



THE TOWN AND COUNTRY PLANNING ACT 1990

**TOWN AND COUNTRY PLANNING (INQUIRIES PROCEDURES) (ENGLAND)
RULES 2000**

LAND OFF GRANGE ROAD, HUGGLESCOTE

APPEAL BY BLOOR HOMES EAST MIDLANDS LTD

**APPENDICES TO PROOF OF EVIDENCE
OF
MARK EDWARDS
MCIHT**

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Appendix A – Coalville Transport Study Brief (20 November 2009)

Coalville Transport Study Brief (20 November 2009)

Technical Note

Job Title	Coalville South East SUE		
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Subject	Transport Study Brief to support the NWLDC LDF Core Strategy		

1 Introduction

- 1.1 The promoters of the proposed Sustainable Urban Extensions (SUE) around Coalville, are seeking to appoint a consultant to undertake a Transport Study to identify the impact of and potential mitigation of proposed housing sites that are being promoted through the Local Development Framework (LDF) Core Strategy. The outcomes of the study should provide the basis of the Transport Evidence Base for the Core strategy in order to demonstrate the soundness of the plan.
- 1.2 In accordance with the East Midlands Regional Spatial Strategy, Coalville is likely to be the focus of housing growth in NWL over the next 15-20 years. The Council is currently reviewing responses to a recent Further Consultation document that identified a range of development at Coalville of between 5400 and 9800 dwellings. It is likely that this figure will be reduced to a maximum of around 7500 on the basis of further evidence and will comprise:
 - North of Stephenson Way SUE: This urban extension would require development of land between Coalville and Whitwick currently identified as a 'Green Wedge' in the existing local plan. It is being promoted by three developers for approximately 2000 dwellings over a number of development stages; and
 - South East Coalville SUE: Including the current local plan allocation and additional land to the south. This has the potential to deliver up to 4500 dwellings also over a number of development stages.
- 1.3 Although the key aim of the Study will be to consider these two SUEs it will be essential to determine and assess the cumulative transport impacts arising from a number of smaller sites (up to 1,000 houses). The location of these sites is shown on Figure 1 attached.

2 Objectives

- 2.1 In line with PPS12 the NWLDC LDF Core Strategy will need to meet the tests of soundness. Guidance issued by the Planning Inspectorate stresses that Core Strategies must be deliverable and should therefore:
 - be based on sound infrastructure delivery planning;
 - have no regulatory or national planning barriers to delivery;
 - identify delivery partners who are signed up to it;
 - have coherence with the strategies of neighbouring authorities;

- be flexible; and
 - be able to be monitored.
- 2.2 The Core Strategy will need to show how and when the transport strategy for the town will be delivered and by whom, and how this will be monitored. This study will provide the evidence base to underpin the transport strategy for Coalville and thereby address each of the points listed above. In terms of outputs the study should meet the requirements of PPS12 and in relation to transport infrastructure set out:
- What the impact of the development will be;
 - what interventions are needed;
 - what modal shift the interventions will achieve;
 - when these will be required (including any critical dependencies with development trajectories or other infrastructure schemes);
 - the estimated costs of the identified infrastructure (capital and revenue) ;
 - the bodies / agencies responsible for their delivery (including developers where appropriate); and
 - committed and potential sources of funding for each identified interventions (including public and private funding) and any potential funding gaps.
- 2.3 The level of detail for infrastructure required to support the development of SUEs, related to on and off site transport measures, will be higher than for smaller sites. For the latter the study should focus on off-site mitigation measures. However, the combined impact of the development proposals will need to be assessed to determine the overall transport interventions to be recommended as part of the Core Strategy.
- 2.4 The work will also allow NWLDC to incorporate suitable and robust enabling policies within the Core Strategy to allow other activities to progress as identified in paragraph 4.4 of PPS 12. This may include considerations such as compulsory acquisition given the infrastructure requirements of any material growth around Coalville.

3 Scope

- 3.1 NWLDC will provide a list of possible development scenarios for the area. These may include development proposals not identified above. The Study approach should therefore be adaptable to allow incorporation or removal of sites in the future. The Study will need to be generally flexible and adaptable to change and uncertainty in order to avoid the need to review the Core Strategy should there be changes to development phasing.
- 3.2 In order to meet these requirements the proposed transport strategy may need to be identified as phased interventions in order to reflect a range of development scales and delivery timescales.
- 3.3 The study and in particular the outcomes of the Preferred Strategy, will need to be aligned with DASTS and RSS objectives. The appointed consultants will be expected to work alongside LCC and the HA to develop a transport vision for the area and a phased approach to the study. As part of this exercise it will be necessary to define the study objectives, outputs and outcomes and confirm the methodology to be adopted.
- 3.4 Examination and determination of transport interventions will need to follow the guidance set out in Circular 2/2007 (in particular refer to paragraphs 21, 23 and 33) and the Guidance on Transport Assessment (GTA) (in particular refer to Figure 4.1 and Chapter 5), related to the need to reduce travel, maximising sustainable access and then dealing with residual trips on the network. The objective being to develop a sustainable transport strategy which will:
- **Reduce travel distances** – by offering vibrant, compact, mixed use developments.
 - **Encourage walking** – by providing attractive legible pedestrian environments free of motorised traffic with appropriate signage / directions.
 - **Encourage cycling** – by providing extensive cycle routes, separate cycling facilities along heavily travelled roads and at intersections, traffic calming of most residential neighbourhoods, ample bike parking and full integration with public transport.

- **Promote public transport** – by providing high quality, efficient and frequent public transport services and up-to-date timetabling information, integrated ticketing and comprehensive coverage.
 - **Discourage car usage** – by control and management of car parking spaces, introducing parking restrictions and charging for off-street parking; manage use of the highway network through traffic controls on access to key routes, queue relocation and reallocation of road space.
 - **Deploy a wide range of smarter choices techniques** – influence people's travel behaviour through developing travel plans, personalised travel planning, car clubs and community bike facilities and the use of targeted marketing and promotional activities."
 - **Network Management Duty** – ensure that the most effective use is made of the existing highway network to reduce the need for additional infrastructure.
- 3.5 It will be necessary to prepare the Study in consultation with a number of stakeholders and key delivery partners that will be identified by the client group.
- 3.6 Upon appointment the consultant will be expected to work alongside LCC and the HA to define the range of interventions to be tested. In advance, and subject to scoping work which will clarify the study area, it is envisaged the study will include:
- demand management/Influencing Travel Behaviour (ITB) initiatives
 - development of a public transport strategy between the centre of Coalville, the SUE developments, Loughborough, Leicester and other significant trip attractors (e.g. East Midlands Airport);
 - capacity of Bardon Road through Coalville;
 - proposed Relief Road North of Beveridge Lane (linking Grange Road and Stephenson Way bypassing Bardon Road, the last remaining single carriageway section of the A511) and its associated junctions;
 - Junction 13 A42 / A511;
 - A511 / A447 Swannington Road Roundabout;
 - A511 Stephenson Way / Thornborough Road Roundabout;
 - A511 Stephenson Way / Whitwick Road Roundabout;
 - A511 Stephenson Way / Broomleys Road traffic signals;
 - A511 Shaw Lane / B585 Beveridge Lane Roundabout;
 - A511 Shaw Lane / B591 Copt Oak Road Roundabout;
 - Junction 22 M1 / A511; and
 - Grange Road / Station Road / Ashburton Road / Central Road traffic signals.

The range of interventions to be assessed should be reviewed with LCC and the HA in the light of further modelling work outcomes. Should the need to make revisions to the interventions/assessment work be identified, these will need to be agreed between the parties involved with this project before proceeding further.

- 3.7 Based upon the hierarchical approach of promoting sustainable access solutions first as set out within Circular 2/2007 and the GTA, the Study should be developed on the basis of there being no critical transport congestion concerns on the Local Highway Network (LHN) and Strategic Road Network (SRN) arising from SUE. Any other proposed developments, **not included in the list of possible development scenarios to be provided by NWLDC referred to in Paragraph 3.1 above**, would need to be assessed separately.
- 3.8 In order to do this effectively and with minimal risk of failing the 'soundness test' it may be necessary to undertake sensitivity and scenario testing to show how the strategy could still be delivered should there be variations (within the limits of the study brief) in scale and programme over a 15 year period.

4 Methodology to Determine Highway Network Trips

- 4.1 The study outcomes should be informed by the use of PTOLEMY as a high level assessment tool to inform potential trip generation, trip distribution, existing and future mode split, traffic growth and network stress based on varying levels of development at alternative locations.
- 4.2 The PTOLEMY model is owned by The East Midland Regional Assembly (EMRA) who will be able to provide for the restricted use of the PTOLEMY model to assist in the testing of alternative interventions. The number of runs will be limited (due to financial constraints) and will need to be agreed with the HA, LCC and NWLDC at inception. Further information on PTOLOMY can be obtained from Andrew Pritchard at EMRA.
- 4.3 Specific junction assessments and infrastructure interventions should be informed based upon the use of models capable of more detailed analysis such as micro simulation or empirical junction models, e.g. Arcady, Picady, Linsig etc. The determination of network flows for this analysis is described below.
- 4.4 The initial phases of the study, to establish future year reference case transport conditions, trip assignment and mode split, should be informed where possible by the PTOLEMY runs already undertaken during spring 2009. The 2026 reference case and the Option 1 (Coalville centric growth – 12,276 dwellings) should be used as the basis for initial considerations with the specific outputs to be requested from LCC.
- 4.5 The initial comparisons between the PTOLEMY 2026 Reference Case and 2026 Option 1 will enable key origins and destinations of trips to be identified, by mode, which should then be used to inform initial transport interventions for testing in PTOLEMY. It is suggested that three PTOLEMY Core Strategy development runs should be tested based upon the following criteria:
- 2026 reference case network – committed transport schemes only
 - 2026 Do something - maximum sustainable transport strategy (see paragraph 3.4 above), minimum highway infrastructure.
 - 2026 Do something – balanced approach between highway infrastructure and sustainable transport
- 4.6 The outputs from PTOLEMY will enable a comparison to be made between 2026 development scenarios and the reference case to establish how effective the maximum sustainable transport strategy may be in reducing the need for significant new highway infrastructure. The exercise should also identify where critical infrastructure may be required to enable the development included the Core Strategy to come forward.
- 4.7 A more detailed consideration of highway infrastructure will then need to be made based upon specific link and junction capacity assessments. PTOLEMY is not capable of providing routing or junction turning flows and therefore a methodology will need to be agreed between the appointed consultants and the Client Group to determine indicative 2026 junction turning flow data for assessment purposes. It is anticipated that this would be on the following basis.
- Step 1 - Determine 2026 background flows on key junctions and links on the network by factoring up recently observed traffic counts at each junction/link using DfT TEMPRO/NRTF background traffic growth factors. These growth factors should be checked against that used in PTOLEMY between the base year and the 2026 reference case.
 - Step 2 - Obtain select zone analysis from PTOLEMY for the 2026 Reference Case and Development Scenarios for each development zone and identify an indicative distribution through the network based on most likely route (shortest cost/ time).
 - Step 3 - Derive a growth rate for all approaches to major junctions based on link flow growth between 2026 PTOLOMY background flows and relevant future year PTOLOMY Core Strategy reference case or Do Something scenarios.
 - Step 4 - Apply the growth rates derived in Step 3 to the junction inflows derived in Step 1 to establish an initial indication of future year turning movements at the junction. However, if any specific distributional issues identified in Step 2 are relevant to the

junction, make adjustments as appropriate to adjust future year turning movement growth.

- 4.8 Discussions will need to be held with EMRA (or their consultants WSP) over the availability of AM and PM peak hour network flows from PTOLEMY. PM peak assigned flows are not a primary output from PTOLEMY but can be derived on request at an additional cost from the PTOLEMY operators.
- 4.9 Where access to PTOLEMY is restricted or relevant information is not available from PTOLEMY outputs, alternative analysis and outputs will need to be agreed with NWLDC, Leicestershire County Council and the Highways Agency.

5 Working with the Client Group

- 5.1 The appointed consultant will be expected to work closely with the Steering Group. The Steering Group will comprise the promoters of the proposed Sustainable Urban Extensions, NWLDC, Leicestershire County Council and the Highways Agency. It is anticipated that this group will meet at least twice during the course of the study.

6 Timescales

- 6.1 The outputs of the study will be required in the form of a draft report by 1st March 2010, with a Final Report no later than 22nd March 2010.

7 Possible Stage 2

- 7.1 Having established an agreed suite of transport interventions necessary to delivering the core strategy, it will be necessary to identify the appropriate role for developer contributions as a mechanism for delivering the required infrastructure.
- 7.2 Stage 2 of the study will be to develop the principal of a bespoke contribution strategy which would form the basis of a specific policy or policies within the Core Strategy, Area Actions Plans, Site Specific Allocations Documents or Supplementary Planning Guidance to ensure the delivery of future infrastructure. The contribution strategy would allow the highway authorities of LCC and the HA to collect funds from developers towards transport related mitigation measures. These may include contributions in lieu of highway improvements that would normally be provided through Section 278 Agreements. The management of mitigation measures in this way through making of contributions would allow the coordination of transport infrastructure between highway authorities', developers and landowners. This should test the applicability of a pooled approach to the collection of contributions towards highway infrastructure in the light of emerging practice elsewhere and any implications of the Government's draft regulations on the operation of the Community Infrastructure Levy.
- 7.3 It is anticipated the Transport Study (Stage 2) will identify a mechanism by which proposed developments in the study area will provide mitigation measures to the LHN and SRN from car-borne residential development generated trips. It will further seek to address infrastructure and policy requirements to accommodate people movements to and from these developments by sustainable modes of transport in order to minimise use of the private car and provide a choice of modes by which to access the developments.
- 7.4 In obtaining contributions it is proposed the Study will set out a position in which LCC and the HA may not require developments to put in place off-site mitigation measures to the LHN and SRN. The objective of phase 2 would be to develop a robust mechanism by which off-site considerations (excluding the site access (es) or other infrastructure specifically identified as excluded in the Study) whether physical works to the highway network or provision of sustainable initiatives will be procured by the Highway authorities by use of the developer contributions & other funding sources. Any strategy which seeks to secure contributions towards strategic or off-site infrastructure will need to be compliant with emerging Regulations for the Community Infrastructure Levy. The Core Strategy will need to include policies capable of addressing these considerations, and the study should recommend appropriate policies in this respect.

Appendix B – Transport Assessment Scoping Note (September 2010)
Transport Assessment Scoping Note (September 2010)

Bloor Homes

Bardon Grange - Coalville

September 2010

Scoping Note

TRANSPORT
TRAFFIC
DEVELOPMENT
PLANNING
URBAN DESIGN
ECONOMICS
MARKET RESEARCH

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Bardon Grange - Coalville

Scoping Note

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September 2010

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1 Introduction

1.1 Background

1.1.1 Colin Buchanan (CB) has been commissioned by Bloor Homes to provide transportation and highways advice in support of a planning application for the construction of up to 800 (C3) residential dwellings, a primary school and a local centre (together with ancillary infrastructure, open space and landscaping) in Coalville, North West Leicestershire.

1.1.2 The proposed Bardon Grange site (the Site) is located to the south east of Coalville Town Centre and is allocated in the North West Leicestershire District Council (NWLDC) Local Plan for residential (C3) and associated development use. Although an overall masterplan for the whole site area is to be considered a first phase detailed application is being prepared for the land to the east of the disused railway line.

1.1.3 In support of the planning application a Transport Assessment (TA) and Framework Travel Plan (FTP) will be prepared to analyse the impact of the proposed development on the relevant transport networks. An Environmental Impact Assessment is also being prepared, which will include consideration of the transport related impacts of the proposed development.

1.1.4 This scoping note has been prepared to set out the approach and methodology CB intends to follow in the preparation of the planning application documents.

1.1.5 The TA and FTP will be prepared in line with local and national policy and guidelines including the Department for Transport (DfT) 'Guidance on Transport Assessment' document (March 2007).

1.2 Development Overview

1.2.1 The Site is located on the south eastern edge of Coalville and covers an approximate area of 39ha. **Figure 1.1** below provides a location plan of the Site with the blue line indicating the Local Plan allocation and the red line indicating the first phase application site comprising up to 800 dwellings.

Figure 1.1: Site Location



1.2.2 The A511 runs to the north of the Site in an east west direction linking the M1 (junction 22) to the east and A42 (Junction 13) to the west. Both the M1 and A42 form part of the Strategic Road Network (SRN) and are under the jurisdiction of the Highways Agency.

1.2.3 The first phase detailed application (as shown in red on **Figure 1.1**) will comprise:

- Up to 800 (C3) residential dwellings of mixed sizes
- Primary school
- Local village centre

1.3 Baseline Conditions

Policy

1.3.1 The following policy documents are to be considered by the TA:

- PPG13 – Transport;
- PPS3 – Housing;
- North West Leicestershire Local Plan;
- Leicestershire Local Transport Plan 2 (2006 – 2011)

Walking and Cycling

1.3.2 CB has considered the accessibility of the surrounding area by walking and cycling based on DfT guidance.

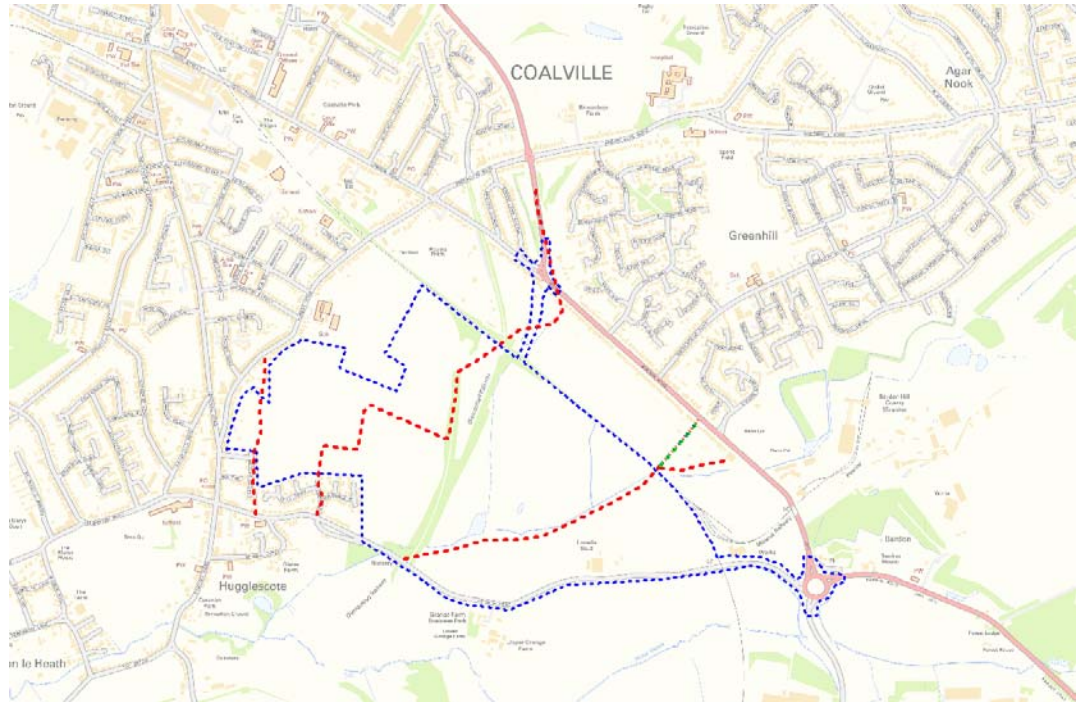
1.3.3 The DfT recommends a reasonable walking distance to school, work, leisure facilities and services as 2km. **Figure 1.2** below indicates a 2km radius around the centre of the site. The blue line indicates the outline of the site and the yellow line is a 2km catchment from the centre of the site.

Figure 1.2: 2km Walking Catchment



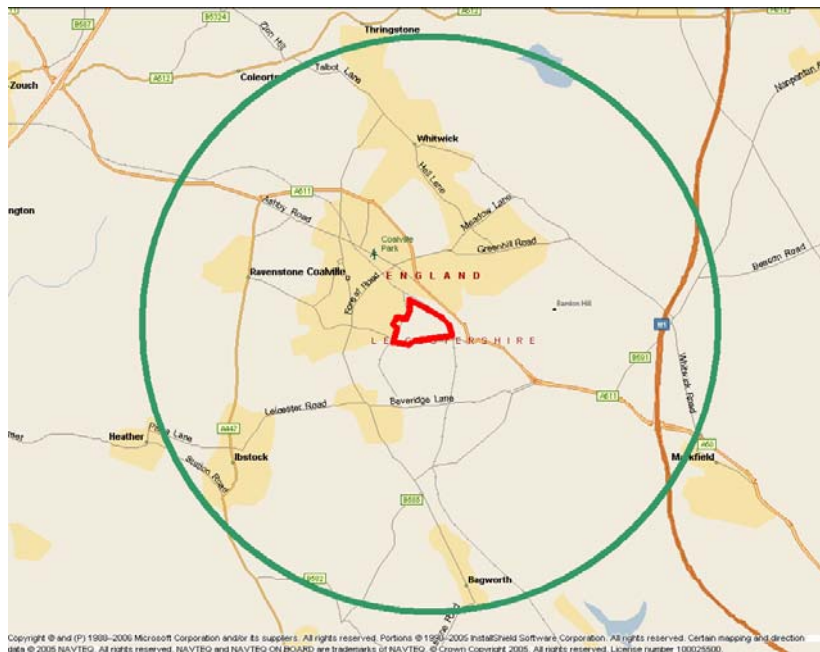
- 1.3.4 It is evident that a large proportion of existing development can be accessed within 2km of the site. At present the Site itself is primarily in agricultural use and therefore has minimal facilities for walking. When developed the area should contain well lit footpaths and a variety of green space in order to encourage people to walk. Linkages with the Town Centre and other key employment and local amenities will be provided as part of the overall masterplan and, where feasible, as part of the first phase application.
- 1.3.5 CB has assessed the existing Public Rights of Way on the Site. **Figure 1.3** below shows the Site boundary (blue dashed line), existing footpaths (red dashed line) and existing bridleway (green dashed line).

Figure 1.3: Public Rights of Way located in the Site



1.3.6 The DfT state that a reasonable cycling distance to work, school and public amenities is 5km. **Figure 1.4** below indicates a 5km radius around the centre of the Site.

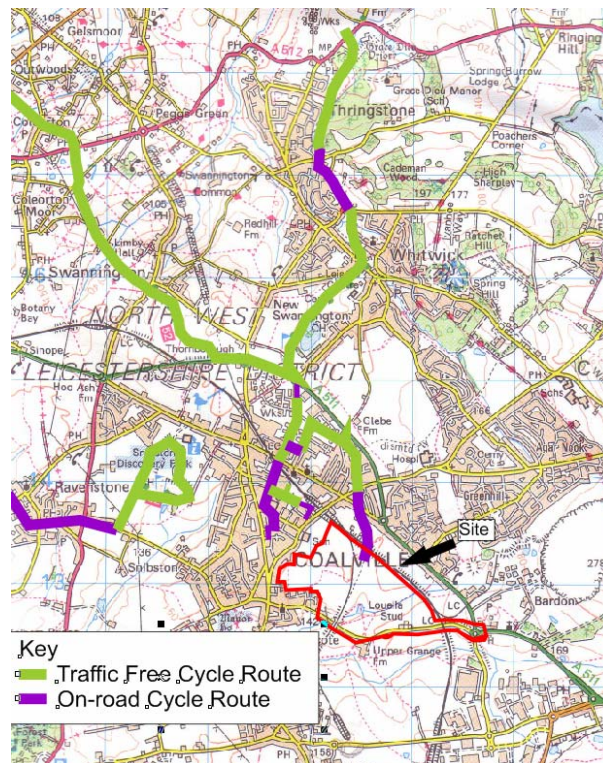
Figure 1.4: 5km Cycling Catchment



1.3.7 As can be seen in **Figure 1.4** above, a 5km radius around the Site provides access to the Town Centre, educational establishments and employment areas in Coalville. In addition surrounding villages such as Whitwick, Ibstock and Bagworth fall within the reasonable cycle distance set by the DfT.

1.3.8 **Figure 1.5** below highlights the existing cycle routes in the surrounding area.

Figure 1.5: Cycle Routes in the Surrounding Area



Public Transport

1.3.9 CB have reviewed the current bus services in and around the development site. This review revealed there is a lack of frequent services from the Bardon Grange area. The following list shows existing services:

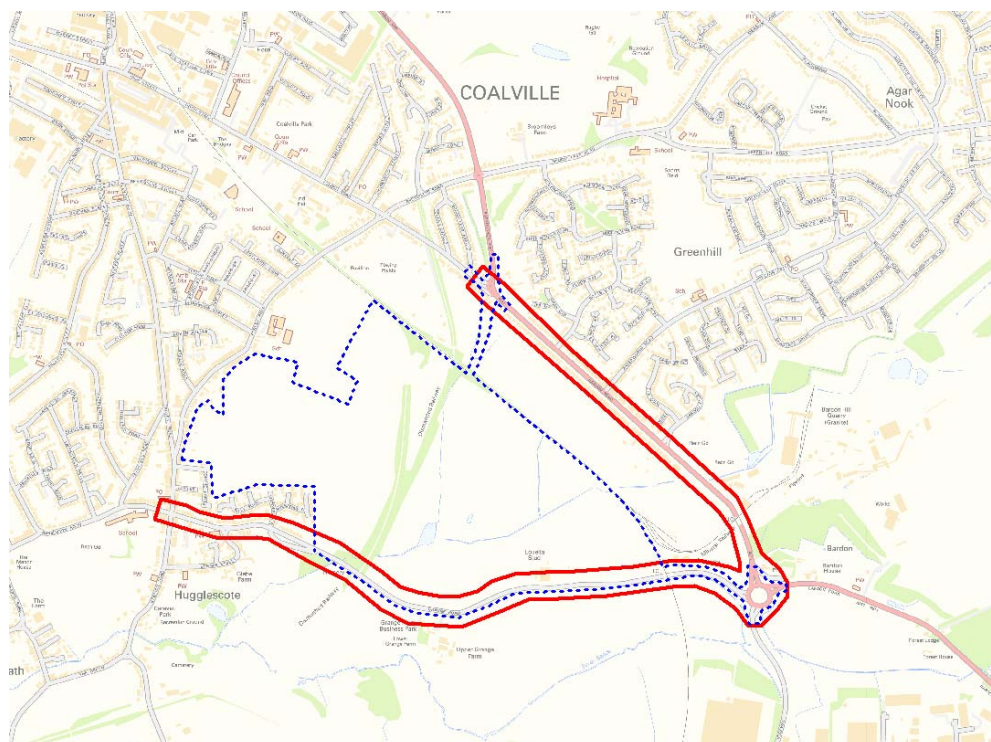
- Arriva service 26 Leicester – Ratby – Thornton – Bagworth – Ellistown – Coalville. Hourly with typical journey time of around 50 minutes;
- Arriva service 29 Leicester – Markfield – Coalville; Hourly with typical journey time of around 50 minutes;
- Arriva service 29A Leicester – Markfield – Whitwick – Coalville; Hourly with a typical journey time of around 60 minutes; Arriva service 152 Leicester – Kirby Muxloe – Barlestone – Ibstock – Coalville; Hourly with a typical journey time of around 70 minutes.

Appendix A provides plans of the current bus service network in the Coalville area.

Personal Injury Accidents

1.3.10 CB has obtained accident data for the most recent five year period in areas on the road network which seem most suitable. **Figure 1.6** indicates the Site boundary (outlined in blue) and the accident analysis area (outlined in red).

Figure 1.6: Accident Analysis Area



1.3.11 Forty accidents were recorded within the search area, 38 were slight, 1 serious and one fatal. **Table 1.1** below shows the number and severity of accidents on each road and junction:

Table 1.1: Recorded Road Traffic Accidents

	Grange Road	Bardon Road	Hugglescote Junction	Bardon Road/Grange Road Junction	Bardon Road/Stephenson Way Junction
Slight Accidents	5	19	4	3	6
Serious Accidents	0	1	0	0	1
Fatal Accidents	1	0	0	0	0
TOTAL	6	20	4	3	7
Pedestrian Involved	0	1	1	0	0
Cyclists Involved	0	3	0	0	0

1.3.12 The data obtained will be analysed to establish whether there are any areas of high accident occurrence. Conditions such as carriageway condition, weather, lighting etc. will be analysed to establish whether the road layout is a causation factor.

Committed Developments

- 1.3.13 NWLDC have provided a list of committed developments which, in combination with the background network traffic demand, will form baseline traffic scenarios against which the highway impact of the Site will be measured. The list of the identified committed developments is shown in **Table 1.2** below:

Table 1.2: Committed Development

Application No	Location	Development
08/00917/OUTM	Hotel Street, Coalville(Ford Garage Site)	mixed use retail development
09/00359/FULM	Belvoir Shopping Centre	shopping centre extension
05/01283/REM	Stephenson College	outline residential development 155 dwellings
06/00066/FUL	138 – 148 Ashby Road	residential development comprising 69 dwellings
06/01220/OUT	Land adjoining Snibston Discovery Park, Ashby Road	outline residential development 51 dwellings
07/00902/FUL	Land rear of 16 – 32 Hotel Street	residential development comprising 12 dwellings
08/01596/FUL & 09/01216/FUL	7 – 9 Marlborough Square, Coalville	residential development comprising 14 dwellings
08/00227/OUTM	103 – 107 Central Road, Hugglescote	outline residential development 11 dwellings
07/01202/REM	Parsonwood Hill, Whitwick	residential development comprising 20 dwellings
06/00925/FUL	46 & Land rear of London Road, Coalville	residential development comprising 23 dwellings

1.4 Existing Highway Network

- 1.4.1 The Site lies approximately 4km to the west of M1 (Junction 22) and approximately 9km to the east of the A42 (Junction 13). These two junctions provide access to the SRN and the level of consideration will be agreed with the Highways Agency.

- 1.4.2 For the local highway network it is proposed that impact on the following links and junctions will be assessed as part of the TA;

Links

- Grange Road
- A511 Bardon Road
- Forest Road
- A511 Stephenson Way

Junctions

- Flying Horse Roundabout
- Beveridge Lane/Shaw Lane Roundabout
- Birch Tree Roundabout
- Bardon Roundabout
- Broomleys Road Cross Roads
- Hugglescote (Central Road) Cross Roads

- 1.4.3 Full traffic turning count survey data has been obtained for the above junctions and further traffic data will be received through Automatic Traffic Counters placed in early September.

2 Assessment Methodology

2.1 Trip Generation

2.1.1 Trip Rates have been derived from the TRICS database (2010). **Table 2.1** below provides the Peak Hour Trip Rates:

Table 2.1: Average Trips Rates for Residential Uses

Land Use – C3 Residential Dwellings	Average Trip Rates (per Dwelling)	
	Arrivals	Departures
AM Peak (08:00 – 09:00)	0.159	0.413
PM Peak (17:00 – 18:00)	0.388	0.231

2.1.2 **Appendix B** to this report provides the TRICS reports.

2.1.3 Using these figures, the following can be estimated for the approximate 800 dwellings proposed at the Bardon Grange site:

- AM Peak – 127 Arrivals and 330 Departures
- PM Peak – 310 Arrivals and 185 Departures

2.2 Trip Distribution

2.2.1 The trip distribution will be established based on the traffic survey information and 2001 census data.

2.3 Future Year Traffic Growth

2.3.1 TEMPRO has been used to assess future traffic growth due to the increase in housing in the site area. Table 2.2 shows calculated traffic growth:

Table 2.2: TEMPRO Data

TEMPRO Default Planning Assumptions for NWL				TEMPRO Calculated Alternative Planning Data		
Year	Base Households	Future Households	Increase in Housing	Committed / Proposed Development (houses)		Future Households (minus Committed Development)
				Committed	Proposed	
2007-2010	38431	40097	1666	355		39742
2008-2010	38986	40097	1111	355		39742
2009-2010	39542	40097	555	355		39742
2010-2016	39742* (40097-355)	43512	3770	355	800	42357
2010-2026	39742*	48691	8949	355	800	47536

* - base households amended in TEMPRO to remove committed developments

2.3.2 Using the TEMPRO data above, the growth factors set out in **Table 2.3** have been determined.

Table 2.3: Growth Factors

Year	Growth factor
2007 – 2010	1.0113
2008 – 2010	1.0061
2009 – 2010	1.0009
2010 – 2016	1.0564
2010 – 2026	1.2632

2.3.3 The full TEMPRO outputs are attached in **Appendix C**

2.4 Mode Split

2.4.1 To establish the modal split for the proposed development the 'Method of Travel to Work - Resident Population (UV39)' dataset from the 2001 Census National Statistics data has been used. The Site is located in the Hugglescote ward but to provide a more robust analysis the wards of Coalville, Bardon and Whitwick have also been considered.

2.4.2 **Table 2.2** below provides the modal splits calculated from the 2001 Census data for each of the wards.

Table 2.4: Percentage Mode Split for Commute to Work for Residents within Hugglescote, Coalville, Bardon and Whitwick Wards

Method of Travel	Hugglescote Residents	Coalville Residents	Bardon Residents	Whitwick Residents
Driving car or van	76.45%	62.09%	83.09%	77.28%
Passenger in a car or van	8.41%	7.75%	6.19%	7.11%
Bus, minibus or coach	4.18%	3.46%	2.09%	4.30%
Train	0.15%	0.16%	0.35%	0.13%
Taxi or minicab	0.66%	0.26%	0.35%	0.17%
Motorcycle, scooter or moped	1.99%	2.04%	2.01%	1.61%
Bicycle	2.85%	4.14%	1.66%	2.65%
On foot	5.30%	20.10%	4.27%	6.74%
Total	100.00%	100.00%	100.00%	100.00%

2.4.3 **Appendix D** to this note provides the data retrieved from the National Statistics website.

2.5 Pedestrian and Cycle Routes and Public Transport

2.5.1 A walking and cycling strategy will be developed for the Site to encourage travel by these sustainable modes.

2.5.2 A public transport strategy will also be included within the TA which considers what improvements, primarily in buses, could be facilitated by the development to increase bus usage and reduce the level of car borne journeys.

2.5.3 The public transport network is heavily reliant on buses and the focus for the project will be the provision of an express service between the Coalville Town Centre and Leicester also serving the Site. The express service should assist with increasing the mode shift from car onto bus for Coalville as a whole improving what currently is a low bus usage for journeys to work.

3 Impact on Highway Network

3.1 Site Access

3.1.1 The proposed site access(es) will be via Grange Road. It is the intention that the majority of trips access and egress the Site via the A511, Birch Tree roundabout.

3.2 Junction Modeling, Link Capacity and Mitigation Measures

3.2.1 Validated junctions models will be used and developed using the appropriate industry standard junction modeling software PICADY, ARCADY and LINSIG.

3.2.2 The capacity on the highway network will be assessed for the proposed completion year (2016) and future year (to be agreed with LCC but likely 2026) with and without development scenarios.

3.2.3 Where concerns with capacity are identified, appropriate mitigation measures will be developed to mitigate the impact of the development traffic providing a nil detriment scheme.

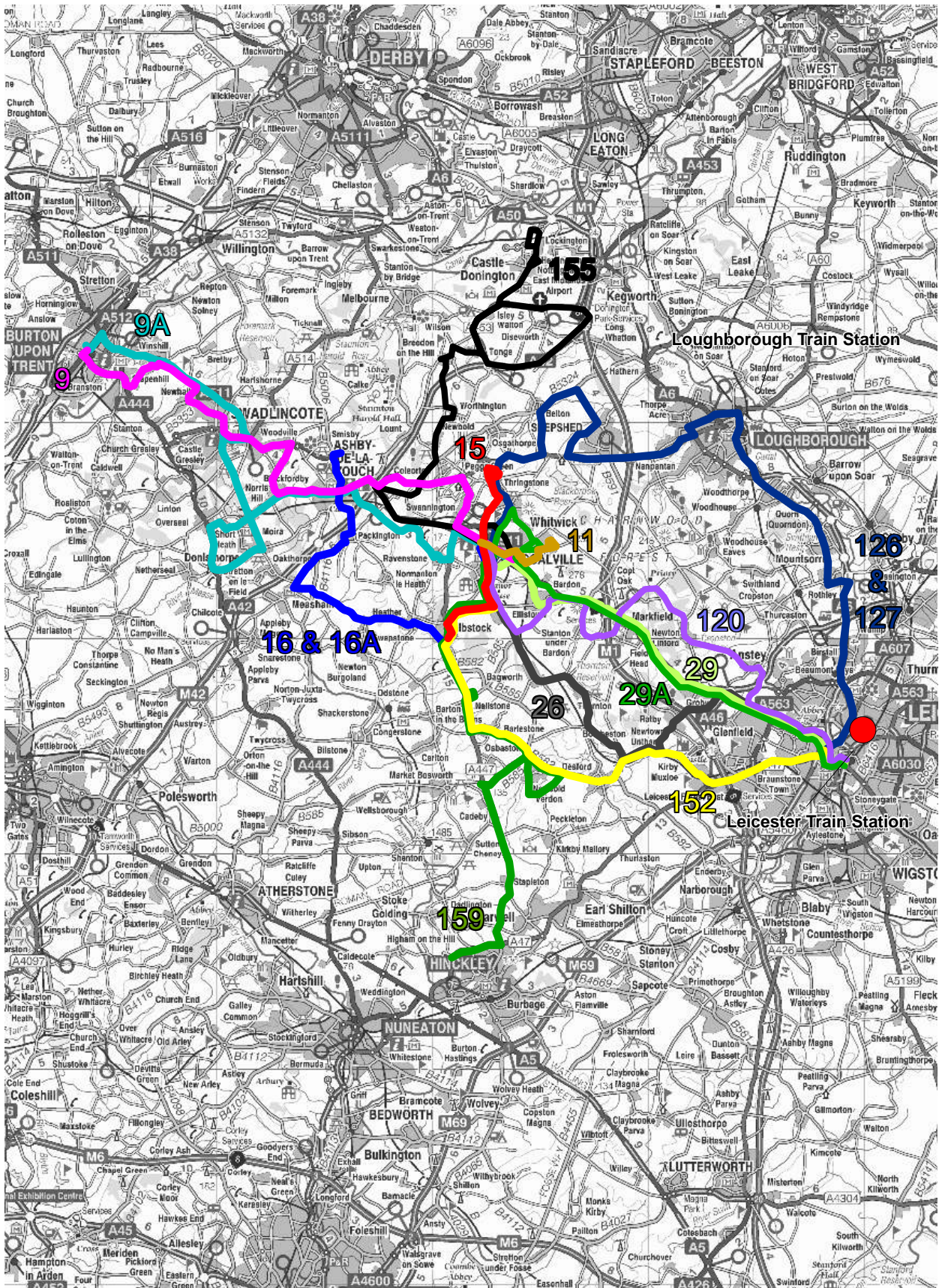
4 Framework Travel Plan

- 4.1.1 A site-specific FTP will be produced and submitted as part of the application. The FTP will be developed in accordance with both national and local policy.
- 4.1.2 The main aim of the FTP will be to widen travel choices. To achieve this the FTP will set a range of objectives focusing on increasing the mode share of walking, cycling and more sustainable travel. SMART (Specific, Measurable, Achievable, Realistic and Time-related) targets will be detailed to measure the effectiveness of the TP; to be ratified by a compliant survey upon a critical trigger point.
- 4.1.3 The FTP will ensure time-bound and successful implementation of a range of measures including, a comprehensive marketing and promotions campaign, mode specific measures and a package of measures to increase sustainable travel and, where possible, reduce the need to travel.
- 4.1.4 A monitoring procedure will be devised in line with local and national guidance and agreed with LCC.

5 Summary

- 5.1.1 Once agreement, in principle, has been obtained on the scope of the TA and FTP, our reports will be produced following the methodology set out in the scoping note.

Appendix A – Existing Bus Service Network



Drawing Title
EXISTING BUS SERVICES IN VICINITY OF SITE

Client
BLOOR HOMES

Job Title
BARDON GRANGE



Scale: NTS
 Designed by: VH
 Drawn by: VH
 Ckd/Appd: VH
 1st Issued: SEP 10
 Job No: 18668-01-1

File Extension:
 T:\COREL\New Frame

Drg No:
APPENDIX B

Appendix B – Trip Generation Report

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	BD	BEDFORDSHIRE 2 days
	EX	ESSEX 1 days
	HF	HERTFORDSHIRE 1 days
	SC	SURREY 1 days
03	SOUTH WEST	
	CW	CORNWALL 2 days
	DC	DORSET 1 days
	GS	GLOUCESTERSHIRE 1 days
	WL	WILTSHIRE 1 days
04	EAST ANGLIA	
	CA	CAMBRIDGESHIRE 1 days
	SF	SUFFOLK 2 days
05	EAST MIDLANDS	
	LE	LEICESTERSHIRE 1 days
	LN	LINCOLNSHIRE 2 days
	NT	NOTTINGHAMSHIRE 1 days
06	WEST MIDLANDS	
	SH	SHROPSHIRE 2 days
	ST	STAFFORDSHIRE 1 days
	WM	WEST MIDLANDS 3 days
	WO	WORCESTERSHIRE 6 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY	NORTH YORKSHIRE 3 days
08	NORTH WEST	
	CH	CHESHIRE 3 days
	LC	LANCASHIRE 2 days
09	NORTH	
	CB	CUMBRIA 3 days
	TV	TEES VALLEY 1 days
	TW	TYNE & WEAR 1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
Range: 10 to 792 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/02 to 10/02/10

Selected survey days:

Monday	6 days
Tuesday	13 days
Wednesday	6 days
Thursday	11 days
Friday	6 days

Selected survey types:

Manual count	42 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	4
Suburban Area (PPS6 Out of Centre)	17
Edge of Town	21

Selected Location Sub Categories:

Residential Zone	32
No Sub Category	10

Filtering Stage 3 selection:

Use Class:

C3	42 days
----	---------

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	9 days
10,001 to 15,000	9 days
15,001 to 20,000	12 days
20,001 to 25,000	5 days
25,001 to 50,000	5 days

Population within 5 miles:

5,001 to 25,000	2 days
25,001 to 50,000	6 days
50,001 to 75,000	1 days
75,001 to 100,000	8 days
100,001 to 125,000	8 days
125,001 to 250,000	12 days
250,001 to 500,000	5 days

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	16 days
1.1 to 1.5	24 days
1.6 to 2.0	1 days

Filtering Stage 3 selection (Cont.):

Travel Plan:

Not Known

4 days

No

38 days

LIST OF SITES relevant to selection parameters

1	BD-03-A-01	SEMI DETACHED, LUTON NEW BEDFORD ROAD	BEDFORDSHIRE
		LUTON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 131 Survey date: THURSDAY 08/07/04	Survey Type: MANUAL
2	BD-03-A-02	SEMI DETACHED, LUTON RIDDY LANE	BEDFORDSHIRE
		LUTON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 82 Survey date: TUESDAY 06/07/04	Survey Type: MANUAL
3	CA-03-A-02	MIXED HOUSES, PETERBOROUGH THORPE ROAD	CAMBRIDGESHIRE
		PETERBOROUGH Edge of Town Centre Residential Zone Total Number of dwellings: 363 Survey date: THURSDAY 13/05/04	Survey Type: MANUAL
4	CB-03-A-02	SEMI DETACHED, WORKINGTON HAWKSHEAD AVENUE	CUMBRIA
		WORKINGTON Edge of Town Residential Zone Total Number of dwellings: 40 Survey date: MONDAY 20/06/05	Survey Type: MANUAL
5	CB-03-A-03	SEMI DETACHED, WORKINGTON HAWKSHEAD AVENUE	CUMBRIA
		WORKINGTON Edge of Town Residential Zone Total Number of dwellings: 40 Survey date: THURSDAY 20/11/08	Survey Type: MANUAL
6	CB-03-A-04	SEMI DETACHED, WORKINGTON MOORCLOSE ROAD SALTERBACK WORKINGTON	CUMBRIA
		Edge of Town No Sub Category Total Number of dwellings: 82 Survey date: FRIDAY 24/04/09	Survey Type: MANUAL
7	CH-03-A-02	HOUSES/FLATS, CREWE SYDNEY ROAD	CHESHIRE
		CREWE Edge of Town Residential Zone Total Number of dwellings: 174 Survey date: TUESDAY 14/10/08	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	CH-03-A-05 SYDNEY ROAD SYDNEY CREWE Edge of Town Residential Zone Total Number of dwellings: 17 Survey date: TUESDAY 14/10/08	DETACHED, CREWE	CESHIRE	Survey Type: MANUAL
9	CH-03-A-06 CREWE ROAD CREWE Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: 129 Survey date: TUESDAY 14/10/08	SEMI-DET./BUNGALOWS, CREWE	CESHIRE	Survey Type: MANUAL
10	CW-03-A-01 ALVERTON ROAD PENZANCE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 13 Survey date: THURSDAY 30/06/05	TERRACED, PENZANCE	CORNWALL	Survey Type: MANUAL
11	CW-03-A-02 BOSVEAN GARDENS TRURO Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 73 Survey date: TUESDAY 18/09/07	SEMI D./DETACHED, TRURO	CORNWALL	Survey Type: MANUAL
12	DC-03-A-01 ISAACS CLOSE POOLE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 51 Survey date: WEDNESDAY 16/07/08	DETACHED, POOLE	DORSET	Survey Type: MANUAL
13	EX-03-A-01 MILTON ROAD CORRINGHAM STANFORD-LE-HOPE Edge of Town Residential Zone Total Number of dwellings: 237 Survey date: TUESDAY 13/05/08	SEMI-DET., STANFORD-LE-HOPE	ESSEX	Survey Type: MANUAL
14	GS-03-A-01 KINGSHOLM ROAD KINGSHOLM GLOUCESTER Edge of Town Centre No Sub Category Total Number of dwellings: 73 Survey date: TUESDAY 25/05/04	SEMI D./TERRACED, GLOUCESTER	GLOUCESTERSHIRE	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	HF-03-A-01	MIXED HOUSES, WELWYN GC	HERTFORDSHIRE
		LONGCROFT LANE	
		WELWYN GARDEN CITY	
		Edge of Town Centre	
		Residential Zone	
		Total Number of dwellings:	53
		Survey date: FRIDAY	06/09/02
			Survey Type: MANUAL
16	LC-03-A-22	BUNGALOWS, BLACKPOOL	LANCASHIRE
		CLIFTON DRIVE NORTH	
		BLACKPOOL	
		Edge of Town	
		Residential Zone	
		Total Number of dwellings:	98
		Survey date: TUESDAY	18/10/05
			Survey Type: MANUAL
17	LC-03-A-29	DETACHED/SEMI D., BLACKBURN	LANCASHIRE
		REVIDGE ROAD	
		FOUR LANE ENDS	
		BLACKBURN	
		Edge of Town	
		Residential Zone	
		Total Number of dwellings:	185
		Survey date: THURSDAY	10/06/04
			Survey Type: MANUAL
18	LE-03-A-01	DETACHED, MELTON MOWBRAY	LEICESTERSHIRE
		REDWOOD AVENUE	
		MELTON MOWBRAY	
		Edge of Town	
		Residential Zone	
		Total Number of dwellings:	11
		Survey date: TUESDAY	03/05/05
			Survey Type: MANUAL
19	LN-03-A-01	MIXED HOUSES, LINCOLN	LINCOLNSHIRE
		BRANT ROAD	
		BRACEBRIDGE	
		LINCOLN	
		Edge of Town	
		Residential Zone	
		Total Number of dwellings:	150
		Survey date: TUESDAY	15/05/07
			Survey Type: MANUAL
20	LN-03-A-02	MIXED HOUSES, LINCOLN	LINCOLNSHIRE
		HYKEHAM ROAD	
		LINCOLN	
		Suburban Area (PPS6 Out of Centre)	
		Residential Zone	
		Total Number of dwellings:	186
		Survey date: MONDAY	14/05/07
			Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

21	NT-03-A-03	SEMI DETACHED,KIRKBY-IN-ASHFD	NOTTINGHAMSHIRE
		B6018 SUTTON ROAD	
		KIRKBY-IN-ASHFIELD	
		Edge of Town	
		Residential Zone	
		Total Number of dwellings:	166
		Survey date: WEDNESDAY	28/06/06
			Survey Type: MANUAL
22	NY-03-A-01	MIXED HOUSES,NORTHALLERTON	NORTH YORKSHIRE
		GRAMMAR SCHOOL LANE	
		NORTHALLERTON	
		Suburban Area (PPS6 Out of Centre)	
		Residential Zone	
		Total Number of dwellings:	52
		Survey date: TUESDAY	25/09/07
			Survey Type: MANUAL
23	NY-03-A-03	PRIVATE HOUSING, BOROUGHBIDGE	NORTH YORKSHIRE
		NEW ROW	
		BOROUGHBIDGE	
		Edge of Town Centre	
		Residential Zone	
		Total Number of dwellings:	14
		Survey date: MONDAY	15/09/08
			Survey Type: MANUAL
24	NY-03-A-05	HOUSES AND FLATS, RIPON	NORTH YORKSHIRE
		BOROUGHBIDGE ROAD	
		RIPON	
		Edge of Town	
		No Sub Category	
		Total Number of dwellings:	71
		Survey date: MONDAY	22/09/08
			Survey Type: MANUAL
25	SC-03-A-03	DETACHED, EAST MOLESEY	SURREY
		A3050 HURST ROAD	
		HURST PARK	
		EAST MOLESEY	
		Suburban Area (PPS6 Out of Centre)	
		Residential Zone	
		Total Number of dwellings:	54
		Survey date: TUESDAY	12/11/02
			Survey Type: MANUAL
26	SF-03-A-01	SEMI DETACHED, IPSWICH	SUFFOLK
		A1156 FELIXSTOWE ROAD	
		RACECOURSE	
		IPSWICH	
		Suburban Area (PPS6 Out of Centre)	
		Residential Zone	
		Total Number of dwellings:	77
		Survey date: WEDNESDAY	23/05/07
			Survey Type: MANUAL
27	SF-03-A-02	SEMI DET./TERRACED, IPSWICH	SUFFOLK
		STOKE PARK DRIVE	
		MAIDENHALL	
		IPSWICH	
		Edge of Town	
		Residential Zone	
		Total Number of dwellings:	230
		Survey date: THURSDAY	24/05/07
			Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

28	SH-03-A-03 SOMERBY DRIVE BICTON HEATH SHREWSBURY Edge of Town No Sub Category	DETACHED, SHREWSBURY	SHROPSHIRE
	Total Number of dwellings:	10	
	Survey date: FRIDAY	26/06/09	Survey Type: MANUAL
29	SH-03-A-04 ST MICHAEL'S STREET	TERRACED, SHREWSBURY	SHROPSHIRE
	SHREWSBURY Suburban Area (PPS6 Out of Centre) No Sub Category		
	Total Number of dwellings:	108	
	Survey date: THURSDAY	11/06/09	Survey Type: MANUAL
30	ST-03-A-05 WATERMEET GROVE ETRURIA STOKE-ON-TRENT Suburban Area (PPS6 Out of Centre) Residential Zone	TERRACED/DETACHED, STOKE	STAFFORDSHIRE
	Total Number of dwellings:	14	
	Survey date: WEDNESDAY	26/11/08	Survey Type: MANUAL
31	TV-03-A-01 POWLETT ROAD	MIXED HOUSES/FLATS, HARTLEPL	TEES VALLEY
	HARTLEPOOL Suburban Area (PPS6 Out of Centre) No Sub Category		
	Total Number of dwellings:	225	
	Survey date: THURSDAY	14/04/05	Survey Type: MANUAL
32	TW-03-A-01 LEECHMERE ROAD HILLVIEW SUNDERLAND Edge of Town Residential Zone	SEMI DETACHED, SUNDERLAND	TYNE & WEAR
	Total Number of dwellings:	81	
	Survey date: WEDNESDAY	18/09/02	Survey Type: MANUAL
33	WL-03-A-01 MAPLE DRIVE	SEMI D./TERRACED W. BASSETT	WILTSHIRE
	WOOTTON BASSETT Edge of Town Residential Zone		
	Total Number of dwellings:	99	
	Survey date: MONDAY	02/10/06	Survey Type: MANUAL
34	WM-03-A-01 FOLESHILL ROAD FOLESHILL COVENTRY Suburban Area (PPS6 Out of Centre) Residential Zone	TERRACED, COVENTRY	WEST MIDLANDS
	Total Number of dwellings:	79	
	Survey date: FRIDAY	03/02/06	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

35	WM-03-A-02	DETACHED/SEMI D., STRBRIDGE	WEST MIDLANDS
		HEATH STREET	
		STOURBRIDGE	
		Suburban Area (PPS6 Out of Centre)	
		Residential Zone	
		Total Number of dwellings:	12
		Survey date: WEDNESDAY	26/04/06
			Survey Type: MANUAL
36	WM-03-A-03	MIXED HOUSING, COVENTRY	WEST MIDLANDS
		BASELEY WAY	
		ROWLEYS GREEN	
		COVENTRY	
		Edge of Town	
		Residential Zone	
		Total Number of dwellings:	84
		Survey date: MONDAY	24/09/07
			Survey Type: MANUAL
37	WO-03-A-01	DETACHED, BROMSGROVE	WORCESTERSHIRE
		MARLBOROUGH AVENUE	
		ASTON FIELDS	
		BROMSGROVE	
		Suburban Area (PPS6 Out of Centre)	
		Residential Zone	
		Total Number of dwellings:	10
		Survey date: THURSDAY	23/06/05
			Survey Type: MANUAL
38	WO-03-A-02	SEMI DETACHED, REDDITCH	WORCESTERSHIRE
		MEADOWHILL ROAD	
		REDDITCH	
		Edge of Town	
		No Sub Category	
		Total Number of dwellings:	48
		Survey date: TUESDAY	02/05/06
			Survey Type: MANUAL
39	WO-03-A-03	DETACHED, KIDDERMINSTER	WORCESTERSHIRE
		BLAKEBROOK	
		BLAKEBROOK	
		KIDDERMINSTER	
		Suburban Area (PPS6 Out of Centre)	
		Residential Zone	
		Total Number of dwellings:	138
		Survey date: FRIDAY	05/05/06
			Survey Type: MANUAL
40	WO-03-A-04	MIXED HOUSES, WORCESTER	WORCESTERSHIRE
		MALVERN ROAD	
		WORCESTER	
		Edge of Town	
		Residential Zone	
		Total Number of dwellings:	792
		Survey date: FRIDAY	24/05/02
			Survey Type: MANUAL
41	WO-03-A-05	TERRACED/DET., BROMSGROVE	WORCESTERSHIRE
		ST GODWALDS ROAD	
		ASTON FIELDS	
		BROMSGROVE	
		Edge of Town	
		No Sub Category	
		Total Number of dwellings:	215
		Survey date: THURSDAY	23/05/02
			Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

42	WO-03-A-06	DET./TERRACED, BROMSGROVE	WORCESTERSHIRE
		ST GODWALDS ROAD	
		ASTON FIELDS	
		BROMSGROVE	
		Edge of Town	
		No Sub Category	
		Total Number of dwellings:	232
		Survey date: THURSDAY	30/06/05
			Survey Type: MANUAL

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	42	119	0.075	42	119	0.265	42	119	0.340
08:00 - 09:00	42	119	0.159	42	119	0.413	42	119	0.572
09:00 - 10:00	42	119	0.167	42	119	0.215	42	119	0.382
10:00 - 11:00	42	119	0.155	42	119	0.188	42	119	0.343
11:00 - 12:00	42	119	0.196	42	119	0.179	42	119	0.375
12:00 - 13:00	42	119	0.213	42	119	0.187	42	119	0.400
13:00 - 14:00	42	119	0.185	42	119	0.178	42	119	0.363
14:00 - 15:00	42	119	0.196	42	119	0.192	42	119	0.388
15:00 - 16:00	42	119	0.283	42	119	0.217	42	119	0.500
16:00 - 17:00	42	119	0.319	42	119	0.203	42	119	0.522
17:00 - 18:00	42	119	0.388	42	119	0.231	42	119	0.619
18:00 - 19:00	42	119	0.290	42	119	0.227	42	119	0.517
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			2.626			2.695			5.321

Parameter summary

Trip rate parameter range selected: 10 - 792 (units:)
 Survey date date range: 01/01/02 - 10/02/10
 Number of weekdays (Monday-Friday): 42
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

Appendix C – TEMPRO Outputs

Dataset Version: 61
Result Type: Trip ends by time period
Base Year: 2007
Future Year: 2010
Trip Purpose Group: All purposes
Time Period: Average Weekday
Trip End Type: Origin/Destination
Alternative Assumptions applied: Yes

Growth Factor

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	0.9983		0.9987

Base Year - Future Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	-236		-186

Base Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	138622		138630

Future Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	138386		138444

Level	Area	Local Growth Figure	
Authority	North West Leicestershire	1.0113	

NTMAF09 Dataset

Dataset Version: 61
Result Type: Trip ends by time period
Base Year: 2008
Future Year: 2010
Trip Purpose Group: All purposes
Time Period: Average Weekday
Trip End Type: Origin/Destination
Alternative Assumptions applied: Yes

Growth Factor

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	0.9975		0.9977

Base Year - Future Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	-347		-313

Base Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	138733		138757

Future Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	138386		138444

Level	Area	Local Growth Figure	
Authority	North West Leicestershire	1.0061	

NTMAF09 Dataset

Dataset Version: 61
Result Type: Trip ends by time period
Base Year: 2009
Future Year: 2010
Trip Purpose Group: All purposes
Time Period: Average Weekday
Trip End Type: Origin/Destination
Alternative Assumptions applied: Yes

Growth Factor

Area Description		All purposes	
Level	Name	Origin	Destination
Authority	North West Leicestershire	0.9967	0.9968

Base Year - Future Year

Area Description		All purposes	
Level	Name	Origin	Destination
Authority	North West Leicestershire	-458	-440

Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
Authority	North West Leicestershire	138844	138885

Future Year

Area Description		All purposes	
Level	Name	Origin	Destination
Authority	North West Leicestershire	138386	138444

Level	Area	Local Growth Figure	
Authority	North West Leicestershire	1.0009	

NTMAF09 Dataset

Dataset Version: 61
Result Type: Trip ends by time period
Base Year: 2010
Future Year: 2016
Trip Purpose Group: All purposes
Time Period: Average Weekday
Trip End Type: Origin/Destination
Alternative Assumptions applied: Yes

Growth Factor

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	1.0857		1.0856

Base Year - Future Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	11855		11848

Base Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	138386		138444

Future Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	150241		150292

Level	Area	Local Growth Figure	
Authority	North West Leicestershire	1.0564	

NTMAF09 Dataset

Dataset Version: 61
Result Type: Trip ends by time period
Base Year: 2010
Future Year: 2026
Trip Purpose Group: All purposes
Time Period: Average Weekday
Trip End Type: Origin/Destination
Alternative Assumptions applied: Yes

Growth Factor

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	1.2299		1.2296

Base Year - Future Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	31809		31785

Base Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	138386		138444

Future Year

Area Description		All purposes		
Level	Name	Origin	Destination	
Authority	North West Leicestershire	170195		170229

Level	Area	Local Growth Figure	
Authority	North West Leicestershire	1.2632	

NTMAF09 Dataset

Appendix D - Mode Split Travel to Work Census Data

Mode Splits for Commute to Work for Four Study Wards and Larger Outer Areas.

Hugglescote

Mode of Transport	Hugglescote Residents	Percentage
Driving car or van	1500	76.45
Passenger in a car or van	165	8.41
Bus, minibus or coach	82	4.18
Train	3	0.15
Taxi or minicab	13	0.66
Motorcycle, scooter or moped	39	1.99
Bicycle	56	2.85
On foot	104	5.30
Total	1962	100.00

Bardon

Mode of Transport	Bardon Residents	Percentage
Driving car or van	953	83.09
Passenger in a car or van	71	6.19
Bus, minibus or coach	24	2.09
Train	4	0.35
Taxi or minicab	4	0.35
Motorcycle, scooter or moped	23	2.01
Bicycle	19	1.66
On foot	49	4.27
Total	1147.00	100.00

Whitwick

Mode of Transport	Whitwick Residents	Percentage
Driving car or van	2303	77.28
Passenger in a car or van	212	7.11
Bus, minibus or coach	128	4.30
Train	4	0.13
Taxi or minicab	5	0.17
Motorcycle, scooter or moped	48	1.61
Bicycle	79	2.65
On foot	201	6.74
Total	2980.00	100.00

Coalville

Mode of Transport	Coalville Residents	Percentage
Driving car or van	1186	62.09
Passenger in a car or van	148	7.75
Bus, minibus or coach	66	3.46
Train	3	0.16
Taxi or minicab	5	0.26
Motorcycle, scooter or moped	39	2.04
Bicycle	79	4.14
On foot	384	20.10
Total	1910.00	100.00

Large Areas

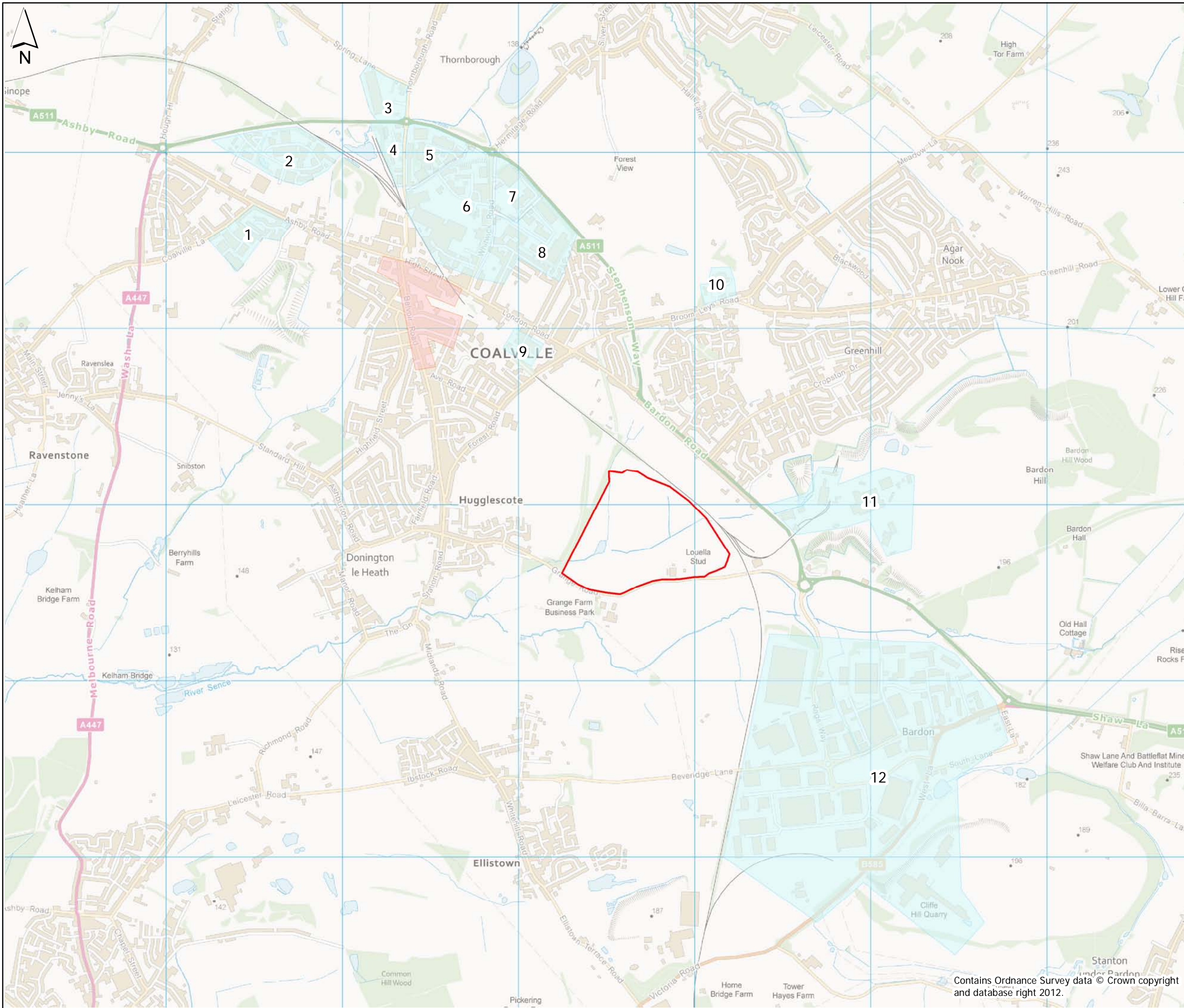
Actual Numbers

Mode of Transport	North west Leicestershire District Residents	East Midlands Region Residents	England Residents
Driving car or van	28580	1157931	12324166
Passenger in a car or van	2685	133260	1370685
Bus, minibus or coach	1281	133858	1685361
Train	115	18849	950023
Taxi or minicab	119	7926	116503
Motorcycle, scooter or moped	576	20,018	249,456
Bicycle	884	62644	634588
On foot	3477	201247	2241901
Total	37717	1735733	19572683

Percentages

Mode of Transport	North west Leicestershire District Residents	East Midlands Region Residents	England Residents
Driving car or van	75.77	66.71	62.97
Passenger in a car or van	7.12	7.68	7.00
Bus, minibus or coach	3.40	7.71	8.61
Train	0.30	1.09	4.85
Taxi or minicab	0.32	0.46	0.60
Motorcycle, scooter or moped	1.53	1.15	1.27
Bicycle	2.34	3.61	3.24
On foot	9.22	11.59	11.45
Total	100.00	100.00	100.00

Appendix C – Local Employment Plan
Local Employment Plan



Legend

- Site Boundary
- Retail Areas
- Employment Areas

- 1 Oaks Industrial Estate
- 2 Stephenson Industrial Estate
- 3 Stephenson College
- 4 Retail Park
- 5 Samson Road Industrial Estate
- 6 Coalville Business Centre
- 7 Morrisons
- 8 Whitwick Business Park
- 9 Scotlands Industrial Estate
- 10 Coalville Community Hospital
- 11 Aggregate Industries Quarry
- 12 Bardon 22

Figure 7.6

4th Floor
 Croxley House
 14 Lloyd Street
 Manchester
 M2 5ND
 TEL: +44 (0)161 835 2400
 FAX: +44 (0)161 835 3400



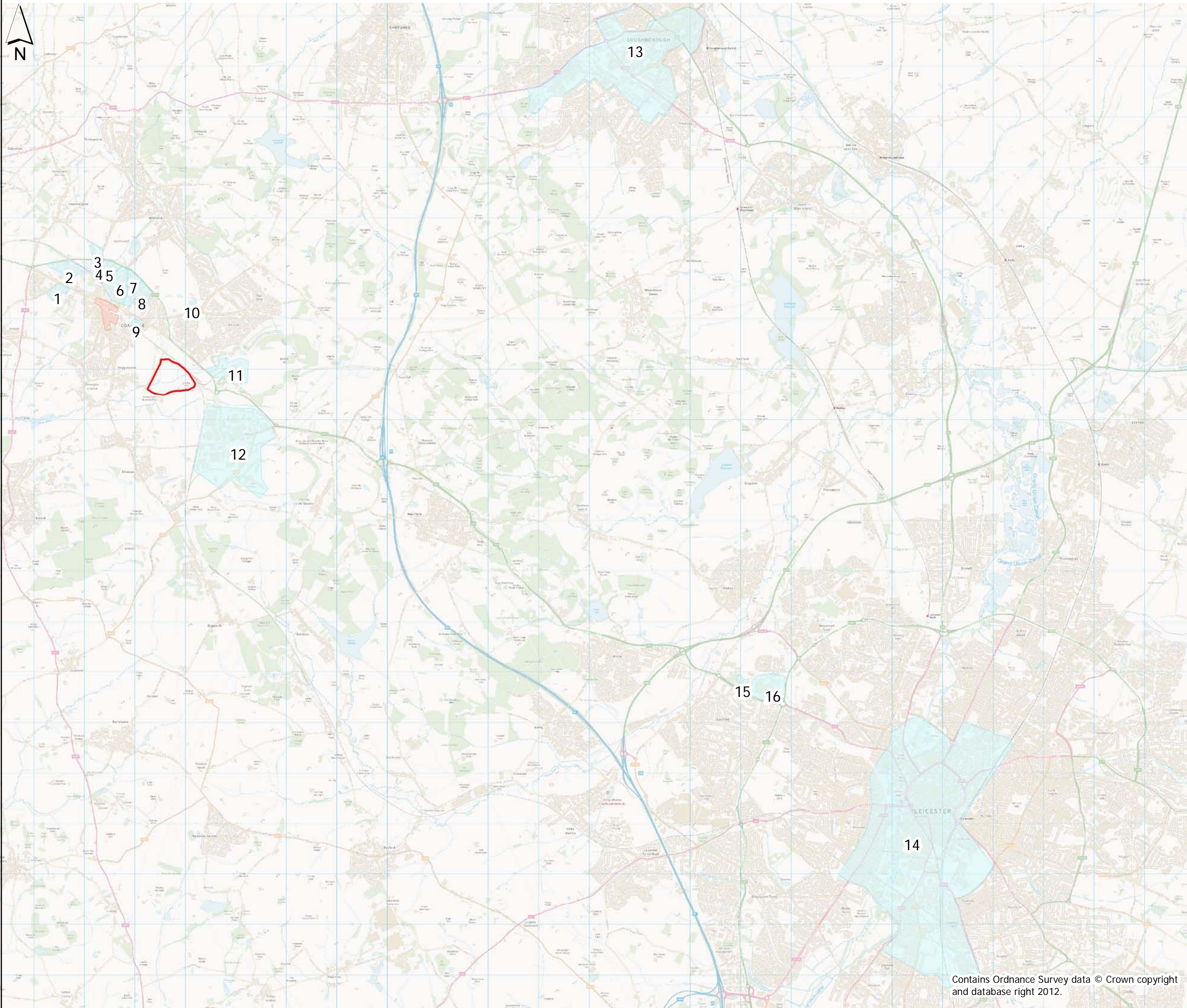
Land off Grange Road
 Hugglescote

Local Areas of Employment

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Appendix D – Wider Employment Plan

Wider Employment Plan



Legend

- Site Boundary
 - Retail Areas
 - Employment Areas
- 1 Oaks Industrial Estate
 - 2 Stephenson Industrial Estate
 - 3 Stephenson College
 - 4 Retail Park
 - 5 Samson Road Industrial Estate
 - 6 Coalville Business Park
 - 7 Morrisons
 - 8 Whitwick Business Park
 - 9 Scotlands Industrial Estate
 - 10 Coalville Community Hospital
 - 11 Aggregate Industries Quarry
 - 12 Bardon 22
 - 13 Loughborough
 - 14 Leicester
 - 15 County Hall
 - 16 Glenfield Hospital

Figure 7.7

4th Floor
 Croxley House
 14 Lloyd Street
 Manchester
 M2 5ND
 TEL: +44 (0)161 835 2400
 FAX: +44 (0)161 835 3400



Land off Grange Road
 Hugglescote

Areas of Employment - Wider Area

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Appendix E – Microsoft AutoRoute Summary Table

Microsoft AutoRoute Summary Table

Employment Route Analysis Results

Employment Area	Distance by Road	Route
1 - Oaks Industrial Estate	6.3km	Left from the site on to Grange Road, turn left at the roundabout on to A511. Continue until Hoo Ash Roundabout and take the 1st exit to destination.
2 - Stephenson Industrial Estate	5.4km	Left from the site on to Grange Road, turn left at the roundabout on to A511. Continue past Thornborough roundabout and turn left at Telford Way.
3 - Stephenson College	4.7km	Left from the site on to Grange Road, turn left at the roundabout on to A511. Continue until Thornborough Road roundabout, take 3rd exit and an immediate left to the destination.
4 - Retail Park	4.5km	Left from the site on to Grange Road, turn left at the roundabout on to A511. Continue until Thornborough Road roundabout, take 1st exit and an immediate right to the destination.
5 - Samson Road Industrial Estate	4.6km	Left from the site on to Grange Road, turn left at the roundabout on to A511. Continue until Thornborough Road roundabout, take 1st exit followed by 1st left to the destination.
6 - Coalville Business Centre	3.8km	Left from the site on to Grange Road, turn left at the roundabout on to A511. Continue until Whitwick Road roundabout and take the 3rd exit to Whitwick Road followed by 1st right to the destination.
7 - Morrisons	3.9km	Left from the site on to Grange Road, turn left at the roundabout on to A511. Continue until Whitwick Road roundabout and take the 1st exit to Whitwick Road followed by 1st left to the destination.
8 - Whitwick Business Park	3.8km	Left from the site on to Grange Road, turn left at the roundabout on to A511. Continue until Whitwick Road roundabout and take the 1st exit to Whitwick Road followed by 1st left to Stephenson Road. Continue on to destination
9 - Scotlands Industrial Estate	2.6km	Left from the site on to Grange Road, 1st exit at the roundabout on to A511. Continue over Bardon Road roundabout, turn left on to Scotlands Industrial Estate.
10 - Coalville Community Hospital	3km	Depart left from the site on to Grange Road, take the 1st exit at Birch Tree roundabout. Continue to Birch Tree roundabout and take second exit. Turn right to Broom Leys Road to destination.
11- Aggregate Industrial Quarry	0.7km	Depart left from site on to Grange Road, take 1st exit on to Bardon Road followed by immediate right to destination.
12 - Bardon 22	1.4km	Depart left on to Grange Road to Birch Tree Roundabout and take the 3rd exit to Bardon Road.
13 - Loughborough	15.7km	Left from site onto Grange Road, along to A511. Join the M1 to J23, exit east along the A512 to Loughborough.
14 - Leicester	17.4km	Left from Site to Birch Tree Roundabout and on to A511. Continue on to A50 and in to Leicester.

Appendix F – TN001 – Highways Note on LCC Surveys (25 November 2011)

TN001 – Highways Note on LCC Surveys (25 November 2011)



LAND OFF GRANGE ROAD, HUGGLESCOTE (N12107)

TRAFFIC COUNT & ANPR SURVEY RESPONSE

TN001 - 25th November 2011

1 Introduction

1.1 Savell Bird & Axon (SBA) have been commissioned by Bloor Homes East Midlands Ltd to provide transportation and highways advice in support of an outline planning application for a residential development off Grange Road in Coalville, Leicestershire.

2 Background

2.1 Following numerous meetings and subsequent correspondence, there remains outstanding highways issues relating to trip distribution and potential impact on the Hugglescote Crossroads junction, which is located some 1.5 kilometres to the west of the proposed site access off Grange Road.

2.2 The original TA proposed a trip distribution which assumed that 8.3% of development traffic would exit the site and travel westbound and hence pass through the Hugglescote crossroads. Leicestershire County Council (LCC) did not concur with this assumption and as such have suggested that a much higher distribution of development traffic is likely to pass through the Hugglescote crossroads.

2.3 To that end, LCC undertook a traffic survey at an existing residential development off Grange Road to observe the turning movements. The results of the survey, while based purely on which direction (i.e. towards Bardon Road or towards Hugglescote crossroads) vehicles turned out of the junction rather than the inclusion of the actual trip purpose, showed that around 70% of vehicles turned right towards the crossroads.

2.4 Another issue raised during these discussions, was the perceived existence of vehicles using Grange Road/Hugglescote crossroads as a rat run to the A511 Ashby Road/Stephenson Way roundabout junction, located to the north.



3 Scope

- 3.1 In light of the above, this note has been prepared to consider whether the 70% distribution towards Hugglescote crossroads put forward by the Council is realistic and appropriate for the assessment of the highway network in the TA.
- 3.2 In addition, this note will also review the existing traffic movements along Grange Road in Hugglescote in general terms but in particular with regard to demonstrating whether or not the perceived rat-running actually occurs.

4 Trip Distribution

- 4.1 The development site is located to the southern edge of Coalville extending to approximately 39 hectares and access to the site will be achieved off Grange Road.
- 4.2 In order to assess the potential trip distribution of the traffic associated with the development, the submitted TA utilised a gravity model based upon the journey to work data contained within the 2001 census data. It is considered that this provided a robust estimation of the most likely direction of travel to and from a place of employment during the peak hour periods.
- 4.3 SBA considers that the traffic survey undertaken on behalf of LCC does not provide an accurate reflection of the likely distribution of the proposed development.
- 4.4 The turning count survey was undertaken at Wainwright Road, an existing development of around 100 units located approximately 350 metres from the crossroad junction. As previously noted the survey did not record the purpose of the existing resident's journeys but simply noted the direction vehicles travelled on leaving Wainwright Road.
- 4.5 One of the key reasons SBA have for considering the 70% to not be representative of the future movements of traffic associated with the proposed development, is the location of the actual junction in relation to the site access.
- 4.6 The proposed site access is located approximately 570 metres away from the A511 Bardon Road roundabout junction.



- 4.7 In contrast, Hugglescote crossroads is located some 1.5 kilometres to the west of the site. On this fact alone, it is logical that traffic from the development will be attracted to the A511 via the shortest route i.e. turning left onto Grange Road.

5 Rat-Running along Grange Road

- 5.1 The site is well located in relation to the strategic highway network being situated just over 4 kilometres to the east of the M1 motorway at Junction 22. The site is also connected to the strategic highway network to the west, with a link through to the A42 Junction 13.
- 5.2 It is generally perceived that Grange Road (Hugglescote) is currently used as a rat-run between these points on the strategic highway network, i.e. to avoid the A511, and that given the location of the site on Grange Road that there is potential for further rat-running to occur once the development is built.
- 5.3 In order to establish an existing profile of traffic using Grange Road and to determine whether or not this perceived rat-running actually takes place, LCC commissioned an Automatic Number Plate Recognition (ANPR) survey.
- 5.4 The survey included a number of data collection points around the local highway network including 3 points along the A511, two points to the east and west of the crossroads and one point in Hugglescote village, as shown in Figure 1 below;



Figure 1 – Location of Registration Plate Survey Recording Points

- 5.5 For the purpose of this exercise, the main review of the data has involved the traffic movements between Point 6 (A511 Bardon Road roundabout junction) and Point 1 (A511 Ashby Road roundabout) whilst noting the number of vehicles that also pass through Point 5 (Grange Road to the east of Wainwright Road and Point 4 (Leicester Road to the west of the junction with Melbourne Road) in both directions.

- 5.6 A summary of the above survey data is presented in Table 1 below;



Table 1 – Summary of Registration Plate Survey Data

Direction	AM Peak (0800 to 0900)			PM Peak (1700 to 1800)		
	Flow	Observed	%	Flow	Observed	%
Point 6 to 5 (wb)	184*	100	54.3	324*	224	69.1
Point 6 to 4 (wb)	184*	41	22.3	324*	73	22.5
Point 6 to 1 (wb)	184*	12	6.5	324*	8	2.5
Point 1 to 5 (eb)	290*	1	0.3	142*	0	0.0
Point 1 to 4 (eb)	290*	16	5.5	142*	33	23.2
Point 1 to 6 (eb)	290*	1	0.3	142*	0	0.0

* Traffic flows on Grange Road taken from LCC survey on 11/10/11

- 5.7 The traffic flows specified include all vehicles (i.e. cars, light goods, heavy goods vehicles and buses).
- 5.8 As shown in the table above, in the westbound direction AM peak, over 50% of the from Site 6 was also recorded at Site 5 on Grange Road while only 22.3% of these vehicles were also recorded at Site 4 close to the A447 Melbourne Road. The key finding is that only 12 vehicles (6.5%) of vehicles were recorded as passing through Site 1 having started their journey at Site 6.
- 5.9 In the PM peak hour, the results show that over 60% of vehicles recorded at Site 6 also travelled along Grange Road and through Site 5. The number of vehicles recorded passing through Site 4 (A447 Melbourne Road) having started at Site 6, equates to 22.5% however, this is not an indication of rat-running as only 2.5% of this traffic was recorded at Site 1 which is the A511 Ashby Road junction.
- 5.10 A review of the data for the eastbound direction in the AM peak hour shows that while 16 vehicles were observed to have passed through Site 4 from Site 1, only 1 vehicle also passed through Sites 5 and 6 meaning that any element of rat-running in this direction is minimal.
- 5.11 Similarly, in the eastbound direction PM peak hour, vehicles recorded at Site 4 having started from Site 1 equates to 23.2% but again evidence of these vehicles also passing through Sites 5 and 6 is non-existent, as no vehicles were also recorded at these points on the network.



- 5.12 On the whole, while the survey of traffic travelling westbound has shown that an element of traffic does travel along Grange Road from the A511 junction to Site 4, the A447 Melbourne Road, there is little evidence to suggest that this traffic then proceeds to Site 1 i.e. the A511 Ashby Road junction which would be considered as a cut-through, with only 12 and 8 vehicles recorded making this particular journey in the AM and PM peak hours respectively.
- 5.13 Furthermore, the data collected during the PM peak hour re-iterates the point that any rat-running is imperceptible with only 1 vehicle recorded passing through Site 5 and 1 vehicle continuing to pass through Site 6. The PM peak hour data has demonstrated that no vehicles recorded at Site 1 pass through wither Sites 5 (Grange Road) or Site 6, the A511 Bardon Road roundabout.

6 Conclusions

- 6.1 This note has examined the LCC suggested assumption of 70% of development traffic exiting the development site and turning right towards Hugglescote crossroads.
- 6.2 Taking account of the location of the proposed site access in relation to its close proximity to the A511 Bardon Road roundabout junction, SBA consider this assumption to be unrealistic and unrepresentative of likely trip movements.
- 6.3 Without knowing the purpose of the journeys made from the Wainwright Road traffic survey, it is considered that some of these trips can be considered as 'local' trips rather than traffic trying to access the strategic road network or for example dropping off children at one of the local schools located in Hugglescote itself.
- 6.4 With regards to the perception of rat-running, rather than compounding the results of the Wainwright Road survey, it is considered that while the results do show an element of traffic travelling along Grange Road and continuing westwards, there is very little evidence that these trips then continue northbound to the strategic highway network i.e. the A511 at the Ashby Road roundabout junction.
- 6.5 In conclusion, it is considered that the majority trips will exit the site and turn left towards the A511 Bardon Road roundabout as derived from the 2001 census data and given that the site access is located over a kilometre to the east of the Wainwright Road junction.



6.6 Furthermore, given the location of the ANPR sites, SBA are unable to see how the results of the ANPR survey can be used to support the suggested 70 to 80% of development traffic using Hugglescote crossroads as set out in LCC's letter dated 9/11/11. Therefore, the 70 to 80% distribution appears to be established from the single evidence base provided by the Wainwright Road turning movement survey.

Marty Rae

Senior Transport Planner

25th November 2011

Appendix G – TN002 - Hugglescote Crossroads Capacity Assessments (30 November 2011)

TN002 - Hugglescote Crossroads Capacity Assessments (30 November 2011)



LAND OFF GRANGE ROAD, HUGGLESCOTE (N12107)

HUGGLESCOTE CROSSROADS CAPACITY ASSESSMENTS

TN002 – 30th November 2011

1 Introduction

- 1.1 Savell Bird & Axon (SBA) have been commissioned by Bloor Homes East Midlands Ltd to provide transportation and highways advice in support of an outline planning application for a residential development off Grange Road in Hugglescote, Leicestershire.
- 1.2 Discussions have been ongoing with Leicestershire County Council (LCC) in relation to the distribution of development traffic through the Hugglescote Cross Roads (HCR). Based on census data, the distribution in the revised Transport Assessment (TA) calculated that 8.3% of development traffic would travel through the HCR. However, LCC do not agree with the revised TA distribution and have suggested that a much higher distribution of development traffic is likely to pass through the HCR.
- 1.3 SBA considers the methodology used in the revised Transport Assessment to be appropriate, however, to aid ongoing discussions with LCC have carried out traffic impact assessments at the HCR for a range of scenarios with an increased distribution of development traffic.



2 Scope

1.4 In light of the above, this note has been prepared to present the results of further sensitivity testing at the HCR junction. The sensitivity testing includes distribution through the junction of 15%, 20%, 30% and 50% for the following scenarios:

- 2016 + 300 dwelling
- 2018 + 420 dwellings
- 2021 + 600 dwellings
- 2025 + 800 dwellings
- 2010 + Development (800 dwellings)



3 Phased Development

- 1.5 The sensitivity tests carried out in this section have been based on incremental levels of development up to the proposed 800 dwellings following an estimated build out of 60 dwellings per year.
- 1.6 Previous sensitivity testing presented in a technical note prepared by SKM Colin Buchanan (TN004 dated 16th September 2011) provided the results of an increased distribution of development traffic of 15% and 20% through the HCR. Given that LCC believe the distribution of development traffic should be higher, further sensitivity testing has been carried out with a distribution of development traffic of 30% and 50%.
- 1.7 The results of the junction capacity analysis provide the impact of a phased delivery of the development for each of the higher distribution scenarios.
- 1.8 As with previous junction capacity analysis at the HCR, the sensitivity test in Tables 1 – 4 make no reduction in vehicle trips generated by the development for travel plan measures, internal trips and the proposed public transport strategy. On this basis, the traffic impact assessments in this note and the revised TA can therefore be taken as robust.
- 1.9 **Tables 1 – 4** below provide the results of the 2016 – 2025 scenarios with an incremental level of development based on a build out of 60 dwellings per year.



Table 1: LINSIG Output Summaries for Year 2016 + 300 dwellings

2016 + 300 Scenario	AM PEAK									PM PEAK								
	Central Road (1/1)		Grange Road (2/1)		Station Road (3/1)		Ashburton Road (4/1)		PRC	Central Road (1/1)		Grange Road (2/1)		Station Road (3/1)		Ashburton Road (4/1)		PRC
	DoS	Q	DoS	Q	DoS	Q	DoS	Q		DoS	Q	DoS	Q	DoS	Q	DoS	Q	
No development	70.7	6	89.5	8	92.9	12	91.4	11	-3.3%	107.3	35	105.6	26	79	8	103.2	17	-19.2%
TA Distribution	71.1	7	93.3	9	93.4	12	91.4	11	-3.8%	108.5	38	107.2	29	79.9	8	103.2	18	-20.6%
15% Distribution	71.6	7	91.3	9	93.6	12	95.1	13	-5.7%	106.1	33	108.3	31	77.9	8	109.3	24	-21.4%
20% Distribution	72.0	7	93.3	10	93.9	12	95.1	13	-5.7%	106.9	35	109.3	33	78.3	8	109.3	24	-21.5%
30% Distribution	74.9	7	93.0	10	97.6	15	95.1	14	-8.5%	108.1	38	111.2	37	79.1	8	109.6	25	-23.6%
50% Distribution	76.3	8	96.4	13	98.3	16	99.2	17	-10.2%	114.2	52	110.3	37	83.6	9	110.4	26	-26.9%

Cycle Time (all scenarios) = 120 seconds (Doubled cycled to allow pedestrian stage every second cycle)
 Q = Passenger Car Units (PCU)

Table 2: LINSIG Output Summaries for Year 2018 + 420 dwellings

2018 + 420 Scenario	AM PEAK									PM PEAK								
	Central Road (1/1)		Grange Road (2/1)		Station Road (3/1)		Ashburton Road (4/1)		PRC	Central Road (1/1)		Grange Road (2/1)		Station Road (3/1)		Ashburton Road (4/1)		PRC
	DoS	Q	DoS	Q	DoS	Q	DoS	Q		DoS	Q	DoS	Q	DoS	Q	DoS	Q	
No development	73.1	7	93.3	10	96.5	14	95.1	13	-7.2%	111.7	45	109.6	34	82.1	8	107.0	23	-24.1%
TA Distribution	74.0	7	98.2	12	96.9	15	95.3	14	-9.2%	109.9	42	112.0	38	80.6	8	113.3	30	-25.9%
15% Distribution	74.7	7	97.3	12	97.4	15	99.0	17	-10.0%	111.1	46	113.3	41	81.5	8	113.7	31	-26.3%
20 % Distribution	75.1	7	100.0	14	97.6	15	99.0	17	-11.1%	112.1	48	114.9	44	82.1	8	114.1	31	-27.7%
30% Distribution	78.6	8	101.0	16	101.7	21	99.2	17	-13.0%	113.9	53	117.3	50	83.2	9	114.4	32	-30.4%
50% Distribution	83.3	9	102.3	19	106.6	29	103.5	22	-18.5%	121.3	71	117.9	52	88.5	11	115.6	34	-34.7%

Cycle Time (all scenarios) = 120 seconds (Doubled cycled to allow pedestrian stage every second cycle)
 Q = Passenger Car Units (PCU)



Table 3: LINSIG Output Summaries for Year 2021 + 600 dwellings

2021 + 600 Scenario	AM PEAK									PM PEAK								
	Central Road (1/1)		Grange Road (2/1)		Station Road (3/1)		Ashburton Road (4/1)		PRC	Central Road (1/1)		Grange Road (2/1)		Station Road (3/1)		Ashburton Road (4/1)		PRC
	DoS	Q	DoS	Q	DoS	Q	DoS	Q		DoS	Q	DoS	Q	DoS	Q	DoS	Q	
No development	77.6	7	98.2	13	101.9	21	100.2	19	-13.2%	118.1	62	115.7	46	86.7	9	113.0	31	-31.3%
TA Distribution	78.7	8	100.3	15	102.6	22	104.4	24	-16.0%	116.8	61	119.2	53	85.6	9	120.0	40	-33.3%
15% Distribution	79.6	8	105.7	21	103.3	23	104.4	24	-17.4%	118.4	65	121.6	58	86.8	10	120.4	40	-35.1%
20 % Distribution	83.0	8	104.8	21	107.3	31	104.6	25	-19.3%	119.8	69	123.2	61	87.7	10	120.7	41	-36.9%
30% Distribution	84.1	9	107.3	26	108.1	32	109.1	32	-21.2%	126.3	85	122.1	62	92.2	12.5	121.5	43	-40.3%
50% Distribution	90.1	10	112.5	38	113.9	43	113.9	40.2	-26.6%	127.9	93	129.2	77	92.8	12.8	129.8	52	-44.2%

Cycle Time (all scenarios) = 120 seconds (Doubled cycled to allow pedestrian stage every second cycle)
Q = Passenger Car Units (PCU)

Table 4: LINSIG Output Summaries for Year 2025 + 800 dwellings

2025 + 800 Scenario	AM PEAK									PM PEAK								
	Central Road (1/1)		Grange Road (2/1)		Station Road (3/1)		Ashburton Road (4/1)		PRC	Central Road (1/1)		Grange Road (2/1)		Station Road (3/1)		Ashburton Road (4/1)		PRC
	DoS	Q	DoS	Q	DoS	Q	DoS	Q		DoS	Q	DoS	Q	DoS	Q	DoS	Q	
No development	82.9	9	105.6	20	109.4	36	107.2	31	-21.6%	126.0	84	124.0	63	92.9	12	121.1	43	-40.0%
TA Distribution	84.0	9	107.3	24	110.1	37	111.5	38	-23.9%	128.3	91	126.9	69	94.2	13	121.8	45	-42.6%
15% Distribution	84.9	9	112.7	32	110.6	39	111.5	38	-25.2%	126.3	88	129.3	74	92.6	13	128.9	53	-43.7%
20 % Distribution	88.5	10	111.1	31	114.9	47	111.8	39	-27.7%	127.7	92	131.5	79	93.5	13	129.3	54	-46.1%
30% Distribution	94.3	13	115.9	43	120.8	58	116.5	47	-34.2%	137.1	116	133.6	87	99.9	20	130.7	56	-52.3%
50% Distribution	98.1	1516	124.3	64	123.3	64	127.5	65	-41.7%	140.0	128	143.1	108	101.6	23	140.4	58	-59.0%

Cycle Time (all scenarios) = 120 seconds (Doubled cycled to allow pedestrian stage every second cycle)
Q = Passenger Car Units (PCU)



4 2010 with Development

1.10 The LINSIG modal provided by LCC has been validated against observed queues in the 2010 base year. Therefore the queues produced by the LINSIG modal correlate with actual on-site queues at the HCR during the peak periods. Given that the model is operating over theoretical capacity in the base year (2010) the accuracy of the results produced by the LINSIG in the future year (2020) is unlikely to be representative of actual on-site queues. Therefore, a 2010 with development scenario has been undertaken to provide a comparison with the 2020 with development results.

1.11 As with the sensitivity test in Tables 1 – 4, the results from the sensitivity tests in Table 5 make no reduction in vehicle trips generated by the development for travel plan measures, internal trips and the proposed public transport strategy. Table 5 below provides the results of 2010 with development scenario.

Table 5: LINSIG Output Summaries for year 2010 + Development (800 dwellings)

2010 + Dev Scenario	AM PEAK									PM PEAK								
	Central Road (1/1)		Grange Road (2/1)		Station Road (3/1)		Ashburton Road (4/1)		PRC	Central Road (1/1)		Grange Road (2/1)		Station Road (3/1)		Ashburton Road (4/1)		PRC
	DoS	Q	DoS	Q	DoS	Q	DoS	Q		DoS	Q	DoS	Q	DoS	Q	DoS	Q	
No development	65.8	6	83.9	7	86.6	9	85.2	8	3.9%	100.0	20	98.4	15	73.7	7	96.1	11	-11.1%
TA Distribution	67.1	6	88.7	8	87.5	10	88.7	10	1.4%	100.0	20	102.4	21	73.4	7	102.2	16	-13.8%
15% Distribution	70.6	7	91.7	10	91.3	11	89	10	-1.9%	105.6	31	101.8	21	77.2	8	102.6	17	-17.4%
20% Distribution	71.5	7	92.1	10	92.0	12	92.5	12	-2.8%	107.5	36	104.1	24	78.5	8	103.3	17	-19.4%
30% Distribution	76.0	7	93.9	12	96.6	14	96.7	14	-7.4%	107.7	37	109.0	34	78.5	8	110.2	25	-22.4%
50% Distribution	82.5	8	103.8	24	102.5	21	101.7	19	-15.4%	118.3	64	114.1	46	85.8	10	112.2	27	-31.5%

Cycle Time (all scenarios) = 120 seconds (Doubled cycled to allow pedestrian stage every second cycle)
Q = Passenger Car Units (PCU)

Appendix H – TN003 - Trip Distribution and the Hugglescote Crossroads (27 January 2012)

TN003 - Trip Distribution and the Hugglescote Crossroads (27 January 2012)



Land off Grange Road, Hugglescote (N12107)

Trip Distribution and Hugglescote Cross Roads

TN003 – 27th January 2012

1 Introduction

- 1.1.1 Savell Bird & Axon (SBA) have been commissioned by Bloor Homes East Midlands Ltd to provide transportation and highways advice in support of an outline planning application for an 800 dwelling residential development off Grange Road in Hugglescote, Leicestershire. The site is allocated for housing development in the local plan under saved policy H4g.
- 1.1.2 Bloor Homes East Midlands Ltd have now lodged an appeal against non determination of the outline planning application (Appeal ref: G2435/A/11/216577). It should be noted that the local planning authority, North West Leicestershire District Council (NWLDC), will be determining their stance on appealed application at the planning committee on 13th February 2012. The Statement of Common Ground for the appeal will be required by the 21st February 2012.
- 1.1.3 The trip distribution presented within the Grange Road (GR) 800 development Transport Assessment (TA) (November 2010) and addendum TA (June 2011) was based on the 2001 journey to work census data. The resulting distribution demonstrated that 8.3% of development traffic would travel through the Hugglescote Cross Roads (HCR). However, Leicestershire County Council (LCC) did not concur with this assumption and have suggested that a much higher distribution of development traffic is likely to pass through the HCR and that the use of 2001 journey to work Census Data was not considered to be an appropriate methodology to derive the distribution of traffic on the highway network and the Leicester and Leicestershire Integrated Transport Modal (LLITM) should be used.
- 1.1.4 William Davis Ltd and Jelsons Ltd have an outline planning application for 1,420 dwellings on the Stephenson Green (SG) site in Coalville, Leicestershire. An appeal against non determination has also been lodged in respect of the SG outline planning application (Appeal ref: G2435/A/11/2158154). The SG TA



(November 2010) and addendum TA (December 2011) has also used a methodology to derive the development trip distribution based on 2001 journey to work census data.

1.1.5 However, an agreement on highways matters between the SG developers and LCC was reached in December 2011 which subsequently led to the withdrawal of LCC's objection and recommendation for refusal on the outline planning application. It is noted that the county council has made written objections to the SG inquiry on the grounds that it is premature and would be contrary to saved local plan policy E20 being Green Wedge.

1.1.6 This note has been prepared to provide further evidence and reasoning that the distribution for the GR 800 development should be deemed acceptable by LCC given the common assessment methodology.

2 Stephenson Green, Coalville

2.1.1 As stated above, SG utilises 2001 journey to work census data to establish trip distribution on the highway network which applies to both the SG development and the agreed committed developments within Coalville, which includes the Local Plan allocated GR committed development (local plan allocation of 2,000 dwellings).

2.1.2 The SG addendum TA (December 2011) makes reference to the use of the 2001 journey to work census data at paragraph 2.1.5 where it states that *"It has been agreed with LCC that the proposed development trip distribution and assignment is as set out in the original TA. This focuses traffic travelling onto the A511 corridor, as it is agreed that this is an important strategic route for traffic travelling in/around Coalville"*. This statement is also included in the SG Highways Statement of Common Ground which has been agreed with LCC.

2.1.3 LCC revised observations on the SG application (dated 20/12/11), supports the withdrawal of their objection to the SG development on highway grounds. They also refer to the Leicester and Leicestershire Integrated Transport Modal (LLITM) undertaken by the SG developers and the comparison with the established trip distribution in the SG TA. LCC states that *"The model outputs (LLITM) also confirmed that assumptions made in respect of distribution in the submitted Transport Assessment (and subsequent Addendum Transport Assessment) i.e.*



the majority of trips would remain in and around Coalville with a draw to Leicester and Loughborough, were robust.” LCC’s revised observations on the SG application are attached at **Appendix A** to this note.

2.1.4 In light of the fact that both the SG and GR 800 development Transport Assessments follow the same methodology of using 2001 journey to work census data to derive traffic distribution on the highway network; and that LCC have agreed this to be acceptable for the SG development, it would be both inconsistent and unreasonable for LCC to deem this methodology unacceptable for the GR 800 development.

3 Hugglescote Cross Roads

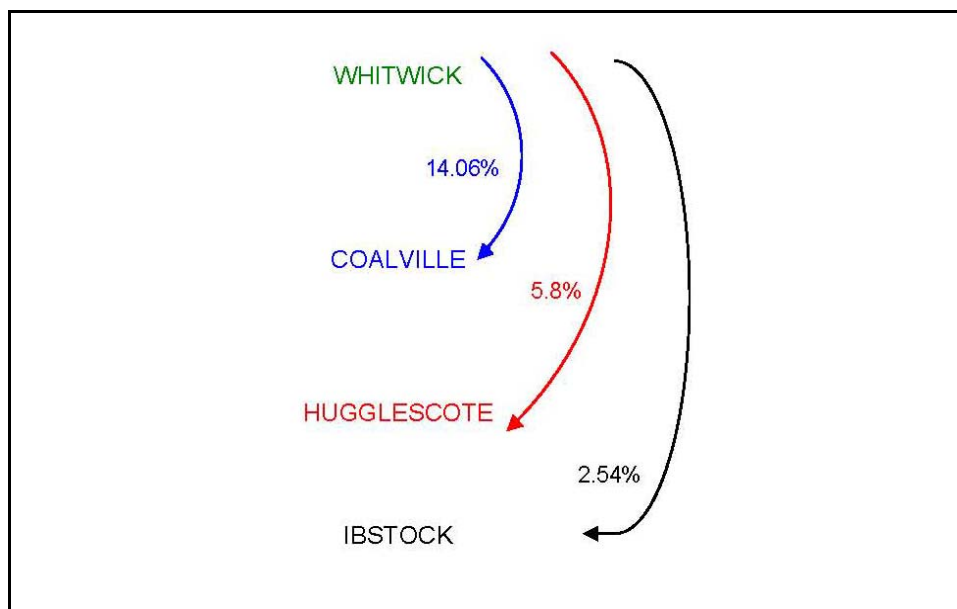
3.1.1 Within the SG addendum TA (December 2011), the traffic distribution figures, presented in Appendix E of the SG addendum TA, present the GR committed development (local plan allocation of 2,000 dwellings) and assign 8% of the development traffic during the peak periods through the HCR.

3.1.2 Based on the GR committed development (local plan allocation of 2,000 dwellings), 8% of the development traffic would equate to 83 vehicle movements in the AM peak and 77 vehicle movements in the PM peak.

3.1.3 For the SG development the HCR has not been included within the scope of assessment and development traffic has not been assigned beyond the 23.5%, established in the SG TA (November 2010), which heads south towards Coalville town centre via Whitwick Road. However, when examining the outputs from 2001 journey to work census data only 14.06% of traffic goes to Coalville, 5.8% traffic from the Whitwick ward (origin of the SG development) travels to the Hugglescote ward and 2.54% travels to the Ibstock ward.

3.1.4 The outputs from the 2001 journey to work census data which identifies the distribution of traffic between the wards is attached to **Appendix B** of this note.

3.1.5 **Figure 1** below summarises the percentages from the Whitwick ward to Coalville, Hugglescote and Ibstock.

Figure 1 – Summary of Journey to Work Data

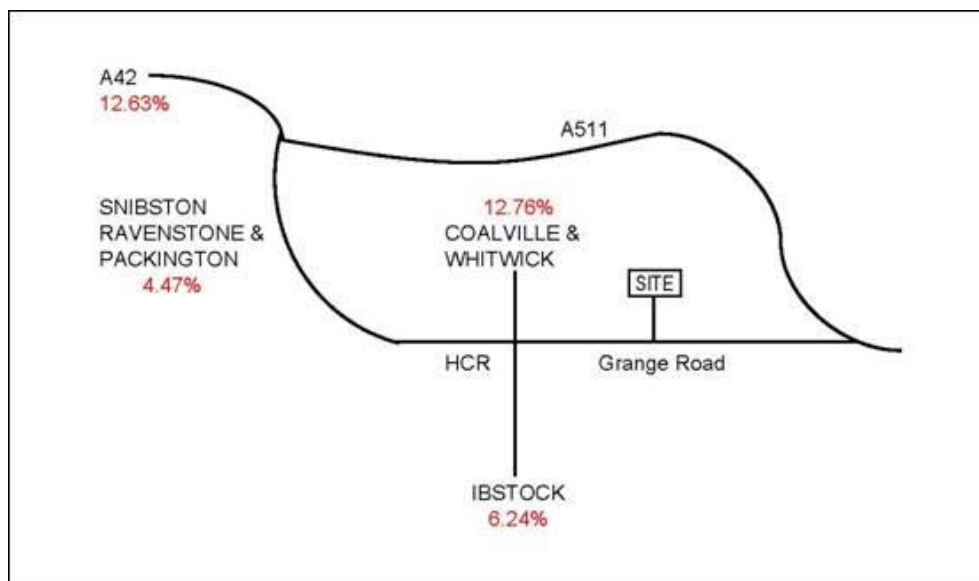
- 3.1.6 Based on the above percentages, it can be seen that 8.34% of traffic from the SG development would travel to the Hugglescote and Ibstock wards and therefore through the HCR. Based on the SG trip generation this equates to 67 vehicle movements travelling through the HCR in the AM peak and 63 vehicle movements in the PM peak.

4 Revised Distribution of Grange Road Development Traffic

- 4.1.1 SBA have re-examined the 2001 journey to work census data and the associated distribution of the GR 800 development traffic through the HCR. In order to establish the 'worst case' scenario for the distribution of development traffic through the HCR, the percentage of traffic which could travel through the junction has been derived from the 2001 journey to work census data.
- 4.1.2 The outputs from the 2001 journey to work census data which identifies the distribution of traffic between the wards is attached to **Appendix B** of this note.
- 4.1.3 **Figure 2** below summaries the maximum percentages of GR development traffic which could travel through the HCR.



Figure 2 – Summary of Journey to Work Data



4.1.4 The combined percentage distribution through the HCR taken from Figure 2 is 36.1% of the GR 800 development traffic. This equates to 171 and 180 vehicle movements through the HCR in the AM peak and PM peak respectively.

4.1.5 It should be noted, that the distribution of 36.1% of the development traffic through the HCR presents a 'worst case' scenario and assumes that all development traffic to/from the A42 junction 13 and the Snibston, Whitwick, Coalville, Ibstock and Ravenstone & Packington wards travel through the HCR. Based on this distribution, no GR 800 development traffic to these destinations would use the A511 corridor.

5 Conclusions

5.1.1 The SG and GR 800 development Transport Assessments use the same 2001 journey to work census data to derive traffic distribution on the highway network. LCC have agreed to the use of this distribution for the SG development therefore, it would be both inconsistent and unreasonable if LCC were not to deem this methodology acceptable for the GR 800 development.

5.1.2 It has been demonstrated that, based on the agreed SG trip distribution, 8.34% of traffic from the SG development would travel through the HCR. The HCR has not been included within the SG scope of assessment and therefore has not



taken account of the impact and the capacity constrained HCR junction. This impact has been accepted by LCC with no mitigation.

5.1.3 LCC have agreed to the SG development with no mitigation measures at the HCR. Based on the agreed SG distribution, this note has demonstrated that the SG development will have an impact at this junction.

5.1.4 This note identifies a 'worst case' scenario distribution of 36.1% through the HCR from the GR 800 development. On the basis that this distribution has been derived from the same agreed methodology for the SG development, there is no demonstrable reason why this should not be acceptable for GR; to come to a contrary view would be inconsistent with the agreed position on SG.

Appendix A

REVISED OBSERVATIONS



PLANNING APPLICATION CONSULTATION RESPONSE

Report of the Director of Environment and Transport
to the Planning Authority relating only to the Highway
aspects.

DETAILS OF APPLICATION

Planning Ref No: 2010/1208/07
CE/EN Ref: Previous on Plan-Con 2009/0448/07
Application Address: Land North Of A511, Stephenson Way, Coalville
Parish: Coalville
Applicant: Jelson Limited/William Davis Limited
District Planning Case Officer: James Knightley
Brief Description of Development: Residential development, village centre (including: primary school, retail, business and other uses (Classes A1, A2, A3, A4, A5, B1, D1 (healthcare) and D2 (community facilities), public open space, recreation areas, play areas, woodland planting, and associated infrastructure including roads, sewers and water storage ponds (Outline - all matters than part access reserved).

OBSERVATIONS

(a) On any Improvement lines: None
(b) On Access Arrangements:
New vehicular access: Yes **New pedestrian access:** Yes
Altered vehicular access: No **Altered pedestrian access:** No
(c) On effect on Rights of Way: Yes
(d) On any new road proposal: No

RECOMMENDATIONS

CONDITIONS

1. No development shall commence on the site until such time as the Stephenson Way signalised site access junction as shown on WYG drawing no. A056098-050-F has been provided in full and is available for use.

Reason: To provide vehicular access to the site, including for construction traffic, in the interests of highway safety, and to comply with Policy T3 of the North West Leicestershire Local Plan.

2. No development shall commence unless and until precise details of improvement works to junctions on the local highway network, together with a phasing programme for their implementation (relating to the occupation of dwellings within each phase of the development) have been submitted to and approved in writing by the Local Planning Authority.

The submitted details shall include details of works to the following junctions, and shall provide measures as indicated generally on the relevant drawings:

- Hall Lane site access as shown on WYG drawing no. A056098-059-B
- A511/Hough Hill/A447/Ashby Road roundabout junction as shown on WYG drawing no. A056098-056
- A511/Thornborough Road roundabout junction as shown on WYG drawing no. A056098-051
- A511/Hermitage Road/Whitwick Road roundabout junction as shown on WYG drawing no. A056098-052-A
- A511/Broom Leys Road signalised junction as shown on WYG drawing no. A056098-53-A
- A511/Bardon Road (signalised) junction as shown on WYG drawing no. A056098-054-A
- A511/Reg's Way/Grange Road roundabout junction as shown on WYG drawing no. A056098-061
- Hall Lane/Meadow Lane priority junction as shown on WYG drawing no. A056098-057-A

No individual dwelling shall be occupied until such time as the junction improvements required in association with the phasing relevant to the said dwelling have been undertaken in full in accordance with the approved details.

Reason: To ensure that traffic generated from the site is satisfactorily catered for on the local road network, in the interests of highway safety, and to comply with Policy T3 of the North West Leicestershire Local Plan.

3. None of the dwellings hereby permitted shall be occupied until such time as a footway/cycleway has been provided on the north side of Stephenson Way between its junctions with Hermitage Road and Broom Leys Road in accordance with details first submitted to and agreed in writing by the Local Planning Authority.

Reason: The highway on Stephenson Way fronting the site has no separate facility for pedestrians and the proposal would lead to an increase in pedestrian movement along the highway. The footway is therefore required for the safety of pedestrians.

4. No development shall commence on the site until such time as a scheme for the downgrading of Green Lane to a footway/cycleway within the site (including a timetable for the undertaking of such works, and proposed measures for the permanent exclusion of motorised vehicles) has been submitted to and agreed in writing by the Local Planning Authority. The works shall be undertaken in accordance with the agreed details and thereafter be so maintained.

Reason: Green Lane has inadequate width/geometry to cater for additional vehicular traffic, in the interests of highway safety, and to comply with Policy T3 of the North West Leicestershire Local Plan.

5. Unless any alternative timescale is first agreed in writing by the Local Planning Authority, no more than 50 dwellings shall be occupied until such time as two bus stops (including pole and flag, bus shelter, raised kerbs and information display case) have been provided within the

development site in accordance with details first submitted to and approved in writing by the Local Planning Authority.

Reason: To ensure that adequate steps are taken to provide a choice in mode of travel to and from the site.

6. No development shall commence on the site until such time as a construction management plan, including wheel cleansing facilities and vehicle parking facilities, and a timetable for their provision, has been submitted to and approved in writing by the Local Planning Authority. The development shall thereafter be carried out in accordance with the approved details and timetable.

Reason: To reduce the possibility of deleterious material (mud, stones etc) being deposited in the highway and becoming a hazard to road users, and to ensure that construction traffic associated with the development does not lead to on-street parking problems in the area.

NOTES TO PLANNING OFFICER

These Revised Observations are made based on the Addendum Transport Assessment dated December 2011, and should be read in conjunction with the 'Statement of Common Ground: Highways and Transportation Issues' dated 24th November 2011.

Leicester and Leicestershire Integrated Transport Model (LLITM)

The Observations of the Highway Authority dated 5th April 2011 stated that the Applicant should be advised to model the development in the Leicester and Leicestershire Integrated Transport Model (LLITM). The Observations of the Highway Authority dated 14th September 2011 stated that LLITM had been commissioned and that modelling work was ongoing. This modelling work has since been completed.

The outputs of the modelling confirmed that the trip generation assumed in the submitted Transport Assessment (and subsequent Addendum Transport Assessment) (based on a worst-case scenario of 1550 dwellings with no reduction for Travel Plan measures) was robust. The model outputs also confirmed that assumptions made in respect of distribution in the submitted Transport Assessment (and subsequent Addendum Transport Assessment) i.e. the majority of trips would remain in and around Coalville with a draw to Leicester and Loughborough, were robust.

Committed development

The Addendum Transport Assessment assumes the following committed development:

- 09/00359/FULM Belvoir Shopping Centre
- 08/00917/OUTM Ford Motors site (Tesco)

- 2,000 dwellings at Bardon Grange. This has been assessed assuming two points of access – one onto Grange Road, and one onto the A511 (as agreed with LCC), **without** the Bardon Relief Road.

Trip distribution has been based on the same assumptions as Stephenson Green. This is a worst-case scenario for assessment of this development because it puts the majority of Bardon Grange traffic onto the A511.

The Addendum Transport Assessment demonstrates that 1550 dwellings at Stephenson Green and 2,000 dwellings at Bardon Grange could be accommodated on the local highway network with the mitigation measures detailed below without the Bardon Relief Road.

Access proposals

The Highway Authority has assessed the junction capacity assessments submitted in the Addendum Transport Assessment in respect of the proposed signalised site access junction at Stephenson Way, and the proposed ghost island junction at Hall Lane. The access designs have been subject to a Stage 1 Road Safety Audit, and to preliminary design checking by Leicestershire County Council. The Highway Authority is satisfied that the access proposals as shown on WYG drawing no.'s A056098-050-F and A056098-059-B respectively are appropriate.

Pedestrian and cycle provision

The submitted Transport Assessment includes for the following pedestrian/cycle improvements, which the Highway Authority considers appropriate and related in scale to the proposed development:

- New footway/cycleway on the North side of A511 Stephenson Way between Hermitage Road and Broom Leys Road connecting with National Cycle Route 52.
- New footway and pedestrian refuge on the southern side of Hall Lane to link the site access to the existing footway
- Downgrading of Green Lane within the development site to a footway/cycleway
- Retention of the existing Public Right of Way to provide links to Hermitage Road and A511 Stephenson Way
- Signal controlled pedestrian/cycle facilities at the A511 Stephenson Way site access
- Signal controlled pedestrian/cycle facilities on all arms at the Hermitage Road roundabout
- Signal controlled pedestrian/cycle facilities on the A511 (E) at the Thronborough Road roundabout

Public Transport provision

The Addendum Transport Assessment includes for the following public transport provision, which the Highway Authority considers appropriate and related in scale to the proposed development:

- A shuttle bus service between the site and Coalville Town Centre to link with existing services
- Two new bus stops within the site
- One Travel Pack per dwelling
- Two six month bus passes per dwelling
- Appointment of a Travel Plan Co-ordinator
- Improvements to two bus stops on Hall Lane
- Improvements to two bus stops on Hermitage Road

In the Statement of Common Ground it was agreed that a bus stop would be provided on Stephenson Way so residents could access the existing Airlink 155 service. However, LLITM modelling did not show that any residents would use this service. Therefore, this proposed mitigation cannot be justified and will not be pursued by LCC.

Mitigation measures at off-site junctions

M1 junction 22 and A42 junction 13

Conditions relating to mitigation measures at M1 junction 22 and A42 junction 13 will be directed by the Highways Agency. The mitigation proposals as shown on Colin Buchanan drawing no.'s 19953-OS-102 and 17446-B-004 rev A respectively require works to be carried out on the local highway network.

LCC considered this proposed mitigation as part of the Coalville Transport Study. The proposed mitigation at M1 junction 22 is acceptable in principle to LCC. The proposed mitigation at A42 junction 13 provides relief to the A42 at the expense of the local highway network. However, LCC has accepted that this is the only possible mitigation within the constraints of the junction.

All mitigation proposals as detailed below are deliverable within existing highway land. The proposals will be subject to Road Safety Audits and detailed design checking under the s278 process:

A511/Hough Hill/A447/Ashby Road roundabout junction

The Highway Authority has assessed the junction capacity assessments submitted in the Addendum Transport Assessment in respect of this junction. The Highway Authority is satisfied that the mitigation measures as shown on WYG drawing no. A056098-056 that include for localised carriageway widening on the A511 arms will mitigate against the impact of the development at this junction.

A511/Thornborough Road roundabout junction

The Highway Authority has assessed the junction capacity assessments submitted in the Addendum Transport Assessment in respect of this junction. The Highway Authority is satisfied that the mitigation measures as shown on WYG drawing no. A056098-051 that include for localised carriageway widening on the A511 arms and a toucan crossing on the A511 (E) will mitigate against the impact of the development at this junction.

A511/Hermitage Road/Whitwick Road roundabout junction

The Highway Authority has assessed the junction capacity assessments submitted in the Addendum Transport Assessment in respect of this junction. The Highway Authority is satisfied that the mitigation measures as shown on WYG drawing no. A056098-052-A that include for localised carriageway widening on all arms, and full signalisation including pedestrian/cycle provision will mitigate against the impact of the development at this junction.

A511/Broom Leys Road signalised junction

The Highway Authority has assessed the junction capacity assessments submitted in the Addendum Transport Assessment in respect of this junction. The Highway Authority is satisfied that the mitigation measures as shown on WYG drawing no. A056098-053-A that include for localised carriageway widening on the Broom Leys Road arms will mitigate against the impact of the development at this junction.

A511/Bardon Road (signalised) junction

The Highway Authority has assessed the junction capacity assessments submitted in the Addendum Transport Assessment in respect of this junction. The Highway Authority is satisfied that the mitigation measures as shown on WYG drawing no. A056098-054-A that include for localised carriageway widening on the A511 and replacing the existing roundabout with traffic signal control will mitigate against the impact of the development at this junction.

A511/Reg's Way/Grange Road roundabout junction

The Highway Authority has assessed the junction capacity assessments submitted in the Addendum Transport Assessment in respect of this junction. These capacity assessments do not include the 2,000 dwellings at Bardon Grange as committed development. The Highway Authority accepts that if this development comes forward more major mitigation is likely to be required at this junction.

The Highway Authority is satisfied that the mitigation measures as shown on WYG drawing no. A056098-061 that include for localised carriageway widening on the A511 and Grange Road will mitigate against the impact of the development at this junction.

A511/Beveridge Lane roundabout junction

The Highway Authority has assessed the junction capacity assessments submitted in the Addendum Transport Assessment in respect of this junction. The Highway Authority is satisfied that the introduction of a queue loop on Beveridge Lane will mitigate against the impact of the development at this junction.

A511/Copt Oak Road/Stanton Lane signalised roundabout

The Highway Authority has assessed the junction capacity assessments submitted in the Addendum Transport Assessment in respect of this junction. The Highway Authority is satisfied that the introduction of MOVA signal control and modifications to the operation of existing signal control equipment will mitigate against the impact of the development at this junction.

Hall Lane/Meadow Lane priority junction

The Highway Authority has assessed the junction capacity assessments submitted in the Addendum Transport Assessment in respect of this junction. The Highway Authority is satisfied that the mitigation measures as shown on WYG drawing no. A056098-057-A that include for localised carriageway widening on Hall Lane will mitigate against the impact of the development at this junction.

Contributions

In order to mitigate the impacts of the development on the local highway network, the following contributions are sought:

1. Contribution of £5280.00 for the provision of a queue loop detector on the Beveridge Lane arm of the A511/Beveridge Lane roundabout junction.

This contribution is comprised as follows:

Re-cut new queue loops £1500.00
Ducting in footway £2850.00
Installation of feeder cables £450.00
Staff costs £480.00

Justification: Junction capacity models of this junction submitted as part of the Addendum Transport Assessment show that whilst there is likely to be little development traffic using Beveridge Lane, the additional development traffic on the A511 arms of the roundabout would reduce the number of available gaps in traffic to allow Beveridge Lane traffic to egress. Consequently, it will lead to increased queue lengths on this arm. The installation of a queue loop detector would trigger the existing signals to provide gaps for Beveridge Lane traffic to egress, and therefore mitigate against the impact of the development.

2. Contribution of £20,240.00 for the installation of MOVA signal control at the A511/Copt Oak Road/Stanton Lane signalised roundabout.

This contribution is comprised as follows:

Ducting and chambers £9000.00
Slot cutting £3000.00
MOVA unit £2000.00
Siemens costs £2,000.00
Contingency @ 10% £1,600.00
Staff costs (design and validation) £2,640.00

Justification: Junction capacity models of this junction submitted as part of the Addendum Transport Assessment have demonstrated that modifications to the operation of existing signal control equipment and the installation of MOVA to optimise the operation of those signals will mitigate against the impact of the development without the need for physical works.

3. A Construction Traffic Routeing Agreement to be submitted to and approved in writing by the Leicestershire County Council. During the period of construction, all traffic to and from the site shall use the agreed route at all times.

Justification: To ensure that all construction traffic associated with the development does not use unsatisfactory roads to and from the site.

The site has been promoted as a Sustainable Urban Extension to Coalville. In the interests of encouraging sustainable travel to and from the site, the following contributions are required:

4. A DDA compliant shuttle bus between the development site and Coalville Town Centre on a 30 minute frequency Monday-Saturday inclusive between the hours of 06:30 and 18:00 for a period of 3 years from the occupation of the 50th dwelling. Thereafter, on a 15 minute frequency Monday-Saturday inclusive between the hours of 06:30 and 18:00 for a period of 2 further years and until a through route from Stephenson Way to Hall Lane is available for use by vehicular traffic.

Justification: The Applicant's appointed transport consultants have been in discussions with bus operator Arriva about diverting an existing bus service through the development site/providing a bespoke bus service to/from the site in the interests of encouraging sustainable travel. Leicestershire County Council has been party to these discussions.

Arriva has confirmed that they would not divert an existing service i.e. 11, 29/29A, 126 into the site during the early phases of development (5 years) when no through route would be available (the Hall Lane site access would not be constructed). Diverting a route would also be to the detriment of their existing customer base. Arriva has advised that during the early phases of development a bespoke shuttle service between the site and Coalville Town Centre to link with existing established services would be the only realistic option to provide residents with access to a bus service.

Initially, when the number of residents on the site is low, this would operate at a 30-minute frequency, increasing to a 15-minute frequency as the number of residents increase. When the Hall Lane access becomes available, and there is a route through the site, a diversion/extension of an existing service may become viable.

5. One Travel Pack per dwelling; can be provided through LCC at a cost of £50.18 per pack/dwelling. If not supplied by LCC, a sample Travel Pack shall be submitted to and approved in writing by LCC.

Justification: To inform new residents from first occupation what sustainable travel choices (including details of the above shuttle bus service) are available in the surrounding area.

6. Two six-month bus passes per dwelling; can be provided through LCC at a cost of £310.50 per pass.

Justification: To encourage new residents to use bus services (including the above shuttle bus service) as an alternative to the private car to establish changes in travel behaviour from first occupation.

7. Appointment of a Travel Plan Co-ordinator for a period to 5 years after completion of the development.

Justification: To ensure effective implementation and monitoring of the site wide Travel Plan submitted in support of the Planning Application.

8. Improvements to the two nearest bus stops on Hall Lane to include (where this does not already exist) pole and flag, bus shelter, raised kerbs, and information display case at a cost of £8,034.00 per stop.

This contribution is comprised as follows:

Shelter £4,674.00
Raised kerbs £3,108.00
Pole and flag £138.00
Timetable case £114.00

Justification: The modelling of the development in LLITM, which includes a public transport module, showed that residents of the development site would use the existing 29/29A service operating along Hall Lane in addition to the proposed shuttle bus. Making improvements to the existing bus stops would improve the waiting environment and accessibility to bus services, to encourage modal shift.

9. Improvements to the two nearest bus stops on Hermitage Road to include (where this does not already exist) pole and flag, bus shelter, raised kerbs, and information display case at a cost of £8,034.00 per stop.

This contribution is comprised as follows:

Shelter £4,674.00
Raised kerbs £3,108.00
Pole and flag £138.00
Timetable case £114.00

Justification: The modelling of the development in LLITM, which includes a public transport module, showed that residents of the development site would use the existing 126 service operating along Hermitage Road in addition to the proposed shuttle bus. Making improvements to the existing bus stops would improve the waiting environment and accessibility to bus services, to encourage modal shift.

NOTES TO APPLICANT

1. All works within the limits of the public highway shall be carried out to the satisfaction of the Highway Area Manager (telephone 0116 305 2202).
2. A public footpath/bridleway crosses the site and this must not be obstructed or diverted without obtaining separate consent from Leicestershire County Council.

Siemens costs £2,000.00
Contingency @ 10% £1,600.00
Staff costs (design and validation) £2,640.00

Justification: Junction capacity models of this junction submitted as part of the Addendum Transport Assessment have demonstrated that modifications to the operation of existing signal control equipment and the installation of MOVA to optimise the operation of those signals will mitigate against the impact of the development without the need for physical works.

3. A Construction Traffic Routeing Agreement to be submitted to and approved in writing by the Leicestershire County Council. During the period of construction, all traffic to and from the site shall use the agreed route at all times.

Justification: To ensure that all construction traffic associated with the development does not use unsatisfactory roads to and from the site.

The site has been promoted as a Sustainable Urban Extension to Coalville. In the interests of encouraging sustainable travel to and from the site, the following contributions are required:

4. A DDA compliant shuttle bus between the development site and Coalville Town Centre on a 30 minute frequency Monday-Saturday inclusive between the hours of 06:30 and 18:00 for a period of 3 years from the occupation of the 50th dwelling. Thereafter, on a 15 minute frequency Monday-Saturday inclusive between the hours of 06:30 and 18:00 for a period of 2 further years and until a through route from Stephenson Way to Hall Lane is available for use by vehicular traffic.

Justification: The Applicant's appointed transport consultants have been in discussions with bus operator Arriva about diverting an existing bus service through the development site/providing a bespoke bus service to/from the site in the interests of encouraging sustainable travel. Leicestershire County Council has been party to these discussions.

Arriva has confirmed that they would not divert an existing service i.e. 11, 29/29A, 126 into the site during the early phases of development when no through route would be available (the Hall Lane site access would not be constructed). Diverting a route would also be to the detriment of their existing customer base. Arriva has advised that during the early phases of development a bespoke shuttle service between the site and Coalville Town Centre to link with existing established services would be the only realistic option to provide residents with access to a bus service.

Initially, when the number of residents on the site is low, this would operate at a 30 minute frequency, increasing to a 15 minute frequency as the number of residents increase. When the Hall Lane access becomes available, and there is a route through the site, a diversion/extension of an existing service may become viable.

5. One Travel Pack per dwelling; can be provided through LCC at a cost of £50.18 per pack/dwelling. If not supplied by LCC, a sample Travel Pack shall be submitted to and approved in writing by LCC.

Justification: To inform new residents from first occupation what sustainable travel choices (including details of the above shuttle bus service) are available in the surrounding area.

6. Two six-month bus passes per dwelling; can be provided through LCC at a cost of £310.50 per pass.

Justification: To encourage new residents to use bus services (including the above shuttle bus service) as an alternative to the private car to establish changes in travel behaviour from first occupation.

7. Appointment of a Travel Plan Co-ordinator for a period to 5 years after completion of the development.

Justification: To ensure effective implementation and monitoring of the site wide Travel Plan submitted in support of the Planning Application.

8. Improvements to the two nearest bus stops on Hall Lane to include (where this does not already exist) pole and flag, bus shelter, raised kerbs, and information display case at a cost of £8,034.00 per stop.

This contribution is comprised as follows:

Shelter £4,674.00
Raised kerbs £3,108.00
Pole and flag £138.00
Timetable case £114.00

Justification: The modelling of the development in LLITM, which includes a public transport module, showed that residents of the development site would use the existing 29/29A service operating along Hall Lane in addition to the proposed shuttle bus. Making improvements to the existing bus stops would improve the waiting environment and accessibility to bus services, to encourage modal shift.

9. Improvements to the two nearest bus stops on Hermitage Road to include (where this does not already exist) pole and flag, bus shelter, raised kerbs, and information display case at a cost of £8,034.00 per stop.

This contribution is comprised as follows:

Shelter £4,674.00
Raised kerbs £3,108.00
Pole and flag £138.00
Timetable case £114.00

Justification: The modelling of the development in LLITM, which includes a public transport module, showed that residents of the development site would use the existing 126 service operating along Hermitage Road in addition to the proposed shuttle bus. Making improvements to the existing bus stops would improve the waiting environment and accessibility to bus services, to encourage modal shift.

Date Received	Date Of Inspection	Inspector	Signed Off
10/01/2011		Rebecca Henson	20/12/2011

Appendix B

Residence Ward	Residence Local/Unitary Authority name	Residence County	Residence Region	Workplace Ward	Workplace Local/Unitary Authority name	Workplace County	Workplace Region	SumOfCar - driver: All people	Percentage Cars
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Belper South	Amber Valley	Derbyshire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Sutton in Ashfield West	Ashfield	Nottinghamshire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Woodhouse	Ashfield	Nottinghamshire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Gatehouse	Aylesbury Vale	Buckinghamshire	South East	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Acacia Green	Birmingham	Metropolitan	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Edgbaston	Birmingham	Metropolitan	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Kingsbury	Birmingham	Metropolitan	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Ladywood	Birmingham	Metropolitan	West Midlands	6	0.26%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Nechells	Birmingham	Metropolitan	West Midlands	4	0.17%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Oscott	Birmingham	Metropolitan	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Blaby South	Blaby	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Cosby with South Whetstone	Blaby	Leicestershire	East Midlands	6	0.26%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Croft Hill	Blaby	Leicestershire	East Midlands	5	0.21%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Ellis	Blaby	Leicestershire	East Midlands	9	0.39%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Enderby and St John's	Blaby	Leicestershire	East Midlands	22	0.95%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Fairestone	Blaby	Leicestershire	East Midlands	16	0.69%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Muxoe	Blaby	Leicestershire	East Midlands	0	0.00%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Narborough and Littlethorpe	Blaby	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	North Whetstone	Blaby	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Pastures	Blaby	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Ravenhurst and Fosse	Blaby	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Saxondale	Blaby	Leicestershire	East Midlands	5	0.21%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Stanton and Flamvile	Blaby	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Winstanley	Blaby	Leicestershire	East Midlands	7	0.30%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Beeston Central	Broxtowe	Nottinghamshire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Toton and Chilwell Meadows	Broxtowe	Nottinghamshire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Charwood	Charwood	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Brstal Wanlip	Charwood	Leicestershire	East Midlands	4	0.17%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	East Goscote	Charwood	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Forest Bradgate	Charwood	Leicestershire	East Midlands	6	0.26%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Loughborough Ashby	Charwood	Leicestershire	East Midlands	17	0.73%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Loughborough Dishley and Hathern	Charwood	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Loughborough Hastings	Charwood	Leicestershire	East Midlands	29	1.25%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Loughborough Lamington	Charwood	Leicestershire	East Midlands	82	3.53%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Loughborough Nanpantan	Charwood	Leicestershire	East Midlands	6	0.26%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Loughborough Southfields	Charwood	Leicestershire	East Midlands	49	2.11%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Loughborough Storer	Charwood	Leicestershire	East Midlands	14	0.60%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Mountsorrel	Charwood	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Queniborough	Charwood	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Quorn and Mountsorrel Castle	Charwood	Leicestershire	East Midlands	10	0.43%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Rothley and Thurgaston	Charwood	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Sheep East	Charwood	Leicestershire	East Midlands	51	2.19%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Shepherd West	Charwood	Leicestershire	East Midlands	43	1.85%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Sibley	Charwood	Leicestershire	East Midlands	6	0.26%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Syston West	Charwood	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	The Wolds	Charwood	Leicestershire	East Midlands	5	0.21%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Thuraston	Charwood	Leicestershire	East Midlands	11	0.47%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Binley and Willenhall	Coventry	Metropolitan	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Henley	Coventry	Metropolitan	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	St. Michael's	Coventry	Metropolitan	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Westwood	Coventry	Metropolitan	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Allestree	Derby	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Alvaston	Derby	Metropolitan	East Midlands	0	0.00%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Arboretum	Derby	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Boulton	Derby	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Chadderton	Derby	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Derwent	Derby	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Normanton	Derby	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Belle Vale and Hasbury	Dudley	Metropolitan	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	South Acton	Ealing	Outer London	London	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Angleysey	East Staffordshire	Staffordshire	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Burton	East Staffordshire	Staffordshire	West Midlands	7	0.30%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	East Park	East Staffordshire	Staffordshire	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Horninglow	East Staffordshire	Staffordshire	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Rolliston on Dove	East Staffordshire	Staffordshire	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Draycott	Erewash	Derbyshire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Sawley	Erewash	Derbyshire	East Midlands	0	0.00%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Bonington	Gedling	Nottinghamshire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Kingswell	Gedling	Nottinghamshire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Netherfield and Colwick	Gedling	Nottinghamshire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Topcliffe	Harrogate	West Yorkshire	Yorkshire and The Humber	0	0.00%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Broughton Astley - Sutton	Harborough	Leicestershire	East Midlands	4	0.17%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Kibworth	Harborough	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Lubenham	Harborough	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Lutterworth Swift	Harborough	Leicestershire	East Midlands	4	0.17%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Market Harborough - Great Bowden and Arden	Harborough	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Peatling	Harborough	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Uffington	Harrogate	West Yorkshire	Yorkshire and The Humber	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Muswell Hill	Haringey	Inner London	London	0	0.00%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Heathrow Villages	Hillingdon	Outer London	London	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Barwell	Hinckley and Bosworth	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Burbage Sketchnay and Stretton	Hinckley and Bosworth	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Burbage St Catherine's and Lash Hill	Hinckley and Bosworth	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Cadaby, Carlton and Market Bosworth with Shackerstone	Hinckley and Bosworth	Leicestershire	East Midlands	4	0.17%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Groby	Hinckley and Bosworth	Leicestershire	East Midlands	2	0.09%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Hinckley Castle	Hinckley and Bosworth	Leicestershire	East Midlands	4	0.17%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Hinckley Clarendon	Hinckley and Bosworth	Leicestershire	East Midlands	9	0.39%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Hinckley De Montfort	Hinckley and Bosworth	Leicestershire	East Midlands	6	0.26%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Markfield; Stanton and Fieldhead	Hinckley and Bosworth	Leicestershire	East Midlands	25	1.07%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Newbold Verdon with Desford and Peckleton	Hinckley and Bosworth	Leicestershire	East Midlands	31	1.33%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Ratby; Bagworth and Thornton	Hinckley and Bosworth	Leicestershire	East Midlands	20	0.86%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Calsington	Leeds	West Yorkshire	Yorkshire and The Humber	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Hunslet	Leeds	West Yorkshire	Yorkshire and The Humber	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Abbey	Leicester	Metropolitan	East Midlands	24	1.03%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Aylestone	Leicester	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Beaumont Leys	Leicester	Metropolitan	East Midlands	53	2.28%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Belgrave	Leicester	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Braunstone Park and Rowley Fields	Leicester	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Coleman	Leicester	Metropolitan	East Midlands	71	3.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Evington	Leicester	Metropolitan	East Midlands	4	0.17%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Fosse	Leicester	Metropolitan	East Midlands	7	0.30%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Freemen	Leicester	Metropolitan	East Midlands	9	0.39%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Humberstone and Hamilton	Leicester	Metropolitan	East Midlands	6	0.26%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Latimer	Leicester	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	New Park	Leicester	Metropolitan	East Midlands	11	0.47%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Rushy Mead	Leicester	Metropolitan	East Midlands	12	0.52%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Spiny Hills	Leicester	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Stonegate	Leicester	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Westcotes	Leicester	Metropolitan	East Midlands	10	0.43%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Western Park	Leicester	Metropolitan	East Midlands	4	0.17%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Boley Park	Leicester	Staffordshire	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Stowe	Lichfield	Staffordshire	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	South	Liverpool	Merseyside	North West	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Frisby-on-the-Wreake	Melton	Leicestershire	East Midlands	0	0.00%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Gaddeby	Melton	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Melton Craven	Melton	Leicestershire	East Midlands	6	0.26%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Melton Dorian	Melton	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Melton Newport	Melton	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	North Keynes	Leicester	Metropolitan	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Boughton	Newark and Sherwood	Nottinghamshire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Bridge	Newark and Sherwood	Nottinghamshire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Arley and Whitacre	North Warwickshire	Warwickshire	West Midlands	7	0.30%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Atherstone South and Mancetter	North Warwickshire	Warwickshire	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Coleshill South	North Warwickshire	Warwickshire	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Hurley and Wood End	North Warwickshire	Warwickshire	West Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Appleby	North West Leicestershire	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Ashby Castle	North West Leicestershire	Leicestershire	East Midlands	16	0.69%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Ashby Holywell	North West Leicestershire	Leicestershire	East Midlands	86	3.70%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Ashby Ivanhoe	North West Leicestershire	Leicestershire	East Midlands	15	0.64%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Bardon	North West Leicestershire	Leicestershire	East Midlands	41	1.76%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Breedon	North West Leicestershire	Leicestershire	East Midlands	5	0.21%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Castle Donington	North West Leicestershire	Leicestershire	East Midlands	37	1.59%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Coalville	North West Leicestershire	Leicestershire	East Midlands	14	0.60%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Greenslade	North West Leicestershire	Leicestershire	East Midlands	64	2.75%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Hugglescote	North West Leicestershire	Leicestershire	East Midlands	135	5.80%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Isotock and Heather	North West Leicestershire	Leicestershire	East Midlands	59	2.54%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Kegworth and Wharton	North West Leicestershire	Leicestershire	East Midlands	21	0.90%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Measham	North West Leicestershire	Leicestershire	East Midlands	11	0.47%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Moira	North West Leicestershire	Leicestershire	East Midlands	6	0.26%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Oakthorpe and Donisthorpe	North West Leicestershire	Leicestershire	East Midlands	3	0.13%
Whitwick	North West Leicestershire	Leicestershire	East Midlands	Ravenshoe and Packington					

3. C.B.R tests shall be taken and submitted to the County Council's Area Manager prior to development commencing in order to ascertain road construction requirements.
4. The Developer will be required to enter into an Agreement with the Highway Authority under s278 of the Highways Act 1980 for works within the highway and detailed plans shall be submitted and approved in writing by the Highway Authority. The s278 Agreement must be signed and all fees paid and surety set in place before the highway works are commenced.
5. All street furniture or lining that requires relocation or alteration shall be carried out entirely at the expense of the Developer, who shall first obtain separate consent of the Highway Authority.
6. If you intend to provide temporary directional signing to your proposed development, you must ensure that prior approval is obtained from the County Council's Area Manager for the size, design and location of any sign in the highway. It is likely that any sign erected in the highway without prior approval will be removed.
Before you draw up a scheme, the Area Manager's staff (telephone 0116 305 2104) will be happy to give informal advice concerning the number of signs and the locations where they are likely to be acceptable.

Contributions

In order to mitigate the impacts of the development on the local highway network, the following contributions are sought:

1. Contribution of £5280.00 for the provision of a queue loop detector on the Beveridge Lane arm of the A511/Beveridge Lane roundabout junction.

This contribution is comprised as follows:

Re-cut new queue loops £1500.00
Ducting in footway £2850.00
Installation of feeder cables £450.00
Staff costs £480.00

Justification: Junction capacity models of this junction submitted as part of the Addendum Transport Assessment show that whilst there is likely to be little development traffic using Beveridge Lane, the additional development traffic on the A511 arms of the roundabout will reduce the number of available gaps in traffic to allow Beveridge Lane traffic to egress. Consequently, it will lead to increased queue lengths on this arm. The installation of a queue loop detector would trigger the existing signals to provide gaps for Beveridge Lane traffic to egress, and therefore mitigate against the impact of the development.

2. Contribution of £20,240.00 for the installation of MOVA signal control at the A511/Copt Oak Road/Stanton Lane signalised roundabout.

This contribution is comprised as follows:

Ducting and chambers £9000.00
Slot cutting £3000.00
MOVA unit £2000.00

Appendix J – TN004– Pedestrian Phase Survey & Junction Capacity Assessments (20 February 2012)

TN004– Pedestrian Phase Survey & Junction Capacity Assessments (20 February 2012)



Land off Grange Road, Hugglescote (N12107)

Hugglescote Cross Roads – Pedestrian Phase Survey and Junction Capacity Assessments

TN004 – 20th February 2012

1 Introduction

1.1.1 Savell Bird & Axon (SBA) have been commissioned by Bloor Homes East Midlands Ltd to provide transportation and highways advice in support of an outline planning application for an 800 dwelling residential development off Grange Road in Hugglescote, Leicestershire. The site is allocated for housing development in the local plan under saved policy H4g.

1.1.2 SBA previously submitted a summary of results at the Hugglescote Cross Roads (HCR) based on the removal of the pedestrian phasing to reduce the cycle time and delay at the junction. However, following submission of this LINSIG results an email was received on the 6th February 2012 from Leicestershire County Council (LCC) seeking justification for removal of this phasing. In order to confirm if removal of the pedestrian phasing was justified, a video survey was commissioned during the peak periods to count the number of times the pedestrian phase was called.

1.1.3 This note has been prepared to present the results of the survey and the subsequent revised modelling work.

2 HCR Video Survey

2.1.1 A video survey was commissioned at the HCR which was undertaken prior to the school half term holiday on Thursday 9th February 2012. The purpose of the survey was to establish the number of times the pedestrian phase was called during the AM (08:00-09:00) and PM (17:00-18:00) peak periods to validate the LINSIG model against the on-site operation of the junction.

1.1.1 **Table 1** below summarises the results from the video survey for the number of cycles during the peak periods and the number of times the pedestrian phase was called.



Table 1: Peak hour total cycles and pedestrian phase results

	No. Cycles	No. Ped Phases
AM Peak (08:00-09:00)	41	36
PM Peak (17:00-18:00)	48	20

- 1.1.2 As can be seen from the results in Table 1, during the AM Peak the pedestrian phase is called almost every cycle and during the PM peak every other cycle.
- 1.1.3 The full results provided by the survey company are attached at **Appendix A** of this note.

3 Traffic Impact analysis

Existing junction operation

- 3.1.1 Based on the results of the video survey, the LINSIG model provided by LCC has been updated in the AM peak to run the pedestrian phase every cycle and the PM peak remaining as a double cycle (DC) with the pedestrian phase running every second cycle.
- 3.1.2 The original LINSIG model supplied by LCC has a 120 second double cycle with the pedestrian phase running every second cycle for both the AM and PM peak period. However, the video survey has shown that in the AM peak period the pedestrian phase is called almost every cycle therefore; the AM peak has been adjusted to a 60 second single cycle including the pedestrian phase.
- 3.1.3 Given the results of the survey, the HCR junction timings are different to those in the original LCC LINSIG model. A review of the video survey shows the cycle time is actually between 80-90 seconds in the AM peak whereas in the PM peak the cycle is between 70-80 seconds including the pedestrian phase and 60-70 seconds without the pedestrian phase.
- 3.1.4 Accordingly, this suggests that a single cycle in the AM peak including the pedestrian phase of 90 seconds and the double cycle in the PM peak with the pedestrian phase every second cycle of around 150 seconds better represents what is happening on-site.
- 3.1.5 The HCR junction has been assessed for the future year (2020) and, as with the previous submitted analysis, the Stephenson Green (SG) (1,550 dwellings) + allocated Bardon Grange (BG) (2,000) sites. The traffic flows used for the junction capacity analysis are provided at **Appendix B** to this note.



3.1.6 The following scenarios have been assessed using the LINSIG model:

Original LCC LINSIG Model: AM peak 60sec cycle/PM Peak 120sec (DC)

- 2020 base flows
- 2020 + Stephenson Green (1,550 dwellings) 8.34% distribution and Bardon Grange (2,000 dwellings) 8% distribution

LINSIG Model, current junction operation: AM peak 90sec cycle/PM Peak 150sec (DC)

- 2020 base flows
- 2020 + Stephenson Green (1,550 dwellings) 8.34% distribution and Bardon Grange (2,000 dwellings) 8% distribution

3.1.7 **Table 2** below summarises the results of from the LINSIG model for each of the above scenarios. The LINSIG outputs for the above are attached at **Appendix C** to this note.

Table 2: 2020 and 2020 + SG and BG (2,000) LINSIG summary

Arm	Road Name		Arm/Lane	
A	Central Road		1/1	
B	Grange Road		2/1	
C	Station Road		3/1	
D	Ashburton Road		4/1	

2020 Base Flows (60sec and 120Sec)					2020 Base + SG & BG (2,000) (60sec and 120Sec)				
Lane	2020 AM Peak		2020 PM Peak		Lane	2020 AM Peak		2020 PM Peak	
1/1	93.9	11	114.2	52	1/1	112.5	34	122.6	77
2/1	113.8	25	112.3	39	2/1	126.7	45	122.7	60
3/1	123.5	51	84	9	3/1	131.2	64	94.8	14
4/1	119.4	43	109.5	26	4/1	132.0	59	117.4	36
PRC	-37.3		-26.9		PRC	-46.7		-36.3	
Cycle Time	60sec		120sec (DC)		Cycle Time	60sec		120sec (DC)	

2020 Base Flows (90sec and 150Sec)					2020 Base + SG & BG (2,000) (90sec and 150Sec)				
Lane	2020 AM Peak		2020 PM Peak		Lane	2020 AM Peak		2020 PM Peak	
1/1	70.4	9	101.5	27	1/1	84.4	12	110.0	50
2/1	91.0	11	100.2	21	2/1	100.6	18	109.5	40
3/1	92.6	15	74.7	9	3/1	98.4	20	85.0	11
4/1	89.5	13	100.0	17	4/1	99.0	19	105.7	24
PRC	-2.9		-12.8		PRC	-11.8		-22.2	
Cycle Time	90sec		150sec (DC)		Cycle Time	90sec		150sec (DC)	



Proposed junction operation

3.1.8 For robustness, the HCR junction has been assessed for the Grange Road (GR) (800 dwelling) development based on the agreed 'worst case' distribution of 36.1%. Discussions have previously been held with LCC about a phased delivery of the development and the impact each phase will have on the HCR. With consideration to these discussions and previous sensitivity testing at the HCR, the assessment work in this note also provides assessments of the GR development in a phased manner. Traffic flows used for the junction capacity analysis are provided at **Appendix D** to this note.

3.1.9 To improve the operation of the junction and mitigate some of the impact from the GR (800 dwelling) development traffic the DC time in the PM peak has been increased to 180 seconds with the pedestrian phase running every second cycle. The AM peak single cycle including the pedestrian phase remains at 90 seconds.

3.1.10 The following GR phased development scenarios have been assessed in the LINSIG model:

LINSIG Model, mitigation cycle time: AM peak 90sec cycle/PM Peak 180sec (DC)

- 2020 + Grange Road (800 dwelling) 36.1% worst case distribution
- 2020 + Grange Road (700 dwelling) 36.1% worst case distribution
- 2020 + Grange Road (600 dwelling) 36.1% worst case distribution
- 2020 + Grange Road (500 dwelling) 36.1% worst case distribution

3.1.11 **Table 3** below summarises the results from the LINSIG model for each of the above scenarios. The LINSIG outputs for the above are attached at **Appendix E** to this note.



Table 3: Grange Road LINSIG summary outputs

2020 Base + Dev (36.1%) - 800 Units					2020 Base + Dev (36.1%) - 700 Units				
Lane	2020 AM Peak		2020 PM Peak		Lane	2020 AM Peak		2020 PM Peak	
	Dos	Queue	Dos	Queue		Dos	Queue	Dos	Queue
1/1	80.9	10	106.9	44	1/1	80.2	10	104.1	37
2/1	103.4	24	106.3	37	2/1	99.5	19	104.3	33
3/1	103.2	25	77.0	11	3/1	102.8	25	75.3	11
4/1	104.5	27	104.3	26	4/1	103.8	25	105.6	27
PRC	-16.1		-18.8		PRC	-15.3		-17.3	
Cycle Time	90sec		180sec (DC)		Cycle Time	90sec		180sec (DC)	
2020 Base + Dev (36.1%) - 600 Units					2020 Base + Dev (36.1%) - 500 Units				
Lane	2020 AM Peak		2020 PM Peak		Lane	2020 AM Peak		2020 PM Peak	
	Dos	Queue	Dos	Queue		Dos	Queue	Dos	Queue
1/1	79.8	10	103.2	34	1/1	75.9	10	102.3	32
2/1	101.1	20	102.6	29	2/1	96.9	16	100.7	25
3/1	102.5	24	74.9	11	3/1	97.8	19	74.3	11
4/1	98.1	19	103.5	24	4/1	102.3	23	101.5	21
PRC	-13.9		-15.0		PRC	-13.6		-13.7	
Cycle Time	90sec		180sec (DC)		Cycle Time	90sec		180sec (DC)	

3.1.12 **Table 4** below identifies the increase in queues (pcus) from the future year 2020 base scenario for the SG (1,550 dwelling) + BG (2,000 dwelling) scenario and the GR development phased scenarios.

Table 4: Difference in peak hour queue lengths (pcus)

Cycle Time: AM 90sec and PM 150sec (DC)				
Lane	2020 Base		2020 SG + BG	
	AM	PM	AM	PM
1/1	9	27	+3	+23
2/1	11	21	+7	+19
3/1	15	9	+5	+2
4/1	13	17	+6	+7
Cycle Time: AM 90sec and PM 180sec (DC)				
Lane	2020 GR 800		2020 GR 700	
	AM	PM	AM	PM
1/1	+1	+17	+1	+10
2/1	+13	+16	+8	+12
3/1	+10	+2	+10	+2
4/1	+14	+9	+12	+10
Lane	2020 GR 600		2020 GR 500	
	AM	PM	AM	PM
1/1	+1	+7	+1	+5
2/1	+9	+8	+5	+4
3/1	+9	+2	+4	+2
4/1	+6	+7	+10	+4



3.1.13 As can be seen from Table 4 above, in the AM peak the GR (800 dwelling) development generates the highest increase in queues whereas in the PM peak the SG (1,550 dwelling) + BG (2,000 dwelling) development generates the highest increase in queues.

4 MOVA

4.1.1 Bloor Homes are prepared to fund the introduction of MOVA control at the HCR junction. The impact of MOVA at a junction is difficult to model accurately in LINSIG, however, research has been undertaken by the Transport Research Laboratory (TRL) and Department of Transport (DfT) as to its benefits.

4.1.2 Whilst the benefit of introducing MOVA to a junction differs depending upon the volume and speed of traffic, TRL and DfT trials have shown that MOVA reduces delays by an average of 13% compared to more traditional systems (Traffic Advisory Leaflet 3/97, March 1997, DfT).

4.1.3 **Table 5** below compares the total delay at the HCR for each of the scenarios.

Table 5: MOVA junction delay (pcu/hr) comparison

Scenario	Junction Delay (pcu/hr)	
	AM Peak	PM Peak
2020 Base Flows (60sec and 120Sec)	116.69	104.67
2020 Base + SG (8.34%) Dev + BG (8%) (60sec and 120Sec)	189.15	164.81
2020 Base Flows (90sec and 150Sec)	26.60	48.22
2020 Base + SG (8.34%) Dev + BG (8%) (90sec and 150Sec)	45.13	96.52
Grange Road without MOVA		
2020 Base + GR Dev (36.1%) - 800 Units	62.43	85.48
2020 Base + GR Dev (36.1%) - 700 Units	55.27	75.28
2020 Base + GR Dev (36.1%) - 600 Units	49.41	66.15
2020 Base + GR Dev (36.1%) - 500 Units	43.99	57.33
Grange Road with MOVA		
2020 Base + GR Dev (36.1%) - 800 Units	54.31	74.37
2020 Base + GR Dev (36.1%) - 700 Units	48.08	65.49
2020 Base + GR Dev (36.1%) - 600 Units	42.99	57.55
2020 Base + GR Dev (36.1%) - 500 Units	38.27	49.88



- 4.1.4 As can be seen from Table 5 above, the introduction of MOVA at the HCR reduces the journey delay of GR development 700 dwelling phase to a similar level in the AM peak and a reduced level in the PM peak than that of SG (1,550 dwelling) + BG (2,000 dwelling) development scenario.
- 4.1.5 For the GR development 500 dwelling phase with the introduction of MOVA the journey delay would be slightly higher than the 2020 base scenario in the AM Peak but almost the same in the PM peak.

5 Conclusions

- 5.1.1 The video survey at the HCR has verified the number of times the pedestrian phase is called during the AM and PM peak periods. It has also established the current on-site signal timings which have been used to validate the model.
- 5.1.2 The agreed distribution of the GR (800 dwelling) development traffic through the HCR is 36.1%. This presents a 'worst case' scenario as, based on this distribution, nearly all traffic heading north, south and west would travel through the HCR which in reality is unlikely to ever occur.
- 5.1.3 As with the previous assessment work, no reduction in vehicle trips from the GR (800 dwelling) development have been made for the proposed public transport provision of travel plan measures.
- 5.1.4 As part of the GR (800 dwelling) development, it is proposed to increase the cycle time in the PM peak to 180 seconds with the pedestrian phase running every second cycle to provide additional capacity to mitigate some of the development impact.
- 5.1.5 Further to this, Bloor Homes are prepared to fund the introduction of MOVA control at the HCR junction. MOVA control would optimise the operation of the signals and provide additional operating capacity.
- 5.1.6 At the HCR, the AM peak of the GR (800 dwelling) development generates the highest increase in queues whereas in the PM peak the SG (1,550 dwelling) + BG (2,000 dwelling) development scenario generates the highest increase in queues.
- 5.1.7 Notwithstanding the additional queue lengths, this note has compared the vehicle journey delay at the HCR for each of the scenarios and demonstrated



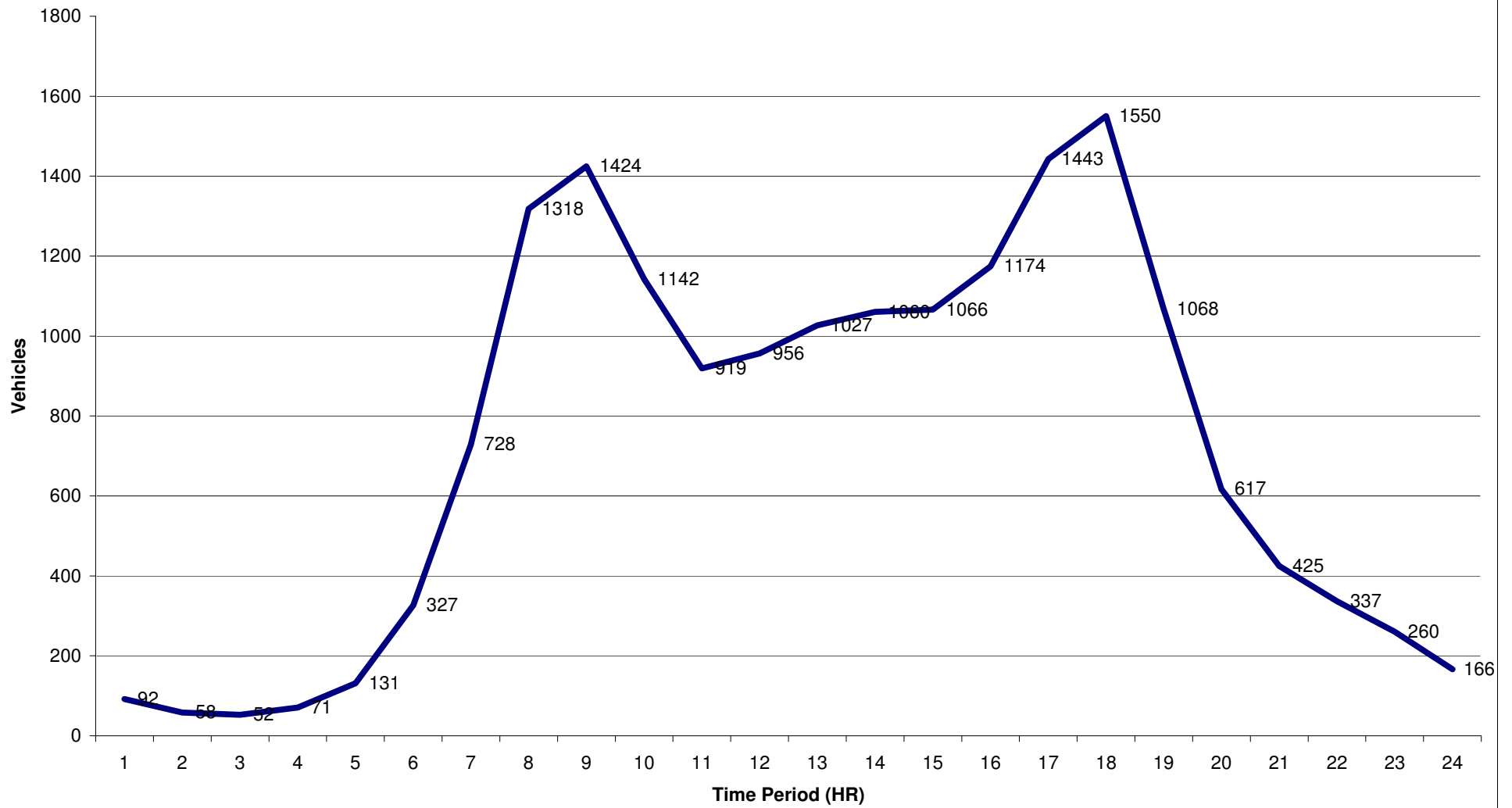
that the introduction of MOVA will reduce the delay at the HCR in 2020 with GR (800 dwelling) development scenario. The 700 dwelling phase brings the GR development journey times in line with that of the SG (1,550 dwelling) + BG (2,000 dwelling) development scenario; whereas the 500 dwelling phase brings the GR development more in line with the 2020 base scenario.

- 5.1.8 On the basis that LCC are prepared to allow some short term pain to enable the first phase of the local plan allocated site to come forward, the measures proposed in this note should enable the 800 dwellings, or part of, prior to a mitigation scheme coming forward as the part of the District Council's Core Strategy.

Appendix K – Automatic traffic count summary graph

Automatic traffic count summary graph

Average Weekday 2-Way ATC Flow (A511 Bardon Road)



Appendix L – Hugglescote Crossroads LINSIG results

Hugglescote Crossroads LINSIG results

Hugglescote Cross Road

2010 Base Flows

Arm	Road Name		Arm/Lane	
A	Central Road		1/1	
B	Grange Road		2/1	
C	Station Road		3/1	
D	Ashburton Road		4/1	
Lane	2020 AM Peak		2020 PM Peak	
	Dos	Queue	Dos	Queue
1/1	61.7	7	88.9	13
2/1	79.7	8	87.9	11
3/1	81.2	11	65.5	7
4/1	78.4	10	87.8	9
PRC	10.9		1.2	
Cycle Time	90sec		150sec (DC)	

2020 Base Flows

Lane	2020 AM Peak		2020 PM Peak	
	Dos	Queue	Dos	Queue
1/1	70.4	9	101.5	27
2/1	91	11	100.2	21
3/1	92.6	15	74.7	9
4/1	89.5	13	100.0	17
PRC	-2.9		-12.8	
Cycle Time	90sec		150sec (DC)	

2020 Base + Dev

Lane	2020 AM Peak		2020 PM Peak	
	Dos	Queue	Dos	Queue
1/1	71.7	9	104.3	33
2/1	94.1	13	103.8	27
3/1	93.5	16	76.5	9
4/1	94	15	100.6	17
PRC	-4.5		-15.8	
Cycle Time	90sec		150sec (DC)	

2020 Base + Dev (Mitigation)

Lane	2020 AM Peak		2020 PM Peak	
	Dos	Queue	Dos	Queue
1/1			97.1	23
2/1			96.9	19
3/1			71.2	10
4/1			95.2	14
PRC			-7.9	
Cycle Time	90sec		180sec (DC)	

NB:

AM Peak pedestrian stage is called every cycle.
 PM Peak is modelled with double cycle (DC) with the pedestrian stage operating every other cycle.

According to the survey video/data, in the AM Peak hour the pedestrian stage is called on 36 occasion during 41 cycles between 8:00 and 9:00, which suggest approximately 80-90 second cycle time.

In the PM Peak hour the pedestrian stage is called on 20 occasion during 48 cycles between 17:00 and 18:00, which suggest average cycle time of 75 second per cycle, approximately 66 second cycle time without the pedestrian staged and 80-90 second cycle time when the pedestrian stage is called.

Appendix M – Third party objections summary table

Third party objections summary table

Ref No.	Name	Address	Request to speak at PI	Traffic Impact	Air Quality	Stephenson's Way (Relief Road)	Schools should be built first	Archaeological Site	Environmental Issues/Loss of Countryside	Noise pollution	Reduction in property value	Road Safety	Wrong type of housing	Loss of Village style to Hugglescote	Flood Risk	Construction Traffic	Other Comments
1	Clr Penny Wakefield	Ellistown & Battleflat Parish Council	Yes	Impact on roads and lack infrastructure	Impact on air quality	If the SW inner relief road is not completed, there is the prospect of partial mitigation by an access to Bardon Road	Schools should be built before houses		Loss of green fields								
2	Suzanne Gibson	87 Bardon Road	N/A					Ancient site that should remain as a natural environment for flora & fauna									Campaigned for the BRR
3	Malcolm James Bailiss	109 Grange road	N/A	Particularly on Grange Road, already big queues at HCR, does not agree that the BRR is not required													Does not think the high speed bus service will get people out of their cars
4	John & Hazel Newbold	9 Mill Pond	N/A	Roads can't cope at the moment						Noise pollution	Property values will be reduced			Loss of community and village way of life			
5	Lorraine Tunbridge	6, Hawley Close	N/A	Congestion at HCR - gridlock particularly at peak times								Will make HCR more dangerous especially for children		Loss of green area			
6	Suzanne Gibson (also see no.2 above)	87 Bardon Road	N/A	Already too many cars on Bardon Road		BRR should be built before development. Formally a member of BRAG (Bardon Residents Action Group)		The land is associated with medieval occupation. Housing should be built on Brownfield sites.				Too many accidents on Bardon Road already		Flooding has occurred in the past on Bardon Road, Pleased to see plans for drainage infrastructure are included	Level of construction traffic particularly thru HCR would be unacceptable		Original agreement included a rail station near Birch Tree Public House. Also believes council tax from residents will be used to fund the bypass
7	Stanley J Warren (Ramblers Association)		N/A						Deplore the loss of such a large area of countryside. More Brownfield sites should be used								Pleased that PROWS will be maintained but think more could be done to connect the site to Coalville etc. Provision of a tunnel should be considered to allow peds to use the footpath to the north east of the development as the steep embankment currently discourages this
8	Karen Yates	5 Mill Pond	N/A						Loss of green space				Not appropriate housing for locals, they can't afford them. Coalville needs Council housing. There are already houses that won't sell in area				
9	Janet Reynolds	49 Grange Road	N/A	Already too much traffic on Grange Road - traffic already too fast - dangerous								Grange Road is an accident black spot already. HCR also dangerous for children. Already congested		The village feel of Hugglescote will be lost			Lack of second level education provision
10	Mr & Mrs A & EJ Heister	3 River Sence Way	N/A	Grange Road already can't cope with traffic					What about the wild life?			Grange Road is already dangerous					Area does not need any more housing. There has not been enough consultation with the builders
11	Mrs IH Davison	47 Central Road	N/A	Too much traffic					Loss of wild life, flora, fauna, hedgerows			Grange Road is already dangerous. HCR is already congested and dangerous to cross		Loss of village status			Not enough jobs for these people. Houses built last year on Ashby Road are still empty, no money, no jobs, no money to buy houses
12	Mr & Mrs AC Holt	108 Ashburton Road	N/A	Traffic will be an issue as there is a lack of public transport infrastructure										Los of rural location, nothing for younger people to do.			Lack of investment in the area. Coalville needs another major supermarket. Many properties in the area are still unsold after 3 years
13	Mr EA & Mrs CM Collins	123 Station Road	N/A	Unacceptable increase in traffic on Ashburton Road and HCR. Gridlock at peak times	Will cause pollution							Increase the chance of accidents					Cars at HCR mount the pavement, bin collection (wheelie bins on pavement) makes it worse. Not enough room for pedestrians on pavements
Totals			1	10	1	2	1	2	5	1	1	6	1	5	1	1	
			Request to speak at PI	Traffic Impact	Air Quality	Stephenson's Way (Relief Road)	Schools should be built first	Archaeological Site	Environmental Issues/Loss of Countryside	Noise pollution	Reduction in property value	Road Safety	Wrong type of housing	Loss of Village style to Hugglescote	Flood Risk	Construction Traffic	Other Comments