Aldershot Urban Extension

Technical Note 16 – Surrey County Council Response to Comments

Job Title	Aldershot Urban Extension
Client	Grainger Plc
Project Number	11570364
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Version	1
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1.1 INTRODUCTION

This Technical Note has been prepared to provide SCC with additional information on the development impacts on key links and junctions located within their county. A meeting between SCC and WSP was held on the 7 May 2013 to discuss SCC's comments on the AUE Transport Assessment (TA) and potential solutions as set out within the meeting notes contained within **Appendix A**.

SCC requested that WSP provide a note identifying the impacts of the Wellesley development of a number of locations and whether any solutions were available. These include;

- Shepard and Flock Roundabout;
- A31 Hinkley's Corner; and
- Lakeside Road Access / B3411 Ash Hill Road Junction

1.2 SHEPARD AND FLOCK ROUNDABOUT

1.2.1 The Shepard and Flock roundabout is a large gyratory located south of the Wellesley development linking the A325 with the A31. To identify the development impacts on this junction both the Do Minimum and Do something traffic flows are presented within Table 1 below.

1.2.2 Table 1 – 2026 Traffic flows at Shepard and Flock Roundabout

	2026 AM Do Minimum	2026 PM Do Minimum	2026 AM Do Something	2026 PM Do Something	AM Difference	PM Difference
A325 Southbound	1633	1735	1514	1785	-119	50
A31 Westbound	2620	2500	2610	2561	-10	61
A31 Northbound	2044	2147	1991	2144	-53	-3
A325 Eastbound	159	145	174	162	15	17
Total	6456	6527	6289	6652	**-247**	**125**

1.2.3 The traffic flows identified in Table 1 indicate that across the junction there will be a reduction of 247 in the morning peak hour and an increase of 125 vehicles in the evening peak hour (an increase of approximately 1.9%). The traffic flows have identified that across the junction in the peak hour, a minimal change in flow is anticipated and as such the proposed development will have minimal impact upon the junction as a whole.

1.3 A31 HINKLEY'S CORNER

1.3.1 The A31 Hinckley's Corner is an existing 4 armed signalised junction located to the south of the A31 to the south west of the Wellesley development. Table 2 below identifies the change in traffic flow associated with the Wellesley development for a 2026 forecast year.

Table 2 – 2026 Traffic flows at Hickley's Corner

	2026 AM Do Minimum	2026 PM Do Minimum	2026 AM Do Something	2026 PM Do Something	AM Difference	PM Difference
B3001 Eastbound	816	697	825	589	9	-108
A31 Southbound	2072	2054	2014	2231	-58	177
B3001 Eastbound	1012	1027	1011	924	-1	-103
A31 Northbound	2353	2216	2349	2272	-4	56
Total	6253	5994	6199	6016	**-54**	**22**

1.3.2 The traffic flows identified in Table 2 indicate that across the junction there will be a reduction of 54 in the morning peak hour and a small increase of 22 vehicles in the evening peak hour. The traffic flows have identified that across the junction in the peak hour, a minimal change in flow is anticipated. Notwithstanding this, the A31 southbound does see an increase of 177 vehicles in the PM Peak hour. However, further review of the model output data has shown that due to the reductions on other arms, the A31 Southbound approach reduces from a V/C of 93.17 in the Do minimum to 86.55 in the Do Something. As such, it is considered that the proposed development will have minimal impact upon the junction as a whole.

1.4 LAKESIDE ROAD

1.4.1 The SATURN model identified Lakeside Road and a number of the existing junctions along this corridor as key constraints. Lakeside Road has a number of traffic calming measures along it which have been taken into account in the SATURN model by applying speed-flow curves with low saturation flows and speeds as a proxy for the reduced capacity caused by the traffic calming. This works effectively, as the model closely replicates observed flows in this area. The reduced capacity applied to these links means that capacity at junctions will be similarly constrained, reporting a high V/C ratio. However, this does not mean that the junctions themselves are failing, and a detailed junction assessment will provide very different results.

1.4.2 It should be noted that a strategic traffic model is not capable of modelling the specific impact of particular measures, such as the wide range of speeds along a link with speed bumps, discomfort of travelling over the bumps, or the priority given to eastbound traffic at the railway bridge. Route choice is a function of distance and time, and Lakeside Road would be an attractive route without the restrictions, so restricted speed-flow curves are used as the best representation of the measures to deter traffic from this route.

1.4.3 To indicate this, WSP undertook assessments of Lakeside Road / Old Farm Place and Lakeside Road / Government Road / Hollybush Lane to show that whilst the model identifies a constraint, in reality the existing arrangement can in fact cope with the traffic. The results were contained within the TA but have been reproduced below for clarification.

Table 3 - Lakeside Road / Old Farm Place 2026 Do-Something Junction Assessment (ARCADY Results)

2026 Do-Something Assessment				
Arm	Weekday AM Peak		Weekday PM Peak	
	RFC	MMQ	RFC	MMQ
Old Farm Place	0.429	1	0.154	1
Lakeside Road (E)	0.606	2	0.526	2
Lakeside Road (W)	0.311	1	0.454	1

Table 4 - Lakeside Road / Government Road / Hollybush Lane 2026 Do-Something Junction Assessment (ARCADY Results)

2026 Do-Something Assessment				
Arm	Weekday AM Peak		Weekday PM Peak	
	RFC	MMQ	RFC	MMQ
Hollybush Lane	0.028	0	0.097	1
Lakeside Road	0.584	2	0.352	1
Government Road	0.401	1	0.442	1

1.4.4 As can be seen in both ARCADY assessments, the existing arrangement can in fact accommodate the proposed traffic generation.

1.4.5 The junction materially affected by the development however is the Lakeside Road / Vale Road which has seen an increase in traffic. The results have shown an increase in V/C on Vale Road (E) to close to capacity (99.5%), albeit there has also been a decrease in both peak hours due to the development on Lakeside Road and the whole junction still works below its theoretical capacity.

1.4.6 To highlight the change in flow at this junction the Do Minimum and Do Something traffic flows are provided within Table 5.

Table 5 – 2026 Traffic flows approaching Lakeside Road / Vale Road

	2026 AM Do Minimum	2026 PM Do Minimum	2026 AM Do Something	2026 PM Do Something	AM Difference	PM Difference
Vale Road Southbound	568	558	549	537	-19	-22
Vale Road Northbound	970	979	1038	1061	68	112
Lakeside Road	431	383	406	367	-25	-16
Total	1969	1920	1993	1965	**24**	**74**

1.4.7 The flows indicate that across the junction there will be a small increase in traffic, notwithstanding this, there is a significant increase along Vale Road which causes the increase in delay at the approach. However, Vale Road to the north will see significant reductions in 2-way traffic flows with vehicles now using Lakeside Road to access the A331 on-slip instead of heading north towards Lynchford Road. As Vale road has more residential dwellings fronting the road the reduction along this route compared to the small increase on Lakeside Road (which is only contains residential dwellings on one side) will provide an overall benefit to the area.

1.4.8 The same issue is identified further west at the B3411 Ash Hill Road junction which also sees an increase in a westbound movement heading towards the new on-slip. The V/C capacity outputs for the B3411 Ash Road junction is shown below in Table 6 below.

Table 6 – Junction V/C for the B3411 Ash Hill road roundabout

Junction	Junction Arm	DM AM	DS AM	DM PM	DS PM
B3411 Ash Hill Road / B3206 Shawfield Road / B3411 Vale Road / Wharf Road	B3411 Ash Hill Road	74.43	79.67	90.43	98.7
	B3411 Vale Road	46.15	52.08	43.13	51.47
	Wharf Road	36.2	40.1	30.69	35.09
	B3206 Shawfield Road	70.84	72.83	55.53	63.55

1.4.9 The VC output results indicate that whilst there will be an increase in traffic along the B3411 Ash Hill Road in an westbound direction, the junction will still be below its theoretical capacity of 100%.

1.4.10 In reality due to the traffic calming along Lakeside Road, the traffic is expected to be lower than that shown in the modelling. As identified, the junction is approaching capacity in the future Do Something scenario. Improvements have been considered but the impact of providing any increased capacity in this area would only further attract traffic through Ash and the surrounding villages. On review of this, it was considered most appropriate to maintain the current arrangement and not provide the additional capacity which will attract additional vehicles wanting to access the new A331 On-slip.

Appendix A – Notes of Meeting with SCC from 7th May 2013

Blacker, Andrew

From: Michelle Edser <michelle.edser@surreycc.gov.uk>
Sent: 07 May 2013 17:28
To: Blacker, Andrew
Cc: mike.green@surreycc.gov.uk
Subject: Re: Wellesley: SCC Meeting 7 May 2013

Hi Andrew

Thank you for your prompt responses, from an initial look this appears to be the way forward as we agreed at the meeting. I will come back to you in detail once I have had chance to review the attachments fully. One of the key items for us will be the "difference plots" which I note will be produced shortly, we will then have a clearer picture of the impacts on SCC's network.

I intend to look at this on Friday as I am out of the office for the next couple of days so no panic for tomorrow morning on my account.

Kind regards
Michelle

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From: "Blacker, Andrew" <Andrew.Blacker@WSPGroup.com>
To: "Michelle Edser (michelle.edser@surreycc.gov.uk)" <michelle.edser@surreycc.gov.uk>,
Cc: "mike.green@surreycc.gov.uk" <mike.green@surreycc.gov.uk>
Date: 07/05/2013 17:03
Subject: Wellesley: SCC Meeting 7 May 2013

Hi Michelle, please see my comments below.

I have yet to issue these to Grainger and others and will wait until you have provided comments on my notes before doing so.

Many thanks
Andrew

Modelling Scenario
We understand the request for an additional modelling scenario to show the network without mitigation, however, it is my opinion that adding the proposed development trips of 2053 and 1563 in the morning and evening peak hours respectively will cause the modelled network to fail. Because of the likely effect of this we only considered a with development (including

mitigation) in the forecast year of 2026.

Our current work which we started today is looking at potential trigger points for the highway capacity mitigation measures. This work is using a forecast year of 2018 and removes the A331 on-slip but keeps the A325 improvements. We are hoping to use this work to determine the optimum point to build the A331 On-Slip and agree this with Grainger/HCC.

Personal Injury Accidents
We agreed to hold off undertaking any further work in this area until SCC had time to consider the which junctions were most affected.

Paragraph 5.1.3 Addition Trip Generation from non-Residential Land Uses
Please refer to Appendix F Trip Generation Technical Note 01 Section 6 which includes non-residential trip generation

Trip Generation – The Trip Generation Technical Note (TN1)
The trip generation note appended to the TA recorded a methodology and for both Residential Trip Gen and Non-Residential Trip Gen. After the draft submission of the TA in August 2012 HCC/SCC raised concerns over the rates being derived. Following comments from HCC it was agreed in correspondence with HCC on 9th October 2012 that a rate agreeable to HCC would be used to allow the model work to continue. A copy of the correspondence between WSP and HCC has been included in Appendix F.

Trip Distribution and Assignment (TN2)
HCC have agreed the Trip Distribution – the attached note was issue to HCC following post application comments.

Committed Development and Infrastructure
We confirm that Whitehill/Bordon has been included in the modelling assessment, I note of this can be seen in Section 9 of the TA under Para 9.1.1 8th Bullet point.

Impact Assessment Methodology, Traffic Impact and Phase 1 (Steve Howard)

11.4.6 V/C 100%
The rationale for saturation criteria was proposed by WSP as a mechanism to identify key network locations. It was considered that if 85% was used this would potentially trigger all junctions and therefore some junctions that required a more detailed assessment or consideration might be lost.

A31 Farnham Bypass/Weydon Lane (see 11.4.14) The remaining junctions require WSP to provide commentary regarding signals or the potential effect of providing additional capacity in these parts of the network.

Forecast Plots showing the DM 2026 and DS 2026 together with difference plots for the DS/DM 2026 will be provided to help understand the impacts across the modelled network. *(difference plots will be ready tomorrow morning).*

Comments on Forecasting Report
HCC have now agreed the forecasting methodology. At the end of November 2012 HCC and Halcrow visited our offices and reviewed the traffic model with our engineers, a number of actions followed this meeting. Technical Note 6 attached provides WSP's responses to HCC which have now been accepted.

Basingstoke Canal
I have spoken to Jonathon Steele of Savils to check this is being dealt with within the Grainger Team, SCC agreed to follow this up with RBC too.

ACTIONS
AB to provide relevant recent material issued to HCC to SCC - Complete
WSP to provide a paper which looks at impacts on A325 within SCC to the A31 including Shepherd and Flock rbt, and Lakeside Road corridor to the west.[attachment "Tech Note 6 Responses to HCC_130325_wAppendices.pdf" deleted by Michelle Edser/EAI/SCC]

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