

# Hallam Developments 21/04275/OUT: Transport and Access Assessments

## Analysis by *Elmsbrook Residents' Traffic & Parking Group*, February-March 2022

### Executive Summary

Elmsbrook Residents wish to support the continued build-out of NW Bicester Ecotown, providing new eco-homes, green spaces and local facilities. However, this **must** be done to meet planning/eco standards and in a manner which does not impact adversely on Bucknell Village or the existing Elmsbrook Phases 1-4. These requirements are equally true for the Outline plans for Firethorn (to which our Group, OCC and 90+ residents have all recently Objected on traffic grounds) and also for Hawkwell Village (referred to as "Hallam development" in the rest of this document).

**When it comes to the Transport Assessment and Traffic Impact Analysis alone, there are several issues which require us to Object to this aspect of the planning *as it stands*** – these need to be addressed in order to meet the requirements of the National Planning Policy Framework: our reasoning is explained below. The key issues are:

- The Transport Assessment's trip simulation has been carried out using the Bicester Traffic Model (BTM), 2014 – this is apparently what the assessor/developer was instructed to use by OCC. However, with the passage of time and the recent change in circumstance regarding the Strategic Link Road progress/funding, OCC has stated in responses to two other Ecotown planning applications (on 7 Dec 2021, and 4 Jan 2022 – i.e. within the last few months, at time of writing) that the BTM (2014) is "no longer considered by OCC to be a reliable method..." – and it would seem logical that the same will also be true for 21/04275/OUT.
- The paragraph/section regarding the potential direct road connection between the proposed 3100 home road network and Elmsbrook Phase 2, via Cranberry Avenue (outside the school) appears to be incomplete – and not just the paragraph ending abruptly with "and" – possibly implying an omitted sentence? There is no attempt to describe how or when this would happen, nor what restrictions (if any) might apply.
- Furthermore, there is no attempt to assess the traffic impact of making this potential connection. It is already known that the school area of Elmsbrook Phase 2 is critical in terms of traffic congestion during the 8-9 AM peak hour – and this is without the addition of either the Firethorn development or this possible significant additional connection. These need considering properly, the traffic levels predicted using the best currently known data, and the impact analysis must be done in tandem with the Firethorn development.
- There is no junction analysis, nor is there any modelling to show the interaction of the 3x A4095 junctions (with or without the interaction with the 4<sup>th</sup> potential connection discussed above) – the modelling as presented seems to treat these 3 access junctions "as one", when considering their impact on the surrounding road network. This would not seem to be appropriate: if the 3 junctions (on the same stretch of road) interact, then the delays and traffic queues will be greater. This would need to be modelled/assessed.
- The Parking Provision they state seems to use an outdated reference, from 2011, and would give a reduced number of unallocated spaces compared to the table from 2019 (as quoted in 21/01630/OUT, for example.)
- The Trip Generation based on the most recent TRICS data gives a 61% increase at peak, compared to Hyder (2014) modelling, which the assessors then reduce to 63% less than the Hyder results, via various arguments. They then conclude that the 2014 predictions are simply unrealistically high. However, the real data for Elmsbrook is actually 117% higher than its Hyder predictions, i.e. more than double. Even when some of the same arguments are applied to Elmsbrook, once the wider Ecotown is built out, the extent of the assessor's reductions still seems significantly over-optimistic/inaccurate. The validity of the assumptions/arguments is analysed/questioned, and further methods to source better data to update the assessment are suggested.

In Paragraph 110 of the National Planning Policy Framework (NPPF), it states that on assessing sites that may be allocated for development in plans: "Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree." **There is not enough accurate evidence provided in the current application to determine if the impacts of traffic congestion, including for Elmsbrook, would be non-severe.** Further to this, Paragraph 111 of the NPPF states: "Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe." Unfortunately, again, there simply does not seem to have been enough modelling performed/reported to provide information to ascertain this. We would suggest an updated assessment/traffic impact analysis is undertaken to address all of these points.

## **Detail**

### *1 / Background: Documentation Provided*

Appendix 5.1 Transport Assessment Part 3 is the document including sections 7 and 8, where the Development Proposals and Trip Generation (respectively) are reported. (Parts 4, 5 and 6 contain related Appendices.) This is referred to and expanded on in the Environmental Statement, Chapter 5, Transport and Access report.

### *2 / Vehicle Access Strategy – Assumptions Out Of Date*

Section 7.2.4 (page 41), states: “In order to adequately serve the proposed NWB allocation, increase the network capacity and remove any barriers and constraints, a new NW Strategic Link Road, through the realignment of the A4095, was proposed as part of the Vehicle Access Strategy. This scheme is being delivered by Oxfordshire County Council with completion due in 2023...”

Furthermore, in the survey methodology details of “ES Chapter 5 Transport and Access.pdf”, (page 10), it states:

“5.3.12 Baseline conditions for the surrounding highway network have been established using the Bicester Transport Model (BTM) run by White Young Green (WYG) on behalf of OCC. The model had a base year of 2012 and the outputs from the model were made available in February 2014 to provide a baseline for NW Bicester. The use of the baseline model was set out and endorsed by OCC in the Scoping response.”

Even though it also states “5.3.16 The BTM was recommended and agreed with OCC and the Highways Agency (HA) as the appropriate tool for assessing the impacts of the previous planning application.” – circumstances appear to have changed since this recommendation was made: OCC have stated in 2 recent neighbouring development responses (21/01630/OUT, Firethorn, and 21/03177/F – i.e. sites which lie either side of the Hallam development), that the Strategic Link Road funding and timescales are now in doubt.

In the latter response, OCC wrote: “The scenario also assumes that the Strategic Link Road (SLR) at North West Bicester (a diversion of the A4095 through the NW Bicester Masterplan area, under the now constructed railway overbridge) will be in place in 2031. However, it has recently been recommended to the Oxfordshire Growth Board that the allocated Growth Deal funding for the project should be reallocated, and with no alternative forward funding currently in place, there is no longer certainty of its delivery within that timescale. The Growth Board will consider the recommendation on 30 November. Therefore, the predictions in the Transport Assessment can no longer be regarded with any degree of certainty. Without the SLR, there would be severe congestion at the junction of Howes Lane, Bucknell Road and Lords Lane. The assessment referred to above is now over six years old, and was based on a traffic model that did not include development at Heyford. **As such it is no longer considered by OCC to be a reliable method of establishing the upper limits of capacity at the critical junction, being likely to underestimate these upper limits.**”

*It would therefore seem logical that, since the Transport Assessment for the Hallam development, 21/04275/OUT, which does not make any reference to or allowance for this latest change of circumstances and uses the exact same 2014 BTM as stated in the clauses above, would also be subject to the same requirement for full reassessment.*

Indeed, in the Hallam application itself, in a section entitled “Limitations and Assumptions” in the Environmental Statement’s Chapter 5 on Transport and Access, it implies clearly that such a change would render the contained assessment invalid:

“5.3.38 The following assumptions regarding the baseline data have been made:

- “All committed developments and proposed highway schemes will be built by 2031 and associated traffic flows will be on the highway network
- “No further developments, new highway schemes or changes to public transport services, other than those previously committed, will be introduced within the area as this could affect traffic flow and pedestrian movement.”

### 3 / Incomplete Junction Modelling and Incomplete Information regarding road link to Elmsbrook

Figure 7.4 (page 42) indicates a “Potential access to Elmsbrook” – which would join onto Cranberry Avenue (as also seen in previous illustrative drawings, e.g. the original Masterplan). The point regarding this seems incomplete:

“7.2.8 In addition there is an option to facilitate a potential additional access through to Elmsbrook. This would take the form of a priority junction and would enable an additional public transport route through the Site and the Exemplar site. Consent is sought for the junction connection arrangements and would be constructed up to the edge of the Elmsbrook site (within the applicant’s control) (see Drawing 20300\_SK\_T\_010\_P2 attached at Appendix G); and” ... i.e. - *it just ends here with an incomplete sentence!*

The Drawing in question simply shows the road fully connected by both lanes – i.e. no “priority junction” is specified. There is no further detail regarding whether this would be open to cars/lorries etc. as well as Buses; if there would be control; cameras to prevent, etc.

Yet – nowhere in the Transport Assessment, anywhere, is there an assessment of how the traffic from Hawkwell Village enters/exits – i.e. while section 8 gives trip generation, it does not show by which junctions these vehicles enter/leave Hawkwell Village – at all; i.e. whether just via the 3x Strategic Link Road exits, or also including the potential Cranberry Avenue link to Elmsbrook.

There is no reporting of any junction capacity/traffic impact for these 4 junctions, nor modelling evidenced which gives indication that any of their *interactions* have been considered. The impact of the site as a whole on the major road network junctions (i.e. further along the A4095 in both directions) is reported – by numbered tables only; however, it seems logical that these 3 (or 4) junctions will interact at peak times, and depending on how the relative in/out flows *for* each are modelled (i.e. a key assumption), this could cause a significantly wide *range of impacts* on the surrounding junctions, and in Elmsbrook and Firethorn development homes.

**This would seem to be a very significant omission** – the original NW Bicester Exemplar Phase (Elmsbrook) and Firethorn proposed applications certainly contain such modelling, in considerable detail. Furthermore, as will be discussed later in section 5 here (“Trip Generation”), with personal vehicles and deliveries for so many homes entering/exiting via only 3/4 junctions – 3100 homes – in addition to construction traffic and public transport, there is no evidence provided enabling determination of the realistic traffic impacts, especially at peak hours on the Hawkwell Village homes, on Bucknell Village, and on the A4095 Ring Road. Over 1000 homes “per exit” – compared with e.g. 170 homes for Charlotte Avenue on Elmsbrook – hints at a strong potential for **severe traffic impacts**.

Elmsbrook Phases 1 and 2 already suffer traffic and parking issues at the AM peak time, and particularly around Cranberry Avenue, Gagle Brook School, and the neighbouring bottlenecks: this has been growing since 2018, and as of 2022, is becoming problematic, and will only increase, along with dangers for children crossing the road on foot or bicycle/scooter, as the school increases from its current 85 pupils to eventual 230 capacity, over the next 3-4 years.

Phase 2 only comprises 71 homes; only ~40 cars deliver pupils and staff at the AM peak. Therefore, the fact that there has been no assessment of what would happen if/when Cranberry Avenue is connected to a development with 3,100 homes – of which perhaps 200-300 would be close enough to see Elmsbrook as a potential “shortcut” to the B4100 North – is concerning.

For the Firethorn development, currently also under proposal, their models for both 2016 and 2031 show hundreds of vehicles entering/leaving via Cranberry Avenue into Hawkwell Village – despite that this was still a field in 2016, and despite their being no modelling of this junction in the Hallam application documents. It would seem very sensible that, since these 2 developments are being proposed simultaneously, they could share modelling information, such that both parties can accurately assess the overall impacts on the A4095 Ring Road and on Elmsbrook, which is “sandwiched in between.”

Because what is really required is that the traffic levels for the actual designs of both developments – when applied *simultaneously* can be predicted and openly assessed for the impacts on Elmsbrook (and junctions beyond in all directions, e.g. Kingsmere) – and the impacts can actually be assessed with a suitable degree of accuracy. The same could also be said for the Ardley rail freight depot/new warehouse proposals, which lies West of Bucknell and Hawkwell Village – has the impact of this, and traffic routes to/from M40 J9/10 for these been holistically assessed?

#### 4 / Parking Provision – uses Outdated Reference source

In the “Vehicle Parking” section, on page 47 of Appendix 5.1 Part 3, it states:

“7.7.2 Parking provision for the proposed residential dwellings will be determined in line with the parking requirements that were previously agreed with OCC for the 2014 outline submission as shown in Table 7.1. The level of provision was developed through the application of OCC's "Parking Standards for New Residential Developments" that was adopted in December 2011.”

However, the recent Firethorn Application quotes *a more recent source* – according to them, this is the updated OCC parking allocation for towns including “(ii) Bicester”, from 2019, which is accepted by CDC as the current (in 2022) standard. Comparing these two sources, we see that the Hallam application is incorrect to use the outdated 2011 source – as this would provide significantly fewer Unallocated Spaces for 2-to-5 Bedroom homes: see Table 1 below:

<b>Hallam application, Table 7.1 - "2014 Agreed Parking Allocations"</b>		
Number Of Bedrooms	Allocated Spaces	Unallocated Spaces
1	1	0
2	1	0.22
3	2	0.22
4	2	0.22
5	3	0.22
<i>(NB: Elmsbrook does not meet these allocations, can't find them published!)</i>		
<b>Firethorn application, Table A6.B1, quoting Table from CDC</b>		
Number Of Bedrooms	Allocated Spaces	Unallocated Spaces
1	1	0
2	1	0.3
3	2	0.3
4	2	0.5
5	2	0.5

Table 1 – Comparing Source References for Parking Allocation, Hallam (top), Firethorn (below)

#### 5 / Trip Generation

In Section 8, on pages 49 to 58 of Appendix 5.1 Part 3, the TRICS database is used to generate an initial set of Peak Hour trips, in/out of the entire “Hawkwell Village” 3100 homes, based on the most recent TRICS reference data. A set of discussions then calculate “reductions” based on the following assumptions/arguments:

- (1) Commuting/Business Trips (arguing 34% of the 37% of total trips “for this purpose” will instead be internal to the development);
- (2) Escort Education Trips (arguing that 100% of 28%/3% (AM/PM peaks) total trips “for this purpose” will no longer be needed, as all pupils will attend the future schools within the development);
- (3) 'Personal Business' - hairdressers, dry cleaners, betting, banks, estate agents, libraries, churches, docs, eating/drinking (arguing that 50% of the 23% total trips “for this purpose” will no longer be needed, as Local Centre will cater for ~50% of these needs);
- (4) Shopping (arguing that 100% of 5%/13% (AM/PM peaks) total trips “for this purpose” will no longer be needed, as the shops will be at Local Centre will cater for all of these needs);
- (5) Homeworking (reducing Employment trips by 10% of the 37%/43% (AM/PM peaks) and 'Commuting and Business' trips by 10% of the 37%/43%, arguing this is the result of Covid, Technology, etc.); and finally:
- (6) Behavioural Change (by following the stated assumption that 'a good travel plan' will shift transport modes away from vehicles by 15%).

By doing so, the reduction of total trips by 63% for the AM peak hour, and by 39% for the PM peak hour.

In section 8.4, a “Comparison Study” is performed - whereby the original Hyder simulations (2014) are compared with (only) the “reduced” figures, with the conclusion that the latter are much smaller, stating:

“8.4.4 It is clear that a lot has happened in the world of travel since 2014 and it is appropriate to reassess the true impacts of the proposals in traffic terms based on current patterns and trends rather than 2014 data. This is in line with the now accepted philosophy of the D&P methodology.” ...and:

“8.4.5 Due to higher levels of internalisation, greater home working, data on Travel Plan success and other data it is clear that the proposals will result in materially less external traffic than was envisaged in 2014.”

Instead of reproducing Table 8.13 in that document, below are two tables to show a fuller comparison: firstly, in Table 2, the Hyder (2014) simulation is not only compared with both the Hallam (2022) *unreduced* and reduced figures, but also a scaled version of the Hyder (2014) data is shown (i.e. scaling up by 3100/2600). In Table 3, the percentage differences are shown.

		AM Peak (08:00 – 09:00)			PM Peak (17:00 – 18:00)		
		IN	OUT	Total	IN	OUT	Total
Hyder, 2014, 2600 homes	All Traffic	303	618	921	596	430	1026
Hyder (2014) but scaled for 3100 homes	Scaled, All Traffic	361	737	1098	711	513	1223
Hallam, 2022, 3100 homes	All Traffic	474	1018	1483	970	551	1521
“	Reduced, All Traffic	175	375	550	592	336	928

Table 2 – Comparing Original and Scaled Hyder (2014) data with Original and Reduced Hallam (2022) data

Percentage change c.f. Hyder Original, 2014	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)		
	IN	OUT	Total	IN	OUT	Total
Hallam, Un-reduced	56	65	61	63	28	48
Hallam, Reduced	-63	-63	-63	-39	-39	-39

Table 3 – Comparing Hyder (2014) Original data with Original and Reduced Hallam (2022) data by %

NB: Positive results show a percentage increase, negative show a decrease; the Hyder Scaling by ratio of 3100/2600 equates to a 19% increase for all data.

Before considering the validity of all the above assumptions/arguments (1-6), it would make sense to compare with the most appropriate *real measured* traffic dataset – and this can be achieved: the Original Hyder (2014) modelling also produced equivalent data for just Elmsbrook (the “Exemplar Phase”); and there have been assessments made using the September to December 2019 traffic monitoring dataset, plus AM peak hour traffic counts carried out in 2019 and 2021 – the former prior to covid restrictions, and the latter more than 1 month after the ONS had reported that UK traffic levels had returned to “at least” their pre-Covid levels (i.e./NB: overall traffic levels have NOT remained lower than pre-covid, due to technology, homeworking, etc.)

Table 4 below shows comparison – just for the AM peak hour (where greater traffic survey data can be used to increase averaging/accuracy), which is measured at the Charlotte Avenue B4100 junction/exit, which services the 160 total built and occupied homes in Phases 1 & 2, plus the School (typically 24 cars drop off pupils travelling from outside Elmsbrook, during this hour), and the Eco Business Centre (typically 1-3cars were arriving during this hour, over the time period of the measurements).

Elmsbrook, Simulated vs Real Data Comparison		AM Peak (08:00 - 09:00)		
		IN	OUT	Total
Hyder 2014, scaled*	Actual TOTALS	24	45	69
Real Measurements	Actual TOTALS	62	87	149
Real vs Hyder	Percentage change	159	94	117

Table 4 – Elmsbrook, Simulated vs Real Data Comparison, and % change – positive: real is increased levels

\* The Hyder data is for all 393 homes, and 135 pupils at the School: their contributions have thus been scaled to the 160 homes on Phases 1 and 2 only (the others exit via Braeburn Avenue), and to the 85 pupils at the School, as of the September 2021 term.

It can be seen that overall, the real traffic on Elmsbrook Phases 1 and 2 in the AM peak hour is actually a significant increase compared to the Hyder (2014) simulations: by 117%, i.e. *more than double*, overall – and by 159% (i.e. more than 2-and-a-half times) for the traffic entering the estate.

Some of this is due to the assumption not holding that almost all of the School pupils come from within the Ecotown – the true demographic is majority from outside; and some pupils travel out to other/private schools elsewhere. In the case where we assume that the school reaches full capacity and the demographic becomes the predicted ratio from outside, however, this increase/decrease (respectively) means that the overall increase vs Hyder prediction is likely to stay at around 150% - *and NB this in excluding either of the Firethorn development additional traffic flowing through all of Phases 1 and 2, AND any traffic from the Hallam development if this is connected to Cranberry Avenue on Phase 2, next to the school!*

However, there are other factors – with the build out of the Hallam development – that would reduce the real measurements for Elmsbrook in future years (by the time Hawkwell Village and the Local Centre(s) on both estates are completed). These included reductions for shopping, personal business, and some behavioural change – i.e. when Elmsbrook residents don't have to travel as far to the shops (because there are currently no facilities at all on Elmsbrook) – once much more of the Ecotown is built. But, again, **this is highly unlikely to reduce the real data down to the Hyder (2014) predictions – and certainly not to 63% lower than these, as per the “reduced” Hallam 2022 predictions.**

It has already been noted that the Homeworking argument (5 above) is likely to be far too much of a reduction – because ONS data shows traffic levels have not reduced at peak commute times, post-covid restrictions. Likewise, the Escort Education trips would not be zero, even when all the new schools are built and at full capacity: there are private schools, and other cases where families move in with children attending other schools and won't move them; on Elmsbrook, for example, this is quite a significant percentage, six years since the first residents moved in.

Furthermore, it is suggested that the Shopping (4 above) assumption is also wrong: it is highly unlikely that the Local Centre shops would be able to provide 100% of all the needs for all (non-home-delivery) shopping. (Grocery shopping, maybe, but not the much wider variety of requirements which a large town centre provides. Perhaps data exists, for e.g. typical local centre shops, and the percentage trips to these vs. town centre shops, which could be used to get a more accurate estimate – but it would perhaps be closer to 50% of needs.)

Finally, it would be most appropriate to “calibrate” the level of Travel Plan “success” based on the very recent (September 2021) whole-day transport mode assessment conducted by Mode Transport, for Elmsbrook Phases 1-4, as part of the planning conditions. This dataset capture should have been designed to enable exact comparison of actual levels with the Travel Plan goals for Elmsbrook, i.e. the most equivalent closely-located existing development to act as a benchmark here – and thus the figures adjusted to increase prediction accuracy based on real evidence.

**It therefore seems likely that the “reductions” are valid to some extent, but go far too far:** at any rate, their components' validity requires more accurate assessment using real data. It is interesting to note that the 2022 “un-reduced” figures are so much higher than the Hyder (2014) data scaled up to the same number of homes (by 35% in the AM peak hour, and 25% in the PM peak hour). This shows that the more recent TRICS data gives a much greater traffic generation, which is very much at odds with the conclusion drawn in clause 8.4.4 of the report. **These models MUST be validated as accurate, such that the omitted junction modelling can be performed with accurate inputs.**