Title: Response to OCC Highways Comments to TN07 V1

Date: July 2022

1.1 Jubb has been commissioned by Hallam Land Management Ltd (HLM) to provide highways and transportation advice in relation to proposals for a residential-led mixed use development on Land north-east of the railway line in North West Bicester (Hawkwell Village).

1.2 This technical note sets out, in table format at Appendix A, a response to Oxfordshire County Council's transport and highways comments relating to TN04 V1 'Response to OCC Highways Comments to TN02 V1' submitted to support the planning application 21/04275/OUT.

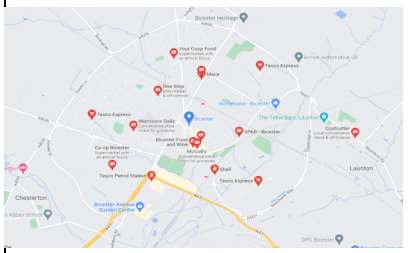
Appendix A Table of Responses

<table>
<tr><th>Document / Paragraph</th><th>TN02 OCC Comments</th><th>TN04 Jubb Comments</th><th>TN04 OCC Comments</th><th>TN07 Jubb Comments</th></tr>
<tr><td colspan="5">Development Traffic Impact – Methodology and Approach</td></tr>
<tr><td>2.1.1</td><td>Note that the Decide and Provide guidance includes modelling more than one scenario.</td><td>Noted.

The trip generation scenario, which is predominantly based on trip purpose and discounted trips due to the on-site provision of services and facilities leading to internalisation of trips along with discounted trips for a change in travel behaviour brought about by the Covid-19 pandemic and the provision of a Travel Plan supported by improved active travel infrastructure, contribution to a bus service and a mobility hub is considered to be realistic and representative of the vision for the future development.
The adjacent Firethorn development (Planning ref: 21/01630/OUT) forms part of the original Eco-Town allocation and whilst not using the ‘Decide and Provide’ wording it predicts a development based on the Eco-Town vision and the containment of trips and did not undertake modelling of more than one scenario.
Following discussions with Tetra Tech and the use of BTM model it has been decided that the development traffic will be modelled using Jubb’s trip generation and also using the trip generation from the BTM.</td><td>Firethorn development did not put forward a ‘Decide and Provide’ methodology and did not seek the same trip discounting that you are proposing. If you were to propose the same methodology as Firethorn we would not be asking for alternative scenario. I note that you have agreed to modelling using your proposed trip generation, and the trip gen from the BTM, which is supported.</td><td>Noted</td></tr>
<tr><td>2.1.6</td><td>There would at least be pass-by and diverted trips. Else why locate it in that position. Needed to make it viable.</td><td>The local centre floorspace and use classes has been designed for the purpose of serving the future population of the development and is not of a size to be seen as attractive as a destination. The TRICS research report 14/1 states that convenience stores are more likely to produce pass-by trips rather than diverted trips. Drivers passing by the site are no more likely to visit the proposed convenience store than that of a convenience store closer to their origin/destination. Therefore, it is considered appropriate that 5% of the trips generated by the convenience store, be considered as pass-by trips.

The TRICS database has been interrogated using category 01 O (Convenience Store). A realistic maximum floorspace for the proposed convenience store is 1000 sq.m. which is predicted to generate 188 and 174 two-way vehicle trips in the AM and PM peak hours respectively. With 5% of these trips being pass-by this would add 9 two-way vehicle trips in both the AM and PM peak hours. The TRICS output report is attached at Appendix A.

The revised external traffic generation and consequent comparison to the 2014 trip generation is shown below.
<table>
<tr><th rowspan="2">Forecast External Traffic for the Site</th><th colspan="3">AM Peak (08:00-09:00)</th><th colspan="3">PM Peak (17:00-18:00)</th></tr>
<tr><th>IN</th><th>OUT</th><th>Total</th><th>IN</th><th>OUT</th><th>Total</th></tr>
<tr><td>NW Bicester Model 2014 TA</td><td>303</td><td>618</td><td>921</td><td>596</td><td>430</td><td>1026</td></tr>
<tr><td>New Predicted External Development Traffic</td><td>201</td><td>635</td><td>835</td><td>697</td><td>368</td><td>1066</td></tr>
<tr><td>Difference</td><td>-102</td><td>17</td><td>-86</td><td>101</td><td>-62</td><td>40</td></tr>
</table></td><td>Having referred briefly to the TRICS report, 5% pass by trips seems very low. Many people do not have a convenience store near where they live, and a store located on their route home will be an attraction.</td><td>Having looked at the provision of convenient stores in Bicester, convenience stores are present within or on the edge of all residential areas. Drivers from the existing Bicester residential areas are more likely to visit a convenience store close to their home as these trips to this use class have already been established. It is proposed, as a reasonable approach and in order to reach agreement, to adjust the pass-by trip to 15% of the trips generated by the convenience store. The revised external trip generation and consequent comparison to 2014 trip generation is shown below.

<table>
<tr><th rowspan="2"></th><th colspan="3">AM Peak (08:00-09:00)</th><th colspan="3">PM Peak (17:00-18:00)</th></tr>
<tr><th>IN</th><th>OUT</th><th>Total</th><th>IN</th><th>OUT</th><th>Total</th></tr>
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<tr><td>New Predicted External Development Traffic</td><td>210</td><td>644</td><td>854</td><td>706</td><td>377</td><td>1083</td></tr>
<tr><td>Difference</td><td>-93</td><td>26</td><td>-67</td><td>110</td><td>-53</td><td>57</td></tr>
</table></td></tr>
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<table>
<tr><th colspan="5">Development Traffic Impact – Journey Composition</th></tr>
<tr><td>2.1.13</td><td>I don't think NTS data covering the whole of England is representative of journey purpose by mode in this location since it will be heavily skewed by the travel habits of people living in cities.</td><td>NTS data is used throughout England in order to estimate traffic generation for developments at both planning application and planning inquiry stages. The adjacent Firethorn planning application is supported by a TA that utilises NTS journey purpose data which OCC considered suitable for the estimation of trips by purpose. TEMPro data covers a 3-hour period and therefore peak hour data is not available.</td><td>I have extracted the paragraph below from our emerging guidance on Predict and Provide, to support my view regarding the need for alternative scenario(s).

2.2.5 Use of DfT National Travel Survey (NTS) data is unlikely to be considered acceptable unless it can be justified that it is directly relatable to the specific characteristics of the proposed development. Typically, referencing national trends will be unacceptable as these are not directly relevant to any specific location. The NTS acknowledges the limitations of its findings in its Quality Report (DfT, 2020a, p.3), stating:

The NTS is not designed to produce robust data below regional level. Whilst it is possible to analyse data for smaller geographies than regions, for example local authorities, often many years of data need to be combined to obtain a suitable sample size. Even then this is not ideal as weightings are applied to the sample to be representative of England. This is likely to skew analyses as demographics at sub-national level can vary significantly from the national level.</td><td>Following discussions with Tetra Tech and the use of BTM model it has been decided that the development traffic will be modelled using Jubb's trip generation and also using the trip generation from the BTM.</td></tr>
<tr><td>2.1.22</td><td>Is there any evidence to back this up?</td><td>This is based on professional judgement. Whilst there may be students from outside the catchment area when the school first opens due to lower student numbers within the development itself, this will be when the development is not generating the full buildout of traffic that is being assessed and therefore, there will be sufficient capacity on the network. The assessment considers the full buildout when, the catchment area, based on a geographical area, will determine the home location of students.</td><td>I'm prepared to accept your point.</td><td>Noted</td></tr>
<tr><td>2.1.23</td><td>This is surely double counting!</td><td>This is not double counting. Previously we discounted all education trips and reduced the residential trip generation accordingly – by introducing 10% external education trips there are now two use classes for which trips need to be deducted. 90% of 'Primary School' trips are deducted from the school trip generation and then the equivalent number of trips are deducted from the residential trip generation as these trips will remain within the site 'Residential – Escort Education'.</td><td>I'm discussing this with a colleague. For clarity, please could you explain how the numbers in table 4.6 have been calculated?</td><td>The forecast trip generation associated with the primary school are abstracted from Table 4.2 (extract below)

<table><tr><th rowspan="2">Traffic Generation</th><th colspan="3">Weekday AM Peak</th><th colspan="3">Weekday PM Peak</th></tr><tr><th>IN</th><th>OUT</th><th>TOTAL</th><th>IN</th><th>OUT</th><th>TOTAL</th></tr><tr><td>Primary School (420 Pupils)</td><td>135</td><td>105</td><td>240</td><td>8</td><td>14</td><td>23</td></tr></table>
Internal trips at 90% associated with the education trip generation and to be removed from the initial education trip generation:

<table><tr><th rowspan="2">Internal Trips</th><th colspan="3">Weekday AM Peak</th><th colspan="3">Weekday PM Peak</th></tr><tr><th>IN</th><th>OUT</th><th>TOTAL</th><th>IN</th><th>OUT</th><th>TOTAL</th></tr><tr><td>Primary School (420 Pupils)</td><td>122</td><td>95</td><td>216</td><td>7</td><td>13</td><td>21</td></tr></table>
The equivalent number of residential trips have been discounted in the opposing direction of traffic:

<table><tr><th rowspan="2">Internal Trips</th><th colspan="3">Weekday AM Peak</th><th colspan="3">Weekday PM Peak</th></tr><tr><th>IN</th><th>OUT</th><th>TOTAL</th><th>IN</th><th>OUT</th><th>TOTAL</th></tr><tr><td>Residential – Escorted Education</td><td>95</td><td>122</td><td>216</td><td>13</td><td>7</td><td>21</td></tr></table></td></tr>
<tr><td>2.1.25</td><td>Realistically, which out of these facilities is likely to be at the local centre?</td><td>The NTS defines personal business as 'visits to services, e.g. hairdressers, launderettes, dry-cleaners, betting shops, solicitors, banks, estate agents, libraries, churches; or for medical consultations or treatment; or for eating and drinking, unless the main purpose was entertainment or social.'
The planning application seeks permission for up to 2,490sq.m. of commercial uses within Classes E(a) retail; E(b) food and drink; E9(c) services and the following sui generis uses hot food takeaways, public house, wine bar.
The DAS states that on the upper floors of the local centre there will be opportunities for commercial space such as small offices.
The application seeks outline consent and therefore the exact composition of the services and facilities that will be provided is unknown and will be subject to commercial viability. However, it is considered that the floorspace is able to deliver a 25% reduction in the forecast Personal Business related journeys.

The Firethorn application applies a 30% internalisation for shopping trips and a 50% reduction for other services whilst providing no on-site services and facilities itself. This application seeks only to reduce external trips on the provision of its own services and facilities and makes no reduction for the wider Eco-Town services and facilities i.e. secondary school, employment (less than 1% overall reduction for this application against 10% reduction for Firethorn/Eco Town) etc. Therefore, 5% (shopping) and 25% (services) reductions are considered suitable.</td><td>I'm prepared to accept your point.</td><td>Noted</td></tr>
<tr><th colspan="5">Development Traffic Impact – Innovation and Homeworking</th></tr>
<tr><td>2.1.35</td><td>I think this is acceptable if comparing against 2019.</td><td>Noted. All of the sites included in the TRICS analysis were undertaken prior to the Covid-19 pandemic.</td><td>-</td><td>-</td></tr>
<tr><th colspan="5">Development Traffic Impact – Behavioural Change</th></tr>
<tr><td>2.1.40</td><td>Is this in relation to residential travel plans?</td><td>This is in relation to employment travel plans. However, given the size of the development and the developer's attitude to influencing travel behaviour through a strong Travel Plan including PTP and marketing strength, the provision of onsite and the upgrading of off-site active travel routes, the provision of a mobility hub with car club and bike hire facilities and the provision through a s106 contribution for a high-quality bus route, the mode shift away from car usage is considered to be achievable.

The development will also provide a primary school, employment and a mixed-use centre including co-working space and on land to the west further employment, a secondary school and further services and facilities will be available which will be accessible by means other than the private car and which will be promoted to be accessed via sustainable modes.</td><td>15% remains a stretching target for this extreme edge of town location. A travel plan will need to be agreed ahead of planning permission, and secured via the S106 agreement, to ensure that it is effective.</td><td>Noted</td></tr>
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<td>Whilst Travel Plans have significantly moved forward the DfT report ‘Smarter Choices: Changing the Way We Travel’ (2004) provides an insight to the effect of elements of Travel Plans such as PTP, travel awareness campaigns, public transport marketing and information, car clubs and car sharing.
The development forms part of the Bicester Eco-Town and therefore, is expected to achieve a significant reduction in single occupancy car use and it is considered that behavioural change through strong marketing of Travel Plans is one of the elements that will assist in achieving the desired outcomes.</td>
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<tr>
<td>2.1.41</td>
<td>Employment and facilities in Bicester are not all located in the town centre - much is off Launton Road for example, or Bicester village, meaning public transport won't be used out of choice for many destinations. Also parking tends to be unrestricted at the destinations other than town centre and whilst we can attempt to restrict it for future development, we can't change what's there. Also Bicester is growing around its edges, with more likelihood of facilities being dispersed and inaccessible by public transport.</td>
<td>It is considered that a 15% reduction on the TRICS trip generation can be achieved by the implementation of a high-quality Travel Plan supported by a mobility hub, on-site and off-site active travel infrastructure and a high-quality public transport service. Some destination use class trips will be higher and some will be lower than the 15% but cumulatively 15% is deemed to be realistic.</td>
<td>Further details of the mobility hub would be helpful. Its provision would need to be secured early in the development.</td>
<td>The form of the mobility hub will be detailed within the s106. Section 7.4 of the TA sets out the type of facilities that are envisaged to be incorporated:

1.1.1 and Firethorn developments, towards an appropriate section 106 contribution.

1.2 Mobility Hubs

1.2.1 A mobility hub will be incorporated into the proposed Local Centre in the vicinity of the proposed bus stops. It could provide electric bike/scooter hire facilities, car club vehicle(s), electric vehicle charging points, storage lockers for home deliveries, a co-working area and sustainable travel information.

Given that the funding for the A4095 realignment has been removed, it is likely that the initial phases of the development will be at the eastern end of the site and therefore, the mobility hub is unlikely to come forward at this stage. As the trip generation will be lower than the full buildout there will be no impact on the operation of the highway network. The delivery timescale of the mobility hub can be included in the s106. The delivery of a temporary hub in the eastern area with less facilities can be discussed.</td>
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<td>2.1.43</td>
<td>Can we see analysis of the resultant mode share, compared with the NTS table?</td>
<td>The TRICS multi-modal surveys (consistent with the survey sites used to derive the vehicle trip rates) have been used to establish the baseline travel pattern.
<table>
<tr><th>Original TRICS</th><th>AM</th><th>PM</th></tr>
<tr><td>Car</td><td>52%</td><td>56%</td></tr>
<tr><td>Passenger</td><td>37%</td><td>34%</td></tr>
<tr><td>Walking & Cycling</td><td>7%</td><td>8%</td></tr>
<tr><td>PT</td><td>3%</td><td>2%</td></tr>
<tr><td>Total</td><td>100%</td><td>100%</td></tr>
</table>
To provide an adjusted modal split, it has been assumed the forecast deduction as a result of the internal trips, behaviour change and mode shift will be proportionally distributed based on the existing modal split for cycling, walking and PT. The resultant modal split is:
<table>
<tr><td></td><td colspan="2">Adjusted</td></tr>
<tr><td></td><td>AM</td><td>PM</td></tr>
<tr><td>Car</td><td>29%</td><td>38%</td></tr>
<tr><td>Passenger</td><td>55%</td><td>48%</td></tr>
<tr><td>Walking & Cycling</td><td>11%</td><td>11%</td></tr>
<tr><td>PT</td><td>5%</td><td>3%</td></tr>
<tr><td>Total</td><td>100%</td><td>100%</td></tr>
</table>
The 2019 NTS travel pattern is:
<table>
<tr><td></td><td>AM</td><td>PM</td></tr>
<tr><td>Walking + Cycling</td><td>36%</td><td>22%</td></tr>
<tr><td>Car Driver</td><td>34%</td><td>46%</td></tr>
<tr><td>Car Passenger</td><td>19%</td><td>18%</td></tr>
<tr><td>PT</td><td>11%</td><td>14%</td></tr>
</table>
Whilst the transfer of trips to sustainable modes cannot be predicted this assessment indicates that car drivers are predicted to be 5% less in the AM peak and 8% less in the PM peak compared with the NTS data.</td>
<td>For the adjusted modal split, why would reductions in trips associated with behaviour change and modal split, be proportionally distributed based on existing modal split? Surely these reductions in trips would be more skewed towards reductions in car trips? I would expect the resultant predicted modal share for public transport, walking and cycling to be higher than 2019 NTS.</td>
<td>Agree. It is unknown exactly what mode the residents will choose to substitute their journey previously undertaken by car as this will depend on distance, bus routes and time available to undertake the journey plus additional factors. As the TRICS data indicates almost double the NTS 'car passenger' percentage, the transfer of trips has been evenly distributed between public transport and walking + cycling as shown below. As can be seen the anticipated levels of walking + cycling and use of public transport are comparable to those of the NTS survey however, due to the comparable high level of 'car passenger' mode in the TRICS survey, higher levels of walking + cycling and use of public transport cannot be achieved unless the percentage of 'car passenger' trips is reduced.
<table>
<tr><td></td><td colspan="2">Adjusted</td></tr>
<tr><td></td><td>AM</td><td>PM</td></tr>
<tr><td>Car</td><td>29%</td><td>38%</td></tr>
<tr><td>Passenger</td><td>37%</td><td>34%</td></tr>
<tr><td>Walking & Cycling</td><td>20%</td><td>17%</td></tr>
<tr><td>PT</td><td>14%</td><td>11%</td></tr>
<tr><td>Total</td><td>100%</td><td>100%</td></tr>
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</table>

<table>
<tr><th colspan="5">Comparison Study</th></tr>
<tr>
<td>Table 4.12</td>
<td>Can total AM and PM vehicle movements from the NW Bicester Model 2014 TA be verified?</td>
<td>The Hyder TA that supported the 2014 application showed in Table 8.9 the anticipated external trips within Bicester and in Table 8.10 the anticipated external trips outside of Bicester. Extracts of the tables are provided below.

Table 8.9: External Trips within Bicester
<table><tr><th rowspan="2">Mode</th><th colspan="3">AM peak (08:00 to 09:00)</th><th colspan="3">PM Peak (17:00 to 18:00)</th></tr><tr><th>IN</th><th>OUT</th><th>TOTAL</th><th>IN</th><th>OUT</th><th>TOTAL</th></tr><tr><td>Car driver</td><td>113</td><td>206</td><td>319</td><td>187</td><td>133</td><td>320</td></tr></table>
Table 8.10: External Trips outside of Bicester
<table><tr><th rowspan="2">Mode</th><th colspan="3">AM peak (08:00 to 09:00)</th><th colspan="3">PM Peak (17:00 to 18:00)</th></tr><tr><th>IN</th><th>OUT</th><th>TOTAL</th><th>IN</th><th>OUT</th><th>TOTAL</th></tr><tr><td>Car driver</td><td>243</td><td>521</td><td>764</td><td>514</td><td>373</td><td>887</td></tr></table>
The total external trips from these two tables are 1083 trips in the AM peak hour and 1207 trips in the PM peak hour.
Jubb's Scoping Note (TN01) explained at para 4.1.46 that the HLM site only accounted for 85% of the ~~original~~ housing provision (3,100 units of a total 3,650 units (the other 550 dwellings form the Firethorn site)) and therefore, 85% of the total external trip generation has been used for comparison purposes.</td>
<td>The Hyder 2014 application referred to (for land N of the railway), ref 14-01384-OUT, was for 2600 units, so I am confused by your response, which suggests it was 3,650.</td>
<td>This calculation relates to the new number of proposed dwellings i.e. 3,100 dwellings at Hawkwell Village and 550 dwellings at Firethorn. Hawkwell Village is 85% of the new total dwellings (3,650). For the comparison exercise the traffic generation of the proposed 3,100 dwellings at Hawkwell Village has been compared to 85% of the 2014 application traffic generation.</td>
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<td>It is worth noting, as provided in TN03 (8.4) that the TRICS database indicates a natural reduction of 17% in daily residential trip rates for private dwellings between 2014 and 2019. This accounts for the additional 500 dwellings generating a similar number of trips to the 2014 application and indicates a significant change in behaviour (online shopping, working from home) over the 5 years prior to the Covid-19 pandemic.

It is therefore, considered that the proposed trip generation is achievable and will be complemented by the additional benefit of a mobility hub and an effective marketed Travel Plan. With the change in travel behaviour there is no compelling evidence that a restriction on car ownership is required to achieve the forecast trip generation and a natural lowering of car ownership will evolve over time when residents realise that their only, second or third car is no longer required due to changes in travel behaviour and the availability of car club vehicles.</td>
<td>Regarding your statement about parking, I'm prepared to accept that parking levels should be as per standards. However, it must be made easier to cycle or walk to/from (and around) the site than to drive, through filtered permeability, excellent cycle parking and cycle routes.</td>
<td>Noted</td>
</tr>
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