

FURTHER HEARING SESSIONS, JANUARY 2020, INSPECTOR'S MATTERS, ISSUES AND QUESTIONS
Matter 6: Transport and other infrastructure

Hearing statement by Neil Gilbranch

1. A12/A120

It is acknowledged that both schemes are required to deliver the long-term aspirations of the Local Plan's growth. Currently it is anticipated that the A120 and A12 will be completed around the same time in 2027/28. There should be certainty over design and funding of these schemes to enable any plan to be found sound.

The ambition of the NEAs is to deliver a garden community of up to 24,000 dwellings, incorporating land both sides of the existing A12. This is reflected in the HIF bid to move the A12 further south, to provide one single, large scale site without severance of a trunk road.

Correspondence from Essex County Council:

Mark Carroll (ECC) 19/7/18	<p>You also specifically ask: "Why is funding not being sought to carry out improvements to the A12 required to support housing in general terms, rather than the limited consideration of accommodating a single large development."</p> <p>As has been stated above funding for improvements to the A12 has been identified through RIS1. Our bid would add additionality to the project. The general upgrades to the A12 have been planned well in advance of our bid for HIF funding. The severance referred to is in relation to the site of the proposed Braintree Colchester Borders Garden Community; the route of the A12 as it currently stands runs through this proposed site, splitting the development to the north and south. The strategic reasoning is that this severance has the effect of making the development less likely to build out as a single-site and therefore tempering ambitions for a sustainable new community.</p> <p>In terms of the exact alignment, this has yet to be finalised and as with all road programmes of this scale, will be subject to public consultation, a favoured route option which would be followed by a Preferred Route Announcement made by Highways England in association with the Department for Transport. I understand that Highways England will be consulting on route options in due course when there will be more detail on the precise alignments being considered.</p>
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The additional SA identifies alternative sites to the north and south of the A12 and to fully explore this alternative strategy would require consideration of an option to continue with the A12 improvement options already identified in the 2017 consultation but with the provision of any additional junction and access requirements to support housing. The alternative sites ALTGC04-06 inclusive appear to be deliverable alternatives with the potential for a new grade separated junction located approximately mid-way between J24 and 25. This appears to be feasible without departures from current Highways design standards and would also serve to relieve pressure around existing J25 which could then continue to serve existing demand with the A120 eventually releasing potential in the local network to serve development already committed within LP2.

This alternative option has not been included in the latest consultation by Highways England. An early opportunity to explore an alternative infrastructure strategy has therefore been lost.

Development to the south of the A12 would be of sufficient scale in itself to provide a sustainable new community and arguably at less risk of being built out than one of larger scale. Smaller scale developments (even if they are still of significant scale) bring in the opportunity to be planned around the needs of existing communities, the opportunity to develop and incorporate NDPs and provide more certainty over local infrastructure delivery.

Additional evidence since the close of the technical consultation as below and related to the Inspector’s questions:

Questions for all participants, including the NEAs	What Highways England have said during the Highways Non-Statutory Consultations for J23-25 (Oct to Nov 2019)
3. (a)	<ul style="list-style-type: none"> • RIS 1 funding only covers the cost of the preferred route announced from the 2017 statutory consultation • More work is being done to understand whether the road might require a 4th lane in each direction between J23 -24 if the nearby A120 improvement and the proposed Garden Community does go ahead. (ref page 17, HE Consultation Brochure J23-25) • An application for the Development Consent Order is expected in 2021, to be secured by 2023.
(b)	<ul style="list-style-type: none"> • Comments received during the consultation for J23-25 (Oct-Nov 2019) will affect the decision on which route is taken forward and all these four options are reliant on additional funding, including a HIF bid, which is all unknown. • If CBBGC doesn’t go ahead then Highways England expect to proceed with the A12 widening based on their 2017 consultation preferred route (Options 2 and 4).
(c)	<ul style="list-style-type: none"> • Route Options 2 and 4 of the Highways England Consultation (Jan to Mar 2017) referred to in EXD/066 are not the same as the alignment shown in Figure 15 of the AECOM <i>Infrastructure Planning, Phasing and Delivery</i> [IPPD] document [EB/088]. • Highways England are working to a brief by the Secretary of State to investigate routes that will avoid the site area indicated for the Colchester Braintree Borders Garden Community (CBBGC) and they have interpreted the Inspectors previous comments (June 2018, IED 011, Item 35) as meaning the A12 must be moved to avoid severance of the site. • It is now implied* that CBBGC, as presented in the evidence, is reliant upon one of these four options even though it has previously been suggested by the NEAs that this isn’t the case (*in this consultation, respondents are asked to comment on four new alignment options which don’t include their original 2107 consultation routes)
4. (a)	<ul style="list-style-type: none"> • The new options in the Highways England Non-Statutory Consultation (Oct to Nov 2019), also referred to in EXD/066, are not the same as the alignment shown in Figure 15 of the AECOM <i>Infrastructure Planning, Phasing and Delivery</i> [IPPD] document [EB/088]. Option C is similar to Figure 15 but

	<p>junction locations are only shown as indicative by Highways England. Option A is a variation on Option B at the western end whereas options B and D are longer versions of A and C which extend further to the east to bypass Junction 25. Routes B and D involve an additional 1.4km of greenfield construction, an additional crossing of London Road and require excavation through an existing landfill site.</p> <ul style="list-style-type: none"> • All four new options (A-D) will have additional environmental and cost impacts (when presented by HE) which may not have been considered within the evidence base submitted. HE will need to carry out detailed assessments if one is required for the CBBGC. • A number of issues have been identified during the first two consultation events such as; lengthy elevated sections of new road to cross river flood plains; a deficit of embankment material requiring the excavation of borrow pits; traffic impacts on existing local roads especially in Easthorpe which have not been adequately recognised; unknown risks from landfill excavation. • The HIF bid is less likely to be sufficient if one of the longer options (B and D) is chosen.
(b) (i)	<ul style="list-style-type: none"> • The HIF bid is reputed to be based on the shorter options (A and C)
(ii)	<ul style="list-style-type: none"> • Highways England “non-statutory” consultations (Oct-Nov 2019) on four new route options are only required if the (CBBGC) goes ahead. Four new routes (Options A -D) are now being considered from Junction 23 to 25, in addition to the routes previously published in the 2017 statutory consultation (Options 1 to 4) for Junction 19 to 25. No detailed designs have been published at this stage. • After the current non-statutory consultation (Oct -Nov 2019) and an initial assessment of options A-D, the preferred route for J23 -25 is expected in Summer 2020. Following that, a further Statutory Consultation (on more detailed designs) is planned for the whole route (junctions 19-25) later in 2020.

2. Water and Wastewater

The NEAs position on the evidence base as confirmed in correspondence with Colchester Borough Council

<p>Ian Vipond (CBC) 1st August 2109</p>	<p>I think you have taken an extract from the proposed modification to the explanatory text for SP5 Infrastructure. It does refer to two documents which are separate both the IWMS and the Infrastructure Delivery Plan. 'Infrastructure Delivery Plan' (IDP) in terms of the Garden Communities refers to the AECOM report found on the Further Work webpage. (EB 088)</p> <p>Additionally, the evidence base also contains separate 'IDPs' for Braintree (BCD012), Colchester (CBC0006) and Tendring (TDC023) which consider Borough/District wide needs.</p> <p>https://www.braintree.gov.uk/downloads/download/1157/section_1_-_infrastructure</p> <p>All these documents provide a consistent message in that they establish the existing position, estimate future requirements, and confirm that planning for expansion is feasible through joint working as masterplanning develops with relevant stakeholders including Anglian Water. Development of further stages of the IWMS depend on that further masterplanning work.</p> <p>The main point is that the Stage 1 report establishes deliverability in principle, as this alternative quote from page 5 of the report states:</p> <p>'Stage 1 of the IWMS has identified feasible and deliverable strategic options for water supply and wastewater demonstrating that the quantum of proposed growth can be accommodated with infrastructure investment. Further assessment work will be required, either as a Stage 2 to the IWMS or similar study work to consider each of the garden communities in more detail, and identify and determine site specific water management measures which can serve to minimise demand for the strategic options as far as possible and set out how surface water and flood risk can be managed on site in an integrated way.'</p> <p>The Councils would accordingly state that the evidence base is adequate for this stage of the planning process which is the Local Plan examination.</p>
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Questions for all participants, including the NEAs	Comments
10.	<p>The plan is to build the largest Garden Community project in the UK in an area under the highest level of water stress.</p> <p>The NEAs rely completely on consultant led evidence due to the technical nature of the issues and have drawn conclusions from high level work which contain a number of significant and important caveats. This is an optimistic approach and not based on traditional risk-based project management.</p>

A lot more work is needed to fully understand the strategic and environmental issues from the GCs and indeed the projected numbers of homes regardless of the outcome of LP1. For example:

Integrated Water Management Strategy EB/015:

This is Stage 1 of 3. This appears inconclusive and not sufficient as a delivery plan for water supply in the long term. It is possible that after either of the following Stages 2 and 3, the options may become undeliverable.

7.1 Next Steps

The solutions identified in Stage 1 will be taken into the Stage 2 Outline IWMS which will develop a range of delivery option strategies for each garden community based on a series of potential wastewater, water supply surface water management and flood risk measures.

The delivery option strategies will be developed from the measures considering an integrated approach to managing water demand, wastewater generation and flood risk to support developing masterplans for each garden community.

A key aspect of the next stage study will be identifying reasonable and deliverable local measures to reduce demand and wastewater generation from the options identified in this Stage 1 report. Whilst the strategic options identified have shown to be deliverable, they will require considerable investment and would require significant amounts of new infrastructure as well as energy to operate effectively. It is therefore important that the Stage 2 IWMS identifies how reliance on strategic options identified can be minimised. The use of localised integrated water management measures may reduce potable demand and wastewater generation to a point that makes other combinations of strategic options preferable and this will be considered through the Stage 2 IWMS scope. All preferred measures will be identified and agreed in liaison with the partner authorities, the Environment Agency and the relevant infrastructure providers.

AW email 6 Aug 2019

The Colchester and Braintree Borders Garden Community development as outlined in the Part 1 North Essex Local Plan has been considered as part of our long-term growth strategy. Please refer to our Water Recycling Long Term Plan (WRLTP) at <https://www.anglianwater.co.uk/about-us/our-strategies-and-plans/water-recycling-long-term-plan/> where the identified investments for Essex can be found on pages 67-76.

If the full development of 20,930 dwellings as outlined in the AECOM report (Integrated Water Management Strategy Phase 1) were to come forward then we currently have no capacity in the local sewerage infrastructure to accommodate. With investment by Anglian Water, Colchester Water Recycling Centre has the nearest infrastructure capable of receiving the flow however we would also examine alternatives, including the provision of new dedicated infrastructure. We will continue to monitor the actual level of growth in the Anglian Water region and the investments timing and strategies outlined in the WRLTP will be continually reviewed, allowing us to be adaptive with our strategies to produce the most suitable solutions.

Extract from EB/088. Section 4.4. Utilities Baseline

This section provides a high-level analysis of utilities based on preliminary conversations with service providers and desk-based study. Further discussions will be required as masterplans are worked up and more detail emerges.

11.	<p>CBC/0048 Water Cycle Study</p> <p>This report contains a number of recommendations and warnings that have not been addressed adequately by the NEAs at this stage.</p> <p>Section 3-5 is of particular interest with a number of caveats on assumptions and the decision to rely on Colchester WRC as the preferred solution for waste water. It effectively says that existing local WRCs are a key part of the environmental issues and upgrading them is likely to be more cost-effective long-term solution than relying on Colchester WRC</p> <p>Email from EA on 2nd August 2019 Sue Hogarth Environment Planning Specialist (Water Quality) East Anglia Area (Essex, Norfolk & Suffolk Team) - Integrated Environment Planning <i>The comments in section 3.5 refer to various options that may be used to treat wastewater in the proposed development areas, and look to be at an early stage. We will be involved in further discussions, and will regulate existing and any new WRCs by setting permit conditions that need to be met at each so that the environment will be protected.</i></p>
12.	<p>Would an alternative approach to phasing be preferable, such as that set out in the Infrastructure Delivery Plan by Create, submitted with the response to EB/088 from Carter Jonas on behalf of L&Q, Cirrus Land & G120?</p> <p>This alternative has a perceived advantage of incremental development of infrastructure which helps to reduce the risk of full build out not being deliverable if the necessary supply, infrastructure and licensing and funding can't be delivered, although the questions of environmental capacity for sewage treatment (discharge) remain (The NEAs reports have identified a limitation to sewage treatment as 50% of the full scale for CBBGC). This proposal also seeks to minimise pumping of sewage and therefore the long environmental cost as well as upfront funding whereas the NEAs proposal maximises pumping and its upfront cost due to reliance on a pipeline transportation to Colchester WRC rather than new local WRCs.</p>
13 (a)	<p>Too many uncertainties with technical design, lifecycle cost, licensing, land requirement, regulatory restrictions over adoption (by Water authority) water efficiency measures, demand reduction, etc</p>
(b)	<p>Much of the GC proposal is a commitment to build out to the full potential and major finance will be required up front to ensure deliverability. For example, moving the A12 which is implied as essential to being able to build out the CBBGC and constructing a 13km pipeline. In this respect, funding for key infrastructure must be committed before planning permission is granted.</p>
(c)	<p>Pumping sewage in such quantity has a number of staging problems and coordination of peak flows with hydraulic capacity at the WRC. Unless that's done right, there is a risk of more overflows, which would be environmentally damaging. I doubt anyone can point to a similar concept of this scale elsewhere.</p>

Doubts around cost and funding in the evidence:

It appears the plans will require long term funding and delivery of significant water saving measures in existing stock to support their level of development (and that's only with minimal numbers up to 2033). Specific funding needs to be included in the viability assessment model.

They also say that employment land is a key issue and they can't assess this as no allocations have been agreed.

Extract from CBC.0006

5.13 AWS has stated that it is not possible to provide costs for the additional used water infrastructure to serve growth. This will need to be determined when particular schemes are assessed.

Funding

5.14 In general, used water treatment infrastructure upgrades to provide for residential growth are wholly funded by AWS through its Asset Management Plan (AMP). AWS is currently within the five-year AMP period 2015 to 2020. This does include schemes to address growth capacity at some of the key WRCs in the Colchester Borough area, but this is not sufficient to fully accommodate the needs arising from growth. Therefore, in order for AWS to fund specific upgrades, it will be necessary to put forward growth schemes for inclusion within the next AMP (post-2021) and for these to be approved, planned and funded, as well as signed off by the regulator, OFWAT. The only other alternative is that developers forward fund this work; however, given the potential costs involved, this is unlikely for all but the largest schemes.

Delivery and timing

5.15 For the West of Colchester Garden Community, the need to upgrade WRC provision means that it will be difficult for any significant growth to come forward before 2022/23 without a commitment to deliver the necessary upgrades in the next AMP period (2021-2025). This is therefore a critical item. The alternative is that it will be developer funded but this is substantially less likely given the costs involved and the uncertainty over the likelihood of recouping this funding.

CBC Water Cycle Study CBC.0048

Comment on Section 4.5. Water Neutrality

A number of policies have been suggested to ensure there is a "neutrality" of water demand from proposed development including retrospective (25%) reduction measures for existing housing stock and "education" to ensure reductions in water demand in order to ensure we have enough water. It's agreed that 100% neutrality is only an aspiration and 50% is regarded as feasible, although it's not clear if that is enough. These require funding and policy implementation. It's not clear who is going to pay or if the policies will actually be implemented.

Table 4-7 is a summary of responsibilities for water saving measures including retrofit to achieve a medium (50% neutrality). About £4.8m cost is suggested for "non developer" funding with CBC carrying the bulk of the funding responsibility has this been included in the debt for the GCs?? Developer funding is much smaller, implying we rely on CBC policy and funds to ensure our water supply is sustainable, which would normally fall within the remit of the water authorities.

I don't believe there is any existing evidence of this being achieved anywhere else in the UK to deliver local plans?

Further questions

I believe the following items are key to answering the Inspectors Matter 6, question 10 and also 11-13 around alternative infrastructure strategies. It would be useful to have further detailed information from the various authorities and agencies in order to gain the necessary confidence on

feasibility. Despite much research and correspondence, at the time of writing this information has not been provided

1. Can Anglian Water guarantee to supply the long term water demand to the three towns proposed in Local Plan part 1, including all the employment provision promised and any growth not included in the three GCs (which appear to be undefined but CBC have said verbally will continue to provide significant growth in future plan periods)?

If so, what is the primary evidence for this?

2. What is the whole life cost of a 13 km pumped sewer to serve a town of 24,000 homes plus employment?

Are there any similar examples in the UK?

I believe initial capital costs are 5-10% of life costs so even if £13m is the realistic construction cost, it seems unlikely to be the whole life cost.

3. Would anyone be able to get the EA to confirm now that all the licenses required to discharge the sewage effluent in the future will be granted?

If not, what is the level of certainty

4. Would OFWAT or any other regulator have something to say about AW potentially adopting a 13km pumped sewer as an alternative to new local WRCs for a development of this type?

My understanding is that transportation costs are greater than treatment.

5. Are there any pilot schemes in the AW region for assessing the viability of community-based greywater recycling and/or rainwater harvesting schemes?