

Ms Sandra Eastaugh
Greater Norwich Development Partnership
PO Box 3466
Norwich
NR7 7NX

By Email only

Our ref: 16197/A3/IP/AC

07 December 2010

Dear Ms Eastaugh

**GNDP JCS – RF97 - RESPONSE TO INSPECTORS' QUESTIONS (RF75)
FLEXIBILITY AND PLAN B**

Thank you for your email of 29th November 2010 attaching the GNDP's proposed response to the above and the submitted amendments to the JCS contained within Appendix 2 of RF97 dated on 02 December 2010. I should be grateful if the comments contained within this letter (by way of its actual circulation) are drawn to the attention of the GNDP members and advising officers before the EiP is reconvened on 09 December 2010. This letter refers to Agenda item 2 for the additional hearing day.

I note that in responding to the Inspectors' questions, the GNDP is keen to avoid further consultation and SA. Accordingly, any changes now proposed by the GNDP must be consistent with the evidence base and, in particular, the SA.

The GNDP's proposed response (a new para 7.12 of the JCS headed "Contingency strategy") appears to accept that there may be an alternative scheme(s) to that currently proposed at Postwick Hub and that, through the AAP, the opportunity for further solutions (which could include our Plan B) will be tested. The GNDP argues that capacity at NE Norwich is limited, in total, to 1800 dwellings with a suitable improvement but any development beyond this is dependent upon a commitment to the NDR. I hope I have understood matters correctly.

You will not be surprised to learn that we have a number of concerns with this position, notably that it does not respond adequately to the questions raised by the Inspectors. It is also useful to recall the comments of Mr Phil Morris at the Examination, where he argued that a 'reserve site' policy (our policy 9A) was not effective due to the short time frame.

I am concerned that the desire to avoid delay and further consultation is placing an unnecessary burden upon the GNDP and resulting in an 'imperfect' solution. I would suggest that the GNDP should explore, more fully, a fuller response to the questions raised by the Inspectors and should address the procedural requirements that arise accordingly rather than vice versa. You will recall the criticisms previously levelled at the GNDP as to the emergence of options 2A and 2+. I foresee the same procedural shortcomings arising again.

I welcome the inference in the proposed amendment to policy and the proposed additional supporting text that an alternative scheme(s) to improve Postwick Hub may be suitable.



Certainly, the work undertaken by Create Consulting Engineers indicates that alternative schemes for the improvement of Postwick Hub could achieve a level of growth in the order of 1,800 (minimum) dwellings together with the now committed employment development areas in and around this location, in advance of the NDR (or an alternative i.e. our plan B).

Based upon the trajectory at appendix 6 of the JCS, this threshold would not be reached until the end of 2016. Even allowing time for design and construction, this would allow sufficient time for the GNDP to progress an alternative to the NDR (if needs be), for funding to be agreed (possibly) and for the GNDP to progress a reserve sites DPD or similar.

It appears that there is the potential for flexibility to be introduced into the JCS. However, it is the GNDP's slavish adherence to the NDR as the only solution that appears to be limiting the achievement of that flexibility. I fear that this may well be driven by a perceived inter-relationship of the NDR in the JCS and the decision on funding. Be that as it may, the JCS ought to be brought forward on its own merit and there appears to be no sound planning reason why the GNDP ought not to consider an inner relief road (our plan B or similar) either as an alternative or interim solution. As an interim measure, our plan B would add further flexibility to extending the potential capacity of the Growth Triangle pre NDR.

The detail of which can tested through the AAP. However, under such a scenario the potential for an alternative needs to be signalled in the JCS. The GNDP's suggested text goes some way to addressing this point (see penultimate paragraph to new text behind para 7.11) but any flexibility is eradicated by the final paragraph. We would suggest that this paragraph is deleted.

I attach our suggested revisions to the addendum text which should be viewed in light of the above together with supporting notes prepared by Create Consulting.

Yours sincerely



IAIN PAINTING
Partner

Enc. Suggested amendments to Appendix 2 RF75
Create Consulting Further Note in Response to RF88 submitted by GNDP

cc. Louise St John Howe, GNDP EiP Programme Officer

**Appendix 2:
Amendments to the JCS submission document**

Policy 10

Page 62 - para Old Catton, Sprowston, Rackheath, Thorpe St Andrew growth triangle.
Amend paragraph as below:

This location will deliver an urban extension extending on both sides of the Northern Distributor Road.

Deleted: Delivery of the growth triangle in its entirety is dependent on the implementation of the Northern Distributor Road.

Page 63 - to add in reference to the Area Action Plan (Note – this change was also agreed at the examination with the Inspector)

Amend second paragraph from “A single co-ordinated approach will be required across the whole area. More detailed masterplanning will be required for each quarter to ***“A single co-ordinated approach will be required across the whole area. This will be provided through the preparation of an Area Action Plan (or its equivalent process). More detailed masterplanning will be required for each quarter”***.”

Page 66 and 67 – para 6.18

Original para 6.18

To implement the JCS significant highway improvements are required at the Longwater (A1074), Thickthorn (A11) and Harford (A140) junctions on the A47 Norwich Southern Bypass. Completion of the Northern Distributor Road and improvements to Postwick junction are a fundamental requirement for growth and the implementation of the remainder of the Norwich Area Transportation Strategy including public transport enhancements. Completion of a bypass is a pre-requisite for the scale of growth identified in Long Stratton.

Para 6.18 revised as below:

To implement the JCS significant highway improvements are required at the Longwater (A1074), Thickthorn (A11) and Harford (A140) junctions on the A47 Norwich Southern Bypass. Completion of the Northern Distributor Road or a similar highway solution ***is fundamental to the full implementation of this Joint Core Strategy. In particular it is necessary to allow significant development in the growth triangle and the full implementation of the remainder of the Norwich Area Transportation Strategy. Improvements to Postwick junction will allow for some development in the Old Catton, Sprowston, Thorpe St Andrew growth triangle in advance of the NDR (see supporting text for Policy 20).*** Completion of a bypass is a pre-requisite for the scale of growth identified in Long Stratton.

Contingency

The GNPD will be working to bring forward all growth proposals and associated infrastructure as early as possible to maximise delivery and flexibility. This will be facilitated by engagement with developers to understand opportunities, overcome constraints and maximise development potential without compromising quality.

There is no phasing of growth in the JCS beyond that imposed by the provision of infrastructure. At the time of adoption the provision of most critical elements of infrastructure is not expected to be a significant constraint.

However, there remains some uncertainty around the timing of the delivery of the Northern Distributor Road (NDR).

The NDR [or a similar highway solution](#) is fundamental to overall delivery of housing and employment growth in the Broadland part of the NPA and to significant parts of NATS including high-quality public transport in the northern part of the urban area.

At the base date of the JCS there is a significant housing commitment that is unaffected by infrastructure constraints. Delay in delivering the NDR does not prevent JCS provision of housing or employment development within Norwich City or South Norfolk Council areas, or existing housing commitment in Broadland as demonstrated in Appendix 7. Indeed, market pressures are likely to bring forward development in these locations in this scenario.

The existing commitment and the range and scale of growth proposals across the JCS area provide significant flexibility to bring forward growth in those locations unaffected by infrastructure constraints.

In late 2010 proposals for Postwick were significantly advanced. The scheme and associated development has planning permission and the design of the layout of the junction has been agreed by the Highways Agency.

The Postwick Hub and the Northern Distributor Road are in the DfT Development Pool ([add to glossary](#)) and the funding decision will be announced by the end of 2011. The NDR will be subject to a separate statutory planning process.

The Postwick Hub can be delivered as a separate scheme and is not necessarily dependent on DfT funding. Contributions from all of the following sources may be used to secure delivery:

- DfT development pool (decision due by end of 2011)
- Existing Growth Point funding
- Pooled Section 106 (until replaced by CIL)
- CIL (expected to be introduced late 2011)
- Local Authorities' capital funding programmes
- New Homes Bonus
- Tax Increment Financing
- Other funding streams

Subject to acceptable improvements to Postwick Junction (Postwick Hub or a suitable alternative) there is significant potential for development in the growth triangle before there is confirmation of the timing of delivery of the NDR. The table below summarises the current understanding of this potential.

Table 1: Housing and Employment development in north east sector assuming that Postwick junction is suitably improved in 2012

Location	Level of growth supported by current evidence	Constrained development
Growth Triangle	At least 1600 dwellings (plus 200 exemplar at Rackheath prior to Postwick junction improvements)	New employment allocation at Rackheath
Smaller sites in Broadland NPA	Delivery of the smaller sites allowance will be dealt with on a site by site basis	
Broadland Business Park	Development of existing allocation and new allocation (25ha incl c50,000m2 B1)	
Airport area		New employment allocation

Broadland District Council is committed to preparing an Area Action Plan (AAP) for the growth triangle. As part of the preparation of this AAP there will be an investigation of the potential to enable further growth over and above that shown in Table 1 above, in advance of confirmation of timing of the NDR. [The AAP will also test whether, in light of decisions on funding, an alternative to the NDR \(or and interim scheme\) is appropriate.](#) This analysis would need to cover capacity of all local infrastructure (not just road capacity), the implications of particular sites, and the nature of development proposed. It will be essential that the growth is delivered in accordance with the overall strategy, taking into account its wider impact across the Norwich area, including a full range of infrastructure provision, services and high-quality public transport, walking and cycling.

Deleted: Development beyond the pre-NDR threshold established through the AAP process will not be possible without a commitment to the NDR. If there is no possibility of the timely construction of the NDR, a complete review of the JCS would be triggered.

ISSUE 5

The GNDP state in their written closing response to Matter 3B that the key existing problems the NDR resolves are as bullet-pointed below:

- *Relieving existing congestion and delay on radial roads and the inner and outer ring roads.*

Create Comment:

NCC/GNDP evidence EIP88 shows in table 4 that overall vehicle movements on radial routes actually increases with the introduction of the NDR.

- *Combating increasing rat running; particularly in north and eastern suburbs.*

Create Comment:

The Plan B inner relief road will also fulfil this function.

- *Improving bus journey times and their reliability. These issues are notably worse to the north of the city.*

Create Comment:

The issue with improving the reliability of bus services is the standard and available carriageway width on the radial routes into the city. The NDR mainly provides an effective link for traffic from the north of the city to reach the trunk road network to the south. It will therefore remove the through traffic and provide an effective distribution route between the radials providing an HGV route around the city.

BENEFIT COST RATIO

The CIF 2 Bid – Postwick Hub Full Business Case – states in the Value for Money Case, page 3.11:

“Without the Postwick Hub improvements, the NDR scheme achieves an economic cost benefit ration (BCR) of 1.6, which marginally qualifies as good value for money under DfT criteria.”

There is clearly a major link between the two schemes and if the Postwick Hub was not brought forward then this would have a significant detrimental effect on the business case for the NDR – particularly given that no option appears viable to connect the NDR to the trunk road network to the west of Norwich.

This should be read in context with the DfT letter dated 27 March 2009 to NCC. This letter states:

“Postwick Junction is one element of the current solution. It has been designed to link up with the proposed Norwich Northern Distributor Road (NNDR) which at present has been prioritised for funding by the East of England within its Regional Funding Allocation. But the Business Case that you have submitted is currently being assessed by the Department for Programme Entry – a critical part of the decision making process. Without the NNDR being in place, it is commonly agreed that the proposed CIF scheme at Postwick would be significantly over-engineered and is doubtful it would offer value for money. All parties do, however, agree that some improvements are needed at Postwick, regardless of whether or not the NNDR proceeds.”

“The CIF business case submitted to DfT/CLG for Postwick Junction did not show analysis of Postwick on its own. However using the analysis available, it was evident that the proposed Postwick scheme, as designed around the NNDR was unlikely to offer significant transport benefits on its own as it offered no approachable distance or delay reductions for traffic flows of traffic. Indeed it appears that in isolation, it could produce net transport disbenefits as some vehicles would need to travel a more circuitous route through the junction. The appraisal of the NNDR full scheme (including Postwick Hub) is still subject to scrutiny by the Department and it is too early to say what the value for money of the full scheme will be.”

“With its current level of knowledge and understanding of Postwick Junction, DfT and CLG Ministers do not feel they can support the CIF proposal unconditionally at the moment. However, Ministers are committed to supporting Postwick Junction once we are clear that the joint proposal for Postwick and the NNDR is the right solution for Norwich. As such DfT/CLG Ministers have agreed to proceed with Postwick Hub on condition that Minister great the NNDR Programme Entry later this year.”

On reviewing the above statements from DfT, it is clearly not economically sound to proceed with the Postwick Hub unless the delivery of the NDR can be guaranteed – we note, at this stage, the NDR has no planning status and no guarantee of funding. There is also a clear sign that the DfT will not release funding for the Postwick Hub unless the NDR is to proceed. It is therefore essential that any Plan B solution should look to an alternative, more cost-effective and more satisfactory junction design solution than that currently presented.

It is clear that NCC/GNDP are concerned that if an alternative (and potentially more satisfactory) scheme for the Postwick Hub were constructed, this will detrimentally effect the chances of the NDR ever being delivered.

ASSESSMENT OF THE 'PLAN B' PROPOSAL

The GNDP state that the Postwick Hub “is ready to go”. This is incorrect given that at present there are a number of key constraints which prevent the Hub from being delivered, these are as follows:

- The CIF funding allocation has been withdrawn and the business case for the Hub needs to be reconfirmed with the DfT (the business case for the Hub in isolation of the NDR is poor and would be unlikely to achieve approval.)
- Without CIF funding and the NDR, the scheme is over-engineered, does not provide value for money and is unlikely to be deliverable by developer contributions.

KEY CAPACITY CONSTRAINTS AT POSTWICK/PRINCIPLE OF DESIGN

The Highway Agency has summarised the three major constraints at the junction, which are:

- The Wensum viaduct west of the junction and the reduced length of the eastbound off-slip.
- The need for another bridge and the topography of the location.
- An existing major high pressure gas main just to the east of the site.

NCC state in the CIF2 Postwick Hub Business Case Section 2.1.5:

“The Highways Agency’s main concern is the capacity of the two diverge slip roads and potential queuing onto the A47. At peak periods, queues can form on these slip roads with present levels of traffic. With the west bound off slips, there is some capacity on the single carriageway section to accommodate some queuing. However, any increase in flow onto the eastbound off slip road resulting from further development is likely to result in the regular incidences of queuing onto the trunk road itself.”

From my extensive experience of working on transport matters in connection with Broadland Business Park, the main capacity issue at the existing A47(T) Postwick “dumbbell” junction relates to the A47(T) westbound off-slip, with queues regularly reaching back to the A47(T) in the AM peak (0800 – 0900).

The A47(T) eastbound off-slip, whilst being originally constructed as a departure from standard, operates well with traffic passing through the junction using the dedicated left turn slip to the A1042.

The other major constraints at the junction are the capacity of the overbridge and the southern “dumbbell” roundabout. The greatest traffic movement through the junction currently during peak periods is from the A47(T) westbound off-slip, north over the existing single carriageway bridge “inbound” towards the A1042. In the AM peak, this steady stream of queuing traffic is often controlled by downstream constraints further to the west at the Pound Lane/“Sainsbury” mini-roundabout junction.

Vehicles with priority over these A1042 “inbound” movements are those leaving Thorpe and Broadland Business Park to gain access to the west via the A47(T). For any future re-design of the A47(T) Postwick junction to be successful, it must ensure that these two critical streams of traffic do not conflict.

THE POSTWICK HUB

The following are the potential issues with the Postwick Hub:

- The whole of the TA for the Hub was based on SATURN outputs rather than specific junction counts. The SATURN model should only be used for strategic traffic movements and is well known to have a number of issues in terms of its accuracy. A detailed junction model based on site specific data should have been utilised.
- The TA for Broadland Gate/Postwick Hub only assesses to the year 2018 with only 70% of the Business Park was to be developed and a further addendum was produced for the TA showing a 100% development. The TA makes use of what we refer to in this note as NCC's "Car Park Trip Generation Methodology" – NCC's preferred methodology does not follow DfT Guidance on Transport Assessment and is "unique" to NCC. NCC's methodology produces considerably more onerous results than from conventional methodology i.e. trip rates derived from TRICS analysis and/or factoring of local traffic survey data. To this effect, a review of the Broadland Gate/Postwick Hub traffic generation has been undertaken by Create. As shown on Create Table 1 (attached), NCC's methodology effectively overestimates the level of traffic generation associated with 42,000sq.m of B1(a) development at Broadland Gate passing through Postwick Hub to a theoretical equivalent of some 1,500 privately-owned residential units in the AM peak and 600 units in the PM peak.
- The TA does not assess Green Lane/Plumstead Road/Thunder Lane roundabout or the St Andrews roundabout/Sainsbury roundabout along the A1042. This is in stark contrast to early transport assessments submitted for the Broadland Business Park, which were required by NCC to specifically consider these junctions.
- A junction of this complexity would normally (and should) have been tested through use of a VISSIM or other micro-simulation model prepared to clearly show how each of the links/junctions interacted. It is reasonable to assume that the Highways Agency's consultants would have advised the Agency to this effect in their consideration of the original TA.
- The TA does not take into account NDR projected traffic flows. It is understood, that whilst not "committed-development" requested, the Highways Agency requested sensitivity testing of the Postwick Hub junction to be carried out to take into account the NDR flows (this sensitivity testing is, surprisingly, not included in the TA).
- The Hub does not improve the critical arm; the westbound off-slip of Postwick and simultaneously introduces a very complex arrangement likely to confuse drivers with potential for increases in accident rates. The traffic data in the TA states that the movements on from the A47(T) westbound off-slip will reduce with the development. This is clearly, counterintuitive as this will be the main route to the Broadland Gate from the east.
- The Hub reduces the length of the existing east bound on-slip which was a previous departure from standard.
- The Hub increases the potential conflict between the two main traffic streams passing through the junction.

- The connection of the future NDR traffic will increase even further the conflict between the two main traffic flows.
- What is the relationship between NCC/Ifield Estates? Has Ifield agreed to sell the land for the highway improvements to NCC or has it been subject of a CPO?
- The Hub does not maximise the use of existing infrastructure constructing a new dual carriageway bridge at an acute angle, requiring significant earthworks and additional bridge construction.
- The design of the junction requires the whole of the scheme to be constructed, rather than being able to be released in logical phases.
- Cost of the scheme approximately £19million.
- The traffic signal junction is a complex and over-complicated arrangement. HGVs will have difficulty tracking the junction.

CREATE CONSULTING – PLAN B POSTWICK

- The Plan B scheme presented by Create can be delivered in phases:
 - Phase 1 (Drawing Number 150/01/104)

New westbound on-slip/existing on-slip closed.
Removal of southern roundabout.
Signal control added to northern roundabout with MOVA and queue control sensors on eastbound off-slip.
Three lanes formed on existing over-bridge.
New dual carriageway link to Park and Ride roundabout.
 - Phase 2 (Drawing Number 150/01/105)

Existing over-bridge alignment widened to four lanes.
 - Phase 3 (Drawing Number 156/01/105)

Construct new eastbound on-slip (as per Postwick Hub)
Construct new eastbound off-slip (as per Postwick Hub)
Connection to NDR.
- Scheme designed to avoid conflict of main traffic streams, even with NDR.
- Maximising use of existing infrastructure.
- Only a two lane additional bridge required, resulting in major saving on construction costs over Hub.

Joint Core Strategy – Matter 3B

- No requirement to build the whole junction initially enabling development to be released at the earliest opportunity.
- Land required within the same ownership as Postwick Hub, therefore, should be available on terms to the Postwick Hub scheme.
- Capacity assessments show that 3,200 dwellings can be released on top of committed development (Phase 2).
- No capacity issues on eastbound off-slip.
- No accident record for current eastbound off-slip. Accidents occurred on all other slips, demonstrating that the current arrangement operates safely.

NUMBER OF DWELLINGS BEFORE NDR

- The traffic modelling undertaken to support the Postwick Hub, used data up to and including growth that would have occurred in 2018. On that basis the “Do Nothing” scenario modelled in the NDR Business case would have been used as the base traffic flow.
- The TA prepared to support Broadland Gate by Mott MacDonald stated in Section 5.9 that the base traffic flows used had taken into account the development of the Rackheath Eco Town. It is not clear in the TA how many dwellings were allowed for in the modelling.
- The CIF2 for Postwick refers to the scheme being capable of serving 1,600 dwellings, which was made up of 600 at Brook Farm and a further 1,000 north of Salhouse Road which is White House Farm scheme which already has planning approval.
- The NDR MSBC Volume 1 allowed for 4,150 dwellings in the Broadland area up to 2016 (see Table 2.9). This table shows the following allocations for key sites in the NE Sector:

Between Wroxham Road/North Walsham Road	106
Rackheath Eco-Community	1,207
Between Salhouse Road/Wroxham Road	1,028
Blue Boar Lane	133
Between Plumstead Road/Salhouse Road	330
Total	2,804

These allocations were assumed in the base flow of the Broadland Gate TA. In addition to this was a further allocation of 600 dwellings at Brook Farm. Therefore, in making an allowance for White House Farm which is committed development, the evidence base shows that the following developments can be released in advance of the NDR.

NE Sector Allocation	2,804
Brook Farm	600
Subtract White House Farm	1,200
Total	2,204 dwellings

- It should be noted this figure does not allow for the over-estimation of B1(a) traffic generation as outlined in this note (see NCC's "Car Park Trip Generation Methodology") which could, theoretically, provide for a minimum of 600 additional privately-owned residential units in the NE Sector of Norwich.
- Create Consulting modelling shows that 3,200 dwellings plus committed developments can be brought forward using Phase 2.

INFORMATION REQUIRED TO BE PUT INTO THE INQUIRY

- Broadland Gate TA.
- Sensitivity testing undertaken on the Broadland Gate TA to show the impact of the NDR.
- Details of the scale of development allowed for the Rackheath Eco-Town in the NATS base runs.

RECOMMENDATIONS

In order to deal with Plan B with a strong evidence base sufficient enough to allow the Plan to be made sound, it is recommended that the following is required in relation to Postwick:

- Undertake a detailed micro-simulation model of a A47(T) Postwick improvement scheme using actual measured base flows rather than "strategic" SATURN outputs.
- Assess capacity of existing junction arrangements.
- Assess phased release of development through traffic model.

J P Cage
Create Consulting Engineers Ltd
07 December 2010

Review of B1(a) Trip Generation for the Proposed Broadland Gate Development

TABLE 1			2-Way Trips/Trip Rates	
Item	Description	Calculation	AM Peak	PM Peak
1	B1(a) NCC "Car Park Methodology" Trips (for 42,000m ² GFA as quoted in the Broadland Gate TA, August 2009, Table 5.3 for 100% Development)		1400	910
2	B1(a) TRICS "Conventional Methodology" Trip Rates per 100m ² GFA		2.29	1.77
3	B1(a) Business Park TRICS Based Trips (applied to 42,000m ² GFA)	Item 2 X 420	960	743
4	Difference in Trips	Item 1-Item 3	440	167
5	TRICS "Conventional Methodology" Residential Trip Rates per Private Dwelling		0.63	0.61
6	Equivalent Private Dwellings assuming all traffic goes through Postwick Hub	Item 4 ÷ Item 5	696	273
7	Equivalent Private Dwellings if assuming that 45% of trips will travel via Postwick Hub (as per Brook Farm TA)	Item 6 ÷ 0.45	1547	607
8	Additional Private Dwellings in NE Sector accounted for as a result of NCC's "Car Park Methodology" over-estimation of B1(a) trips rates and capped as a function of PM peak traffic generation	Minimum Result from Item 7	607	