

6. Accessibility and Integration

6.1 The **Accessibility** objective consists of three main elements:

- Option values;
- Severance; and
- Access to the Transport System.

6.2 The **Integration** objective consists of the following elements:

- Interchange with other transport modes; and
- Land Use and Other Government Policies.

6.3 This section will examine each of these elements in relation to the A590 High and Low Newton Bypass.

Accessibility

Option Values

6.4 For option values, the AST states:

'Not applicable for road schemes. Scheme does not include any additional public transport provision' **Score: Neutral**

6.5 Option values are associated with unexpected use of a transport facility i.e. the availability of transport options even if they are rarely used. For example, a car-owner may value the ability to use a bus service when, for whatever reason, they cannot drive or their car is unavailable.

6.6 As the scheme has not led to any change in public transport services or infrastructure the AST assessment of neutral for option values is considered correct.

Severance

6.7 For the severance sub-objective the AST states:

'High level of relief from severance for local population and tourists' **Score: Moderate Beneficial**

6.8 Severance is concerned with the affects of traffic on those using non-motorised modes, especially pedestrians. A moderate beneficial score suggests that before the scheme opened some people, particularly children and old people, were likely to be dissuaded from making journeys on foot. For others, pedestrian journeys would be longer or less attractive.

6.9 Unfortunately no post opening Non Motorised User (NMU) surveys were available for this scheme. Hence the evaluation of this sub-objective will focus on the qualitative impacts and the residents survey.

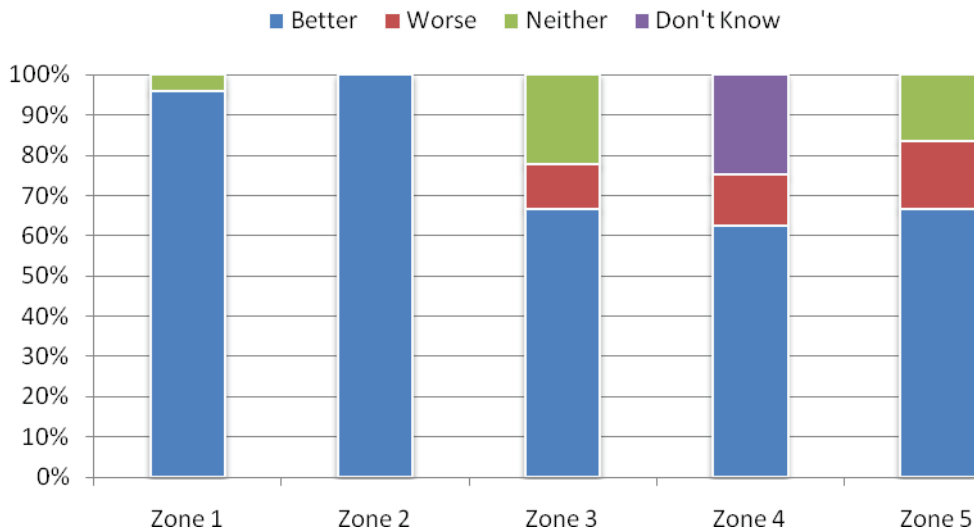
"It's a lot quieter. You can get out a lot more and I don't have to wait for 15 minutes to get across the road."

Low Newton Resident (North West Evening Mail 07/10/2008)

6.10 Local residents were asked a number of questions to ascertain their views on severance related issues. Residents that had lived in the area for more than 3 years were asked how the ease and safety of crossing the road had changed since the scheme opened.

6.11 The results are displayed by zone in **Figure 6.1**:

Figure 6.1 – How has the ease and safety of crossing the road changed since the opening of the bypass?

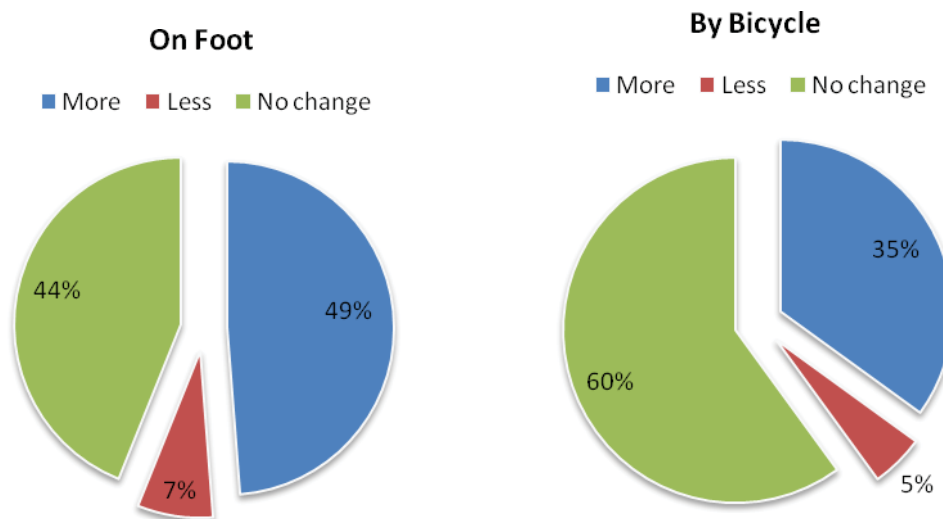


Base: 53 Respondents

6.12 In total 83% of respondents find the ease and safety of crossing the road better since the scheme opened. In Zone 1 – High Newton 96% of respondents find that crossing the road is easier whilst in Zone 2 – Low Newton all respondents find crossing easier. In zones 3 (Ayside), 4 (Barber Green) and 5 (outlying properties) the majority of residents have found crossing the road better however a greater proportion of residents in these zones felt that crossing the road was now worse compared to residents in Zones 1 and 2.

6.13 Another good indication of severance is whether residents are making more or less journeys on foot and bicycle following the opening of the scheme. **Figure 6.2** shows the responses to the question relating to this on the residents survey.

Figure 6.2 – Since the bypass opened in 2008, are you making more or less journeys on foot and by bicycle?



Base: 41 Respondents

Base: 20 Respondents

- 6.14 The results in **Figure 6.2** show that overall, 49% of respondents make more journeys on foot and 35% make more journeys by bicycle since the scheme opened. When examining the results by zone, Zone 1 – High Newton and Zone 2 – Low Newton were the only zones to have residents that travel more by bicycle since the scheme opened (75% and 50% respectively). These two zones also had the most respondents who stated to have travelled more on foot (65% - Zone 1 and 67% Zone 2).
- 6.15 It is likely that the downgrading of the old A590 has made travelling on foot and by cycle in the villages of High and Low Newton more appealing. **Figure 6.3** shows the route of the former A590 which has been downgraded.

Figure 6.3 – Downgraded A590 with widened verges



- 6.16 Taking account of the results from the residents survey and with 97% of traffic diverting to the new bypass the assessment score of moderate beneficial in the AST is considered to be correct.

Access to the Transport System

- 6.17 The AST states:
'Scheme does not include proposals for public transport nor does it directly affect access to existing public transport' **Score: Neutral**
- 6.18 The only bus service in the area is the X35 service between Kendal and Barrow-in-Furness. This service is operated by Stagecoach North West. Consultation with the operations manager for this route was undertaken in January 2010. The following comments were received:
- The scheme has been beneficial in terms of reducing traffic through High Newton which improves journey time reliability; and
 - As the buses still use the old A590 and stop at High Newton, the narrowing of the carriageway at bends was considered to be a safety concern. This is because the size of the buses (Double Decker) combined with the new narrower carriageway width means that in some instances it is necessary for buses to encroach onto the opposite side of the road.

Integration

Transport Interchange

- 6.19 For transport interchange the AST states:
'Scheme does not include any additional public transport provision or freight interchange facilities'
Score: Neutral
- 6.20 Following a site visit and consultation with Stagecoach (the main bus operator), it has been confirmed that there has been no change in public transport facilities. The provision of existing bus

stop poles in High Newton remains unchanged. However, the reduced traffic volumes on the former A590 through High Newton have facilitated indirect public transport interchange improvements including:

- Buses can now stop without causing significant disruption to the flow of traffic;
- Lighter traffic volumes have resulted in a more pleasant waiting environment for local bus users (largely through removal of traffic, reduced noise, and improved roadside air quality); and
- Reduced traffic volumes have helped to reduce the severance. Consequently the accessibility and safety of bus stops on both sides of the route appear to have improved significantly.

6.21 Any impacts on transport interchange are clearly not due to the improvement of facilities but are purely related to the removal of through traffic. The AST assessment of 'neutral' impact is therefore considered a valid assessment of the impact.

Land Use Policy

6.22 For Land Use Policy the AST states:

'The Scheme is specifically proposed in regional and more local level planning documents' **Score: Neutral**

6.23 This section examines how well the scheme aligns with land use policies, both local and regional.

Cumbria Local Transport Plan (2006-2011)

6.24 The key transport priorities in the Cumbria Local Transport Plan relevant to the scheme are:

- To develop transport infrastructure to support improvements to the Cumbrian economy.
 - *The A590 between the Furness peninsula and the M6 motorway has several constrictions, including passing through High and Low Newton, and long single carriageway sections with unimproved alignments. This causes unreliable and extended journey times between Furness and the rest of the region and UK, impeding economic development.*
- To reduce the high level of road casualties.
 - *The A590 through South Lakeland is a key strategic route and has several constrictions in consequence journey times can be long and unreliable and there are concerns about safety.*

6.25 The implementation of the A590 scheme assists in the achievement of these objectives. However, although stated in the Environmental Statement (1993), assisting economic growth was not a specific objective of the scheme.

North West Regional Transport Strategy (RTS)

6.26 The RTS objectives to which the scheme aligns most closely are:

- Ensuring that north-south and east-west transport corridors have reduced congestion, improved safety and make best use of existing capacity;
- Support economic development and regeneration of Furness and West Cumbria through securing reliable and effective links to the M6 and West Coast Main Line;
- Improving road safety; and
- Protect national parks and areas of outstanding natural beauty, minimising the impact of transport infrastructure and traffic.

- 6.27 The scheme achieved a CEEQUAL ('Civil Engineering Environmental Quality Award') score of 85.4% 'Excellent'. The award was made in recognition of the excellent standards achieved in the environment design and implementation. This highlights the schemes achievement in minimising the impact of transport infrastructure and traffic in the National Park.
- 6.28 The reduction in congestion and delay and the improvements to road safety since the scheme opened all support objectives outlined above.

Cumbria and Lake District Joint Structure Plan 2001 - 2016

- 6.29 This is a statutory document which provides a strategy and policies for the development and use of land within Cumbria, including the Lake District National Park. The structure plan states that:
 - Constructing new roads will play a role, although as a last resort when other alternatives have been evaluated and rejected;
 - New roads may be necessary to support regeneration;
 - Any proposals to significantly upgrade routes must be subject to a full evaluation of need, consequences and the alternative solutions available. This will include appraisal against the five key transport criteria of accessibility, safety, environment, economy and integration;
 - Improvements will need to be justified within the overall approach to the route (including any route management strategy) its role in the network and its place in the hierarchy;
 - Consideration also needs to be given to consequent impacts elsewhere on the network;
 - As roads can have far reaching visual and environmental impacts there is a need to ensure, through careful design that all possible steps are taken to limit any harm; and
 - Appropriate measures for accommodating public transport, cycling and walking will need to be incorporated into the design of new developments at an early stage.
- 6.30 The measures to mitigate the adverse effects of the bypass on the sensitive landscape as outlined in the environment section of this report clearly accord with policies in the structure plan.

Key Points

Section 6: Accessibility and Integration
<p>Accessibility</p> <ul style="list-style-type: none"> • The reduction of through traffic on the former A590 has reduced severance in High and Low Newton; and • Bus services have benefited from reduced traffic on the A590. However, the view of the main bus operator in the area is that the scheme to downgrade the old A590 (road narrowing) has resulted in difficult driving conditions for larger vehicles. <p>Integration</p> <ul style="list-style-type: none"> • Reduced traffic volumes on the former A590 have facilitated improvements for public transport interchange. • The scheme integrates well with the objectives set out in local and sub-regional policies.

7. Appraisal and Evaluation Summary Tables

Appraisal Summary Table (2006)

7.1 The Appraisal Summary Table (AST) is a one page summary of the main environmental, economic, and social impacts of a trunk road scheme. The AST summarises the predicted impacts of the scheme upon the five government objectives for transport, these being:

- **Environment** – forecasts of the scheme’s impacts upon factors such as noise, local air quality, landscape, biodiversity, heritage and water;
- **Safety** – measured as reduction in accidents;
- **Economy** – estimated impact of the scheme upon travel time benefits, scheme cost and Journey reliability;
- **Accessibility** – a review of scheme impact upon access to the public transport network, community severance and non-motorised user impact; and
- **Integration** – a description of how a scheme is integrated with local and wider planning policy objectives.

7.2 The 2006 AST for this scheme is shown in **Table 7.1** with the main points from the AST as follows:

Environment

- Slight reduction in the number of properties affected by traffic noise;
- Moderate beneficial impact in local air quality;
- Minor adverse impact in relation greenhouse gases due to speed;
- Large adverse impact on landscape with a significant impact on fields, walls and hedgerows;
- Slight beneficial impact on townscape and physical fitness; and
- Large beneficial impact on journey ambience.

Safety

- £24.18m accident saving predicted.

Economy

- Journey time savings of up to 1 minute 35 seconds per vehicle; and
- Reduced driver stress as a result of improved journey time reliability.

Accessibility

- High level of reduced severance for residents and tourists

Integration

- No impact on transport interchange; and
- Scheme consistent with local planning and Government policies.

Evaluation Summary Table (EST)

- 7.3 In order to ascertain the accuracy of predictions made prior to scheme construction, a review of the AST has been undertaken. Whilst the AST format is standard from the NATA process, the Evaluation Summary Table (EST) has been devised for the POPE process to record a summary of the outturn impacts for the NATA objectives, compared to the predictions in the AST. A copy of the EST is shown in **Table 7.2**. Where possible, the format of the EST mirrors the appearance of the AST to enable direct comparison between the two.

A590 High and Low Newton Bypass		Present Value of Public Costs to Accounts: £25.692m		
Objective	Sub Objective	Qualitative Impacts	Quantitative Measure	
Environment	Noise	Description: 3.8km of new dual carriageway bypass, 4 new underpasses, 1 new overbridge; Estimated scheme cost estimate £36.310M (out-turn, Line L of Annex 4 form); Opening Year 2008	Problems: Congestion from high traffic volumes and %HGVs through villages; safety and environmental impacts	Assessment
	Local Air Quality	The removal of traffic from the existing A590 would result in a reduction of noise at nearby properties. With the scheme, the number of people exposed to noise levels of greater than 75dB is expected to reduce from 55 to zero. There would also be a reduction of people (from 26 to 17), exposed to a noise levels between of 70 and 74dB.	Estimated population annoyed - Do-Minimum: 77.6, Do-Something: 50.3	Estimated Population Annoyed by Noise would be reduced by 27
	Greenhouse Gases	Residents of properties along the existing road will benefit, while a smaller number close to the bypass would experience deterioration in air quality. Overall, there is not an air quality problem in the area.	No. of properties where air quality would be: improved = 105; worse off = 89; no change = 12	Aggregate PM10 = -120.79; Aggregate NO2 = -313.38
	Landscapes	Emissions of CO2 emissions can be expected to increase by 9% as a result of increased vehicle speeds on the bypass	Do-Minimum: 4821 tonnes/year; Do-Something: 5273 tonnes/year	Increase in CO2 of 452 tonnes/year
	Townscape	Offline bypass avoiding High and Low Newton. Important communication route and gateway to major tourist area. Attractive high quality rural landscape within the southern part of the Lake District National Park. Route follows transitional zone between lowland vale and upland fell. Small loss of woodland but significant impact on fields, walls and hedgerows. Incompatible with undulating landform.	Not applicable	Large Adverse
	Heritage Historic Resources	Removes traffic from High and Low Newton. Conflict with existing small scale, fine grain townscape local to Ayside.	Not applicable	Slight Beneficial
	Biodiversity	All known impacts could be adequately mitigated through a programme of archaeological works in advance of, or during, construction. The setting of the Listed Buildings at Low Newton would benefit from the removal of traffic from the existing road. The Listing Building at High Newton would experience slight visual intrusion which would be ameliorated by planting schemes. Black Beck Hall is not a Listed Building but has some local significance and will be recorded prior to demolition.	Not applicable	Neutral
	Water Environment	Significant impacts on protected species, notably badgers, breeding birds and commuting, foraging and roosting bats. The impact on ecological features at a landscape scale is considerable, and in places there are insurmountable connectivity and severance issues for protected species – notably bats. There is scope for conservation of species-rich grasslands through appropriate seeding.	Not applicable	Moderate Adverse
	Physical Fitness	Negligible overall impact on water quality and surface run-off.	Not applicable	Neutral
	Journey Ambience	Traffic reduction will produce substantial relief of existing community severance and improvement in amenity. Provision of 4 underpasses and 1 overbridge will remove conflict between equestrians/cyclists/pedestrians and the bypass road traffic.	No quantitative data, but consultations with local population suggest suppressed demand.	Slight Beneficial
	Improvements for both public transport and road users	>10,000 travellers experiencing benefits (daily)	Large Beneficial	

<p>Safety</p>	<p>Accidents</p>	<p>Significant benefits accrued as a consequence of traffic diverting from single to dual carriageway and the subsequent reduction in accident rate.</p>	<p>No. of accidents saved = 431 Casualty reductions: 10 Fatal, 72 Serious, 559 Slight</p>	<p>£24.18m saving; 94% of PVC</p>
<p>Economy</p>	<p>Security</p>	<p>Significant improvements for road users, neutral for public transport user</p>	<p>10,000 travellers experiencing benefits (daily)</p>	<p>Moderate Beneficial</p>
<p>Economy</p>	<p>Public Accounts</p>	<p>All costs to central government</p>	<p>Central Government PVC</p>	<p>PVC £25.692m</p>
<p>Economy</p>	<p>Transport Economic Efficiency</p>	<p>Moderate journey benefits for road users during peak and off-peak periods. Peak hour journey time savings of 1 minute 35 seconds. Off-peak hour journey time savings of 1 minute 26 seconds. Overall the scheme provides a modest economic return.</p>	<p>Users PVB Transport Providers PVB Other PVB Consumers PVB</p>	<p>PVB £36.214m PVB £0.145m PVB £0m PVB £31.875m</p>
<p>Economy</p>	<p>Reliability</p>	<p>The percentage stresses are below the value at which stress becomes significant.</p>	<p>Route Stress Before 74%, After 24%</p>	<p>Neutral</p>
<p>Economy</p>	<p>Wider Economic Impacts</p>	<p>The scheme is not in a designated regeneration area, nor are there any significant developments dependent on the proposed bypass.</p>	<p>Serves regeneration priority area? - No Development depends on scheme? - No</p>	<p>Neutral</p>
<p>Accessibility</p>	<p>Option Values</p>	<p>Not applicable for road schemes. Scheme does not include any additional public transport provision.</p>	<p>Not applicable</p>	<p>Neutral</p>
<p>Accessibility</p>	<p>Severance</p>	<p>High level of relief from severance for local population and tourists</p>	<p>Approx 205 local population</p>	<p>Moderate Beneficial</p>
<p>Integration</p>	<p>Access to the Transport System</p>	<p>Scheme does not include proposals for public transport nor does it directly affect access to existing public transport.</p>	<p>Not applicable</p>	<p>Neutral</p>
<p>Integration</p>	<p>Transport Interchange</p>	<p>Scheme does not include any additional public transport provision or freight interchange facilities</p>	<p>Not applicable</p>	<p>Neutral</p>
<p>Integration</p>	<p>Land Use Policy</p>	<p>The scheme is specifically proposed in regional and more local level planning documents.</p>	<p>Not applicable</p>	<p>Neutral</p>
<p>Integration</p>	<p>Other Gov't Policy</p>	<p>The scheme is in line with the Northern Way Growth Strategy and the Government's transport objectives at a national level.</p>	<p>Not applicable</p>	<p>Neutral</p>

Table 7.2 – Evaluation Summary Table

Objective	Sub Objective	Qualitative Impacts	Quantitative Measure	Assessment
Environment	Noise	Based on observed traffic flows after opening it is likely that there has been an improvement in the local noise climate adjacent to the old A590 and a worsening for properties nearer to the new bypass.	97% reduction in traffic on the old A590.	As Expected
	Local Air Quality	Based on observed traffic flows after opening it is likely that residents of properties along the old A590 will have benefited from improved air quality due to the reduction in traffic and properties nearer to the bypass will have experienced deterioration in air quality		As Expected
	Greenhouse Gases	Increase in carbon emissions caused by higher than predicted traffic volumes on the A590.	Predicted Opening Year Change: +215 Tonnes of Carbon Outturn Opening Year Change: +221 Tonnes of Carbon	As Expected
	Landscape	The bypass is located in the transitional zone between fells and vale; the curved alignment, careful use of cuttings and earthworks, new landscape planting together with attention to detail in design including use of vernacular style helps integrate the scheme into the local landscape. However, as expected, the scheme is located within the national park high quality rural landscape and does impact on the character of the area.		As Expected
	Townscape	The old A590 has become less urban in character, measures have been undertaken to 'downgrade' the road including widened verges to reduce carriageway width in Long Newton, significant reductions in traffic has improved visual amenity and in turn local village character. The route corridor does pass close to the village of Ayside as expected.		As Expected
	Heritage of Historic Resources	The LDNPA considers that the impact on heritage resources is as expected and it is not aware that there have been any unforeseen impacts. It considers that sufficient archaeological evaluation was undertaken and that the reporting, publication and archiving of the archaeological work has been satisfactory. There has been no direct impact on listed buildings and impact on setting will be reconsidered at FYA when the establishment of planting should be more advanced		As Expected
	Biodiversity	Mitigation measures incorporated into the scheme as expected. HA monitoring in place to establish effectiveness of measures for bats. Further study would be required to evaluate effectiveness of other measures. Biodiversity to be considered further at FYA including areas of species-rich grasslands.		As Expected
	Water Environment	Mitigation measures have been incorporated into the scheme and there is no information which would suggest that they are performing other than as expected. However, due to heavy rain during construction sedimentation of local watercourses occurred and this has been commented on by consultees. Water should be considered in detail at the FYA stage as the situation regarding sedimentation may have improved		Worse than expected at OYA due to silty run-off entering local watercourses.

	Physical Fitness	Traffic has significantly reduced along the existing A590 resulting in an improvement in local amenity. It is considered that connectivity has been retained across the bypass for HMDUs and the scheme links into the wider PROW network. The bypass has introduced traffic noise into the previously quiet countryside	As Expected
	Journey Ambience	The provision of the bypass and the removal of significant volumes of traffic from the old A590 has benefited journey ambience.	As Expected
Safety	Accidents	Re-forecast accident benefits are less than forecast.	Worse than Expected
	Security	Lay-bys and emergency telephones included as part of the scheme.	Worse than Expected
Economy	Public Accounts		
	Transport Economic Efficiency		PVB: Forecast: £92.4m
			Observed: £104m
			BCR: Forecast: £22.74m
		Observed: £21.56m	
	Reliability	Reliability improved on former A590	As Expected
	Wider Economic Impacts	The scheme is not in a designated regeneration area, nor were there any significant developments dependent on the proposed bypass.	As Expected
Accessibility	Option Values	The scheme has not led to any change in public transport services or infrastructure	As Expected
	Severance	Reduction in severance in High and Low Newton with more journeys on foot and cycle.	As Expected
	Access to the Transport System	The scheme has been beneficial in terms of reducing traffic through High Newton which improves journey time reliability however as the buses still use the old A590 and stop at High Newton, the narrowing of the carriageway at bends was considered to be a safety concern.	As Expected
Integration	Transport Interchange	Lighter traffic volumes have facilitated an indirect improvement. No new facilities as a result of the scheme.	As Expected
	Land Use Policy		
	Other Government Policy	The scheme integrates well with the objectives set out in local and sub-regional policies.	As Expected

8. Conclusions

Success against Objectives

8.1 To conclude this report, this section summarises how the scheme is meeting its objectives. Objectives can be categorised as follows:

- NATA objectives: Impacts are assessed against the Government's five objectives for Transport; environmental impact, safety, economy, accessibility and integration; and
- Scheme specific objectives.

Scheme Specific Objectives

8.2 The evaluation of the scheme's specific objectives as reported in this study are summarised in **Table 8.1**.

Table 8.1 – Success against Scheme Objectives

Source	Objective	Success	
Form MON1 - Record of the Predictions	Reduce the number of accidents	Based on the limited amount of post opening accident data available, the evidence suggests that the scheme has been successful in reducing accidents with no post opening accidents recorded.	✓
Environmental Statement, 1993	Improve the environment by removing through traffic from unsuitable roads in towns and villages	The scheme has removed 97% of traffic through the villages of High and Low Newton thus reducing severance and improving residential amenity, local noise and air quality.	✓
Roads Review 1998	To provide a route to modern design standards to replace the existing section of severely sub-standard trunk road	The scheme has provided a 3.8km dual carriageway bypass built to modern design standards.	✓
	To improve the accessibility of the Barrow Peninsula which has Assisted Area status	Improvements to journey times at this location suggests that accessibility of the Barrow Peninsula has improved	✓
	To cater for predicted future traffic growth	The CRF which is expressed as an AADT flow estimate at which a road is likely to be congested in the peak periods on an average day has been calculated as 80,300. This is considerably higher than present volumes and as such the road is capable of accommodating future traffic growth.	✓

8.3 In summary, the results in **Table 8.1** show that based on the data available at this one year after stage, the A590 High and Low Newton bypass scheme is achieving all its objectives.

Five Years After study

8.4 The Five Years After study due to be undertaken in 2013 will follow a similar structure to this One Year study setting out a comparison of the forecast and outturn impacts of the scheme against each of the NATA objectives (and sub-objectives) five years after opening. This will examine whether the successes reported in this report are continuing.

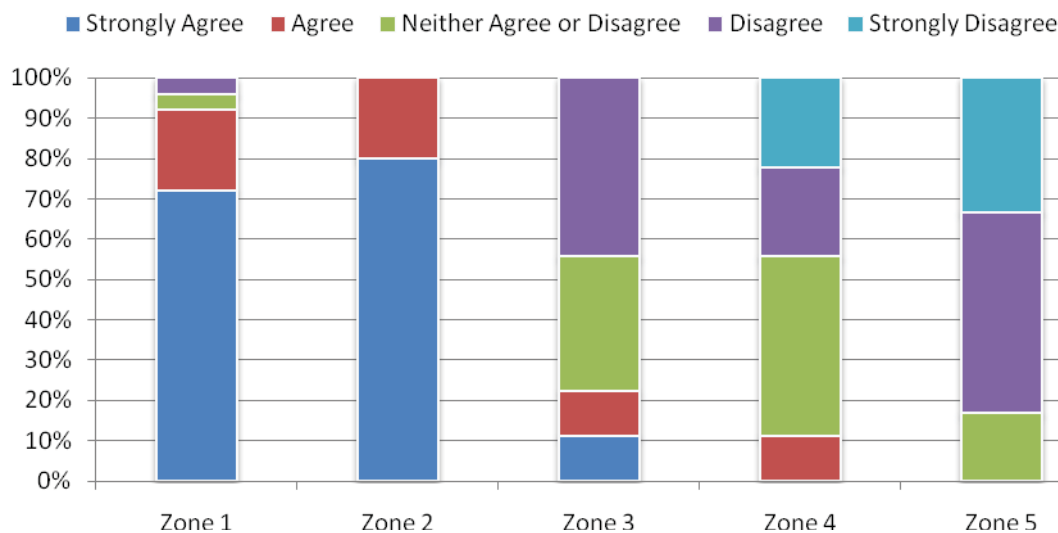
8.5 Particular issues for the five years stage will be:

- Results from the analysis of accident analysis at the five years after stage are likely to offer greater robustness than those recorded at the one year after stage; and
- The environmental evaluation will focus more closely on the effectiveness of mitigation measures would should be more evident at that stage.

Residents' view on overall success of scheme

8.6 Residents were asked whether overall they agree that the bypass has made the area a better place to live. The results of these responses are presented in **Figure 8.1**.

Figure 8.1 – Overall, do you agree that the bypass has made the area a better place to live?



Base: 54 Respondents

8.7 There is clear contrast between the view of the success of the scheme depending on the zone in which the respondents live. In Zone 1 – High Newton, 92% of respondents strongly agree/agree that the bypass has made the area a better place to live. In Zone 2 – Low Newton, all respondents agreed that the area is a better place to live. In Zone 3 – Ayside, just 22% of respondents strongly agree/agree that the bypass has made the area a better place to live and in Zone 4 - Barber Green this falls to 11%.

Appendix A - Residents Survey

High and Low Newton Bypass | A590 Residents Survey



Thank you for taking a few moments to complete this short questionnaire. In April 2008 the Highways Agency opened the A590 Bypass. We are now assessing the impact of the scheme on the local area and want to hear the opinions of as many residents as possible.

Instructions

Please give your answers to each question or statement with a tick (✓). There is space after some of the questions to make comments if you wish. At the end there is a larger space to make further comments. All responses received will be treated in confidence.

The location of the A590 High and Low Newton scheme is shown on the map.

Opening in April 2008, the scheme involved the following improvements:

- 3.6 km (2 miles) of dual two lane carriageway;
- 5 structures for crossing the bypass;
- 2 grade-separated junctions at the northern and southern tie-ins;
- Earth mounding to mitigate the visual intrusion; and wildlife mitigation measures.

1. How long have you lived in the area?
 Less than 3 Years
(Please go to Question 2 below)
 More than 3 Years
(Please go to Question 3 below)

If you have answered 'less than 3 years' then it is likely you will be unaware of the conditions in the area before the bypass opened in 2008. The majority of the questions in this form will therefore not be relevant to you.

2. Did the bypass influence your decision to move here?
 Yes
 No
 Don't Know
(Please go to Question 13)

3. Were you in favour of or opposed to the new bypass?
 In favour
 Opposed
 Don't Know
 Please give a reason for your response:

4. To what extent do you agree/disagree that safety for drivers has improved in the area since the bypass opened?
 Strongly Agree
 Agree
 Neither Agree or Disagree
 Disagree
 Strongly Disagree
 Please give a reason for your response:

5. To what extent do you agree/disagree that safety for pedestrians and cyclists has improved in the area since the bypass opened?
 Strongly Agree
 Agree
 Neither Agree or Disagree
 Disagree
 Strongly Disagree
 Please give a reason for your response:

6. To what extent do you agree/disagree that there has been a reduction in congestion on the old A590?
 Strongly Agree
 Agree
 Neither Agree or Disagree
 Disagree
 Strongly Disagree
 Please give a reason for your response:

7. How do you currently travel around your local area? (Tick all that apply)

Car
 Public Transport
 On Foot
 Bicycle

8. Since the bypass opened in 2006, are you making more or less journeys?

	More	Less	No Change
By car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By public transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By bicycle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Do you use the local facilities more frequently since the opening of the bypass? E.g. shops, cafes etc

Yes
 No
 Don't Know

Please give a reason for your response:

10. To what extent do you agree/disagree that the visual impact of the bypass on adjacent properties has been minimised, blending the bypass with the natural environment.

Strongly Agree
 Agree
 Neither Agree or Disagree
 Disagree
 Strongly Disagree

Please give a reason for your response:

11. How have the following changed since the opening of the bypass?

	Better	Worse	Neither	Don't Know
HGV traffic through villages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of traffic on old A590	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local air quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Level of traffic noise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landscape planting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public transport reliability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Horse riding (ease and safety)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local village character	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interaction with other residents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crossing the road (ease and safety)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please give any reasons for your response:

12. Overall, do you agree that the bypass has made the area a better place to live?

Strongly Agree
 Agree
 Neither Agree or Disagree
 Disagree
 Strongly Disagree

Please give a reason for your response:

13. If you have any further comments that you would like to raise regarding the impact of the A590 High and Low Newton Bypass, please write them below.

(Please continue on an additional sheet if necessary and attach firmly)

Win £50 High Street Gift Vouchers

If you would like to enter the prize draw we require a few details which will only be used for the purpose of the draw.

Name: _____

Daytime Telephone Number: _____

Thank you for taking the time to complete this questionnaire

Please return your completed questionnaire by 31/12/09 using the prepaid reply envelope or send to:

Atkins Transport Planning, Policies and Plans, The Axis, Floor 10 West, 10 Holliday Street, Birmingham, B1 1TF

Data Protection Act 1998: The Highways Agency is bound by the principles for the Data Protection Act 1998. Our policy is that personal information about you will: Not be used for any purpose other than that specified on collection, be held in a secure manner, be maintained accurately and up to date, only be accessible to those in the Agency with the need to see and process it (or similar); and be destroyed when that process is complete.

For further information about this survey please contact:
 Chris Slack
 Tel 0121 483 6145 or
 E-Mail christopher.slack@atkinsglobal.com

For general information about motorways and trunk roads please call Information Line:
08457 50 40 30
 Lines open 24 hours a day, 365 days a year. BT landline 4p/min; calls from mobiles usually cost more.

Appendix B - Route Stress Calculation

Calculation of Route Stress (Reliability)

Based on approach in GOMMMS Vol 2 para 6.3.12 and Appendix I.
Congestion Reference Flow based on DMRB 5.1.3 Annex D

Scenario	Site	A	B	PkH	CAPACITY	NL	Wf	PkF	PkD	AAWT	CRF	Calculated Stress
Old Road Before	Site 1	1380	15	10.0	1230	1	1	9.00	51.00	17200	27900	64%
Old Road After	Site 1	1380	15	5.0	1305	1	1	8.00	50.00	570	32600	2%
New Bypass After	Site 3	2100	20	10.0	1900	2	1	9.00	51.00	17300	80300	21%

Key:

- A, B - set parameters in the calculation of Routetress by road standard
- PkH - Percentage HGV in Peak hour, in peak direction
- Capacity = $[A - (B * PkH)]$
- NL is the Number of Lanes per direction
- Wf is a Width Factor
- PkF is the proportion (percentage) of the total daily flow (2-way) that occurs in the peak hour
- PkD is the directional split (percentage) of the peak hour flow
- AADT is the Annual Average Daily Traffic flow on the link
- AAWT is the Annual Average Weekday Total (Mon - Friday average)
- CRF - Congestion Reference Flow: An AADT estimate at which a road is likely to become congested in the peak periods on an average day
- $CRF = Capacity * NL * Wf * 100 / PkF * 100 / PkD * AADT / AAWT$
- Stress = $AADT / CRF$

Safe roads, Reliable journeys, Informed travellers



Appendix C - Environment Information Requested

Table C.1 - Record of environmental background information requested and received

Requested Information	Response
Environmental Statement	A590 High & Low Newton Bypass Environmental Statement February 1993 including main text, appendices, figures and non-technical summary
AST	AST version 7 th February 2008
Any amendments/ updates/addendums etc to the ES or any further studies or reports relevant to environmental issues. Have there been any significant changes to the scheme since the ES.	No amendments to the ES. No significant changes to the scheme since the ES. Survey information updated prior to construction and provided to POPE
'As Built' drawings for landscape, ecological mitigation measures, drainage, fencing, earthworks etc. Preferably electronically or on CD.	Environmental Masterplan sheets 1 to 13 August 2008, Landscape & Ecology Detail sheets 1 to 8 April 2008, Offsite Planting Proposals November 2006
Copies of the Construction Environment Management Plan and Landscape/Ecology Management Plan or Handover Environmental Management Plans	Construction Environment Management Plan 6 Month Update April 2007 (part only – no appendices provided); Handover Environmental Management Plan July 2008
Contact names for consultation	Provided
Archaeology - were there any finds etc. Have any Archaeological reports been written either popular or academic and if so are these available?	Archaeological Watching Brief December 2005 Black Beck Hall, Ayside, Cumbria - Archaeological Building Recording October 2006 Stratigraphic and Palaeoenvironmental Investigations along the A590 Bypass at High Newton, Cumbria: Final Report November 2006 Archaeological Topographic Survey, Photographic Recording, Evaluation and Watching Brief February 2007
Have any properties been eligible for noise insulation?	None
Have there been any Part 1 Claims regarding noise, air quality or lighting? Have any post opening surveys been undertaken?	HA Part 1 Team confirmed that it is too early in the claims process. This information should be provided for the FYA report Not aware of any post opening surveys being required
Has any post opening survey or monitoring been carried out e.g. for ecology/biodiversity or water quality and if so would copies of the reports be available?	Bat Monitoring Interim Report 2007 dated January 2008 Bat Monitoring Interim Report 2008 dated November 2008
Animal Mortality Data	Provided
Copy of post opening Non-motorised User Survey	Not undertaken
Any publicity material	Newsletters sourced from HA web page. Information on awards provided – CEEQUAL Excellent Award, ICE north west Merit Award and entered for Landscape Institute Awards 2009
Information may be available regarding environmental enhancements to streetscape/townscape for bypassed settlements	A590 De-trunking Proposals Sheets 1 to 14 May 2008
Employer's Requirement works Information for	Volume 6 Environmental Design Information

environment	
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