12 Oxford Street
Nottingham
NG1 5BG
T: 0115 840 2227
F: 0115 840 2228
info@bsp-consulting.co.uk
www.bsp-consulting.co.uk

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Your Ref: 11/00758/OUT

Nottinghamshire County Council
Trent Bridge House
Fox Road
West Bridgford
Nottingham
NG12 6BJ

For the attention of Mr. Vince Mandeir **BY POST AND EMAIL**

Dear Vince

Re: Proposed Residential Development – Field Farm, Stapleford

With reference to the work that has been undertaken as requested in response to comments from Nottinghamshire County Council (NCC), as the local highway authority, and the Highways Agency (HA)/AECOM on the Transport Assessment and Travel Plan submitted alongside the outline planning application for the above proposals, we are writing to confirm our current position and proposals.

The original Transport Assessment (TA) was based upon the agreed scope of work set out in four scoping notes and appendices dated 23.09.10, 07.10.10, 10.03.11, 11.03.11 which were sent to the HA, NCC, Nottingham City Council, and Derbyshire County Council, and a scoping meeting with NCC on 30.09.10. The planning application was registered on 30.11.11 and consultation comments were provided to the planning officer at Broxtowe Borough Council (BBC) from the HA/AECOM (25.01.12) and NCC (03.02.12). We have continued to work in liaison with NCC and the HA/AECOM to address these and subsequent comments and requests for additional work in a series of Technical Notes (TN01-04). As set out in the National Planning Policy Framework, **"development should only be prevented or refused on transport grounds where the cumulative impacts of development are severe"** (paragraph 32) and it is considered that the transport assessment work completed to date adequately demonstrates the impact of the proposed residential development at Field Farm is **not** severe, and there are potential improvements to the highway and transport network that will further limit the significance of any impact from the development.

Each of the following sections (A-F) sets out our position on the key junctions and the Travel Plan. It should be noted that all of the traffic impact assessment work in the original Transport Assessment, and all subsequent work, considers a residential development of up to 500 dwellings at Field Farm. However, the outline planning application is for up to 450 dwellings, and therefore all of the trip generation figures and traffic impact assessment results are very robust.

A) Bramcote Island

As agreed with NCC and the HA/AECOM, we originally considered Bramcote Island within the SATURN transport model work completed using the Greater Nottingham Multi-Modal Transport Model (GNMMTM). This provided the following outputs in terms of additional traffic at the junction in the assessment year (2026) (see Table 1 overleaf).

The impact of the development equates to up to an additional 1% of the traffic flowing through the junction, with 59 extra PCUs (passenger carrier units, 1 car = 1 PCU) during the AM peak hour and 52

PCU's during the PM peak hour, compared to base flows of over 6000 PCUs during each of the peak hours.

Table 1: Net and Percentage Increase in PCUs at Bramcote Island

Junction	AM				PM			
	Total Flow (PCUs)		Net Traffic Impact	% Impact	Total Flow (PCUs)		Net Traffic Impact	% Impact
	Ref Case	With Dev			Ref Case	With Dev		
A52 / A6007 Ilkeston Rd /Derby Rd /Town St GNMMTM	6192	6251	59	1.0	6514	6566	52	0.8

Nonetheless, the HA/AECOM requested in their consultation response (25.01.12) that we completed a standalone assessment of the junction using LinSig or TranSYT (not VISSIM) of the complex signalised roundabout junction. We initially set out evidence to argue that this additional work was unnecessary and contradicted some of their previous comments, but the request was re-iterated. We then completed some of the preliminary work and agreed the methodology for the assessment work in Scoping Note 05 (14.03.12). The LinSig model considered the GNMMTM results, plus two additional 'with development' scenarios assuming no re-assignment of existing traffic with a select link analysis (SLA) and re-distribution of development traffic using a census distribution model. All of the above work, set out in TN01 (14.06.12), demonstrated that the impact of the proposed residential development at the junction was minimal in comparison to the 'reference case', and the impact was certainly **not** severe.

Extract from TN01:

The use of the GNMMTM (as required by the HA and NCC) demonstrates that the affect of the development traffic has as negligible impact on the 'reference case' PRC and MMQ for the junction in the AM peak hour, and a positive effect in the PM peak hour.

In considering the results of the worst case 'with development' scenarios calculated using alternative methods with no re-assignment of existing traffic, the capacity assessment results show no significant detriment to the operation of the junction, with minor differences, and some improvements on critical arms.

Despite these conclusions, NCC required us to use another computer programme to produce a VISSIM model of the junction for further assessment to be undertaken. This work was completed and submitted on 10.07.12. The results of all the assessment work at this junction were also set out in TN03 (17.07.12) and discussed in a highways meeting with NCC and the HA/AECOM (also attended by BBC) on 20.07.12.

A number of tweaks to the VISSIM base model were suggested in order to more accurately reflect the existing situation, especially if the model was to be used to test further scenarios (not required by the developer). This includes NCC's suggestion to add the signal junction to the east (A52/Thorseby Road) which they have observed to occasionally generate queues back towards Bramcote Island during the AM peak hour. This would involve adding coding to reflect detailed observations we would need to undertake at this junction. It was not previously suggested that this junction should be included as part of the VISSIM model, or that its impact on the operation of Bramcote Island should be monitored.

However, it was acknowledged that the video outputs from the VISSIM work completed demonstrated that the impact of the development when considered against the 'reference case' was **not** severe. It was also acknowledged that NCC and the HA/AECOM would not request physical improvements at this junction. It

was discussed that the only likely request to mitigate impact at this junction would be a contribution towards re-optimising the MOVA settings at the junction, which occurs periodically in any case (due in 2013 and at 3 yearly intervals).

In conclusion, the impact of the development at this junction is demonstrated by various methods to **not** be severe, and would not require physical mitigation measures to be proposed. Therefore it is not considered necessary to complete further work on the VISSIM assessment to ultimately come to the same conclusion.

B) Ilkeston Road/Trowell Road/Pasture Road (mini-roundabout)

The net and percentage impact at this junction was not considered necessary to complete further capacity assessment work. (It should be noted that the minus figures in the PM peak hour is a result of the re-assignment/re-routing of traffic predicted by the GNMMTM.)

Table 2: Net and Percentage Increase in PCUs at Ilkeston Road/Trowell Road/Pasture Road

Junction	AM				PM			
	Total Flow (PCUs)		Net Traffic Impact	% Impact	Total Flow (PCUs)		Net Traffic Impact	% Impact
	Ref Case	With Dev			Ref Case	With Dev		
A6007 Ilkeston Rd / Trowell Rd / B6003 Pasture Rd	1677	1733	56	3.3	1832	1825	-7	-0.4

However, in response to NCC's requirements (initial comments 03.02.12, queried by BSP 29.02.12, confirmed by NCC 04.04.12) an ARCADY assessment was completed. The results were set out in TN03 (17.07.12) confirmed that there was very little impact, and therefore it was concluded that no mitigation measures were necessary. Nonetheless, NCC requested that capacity improvements to the Trowell Road approach were investigated. Further work was completed to design and test junction improvements and submitted in TN04 (17.08.12). If considered necessary by BBC/NCC, the scheme presented in TN04 as illustrated on drawing 10172/011 more than mitigates the development traffic on Trowell Road and other arms of the junction, and the developer would be willing to make a contribution towards these improvements.

C) Ilkeston Road/Coventry Lane/Hickings Lane (double mini-roundabouts)

We carried out an assessment of the double mini roundabout junction using ARCADY and proposed a set of mitigation measures in the original Transport Assessment. The design of the junction improvements were adjusted and re-assessed following comments from NCC (03.02.12), and later adjusted further following additional comments from NCC on the layout and modelling settings (02.08.12).

The capacity results with the potential improvements at the Hickings Lane roundabout illustrated on drawing 10172/006 Rev C, indicate a reduction in potential queuing towards the site on Ilkeston Road W in the AM peak hour, and a reduction in the PM peak hour to below the 'reference case'. There are no other negative effects in the AM peak hour, except for Hickings Lane. In the PM peak hour the RFC and max queue length increases on Coventry Lane and Ilkeston Road E at the Coventry Lane roundabout, however there is a positive effect on the Ilkeston Road W and Hickings Lane arms of the Hickings Lane roundabout.

In conclusion, the suggested improvements at the junction go a considerable way to fully mitigating the impact of the development, on nearly all arms of the complex junction, and there are also potential improvements offering an overall benefit elsewhere, e.g. Trowell Road. If required by BBC/NCC the

developer could look to provide the mitigation scheme already tested or provide a contribution towards a more comprehensive junction upgrade to incorporate signal control, as intimated may be a future option considered by NCC as part of the aligned core strategy LDF traffic modelling work.

D) Signalised Junctions – Balloon Woods and B5010 Derby Rd/Nottm Rd/Toton Ln/Church St, in Stapleford

The net and percentage impact at these two junctions were not considered necessary to complete further capacity assessment work. (It should be noted that the minus figures in the PM peak hour through the signal controlled junction in the centre of Stapleford is a result of the re-assignment/re-routing of traffic predicted by the GNMMTM.)

Table 3: Net and Percentage Increase in PCUs at Balloon Woods Signalised Junction

Junction	AM				PM			
	Total Flow (PCUs)		Net Traffic Impact	% Impact	Total Flow (PCUs)		Net Traffic Impact	% Impact
	Ref Case	With Dev			Ref Case	With Dev		
A6002 Coventry Ln / A609 Nottm Rd/ Wollaton Vale	3748	3793	45	1.2	3799	3865	66	1.7
B5010 Derby Rd / Nottm Rd / B6003 Toton Ln / Church St	1660	1714	54	3.3	1657	1642	-15	-0.9

Despite the above evidence, NCC required that LinSig assessments were completed, and the results were submitted to NCC in TN03 on 17.07.12. NCC required a few tweaks to the models and traffic flows added to the GNMMTM traffic flow matrices in order to provide a more robust assessment. A written response was sent to NCC in TN04 on 17.08.12 to explain why the amendments were not considered necessary. NCC re-issued very similar comments and therefore, although we considered this work unnecessary, it has now been completed and in any case the conclusions remain the same. The new LinSig results are summarised below.

Table 4: LINSIG Results – Balloon Woods

Scenario	AM					PM				
	Cycle Time (s)	PRC (%)	Total Delay (pcuHr)	Max Deg Sat (%)	Mean Max Queue (PCU)	Cycle Time (s)	PRC (%)	Total Delay (pcuHr)	Max Deg Sat (%)	Mean Max Queue (PCU)
2026 Ref Case	90	-0.9	60.6	90.8	13.6	120	-12.0	98.5	100.8	32
2026 With Dev	90	-0.9	60.8	90.8	13.6	120	-17.7	129.2	105.9	43.7
2026 With Dev +Imp	90	-0.7	58.2	88.4	12.4	120	-10.6	88.9	99.4	22.2

In summary, there is spare capacity in the AM peak hour with no real impact, but a capacity issue in the PM peak hour and therefore the 'with development' scenario is shown to have an impact. The suggested amendments to the junction layout (illustrated on the attached sketch) have a slight benefit in the AM peak hour, but this already has spare capacity. In the PM peak hour, the PRC, total delay, maximum degree of

saturation and queue length are all improved with the road widening scheme, to give better results than the reference case scenario. Therefore, the proposals go beyond mitigating the impact of the development.

Table 5: LINSIG Results - B5010 Derby Rd/Nottm Rd/Toton Ln/Church St in Stapleford

Scenario	AM					PM				
	Cycle Time (s)	PRC (%)	Total Delay (pcuHr)	Max Deg Sat (%)	Mean Max Queue (PCU)	Cycle Time (s)	PRC (%)	Total Delay (pcuHr)	Max Deg Sat (%)	Mean Max Queue (PCU)
2026 Ref Case	80	3.6	17.2	86.9	12.8	80	12.2	17.3	80.2	11.1
2026 With Dev	80	2.4	19.1	87.9	13.0	80	8.5	18.2	82.9	11.6

The maximum DoS remains below the 90% threshold for both peak hours, even with the development traffic, and the overall PRC for the junction is positive. Therefore, the results demonstrate that the junction as a whole operates well within capacity with the proposed development traffic in both the AM and PM peaks. Therefore, mitigation measures are not considered necessary at this junction.

E) Access Junctions

NCC made some comments on the proposed site access arrangements in their consultation response (03.02.12). Most of these comments were addressed in TN02 (14.06.12), and the current proposals illustrated on drawing 10172/004E have been designed in accordance with current design guidance and are considered acceptable. The junction designs have also been tested in terms of capacity and the results demonstrated that they should operate well. Therefore, it is not considered necessary to provide a back-to-back right turn lane facility for the western access and Melbourne Road junctions, or to provide a two lane exit at the eastern site access junction. The results of this work are also provided in TN02 (14.06.12).

F) Travel Plan

The Travel Plan will form part of the Section 106 agreement, and the detailed Travel Plan will be updated and implemented through this process. The timings for various action points will be linked to the phasing of the development build out, and therefore will need to be agreed with BCC/NCC at the reserved matters stage.

The Travel Plan includes for the following:

- Provision of pedestrian/cycle routes within the site
- Provision of internal road layout with design speed of 20mph or less (except loop road designed to be suitable as a bus route)
- Provision of loop road within the site designed to be suitable for future use by buses should operators consider this be a commercially viable (it is not considered necessary to divert a bus service into the site, as 87% of the site will be within 400m of a bus route for an existing service*)
- Provision of pedestrian/cycle links between the site and the existing network
- Provision of a shared pedestrian/cycle route from the site to existing facilities at the Ilkeston Road/Coventry Lane junction
- Provision of a suitable level of car parking
- Promotion of the Travel Plan and sustainable transport modes to prospective residents
- Produce and distribute Travel Information Packs to residents (including walking, cycling, public transport and car sharing information)
- Offer residents taster tickets/travel cards to use public transport

*The Institute of Highways and Transportation's *Guidelines for Planning for Public Transport in Developments* (IHT 1999) states that the recommended 400m is to be 'treated as guidance' and that it is 'more important to provide services that are easy for passengers to understand and attractive to use than to achieve slavish adherence to some arbitrary criteria for walking distance'.

Summary

Technical Notes 01-04 and the revised Travel Plan reflect the National Planning Policy Framework (NPPF), which was introduced in March 2012, after the submission of the planning application (30.11.11) and accompanying Transport Assessment and Travel Plan.

In accordance with paragraph 32 of the NPPF, **it is considered that the original Transport Assessment, Travel Plan and subsequent transport assessment work adequately demonstrates that the impact of the proposed residential development at Field Farm is not severe**, opportunities to encourage the use of sustainable modes of transport have been taken up, safe and suitable access to the site can be achieved for all people and there are potential improvements to the highway and transport network that will further limit the significance of any impact from the development. In light of the above, it is concluded that no further transport assessment work is considered necessary and that the development should not be prevented or refused on transport grounds.

Yours sincerely

For and on behalf of BSP Consulting

Mark Rayers **BSc(Hons) CMILT MCIHT**
Director
m.rayers@bsp-consulting.co.uk

Enc. Drawing 10172//011– Ilkeston Rd / Trowell Rd / Pasture Rd Junction Improvements
Drawing 10172/006C – Hickings Ln Junction Improvements
Sketch – Balloon Woods Junction Improvements
Drawing 10172/004E – Site Access Arrangements

Cc. Mr Graham Broome – HA
Mr Steve Dance – BBC
Mr Robert Westerman – Westerman Homes Ltd