Figure 5.3: Model Stages

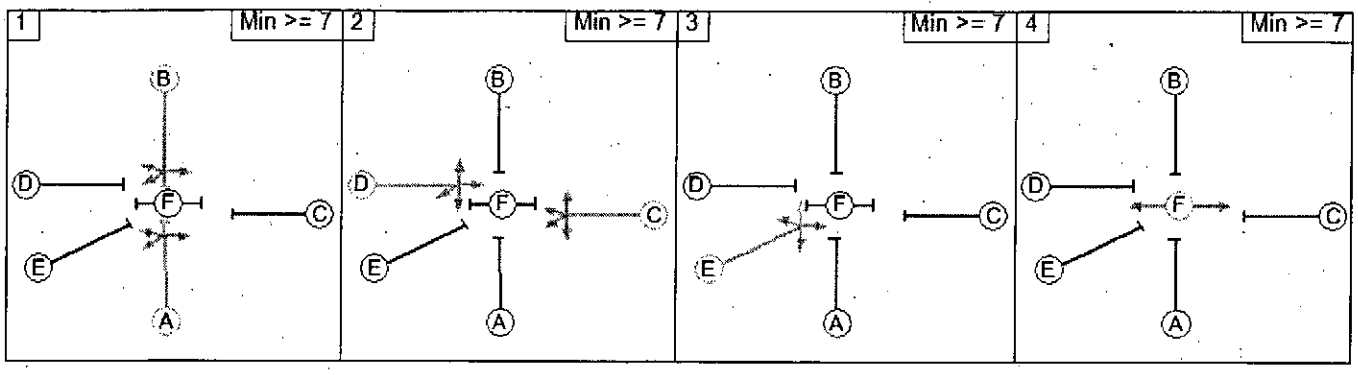
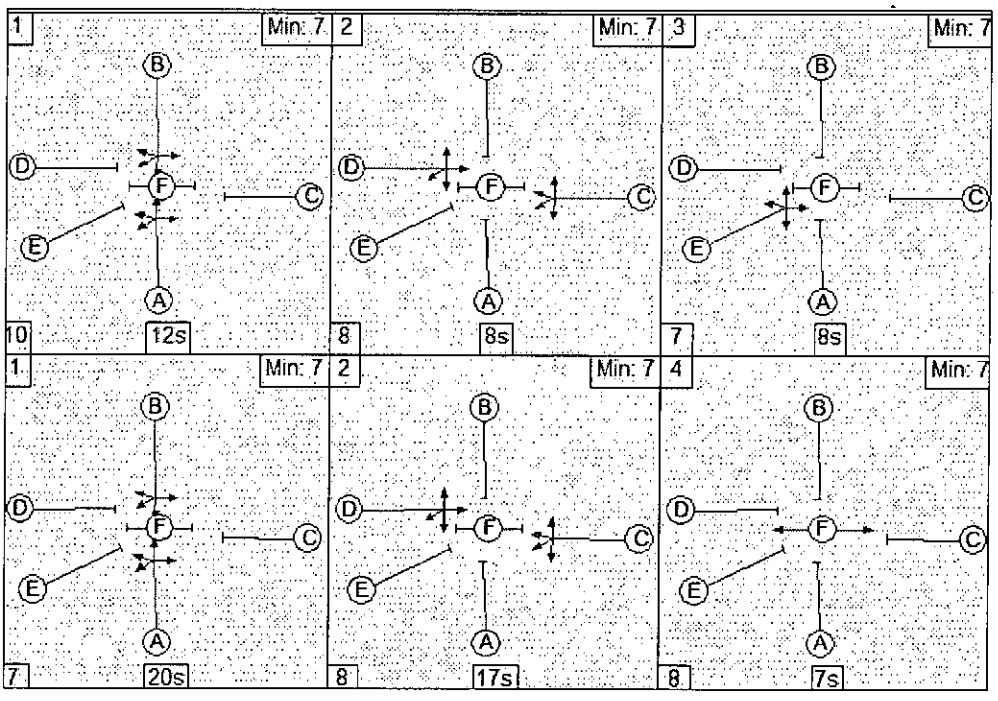


Figure 5.4: Model Staging Sequence



5.2.3 Modelling Results

The LINSIG results for each of the five scenarios are demonstrated in **Tables 5.1 – 5.5** below.

Table 5.1: Scenario 1 - 2013 Existing

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	Degree of Saturation (%)	Mean Max Queue	Degree of Saturation (%)	Mean Max Queue
Green Lane	81.3	7.9	69.5	4.3
High Street	57.8	5.2	65.5	7.4
West Street	55.1	3.7	65.6	4.8
Dale Road	86.2	8.3	73.0	6.3
London Road (Right Turn)	42.9	1.6	66.0	3.3
London Road (Ahead / Left)	86.3	10.0	71.2	8.2
Cycle Time (seconds)	120		120	
Overall Junction Practical Reserve Capacity (%)	4.3		23.2	
Total Delay (pcu/Hr)	21.03		17.42	

As can be seen in **Table 5.1**, all approaches at the junction operate within capacity during both the AM and PM peak period in the existing 2013 scenario. The junction operates with a maximum Degree of Saturation (DoS) of 86.3% in the AM peak with an associated queue of 10 Passenger Car Units (PCUs) on the London Road (ahead/left) approach.

The modelling results for the 2015 Existing scenario are demonstrated in **Table 5.2**. The results illustrate that the junction is predicted to continue to operate within capacity on all approaches during the AM and PM peak periods.

Table 5.2: Scenario 2 – 2015 Existing

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	Degree of Saturation (%)	Mean Max Queue	Degree of Saturation (%)	Mean Max Queue
Green Lane	82.6	8.1	70.9	4.4
High Street	59.0	5.4	66.6	7.5
West Street	55.6	3.8	69.9	5.2
Dale Road	88.0	8.8	74.7	6.7
London Road (Right Turn)	44.1	1.7	65.7	3.3
London Road (Ahead / Left)	88.0	10.7	72.6	8.4
Cycle Time (seconds)	120		120	
Overall Junction Practical Reserve Capacity (%)	2.3		20.5	
Total Delay (pcu/Hr)	22.31		18.32	

Table 5.3 below shows the modelling results for the 2015 Existing scenario with the addition of the development traffic.

Table 5.3: Scenario 3 – 2015 Existing + Development

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	Degree of Saturation (%)	Mean Max Queue	Degree of Saturation (%)	Mean Max Queue
Green Lane	92.5	10.4	79.8	5.5
High Street	60.3	5.8	75.8	9.2
West Street	64.5	4.3	87.8	7.3
Dale Road	98.4	14.1	82.1	7.6
London Road (Right Turn)	48.2	1.8	85	5.4
London Road (Ahead / Left)	97.1	17.4	83.4	10.8
Cycle Time (seconds)	120		120	
Overall Junction Practical Reserve Capacity (%)	-9.4		2.6	
Total Delay (pcu/Hr)	35.84		26.65	

The results in **Table 5.3** demonstrate that the junction is predicted to operate within capacity with the addition of the development traffic in 2015. During both the AM and PM peak period all approaches operate within capacity with maximum DoS of 98.4% in the AM peak on the Dale Road approach with an associated queue of 14.1 PCUs. In the PM peak the junction operates with a PRC of 2.6% which suggests that the junction has the capacity to operate efficiently with the addition of extra traffic numbers. The addition of development traffic only increases the maximum queue on the London road (ahead / left) approach in the AM peak by 6.7 PCUs and by 1.6 PCUs in the PM peak.

Table 5.4 shows the LINSIG results for the 2020 Existing scenario. The results illustrate that the junction will continue to operate within capacity during the AM and PM peak period. It can be seen that in the AM peak period that the PRC if -0.3% which suggests that there is limited potential for the junction to operate effectively with existing traffic numbers. The results suggests that future mitigation measures may need to be introduced in order for the junction to operate efficiently in 2020 with base flow traffic.

Table 5.4: Scenario 4 = 2020 Existing

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	Degree of Saturation (%)	Mean Max Queue	Degree of Saturation (%)	Mean Max Queue
Green Lane	84.3	8.5	72.3	4.6
High Street	60.3	5.5	68.3	7.8
West Street	57.1	3.9	71.4	5.4
Dale Road	90.3	9.7	76.6	6.9
London Road (Right Turn)	46.4	1.7	67.4	3.5
London Road (Ahead / Left)	90.1	11.5	74.4	8.7
Cycle Time (seconds)	120		120	
Overall Junction Practical Reserve Capacity (%)	-0.3		17.5	
Total Delay (pcu/Hr)	24.28		19.30	

As can be seen in **Table 5.5**, the London Road (ahead / left) approach operates with a maximum DoS of 84.9% with an associated queue of 11.3 PCUs which is an increase of 2.6 queuing PCUs from the 2020 Existing scenario.

During the AM peak, the Dale Road approach operates slightly under capacity with a maximum DoS of 98.7% with an associated queue of 14.3 PCUs. In the AM peak the PRC of the junction is -9.8% however the junction is already predicted to operate with a negative PRC in the 2020 Existing base scenario.

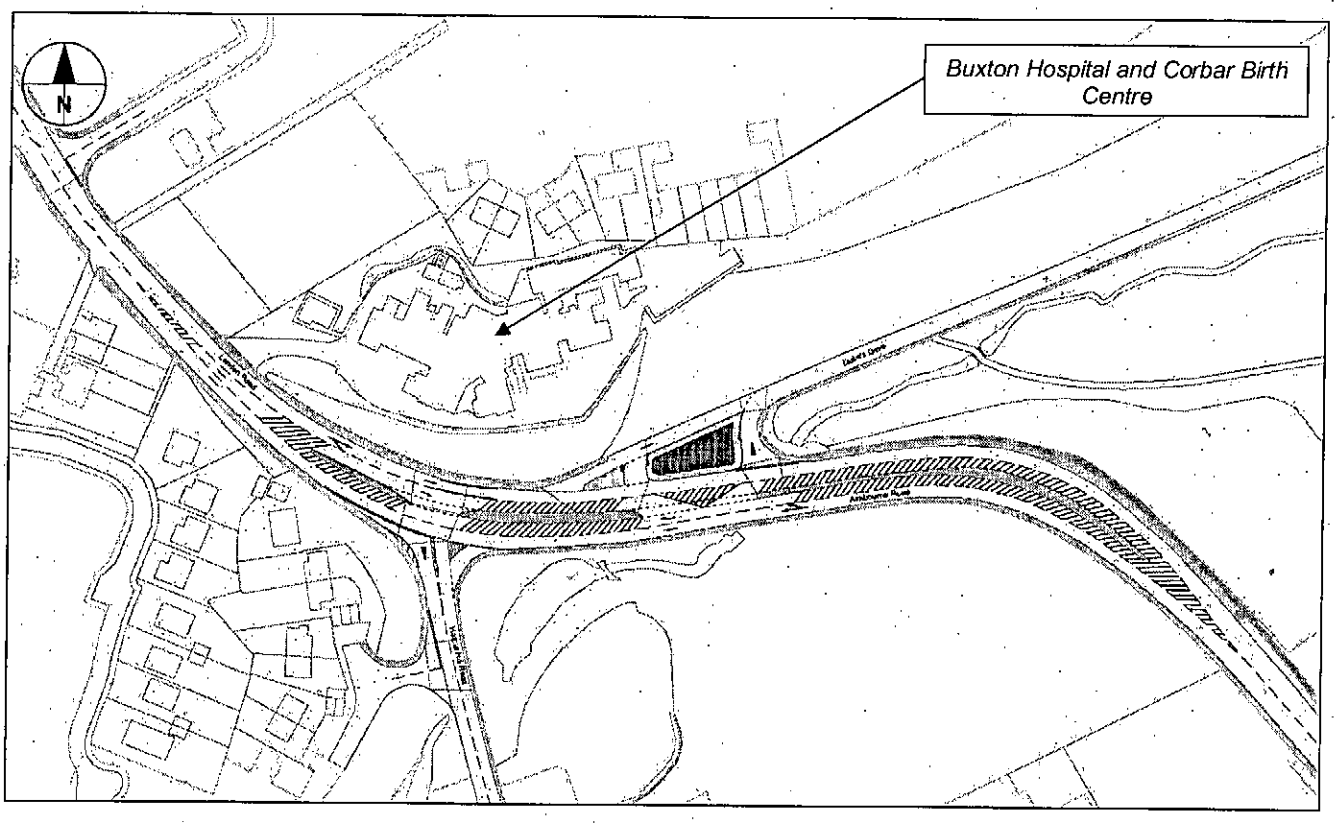
Table 5.5: Scenario 5 – 2020 Existing + Development

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	Degree of Saturation (%)	Mean Max Queue	Degree of Saturation (%)	Mean Max Queue
Green Lane	94.4	11.2	91.3	7.1
High Street	61.7	6.1	77.5	9.8
West Street	66.2	4.5	85.4	7.0
Dale Road	98.7	14.3	80.5	7.4
London Road (Right Turn)	50.4	1.9	86.9	5.9
London Road (Ahead / Left)	98.8	19.5	84.9	11.3
Cycle Time (seconds)	120		120	
Overall Junction Practical Reserve Capacity (%)	-9.8		-1.5	
Total Delay (pcu/Hr)	39.14		28.69	

5.3 Junction 2: Ashbourne Road / Harpur Hill / Dukes Drive

The Ashbourne Road / Harpur Hill / Duke's Drive junction is a staggered priority junction situated adjacent to Buxton Hospital and Corbar Birth Centre as illustrated in **Figure 5.5**.

Figure 5.5: Ashbourne Road / Harpur Hill / Dukes Drive



5.3.1 Modelling Results

The junction has been modelled using PICADY for the both the AM and PM peak periods for the five scenarios, with the results listed in **Tables 5.6 – 5.10.**

Table 5.6: Scenario 1 – 2013 Existing

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	RFC	Queue	RFC	Queue
Ashbourne Road South (Right Turn)	0.165	0.2	0.246	0.3
Harpur Hill (All Movements)	0.627	1.6	0.412	0.7
Ashbourne Road North (Right Turn)	0.317	0.5	0.461	0.8
Duke's Drive (All Movements)	0.363	0.6	0.332	0.5

Table 5.7: Scenario 2 – 2015 Existing

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	RFC	Queue	RFC	Queue
Ashbourne Road South (Right Turn)	0.170	0.2	0.252	0.3
Harpur Hill (All Movements)	0.644	1.8	0.424	0.7
Ashbourne Road North (Right Turn)	0.325	0.5	0.473	0.9
Duke's Drive (All Movements)	0.372	0.6	0.340	0.5

Table 5.8: Scenario 3 – 2015 Existing + Development

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	RFC	Queue	RFC	Queue
Ashbourne Road South (Right Turn)	0.192	0.2	0.227	0.4
Harpur Hill (All Movements)	0.704	2.3	0.490	1.0
Ashbourne Road North (Right Turn)	0.335	0.5	0.487	0.9
Duke's Drive (All Movements)	0.409	0.7	0.396	0.7

Table 5.9: Scenario 4 – 2020 Existing

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	RFC	Queue	RFC	Queue
Ashbourne Road South (Right Turn)	0.174	0.2	0.259	0.3
Harpur Hill (All Movements)	0.661	1.9	0.437	0.8
Ashbourne Road North (Right Turn)	0.334	0.5	0.486	0.9
Duke's Drive (All Movements)	0.382	0.6	0.350	0.5

Table 5.10: Scenario 5 – 2020 Existing + Development

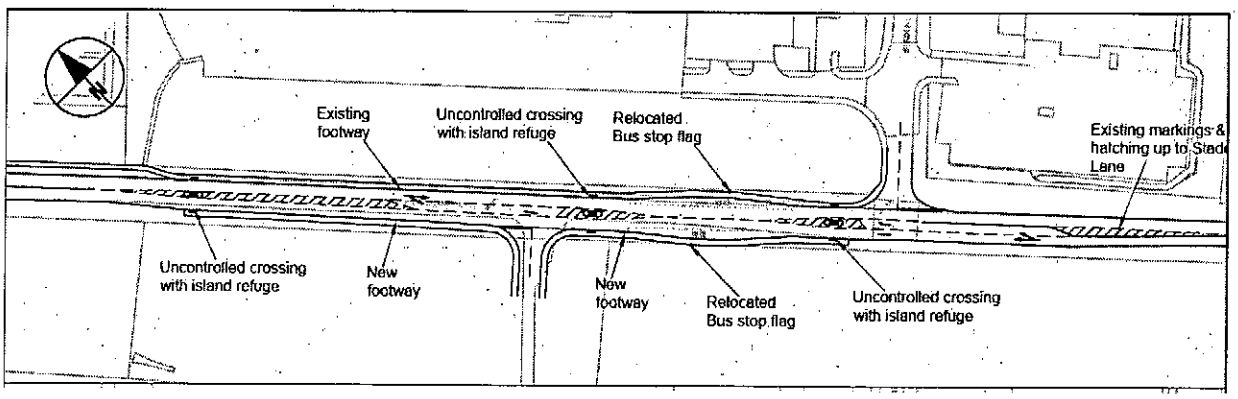
Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	RFC	Queue	RFC	Queue
Ashbourne Road South (Right Turn)	0.202	0.3	0.299	0.4
Harpur Hill (All Movements)	0.722	2.5	0.505	1.0
Ashbourne Road North (Right Turn)	0.346	0.5	0.500	1.0
Duke's Drive (All Movements)	0.424	0.7	0.410	0.7

As can be seen in **Table 5.6 – 5.10**, the Ashbourne Road / Harpur Hill / Dukes Drive junction operates below capacity in the AM and PM peaks across all the scenarios. The junction operates with a maximum RFC of 0.722 in the 2020 Existing + Development scenario with an associated queue of 2.5 vehicles which illustrates that the junction is operating with no capacity issues and therefore the addition of development traffic will not have a detrimental impact on the operation of the junction in future years.

5.4 Junction 3: Ashbourne Road / Industrial Estate / New site access

It is proposed to provide access to the development site through the construction of a new priority junction onto Ashbourne Road which will form a staggered junction with the adjacent Industrial Estate. The proposed layout of this junction is illustrated in **Figure 5.6**.

Figure 5.6: Proposed Site Access Staggered Junction



5.4.1 Modelling Results

The proposed junction has been modelled using PICADY with the outputs shown in **Tables 5.11 – 5.15**.

Table 5.11: Scenario 1 – 2013 Existing

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	RFC	Queue	RFC	Queue
Industrial Estate (All Movements)	0.170	0.2	0.581	1.3
Ashbourne Road Southbound (Right Turn)	-	-	-	-
Site Access (All Movements)	-	-	-	-
Ashbourne Road Northbound (Right Turn)	0.149	0.2	0.044	0.0

Table 5.12: Scenario 2 – 2015 Existing

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	RFC	Queue	RFC	Queue
Industrial Estate (All Movements)	0.136	0.2	0.596	1.4
Ashbourne Road Southbound (Right Turn)	-	-	-	-
Site Access (All Movements)	-	-	-	-
Ashbourne Road Northbound (Right Turn)	0.152	0.2	0.044	0.0

Table 5.13: Scenario 3 – 2015 Existing + Development

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	RFC	Queue	RFC	Queue
Industrial Estate (All Movements)	0.136	0.2	0.574	1.3
Ashbourne Road Southbound (Right Turn)	0.186	0.2	0.330	0.5
Site Access (All Movements)	0.418	0.7	0.387	0.6
Ashbourne Road Northbound (Right Turn)	0.150	0.2	0.041	0.0

Table 5.14: Scenario 4 – 2020 Existing

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	RFC	Queue	RFC	Queue
Industrial Estate (All Movements)	0.593	1.4	0.601	1.5
Ashbourne Road Southbound (Right Turn)	-	-	-	-
Site Access (All Movements)	-	-	-	-
Ashbourne Road Northbound (Right Turn)	0.044	0.0	0.046	0.0

Table 5.15: Scenario 5 – 2020 Existing + Development

Approach	AM Peak (0800-0900)		PM Peak (1700-1800)	
	RFC	Queue	RFC	Queue
Industrial Estate (All Movements)	0.143	0.2	0.593	1.4
Ashbourne Road Southbound (Right Turn)	0.187	0.2	0.332	0.5
Site Access (All Movements)	0.421	0.7	0.294	0.6
Ashbourne Road Northbound (Right Turn)	0.155	0.2	0.043	0.0

As can been seen from **Tables 5.11 – 5.15**, the proposed junctions operates well within capacity for all scenarios during both the AM and PM peak periods. Across all scenarios the junction operates with a maximum RFC of less than 0.700 therefore there are no capacity issues with junction with the addition of the traffic generated by the proposed development.

5.5 Impact Analysis Summary

From the above modelling results, the following key findings are evident:

- Junction 1 – The junction operates within capacity for Scenarios 1, 2 and 4 however during Scenario 4 in the AM peak the junction has a PRC of -0.3% which suggests that there may be some operational issues with the junction operating with 2020 base traffic flows. During Scenarios 3 and 5, the junction is operating over the practical capacity and close to the ultimate capacity;
- Junction 2 – Under all scenarios, the junction is operating under 85% capacity which indicates that there should be no adverse impacts as a result of the development; and
- Junction 3 – Under all scenarios, the junction remains well within operational capacity.

Findings and Recommendations

6 Findings and Recommendations

6.1 Findings

The following provides a summary of the key findings of this transport assessment:

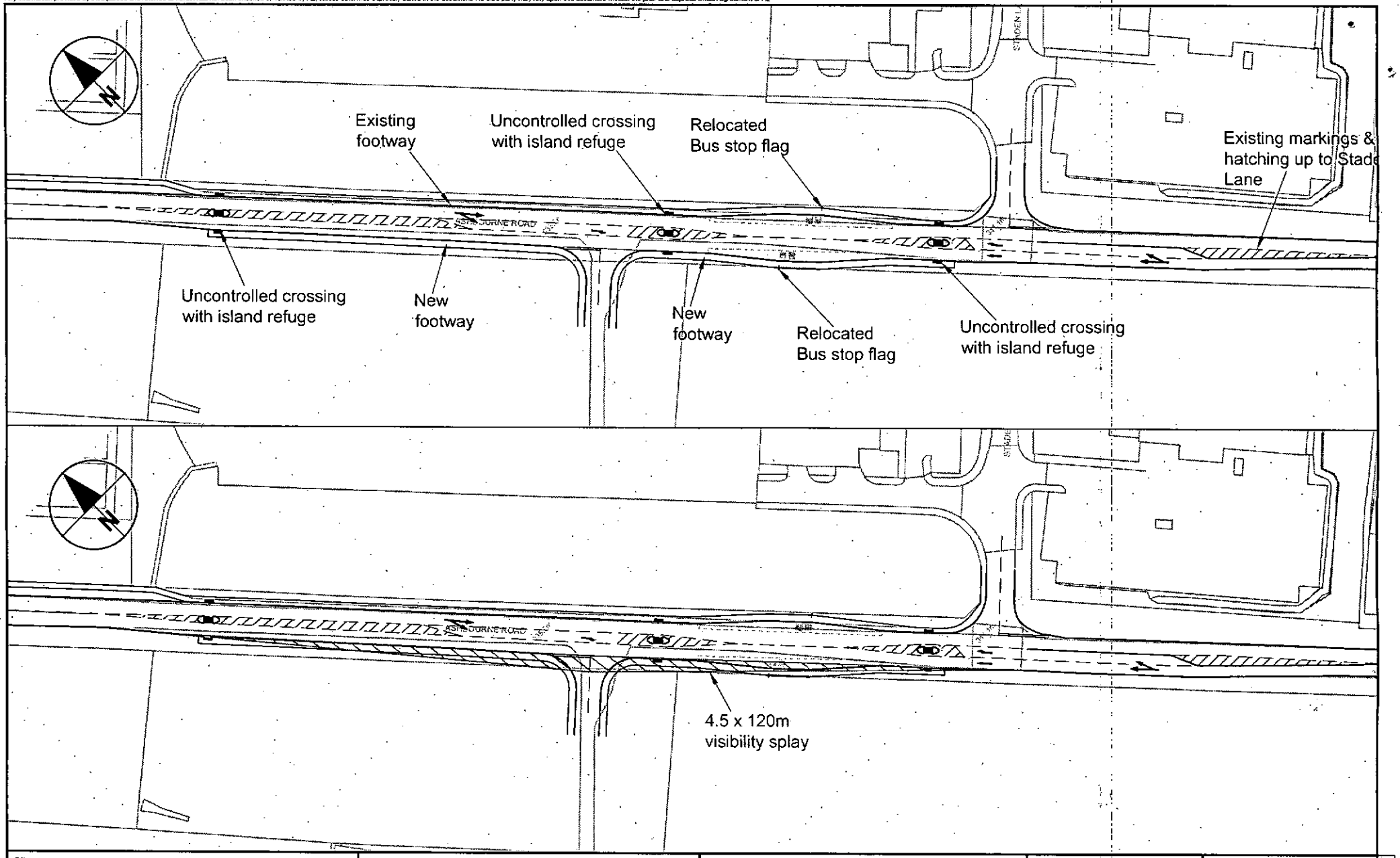
- Buxton is generally a prosperous town with a good range of local amenities and services which will be used by the population of the proposed development on a day-to-day basis;
- The town is also a transport hub for the surrounding region, with a rail terminus giving regular services to Stockport and Manchester and hence the wider national rail network; and a good selection of bus services accessing local destinations and outlying villages;
- The town's position in the Peak District, and the nature of the rural roads, means drive times to more remote destinations are more extended than other urban areas convenient to the strategic road network. But, this is off-set by the presence of the rail station in the town, and the amount of services and employment opportunities which are available locally;
- The proposed development site itself is located on the southern boundary of the town, with the Harpur Hill community to the west, and more recently constructed low density residential to the north (built on what used to be land which was part of the Foxlow Farm estate). To the east of the site is the established Staden Lane business park, which contains a mix of employment, light industrial and retail facilities. Further to the south of the site, the land becomes more rural and agricultural in its uses;
- The land-uses for the development are currently proposing around 375 residential properties, a 70 unit residential care home and around 2 hectares of employment / retail uses. At present, the proposed employment and retail land uses comprise of the following land uses A1 600m^2, A4 580 m^2, B1 1,000m^2 and D1 1,000m^2. The latest masterplan for the site clusters the residential towards the north of the site, adjacent to the existing housing, and for the employment uses to be positioned opposite the Staden Lane business park. The rest of the site to the south would be given over to greenspace or retained for agricultural use;
- The site is bounded to two sides by public roads. To the west is Harpur Hill Road, and to the east is Ashbourne Road. Both of these roads have very different characters, with Harpur Hill Road being more of a residential access road; and Ashbourne Road more of a regional distributor road;
- The site access to Harpur Hill Road is not suitable in its current form to act as a major vehicle access point to the development, and space constraints and level issues means that it is not particularly feasible to act as one. This access is proposed to be retained, but only for the use of pedestrians and cyclists. The traffic calmed nature of Harpur Hill Road, and the views over the Peaks give a good quality walk route, and there is also a primary schools and other local facilities which will be useful for local residents;
- Ashbourne Road is therefore proposed to give the only public vehicle access to the proposed development site. Based upon traffic surveys, speed surveys and a topographic survey, a suitable access can be formed approximately in the position of the existing Foxlow Farm access. This access would form a right / left stagger with the nearby Staden Lane junction, and therefore turning movement conflicts would be minimised. Ashbourne Road is also an important public transport corridor into the town, and to help facilitate multi-modal access, the bus stops adjacent to the site would be up-graded to provide shelters and travel information points;
- Footways are lacking on the south side of Ashbourne Road in the vicinity of the site, therefore new footway and pedestrian road crossing facilities would be provided to connect into the town's wider footway network. No improvements are required on the Harpur Hill side of the development as the streets are already well provided. However, a pedestrian / cycle link will be created at the position of the existing farm access on this side of the site;
- Harpur Hill Road also forms part of the National Cycle Network, and consequently a signed route is already provided between the site and the town centre. To the south and west of the site there is also planning permission in place to create new off-road cycle tracks which could be of benefit to the new population;

- Detailed traffic modelling has been undertaken for key junctions between the site and the town centre using new traffic counts and appropriate junction simulation software. The findings of this work are as follows:
    - Staden Lane / Ashbourne Road: works well now and in the future with the development fully operational;
    - Site Access / Ashbourne Road: works well in the future with the development fully operational;
    - Harpur Hill Road / Ashbourne Road / Duke's Drive: works well now and in the future with the development fully operational;
    - Fiveways signal junction: Initially when this junction was modelled, the results indicated that it was near capacity during morning and evening weekday peak periods. Subsequently, detailed video surveys covering every approach and the overall junction itself were commissioned. A review of this data showed that the junction did go close to capacity, but generally only for relatively short periods – such as when right turners blocked the through movement. Outside of these times, the junction worked well with queues clearing during each cycle. The videos also showed that neither the all-red pedestrian stage, nor the Green Lane approach was triggered every cycle. The findings of this review therefore allowed the traffic models to be refined to better reflect the on-the-ground situation. The addition of the estimates of development generated trips to this junction did show a reduction in capacity, but overall the junction continued to work within all links operating under theoretical (100%) capacity for all modelling scenarios.

Overall, a comprehensive transport assessment has been prepared, from which an appropriate access strategy has been proposed to help realise this development.

6.2 Recommendations

On the basis of this transport assessment, no significant issue has been identified which would preclude the development land-use mix as is currently proposed in terms of access and movement.



Client: Hallam Land Management Ltd	Title: Proposed Site Access Arrangements, Ashbourne Road, Buxton	AECOM 3rd Floor, Princes Parade, Princes Dock, Liverpool, L3 1QH Tel: +44 (0) 151 331 8900 Fax: +44 (0) 151 331 8999 www.aecom.com	Design: DC	CAD: MD
Project: Proposed Mixed Use Development, Foxlow Farm, Buxton			Chk'd: DD	App'd: KR
			Date: Feb 2013	Scale: 1:1000
			No. 60286491/LP/001	Rev:
				A3

Appendix A: Scoping Assessment

Foxlow Farm, Buxton, Transport Assessment Scoping

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Foxlow Farm, Buxton, Transport Assessment Scoping

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-	First issue	DC	KR	March 2013

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Job No 60286491 Reference LIV 417 Date Created March 2013

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Introduction

Capabilities on project:
Transportation

1 Introduction

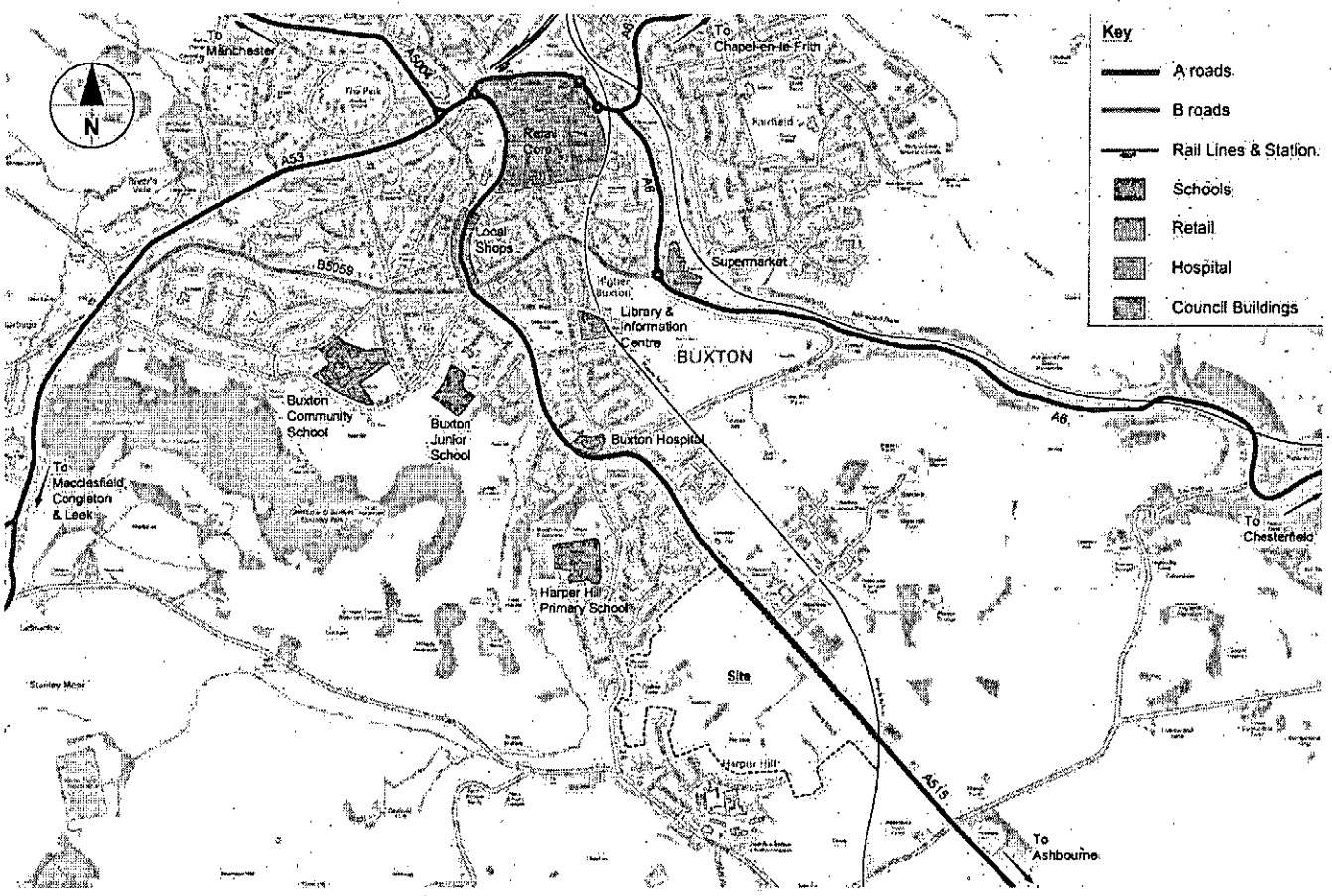
1.1 Background

AECOM have been appointed by Hallam Land Management Ltd to prepare transport reports in support of an outline application for a mixed-use development on a site on the southern edge of Buxton. The site is called Foxlow Farm, and its location is given on Figure 1.

In February and March of this year an outline scoping assessment was submitted to the highways authority of Derbyshire County Council, and a without prejudice response was received. Details of these communications are given in Appendix A.

Further data and information is now available, and consequently this note is intended to give the County Council more details on the proposed scope and methodology of the transport assessment and travel plan reports.

Figure 1 Local Context



Capabilities on project:
Transportation

1.2 Data Collection

Since the previous correspondence, the following data has now been obtained:

- Classified turning counts undertaken on Tuesday 5 March 2013 at the junctions of:
    - Ashbourne Road / Staden Lane, a three arm priority junction adjacent to the development which gives access to a commercial / retail estate;
    - Ashbourne Road / Harpur Hill Road, a four arm staggered priority junction; and
    - London Road / Dale Road, a five-arm signalised junction known as Fiveways.
- An automatic traffic counter placed on Ashbourne Road close to the position of a future access to the site. This recorded the classification of vehicles and their speeds, and was in position for a one week period between 03/03/2013 and 09/03/2013;
- Historic injury accident data obtained from Derbyshire Police;
- The traffic signal specification of the Fiveways junction;
- OS 1:1250 digital mapping of the site and adjacent roads; and
- A 2-D and 3-D topographic survey of the site and adjacent roads.

In addition, a site visit was undertaken on a weekday.

Note, the traffic count data was collected during a period when roads were clear from snow.

1.3 Application Timescales

At this time, the planning application has the following key dates:

- April – submit representations to the Local Plan consultation;
- May – public exhibition and consultation;
- July – submit planning application.

Proposed Development

Capabilities on project:
Transportation

2 Proposed Development

2.1 Development Details

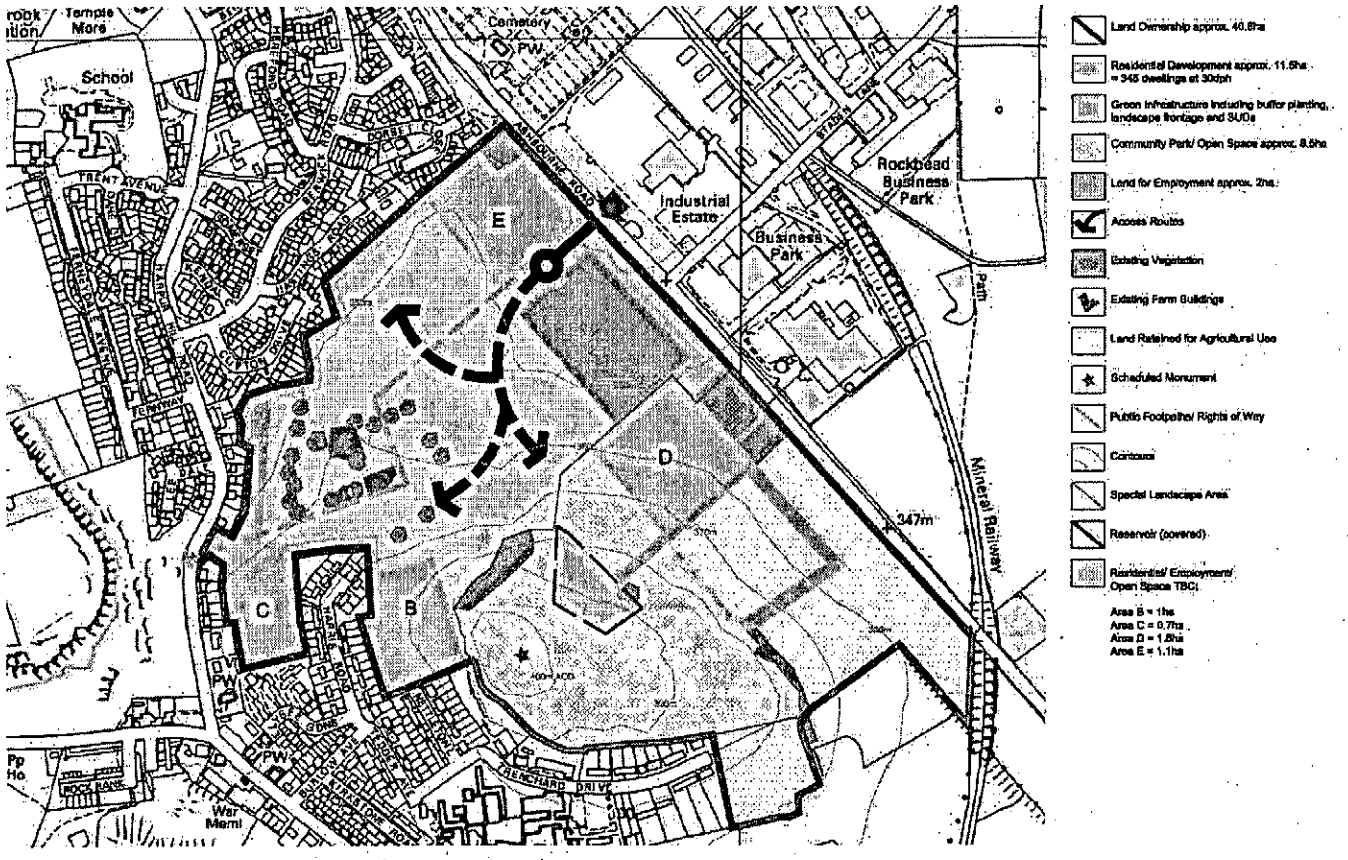
The final details of the development proposals which will be included in the planning application are still being decided, and will be subject to further consultation with the local planning department of High Peak, and feedback from public exhibitions. However, at this time, the development land-use mix is as follow:

- 350 mixed residential units;
- 2 hectares of B1 / B2 / B8 uses – assumed to be a light industrial estate.

The outline masterplan for this development proposal is given on Figure 2, and as can be seen has the following points of note:

- Residential mainly to the north and west of the site, abutting existing residential development;
- An employment zone to the north east of the site, opposite the existing industrial estate;
- Large areas of retained greenspace / agricultural land.

Figure 2 Outline Masterplan



Capabilities on project:
Transportation

2.2 Trip Generation and Distribution

2.2.1 Trip Generation

The trip generation for the above land-use mix has been estimated with the latest release of the TRICS database, the results of which are summarised below.

Table 1 Estimated Trip Rates

Land-use	Morning Peak Hour		Evening Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Residential (1)	0.14	0.41	0.37	0.22
Employment (2)	26.70	11.73	5.97	21.91

Note: (1), trip rate per unit

(2), trip rate per hectare

Using the above rates, translates into the following traffic generation estimates.

Table 2 Estimated Traffic Generation

Land-use	Morning Peak Hour		Evening Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Residential	50	142	128	77
Employment	53	23	12	44

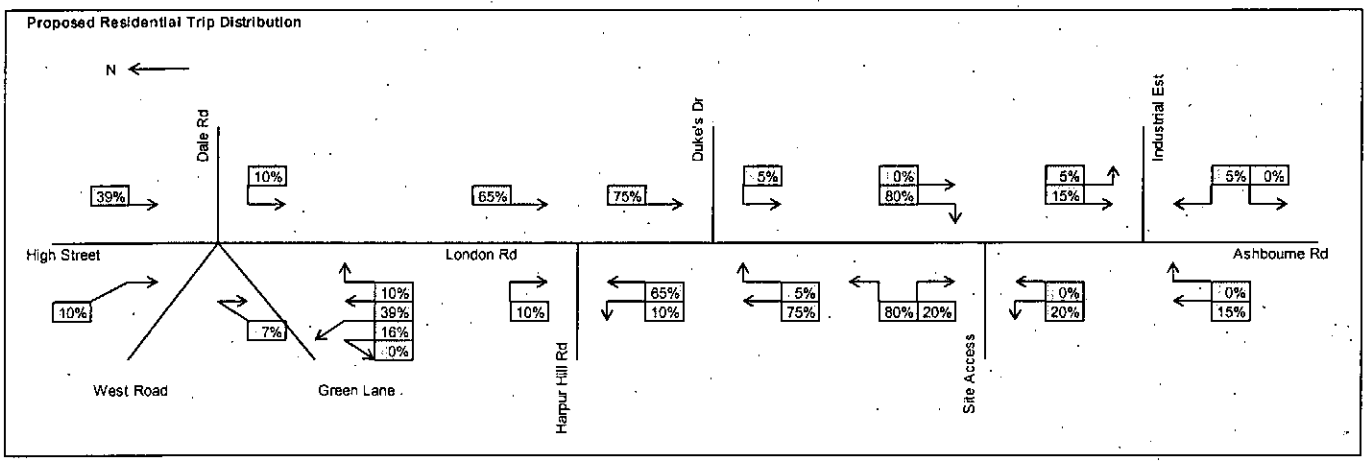
2.2.2 Trip Distribution

The two principal land-uses are likely to have slightly different trip distributions due the nature of their operations and the surrounding road network. Our estimates are given below.

Residential

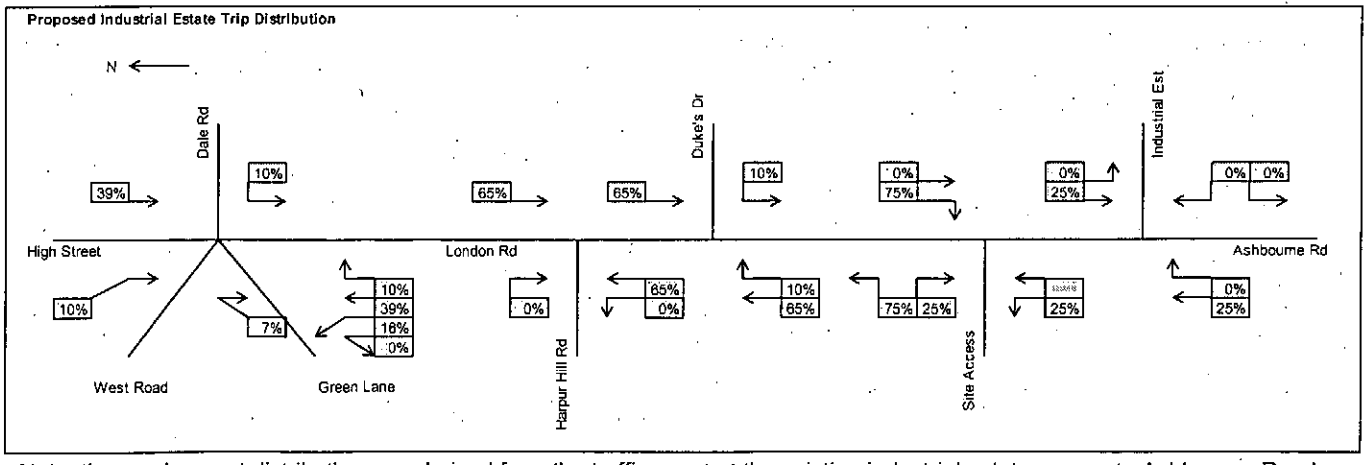
The trip distribution for the proposed residential development has been estimated using the following data:

- The latest available census travel to work data;
- The recently collected traffic count data; and
- A review of trip generators in and around Buxton.



Employment

The main difference in the employment distribution is that the industrial estate is unlikely generate many trips.



Note: the employment distribution was derived from the traffic count at the existing industrial estate access to Ashbourne Road.

Proposed Site Access

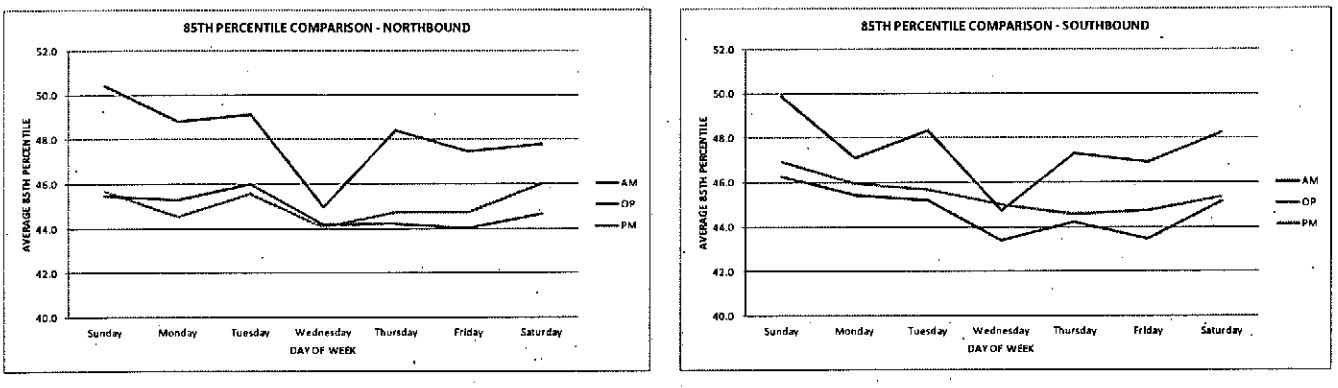
3 Proposed Site Access

The development is proposed to have a single primary vehicle site access from Ashbourne Road. In addition, pedestrian and cycle access points are proposed to the Harpur Hill side of the development site.

3.1 Ashbourne Road

In the vicinity of the site, Ashbourne Road has a 40mph speed limit. However, currently the visual aspect of the road is very much more rural than urban, and it would be expected that vehicle speeds would be higher than the posted speed limit. This is confirmed by the results of the ATC speed survey which is summarised below.

Graph 1 Average 85th Percentile Speeds (mph)



The above graphs show that average 85th percentile speeds on Ashbourne Road in the vicinity of the site are above the speed limit both northbound and southbound, and during peak and off-peak periods.

When considering weekday daytime (07:00 – 19:00) speeds, the survey gave the following overall 85th percentile results:

Northbound (into Buxton): 45.4 mph

Southbound (out of Buxton): 45.3 mph

Overall, daytime speeds are very similar northbound and southbound, and with reference to the Design Manual for Roads and Bridges, would equate to a design speed of 70 kph, and a forward visibility distance of 120 metres.

The proposed development will offer the opportunity of changing the visual appearance of this section of Ashbourne Road, through a combination of several factors, including: landscaping; proximity of buildings in relation to the main road; the site access itself, street lighting and other street furniture. If designed correctly, the development should have a positive influence on driver behaviour, and it would be hoped that over time vehicle speeds would reduce to be more in keeping with the speed limit of Ashbourne Road.

The details of the side treatment to Ashbourne Road will be developed over the course of this application. However, at this time, Drawing No. 001 gives the proposed layout of the site access, from which the following features are evident:

- The existing access to the industrial estate would remain unchanged;
- The site access would be formed in the approximate position of the existing field entrance;
- The combination of the site access and the industrial estate access will form a right / left staggered junction, so turning conflicts will be minimised;
- A right turn pocket from Ashbourne Road is provided as per design guidance;

Capabilities on project:
Transportation

- 4.5 metre x 120 metre visibility is proposed at the site access. This visibility envelope has also been checked in the vertical via the topo survey;
- Between the two junctions the road is widened and the road marking amended to enable two half lay-bys for buses;
- Pedestrian connection is facilitated to the two stops by new footways, and two refuge islands on the desire lines;
- Footway is extended north along Ashbourne Road to a third refuge island to facilitate pedestrian connection in this direction.

3.2 Harpur Hill Road

No vehicle access is proposed to the development from the Harpur Hill Road side of the site. However, it is intended that there will be at least one pedestrian / cycle connection as it will give the most convenient access to a range of day-to-day facilities (such as schools and shops). Harpur Hill Road will also give a good quality walk route, with excellent views across the Peaks alongside a traffic calmed road. Harpur Hill Road is also a bus route.

The main pedestrian / cycle access point from this side is likely to be in the position of the existing Foxlow Farm access, where there is an existing public right of way. Note, this right of way across the site will be maintained, but a diversion may be required to help facilitate the development.

In addition, further pedestrian connections may be proposed on the Harpur Hill side of the site. A large proportion of the site will be retained as green space / agricultural lane, so could become an attractive recreation space for local residents.

Junction Assessments

4 Junction Assessments

4.1 Junctions of Assessment

The following junctions are proposed to be included with the traffic impact section of the Transport Assessment:

- Ashbourne Road / Staden Lane: PICADY;
- Site Access / Ashbourne Road: PICADY (will be modelled with the Staden Lane junction);
- Harpur Hill Road / Ashbourne Road / Duke's Drive: PICADY;
- Fiveways signal junction: LinSig.

4.2 Traffic modelling Scenarios

It is likely that the proposed development will be constructed over several years, and in a number of phases. To allow for this we propose the following modelling scenarios be included within the traffic impact assessment:

- 2013 Base, to calibrate base traffic models;
- 2015 Base – year of opening;
- 2015 Base plus development;
- 2020 Base – design year;
- 2020 Base plus development.

The modelling will be undertaken for weekday morning (08:00 – 09:00), and evening (17:00 – 18:00) peak hour periods.

4.3 Traffic Growth Factors

Peak hour traffic growth factors for the above assessment years have been estimated via TEMPRO for the Buxton area. The results of this search are as follows:

2013 – 2015: 1.0204;

2015 – 2020: 1.0243.

4.4 Other Developments

At this stage, no significant committed developments have been identified in the Buxton area. As such, it will be assumed that traffic associated with other developments will be accounted for in the traffic growth factors.

Travel Plan Framework

Capabilities on project:
Transportation

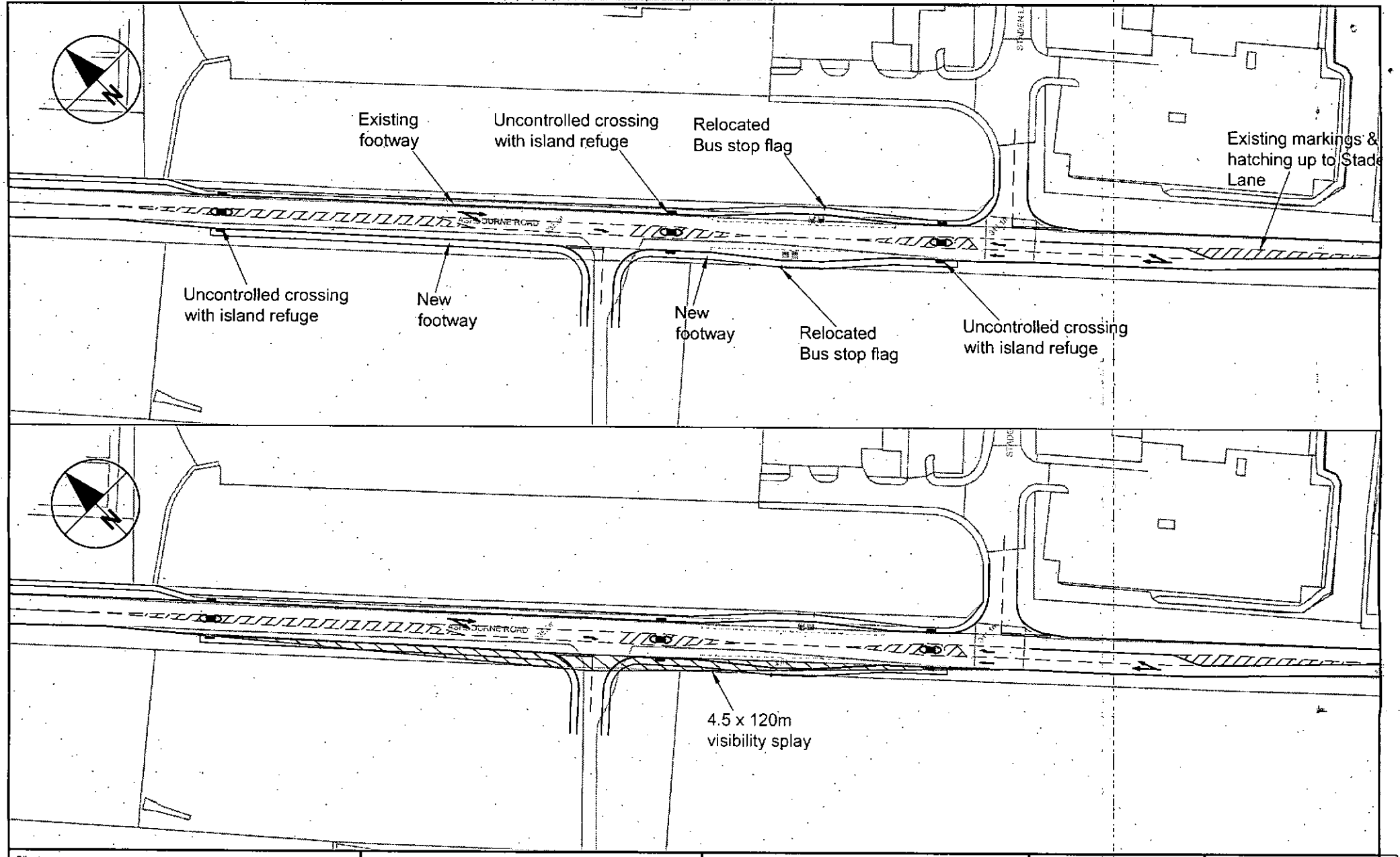
5 Travel Plan Framework

The details of the proposed development are at a very early stage, however an initial Travel Plan framework will be prepared for the whole development site.

This document will include an appropriate set of travel awareness initiatives, which can be built upon as the planning for the development moves forward in more detail. This will include a review the DfT 'Smarter Choices' measures, and especially connecting the development to the surrounding area for pedestrians and cyclists and links to public transport stops.

No modal shift targets will be suggested at this stage..

Drawing



Client: Hallam Land Management Ltd	Title: Proposed Site Access Arrangements, Ashbourne Road, Buxton	AECOM	Design: DC	CAD: MD
Project: Proposed Mixed Use Development, Foxlow Farm, Buxton		3rd Floor, Princes Parade,, Princes Dock, Liverpool, L3 1QH Tel: +44 (0) 151 331 8900 Fax: +44 (0) 151 331 8999 www.aecom.com	Chk'd: DD	App'd: KR
			Date: Feb 2013	Scale: 1:1000
			No. 60286491/LP/001	Rev:
				A3

Appendix A

From: Knowles,Nick (Environmental Services)
To: Crockett, Duncan
Subject: RE: Foxlow Farm, Buxton: Outline TA Scope
Date: 18 March 2013 07:52:48
Attachments: High Peak LP Buxton Cumulative.pdf

Morning Duncan

I've now had opportunity to have a look into your enquiry and can comment as follows:-

I note you make reference to the draft High Peak Local Plan and use of committed/ likely developments for future year traffic flow purposes. This Authority is currently reviewing the content of the draft prior to making further comment, however, I recommend you include your views on cumulative impact of developments in the Buxton Area. Attached, for your information, is a copy of this Authority's response to the original consultation of last year that may be of use.

Inclusion of the junctions referred to within the TA (carried out in accordance with the DfT guidance) is acceptable, however, it is possible that the Assessment may need to be extended and further junctions may require assessment following the initial findings. Both the four-arm and five-arm junctions referred to are congested and meaningful mitigation, to cater for cumulative development, should be proposed.

Visibility requirements will need to be based on specific free flow traffic speed survey results rather than ATC data as the latter does not adequately take into account convoys, weather conditions, traffic conditions, etc.

Signal timing information may be requested from Graham Wheatley (e-mail graham.wheatley@derbyshire.gov.uk).

Injury accident data should be obtained from Derbyshire Police - contact Alison Morse, Performance Delivery (Main switchboard 0300 123 3333 or email Alison.morse.5144@derbyshire.pnn.police.uk)

If you still feel a meeting will be of benefit, could you please provide some suitable dates from w/c 15 April onwards.

I hope that the above comments, made without prejudice, are of use and enable you to further your project.

Regards

Nick

From: Crockett, Duncan [mailto:duncan.crockett@aecom.com]
Sent: 19 February 2013 12:58
To: Knowles,Nick (Environmental Services)
Cc: Riley, Kevin
Subject: Foxlow Farm, Buxton: Outline TA Scope

Nick,

Further to our earlier telephone conversation, please find attached an outline scope for the transport assessment for a proposed development site on the south side of Buxton.

This is really to introduce you to the possible development, and to open discussions on the content and methodology of the assessment. Ideally, we would hope to sit down with you or one of your colleagues to go through the scope point by point in the next week or so that we avoid any abortive work.

In the meantime we will be looking to commission the traffic surveys, so could you check that all key junctions are included.

Also, could you please give me a contact at the Council to obtain:

Signal timing information; and
Injury accident data.

Look forward to discussing further soon, and thanks for your help.

Regards

Duncan Crockett
Principal Consultant, Development Planning
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AECOM, Exchange Court, 1 Dale Street, Liverpool, L2 2ET
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File Note

AECOM

Project:	**Foxlow Farm, Buxton**	Job No:	**60286491**
Subject:	**Outline Scope, Transport Assessment**	Date:	**19 February 2013**

1.0 Background

AECOM have been appointed by Hallam Land Management Ltd to prepare transport reports in support of an outline application for a mixed-use development on a site on the southern edge of Buxton. The site is called Foxlow Farm, and its location is given on the attached plan.

The purpose of this note is to introduce the scheme to Derbyshire County Council, and provide a suggested outline for the scope of the detailed transport assessment. This scope will be refined as discussions proceed with the County Council.

2.0 Policy

The draft High Peak Local Plan identifies this site as being suitable for a mixed-use development subject to detailed assessments and consultation.

3.0 Land-uses

The proposed land-uses are currently subject to a masterplanning assessment, however will likely comprise of residential (around 400 units), commercial, employment, and leisure. Details will be confirmed as this assessment progresses.

4.0 Site Access

Vehicle site access is likely to be restricted to the east from Ashbourne Road. Along the frontage of the site the road is posted at 40 mph, however the alignment (both horizontal and vertical) will be important in the positioning and design of the access.

To help inform the access design, the following information will be used:

- 1:1250 OS mapping;
- Topographic survey (currently being collected);
- ATC data of Ashbourne Road to give speeds and classification of vehicles;

The preliminary access design will be given to the County Council for comment prior to the assessment progressing too far.

Pedestrian / cycle access points will be proposed on the western (Harpur Hill) side of the site to give access to local facilities.

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5.0 Traffic Impact Assessment

5.1 Trip generation

Trip generation for the proposed development will be estimated using the latest version of the TRICS database.

5.2 Trip distribution

Trip distribution will be estimated on the basis of local and wider area trip attractors, and with reference to the junction counts detailed below.

5.3 Junctions of assessment

The following junctions are proposed to be included within the traffic impact assessment (see also enclosed plan):

- The proposed site access off Ashbourne Road;
- The priority access to the industrial estate on the other side of Ashbourne Road (Staden Lane);
- The four-arm staggered priority access of Harpur Hill Road / Ashbourne Road / Duke's Drive; and
- The five-arm signalised junction know as Fiveways on the south side of the town centre.

New classified turning counts will be commissioned at the three existing junctions covering weekday peak periods (07:30 – 09:30 and 16:00 – 18:00).

5.4 Committed developments / traffic growth / years of assessment

It is suggested that committed / likely developments be used to form the basis of future year traffic flow estimates. This would give two years of assessment: year of opening and plus five years including other developments.

5.5 Traffic models

Standard traffic models will be used in the assessment (PICADY and LinSig). It would be useful if the County Council could provide the existing signal timing information for the Fiveways junction.

6.0 Road Safety

The most recent three years of injury accident records will be requested from the County Council to cover the junctions of assessment, and the frontages of the site with Ashbourne Road and Hapur Hill Road. This data will be assessed to determine any trends, and will be used to review the safety implications of possible off-site works.

7.0 Site Accessibility

Access to the site by all modes will be reviewed with either reference to a standard checklist, or a more local County Council method if one is available.

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8.0 Travel Plan Framework

A travel plan framework will be prepared with reference to appropriate local, regional and national guidelines. The detail of this document will be updated as the detailed planning for the site progresses.

9.0 Application Timescales

Currently, it is planned that the submission of the outline application be targeted for mid-June of this year.

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