

## Deadline 4 Submission from Bryan Robinson (IP ID 20028154)

The following are comments against the Applicant's replies to my earlier observations on specific issues in the Inspector's questions at EXQ1 and resulting from ISH2 hearings.

### Junction Design

I am still confused with the conflicting interpretations of design requirements between the two National Highway schemes on the A47 between the North Tuddenham and Easton (A47NTE) and between Blofield and North Burlingham (A47BNB).

The two schemes adopt differing policies for the use of compact grade separated junctions within the design. The A47 upgrades are publicised as completion of dualling between East Dereham and Acle and I contend that in the interests of safety, a common approach to junction design should be adopted.

The DS mainline traffic flows in 2040 for the schemes are stated in the submissions at the Norwich Road junction (A47NTE) and the B1140 junction (A47BNB) as:

	AADT Mainline 2040	Side Road North 2040	Side Road South 2040	Underpass 2040	
A47NTE	46,000			4,700	Fig 4.18 Doc. APP-140
A47BNB	49,000	3,800	4,300		

One would therefore assume that the junction designs would follow the same principles.

The explanations for the determination of a dumb bell solution for A47NTE and a compact grade separated junction for A47BNB from the respective schemes are repeated below. I will be sending the Inspector for A47BNB a copy of the appropriate section.

#### NH Response for A47NTE

*The design of the proposed grade separated junctions is based on the scheme design year (2040) traffic flows. The traffic flow varies according to road type, junction location, sideroad network, local traffic movements and consideration of local constraints.*

*The junction design takes into account local user traffic movements, future traffic growth, future developments and provides safe access to and from the Strategic Road Network for users (villages) north and south of the A47 in a form consistent with junctions on this section of the A47 corridor.*

*The proposed Norwich Road Junction has been designed in accordance with the 'UK DMRB, CD 122 – Geometric design of grade separated junctions' and follows the junction hierarchy presented in Appendix A, which outlines layouts based on increasing traffic flows. The design year mainline flows are in excess of 30,000 AADT\**

*with the minor road flows on the southern roundabout in excess of 3,000 vehicles AADT 2-way \*\*, therefore a fully grade separated option was developed.*

*The operational modelling assessment is described within section 4 of the Case for the Scheme (APP-140).*

*\* – UK DMRB, CD 122, Clause 2.2.1 – “Compact grade separated junctions should not be used on dual and single carriageway roads when mainline flows are above 30,000 AADT”. Note: Compact grade separated junctions consist of left-in left-out priority junction(s), between the mainline and connector road, designed in accordance with CD 123 [Ref 2.N]*

*\*\* – UK DMRB, CD 123, Clause 2.10.1 – “Priority junctions should not be provided on rural dual carriageway roads where the minor road flows exceed 3,000 vehicles AADT 2-way.”*

*The Applicant has followed the requirements and good practice outlined in the UK DMRB.*

#### *NH Response for A47 BNB*

*VISSIM operational modelling has been undertaken to provide a detailed assessment of the Scheme’s performance across the A47 mainline Scheme section and the upgraded B1140 junction. To support this assessment PICADY analysis has been undertaken of the priority junction connecting the de-trunked A47 east to B1140 South Walsham Road on the northern side of the A47. (see Transport Assessment (TR010040/APP/7.3 Rev 1) Section 6.2 ‘Overview of the Operational Modelling’ and Section 7.8 ‘Impact on Junctions, Queuing and Delay’).*

*For the VISSIM and PICADY assessments, October 2019 traffic counts were utilised to calculate the additional seasonal growth in traffic relating to the British Sugar PLC located in Cantley. The additional British Sugar PLC demand was added to the NATS 2040 forecasts. This ensures that the VISSIM and PICADY operational assessments account for the extra demand generated from the British Sugar PLC during its seasonal period. In summary the VISSIM and PICADY analysis shows that the Scheme design is suitable even during the British Sugar PLC peak season where there is a large increase in HGV demand.*

*VISSIM (Section 7.8 of APP-122 from 7.8.1 to 7.8) shows minimal delay on all merges and diverges.*

*PICADY (Section 7.8 of the Transport Assessment (TR010040/APP/7.3 Rev 1) from 7.8.1 to 7.8.3) indicates that all arms will operate well within the available capacity and that on average minimal delays of around 6-10s will be experienced during peak periods.*

*The Scheme Design Report (TR010040/APP/7.6 Rev 1) sets out the justification for the junction at Yarmouth Road and details the options considered. A grade separated*

*junction was discounted due to the low use of the existing junction arrangement in the forecast future years dominimum scenario with the strategic traffic model.*

*The B1140 junction is proposed to be a compact grade separated junction based on the traffic flows and existing constraints.*

A47NTE uses the 30,000 mainline flow constraint in UK DMRB, CD 122, Clause 2.2.1 as the overriding determinant factor negating the use of a compact grade separated junction as an option.

This is not considered in A47BNB and I suggest that clarification is required on when compact grade separated junctions are acceptable. In this connection it would be useful to understand the intended differentiation between the wording of Clause 2.2 in CD122 which states "*Compact grade separated junctions **shall not** be used on motorways*" and Clause 2.2.1 which states "*Compact grade separated junctions **should not** be used on dual and single carriageway roads when mainline flows are above 30,000 AADT*".

If both are mandatory prohibition statements, then the compact grade separation junction for A47BNB does not comply.

These overriding principles of CD122 also therefore raise the question of why the existing compact grade separated junction at Fox Lane at the western extremity of the A47NTE scheme has not been replaced to reflect the increase of AADT mainline traffic flows from 24,000 in 2015 to 49,000 in 2040 under the DS scenario.

The Junction and Sideroad Strategy Report (February 2020) published by HE (NH) does not form part of the planning consultation but Section 8.3 in the report acknowledges that the Fox Lane junction will continue to operate as the existing configuration but notes that "*mainline traffic figures are far beyond the limiting figure of 30,000 recommended for a compact layout*".

I find it disturbing that the Applicant can simply use one design principle as justification in a particular situation but argues that the same principle can be ignored for another situation.

I would respectfully suggest if it is determined that CD122 2.2.1 should be the dominant design factor, it should apply to the whole scheme and the Fox Lane junction should be upgraded to meet that standard.

#### Norwich Western Link (NWL)

I contend that consideration of the status of the NWL is the fundamental issue for A47NTE and how, or indeed if, this should dictate the design of an upgrade to part of the Strategic Road Network (SRN).

In the Case for the Scheme (APP-7.1) at paragraph 4.4.6, the Applicant states that the DM scenario assumes, in the absence of any layout plan from NCC, that the NWL junction to the A47 is assumed to be an at-grade five arm roundabout with two circulatory lanes.

From all the detailed information provided in the 5 years of the NWL promotions by NCC there has never been any proposal for the A47 connection to be other than by NH in the A47NTE proposals. There is no allowance in the £198m costs of the NWL for the connection.

NH has determined that the NWL is “Near Certain” and this forms the basis of the single Core Scenario. This appears to be based on the fact that a Strategic Outline Business Case for the scheme was accepted by DfT for progression to the Outline Business Case stage.

Not only does the traffic modelling reflect the NWL, but the side road strategy particularly the temporary closing of Honingham Road, is dependent upon the NWL to allow it to reopen.

Whether one agrees with the wisdom of this approach, there is obvious reluctant acceptance that the NWL may not proceed as demonstrated by the alternative scenario presenting forecasts of traffic figures without the NWL. The Applicant does not offer an alternative design against the alternative scenario.

If it is accepted that there is the possibility of no NWL, the design implications must be made available to the Inspector, in particular the outline for a revised design of the Wood Lane junction and the side road strategy.

Consultants engaged by Interested Parties have made statements that they consider the Wood lane junction to be oversized without the NWL. The answer to the question by the Inspector at ISH2 of whether the Wood Lane junction design would change without the NWL was studiously avoided by the Applicant with references to designs following DMRB.

I believe this lack of transparency for a base design without the NWL, which currently still does not have planning, is not yet guaranteed of funding and for which a Habitats Regulations Appropriate Assessment has yet to be undertaken, is a the major encumbrance limiting the recommendation options for the Inspector.

If the Inspector determines support for the submission, the design for which is specific to the NWL being built, will the recommendation have to be qualified as conditional upon the NWL being built with time constraints also stipulated?

Would then such a recommendation constitute predetermination influencing the later planning decision for the NWL and does it then infer that the Inspector should determine the likelihood of planning approval for the NWL? Without the background and detail for the NWL this is impractical.

The Applicant made reference during ISH2 Part 1 Session 2 (at approximately 41mins) to NCC having an outstanding requirement as a result of the DCO for the Northern Distributor Road (NDR) to provide a scheme of works as traffic numbers have breached the thresholds of the DCO for Weston Longville. Further (and I paraphrase) that the NWL is the solution by NCC to correct this breach and the Applicant is collaboratively working with NCC to deliver this solution.

The Condition relates to traffic levels not exceeding traffic levels which were being experienced prior to the NDR.

Whilst agreeing that the requirement of the NDR DCO remains unfulfilled, **I do not agree that the NWL is the solution being proposed** for discharge, particularly noting the concerns of Weston Longville Parish Council that the NWL and the A47NTE **combined are likely to increase numbers further**.

The NWL scheme was proposed by NCC before the NDR had even commenced and it must be assumed that the traffic predictions for a reduction in traffic through the villages would be achieved. The alternative that NCC knew the NDR would increase numbers would constitute a serious breach of faith in what was promised for the NDR. In fact the Wensum Link is contained in the NDR documents but it refers to the B1535 which was intended to serve as the connection between A47 and A1067.

Unfortunately the upgrades, completed in circa 2014, has never fulfilled this solution to the historic problem of rat running across the rural valley roads, primarily due to NCC providing limited funding for a minority of the recommended alterations.

I am surprised the NH has allowed itself to become embroiled in the politics of the NWL.

It is important that you should be aware that at the time of the NDR planning application to the Planning Inspectorate that a new link over the Wensum Valley was specifically excluded from the submission because it was considered at that time that it would have a negative impact on the River Wensum SAC under the Habitats Regulations. NCC have not provided any evidence that this is still not the case and have indicated in correspondence that there is no intention to prepare a further Habitats Regulations Appropriate Assessment until the NWL planning application.

It is agreed that having seen traffic numbers increase in the villages to above pre-NDR levels, the NCC is probably **hoping** that the NWL will solve the problem.

The Applicant emphasises that it is in constant liaison with NCC to assist the implementation of the NWL. Noting the Outline Business Case (OBC) for the NWL, submitted to DfT in July 2021 promotes the scheme as the “**completion of the orbital route around Norwich**”, I am concerned that this concept of a outer ring road which will incorporate the part of the SRN on the A47 between Honingham and Postwick may have dictated the NH design rather than looking at the dualling of part of the Strategic Road Network.

If the NWL with the stated intention of being part of an orbital route around Norwich forms an integral part of the A47NTE design, it begs the question of the extent of the environmental considerations which should be included in this application. I would accept that the full implications could be ignored in A47NTE if these considerations had previously been tested under the planning system for the NWL. This is not the case and therefore should be investigated as part of this submission.

The Applicant has stated many times that it is in consultation with NCC concerning the design and implications of the NWL and therefore should be aware that the NWL is not in any of the existing policies and although reference in the emerging Greater Norwich Local Plan and Transport for Norwich plans is specifically excluded. It does form part of the emerging Norfolk Local Transport Plan which is programmed to be presented to Council for

approval this month, after revisions to the draft. These revisions have not been seen by the public but are rumoured to involve climate and environment issues.

If however, despite the continuing dialogue with NCC, NH is unaware of the orbital proposal questions need to be asked whether this will conflict with the design as proposed for implications for the SRN.

I reiterate my suggestion that the A47NTE should be a standalone design with the side road strategy to ensure there is no worsening of the current situation and improvements where possible.

As a secondary consideration an alternative design can be determined with the NWL to assess the full implications on traffic levels, the design of junctions and environmental issues. This would avoid the current situation of a starting point which makes the NWL front and centre of the design.