

# Appendix 1: Methodology Consultation Response Summary

Consultee	Consultation Response
<b>Transport Planning Team</b>	Step 1 (Sustrans and the LPA Consultation) - There is no specific mention of a review of the existing public transport provision, in particular the mapping of existing high frequency commercial public transport and engagement with officers with responsibility for public and shared transport strategy at Gloucestershire CC. The emphasis should be on accessibility with due regard for all users.
	Step 2 (Air Quality) - Air quality data is not available for the whole area being considered and so is not identified as a secondary constraint at this stage. Care would also be needed in doing so as there would be a risk that this would push development further away from the urban area and main access routes limiting scope for sustainable access.
	Step 2 (Accessibility) - Straight line isochrones can be very inaccurate where there are significant severances (e.g. rail/river/motorway) and / or a street network with poor permeability, but for this initial stage of the assessment this isn't considered a major issue.
	Step 2 (Accessibility Modelling Matrix) - It is also proposed to use Gloucestershire County Councils Accessibility Modelling Matrix, completed in 2016, to assess access to services and facilities but not employment. Public transport can change significantly over relatively short periods so it will be important to ensure that any major changes in public transport provision since 2016 are understood and reflected in the analysis.
	Step 2 (Travel to Work Patterns from 2011 Census) - Further segmentation analysis may help understanding of where investment in transport opportunities will be optimised.
	Step 2 (Constraints in the Capacity of Strategic Infrastructure) - The transport review will also consider current constraints in the capacity of strategic infrastructure. This is proposed to address road and rail but not cycling or bus based public transport. This is stated as being on the basis that these pieces of infrastructure can always be delivered off site and therefore are not a constraint. This is not however the case for either bus based public transport or cycling.
	Step 2 (Bus Based Public Transport) - In terms of bus based public transport achieving long term viability for a high frequency bus service serving new development is challenging and should be considered in the context of the existing bus network and in particular those elements of it that are already high frequency
	Step 2 (Cycling) - Cycling is arguably less challenging at a strategic level but the proximity of sites to existing strategic networks and distances to both services and main areas of employment should be considered at this early stage, as should cycling propensity on key transport corridors. The advent of 'e-Bikes' is likely to extend the geographic reach of cycling as a transport mode and help address the challenges of topography, where they exist, which is likely to increase the attractiveness and importance of this mode.
	Step 3 (Land Appraisals) - This step sets out the criteria that will be used to identify the areas of land that will be appraised. It limits the inclusion of standalone sites greater than 1km from existing settlement boundaries which are too small to accommodate more than c. 1500 dwellings. This approach will sift out areas which are separated from the urban area but too small to accommodate the scale of development necessary to support the inclusion of local services. This is essential if a shift to sustainable modes of transport including to access local services and facilities is to be delivered.
	Step 4 (Bus Services) - In practice it is very difficult to establish new high frequency commercially viable bus services on the back of developments of even the scale discussed. As noted before including an assessment of the current bus network and in particular the proximity to high frequency bus services will be needed to understand whether it is likely to be feasible to establish a high frequency high quality service that is likely to be attractive to a range of users and for journeys including those to work.
	Step 4 (Bus Services) - In practice it is very difficult to establish new high frequency commercially viable bus services on the back of developments of even the scale discussed. As noted before including an assessment of the current bus network and in pa
	Step 4 (Cycling) - Cycle travel time isn't considered. This is understandable to some extent but the only way of achieving a significant increase in cycling is to plan for this in new development and consider to proximity and journey length to employment and services at the outset, and especially as cycle trip times are more easily predicted than those of motorised vehicles. E-Bikes are also likely to extend the range and appeal of cycling as noted previously.
	Step 4 (Proximity to Stations) - Including rail in this measure is questioned as relying on proximity to stations in assessing accessibility may downgrade sites that actually have high levels of accessibility for access to services, facilities and jobs within Gloucestershire. It may also enhance the accessibility of sites which in fact have relatively low accessibility notwithstanding their proximity to a station in part because of the current rail service patterns. Rail is important but it is suggested it would be more appropriate to consider separately.
	Step 4 (High Frequency of Bus Service) - What is meant by a high frequency bus service is not defined. It is generally considered to be a 'turn up and go frequency' of between 10 and 15 minutes in the weekday daytime. It's suggested this is defined.
	Step 4 (Viability and Deliverability) - What isn't proposed to be included are the potential revenue costs of supporting public transport while the developments are built out and potentially after completion. These costs can be significant. Developments which can build off existing high frequency bus networks and which are adjacent to the existing urban areas are likely to have lower costs and risks in this regard.
The transport benefit of the assessment will be in terms of its outputs and their applicability. Arguably, any or no strategic sites may be inherently sustainable in transport terms depending to an extent on the detail of development layout patterns, and optimisation of connectivity within and adjacent to the sites. A close understanding of this with caveats will be helpful.	
<b>Highways England</b>	We would request that further consideration is given to the current performance and operation of the SRN, and the transformative effect that current JCS sites, and potential future sites, might have on the highways and transport network. The known constraints in the performance and operation of the SRN at certain locations, particularly M5 junctions 9, 12 and 14 as well as a number of junctions on the trunk road network, should be used to help inform/shape site selection and the future spatial strategy, and not just considered to be a matter to be addressed or overcome through mitigation. There are some complex capacity constraints at these junctions, particularly on the M5, which will present a substantial challenge to bringing forward strategic development sites in the vicinity and may be disproportionately expensive to solve.
<b>Network Rail</b>	Step 1 (Data Sources) - The document includes a list of sources that data will be gathered from, I see Network Rail is not on this list; It may be beneficial if we were.
	Step 2 (Rail Improvements) - Any rail improvements necessitated by development will have to be considered within any viability assessment.
	Step 2 (Level Crossings) - I can confirm that there are a considerable amount of level crossings within Gloucestershire. Where any development would result in a material increase or significant change in the character of traffic using a rail crossings the application should be refused unless, in consultation with Network Rail, it can either be demonstrated that the safety will not be compromised, or where safety is compromised serious mitigation measures would be incorporated to prevent any increased safety risk as a requirement of any permission. The attached Appendix 1 gives examples of possible impacts.
	Step 2 (Funding for Rail Improvements) - Within the plan area there will be provision for more than 35,000 houses. This will inevitably create additional demand for train services and facilities. As Network Rail is a publicly funded organisation with a regulated remit it would not be reasonable to require Network Rail to fund rail improvements necessitated by commercial development. It is therefore appropriate to require developer contributions to fund such improvements.
Step 3 (Potential developable land) - It is at this point that any requirement for rail related obligation should be included.	
Step 4 (Accessibility and Viability Appraisal) - Any appraisal should include any obligation identified in Step 3 in relation to the railway within the plan area as the cost of mitigating any impact may have a bearing on the viability and deliverability of any such proposed site.	
<b>ITP World</b>	It would be useful to have any relevant data Network Rail hold to help in the assessment. The information you [Lisa at Network Rail] have sent through on level crossings is very useful. Quantifying the level of potential increase from passengers on the rail network, and the existing capacity to do so, is something we would like to include. Are you able to share any data on available capacity or overcrowding? (From the RUS?)
<b>University of Gloucestershire</b>	We do have some crossover in methodology with the initial phase of your strategic growth option study. I was wondering if the mapping of the primary constraints was now complete and if you would be able to share any of the metadata for the data sets that were actually incorporated as is not totally transparent from the tables in the method statement - I think that much of it will be open data that I have already used in my project but would be interested to see if I have missed anything that could be helpful. Also would you be able to share any images of the mapping output for this initial phase? I totally understand if it is not possible at this stage of your work, I just thought it worth asking.
<b>Historic England</b>	It would be great if you could have a chat with Steven Orr about this commission...if you haven't already.
	Not sure why large brownfield opportunities within urban areas such as Gloucester are not being considered.
	The Historic Environment really shouldn't be considered a constraint.
	Although you appear to be considering the immediate impact on heritage assets will you be able to consider the integrity of historic places, their character and setting within a landscape context.
	Pg 12 - As we know setting is a really important factor and can have a critical impact on site suitability. An assessment should be undertaken as soon as possible before decisions are taken.
	A 20m buffer may provide the wrong impression as often development within 20m is entirely appropriate and in another situation a more extensive setting needs to be safeguarded.
You may find our GPAs esp no. 3 and HEANs useful.	
2.20 - I'm not clear why smaller (fragmented) sites are being discounted? They can often be more appropriate in supporting the delivery of sustainable development and can often be more suitable in sensitive historic landscapes.	
The presumption of a minimum size of site could really do with being reconsidered.	
Table 2.3 - It will be important that an understanding of the significance of affected heritage assets and the contribution of their setting informs this exercise.	

<p><b>GCC Planning Officers - Ecology and Historic Environment</b></p>	<p>Section 2.2 - There may be a need to do data searches for sites and notable species of any general growth area identified. Natural England and government websites do not include local sites (i.e. Local Wildlife Sites and Regionally Important Geological Sites), habitats and most species records. Although some partial information is available through the NBN Atlas (<a href="https://nbnatlas.org/">https://nbnatlas.org/</a> ) full biodiversity information can only be obtained through GCER (<a href="https://www.gcer.co.uk/">https://www.gcer.co.uk/</a> ). If GCER is not contacted (seems unlikely) there must be a strong caveat that each LPA needs to do more detailed environmental searches with GCER. The Historic Environment Record (<a href="https://www.gloucestershire.gov.uk/planning-and-environment/archaeology/request-archaeological-data-from-gloucestershires-historic-environment-record-her/">https://www.gloucestershire.gov.uk/planning-and-environment/archaeology/request-archaeological-data-from-gloucestershires-historic-environment-record-her/</a>) is used to inform all the LPAs in Gloucestershire regarding the historic environment and should also be consulted. These more local searches could easily affect the scoring system values as presented at Section 2.32 and Table 2.3.</p> <p>Section 2.6 - Primary constraints in biodiversity would be European/International or National Sites (SPA/Ramsar/SAC/SSSI/NNR) so we agree with Table 2.1. In relation to all these sites nearby residential development could have recreational impacts and HRA would be triggered. Stroud have already defined some zones where developer contributions are required to help mitigate recreational impact on the Severn Estuary and Rodborough Common. Work is about to start to define similar zones in relation to the Cotswold Beechwoods SAC (funded by the relevant District Councils).</p> <p>Significant population(s) of a European Protected Species (e.g. bats, dormice, great crested newts) could sometimes be considered secondary constraints for the study. For example some land used by horseshoe bats, especially to the west of the Severn may be ecologically linked to the conservation of the Wye Valley and Forest of Dean Bat Sites SAC bat populations. In terms of Great Crested Newts though the District Licensing option for developers will be a material consideration from this summer as all Gloucestershire LPAs will be part of an extended South Midlands scheme (<a href="https://naturespaceuk.com/participating-areas/">https://naturespaceuk.com/participating-areas/</a> ). Only Great Crested Newt red zones (which will be made available on request) should be considered secondary constraints however.</p> <p>The list of designated heritage assets contained in table 2.1 is correct, although NPPF (February 2019) footnote 63 ('Non-designated heritage assets of archaeological interest, which are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets') does require that there is potential for heritage assets, the significance of which is not yet known, to become primary constraints during subsequent steps in the process.</p> <p>Section 2.16, 2.25 and from 2.46 to 2.48 Needs to include at least strategic green infrastructure as being defined by the District Councils and the Local Nature Partnership (<a href="https://www.gloucestershirenature.org.uk/">https://www.gloucestershirenature.org.uk/</a> ). Note all Councils are signed up to the LNP's GI Pledge.</p> <p>Assessments should be undertaken in accordance with the relevant sections of Historic England's Historic England Advice Note 3: The Historic Environment and Site Allocations in Local Plans and Historic Environment Good Practice Advice in Planning: 1 The Historic Environment in Local Plans.</p> <p>Section 2.32 - See comments about local record centre searches under Section 2.2 above. The criteria/information needed for scoring biodiversity (Table 2.3) cannot be done without contacting GCER (and HER similarly for the historic environment). Note that housing development over 2km from the Cotswold Beechwoods SAC or the Severn Estuary SAC could easily have adverse effects due to an increase in recreational disturbance (minor to significant negative effects).</p>
<p><b>Environment Agency</b></p>	<p>One key comment we have is that, whilst we welcome the precautionary approach to flood risk and the importance that has been placed upon it, we would advise caution in discounting sites entirely due to Flood Zone 3. This 'black and white' approach to sifting may mean you don't get the most sustainable growth options. We'd advocate considering how infrastructure planning can underpin and support sustainable growth. E.g. aligning the IDP with the SHLAA process. There may be examples for instance where a flood risk management scheme is being considered that could help to bring forward land that may be suitable for development and it may be prudent to consider allocating land to be safeguarded for flood risk management infrastructure that in turn allows other sites to come forwards. This approach could also help to unlock funding for such infrastructure. We'd be keen to discuss this with you more as your work progresses - clearly there is a fine balance to be struck in terms of flood defences being there to protect existing communities rather than facilitating new development, but this shouldn't discount consideration of aligning infrastructure planning at this point in time to see if there are more sustainable growth options within areas affected by flood risk - ultimately the potential to secure flood risk betterment through development should not be discounted.</p> <p>We can't see reference to land contamination as a constraint. Perhaps this should be added in with soil quality? E.g. our historic landfills layer which LPAs should already have and is available online) is a relevant dataset. This would be a 'secondary' constraint as it can be cleaned up through development (which is a positive reason for site selection), but can impact on viability due to the cost of clean-up.</p> <p>Table 2.1 - we query what is meant by 'flood storage areas'? If this is 'land where flood water is stored in times of flood' this is arguably Flood Zone 3b - functional floodplain - which should be avoided. If it means things like the Horsebere Brook flood attenuation scheme then that's slightly different and wouldn't necessarily preclude development.</p> <p>2.16 - we welcome that infrastructure - specifically water and waste water - will be investigated. In our experience things like upgrades needed to the sewage treatment works or sewerage network are very important to understand the phasing of development, but wouldn't necessarily preclude development in itself.</p> <p>Table 2.2 water quality - we welcome the reference to Source Protection Zones (SPZs. Bear in mind that SPZ1 is the most sensitive area. SPZ2 and 3 are still sensitive, but less so. This might have a bearing on scoring - so the outputs should make clear which SPZ(s) the site falls within.</p> <p>2.47 - development specific infrastructure requirements - here it would be useful to note land contamination and also where there are culverted watercourses as we would like to see greater commitment to opening up culverts as part of the JCS Review (there is currently support for this in Policy INF2 (section iv states "enhance natural forms of drainage"), and supporting text para 5.3.11 ("restoring culverted watercourses back to open channels"), however we would be looking for stronger emerging policy and flagging right from the start where culverts exist and an expectation they will be restored to open watercourses will help with this.</p> <p>Table 2.1 - ecological and geological environment - please consider adding Key Wildlife Sites to the list in secondary constraints.</p> <p>Table 2.1 - Water Quality - water features are listed here, but another data source of relevance is the Water Framework Directive (WFD) Cycle 2 data which is available online.</p>
<p><b>Severn Trent</b></p>	<p>Para 1.9 - Severn Trent is supportive of the Duty to Cooperate comments and are keen to be included as a key stakeholder in subsequent site assessments and JCS Review consultations. We would ask that the email address <a href="mailto:growthdevelopment@severntrent.co.uk">growthdevelopment@severntrent.co.uk</a> is included as the main contact address for future consultations.</p> <p>Para 1.10 - We are supportive of you working closely with Stroud District Council throughout the production of the JCS and advise that the JCS take into consideration the sites that have been proposed for allocation as part of the recent Stroud District Local Plan Review - Emerging Strategy Consultation from November 2018.</p> <p>Para 2.3 - We are supportive of flood risk being included in the potential constraint assessments however we advise that you edit this line to say 'hydrology including flood risk from multiple sources'. This is because there are a number of causes of flood risk including fluvial, pluvial, groundwater and sewer flooding and we advise that any flood risk assessments should include assessment of sewer flood risk.</p> <p>Table 1.2 - We are supportive of the inclusion of Water Quality Drinking Water Quality Safeguarding and Source Protection Zones as a secondary constraint as it is important to protect drinking water resources to exposure to pollution as a result of new development.</p> <p>On the Flood risk or Infrastructure line we recommend adding flood risk from sewers or Sewerage Infrastructure as a secondary constraint. We recognise that we have a duty under the Water Industry Act 1991 to provide capacity for new development and we are keen to work with Local Planners to identify sites for allocation which would be preferable based on existing sewer capacity availability and less infrastructure improvement requirements to reduce the potential impact of flood and pollution risk to customers and to minimise the potential delays to development that infrastructure improvements may cause.</p> <p>We are supportive of the Odour constraints line and inclusion of Cordon Sanitaire assessment at Netheridge Waste Water Treatment works (WwTW) in particular. We would also advise that odour assessments are conducted for other sites that are in proximity to other WwTW in the Plan area, most notably Hayden WwTW and Tewkesbury WwTW.</p> <p>Para 2.16 - We are supportive of the inclusion of water and waste water in the Utilities infrastructure assessment. The common approach that we employ on consultations of this nature is to complete what we call a Sewer Capacity Assessment whereby we complete a desktop assessment of each of the potential development allocations providing a low to high risk rating against the following areas:</p> <ul style="list-style-type: none"> <li>- Foul sewer impact which looks at existing network constraints such as existing flooding and pollutions locations downstream and the size of the existing network compared to development size.</li> <li>- Surface water potential impact which considers the availability of development being able to follow the Drainage Hierarchy as supported by Planning Practice Guidance Paragraph 80 for surface water disposal. This looks at the ability for a site to infiltrate using SuDS, the availability of a nearby watercourse to discharge into, the availability of surface water sewers to connect into and finally the likelihood that a development would be able to connect surface water into the foul sewer network.</li> <li>- Waste water Treatment Works available capacity</li> </ul> <p>We therefore encourage you to consult us at the earliest opportunity when sites are being assessed to allow this Sewer Capacity Assessment to be completed.</p> <p>Table 2.3 - We are supportive of the Water Quality criteria. For the Flood risk line we encourage the inclusion of sewer flood risk assessment as detailed above in the Sewer Capacity Assessment, this is because flood risk can occur from multiple sources and all should be considered.</p>