at the airport and possibly any Park and Ride site p			-	Assessment: Slight beneficial impacts
Landuse Policies Qualitative Impact: The route will have a positive impact on policies for the development of Norwig urban areas and the enhancement of public highways. The route will have a r andscape, countryside and the environment, waste facilities and mineral reso	negative impact on policies for the protection	Quantitative N/A	Impact:	Assessment: Neutral
Other Policies Qualitative Impact: Would support policy objectives by facilitating inter-regional movement, econo road safety standards. The agricultural land take and loss of trees and natural			Impact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES Option: Description: Hockering to Lenwade Construction of the 20km long western half of a new dual carriageway with 5 at gra and 2 grade separated junctions. From the A47 at the junction with The Street; northwards following Heath Road; northwards along Hockering Road Ad007 and acreate the Direct Wards to Except the provide the parts of Theorem Marineth worth and the parts of Theorem Marineth wort	ade £100,68 ad to the A1067	7; along the air quality		services ance to residents, busy roads, poor	
A1067 and across the River Wensum to Deighton Hills; wide round the north of Thorpe Marriott; south-eastwards A140; then eastwards between the airport and Horsham St. Faith.	south of Horst	ord to the	 Population growth and new housing Increasing economic growth and pre- Access to Norwich International Airp 	osperity	
Noise Qualitative Impact: Approximately 375 properties lie within 300m of the route option. At this stage the traffic information is unavailabl determining how many properties lie within 300m of existing roads experiencing an increase or decrease in traffic more than 25%.		Quantitative	mpact: n levels of noise is unavailable at this	Assessment: 375 properties within 300m of route	
Air Quality Qualitative Impact: The route passes within 200m of 175 properties, 36 of which fall within 50m. Impacts of traffic emissions on local are experienced up to 200m from the roadside. It is anticipated that the air quality limits and objectives for PM10 will not be breached. The scheme does not pass through an Air Quality Management Zone.		Quantitative Impact: Information on quantities of PM10 and NO2 is unavailable at this stage		Assessment: 175 properties within 200m of route	
Greenhouse Gases Qualitative Impact: With the do-minimum scenario CO2 emissions can be expected to increase. With this route option they will also be to increase. The assessment of the size of these increases is still to be carried out.	be expected	Quantitative Impact: Information on the quantity of CO2 is unavailable at this stage		Assessment: Adverse impact	
Landscape Qualitative Impact: Landscape features are typical of a mixed farmland disbursed with hamlets such as Frans Green and Green Gate whole the landscape can fairly easily accommodate an improved standard of road. The exception to this is within Wensum at Lenwade where the valley landscape is of high quality. The route passes close to a small number of is properties, Weston Hall and to the north of Thorpe Marriott all of which would experience visual intrusion.	n the	Quantitative Impact: N/A		Assessment: Moderate adverse	
Townscape Qualitative Impact: No townscape affected.		Quantitative N/A	mpact:	Assessment: Neutral	
Heritage of Historic Resources Qualitative Impact: There are no scheduled ancient monuments or conservation areas that would be affected. The road may detract f setting of both Weston Hall and Overgate House, both grade II listed buildings. The integrity of the historic parklar Weston Hall would not be affected however it setting in the wider landscape would deteriorate due to its proximity road. The route would impact on the grade II listed Morton Lodge.	nd of	Quantitative N/A	mpact:	Assessment: Moderate Adverse	
Biodiversity Qualitative Impact: The route crosses through the Wensum valley for over 1km at Lenwade. This area is rich in flora and fauna. Sm of woodland, hedgerows and marshy meadow would be lost which are all important in terms of local biodiversity. I species such as bats and otters are also likely to be present.		Quantitative Impact: N/A		Assessment: Severe Adverse	
Water Environment Qualitative Impact: The route will cross the River Wensum at an existing river crossing. It also impacts upon a tributary (Blackwater? River Wensum. If construction impacts are mitigated the proposed improvements would be marginally beneficial. majority of the route passes over the major chalk aquifer supplying Norwich with it's source of water.		Quantitative Impact: N/A		Assessment: Moderate Adverse	
Physical Fitness Qualitative Impact: A footpath/cycleway will be provided along the length of the road which may encourage walking/cycling. This rout PROWs and a cycleway which may discourage pedestrians/equestrians/cyclists unless suitable crossing points a		Quantitative Impact: Information on numbers of pedestrians, equestrians and cyclists is unavailable at this stage		Assessment: Slight beneficial impact	
Journey Ambience Qualitative Impact: Uninterrupted travel on a modern dual carriageway through the countryside provides improved journey ambience. provision of 5 at grade roundabouts along the route may impact on driver stress.	. The	Quantitative Impact: N/A		Assessment: Moderate beneficial impact	
Accidents Qualitative Impact: By transferring traffic from congested roads within the northern suburbs and surrounding rural lanes and villages of modern purpose-built road, it is estimated this option would bring about an annual saving of up to 60 casualties a		Quantitative Impact: Information on the number of Personal Injury Accidents over the 30 year assessment period is unavailable at this stage		Assessment: Large beneficial	
Security Qualitative Impact: There will be a number of lay-bys at locations minimising security risks. At this stage it is not proposed to provide telephones or lighting in the lay-bys. A footway/cycleway will be provided along the length of the new road but it v and may be separated from the road by landscaping. Bridges and underpasses will be designed for pedestrian at use where appropriate.	will not be lit	Quantitative Impact: N/A		Assessment: Neutral	
Public Accounts Qualitative Impact:		Quantitative Impact:		Assessment: PVC = £210.7M	
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:		Assessment: PVB = £309.8M	
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:		Assessment: PVB = £243.4M	
Reliability Qualitative Impact:		Quantitative Impact:		Assessment: Large beneficial impact	
Wider Economic Impacts Qualitative Impact: The scheme would enhance access to Norwich International Airport, and also aid development around the Norwich	ch Area.	Quantitative Impact: N/A		Assessment: Slight beneficial impact	
ption Value Qualitative Impact: o new transport options created by this scheme		Quantitative Impact: N/A		Assessment: Neutral	
Severance Qualitative Impact: No communities are severed by this route. It severs 4 PROWs and a cycleway.		Quantitative Impact: N/A		Assessment: Slight adverse impact	
Access to Transport System Qualitative Impact: May improve public transport through reduced congestion in the northern suburbs. Longer distance bus services NDR to access the best corridor into the city.	may use the	Quantitative Impact: N/A		Assessment: Slight beneficial impacts	
Transport Interchange Qualitative Impact: This option would facilitate passenger and freight interchange at Norwich International Airport. It would also enhat to the Park and Ride sites at the airport and possibly any Park and Ride site proposed on the A1067 corridor.	ance access	Quantitative N/A	Impact:	Assessment: Slight beneficial impacts	
Landuse Policies Qualitative Impact: The route will have a positive impact on policies for the development of Norwich airport, environmental improvement urban areas and the enhancement of public highways. The route will have a negative impact on policies for the p landscape, countryside and the environment, waste facilities and mineral resources.	ents to protection of	Quantitative Impact: N/A		Assessment: Neutral	
Other Policies Qualitative Impact: Would support policy objectives by facilitating inter-regional movement, economic growth, reducing peripherality a road safety standards. The agricultural land take and loss of trees and natural habitats would conflict with certain		Quantitative N/A	mpact:	Assessment: Slight beneficial impacts	

PRELIMINARY APPRAISAL SUMMARY TABLES Option: Description: PVC to	o Public:	Problems:	
cockering to Attlebridge Construction of the 18km long western half of a new dual carriageway with 4 at grade £88, and 2 grade separated junctions. com the A47 at the junction with The Street; northwards to Weston Green Road; north-eastwards to Weston Longville; northong Marl Hill Lane to the A1067; along the A1067 and across the River Wensum to Deighton Hills; wide round the north of T		 Problems: Congestion & slow journey times in built up areas Reliability and availability of bus services Problems caused by traffic - nuisance to residents, busy roads, poc air quality Population growth and new housing development 	
south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.		 Increasing economic growth and pro Access to Norwich International Airp 	osperity
Noise Qualitative Impact:	Quantitative I	mpact:	Assessment:
Approximately 284 properties lie within 300m of the route option. At this stage the traffic information is unavailable determining how many properties lie within 300m of existing roads experiencing an increase or decrease in traffic levels of more than 25%.	Information on stage	levels of noise is unavailable at this	284 properties within 300m of route
Air Quality Qualitative Impact:	Quantitative I	•	Assessment:
The route passes within 200m of 115 properties, 12 of which fall within 50m. Impacts of traffic emissions on local air quality are experienced up to 200m from the roadside. It is anticipated that the air quality limits and objectives for PM10 and NO2 will not be breached. The scheme does not pass through an Air Quality Management Zone.	unavailable at		115 properties within 200m of route
Greenhouse Gases Qualitative Impact: With the do-minimum scenario CO2 emissions can be expected to increase. With this route option they will also be expected to increase. The assessment of the size of these increases is still to be carried out.	Quantitative I Information on this stage	mpact: the quantity of CO2 is unavailable at	Assessment: Adverse impact
Landscape Qualitative Impact: _andscape features are typical of a mixed farmland disbursed with hamlets such as Weston Green and Weston Longville. On the whole the landscape can fairly easily accommodate a new road. The route passes close to a small number of isolated	Quantitative I N/A	mpact:	Assessment: Moderate adverse
properties and properties to the north of Thorpe Marriott all of which would experience visual intrusion. However the most severe visual intrusion will occur to properties at Weston Longville where it is difficult to mitigate due to the close proximity of the road.			
Fownscape Qualitative Impact: No townscape affected.	Quantitative I N/A	mpact:	Assessment: Neutral
Heritage of Historic Resources Qualitative Impact:	Quantitative I	mpact:	Assessment:
No ancient monuments or conservation areas are affected. The setting of Overgate House (grade II) may be affected, as would the listed buildings in Weston Longville. The route would impact on the grade II listed Morton Lodge.	N/A		Moderate adverse
Biodiversity Qualitative Impact: Small areas of woodland would be lost and a significant number hedgerows would be severed, all of which are important in	Quantitative I	mpact:	Assessment: Moderate adverse
erms of local biodiversity. Protected species such as bats are also likely to be present.	N/A		
Nater Environment Qualitative Impact:	Quantitative I	mpact:	Assessment:
The route will cross the River Wensum at an existing river crossing. If construction impacts are mitigated the proposed mprovements would be marginally beneficial. Only 600m of the road passes over a ground water protection zone. However, with adequate measures in place the groundwater would not be affected. All of the route is under the major chalk aquifer supplying Norwich and the surrounding area with it's water.	N/A		Moderate Adverse
Physical Fitness Qualitative Impact:	Quantitative Impact:		Assessment:
A footpath/cycleway will be provided along the length of the road which may encourage walking/cycling. This route severs 4 PROWs and a cycleway which may discourage pedestrians/equestrians/cyclists unless suitable crossing points are provided.	Information on numbers of pedestrians, equestrians and cyclists is unavailable at this stage		Slight beneficial impact
Journey Ambience Qualitative Impact: Uninterrupted travel on a modern dual carriageway through the countryside provides improved journey ambience. The provision of 4 at grade roundabouts along the route may impact on driver stress.	Quantitative Impact: N/A		Assessment: Large beneficial impact
Accidents Qualitative Impact: By transferring traffic from congested roads within the northern suburbs and surrounding rural lanes and villages onto a nodern purpose-built road, it is estimated this option would bring about an annual saving of up to 60 casualties a year.	Quantitative Impact: Information on the number of Personal Injury Accidents over the 30 year assessment period is unavailable at this stage		Assessment: Large beneficial
Security Qualitative Impact: There will be a number of lay-bys at locations minimising security risks. At this stage it is not proposed to provide emergency telephones or lighting in the lay-bys. A footway/cycleway will be provided along the length of the new road but it will not be lit and may be separated from the road by landscaping. Bridges and underpasses will be designed for pedestrian and cyclist	Quantitative Impact: N/A		Assessment: Neutral
use where appropriate. Public Accounts Qualitative Impact:	Quantitative Impact:		Assessment: PVC = £194.7M (estimate)
ransport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:	nd Transport Providers Qualitative Impact: Quantitative Impact:		Assessment:
Fransport Economic Efficiency: Consumers Qualitative Impact:	Quantitative Impact:		PVB = £318.8M (estimate) Assessment: PVB = £250.6M (estimate)
Reliability Qualitative Impact:	Quantitative Impact:		Assessment:
Vider Economic Impacts Qualitative Impact: The scheme would enhance access to Norwich International Airport, and also aid development around the Norwich Area.	Quantitative Impact:		Large beneficial impact Assessment: Slight beneficial impact
Option Value Qualitative Impact:	Quantitative Impact:		Assessment:
No new transport options created by this scheme Severance Qualitative Impact:	N/A		Neutral
beverance Qualitative Impact: This route bisects the village of Weston Longville. It severs 4 PROWs and a cycleway.	Quantitative Impact: N/A		Assessment: Severe adverse impact
Access to Transport System Qualitative Impact: May improve public transport through reduced congestion in the northern suburbs. Longer distance bus services may use the NDR to access the best corridor into the city.	Quantitative I N/A	mpact:	Assessment: Slight beneficial impacts
Fransport Interchange Qualitative Impact: This option would facilitate passenger and freight interchange at Norwich International Airport. It would also enhance access o the Park and Ride sites at the airport and possibly any Park and Ride site proposed on the A1067 corridor.	Quantitative I N/A	mpact:	Assessment: Slight beneficial impacts
Landuse Policies Qualitative Impact: The route will have a positive impact on policies for the development of Norwich airport, environmental improvements to urban areas and the enhancement of public highways. The route will have a negative impact on policies for the protection of andscape, countryside and the environment and mineral resources.	Quantitative Impact: N/A		Assessment: Neutral
Other Policies Qualitative Impact: Vould support policy objectives by facilitating inter-regional movement, economic growth, reducing peripherality and higher oad safety standards. The agricultural land take and loss of trees and natural habitats would conflict with certain objectives.	Quantitative I N/A	mpact:	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES Option: Description: PV	to Public:	Problems:		
Hockering to Ringland Route Construction of the 16km long western half of a new dual carriageway with 2 at grade £76	969,475 - Congestion & slow journey times ir			
and 2 grade separated junctions.		 Reliability and availability of bus ser Problems caused by traffic - nuisan 		
round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Hors Faith.		air quality - Population growth and new housing		
ı anı.		 Increasing economic growth and pro- Access to Norwich International Airp 		
Noise Qualitative Impact:	Quantitative	Impact:	Assessment:	
Approximately 136 properties lie within 300m of the route option. At this stage the traffic information is unavailable determining how many properties lie within 300m of existing roads experiencing an increase or decrease in traffic levels of		on levels of noise is unavailable at this	136 properties within 300m of route	
more than 25%.	stage		orroute	
Air Quality Qualitative Impact: The route passes within 200m of 58 properties, 6 of which fall within 50m. Impacts of traffic emissions on local air quality ar	Quantitative	Impact: on guantities of PM10 and NO2 is	Assessment: 58 properties within 200m or	
experienced up to 200m from the roadside. It is anticipated that the air quality limits and objectives for PM10 and NO2 will not be breached. The scheme does not pass through an Air Quality Management Zone.	unavailable a		route	
Greenhouse Gases Qualitative Impact:	Quantitative	Impact:	Assessment:	
With the do-minimum scenario CO2 emissions can be expected to increase. With this route option they will also be expecte	d Information of	on the quantity of CO2 is unavailable at	Adverse impact	
to increase. The assessment of the size of these increases is still to be carried out. Landscape Qualitative Impact:	this stage Quantitative	Impact:	Assessment:	
Although the route goes through the Wensum valley the landscape is more open in this location however substantial advers		, inpuon	Severe Adverse	
effects would still arise on Ringland Hills, the River Wensum valley landscape and on the village setting of Ringland. Substantial visual intrusion would occur for properties in Ringland village. These impacts could not be adequately mitigated				
Townscape Qualitative Impact:	Quantitative	Impact:	Assessment:	
No townscape affected.	N/A Quantitative	Impact:	Neutral	
Heritage of Historic Resources Qualitative Impact: No listed buildings, ancient monuments or conservation areas are affected. A crop mark of a roman villa is evident from	Quantitative N/A	ε παρασι.	Assessment: Severe Adverse	
aerial photos of the area, although the road does not do through the villa site due to its proximity to the road adverse affects are likely.				
Biodiversity Qualitative Impact:	Quantitative	Impact:	Assessment:	
The features of the River Wensum SAC would be adversely impacted upon. A semi-natural ancient woodland would be subject to limited habitat loss as would Mouse Wood, an county Wildlife site. A significant number of hedgerows would be	N/A		Severe Adverse	
severed. More widespread habitat fragmentation would occur where the road goes through Ringland Hills significantly affecting local biodiversity. Protected species are known to be present including otters, bats and water vole.				
Water Environment Qualitative Impact:	Quantitative	Impact:	Assessment:	
Where the route crosses the River Wensum specific measures are required to overcome the significant consequences of	N/A	mpuoti	Severe adverse	
pollution and increased siltation within the river system. Also without measures in place both flood plains could be adversely affected. Approximately 1km of the road passes over a ground water protection zone, with all the route crossing over a major				
chalk aquifer.	Quantitativa	Impacti	Accorement	
Physical Fitness Qualitative Impact: A footpath/cycleway will be provided along the length of the road which may encourage walking/cycling. This route severs 8		on numbers of pedestrians, equestrians	Assessment: Slight beneficial impact	
/s and a cycleway which may discourage pedestrians/equestrians/cyclists unless suitable crossing points are provided. and cyclists is unavailable at this stage				
Journey Ambience Qualitative Impact:	Quantitative	Impact:	Assessment:	
Uninterrupted travel on a modern dual carriageway through the countryside provides improved journey ambience. The provision of 2 at grade roundabouts along the route may impact on driver stress.	N/A		Large beneficial impact	
Accidents Qualitative Impact:	Quantitative	•	Assessment:	
By transferring traffic from congested roads within the northern suburbs and surrounding rural lanes and villages onto a modern purpose-built road, it is estimated this option would bring about an annual saving of up to 60 casualties a year.	0 casualties a year. Accidents over the 30 year assessment period is		Large beneficial	
	unavailable a	.	A	
Security Qualitative Impact: There will be a number of lay-bys at locations minimising security risks. At this stage it is not proposed to provide emergence		impact:	Assessment: Neutral	
telephones or lighting in the lay-bys. A footway/cycleway will be provided along the length of the new road but it will not be l and may be separated from the road by landscaping. Bridges and underpasses will be designed for pedestrian and cyclist	t			
use where appropriate.	Quentitatius	luura est.	A	
Public Accounts Qualitative Impact:	Quantitative	Impact:	Assessment: PVC = £180.2M	
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:	Quantitative	Impact:	Assessment:	
Transport Economic Efficiency: Consumers Qualitative Impact:	Quantitative	Impact:	PVB = £334.1M Assessment:	
		puot.	PVB = £262.5M	
Reliability Qualitative Impact:	Quantitative Impact:		Assessment:	
Wider Economic Impacts Qualitative Impact:	Quantitative	Impact:	Large beneficial impact Assessment:	
The scheme would enhance access to Norwich International Airport, and also aid development around the Norwich Area.	N/A		Slight beneficial impact	
Option Value Qualitative Impact: No new transport options created by this scheme	Quantitative N/A	Impact:	Assessment: Neutral	
Severance Qualitative Impact:	Quantitative	Impact:	Assessment:	
No communities are severed by this route. It severs 8 PROWs and a cycleway.	N/A		Slight adverse impact	
Access to Transport System Qualitative Impact:	Quantitative	Impact:	Assessment:	
May improve public transport through reduced congestion in the northern suburbs. Longer distance bus services may use the NDR to access the best corridor into the city.			Slight beneficial impacts	
Transport Interchange Qualitative Impact:	Quantitative	Impact:	Assessment:	
This option would facilitate passenger and freight interchange at Norwich International Airport. It would also enhance acces to the Park and Ride sites at the airport and possibly any Park and Ride site proposed on the A1067 corridor.			Slight beneficial impacts	
to the Park and Ride sites at the airport and possibly any Park and Ride site proposed on the A1067 corridor.	Quantitative	Impact:	Assessment:	
The route will have a positive impact on policies for the development of Norwich airport, environmental improvements to	N/A	1	Neutral	
urban areas and the enhancement of public highways. The route will have a negative impact on policies for the protection o landscape, countryside and the environment, mineral resources and land for public use.				
		luun aat.	Assessment:	
Other Policies Qualitative Impact	Quantitativo	impact:		
Other Policies Qualitative Impact: Would support policy objectives by facilitating inter-regional movement, economic growth, reducing peripherality and higher road safety standards. The agricultural land take and loss of trees and natural habitats would conflict with certain objectives	Quantitative N/A	impact:	Slight beneficial impacts	