

Technical Note

Project: Stroud LDP

Subject:	Review of the Sharpness Vale Development Site		
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Date:	30/01/2023	Project No.:	5218719
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Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Draft evidence summary for GCC to support LDP Examination in Public	LT	CLC	JJ	CLC	16/12/22
1.1	Updated to incorporate EiP PI Qu's, references to additional supporting documents and client comments and reformatting	LT	CLC	JJ	CLC	30/01/23
1.2	Reformatting for final issue	LT	CLC	JJ	CLC	06/02/23

Client signoff

Client	Gloucestershire County Council
Project	Stroud LDP
Project No.	5218719
Client signature / date	

1. Introduction

1.1. Stroud LDP

Atkins are pleased to have been commissioned by Gloucestershire County Council (GCC) to provide Expert Witness advice in support of the Examination in Public process for the Stroud LDP. This Expert Advice will be provided to Gloucestershire County Council through a series of targeted technical notes.

This first technical note focussing on the Sharpness Vale Development site includes a review of a list of the supporting documents and summarises the transport assumptions made by the Developer, with specific reference to the sustainability of the location of this proposed allocation, the proposed sustainable travel options and their deliverability. The technical note will also provide a summary conclusion which will highlight the key issues that contribute to GCC’s conclusion that the evidence for this allocation is not sound. (See Appendix A GCC’s Regulation 19 response to Stroud District Council).

Technical Note 4 includes Atkins’ advised response to the Inspector’s questions where they relate to the Sharpness allocation.

The technical note follows the following structure and includes a series of appendices that provides additional supporting evidence.

1	Introduction
2	Document summary
3	Sharpness Vale Documents (Reviewed)
	Appendices
A	GCC Response to the Regulation 19 Consultation - Letter date 21st July 2021
B	The Rail Service Viability Report from SLC Rail (June 2021-V2)
C	Minutes of Meeting between Atkins and Stagecoach 9th January 2023 and Stagecoach Response to the Regulation 19 Consultation

1.2. Sharpness initial response to schedule 19 consultation

Gloucestershire County Council have previously stated their concerns with the ‘soundness’ of two sites included in the Stroud LDP (See Appendix A). One of those sites is at Sharpness and it is described in the conclusions of the letter as below:-

“Sharpness..... [is a] substantial allocation in the Plan and [is] clearly an important component of the development strategy for the District as a whole. Given the transport concerns raised above regarding....[the] site [s], based on the available submitted transport evidence, GCC consider the Plan to be unsound.” In addition, Gloucestershire County Council has also clearly stated in that letter that the site allocated is ‘*not sound*’ and is ‘*unsustainable*’.

Evidence of the continued concern and the level of that concern is summarised in Section 2 of this technical note, and where appropriate the concerns have been referenced to the evidence documents detailed in Section 1.3 which has been sourced from the Examination in web-based Public Library. Any additional documents referred to in Section 3 are also in the public domain and have been referenced in the appropriate footnotes.

1.3. Sharpness Vale Development

The Sharpness Vale Development, or ‘the site’ as referenced in this technical note is stated by the promoters of the proposal to be a sustainable and resilient growth point, on land south and east of Newtown and Sharpness, in the district of Stroud, Gloucestershire. Sharpness Development LLP are the promoters of the proposed Sharpness Vale Settlement.

The Sharpness Vale Development is identified in the Stroud District Local Plan Review Draft Plan for Consultation (May 2021) 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 enabling 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.

A SALA assessment for the site has been completed according to the process stated in note EB112. This assessment provides a total access score to various destinations for 431 sites. The access scores range from 44 to 98, with a higher score representing a higher travel time. The relevant scores in the corresponding spreadsheet EB112a from November 2020 are:

- 67 for land at Sharpness (Sanigar Farm) with site reference NEW002.
- 82 for additional land at Newtown and Wanswell is with site reference NEW002A. This SALA score is for phase two of the development. In terms of access score these sites are ranked 236 and 382 of the 431 sites.

The Census data indicates that with regards to journey-to-work information, in Sharpness 88% of such trips are made by car compared to 83% for Stroud District, 80% for South Gloucestershire District and 67% for England as a whole. Currently only 2% of people in Sharpness use public transport (compared to 4% in Stroud, 6% in South Gloucestershire and 18% in England. Of the public transport use only 1% was by bus in Sharpness compared to 2%, 5% and 8% respectively in Stroud District, South Gloucestershire, and England. Thus, highlighting the lack of public transport options and confidence in public transport provision and reliability, that are currently experienced in this area.

Active travel modes (walking and cycling) account for 10% of journey to work trips, compared to 12% for Stroud District, 13% for South Gloucestershire and 14% in England.

The documents submitted as evidence for the Examination in Public of the Stroud Local Plan have been reviewed to assess whether the Sharpness Vale Development represents a sustainable pattern of development in respect of existing and proposed transport opportunities. Other publicly available documents such as the Bristol to Birmingham rail corridor strategic study have also been reviewed, as these materials provide updated evidence on the sustainable transport initiatives proposed for the site¹.

PS36 Transport Approach (EB95c)	PS36 Mobility Service and Express Coach (EB95f)
PS36 Highway Capacity Assessment (EB95b)	PS36 Transport Appendix A (EB95g)
Stroud Sustainable Transport Strategy Addendum (EB108)	PS36 Sharpness Branch Line Technical Note (EB95h)
PS36 Transport Technical Appraisal (EB95d)	PS36 Sharpness Branch Line Outline Case Submission (EB95i)
PS36 Natural Neighbourhoods (EB95e)	

This note will discuss each of the above documents in turn to support the conclusion that the Sharpness Vale Development is in a location which is not and cannot be made sustainable.

¹ <https://sacuksprodnr.digital0001.blob.core.windows.net/regional-long-term-planning/Wales%20and%20Western/Bristol%20to%20Birmingham%20rail%20corridor%20strategic%20study.pdf>

2. Document Summary

Having reviewed the evidence presented, in support of the Sharpness Vale sustainable garden village, which is detailed in Section 3 below, it is unlikely that it can be delivered as a sustainable Development as it is reliant on significant road travel and the non-car options are not sustainable.

The main area of concern with regard to this proposed Development is that it would now not be possible to deliver it with a sustainable transport strategy in place. This is highlighted by the following:

- I. Key parts of the transport proposals which would be needed to ensure the Development reduces the need for travel in private cars are not within the direct control of the Developer. These are specifically the proposed rail improvements proposed and the road-based bus public transport provision.
- II. There is no evidence of statements of common ground or commercial agreements in place between the Developer and local / national transport operators that demonstrate that the public transport provision by bus and rail will materialise nor evidence of agreement with any travel-planning service providers.
- III. In evidence, the Developer has provided an Outline Case Submission prepared for the DfT/ Network Rail Restoring Your Railway Fund submission in October 2020. As stated within that document, this represents *“an overview business case appraisal rather than one that is fully compliant with HM Treasury’s Green Book appraisal process”*.

The review by Atkins of the Outline Case Submission identifies the following issues:

- There is no evidence that engagement with the relevant Train Operating Companies (TOCs) has taken place to understand whether a service is feasible. There also appears to be no consideration of other potential plans for upgrades by the TOCs or Network Rail to other routes or services in the area which may limit the possibility for services to Sharpness.
 - The expectation is that the DfT / Network Rail would be responsible for funding the majority of the scheme. Given this Outline Case Submission was prepared for at least one specific funding opportunity (Restoring Your Railways) and there is no evidence of grants for further Business Case development or guarantees to fund the scheme from either funding party, doubts must be raised about the feasibility of the scheme being delivered.
 - Whilst a positive Cost Benefit Analysis has been reported in the document, the robustness of that analysis must be questioned for several reasons, not limited to:
 - o The appraisal of benefits has not been conducted in line with the DfT’s Transport Appraisal Guidance.
 - o Calculations for scheme demand have been undertaken by applying a set of Trip Rates to the existing land uses and proposed Sharpness Development, which implies a guaranteed rail usage. This is as opposed to the use of the strategic rail modelling using standard industry tools which would identify how likely any demand for the new service would be.
 - o There has been no estimation of the operational cost requirements for running services along the proposed route, nor have infrastructure costs been estimated in line with appropriate guidance.
- IV. No letters of support for delivering additional services in the area have been provided from either Network Rail or local bus operators since the 2020 discussions with the Developers of the Sharpness Vale site.
 - V. The proposals that the Developer has assumed will be delivered by Network Rail are not included in the *Bristol to Birmingham - rail corridor strategic study* and therefore are currently considered aspirational as they are unlikely to materialise.
 - VI. The significant improvements to the road based public transport service proposals are also not within the direct gift of the Developer and would be likely to require significant financial support to ensure their commercial viability.
 - VII. GCC have commissioned their own assessment of the rail proposal by SLC Rail. The Rail Service Viability Report from SLC Rail (June 2021-V2) is included at Appendix B. In summary, the SLC observations are that, based upon the current situation, that there are considerable risks to the viability of the scheme which make it unlikely that it would gain the necessary approvals to progress to delivery.
 - VIII. Stagecoach’s Schedule 19 representations are included in Appendix C and that states that “Stagecoach, has been abundantly and consistently clear about its very serious concerns

about the appropriateness of a local plan strategy that includes a remote new settlement at Sharpness”.

- IX. Stagecoach and Atkins met on 9th January 2023. Atkins is able to confirm that currently there is no Statement of Common Ground between the Developers of the Sharpness Vales site and Stagecoach as the main road based public transport provider in the area. A note of this meeting is included in Appendix C.

Without these improvements in place, it would be possible that some of the proposed Development could be delivered without significant detriment to the surrounding highway, with appropriate highway mitigation, but it would be heavily reliant on private car use which is against the fundamental principles of a sustainable development

3. Sharpness Vale Documents (Reviewed)

3.1.1. Transport Approach (2020). Ref: EB95c²

3.1.1.1. Purpose of the document

- The Transport Approach document explains how the Sharpness Development LLP developed the transport philosophy for the new settlement Sharpness Vale.

3.1.1.2. Key points from the document

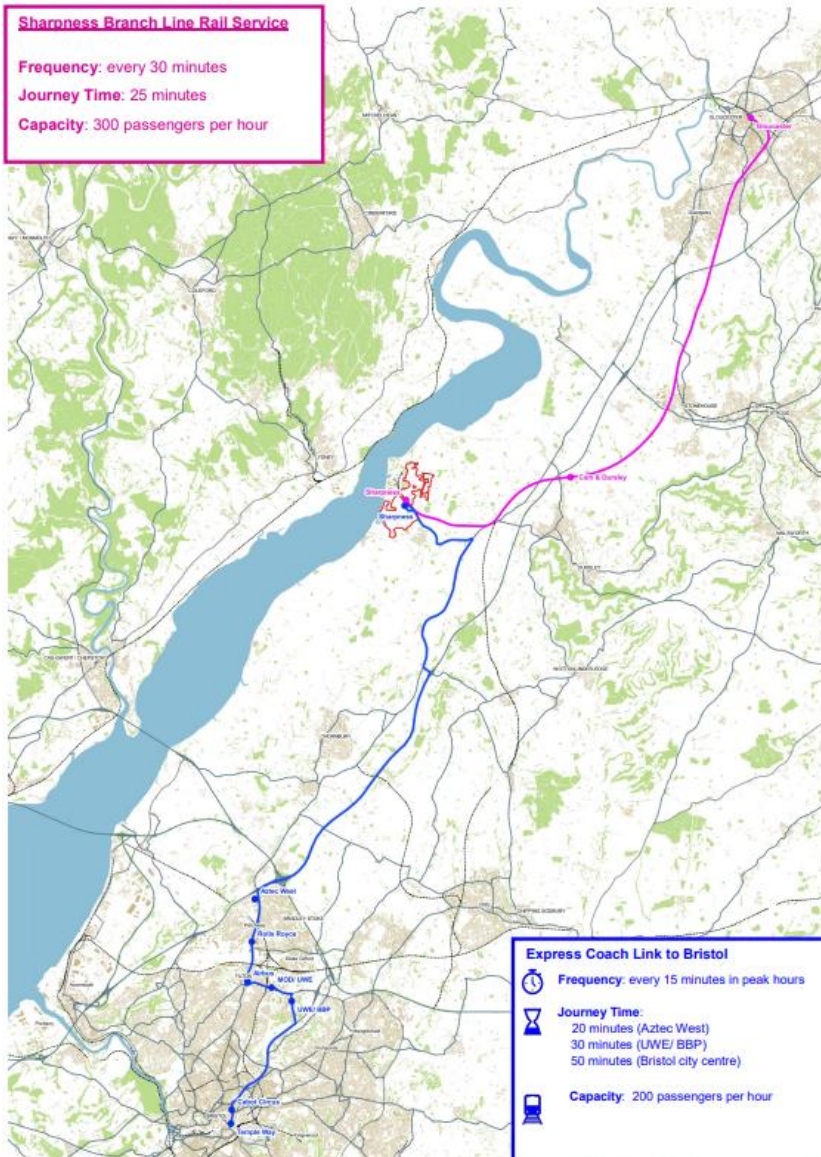
- The document states how Sharpness Development LLP want to address the balance between public transport and the car and where investment in public transport will be prioritised.
- The document suggests that people who move to Sharpness Vale would do so to adopt a different lifestyle approach, where people live, work and have access to core amenities all in one place to reduce the need to travel.
- Where people do need to travel, the Sharpness Development LLP propose providing sufficient public transport options so people are not reliant on the private car.
- Key principles highlighted in the document include:
 - To provide for every peak hour trip out of Sharpness by sustainable transport i.e. a seat on a train, coach, or bus.
 - To provide routes across and through the Sharpness Vale Development site that are available, safe and convenient for all modes of personal transport, including emerging micro-mobility options such as e-scooters.
- There is desire to provide regular and dependable services from Sharpness Station, along with dedicated hubs to serve both traditional and demand responsive bus and coach services. A hub in the centre of the Development will also be provided for cycle parking and provide both maintenance support and shower facilities etc.

3.1.1.3. Is the document reasonable / plausible / of concern?

- A major concern is it has not been identified clearly in the report is who is going to provide, fund and maintain the sustainable public transport services required to ensure this is a sustainable development. No agreement is in place with transport providers concerning delivery of the rail or bus services.
- There is significant concern that this document includes proposals that are not deliverable, which has led to the supplementary evidence provided in September 2020 and discussed above.
- This raises key questions in respect of timescales of delivery - Will the proposed sustainable transport provision be installed before the on-site employment facilities are opened so that employees will use it from day one? What will be the impact on the surrounding highway if people move to Sharpness and the sustainable transport plans are not in place and only the planned minimal car parking spaces are provided? What kind of services and other leisure facilities will be provided from day one, as the failure of early provision will lead to car trips away from the Development site?
- Currently privately owned scooters are not legally allowed in UK highways and pavements. An agreement with an e-scooter provider and operator need to be in place at the outset of the Sharpness Vale Development if these are to be used to facilitate additional sustainable travel options.
- Figure 3-1 highlights the frequencies of the services needed and it is a concern that in order to provide public transport services to meet this demand. On the basis of the evidence available there is no realistic prospect of this level of public transport services being made available.

² <https://www.stroud.gov.uk/media/1485654/sharpness-37.pdf>

Figure 3-1 - Sharpness Vale Commuting Transport Plan



Source: Stantec Sharpness Vale Transport approach 2020

3.1.1.5. Is the document clear and supported by evidence?

- The document is concise and easy to read but does not elaborate on points of concern in sufficient detail to remove those concerns.
- Some limited data is included in the document, but more evidence is needed to support the proposals, which has been provided in the supplementary evidence discussed above. Parts of the documented evidence on the sustainability of the site are aspirational and may not be deliverable as they are outside of the Developers' area of direct influence.

3.1.1.6. From the evidence supplied, is the Sharpness Vale Development Site in a location that can be made sustainable?

- There is a need to obtain formal agreement on the realistic service provision from potential transport providers. The absence of such agreements means there is little prospect of residents having a genuine choice of transport modes. Setting aside the timing and viability of provision, there is the potential that the transport approach that relates directly to those internal aspects of the allocation may be achievable.

3.1.2. Highway Capacity Assessment (September 2020)³

3.1.2.1. Purpose of the document

- The Highway Capacity Assessment provides analysis of the possible effects of the proposed Local Plan allocation for 2,400 homes at Sharpness Vale on the local highway network.

3.1.2.2. Key points from the document

- The Highway Capacity Assessment is supplemented by two earlier documents: Transport Approach – How we developed the transport philosophy for the new settlement (April 2020) and Transport Technical Appraisal (June 2020).
- The report supplements earlier work by testing what might happen if the sustainable approach cannot be delivered, or is not as successful as envisaged. Together the earlier documents already referred to and this document have been prepared by the Developer to demonstrate their assessment of the way that the transport network may be affected by the Sharpness Vale Development.
- Whereas the earlier documents proposed and assessed a holistic transport network approach, that applied a hierarchy to travel and movement demand – what may be termed an “Ideal” outcome, this additional report considers the “Fallback” position as a worst case assessment in terms of impacts on the highway network for the proposed Local Plan allocation.
- The Highway Capacity Assessment details how the proposed Development at Sharpness Vale is phased, with the initial phase of Development accommodating 2,400 homes, 10Ha of employment land and other supporting and core land uses, whilst the later phase of the Development, to north of the initial site, would accommodate an additional 2,600 homes and would be subject to a future Local Plan allocation.
- The “Fallback” assessment is predicated on the following assumptions:
 - There remains a high level of car use in the future year of 2040 with approximately 85- 95% of trips being undertaken as either a car driver or car passenger
 - The passenger services on the Sharpness Branch Line and bespoke coach and bus network are not provided. Instead, a more typical expanded local bus service would be provided which will cater for a lower level of public transport trips consistent with other similar areas
 - There would be a low level of internalisation of trips within the Development, but the majority of peak period trips will travel off-site
 - Although primary school provision would be made locally, on-site, all secondary school trips would be to destinations away from Sharpness.
- This “worst case” approach is not what is planned at Sharpness Vale, and other evidence has been prepared in respect of the innovative transport strategy that is proposed. This assessment comprises a theoretical appraisal to provide evidence to the Council and wider stakeholders that the Local Plan allocation development can be accommodated on the highway network if other initiatives prove incapable of delivery.
- It is also noted in the assessment that the considered A38 junctions will all require some degree of improvement by the end of the Local Plan period in any event, whether development at Sharpness is progressed or not. It is therefore possible that the highway authority would have needed to undertake improvements at these junctions in the meantime in any case to support the already committed and allocated developments.

3.1.2.3. Is the document reasonable / plausible / of concern?

- The document is reasonable as it considers the transport impact of the scheme should the sustainable transport options such as reopening the railway line, improving bus service, installing coach services do not go ahead as they are outside of the control of the Developer. However, there is currently no evidence of any formal agreements between the Developer and Council, nor Developer and travel providers that this sustainable infrastructure will be provided. Without this choice of transport modes, the development is not in a location that can be made sustainable and car use will remain extremely high in 2040.
- In addition, there will need to be formal agreement in place that the associated community facilities e.g. schools, will be provided in a timely fashion to limit the need to travel. If not, there is a risk that the Development will be isolated and will increase the transport problems if people need to commute from the Development for school and other goods and services.

³ <https://www.stroud.gov.uk/media/1485652/sharpness-27.pdf>

- It is unclear if the two phases of proposed Development are interdependent in respect of opportunities for internalisation of travel. Is the initial stage of the Development viable if the second stage of the Development does not materialise, are those essential destinations all included in the first stage?
- If a secondary school is not provided on site, how will children access secondary schools nearby? High car-use is not sustainable and working parents may not be able to drop their children off before going to work, such that specific public transport would need to be provided for these school children.
- Interdependent timescales - when will the A38 junction modifications be delivered? To deliver the scheme, there are a number of junction modifications discussed which the Developer will need to be tied to through the Planning Process and the trigger points for these will need to be established before any site mobilisation.

3.1.2.4. Is the document clear and supported by evidence?

- The document is technical, but in collaboration with the earlier documents appears to provide a comprehensive highways assessment.
- The report is supported by clear evidence based on the industry standard TRICS database. The TRICS data used is based on existing traffic surveys covering a number of days of the week at several different locations, but in general the data used to support the Sharpness Development proposals has selected small scale sites (less than a 1000 dwellings). There are no 'garden village' or large scale residential developments selected which may impact the overall site trip generation, but it is not likely to undermine the junction modelling which appears robust.
- The highway capacity assessment for the overall strategic modelling has been agreed with GCC officers

3.1.2.5. From the evidence supplied, is the Sharpness Vale Development Site in a location that can be made sustainable?

- Notwithstanding the uncertainty about the provision of local services for internalisation, a fundamental transport requirement would be for a formal agreement between the Developer and transport service providers to ensure the proposed Development is sustainable. The absence of such an agreement means that there is no certainty that new residents would be offered a genuine choice of transport modes.

3.1.3. Stroud Sustainable Transport Strategy Addendum (July 2022) Notes

3.1.3.1. Purpose of the document

- The Sustainable Transport Strategy (STS) has been developed to form part of the evidence base for Stroud District Council's (SDC) Local Plan Review.
- The STS plays a key role in setting out plans for achieving the connectivity and mobility aspects of the Local Plan needed to support growth, in as sustainable a manner as possible.
- The STS addendum has been produced to provide an update to the original STS document produced in 2019, with a minor update in 2021 to include modelling results only. Since the publication of this document, there have been various changes to the policy and guidance framework, changes to the certainty surrounding sustainable transport interventions, and new transport interventions have emerged. The SDC Local Plan has also been updated, to include additional site allocations, revisions to previous site allocations and also removes some allocations. These changes have been captured in this STS addendum.
- The STS provides an important opportunity to tackle issues such as climate change, congestion, accessibility, air quality, public health and safety whilst supporting the District in delivering mobility for inclusive growth. This has been summarised into a series of challenges and opportunities, which set the framework for the development of a bespoke STS for Stroud District.

3.1.3.2. Key points from the document

- The STS is informed by a vision and objectives which have been developed through consultation with stakeholders. The vision of the STS is: *'Enable mobility for all, prioritising sustainable and low carbon modes of transport, allowing healthy and prosperous communities and economy to thrive, whilst continuing to be an environmentally responsible district.'*
- The objectives of the STS are:
 - Improve community health and wellbeing by promoting and prioritising active travel modes;
 - Improve accessibility and connectivity via sustainable mode choices;
 - Promote a sustainable travel hierarchy which prioritises sustainable modes and reduces the need travel;
 - Protect and extend existing active travel infrastructure;
 - Improve the safety of people travelling around the district, in particular pedestrians, cyclists and public transport users;
 - Support sustainable economic activity;
 - Encourage innovative and technological mobility solutions to support the Council's ambition to become carbon neutral by 2030
- The STS includes a review of existing and emerging planning and transport policy and guidance, identifying relevant measures for inclusion in the long list of interventions. Since the publication of the STS in 2019, a number of policies have been revised and new strategy documents have been published. These have been summarised with regard to their impact upon the STS for the emerging SDC Local Plan.
- The current Stroud District Local Plan was adopted in November 2015 and outlines the agreed development strategy across the District up to 2031. SDC commenced with the latest Local Plan Review in 2017, with a 'Draft Plan for Consultation' published in November 2019 and a 'Pre-Submission Draft Plan' published in May 2021. The Local Plan Review is currently progressed to the Examination in Public (EiP) stage. The 2019 draft included interim and developing policies, including in relation to sustainable travel. These have been fully developed in the latest version (2021).
- The update to Local Plan Section still maintains the sustainable transport aspirations for the site that SLC, Network Rail and Stagecoach have all indicated are unlikely to materialise.

New settlement at Sharpness – 2,400 Dwellings & 10ha Employment

- The site proposals are for 2,400 residential dwellings by 2040 (with 5,000 dwellings by 2050) with 10ha of employment space (B2 and B8) to create a new garden village between Berkeley and Sharpness.
- The development should provide high-quality and accessible cycling and walking routes, connecting to employment, local and educational centres. Furthermore, appropriate off-site active travel infrastructure and routes to be put in place to connect the new development, Berkeley green, Berkeley town centre, Sharpness, Newton and to national cycle and canal networks;
- The development will lead to enhancements to the Sharpness branch line and support a regular passenger service to Gloucester.

- Measures to reduce car usage and ownership will be part of the development, which will include Mobility-as-a-Service systems, bike hire schemes and incentives for public transport use.
- The STS sets out various sustainable transport initiatives developed to achieve the objectives of the STS vision and enable and support the growth and development of the District and refocus investment towards active, sustainable mobility. The STS Addendum considers additional interventions which have emerged or have been developed since the publication of the STS. These include the relevant measures identified from the review of the GLTP4, as well as other interventions identified for consideration at this time (i.e. Charfield Station). The additional interventions enable sustainable travel across the wider district area and Gloucestershire County.
- The STS addendum considers the additional interventions in relation to the strategic modelling exercise undertaken to inform the SDC Local Plan. The STS is part of the mitigation package to reduce the impact of Local Plan development traffic on the District's highway network. The additional interventions are considered within the assessment framework and evaluates the impact of the schemes, alongside those included in the original STS, in terms of mitigating Local Plan traffic impact.
- The percentage reduction in car use appears to have been reduced in STS addendum, see Figure 3-2, which suggests the site is now less sustainable than previously modelled.

Figure 3-2 - Extracts from Appendix A-of the Stroud Sustainable Transport Strategy Addendum

SDC Sustainable Transport Strategy
Updated STS Modelling Reductions for STS Addendum 2022

xxx STS Addendum updates.

Location	Ref.	Proposed Sustainable Travel Interventions	Scale of Cost (1 = Lowest to 5 = Highest)	Development				Background					
				Trip Type	Percentage Reduction in Car Trips		Revised for STS Addendum (For Modelling)	Notes	Trip Type	Percentage Reduction in Car Trips		Revised for STS Addendum (For Modelling)	Notes
				Minimum (For Modelling)	Maximum (Target, where different)			Minimum (For Modelling)	Maximum (Target, where different)				
Strategic Sites													
New settlement at Sharpness - 2,400 dwellings & 10ha (Berkley Cluster)	14	Direct public transport services to key destinations, including Bristol, Gloucester and employment nodes	3	Trips to/from central Bristol, and central Gloucester.	20%	30%	20%	Service would need to be established early and be direct. This would need to be an exemplary service and the modelled value incorporates potential for the rail service to be delivered.	Trips between Sharpness and Bristol / Gloucester	15%	20%	15%	Lower proportion as trip patterns established and home locations further from central pick up point.
	15	Potential re-opening of the Sharpness railway branch line for passenger services (including to Gloucester)	5	Trips to/from central Gloucester	Not to be included in model - feasibility.	40%	-	This would supersede the direct public transport services measure above.	Trips between Sharpness and Gloucester	Not to be included in model - feasibility.	30%	-	Lower proportion as trip patterns established and home locations further from central pick up point.
	16			Trips to/from Bristol, Stroud, Cheltenham, and longer distance cities	Not to be included in model - feasibility.	30%	-	Creates direct access to longer distance rail services, likely with a need to interchange.	Trips to/from Bristol, Stroud, Cheltenham, and longer distance cities	Not to be included in model - feasibility.	20%	-	Lower proportion as trip patterns established and home locations further from central pick up point.
	17	Cycle route to Stroud from Sharpness development	3	Trips to/from Stroud and intermediary destinations e.g. Stonehouse	0%	5%	0%	Distance is likely to be a barrier, although ebikes have the potential to be an enabler.	Trips between Stroud and Sharpness	0%	5%	0%	Distance is likely to be a barrier, although ebikes have the potential to be an enable.
General													
	35	Policy Interventions Package	2	All Development	0%	2%	-	In addition to measures above	Trips within Stroud DC	-	0%	-	Limited potential to influence existing trips
	36	Mobility Behaviours	2	All Development	0%	2%	-	In addition to measures above	Trips within Stroud DC	-	1%	-	-
	37	Public Transport packages, e.g. RTI, smart ticketing	3	All Development	0%	1%	-	In addition to measures above	Inter and intra-urban trips within Stroud and to/from Bristol/Gloucester	-	1%	-	-
	38	Rail service improvements	4	-	-	-	-	-	Long distance trips	-	1%	-	-
	39	Cycle access improvements to Gloucester & Sharpness Canal towpath, Gloucester	2	-	-	-	-	Potential to benefit Sharpness and Hardwicke residents but arguably could be included in the PT mode shift.	Trips between Sharpness and Gloucester (including destinations along the canal route)	-	2%	-	-

3.1.3.3. Is the document reasonable / plausible / of concern?

- The document is reasonable and provides update on the original STS document produced in 2019.
- The reality of how sustainable the Sharpness development will be, can be challenged by the fact the enhancements to the Sharpness Branch line may not materialise. This could mean there is an increased car dependency, especially as the site is currently isolated and does not have strong existing active travel links nearby. Even if new off-site active travel links are provided, the journey time / long distance constraints may be a barrier for people to travelling to work, families and people will accessibility challenges limiting the update of walking/cycling as active travel modes.
- The idea that the Addendum truly promotes sustainable modes of transport can be contested in Appendix A, where the percentage reduction of cars figures has been revised and are now a proportionally lower split than previously, suggesting car use actually needs to increase at the Sharpness site.

3.1.3.4. Is the document clear and supported by evidence?

- As the Addendum has been developed as supplementary document to the Local Plan, the document is succinct and sufficiently supported by evidence.

3.1.3.5. From the evidence supplied, is the Sharpness Vale Development Site in a location that can be made sustainable?

- The current evidence supplied by this document in support of the proposed Sharpness Vale site does not suggest that this site can be easily made sustainable as both road and railed based public transport services are unlikely to materialise.

3.1.4. Transport Technical Appraisal (June 2020). Ref: EB95d⁴

3.1.4.1. Purpose of the document

- Provides analysis of the initial transport and movement patterns likely to arise from the proposed Sharpness Vale Development site, but has been largely superseded by the supplementary evidence detailed above.

3.1.4.2. Key points from the document

- 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.
- New technology is proposed to support the sustainable development package. The intention would be to ensure that a public transport seat is available for every journey that might need to be made in the peak periods from and to Sharpness Vale.

Vamooz is an app-based service for the hire of a bus which allows you to hail the bus to follow a route and stops that you as the user chooses. It is ideal for more rural areas that do not have many existing bus services. Vamooz is currently used mainly for school buses, for commuting employees, as a coach service to football games and concerts in larger venues in the cities. A benefit of Vamooz is that it can still be used on Sundays, Bank Holidays and Boxing Day where existing bus services may not be running and the routes can be made longer to supplement bus routes in the area. The app would use mobile ticketing and is modelled so that the more people on the bus then the cheaper the ride is.

Arriva Click is essentially a Demand Responsive service, with an app providing access to a flexibly routed mini bus service (approximately 12 passengers). The user puts the details of their journey into the App and it combines collection on journey with other passengers. The driver picks the user up from the designated spot and then travels to your destination whilst collecting others along the way

- The developer has stated *it should be understood that the basis of this appraisal is slightly different. It is important to understand 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. This 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.*
- In terms of Covid 19, the document assumes that patterns of travel will change, and that, in general, people will retain a nervousness about using public transport until measures that give them confidence to travel are in place. The Sharpness Vale scheme incorporates many of the expected pre COVID changed principles of travel and would be well placed to adapt to the “new normal” requirements around local living with extended reliance on public transport provision.
- The document.....Car usage may be the alternative in the short term – but a significant proportion of people probably will not return to making the journeys that they use to make. It is not expected that traffic levels will return to pre-Covid19 levels for some time. So, local living is expected to become much more prevalent with a reduced aspiration to travel on a day-to-day basis and therefore remaining relatively local will drive increased reliance on home working and local employment, which is provided by the Sharpness Development proposals.

3.1.4.3. Is the document reasonable / plausible / of concern?

- The idea behind Vamooz and Arriva Click is good, but there is no evidence that these providers have been contacted and would be able/willing to provide this service.
- It is of concern that demand responsive transport may not be sustainable with only 12 people able to travel at a time, especially for a Development with 2,400 dwellings by 2040 and 5000 dwellings by 2050. There is concern that this service will either be barely used or may not support the overall level of sustainable transport use needed at Sharpness Vale.

⁴ <https://www.stroud.gov.uk/media/1485653/sharpness-47.pdf>

- Demand Responsive transport works well where people make infrequent journeys rather than at locations heavily reliant on regular public transport provision. Demand Responsive Services are at risk of being cut during evenings / weekends if not regularly used.

3.1.4.4. Is the document clear and supported by evidence?

- The appraisal is technical in a well-structured document.
- The document is supported with evidence using industry standard methodologies.

3.1.4.5. From the evidence supplied, is the Sharpness Vale Development Site in a location that can be made sustainable?

- This document, as it stands, provides evidence of what could be achieved if the sustainable transport options can and are delivered at the outset of the onsite Development. It does not satisfactorily explain how that might be delivered and maintained at Sharpness in a manner that can provide residents with a genuine choice of transport modes.

3.1.5. Natural Neighbourhoods (March 2021) Ref: EB95e⁵.

3.1.5.1. Purpose of the document

















- Explains how Sharpness Vale is a natural neighbourhood that is an exemplar of sustainable living and innovation where all infrastructure needs are planned and delivered from the outset.

3.1.5.2. Key points from the document

- It is acknowledged by the Developer that there is a need to create easy sustainable alternatives to reduce reliance on the car
- Network Rail had confirmed that they concur with the timetable study commissioned to explore the viability of restoring passenger train services to Sharpness. The study concluded that a service for one train per hour between Sharpness and Gloucester could be accommodated within the timetable as it stands today. The addition of a further service to provide two trains per hour to Sharpness could also be accommodated in the future. However, this is providing track and signal improvements on the branch line and signalling amendments on the approach to Gloucester station were completed. Since this position in 2020 when a number of possible rail scenarios were being considered by Network Rail there has been a publication in February 2022 by Network Rail entitled Bristol to Birmingham rail corridor strategic study¹ which makes no reference to these proposed improvements being taken forward and as such this now puts the sustainable nature of this site at the mercy of any road based public transport provision.
- Probably worth putting in what the Network Rail study does support on the main line.
- The report suggests the Sharpness Vale could be a sustainable development and directly address the climate change agenda by ensuring the Development uses green sources of energy and abandons fossil fuels. However, the position of Network Rail has changed since this report was published in 2020.
- The report confirms that sustainable transport services will be accessible through an integrated 'Mobility-as-a-Service' app and possible options have been discussed above.
- The primary travel principles below for Sharpness Vale are to provide a development that is sustainable and through reduced parking provision, coupled with excellent public transport provision, is supported by both road-based buses and rail.:
 - Reduce the need to travel;
 - Positive planning for emerging personal modes of transport;
 - Greater accessibility within the community; and
 - Longer distant travel by public transport, including a train link.
 - Reduction in emissions from carbon-based transportation.
- Regarding car use the Sharpness Vale developer stated in the report '*we won't limit car use if people really want to use this mode, but we aren't planning to provide any extra capacity for them, as we know that this simply exacerbates the temptation to get in the car for unnecessary trips.* It could also be determined that developers encouraging unsustainable car trips through '*there will be no sanction on the use of the car – it just won't be the most convenient mode to move around Sharpness by some margin. Sharpness residents and visitors will be free to choose this mode if they wish, but no concession will be made in respect of this mode of transport.*'
- 2011 Census data and other historic National survey data / statistics related to the Sharpness Vale Development have been used to analyse the destinations that people will want to go to. Based on these predicted patterns, it is thought around 4,700 person trips in the morning and 4,200 person trips in the evening will be completed. It is calculated in the report that just over 2,000 people will need to travel to and from Sharpness in the peak periods. Figure 3-3 shows the number of public transport services that will need to operate during the peak hours to allow 2,000 people to travel sustainably. This is significant and will need buy-in from the local service providers as it is significantly in excess of a minor enhancement. (It should be noted that the 2021 Census data has recently been made available, but it is unlikely that there will be any significant difference in the mode of transport and general travel patterns that would cause concern with the assessments made by the Developer in their documents published in 2020).

⁵ <https://www.stroud.gov.uk/media/1485656/sharpness-57.pdf>

Figure 3-3 - Sharpness Vale Peak Service Requirements

	Morning Peak	Evening Peak
Berkeley & Sharpness		
Cam & Dursley	 	 
Bristol & South Gloucestershire	 	 
Gloucester	 	 
Stroud & Stonehouse		

Source: <https://www.stroud.gov.uk/media/1485656/sharpness-57.pdf>

- It is proposed, by the Developer, that the above peak service schedule might be different when Sharpness station is established. If there is a new train service, twice every hour, from Sharpness to Gloucester the developer thinks more residents might look to find work there than in Bristol where most of the existing pattern of movement is targeted. However, as the Sharpness rail spur does not have a Bristol facing line, any train commuters would have to travel north to go south meaning Bristol is not a sustainable rail destination.
- Some of the bus services may also be combined, as not all of them will be full, so there won't need to be quite as many actual buses as the figure above suggests. Unfortunately, it is now known that the support from the rail service¹ is no longer expected to materialise.
- The document states that providing the movement infrastructure necessary to make the plan work will be expensive to establish, but the Developer is confident it will be able to sustain itself once a "critical mass" is achieved at Sharpness.
- A Mobility-as-a-Service (MaaS) would provide access to a range of services and allow people to book tickets within a bespoke journey planning app (for a fixed monthly subscription). The Developer proposes the app would include:
 - Rail tickets to Sharpness Branch Line services as soon as they are up and running;
 - Bookings for the tailored, express coach services;
 - Tickets for the local bus services;
 - Bookings for local taxi providers, Uber and other on demand services;
 - Cycle hire facilities (provided by others on site but available through MaaS);
 - Access to personal modes of transport;
 - Car hire and pooling for Battery Electric Vehicles.
- There is a need to upgrade the Sharpness railway line to passenger trains, with a new service to Cam and Gloucester. The proposal would also require a new station at Sharpness, track and signal improvements re-signalling works and the appointment of a suitable operator. The Developer has met with Network Rail, Gloucestershire County Council and the Vale of Berkeley Railway Group in respect of their proposals which in early 2020 looked possible as the options were being considered as part of the Network Rail advanced proposals. However, it has now been established that these improvements which would have provided significant support to the sustainable nature of the Sharpness Vale Development are no longer expected to materialise¹ following the publication of the Network Rail proposals for the line between Bristol and Birmingham.

- There is a need for a high quality express coach service to Gloucester, Stroud and Bristol and key employment sites around the city and the Developer has suggested use of the “Zeelo” model to utilise chartered coach resources on routes designed to maximise the commuter patronage to help support the sustainability of this site. Zeelo are a commercial operator of a demand responsive passenger transport system. There is a plan to commit by the Developer to support the early years express coach services in advance of the railway being regenerated to enable people on this site to use sustainable modes from the first day they move in. This adopted movement strategy would be used to avoid any stopgap reliance on private car as far as reasonably possible. Enabling people to adopt non-car based travel in the peak periods is most important, as that is when the highest trip demands are present and the network is the most stressed.
- The Developer suggests that there is scope to have a plan to provide ‘flexible approaches’ to parking, so that as less car ownership occurs over time there is a thought that parking spaces should not necessary become hard paved areas, but should be re-purposed as green spaces, Development plots, play spaces, community gardens, allotments etc. There is no evidence to support how this would be achieved in reality within the Developers, reports.

3.1.5.3. Is the document reasonable / plausible / of concern?

- It is a concern that this Development site relies heavily on public transport services that are not directly in the control of the Developer to deliver and there is no statement of common ground/agreement in place to ensure the services will be delivered. If the public transport services do not materialise, which is now the likely scenario¹, or there is an insufficient provision then people are still likely to use the car as the main form of personal mobility. An overall reduction in emissions from carbon-based transportation will not be possible if the sustainable transport options do not materialise.
- There is no clear plan in the report on how the Developer can/will ensure fossil fuels are abandoned as far as possible as there are no specific sanctions in place preventing the use of the car. The statement ‘*we won’t limit car use if people really want to use this mode, but we aren’t planning to provide any extra capacity for them, as we know that this simply exacerbates the temptation to get in the car for unnecessary trips*’ is concerning for a Development that aspires to be sustainable by definition. It has already been suggested by the Developer that a large volume of public transport is needed to support 4,700 person trips in the morning and 4,200 person trips in the evening via sustainable modes.
- ‘Some of the bus services will be combined, as not all of them will be full – so there won’t need to be quite as many actual buses as the graph suggests’ this statement lacks data and is vague and unsupported.
- The Developer claims that ‘*if there is a new train service, twice every hour, to Gloucester then more residents might look to find work there rather than in Bristol where most of the existing pattern of movement is targeted*’. Unfortunately, this is now known to be unlikely to materialised in the foreseeable future¹.

3.1.5.4. Is the document clear and supported by evidence?

- The document is clear but some of the claims may not be feasible, or deliverable.
- The document includes some evidence, but some points need further evidence to quantify the statement and substantiate the claims if the sustainable basis for this Development is to be established at the outset and in the long run.

3.1.5.5. From the evidence supplied, is the Sharpness Vale Development Site in a location that can be made sustainable?

- This document, as it stands, provides evidence of what could be achieved if the sustainable transport options can and are delivered at the outset of the onsite Development. However, this is unlikely to materialise in its current form given the fundamental issues highlighted:
- Bristol to Birmingham rail corridor strategic study.
- Absence of any transport provider support
- Absence of any strategic or economic case
- Absence of any capital or revenue funding strategy

3.1.6. Mobility Service and Express Coach (March 2021). Ref: EB95f ⁶

3.1.6.1. Purpose of the document

- The report is both a non-car movement strategy and viability and funding appraisal for the Sharpness Vale Development site. The document examines the way that movement can be catered for at Sharpness Vale, and specifically sets out the way that Mobility as a Service (MaaS) 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.

3.1.6.2. Key points from the document

- To look to the future the Sharpness Vale Development site will need:
 - A more flexible and sophisticated approach to transport, that is able to respond in real time to the needs of residents, businesses and visitors
 - A tiered approach to provision that provides a range of responses to tackle individual travel needs
 - The service provision to be adaptable with changes to routes, destinations, vehicle types and timings to be accommodated quickly and effectively to meet users' needs/requirements
 - An effective way for users to interact with the service so they can access the most efficient means of making their journey, whether this is determined by cost, time or other factors that the user specifies.
 - Provide access to transport services that are user-focussed, delivers journey planning in real-time to individual demands, and responds to individuals differing travel needs on a day-to-day basis
- To achieve the above, the Developer believes establishing MaaS across Sharpness Vale and the existing Developments close to it, is likely to offer the best comprehensive mechanism for people to access a range of travel information and services easily.
- The plan for Sharpness Vale is to have a MaaS service operational from the outset of the Development, and to make this accessible to residents and occupiers of the Development, and to the existing communities in the surrounding area.
- The MaaS service is expected to provide access to a range of services that together form the tiered and proportionate transport offer at Sharpness Vale, specifically:
 - Rail tickets to Sharpness Branch Line services as soon as they are up and running
 - Bookings for the "Zeelo" express coach services
 - Tickets for the local bus services
 - Booking with local taxi providers, Uber and other on-demand services
 - Cycle hire facilities – probably provided by others on site, but available through MaaS
 - Car-pooling and rental
- The document states it will be for the MaaS provider to coordinate and negotiate deals with individual providers, whether these are geared around a reimbursement of ticket price basis, or on a different lump sum or similar arrangement. However, it is expected that the local public transport operators, rail, taxi and bus in particular, would be available through the scheme. Demand Responsive travel providers, such as Uber and Lyft, already have connections with MaaS operators and so should be available through the MaaS system. The provision of cycle and personal transport modes may be through a link to a cycle hub operator within the Sharpness Vale Development or may be something that the MaaS operator would undertake. Access to car rental and car-pooling (car clubs) would generally be through an arrangement with a rental company or operator who would base cars within the Development.
- The appraisal of the way that the express coach services will be delivered is set out in the spreadsheet models in Appendix A of the report. Two separate models have been constructed, the first relates to the 2,400 home Local Plan allocation scenario, and the second extends this to include the full 5,000 homes that are anticipated to be built at Sharpness Vale. Both scenarios include the 10ha employment land uses and supporting uses.
- The delivery of express coach services is configured around a partnership with a suitable operator, who will provide services to and from Sharpness on a flexible basis, matched to demand and key destinations as these develop over time. The Sharpness Vale promoters have decided to form a relationship with an

⁶ <https://www.stroud.gov.uk/media/1485651/sharpness-67.pdf>

operator called “Zeelo”, to develop a specific and tailored strategic coach and bus response to support the Sharpness Vale Development. Zeelo has developed a costed proposal for Sharpness Vale. This does demonstrate that they have considered the proposal, but does not show they would fully support, fund and operate the service and this would need to be in place if the site is to be considered truly sustainable.

- An extract from the Zeelo brief is shown in Figure 3-4.

Figure 3-4 - Extract from the Zeelo commercial proposition

- Targeting initially a “budget focussed” solution, with a 12 - 24 months contract period
 - Fares initially paid for by the developer
 - Then partly subsidised periods- tbc
 - Ultimately moving towards a full “farebox” system

Source: <https://www.stroud.gov.uk/media/1485651/sharpness-67.pdf>

3.1.6.3. Is the document reasonable / plausible / of concern?

- Mobility as a Service isn’t a fully established and available to rollout across the UK DfT funding for MaaS trail areas is available, but it is currently being targeted at whole cities / sections of cities which are much bigger areas than a single development. The Developer is not able to deliver MaaS on their own, as it forms part of a much wider transport integration initiative that is not currently in operation in Gloucestershire.
- The proposals recognise that the potential restoration of the railway will only deal with some trips, and that other complementary 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.
- It is a concern that the Developers proposals rely on a cost efficient and viable service provision that is adaptable, with changes to routes, destinations, vehicle types and timings to meet users’ needs. It also needs a MaaS service, linked to an app, to be operational from the outset. There is no evidence provided that a MaaS provider would negotiate the deals with public transport and other service providers that it would need to operate successfully. Clarity is needed over exactly who is providing the additional cycle provision and car clubs.

3.1.6.4. Is the document clear and supported by evidence?

- The document demonstrates a level of confusion between the concepts of a MaaS system and what a Developer needs to negotiate to be in place to ensure such a system could/would operate for this Development. The level of upfront organisation and financial commitment by the Developer has not been fully captured in the report.
- MaaS is being trialled by DfT in large urban areas and it is unlikely to be viable for a single development, of the scale of Sharpness Vale.

3.1.6.5. From the evidence supplied, is the Sharpness Vale Development Site in a location that can be made sustainable?

- Formal agreement between the Developer and the transport providers is needed to remove the unsupported assumption that the MaaS provider will set up and agree contracts with public transport providers on the Developer’s behalf. Without a formal agreement in place this site is unlikely to be sustainable in terms of transport provision.

3.1.7. Transport Appendix A (undated as part of TA report). Ref: EB95g⁷

3.1.7.1. Purpose of the document

- This appendix collates all the basic trip generation information from TRICS (entitled B of the Transport Assessment) and the TRL Junctions9 assessment for a series of priority junctions and roundabouts, together with LINSIG signal assessment (entitled Appendix C of the Transport Assessment).

3.1.7.2. Key points from the document

- There is no suggestion that the TRICS rates have been treated in a way to favour the Developers' conclusions nor that the geometric assessments have been carried out in anything other than a robust manner. It is interesting to note that the variety of days of the week and sites used are for the residential sites with between 110 and 805 dwellings which may not have the benefit of the significant sustainable features proposed for the Sharpness Vale site. The worst-case sensitivity test carried out by the Developer would therefore be using fairly robust trip rates to assess the impact on the existing junctions. This has led to a number of highway junction improvements being needed as mitigation to ensure that the junctions operate within theoretical capacity in 2040 with the Development in place. It is noted that in some cases warnings are present in the junction assessment reporting that have not been addressed by the Developer, but it is unlikely that these would significantly alter the conclusions drawn from the assessments as they relate mostly to longer than normal flare lengths and not providing separate HGV matrices.
- The following development years have been assessed for both the AM and PM peak hours in 2020 (the base year), 2040 both with and without the Development and a 2040 with Development assuming the sustainable options proposed are not delivered as part of the proposed Development (the worst-case scenario). This series of assessments are in accordance with industry practice.

The following junctions have been assessed:

1. B4066/ Saniger Lane T junction
2. B4066 Station Road roundabout
3. Canonbury Street roundabout
4. B4066 / Alkington Lane T junction
5. A38-B4066 T junction
6. A38 Alkington Lane staggered T
7. A38 Breadstone T junction
8. A38 Berkeley Road T junctions

Highway mitigation improvements have been proposed at the first six junctions which do result in some changes of the control method.

1. B4066/ Saniger Lane T junction
2. B4066 Station Road roundabout
3. Canonbury Street T junction
4. B4066 / Alkington Lane T junction – signal controlled
5. A38-B4066 T junction
6. A38 Alkington Lane – signal controlled

3.1.7.3. Is the document reasonable / plausible / of concern?

- There are no issues of concern with the modelling information provided and it does demonstrate that highway junction mitigation is needed and that with that in place the junctions assessed would operate within theoretical capacity which would allow for some daily traffic flow variation without the junctions locking up and causing grid lock on the highway network surrounding the Sharpness Vale Development. Depending on the form of junction enhancement required, third party land may be necessary to deliver the improvement, but GCC has highway authority have accepted that appropriate network improvements are achievable with adequate funding

⁷ <https://www.stroud.gov.uk/media/1485655/sharpness-77.pdf>

3.1.7.4. Is the document clear and supported by evidence?

- Industry standard junction modelling software has been used for the junction assessments appended to the Transport Assessment. These are Junctions 9 for priority junctions/roundabouts and LINSIG for traffic signal-controlled junctions.

3.1.7.5. From the evidence supplied, is the Sharpness Vale Development Site in a location that can be made sustainable?

- The information is appropriate for the level of assessment needed at this stage of the development proposals. The information supports car based transport and is not relevant to improving the sustainability of the site.

3.1.8. Sharpness Branch Line Technical Note (June 2021). Ref: EB95h⁸

3.1.8.1. Purpose of the document

- Stroud DC 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.

3.1.8.2. Key points from the document

- Sharpness Development LLP, the promoters of the Sharpness Vale proposals included as a strategic allocation in Stroud District Council's (Stroud DC's) Draft Local Plan under policy proposals PS36, are fully supportive of the Stroud District Council's aspirations to re-establish passenger railway services on the existing Sharpness branch line.
- The scheme would deliver two distinct passenger services:
 - Timetabled scheduled services between a new station at Sharpness Vale and Gloucester to serve the growth point Development in the current plan period of 2,890 new increasing to as much as 5,490 new homes in the subsequent plan period allowing for further growth, and
 - Tourist and heritage services, at weekends and holiday periods, to allow the Vale of Berkeley Railway (VoBR) to establish itself as a tourist attraction alongside other attractions in the area.
- The RyR submission proposes that a series of interventions will be required to deliver the service:
 - Upgrading the track on the branch line
 - Re-providing stations suitable for the services
 - Improving the signalling at the junction with the mainline, and
 - Potentially improving the signalling at Gloucester station to accommodate a second hourly service.
- Sharpness Development LLP can confirm that, insofar as these interventions would require land to be made available within the Development area, that this can be accommodated, and has already been taken account of in the indicative masterplan for the Sharpness Vale scheme.
- There are a series of aspects to the proposals:
 - establish a station at Sharpness Vale and introduce the capability for a once per hour scheduled service to Cam & Dursley and Gloucester (weekdays and Saturdays)
 - establish heritage services between the VoBR site near Sharpness Docks and a reinstated halt at Berkeley
 - develop the heritage offer over time, with a replacement of the station at Sharpness (as it used to be close to the docks) and potentially with further services to a new halt closer to the mainline, and
 - expand the scheduled service to a twice per hour service (weekdays, Saturdays and with some service on Sundays) to Gloucester.
- Sharpness Development LLP is keen to work together with the charity to ensure that both aspirations, for a heritage service and a scheduled service, can be delivered as part of the railway re-establishment proposals.
- As part of the work undertaken to support the re-establishment of passenger services, Sharpness Development LLP commissioned a detailed Timetable Study for the proposed scheduled services, which has subsequently been discussed with Network Rail, and has been demonstrated that the services can be accommodated.
- The Sharpness Vale Development will ultimately need to be served by a new accessible station. It is envisaged this would be roughly midway between the sites of the original Berkeley and Sharpness stations, sitting at the heart of the new Development, and already included in the indicative masterplan as part of the market centre within the scheme.
- There is also an overlap with the potential bid by Nuclear South-West for the 'STEP (Spherical Tokamak for Energy Production) Fusion Power Generation Project' which has been submitted to Government for

⁸ https://www.stroud.gov.uk/media/1605136/sharpness-branch-line-restoring-passenger-railway-services-technical-note-2021_redacted.pdf

consideration. The potential Berkeley site is very close to Sharpness, and so the upgrading of the branch line would provide the opportunity for sustainable transport to the potential STEP site for both employees and materials.

- Sharpness Development LLP strongly believes that re-establishing passenger services on this branch line would make use of an underutilised, but perfectly serviceable, asset to achieve sustainable growth for Stroud and Gloucestershire.

3.1.8.3. Is the document reasonable / plausible / of concern?

- The current 2022 Network Bristol to Birmingham rail corridor strategic study now states that this is unlikely to happen.
- There is a need to obtain formal agreement on the realistic service provision from potential transport providers. The absence of such agreements means there is little prospect of residents having a genuine choice of transport modes.
- There is an overlap with the potential bid by Nuclear South-West for the 'STEP (Spherical Tokamak for Energy Production) Fusion Power Generation Project' which has been submitted to Government for consideration. The nuclear development will not contribute to any funding of the proposed rail changes as STEP is no longer progressing.

3.1.8.4. Is the document clear and supported by evidence?

- The document provides a good summary of how the passenger railway services could be restored, but does not appear to provide any evidence of the continued support for this proposed passenger service by National Rail.
- Network Rail provided provisional consideration, and support in 2020, of the timetable proposals for the Sharpness branch line services which would enable the proposed passenger service to be implemented.

3.1.8.5. From the evidence supplied, is the Sharpness Vale Development Site in a location that can be made sustainable?

- The lack of any formal support by Network rail to the proposed rail improvements needed to enable this site to be sustainable suggests that this site cannot be made sustainable in terms of transport provision.

3.1.9. Sharpness Branch Line Outline Case Submission (September 2020) Ref: EB95i⁹

3.1.9.1. Purpose of the document

- This submission sponsored by local MP Siobhan Baillie is made by Stroud District Council (SDC) in partnership with Vale of Berkeley Railway Charitable Trust (VoBR) and Sharpness Development LLP in respect of the reuse of the Sharpness branch line for passenger services that will link Sharpness to Gloucester.
- This is a second submission, following the initial submission made in response to the Government's "Restoring your Railway" initiative in May 2020. This submission is an update and is more detailed providing further information on the proposals following the initial submission. There is a greater assessment of the business case for the scheme, but both reports outline the case at Sharpness (the initial submission setting out the concept of reopening the passenger services along the branch line) and this follow up document setting out the detail of the costs and benefits.

3.1.9.2. Key points from the document

- The Sharpness line was part of the Severn and Wye Railway connected across the River Severn via a bridge located immediately to the north of the docks. This made a direct connection to Lydney and onwards into the coalfields of the Forest of Dean and provided a diversionary route when the Severn Tunnel was closed for maintenance. This continued until 1960 when the bridge was damaged in a collision between barges on the river. It was deemed uneconomic to repair and was eventually demolished, severing social and economic links between the communities on both sides of the river. There has been discussion amongst local politicians and other stakeholders over the years about reinstating a bridge.
- The route of the Sharpness branch line lies wholly within the ownership of Network Rail. VoBR and Sharpness Development LLP have been in ongoing discussions with Network Rail in respect of the proposals to utilise this line in support of their proposals for a sustainable 'garden village' Development. The railway represents a public asset that is underused, but could provide a key sustainable transport opportunity that will lead to sustainable growth and a reduction in carbon output. The proposal is to enhance the existing freight railway to upgrade it for passenger services.
- The intention is for the neighbourhoods at Sharpness Vale to grow organically in a logical and sustainable manner benefiting from the new infrastructure created by the initial Development. Sharpness Vale has been designed to be a genuinely mixed use, new community where it is intended that people will be able to live and work in the same place. The design of the Development will also look to prioritise personal modes of travel over road-based travel that will ensure that most internal trips are undertaken in a sustainable manner. Connecting the Development by rail will give people a genuine choice in the way they travel longer distances and will help to further reduce reliance on the private car. Sharpness Vale would therefore be a sustainable growth point for the District for this and forthcoming Plan period allowing for successive phases of Development to be rolled out.
- The track is fully operational, and therefore represents a cost effective and realistic way to permit sustainable growth and development in a way that is not reliant on the private car. The scheme knits together four core opportunities for economic growth and development in this part of Stroud:
 1. Proposals by VoBR to re-introduce passenger services onto the existing Sharpness branch line to support local tourism in the more immediate term.
 2. Enabling the release and Development of existing employment, housing and tourism proposals at Sharpness that have currently stalled or lack sustainable forms of transport to access them, due to the lack of infrastructure in the area.
 3. Support the reintroduction of twice-hourly passenger services from Sharpness to Cam/ Dursley and Gloucester railway station, providing the ability for onward journeys to Bristol and Birmingham. This service would be introduced in parallel with SDC's proposed Development of a new garden village at Sharpness ('Sharpness Vale') subject to this being approved in the emerging Local Plan Review.
 4. In the longer term, SDC and other authorities are exploring the potential for the development of passenger services connecting communities at Sharpness and Lydney via the re-instatement of a third Severn bridge.
- This further submission in respect of the proposals to re-instate passenger services on the Sharpness branch line in Stroud is intended to demonstrate that the scheme would create sufficient public benefits to

⁹ <https://www.stroud.gov.uk/media/1605164/outline-bc-240621.pdf>

justify its inclusion in the next round of detailed business case funding for the Restoring your Railway funds. The proposals include:

- The sequential Development of heritage passenger rail services on the branch line, providing a new tourist attraction in the area
- The re-provision of a scheduled passenger train service between Sharpness and Gloucester, with a stop at Cam & Dursley.
- The submission includes detailed timetable modelling to demonstrate that the planned service can be accommodated on the railway network – both now, and when considered in the context of other planned service changes (the MetroWest services on the main line in particular). It also sets out the results of patronage forecasting and suggests that as many as one million trips could be expected at the Sharpness station when the Development is complete.
- The developer’s appraisal shows that overall public benefits of more than £253m could be derived, for an investment risk of around £Xm. This states a very healthy BCR of more than X – a result in the “Very High” value category.
- The submission sets out the details of the infrastructure works that would be required to achieve the reintroduction of the passenger service including:
 - The upgrades to the branch line track and signalling
 - Upgrades to the connection to the main line
 - The provision of new station facilities on the branch line
 - The possibility of the need, eventually, to upgrade the signalling and track on the approach to Gloucester station.

3.1.9.3. Is the document reasonable / plausible / of concern?

- Following the second submission of the OBC, it appears that Network Rail’s current position on delivering the Sharpness scheme has changed as the scheme is not mentioned in the Bristol to Birmingham rail corridor strategic study.
- Unfortunately, the report is fundamentally flawed as there is no evidence that Network Rail will provide these services and the economic case is not HM Treasury Green Book compliant which raises significant concerns over the development of the business case which shows that overall public benefits over £253m could be derived from an investment risk of around £51m. This equates to an unsupported BCR over 5.0. All the infrastructure works are included in the appraisal, allowing estimates that could be benchmarked against other similar schemes.

3.1.9.4. Is the document clear and supported by evidence?

- The report provides a clear indication of the improvements and needs that Network Rail would need to provide to support this sustainable garden village Development at Sharpness Vale. However, it is fundamentally flawed as there is no evidence that Network Rail will provide these services and the economic case is not HM Treasury Green Book compliant which raises concerns with the development of the business case.

3.1.9.5. From the evidence supplied, is the Sharpness Vale Development Site in a location that can be made sustainable?

- To make the Sharpness site more deliverable it is recommended that the Developer ensures that any business case presented is HM Treasury Green Book compliant and that it is fully supported by Network Rail and that they are signed up to a clear delivery phasing plan for these improvements to be implemented and become operational.

Appendix A

GCC Response to Regulation 19 Consultation Letter date 21st July 2021

To: Planning Strategy Team
Stroud District Council
Ebley Mill
Westward Road
Stroud
GL5 4UB

Rob Niblett, Senior Planning Officer
Economy, Environment and Infrastructure
Shire Hall
Westgate Street
Gloucester, GL1 2TG

email: robert.Niblett@gloucestershire.gov.uk
01452 425695

Our Ref: SDCLP/RN **Your Ref:**

Date: 21st July 2021

Dear Sir/Madam

Stroud Local Plan Review – Pre-submission Consultation Regulation 19

Thank you for consulting Gloucestershire County Council (GCC) on the above matter. I have the following officer comments to make.

Officers have previously responded to Stroud Local Plan consultations as well as providing comments on the Local Plan modelling report. The comments provided in those previous responses remain relevant. On reviewing the Pre-submission Plan and the supporting evidence provided, officers consider it to be unsound.

Concerns remain over the transport evidence provided to support the proposed Sharpness and Whaddon allocations. Also, a number of policies are considered unsound from a Minerals and Waste Policy perspective but amendments are suggested to help Stroud District Council (SDC) overcome these concerns.

Detailed comments are set out below.

Transport/Highways Authority Comments

All of the details set out within this section are made by officers of GCC in its capacity as the Local Highway and Transport Authority

Following on from comments made to previous consultations, this response will focus on specific concerns regarding the allocations at Sharpness and Whaddon and the soundness of the evidence that is provided to support their inclusion within the emerging Local Plan.

GCC Draft plan Consultation comments can be found at:

<https://www.stroud.gov.uk/media/1164522/gloucestershire-county-council.pdf>

Strategic Site Allocation Policy- PS36 Sharpness:

GCC officers have significant concerns with regards to allocation at Sharpness and the evidence provided to justify its sustainable transport interventions and inclusion within the Plan which are set out below.

Sharpness allocation rail proposal:

In regards to the evidence provided specifically for the Sharpness allocation, GCC officers have serious doubts about the rail proposal and the likelihood of this coming forward. Even if it did come forward demand would be low as it would fail to confer convenience. Rail travel in Gloucestershire is not favoured for short trips, especially where the alternative of the private car exists. Officers have therefore commissioned SLC to review the rail proposal and Restoring Your Rail (RYR) bid and Technical Note (dated 23rd June 2021) supporting documentation. This is attached as an appendix to this response.

There are three key significant issues that indicate this proposal is unlikely to be delivered, these are cost, strategic fit/purpose and deliverable from an operational perspective.

Costs

Should this site be allocated with the transport interventions as stated and build out commences, but the cost of providing the rail solution is higher than agreed by the developer, it is unclear how this would be funded. The predicted passenger numbers are extremely optimistic (as detailed below) and there is a risk that actual numbers may be significantly lower, in line with other 'local' rail stations in Gloucestershire. This would result in the revenue assumptions not being realised and the need for the service to be subsidised. The SLC review concludes that the service is likely to be loss making.

The supporting information suggests that the rail proposal will have one million passengers per annum. This is not considered realistic, for example, four of Gloucestershire's stations have less than 200,000 passengers per annum and Stroud serves over 500,000 passengers, with direct services to London and covers a much wider catchment area and population than the Sharpness proposal. The passenger numbers will determine the level of subsidy the service requires. However, the level of subsidy for this proposal is unclear, if it is based upon one million passengers per annum and that number is not achievable, then the service will require an even bigger subsidy.

The economic case is considered weak, based on high levels of demand, considerable infrastructure investment as well as the aforementioned need for on going (potentially high) subsidy. This is likely to lead to a low Benefit Cost Ratio (BCR).

Wider Economic Considerations:

In March 2020, GCC commissioned the Gloucestershire Rail Investment Strategy (GRIS), in partnership with the six district councils and Gfirst LEP.

<https://www.gloucestershire.gov.uk/media/2096940/gloucestershire-rail-strategy.pdf>

The GRIS sets out a strategy for which service improvements will deliver most for the County's economy, backed up by evidence of resultant GVA uplift. A series of tests of enhanced train services was developed, based on an assessment of the County's development plans and the gaps in the current rail service provision to

support them. Part of the study considered testing options relating to the reopening of the freight line from Cam & Dursley to Berkeley and Sharpness. This was in response to the significant Local Plan proposal for Sharpness. The services considered were;

- 1tph Sharpness – Bristol
- 2tph Sharpness – Bristol
- 1tph Sharpness – Cam & Dursley
- 2tph Sharpness – Cam & Dursley
- 1pth Sharpness – Gloucester – Cheltenham

The GRIS showed that the level of economic uplift from each option is relatively modest and doesn't take account of the significant investment in infrastructure that would be needed to deliver these services.

The overall GRIS results showed that an enhanced regional service between Bristol and Birmingham would deliver substantial economic benefits and improve connectivity along the M5 corridor south of Gloucester, transform connectivity between Gloucester/Cheltenham and Worcester and greatly improve Gloucester's connectivity to Birmingham. This matches the priority set out in the recently adopted Local Transport Plan (LTP) 2020-2040. This is an important conclusion, particularly as the Sharpness allocation's rail proposal could negatively impact on this wider ambition.

Strategic Fit

The recently published Network Rail Bristol to Birmingham Corridor Strategic Study discusses the possibility of increased service provision between Bristol and Gloucestershire's city region as well as additional freight pathing on the corridor. The study makes no mention of potential branch-line reopening and it is unknown whether there is additional capacity for such services without impacting wider regional train service ambitions. The service would largely only benefit the Sharpness development whereas other, more regional, service ambitions have the potential to benefit a wider range of users. The Sharpness proposal in fact has the potential to damage these strategic ambitions by taking up valuable line capacity.

Strategic Purpose:

The Sharpness proposal needs to strongly evidence why this heavy rail proposal is the best approach compared to alternatives. The underlying problem that the rail solution is to address needs to be clearly identified. From the supporting documentation it appears that the heavy rail solution is to help achieve a sustainable car minimal development. This is considered high risk as it is dependent on the 'buy in' of residents to make the ambition a reality and should it fail it could result in an unviable rail service. The proposed rail service therefore only focuses to serve that location, despite the small Sharpness population, even when fully built out. The heavy rail solution therefore does not have a strategic purpose as it stands.

Operational Issues:

As stated previously the reopening of the branch line for passenger use is not in the Network Rail (NR) Bristol to Birmingham Corridor Strategic Study which could impact on line capacity and pathing as well as timetabling. Train Operating Companies (TOCs) would also need to agree to a network change and there is no guarantee that that would be possible.

There are no commitments from TOC's, NR or the Department for Transport (DfT) to reopen this branch to passenger traffic which has the possibility of creating delivery issues further in the planning process.

Even if the ambitions in the NR study for additional services should not be delivered, the Sharpness rail proposal for the Sharpness – Gloucester service would still introduce conflict points, particularly with northbound services. The conflict moves would be where the service meets the mainline near Gloucester and when the service crosses the mainline to traverse the Sharpness branch-line. This adds additional complexity and performance risks to other services.

NR and the DfT will need to be convinced that the substantial modal shift is possible and that it is possible to include the proposal alongside other additional services on the Bristol to Birmingham corridor as set out in the recent NR Study.

Express Coach

The Sharpness allocation has proposed a Zeelo express coach model as stated in the Mobility as a Service (Maas) & Express Coach services document. The service configuration will see the coach service travel to destinations of most demand, directly and quickly making the journeys comparable to the car as stated in the supporting document. Appendix B of the MaaS and Express Coach document provides some information from Zeelo including a proposed route with stops at Aztec West, Rolls Royce, Airbus, M.O.D, UWE and central Bristol.

The information suggests a journey time of 35 minutes approximately. However, reviewing route journey planners this journey could take 1 hour 4 minutes following road alignments and assuming the stops are located directly at these destinations. A journey time of 45 minutes is suggested if the stops are located on primary routes somewhere in proximity to the destinations with a walk, cycle or other MaaS method required to finish the journey.

However, this has not considered whether it is possible, practical or safe to stop in these approximate locations but has been reviewed for the journey time comparison only. A direct journey from Sharpness to central Bristol is 41 minutes, whereas it is unclear whether the '35 minute' Zeelo route has considered stop, wait and/or alighting times at the destinations which would increase journey times. Therefore it is unclear how the approx. 35 minute journey time has been calculated. Furthermore, officer journey time reviews have been undertaken with no traffic. Peak times are likely to result in significantly longer journey times due to higher traffic flows. Officers do not believe that the journey times are comparable and this will do little to persuade users to shift modes from private car use.

Furthermore, the overall journey time has not considered walk/cycle times at origin and destination. The peripheral areas of the allocation are quite some distance away from the proposed coach pick ups which questions the practicality of such service for most users and whether it is a practical alternative method.

The service appears not to be entirely flexible, with set destinations and timing of service. The technical note states that if users miss the express coach service the opportunities for MaaS will ensure they have travel options. Furthermore, the MaaS and express coach document has stated high levels of demand/users switching to the Zeelo services. Given the limited departure/arrival times, this level of mode share looks unrealistic. The location of the site itself questions the level of mode share as it is not located on any strategic transport corridor unlike other proposed developments in the plan.

The mode share modelling provided in the MaaS and express coach document appears to align to a best case scenario where by residents embrace the transport offer, whereas no evidence to the contrary is provided.

This proposal suggests the development needs to be inhabited by like minded individuals who are willing to embrace this new method. This is considered unlikely in reality. The service also serves little strategic purpose other than to benefit the residents of Sharpness. GCC have ambitions to utilise the major transport corridors for high frequency bus services, linking with major transport hubs and railway stations, that can target a much wider population, as outlined in the Local Transport Plan 2020-2040. Sharpness' remote location will not benefit from the potential connectivity arising from GCC's strategic ambition and is therefore unlikely to realise a coach mode share that supports a sustainable pattern of development.

Furthermore, Section 3.8 'Option Assessment' of the RYR – Sharpness Branch line technical note recognises that a bus based solution would have unattractive journey times when considering acceptability. This does not provide confidence that bus/coach based solution would be successful.

General Comments:

The express coach and rail interventions are high risk, high cost proposals which may not generate sufficient demand to make them deliverable/viable, particularly if the residents do not buy into the vision for the development. There is also conflict with the ambitions of the development which focuses strongly on internalisation, which could conflict with the proposed numbers using the coach/rail proposals and possibly impacting on long term viability. Officers, therefore question the long term success of these methods in this location.

The site allocation is remote and a significant distance away from major transport corridors such as the A38, M5 and mainline railway. It is also landlocked to its west. This will inevitably impact on journey times to key destinations.

This leaves officers concerned that the intervention schemes may not be delivered but housing/employment may receive consent or have work commenced, leaving the site not just unsustainable, but less sustainable than other existing and proposed developments in Stroud District and Gloucestershire. It is GCC officer's view that the

assumptions used are overly ambitious and are not reflective of typical transport demand in Gloucestershire in relation to travel demand.

Therefore, officers have concluded that the evidence for this allocation is not sound. The development is unsustainable when considered against the policies outlined in both the NPPF and Stroud District Local Plan. The transport measures proposed are not considered viable or deliverable, and the future residents are expected to behave in a way that is not evidenced in any other location with similar, dislocated attributes, both geographically and in terms of transport opportunities.

Strategic Site Allocation Policy G2 - Land at Whaddon

Previous officer comments of concern relating to the Gloucester fringe site at Whaddon remain. The peripheral location needs consideration as to how sustainable transport interventions can be provided within the site allocation, but then integrated seamlessly into the existing built environment. Overcoming the severance caused by the railway is critical to this and further consideration is needed in regards to additional crossing points for walk, cycle and public transport. Previous comments have suggested routes adjacent to Daniel's Brook and Buckenham Walk. No supporting information has been provided to evidence that these issues have been addressed.

This site needs to heavily promote low traffic neighbourhoods as a means of encouraging cycling and walking for short journeys. Increased permeability for those trips into the existing built environment will also help integrate the site into Gloucester and provide access to wider local centres and employment. The public transport offer has to be realistic and comparable if not better than the car in terms of journey times and availability.

The highway impact also remains a significant concern. St Barnabas roundabout is identified as needing additional capacity to cater for the additional car traffic generated by the site allocation, but the specific impacts of this development site are unknown therefore it is difficult to determine what intervention is appropriate and whether that mitigation would have adverse environmental impacts. Furthermore, improving St Barnabas may have knock on impacts elsewhere along the A38 corridor and this issue needs to be understood, particularly as interventions are likely to be costly. The interventions should also include public transport consideration as well as walk/cycle accessibility in line with Cycle Infrastructure Design (LTN 1/20). To accommodate these users and provide a suitable junction with sufficient capacity will be difficult within the existing footprint of the roundabout. There will be implications for land take at this location and the impact it will have on site delivery. These are issues that are currently not addressed and are important concerns for officers.

Furthermore, the current traffic modelling exercises provide a cumulative effect assessment, evaluating the overall traffic impact of all Local Plan allocations within the study area. It does not identify which of the potential sites within proximity to key Strategic/Major/Local Road Networks junctions has the greatest impact upon them. M5 Junction 12 has been identified in the Local Plan Modelling as requiring enhanced intervention which is likely to result in significant costs in order to deliver. Whaddon is highly likely to have significant impacts on M5 Junction 12, but without site specific modelling evidence it is difficult to determine the extent of this impact.

Therefore officers consider that insufficient evidence has been provided to support this proposed allocation.

The site has challenging sustainable accessibility issues, potentially leaving future residents dislocated and separated from Gloucester City both geographically and in terms of transport opportunities. The evidence currently available for this proposal does not make it clear how the site could meet the sustainability requirements of the NPPF and Stroud District Local Plan. The highway impacts arising from the allocation and mitigation required have not been provided in sufficient detail, raising concerns over their viability, deliverability and impacts on the wider network. The underlying principles of any development in this area needs to articulate a vision for how new neighbourhoods will be created; how new residents will travel and meet their needs, and how internalisation of trips might mitigate the need for transport interventions on the principal road network and the impact of those interventions.

Minerals and Waste Policy Comments

All of the details set out within this section are made by officers of GCC in its capacity as the local Mineral and Waste Planning Authority (MWPA).

The Stroud District Local Plan Review has now reached the Pre-Submission (Regulation 19) plan-making stage. Consequently, the comments made by M&W policy officers relate to one or more of the three matters that will be assessed through examination and will largely determine whether the plan can move to adoption – legal compliance; soundness; and the duty-to-co-operate. For ease of consideration sub-headings have been used to identify the elements of the plan that have demanded a representation by officers of the MWPA:-

Core Policy CP11 - New employment development

Officers of the MWPA do not consider the pre-submission version of Core Policy CP11 to be sound as it is not clear whether future proposals for waste management-related infrastructure could be afforded local policy support? National policy as set out under the National Planning Policy for Waste (NPPW) advises that priority for new or enhanced waste management facilities should be given to sites identified for employment uses alongside a number of other land-use types.

However, officers of the MWPA would support to Core Policy CP11 going forward if a modification was made either through an additional bullet point; or slightly expanded text to bullet points 5 or 6; and / or a revision to the supporting text under paragraph 5.2. Confirmation is required that future proposals for waste management-related infrastructure might reasonably be considered alongside traditional employment land use categories of business use, general industrial use and storage / distribution use and “Sui Generis” industrial uses, tourism, retailing, health care, education and leisure facilities.

Delivery Policy EI2 - Regenerating existing employment sites

Officers of the MWPA do not consider the pre-submission version of Delivery Policy EI2 to be sound as it does not acknowledge the potential risk posed to the safeguarding of waste management facilities. This is an issue responded to by national policy within the NPPW. Waste management site safeguarding is also a

well-established local policy as set out in the adopted Gloucestershire Waste Core Strategy (WCS) under Core Policy WCS11 - Safeguarding Sites for Waste Management. Failure to accommodate this matter could also bring into question the duty to cooperate by way of undermining the MWPA's attempt to facilitate and support an efficient and effective countywide network of waste management facilities.

Nevertheless, officers of the MWPA would support to Delivery Policy EI2 going forward if a modification was made (mostly obviously to the supporting text under paragraph 5.24). The modification should clearly articulate that regenerative development at existing employment sites would need to ensure that potential adverse impacts on existing waste management facilities, permitted sites, and areas allocated for future waste management-related uses would not occur. Regenerative development that could generate incompatible land-uses should be avoided or accompanied by sufficient mitigation that will prevent prejudicing the efficient operations of waste management-related facilities and their ability to effectively implement the waste hierarchy.

Delivery Policy EI2a - Former Berkeley Power Station

Officers of the MWPA do not consider the pre-submission version of Delivery Policy EI2a to be sound as it is not clear whether waste management-related infrastructure uses could be afforded local policy support. National policy as set out under the NPPW advises that priority for new or enhanced waste management facilities should be given to sites identified for employment uses alongside a number of other land-use types.

However, officers of the MWPA would support policy EI2a going forward if a modification was made to the supporting text under paragraph 5.27. Waste management-related infrastructure should be added to the list of employment uses that may be supported.

Delivery Policy EI5 - Farm and forestry enterprise diversification

Officers of the MWPA do not consider the pre-submission version of Delivery Policy EI5 to be sound as it is not clear whether waste management-related infrastructure uses could be afforded local policy support. National policy as set out under the NPPW advises that priority for new or enhanced waste management facilities should be given to redundant agricultural and forestry buildings and their curtilages alongside a number of other land-use types.

However, officers of the MWPA would support Delivery Policy EI5 going forward if a modification was made to the third sentence of paragraph 5.30. Waste management-related infrastructure should be added to the list of potential uses identified.

Employment Allocation Policy PS43 - Javelin Park

Officers of the MWPA support the pre-submission version of Employment Allocation Policy PS43 as it clearly acknowledges waste management safeguarding requirements associated with the adjacent Javelin Park Energy from Waste (EfW) facility.

Strategic Site Allocation Policy PS34 - Sharpness Docks

Officers of the MWPA do not consider the pre-submission version of Strategic Site Allocation Policy PS34 to be sound. The policy and supporting text fails to acknowledge the need to safeguard mineral and waste management infrastructure that is present at Sharpness Docks. Safeguarding of mineral infrastructure is a matter responded to by the NPPF and the requirement to safeguard waste management facilities is set out in the NPPW. Furthermore, at the local-level mineral and waste safeguarding is an established part of the local development plan under adopted Minerals Local Plan for Gloucestershire Policy MS02 - Safeguarding mineral infrastructure and Core Policy WCS11 - Safeguarding Sites for Waste Management of the adopted Gloucestershire Waste Core Strategy (WCS). In addition, both spatial planning matters have been included on the county's Minerals and Waste Policies Map. The failure to accommodate this policy provision brings into question the duty to cooperate by way of undermining the local MWPA's attempt to facilitate and support efficient and effective countywide networks of mineral and waste management infrastructure.

However, officers of the MWPA would support Strategic Site Allocation Policy PS34 going forward if modifications were made. The 'Planning constraints and designations' set out on page 169 should include the presence of minerals and waste infrastructure and the need to ensure their efficient and effective operations will not be compromised by new development. This constraint should also be accommodated in the main policy text – under part a. A requirement should be added that will ensure future dock uses and dock-related industrial and distribution uses will not prejudice the efficient and effective operations of safeguarded minerals and waste infrastructure.

Strategic Site Allocation Policy G2 - Land at Whaddon

Officers of the MWPA do not consider the pre-submission version of Strategic Site Allocation Policy G2 to be sound. The policy and supporting text fails to reference the presence across part of the allocation of underlying sand and gravel mineral resources that are of potential economic importance. National policy on mineral resource safeguarding is contained within in the NPPF and has been further interpreted locally through the adopted Minerals Local Plan for Gloucestershire Policy MS01 - Non-mineral developments within MSAs. The overarching policy aim is to ensure valuable mineral resources are not needlessly sterilised by surface development. The county's Minerals and Waste Policies Map shows that a reasonable proportion of the south-western part of the allocation is within a designated Mineral Safeguarding Area (MSA).

Nevertheless, officers of the MWPA would support Strategic Site Allocation Policy G2 going forward if modifications were made. The 'sensitivity, constraints and designations' set out on page 155 should include the fact that part of the allocation falls within a designated Mineral Safeguarding Area (MSA). In addition, the text for Strategic Site Allocation Policy G2 should include a further bullet requiring any future development brief to...:- determine through an initial Mineral Resource Assessment (MRA), the significance of the underlying mineral resources present within the designated MSA and the extent to which any mitigation measures will be necessary to avoid sterilisation by surface development and / or whether a strategy for the prior

extraction of the mineral will be required for any future development proposals covering the relevant area of allocation G2.

Strategic Site Allocation Policy PS20 - Stonehouse - Eco Park M5 Junction 13

Officers of the MWPA do not consider the pre-submission version of Strategic Site Allocation Policy PS20 to be sound. The policy and supporting text fails to reference the presence across part of the allocation of underlying sand and gravel mineral resources that are of potential economic importance. National policy on mineral resource safeguarding is contained within in the NPPF and has been further interpreted locally through the adopted Minerals Local Plan for Gloucestershire Policy MS01 - Non-mineral developments within MSAs. The overarching policy aim is to ensure valuable mineral resources are not needlessly sterilised by surface development. The county's Minerals and Waste Policies Map shows that a proportion of the north-western and southern parts of the allocation and near to the site boundary with the A419 fall within designated Mineral Safeguarding Areas (MSAs).

Nevertheless, officers of the MWPA would support Strategic Site Allocation Policy PS20 going forward if modifications were made. The 'planning constraints and designations' set out on page 105 should include the fact that part of the allocation falls within designated Mineral Safeguarding Areas (MSAs). In addition, the text for Strategic Site Allocation Policy PS20 should include a further bullet requiring any future development brief to...:- determine through an initial Mineral Resource Assessment (MRA), the significance of the underlying mineral resources present within the designated MSAs and the extent to which any mitigation measures will be necessary to avoid sterilisation by surface development and / or whether a strategy for the prior extraction of the mineral will be required for any future development proposals covering the relevant areas of allocation PS20.

Ecology (biodiversity) Comments

Firstly on a matter of a small but important detail the various headers on each page of the HRA report do not correctly refer to the Pre-submission version of the Stroud Local Plan and need correcting.

Despite significant challenges of mitigating the effects of new development allocation upon national and internationally designated sites and upon wider biodiversity the policy approach and associated SEA/HRA processes have produced an acceptable pre-submission version of the Local Plan. From an ecological (biodiversity) perspective there are no obvious issues to raise regarding legal compliance, soundness or duty to co-operate including with our own authority. We note the Local Plan makes good provision for the forthcoming changes due if the Environment Bill currently before Parliament receives Royal Assent.

Conclusion

Sharpness and Whaddon are substantial allocations in the Plan and are clearly an important component of the development strategy for the District as a whole. Given the transport concerns raised above regarding these two sites, based on the available submitted transport evidence, GCC consider the Plan to be unsound.

Also, with regard to the Minerals and Waste comments, if the suggested policy amendments are not agreed then the Plan will be considered unsound on this basis as well.

If you would like to discuss any of the points raised above please do not hesitate to contact me.

Yours faithfully

Rob Niblett
Senior Planning Officer

Appendix A – Sharpness Vale Statement of Opinion is attached separately

Appendix B

The Rail Service Viability Report from SLC Rail (June 2021-V2)

Gloucestershire County Council commissioned a Rail Service Viability Report from SLC Rail (June 2021-V2) and an extract of the Executive Summary is reproduced below which supports that the Sharpness site is unlikely to be sustainable with the respect to the use of public transport by either road or rail.

Purpose

Gloucestershire County Council (GCC) has asked SLC Rail for an opinion in respect to the viability of the introduction of a new passenger railway service along the Sharpness branch line.

Background

The Stroud District Draft Local Plan Review (pre-submission Draft Plan 2021) provides for a 5,000 home, sustainable development called Sharpness Vale 'following Garden City principles', which will be 'boosted by the reopening of the Sharpness rail branch-line to passenger and tourism services'.

The 'Garden City Principle' relies upon sustainable transportation being provided by a combination of the railway and a green bus network, with the emphasis on the railway provision. If the draft plan is accepted on the condition of the delivery of a passenger rail service and it is subsequently found that it is not possible to do so, then the eventual development will not be sustainable in the way that the vision and the plan intended.

Railway Service Enhancement Proposal

The developers are clear that 'proposals for Sharpness Vale depend upon the allocation being confirmed in the Pre-Submission Draft Local Plan and the Local Plan being adopted during 2022'. The proposal is currently subject to a Restoring Your Railways application for government funding to develop a Strategic Outline Business Case. The proposal is for one train per hour (TPH) with the intention of increasing to 2 TPH, providing direct connectivity from Sharpness to Cam and Dursley and Gloucester. Infrastructure costs estimated at £34m and the train service will require subsidy. The developer's estimate of daily passenger demand is 4,000 on a typical weekday and 1 million journeys per annum.

Requirements of the Railway Authorities

The process of approval required to introduce new railway stations requires: a compelling 'strategic purpose'; a 'strategic fit' with the existing rail network; and evidence of a strong business case.

Opinion

There are two key factors which should be considered alongside our advice:

That the transformative nature of the Sharpness Vale vision and, ultimately, the underlying business case is dependent upon (1) obtaining the planning consent for the development and (2) that residents entirely comply with the 'non car' approach. Both elements are, at this stage, uncertain—as is the degree to which the Department for Transport would be prepared to accept the 'non car' logic within the underpinning economic business case.

That the promoters are at an early stage in the railway enhancement pipeline process. Therefore, there are questions asked in this document which may not yet have been considered by the promoters. But the answer to these questions will influence the likelihood of the scheme proceeding to delivery.

In summary, our observations are as follows:

It is our opinion that, based upon the current situation, that there are considerable risks to the viability of the scheme which make it unlikely that it would gain the necessary approvals to progress to delivery.



SLC Rail

Sharpness Vale – Rail Service Viability

Statement of Opinion for
Gloucestershire County Council

V2

June 2021

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Document Control

Version Control

Version No.	Date	Created/Modified by	Notes
V.1	25.06.2021	Jeremy Higgins	First draft
V.2	01.07.2021	Jeremy Higgins	Complete document

Approvals

Version No.	Name of approver	Title & organisation	Date
V.1	Mark Beckett	Rail Strategy Manager, SLC Rail	25.06.2021
V.2	Mark Beckett	Rail Strategy Manager, SLC Rail	01.07.2021

Executive Summary

Purpose

Gloucestershire County Council (GCC) has asked SLC Rail for an opinion in respect to the viability of the introduction of a new passenger railway service along the Sharpness branch line.

Background

The Stroud District Draft Local Plan Review (pre-submission Draft Plan 2021) provides for a 5,000 home, sustainable development called Sharpness Vale 'following Garden City principles', which will be 'boosted by the reopening of the Sharpness rail branch-line to passenger and tourism services'.

The 'Garden City Principle' relies upon sustainable transportation being provided by a combination of the railway and a green bus network, with the emphasis on the railway provision. If the draft plan is accepted on the condition of the delivery of a passenger rail service and it is subsequently found that it is not possible to do so, then the eventual development will not be sustainable in the way that the vision and the plan intended.

Railway Service Enhancement Proposal

The developers are clear that 'proposals for Sharpness Vale depend upon the allocation being confirmed in the Pre-Submission Draft Local Plan and the Local Plan being adopted during 2022'. The proposal is currently subject to a Restoring Your Railways application for government funding to develop a Strategic Outline Business Case. The proposal is for one train per hour (TPH) with the intention of increasing to 2 TPH, providing direct connectivity from Sharpness to Cam and Dursley and Gloucester. Infrastructure costs estimated at £34m and the train service will require subsidy. The developer's estimate of daily passenger demand is 4,000 on a typical weekday and 1 million journeys per annum.

Requirements of the Railway Authorities

The process of approval required to introduce new railway stations requires: a compelling 'strategic purpose'; a 'strategic fit' with the existing rail network; and evidence of a strong business case.

Fit between Proposed Scheme and Rail Requirements

Question	Opinion
Strategic Purpose	The promoters have assumed a heavy rail solution without exploring other alternatives fully and explaining why heavy rail is the best solution.
Strategic Fit	The promoters will need to convince Network Rail and the Department for Transport that it is possible to include this scheme as well as other additional services proposed for the Bristol – Birmingham railway (for example by Midlands Connect) without detriment to train performance.
Economic and Financial Cases	The scheme does not currently have a compelling business case. It requires an investment of £34.85m and the resulting service will require subsidy on an ongoing basis. The level of passengers forecast for the scheme looks unrealistically high compared to a range of existing stations on the network.

	<p><i>Whilst no Benefit Cost Ratio has yet been presented, in our view it is unlikely that the scheme will have a strong value for money case.</i></p> <p><i>Network Rail and the Department for Transport will need to be persuaded that the transformational modal shift assumptions are deliverable.</i></p>
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Opinion

There are two key factors which should be considered alongside our advice:

- That the transformative nature of the Sharpness Vale vision and, ultimately, the underlying business case is dependent upon (1) obtaining the planning consent for the development and (2) that residents entirely comply with the 'non car' approach. Both elements are, at this stage, uncertain – as is the degree to which the Department for Transport would be prepared to accept the 'non car' logic within the underpinning economic business case.*
- That the promoters are at an early stage in the railway enhancement pipeline process. Therefore, there are questions asked in this document which may not yet have been considered by the promoters. But the answer to these questions will influence the likelihood of the scheme proceeding to delivery.*

In summary, our observations are as follows:

It is our opinion that, based upon the current situation, that there are considerable risks to the viability of the scheme which make it unlikely that it would gain the necessary approvals to progress to delivery.

1. Purpose

Gloucestershire County Council (GCC) has asked SLC Rail for an opinion in respect to the viability of the introduction of a new passenger railway service along the Sharpness branch line. This proposed service enhancement forms an integral aspect of the proposal for a sustainable 'Garden City' type development at a location to be known as Sharpness Vale. The purpose of the opinion is to inform the Local Planning process. The development will not be sustainable without the passenger rail service, and without the development there will be no justification for a train service.

SLC Rail has significant experience in working with clients to deliver new railway station schemes. The most recent station, Worcestershire Parkway opened in 2020. SLC Rail is currently working on a number of other station projects and has a detailed and up to date understanding of Network Rail's and the Department for Transport's issues and concerns and the headwinds associated with railway scheme delivery in a post-COVID world.

2. Background

Policy PS36 of the Stroud District Draft Local Plan Review (pre-submission Draft Plan 2021) provides for a 5,000 home, sustainable development called Sharpness Vale (2,400 dwellings will be completed by 2040 and the remainder by 2050).¹ The Draft Local Plan characterises the Sharpness development as: 'following Garden City principles', which will deliver 'a truly sustainable pattern of living'; that 'sustainable forms of transport will be boosted by the re-opening of the Sharpness rail branch-line to passenger and tourism services'; and will benefit from a 'new railway station and enhancements to the Sharpness branch line and contributions to support a regular passenger service to Gloucester'.² The developers of Sharpness Vale are Sharpness Development LLP.

Sharpness Development LLP's transport advisors, Stantec, state that Sharpness Vale will be 'a mature, attractive settlement that will provide for many day-to-day needs and reduce the need to travel'.³ Stantec state that 'the Sharpness philosophy is geared around attracting those that understand the approach that is being taken, it will be self evident'.⁴ Stantec go on to explain that they are 'expecting people to want to buy into this lifestyle change', but then mention that they 'expect people to be attracted to Sharpness Vale because of its key transport links'.⁵

The 'Garden City Principle' relies upon sustainable transportation being provided by a combination of the railway and a green bus network, with the emphasis on the railway provision. If the draft plan is accepted on the condition of the delivery of a passenger rail service and it is subsequently found that it is not possible to do so, then the eventual development will not be sustainable in the way that the vision and the plan intended.

¹ *Stroud District Local Plan Review (Pre-submission Draft Plan 2021), p.176, p.178.*

² *Stroud District Local Plan Review (Pre-submission Draft Plan 2021), p.162, p.179.*

³ *Sharpness Vale: Transport Approach: Stantec, 2020, p.5.*

⁴ *Sharpness Vale: Transport Technical Appraisal: Stantec, 25 June 2020, p.1.5.*

⁵ *Sharpness Vale: Transport Approach: Stantec, 2020, p.5.*

3. Railway Service Enhancement Proposal

Stroud District Council and Sharpness Development LLP are proposing a reinstatement of a passenger rail service to the Sharpness branch line. The location of the branch is shown on the map below.

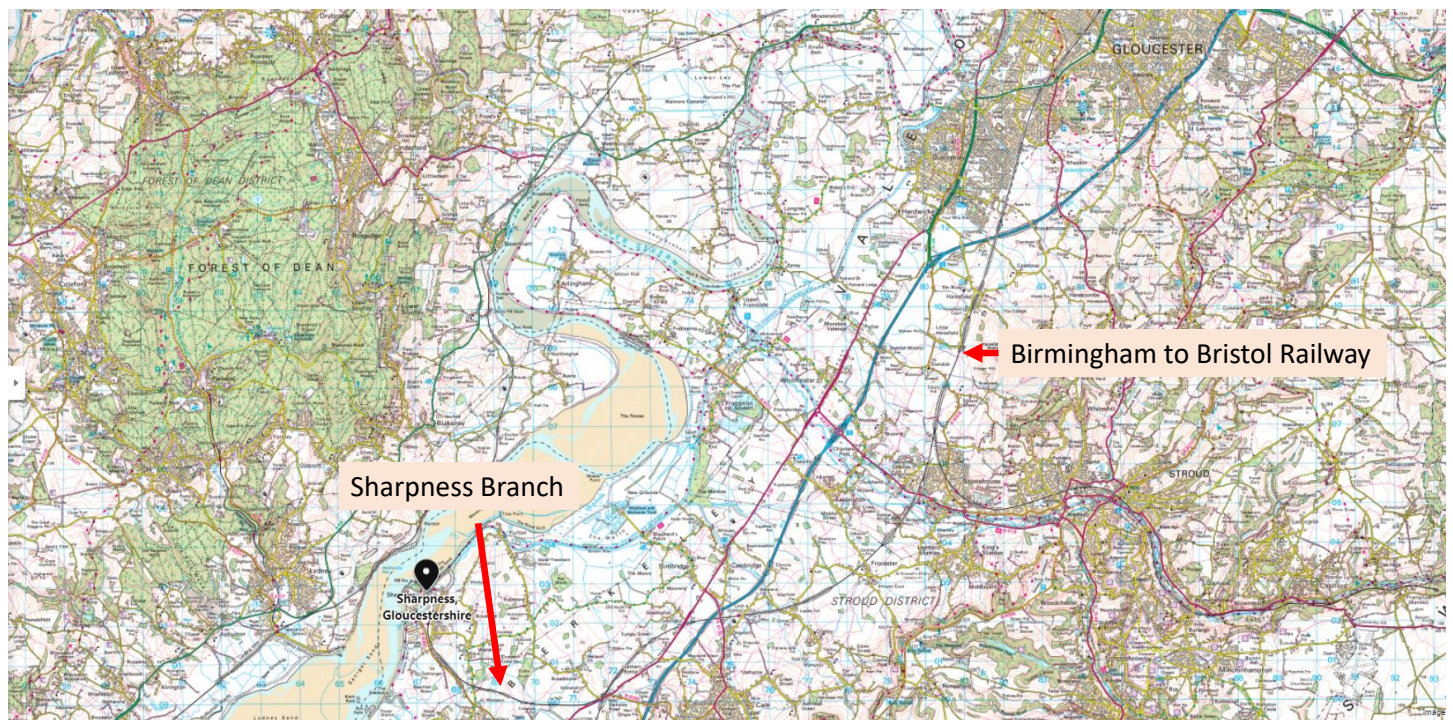


Figure 1 – Map of Sharpness (c) Ordnance Survey

The branch is 4 miles long, and joins the main Birmingham – Bristol line at Berkley Road Junction. Its sole use is for nuclear flask trains for the decommissioned Berkley power station. There is one path per day shown in the industry timetable, arriving at 09.19 and departing at 13.28. The path is shown as to be used “as required”. The branch has a maximum permitted line speed of 15 mph. Access to the branch requires the train driver to collect a Train Staff, which is kept in Cheltenham Alstone Level Crossing Signal Box⁶. The line is therefore not currently suited for passenger traffic.

The proposed passenger service would initially constitute one train per hour (TPH) with the intention of increasing to 2 TPH, providing direct connectivity from Sharpness to Cam and Dursley and Gloucester. It would also provide indirect connectivity: changing at Cam and Dursley to access Bristol and the south west; and at Gloucester for Cheltenham, Birmingham and beyond. The proposal is currently subject to a Restoring Your Railways application for government funding to develop a Strategic Outline Business Case.

It is clear that considerable work has been undertaken to develop a business proposition for this scheme. A number of infrastructure requirements to upgrade the line, build a station, and enhance capacity at Gloucester have been identified. The infrastructure costs have been estimated at £ 34.65m (£12m station, £17.65m track and signal enhancements, £5m allowance for Gloucester stations works (only in 2 TPH scenario)), excluding optimism bias. The assumption is that a Train Operating Company will provide the trains, and that the service will require subsidy. The cost

⁶ Western and Wales Sectional Appendix, section GW425

of the subsidy is calculated at £1m in year 4 and reducing pro-rata to £206k in year 19. Presumably the subsidy in years 1-3 will exceed that of year 4. There is no explanation of what occurs after year 19, presumably the subsidy will continue to be required.

The importance of the rail connectivity to the developer becomes clear in the following statement:

*'The philosophy is that, as sustainable mode capacity will exist, sufficient to allow every movement likely to take place during the key peak periods to be undertaken without reliance on the private car, then no highway capacity provisions will need to be made.'*⁷

Although there is an assumption that this new community will be largely self-contained, there is also an assumption that many residents will seek to travel to Gloucester and beyond:

*'The vision focuses on the morning and evening peak periods, when the whole network is under stress. We believe that if we can make sure that almost everyone could complete the journey they need to make by a sustainable mode, then we can remove the need to provide unsustainable highway improvements.'*⁸

The developer has estimated that Sharpness Vale, when completed, will boost the existing 4,500 residents by a further 13,000-15,000 new residents as well as the incoming employees that will form part of the growth area.⁹ The developer's estimate of daily passenger demand amounts to 4,000 on a typical weekday and 1 million journeys per annum.¹⁰

The developer has calculated peak demand to be between 8am and 9am and 5pm (300 departing and 94 arriving - total 393) and 6pm on a weekday (273 arriving and 140 departing - total 413).¹¹ It is not clear when this level of custom will be achieved. If it is when the development is completed, then it is likely to be after 2050 (29 years hence) and only if the additional 2,600 units is given consent at the Local Plan extension in 2040. If construction commences in 2023 and achieves an average build-out rate of 342 pa (to achieve 2,400 by 2040) then 1,250 units will have been completed by 2027 and the halfway mark of 2,500 by 2031.

The projected built-out rate will have a direct impact upon the volume of passengers, which in turn will have a direct impact on the subsidy required. If the build-out rate is slower than anticipated and/or the proportion of rail users is lower than anticipated, then the requirement for subsidy is likely to increase. As part of the financial case clarity will be required in respect to: who pays the subsidy; whether there an open-ended guarantee to pay the subsidy and if not clarity on what then happens; the approach if rail patronage does not align with the business case; and what happens in respect to subsidy after year 19.

In terms of deliverability of the railway scheme, it is understood that Sharpness Development LLP commissioned a detailed timetable study for the proposed scheduled services, which it is stated, has been signed off by Network Rail, and which demonstrates that the services can be accommodated.¹² Although elsewhere in the Restoring Your Railway application it is also stated that: 'discussions with Network Rail and the timetable study have confirmed that there should

⁷ Sharpness Vale: Transport Technical Appraisal: Stantec, 25 June 2020, p.14

⁸ Sharpness Vale: Transport Technical Appraisal: Stantec, 25 June 2020, p.1.3.

⁹ Stroud District Council: Restoring Your Railway Bid, 2021, P.19

¹⁰ Stroud District Council: Restoring Your Railway Bid, 2021, P.20.

¹¹ Sharpness Vale: Transport Technical Appraisal: Stantec, 25 June 2020, p.8.72, p.8.75.

¹² Sharpness Vale: Technical Note: Stantec, 18 June 2021, p.2.

be no capacity issues on the branch line itself. Network Rail has indicated that train paths and capacity on the mainline either side of Berkeley Road are more constrained'.¹³

The developers are clear that 'proposals for Sharpness Vale depend upon the allocation being confirmed in the Pre-Submission Draft Local Plan and the Local Plan being adopted during 2022'.¹⁴

¹³ *Stroud District Council: Restoring Your Railway Bid, 2021, P.20.*

¹⁴ *Stroud District Council: Restoring Your Railway Bid, 2021, P.13.*

4. Requirements of the Railway Authorities

The process of approval required to introduce new railway stations onto the network is complex, onerous and time consuming. There is a requirement to satisfy Network Rail and the Department for Transport on:

- the compelling strategic purpose for the new station
- the strategic fit with the existing network
- evidence of a strong business case which demonstrates both value for money and proves that the proposal is the best use of limited resources and rail capacity.

Each of these aspects will be considered in more detail in the table below.

Requirement	Considerations
Strategic Purpose	<p>The strategic case needs to explain:</p> <ul style="list-style-type: none"> • what 'problems' are to be solved; • what alternatives there are which could resolve the 'problems'; • why rail is the best solution; • why the 'problem' needs to be solved now. <p>An aspect of the strategic case is to explain and justify whether there are other potential benefits of the scheme. For example, some new stations can act as 'parkway' stations, or provide access to the railway network for unsatisfied customer demand, and unlock residential development.</p>
Strategic Fit	<p>On top of a strategic purpose, Network Rail and the Department for Transport need to be satisfied that:</p> <ul style="list-style-type: none"> • there is a 'Strategic Fit' with the existing rail network and rail strategy. • the impact of the proposal on 'Resilience' relating to train performance and timetabling, on the rail network is understood, • the opportunity cost of provision of the proposed service on the limited capacity of the railway network is known.
Economic and Financial Cases	<p>There is also a need to prove a business case, that the scheme represents value for money, and that it is affordable, both in terms of its initial capital cost but also in terms of any requirement for ongoing operational subsidy.</p>

Figure 2 – Requirements of railway authorities

5. Fit between Proposed Scheme and Rail Requirements

5.1. Strategic Purpose

The strategic case needs to explain: what 'problems' are to be solved; what alternatives there are which could resolve the problems; why rail is the best solution; and why the problem needs to be solved now.

The 'Problem Statement' for Sharpness Vale station would appear to be to provide rail connectivity for the proposed development. The vision for this 'Garden City' type development is that a very high proportion of residents will not use the car. Indeed, the underlying logic is that this development will attract residents who 'buy in' to this ethos. It remains to be seen to what degree this vision becomes reality. The 'car minimal' assumption does drive an aggressive assumption in respect to projected passenger numbers (see below). The existing Sharpness population is small, and because of the geographical location there is no prospect of a 'Parkway' role – there is already a station at Cam and Dursley that can perform this role to an extent, and which is closer to the trunk road network.

At this stage, which is pre-Strategic Outline Business Case, there appears to have been comparatively little consideration in respect to alternative solutions to the underlying 'problem'. A detailed 'Non-Car Movement Strategy' has been produced which considers the viability and funding of express bus services, but these are considered to be an essential addition to the rail service, and not an alternative.¹⁵ The 'non-car' strategy is not included as an alternative option as part of the business case development, but is an entirely separate document.. There also appears to have been no consideration, for example, of other solutions such as: a branch line operation or train, or light rail; a fast bus service to Cam and Dursley station for integration into existing services. Network Rail and the Department for Transport would expect consideration of the alternatives within the Transport Business Case.

5.2. Strategic Fit

Although the railway scheme concerns the reintroduction of passenger services onto a branch line, the proposal does involve access to the strategically important Birmingham to Bristol main line. This important rail corridor is heavily utilised and any alteration to current and future timetables needs to be given detailed and careful consideration. This route is a conduit for some of the longest passenger train journeys in the country (such as an hourly Edinburgh to Plymouth, which in some hours extends to Aberdeen and Penzance). Because of the integrated nature of railway timetabling, a minor delay of a key long-distance train can have a large impact not only on its punctuality, but also the punctuality of many other services. This is particularly the case for services which travel through Birmingham New Street, which is the 5th busiest station in the country, and the busiest 'through' station. For this reason, any alteration of the timetabling on this route is likely to require considerable scrutiny.

The Restoring Your Railways application is slightly ambiguous in relation to the maturity of timetabling work with Network Rail. It is mentioned that the proposed timetable has been 'signed off' by Network Rail but also that there have been 'discussions with Network Rail and the timetable study has confirmed that there should be no capacity issues on the branch line itself. Network Rail has indicated that train paths and capacity on the mainline either side of Berkeley Road

¹⁵ Stantec: Sharpness Vale: Mobility-as-a-service and express coach services, 30 March 2021.

Junction are more constrained'.¹⁶ The strategic fit, and ultimately deliverability of this scheme, hinges upon the ability for this service to be integrated into the main-line timetable without introducing any additional performance risk.

The introduction of the Sharpness service has the potential to create new performance risk. The southbound journey between Gloucester to Sharpness will involve two additional conflicting moves with the northbound mainline. The first as the train joins the mainline from Gloucester and the second as it leaves the mainline at Berkeley Road Junction. Such moves introduce additional complexity and performance risk.

During 2021 Network Rail has been leading the Bristol to Birmingham Corridor Strategic Study in respect to future aspirations for train service improvements, the underlying business rationale, and the scale of infrastructure requirements needed to unlock the increased capacity to deliver the enhanced train service.¹⁷ This study, undertaken collaboratively with stakeholders (including Gloucestershire County Council) identifies a range of strategic enhancements in relation to fast express services, regional services, and increased freight provision as shown below. There is no mention of the proposed Sharpness to Gloucester service within this document.

Type of service	Proposed additional services (per hour)
Fast Express services	Birmingham to Bristol Birmingham to Cardiff
Regional services	Bristol to Worcester Gloucester to Bristol Swindon to Cheltenham
Freight 'paths'	Increase in freight paths to 2 per hour in each direction

Figure 3 - Identified service improvement aspirations on Network Rail Corridor Study

In terms of 'strategic fit' the proposed Sharpness to Gloucester service has the disadvantage of taking up valuable capacity on the main line whilst only servicing the new development and Cam and Dursley. In contrast, the proposed new regional services have potential to provide much greater connectivity to far more residents over a much wider geographical area. The Sharpness proposal needs to either prove that the business case is stronger than these alternatives, or to determine whether there is sufficient capacity for these services plus the Sharpness proposition.

The Corridor Study is very recent work that begins to map out the possible future direction of the railway. It may be that, in the short-term, and in the absence of these enhanced services it is technically possible to introduce a Sharpness service. But that might not be the best fit for the railway network in the long-term.

¹⁶ Stroud District Council: Restoring Your Railway Bid, 2021, P.20.

¹⁷ Network Rail: Bristol to Birmingham Corridor Strategic Study, June 2021.

'Strategic fit' is important not only in relation to track capacity, but also in respect to train set utilisation and railway demand. There should be a strong case as to why scarce rolling stock should be used on the branch line when it could, arguably, be used more effectively enabling some of the additional regional services.

It would appear that, as yet, no compelling case has been made for the strategic fit of the Sharpness proposal. At this stage, given the longer term and wider scope aspirations of connectivity, it is difficult to envisage such a fit.

5.3. Economic and Financial Cases

Transport Business Cases require evidence of a strong, WebTag compliant, benefit cost ratio. Such a BCR would indicate that a project constitutes good value for money.

The indicative appraisal in the Restoring Your Railways application suggests that even with an aggressive assumption in respect to passenger numbers, the proposed service will require a sizeable subsidy for many years (see below). In other words, despite the capital expenditure of around £34.65m (not including optimism bias) the resulting railway service will be loss making.

In terms of a WebTag compliant business case, it seems unlikely (although not impossible) that in railway investment terms a positive BCR will be generated on a subsidised service which requires a capital investment of at least £34.6m.

We have estimated the annual operating costs of a 'Sprinter' style service on 1 TPH basis at £1.6m p.a and £3.1m for 2 TPH. The Restoring Your Railways document refers to a subsidy of £1m at year 4. A simple comparison of costs to subsidy would suggest that the projected ticket income is based around £600,000 p.a. (on the assumption of 1 TPH) or £2.2m (on 2 TPH).

	1 TPH	2 TPH
Estimated operational costs	1.6m p.a.	3.2m p.a.
Subsidy (at year 4)	1.0m	1.0m
Estimated ticket income required with subsidy to break even	0.6m	2.2m

Figure 4 – Operational costs, subsidy and estimated income

The Restoring Your Railways bid assumes that there will be 1 million passenger journeys per annum (a single trip being a passenger journey). The average ticket yield is likely to be low as most customers are likely to travel to Gloucester, or perhaps Bristol. It is not clear from the documentation how the journey profile has been created, or which year the patronage achieves this level. It is, though, a very optimistic level of customer demand. Whilst it is accepted that the whole rationale of the Sharpness Vale project is that customers will eschew the car, it remains to be seen to what degree they do in reality and chose to utilise the train. The business case of the service is built, though, upon this optimistic assessment.

By way of comparison, the current level of journeys of local stations is shown in Figure 5. It can be seen that four stations in Gloucestershire have less than 200,000 journeys per annum. Stroud has a much larger patronage of 561,000 but that is just over half of what is proposed for Sharpness Vale. By way of comparison, if Sharpness Vale delivered 1 million journeys per annum it would be the 346th largest railway station outside of London out of 2,200. It would be comparable to stations at Kettering, Wellingborough and Stratford-upon-Avon. Many of the stations listed in the table below have a larger population, a wider catchment area, or a role as a parkway station.

	Passenger numbers p.a.	Population	Wider local catchment?	Possible parkway function?	Connectivity
Sharpness Vale	1m	19.5k*	No	No	*(with 5,000 new homes) Cam and Dursley/Gloucester
Local stations					
Stroud	561k	32.6k	Yes	No	London and Cheltenham/Gloucester
Kemble	387k	1k	Yes	Yes	London and Cheltenham/Gloucester
Lydney	198k	8.8k	No	No	Cardiff/Gloucester/Cheltenham/ Birmingham/Nottingham
Cam and Dursley	191k	19.1k	No	No	Bristol/Gloucester/Cheltenham/Worcester
Stonehouse	166k	7.7k	No	No	London and Cheltenham/Gloucester
Ashchurch	102k	11k	Yes	Yes	London/Cheltenham/Gloucester/ Birmingham/Cardiff/Nottingham/ Worcester
1m Journey stations					
Kettering	1m	56k	Yes	Yes	London/Leicester/Nottingham/ Derby/Sheffield
Wellingborough	1m	49k	Yes	Yes	London/Leicester/Nottingham/ Derby/Sheffield
Stratford-upon-Avon	1m	27.5k	No	No	Birmingham

Figure 5 - Benchmarking the proposed Sharpness Vale station

The scale of the ambition in relation to passenger numbers can be demonstrated by comparing the relationship between the size of the population and the number of rail journeys per annum (first two columns in Figure 5), and this is presented in the graph below. In Lydney, Stroud, Stonehouse and Cam and Dursley the notional resident makes less than 20 rail journeys per annum. This number is broadly similar to the larger stations of Wellingborough and Kettering. Kemble and Stratford-upon-Avon stand out for different reasons at around 40 rail journeys per notional resident. The former is skewed because the town is tiny and acts as a parkway station for Cirencester, the latter because of the number of tourist visitors. All are eclipsed, though, by Sharpness, which would have a ratio of 50 journeys per resident per annum.

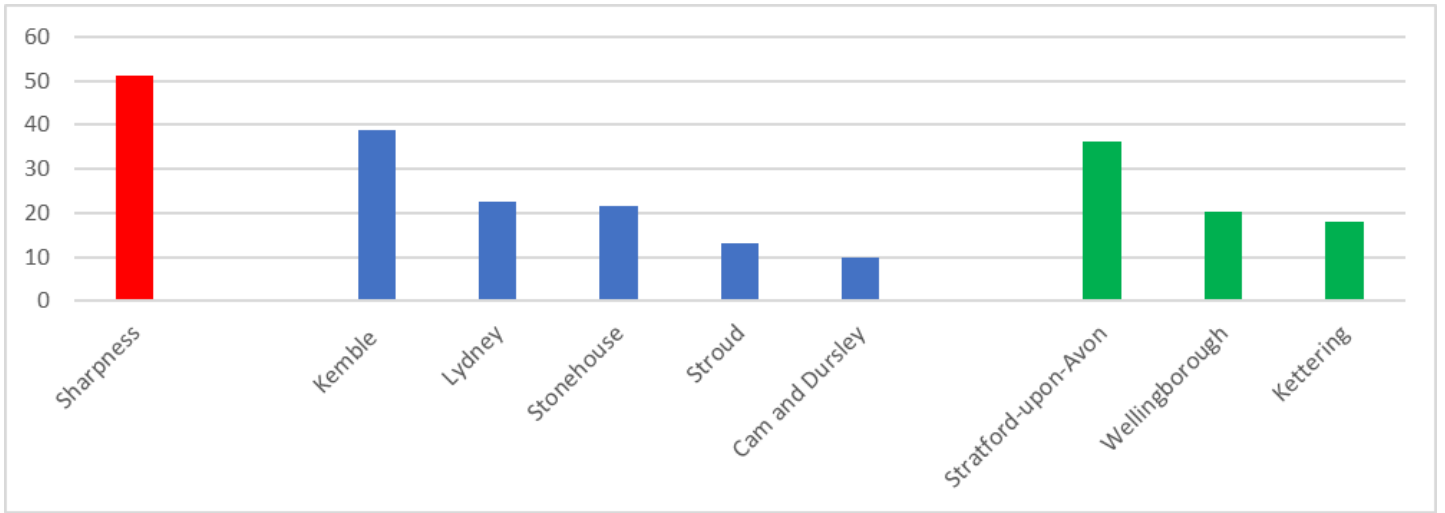


Figure 6 - Benchmarking graph: journeys per resident per annum

How the formula for subsidy has been calculated is unclear. If the subsidy is based upon the 1 million customers and that number is not achievable, then the service will require an even greater subsidy.

The relationship between build-out rate and thus passenger uptake and required subsidy are aligned. Whatever that relationship is, it is quite possible that passenger uptake is much slower than anticipated.

6. Opinion

There are two key factors which should be considered alongside our advice:

- That the transformative nature of the Sharpness Vale vision and, ultimately, the underlying business case is dependent upon (1) obtaining the planning consent for the development and (2) that residents entirely comply with the 'non car' approach. Both elements are, at this stage, uncertain – as is the degree to which the Department for Transport would be prepared to accept the 'non car' logic within the underpinning economic business case.
- That the promoters are at an early stage in the railway enhancement pipeline process. Therefore, there are questions asked in this document which may not yet have been considered by the promoters. But the answer to these questions is likely to influence the likelihood of the scheme proceeding to delivery.

In summary, our observations are as follows:

Question	Opinion
Strategic Purpose	The promoters have assumed a heavy rail solution without exploring other alternatives fully and explaining why heavy rail is the best solution.
Strategic Fit	<p>Whilst the lack of inclusion of the Sharpness project in the Corridor Study does not mean that it cannot happen, it is clear from the study that there will be considerable pressure for access to the mainline from other more strategic service enhancements.</p> <p>The promoters will need to convince Network Rail and the Department for Transport that it is possible to include this scheme as well as the other additional services without detriment to train performance.</p>
Economic and Financial Cases	<p>The scheme does not currently have a compelling business case. It requires an investment of £34.85m and the resulting service will require subsidy on an ongoing basis.</p> <p>The level of passengers forecast for the scheme looks unrealistically high compared to a range of existing stations on the network. If further forecasting work shows this to be the case, the level of subsidy required would be correspondingly higher than that suggested by the promoters.</p> <p>Whilst no Benefit Cost Ratio has yet been presented, in our view it is unlikely that the scheme will have a strong value for money case.</p> <p>Network Rail and the Department for Transport will need to be persuaded that the transformational modal shift assumptions are deliverable.</p>

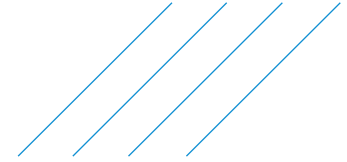
Figure 7 – Summary of our opinion

It is our opinion that, based upon the current situation, that there are considerable risks to this scheme which make it unlikely that it would gain the necessary approvals for the scheme to progress to delivery.

Appendix C

Minutes of Meeting between Atkins and Stagecoach 9th January 2023

Following a meeting between Stagecoach and Atkins on 9th January 2023, Atkins is able to confirm that currently there is no Statement of Common Ground between the Developers of the Sharpness Vales site and Stagecoach as the main road based public transport provider in the area. Concerns were shared with Atkins about the isolated nature of the site in respect to any existing public transport service provision and that the future level of patronage of any services would be extremely low. Therefore, there is a significant risk that in the future there would be no viable service provision to this site. At this time Stagecoach informed Atkins that they would be unlikely to support a service or services that would provide any realistically viable service provision for the new residents of this proposed Garden City.



Meeting Notes

Project:	Stroud LDP		
Subject:	Stagecoach		
Meeting place:	Teams	Meeting no:	2023 - stagecoach
Date and time:	9 January 2023	Minutes by:	C Currie
Present:	James Jackson Claudia Currie Nick Small	Representing:	Atkins Atkins Stagecoach

ITEM	DESCRIPTION AND ACTION	RESPONSIBLE
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Next meeting:	n/a		
Distribution:	For reference only		
Date issued:	10 January 2023	File	Ref:5218719 / M extra 1

NOTE TO RECIPIENTS:

These meeting notes record Atkins understanding of the meeting and intended actions arising therefrom. Your agreement that the notes form a true record of the discussion will be assumed unless adverse comments are received in writing within five days of receipt.

Contains *sensitive* information

Part B – Please use a separate sheet for each representation

Name or Organisation:

3. To which part of the Local Plan does this representation relate?

Paragraph Policy Policies Map

4. Do you consider the Local Plan is :

4.(1) Legally compliant	Yes	<input type="text" value="Y"/>	No	<input type="text"/>
4.(2) Sound	Yes	<input type="text"/>	No	<input type="text" value="N"/>
4 (3) Complies with the Duty to co-operate	Yes	<input type="text" value="Y"/>	No	<input type="text"/>

Please tick as appropriate

5. Please give details of why you consider the Local Plan is not legally compliant or is unsound or fails to comply with the duty to co-operate. Please be as precise as possible.

If you wish to support the legal compliance or soundness of the Local Plan or its compliance with the duty to co-operate, please also use this box to set out your comments.

This Policy allocates land at Sharpness Vale for up to 2400 dwellings, and 5Ha of employment deliverable in the plan period to 2040. The Plan and this and other policies related to Sharpness Vale have adopted a much wider vision that has been advanced by the promoter, that it considered by them to be able to accommodate a much larger quantum of over 4000 dwellings: exactly what this number is is actually something that has varied over the period the concept has been promoted.

We acknowledge that NPPF explicitly recognises that large scale new settlements, by virtue of their scale and long lead-in time, might warrant a long-term plan horizon or, at least an approach that goes beyond a typical plan period. This of course reflects a great deal of wider evidence, including the [Letwin Independent Review of Build Out \(2018\)](#) and the Lichfield research entitled ["From Start to Finish" \(2nd ed. Feb 2020\)](#).

The "phase 1" site proposed for allocation lies entirely west and south of a largely disused freight branch rail line. The phase 2 site for delivery beyond 2040, extends quite substantially north of the line.

The western edge of the Phase 1 site is co-terminous with the eastern boundary of the existing mixed-use allocation at Sharpness Docks, which provides for about 300 additional dwellings. There is an argument that the arguments or allocating each site are so closely conjoined, that the two might well be better treated as a single allocation.

Stagecoach, has been abundantly and consistently clear about its very serious concerns about the appropriateness of a local plan strategy that includes a remote new settlement at Sharpness.

We need, once again, to set out the basis for this concern. We explain elsewhere in our representations regarding the evidence base and other aspects of the plan as a whole, that the effects of development related traffic generation on our business, arising from inappropriate and unsustainable patterns of development that have evolved over the last years, mean we cannot any longer stand by and see highly unsustainable, car-dependent patterns of development perpetuated, and worse still, reinforced.

Much more positively, we continue to believe that this Local Plan Review offers an historic opportunity to secure a shift towards much improved active travel infrastructure, and public transport provision, despite the high existing levels of car dependency and relatively limited public transport offer. Indeed, given the baseline position, it is still the more vital that the plan maximises the opportunities to transform the current public transport offer across the District, given the fact that the bulk of travel demands arise from existing residents and activity.

We believe we can offer a well-evidenced basis for our own vision to achieve this, which will be given substantial forward impetus by the National Bus Strategy and the impending Bus Service Improvement Plan for Gloucestershire, that will be collaboratively produced with the County Council. However we do not see any basis to effectively fold Sharpness Vale into such a vision, or indeed a proposed public transport strategy for the District referred to in the Draft Plan at Policy DEI1.

Summary of the Stagecoach position regarding Sharpness Vale

- Sharpness Vale by virtue of its remote location for all significant centres of population and activity, represents a **highly and unjustifiably intensified spatial development strategy** for the District.
- As such the transport demands arising from the development off site are inevitably going to be **motorised, energy intensive and dispersed to a large number of distant destinations, making carbon neutrality inherently harder to achieve**, than almost any other credible development option.
- The site, lying both distant from destination and entirely off-line any existing traffic low, much less public transport route, makes it **impossible to secure any synergy with or benefit to, existing or credibly deliverable public transport services** in support of the plan's objectives and priorities.
- A superficially-elaborate package of "bespoke" transport infrastructure and services is therefore proposed. The involves what could be described as a "development-oriented transit" strategy focused on, and reliant entirely upon demand from the development itself. **The attractiveness and thus the effectiveness of the sustainable transport provision is fatally undermined** by the very limited frequencies likely to be achievable, (many in effect a single round trip per day on contract coaches); extended journey times relative to car use, and the limited range of destinations.
- The **cost of any such provision, by whatever means provided, is exceptionally elevated by the distances involved**. When the low value of the service to the public is set against the inherently elevated costs of provision, the **economics are utterly compromised**, making any expectation that it could be delivered or sustained in the longer term highly challengeable. **Methods of addressing a very large permanent funding gap** by levying a charge on all residents, if implementable and justifiable, **will do nothing to make the service more attractive or effective**.
- **These costs are not set out anywhere in the promoter's supporting material**, for any element of the proposed provision apart from the bespoke commuter coaches.
- **The rationale for the allocation to an exceptional degree relies upon restoration of passenger rail services on the Sharpness Branch Line**. This requires both the reinstatement of passenger rail infrastructure, including track, signalling and station, and the ongoing provision of a regular scheduled rail service. The **evidence to support the deliverability of this is scant**. The **costs are not specified at any point**, but can be expected to be exceptionally high. Neither Network Rail nor Great Western Railway has made any substantive representations at any stage of the plan-making process, or other public statements that they sponsor or "buy-in" to these proposals, which themselves have been subject to huge changes over the promotional period. Such evidence that does exist in the

public domain is clear that the business case and opportunity costs of any such project are likely to make it unjustifiable.

- The site benefits from virtually no meaningful current provision of travel choices to car use. Furthermore, any level of self-containment will **only be realised progressively over a very extended build-out**. Thus over an extended period an exceptionally high proportion of trips are likely to require off-site, with few if any practical or credible choices available to meet them.
- **Stagecoach refutes the contention that meaningfully attractive and effective local bus services can ever be delivered within realistic resources and costs to this location**, even on a permanently loss-making basis, supported in some manner by a permanent revenue support mechanism.

As such, the proposals at PS36 are considered by Stagecoach to be entirely unsound, being fundamentally:

- **Out of conformity with national policy** at paragraphs 72, 102-103 and 105 of NPPF, in particular the requirement at paragraph 103 that "*Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes.*"
- **Inadequately evidenced** on costs and deliverability of either the transport package or the viability of the development as a whole, and thus **unjustified**;
- given the exceptionally elevated abnormal costs associated with transport and servicing, look highly likely to be **undeliverable** at any stage without substantial external funding support, risking this aspect of the plan being **ineffective**
- the proposed **allocation is inconsistent with and undermines delivery of the strategic objectives and Key Priorities of the plan**, and is clearly out of conformity with the proposed strategic policies of the plan set out, among other places, at DCP1 and CP13, and development management policy EI12. It therefore makes the **plan ineffective**.

The potential role of New Settlements in achieving highly sustainable transit oriented development

This is in no way a principled objection to new settlements. Far from it. Our representations to Government on proposed changes to national planning policy, our representations to other local plans (including that ongoing in the Forest of Dean), and our representations to the Stroud District Local Plan Review itself, all made equally plain that **we consider that planned new settlements, in principle, can and should be expected to play a significant and increasing role in meeting development needs.**

That is because, where new settlement site searches are steered towards existing and demonstrably deliverable high quality public transport corridors, they are frequently best able to secure, at all stages of build-out, a **better** range of credible of sustainable transport choices. For the same reasons they can often also best realise the opportunities to synergise with existing transport patterns and demands to secure very substantial uplifts in service quality, and thus relevance and effectiveness in competing as an attractive choice with car use, than other development options. This includes urban extension s, which paradoxically can often be quite hard to tie in to the adjoining urban fabric and into existing and potential high-quality bus service provision in particular, which may not even already be available in adjoining neighbourhoods.

New settlements can represent an excellent way of securing "transit-oriented development", where they are sited directly on existing and easily achievable high quality public transport corridors.

As we point out elsewhere, the new settlement option proposed at Wisloe Green, close to and directly linked to one of the District's two rail stations at Cam, and directly adjacent to the junction between the A38 and A415 which forms an existing and readily-improved bus service corridor, well represents just such a new settlement. A similar opportunity clearly exists East of Whitminster (Council Ref WHI014), on which the Council sought views formally at the end of 2020 in its Additional Housing Options Consultation.

However, **achieving very sustainable new settlement proposals is highly sensitive to location. They must be very closely aligned to existing major public transport facilities and services** as far as possible. Failing that, they should seek to catalyse new or really improved services by relating directly to **the existing broad patterns of travel demand along key road corridors that might credibly support new services. In the case of Stroud District, this is the A38.**

If new settlements are sited remotely from major off-site trip attractors, and worse still, off-line of any existing major transport flows and public transport corridors, with which synergies can be achieved, that their rationale can only be supported, in principle by two sets of assumptions, achievement of which is usually highly challenged, and challengeable:

- 1) That the new settlement will be **so self-contained** by virtue of its size and range of life opportunities, that there will be relatively little need nor desire to leave it.
- 2) That the new settlement by virtue of its size, can provide **an entirely new range of sustainable transport infrastructure and services, which are "stand-alone"**, have no such synergies with existing flows to support frequent public transport (potentially to multiple destinations), and make no contribution to enhancing sustainable transport connectivity or attractiveness to a much wider corridor or area.

Such new settlement sites represent not "transit oriented development", but rely on the precise opposite concept of that which NPPF and the Council's existing and proposed policy suite (at CP5, CP13 and EI12), and Stagecoach endorses. We might call it **development-oriented transit**. Decades of experience at all scales and in all regions of the UK (and no doubt beyond) show that this fundamentally manipulative approach to the development of public and mass transit modes in particular, if deliverable at all, **is entirely ineffective in achieving a sufficiently attractive and relevant service level to avoid exceptionally high levels of car use**. Faced with such low levels of use compared with exceptionally elevated costs of provision, the long term provision of any level of services is typically impossible to justify and sustain.

We are aware that some promoters seek to bypass this fundamental problem by positing a means of passing on these costs in perpetuity to residents through some kind of putative local management charge. A good example of this is the (still to be implemented) new settlement proposal at Dunsfold Park in Waverley, Surrey. **Merely making householders pay for services they are unlikely to regularly or ever use, doesn't make them more relevant or effective.**

It clearly does not overcome the tyranny of distance nor fundamental principles not only of transport economics, but known patterns of human behaviour.

Heyford Park: A Cautionary Tale

Before we go into more depth looking at the proposals advanced for Sharpness and the transport package evidence behind them, we can point to a new settlement proposal similar in scale and intent, and as divorced from existing high-quality public transport as it is from any higher order centres. Lying in Cherwell District in Oxfordshire, Heyford Park occupies a former Cold War airfield 5km drive west of junction 10 of the M40, about 11km north west of Bicester, and rather further from Banbury to the north-west and Kidlington (about 19km) and Oxford (about 26km) to the south.

The current consent accounts for just under 1100 dwellings, plus mixed employment uses and primary and secondary free school has also since been established. The site is now subject to an allocation and a live planning application for a further 1175 dwellings while adjacent parcels account for a further modest quantum so that site is expected to deliver about 2300 dwellings in total. Delivery commenced in 2015. About 800 homes are now occupied, and reserved matters have been submitted for all of the original outline consent.

In many respects the Heyford Park development started off in a greatly better place than does Sharpness. A long-established hourly bus service, now numbered 250, passes directly through the centre of the development site providing direct links to both Oxford and Bicester. This was already in place for the first residents. As a major USAF base it benefited at the outset from a substantial amount of local infrastructure that could be quickly and readily repurposed, such as the sports and welfare facilities. There were some established businesses and residents on the site.

The bus service had always been subsidised by Oxfordshire County Council. The hourly frequency requires at least three buses to provide off-peak – and this is optimistic. Reliability is challenging to maintain. Peak frequencies have to open up to a bus every 70-80 or so minutes. There is arrival in Oxford City Centre at 0734 and at 0845 with a peak journey time schedule at just under an hour. Really, 4 buses are needed to provide a robust offer. Since the withdrawal of all County funding for the supported bus network in July 2016, the continuation of funding for 250 has entirely relied on the developer funding from Heyford Park. The hope was that additional demand would evolve sufficient to at least secure the hourly service allowing the later phases subject to the current outline to look to catalyse a better and more relevant offer.

The operator of the 250 has consistently struggled both to operate the service reliably within the resource, or attract sufficient patronage to make the service viable on a minimum-subsidy price. In fact between 2015 and 2019, Stagecoach was apprised that no discernible additional demand

whatever accrued to the service from Heyford Park, despite occupations taking place steadily over the period, and 29% of homes being affordable tenures. In 2019 the operator served notice on the contract. A short term financial uplift was agreed, and then the service was re-procured by the County Council, at a higher price. The result is that the developer-funding budget for the service is being drawn down at a rapid rate, with no impact on travel behaviour from the site. This is causing all stakeholders some concern especially given that the policy basis for the allocation had assumed much more frequent bus services and Banbury as an additional destination.

The location of Heyford Park fundamentally compromises the attractiveness of bus service provision especially with the SRN so readily available. Demand from the site is split in all directions overwhelmingly to destinations that are at least 15 km away, and often much further, making the car the only realistic choice, and making it completely uneconomic to look at new bus services. Even where established bus service is available to Oxford and Bicester, the car is hugely more competitive in convenience and journey time, even factoring in the use of Park and Ride at Oxford.

We are aware of several similar scenarios. Some, such as Mawsley near Kettering and Witham St Hugh's between Newark and Lincoln, benefit from no public transport service relevant to any other than school movements.

Conformity with the plan's objectives and Key Priorities

The huge influence of location on transport, and vice versa, is well recognised in Chapter 9 of NPPF that covers transport issues, which should be considered from the "*earliest possible stage*" according to paragraph 102. As such, transport issues are not and cannot be subservient to all other criteria driving the spatial strategy of a plan or consideration of specific development sites, especially large ones, if a plan strategy of a major allocation are to be considered soundly based.

Paragraph 103 goes on to outline how transport matters should steer the selection of spatial distribution approaches, and strategic allocations that would conform with those approaches. **To meet the definition of sustainable development** both plan strategies, strategic policies and strategic allocations must comply with this "first principles" statement:

"Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes."

Even this fairly broad and open-ended language is sufficiently clear that remote locations, that cannot realistically deliver alternatives to private car use, cannot fall under the definition of sustainable development.

A spatial approach that requires plan-makers **to fully leverage existing transport assets and services first, especially in the location of larger developments, is also explicitly mandated by NPPF.**

NPPF Paragraph 72 makes abundantly clear that the **size of development and the opportunities that scale** might offer to deliver new infrastructure or offer a higher degree of self-containment **cannot substitute for inherently poor, unsustainable location:**

*"The supply of large numbers of new homes can often be best achieved through planning for **larger scale development, such as new settlements** or significant extensions to existing villages and towns, **provided they are well located** and designed, and supported by the necessary infrastructure and facilities. ... strategic policy-making authorities should identify suitable locations for such development where this **can help to meet identified needs in a sustainable way**. In doing so, they should:*

*a) **consider the opportunities presented by existing or planned investment** in infrastructure, the area's economic potential and the scope for net environmental gains..." (our emphasis)*

The proposed allocation PS36 at Sharpness Vale is entirely out-of-conformity not only with NPPF at paragraphs 102-103 and paragraph 72, but locally-specific Strategic Objectives and Key Issues and the aligned draft policies in the plan, including two important Core Policies that are intended to achieve them. Specifically:

Closely reflecting NPPF language we have already highlighted, the **Priority Issues** in the this Regulation 19 draft Local Plan state at page 11 that the plan will achieve its objectives, and conform with the requirements of NPPF by:

"Ensuring new development is located in the right place, supported by the right services and infrastructure to create sustainable development, including by:

- *concentrating housing development at locations where there is currently the best access to services, facilities, jobs and infrastructure;*
- *creating new sustainable communities at locations where development can transform existing access to services and infrastructure;*
- *concentrating employment growth within the A38/M5 corridor and at locations in tandem with housing growth."*

Draft **Core Policy CP5** - Environmental development principles for strategic sites, point 3 accordingly states that strategic sites will:

*"Be **readily accessible by bus, bicycle and foot** to shopping and employment opportunities, key services and community facilities; and will contribute towards the provision of new sustainable transport infrastructure to serve the area, in **seeking to minimise the number and distance of single purpose journeys by private cars**" (our emphasis)*

Draft **Core Policy CP13** - Demand management and sustainable travel measures, states that in all development cases, schemes shall:

*"i) be located where there are, or will be, at the time of development, **choices in the mode of transport available** and which **minimise the distance people need to travel**" (our emphasis)*

Draft **Development Management Policy EI12** states:

*"**All developments should be planned in line with the Sustainable Transport Hierarchy. In the first instance, opportunities to reduce the need to travel should be maximised, including through the provision of ancillary facilities on-site and through measures which enable people to work from home, such as high speed broadband. Development should be located in areas which are already well served by public transport and have access to a range of local facilities within walking and cycling distance.**"*

Thus, the **plan strategy itself clearly seeks to avoid, from first principles, a contrived approach to transport and mobility.**

However, the allocation at Sharpness Vale evidently flies in the face of all this. There are very evident alternative options before the Council that much more clearly and comfortably align with and support the plan strategy and the delivery of its objectives.

It is very clear that the choice of so remote a site is fundamentally and highly problematic in the light of these national and local policy requirements.

Clearly, it will be often necessary to undertake measures to improve sustainable travel choices, both across the plan area and at specific sites, as this plan broadly seeks to do. This is a world away from "transport agnostic" strategies and allocations that have minimal regard to location, the transport implications, or the deliverability and effectiveness of achievable measures, as is the case at Sharpness Vale. **Sharpness Vale obviously diverges hugely in its conformity with and achievement of the plan strategy and objectives than any other proposed allocation.** We look therefore at this strategy and evidence below.

The voluminous transport material supplied by the promoter in support of the proposals is intended to indicate that the site can be made sustainable, in order to satisfy NPPF paragraph 102. This unavoidably looks to "retrofit" sustainable travel choices to an unsustainable site.

Achievability of the plan's objectives and Key Priorities

it should be immediately apparent that the almost complete absence of meaningful modal choices, and the exceptionally long distances to key destinations off-site, means as far as provision of non-car accessibility and mobility, heroic assumptions must be made for Sharpness Vale about:

- what is deliverable,
- when it can be delivered,
- how far it could be realistically economically provided and/or be sustainable,
- and how far it could be expected to be effective.

We therefore turn now to consider how far the proposals tabled for Sharpness **credibly could deliver** against the plan's SOs and key priorities. In line with the hierarchy set out at paragraph 102 of NPPF and mirrored in draft strategic policies DCP1 CP5 and CP13, we can break this down under

- first "reducing the need to travel" at all;

- then reducing the distance and energy implied in meeting mobility demands, and
- “making the site sustainable”: the effectiveness of the package of sustainable travel elements proposed in substituting for any, never mind many of others car-borne trip demands off-site.

We must point out that the actual package of sustainable travel measures set out in substantial documentation advanced by the promoter at two formal Regulation 18 stages and again at this Regulation 19 stage, has **very significantly varied. This is especially true of the assumptions made about the rail service that would be offered from the site.** It must then be concluded that the allocation of the site has relied less on evidence, and much more on a “grand visionary concept” regarding the railway, with very little weight given to what actual rail offer would or could demonstrably be provided, or when.

We and other participants can only for now work with the package of measures provided by the promoters in support of this regulation 19 consultation. Again, we are clear that the plan can only rely on developers assertions, with very little evidence of sponsorship or endorsement by the rail industry in particular, and overwhelming evidence for ourselves as the main commercial bus and coach operator in the County and District, that no credibly effective or relevant public bus service could be delivered from the site.

Reducing need to travel – Self Containment.

The promotion at Sharpness is highly reliant in the first instance on an exceptionally ambitious vision for self-containment.

While its sheer remoteness might help to support this, we would argue that much more likely, this will simply replicate existing behaviour elsewhere in this relatively rural district and beyond: an exceptionally high level of car use. The site also suffers greatly from having virtually nothing else already available on or directly adjoining the site on which early residents can rely: a fundamental problem with any entirely new settlement.

Gloucestershire County Council Highways have raised their own concerns in their Regulation 18 response about Sharpness. They have particularly *“highlighted the reliance on the PS36 New settlement at Sharpness providing a high level of trip internalisation. It is therefore **vital that supporting infrastructure, such as shops and services, are provided in a timely fashion to minimise out-commuting and reduce pressure on the surrounding highway network.**”*

Stagecoach has great concerns that the traffic modelling assumptions about trip internalisation at Sharpness are both is robustly derived and realistic. The modelling has assumed a very high level of self-containment at Sharpness involving a 18% reduction to residential trip rates in the AM peak and 10% reduction in the PM peak. This is said to reflect the on-site employment and secondary school.

However the delivery of substantial additional employment on or near the site is entirely speculative, as is the relationship between the housing trajectory and the point at which a secondary school is likely to be opened.

The residential distribution (Appendix H - Table H.1) reveals that the traffic modelling has assumed nearly a quarter of all off-site vehicle trips (23%) from the allocation at Sharpness (PS36) would be to be to the Berkeley area. Given how limited and how specialist the employment base in the area is, this seems a remarkably high figure. This pattern of local trip distribution has also been applied to the proposed employment at Sharpness with the employment distribution (Appendix H - Table H.2) showing 26% of vehicle trips are drawn from Berkeley.

We simply do not see those figures as being transparently based or realistic. They seem to have been “plucked out of the air”.

In fact these assumptions run themselves counter to the promoters own narrative. These draw heavily on the notion that much or most employment, looking into the future will be “home-based” wholly or in part: contentions that the COVID experience has given great credence to. However much of this narrative works on the assumption that most employment in the UK is office based, or office-like: professional, IT or administrative. This is far from being entirely true. Well over half of all employment requires physical presence, especially in education, healthcare and service delivery, even before scientific, manufacturing and other areas are considered.

Even where tasks can be performed remotely from home, this is unlikely to entirely obviate off-site journeys. “Hybrid” working was already stablishing itself before COVID, and in key markets we operate in this had already led to a disproportionate reduction in demand, and some traffic, on Mondays and Fridays. It cannot be assumed that home working will actually eliminate journey to work peaks – it

may well just mean there are fewer such days, but that demands on the network on Tuesday to Thursdays could well be close to or even exceed those seen in the past.

What is at least as clear from the National Travel Survey and other sources, is that **hybrid and home-working directly drives extensification of journeys**. Because commutes or work-related travel are lesser, people are ready to travel much further, trading this off against a better lifestyle in a larger property (necessary to support effective home working in any case) and a more rural lifestyle in more attractive surroundings. This does suggest that development at **Sharpness might be more marketable and attractive, than it might have been a few years ago. It certainly does not make it more sustainable, especially if fewer car journeys are more than offset by the length of those trips**. The DfT's National Travel Survey makes quite clear that a lower number of car-borne journeys has been more than offset by average journey length. This is one of the key causative drivers of stubbornly high emissions from road transport.

There is also some evidence that working from home perversely can redirect work-related journeys to other trip purposes; especially driving children to and from school. More and longer leisure journeys by car are already evident at weekends than prior to COVID according to data released by DfT in July 2021. People **working from home does not correlate directly to people staying at home**.

We also see little clarity on the matter of how high rates of internalisation will be achievable for other trip purposes. Primary education and convenience retail and grocery shopping would stand out here. While it would be possible for the developer to provide a village shop from the first occupation, or shortly afterwards, we do not see this either as a commitment, not as a development cost. Over a 10-year likely loss-making trading period (commercial convenience retail operators look for an exclusive hinterland of about 1400 occupations before they can see a business case to open a new store) could be substantial. Primary education lies outside the control of the promoter to provide, and early on-site delivery of this is entirely speculative.

This just involves the most basic of local services. A much broader range of choices to meet leisure, education retail and other social activity will be necessary on site or within convenient walking or cycling distance to make levels of internalisation close to the figures that are being suggested. With a virtually "blank canvas" the proposed allocation actually starts with a huge deficit in realistically-available services and amenities available without the car, at the point that it starts to be delivered. When added to its remoteness, the evidence points not to the proposals supporting a radically different kind of travel choice than local residents today, but a perpetuation of it..

Distance to Destinations

Both Core Policies CP5 and CP13 set out to ensure that the spatial distribution of development is such that patterns of movements are not extensified: **site should be allocated by the plan, then, to ensure distances travelled are minimised**.

This policy position is strongly reinforced by Gloucestershire County Council's Draft Local Transport Plan Review at Policy LTP PD 0.4 – Integration with Land Use Planning and New Development, bullet 1 which states:

"Development will be resisted (by GCC) where the impact on the transport network requires retrofitting or where safe and suitable access is not provided. GCC will support new compact, high density mixed use development of new sites already served by public transport over other more remote and inherently less sustainable locations" (our emphasis).

This strong policy steer is because relatively compact patterns of development so directly and greatly contribute to reducing the carbon intensity of travel and accessibility:

- For any journey of meet a given trip requirement the energy requirement and any carbon emissions associated therewith are proportionately and directly reduced, for any motorised mode.
- The potential for cycling greatly increases for compact journey patterns, and even for new settlements a short offset from key offsite destinations also makes it much more likely cost-effective provision of high quality cycling infrastructure can be delivered.
- In the same way, reducing the distance to key destinations makes the provision of high quality public transport greatly less costly, whilst also making it more attractive viz-a-viz the private car. If a single vehicle can comfortably make a round-trip between a site, including a new settlement, and key transport hub within 30 minutes, just two buses could provide a 15 minute service frequency on that route. A 12-13 minute end-to end journey time on such a route at such a frequency is highly relevant choice. As distances extend the cost of providing a given frequency multiplies. The relevance of the service rapidly reduces, especially since

bus services become less competitive with direct car journeys over longer distances because of running speeds and, typically, the increased number of stops.

It is starkly apparent that Sharpness Vale is exceptionally remotely located. In fact one not need to look at detailed data or modelling, to evidence this. The immediate locality was selected in the 1950s and 1960s to accommodate nuclear power stations, one of the primary consideration for which, apart from liberal supplies of water, was physical distance both from any significant centres of population, and major infrastructure.

The Draft Sustainable Transport Strategy acknowledges that Sharpness has an issue of relative remoteness (page 29), particularly in public transport terms. It is regrettable that it makes no real attempt - at this or any other point - to unpack why this presents a fundamental problem, especially for public transport economic.

This observation is echoed in the IDP (June 2021) at page 27, "*The proposed allocations at PS34 Sharpness Docks and PS36 New settlement at Sharpness have an issue of relative remoteness, particularly in public transport terms. This increases demand for private car usage.*" We agree, though again it is a shame that the evidence base does not emphasis why the tyranny of distance sets up fundamental and unavoidable difficulties for accessibility, travel behaviour and carbon emissions.

We offer our own evidence on the remoteness of this site, compared with other options, measured in terms not only of crude distance but of scheduled bus journey times achievable from the site. This is viewable in the table attached as **Appendix PS34 - 1**

From this it can be very readily seen that the closest credible bus destination is Cam: hardly a major settlement or powerful trip attractor, compared with higher order centres and nodes in the District as well as beyond it. Dursley beyond Cam, involves a bus journey that would take over 20 minutes. Even assuming direct limited stop bus services using the A38, and where appropriate, even the M5, it becomes very hard to provide journey times of less than 40 minutes from the site.

This contrasts starkly with the other proposed major strategic allocations. Of these, three around the Draycott and Cam area - PS37 Wisloe New Settlement, PS24 Cam North West (North West Draycott) and PS25: Cam North East Extension - also directly benefit from credible walking and cycling access to Cam for Dursley Rail Station. Here regular direct rail services north and south already exist, alongside the existing main bus corridor that we are equally clear could relatively simply be augmented based on consolidation of trip demands along it.

- ***Impact and relevance of the off-site travel options***

The promoter's strategy then aims to make alternatives to private car use so attractive there will be a preference not to drive, to virtually any off-site destination. This arises from a truly comprehensive and multi-modal offer which, for a scheme of only 2,400 dwellings, is certainly eye-catching. It needs to be, given how crippled the site is by virtue of its location.

The effectiveness of this offer is entirely speculative: no other site we are aware of has proposed anything like it. There is no precedent.

Voluminous material continues to have been produced on behalf of the promoter by its consultants at every stage of plan-making, and, especially with regard to the provision of an entirely new passenger rail line and service from the site, and scheduled bus/coaches, the proposals have very significantly evolved, to put it mildly.

This is set out in several documents published by the Council in support of this round of consultation, prepared by Stantec's Birmingham office on behalf of the promoter. Of these, we focus on the proposals in the **Sharpness Vale Highway Capacity Assessment September 2020. At section 3.18 a phased delivery schedule of transport measures is set out.** This is heavily circumscribed by caveats. We point to the statement "***Delivery of mitigation will be judged on a value-for-money basis, with consideration given to the environmental, resilience and sustainability benefits as well as the purely economic ones.***"

It is highly arguable how much meaning this statement holds. **Taken at face value it appears to mean that the promoter is committed to doing nothing specific.**

The Rail Service

For off-site travel the strategy set out at section 1.1.1.3 depends, first and foremost, on reintroduction of passenger rail services on the Sharpness Branch rail line. Without this, it is very arguable that the

promotion has even the most basic level of credibility. The deliverability of this service, and its effectiveness, is therefore of the essence.

This requires the reinstatement of passenger rail services along a freight branch line that is in current very occasional use. The remaining chord linking to and from the Birmingham-Bristol Main Line is north facing. That to the south, towards Bristol was lifted many years ago and the land sold. Some has since been built over. Accordingly, any service from Sharpness is much easier to provide in a northerly direction, and the promoter has proposed exactly this. The service would terminate at Gloucester.

This means that, as far as can be ascertained direct rail service would serve the intermediate existing station and Cam, and in the absence of a new station at Stonehouse (Bristol Road) would then run to Gloucester. This service would certainly be direct and fast to the terminal station. However, the range of journeys it could realistically provide seems very modest. The total trip assignment towards Gloucester from the site reflects the multi-directional split of demands to multiple potential off-site destinations. Trip assignment off-site is set out at section 7.1.2. of the Sharpness Vale Highways Capacity Study. Table 7.1 summarises the assignment of destinations. This shows that 13% are likely to see a journey to work destination in Gloucester. 13% seems a small minority, especially when the 38% of off-site trip towards the Bristol area is compared with it.

In fact, of those 13%, many will no doubt be seeking destinations such as Waterwells Business Park and Quedgeley, or Gloucester Business Park at Brockworth, literally miles from the station where a bus trip of about 30 minutes must be added onto the rail journey. It is not credible to suggest that that these journeys would eschew car use, when individuals are able to drive directly to the destination well within 30 minutes. By contrast, a multi-stage public transport journey even on a best case set of assumptions will take at least an hour to these destinations.

In truth **the rail link to Gloucester will offer relevant choices that are effective in substituting for car-borne trips, to a fraction of the 13% of peak off-site trips:** mainly those to destinations that are within immediate reach of the station by walking and, perhaps, by cycling. Fewer than 5% off peak off-site trips are likely to find it a meaningful choice. **95% of peak off-site trips will doubtless be seeking another option.**

To the south, the rail service will require a change of train at Cam. **If** a half-hourly service were provided on **both** the branch **and** main-line service, this might start to provide a relevant choice to parts of Yate, the immediate vicinity of Bristol Parkway, and Bristol's Temple Quarter and parts of the city centre all of which will collectively present a significant proportion of the peak and wider off-peak demands for travel from Sharpness. However this scenario is highly speculative. It is be extremely dependant on actual timetabling and the efficacy of connections at Cam, and associated waiting times.

As it is, the initiation of the half-hourly service from Sharpness has no date assigned to it by the promoter, on which any reliance can be placed, and even the aspirations for MetroWest Phase 2 have slipped. Much less clear is when the extension of MetroWest Phase 2 to Cam would be implemented, to provide a half-hourly mainline stopping service. A change of train might prove acceptable but in so doing, this erodes the time value of the rail offer substantially. To many destinations, especially in the Northern Fringe, where even accounting for quite severe congestion-related delays could be reached by car well within 40 minutes, it is hard to see how attractive and effective the rail offer would be compared with car use.

Contract Coach services

This provision could be supplied to any destination.

However, the evidence supplied by the promoter and set out at Sections 1 and 3 of the Highways Capacity Assessment focuses on the largely office-based employment destinations in the Bristol Northern Fringe. Further material submitted also propose a link to Gloucester City Centre via Oldends Lane, west of Stonehouse, that is major employment site. The Northern Fringe is a very extensive belt that sits within the Bristol M4-M5 Motorway Box accessible directly from as many as four motorway junctions. Herein lies the appeal of the car for such journeys. Once junction 14 on the M5 is reached, most of these destinations are as little as 15-20 minutes further drive, especially in free-flowing conditions.

The contract coach provision aims to provide a "bespoke" provision to the site, as close as possible to the destination, non-stop.

The promoter has engaged with Zeelo a company that has been established within the last few years to broker and sell these kinds of bespoke solutions. Generally, this has been driven by the needs of large employers with very heavy concentrations of employees, on quite inflexible working hours, on single very large sites. In many cases the employers have limited or no credible public transport provision, while on-site parking is insufficient and/or impossible to cost-effectively augment. These

include JLR at Gaydon, Warwickshire. A similar scenario operates at National Grid's HQ at Warwick Technology Park. The active participation and engagement of the employer at the destination has been a strong characteristic of this model.

About 35% of off-site peak demand is anticipated to be in the direction of South Gloucestershire. Combined, across the whole area, the Highways Capacity Study considers that a total 271 2-way person trips are anticipated from 2400 dwellings. However this demand, even if all were to be attributable to the coach provision, will be spread across a very large number of true destinations. "Demand-responsive" (i.e. charter) coaches might combine a few drop offs but are highly unlikely to offer any choice of departures at all.

In fact, the existing bus service 62 to central Bristol, which offers a single morning peak arrival, is broadly equivalent. It runs from Sharpness and Berkeley via Falfield non-stop via the M5 from junction 14, via the M4 and M32 to central Bristol. The relevant and impact of this service is such that in 2019, while we operated it, it carried a total, on average, of only **6.5 passengers a day** combined demand from Sharpness, Berkeley and Falfield. The pattern is also extremely erratic, for reasons that are hard to fathom. On many days, fewer than 2 passengers were carried. It may well be that work-related journeys are in fact the minority and it is being used for a range of more diffuse and discrete journey demands, probably those without easy access to a car. For example, out-patient appointments at the BRI are easily reachable at the terminus. It should be remembered that this destination, in terms of both scale and range of employment opportunities, set against the quite high cost and friction associated with driving, dwarfs any other for market potential for a non-car alternative. **This evidence suggests that the provision of bespoke contract coaches operating a similarly limited pattern of service is going to be very limited in relevance and impact.**

However one looks at the potential arithmetic within that broad overall demand figure, it will be entirely insufficient to sustain even single departures to key JtW destinations at a 2400-unit build-out, a point we have made previously in our representations. The only way such a service is likely to attract meaningful uptake would be for it to be virtually free of charge, and/or for physical measures to be taken to make it virtually impossible to leave the site in a single-occupancy vehicle before 0900.

While at certain points, such as at Appendix B of the Sharpness Vale Mobility as a Service and Express Coach Services paper, the promoter appears to be considering offering the coach services for an initial period free of charge, and then at a heavy subsidy, there is no commitment to this. It quite clearly rules out any restrictions on site on car ownership and use whatever.

Scheduled Bus Services

The applicant, despite the evidence before it and our own clear prior representations, continues to insist that feasible and relevant local bus services could be provided from the site, in some manner. These services are entirely undefined. Destinations, routes, journey times and frequencies have at no point been specified to date and remain entirely speculative at this Regulation 19 stage. The effectiveness of these service therefore cannot be evaluated.

We would suggest that a half-hourly service is the minimum level required to start to offer a degree of journey time flexibility. This should include a timetable coverage that starts sufficiently early and concludes late such that a variety of essential and discretionary trips can be made; not just shift work but, say, sports practices and evening socialising.

We would also suggest that where journey times to key destinations exceed 45 minutes, and also are more than double what would be achievable in a car, it is not credible to suppose that meaningful modes shift would be achieved in the absence of consistent and effective demand management measures in the wider locality and at key destinations.

"Mobility-as-a Service"

This very topical phrase, abbreviated to MaaS, has at its heart the idea that a single IT platform will create an ability to access any and all forms of mobility seamlessly, both in terms of planning and trip payment. The platform becomes the complete controller of the interface between the traveller and any number of suppliers of mobility, or any number of kinds. This mode agnosticism, innate personalisation and demand-responsiveness, and the "promise of universality" is simple and alluring. Implicitly and explicitly embedded within the narrative is the facilitation and commercialisation of a wide range of mobility options that are either innovative (here we would emphasis micro-mobility) and/or involve the shared economy.

The idea has been around for several years now and has led to significant investments by the technology/data industry. The apparent ability to transform mobility especially in urban contexts,

where the density of potential demand and also supply is much higher, has led to substantial public sector funding and support.

There is neither time, nor is this the place to embark a comprehensive exposition and critique of the relevance of this model, which will in time, and in certain contexts, no doubt offer substantial value to the public and will shape the way that service providers including Stagecoach engage with the market-place.

MaaS, and indeed any kind of demand-responsive data driven service intermediation tools, do not themselves supply mobility. What mobility can be supplied and ultimately accessed even by the most comprehensive and effective of such tools, depends at the most basic level, not on the MaaS application, but what forms of mobility can be economically and effectively provided by transport service providers of all kinds. The availability of service will depend, inevitably, on the level of demand and its geographical disposition.

The laws of time and space cannot be circumvented by MaaS: sparsely populated remote areas will never be able to sustain the same level of transport service availability and densely populated urban ones, or corridors in which a significant density of demand already exists.

This can easily be exemplified by the most basic forms of MaaS supply: lift-sharing, and ride-hailing apps (such as Uber). The density of demand in urban areas mean that ride-hailing apps can provide a car to a given point within minutes, and that supplier (the driver) is also much more likely to accept the ride given the likelihood they will be able to pick up another call close to the destination, within a reasonably short period after drop-off. The productivity of the service is relatively high and concentrated demands also mean that there are a large number of resources sustainable to meet that demand. Despite this, companies like Uber are far from universally profitable on ride hailing, and the challenges faced by suppliers meeting their true full costs of operation are also well-aided. Where demand is less dense, and journeys also extend in distance, the same problems faced by fixed public transport actually apply. Unit costs rise quicker than the opportunity cost of providing the service. Just like taxis, ride-hailing suppliers have no obligation to accept all requests and the longer the trip and the more remote the destination, the more likely they are to "pass".

The same is true for lift-sharing. It should be obvious that where there is a dense corridor where multiple individual journey paths align, often for a much longer-distance journey, the chances of finding someone prepared to offer a lift using a popular App like Liftshare.com, which has very large numbers of registered users, will rise exponentially. The "supply" available rises dramatically.

Looking at provision that closer aligns with bus services, "dynamic demand responsive transport" (DDRT or DRT) uses larger vehicles that seek to combine a larger number of discrete journeys on a single vehicle, with an automated algorithm adjusting route and pick up times to try to arrive at an optimised routing solution in real time. This is faced with exactly the same challenges as for discrete journeys, made even harder by the need to trade-off journey distance and time between multiple travellers. In sparsely-populated rural areas, this means that as calls on a single vehicle increase, journey time and circuitry of the "run" extend rapidly, to the point that while a number of people might reach their destination well enough, the time taken to get there becomes inordinate; or, additional booking cannot be accepted because the vehicle becomes over-committed. The broader and more diffuse demand, the quicker these problems arise. These issues are generally managed by tightly specifying a DDRT service around a particular corridor, or within a limited distance of a central "hub", constraining supply very considerably in time and space. The most successful DDRT systems such as Lincolnshire's CallConnect service, have succeeded precisely because they have found a way to clearly define and constrain availability in this way, to which they add a further rationing principle: "first come, first-served". The more remote the community the fewer DRT options are available in practice.

These realities have also conspired to ensure that globally, not a single DDRT minibus service that we are aware of has proven to be commercially sustainable in any format or in any context, urban or rural. The most relevant services, such as CallConnect, need ongoing sums of revenue support to be sustainable. The costs of provision always exceed revenues – a good sign that the chargeable value of the service to the customer is never sufficient to meet the cost curve.

Experience cross rural England shows that while providing well-designed DDRT services can suitably address demands for essential mobility, such as shopping and social trips, mainly for pensioners, and others who cannot drive, it can serve very little else. There is **no evidence that we are aware of the rural DDRT can or does substitute for significant numbers of car trips**. The service is insufficiently flexible (in terms of availability specially with limited notice), while if a trip can be booked close to the times required, the trip duration is typically much more indirect than it would otherwise be to drive.

The remoteness of Sharpness, and its distance from establish flows of trips on the wider network, greatly undermine the ability of MaaS solutions and other forms of demand-responsive mobility, to provide relevant, attractive and thus effective substitutes for car-borne journeys.

However good **MaaS** applications might become – and there are huge issues in terms of commercialising them – they **cannot avoid the basic principles of transport supply and demand in sparsely populated and remote locations and how these affect service availability. They do not allow the Stroud Local Plan to depart from achieving the principles set out in NPPF at paragraphs 72, 102 and 103, or in the Local Plan itself at CP5, CP13 and EI12. It will not mitigate meaningfully against car-dependency.**

The Assumptions in the STM

In the light of the discussion above, we have further very serious concerns that the County's Strategic Traffic Model entirely unjustifiably over-estimates the impact of these interventions. For clarity, these modelling assumptions regarding mode share and trip discounting from single-occupancy are not derived within the model, as they might be if a multinomial logit-choice multimodal transport model were used. This would be a hugely more sophisticated modelling tool, and we concede that rarely are they employed in the UK, mainly because national policy, as well as professional practice, does not require this kind of evidence, given that traffic impacts continue to be the main basis on which transport policy and investments are justified. SATURN is a traffic model alone, and trip generation is simply discounted at the outset, to account for mode shift by a factor decided by the modeller.

For each strategic allocation including PS34 and PS36, to account for the impact of proposed sustainable travel interventions set out in the STS, such a reduction is applied to trip generation rates. Appendix K of the modelling report reveals that for trips to/from Gloucester and Bristol a 20% reduction has been applied for trips to/from the Sharpness site (PS36) to reflect the proposed "direct public transport services to key destinations including Bristol, Gloucester and employment nodes". This percentage reduction is significantly greater than all the other Local Plan strategic allocations where reductions of between 3% - 10% have been applied reflecting contributions and support for public transport services – despite the fact that for all the other SAs, a much greater frequency and choice of arrival and departure times will be available, and the length of journeys being that much shorter, will make bus services greatly more competitive with car use than it could conceivably be at Sharpness.

It is unclear why Sharpness has been assumed to have a greater potential for transfer to public transport than the other Local Plan sites, particularly given its isolated location away from the sustainable movement corridors, greater travel distances and the disparate range of credible employment destinations in particular.

Conclusions

For all these reasons, **the patronage and mode share forecasts for Sharpness Vale are simply not credible for any journey purpose.** They well exceed the highest peak bus mode shares recorded even in places like Oxford which benefit from long-standing vigorous car restraint at key destinations – mainly through the costs and availability of parking - and very high levels of service not just at peak times but seven days a week and late into the night.

The possible exception might be the railway – best able to address longer distance journeys – were it able to supply direct journeys to the bulk of key destinations. It cannot, even assuming that any way can be found to provide a half-hourly frequency from the site to Gloucester City Centre.

The promoters suggest that travel demand will follow the provision made available, and that with the provision of a direct rail service to Gloucester in particular, significant weighting of residential location choices will result in those with Gloucester City Centre destinations preferentially choosing to live at Sharpness Vale. As such the promoters in effect is starting down a truly extreme path of reverse logic: that providing a transport option to a remote and distant location is justifiable for its own sake.

We concede that the availability of such a service might be expected to have some influence – and were it the case that the employment market in Gloucester City Centre had the depth and breadth of a metropolitan city centre such as Birmingham or even Oxford/Cambridge it might allow the place to meet a significant proportion of needs arising in that labour market. It does not. Nor is Sharpness being allocated to sustainably meet Gloucester's housing needs. In any case, locational decisions for new-build properties in particular are typically made on the journey requirements of two working adults, not one, each of whom in this geographic context is likely to have very different destinations. In any case, competitive journey times are and would be available from locations much closer to Gloucester – including, where the railway is concerned, Cam and Wisloe Green. Why an array of closer and quite

probably cheaper housing options would be passed over to select a new home at Sharpness is very hard to fathom.

- ***Deliverability and sustainability of the sustainable transport package at Sharpness***

Before we even start to explore the matter in more detail, it must again be stressed that at full buildout the are expected to be only about 2700 new homes occupied (inclusive of Sharpness Docks) on top of the relatively small existing population. Even if we assume the most idealised achievement of both the development trajectory and the deliverability of any and all of the sustainable travel interventions proposed by the promoter, there is only a relatively small level of total demand available from which any passenger transport provision can rely.

Were the development able to synergise with existing travel patterns and demands, the scale of the Sharpness Vale proposals would represent a significant amount of additional demand to help consolidate and boost demand justifying higher levels of capacity and frequency – especially if much of it was to destinations on a single corridor running through or adjoining the site and extending in two directions away from it. Uniquely of almost all the proposed strategic allocations in the plan it cannot synergise with existing travel patterns or travel flows at all.

To add to this difficulty this trip demand is split in a wide range of directions, off-site, ranging from Cheltenham, Gloucester and Bristol.

Trip assignment off-site is set out at section 7.1.2. of the Sharpness Vale Highways Capacity Study. Table 7.1 summarises the assignment of destinations.

The specifics of the assignment are not broken down greatly; for example, how far within a Gloucester “head” this would account for trip to Brockworth and Quedgeley as opposed to the city centre, is not stated in either the promoters or the Councils’ evidence bases. The arithmetic of passenger transport economics of the site is thus even more savagely compromised: limited total demand is then assigned in such a way that only a relatively small fraction, or a limited pool of travellers, are available to sell any service to. This means that **achieving near 100% sustainable mode share is required for off-site journeys to generate meaningful loads even at peak times.**

But this then still assumes that demand to any given destination would be content with a very limited choice of departures. For the contract express coach services this would be a single choice journey from the site and returning to it. This offers neither flexibility nor robustness: compared with the ability to drive at will to the same destination, with the ability to return this offer cannot compete, especially if free parking is readily available at the destination. This is a reasonable assumption across the Bristol Northern Fringe and one that largely explains existing exceptionally car-dependent travel behaviour along the M5 from satellite communities of all sizes in South Gloucestershire and Stroud District beyond.

Rail Service

Others, including the County Council in their own representations at Reg 18 stage, have commented on this matter.

It is nevertheless appropriate for us to point out that Network Rail has barely been participant in the plan-making process. Great Western Railways as the principal Train Operating Company has made no public statement or endorsement of the proposals that we can find. Whatever statements might be being made to the promoter or the planning authority behind “closed doors”, it is necessary for a clear and public endorsement from the rail sector for any material weight to be given to the contention that any rail service is deliverable.

The baseline situation for rail is set out at section 2.2.3 of the Highways Capacity study presented by the promoter. This makes plain that track and signalling will need to be replaced to allow the resumption of passenger services.

We see that a recent application has been made by the Planning Authority and the promoter, under the “Restoring Your Railways Fund” for Government financial support to achieving the project. This has been to the “Ideas Fund”: an apt title indeed, in our view. This will, if successful, assist in the initial stages of assessing the technical and business case or the proposals, as far as Network Rail’s GRIP (Governance for Rail investment Projects”) Stage 2. This defines deliverable key outputs and a preferred option that would achieve them.

Importantly, nobody within the rail sector is eligible to bid for the Ideas Fund. Implicitly, such ideas therefore will be outwith anything that currently has formal rail sector sponsorship. While the guidance

document recommends that Network Rail and the relevant Train Operating Companies are approached, **no endorsement or sponsorship from the rail sector is either assumed or required.**

The Ideas Fund expects no due diligence. In the words of the current web-based memorandum "*At this stage, (DfT) would not expect you to provide estimates for infrastructure and operating costs for the scheme.*" The **submission to the Ideas Fund cannot then be taken as any indication that substantial feasibility work has been undertaken in any meaningful way.**

The kind of technical due diligence required to reach a level of definition at which delivery cost can start to reliably be attributed, is GRIP Stages 3 and 4, well beyond what even a successful RYRF Bid would provide for. We are apprised that South Gloucestershire Council has commissioned Network Rail to do this level of design work for reopening a station at Charfield immediately south of the District, the cost of which will exceed £1m. This work is ongoing.

A successful RYRF bid will, in future, get a scheme to GRIP Stage 2. The Transport Appraisal Guidance (published by DfT) has a formal matrix to assess the likelihood of scheme delivery. This is described within the methodology section of the Traffic Forecasting Report (March 2021) prepared by Mott Macdonald for the Plan, at section 4, table 4.1. **Where a rail scheme has reached only GRIP Stage 2, its delivery is assessed within TAG as "hypothetical". In this case the rail measures to serve Sharpness have not even reached Stage 1.** As such a TAG-compliant modelling process should place no weight whatever on their deliverability.

The RYRF Bid exposes, if anything, that the rail vision for Sharpness Vale in terms of evidence of practical deliverability, remains little more than a concept, that barely justifies being described as "hypothetical" under DfT transport appraisal protocols.

As many in the rail sector have already identified, there is a fundamental clash between having a "single guiding mind" for the railway, and it being more responsive to local interests and communities, as the Government intends, given they collectively hold a myriad of conflicting aspirations for the service that is provided, and the way in which finite track and station capacity is used.

Further, the impact of COVID on the railway revenue environment has been hugely worse, and longer-lasting, than on the bus sector. This poses fundamental economic issues for the railway in the medium and potentially much longer term that dwarf the challenges faced by bus and coach.

There is thus a higher level of uncertainty attached to rail investments now than there has been for many years. An extended transition period follows, and the outcomes in terms of process and protocol, much less the specific level of future services on given sections of track, will not be known before this Plan is at Examination. It is thus even more ill-advised to place weight on assumptions about the future size and shape of the railway over the Plan period to 2040 than it has been for the last 20 years.

The Long-Term Planning Process (LTPP) at Network Rail has undergone fundamental changes since 2018 as the result of the formal review of Network Rail processes and governance of rail enhancement undertaken by Hendy and Shaw. The LTPP looks forward typically about 6-7 years. Within the LTPP discipline a new Continuous Modular Strategic Planning (CMSP) protocol has been established. This has replaced the Route Utilisation Strategy (RUS) and Route Study processes that preceded it. The CMSP process has moved away from the traditional large Route Studies, aligned to 5-year Control Periods, towards an ongoing process of continuous planning that addresses more focussed "modules" that can be more targeted to specific lines and geographies, and bridge the 5-year Control Periods (the current CP6 ends in March 2024).

The latest position in Networks Rail's LTPP activity for the line is set out in the West of England Combined Authority 10-Year rail Delivery Plan dated December 2020. A Bristol-Birmingham CMSP Study that determines the feasible capacity of the line to accommodate additional service and frequencies started in 2020 and is believed to exist, having been intended for publication in April 2021. Unhelpfully, it is still not published.

The line is highly constrained in terms of train paths, for a number of reasons that are set out at high level within the Gloucestershire Rail Investment Strategy (GRIS), published in 2019.

There are multiple aspirations to improve frequencies on the Bristol-Birmingham main line both for long-distance as well as more local stopping services. Midlands Connect, the sub-national transport body covering the section of line north of Ashchurch, has aspirations to augment the long-distance function of the whole line as part of strategic connectivity between the West Midlands, Wales and the wider South West.

By contrast, within the County and further south, political aspirations are much more focused on improvement of intra-regional rail connectivity and frequency towards Bristol.

Alongside the CMSP activity, the Western Gateway sub-national transport body sets out its own aspirations in a Western Gateway Rail Strategy (WGRS). This was adopted in September 2020. This appears to set out a multiplication in additional service frequencies between Bristol and both Gloucester and Birmingham, both fast and more local.

Leading these aspirations in the GRIS is the extension of the anticipated "MetroWest Phase 2" half-hourly local service north of Yate where it is currently intended to terminate, to Gloucester to provide a half-hourly stopping pattern. This is intended for delivery in the period 2020-2025 as far as Yate with "extension to Gloucester under review". It has clear and longer-standing support from local authorities and the STB as well as parts of the rail industry, in contrast to reinstating some kind of passenger service from Sharpness, where there is no such endorsement.

Alongside the MetroWest-associated frequency uplift are continuing strong aspirations to open at least one, and potentially two new stations on the main line within Gloucestershire, at Stonehouse (Bristol Road) and Hunts Grove. Further, within South Gloucestershire, funding exceeding £1m has been passed to Network Rail to design a new station at Charfield to GRIP Stage 3/4, which is a deliverable feasibility design of a selected option. The combined market that these stations would address, for destinations both to the north and the south, would exceed that from Sharpness to Gloucester and any intermediate calls made, by a huge margin. Therefore, the business case for assigning any additional train paths to a through stopping service from Bristol to Gloucester would entirely eclipse that for a branch line serving the Sharpness to Gloucester market only, even assuming new stations at Stonehouse and Hunts Grove, which under such a scenario would offer very limited Bristol-bound service.

Longer term to 2030 and 2035, the WGRS has even more radical aspirations for frequency improvements that require multiple additional train paths between Bristol and Gloucester or Cheltenham. WGRS makes mention of multiple Restoring your Railways Ideas bids, but makes no mention of that submitted for Sharpness presumably because it was made under round 3.

Regarding the business case and technical issues surrounding a new branch service to Sharpness, it should be emphasised that Gloucester Station itself lies on a branch from the Bristol Birmingham Main Line. It has a primary station catchment of well over 160,000 people and is a major regional centre: considerably larger than Cheltenham lying on the main line. Bristol to Birmingham trains do not divert to stop at Gloucester, despite it lying less than one mile from the main line. It is largely reliant for connectivity on two, hourly services: one from the north; one from the south. If Gloucester cannot justify train paths sufficient to deliver an extra hourly service to Bristol, why does the applicant believe that two new train paths each way south of Gloucester are justifiable to serve Sharpness?

The relative deliverability and business case for a reopening of the Sharpness Branch Line are also covered, in context, by the Gloucestershire Rail Investment Strategy. As we cover elsewhere our representations, this work makes very plain that the economic benefit of this project relates entirely to the development itself. In other words, it has no justification other than to facilitate this particular development.

Whatever the actual capital and operating costs of the project, which are nowhere explored or stated, this presents the singular issue that **the opportunity costs of investing at Sharpness and then operating the service thereafter, are not conceivably likely to be justified when other projects that offer much greater value are considered. Even before the costs of the project and engineering risks associated with it begin to be meaningfully explored, this casts the greatest doubt on how far the plan strategy and the allocation of Sharpness Vale can rely on any rail provision in the foreseeable future.**

Those costs are likely to be exceptionally high, especially for development on the scale of that proposed, which is likely to be burdened by other substantial abnormal infrastructure costs, including servicing and drainage, and social infrastructure such as schools. The ability of the development to bear such costs is completely undemonstrated, nor can it be. It is entirely reasonable to state that the costs of reopening the line and providing the station would in all probability seriously compromise the development economics of the promotion. The lack of evidence supplied in this regard, in and of itself demonstrates the allocation is unsound, being **inadequately evidenced**, and to the degree the justifying narrative for the allocation implicitly depends so heavily on the rail provision, makes the plan **ineffective**.

We see no proposal for the development to bear the operating costs deficit for such a service which, given the size of the development, lack of population in the vicinity, and the small minority of trips for

which this might provide relevant option, could not conceivably close to covering the costs of operation.

It is as well to add that controlling the costs and delivery timescales of rail investment projects obviously continues to challenge the rail sector. Multiple government studies and the latest Williams Shapps Reform have sought to tackle this. Circumstantial evidence across England makes plain that relying on rail delivery time scales is highly risky, even where projects are fully sponsored by the rail sector and government, already committed and funding has been agreed. The proposals for Sharpness meet none of these criteria. Given that the site is intended to start delivering dwellings by 2027, the timescales for achieving a rail-based solution are, by railway standards, very ambitious, and ultimately speculative.

Local Bus Services

It is technically possible to provide scheduled bus services anywhere there are roads physically capable of accommodating them. There is no particular problem with Sharpness in this regard of course.

According to the proposed mobility hierarchy in section 1.1.1.3 of the Sharpness Vale Highway Capacity Assessment September 2020, road-based passenger transport will address residual off-site demands once the rail-based "mass-transit" demand is stripped out. For there to be any conceivable business case for a rail link – even a limited branch line shuttle terminating at Cam – this demands the bulk of off-site travel demands will be carried by rail. This further undermines the business case for any kind of passenger transport from the site that can foreseeably be envisaged. Indeed, it is unclear what destinations would be served by "extended and improved bus services", once demands to Cam and Gloucester were covered by rail, and to Bristol and the Northern Fringe by Contract Coaches.

The baseline situation for bus is set out at section 2.2.2 of the Sharpness Vale Highway Capacity Assessment.

Local bus services in the immediate area do not "ply their trade" as stated at 2.2.0. which implies they reflect some level of commercial logic and discretion. The single infrequent local public bus service is designed by and contracted by Gloucestershire County Council principally to ensure that a policy objective is satisfied, to provide for essential rural mobility. It is not designed to respond to identifiable suppressed demand, and it is intended to meet only needs for essential travel for those without access to alternatives. It therefore operates whether significant demand exists or not. The very low levels of patronage show the very limited relevance to the vast majority of local residents, reflecting both of low frequency, circuitous routing and extended journey times. This is typical for remote rural areas.

Figure 2.6 well demonstrates this for Route 62 with multiple route variations and diversions. This service (Berkeley-Bristol) which Stagecoach operated under contract until earlier in 2021, is now operated by Bristol Community Transport following re-tender.

School Bus services are irrelevant to justifying development on the site as they are either provided at Council expense to meet statutory requirements set by the Education Act 1944, or are provided in effect by parental subscription. They are in fact demand-responsive by definition, albeit scheduled.

Without a clear service specification, cost and likely revenues simply cannot be determined. However, given that the only destinations of any real account not explicitly covered by rail and contract coach are Stonehouse and Stroud, it might be speculated that a half-hourly extension of a core service between Wisloe and these places might extend to Berkeley and Sharpness.

Such a service would demand at least two additional buses, in the operating cycle especially if it is to circulate around the development, or extend to the Docks. This would require revenues of at least £300,000 per year to be sustainable at current costs, for Monday-Saturday service. Realistic yields would suggest that crudely 200 passengers per day would be needed for this service extension to break even. While this superficially looks quite unproblematic, in terms of what this means for bus modes share to these destinations from Sharpness Vale and its immediate environs, this is simply not credible, especially when the relative attractiveness of car for these journeys were compared. It certainly is highly inconsistent with the trip assignment and demand hypothesised in the promotional supporting material.

Contract Coach Services

This is the only part of the proposed provision where costs and a delivery path are spelled out in any depth.

We would say, to start, that the daily prices quoted by Zeelo to the promoter do look very realistic to us. These are set out at the **Appendix B to the Sharpness non-car Movement Strategy and Funding Appraisal**.

The proposals sought from Zeelo reflect the fact this solution is “easy-in”, but also “easy-out”. There is no need for a very long-term commitment. The proposal is made on the basis that a scaled introduction is feasible but, notably, that while the developer is seeking to provide initially free, and then subsidised travel, the intention is that this would be financially self-sustaining in time. It is notable that Zeelo itself takes no revenue risk. It is an intermediating service management contractor making a guaranteed fixed profit, unlike a commercial bus operator. The overall viability impact and fundamental business case of any service offered through their service poses no business.

The material submitted does make plain that providing peak-only coaches is not cheap. Adding the “managed service” cost on top of the operating costs adds to the price. These vehicles are relatively heavy, have a high capital and thus elevated depreciation cost, and as a direct consequence are also relatively costly to fuel. As a major coach operator we also find them more costly to maintain. This is the time of day when the calls on capacity, especially from school contracts, is at its highest. It is exceptionally inefficient to gauge fleets of large vehicles to operate mainly only for a limited period in the morning and afternoon. Whilst there would be some scope for operators to meet other off-peak demands, such as to distribution parks the long periods of downtime for vehicles and staff are unavoidable with this model.

As a result the range of costs to provide services is not directly well related to capacity: a 16-seat minicoach is priced at about £420 to offer two peak round-trips to Filton, up to about £580 for a 53-seater. These would provide 32 each-way seats and 106 each-way seats respectively. This would improve staff and vehicle utilisation substantially if a single vehicle can double-run. These prices seem to be offered based on this assumption.

Scheduled public bus services make use of this availability to reap such revenues as can be secured off-peak, and broadly speaking if these exceed the marginal costs of operation to any appreciable degree it is rational to do so. It also explains why so many double deck buses are observed lightly laden during the day: a high proportion of the operating costs are covered by peak flows, especially school children. However it is not possible to deploy coaches in this way, which are not designed for scheduled local bus work.

It also makes clear that labour costs significantly affect the overall costs of operation. Use of smaller vehicles does not reduce costs greatly: in fact unit cost per seat per kilometre are actually rather higher for smaller coaches. At every stage of build, therefore, a high proportion of seats need to be filled to cover the costs of providing the service at relatively high fares. The offer is not, in fact, very amenable to lower costs of operation during earlier phases. The developer cannot claim that this strategy provides a low-cost and highly scalable solution in the early days of the development.

To provide even single departures to a credible range of employment destinations is likely to require 6-8 coaches leaving the site per day, each carrying very low numbers. Combining destinations rapidly causes journey times to extend across multiple stops and also in the afternoon, makes services prone to unreliability: from a single employment return point a contract coach can at least be expected to be “on site” at a scheduled time, which is a key element of the USP of the Zeelo model. We note that the service design to Bristol actually combines multiple points, while that to Gloucester calls only at Oldends Lane, Stonehouse. As a result the journey time to Bristol in particular will be hugely extended; the 40-minute Sharpness – City centre journey time assumed in the proposal is clearly unachievable and reflects the fact that Zeelo is not a scheduled transport operator. With 5 intermediate stops and number of double runs into and out of key sites this would add at least 10 minutes just for site access and stopping times – and that assumes passengers are very brisk to board and alight from a high-floor coach.

Even once the development and the service offer has largely matured, taking the *per diem* cost of deploying a coach from the site to Bristol Northern Fringe is about £300 for a single round trip assuming that each coach would offer two round-trips, even a **£10** return average yield requires 30 seats to be sold to cover these costs: about a 60% load factor on a typical full sized 12m (53-seat) coach. This in turn suggests that for full-time office workers the **annual cost would be about £2500**. This is far from being competitive, or, indeed, for many workers, even affordable.

The proposals are actually assuming a daily round-trip fare of only £4. On that basis these services simply cannot come close to breaking even, even if running full, though we concede such a price point would start to look attractive, if the limited timetable offer was sufficiently attractive to give people confidence. Appendix B makes plain that **indicative “net” costs to the developer for each route, at that price point, will be hundreds of pounds per coach per day, even if they are on**

average 80% full. To achieve break even as the proposal was invited to set out, demands price points and levels of use that are simply unrealistic.

The Zeelo proposals makes plain that the remoteness of Sharpness and the nature of likely offsite destinations fatally compromises the ability to readily deliver relevant, marketable and effective options to private car use.

The fact that even a bespoke coach-based shared travel model - which by consolidating demands on a small number of larger vehicles ought to be most cost effective - can only demonstrate permanent losses at the most optimistic of use forecasts, ought to cause the Council very serious concerns. The baseline costs of the gap at 80% occupancy exceed £200/coach/day; about £50,000 per coach per year, as a best case scenario.

Addressing the funding gap

The promoter says virtually nothing about capital nor net revenue costs to provide the transport service to the site.

The Zeelo proposal we examine above is the only reasonably transparent attempt to explore these. The net revenue deficit for any rail service would be a multiple of this given the fixed and marginal cost of the railway are a multiple of those for buses and coaches. The rather casual way in which the promotion assumes the engineering deliverability as well as the funding of these measures can be "taken as read" as the plan is submitted for examination is entirely unjustifiable.

The promoter starts to talk about **innovative new funding models to address any funding gaps**. It says relatively little about this in the main body of its evidence, while absolutely no estimates are provided as to what the funding gap is likely to look like over the development trajectory.

However Page 26-27 Sharpness Non-car Movement Strategy and Funding Appraisal sets out how this gap funding would be addressed.

A "four-pot" system is proposed.

- First, it is suggested all residents would pay for the gap through a service charge. If the services offered were clearly good value and represented a fundamentally attractive alternative to car ownership and use for most residents this would, of course start to offer a credible mechanism. If the charge was affordable and relatively low, this would also be more likely to make the application of such a mechanism in the long term justifiable. Being forced to contribute at a high annual rate to a service or services they do not use or benefit from is an entirely different proposition. Transport services that are not universally relevant or enjoyed by all households to cannot be compared to the use of management charges to pay for communal areas and shared environment, that all residents making a choice to live on a development can realistically be expected to "buy into". The level of the charge is entirely speculative, reflecting the lack of evidence behind the proposals. However at the point that residents were to subsequently take control of the management company, it is very risky indeed to suppose that continuing to levy such a charge would be acceptable. In fact, the lesser the relevance or impact of the services, the more likely this mechanism and the services would be abandoned.
- Second, it is suggested that the developer itself would make contribution to pump-prime sustainable travel solutions from the site. This is already common practice and to be expected. Again, without any clear understanding and sense of evolution of costs and revenues for any provision, it is impossible to evaluate if these contributions would be affordable or sufficient per se, much less that a commercially sustainable provision could be expected.
- Third, MaaS charges are suggested. This refers to a subscription based model giving access through a single platform and intermediary to a wider range of provision. This model has been deployed commercially almost nowhere in the UK, and rarely beyond. Where it has, it is still its infancy. It has serious difficulties in terms of commercialisation. Irrespective, it should be obvious that the MaaS service value is intrinsically linked to the quality of provision. In remote rural areas the overall level of supply for any MaaS component is always going to be compromised on price, availability, or both, as we discuss elsewhere. MaaS charges are not over and above the cost of supply of the service, and typically the **MaaS provider actually takes a commission from the operator not the service user**, as the consultants ought to be aware. We do not consider this source of funding is a discrete source at all and rather is part of the final "farebox" component. The idea that people will pay a substantial MaaS premium simply because they "might" want to avail themselves of wider range of services one day was "tested to destruction" by WHIM in the world's first major roll-out of MaaS in Helsinki. The transport and travel market, while seeking to deliver increased personalisation,

is discovering that far from securing added value from “bundling” products, is in many respects headed rapidly the other way.

- Fourth the “farebox” – or payment directly linked to usage by the traveller. This is key: a service that people value will be one that is used and paid for.

It is ironic that the party controlling the site, a Registered Social Landlord, should be so committed to providing homes on a site so remote from opportunities, where the costs of accessing them becomes potentially so great that the effects of remoteness reinforce socio-economic disadvantage. **The idea that large number of affordable and social housing tenants can and should be expected to pay additional monthly sums for the privilege of living in an evolving new settlement, distant from not only employment and services but also family and social networks**, is a hard one to square with the purpose of the organisation.

The greatest part of the fundamental problem that the elaborate range of material supplied by the promoter is struggling to obviate is simply down to the remote location of the development: cost-effectively providing alternatives that could compete with private car use and secure enough use to be sustainable, is hugely compromised, while the relevance and impact of the provision is also always going to be weaker compared to more compact and corridor-centric patterns of development.

Any other allocation or credible alternative site to Sharpness would find it hugely cheaper and easier to supply a better transport offer across all the modes proposed for Sharpness, at much lower gross costs. In so doing they could (and no doubt will) each leverage existing demands to further support the quality and financial sustainability of the transport offer. In the case of capital projects, such as rail investments that are all but certain to require public money, they would secure a multiple better benefit-to-cost ratio, by leveraging existing demands in key corridors.

- **Traffic Generation**

The promoter at Sharpness Vale goes to extraordinary ends to argue that, in the view of its proposals that they claim will lead to exceptionally high internalisation of trips, with a range of non-car modes proposed to be provide, irrespective of their ongoing financial sustainability, to address residual off-site travel requirements, especially at peak, there will be no need for any significant need to provide additional highways capacity across the wider network. In fact the funding that might typically have been applied to this can be redirected at these sustainable options: clearly a radical idea and one that, taken at face value Stagecoach would in principle strongly support, if we could see that it would be demonstrably effective.

The promoter also advances material that attempts to show a “worst case” scenario where much lesser levels of internalisation and sustainable transport use occur. Section 4 of the Sharpness Vale Highways Capacity Study sets out “fallback” assumptions, in the event that virtually no sustainable travel measures are delivered. The report then works through in Sections 8 and 9, the “worst case” traffic generation that it considers could be expected with a view to demonstrating that these could be satisfactorily accommodated in any event. It concludes, unsurprisingly, that the immediate local network could nevertheless largely do so with modest junction improvements. The promoter reverts back to industry standard procedure: that sustainability far from being governed by NPPF as a whole, including the whole of Chapter 9 therein, simply needs to comply with a single phase at paragraph 109, that “cumulative unmitigated residual impacts” (on the highway network) would not be “severe”. **This is not a test of sustainability. It comes nowhere close to meeting the necessary standard of proof that the site should be allocated.**

This analysis does not, interestingly, extend to cover key junctions likely to be used to reach South Gloucestershire in particular M5 j14 which operates over capacity for significant periods and with the pressure concentrated on tidal peak movements from the western side (am) and to the western side (pm). Development at Sharpness credibly ought to be considered to add significant pressure to this junction.

Leaving this aside, in a sparsely populated deep rural area, where the main employment at Sharpness Docks and at the former nuclear installations has greatly reduced if not entirely ceased, it should come as no surprise whatever that this traffic can be satisfactorily accommodated by a range of fairly modest local junction improvements, especially given significant road construction took place in the 1960s to serve the Berkeley nuclear power station site, and the A38 is a former trunk road that in many respects is wholly over-sized for typical current demands.

This work far from proving that the development is inherently sustainable, but rather demonstrates the contrary; the site is so remote and in so sparsely populated an area that it lies at a “watershed” of traffic origins and destinations, such that the immediate network is very lightly trafficked.

The tone of the Report intends to convince the reader that this "Fall-back" scenario is highly unlikely. Based on our deep and extensive knowledge of passenger transport economics, that extend well beyond local bus services, and detailed knowledge and experience of other large scale residentially-led developments brought forward across England over the last 20 years, we conclude that the overwhelming evidence before us is that something analogous to the Fall-back scenario actually is by far the most likely outcome, if the allocation is confirmed.

The folly of relying on August 2020 data in a study of this kind is evident in the statement at 4.0 that "rail use has returned to 40% and bus use to 55% of pre-pandemic levels". This statement is already wholly out-of-date and was actually quite inaccurate at the time.

In fact, rail use has generally at June 2021, not recovered to more than about 45-50% of pre-pandemic use. Bus networks have come back to more than double this figure in the vast majority of cases, and in parts of Gloucestershire, rather higher: in excess of 75% of use. Part of this is explained by the fact that the railway has been hugely reliant on peak usage for business and commuting purposes. Bus services, especially outside of the main conurbations, serve a very much wider range of trip demands.

The "fallback" assumptions demand a level of improved local bus service that is not specified. Its potential relevance is therefore entirely immune to proper consideration. It is posited that this will generate usage "consistent with other similar areas". Again, these are not discussed. We struggle to think of a comparable settlement of 3000 or some many newly-built homes lying so remote from key destinations and corridors, that offers any more than an hourly service. In fact no bus route serving even Dursley currently operates more than hourly. The best example is Mawsley Village between Kettering and Northampton with about 1000 homes where aside from school provision virtually nothing more is sustainable.

It is neither appropriate or necessary for us to scrutinise this in more detail, but it should be evident to all stakeholders that these models are based on a number of assumptions and forecasts, that are very hard to validate.

Other stakeholders and the County Council in particular also seem somewhat unconvinced so far by the material advanced by the promoter in support of this approach – although this has widely varied of the plan preparation period.

Gloucestershire County Council has undertaken its own modelling of the proposed Local Plan strategy, and the Sharpness cluster sites (that also include PS34 Sharpness Dock and two relatively small allocations at Berkeley, in its updated Strategic Traffic Model (STM). This is a SATURN model which is certainly well-understood and a highly familiar tool that is generally used to support the "predict and provide" approaches to dealing with development related traffic – for which read: "cars".

The IDP confirms that the STM identifies a total of eight 'pinch-points' within the Berkeley Cluster, although nine locations are included in the list. M5 Junction 14, which lies just outwith the County at Falfield to the south, is separately identified. This is consistent with the highway mitigation identified in the Traffic Forecasting Report, March 2021.

The IDP June 2021 states:

"Concerns are raised in the draft LTP that the B4066 and Alkington Lane which link the above site allocations to the A38 Bristol Road are not sufficient to support the levels of growth set out in the Local Plan Review. Corridor improvements remain a short-term priority on the B4066 in the Local Transport Plan." (page 28)

It goes on to say that:

"Although in South Gloucestershire, the transport model has indicated that the new settlement at Sharpness Garden Village may result in capacity issues relating to Junction 14 of the M5 and the B4509 which links the motorway to the A38." (p.29)

Highway mitigation in the form of a new junction at Junction 14 has been tested as part of the transport model. This work has been largely driven by historically-proposed strategic allocations at Buckover and Charfield within South Gloucestershire, and the scale of development currently subject to live applications in Charfield is such that this work has progressed since the west of England Joint Spatial Plan was withdrawn.

"A scheme to widen the A38 and the approach from the B4509 are also included within the highway mitigation. It is expected that development within the vicinity of the junction would provide financial contributions towards addressing capacity issues in this location."

However, consistent with the wider deficiencies we identify in the transport evidence base, no delivery plan or costings have been published. How these interventions and their delivery relates to the housing trajectory on page 306 of the Reg 19 Plan is entirely opaque.

Conclusion

In the light of the discussion and examination of the evidence available, Stagecoach regrettably concludes that the allocation at Sharpness Vale (PS36 Sharpness New Settlement), is unsound on all counts defined in NPPF. We see no remedy for this, as the problem is entirely the result of the location of the development distant from existing settlements, other economic activity, and key existing movement corridors. It demonstrably **cannot be made sustainable**.

The proposed allocation is **contrary to national policy** at NPPF paragraphs 72, 102 and 103.

The proposed allocation undermines achievement of the Plan's Strategic Objectives and Key Priorities, in respect of transport and carbon mitigation, and the spatial strategy of the plan, most clearly expressed in draft Policy CP5, CP13 and EI12, making the plan **ineffective**.

No costs are set out for the packages of mitigations proposed for the development and thus the proposal is inadequately evidenced and thus **unjustified** in this and some important other respects.

Of these, the lack of any explicit support, endorsement or confirmation of deliverability for any element of the public transport strategy from any relevant infrastructure provider or transport operator, either directly or through publicly-available strategies and funding prioritisation statements casts **fundamental doubt on the deliverability** of much of the transport strategy in support of the proposal.

The rail infrastructure and rail service is the particular "point of difference" that might, *in extremis*, start to make the location look appropriate. The particular evidence presented to support these elements is especially weak. In addition, the powers that the developer and any local authority has to influence, much less effect such interventions is minimal. Such evidence that is available such as the Gloucestershire Rail Investment Strategy and the West of England Rail Strategy make clear that both the actual as well as the opportunity costs look very unlikely to support the case for such an intervention. The allocation and the promotional narrative behind it therefore remain essential conceptual and speculative. The proposed allocation is **thus unjustified**.

(Continue on a separate sheet /expand box if necessary)

6. Please set out the modification(s) you consider necessary to make the Local Plan legally compliant and sound, in respect of any legal compliance or soundness matters you have identified at 5 above. (Please note that non-compliance with the duty to co-operate is incapable of modification at examination). You will need to say why each modification will make the Local Plan legally compliant or sound. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible.

Policy PS36 fundamentally compromises the soundness of the plan. **It should be deleted as it is a fundamentally unsustainable location that cannot be made sustainable.**

This begs an alternative new settlement site, since we recognise, as does the Council, that alternatives that extend existing settlements, and previously-developed land within existing more sustainable towns and villages cannot accommodate the remaining development needs of the District in full.

An alternative new settlement project or projects will need to align with the existing evidence base and clearly support and deliver the Key Priorities and Strategic Objectives of the plan in a way that Sharpness evidently cannot.

As a replacement site, Land at Grove End Farm, Whitminster (SDC Ref WHI014) has already been formally consulted upon by the Council in its Additional Housing Options consultation in December 2020, as one of two possible additional strategic new settlement options, the other

being a series of land holdings east of the A38 around Moreton Valence a short distance south of Hardwicke. This indicates clearly that the Council recognises these are two of the most credible options, that could align well with the plans strategy and help to secure its objectives and Key Priorities.

Of the two additional site options offered for comment by the Council, we have clearly indicated to the Council that we consider Land at Grove End Farm (reference WHI014) to be much preferable.

We understand that the land under promotion has the capacity to accommodate 2,250 dwellings and employment land which makes it capable of meeting the Council's residual development requirements to a very great extent within little need to look to disperse development more broadly.

We have ourselves, at all stages in the plan-making cycle, consistently highlighted the potential at Whitminster, in a highly sustainable location. While the A38 through Whitminster is already identified by the County Council and the Council as a Sustainable Movement Corridor, we will be substantially amending our core network from September 2021 to operate a half-hourly service between Gloucester, Quedgeley, Whitminster, Stonehouse (passing very close to the major employment cluster at Oldends Lane) and Stroud.

This route passes or runs well within convenient walking distance of a very wide range of secondary schools, Gloucester College, Gloucester Quays, and employment sites at Hardwicke Quedgeley and Bristol Road. Most of the destinations would be reached with a journey time of less than 30 minutes from Whitminster. This because Whitminster sits between Quedgeley and Stonehouse and as such offers destinations in both directions on the route. At the same time its location benefit from ensuring that journey times to a wide range of destinations are not extended.

Figure 1 from the Draft Sustainable Transport Strategy demonstrates the location of Whitminster at the hub of the identified movement corridors in the STS, where integrated packages of initiatives can readily and demonstrably be delivered. Its strategic location is probably one of only three locations in the plan area that is likely to be able to "*showcase multimodal use with a focus on sustainable travel modes*": The Site at Whitminster is exceptionally well-placed to support the plans policy approach set out at CP5, CP13 and EI12, being located at the confluence of the A38/M5 and A419 corridors. It therefore sits on and can facilitate the development of a multi-modal node at this key intersection. This mean that the site is likely to further benefit from public transport improvements along the A38 from Cam and Dursley to the south. The current hourly service diverts via Eastington but it is neither necessary nor likely to be advantageous for all journeys to do this at the point bus services frequency from the Dursley/Cam/Wisloe area towards both Stonehouse/Stroud and Gloucester is improved.

This interchange potential is recognised by the County Council within the Draft LTP Review. It could also include the ability for longer distance coaches to quickly leave or rejoin the motorway. The site could credibly help to facilitate this.

There is a wide range of evidence before the Council including the Employment Land Review, indicates is also attractive to the market, and aligns with the clear evidence from the GFirst

LEP that seeks to ensure employment needs are met having good access to the M5 at key junctions.

The other two obvious localities where sustainable transport infrastructure and services can be catalysed to strongly support the plan's development strategy and achieve its strategic objectives and key priorities are around Cam for Dursley Station (including Draycott and Wisloe) which is already identified in the plan for strategic development; and conceivably in the Hardwick area.

The plan already identifies land at Hardwicke Green for strategic development in this locality. This might suggest that Moreton Valence is also a good option.

Unfortunately, Moreton Valence does not sit anything like as comfortably as Whitminster next to the A38 in a manner that, within the land believed to be available, allows for the development footprint to accommodate an especially attractive or efficient bus diversion. It is also a rather smaller site, the capacity of which is less well defined. While it is nearer to employment and facilities at Quedgeley and Gloucester, once the whole journey time budget is considered, this would not be more than 5-6 minutes difference; by contrast, journey times to the south would be extended a similar amount. It would be much less readily able to benefit from proximity such that cycling offered a credible option than Whitminster. Development at Moreton Valence lies south of the busy B4008 dual carriageway connection between M5 junction 12 and the A38, which presents a high level of severance. By contrast, development at Whitminster can clearly take advantage of Grove Lane which provides a natural quietway directly towards key destinations east of the M5.

A suitable, achievable site for an efficient multi-modal hub that draws together range of bus and longer distance coach services minimising diversion and circuitry is not identifiable at Moreton Valence, nor do we understand that it is proposed, contrasting with at Land at Grove Farm, where this important potential has already been identified and taken up by emerging proposals.

(Continue on a separate sheet /expand box if necessary)

Please note In your representation you should provide succinctly all the evidence and supporting information necessary to support your representation and your suggested modification(s). You should not assume that you will have a further opportunity to make submissions.

After this stage, further submissions may only be made if invited by the Inspector, based on the matters and issues he or she identifies for examination.

7. If your representation is seeking a modification to the plan, do you consider it necessary to participate in examination hearing session(s)?

No, I do not wish to participate in hearing session(s)

Yes

Yes, I wish to participate in hearing session(s)

Please note that while this will provide an initial indication of your wish to participate in hearing session(s), you may be asked at a later point to confirm your request to participate.

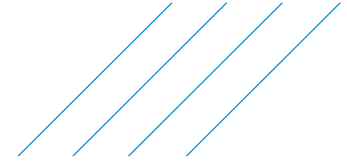
8. If you wish to participate in the hearing session(s), please outline why you consider this to be necessary:

See comments set out in our representations regarding the pan strategy and evidence base.

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate in hearing session(s). You may be asked to confirm your wish to participate when the Inspector has identified the matters and issues for examination.

9. Signature:

Date:



Nick confirmed that Stagecoach had responded to the Regulation 19 consultation with a detailed report on public transport provision assumptions for developments included in the Stroud LDP.

Atkins to review Reg 19 Response for specific information on Sharpness. No Statement of Common Ground is currently in negotiation with Stagecoach for the Sharpness site and concern was raised about its isolated location in respect to the provision of a new service

Atkins

Currently no Statements of Common Ground have been signed, but some are in discussion. This will be shared directly with the PiE if appropriate and signed.

For many of the developments Stagecoach is supportive in principle, but the detail does need to be bottomed out. Nick is in discussion with a number of the developers and therefore is able to confirm in principle that routes could be extended into new / existing sites if there is a future increase in patronage expected.

Nick confirmed he would attend the PiE. Therefore, allowing Atkins to inform the Inspector that if they wanted detailed information they could question this from Stagecoach direct. This was to avoid Atkins being placed in a position of having to 'second guess' what Stagecoach's opinion was.