

APPENDIX 3:

Leicestershire County Council – Highway representations received
15 April 2013



**Leicestershire
County Council**

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: 2012/0295/04/HCON
CE/EN Ref: 2011/7004/04 2010/6004/04 2007/7003/04
Application Address: BARWELL (SUE) LAND WEST OF BARWELL, ASHBY
ROAD, BARWELL, LEICESTERSHIRE
Parish: Barwell CP
Applicant: c/o HOW Planning
Brief Description of Development: OUTLINE APPLICATION INCLUDING ACCESS FOR UP
TO 2,500 NEW RESIDENTIAL DWELLINGS (USE CLASS
C3), AN EMPLOYMENT ZONE FOR GENERAL
INDUSTRIAL BUILDINGS (USE CLASS B2) AND
STORAGE AND DISTRIBUTION WAREHOUSES (USE
CLASS) B8) PROVIDING UP TO 24,800 SQM, SPORTS
PITCHES, PAVILION BUILDING AND CHANGING ROOMS
(USE CLASS D2), AREAS OF FORMAL AND INFORMAL
OPEN SPACE, CHILDREN'S PLAY AREAS,
LANDSCAPING, ALLOTMENTS AND PUBLIC REALM
WORKS, PROVISION OF HYDROLOGICAL
ATTENUATION FEATURES, PEDESTRIANS AND
CYCLISTS CONNECTIONS, NEW INFRASTRUCTURE
AND SERVICES AS NECESSARY TO SERVE THE
DEVELOPMENT AND A NEW COMMUNITY HUB AREA
COMPRISING A PRIMARY SCHOOL (USE CLASS D1), A
LOCAL HEALTH CARE FACILITY (USE CLASS D2) OR, IN
THE ALTERNATE, A FAMILY PUBLIC
HOUSE/RESTAURANT (USE CLASS A3/A4) AND LOCAL
RETAIL AND COMMERCIAL UNITS (USE CLASS
A1,A2,A3,A4 AND A5) UP TO A MAXIMUM FLOOR SPACE
OF 1,000 SQM (EIA DEVELOPMENT)

GENERAL INFORMATION

Member: Mrs. R. Camamile
Road Class: Adopted - Class A
General Observations: 29/15; 29/24; 29/25 And 29/34
Planning Officer - Rebecca Grant

Recommendation:

The County Highway Authority (CHA) has considered the highway implications of this scheme carefully. It is satisfied that it would be proper to grant outline planning permission on the basis of the information it has received. Albeit that there remain a number of minor issues to be resolved through the medium of a Section 106 agreement to which it will be a party.

1. PRINCIPLE OF DEVELOPMENT

The principle of this development is established in the adopted Hinckley and Bosworth Local Development Framework Core Strategy. County Highway officers support the principle of delivering new housing and employment on this scale for the following reasons:

- Concentrated urban expansion contributes towards the delivery of major transport infrastructure and measures to support new settlements. This ensures that a comprehensive approach to addressing the impact of the development on the local transport network is possible in accordance with the County's strategic transport goals.
- A mix of different land uses will reduce the need to travel, and where travel is a necessity, reduce the need to travel by private car through the integrated provision of high quality public transport, walking and cycling facilities which seek to provide high-quality non-car linkage between uses and provide good connectivity to external centres of activity.
- The concentration of infrastructure and delivery of sustainable development cannot be realised where housing is delivered across a wide area through a fragmented and piecemeal approach. This would be contrary to local and national planning and transport policy and would generate worsening unmitigated conditions on the local and strategic highway networks.

2. DETERMINATION METHODOLOGY & TIMELINE

- 2.1** The development proposals have a direct impact upon the networks of several highway authorities. In view of this, a specialist Transport Working Group (TWG) was set up to assess the application. This includes members of the CHA, the Highways Agency (HA), HBBC, and the applicant. During this period, liaison has also taken place with HBBC's transport consultants, who are preparing the Strategic Transport Assessment (STA) to support HBBC's Area Action Plan.
- 2.2** The TWG and the applicant concur that a development of this size can only be satisfactorily assessed through the use of a strategic transport and land use planning model. The impacts and influences of the development are complex and are reliant upon market conditions, demographics, and land-use interactions together with the cost of travel. These relationships are unable to be assessed using more traditional Transport Assessment methods. In accordance with Department for Transport (DfT) guidance, the application of a more detailed analytical tool is necessary. The Leicester & Leicestershire Integrated Transport Model (LLITM) has been developed specifically for this purpose and the future year forecasts from that modelling have been considered as part of the consideration of HBBC's AAP and the CHA's response to this application.
- 2.3** In order for the transportation impacts of the development to be fully understood and appropriate mitigation devised, an iterative process has been undertaken and a summary timeline of this process is provided below.

February 2012: LLITM preparatory work

- LLITM model calibrated and validated to better represent the highway network around the Hinckley, Earl Shilton and Barwell area for the purpose of assessing planning applications.

April 2012: Application submission

- Planning application for Barwell Sustainable Urban Extension (SUE) submitted and validated.

May 2012: LCC initial formal highway observations to HBBC (key points):

- *The application will require detailed consideration of the likely highway impact, it will take some time to formulate a formal response*
- *Work is currently on-going using the Leicester & Leicestershire Integrated Transport Model (LLITM) as part of the Hinckley & Bosworth Area Action Plan (AAP) process.*
- *The submitted TA does not provide robust forecasting of the demographic make-up and resultant travel patterns of the development in future years.*
- *It is not possible to determine an appropriate strategy of transport infrastructure to support the proposal on the basis of the supporting information received to date.*

June 2012: LLITM scoping and assessment:

- TWG agree scoping for the modelling of the SUEs for the Area Action Plan using LLITM.

September 2012: Results of the first model run scenarios:

- Testing of future year (2026) scenarios with and without the Earl Shilton & Barwell SUEs; without any mitigation using LLITM.
- TWG assesses impact of development and identify areas that require mitigation.

October 2012: AAP testing of SUEs impacts using microsimulation

- Commencement of modelling using the Hinckley & Nuneaton Paramics model (HNPM)

November 2012: LCC submit revised highway observations (23-Nov-2012):

- Analysis of findings from first LLITM AAP run
- LCC Commentary on the methodology adopted in the submitted Transport Assessment
- Determination to be informed further by microsimulation modelling.
- Confirmation of areas and issues not addressed and requiring further consideration

December 2012: Results of Paramics with mitigation testing

- LCC / HBBC analyse the effectiveness of tested mitigation using the HNPM.

January – March 2013: Final LLITM runs and applicant negotiations

- Mitigation tested in Paramics modelled in LLITM to understand impact on routing
- Addendum Transport Assessment submitted by applicant
- Highway mitigation designs reviewed by CHA engineers following latest modelling
- Discussions progress towards the agreement of planning conditions and s106 obligations.

3. EXECUTIVE SUMMARY - PREVIOUS LCC CONCERNS

The revised observations made by LCC to HBBC, dated 23 November 2012 highlighted seven key concerns regarding the transport impacts of the development which the CHA considered required further attention on the basis of the findings of the strategic modelling. These are revisited below with a brief commentary on how these concerns have either been addressed to LCC's satisfaction, or where further work is still required.

3.1 Transport Assessment Methodology

- 3.1.1 The work carried out on behalf of the applicant in the submitted Transport Assessment in the view of the CHA is largely superseded by the strategic land use modelling using the County's LLITM tool, combined with the detailed microsimulation work using the Hinckley & Nuneaton Paramics model (HNPM), which assessed the operation of a number of key junctions on the highway network at the same time.
- 3.1.2 An addendum Transport Assessment (TA) was submitted by the applicant in February 2013 to reflect this work in comparison with the more traditional methods adopted in the original TA.

3.2 Traffic Routing

- 3.2.1 Following CHA concerns on the methodology of the original TA, the Transport Working Group (TWG) have worked closely with the applicant to understand the results from the LLITM modelling. LLITM has forecast the extent to which development and background traffic may divert onto less appropriate routes in avoidance of congestion arising on the major route network. This work has allowed for evidence to be prepared that supports the TWG's requirements for the implementation of capacity enhancements along principal and major routes such as the A447, A47 and the A5. These measures will assist in encouraging traffic to use those routes that are most suitable.

3.3 Scope of Junction Assessment

- 3.3.1 The CHA formal observations of 23rd November 2012 highlighted key concerns regarding the scope of junction assessment incorporated in the original TA. Following the LLITM assessment a number of junctions including Barwell village centre were highlighted as requiring further investigation and this work was revisited as part of the HNPM microsimulation work undertaken on behalf of HBBC.
- 3.3.2 The CHA confirms in more detail the impact of the proposed development and provides more detail on the routing of traffic and the effectiveness of the proposed mitigation in **section 6**.

3.4 Masterplanning & development phasing

- 3.4.1 The CHA have previously highlighted the need for more detailed masterplanning and phasing information to enable a sustainable transport strategy to be developed and delivered.
- 3.4.2 In the absence of this information the CHA require that a planning condition be applied that requires the applicant to submit a detailed phasing strategy to enable the planning and highway authorities to better understand how the site would be developed over the coming years and define the necessary requirements and trigger points for off-site infrastructure.

3.5 Ashby Road

- 3.5.1 Whilst the development proposes a number of accesses from Ashby Road alongside a proposal to reduce the speed limit, at the time of submission the applicant had failed to demonstrate a cogent overall strategy for this route that would provide the necessary comfort to the CHA that

the speed of traffic could be effectively restricted below the suggested 40mph limit whilst safely accommodating turning vehicles, pedestrians and cyclists.

- 3.5.2 In subsequent discussions, the CHA has requested that an overall scheme is proposed that covers the entirety of Ashby Road between Stapleton and the A47, with greater regard to the access requirements of pedestrians and cyclists alongside the need to accommodate development traffic along this route.
- 3.5.3 Following this, the applicant has submitted amended designs that incorporate: footways that are suitable for use by both pedestrians and cyclists; controlled (signalised) crossing points and crossing facilities for pedestrians wishing to access the County's Public Rights of Way network and areas of employment / activity further south. Whilst there are still a number of minor outstanding issues with the current designs, these are dealt with by condition.

3.6 Public Transport

- 3.6.1 The applicant has proposed an additional public transport service between the site and Hinckley town centre and rail station. The principle of this is supported and CHA officers are currently assessing the applicant's submitted costing exercise which establishes the likely level of subsidy required to support the service over the early years of the development.
- 3.6.2 The detail and phasing of this service are therefore still to be determined and will need to take account of predicted occupation levels and types of housing. The applicant has also agreed that such a service may enable public transport linkage access between Barwell and Earl Shilton at an appropriate time.
- 3.6.3 The applicant has also agreed to make a section 106 contribution towards Real Time Passenger Information (RTPI), and associated bus stop infrastructure which will facilitate easier bus access and user-ability which will assist with encouraging bus use and therefore modal shift.
- 3.6.4 However the CHA has outstanding concerns that the present PT proposal does not take account of more distant direct journeys to either Leicester or the Nuneaton/Coventry area, the latter of which has been shown by the LLITM to have a major draw from the site for employment purposes. These are dealt with by condition.

3.7 Walking / Cycling connectivity

- 3.7.1 Of particular concern to the CHA is ensuring that appropriate pedestrian and cycle connectivity is provided between the development and Barwell village centre, in addition to the surrounding areas of Stapleton, Hinckley town centre and the employment sites located along the A47 to the south west. Furthermore, it has been necessary to ensure that where Public Rights of Way cross the motorised highway network (such as Ashby Road, above), appropriate crossing facilities are provided.
- 3.7.2 The applicant has agreed to fund or deliver a schedule of high-quality walking and cycling routes that permeate the development and provide high quality linkage to the surrounding area. This will assist in facilitating modal shift from car use through providing high quality alternatives to motorised travel. Such works will be subject to a combination of planning conditions and section 106 financial obligations.

3.8 Travel Plan (TP)

- 3.8.1 Following the previous CHA comments, the applicant has submitted a replacement TP as part of the Addendum TA and many of the previous concerns have been addressed. However, the CHA still has a number of minor concerns with the replacement document, and these are being dealt with by condition.

4. POLICY

- 4.1 The concept of a new settlement in Barwell has been established in HBBC's Adopted Core Strategy 2009. Subsequent to the Core Strategy, an Area Action Plan (AAP) for the Earl Shilton and Barwell SUEs is an emerging Development Plan Document (DPD) currently being prepared by HBBC for submission to the Secretary of State in 2013.
- 4.2 In meeting designated housing requirements, it is considered that the concentration of Sustainable Urban Extensions (SUEs) on the edge of existing built up areas provides the best opportunity to meet housing requirements whilst ensuring that such developments benefit from their location in close proximity to community and economic activity and transport links.
- 4.3 The alternative of delivering growth more sporadically across the Leicester and Leicestershire Housing Market Area (HMA) and through smaller development plots in potentially remote locations will result in cumulative transport impacts and demands that cannot be mitigated or provided for. It is considered that such an approach would be contrary to the CHA's strategic transport goals, as identified in the adopted Leicestershire Local Transport Plan (LTP3) and would comprise a piecemeal solution to a comprehensive housing requirement.

The CHA supports the principle of SUEs for which the following two key themes emerge:

- The development of SUEs contributes towards the delivery of major transport infrastructure to support new settlements and in doing so mitigates the impact of the development. In some cases this may allow for existing highway problems to be addressed more comprehensively, in accordance with the County's strategic transport goals, as identified in the adopted Local Transport Plan (LTP3);
 - A mix of differing land uses that provides new and existing residents with a choice and range of local retail, educational, employment and leisure facilities from the outset will reduce the need to travel, and where travel is a necessity reduces the need to travel by car through the integrated provision of high quality public transport, walking and cycling facilities internally, and within the surrounding area.
- 4.4 The above benefits cannot be realised where housing requirements are delivered across a wide area through a fragmented and piecemeal approach.

Leicestershire Local Transport Plan (LTP3), 2011 - 2026

- 4.5 The following highway observations are made in the context of the adopted Leicestershire Local Transport Plan (LTP3). An essential component of delivering sustainable development is to ensure that the following policy objectives, contained within chapters 5 and 6 of the LTP3 are met:

We will: Work through the planning system to seek to minimise the potential transportation impacts of population growth on the efficient and reliable operation of our transport system

Our approach to doing this will include:

c) Inputting into the masterplanning of new development, especially the Sustainable Urban Extensions around the edges of Leicester and the county towns, to ensure that they are designed from the outset to provide highway quality, safe facilities to encourage walking and cycling and (as appropriate) public transport access / use. Note that through the planning system, we will seek to resist proposals that do not achieve these things.

We will: Work through the planning system to seek to reduce the need to travel

We will do this by: c) Seeking to ensure that new development proposals put forward by others are either supported by an appropriate range of facilities that reduce the need to travel off-site, or, where it is necessary

to travel off-site, travel distances are minimised and genuine, safe, high quality choices are available (or can be provided) for people to walk, cycle and use public transport to access facilities and services nearby."

Hinckley & Bosworth Adopted Core Strategy, 2009

4.6 The proposal site forms one of two areas of strategic housing growth identified in the above document. A key component of these proposals relates to ensuring the provision of necessary physical infrastructure to support growth in this area. Preliminary Transport modelling was undertaken by the CHA in collaboration with HBBC at the time and a preliminary schedule of infrastructure was compiled to support the Core Strategy. In relation to transport infrastructure, the following improvements were identified in chapter 5 of the document:

- Works to the A5, A47 and The Long Shoot junction
- Links to existing urban areas for buses, pedestrians, cyclists and for local traffic.
- Junction improvements, bus priority measures and possible widening of the A47 Earl
- Shilton Bypass and the Hinckley Northern Perimeter Road (HNPR)
- Improved linkages into the Town Centre involving alterations to signal operations at
- selected junctions
- New public transport linkages
- New pedestrian and cycle linkages
- A combination of traffic calming and traffic management measures on key routes
- The introduction of bus priority measures on the A447 Ashby Road

4.7 The Core Strategy was supported by the Planning Inspector, who commented (21-08-2009) that:

"...whilst the package of transport measures provided a balanced approach to meeting the transport requirements of the SUEs... the full extent of the capacity improvements needed is not yet clear, and cannot be finalised until the more detailed assessments are available through the Paramics model."

Earl Shilton & Barwell Area Action Plan Consultation Draft (HBBC), November 2010

4.8 A requirement of the above document is that the Strategic Transport Assessment (STA) will identify key transport infrastructure requirements over the period of the plan. Of these requirements, the A5 and in particular its junctions with the A47 at Dodwells Road and Long Shoot are recognised as key areas where mitigation will be required to be commensurate with the scale of the impacts of the AAP. The A47 Normandy Way / A447 Ashby Road junction is also recognised as being required to accommodate impacts from the two developments. In relation to the mechanism required to deliver improvements at these locations and also along the pedestrian and cycle networks, the draft AAP states that:

"developers will be required to contribute towards the implementation of these off-site works through developer contributions where they meet the tests set out in the Community Infrastructure Levy Regulations 2010."

National Planning Policy Framework (NPPF), 2012

4.9 The Department of Communities and Local Government (DCLG) has adopted revised policies for the planning system under the National Planning Policy Framework (NPPF). Under the banner of chapter 4 'Promoting Sustainable Transport', the following policies are of relevance in the determination of this proposal:

32. ...Plans and decisions should take account of whether:

- o *the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;*
- o *safe and suitable access to the site can be achieved for all people; and*

- o *improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.*

34. Plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised.

37. Planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities.

38. For larger scale residential developments in particular, planning policies should promote a mix of uses in order to provide opportunities to undertake day-to-day activities including work on site. Where practical, particularly within large-scale developments, key facilities such as primary schools and local shops should be located within walking distance of most properties.

41. Local planning authorities should identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice.

- 4.10 The importance of using the correct evidence base upon which to make decisions cannot be stressed enough, and as such it is the view of LCC and HBBC that the application of the strategic land-use and transport planning modelling tool (LLITM) provides the best alternative in accordance with paragraph 158 of the NPPF, which states:

“Each local planning authority should ensure that the Local Plan is based on adequate, up-to-date and relevant evidence about the economic, social and environmental characteristics and prospects of the area. Local planning authorities should ensure that their assessment of and strategies for housing, employment and other uses are integrated, and that they take full account of relevant market and economic signals.”

5. AAP ASSESSMENT METHODOLOGY

Leicester & Leicestershire Integrated Transport Model (LLITM)

- 5.1 The impacts and interactions associated with land-use proposals of the size contained within the AAP are complex. It is therefore necessary to assemble robust and credible evidence upon which to best demonstrate the requirements of the AAP. This is especially important where there are two major developments which combine to generate material impacts on the surrounding highway network. The Leicester & Leicestershire Integrated Transport Model (LLITM) is regularly updated to include all known growth in the region and has been specifically designed to undertake such work and is therefore being used by HBBC to inform the Strategic Transport Assessment.
- 5.2 As defined in section 2, it is necessary to model the combined impact of the SUEs together before decisions are undertaken relating to the demands, impacts and provision of infrastructure to support them. This requires the best methodology available to derive an informed forecast of future patterns of economic growth, and the effect of this upon migration and the choices made by future households in relation to their requirement for accommodation and travel.
- 5.3 The outputs of the LLITM modelling are produced in various formats relating to a development and include the future year origin, destination and mode of travel by purpose, resultant traffic flow and associated junction capacity outputs and journey time data. The essential outputs of the model are summarised below:
- Demographic make-up of new development
 - Where people will travel, when they will travel and for what purpose
 - What mode of travel they will adopt
 - Changes caused by housing or employment growth
 - Traffic volumes, queue lengths and journey times
 - Future year congestion on the road network
 - Future demand for public transport, walking and cycling
- 5.4 The use of the Leicester & Leicestershire Integrated Transport Model (LLITM) provides the best opportunity to assess the development proposals as they stand and undertake testing of the effectiveness of potential supporting infrastructure. The need for detailed outputs is particularly important, not just in terms of testing physical solutions, but also in relation to travel plan and smarter choice measures and the derivation and targeting of modal shares.
- 5.5 SUEs are likely to take a considerable amount of time to deliver. It therefore follows that any assessment of travel patterns which is based upon old data or incompatible reference sites will be largely unfit for assessment, given the timescales of the proposed SUEs and their size. It is therefore necessary to use a land-use planning and transportation model such as LLITM which offers a considerably greater level of sophistication than traditional assessment techniques.

LLITM Model validation

- 5.6 The application of area-wide transportation models is qualified in the DfT Guidance on Transport Assessment (2007) which recommends the agreement of applying area-wide traffic models at the pre-application stage to assist in providing the basis of the assignment of development traffic.
- 5.7 The LLITM has been constructed in compliance with the Department for Transport's WebTAG Transport Analysis Guidance standards and is continually updated and maintained to ensure accuracy. The model has recently been revised to better represent the areas of Hinckley, Earl Shilton and Barwell area for the purpose of assessing planning applications and this work was completed in February 2012.

Hinckley & Nuneaton Paramics Microsimulation model

- 5.8 LCC, HBBC and the applicant recognise that there are two levels of transport modelling necessary to complete the STA. The LLITM strategic tool model provides the basis on which to assemble evidence relating to travel mode choice, origin and destination data and the routing of traffic and the ability of the model to assess impacts across the County and beyond is recognised. However, in relation to the testing of the highway network in finer detail, a separate tool is required where the need to assess the performance of junctions on a grouped and individual basis is necessary.
- 5.9 The Hinckley and Nuneaton Paramics model was developed to take account of the need to obtain a more detailed visual representation of highway network operation within the two urban areas and the relationships between them. The model is able to test the impact of development proposals at specific locations on the highway network and how the introduction of highway interventions generates changes in terms of queue lengths, vehicle speeds and journey times. The Paramics model has been used to test mitigation proposals to support the SUEs to better understand how congestion at one junction may affect another. This is particularly relevant where impacts are apparent along a corridor, and in this case in particular, the A447 Ashby Road, the A47 Hinckley Northern Perimeter Road and the A5 trunk road.
- 5.10 This approach is supported by the Planning Inspectorate which recommended this process in the Hinckley & Bosworth Core Strategy EiP Inspectors' Report, commenting that the full extent of the capacity improvements needed is not yet clear, and cannot be finalised until the more detailed assessments are available through the Paramics model. It would not be acceptable for the CHA to accept mitigation for such large developments where only presented with queue length forecasts from traditional and more rigid junction assessment tools that only assess one junction at a time. It is necessary to understand the speed of traffic approaching junctions and how this affects congestion, routing and consequently traffic impact.

Committed developments

- 5.11 Within both the LLITM and Paramics models, the inclusion of committed development schemes (i.e. those that have planning permission) is an essential component of the baseline modelling to ensure that the modelling assessment takes full account of those developments that are not yet operational. To this extent, the approved proposals at Sketchley Brook, MIRA and Hinckley Town Centre are included in the model and include the associated highway works that have been agreed as part of those developments. In addition to this the recent planning application at Lubbesthorpe to the west of Leicester has been coded into the LLITM model, as have major developments in other parts of Leicestershire including within the City at Ashton Green and at Glenfield Park in Blaby District. Other planned growth occurring within the county but not yet subject to planning consent is also included in the overall background traffic flows.

Required Outcomes

- 5.12 The objective of the current modelling is to establish the combined impacts of both the Earl Shilton and Barwell SUEs so that a combined package of mitigation and transport improvements can be set out. This is in the interests of avoiding the delivery of piecemeal improvements that have no regard to the wider cumulative impact of the two developments. Following this it has been necessary to formulate a strategy of mitigation which takes account of the two developments and accordingly requires the delivery of infrastructure through planning obligations or by condition, depending upon the implications of delivering such improvements.

6. DEVELOPMENT IMPACT, MITIGATION & TESTING

6.1 The application of a number of tools is necessary to properly establish the impacts and requirements of growth. The process followed by HBBC is supported by the CHA and provides the best evidence available upon which to make recommendations. The timescales referred to in section 2 of this report and the methodologies outlined in section 5 provide a sound basis for establishing impacts and assessing the merits of supporting mitigating infrastructure. For clarity, this eight-point-process has been summarised below:

- i) Code the proposed development into the strategic model (LLITM)
- ii) Run the future year model with the development, without mitigation (LLITM)
- iii) Assess the volume and routing of traffic associated with the development (LLITM)
- iv) Use the trip patterns to test the operation of junctions on a collective basis (HNPM)
- v) Devise improvements that mitigate the impacts of the SUEs on the highway network
- vi) Test the effectiveness of the junction improvements on a collective basis (HNPM)
- vii) Consider how the highway improvements affect the routing of traffic (LLITM)
- viii) Revisit the junction designs as necessary using more detailed software and design tools

6.2 Notwithstanding the need to consider the combined impacts of the two SUEs proposed, this section of the report also clarifies how this process has assisted in understanding the patterns of traffic and the resultant impacts occurring on the highway network as a result of the proposed Barwell SUE development. This is necessary in order to formulate sound planning conditions and obligations that can be associated with the development in question, in accordance with part 122 of the *Community Infrastructure Levy (2010)* regulations concerning planning obligations, and *Circular 11/95* regarding planning conditions.

i), ii) & iii) Future year modelling and Traffic Routing, without mitigation (LLITM)

6.3 The impact of development traffic has been tested for the peak hours of demand during the future year of 2026. This year comprised the end of the Regional Spatial Strategy period, by which time planning authorities were to allocate and deliver their housing requirements. As such, this year is included as a scenario within both the LLITM and Paramics models and serves as an appropriate future year to assess the impacts of HBBC's AAP and the development in question.

6.4 Section 4 of the CHA's formal observations on the application to HBBC (dated 23-Nov-12) provides considerable detail on the findings of the LLITM 2026 future year (no mitigation) scenario with regard to the routing of traffic. The AM peak period findings for the Barwell generated two-way traffic is illustrated below for reference.



6.5 From the initial LLITM run, the following main findings were apparent:

- There is a considerable demand for movement from Barwell to Warwickshire and the West Midlands, but a decrease in demand for movements to trip destinations within Leicestershire (compared to the 2001 census); Vehicular trips into Hinckley are comparatively low from both SUEs (see also section 5.8 of previous LCC comments);
- Congestion occurring on the network may be responsible for the routing of traffic away from the major routes onto more rural routes;
- The Earl Shilton SUE is more reliant upon locations in Leicester City and Blaby District for employment and other activity than Barwell SUE, although it too shows a significant draw to the south west of Leicestershire. Traffic from Earl Shilton is able to access the A47 directly and therefore has a much lesser reliance upon rural routes;
- Of particular note is the avoidance of certain junctions, including the A447 Ashby Rd / A47 Normandy Way junction, the A47 / A5 Dodwells roundabout, and the A5 / A47 Long Shoot junction;
- As a result, the model is forecasting material increases in traffic along routes including Dadlington Lane, Rogue's Lane, Stoke Road and Fenn Lanes in avoidance of the A47 and A5.

iv) AAP Microsimulation modelling (Hinckley & Nuneaton Paramics model – no mitigation)

6.6 Greater detail on the future year modelling for HBBC's AAP process is contained within HBBC's emerging Strategic Transport Assessment. However, a summary of the findings is provided below for those locations where a material traffic impact is forecast to be associated with the inclusion of the two SUEs. This uses the methodology adopted within the Strategic Transport Assessment prepared on behalf of HBBC to relate to an increase in queuing of in excess of 60 metres.

6.7 It should also be noted that the microsimulation modelling has assumed the highway improvements associated with the MIRA Enterprise Zone as committed and the employment site itself to be fully occupied at 2026.

Table 1 Material net increases in queues (both SUEs) – 2026 scenario – no mitigation

Junction	Junction arms experiencing a material increase in queuing traffic	
	AM Peak Period	PM Peak period
A5 / A444 Weddington Ln / Atherstone Rd (WCC / HA)	A5 (E), A444(S)	A5 (E), A444(S)
A5 / A47 Long Shoot (WCC / HA)	A47 (S), A5 (W)	A47 (S)
A5 / A47 Dodwells Rd / B4666 Coventry Rd (HA / LCC)	A5 (E), A5 (W), A47 (N), B4666 (E)	A47 (NW)
A5 / Nutts Lane (HA / LCC)	A5 (E), A5 (W)	A5(W)
A47 / Stoke Road roundabout	Stoke Rd (S)	
A47 Normandy Way / A447 Ashby Road	A447(N), A447(S)	A447 (N)
A447 Ashby Rd / Rogue's Lane	Hinckley Rd (E)	Hinckley Rd (E)
A447 Ashby Rd / Stapleton Lane	Stapleton Lane (S)	Stapleton Lane (S)
Barwell Village Centre roundabout	Stapleton Lane (N)	Stapleton Lane (N)

6.8 The proposed development accesses are considered in greater detail later on as the current designs were run in the 'with mitigation' scenario. The paramics microsimulation modelling has also been considered in terms of the impact upon journey times along a number of strategic corridors. A summary of the results of the journey-time modelling is provided below.

Table 2 Net increase in journey times (seconds) resulting from both SUEs – 2026 scenario – NO MITIGATION

Route / Time Period	A47: Clickers Way to A5		B4666: A5 to The Common		A447/B4109: Hinckley Rd to M69 J1		A5: Long Shoot to M69 J1	
	Direction							
	NB	SB	NB	SB	NB	SB	EB	WB
07:00-08:00	8.4	86.5	40.8	49.3	0.3	111.6	114.1	7.7
08:00-09:00	15.8	212.8	78.3	213.9	106.8	311.1	34.5	133.8
09:00-10:00	1.7	96.2	6.5	199.3	15.2	99.1	68.4	90.1
16:00-17:00	15.6	32.5	26.8	7.8	28.2	7.6	27.1	-3.4
17:00-18:00	41.0	59.5	63.5	76.5	35.7	138.6	30.9	26.5
18:00-19:00	29.0	85.7	6.4	20.2	3.4	116.2	6.8	9.5

6.9 The above analysis confirms a number of material increases in journey times as a direct result of the AAP proposals for growth, particularly southwestbound along the A47 and B4666 towards the A5, southbound along the A447 Ashby Road towards Hinckley and westbound along the A5 towards Nuneaton during the morning peak hour period. During these periods, increased journey times of between 2 and 6 minutes are forecasted between 0800 and 0900 hours, with increased delays extending into the shoulder peak periods of 0700-0800 and 0900-1000 hours. During the evening peak hour period, the increase in journey times is less apparent, although material increases are forecasted along the A447 between Barwell and Hinckley and also along the A47 southbound towards the Dodwells roundabout.

6.10 The findings of the Paramics microsimulation model support those contained within the LLITM analysis in that notwithstanding the improvements which are conditional upon the development of the nearby MIRA Enterprise Zone, the operation of both the County and strategic highway networks is significantly compromised and several key junctions along the A47 and A5 corridors are forecasted to operate over capacity as a result of the increased traffic generated by the SUE developments. As a result, traffic is forecasted by both LLITM and the HNPM to re-route to avoid this area.

MIRA A5 Highway Improvements and HA Pinch Point scheme bid

6.11 It should be noted that the mitigation design for the MIRA development caters for the impact of development traffic associated with that development and therefore had no remit to mitigate the impact associated with housing developments elsewhere in the Hinckley and Nuneaton area. This would not have been reasonable and in any event would have been contrary circular 11/95 concerning planning conditions.

6.12 The results from the AAP microsimulation modelling support that at the time of the MIRA planning application, the testing undertaken for the MIRA highway mitigation would have absorbed the Earl Shilton and Barwell SUE traffic into a global background growth factor. This would result in the assumed AAP traffic being dispersed equally across the region and subsequently generating a much-diluted and evenly spread presence across all arms of the junctions tested at that time. This modelling can therefore in no way have applied, and nor should it have the specific routing and volume of the Barwell SUE traffic to the same degree of confidence that is currently being assessed for the AAP.

6.13 Following the forecasted results of the LLITM & HNPM modelling, evidence confirms that the approved MIRA scheme does not accommodate the impact of the SUEs on the County Highway networks of Leicestershire and Warwickshire and that further mitigation should be sought to accommodate their impact in addition to those improvements.

6.14 The CHA's view does not change given the Highways Agency's recent successful bid for central government pinch point funding, which will see a similar improvement implemented along the A5

corridor by spring 2015 in place of the MIRA works. Recent traffic modelling conducted by the HA to support the pinch point proposals using a VISSIM microsimulation model for a design year of 2022 assume the MIRA development to be only 60% occupied and an incomplete Earl Shilton SUE. Nevertheless, significant congestion still occurs on the County Highway network with the current design. The CHA and Warwickshire therefore cannot support the findings of any traffic modelling that seeks a short-term solution and fails to take into account all known growth in a realistic future year scenario.

v) Proposed infrastructure to mitigate the impact of SUEs upon the highway network

- 6.15 Following the above consideration of impacts, it was necessary for the TWG in conjunction with HBBC's appointed transport consultants to devise solutions that respond to the demands of traffic generated by the SUEs and mitigate the impacts of the Earl Shilton and Barwell SUEs on the County and Strategic Highway networks.
- 6.16 In determining appropriate mitigation, regard was held towards the findings of the LLITM with regard to the routing patterns of development traffic, and also the more detailed analysis presented in the HNPM. A schedule of highway improvements was established and then tested in the HNPM. These improvements are summarised below in Table 3 and include a number of suggested mitigation measures put forward by the applicants of the Barwell SUE.
- 6.17 The list provided in the table below represents those changes that were made to the coding of the Paramics microsimulation model in order to test mitigation required for the SUEs, and does not represent the totality of infrastructure required to support the developments. It should also be noted that the Paramics microsimulation model does not extend beyond the junction of the A47 with Leicester Road to the East of Earl Shilton, and therefore any infrastructure requirements to the east of this point were not tested in the HNPM but would have been picked up in the subsequent LLITM run. The development access points for both Barwell and Earl Shilton SUEs are included in the table below in the interests of completeness.

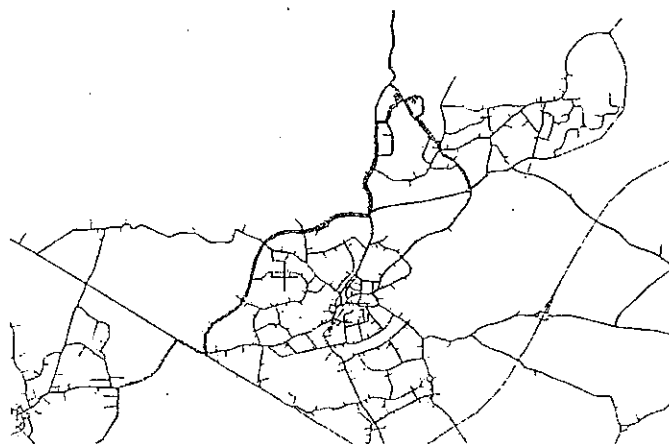
Table 3 AAP Highway Mitigation microsimulation testing using HNPM

Location	Description of improvements
A5 / A47 Long Shoot signalised T- junction	Widening of the A5 eastern approach to a 2 lane straight-ahead with a merge to one lane to the west of the junction;
A5 between Long Shoot and Dodwells Rd	Widening of the A5 to provide a continuous two lane westbound carriageway between Dodwells Rd and The Longshoot.
A5 / A47 Dodwells Rd / Coventry Rd junction	Widening of the circulatory carriageway to the south of the roundabout to provide for two east to west straight-ahead lanes with a dedicated third lane approach from the east for traffic turning to Dodwells Rd and Coventry Rd;
A47 Dodwells Road, north of A5	Widening of the Dodwells Rd approach to two lanes for a distance of 200m to provide for increased capacity at this arm of the junction.
A47 Normandy Way / A447 Ashby Rd junction	Provision of a 100m widened southbound approach to two lanes; provision of a three lane northbound approach including a signal-controlled dedicated left turn lane.
A447 Ashby Road / Rogue's Lane junction	Signalisation of existing crossroads junction
A447 Ashby Road, north of Rogue's Lane (DEVELOPMENT ACCESS)	Provision of a new roundabout access to serve the development
A447 Ashby Road, south of Stapleton Lane (DEVELOPMENT ACCESS)	Provision of new T-junction incorporating a ghost-island right-turn lane to serve the development
A447 Ashby Road / Stapleton Lane junction	Implementation of a traffic signal controlled junction, incorporating signal controlled pedestrian crossing facilities

Stapleton Lane south of Ashby Road (DEVELOPMENT ACCESS)	Provision of a new signalised crossroads incorporating pedestrian and cyclist crossing facilities to serve the development
Stapleton Lane south of Ashby Road (DEVELOPMENT ACCESS)	Provision of a new priority T-junction to serve the development
Stapleton Lane / Shilton Rd / Chapel St / High St junction	Replacement of mini-roundabout with a traffic signal controlled junction and signal-controlled pedestrian crossing facilities
A47 / Masfield Drive junction	Replacement of existing priority T-junction with a signal-controlled junction, incorporating controlled pedestrian crossing facilities
A47 / Mill Lane south of Mill Lane (DEVELOPMENT ACCESS)	Provision of a new roundabout access to serve the development
Astley Road Earl Shilton, south of Alexandra Avenue (DEVELOPMENT ACCESS)	Provision of a new roundabout access to serve the development

vi) Results of AAP microsimulation modelling (with mitigation)

- 6.18 This section of the report considers in detail the impact of the proposed mitigation strategy identified above and provides a summary of the impact of the proposed SUE developments at the junctions referred to in Table 1, indicating the forecasted success of the agreed mitigation in reducing or otherwise the amount of queuing on the County and strategic highway networks.
- 6.19 An indication of the routing of the Barwell SUE development traffic for the HNPM 2026 morning peak hour scenario is provided in the bandwidth diagram below. The Paramics network covers a smaller area than that of the LLITM and therefore less of the rural road network further away from the development is coded into the Paramics model. However, the effect of this is that traffic is concentrated in much more heavily upon those routes which are more suitable to accommodate through traffic. This therefore allows for junction mitigation measures to be tested on the basis of much higher design flows, giving greater confidence in the results of the mitigation testing.



*Paramics bandwidth output – 2026 AM peak hour period

- 6.20 The HNPM is able to forecast the interaction of junctions simultaneously and therefore establishes with greater confidence where the operation of one junction may impinge on the efficiency of another, for instance, where queuing traffic may create a blockage that extends in such a way as to affect the operation of the next junction. This kind of reporting across a wide network is not possible using more traditional junction assessment methods such as TRANSYT, LINSIG, ARCADY and PICADY. For this reason, a number of junctions are considered which were not subject to mitigation to understand better the functioning of the network, post-mitigation. The outputs data below is taken directly from the AAP microsimulation modelling tested in the HNPM, unless otherwise stated.

A5 / A444 Weddington Lane / Atherstone Rd staggered T-junction

- 6.21 Whilst no mitigation has been proposed at this junction, the microsimulation model forecasts that improvements made further upstream are allowing traffic to flow more freely through the junction and as such, the inclusion of the AAP mitigation has reduced the extent of queuing occurring on the network in this location in the morning peak hour period, although considerable congestion is still apparent during the evening peak hour. However, it should be noted that the AAP proposals do not generate significant levels of additional traffic through this junction.

A5 / A47 Long Shoot signalised T-junction & Dodwells roundabout

- 6.22 The operation of the A5 between the A47 Dodwells Road in Leicestershire and the A47 Long Shoot in Warwickshire is critical to the movement of traffic and subsequently the economy of the area. Their direct interaction means that they cannot be considered or modelled in isolation from one another. In keeping with the sentiment expressed in paragraph 5.10, the characteristics of both the A47 Dodwells Road and The Long Shoot approaches to the A5 in this location in both peak hours is of an often of a slow moving platoon of vehicles progressing to a static queue of traffic upon approaching the A5. It is necessary to understand how this will change over time as a result of the MIRA works but also resulting from the impact of the SUEs.
- 6.23 With regard to the issues expressed in paragraph 6.12, the evidence collected indicates that without further mitigation, the agreed MIRA works struggle to accommodate the impact of the Hinckley SUEs and that the additional capacity works tested are necessary in this instance. This is also the case in the 2022 VISSIM model provided by the Highways Agency, albeit with much lower assumed flows, as referred to in paragraph 6.13. The AAP modelling has assumed the developments at MIRA, Barwell SUE and Earl Shilton SUE to be 100% complete at a future year of 2026 and therefore represents the totality of known growth occurring in the area.
- 6.24 It is established that the modelling undertaken to date forecasts a significant draw from the Earl Shilton and Barwell SUEs to Warwickshire and the West Midlands. As a result, additional pressure is placed upon this area and the two junctions that take access to the A5 in this location. Consequently, where traffic is either significantly delayed, or unable to access the A5 via the A47 (in either direction), re-routing is likely, and has been forecasted to occur along the rural road network.
- 6.25 The AAP modelling process has sought to address this matter and encourage a greater amount of development traffic onto the routes that are most appropriate for these journeys in keeping with the approach required by the CHA in paragraph 3.2. This has comprised the proposed widening of the A47 Dodwells Road to two lanes on its approach to the A5 and the widening of the A5 westbound to two-lanes between the Dodwells roundabout and the Long Shoot junction. It is felt by the CHA that both of these improvements are necessary, firstly in order to allow more traffic to exit the A47 through the allocated green time at the future signalised Dodwells Road arm of the junction and secondly to avoid further delay at the A5 westbound exit from the roundabout where two lanes merge into one very soon after exiting the junction.
- 6.26 The proposed increase to capacity for westbound movements along the A5 towards Nuneaton, together with additional capacity on the A47 Dodwells Road is reflected in the modelling results where queue lengths reduce considerably as a result of this additional mitigation.

A5 / Nutts Lane roundabout (LCC / HA) no mitigation

- 6.27 In relation to the operation of the A5, the capacity enhancements at the Dodwells and Long Shoot junctions have contributed to a knock-on effect in that the extent of additional queuing generated by the SUEs has diminished significantly as a result of the mitigation at the junctions further to the west. In view of the microsimulation modelling, and the routing patterns exhibited by the SUE traffic, the baseline congestion occurring at this junction is therefore not materially increased as a direct result of the SUEs. No mitigation is therefore being considered at this junction.

A47 Normandy Way / Stoke Road / Sword Drive roundabout no mitigation

- 6.28 The operation of this junction is impacted by the SUE developments on its southern and northern arms in the 2026 morning and evening peak periods respectively, as traffic departs the Hinckley area in the morning and returns in the evening. However, it is apparent from the modelling results that a proportion of this traffic is re-assigning to the A47 as a result of the capacity enhancements at the Dodwells roundabout and Long Shoot junctions.
- 6.29 As a result of mitigation a greater amount of traffic is attracted to the major route which would otherwise have continued to seek alternative routing towards Warwickshire and the West Midlands through the rural road network via Stoke Golding. As a result, the impact at this junction, post-mitigation has been reduced and no mitigation measures are sought.

A47 Normandy Way / A447 Ashby Road signalised crossroads

- 6.30 Similarly to the issues concerning the Dodwells roundabout and Long Shoot junctions, the operation of this junction is fundamental to the route choice of motorists travelling south from the direction of Barwell towards Hinckley and Nuneaton and therefore plays a significant part in whether motorists choose to access the A47 or seek alternative routing along the rural route network.
- 6.31 The current operation of this junction restricts the amount of traffic that is able to turn right onto the A47 from the Ashby Road arms due to the current signal configuration which restricts right-turning movements to where gaps are available from the opposing traffic stream. This is a current problem.
- 6.32 Issues also arise at this location during the current peak hour periods where queuing traffic accumulates along the A47, particularly along the eastern approach to the junction in the morning peak period. The microsimulation model has sought to address these demands by allocating a greater amount of green time to the A47 arms of the junction. However, the consequence of this is that green time is reduced to the north-south arms and congestion worsens along the Ashby Road arms, which in turn affects the routing of traffic further north and increases the chances of motorists taking risks to achieve right-turns. CHA engineers are currently considering the provision of a two lane exit flare from the junction for westbound traffic to maximize the capacity for movements west along the A47
- 6.33 This junction requires further detailed adjustments before a finalised scheme can be established and appropriate contributions sought. CHA engineers are working with the applicant to finalise a revised scheme for this junction that will allocate a greater level of capacity to right-turning traffic from the north in addition to accommodating the increased demand from the Earl Shilton SUE for east-west movements. It is expected that a final scheme can be incorporated into a funding mechanism that will seek contributions from both Earl Shilton and Barwell SUEs, proportionate to their impact. Further discussion on the AAP proposals for this junction is provided in section 7 of this document in relation to the establishment of and funding of appropriate mitigation.

A447 Ashby Rd / Hinckley Road / Rogue's Lane signalised crossroads

- 6.34 The mitigation proposed at this junction has been suggested by the applicant to allow right-turning vehicles protection from oncoming straight-on traffic using Ashby Road. The junction improvement has been tested using LINSIG, as the HNPM does not include Rogue's Lane and as such models this junction as a three-arm arrangement.
- 6.35 The eventual requirement for this junction will need to consider how the junction will safely accommodate stationary right-turning traffic in such a way that does not impede the free-flow of traffic along Ashby Road. It is noted that the current proposal accommodates queuing space for 1-2 vehicles from the northern and southern arms. However, the modelling indicates that this stacking space may be insufficient for the demand and as a result could block the free-flow of

traffic along the A447, potentially causing traffic to re-route in such a way along Rogue's Lane as the CHA require to be avoided. This junction requires further consideration, including the potential for the restricting of movements as felt necessary before a finalised scheme can be established and appropriate improvements are sought.

A447 Ashby Rd / Development Access roundabout Development access

- 6.36 The CHA has previously raised concerns regarding the need for physical measures to be provided along Ashby Road to ensure compliance with the proposed reduced speed limit to 40mph. As part of these measures, the principle of a roundabout is supported given that it offers a degree of horizontal deflection which will cause motorists to slow down upon approaching it. The modelling results confirm that the proposed access will operate within capacity, although the final geometries of the roundabout require to be finalised with LCC's engineering design team.

A447 Ashby Rd / Development Access T-junction Development access

- 6.37 As part of a singular scheme for Ashby Road, the provision of a further development access is supported, provided that the access safely accommodates the amount of turning traffic that is likely to use it and secondly, conforms to the design guidelines of Leicestershire County Council. Modelling undertaken to date indicates this junction to operate within capacity.

A447 Ashby Rd / Stapleton Lane T-junction

- 6.38 The rationale for the provision of a signalised junction in this location is threefold: firstly in relation to the accommodation of additional traffic on the highway network, secondly to allow safe passage for vehicles to turn right, and thirdly to allow pedestrians and cyclists to benefit from adequate segregation from traffic whilst travelling between the Barwell SUE and Stapleton. The change from a priority T-junction to a signalised junction is forecasted to result in an element of additional queuing on the main road. However, this needs to be balanced against road safety and connectivity concerns, and the ability of cyclists and pedestrians to safely cross Ashby Road to access / egress the development. The principle of a signalised T-junction is supported at this location by LCC engineers. However, more detailed minor amendments are likely to be necessary following the comments of LCC's engineering design team and the presence of the junction will require adequate warning signage on the main road.

Stapleton Lane proposed access signalised crossroads Development access

Stapleton Lane proposed priority T-junction access Development access

- 6.39 Both of these new development accesses have been forecast to operate within capacity as a result of the additional development traffic that will use them. More detailed minor amendments may however be necessary following the input of LCC's engineering design team. It is imperative however that upon occupation of the proposed development, the new residents have high quality accessibility by foot and by bicycle to the local facilities in the centre of Barwell, and as far as practicable further afield towards Hinckley and the employment and healthcare facilities located on its northern and western fringes.

Barwell Village Centre

- 6.40 The applicant has proposed a package of urban realm improvements in Barwell village centre to coincide with the proposed development. The objectives of this scheme are to improve the appearance of this area whilst creating a safer environment for pedestrians and cyclists who currently suffer from poor and infrequent crossing facilities, along with narrow footways and other undesirable effects generated by through traffic and parked vehicles.
- 6.41 The above safety concerns however need to be balanced against the need to accommodate the levels of traffic forecasted to use the village centre in the future. The Paramics microsimulation model has assessed the traffic impacts generated by both the Barwell and Earl Shilton SUEs in this location with and without the proposed signalised junction.

- 6.42 The route choice of motorists undertaking trips between Barwell and Hinckley is a key issue to be considered here and the modelling outputs allow the CHA to assess these interactions. In the 'do nothing' scenario (with no changes to the highway network), Barwell SUE traffic travelling towards Hinckley is forecast to be more inclined to travel through Barwell village centre along Stapleton Lane and Chapel Street to access the B4668 Leicester Road via The Common. This of course presents problems in that Chapel Street itself suffers from congestion owing to the presence of parked vehicles which effectively narrow the usable carriageway width to one lane.
- 6.43 In the 'with mitigation scenario', the combination of capacity improvements at the Ashby Road approach to the A47 Normandy Way junction and the signalisation of Barwell village centre, along with more accurate coding of Chapel Street to reflect the presence of parked vehicles forecasts that less SUE traffic is likely to choose this route than would otherwise have been the case, in view of the increased capacity on the main road and the deterrent to through traffic generated by the presence of traffic signal control and pedestrian crossing phases.
- 6.44 The results of the microsimulation modelling do however confirm that the signalised junction is likely to by its very nature increase the level of queuing occurring in this location, in particular along Stapleton Lane. However, in this case, a balance has to be struck between the negative effects that additional free-flowing traffic would generate to non-motorised users in the absence of an improved and enhanced pedestrian environment.
- 6.45 It should also be pointed out that any scheme proposed for Barwell village centre will undergo a much more detailed scrutiny through a public consultation process, requiring the input of local residents, walking / cycling groups, the emergency services and public transport operators, as well as the Borough Council and engineers of the CHA before any scheme in this location is finalised. It is therefore necessary at this moment in time that a condition be placed upon this improvement to allow sufficient flexibility so that the correct scheme is implemented at the right time.

Impact of mitigation upon journey times

- 6.46 Section 6.8 of this report refers to the journey time assessment carried out by the Paramics microsimulation model in the SUE development scenario with no mitigation applied to the surrounding highway network. The table below provides a summary of the forecasted journey times resulting from the mitigation package defined in Table 3 and follows the same format as the results reported in Table 2.

Table 4 Net increase in journey times [seconds] resulting from both SUEs – 2026 scenario – WITH MITIGATION

Route / Time Period	A47: Clickers Way to A5		B4666: A5 to The Common		A447/B4109: Hinckley Rd to M69 J1		A5: Long Shoot to M69 J1	
	Direction							
	NB	SB	NB	SB	NB	SB	EB	WB
07:00-08:00	6.6	15.6	2.7	15.0	3.6	26.2	74.3	3.8
08:00-09:00	18.5	54.1	41.5	21.9	2.0	89.7	89.3	22.7
09:00-10:00	1.0	8.6	8.8	17.0	2.0	17.6	21.2	2.6
16:00-17:00	2.0	18.2	15.9	8.4	9.2	89.2	61.8	7.3
17:00-18:00	8.2	18.4	51.9	45.5	73.2	74.3	77.4	13.5
18:00-19:00	7.6	40.4	19.4	27.5	33.1	35.7	30.5	3.8

6.47 The above findings indicate that significant improvements are made to the free flow of traffic along the A47 and A5 when compared with the no mitigation scenario, where the net journey time is either reduced (particularly along the A5 and northbound along the A47), or the increases are contained to a maximum of one minute. Where journey times are shown to increase beyond one minute, eg the southbound A447 into Hinckley during the morning and evening peak hour periods, this heightens the need to provide the correct solution to the congestion occurring at the Ashby Road / Normandy Way signal junction to accommodate the demand for traffic wishing to access the A47. The final improvement at this junction, as referred to in paragraphs 6.30-6.33 will need to be secured through a financial contribution from both the Earl Shilton and Barwell SUE developments.

vii) **Effect of highway improvements upon the routing of traffic (LLITM)**

6.48 Following the satisfactory conclusion of the Paramics 'with-mitigation' modelling, it is necessary to understand more widely the impacts of those changes to the highway network in terms of how this affects the routing of traffic across the wider highway network. In order to do this, the LLITM strategic model was run with the proposed mitigation included to better understand to what extent the mitigation would cause traffic to re-route along more major roads, in comparison the previous 'no-mitigation' LLITM run, which had assigned significant levels of traffic along the rural routes. As part of this modelling a number of revisions to the coding of the model were made to better reflect the nature and speed of traffic along the network by applying more realistic free-flow speeds to these routes. A graphical representation of the results of this modelling is shown below, which indicates the routing of traffic directly associated with the Barwell SUE.



6.49 The above diagram indicates a significant change from the 'do-nothing' scenario in that a greater level of traffic is using the A47 and A5 to the west of Stoke Road in favour of the rural road network. This can be attributed to the improved junction operation and resultant improvement to journey times reported in Table 4. The findings reveal a considerable reduction in the extent of traffic using Dadlington Lane and resultantly a change in the routing patterns, whereby traffic is forecasted to favour turning left rather than right onto Ashby Road to undertake trips towards the south west of Hinckley, potentially in avoidance of the additional signal junction at the northern end of Stapleton Lane. This reduces the extent of traffic that would otherwise have passed through Stapleton village and turned left along the rural route and subsequently along the Fenn Lanes towards the A5.

6.50 The CHA do however recognise from the above assessment that some traffic is forecasted to continue to turn right into Rogue's Lane before turning left into Stoke Road to access the A47, in favour of continuing along the A447 and turning right into Normandy Way. This is symptomatic of the issues raised in paragraphs 6.30-6.35 where the operation of the A47 directly impacts on the Rogue's Lane junction, where motorists are routing in such a way as to avoid the delays caused by right-turning traffic onto the A47 Normandy Way. The CHA are confident that through the correct treatment of the Ashby / Normandy Way junction, with potential to introduce further restrictive measures if required at the Rogue's Lane junction, these movements can be minimised and discussions are currently taking place on how this can best be achieved.

7. TRANSPORT INFRASTRUCTURE REQUIREMENTS

7.1 Delivery of supporting infrastructure

7.1.1 In order to be acceptable, planning obligations and conditions are required to meet a number of tests. These tests are in place to ensure that legally, an improvement that is either funded or delivered physically by a developer is reasonable in scale to the development proposed, necessary to make the development acceptable and related to planning. This is underpinned firstly by part 122 of the Community Infrastructure Levy (CIL) Regulations in relation to planning obligations (s106 agreements) and secondly by Circular 11/95 concerning planning conditions. Failure to demonstrate that such improvements are necessary and in accordance with these requirements could otherwise result in a legal challenge to these requirements.

7.1.2 The scale of the development in question is such that a joint approach is required that incorporates both mechanisms. Planning conditions will be necessary for the developer to deliver the development access points, as well as off-site improvements (where the developer undertakes the work under licence from the highway authority). Where it is felt that the highway authority are better placed to undertake works themselves, it has been necessary to agree that this can only take place through the contribution of a sum of money for the highway authority to deliver such works.

7.2 Absence of a masterplanning and phasing strategy

7.2.1 The applicant has consistently failed to include a plan defining a schedule of how the development will be phased across the site over time. This makes it impossible to clearly define what infrastructure will be required and when and consequently generates fundamental question marks regarding the timing of necessary infrastructure to support the development. In the absence of this information, the CHA are only able at this stage to confirm the totality of infrastructure to support the development as a whole, subject to a condition requiring further information on the phasing of development to be submitted prior to the submission of any reserved matters planning application pertaining to it.

7.2.2 The above stance is necessary and this approach is made in the interests of ensuring that the development adheres to the national and local policy requirements to achieve sustainable development from the outset. It will under no circumstances be acceptable for these proposals to come forward as reserved matters applications in the future in a piecemeal and un-coordinated manner. Any evidence of this in the future is likely to lead to a recommendation of refusal from the highway authority in the interests of safeguarding the policy requirements referred to in section 4 of this report.

7.2.3 The requirement for sound transport planning is intrinsic to the formation of a successful masterplan and it is considered by CHA that these two entities cannot be considered in isolation. The co-location of a mix of uses within a convenient walking distance of new residents achieves the greatest benefit in reducing the need to travel by motorised modes of transport. Likewise, for movements outside of the immediate area, the delivery of public transport at as early stage as possible can only be of benefit in providing modal choice and avoiding unnecessary car trips. However, if the development is brought forward in a piecemeal and sporadic manner, these objectives cannot be achieved and the development will be fundamentally unacceptable.

7.3 Schedule of infrastructure

7.3.1 The table below provides a summary of the necessary infrastructure required to make the development acceptable in transport terms. This schedule draws from the LLITM and Paramics modelling work undertaken to support the Hinckley & Bosworth Area Action Plan and therefore takes into account the dual impact of both the Earl Shilton and Barwell SUEs.

Table 5 – Schedule of required off-site infrastructure to support the development

Location	Description of improvements	Delivery Mechanism
A5 / A47 Long Shoot signalised T-junction	Widening of the A5 eastern approach to a 2 lane straight-ahead with a merge to one lane to the west of the junction;	Proportionate Financial Contribution through s106 - 64% of total scheme costs (36% to be contributed by Earl Shilton SUE, based upon LLITM findings)
A5 between Long Shoot and Dodwells Rd	Widening of the A5 to provide a continuous two lane westbound carriageway between Dodwells Rd and The Longshoot.	
A5 / A47 Dodwells Rd / Coventry Rd junction	Widening of the circulatory carriageway to the south of the roundabout to provide for two east to west straight-ahead lanes with a dedicated third lane approach from the east for traffic turning to Dodwells Rd and Coventry Rd;	
A47 Dodwells Road, north of A5	Widening of the Dodwells Rd approach to two lanes for a distance of 200m to provide for increased throughput to the west.	
A47 Normandy Way / A447 Ashby Rd junction	Provision of a 100m widened southbound approach to include two approach lanes; Provision of a two-lane westbound exit from the junction; provision of a three lane northbound approach including a signal-controlled dedicated left turn lane; provision of a two lane exit to Normandy Way west and signal-controlled cycle and pedestrian crossing facilities	Proportionate Financial Contribution through s106 - 68% of total scheme costs (32% to be contributed by Earl Shilton SUE, based upon LLITM findings)
A447 Ashby Road, between Normandy Way and Stapleton	Provision of revised speed limit and pedestrian / cyclist accessibility, incorporating a footway / cycleway and necessary supporting infrastructure, including controlled and informal crossing points, signing, line-markings	Developer-delivered mitigation (s278)
A447 Ashby Road / Rogue's Lane junction	Signalisation of existing crossroads junction	Developer-delivered mitigation (s278)
A447 Ashby Road / Stapleton Lane junction	Implementation of a traffic signal controlled junction, incorporating signal controlled pedestrian crossing facilities	Developer-delivered mitigation (s278)
Stapleton Lane	Provision of an improvement scheme between Stapleton village and Barwell village centre including a reduction in the existing speed limit, the provision of new footway / cycleways, traffic calming measures, lighting and associated lining and signage	Developer-delivered mitigation (s278)
Stapleton Lane / Shilton Rd / Chapel St / High St junction	Implementation of a revised junction arrangement at the existing roundabout to incorporate (but not be limited to): increased footway widths, signal-controlled crossing facilities and associated lining, signage and infrastructure.	Developer-delivered mitigation (s278)

7.4 Public Transport

- 7.4.1 Section 4.4 of the submitted TA proposes a Public Transport strategy to serve the site. The single key determinant in the cost, and ultimately, the success of public transport provision is the level of patronage. In general terms, the faster and more frequently a route can link employment, retail and other centres of activity with the passengers who are most likely to require travel by means other than the private car, the greater chance it has of becoming viable at an early stage and therefore reducing the level of subsidy.
- 7.4.2 It is accepted that during the initial stages of the development, a level of subsidy will be required to encourage the use of a new bus service and so reduce the traffic impact of the development in line with the objectives of the submitted Travel Plan. The level at which subsidy is required however is significantly reduced by the formation of public transport connections that are viable from the outset and that reduce the need to travel by car, providing connectivity for those who require it most.
- 7.4.3 Traditionally, public transport users are drawn largely from high density housing located in areas of low car reliance. It should therefore follow that such residential types form the initial phasing of the development, in an area that is well served by local facilities; that firstly reduce the need to travel at all; and secondly, by providing convenient and high quality access to the public transport network allow useful and regular access to more distant attractors. Such provision therefore reduces social exclusion by connecting the most vulnerable sectors of the community with local facilities, in line with LTP3 policy.

Applicant-proposed Public Transport Strategy

- 7.4.4 The applicant has suggested one new public transport service, on a similar route to the existing 82 service which provides access through the site to Hinckley town centre, and a further extension to the route to provide access to Hinckley railway station. The principle of routing through the site is supported and this will provide a realistic link for many to access existing and proposed retail, leisure and employment facilities within Hinckley town centre. Likewise the significant draw towards the West Midlands is recognised by the proposed extension of the route to the railway station at which rail services can be caught to Birmingham, Nuneaton and Leicester. It is not currently thought realistic however that those passengers commencing their journey at either of the SUEs would travel in the opposite direction from Leicester, by bus, to then catch a train back to Leicester.
- 7.4.5 The CHA see some merit in this proposal to catch passengers undertaking rail trips to Birmingham, as it provides an opportunity to remove car trips from the network between the SUEs and Hinckley railway station. However this would need to rely heavily on two critical factors:
- a) the willingness of passengers to undertake two public transport journeys to reach their destination, and
 - b) the connection time i.e. the need for the bus service to coincide with railway timetables to ensure the minimal delay to the overall door-to-door journey time between both Barwell and Earl Shilton.
- 7.4.6 The CPA has requested the applicant consider these issues in the details of the proposed new service.

Combined PT requirements of Earl Shilton and Barwell SUEs

- 7.4.7 The PT proposal in the original TA did not consider the combined public transport requirements of the Barwell and Earl Shilton SUEs as a whole; however, as outlined above, the proposal has been revised in the Addendum TA. As a result CHA officers are reassured that the applicant acknowledges the need to consider the totality of growth occurring in the area through the AAP, as required by the CHA in paragraph 5.2.
- 7.4.8 However, the submitted public transport strategy does not take into account the potential for more direct linkage between the SUEs and employment locations further south that are not served by rail. The current 158 and 48 services run between Leicester, Coventry and Nuneaton through both Earl Shilton and Barwell and CHA officers have requested that the applicant considers the potential for these routes to be diverted into the SUEs given the sizeable potential catchment and the findings of the LLITM modelling, as set out in the CHA's previous observations.

Installation of bus-priority measures

- 7.4.9 In keeping with the need to encourage and better manage journey times by public transport, measures are being considered through the AAP which will enable more reliable bus journey times in the form of bus priority systems along the Ashby Road into Hinckley Town Centre.
- 7.4.10 As mentioned in section 3.6.3, the applicant has agreed to contribute towards real-time information, which should therefore be provided on the proposed new 81/82 bus route. During the AAP modelling process and resulting draft designs for Highway junction mitigation, it has been recognised that there is insufficient available Highway land to install bus lanes on the bus corridor into Hinckley town centre. However, as mentioned in section 5.64 of the previous observations dated November 2012 the CHA still consider that some additional bus priority measures would be appropriate, and should form part of the s106 agreement, or a planning condition. For example, traffic signals that prioritise buses when a bus is waiting in a signal controlled queue, these could be considered at a number of locations, to include the following:
- Ashby Road / Normandy Way junction
 - Ashby Road / Derby Road / Upper Bond Street junction
 - Derby Road / Hollier's Walk / New Buildings junction
 - Upper Bond Street / Lower Bond Street / Hollycroft / Trinity Lane junction
 - Lower Bond Street / The Borough / Mansion Street junction
 - Trinity Lane / Mansion Street junction
 - Coventry Road / Trinity Lane / Lancaster Road / Rugby Road

7.5 Walking / Cycling linkages

- 7.5.1 The submitted TA recognises in section 4.3 the need to ensure that the development is accessible by high quality non-motorised modes of transport. This is concurrent with established national and local policy and is essential to the minimisation of negative traffic impacts associated with the development, through the encouragement of more sustainable forms of travel.
- 7.5.2 As the site lies within a 5km cycling distance of the centres of Earl Shilton, Barwell and Hinckley there is a realistic opportunity to promote cycling as a viable alternative to motorised travel to these destinations.
- 7.5.3 As mentioned in section 3.7, a number of enhancements to the existing walking and cycling network have been agreed through discussions with the applicant to ensure that the development

is fully served by high quality non-motorised routes to locations outside of the site. These enhancements now acknowledge the site as a destination which people will seek access to, as well as egress from.

7.5.4 It is required that where the enhancements, listed below, relate to off-site works they form part of the s106 obligations or planning conditions.

- Footway provision between SUE and the A47 at Ashby Road.
- Connections between SUE and Stapleton, along Ashby Road / Stapleton Lane.
- Connections between SUE and Barwell village centre along Stapleton Lane.
- Connections between SUE and Stapleton via PRow U33.
- Diversion of route U35 to tie in with Stapleton Lane.
- Internal linkage to Barwell centre via PRow U33 / T97 to Harvey Close along a direct route that avoids proposed sports pitches.
- Surfacing improvements to U33 alongside cemetery to Adrian Drive.
- Rationalisation of route T99 to the east of A447 Ashby Road in connection with roundabout access proposal and delivery of crossing points.
- Continuation through site of route T99 to link with Hereford Close.
- Resurfacing, lighting and re-grading slope of PRow T58 between SUE and Barwell centre.
- Route T58 through site to be provided alongside north-south inner spine road to connect to school.
- Rationalisation of U36 Leicestershire Round, and U37 in connection with Employment zone, and Leicestershire Round linkage to St Mary's Avenue & U44 via route between nos 12 and 20 Hinckley Road (within site)
- Signage along Barwell Lane and surface improvements between Hinckley and PRow U8.
- Surface improvement of PRow u9 between Barwell Lane and Leicester Road.
- Other improvements, including improved signage, gates and marker posts where necessary.
- Associated costs of preparing and implementing orders for diversions / stopping-up and re-classification as appropriate.

8. TRAVEL PLAN FRAMEWORK

- 8.1 The delivery of a robust package of travel plan measures to support the development is fundamental to the success of the proposals in achieving a sustainable form of development. Without a robust and targeted strategy in place, the development will fail to demonstrate that it can be accommodated on the local highway network without generating fundamental consequences in relation to congestion, road safety, noise, and air quality. This is an essential component of the CHA's Local Transport Plan (LTP3).
- 8.2 Such travel plans should seek to reduce travel by car and be backed up by a target-driven monitoring and reporting programme that will allow the effectiveness of the travel plan in changing travel behaviour to be assessed. It is suggested that such travel plans should also contain the requirement for penalty charges to be introduced where targets are not met.
- 8.3 The scale of the development proposed warrants a detailed and robust package of travel plan measures which will need to continually evolve as the development progresses over its build period, which may take up-to 15 years. Therefore this needs to be adaptable and timed effectively to coincide with the delivery of infrastructure. As expressed in previous chapters, the imposition of such measures from the outset is imperative to the success of the Travel Plan and the CHA would require this to be secured through a section 106 agreement.
- 8.4 The appointment of a Travel Plan Co-ordinator (TPC) is essential to the success of the Travel Plan in delivering its objectives. Without permanent governance, the risks are that the development will generate an unacceptable impact upon the local highway network resulting in the need for the developer to fund a greater amount of highway capacity infrastructure than may have been necessary where a robust travel plan has been implemented. The remit and responsibilities of the TPC will require to be confirmed within the s106 agreement, with confirmation of the level of staffing required to implement the framework.
- 8.5 There are six common themes which are required to form the basis of travel planning to, from and within the site. These themes will need to run consistently through each individual travel plan which forms a subsidiary component of the wider framework.
- **Analysis** – a review of existing facilities, establishing future requirements
 - **Targets** – establishment of desired modal shares through the life of the development
 - **Proposals** – Strategic and area-wide infrastructure and accessibility enhancements that contribute towards the reduction in travel and where travel is necessary, minimisation of single-occupancy car journeys.
 - **Design Principles** – Those features within the site that encourage movements by non-car modes
 - **Phasing** – Availability of the full range of travel options at every stage
 - **Monitoring / Review** – Management and surveys to test success of measures to include fall-back measures and penalties as required.
- 8.6 The applicant submitted a Framework Travel Plan (FTP) as part of the application. This was reviewed by CHA officers and detailed comments were submitted to the applicant, which are summarised below. The applicant submitted a replacement FTP with the Addendum TA in

February 2013. This replacement document addressed many of the initial concerns, however there are still a few outstanding issues; the present position is appended in italics below.

Policy Section – Requires updating to reflect current policy guidance. *This has been done.*

Walking / Cycling Distances – CHA officers query the assumption / guidance that specifies that 5km is considered to be an acceptable walking distance. This is clearly not viable for a large proportion of the population. *The applicant has agreed, the wording has been adjusted to cover other sustainable modes, and various walking and cycle improvements are proposed as mentioned in above sections.*

Targets – to be confirmed following further interrogation of LLITM. *The applicant has agreed, and further liaison will take place during the on-going s106 negotiations.*

Travel Plan Governance CHA officers welcome the suggestions for the appointment of a Travel Plan Co-ordinator (TPC) and Steering Group to engender liaison with TPCs for significant subsidiary developments. However, it is not confirmed how the lead developer will secure the collaboration of subsequent occupiers to comply. *The applicant has agreed, and further liaison will take place during the on-going s106 negotiations.*

Steering Group CHA officers concerned that the steering group will be voluntary so it could be ineffectual if any occupier chooses not to participate and it will be the lead developer that will face penalties if the targets are not met. *The applicant has confirmed this commitment and the wording of the replacement FTP has been adjusted accordingly.*

Residents' association the developer should encourage the development of a residents' association early in the development to co-ordinate residents' views and activities to best advantage in the interests of promoting sustainable travel options. *The applicant has confirmed this commitment and the wording of the replacement FTP has been adjusted accordingly.*

Homeworking further information required on what the lead developer is doing to secure high speed broadband/cable internet access to every home and business in the development. *The applicant has confirmed this commitment and the wording of the replacement FTP has been adjusted accordingly.*

Walking / Cycling links TP Coordinator's role to include liaison with the TPCs at all local schools to collaborate over promotion of safe and sustainable ways to travel to them from the new residential areas – to be included in the proposed Household Welcome Packs. *The applicant has confirmed this commitment and the wording of the replacement FTP has been adjusted accordingly.*

Public Transport CHA officers have a standard requirement for developments to offer free bus travel and personalised travel advice to residents and employees locating at the site. This shall be secured through any s106 agreement. *The applicant has acknowledged the CHA's comments and the item will be discussed at on-going s106 negotiations.*

Personalised Travel Planning (PTP) should be an essential component of the Travel Plan and the CHA would insist that a series of interviews are conducted with new residents to promote alternatives to car travel and establish key issues which have not already been considered. The implementation of PTP is something that the developer would be required to deliver through a separate agreement with a PTP provider. Alternatively, the CHA may consider undertaking this work via a financial contribution. *The applicant has acknowledged the CHA's comments and the item will be discussed at on-going s106 negotiations.*

Car Clubs - CHA officers accept to a certain extent that some car journeys are unavoidable. However, the ownership and running costs are proving to be restrictive to many sectors of the community. In keeping with the need for modal choice and the selective use of private car travel, the CHA recommend that the applicant obtains some form of market analysis by car club operators of whether the development would be able to support such a scheme. Such a measure has the opportunity for some areas of the site to require less car parking than may otherwise be needed in view of residents' propensity to use such a scheme. *The applicant has acknowledged the CHA's comments and the item will be discussed at on-going s106 negotiations.*

Electric Car charging points – the requirement for this infrastructure is established in page 35 of the NPPF. The incorporation of such facilities is considerably cheaper to implement as part of a development as opposed to retrospectively. *The applicant has acknowledged the CHA's comments and the item will be discussed at on-going s106 negotiations.*

Central Transport 'hub' - Essential to the success of sustainable transport is the ability for users to have access to information and support in a visible and central location. As part of the local centre, and possibly within the centre of Barwell itself the CHA would strongly recommend a unit being provided in close proximity to any public transport interchange that would be able to provide information and particularly in relation to cycling, have an incorporated cycle repair / stockist. *The applicant has acknowledged the CHA's comments and the item will be discussed at on-going s106 negotiations.*

9. CONDITIONS

9.1 Phasing Schedule (to be reviewed, updated and re-submitted, as required)

- a) Prior to the submission of any reserved matters application a Site Wide Phasing Programme shall be submitted to and approved in writing by the local planning authority. The Phasing Programme shall include details of the proposed sequence of development across the entire site, the extent and location of individual development phases including reference to the type and extent of any development envisaged in each phase, and a description.
- b) The Phasing Programme shall state when each of the following will be delivered:
- (1) Major internal infrastructure including internal roads, pedestrian and cycle crossings, footpaths, cycleways, services, Sustainable Urban Drainage Systems (SUDS) and the delivery of open space (confirming ownerships & responsibilities)
 - (2) Confirmation of the scope and timescale for the implementation of off-site highway infrastructure including highway improvements and where required the undertaking of Road Safety Audits, the progressing of Traffic Regulation Orders and other consultation processes.
 - (3) The delivery of public transport services and accompanying infrastructure within the site and external to the development to include but not be limited to: bus stops (within a maximum 400m walking distance of each dwelling within the development); bus shelters, bus prioritising measures at signalised junctions, Real Time Information, raised kerbs, lighting and timetable information.
 - (4) The submission of a timescale and mechanism for the stopping-up, diversion and re-classification of Public Rights of Way affected by the development, as necessary in agreement with the highway authority.
- c) The provision of all elements in the Phasing Programme shall be carried out in accordance with the approved Phasing Programme and the time triggers specified in it.

Reason: To provide clarification on how the development will be delivered to assist determination of reserved matters and to ensure that necessary infrastructure provision and environmental mitigation is provided in time to address the impact and needs of the development.

9.2 Review Mechanism

No development shall commence until a mechanism for the continual review of the transport impacts of the development have been submitted to and approved in writing by the Local Planning Authority.

Reason: To ensure that the development is appropriately mitigated against to ensure impacts are no worse at any time during the construction phase than at the completion of the development.

9.3 Ashby Road access T junction.

In accordance with the agreed Phasing Programme the Ashby Road Northern Access Junction shall be constructed as shown on drawing 25287-012-001F and available for use thereafter.

Reason: To ensure adequate and safe access for all modes of transport to the development.

9.4 Ashby Road access roundabout.

The Ashby Road Southern Access Roundabout shall be constructed as shown on drawing 25287-012-003C in accordance with the agreed Phasing Programme.

Reason: To ensure adequate and safe access for all modes of transport to and from the development.

9.5 Stapleton Lane access crossroads.

In accordance with the agreed Phasing Programme the Stapleton Lane Signalised Junction shall be constructed as shown on drawing 25287-012-005B and available for use thereafter.

Reason: To ensure adequate and safe access for all modes of transport to and from the development.

9.6 Stapleton Lane access T junction.

In accordance with the agreed Phasing Programme the Stapleton Lane Eastern Access Junction shall be constructed as shown on drawing 25287-012-002C and available for use thereafter.

Reason: To ensure adequate and safe access for all modes of transport to and from the development.

9.7 Stapleton Lane Improvements

Notwithstanding the details showing the footway and cycleway crossing points and widths and raised table on submitted drawings 25287-012-005B and 25287-012-002C, and all details on accompanying drawing 25287-012-004D, in accordance with the agreed Phasing Programme, a scheme shall be submitted to and approved in writing by the Local Planning Authority to provide and implement pedestrian and cycleways on both sides of the carriageway connecting Stapleton Lane / Ashby Road junction to the junction with Cumberland Way, including crossing points and traffic calming measures. The development shall thereafter be completed in accordance with the approved details.

Reason: To ensure adequate and safe access for all modes of transport to and from the development.

9.8 Ashby Road / Stapleton Lane junction.

Notwithstanding the details shown on submitted drawing 25287-012-006B, in accordance with the agreed Phasing Programme, a scheme shall be submitted to and approved in writing by the Local Planning Authority to provide and implement a signal-controlled junction at Ashby Road / Stapleton Lane with pedestrian and cycleway provision including crossing facilities and right turn lane from a southern direction. The development shall thereafter be completed in accordance with the approved details.

Reason: The details shown on the submitted plan are inadequate and not in accordance with the 6Cs Design Guide and to ensure adequate and safe access for all modes of transport to and from the development.

9.9 Ashby Road Improvements

Notwithstanding the details showing footway and cycleway crossing points, routes and widths and right turn lane submitted drawings 25287-012-001F and 25287-012-003C, and all details on accompanying drawings 25287-012-007A, 25287-012-008A and 25287-012-009A in accordance with the agreed Phasing Programme, a scheme shall be submitted to and approved in writing by the Local Planning Authority to provide and implement a continuous pedestrian and cycleway

including crossing points, connecting Main Street, Stapleton to the Ashby Road / Stapleton Lane junction, and between the Ashby Road / Normandy Way junction and the Ashby Road access roundabout. The development shall thereafter be completed in accordance with the approved details.

Reason: The details shown on the submitted plan are inadequate and not in accordance with the 6Cs Design Guide and to ensure adequate and safe access for all modes of transport to and from the development.

9.10 Ashby Road / Hinckley Road / Rogues Lane junction

Notwithstanding the details shown on submitted drawing 25287-012-013, in accordance with the agreed Phasing Programme, a scheme shall be submitted to and approved in writing by the Local Planning Authority to provide and implement a signal-controlled junction at Ashby Road / Hinckley Road / Rogues Lane with pedestrian and cycleway provision along the eastern side of Ashby Road including crossing facilities at the eastern Hinckley Road arm of the junction and right turn lanes from a northern and southern direction. The development shall thereafter be completed in accordance with the approved details.

Reason: The details shown on the submitted plan are inadequate and not in accordance with the 6Cs Design Guide and to ensure adequate and safe access for all modes of transport to and from the development.

9.11 Barwell Village Centre

Notwithstanding the details shown on drawing 25287-003-SK08, in accordance with the agreed Phasing Programme, a scheme shall be submitted and approved in writing by the LPA to provide and implement improvements to the junction of Malt Mill Bank / High Street / Chapel Street / Shilton Road to include pedestrian and cycle crossing facilities, amended bus stop locations, traffic calming measures and adjustments to existing street furniture. The development shall thereafter be completed in accordance with the approved details.

Reason: The details shown on the submitted plan are inadequate and to ensure adequate and safe access for all modes of transport to and from the development.

9.12 Public Transport; between site and Hinckley.

Notwithstanding the details submitted within the Transport Assessment, in accordance with the agreed Phasing Programme, a public transport scheme shall be submitted to and approved in writing by the Local Planning Authority to include full details of the proposed destinations, routes, days and hours of operation, frequency and duration of provision of a daily bus service to serve the development. The bus service shall be provided thereafter in accordance with the approved details.

Reason: To ensure high quality frequent public transport choice for all new residents from early occupation in order to encourage modal shift.

9.13 Design Standards

All details of the proposed development shall comply with the design standards of the Leicestershire County Council as contained in its current design standards document. Such details must include parking and turning facilities, access widths, gradients, surfacing, signing and lining (including that for cycleways and shared use footway/cycleways) and visibility splays and be submitted for approval by the Local Planning Authority before development commences.

Reason: To ensure a satisfactory form of development and in the interests of highway safety.

9.14 Number of dwellings permitted from a single point of access

No vehicular access serving any part of the development shall provide the sole means of vehicular access to more than 150 dwellings. After this a secondary point of access to the adopted highway network will be necessary.

Reason: To ensure a satisfactory pattern of development in conjunction with a sensible layout strategy that allows for adequate access by service, emergency and delivery vehicles.

9.15 Redundant Accesses

All existing vehicular accesses that become redundant as a result of this proposal shall be closed permanently and the existing vehicular crossings reinstated in accordance with a scheme that shall first have been submitted to and approved by the LPA in consultation with the Highway Authority within one month of the new access being brought into use.

Reason: To reduce the number of vehicular accesses to the site and consequently to reduce the number of potential conflict points.

9.16 Highway Free of Mud

For the period of the construction, the applicant shall take measures to ensure that the highway is kept free of mud, water, stones etc, in accordance with details that shall have first been approved in writing by the LPA.

Reason: To reduce the possibility of deleterious material (mud, stones etc) being deposited in the highway and becoming a hazard for road users.

9.17 Residential Travel Plan

In accordance with the agreed Phasing Programme, prior to the occupation of each phase a Residential Travel Plan, in accordance with the Framework Travel Plan, shall be submitted to and agreed in writing by the LPA. The measures approved shall thereafter be provided.

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

9.18 Employment Travel Plan

In accordance with the agreed Phasing Programme, prior to the occupation of each phase an Employment Travel Plan in accordance with the Framework Travel Plan, shall be submitted to and agreed in writing by the LPA. The measures approved shall thereafter be provided.

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

9.19 School Travel Plan

In accordance with the agreed Phasing Programme, prior to the occupation of each phase a school travel plan in accordance with the Framework Travel Plan, shall be submitted to and agreed in writing by the LPA. The measures approved shall thereafter be provided.

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

9.20 Submission of a Construction Environmental Management Plan for each phase of development

In accordance with the agreed Phasing Programme, no development shall take place within each phase of development, including any works of demolition, until a Construction Environmental Management Plan (CEMP) for that phase has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall set out the overall strategies for:

- i. The parking of vehicles of site operatives and visitors
- ii. Loading and unloading of plant and materials
- iii. Storage of plant and materials used in constructing the development
- iv. Location of Contractor compound(s)
- v. Screening and hoarding details
- vi. Wheel washing facilities
- vii. Measures to control the emission of dust and dirt during construction
- viii. Hours of operation - the details shall include the hours of construction and the hours for the loading/unloading of materials.
- ix. Construction noise and vibration strategy
- x. Earthworks and soil management strategy
- xi. Sustainable site waste management plan
- xii. The means of access and routing for demolition and construction traffic
- xiii. A construction travel plan
- xiv. Management of surface water run-off including details of any temporary localised flooding management system and a scheme to treat and remove suspended solids from surface water run-off during construction
- xv. The storage of fuel and chemicals
- xvi. The control of lighting

The approved CEMP shall be adhered to throughout the construction period for that phase of development to which it relates.

Reason: To ensure appropriate mitigation for the impacts caused by the construction phases of the development and to reflect the scale and nature of development assessed in the submitted Environmental Statement.

10. S106 OBLIGATIONS

To comply with Government guidance in the NPPF, the CIL Regulations 2011, and the County Council's Local Transport Plan 3, the following contributions would be required in the interests of mitigating the negative transport impacts of the development and encouraging sustainable travel to and from the site, achieving modal shift targets; and reducing car use.

10.1 Travel Plan (to be appended to the s106 agreement)

- a) Development shall not commence until details of a Travel Plan for the development as a whole has been submitted to and agreed in writing by the LPA (to be appended to the s106 agreement)
- b) The plan shall make provision for relevant surveys, review and monitoring mechanisms, targets, timescales, phasing programmes and on-site management responsibilities. It shall be implemented and subject to regular review in accordance with the above approved details.

10.2 Financial contributions to transport infrastructure

<u>Location</u>	<u>Infrastructure</u>	<u>Mechanism for Delivery</u>	<u>Timing of contribution</u>
A47 / A5 / Dodwells Road / Coventry Road junction	Widening of the circulatory carriageway to the south of the roundabout to provide for two east to west straight-ahead lanes with a dedicated third lane approach from the east for traffic turning to Dodwells Rd and Coventry Rd;	Proportionate financial contribution to LCC through s106 to design, consult on and implement a scheme of improvements that provides adequate mitigation of growth at Barwell and Earl Shilton	In accordance with an approved phasing programme (see 9.1)
A47 Dodwells Road, north of A5	Widening of the Dodwells Rd approach to two lanes for a distance of 200m to provide for increased capacity from this arm of the junction.		
A5 / A47 Long Shoot signalised T-junction	Widening of the A5 eastern approach to a 2 lane straight-ahead with a merge to one lane to the west of the junction;		
A5 between Long Shoot and Dodwells Rd	Widening of the A5 to provide a continuous two lane westbound carriageway between Dodwells Rd and The Longshoot, and a left turn filter lane into Longshoot.		
A47 Normandy Way / A447 Ashby Rd junction	Provision of a 100m widened southbound approach to include two approach lanes; Provision of a two-lane westbound exit from the junction; provision of a three lane northbound approach including a signal-controlled dedicated left turn lane; provision of a two lane exit to Normandy Way west and signal-controlled cycle and pedestrian crossing facilities		

<p>Travel Packs & Passes</p>	<p>Travel Packs; to inform new residents from first occupation what sustainable travel choices are in the surrounding area (can be supplied by LCC)</p> <p>6 month bus passes (2 application forms to be included in Travel Packs and funded by the developer); to encourage new residents to use bus services, to establish changes in travel behaviour from first occupation and promote usage of sustainable travel modes</p>	<p>Financial contribution to LCC through s106. Subject to a maximum equivalent to 20% pass take-up rate per tranche of housing.</p>	<p>In accordance with an approved phasing programme (see 9.1)</p>
<p>PRoW scheme(s)</p>	<p>Provision of a number of enhancements to the existing walking and cycling network [as listed below] to ensure that the development is fully served by high quality non-motorised routes to locations outside of the site.</p> <ul style="list-style-type: none"> • Diversion of route U35 to tie in with Stapleton Lane. • Surfacing improvements to U33 alongside cemetery to Adrian Drive. • Resurfacing, lighting and re-grading slope of PRoW T58 between SUE and Barwell centre. • Route T58 through site to be provided alongside north-south inner spine road to connect to school. • Minor works and signage along Barwell Lane and surface improvements between Hinckley and PRoW U8. • Surface improvement of PRoW U9 between Barwell Lane and Leicester Road. • Other improvements, including improved signage, gates and marker posts where necessary. • Associated costs of preparing and implementing orders for diversions / stopping-up and re-classification as appropriate. 	<p>Financial contribution to LCC through s106 to design, consult upon and implement a scheme of walking & cycling accessibility improvements</p>	<p>In accordance with an approved phasing programme (see 9.1)</p>

11. NOTES TO PLANNING OFFICER

In accordance with the agreed Phasing Programme, but prior to any development of the employment area. The CHA requests the submission and agreement of a design for the employment area that encompasses an internal road layout that does not prohibit the CHA implementing a highway link through to the existing Moat Way industrial estate at a future time. To ensure future adequate and safe access for traffic to the employment area and through into the existing Moat Way industrial estate.

12. NOTES TO APPLICANT

12.1 Alterations to the Highway

All works within the limits of the highway with regard to the access shall be carried out to the satisfaction of the Highways Manager- (telephone 0116 3050001)

12.2 Public Transport

The scheme for public transport shall include destinations between the development site, Barwell village centre, Hinckley town centre, Hinckley rail station and Earl Shilton; and also the development site and Nuneaton, Coventry and Leicester.

12.3 Design Standards

Your attention is drawn to the requirement contained in the Highway Authority's current design guide to provide Traffic Calming measures within the new development.

12.4 Residential Travel Plan

The plan shall comprise proposals to reduce car dependence and vehicle emissions and to establish and encourage the use of alternative transport modes for all journeys. Details of the proposals shall include measures to secure increases in car sharing, public transport use, cycling and walking, to promote alternative modes of travel to the site.

12.5 Employment Travel Plan

The plan shall comprise proposals to reduce car dependence and vehicle emissions and to establish and encourage the use of alternative transport modes for journeys to and from work and during working hours. Details of the proposals shall include measures to secure increases in car sharing, public transport use, cycling and walking, proposals for car parking restrictions and controls and details of on-site facilities to promote alternative modes of travel to the site.

12.6 Travel Plans - General

The Travel Plans shall make provision for relevant surveys, review and monitoring mechanisms, targets, timescales, phasing programmes and on-site management responsibilities. They shall be implemented and subject to regular review in accordance with the approved details.

The plan referred to shall, amongst other things, set out:

- (a) The details of the measures to be adopted;
- (b) The mechanism and timescale for implementing those measures;
- (c) The details of how the Travel Plan shall be kept under review to achieve continual improvement in the reduction in the number of car journeys to the school. This shall include a monitoring report to be submitted annually, on the anniversary of the approval of the Travel Plan, which shall set out:

i) Details of progress in implementing the plan;

ii) Details of any enhancement or additional measures or other amendments to be implemented in the light of the monitoring report;

iii) Details of how failures to implement the measures in the approved Travel Plan are to be remedied.

Any enhancements, additions or remedies as referred to in i) and ii) above shall have first been approved by the CHA before being implemented and thereafter shall form part of the approved Travel Plan.

12.7 Section 278 Agreement

The Developer will be required to enter into an agreement with the Highway Authority under Section 278 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 Section 278 Agreement must be signed and all fees paid and surety set in place before the highway works are commenced.

This planning permission does NOT allow you to carry out access alterations in the highway. Before such work can begin, separate permits or agreements will be required under the Highways Act 1980 from either the Adoptions team (for 'major' accesses) or the Highways Manager. For further information, including contact details, you are advised to visit the County Council website as follows: - For 'major' accesses - see Part 6 of the "6Cs Design Guide" (Htd) at www.leics.gov.uk/Htd. For other minor, domestic accesses, contact the Service Centre Tel: 0116 3050001.

12.8 Highway Trees

In order to provide the visibility splays/access shown on the submitted plans, it would be necessary to remove/carry out works to trees within the limits of the Highway but before any works to the trees are commenced you must first obtain the separate consent of the Highway Authority. If approval is granted, you will be required to provide appropriate replacement trees.

12.9 Structures

All highway related structures, must be designed and constructed in accordance with the current relevant Highways Agency standards, codes of practice and technical memoranda. The design will be subject to the technical-approval procedure set out in BD 2/05 "Technical Approval of Highway Structures" which is part of the 'Design Manual for Roads and Bridges' that can be found on www.standardsforhighways.co.uk. You must employ a chartered civil or structural engineer with experience in highway structures and approved by the County Council to carry out the design and oversee construction. You should start this approval process at an early stage to avoid delays in completing the Section 38 road adoption agreement, which may delay site works.

Highway related structures will normally include bridges, retaining walls, reinforced soil and anchored earth structures, environmental barriers (including noise barriers and fencing) and all drains, piped and box culverts, sewers and drainage structures, other than bridges, that have a diameter or clear span of more than 900mm. There should be discussion at an early stage to agree which structures we are to adopt. You will have to pay the additional design checking and inspection fees for any highway structure. You must also pay a commuted sum for future maintenance of any highway structure to be adopted.

Separate consent may also be required under Section 177 of the Highways Act 1980 for any structures / sign over the highway and the Highways Manager should be contacted - (telephone 0116 3050001)

12.10 Adoption of New Highway

If the roads within the proposed development are to be adopted by the Highway Authority, the Developer will be required to enter into an agreement under Section 38 of the Highways Act 1980 for the adoption of the roads. Detailed plans will need to be submitted and approved, the agreement signed and all sureties and fees paid prior to the commencement of development. If an Agreement is not in place when the development is to be commenced, the Highway Authority will serve APCs in respect of all plots served by all the roads within the development in accordance with Section 219 of the Highways Act 1980. Payment of the charge MUST be made before building commences.

If the applicants do not wish to seek adoption of the roads, the Highway Authority will serve APCs in respect of all plots served by all the roads within the development in accordance with Section 219 of the Highways Act 1980. Payment of the charge MUST be made before building commences. Please note that the Highway Authority has standards for private roads which will need to be complied with to ensure that the APC may be exempted and the monies returned. Failure to comply with these standards will mean that monies cannot be refunded. For further details see www.leics.gov.uk/htd or phone 0116 3057198.

12.11 Traffic Calming

Your attention is drawn to the requirement contained in the Highway Authority's design document to provide Traffic Calming measures within the new development.

12.12 Footpaths / Bridleways

Several public footpaths / bridleways cross the site and must not be obstructed or diverted without obtaining separate consent from Leicestershire County Council.

12.13 Street Furniture / Lighting

Any street furniture or lining that requires relocation or alteration shall be carried out entirely at the expense of the applicant, who shall first obtain the separate consent of the Highway Authority.

12.14 Temporary Signage

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 Highway 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 Highway Managers' staff (tel: 0116 3050001) will be happy to give informal advice concerning the number of signs and the locations where they are likely to be acceptable. This will reduce the amount of your abortive sign design work.

Date Received	Inspector	Signed Off
13 April 2012	Laurence Fallon	15 April 2013