



Submission from the Slimbridge "Quiet Lanes" Group concerning the proposed development (Wisloe) within the Parish of Slimbridge.

The group was formulated to improve the amenity of the road's, lanes, and footpaths within the boundaries of the Slimbridge Parish. Following presentations to Slimbridge Parish council the group were affiliated to the council and given approval to develop proposals.

The principles within the "Quiet Lanes" legislation were adopted, by the group, as guidelines to develop actions, within a plan, which would seek to improve the elements of safety, recreation and the environment within the development of a "community project" which seeks to benefit, residents, businesses and visitors to the parish of Slimbridge

Quiet Lanes are an initiative of the Countryside Agency, supported by the Department for Transport. They are a network of rural roads where minimal traffic calming measures are used to enable all road users to 'share with care'.

- Travel is easier for cyclists, walkers, horse riders and those in wheelchairs
- Drivers are encouraged to travel at slower speeds
- Everyone using the lanes must consider their behaviour towards other users and 'share with care'
- Local authorities, interest groups and local communities develop a partnership to establish a local consensus about local travel
- Research is carried out into how people travel
- Communities are encouraged to 'own' the lanes

- People show respect for the local environment and its character and landscape is managed and conserved
- Links with other routes may be developed to create local networks for communities to use.

The increased traffic generated from 1500 additional homes and potentially 3000 vehicles will have a dramatic effect on the rural road network, which is currently a haven for walking, cycling, horse riding and relaxing. All of these activities have a very positive effect on physical and mental health which will be threatened should this proposal proceed. Therefore, the steering committee of the Quite Lanes Group have many concerns with regard to the proposed development within Slimbridge Parish which we have expressed below.

We have been in contact with the Wisloe Action Group and support their opposition to the proposed development. We have studied their submission and believe that the following items are relevant to the Quite Lanes Groups key aims to improve the elements of safety, recreation and the environment within the Parish of Slimbridge.

Road Traffic

There can be no doubt whatsoever that the building of up to 1500 new homes at Wisloe along with the large number of other proposed homes in both the Cam and Berkeley clusters will stress the current road infrastructure in the immediate vicinity even more. Furthermore, the developments further afield such as at Hardwick and Falfield will only serve to accentuate this stress.

Transport and transport planning do not fall within the strict remit of the District Council it has obligations through the planning process to consider the effects of developments on road infrastructure. The Department of Transport Circular 2/13 concerning The Strategic Road Development and the Delivery of Sustainable Development (a policy to be read by Authorities and developers alike) notes the following:

'Development proposals are likely to be acceptable if they can be accommodated within the existing capacity of a section (link or junction) of the strategic road network, or they do not increase demand for use of a section that is already operating at over-capacity levels, taking account of any travel plan, traffic management and/or capacity enhancement measures that may be agreed. However, development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.'

The A38 access to the M5 at Junction 14 is already operates to capacity as noted by the Highways and Transport Technical Overview commissioned by Earnest Cook Trust and Gloucestershire County Council.

It is a major cause of congestion at the busiest times of the day on the A38. We would suggest the cumulative impacts are already severe with existing traffic and will only get worse.

In November 2019 SDC published its Draft Sustainable Transport Strategy Document. Along with SDC's 'commitment' to be carbon neutral by 2030 there are many facets that are laudable. The document has seen much energy put in extolling the health benefits of cycling and walking and the provisions for improving this. However, for these aspirational policies to be taken seriously there needs to be acceptance of economic reality and an honesty with the public particularly with regards to proposed developments and the timeframes involved.

The STS document for the district notes the following commuter 'journey to work' statistics;

Work from home	9%
Walk	9%
Cycle	2%
Bus	2%
Train	1%
Car Passenger	5%
Self-Drive car/van	70%
Other	2%

This is hardly surprising – we do live in a rural community. The average commute distance is 17km, again consistent with the fact that people largely work away from the locality. Even if public transport use and cycling to work was doubled there would be negligible impact on car use. The Cycling and Walking Investment Strategy (2017) is probably a useful reference for town dwellers. The car is seen as a necessity not just for commuters but families, shoppers etc. This is the economic and practical reality. Indeed, SDC itself recognises that public transport is infrequent and often unreliable.

The proposed Wisloe development of 1500 homes plus a further 1530 in Cam could see a further 3000 vehicles 'on site' and possibly many more as 47.5% of SDC households have 2 or more vehicles. That is more vehicles (however green they may be in the future) taking people to and from work because the places of work are not in Wisloe!

Furthermore, the Sustainability Appraisal Scoping Report for the Stroud District Local Plan Review (LUC April 2018) notes the following with regards to transport issues.

Transport

2.54 The NPPF encourages local planning authorities to promote land uses, transport infrastructure and technologies that reduce the need to travel, greenhouse gas emissions and congestion. Developments that will generate significant movement are required to be located where travel can be minimised, and the use of sustainable transport modes maximised.

2.55 The draft revised NPPF requires that "transport issues should be considered from the earliest stages of plan-making". The scale, location and density of development should reflect "opportunities from existing or proposed transport infrastructure". To help reduce congestion and emissions and improve air quality and public health the planning system should focus significant development "on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes." The draft revised framework also requires that planning policies support an appropriate mix of uses across an area to further help reduce the need to travel as well as the provision of high quality walking and cycling network.

The proposed development proposal does not seem commensurate with the above with regards to current commuter trends so it is inevitable that more cars will fill our already busy roads.

Pedestrian Traffic

The A4135 crosses the main railway line. There is currently a narrow pavement on the north side of the carriage way. It is not fit for purpose. Increased pedestrian traffic would necessitate an alternative means of crossing the line probably by a separate bridge. Furthermore, residents on the south side of the main road will need means to cross safely. To do so safely will surely mean a traffic light controlled crossing which again will hinder traffic flow at peak times. The A38 is a very busy road so crossing this to access Slimbridge Village and the canal is dangerous so improvements will have to be made.

SETTLEMENT TIERING

This document assesses the issue of tiering for the villages immediately affected by the proposed Wisloe development.

The proposed Wisloe development is bounded by the M5, A38, railway line and river Cam and is entirely within the parish of Slimbridge. The main settlements which would be affected by the proposal are the main villages of Slimbridge and Cambridge and the surrounding hamlets of Gossington and Wisloe.

The Wisloe proposal is being marketed as a 'Garden Village' but that is irrelevant as far as this assessment is concerned which is purely based upon the impact to tiering resulting from introduction of a large housing estate.

The current Wisloe plan stretches from Cambridge in the north to Gossington in the south tracking the edge of the A38. The edge of Slimbridge village, in the centre of the proposal abuts the A38, Wisloe is completely surrounded in the proposal. One road width of separation is not sufficient delineation between settlements to distinguish between them. Essentially, the Wisloe proposal joins all four settlements with Wisloe.

The latest version of the Local Plan states Slimbridge to be Tier 3b and Cambridge to be 4a (was previously 5). Tier 3b states 'These small and medium sized rural villages provide a range of services and facilities for their communities, but some have poor access to key services and facilities elsewhere and they all face significant environmental constraints to growth'. Tier 4a states 'These small and very small villages provide a limited range of services and facilities for their communities. These settlements are relatively less sustainable for growth and most face significant environmental constraints. Both Tier categories state they are **not suitable for growth** yet the proposed Wisloe development would join them all up creating a single settlement three times the current size (from 500 to 2000 dwellings). This housing growth increase does not comply with the current Tier rating definitions for the villages contained in the Local Plan.

Furthermore, the current housing developments proposed for the north of Cam, if accepted, will join with the Wisloe development thus creating a single amorphous urban sprawl from the Cotswold AONB in Dursley through to the Severn Valley. The coalescence of the villages around Wisloe with Cam and Dursley (both Tier 1 settlements) will remove their individual identity and effectively make all the villages Tier 1 settlements as well. This new large Tier 1 urban conurbation which coalesces the villages of Slimbridge, Cambridge and Gossington with Cam/Dursley is contrary to SA8 of the SDC Sustainability Appraisal.

It does not:

- *SA 8: Conserve and enhance the local character and distinctiveness of the landscape.*
- *SA 8.1: Protect and enhance the District's sensitive and special landscapes.*
- *SA 8.2: Prohibit inappropriate development that will have an adverse effect on the character of the District's countryside and settlements.*
- *SA 8.3: Promote the accessibility of the District's countryside in a sustainable and well-managed manner.*
- *SA 8.4: Prevent coalescence between settlements.*

- *SA 8.5: Protect and enhance the District's natural environment assets (including parks and green spaces, common land, woodland and forest reserves*

Assessment of 'Tiering' concludes the Wisloe proposal does not comply with the level 3 and 4 tiering definitions for Slimbridge and Cambridge respectively defined in the Local Plan and should not be accepted. The Wisloe proposal would result in major coalescence, loss of individual village identity and absorption into a significant new development which would grow the villages by a factor of three.

IMPACT TO THE RURAL COMMUNITY

SDC's Core Strategy states that it "aims to protect and enhance the natural and built environment of the district". The Stroud area is officially designated a Rural District with the Severn Vale, in which the Slimbridge Parish is located, being its most rural part.

The Sustainability Appraisal Report states that the District is "mostly rural in character with 51.6% of the land classed as rural. The population density in the most rural parts of the District is less than one person per hectare.

www.openaccessgovernment.org states that a Garden Village "By definition, it is a piece of brownfield land that is used to develop new areas for families and businesses".

This is not a of the proposed Slimbridge site which is primarily greenfield apart from the Wisloe Farm site which resides directly below the A4135 and contains an arena and agricultural barns.



Photo 1 – North of the A4135

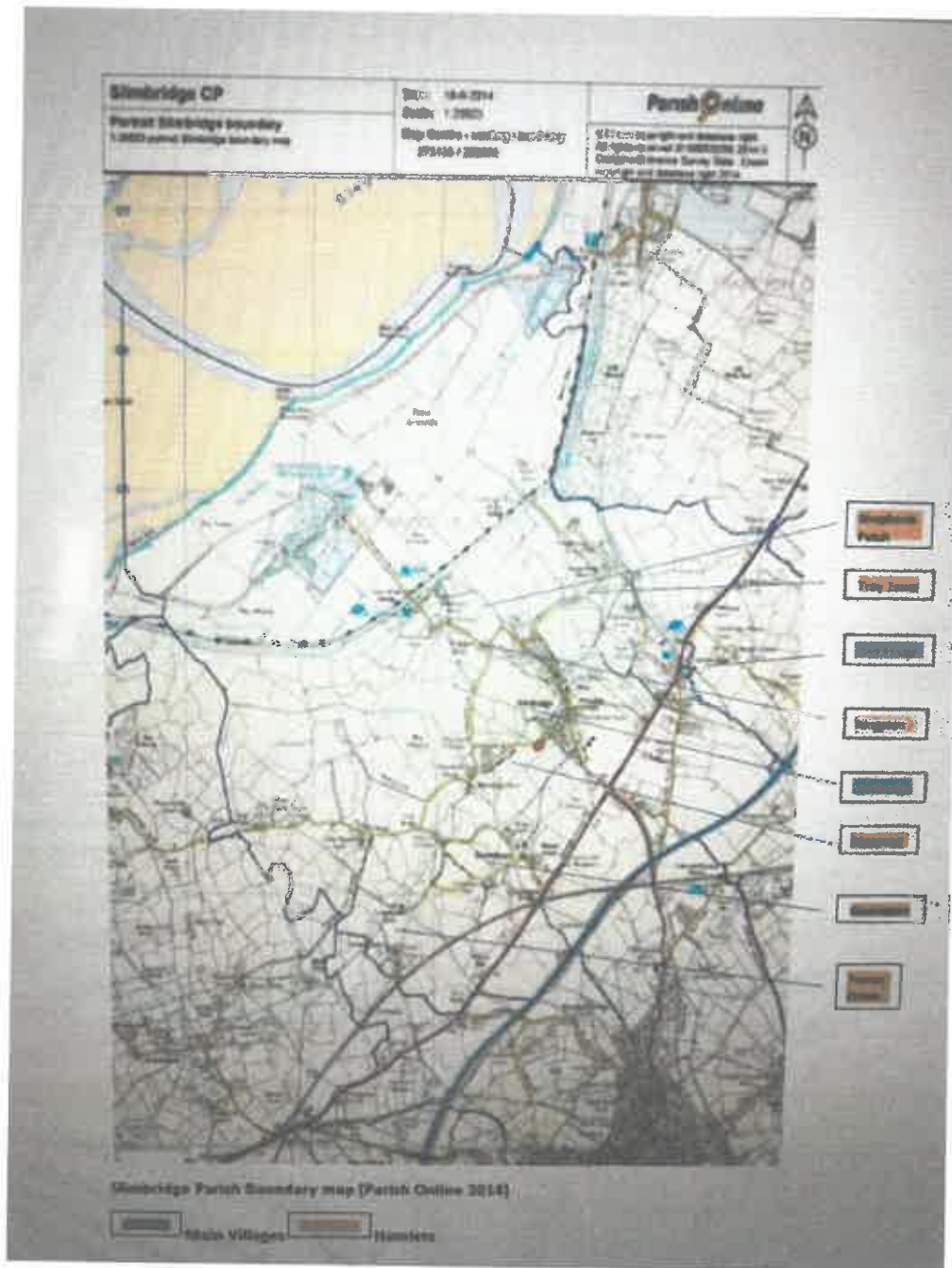


Photo 2 – South of the A4135

The Slimbridge Village Design Statement provides detail on the rural natural and design of how the Parish has evolved, the settlement patterns, over time with small developments and primarily open flat farming countryside

The Slimbridge Parish has developed organically and is linear in form with dispersed communities as shown in the map below

<https://www.stroud.gov.uk/media/241059/2016-12-final-slimbridge-village-design-statement.pdf> .



The proposed allocation of such a large site physically joins Slimbridge, Gossington, Cambridge and Cam will fundamentally change the rural community forever as it will become a town. It is not in keeping with the current built form. The proposal to include a town sized housing estate in a very rural community will destroy the very nature, beauty and character of what makes it a wonderful place to live, work and play.

ENVIRONMENTAL CN2030

The proposed development in Slimbridge Parish will have massive impact on the area across the full spectrum of environmental considerations.

The Draft Local Plan was produced in advance of CN2030 and the Proposed Development in Slimbridge Parish falls short across numerous policies within CN2030.

The Stroud District Green Party has commented on this as follows: -

The current consultation was launched in advance of the District Council declaring a climate emergency and committing itself, alongside other progressive local authorities, to reaching carbon neutrality by 2030. Attaining carbon neutrality by 2030 will have challenging implications for our revised local plan. It will require setting aside sites and policies to encourage significant additional renewable energy generation, including in appropriate locations within the AONB. New houses will need to be future proof and carbon zero, which will also reduce future energy bills and boost our local skills base in low carbon building. Reducing travel and modal shifts in transport will be important, transport needs to have an inbuilt hierarchy, which prioritises those modes of transport with the least greenhouse gas emissions (walking, cycling, buses and trains, as well as enabling the growth of electric vehicles and upcoming new transport technologies). Additional high-quality agricultural land will need to be retained for human food production and other land for carbon sequestration.

If well planned all these changes can make our district a cheaper, safer, more attractive, more communal, more biodiverse and resilient place to live.

The Green Party objects to the Tory Government imposed demand that land is allocated for 12,800 additional homes by 2031. We believe this figure has been calculated using a flawed methodology and is undeliverable without significant damage to our environment and communities. We believe that if land is allocated within Stroud District to meet the housing needs of Gloucester City, then this

number should be deducted from, rather than additional to, the numbers being forced upon Stroud District Council.

The Council needs more powers to force developers to build on brownfield sites and smaller, affordable homes. We are aware that the greatest need is and will be for both young people and young families as well as an increasing elderly population.

The proposed development will consume high quality agricultural land whilst increasing emissions through higher commute miles and private car usage.

SDC Policy CP14 High quality sustainable development states: -

High quality development, which protects, conserves and enhances the built and natural environment, will be supported.

Development will be supported where it achieves the following:

- 1. Sustainable construction techniques, including facilities for the recycling of water and waste, measures to minimise energy use and maximise renewable energy production*
- 2. No unacceptable levels of air, noise, water, light or soil pollution or exposure to unacceptable risk from existing or potential sources of pollution. Improvements to soil and water quality will be sought through the remediation of land contamination, the provision of SuDS and the inclusion of measures to help waterbodies to meet good ecological status*
- 3. Adequate water supply, foul drainage and sewage capacity to serve the development and satisfactory provision of other utilities, transport and community infrastructure*
- 4. No increased risk of flooding on or off the site, and inclusion of measures to reduce the causes and impacts of flooding as a consequence of that development*
- 5. An appropriate design and appearance, which is respectful of the surroundings, including the local topography, built environment and heritage*
- 6. Re-use of previously developed land and/or the adaptation of existing buildings that make a positive contribution to the character of the site and surroundings, unless demonstrably unviable*
- 7. No unacceptable adverse effect on the amenities of neighbouring occupants*
- 8. Contribute to the retention and enhancement of important landscape & geological features, biodiversity interests (including demonstrating the relationship to green infrastructure on site and wider networks)*
- 9. Contribute to a sense of place both in the buildings and spaces themselves and in the way in which they integrate with their surroundings including appropriate*

landscaping, biodiversity net gain, appropriate open space, sport and amenity space provision

10. A design and layout that aims to assist crime prevention and community safety, without compromising other design principles

11. Efficiency in terms of land use, achieving higher development densities in locations that are more accessible by public transport and other non-car modes and where higher densities are compatible with the character of the area and the setting of the development

12. It is not prejudicial to the development of a larger area in a comprehensive manner

13. Safe, convenient and attractive accesses on foot and by cycle and suitable connections with existing footways, bridleway, cycleways, local facilities and public transport

14. It is at a location that is near to essential services and good transport links to services by means other than motor car.

The proposed development In Slimbridge Parish falls short on items 2, 3, 4, 5, 7, 8, 11 and in particular 14 as the essential services are located in Cam and Dursley and the train station is only really accessible by car.

Sustainability Appraisal Report for the Stroud Draft Local Plan 65 November 2019 SA10 possess the question

SA 10.2: Does the Plan promote more sustainable transport patterns and reduce the need to travel, particularly in areas of high congestion, including public transport, walking and cycling?

SA 10.3: Does the Plan promote more sustainable transport patterns in rural areas?

With the average commute distance being 17km and essential services being some miles away cycling or walking is not realistic. Public transport continues to be unpopular with only 3% of the population utilising it regularly so the car will remain a necessity not just for commuters but families, shoppers etc.

The proposed development In Slimbridge Parish falls short in both areas.

Conclusion

The proposed development In Slimbridge Parish falls short in so many areas highlighted within CP14 and in particular CN2030 that it is difficult to see how it can conceivably stay within the local plan.

COALESCENCE

Slimbridge Parish contains two main villages, these being Slimbridge and Cambridge plus the hamlets of Gossington, Moorend, Tumpy Green, Kingston, Troy Town and Shepherds Patch, the parish covers approximately 6.5 square miles. A huge concern of the Parishioners is losing the identity, charm and individuality of these villages and hamlets.

SDC policy ES7. Paragraph 6.43 notes

"the principle pressure on the landscape arising from new development is erosion of the separate identity, character and functional amenity of settlements and the setting, and impacts on the open countryside".

The Proposed development within Slimbridge Parish will have huge impacts on the open countryside and result in the Coalescence of Slimbridge, Cambridge, Gossington and indeed the M5 and Cam.

The Draft Plan 2019 goes on to state: -

Core Policy CP15 A quality living and working countryside

In order to protect the separate identity of settlements and the quality of the countryside (including its built and natural heritage), proposals outside identified settlement development limits will not be permitted except where these principles are complied with:

- 1. It is essential to the maintenance or enhancement of a sustainable farming or forestry enterprise within the District; and/or*
- 2. It is essential to be located there in order to promote public enjoyment of the countryside and support the rural economy through employment, sport, leisure and tourism; and/or*
- 3. It is a 'rural exception site', where development is appropriate, sustainable, affordable and meets an identified local need; and/or*
- It is demonstrated that the proposal is enabling development, required in order to maintain a heritage asset of acknowledged importance; and/or*
- 5. It is a replacement dwelling or subdivision; and/or*
- 6. It is a house extension; and/or*
- 7. It will involve essential community facilities; and/or*
- 8. It will involve the re-use of an existing rural building; and/or*
- 9. It is a scheme of up to 9 dwellings at a designated Tier 4a or 4b settlement, supported by the local community.*

The Proposed development within Slimbridge Parish doesn't appear to fit any of the above criteria.

Sustainability Appraisal Report for the Stroud Draft Local Plan 65 November 2019 possess the questions

SA 5.3: Does the Plan safeguard and enhance the identity of the District's existing communities and settlements?

SA8, 8.4: Does the Plan prevent coalescence between settlements?**SA 8.5: Does the Plan protect and enhance the District's natural environment assets.**

The Proposed development within Slimbridge Parish doesn't safeguard settlement identities, prevent coalescence and certainly does not protect or enhance the natural environment.

The Slimbridge Village Design Statement December 2016

Slimbridge Landscape and Natural Environment (SLN) Key Objectives: To conserve the identity of the separate villages of Slimbridge and Cambridge and the smaller hamlets surrounding these. The open and rural nature of the area should be conserved and encouragement for the natural environment to be preserved.

SLN 2 In order to protect the separate identity of the villages and hamlets and the quality of the countryside (including its built and natural heritage), proposals outside identified settlement development limits will not be permitted that do not accord with the principles in the Adopted Stroud District Local Plan (2015) and particularly where they also involve the loss of quality landscape features or result in an adverse impact on local character. It is important to prevent the areas merging into one another so as each hamlet can keep its own identity and preserve its setting and character. Relating to policy CP15 in the Local Plan referring to quality living and working in the countryside; and ES12 as this refers to site appraisal using local design statements and ensuring design and access statements.

In addition to this the expansion of Cam will effectively result in one urban sprawl from the Cotswold ANOB right through Slimbridge Parish to the Severn Estuary. The M5 motorway cannot be considered a natural and clear break between the two settlements. If the plan is adopted it will result in 3030 new homes either planned, in planning, or proposed to be built at Cam and Wisloe.

This makes it the single largest house concentration in the district and therefore when assessing the impact on the environment, service infrastructure and road infrastructure it is only right to consider this as one big development and not to dilute the issues by stating that it is two!

One of the defining characteristics of a 'Garden Village' (as Wisloe is described) is a 'new discrete settlement, and not an extension of an existing town or village. This does not exclude proposals where there are already a few existing homes. Clearly therefore, the proposed Wisloe development, which joins Dursley/Cam with Slimbridge, Cambridge and Gossington is not a Garden Village

Conclusion

The proposed Development falls outside the settlement development limits of both Slimbridge and Cambridge and falls very short of protecting the identities of the settlements of Slimbridge, Cambridge and Gossington. In addition to this the issues with Coalescence with Cam creates one large urban sprawl from the Cotswold Escarpment through to the Severn Estuary and therefore it should be removed from the draft plan.

ECOLOGY

The proposed Slimbridge site does not mean the requirements of the National Planning Policy Framework (NPPF) which states;

"To contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

The proposed Slimbridge site cannot contribute and protect the natural environment as it will damage the wildlife that it sustains.

Recreational Catchment Zone

The proposed Slimbridge site is located within the identified 7.7km recreational catchment zone of the Severn Estuary which is designated as a Special Protection Area (SPA), a Special Area of Conservation (SAC) and Ramsar site (RS) for its overwintering birds, estuarine habitats and associated species of fish. Habitat Regulation Assessments (HRA) concluded that proposed residential growth identified in the Local Plan within Severn Estuary SAC/SPA/Ramsar could have a likely significant effect. In 2016 a [Visitor Survey Report](#) concluded that Likely Significant Effects on the conservation status of the SPA could not be ruled out.

The Strategy for Avoidance of Likely Significant Adverse Effects on the Severn Estuary SAC, SPA and RS is based on the Stroud District Local Plan (2015) which did not include such a large proposed development so close to the estuary, and is based on housing commitments of 11,400 (not the current proposed forecast which exceeds requirements).

New residential development will further exacerbate pressure to the catchment zone of the Severn Estuary as it brings more people to the local area and will affect the sensitive area through recreational disturbance. As set out in the Habitat Regulations Assessment of the Stroud District Local Plan (carried out by URS in 2014), it was identified that recreational pressure had the potential to impact upon the qualifying features for which the Severn Estuary was designated, in particular through disturbance to the bird species which use the Estuary for feeding and roosting during the Winter. When this strategy was developed it was never envisaged that SDC would propose a site of such massive scale and proximity to the Severn Estuary.

Wildfowl

The WWT is one of the world's largest and most respected wetland conservation organisations working globally to safeguard and improve wetlands for wildlife and people. The WWT have a network of UK visitor centres comprising 2,600 hectares of globally important wetland habitat. WWT Slimbridge and the surrounding land is of significant International importance. The proposed site is flat open space only 2.75km from the WWT. Protected wildfowl are recorded on the proposed site and the surrounding areas. A development on this site would impact wildfowl feeding grounds and cannot be mitigated against as once the land is covered in buildings the wide and open space is lost forever.

The Ecological Survey conducted on behalf of the developers is the summary of a field walk which took place on a day in September 2019 which primarily focused on taking photographs and hedgerow habitat, and a desk based summary drawn from one report and is not representative of the site, and surrounding land, wildlife. Mammals and birds are transient, and this has not been taken into account by the developers' assessment at all.

Gloucestershire's Local Environmental Records Centre (GCER)

DCER provide a unique source of information about the wildlife and natural environment of our county. Their database is updated continuously and forms a primary evidence base. The data below is based on an estimated 2km zone. However, as mentioned above the ecological impact should be considered for a much wider area (see this 7.7km recreational catchment zone).

AIR QUALITY

Objective

To gather air quality data for the site PS37 and determine the likelihood of meeting National Air Quality Standards.

References:

1. UK Air – Air Information Resource interactive map <https://uk-air.defra.gov.uk/data/gis-mapping/>
2. Stroud District Council, 2019 Air Quality Annual Status Report <https://www.stroud.gov.uk/environment/environmental-health/pollution-and-nuisance/air-quality>
3. Sustainability Appraisal of the Stroud District Local Plan Review – Draft Plan, November 2019, <https://www.stroud.gov.uk/environment/planning-and-building-control/planning-strategy/stroud-district-local-plan-review>

National Targets

The UK government, based on EU requirements, has set limits for air pollution for a wide range of pollutants, covering gases such as NO₂, heavy metals such as lead and particulates. The key pollutants which are measured at national and local level are NO₂, PM₁₀ and PM_{2.5}. The mean annual concentration limits are 40 µg/m³ for NO₂ and PM₁₀ and 25 µg/m³ for PM_{2.5}. In addition, limits are set for one hour means.

Comments on references

Reference 1 is an interactive map published by DEFRA, based on 2018 data. The map covers 1 km squares and gives concentrations of NO₂, PM₁₀ and PM_{2.5}. in the units required for comparison with the national limits.

Reference 2 is published by Stroud District Council and gives 2018 air quality data for the Stroud district. The Council deploys automatic instruments on two sites and non-automatic instruments on 22 sites. The sites are mainly throughout the north of the district and four sites are reasonably close to the M5. The closest monitoring site to PS37 is site 37 near Westend Farm, Grove Lane, Westend and is approximately 150 metres from the M4 at Junction 13. Three others monitoring sites are reasonably close to the M5, site 31 at Upton St Leonards, site 33 at Hardwicke and site 35 at Haresfield.

Analysis of the data

Analysis of the data from reference 1 for the PS37 site, gives the following results:

Mean annual concentration NO₂, 12.23 µg/m³.

Mean annual concentration PM₁₀, 15.04 µg/m³.

Mean annual concentration PM_{2.5}, 9.33 µg/m³.

Analysis of the data from reference 2 for nearby locations gives the following results:

Site 37 mean annual concentration NO₂, 20.34 µg/m³.

Site 31 mean annual concentration NO₂, 22.52 µg/m³.

Site 33 mean annual concentration NO₂, 32.83 µg/m³.

Site 35 mean annual concentration NO₂, 21.35 µg/m³.

Unfortunately, relevant data from Reference 2 were not available for PM₁₀ and PM_{2.5} as the two automated instrument sites were too far away from the PS37 site to be useful.

One hour mean data is not available but based on the annual means found, it is likely that the limits would be met.

Observations

Current on site measurements for NO₂, PM₁₀ and PM_{2.5} concentration levels are not available for the PS37 site but available data shows, with a low degree of confidence, that current limits for NO₂, PM₁₀ and PM_{2.5} concentration levels are probably not exceeded.

The South of site PS37 is of particular concern because of the elevated nature of the M5 at this point. NO₂ is denser than air (1.83 vs. 1.0) and will tend to concentrate in this area of PS37.

Increased volume of traffic on the M5, A38 and A4135 are inevitable due to the development of site PS37 and future developments in Cam and Sharpness, leading to increased levels of pollutants. Queuing traffic at future roundabouts and traffic lights will also add to the problem. This view is supported by Reference 3, page 104, paragraph 5.27, which states: '*significant negative effect is expected for draft site allocation PS37 in relation to SA objective 10: air quality.*'

SDC Core Policy CP14 states: '*No unacceptable levels of air, noise, water, light or soil pollution or exposure to unacceptable risk from existing or potential sources of pollution.*'

SDC Core Policy ES3 states: '*Permission will not be granted to any development which would be likely to lead to, or result in an unacceptable level of: 2. ...environmental pollution to water, land or air...*'

SDC Core Policy ES5 states: '*Development proposals which by virtue of their scale, nature or location are likely to exacerbate existing areas of poorer or marginal air quality, will need to demonstrate (potentially by provision of a formal air quality assessment) that effective measures can be taken to mitigate emission levels in order to protect public health and wellbeing, environmental quality and amenity. Mitigation measures should demonstrate how they will make a positive contribution to the aims of any locally agreed air quality and/or transport strategies for Stroud District...*'

SDC SA 10.1 states: '*Does the Plan avoid, minimise and mitigate the effects of poor air quality*'.

As shown above air quality would be adversely affected by the development of site PS37 and may exceed national limits, mitigation measures are not specified and hence development of site PS37 would not meet the requirements of Core Policies CP14, ES3 and ES5 or SA objective 10

The effect of the increase in air pollution on the Natura 2000 site at Slimbridge, which is of world importance and less than 3 km from PS37, is unknown.

Conclusions

Analysis of the referenced data for site PS37 shows that current data is sparse, and levels of air pollutants are not well quantified. Stroud District Council's own analysis for the development of site PS37 shows a significant negative effect on air quality. Core Policies CP14, ES3 and ES5 and SA objective 10 would not be met. Also, the effects on wildlife at a site of world importance are unknown. Therefore, site PS37 is not suitable for development because of its effect on air quality.

NOISE POLLUTION

References

1. Reference 7952/PR/BL, dated October 2019
2. BS 8233:2014, Design criteria for external noise
3. Review of EIS Application 2018/0758/EIAS
4. Auditory and non-auditory effects of noise on health, Basner et.al., *The Lancet*, Volume 383, Issue 9925, 12–18 April 2014, Pages 1270
5. Does noise affect learning? A short review on noise effects on cognitive performance in children, Maria Klatté, Kirstin Bergström and Thomas Lachmann , *Front. Psychol.*, 30 August 2013

Background

Reference 1 is a noise impact assessment and environmental noise survey carried out on behalf of the Ernest Cook Trust and Gloucestershire County Council at site PS37.

The main sources of noise were assessed as road traffic noise, railway noise and commercial noise. The survey was carried out to the appropriate standards using correctly calibrated equipment at six locations on the site.

Very high levels of noise were observed on the site caused by road traffic, reaching a maximum of 88 dB(A). Passing trains reached a similar level. Noise from the industrial site at Rocket Rentals was also observed to be high.

Modelling using the results obtained showed that the majority of the site had transport daytime equivalent noise levels of >65 dB LAeq (16 hour), night-time equivalent noise levels >60 LAeq(8 hour) and night-time maximum noise levels >75 dB LAFmax. This implies that in order to meet the required standard for internal noise the walls and roof can be of a conventional construction with double glazed windows and attenuated ventilation in the form of upgraded acoustic trickle vents or a mechanical ventilation system. Windows may be opened for ventilation, but for noise control should be sealed airtight to control external noise. The modelling also showed that, assuming buildings are placed along the boundaries and other measures implemented, the area exceeding the values shown above could be reduced. However, significant areas of the site would still have daytime equivalent noise levels of between 50-65 dB LAeq (16 hour), night-time equivalent noise levels of between 45-60 dB LAeq(8 hour) and night-time maximum noise levels of between 60-75 dB LAFmax.

Noise from the industrial site, Rocket Rentals was also shown to be a problem which would affect most of the Southern section of the site.

Reference 2, section 7.7.3.2 states: *'For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB LAeq,T, with an upper guideline value of 55 dB LAeq,T'*

Reference 1 concludes that internal noise levels could be generally within the British Standard 8233:2104 criteria and *the layout of the site is not known, however, the modelling indicates that with a carefully designed layout (which includes gardens facing away from the noise sources), acceptable external amenity space levels can be achieved across the site.'*

Observations

It should be noted that measurements in dB are not linear and, for example, each 3 dB added doubles the sound energy and when 10 dB is added, the energy is increased ten-fold, while adding 20 dB is a hundred-fold increase.

Despite the conclusions in Reference 1, it is doubtful that the site could meet the permitted noise levels in Reference 2 for external areas. Reference 1 shows that, for significant areas of the site, daytime equivalent noise levels of up to 65 dB LAeq(16 hour), night-time equivalent noise levels of up to 60 dB LAeq(8 hour) and night-time maximum noise levels of up to 75 dB LAFmax. would be present. These noise levels exceed the permitted noise levels in BS8233:2014 for external areas.

Hardwicke Parish Council in their comments on Reference 3, regarding noise problems at Hunts Grove, noted that *'... a number of mitigation options that could be incorporated to try and achieve the 50 dB (LAeq, T) external noise level. However, the results of the modelling demonstrated that there are no practicable mitigation options available to achieve the 50 dB (LAeq,T) external noise level, but that it would be possible achieve 55 dB (LAeq,T) in all but 7 of the plots. These plots would experience levels of between 55 dB (LAeq, T) and 58 dB (LAeq,T).'*

The noise levels are already very high and can only get worse because of the increased traffic density caused by the plans for housing and industrial development at PS37 and development of the Cam and Sharpness sites.

SDC Core Policy CP14 states: *'No unacceptable levels of air, noise, water, light or soil pollution or exposure to unacceptable risk from existing or potential sources of pollution'*. Site PS37 would suffer from levels of noise pollution which are unacceptable and exceed the requirements of BS8233:2014 and hence do not meet the requirements of Core Policy CP14

SDC Core Policy ES3 states: *'Permission will not be granted to any development which would be likely to lead to, or result in an unacceptable level of:*

1. noise, general disturbance ...'

Site PS37 would not meet the requirements of Core Policy ES3.

SDC SA5.1 state: *SA 5.1: 'Does the Plan help to improve residential amenity (including potential to reduce light, smell and noise pollution) and sense of place?'*

The plan for site PS37 will not help to reduce noise pollution.

Warmer summers due to climate change are becoming more common and will result in residents keeping windows open at night to reduce internal temperatures. Given the ambient noise levels a good nights sleep would be most unlikely.

Noise pollution is acknowledged by many studies to cause a number of serious health and behavioural problems (See for example reference 4). Noise pollution is of particular concern in the case of children where noise pollution can have serious adverse effects on learning (see for example the review at reference 5).

Conclusion

The results from Reference 1, previous experience at Hunts Grove, medical and educational studies and failure to meet the requirements of SDC Core Policies CP14 and ES3 and SA Objective 5, clearly demonstrate the unsuitability of site PS37 for a new community.

HERITAGE

Slimbridge parish, of which Cambridge and Wisloe are part, has long been recognised as having had a Roman presence, however, this has only recently been recognised as having far more significance than was previously known.

A little history

The Slimbridge Village Design Statement, December 2016 at 2.2 Historical Development states:

Some evidence exists to show that there was Roman occupation in Slimbridge. An example of this is the remains found in the field to the East of Lane's End Bungalow opposite the end of Gossington Lane. This was probably a resting area for travellers between Aust and Gloucester or Cirencester. Another Roman feature discovered is a ford across the River Cam at Old Ford Farmhouse.

There is a strong case for stating that the Vikings had a camp, possibly on the River Cam, when they made a major assault up the River Severn to the Midlands.

The evidence of Roman occupation mentioned above, refers to a one-day field walk in 2001 when 387 sherds and a coin of Roman origin were found including building fragments and hypocaust tile used in the heating systems of Roman buildings. The full report was published in Glevensis, the journal of the Gloucestershire Archaeology Society. The significance of the finds is that they indicate that there was almost certainly at least one Roman building on the site. The A38 being acknowledged as the course of the Roman road this was hardly surprising. The chairman of the Slimbridge Local History Society at the time, Peter Ballard, was given permission by the tenant to simply walk the field again after 2001 and the attached photographs show further sherds which he recovered after the field walk. Amongst the sherds recovered there is clear evidence of the presence of a building or buildings on the site.

What is surprising is what has happened over the last two years.

Recent discoveries

In the summer of 2017 permission was given for a detectorist rally on land behind Lancelot Close just north and west of the church. To everyone's surprise literally hundreds of Roman coins, brooches and artefacts were found. The detectorists were given permission to conduct three more rallies at other sites in the parish before it was realised that they were simply looting most of what was being found. The location of the finds was not being recorded and the vast majority were never seen again.

The rallies were stopped and, with the kind permission of the tenant and the landowner, Berkeley Estate, the Slimbridge Local History Society (SLHS) began coordinating a project to geophysically scan and systematically metal detect three fields in the parish. It soon became apparent that not only was there a significant Roman presence in the parish but also an Iron/Bronze Age settlement on the Lighten Brook. Hundreds of Roman coins and artefacts from around the second to third century AD have been recovered along with a whole range of items associated with Roman settlement and also a small number of Iron/Bronze Age coins. A Romano British double-ditch enclosure was found in Lynch Field close to Rectory Farm along with signs of an Iron/Age roundhouse next to Lighten Brook on Lightenbrook Lane.

All the finds were carefully mapped and shared with Kurt Adams the Gloucestershire and Avon Finds Liaison Officer based at Bristol City Museum & Art Gallery. Geophysical scanning was conducted by Tony Roberts of Archeoscan. Members of SLHS provided field support to the scanning and an educational programme was started by the society with local schools and information shared with the local community. Tony Roberts' report is available from the Gloucestershire County Council (GCC) Heritage Team.

Possible unexploded WWII munitions

One elderly resident recalls a German bomber dumping its bombs just off Dursley Road. He was in one of the six houses nearest the M5 and was sheltering under a table in one of the houses when the bombs were dropped, blowing out the windows of the houses. He recalls playing in the bomb craters but, given the overgrown nature of the soft ground at the time, he can't be sure that all the bombs exploded. He would be willing to pinpoint the location if asked.

Significance of the discoveries

The significance of the two discoveries, Lanes End Bungalow field and Lynch field, is that they are linked by Lighenbrook. Firstly, the brook would have been crossed by the Roman Road. Secondly, the gravel bed would have provided high quality drinking water for travellers and those living in Lynch field and, lastly, the brook would have given access to the River Severn. This almost certainly shows settlement occupation stretching between at least Lanes End Bungalow field on the Roman road and a settlement on what would have then been the banks of the River Severn and may well extend over all the land earmarked for development. The view that there is a larger archaeological landscape is enforced by aerial photographs showing distinct and as yet unexplored cropmarks in fields behind Tynning Crescent which would link the two sites. This is a far larger and more significant settlement than was previously recognised.

It also seems quite possible that this was also the site of a road junction leading not only to the Roman town of Corinium, present day Cirencester, but also the River Severn. Slimbridge would have been pretty much equidistant to all three major Roman towns, Bristol, Gloucester and Cirencester, and therefore a logical place for the interchange of materials and people. You could view this settlement area as a military and civilian settlement at a crossroads which formed a vital, major location for trade, manufacturing and the import of goods from across the Roman Empire. If this so, this would be an unprecedented discovery in the Severn Vale.

Heritage Assessment

The heritage assessment conducted by Cotswold Archaeology on behalf of GCC and the Ernest Cook Trust (ECT) is accurate as far as it goes. What it does not include is the report on geophysical scanning prepared by Archeoscan on December 2019 as it was not available at the time the report was written. The sheer scale of the size of the previously unknown settlement and the enormous number of finds of Roman and Bronze/Iron Age artefacts clearly indicates prolonged settlement in the area. It is incomprehensible not to link this settlement with the finds of the same period at the development site. This is supported by aerial photographs of cropmarks between the two sites. The previous theories of a staging post at Lanes End Bungalow have been misleading. The current evidence demonstrates the presence of a major settlement close to the Roman Road on the course of the A38.

Next steps

Before any development work is even considered the whole site needs to be thoroughly geophysically scanned and metal detected. This is far more than just an inappropriate place to build 1500 houses. This is our community's heritage and conserving, understanding and enjoying what was here nearly 2000 years ago is far more important than making a fast buck building house. A view I would expect the trustees of the ECT to hold close to their hearts now that they are fully appraised of these discoveries. It is, after all, just what their founder set out to achieve and is their duty as trustees to see his wishes fulfilled. A unique opportunity exists to educate local children and the community at large and this is something which once again I would expect ECT and even the GCC to recognize and encourage. This is work that SLHS with its limited resources has already started and wishes to continue for years to come. We would welcome support from ECT and GCC.

Desired outcome

From an archaeological viewpoint alone, this development should not go ahead.

Regardless of whether evidence of Roman or Iron/Bronze Age buildings are found it would be insensitive at least for SDC, which frequently espouses its views on the environment and the rich culture of this part of the English countryside, to ignore and desecrate a site which has remained untouched for thousands of years.

The GCC Heritage Team are encouraged to conduct a full geophysical scan of the entire site, supported by metal detection, to further establish the importance of this community's heritage.

Overall Conclusion

From our review of the Local Plan and in particular for the proposal within Slimbridge Parish it is plain to see that any development of this size in this area fails to meet many of the NPPF policies or indeed those stated within SDC's own documents. In fact, in many cases the proposal contradicts many of these policies and requirements. We therefore strongly urge SDC to remove the proposed development from the Local Plan.