1 / Gagle Brook Primary School Travel Survey, November 2018

1.1 / Methodology

The survey data was collected in late November 2018 by paper or emailed questionnaire; initial response was 88% returns in 1 week, and the remaining data were sought by interview to save time. The questions included: (1) Per day of the week, and AM/PM: what transport mode do you use, does your child go into after school club (thus dropped off/collected at different times), and what variations on this occur? (e.g. due to bad weather). (2) If you use a vehicle, why? - do you have an alternative? (3) Would you support and/or be prepared to assist with a Park & Stride plus Walking Bus scheme?

Note: these results rely on the honesty/accuracy of the self-reporting by the parents. However, the majority of the parents all indicated strong support of the school's One Planet principles, so the data are thought to be reliable.

1.2 / Results and Analysis

Table 1.1 below compares Transport Mode measured data and targets, as percentage of the total number of trips taken. "Bicester" refers to the measurements made on how pupils in wider Bicester travel to their schools, as reported in Gagle Brook's Travel Plan [1].

"Target (1)" refers to the ideal aims of Gagle Brook as a One Planet school: note that the aim is to *exceed* the Bicester average figures, ideally by moving 5% of Car travel across to Bicycle travel (see [1]). Note that the goal for the school's first year was 50% cars, with the aim of working towards the 20% only goal in the long-term. (Laura from Mode has commented: "Technically the 50% still remains as it forms part of the legal document for the Elmsbrook overall planning application. If this is not met or discussions are not successful in altering this target, there are financial penalties applicable as part of the wider targets being monitored.")

"Target (2)" refers to the Targets stated for school – for both 2019 (was 2016) and 2029 (was 2026) in the original signed off site Travel Plan and predating Transport Assessment [2]. The 30% by Car is from Table 8.3 on page 55 in [2], and the remaining percentage figures here are extrapolated by averaging Target (1) with the scaled Bicester data, to give an indication of rough anticipated results.

The "Nov 2018" column is the raw summation of Survey results; the "Dec 2019" column is an estimate from taking into account new reception year joiners, 3 Elmsbrook-resident children moving schools and 4 non-Elmsbrook-resident children also moving schools during Term 1 of Year 2019-2020.

Travel By	Bicester	Target (1)	Target (2)	Nov 2018	Dec 2019
Car	25	20	30	58	56
Walk	57	57	50	29	30
Cycle	9	14	15	13	14
Bus	9	9	5	0	0
TOTAL	100	100	100	100	100

Table 1.1: Transport Mode measured data and targets, as Percentage of the total no. of trips taken

The Survey also ascertained that:

- In November 2018, 79% of pupils attending lived outside Elmsbrook.
- In December 2019, our current estimate is 80% of pupils attending live outside Elmsbrook.

Figures 1.1 (a), (b) and (c) below plot as pie charts the results for Bicester, Target (1) and Nov 2018 columns of the data in Table 1.1, respectively.

The "Distance Travelled" graph (Figure 1.1 (d)) shows a subset of the initial data, to give an idea of the commute distances of the pupils: as can be seen, only 4 of the pupils – the data points between 0.1 and 0.6 km, at indices 10, 11, 16, 17 – live on Elmsbrook. The significant cluster at around 2 km distance are those who live on Caversfield (which is part of the School's catchment area), and also Bure Park and Southwold estates. The greater distance 'outliers' are pupils travelling from Glory Farm and Kingsmere estates.

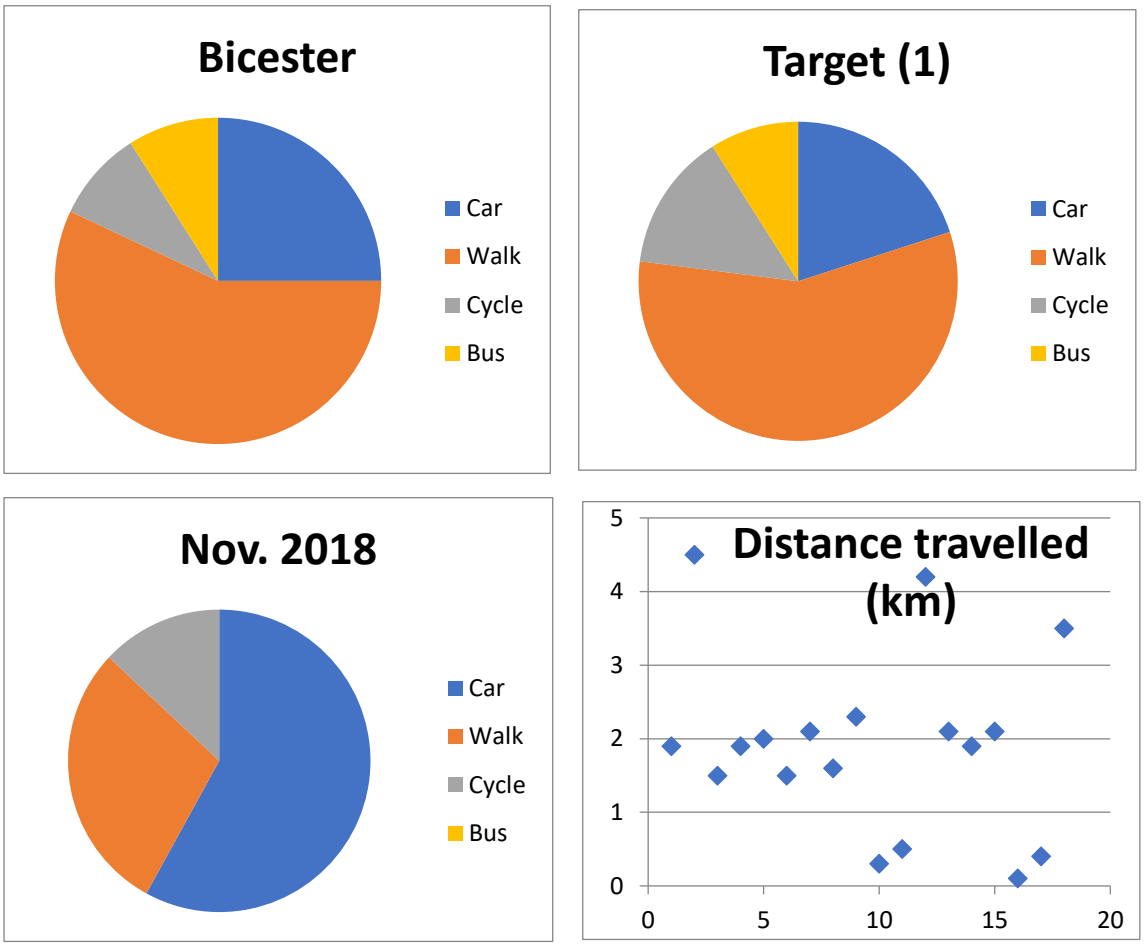

Figure 1.1: Transport Mode proportions (a-c), and Distance travelled to school in km (d)

1.3 / Discussion

- Trips by Car are found to be of significantly higher proportion than the Targets: November 2018 showing 58%, compared to 20%/30% for the target figures.
- The reason for this is clear from assessment of the locations of pupils' residential addresses: roughly 80% of pupils live outside Elmsbrook, and only 20% from Elmsbrook itself.
- This suggests that the assumption made by the original 2010-11 Travel Plan/Transport Assessment – that the vast majority of pupils would be Elmsbrook residents – is not currently true.
- Assessment of the impact of this invalid assumption – on future ability to meet targets and on the impacts on Traffic Flow and Parking on – will be continued in Section 3.

1.4 / Feedback to date

- When the issue with School parking was first presented to A2Dominion (13 July 2018) and CDC's Planning team (29 January 2019), the seriousness of the issue was not acknowledged. ("No more spaces" was the reply.)

- Laura from Mode (Elmsbrook TPC) commented (Spring 2020): "The key point to note is that this will increase as the site is built-out, so the School should remain ambitious and push for minimal car trips."

- This is true – as in, no one is saying minimal car trips shouldn't be pushed for.

- However, this comment ignores two important points:

    - Firstly, that the Ecotown is only 3% built, and the school will reach full capacity of 230 pupils in roughly 2024-25, when the Ecotown will still only be 6% built; thus the Ecotown *could not and will not* be able to sustain Gagle Brook "by itself" for many years into the future;

    - Secondly, as shown in Figure 1.2 below, the school's catchment area is not and has never been purely limited to the Ecotown: it also covers Bucknell and Caversfield. In fact, children as young as 3-5 (Nursery, Reception and Year 1 demographic) are not and should not be expected to walk or cycle as far as the extremes of this area – i.e. Caversfield and Bucknell, and potentially a large part of the future Ecotown homes area – and there are no alternative methods available apart from the E1 Bus, which only goes to the very nearest corner of Caversfield (Aunt Ems Lane / Fringford Road).

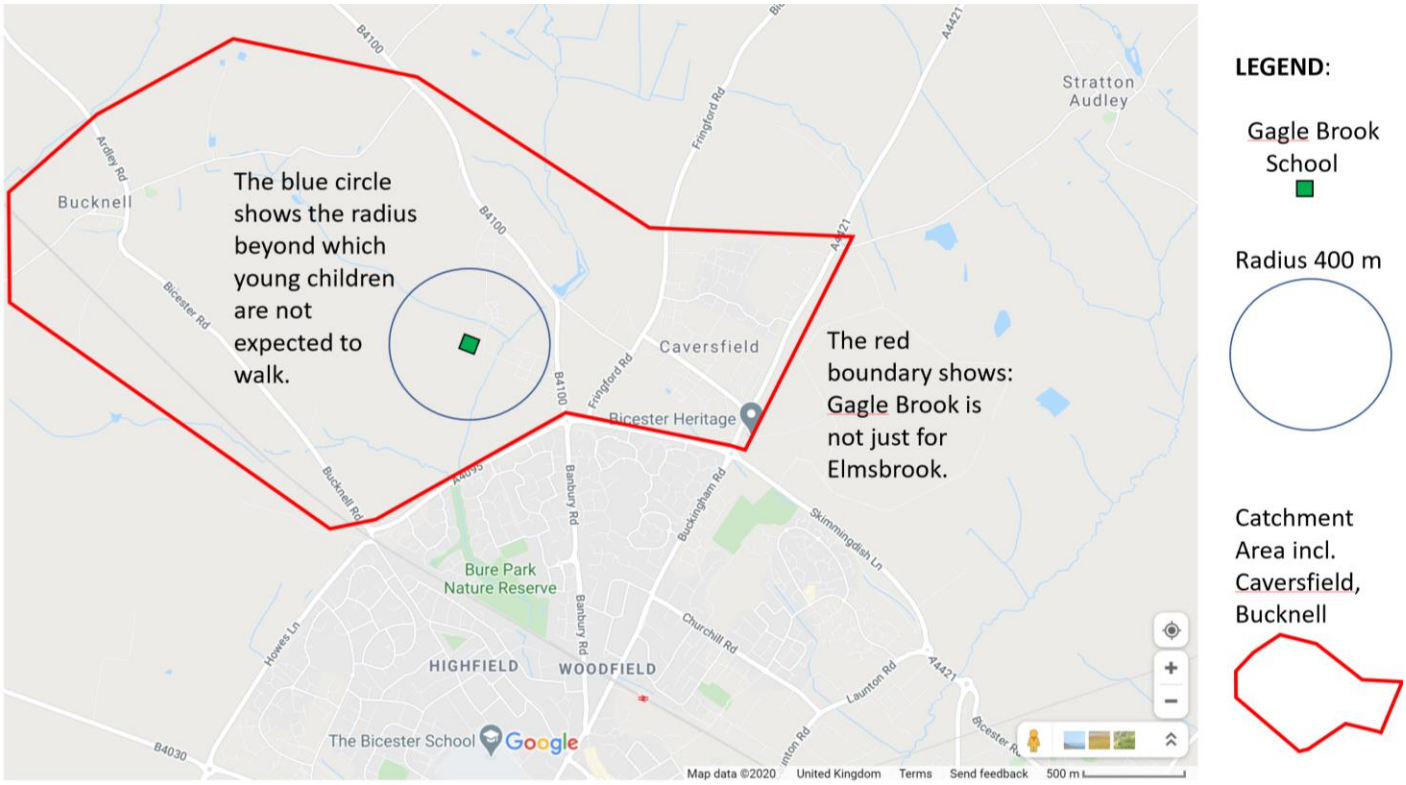

Figure 1.2: Map of north Bicester area, showing Gagle Brook School Location and Catchment Area

Update, Sept. 2020:

- When these points were presented to members of CDC's Planning team, on 9 September 2020, along with comparative evidence of the trends since 2018, there was finally acknowledgement that this IS an issue.

2 / Gagle Brook Primary School Pupil Travel Survey, October 2020

2.1 / Methodology

Slightly different for this one: the Headmaster wanted to *involve the pupils* in obtaining a survey of how they arrive at school and travel home – as part of lessons to encourage them to think about how they travel, forming part of the Sustainable Travel aspect of the school's One Planet Principles. This also had the advantage of saving paper, i.e. no forms sent to parents. Note also: the inclusion of "Scooter" travel was moved from "Walk" to "Cycle" data subsets.

A potential follow-up with parents regarding home locations has not, to date, been carried out: with the school closing again due to lockdown restrictions, as of 6 January 2021, it is unlikely that this will happen before the next survey in Autumn 2021 – providing restrictions are fully lifted by then.

2.2 / Results and Analysis

To present this, Table 1.1 has been copied and an extra results column added for October 2020, creating Table 2.1:

Travel By	Bicester	Target (1)	Target (2)	Nov 2018	Dec 2019	Oct 2020
Car	25	20	30	58	56	56
Walk	57	57	50	29	30	24
Cycle	9	14	15	13	14	17
Bus	9	9	5	0	0	0
TOTAL	100	100	100	100	100	97 *

Table 2.1: Transport Mode measured data and targets, as Percentage of the total no. of trips taken

* NB: The pupils survey contained an "Other" column, of 3%, thus the total in this new column of the table is 97%, as it is not clear what this "Other" includes! (*To do: ask!!)*

2.3 / Discussion

- Overall, we can perhaps conclude (i.e. tenuously, from only 3 data points) that car travel is gradually reducing (and migrating to "eco" transport modes) by around 1% per annum.
- Note also: A slight shift in percentage travel from "Walk" to "Cycle" is seen – somewhere around 3-5% (since the December 2019 data are imprecise, based on adding/subtracting new/departing pupils, when the school was in a state of some flux). This is perhaps entirely due to the modification made by including "Scooter" travel was under "Walk" rather "Cycle" data subsets.

2.4 / Feedback to date

- The Headmaster commented on feedback from CDC: "Angela Smith [from Cherwell District Council] got in touch today to ask what communication we share with parents about travelling to school as she thinks, in the first instance, that communication could help solve the problem! I shared our wording from the school induction booklet for families encouraging them to walk / scoot / cycle but told her the 56% who drive is not far off the families who live way off Elmsbrook and therefore potentially it is too far or dangerous to walk."
- Elmsbrook's Parking and Traffic Group commented that a follow-up, to get anonymised postcodes of pupils' addresses (as was done in the 2018 analysis) would be useful – to analyse and see if the Elmsbrook vs. non-Elmsbrook pupil home location demographic is actually reducing from ~80%.

3.1 / Possible Future Demographics and Modelling School Traffic

The impact of potential future trajectories of the school demographic on use of cars can be assessed, firstly by simple calculations allowing the potential impact on traffic and the restricted parking available to be fully explored. Table 3.1 shows calculations of the range of total number of vehicles which would be travelling to/from Gagle Brook School, each morning and evening, for drop-off and collection of pupils:

- The Row headings show the Number of Pupils attending the school – 32 was the initial intake to Reception and Nursery years in September 2018 when the school opened. Rows are separated by a step size of 4 pupils, such that the lowest row of calculations are for 100 pupils total – the table can be trivially extended to reach 230 pupils, the eventual full capacity when all years exist and are filled.
- The Column headings show the Percentage of pupils travelling by Car. As the first survey found this figure to be 58%, the scale has been set from 30% to 60% in 2.5% steps – the table can be extended e.g. down to 20%.
- The numbers within the table itself then show the likely maximum Number of Cars arriving to drop pupils off at the school in the morning peak hour – for [Row #] of pupils attending given [Column #] percentage car travel. (NB: Actually 0825-0850 is found to be the time when the greatest number of cars are parked in order to bring the children to classrooms.)
- A colour-highlight scheme is used to show the 'contours' of Vehicle numbers: dark green shows 12 or less; light green 13-15; yellow 16-19; orange 21-25; red 26-29, and so on. The decade quantities – 20, 30, 40, 50, 60 – have been left white for visual contrast.

Percentage of Pupils travelling by Car – from 30% to 60%

Number of Total Pupils Attending the School – NB: this shows the range from Sept. 2018 started (32) up to 100; the total capacity for the school, when complete to Year 6, is 230 pupils.

	30	32.5	35	37.5	40	42.5	45	47.5	50	52.5	55	57.5	60
32	10	11	12	12	13	14	15	16	16	17	18	19	20
36	11	12	13	14	15	16	17	18	18	19	20	21	22
40	12	13	14	15	16	17	18	19	20	21	22	23	24
44	14	15	16	17	18	19	20	21	22	24	25	26	27
48	15	16	17	18	20	21	22	23	24	26	27	28	29
52	16	17	19	20	21	23	24	25	26	28	29	30	32
56	17	19	20	21	23	24	26	27	28	30	31	33	34
60	18	20	21	23	24	26	27	29	30	32	33	35	36
64	20	21	23	24	26	28	29	31	32	34	36	37	39
68	21	23	24	26	28	29	31	33	34	36	38	40	41
72	22	24	26	27	29	31	33	35	36	38	40	42	44
76	23	25	27	29	31	33	35	37	38	40	42	44	46
80	24	26	28	30	32	34	36	38	40	42	44	46	48
84	26	28	30	32	34	36	38	40	42	45	47	49	51
88	27	29	31	33	36	38	40	42	44	47	49	51	53
92	28	30	33	35	37	40	42	44	46	49	51	53	56
96	29	32	34	36	39	41	44	46	48	51	53	56	58
100	30	33	35	38	40	43	45	48	50	53	55	58	60

Table 3.1: Number of Pupils (ROWS) vs Percent Car Travel (COLUMNS) -> Number of Cars (In Table)

3.2 / Comparing 2019 and 2020 results based on 2018 model predictions

- The November 2018 survey identified a likely true maximum Number of Cars (on Thursday and Friday mornings, when fewest pupils are brought earlier to the pre-school wrap around care at the school) of **20 cars** (c.f. the "32 row" and the "57.5 and 60 columns" in table 3.1).

- The September 2019 Traffic Survey measured **31 cars** travelling to the school between 8-9am, **3 of which** were school staff: c.f. **28** with "48 row" and "55 and 57.5 columns" in table 3.1.

- The October 2020 pupil Travel Survey, by the Headmaster (Section 2), measured 56% average trips by car.

- It can therefore be seen that the surveys and these calculations agree well (as would happen if the pupil demographic does not change very much in these initial years).

- As of the January 2021 intake, the school will be increase to around 68 pupils. This implies that the total number of cars might be around **37-38** at peak hours.

3.3 / Parking Issues created

This number of vehicles arriving presents current and future problems for both parking and traffic. This is partly because of the Parking Enforcement on the roads immediately adjacent to the school – Charlotte Avenue and Cranberry Avenue – which was brought in by A2Dominion's estate management team to dissuade Phase 2 Residents and their visitors from parking on the relatively narrow roads (causing issues for the E1 bus, emergency vehicle access, and other potential dangerous or inconsiderate parking issues). This was later extended to Charlotte Avenue throughout Phase 1. It will be removed from Phase 1, but not from Phase 2 for the foreseeable future.

Despite the short time periods when cars will actually be dropping off/collecting pupils, the company responsible (PCM) have refused Resident and A2Dominion's requests to make an exception for school drop-off/collect times – or even to have a stated non-zero "grace period" – despite this theoretically being required by law. While Gagle Brook's (previous) Headteacher has had verbal discussions with a representative of PCM (as recently as 23 January 2020), the issue is "acknowledged" but there is no agreement – verbally or in writing – as to how this will be dealt with.

In addition to previous parent tickets being issued, PCM have recently (on 10 January 2020) given tickets to car owners parked *in the school's 4 space layby* – which is (according to plans given by A2D's architects to the School's original headmaster) not part of their jurisdiction. (This was challenged by the school; it was particularly bad timing, as the car owners were potential future parents attending a 'stay and play' sample session with their children!)

With all the above in mind, there are theoretically only **12** Parking Spaces available:

- 4 spaces in the layby "bay" directly in front of the school
- 9 (*+3 shared)* spaces in Car Park – incl. 2-3 staff (depending on day of the week).
- 1 Visitor space (Cherry Lane) – *if not otherwise occupied by residents/their visitors.*

However, note that while in 2018, school employees only used 3 of the available 9(+3) spaces, by 2020 this has increased to 6 spaces – and the Headteacher has stated that for the 2021-22 year and beyond, parents should not expect to be able to park in the School's Car Park area *at all*.

When all of the above spaces are full, cars have *nowhere to park* other than out on roads next to the school – which are enforced by PCM: i.e. they do so at risk of being fined (and parents have received both tickets and random "let offs" by the occasionally-visiting inspectors).

Conclusion: Parents are still parking at risk of financial penalty, every day: and there is no current plan for an approach to resolve this, for all parties concerned.

NB: This is penalising parents who have no other option: we cannot expect 3-6 year olds to walk such a long distance to attend a school in their catchment area (for Caversfield and Bucknell resident pupils) or have been assigned to this school but live further afield.

And: despite a presentation to OCC, Bicester Town and CDC councillors, The White Horse Federation (who run the school), PTA, ECO and A2Dominion representatives (on 29 January 2019) to make all parties aware of the issue, **nothing has been done to work towards a formalised solution.** This is because the required combination of parties have simply not sat down together, with agreement that a formal resolution is needed: it is "in limbo" – presumably until some kind of (significant) incident occurs.

Update spring 2021: The exception to this has been parents organising a Park & Stride/Walking Bus scheme, supported and helped by the manager of the Eco Business Centre (EBC) – however, this was a very time-limited solution, which never got off the ground, due to the interruption of Covid-19 restrictions. By the time the schools reopened in spring 2021, the EBC had increased from 25% to 40% capacity, and its car park was regularly full, rendering the Park & Stride scheme impossible to run from here.

At time of writing, whether a suitable safe alternative location to *drop off* for a Walking Bus can be found for the school year of 2021-22 is now being considered. The main issue is that, as soon as construction works begin on the Community Hub – which is located on the school side of the EBC, but with its site storage on the other side of Charlotte Avenue – it is unlikely to be safe to use Phase 1 side roads or the Marketing Suite Car Park either – because of the Walking Bus crossing the 2x site entrances (and, based on experience of the EBC construction period, the number of construction-related vehicles parking along one side of Charlotte Avenue here: along with the construction work immediately adjacent to the road edge, footpath closure and obstruction is very likely throughout).

3.4 / Modelling Possible Future Parking

The calculation step is to move from the number of vehicle trips on the peak drop-off days to a model of *how many parking spaces are required* – in order to allow the maximum number of vehicles present at any one point in time.

Parents collected initial data in April-May 2019, and the following 'test' data for September 2019 to January 2020:

- 5-6 cars were typically observed at 0845 and 1515, every day, parked on the nearest roadsides (on Charlotte Avenue and Cranberry Avenue).
- On several occasions this was 8-9 cars.
- The worst case observed was 10 cars.

A couple of different methods to simulate parent arrival, stay time to drop-off, and departure, in the time period 0825 to 0855, were modelled, using the April-May 2019 data and the data from the September and December 2019 Traffic Surveys – which enabled (a) breakdown of vehicles into School and non-School traffic (by human observation: this is not possible with the Traffic Monitoring sensor data), and (b) capture accuracy to 5-minute windows [3,4]. One method uses Poisson distribution for interval generation; the other uses the SFP (Self-Feeding Process) – both gave similar results. This proved accurate for the overspill levels seen in September-December 2019, following the increase in the size of the school (i.e. 2 years to 3 years) – though with such a limited dataset this does not really test the model.

This found that:

- 18-20 cars overspill by Trips creates 2-3 cars parked on roads typically, and 5 worst case. (2018-19)
- 28-31 cars overspill by Trips creates 5-6 cars parked on roads typically, and 9-10 worst case. (2019-20)

Update spring 2021: the model code predicts what we are currently seeing: 16-18 cars typically, 20 typical worst case, and an absolute worst case of 26 on a very wet day. NEXT STEP: get accurate data for Sept 2021 intake, run model.

4 / References

[1] November 2018 – Gagle Brook Primary School Parents Travel Plan incl. Survey and Analysis

Gagle Brook Primary School - School Travel Plan

Prepared by: Alan Derry (Principal) / Angela Smith (CDC) / Rob Fellows (Parent/Elmsbrook)

Report Version No. 1.0

Final Release Date: 22 January 2019

[2] 2010 Transport Assessment for 10/01780/HYBRID:

P3Eco (Bicester) Limited & A2Dominion Group

NW Bicester Eco Development : Transport Assessment – Exemplar Site

Author: Dan Hammond; Checker: Janice Hughes; Approver: Kathryn Kennell

Report No. 1500-UA001881-UP23R-01

Final Issue Date November 2010, by Hyder Consulting

[3] September 2019 – Traffic Survey (8-9am peak slot): Phase 1/Phase 2/School/B4100 exit as nodes.

Carried out on Friday 20 September, on behalf of Elmsbrook Residents' Association.

[4] December 2019 – Traffic Survey (8-9am pk slot): Phase 1/Phase 2/School/B4100 exit as nodes.

Carried out on Thursday 5 December, on behalf of Elmsbrook Residents' Association.