Figures
**Figure 2.1**

**TYNESIDE AREA MULTI-MODAL STUDY**

**LAND USE**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Input</th>
<th>TRANSPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>Current land use</td>
<td>2000 trips</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2000 network</td>
</tr>
<tr>
<td>2006 RC assumptions</td>
<td>2006 trips</td>
<td>RC network</td>
</tr>
<tr>
<td></td>
<td></td>
<td>costs</td>
</tr>
<tr>
<td>2011 RC assumptions</td>
<td>2011 trips</td>
<td>RC network</td>
</tr>
<tr>
<td></td>
<td></td>
<td>costs</td>
</tr>
<tr>
<td>2016 RC assumptions</td>
<td>2016 trips</td>
<td>RC network</td>
</tr>
<tr>
<td></td>
<td></td>
<td>costs</td>
</tr>
<tr>
<td>2031 RC assumptions</td>
<td>2031 trips</td>
<td>RC network</td>
</tr>
</tbody>
</table>

**Date:** September 2002

**Figure:** 2.1
Title: Change in Job Ratios by District, 2000-2016
Date: September 2002
Figure: 3.3
Scale: NTS
Title: Change in 1 and 2+ Adult Households, 2000-2016

Date: September 2002

Figure: 3.5

Scale: NTS

TYNESIDE AREA MULTI-MODAL STUDY

Change in Households
(1 or 2+ adults)

- Change in Households
  - 1 adult households
  - 2+ adult households

ARUP

Title: Change in 1 and 2+ Adult Households, 2000-2016

Date: September 2002

Figure: 3.5

Scale: NTS
Changes in Residential and Commercial Development Pressures, 2000-2016

Date: September 2002

Figure: 3.6

Scale: NTS
Modelled Change in Unemployed Households, 2016-2031

Date: September 2002

Figure: 3.8  Scale: NTS
Title: Modelled Change in Job Ratio from 2016-2031

Date: September 2002

Figure: 3.9

Scale: NTS
Title: Modelled Change in Proportion of SEG1 Households, 2016-2031
Date: September 2002
Figure: 3.10  Scale: NTS
Modelled Change in 1 adult and 2 adult Households 2016-2031

TYNESIDE AREA MULTI-MODAL STUDY
Modelled Change in Pressure for Residential/Commercial Developments 2016-2031

September 2002

Figure: 3.12
Scale: NTS
Volume to Capacity Ratios

- Volume to Capacity Ratio less than 1
- Volume to Capacity Ratio between 1 and 1.125
- Volume to Capacity Ratio between 1.25 and 1.1.25
- Volume to Capacity Ratio greater than 1.25

Title: Existing (2000) Volume to Capacity Ratios
Date: September 2002
Figure: 3.13  Scale: NTS
Volume to Capacity Ratios

- Volume to Capacity Ratio less than 1
- Volume to Capacity Ratio between 1 and 1.125
- Volume to Capacity Ratio between 1.25 and 1.125
- Volume to Capacity Ratio greater than 1.25

Title: 2031 Reference Case Volume to Capacity Ratios
Date: September 2002
Figure: 3.14 Scale: NTS
Seaton Burn

Dudley Lane

Moor Farm

Killingworth

Holystone

Silverlink

Wallsend Road

North Portal

Tyne Tunnel

South Portal

Lindisfarne

White Mare Pool

Bifurcation

Key:

Mainline Grade Separated

Mainline At-Grade Junction

Title: Reference Case A19 Route Plan
Date: September 2002
Figure: 6.2 Scale: NTS
Seaton Burn
North Brunton
Kingston Park
Ponteland Road
Stamfordham Road
West Road
Scotswood Road
Blaydon Bridge
Derwenthaugh Bridge
Swalwell
MetroCentre
Sawwell Slip Roads Closed
Aske Road Parallel distributor road constructed - to remove weaving.
Lobley Hill North facing slip roads closed.
Access to and from A1 North via - parallel distributor road.
Team Valley
Eighton Lodge Southbound parallel distributor road - constructed to remove weaving.
Blackfell Direct link from A1 to A1231 constructed
Bifurcation

Key:
- Mainline Grade Separated
- Mainline At-Grade Junction

Note: Additional Lane Added on A1 Between Blaydon Bridge and A1(M)

TYNEZONE AREA MULTI-MODAL STUDY
2016 H1 AM Peak
A19 Grade Separations
and Reconfigurations
Highway Flow Changes
from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more

Title: 2016 H1 Morning Peak
Date: September 2002
Figure: 6.7  Scale: NTS
2016 H1.1 AM Peak
As H1 plus no toll
on the NTC
Highway Flow Changes
from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more
2016 H2 AM Peak
A1 Bypass
Highway Flow Changes
from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more
2016 H3 AM Peak
A1 3-Lane Widening
Highway Flow Changes from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more
2016 H4 AM Peak
A1 4-Lane Widening
Highway Flow Changes
from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more

Title: 2016 H4 Morning Peak
Date: September 2002
Figure: 6.11  Scale: NTS
2016 H5 AM Peak
North West Orbital
Highway Flow Changes
from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more

Title: 2016 H5 Morning Peak
Date: September 2002
Figure: 6.12 Scale: NTS

TYNESIDE AREA MULTI-MODAL STUDY
ARUP
2016 MBU1 AM Peak
City Centre Cordon £1
Each Way Toll
Highway Flow Changes
from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more
2016 MBU2 AM Peak
River Screenline £1 Each Way Toll
Highway Flow Changes
from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more
2016 MBU2.1 AM Peak
River Screenline £2 Each Way Toll
Highway Flow Changes
from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more
2016 MBU3 AM Peak
A1 Off Slip Road £1 Tolls
Highway Flow Changes
from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more

Title: 2016 MBU3 Morning Peak
Date: September 2002
Figure: 6.17
Scale: NTS
2016 MBU4 AM Peak
Increased Parking Charges
Highway Flow Changes
from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more
Seaton Burn

North Brunton

Kingston Park

Ponteland Road

Stamfordham Road

West Road

Scotswood Road

Blaydon Bridge

Derwenthough Bridge

Swalwell

MetroCentre

Askew Road

Lobley Hill

Team Valley

Eighton Lodge

Blackfell

Bifurcation

Title: Highway Investment Core Scenario
A1 Intervention Measure

Date: September 2002

Figure: 7.1 Scale: NTS
Seaton Burn
Junction Bypassed (A1 North - A19 East)

Dudley Lane

Moor Farm
A19 Grade Separated

Killingworth

Holystone

Silverlink
A19 Grade Separated

Wallsend Road

North Portal
A19 Grade Separated

Tyne Tunnel
New Tyne Crossing Constructed
£1.40 Toll Assumed

South Portal
A19 Grade Separated

Lindisfarne

White Mare Pool

Testos
A19 Grade Separated

Bifurcation

Title: Highway Investment Core Scenario A19 Intervention Measure
Date: September 2002
Figure: 7.2
Scale: NTS

TYNESIDE AREA MULTI-MODAL STUDY
ARUP
Highway Flow Changes from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more

Title: Highway Investment Core
Scenario: Difference Plot
2016 Morning Peak
Date: September 2002

Figure: 8.1 Scale: NTS
Highway Flow Changes from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more
Highway Flow Changes from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more
Highway Flow Changes from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more

Title: Public Transport Investment
Core Scenario: Difference
Plot 2031 Morning Peak
Date: September 2002

Figure: 8.6 Scale: NTS
Highway Flow Changes from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more

Title: New Tyne Crossing Core
Scenario: Difference Plot
Date: September 2002
Figure: 8.7
TYNESIDE AREA MULTI-MODAL STUDY

Title: Change in Households Compared to Reference Case
Date: September 2002
Figure: 8.10 Scale: NTS
TYNESIDE AREA MULTI-MODAL STUDY

Title: Change in Households Compared to Reference Case - Constrained Land Use
Core Scenario 2016
Date: September 2002
Figure: 8.12  Scale: NTS

Constrained Land Use

Constrained Land Use with Public Transport

Legend:
- 0.5% or more
- 0.1% to 0.5%
- 0.1% to 0.1%
- 0.5% to 0.1%
- 0.5% or less
Hybrid 1 Land Use Model Results

TYNESIDE AREA MULTI-MODAL STUDY

Title: Change in Employment compared to 2016 Reference Case

Change in employment
Compared to Reference Case

- 2% or more
- 0.5% to 2%
- -0.5% to 0.5%
- -2% to -0.5%
- -2% or less

Title: Change in Households compared to 2016 Reference Case

Change in households
Compared to Reference Case

- 0.5% or more
- 0.1% to 0.5%
- -0.1% to 0.1%
- -0.5% to -0.1%
- -0.5% or less

Date: September 2002

Figure: 9.1  Scale: NTS
Highway Flow Changes from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more

Title: Hybrid 1 Highway
Difference Plot: 2016 Morning Peak
Date: September 2002
Figure: 9.2
Scale: NTS
Highway Flow Changes from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more

Title: Hybrid 1 Highway Difference Plot:
2031 Morning Peak
Date: September 2002
Figure: 9.3 Scale: NTS
Volume to Capacity Ratios

- Volume to Capacity Ratio less than 1
- Volume to Capacity Ratio between 1 and 1.125
- Volume to Capacity Ratio between 1.25 and 1.125
- Volume to Capacity Ratio greater than 1.25
Title: Hybrid 2 Land Use Model Results

Date: September 2002

Figure: 9.5

Scale: NTS

TYNESIDE AREA MULTI-MODAL STUDY
Highway Flow Changes from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more
Highway Flow Changes from Reference Case

-50% or more
-20% to -50%
+20% to +50%
+50% or more