

Job Name: Sharpness
Job No: 332210067
Note No: 550-SN01
Date: 19th July 2021

Summary of Transport Work Undertaken to Date, Planned Next Steps and Comments regarding Local Plan Transport Modelling Work

1 Background and Context

- 1.1 Sharpness Development LLP are the promoters of the proposed Sharpness Vale settlement, following garden village principles, at land south and east of Newtown and Sharpness, in the district of Stroud, Gloucestershire.
- 1.2 The site, referenced in this appraisal report as 'Sharpness Vale' is identified as a growth point in the draft Stroud District Local Plan - Review Draft Plan for Consultation (November 2019) as a proposed allocation under site reference 'PS36' for a new garden community comprising:
- 10ha mixed employment uses, to complement what already exists at and around Sharpness Docks
 - 2,400 dwellings in the Local Plan period, by 2040, and a total of 5,000 by 2050
 - Local centre including shops and community uses, primary school(s) and secondary school, associated community and open space uses
 - Strategic green infrastructure and landscaping
 - Priority for walking, cycling, "micro-mobility" modes and public transport over the use of the private car including high quality pedestrian, cycle and micro-mobility routes throughout the development, bus only routes and displaced car parking
 - The reopening of the Sharpness Branch line to passenger services, in addition to the current freight operations, including provision of a new rail station, providing direct rail services to Cam and Gloucester, and onwards journeys to Bristol and the rest of the UK, and
 - Flexible and targeted bus services, utilising "Demand Responsive" services, traditional local bus routes, bespoke coach services and other emerging technologies to provide for a wide range of different journey purposes.
- 1.3 The aim of Sharpness Vale is to create an exemplar, high-quality and sustainable network of new neighbourhoods that people will aspire to live and invest in with a real 'sense of place.' The intention is for the neighbourhoods to grow organically in the future in a logical and sustainable manner, benefiting from the new infrastructure created by the initial development. In terms of transport and movement, Sharpness Vale is developing a wholly sustainably focused strategy for Access and Movement. The approach to this is under-pinned by the provision of a "Mobility-as-a-Service" platform that allows for users from both the existing and new communities to access every type of travel mode through a seamless journey planning app. The "MaaS" platform will provide for subscription based and pay-as-you-go access to public transport, active mode rentals, taxis and demand responsive services and car shares and hire. It will provide real-time, variable journey planning on a day to day basis, and will be developed to respond to a two-fold movement philosophy:
- Providing a flexible approach to infrastructure delivery, focussed on active modes and public transport, that looks to the future, at emerging trends and changes in behaviour, technology

and attitudes to create a place that is resilient to changes like working trends, necessary climate change responses, and so on; and,

- Planning positively around the aims and aspirations of people in the existing and new communities so that they can most easily adopt sustainable modes, and hence making positive provision for the outcomes that we want to see and deliver, rather than making reactionary provision based out of concerns that behaviour won't change.

- 1.4 As a result, the vision for movement developed for Sharpness Vale provides for the overarching "MaaS" platform, and a series of sustainable infrastructure interventions to support the approach adopted, and which picks up on and reinforces the latest policy trends and direction. This includes the re-opening of railways which has been part of emerging Government policy (reference Restoring your Railway Fund, and the Future of Transport regulatory review consultation which is on-going), and which we have been gratified to see follows the principles that we have outlined for Sharpness for some time.
- 1.5 The proposals also recognise that whilst the restoration of the railway will provide for a range of strategic trips to be made to and from Sharpness, some trips will not be able to be made by this mode. Hence alternative sustainable transport provision will be required to deal with the wide range of possible trips that people will need to make to and from the development.

2 Transport Work Completed to Date

- 2.1 Over the last four years, Stantec have provided transport planning advice which has progressed from the development of high level issues and options work to the definition of the sustainable movement approach and how it would be provided, and this has been supported by detailed technical appraisals and Local Plan representations. This work has helped inform the Masterplan for the site and identified a strategy to provide the right access platforms for movement services, along with necessary local and strategic improvements which may be required to facilitate the development. These prioritise the reopening of the Sharpness branch line to passenger services, the provision of express coach services to complement the train, local bus services, provision for active modes connecting across the site, and, only where absolutely necessary, some highway improvements.
- 2.2 This technical work has resulted in a series of complementary reports which have been uploaded to the Stroud Local Plan Review Evidence Base on the 'Site promoter responses' page (<https://www.stroud.gov.uk/environment/planning-and-building-control/planning-strategy/stroud-district-local-plan-review/local-plan-review-evidence/site-promoter-responses>). This section provides a brief summary of the contents of each report and further information can be found within the reports at the link above under the heading 'Documents relating to PS36 Sharpness new settlement'.

Transport Approach (April 2020)

- 2.3 The Transport Approach report sets out the overall transport related aspirations for Sharpness Vale. The key message throughout this report (and indeed all the transport work) is that Sharpness Vale should be designed on the basis of a carbon neutral future where movement needs can most easily be met in a wholly sustainable fashion. This includes provision of on-site retail, education and employment opportunities to minimise the need for off-site travel and maximising public transport use for those trips which do need to travel off-site.

Transport Technical Appraisal (June 2020)

- 2.4 A Transport Technical Appraisal was prepared to build on the Transport Approach, assessing the potential peak hour demand assuming that Sharpness Vale will include a range of on-site facilities and off-site public transport measures to limit the number of car trips generated by the development.

- 2.5 The intention would be to ensure that either active modes or a public transport seat is available for every journey that might need to be made in the peak periods from and to Sharpness Vale. This would mean that there would need to be sufficient availability and capacity on these modes for all of the total forecast off-site trips that are outlined in this assessment.
- 2.6 However, it should be understood that the basis of the appraisal is slightly different, as it considers both the total number of person trips that may need to be accommodated, but also the propensity towards using particular modes, based on available evidence and assessment. The appraisal therefore provides an assessment of potential movement patterns, based on nationally recognised data sources, to evaluate how people are likely to want to travel.
- 2.7 The appraisal sets out a robust methodology for establishing where people may wish to use facilities and amenities within the site, or close to it, and where they may choose to work within the site or close to it, or from home. It also considers the attractiveness of the public transport and sustainable modes that will be provided and assigns person trips to those modes. These are trips where the user would be expected to adopt this particular mode, based on current travel trends and behaviours, and the convenience and reliability of the modes themselves.
- 2.8 The appraisal then defines a residual level of trip demand that, under normal circumstances, would be expected to choose to undertake their journeys by private car. This represents that challenge for the Sharpness Vale transport strategy and the sustainable measures that will be provided, to seek to ensure that these trips too will switch to sustainable modes – for which capacity will be provided. This will be achieved through Travel Plan measures, active travel planning, the provision of a Mobility-as-a-Service subscription service and other support and subsidies.
- 2.9 In the absence of these, the appraisal does provide an indication of the level of car trip generation that might otherwise occur from the Sharpness Vale development.

Highway Capacity Assessment (October 2020)

- 2.10 The Highway Capacity Assessment supplements the Transport Approach and Transport Technical Appraisal by testing what might happen if the sustainable approach cannot be delivered or is not as successful as envisaged. It is not intended that this would be the outcome at Sharpness Vale, but this assessment follows the traditional way that the worst case impacts of developments have been assessed – and so it was considered important that Sharpness Vale had, in addition to the wholly sustainable proposition outlined in the other documents, also undertaken the same assessment as other similar schemes within the Local Plan and more widely in Gloucestershire.
- 2.11 Together the earlier documents already referred to and this document underpin a resilient assessment of the way that the transport network may be affected by the Sharpness Vale development.
- 2.12 Whereas the earlier documents propose and assess a holistic transport network approach, that applies a hierarchy to travel and movement demand – the preferred and planned-for outcome, the Highway Capacity Assessment considers the “Fallback” position as a worst-case assessment in terms of impacts on the highway network for the proposed Local Plan allocation. This is consistent with the adoption of a resilient approach. Part of resilience is to explore and accommodate a range of potential outcomes, and to show that the proposed scheme can cater for this wide range.
- 2.13 This would then be used to develop a structured “Monitor & Manage” approach to any future planning application obligations to allow prevailing circumstances to be responded to and ensure that the actual outcomes and impacts were effectively managed.

- 2.14 This assessment is intended to provide confidence to the highway authorities, as well as the planning authority and other stakeholders, that the Sharpness Vale proposals have been considered in a “worst case” assessment that assumes that typical historical travel behaviours will persist should the development be built out. Therefore, it uses source data that utilizes data collected from existing developments (via the widely accepted TRICS database) to derive trip rates that mirror what is seen as existing developments.
- 2.15 The resulting assessment is essentially car-based in terms of the predominant travel mode and is typical of larger scale developments built out in recent years. It should be noted that, even in this undesirable overall outcome, the assessment shows that the Sharpness Vale Local Plan allocation can be accommodated on the local highway network.

Mobility-as-a-Service and Express Coach Services – Non-car Movement Strategy, Viability & Funding Appraisal (March 2021)

- 2.16 This document examines the way that movement can be catered for at Sharpness Vale, and specifically sets out the way that Mobility as a Service provision across the development and the local area will create an umbrella for residents and local businesses to access the full range of sustainable transport modes. It goes on to consider how the tiers of sustainable transport will be provided for and details the way that express coach services will provide for journeys in a tailored way.

Restoring your Railway Ideas Fund Bid

- 2.17 Stroud District Council (SDC) have submitted a funding bid to develop an Outline Business Case for the scheme as part of the DfT’s ‘Restoring your Railway’ initiative (RyR), using much of the technical evidence and assessments undertaken by Sharpness Development LLP in support of the Sharpness Vale proposals. This work considered the potential patronage that could arise from the re-provision of passenger services, with many of these trips emanating from the new development, but a proportion also coming from the existing population who would benefit from a passenger railway service again.
- 2.18 Stantec prepared an Outline Business Case which provided supporting information for the purposes of the RyR bid process to provide confidence to DfT that the scheme was both viable and deliverable. The document was provided as a supplementary submission, outside of the formal RyR process, in response to queries raised by DfT after the first round submission was completed by Stroud DC. The Outline Business Case was appended to a covering Technical Note (reference 332210067/TN-LP01) and uploaded to the Local Plan Review Evidence Base.

3 Next Steps

- 3.1 Stantec and Sharpness Development LLP are currently engaged in discussions with SDC and their transport consultants Mott MacDonald and AECOM with the aim of finding a common position on a number of technical matters. AECOM have prepared a ‘Critical Friend Review’ of Stantec’s work to date which offers comments and suggestions about where our evidence could be further refined and developed and Stantec are currently preparing a similar review of the AECOM Sustainable Transport Strategy and Mott MacDonald Traffic Forecasting Report. It is notable that both parties are approaching the Local Plan challenges from the perspective of the best routes to achieve sustainable outcomes, and so the reviews are being undertaken in this context.
- 3.2 Stantec are also liaising with SDC and Gloucestershire County Council (GCC) regarding obtaining outputs from the Gloucestershire Countywide Transport Model and potentially commissioning a further run of the transport model to test the impacts of Sharpness Vale alone. Running such a ‘Sharpness only’ development scenario would test the impact of Sharpness Vale on the highway network and identify locations of potential concern on the

highway network so that proportionate and sustainable mitigation measures may be developed to address them.

- 3.3 Following our work on the Local Plan Representations, Stantec will continue to provide transport support for the eventual outline planning application. This scope of works will be discussed and agreed with SDC and GCC but is anticipated to include a Transport Assessment, Framework Travel Plan and transport input to the Environmental Statement.

4 Comments Regarding the Transport Modelling used to underpin the Local Plan evidence base

- 4.1 Overall, Sharpness Development LLP is supportive of the draft Local Plan and the overall strategy that it outlines for the District. However, there are elements of the transport case that we consider are not as well expressed or well resolved as they could be, and elements of the assessment approach that risks compromising the way that mitigation is implemented across the District. Whilst it is not considered that these concerns relate to the soundness of the draft Local Plan, they are nevertheless important points which could help to improve the draft Local Plan as a whole.

Reasons for concern

- 4.2 We consider that some aspects of the transport approach that has been provided could go a little further, in the context of the Council's stated aspirations for the District to be Carbon Neutral by 2030. In particular, whilst the transport assessment that has been undertaken as part of the evidence base to the Local Plan adopted an approach of trying to integrate transport planning into the overall strategy, with a public transport led approach, the traffic modelling nevertheless seems to then rely on undesirable historic trends in traffic growth being projected forwards to justify the provision of additional highway infrastructure.
- 4.3 We have concerns that this modelling approach perpetuates the thinking that it is always necessary to include an allowance for additional highway capacity in planning, on the basis that people probably won't change travel behaviour. If the Council's aspiration towards carbon neutrality is to be reached then it may have to be the case that the "highway backstop" approach that the modelling pre-supposes will have to be set aside, and a more transformational approach defined that does not make provision for unsustainable modes of travel (in this context unsustainable should include environmental, social, community and economic sustainability).
- 4.4 Whilst recognising that the highway authorities have a remit that extends across the short, medium and long terms – and hence that in the short to medium term there is a desire to default to historic trends and management strategies, we would argue that there is now a requirement to start to draw a line under this type of approach, and to start again with a wholly sustainably planned approach, with resources directed solely towards public transport and active modes.
- 4.5 The "highway backstop" approach – where it is accepted that any residual private car demand should be accommodated in the form of additional highway capacity, which emanates from the way that the transport modelling has been undertaken, is likely to increase carbon emissions, both in terms of making provision for the continued and potentially increased use of internal combustion engine vehicles, but also in the actual construction of this infrastructure, which is exceptionally carbon intensive.
- 4.6 We recognise that the modelling process has taken some account of the potential for alternative travel modes to feature in Local Plan growth proposals, and that it sought to build this in and emphasise it from the outset. Our suggestion is that it could go further and having defined that scenario could then have sought to also model mechanisms by which even the residual "car based" trips could be accommodated without reliance on the private car. The opportunities provided by digital platforms, linked to sustainable and active modes provides

the ability to do this – and it would be helpful and enlightening to see a modelling scenario that explored that most desirable of all outcomes.

- 4.7 We have concerns that the omission in the modelling of a wider range of scenarios that explore the comprehensive adoption of digital transport network management techniques, including the use of real-time and demand responsive services and technologies aimed at maximising network useability for individuals means that the evidence suggests that there is likely to be an inherent need for “fallback” infrastructure provision. This “fallback” provision is likely to follow a traditional approach of relying on highway mitigation schemes to meet travel demand, thus perpetuating the continuation of reliance on the private car and unsustainable patterns of movement. Ultimately this could defeat the Council in getting to a carbon neutral agenda by 2030.
- 4.8 It is clear that the pandemic will lead to transformational change in the way in which we approach future travel, and it is also clear that extrapolating historic trends from the immediately pre-pandemic years is unlikely to be realistic or representative. We anticipate that measures to encourage and allow more local living, especially using active travel modes for shorter, more neighbourhood-centric journey making (as advocated in site allocation PS36) may well come more to the fore.
- 4.9 We consider that adopting policies on the basis of modelling and appraisal which lock in a residual level of unsustainable car trips that must be accommodated may well lead to fixed and pre-determined mitigation measures. This in turn could result in over-compensation for possible outcomes, and hence leads to the provision of mitigation that is either unnecessary or which encourages unsustainable patterns of movement, or both.
- 4.10 Therefore, under these circumstances we consider that the Traffic modelling supporting the Local Plan evidence base should equally support and test for scenarios around greater modal shift away from traditional car borne traffic modes that will assist the local plan in achieving carbon neutrality as well as addressing the climate emergency. It should:
- Take account of a range of forecast outcomes, considering a realistic series of future scenarios and means of influencing travel behaviour;
 - Define variable triggers and mitigation measures that can be adapted on a flexible basis to take account of actual circumstances and events, and which allow for monitoring and management of the impacts of development with mitigation proposals that can be adapted to meet the needs at the time;
 - Prioritise the use of digital platforms alongside sustainable travel modes to address the realities of providing for individual travel planning and journey procurement for users, creating an environment where reliance on the private car is diminished.
- 4.11 The Local Plan would, in our view, be better served by an evidential approach that was supported by modelling tests across a more wide-ranging series of possible outcomes. The aspiration towards a carbon neutral future for the District is laudable, and one that we support as being necessary in the context of the climate emergency. Indeed, this is noted under the Priority Issues as the first one to be listed – that the District should move to Carbon Neutrality by 2030, and its placement in the list is presumably a deliberate attempt to highlight its critical importance.
- 4.12 We consider that this issue needs a much stronger policy focus if it is to be achieved. Section 1.1.12 – bullet 8 of the draft Plan states that CO₂ emissions continue to rise in the District, and bullet 9 reiterates that Public Transport provision is limited across the District. These seem to be issues that need to be addressed together, and in a way that provides for individual residents, workers, students and others to make travel choices easily and flexibly without any reliance on the car.

- 4.13 The greater changes in the post-pandemic context may mean that some of these objectives are harder to achieve. Statistics suggest (<https://www.transportxtra.com/publications/local-transport-today/news/69051/traffic-volumes-exceed-pre-lockdown-leve?etid=3335351&artid=69051>) that, at present, traffic volumes and patterns are not following previous trends, or returning to them, but are going somewhere else entirely. Reticence to use public transport, more flexible and home-based working and moves by employers and workers to re-configure their homes and workplaces to be closer to each other (and hence reduce the need to travel) are all trends that will shift the basis of transport planning in the next few years. These trends are now seen to be a permanent direction of travel in terms of movement patterns and the Plan needs to be flexible enough to adapt to the changes so far and those that are to come over the next few months and years.

The Sharpness Vale approach

- 4.14 In raising these comments with regard to the transport evidence base, and the modelling that has been undertaken in particular, we note that the Local Plan and its evidence base have properly reflected the transport proposals that have been made in respect of the Sharpness new settlement. These are set out in the Sustainable Transport Strategy (albeit they are couched as requirements, when they are actually measures and techniques that have been offered). However, it is considered that these measures, whilst being accepted at Sharpness new settlement, could also be broadened to apply to other large scale allocations in the District – and this is where the Transport Assessment could be improved, in our view.
- 4.15 The adoption of Mobility-as-a-Service is referenced at Sharpness under policy PS36 (p.178). Section 21 references MaaS as being required at Sharpness. To assist the reader, it is considered that the explanatory text could highlight the benefits of this service and explain what future residents and users may expect. This is followed, at paragraph 22 by a requirement for a Travel Plan for the development. We consider that the implementation of MaaS, with its inherent support mechanism and real-time data gathering provides a more powerful and dynamic approach to travel planning. We therefore believe that the Policy could be made stronger if MaaS became an inherent part of the ‘Travel Plans’ objectives which would also accelerate modal shift.
- 4.16 The inclusion of direct reference to MaaS as part of all travel plans would avoid the production of unnecessary documents and planning submissions to discharge conditions and would redirect the emphasis on the delivery of the systems required to establish a network – strategies that define the implementation of real-time travel planning and booking apps for actual users, provision of integrated approaches to end-to-end journey provision, seamless interchange for users (with single tickets and real-time information and re-planning of delayed connections), and the provision of routes and other infrastructure to support active and public transport modes.
- 4.17 We also note that MaaS is mentioned in the Sustainable Transport Strategy that supports the Draft Local Plan – on p.30, where it is listed as a “requirement” for the Sharpness allocation. It should be emphasised that this is, in fact a measure that has been offered by the promoter to underwrite the accessibility strategy for the scheme – it provides the mechanism by which individuals can interact with the transport network and the infrastructure provision being made, to reduce reliance on the car.
- 4.18 Confusion arises when the Local Plan, and its evidence base, accepts the principles of the digitally based approach to individual journey planning, coupled with the provision of support for active and sustainable modes, at Sharpness Vale but then this does not seem to be taken forward in and supported by the transport modelling. The Local Plan appears to both recognise and understand the benefits of this approach, however, the transport modelling work does not seem to take the same approach and does not recognise the climate change imperative which the Local Plan is trying to achieve. The modelling also appears not to understand the benefits of MaaS which contradicts the Local Plan objectives. Overall, it is considered that the transport modelling has been slow to respond to recent changes and needs to be both more optimistic and much more aspirational in its approach to modal shift.

- 4.19 There is a clear need for this approach to be applied more universally across the District and the County and not simply to be applied to Sharpness Vale as a “requirement” after it has been offered. We are concerned that the modelling does not actually justify the “requirement”, because it doesn’t seek to reflect this approach in any case. We believe that the requirement arises as a result of the climate emergency, and hence that the Transport Strategy proposed for Sharpness Vale reflects this – the transport modelling does not, and furthermore does not apply this same aspiration to other proposals contained in the Local Plan.
- 4.20 Including this approach in the modelling would ensure that the maximum opportunity and benefits of integrated digital and physical networks could be defined, planned for and hence be realised, using systems like MaaS, to achieve travel patterns that are more sustainable in the Plan period. Moreover, the potential outcomes of this approach should be modelled, so that necessary infrastructure to deliver it in respect of each strategic allocation can be identified and included within the plan as necessary mitigation measures.
- 4.21 For clarity – this follows the “traditional” approach – but instead of requiring a list of highway improvements to deal with the adverse impacts of proposals, they would feature a positively planned approach to the provision of wholly sustainable transport networks – with both digital and physical infrastructure included.
- 4.22 This would ensure that mitigation strategies are people focussed, rather than being solely about vehicle movement and operations. Experience shows that the operational based approach to mitigation (e.g. agreeing support for a pre-determined level of bus services for a fixed period) often has limited impact on travel behaviour. Our argument is that this is because it is not focussed on the User experience.

Suggested improvements to the evidence base for the draft Local Plan

- 4.23 It is considered that the highway authorities should collaborate closely with Council through the Local Plan process in order to develop an agreed “robust” approach with Highways England and Gloucestershire County Council to achieve more aspirational assumptions which mirror the Council’s carbon neutral objectives that have not found their way into the modelled scenarios. It is suggested that the transport modelling could benefit from some specific clarifications and amendments that address these key issues as follows:
- That the transport modelling should be founded on the basis of achieving the carbon neutrality set out in the draft Plan, and consequently should model the best possible outcome in this regard, prioritising resource from development into active and sustainable travel modes, and considering how these outcomes should be modelled. (Noting that it may remain appropriate to undertake a “worst case” assessment as a “fallback” if the carbon neutral aspiration cannot be achieved – but that mitigation schemes involving unsustainable infrastructure associated with this scenario would only come forward once all other avenues had been exhausted).
 - That assessment methodologies should consider a reasonable and agreed range of possible future scenarios, recognising the potentially permanent shift in travel patterns and travel mode choice that has resulted from the Covid pandemic, such that resource is not wasted on measures determined at the planning stage which have been overtaken by changing circumstances by the time the relevant development trigger for implementation is reached;
 - That any requirement for assessment of travel demand associated with larger scale developments should require that a flexible approach is taken to mitigation measures and their implementation, with a requirement for on-going monitoring of actual outturn conditions during the development and tailored mitigation responses that address actual impacts;

SUMMARY NOTE



- That the mitigation measures place an emphasis on encouraging and supporting the use of sustainable modes of transport first, and only involve the addition of more highway capacity as an absolute last resort, and on the base that other methods to promote travel by sustainable modes has proven unsuccessful through the on-going monitoring;
- That the available mitigation measures are flexible and adaptable, with actual measures to be implemented to be determined at the time when mitigation is required, in order to be as closely related to dealing with actual impacts as possible.