

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Consultation Western Red Route	Description: Construction of the 13km long western half of a new dual carriageway with 2 at grade and 2 grade separated junctions.	PVC to Public: £73,374,967	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 immediately west of the Easton roundabout; northwards across the River Tud to Ringland Lane; eastwards across the River Wensum to the A1067; close round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
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 Impact: Information on levels of noise is unavailable at this stage	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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	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 Impact: Information on the quantity of CO2 is unavailable at this stage	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 Impact: N/A	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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 Impact: N/A	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.		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 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 Impact:	Assessment: PVC = £176.7M
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £369.3M
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £290.1M
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: N/A	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 5 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 may use the NDR to access the best corridor into the city.		Quantitative Impact: N/A	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 Impact: 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 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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Consultation Western Blue Route	Description: Construction of the 13km long western half of a new dual carriageway with 2 at grade and 2 grade separated junctions.	PVC to Public: £67,239,411	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 immediately west of the Easton roundabout; northwards across the River Tud; north-eastwards across the River Wensum to the A1067 immediately west of Taverham; close round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 293 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 Impact: Information on levels of noise is unavailable at this stage	Assessment: 293 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 77 properties, 8 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 77 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 Impact: Information on the quantity of CO2 is unavailable at this stage	Assessment: Adverse impact
Landscape Qualitative Impact: Substantial adverse effects on the landscape character of Ringland Hills, the River Wensum valley landscape and on the village setting of Ringland as well as substantial visual intrusion which could not be adequately mitigated.		Quantitative Impact: N/A	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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.		Quantitative Impact: N/A	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 watervole.		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 1.5km of the road passes over a groundwater protection zone with the whole route passing over 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 = £170.0M
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £383.2M
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £301.1M
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: N/A	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 a PROW 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 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 the airport and any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 and the enhancement of public highways. The route will have a negative impact on policies for the protection of landscape, countryside and the environment and mineral resources.		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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Consultation Western Orange Route	Description: Construction of the 13km long western half of a new dual carriageway with 2 at grade and 2 grade separated junctions.	PVC to Public: £75,598,035	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 at the Longwater junction; north-eastwards across the River Tud to Ringland Lane; north-westwards across the River Wensum to Ringland Road; north-eastwards to the A1067 immediately west of Taverham; close round the north of Thorpe Marriott; eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 350 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 Impact: Information on levels of noise is unavailable at this stage	Assessment: 350 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 98 properties, 11 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 98 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 Impact: Information on the quantity of CO2 is unavailable at this stage	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 Impact: N/A	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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.		Quantitative Impact: N/A	Assessment: Moderate Adverse
Biodiversity Qualitative Impact: Where the Rivers Wensum and Tud are crossed by the road the river valleys would be adversely affected. The features of the River Wensum SAC would be adversely impacted upon. Four county wildlife sites would be subject to habitat loss and fragmentation. At least three smaller woodlands would also be affected influencing the local biodiversity.		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 floodplains could be adversely affected. Approximately 3km of the road passes over a groundwater protection zone although this is not the major chalk aquifer under the majority of Norwich.		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 = £175.7M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £401.6M (estimate)
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £315.6M (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: N/A	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: This route separates the proposed housing north of the Tud from Costessey. It severs a PROW and a cycleway.		Quantitative Impact: N/A	Assessment: Moderate 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 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 Impact: 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 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 and housing, waste facilities and mineral resources.		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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Consultation Western Green Route	Description: Construction of the 10km long western half of a new dual carriageway with 3 at grade and 3 grade separated junctions.	PVC to Public: £71,676,590	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A1074 500m east of the A47 interchange; north-eastwards across the River Tud between Old and New Costessey to Town House Road; north-eastwards across the River Wensum to the A1067; north-eastwards between Drayton and Hellesdon to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 536 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 Impact: Information on levels of noise is unavailable at this stage	Assessment: 536 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 245 properties, 6 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 245 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 Impact: Information on the quantity of CO2 is unavailable at this stage	Assessment: Adverse impact
Landscape Qualitative Impact: Where the route crosses the Wensum and Tud valleys the area is of high landscape quality which would be difficult to adequately mitigate. It would also be difficult to mitigate the visual instruction caused by the road, particularly where it passes between Costessey and New Costessey.		Quantitative Impact: N/A	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	Assessment: Neutral
Heritage of Historic Resources Qualitative Impact: No listed buildings, ancient monuments or conservation areas are affected.		Quantitative Impact: N/A	Assessment: Slight Adverse
Biodiversity Qualitative Impact: The River Wensum SAC would be adversely affected. Protected species such otters and bats are known to be in the area. Local biodiversity species would also be adversely affected.		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 the floodplain could be adversely affected most notability at the River Tud as over 1km of road falls with the floodplain. Approximately 3km of the road passes over a groundwater protection zone.		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 3 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 = £179.7M
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £400.1M
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £314.4M
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 Area.		Quantitative Impact: N/A	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: This route separates Old Costessey from New Costessey, and Drayton and Taverham from the Norwich urban area. It severs a PROW 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 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 Impact: 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 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 protection of the environment from pollution.		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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Alternative Western Red Route 1	Description: Construction of the 15km long western half of a new dual carriageway with 2 at grade and 2 grade separated junctions.	PVC to Public: £81,220,459	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 immediately west of the Easton roundabout; northwards across the River Tud to Ringland Lane; north-eastwards across the River Wensum and the A1067 to Reepham Road; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
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 Impact: Information on levels of noise is unavailable at this stage	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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	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 Impact: Information on the quantity of CO2 is unavailable at this stage	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 Impact: N/A	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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 Impact: N/A	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.		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 ground water protection zone, with the whole route passing over 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 3 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 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 Impact: N/A	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 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 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 the airport and any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Alternative Western Blue Route	Description: Construction of the 15km long western half of a new dual carriageway with 2 at grade and 2 grade separated junctions.	PVC to Public: £70,718,577	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 immediately west of the Easton roundabout; northwards across the River Tud; north-eastwards across the River Wensum; northwards next to the Wensum Valley to the A1067; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 133 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 Impact: Information on levels of noise is unavailable at this stage	Assessment: 133 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 51 properties, 3 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 51 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 Impact: Information on the quantity of CO2 is unavailable at this stage	Assessment: Adverse impact
Landscape Qualitative Impact: Substantial adverse effects on the landscape character of Ringland Hills, the River Wensum valley landscape and on the village setting of Ringland as well as substantial visual intrusion which could not be adequately mitigated.		Quantitative Impact: N/A	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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.		Quantitative Impact: N/A	Assessment: Moderate Adverse
Biodiversity Qualitative Impact: In the locations where the Rivers Tud and Wensum are crossed the river valleys would be adversely affected. 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 watervole.		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 1.5km 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 2 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 Impact:	Assessment: PVC = £172.8M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £383.2M (estimate)
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £301.1M (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 Impact: N/A	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 2 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 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 the airport and any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 and mineral resources.		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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Alternative Western Orange Route 1	Description: Construction of the 13km long western half of a new dual carriageway with 2 at grade and 2 grade separated junctions.	PVC to Public: £82,166,095	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 at the Longwater junction; north-westwards across the River Tud to Ringland Lane; northwards across the River Wensum to Ringland Road; north-eastwards to the A1067 immediately west of Taverham; wide round the north of Thorpe Marriott; eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
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 Impact: Information on levels of noise is unavailable at this stage	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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	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.		Quantitative Impact: Information on the quantity of CO2 is unavailable at this stage	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 Impact: N/A	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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 Impact: N/A	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 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 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: N/A	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 a PROW 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 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 Impact: 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 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 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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Alternative Western Orange Route 2	Description: Construction of the 15km long western half of a new dual carriageway with 2 at grade and 2 grade separated junctions.	PVC to Public: £46,104,760	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 at the Longwater junction; north-westwards across the River Tud to Ringland Lane; northwards across the River Wensum to Ringland Road; northwards next to the Wensum Valley to the A1067; wide round the north of Thorpe Marriott; eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 151 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 Impact: Information on levels of noise is unavailable at this stage	Assessment: 151 properties within 300m 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 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 66 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 Impact: Information on the quantity of CO2 is unavailable at this stage	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 especially as the road follows the river valley for over 1km. The route also passes through the particularly fine wooded area of Ringland Hills.		Quantitative Impact: N/A	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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 Impact: N/A	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 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 3km of the road passes over a ground water protection zone, with the whole route passing over 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 2 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 Impact:	Assessment: PVC = £196.9M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £401.6M (estimate)
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £315.6M (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: N/A	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 2 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 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 Impact: 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 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 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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Pylon Route	Description: Construction of the 18km long western half of a new dual carriageway with 4 at grade and 2 grade separated junctions.	PVC to Public: £93,473,863	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 immediately west of the Easton roundabout; north-westwards across the River Tud to Breck Lane; northwards to Ringland Lane; along Marl Hill Lane to the A1067; along the A1067 and across the River Wensum to Deighton Hills; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 187 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 Impact: Information on levels of noise is unavailable at this stage	Assessment: 187 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 97 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.		Quantitative Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 97 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 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 Weston Green. On the whole the landscape can fairly easily accommodate a new road. Visual intrusion would be experienced by a small number of properties close to the road including those at Thorpe Marriott, although this impact could be mitigated during detailed design stages of the scheme.		Quantitative Impact: N/A	Assessment: Moderate adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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 setting of the Church of St Peter, a grade I listed building although it is already situated adjacent to the A47. The route would impact on the grade II listed Morton Lodge.		Quantitative Impact: N/A	Assessment: Moderate adverse
Biodiversity Qualitative Impact: The route passes through a substantial area of woodland, part of which is listed as a county wildlife site. A number of hedgerows would be lost which are important in terms of local biodiversity. Protected species such as bats, badgers and otters are also likely to be present within the route corridor. The route would cross the river Wensum SAC although at an existing bridge crossing.		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 Wensum would be using an existing bridge. Without specific measures the consequences of pollution and increased siltation within the river systems are significant. Approximately 1km of the road passes over a groundwater protection zone.		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 severs 2 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 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 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 = £205.0M
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £346.0M
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £271.9M
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: N/A	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 2 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 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 the airport and possibly any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 and mineral resources.		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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Alternative Western Red Route 2	Description: Construction of the 13km long western half of a new dual carriageway with 2 at grade and 2 grade separated junctions.	PVC to Public: £77,267,713	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 immediately west of the Easton roundabout; northwards across the River Tud to Ringland Lane; north-eastwards across the River Wensum to the A1067; eastwards close round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 139 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 Impact: Information on levels of noise is unavailable at this stage	Assessment: 139 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 66 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 66 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 Impact: Information on the quantity of CO2 is unavailable at this stage	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 Impact: N/A	Assessment: Severe adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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 Impact: N/A	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. 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.		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 ground water protection zone, with the whole route passing over 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 3 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 Impact:	Assessment: PVC = £180.8M (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 Impact: N/A	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:
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 the airport and any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Alternative Pylon Route	Description: Construction of the 18km long western half of a new dual carriageway with 4 at grade and 2 grade separated junctions.	PVC to Public: £92,383,058	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 immediately west of the Easton roundabout; north-westwards across the River Tud to Breck Lane; northwards to Ringland Lane; along Marl Hill Lane to the A1067; along the A1067 and across the River Wensum to Fakenham Road, Attlebridge; eastwards to Reepham Road; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
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 levels of more than 25%.		Quantitative Impact: Information on levels of noise is unavailable at this stage	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 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	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 expected to increase. The assessment of the size of these increases is still to be carried out.		Quantitative Impact: Information on the quantity of CO2 is unavailable at this stage	Assessment: Adverse impact
Landscape Qualitative Impact: In landscape terms outside of the enclosed river valleys the landscape is mostly extensive and largely feature less open arable farmland. Visual intrusion would be experienced by a small number of properties close to the road including those at Thorpe Marriott, although with this option the route is at least 200m away from properties in Thorpe Marriott.		Quantitative Impact: N/A	Assessment: Moderate adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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 setting of the Church of St Peter, a grade I listed building although it is already situated adjacent to the A47. The route would impact on the grade II listed Morton Lodge.		Quantitative Impact: N/A	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 of hedgerows would be lost that are important in terms of local biodiversity. This option also crosses Triumph and Foxburrow plantations county wildlife site composed of a mixed broadleaved woodland. Protected species such as bats, badgers and otters are also likely to be present with the route corridor. The route would cross the river Wensum SAC although at an existing bridge crossing.		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 Wensum would be using an existing bridge. Without specific measures the consequences of pollution and increased siltation within the river systems are significant. Approximately 1km of the road passes over a groundwater protection zone.		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 severs 3 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 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 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 = £206.1M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £346.0M (estimate)
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £271.9M (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: N/A	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 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 the airport and possibly any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Frans Green 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: £82,785,480	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 at the Wood Lane junction; north-eastwards to Breck Lane; northwards to Ringland Lane; along Marl Hill Lane to the A1067; along the A1067 and across the River Wensum to Deighton Hills; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 163 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 Impact: Information on levels of noise is unavailable at this stage	Assessment: 163 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 94 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.		Quantitative Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 94 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 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 Weston Green. On the whole the landscape can fairly easily accommodate a new road. The route passes close to a small number of isolated properties and to the north of Thorpe Marriott, all of which would experience visual intrusion.		Quantitative Impact: N/A	Assessment: Moderate adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	Assessment: Neutral
Heritage of Historic Resources Qualitative Impact: There are no ancient monuments or conservation areas that would be affected. The route would impact on the grade II listed Morton Lodge.		Quantitative Impact: N/A	Assessment: Moderate adverse
Biodiversity Qualitative Impact: The route crosses through a relatively species rich woodland . Other small areas of woodland and hedgerows would be lost which are all important in terms of biodiversity. Badger setts have been recorded within the route corridor . Protected species such as bats are also likely to be present. The route would cross the river Wensum SAC although at an existing bridge crossing.		Quantitative Impact: N/A	Assessment: Moderate adverse
Water Environment Qualitative Impact: The route will cross the River Wensum in the vicinity of an existing river crossing. If construction impacts are mitigated the proposed improvements would be marginally beneficial. Only 600m of the road passes over a groundwater protection zone, but with adequate measures in place the groundwater would not be affected.		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 severs 3 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 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 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 = £189.8M
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £328.0M
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £257.7M
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: N/A	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 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 the airport and possibly any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 and mineral resources.		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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Alternative Frans Green 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: £81,694,675	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 at the Wood Lane junction; north-eastwards to Breck Lane; northwards to Ringland Lane; along Marl Hill Lane to the A1067; along the A1067 and across the River Wensum to Fakenham Road, Attlebridge; eastwards Reepham Road; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 197 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 Impact: Information on levels of noise is unavailable at this stage	Assessment: 197 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 103 properties, 9 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 103 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 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 Weston Green. The route passes close to a small number of isolated properties and to the north of Thorpe Marriott, all of which would experience visual intrusion.		Quantitative Impact: N/A	Assessment: Moderate adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	Assessment: Neutral
Heritage of Historic Resources Qualitative Impact: There are no ancient monuments or conservation areas that would be affected. The route would impact on the grade II listed Morton Lodge.		Quantitative Impact: N/A	Assessment: Moderate adverse
Biodiversity Qualitative Impact: The route crosses through a relatively species rich woodland. This option also crosses Triumph and Foxburrow plantations county wildlife site composed of a mixed broadleaved woodland. Other small areas of woodland and hedgerows would be lost which are all important in terms of biodiversity. Badger setts have be recorded within the route corridor . Protected species such as bats and otters are also likely to be present. The route would cross the river Wensum SAC although on an existing bridge crossing.		Quantitative Impact: N/A	Assessment: Moderate adverse
Water Environment Qualitative Impact: The route will cross the River Wensum in the vicinity of an existing river crossing. If construction impacts are mitigated the proposed improvements would be marginally beneficial. Only 600m of the road passes over a groundwater protection zone, but with adequate measures in place the groundwater would not be affected.		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 severs 4 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 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 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 = £190.9M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £328.0M (estimate)
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £257.7M (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: N/A	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 4 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 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 the airport and possibly any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Easton to Morton Route	Description: Construction of the 18km long western half of a new dual carriageway with 3 at grade and 2 grade separated junctions.	PVC to Public: £73,123,052	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 immediately west of the Easton roundabout; north-westwards across the River Tud to Breck Lane; northwards to Ringland Lane; north-eastwards and across the River Wensum to the A1067 at the Fakenham Road junction; along the A1067 and to Deighton Hills; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 149 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 Impact: Information on levels of noise is unavailable at this stage	Assessment: 149 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 62 properties, 7 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 62 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 Impact: Information on the quantity of CO2 is unavailable at this stage	Assessment: Adverse impact
Landscape Qualitative Impact: In landscape terms outside of the enclosed river valleys the landscape is mostly extensive and largely feature less open arable farmland. Visual intrusion would be experienced by a small number of properties close to the road including those at Thorpe Marriott, although this impact could be mitigated during detailed design stages of the scheme.		Quantitative Impact: N/A	Assessment: Moderate adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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 setting of the Church of St Peter, a grade I listed building, although it is already situated adjacent to the A47. Morton Hall's (grade II) setting would be adversely affected by the alignment of the road.		Quantitative Impact: N/A	Assessment: Moderate adverse
Biodiversity Qualitative Impact: There would be a large impact on the River Wensum SAC. The route passes through a substantial area of woodland part of which is listed as a county wildlife site. A number of hedgerows would be lost that are important in terms of local biodiversity. Protected species such as bats, badgers and otters are also likely to be present with the route corridor.		Quantitative Impact: N/A	Assessment: Severe Adverse
Water Environment Qualitative Impact: The route crosses two water courses the River Tud and the River Wensum with the crossing over the River Wensum adjacent to an existing one. Without specific measures the consequences of pollution and increased siltation within the river systems are significant. Approximately 1km of the road passes over a groundwater protection zone.		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 2 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 3 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 = £181.3M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £346.0M (estimate)
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £271.9M (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: N/A	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 2 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 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 the airport and possibly any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 and mineral resources.		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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
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 built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 at the Wood Lane junction; north-eastwards following Wood Lane to Weston Longville; north-eastwards along Marl Hill Lane to the A1067; along the A1067 and across the River Wensum to Deighton Hills; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 251 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 Impact: Information on levels of noise is unavailable at this stage	Assessment: 251 properties within 300m of route
Air Quality Qualitative Impact: The route passes within 200m of 127 properties, 24 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 127 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 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 Weston Green and Weston Longville. On the whole the landscape can fairly easily accommodate a new road, although the section between the A47 and the A1067 is along very rural road. The route passes close to a small number of isolated 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 Green and Weston Longville which are difficult to mitigate due to the close proximity of the road.		Quantitative Impact: N/A	Assessment: Moderate adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	Assessment: Neutral
Heritage of Historic Resources Qualitative Impact: No ancient monuments or conservation areas are affected. A number of buildings within Western Longville are listed. The setting of these may be adversely affected. The route would impact on the grade II listed Morton Lodge.		Quantitative Impact: N/A	Assessment: Moderate adverse
Biodiversity Qualitative Impact: The route passes through two county wildlife sites. Other small areas of woodland and hedgerows would be lost which are all important in terms of biodiversity. Badger setts have be recorded within the route corridor . Protected species such as bats are also likely to be present. The route would cross the River Wensum SAC although at an existing bridge crossing.		Quantitative Impact: N/A	Assessment: Moderate adverse
Water Environment Qualitative Impact: The route will cross the River Wensum in the vicinity of an existing river crossing. If construction impacts are mitigated the proposed improvements would be marginally beneficial. Only 600m of the road passes over a groundwater protection zone, but with adequate measures in place the groundwater would not be affected.		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 severs 2 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 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 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 = £191.1M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £328.0M (estimate)
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £257.7M (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: N/A	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: This route bisects the village of Weston Longville. It severs 2 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 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 the airport and possibly any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 and mineral resources.		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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Sandy Lane Route	Description: Construction of the 20km long western half of a new dual carriageway with 5 at grade and 2 grade separated junctions.	PVC to Public: £101,379,965	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 east of the Sandy Lane junction; northwards following Sandy Lane; north-westwards following Weston Green Road; northwards along Hockering Road to the A1067; along the A1067 and across the River Wensum to Deighton Hills; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 324 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 Impact: Information on levels of noise is unavailable at this stage	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. 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 140 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 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. On the whole the landscape can fairly easily accommodate an improved standard of road. The exception to this is within the Wensum at Lenwade where the valley landscape is of high quality. The route passes close to a small number of isolated farm properties, Weston Hall and to the north of Thorpe Marriott all of which would experience visual intrusion.		Quantitative Impact: N/A	Assessment: Moderate adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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 setting of Weston Hall, a grade II listed building. The integrity of the historic parkland of Weston Hall would not be affected, however it's setting in the wider landscape would deteriorate due to its proximity to the new road. The route would impact on the grade II listed Morton Lodge.		Quantitative Impact: N/A	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. Small amounts of woodland, hedgerows and marshy meadow would be lost which are all important in terms of local biodiversity. Protected 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. If construction impacts are mitigated the proposed improvements would be marginally beneficial. The majority of the route passes over the major chalk aquifer supplying Norwich with it 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 route severs 2 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 5 at grade roundabouts along the route may impact on driver stress.		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 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 = £212.8M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers 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: N/A	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 2 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 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 the airport and possibly any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Hockering to Lenwade Route	Description: Construction of the 20km long western half of a new dual carriageway with 5 at grade and 2 grade separated junctions.	PVC to Public: £100,681,479	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 at the junction with The Street; northwards following Heath Road; northwards along Hockering Road to the A1067; along the A1067 and across the River Wensum to Deighton Hills; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: Approximately 375 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 Impact: Information on levels of noise is unavailable at this stage	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 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 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 expected to increase. The assessment of the size of these increases is still to be carried out.		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. On the whole the landscape can fairly easily accommodate an improved standard of road. The exception to this is within the Wensum at Lenwade where the valley landscape is of high quality. The route passes close to a small number of isolated farm properties, Weston Hall and to the north of Thorpe Marriott all of which would experience visual intrusion.		Quantitative Impact: N/A	Assessment: Moderate adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	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 from the setting of both Weston Hall and Overgate House, both grade II listed buildings. The integrity of the historic parkland of Weston Hall would not be affected however it setting in the wider landscape would deteriorate due to its proximity to the new road. The route would impact on the grade II listed Morton Lodge.		Quantitative Impact: N/A	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. Small amounts of woodland, hedgerows and marshy meadow would be lost which are all important in terms of local biodiversity. Protected 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?) to the River Wensum. If construction impacts are mitigated the proposed improvements would be marginally beneficial. The 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 route severs 4 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 5 at grade roundabouts along the route may impact on driver stress.		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 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 = £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 Area.		Quantitative Impact: N/A	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 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 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 the airport and possibly any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Hockering to Attlebridge Route	Description: Construction of the 18km long western half of a new dual carriageway with 4 at grade and 2 grade separated junctions.	PVC to Public: £88,768,689	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 at the junction with The Street; northwards to Weston Green Road; north-eastwards to Weston Longville; north-eastwards along Marl Hill Lane to the A1067; along the A1067 and across the River Wensum to Deighton Hills; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: 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%.		Quantitative Impact: Information on levels of noise is unavailable at this stage	Assessment: 284 properties within 300m of route
Air Quality Qualitative Impact: 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.		Quantitative Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 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 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 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 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.		Quantitative Impact: N/A	Assessment: Moderate adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	Assessment: Neutral
Heritage of Historic Resources Qualitative Impact: 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.		Quantitative Impact: N/A	Assessment: 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 terms of local biodiversity. Protected species such as bats are also likely to be present.		Quantitative Impact: N/A	Assessment: Moderate adverse
Water Environment Qualitative Impact: The route will cross the River Wensum at an existing river crossing. If construction impacts are mitigated the proposed improvements 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.		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 severs 4 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 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 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 = £194.7M (estimate)
Transport Economic Efficiency: Business Users and Transport Providers 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: N/A	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: 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 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 the airport and possibly any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 and mineral resources.		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 Impact: N/A	Assessment: Slight beneficial impacts

PRELIMINARY APPRAISAL SUMMARY TABLES			
Option: Hockering to Ringland Route	Description: Construction of the 16km long western half of a new dual carriageway with 2 at grade and 2 grade separated junctions.	PVC to Public: £76,969,475	Problems: - Congestion & slow journey times in built up areas - Reliability and availability of bus services - Problems caused by traffic - nuisance to residents, busy roads, poor air quality - Population growth and new housing development - Increasing economic growth and prosperity - Access to Norwich International Airport
From the A47 at the junction with The Street; north-eastwards to Ringland Lane; eastwards across the River Wensum to the A1067; wide round the north of Thorpe Marriott; south-eastwards south of Horsford to the A140; then eastwards between the airport and Horsham St. Faith.			
Noise Qualitative Impact: 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 more than 25%.		Quantitative Impact: Information on levels of noise is unavailable at this stage	Assessment: 136 properties within 300m of route
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 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 Impact: Information on quantities of PM10 and NO2 is unavailable at this stage	Assessment: 58 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 Impact: Information on the quantity of CO2 is unavailable at this stage	Assessment: Adverse impact
Landscape Qualitative Impact: Although the route goes through the Wensum valley the landscape is more open in this location however substantial 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.		Quantitative Impact: N/A	Assessment: Severe Adverse
Townscape Qualitative Impact: No townscape affected.		Quantitative Impact: N/A	Assessment: 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 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.		Quantitative Impact: N/A	Assessment: Severe Adverse
Biodiversity Qualitative Impact: 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 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.		Quantitative Impact: N/A	Assessment: Severe Adverse
Water Environment Qualitative Impact: Where the route crosses the River Wensum specific measures are required to overcome the significant consequences of 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.		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 8 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 Impact:	Assessment: PVC = £180.2M
Transport Economic Efficiency: Business Users and Transport Providers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £334.1M
Transport Economic Efficiency: Consumers Qualitative Impact:		Quantitative Impact:	Assessment: PVB = £262.5M
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: N/A	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 8 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 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 the airport and possibly any Park and Ride site proposed on the A1067 corridor.		Quantitative Impact: 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 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 Impact: N/A	Assessment: Slight beneficial impacts