North West Bicester

## 20300



Title: Response to OCC Highways Comments to TN02 V1

Date: May 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.
- 1.2 This technical note sets out, in table format, a response to Oxfordshire County Council's transport and highways comments relating to TN02 V1 'Vehicle Trip Generation' submitted to support the planning application 21/04275/OUT.

Document /	OCC Comments	Jubb Comments
Paragraph		
	Development Troffic Impact Mothe	
	Development Traffic Impact – Metho	dology and Approach
2.1.1	Note that the Decide and Provide guidance includes modelling more than one scenario.	Noted.
		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

Document / Paragraph	OCC Comments	Jubb Comments						
		containment of trips and did not undertake modelling of more than one scenaric						e 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.					t has been lubb's trip	
2.1.6	There would at least be pass-by and diverted trips. Else why locate it in that position. Needed to make it viable.	The local centre floorspace and use serving the future population of th as attractive as a destination. T convenience stores are more likely trips. Drivers passing by the site convenience store than that origin/destination. Therefore, it is generated by the convenience store The TRICS database has been inte Store). A realistic maximum floors 1000 sq.m. which is predicted to g the AM and PM peak hours respect would add 9 two-way vehicle trips output report is attached at <b>Appen</b> The revised external traffic genera trip generation is shown below.	e classe e deve he TR to pro e are of a conside, be co erroga space generat tively. V in both <b>dix A</b> .	es has be elopment ICS rest oduce p no mo conve dered a onsider ted usi for the te 188 s With 59 h the Al	peen de nt and i search pass-by re likel nience appropr ed as pa ng cate propo and 174 6 of the M and F sequent	signed s not repor trips r y to store iate t ass-by gory gory sed co two- se trip PM pe	d for the of a size rt 14/1 s rather tha visit the e closer hat 5% c rtrips. 01 O (Co onvenien way vehi os being p eak hours parison to	purpose of to be seen states that an diverted proposed to their of the trips onvenience ce store is icle trips in bass-by this . The TRICS o the 2014
		AM Peak (08:00-09:00) PM Peak (17:00-18:00) Forecast External Traffic for the Site			7:00-18:00)			
			IN	OUT	Total	IN	OUT	Total
		NW Bicester Model 2014 TA	303	618	921	596	430	1026
		New Predicted External Development Traffic	201	635	835	697	368	1066
		Difference	-102	17	-86	101	-62	40

Document /	OCC Comments	Jubb Comments							
Paragraph									
	Development Traffic Impact – Journey Composition								
2.1.13	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.	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.							
2.1.22	Is there any evidence to back this up?	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.							
2.1.23	This is surely double counting!	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'.							
2.1.25	Realistically, which out of these facilities is likely to be at the local centre?	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.							

Document / Paragraph	OCC Comments	Jubb Comments
		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.
	Development Traffic Impact – Inno	vation and Homeworking
2.1.35	I think this is acceptable if comparing against 2019.	Noted. All of the sites included in the TRICS analysis were undertaken prior to the Covid-19 pandemic.
	Development Traffic Impact –	Behavioural Change
2.1.40	Is this in relation to residential travel plans?	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.
		use centre including co-working space and on land to the west further

Document / Paragraph	OCC Comments	Jubb Comments				
		employment, a secondary school and further services and facilities will be available which will be accessible by means other than the private car and whice will be promoted to be accessed via sustainable modes.				
		Whilst Travel Plans have significantly moved forward the DfT report 'Smarte Choices: Changing the Way We Travel' (2004) provides an insight to the effect o elements of Travel Plans such as PTP, travel awareness campaigns, publi transport marketing and information, car clubs and car sharing.				
		The development to achieve a signi that behavioural elements that wil	forms part of the Bice ficant reduction in sing change through strong l assist in achieving the	ster Eco-To gle occupano g marketing desired out	wn and then cy car use ar of Travel Pl comes.	efore, is expected nd it is considered lans is one of the
2.1.41	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.	It is considered achieved by the mobility hub, on- public transport s will be lower thar	that a 15% reduction implementation of a site and off-site active ervice. Some destination the 15% but cumulation	n on the T high-quality e travel infr on use class vely 15% is (	RICS trip ge Travel Plar astructure a trips will be deemed to b	eneration can be n supported by a and a high-quality higher and some e realistic.
2.1.43	Can we see analysis of the resultant mode share, compared with the NTS table?	The TRICS multi-1 the vehicle trip ra	nodal surveys (consist tes) have been used to	ent with th establish th	e survey sit ne baseline ti	es used to derive ravel pattern.
			Original TRICS	AM	PM	
			Car	52%	56%	
			Passenger	37%	34%	
			Walking & Cycling	7%	8%	

Document /	OCC Comments	Jubb Com	ments			
Paragraph						
			PT	3%	2%	
					-	
			Total	100%	100%	
		To provide an	adjusted modal solit it l	has heen ass	umed the f	precast deduction
		as a result o	f the internal trips, bel	naviour chai	nge and me	ode shift will be
		proportionally	distributed based on the	e existing m	odal split fo	or cycling, walking
		and PT. The re	sultant modal split is:			
				Δ	djusted	
				AM	PN	Λ
				,		
		Са	r	29%	38	%
		Ра	ssenger	55%	48	%
		W	alking & Cycling	11%	11	%
		PT		5%	39	6
		То	tal	100%	100	0%
		The 2019 NTS	travel pattern is:			
				AM	PM	
			Walking + Cycling	36%	22%	
			Car Driver	34%	46%	

Document /	OCC Comments	Jubb Commo	ents					
Paragraph								
			Car Pass	enger	19%	18%	, D	
			PT		11%	14%	, )	
		Whilst the trans	fer of trips	to susta	inable mod	es cann	ot be pr	edicted this
		and 8% less in the	PM peak co	mpared w	vith the NTS	data.	/0 1855 111 1	ne Alvi peak
	Comparison St	udv.						
Table 4.12	Can total AM and PM vehicle movements from the NW Bicester Model 2014 TA	The Hyder TA th	at supporte	d the 20	14 applicat	ion show	wed in Ta	ble 8.9 the
	be vermed?	external trips out	side of Bicest	er. Extrac	ts of the tak	i Table bles are p	orovided b	elow.
		Table 0.0. Exte	real Trine v	uithin Di				
		Table 8.9: Exte				ВМ	Poak (17.0)	) to 19:00)
		Mode			TOTAL	IN		TOTAL
		Car driver	113	206	319	187	133	320
					1	·		
		Table 8.10: Ext	ernal Trips	outside	of Biceste	r		
			AM p	eak (08:00	) to 09:00)	PM P	eak (17:00	to 18:00)
		Mode	IN	OUT	TOTAL	IN	OUT	TOTAL
		Car driver	243	521	764	514	373	887
			I	(66		100	l	
		The total external and 1207 trips in t	trips from tl the PM peak	nese two hour.	tables are 1	.083 trip:	s in the Al	M peak hour
		Jubb's Scoping N	ote (TN01)	explained	l at para 4	.1.46 th	at the HL	.M site only
		accounted for 85	% of the orig	inal hous	ing provisio	n (3,100	units of a	a total 3,650

Document / Paragraph	OCC Comments	Jubb Comments
		units (the other 550 dwellings form the Firethorn site)) and therefore, 85% of the total external trip generation has been used for comparison purposes.
		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.

Appendix A TRICS Output Report

TRICS 7.9.1 300322 B2 20300 Hawkwell Villac	0.41 Database right of TRICS Consor	tium Limited, 202	2. All rights reserved	Wednesday 2	25/05/22 Page 1
JUBB Consulting Enginee	rs Excelsior Road, Western Avenue	Cardiff		Licence N	lo: 829401
TRIP RATE CAL	CULATION SELECTION PARAMETERS	S:	Calculation Reference:	AUDIT-829401-220	0525-0546
Land Use : 0 Category : 0 TOTAL VEHI0	1 - RETAIL ) - CONVENIENCE STORE CLES				
Selected regions	and areas:				
03 SOUTH W	EST				
WL WI	TSHIRE	1 days			
07 YORKSHI	RE & NORTH LINCOLNSHIRE				
NY NO	RTH YORKSHIRE	1 days			
WY WE	ST YORKSHIRE	1 days			
09 NORTH					
TW TYN	IE & WEAR	1 days			
This section disp	lays the number of survey days per TRI	CS® sub-region i	in the selected set		

## Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Actual Range: Range Selected by U	ser:	Gross floor area 292 to 539 (units: sqm) 70 to 1200 (units: sqm)			
Parking Spaces Rang	je:	All Surveys Included			
Public Transport Provision: Selection by:					
Date Range:	01/01/	14 to 25/09/19			

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Include all surveys

<u>Selected survey days:</u>	
Monday	2 days
Friday	2 days

This data displays the number of selected surveys by day of the week.

<u>Selected survey types:</u>	
Manual count	4 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

<u>Selected Locations:</u>	
Suburban Area (PPS6 Out of Centre)	3
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

<u>Selected Location Sub Categories:</u> Residential Zone

4

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Hawkwell Village		Pa
onsulting Engineers Excelsior Road, Wester	n Avenue Cardiff	Licence No: 82
Secondary Filtering selection:		
<u>Use Class:</u>		
E(a)	4 days	
This data displays the number of surveys per has been used for this purpose, which can be	Use Class classification within the selected found within the Library module of TRICS	set. The Use Classes Order 2005 ®.
Population within 500m Range:		
All Surveys Included		
Population within 1 mile:		
5,001 to 10,000	1 days	
10,001 to 15,000	2 days	
25,001 to 50,000	1 days	
This data displays the number of selected su	rveys within stated 1-mile radii of populatio	<i>n.</i>
Population within 5 miles:		
5,001 to 25,000	1 days	
25,001 to 50,000	1 days	
125,001 to 250,000	2 days	
This data displays the number of selected su	veys within stated 5-mile radii of populatio	<i>n.</i>
<u>Car ownership within 5 miles:</u>		
0.6 to 1.0	3 days	
1.1 to 1.5	1 days	
This data displays the number of selected su	veys within stated ranges of average cars of	owned per residential dwelling,
	51185.	
<u>Petrol TIIIIng Station:</u>	0 days	
Included in the survey count	U days	
Evaluada from count or no filling station	4 days	

<u>*Travel Plan:*</u> No

4 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

<u>PTAL Rating:</u> No PTAL Present

4 days

This data displays the number of selected surveys with PTAL Ratings.

CS 7.9.1	300322 B20.41 Database right of TRICS Co swell Village	onsortium Limited, 2022	. All rights reserved	Wednesday 25/05/22 Page 3
B Consult	ing Engineers Excelsior Road, Western Aver	nue Cardiff		Licence No: 829401
<u> 1151</u>	OF STIES relevant to selection parameters			
1	NY-01-O-03 CO-OPERATIVE FOREST ROAD NORTHALLERTON		NORTH YORKSHIRE	
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: Survey date: MONDAY	305 sqm <i>19/09/16</i>	Survey Type: MANUA.	Ĺ
2	TW-01-O-02 CO-OPERATIVE ETHEL TERRACE SUNDERLAND CASTLETOWN Suburban Area (PPS6 Out of Centre)		TYNE & WEAR	
	Residential Zone Total Gross floor area: Survey date: FRIDAY	330 sqm <i>07/04/17</i>	Survey Type: MANUA	Z
3	WL-01-O-01 ONE STOP THE CIRCLE SWINDON		WILISHIRE	
	Suburban Area (PPS6 Out of Centre) Residential Zone			
4	Total Gross floor area: Survey date: FRIDAY	292 sqm <i>23/09/16</i>	Survey Type: MANUA	L
4	AINSTY ROAD WETHERBY		WEST YORKSHIRE	
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone	500		
	I otal Gross floor area: Survey date: MONDAY	539 sqm <i>26/09/16</i>	Survey Type: MANUA	L

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

JUBB Consulting Engineers Excelsior Road, Western Avenue Cardiff

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE TOTAL VEHICLES Calculation factor: 100 sqm BOLD print indicates peak (busiest) period

	ARRIVALS		DEPARTURES			TOTALS			
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00							_		
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	422	4.265	2	422	4.265	2	422	8.530
07:00 - 08:00	4	367	7.299	4	367	7.094	4	367	14.393
08:00 - 09:00	4	367	9.277	4	367	9.482	4	367	18.759
09:00 - 10:00	4	367	6.276	4	367	5.866	4	367	12.142
10:00 - 11:00	4	367	5.798	4	367	5.525	4	367	11.323
11:00 - 12:00	4	367	4.911	4	367	5.389	4	367	10.300
12:00 - 13:00	4	367	7.162	4	367	6.958	4	367	14.120
13:00 - 14:00	4	367	5.457	4	367	5.321	4	367	10.778
14:00 - 15:00	4	367	5.662	4	367	5.866	4	367	11.528
15:00 - 16:00	4	367	6.548	4	367	6.276	4	367	12.824
16:00 - 17:00	4	367	6.685	4	367	6.617	4	367	13.302
17:00 - 18:00	4	367	8.663	4	367	8.731	4	367	17.394
18:00 - 19:00	4	367	9.891	4	367	9.618	4	367	19.509
19:00 - 20:00	4	367	8.458	4	367	8.254	4	367	16.712
20:00 - 21:00	3	391	3.237	3	391	3.578	3	391	6.815
21:00 - 22:00	3	391	2.215	3	391	2.385	3	391	4.600
22:00 - 23:00									
23:00 - 24:00									
Total Rates: 101.804 101.225 203.02					203.029				

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

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## Parameter summary

Trip rate parameter range selected:	292 - 539 (units: sqm)
Survey date date range:	01/01/14 - 25/09/19
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.