

# **Planning Inspectorate NSIP ref no TR010037**

## **A47 – A11 Thickthorn Junction**

**Submission from Richard Hawker IP ref No 20028387 Date: 20 March 2022**

### **Deadline D10 comments**

**Summary** The case for the scheme is not proven. The Applicant has not provided all the relevant data, therefore it is not possible for the SoS, or ExA, to make a legitimate decision on this issue.

The scheme contradicts government policy/legislation regarding bus priority, modal shift and climate change. The proposals therefore risk judicial challenge.

I believe cheaper and better ways to reduce congestion in the area have not been adequately investigated, and I give examples. These could be introduced in a shorter timescale, and would not prevent the current proposals being enacted, in the future, should those options not prove adequate in the long-run.

The increase in traffic which the applicant quotes does not consider existing and possible changes in government policies, which should limit the increase, or result in a reduction. Due to the refusal of the applicant to provide the necessary traffic information, I offer an analysis of traffic based on figures we do have, plus ‘commonsense’ assumptions.

It is difficult to understand why the traffic model NATS2019, information for which is now over 2 years old, has not yet been approved by DfT for use by Highways England, instead of the much older NATS2015, which is now 7 years out of date. No reason for the delay has been given, and one wonders about the usefulness of creating such a traffic model if it is not deemed fit for use almost 3 years later.

The adverse impact of the proposals will be very large. The major environmental problems cannot be mitigated, so the best solution is to avoid creating them.

Many of these aspects have been raised in the correspondence and hearings, but some of the queries put to the applicant, particularly regarding traffic, have often not been answered fully, despite being asked several times.

### **I The case for the scheme - comments**

#### **Increase in traffic/congestion**

The **case** relies on there being excess levels of congestion and delay at the roundabout, both now and in the future, but only during peak periods. Little traffic information and few traffic counts are given for anything outside these periods. One assumes that the area currently runs acceptably at other times, and this is borne out by anecdotal information. Predicted increases are around 14% by 2025, and 25% by 2040, which are not far from the general prediction in the government’s publication ‘Road Traffic Forecasts 2018’, in which growth from 2015 to 2050 is forecast between 17 and 51%. This corresponds with approximately 0.5 and 1.0% pa, giving around 10% by 2025 and 28% by 2040.

However, this publication is from 4 years ago, since when many significant events have occurred (COVID 19, Ukraine, cost-of-living increase, understanding of climate change, encouragement of modal shift) which will likely result in reduced predictions in any updated publication.

It is claimed that the roundabout will not cope with the anticipated increase in traffic due to 'near certain' local developments. The biggest effect is the increase in traffic on B1172, caused by housing at Wymondham and Hethersett. But this does not bear in mind the change in government policy of modal shift (supported by Norfolk County Council) in their Bus Back Better document. Such concentrated housing developments would be ideal places to instigate public transport, both bus and rail, which would reduce pressure on the roundabout.

If one does accept the traffic predictions in the case for the scheme, the roundabout will still be under some pressure in 2025 and 2040, when the Volume/capacity ratio for the A11Ebnd leg is predicted to be 95% and 101% respectively. This is below the target level of 85%. The basis of calculation of the capacity of a stretch of road has not been explained.

## **II Alternatives**

It has not been shown that less-obtrusive and cheaper alternatives to the scheme, which involves extensive alterations, have been investigated. The applicant's reference in REP4-027 to alternatives simply states that many alternatives were looked at before the preferred route announcement, but I cannot see them listed, let alone detailed within the section 'Alternatives' within APP-125 – the case for the scheme.

In particular, the options of Traffic Light control and Dedicated slip roads could avoid having to build the underpass and overbridge.

In more detail:

### **A) Traffic Light control**

The roundabout is controlled by traffic lights, installed at large expense some years ago. But there is no analysis of what effect adjustment of timings of the lights, and alteration of feedback measures, could have to improve the throughput of traffic. The MOVA system is described in some detail at para 4.4.12. of APP-125. It is clearly a complex system taking inputs from queuing traffic and flow rates.

Looking at table 4.5, there is a vast difference in queueing times for different legs of the roundabout – 4 min for A11NEbnd, 1.3min for B1172 Ebnd, whereas all the others are below 1.0min. There is surely scope within this system for adjusting the light sequence to allow greater GO times for the A11NEbnd leg, yet there is no evidence that this option has been investigated. The cost would be minimal.

### **B) Suggested Dedicated slip roads**

- i) A47NWbnd to A11SWbnd. It was very good to see that the scheme design changed in 2020 to include a dedicated slip road from A47NWbnd to A11SWbnd, in place of one large underpass. This will clearly take some pressure from the roundabout, and could be done independent of any other work, and, with

appropriate design could surely still allow for Cantley lane residents to access the roundabout. This is discussed later.

- ii) from A47SEbnd to A11NEbnd and
- iii) from A11SWbnd to A47SWbnd.
- iv) From A11 NEbnd to the Park and Ride facility: Figures for this are admittedly predicted to be relatively small, but this slip would not only take cars from the roundabout, but reduce travel time for those accessing the location. This may even encourage more drivers to take the park-and-ride option, reducing pressure on the roundabout still further. The applicant has stated that NCC is in agreement with them over the non-building of this promised road, but this should be reassessed.

## **1) Traffic Analysis of the effect of these slip road options – on peak flows.**

### **a) Introduction**

The applicant has declined several times to reveal the traffic readings, turning counts, origin-and-destination data and calculations which underpin their justification for the scheme, deeming it ‘unnecessary’ (REP7-007). This information must be available, as the modelling software uses such information from mobile phone data. This makes constructive, reasoned development of alternative courses of action very difficult, and it calls into question the robustness of the applicant’s arguments. We are invited to accept their assurance that their predictions of traffic comply with TAG guidelines, but are allowed to see no evidence of this, nor question the assumptions on which those calculations are based.

### **b) Detail of analysis**

However, it is clear that the effect of slip roads can only be beneficial. As the main concern is with peak-hour traffic, an attempt is made to estimate those flows which could be taken by the suggested slip roads, in the absence of actual figures. There are figures and diagrams given for the AM and PM peaks, but the numerical references given by the applicant for the locations of traffic numbers in diagrams of Fig 4.13 (AADT) and Fig 4.15 and 4.16 (PM and AM peak) are different. This is totally unnecessary and confusing. I have derived a cross-reference and listed it in tables 1 – 3. Also, peak flow figures are not given for the total main flow on the A47 overbridge at DS2025 (which they are for the AADT figures), so it is not possible to estimate the percentage which could be expected to use the slip road if it were put in place now (i.e. based on BY2015 figures, not DM).

However, those figures *are* shown on the AADT diagram and they are in my tables Figs 1 – 3, showing the numbers making up the total traffic away from the roundabout on each of the five roads. It is not possible to do the same for traffic entering. This summary was done to check that there were no anomalies (as found on the A47 North Tuddenham modelling). Tables 1 – 3 are for BY 2015, DM2025 and DS2025 respectively, and are based on the figure 4.13 in APP-125. The first figure (bold) is the total on that road, and the figures below it are those flows which contribute to it. There are no obvious anomalies.

Table 1 BY2015 'Base year' i.e. nearest to 'the present'. AADT figures (5 or 7-day unknown)  
LEAVING junction

<i>Main road from junction</i>	<i>Location number on Fig 4.13</i>	<i>Location number on Figs 4.15 &amp; 4.16</i>	<i>AADT</i>	<i>Comment</i>	
<b>A11 to city</b>	<b>7</b>	-	<b>18,100</b>		
From A47SEbnd	6	4	7,700		
From rndbt	-	-	(11,400)	No figure given – derived from other two	
<b>A47SEBnd to Yarmouth</b>	<b>15</b>	-	<b>21,250</b>	42,500/2	
From A11NEBnd	11	6	0	Not built	
From Rndbt	9	5	11,200		
A47 overbridge	13	-	9,900	19,800/2	
<i>Total</i>			<i>21,100</i>	<i>Very close</i>	
<b>A11 to Wy'ham</b>	<b>20</b>	-	<b>19,500</b>		
From A47NWbnd slip	12	7	0	Not built	
From Rndbt	1		19,500	No other contributors	
<b>B1172 E of Cantley Lane</b>	<b>16</b>	-	<b>4,250</b>	8,500/2	
<b>A47 to Swaffham</b>	<b>14</b>	-	<b>15,100</b>	30,200/2	
From Rndbt	5	-	4,400		
From A47 overbridge	13	-	9,900	19,800/2	
<i>Total</i>			<i>14,300</i>	<i>Very close</i>	

Table 2 DM2025 'Do-Minimum i.e. NOT this scheme, but all others in place Assumed year 2025.

AADT figures (5 or 7-day unknown) From Fig 4.13 LEAVING junction

Main road from junction	Location number on Fig 4.13	Location number on Figs 4.15 & 4.16	AADT	Comment	
<b>A11 to city</b>	<b>7</b>	-	<b>21,000</b>		
From A47SEbnd	6	4	7,700		
From rndbt	-	-	(13,300)	No figure given – derived from other two	
<b>A47SEBnd to Yarmouth</b>	<b>15</b>	-	<b>26,950</b>	53,900/2	
From A11NEBnd	11	6	0	Not built	
From Rndbt	9	5	14,000		
A47 overbridge	13	-	12,450	24,900/2	
<i>Total</i>			<i>26,450</i>	<i>Very close</i>	
<b>A11 to Wy'ham</b>	<b>20</b>	-	<b>23,500</b>		
From A47NWbnd slip	12	7	0	Not built	
From Rndbt	1		23,500		
<i>Total</i>			<i>23,500</i>	<i>No other contributors</i>	
<b>B1172 E of Cantley Lane</b>	<b>16</b>	-	<b>6,000</b>	12,000/2	
<b>A47 to Swaffham</b>	<b>14</b>	-	<b>19,100</b>	38,200/2	
From Rndbt	5	-	5,600		
From A47 overbridge	13	-	12,450	24,900/2	
<i>Total</i>			<i>18,050</i>	<i>close</i>	

Table 3 DS2025 'Do-Something' i.e. this scheme and all others in place Assumed year 2025.

AADT figures (5 or 7-day unknown) LEAVING the Junction

<i>Main road from junction</i>	<i>Location number on Fig 4.13</i>	<i>Location number on Figs 4.15 &amp; 4.16</i>	<i>AADT</i>	<i>Comment</i>	
<b>A11 to city</b>	<b>7</b>	-	<b>22,000</b>		
From A47SEbnd	6	4	7,600		
From rndbt	-	-	(14,400)	No figure given – derived from other two	
<b>A47SEBnd to Yarmouth</b>	<b>15</b>	-	<b>27,800</b>	55,600/2 – only given 2-way fig	
From A11NEBnd	11	6	9,800		
From Rndbt	9	5	6,100		
A47 overbridge	13	-	11,850	23,700/2	
<i>Total</i>			<i>27,750</i>	<i>Very close</i>	
<b>A11 to Wnd'm</b>	<b>20</b>	-	<b>24,300</b>		
From A47NWbnd slip	12	7	9,800		
From Rndbt	1		14,500		
<i>Total</i>			<i>24,300</i>	<i>Very close</i>	
<b>B1172 E of Cantley Lane</b>	<b>16</b>	-	<b>5,600</b>	11,200/2	
<b>A47 to Swaffham</b>	<b>14</b>	-	<b>19,000</b>	38,000/2	
From Rndbt	5	-	6,700		
From A47 overbridge	13	-	11,850	23,700/2	
<i>Total</i>			<i>18,500</i>	<i>Very close</i>	

To attempt an estimate of the numerical effect of slip roads, the following was done:

Figures for the dedicated slip lanes linking A47NWbnd to A11SWbnd, and vice versa, in the DS2025 scenario, predict that around 9,800 vehicles of roughly 25,000 will make that turn, i.e. around 35 – 40%. Now considering the BY2015 figures, and taking that percentage of vehicles from those entering the roundabout from the total A47NWbnd show that a total of 660 vehicles could be diverted from the roundabout in the AM peak and 530 in the PM peak. (The same number would be expected to make the turn in the opposite direction). If other sliproads were built from A11SWbnd to A47SEbnd, and A47SEbnd to A11NEbnd, and they took just 15% of the traffic entering the roundabout (a conservative estimate), a total of around **980** vehicles could be diverted from entering the roundabout in the AM peak, (15% of

the total 6538) and **920** in the PM peak (14% of the total 6507). This is thus *more* than the roughly **660** which would be taken by the underpass (based on 2015 figures).

Thus dedicated sliproads could likely achieve a better result than an underpass.

**c) Knock-on benefits**

- i) **Underpass** If enough traffic can be prevented from entering the roundabout by these means, and better control of traffic lights, together with the improvement in public transport which the government is encouraging, the need for the dedicated underpass element of the scheme, from A11NEbnd to A47SEbnd, is eliminated; this therefore means that the existing footbridge across the A47 would not have to be replaced, although it is appreciated that a facility for riding a cycle (rather than wheeling it) would be an advantage here.
- ii) **New Cantley Lane bridge** This is proposed in order to permit the closure of the existing access arrangements, which are close to the roundabout. It provides an alternative access to several properties on Cantley Lane, east of the low (4m) railway bridge. In the REP4-026 response to Richard Hawker's submission, the applicant has deemed the current access arrangement not to current design standard, quoting DMRB CD123 as stating "a direct access should not be provided on trunk roads . . . .". Direct Access is defined in CD123 as an access to (among other possibilities) a single dwelling. The connection to Cantley Lane is therefore NOT a direct access, so this reference is misleading, and thus the applicant has quoted no helpful reference to DMRB. The applicant does make relevant comments about the need to minimise crossing of lanes of traffic. Regarding a safer design, there is no reason why the slip road to the roundabout from A47 cannot be initiated a little further back, and the slip from Cantley Lane made to join it earlier, giving more time to merge with traffic. The segregated left-hand turn to the A11 would appear considerably after this merge, and the slip back into Cantley Lane can be moved further south.

This, with possible speed limits if necessary, could be more feasible than building a complete new bridge over rail and road, and diverting Cantley stream. This access would only be *essential* for vehicles too tall to negotiate the existing rail bridge. Many smaller vehicles could use the route south, away from the roundabout, to access the junction at Wymondham (admitted some distance away); those going southward probably use this now. It is appreciated that safety is to be considered, but there is no record of any accident at this spot in the years 2014 – 2018, and the number of vehicles using the entry is extremely low, and would continue to be so. There is a case for an investigation of this possibility, as the benefits to cost and disruption would be very advantageous.

*General point about accidents.* Section 4.12 of APP-125 shows recorded accidents, and the anticipated monetary saving by expected accident reduction due to the scheme. The calculation of this saving is stated to be given in Section 5, but there is no calculation there, just the results. So there is no way to check the figure of £7M saving quoted. The inclusion of a table for (what emerges as) the whole area is confusing.

### **III Legal considerations – government policy**

#### **A) Modal shift.**

The case for the scheme envisages congestion becoming worse by 2025 and worse still by 2040, due mainly to increased traffic entering from the B1172, caused by housing developments in Hethersett and Wymondham (para 4.3.23). These are assumed to generate traffic heading north, west or east, which will all have to negotiate the roundabout. This assumption has not taken into account the government's policy of modal shift to public transport and active travel. The Norwich-to-Cambridge railway line is very close to both housing developments, and the line from Norwich runs very close to Broadland Business park, and further on, to Gt Yarmouth. There is every reason for these lines to be developed and take car traffic from the roundabout.

The government's policy of encouraging 'modal shift' to buses, described in 'bus back better' requires that any new road scheme must offer a positive benefit for bus travel ('A better deal for bus users' Sept 2019, quoted in 'Bus Back Better', Feb 2020). Other government policy regarding climate change and carbon reduction aims to reduce car travel by 20% over the next 25 – 30 years. Road schemes such as this are predicated on an increase in traffic, and history has shown that once such schemes are built, the very fact of their being there, even without any anticipated housing development, do encourage an increase in traffic, either by drivers using their cars more, or non-drivers deciding to buy one. Therefore the scheme will provide an undesirable pressure for traffic to increase.

#### **B) Wildlife - Bats**

It is noted that a bat survey is recommended to be carried out if work on the scheme had not begun by February 2022 (REP7-009), and the applicant stated that the results of such a survey would be available for deadline 9. This does not appear to have been supplied. The highly-protected Barbastelle bat has known colonies not too far away, and it is surely essential to know whether this scheme would have an impact on such bats before a decision is made.

#### **C) Climate change**

This has been dealt with in more detail by other interested parties.

Note: There is one map of traffic flows linked with this submission. Dated 20.3.22

Richard Hawker

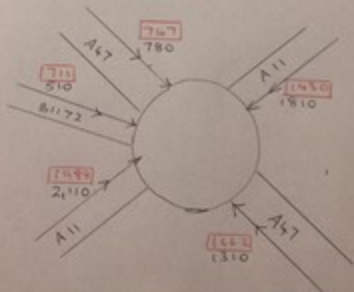
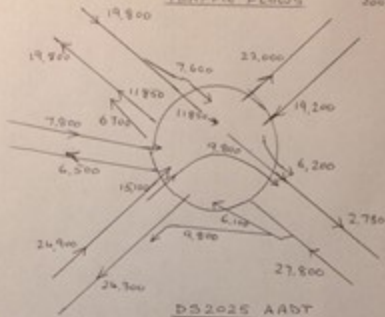
20 March 2022



A47-A11 THICKTHORN TRD10037

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TRAFFIC FLOWS



ENTERING JUNCTION BY 2015

AM PEAK  
PM PEAK