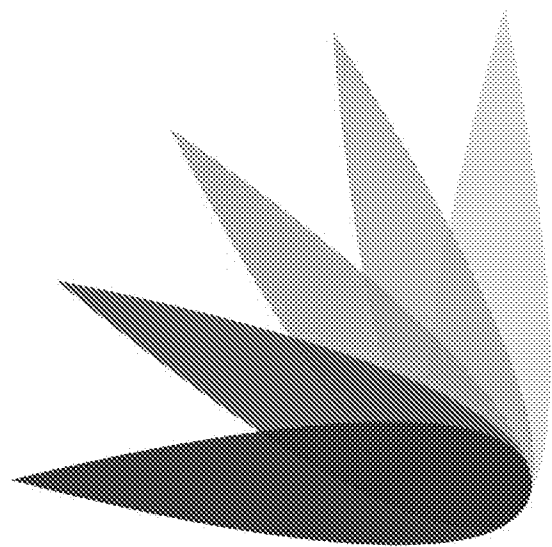


# Technical Note

The Old Cottage Lidsey

SEPTEMBER 2018



Reeves Transport Planning

PRODUCED for CHRIS HARRIS

PRODUCED by REEVES TRANSPORT PLANNING LTD

TN/SGR/TOC/101117-4\_V2

[www.reevestransportplanning.co.uk](http://www.reevestransportplanning.co.uk)

## 1. Introduction

- 1.1 Reeves Transport Planning has been commissioned to provide a Technical Note addressing the additional questions raised by West Sussex County Council (WSCC), acting in their capacity as the Local Highway Authority, in respect of planning application AL/20/18/OUT. A copy of the comments is attached at Appendix 1.
- 1.2 Clarification has been requested regarding the bellmouth radii, sight stopping distances achievable under various conditions, the annotation of the new and existing highway verge and vegetation, and an Audit Team review. The following narrative responds to each of these concerns.

## 2. Bellmouth Radii

- 2.1 Any dimension of bellmouth radii can easily be accommodated, within the site limits, without adversely affecting the access layout. We do not agree that such a widening would be inappropriate or safe. A wider bellmouth will facilitate easier access for large vehicles but it will also encourage speeding by smaller vehicles. Our professional judgement is that this will introduce a safety hazard to the scheme, which is particularly pertinent given the speed of passing traffic. Eastbound traffic travels at 38mph, and whilst this is acceptable for 'A' Road traffic, this is far from acceptable for a residential street. Wider radii will enable much of this speed to be retained, as a vehicle enters the residential environment. Limiting the bellmouth will slow vehicles accessing the site.
- 2.2 Manual for Streets emphasises that streets should be designed to encourage a sense of space and not be dominated by the needs of vehicles. In the rare event that a large vehicle will use the new access, there is more than enough visibility to allow both vehicles emerging and passing the access to do so safely. The merits of a wider bellmouth can be discussed and addressed as part of the detailed design stage. Therefore, it is not necessary for the wider bellmouth to be annotated to determine the Outline Planning Application. If it is considered necessary to widen the bellmouth, then this will be identified as part of the Stage 2 Road Safety Audit.

### 3. Sight Stopping Distances and Vegetation

- 3.1 Updated plan OCL/SR/701 rev D is attached, as Appendix 2, which illustrates the forward visibility afforded to vehicles passing and entering the site. The achievable Sight Stopping Distances (SSDs) are noted as a minimum of 70metres to the south and 81metres to the north. These exceed the distances noted in the Local Highway Authority's comments.
- 3.2 The existing adopted highway and realigned verge are annotated in red shading. There was an observation regarding the position of cars waiting to turn right into the site and the annotation of the SSDs. Using a scale rule, and professional judgement, it is clear that the available visibility, no matter where a car is waiting to turn, exceeds the 67metre minimum noted by the Local Highway Authority. This visibility is achievable within land that is part of the adopted highway. It is apparent that providing additional plans demonstrating innumerable versions of achievable SSDs to determine that the access will be safe is unnecessary.

### 4. Submit updated plans for comment by the Audit team

- 4.1 The original Stage 1 Road Safety Audit clearly notes that the best access position, to serve the development, is at the apex of the curve in the alignment of the A29 passing the site. The expansion of the development site, to incorporate the land to the north, has provided the opportunity to widen the alignment of the A29, close off two poorly designed private accesses and construct the new access, which is designed to meet all relevant design standards. As requested, the Audit team have reviewed the proposal, see note attached at appendix 3 and advised that the team *'does not believe they will have any adverse effect on the safety of the highway'* and that *'some potential safety benefit ... could be readily accommodated as part of the detailed design process'*. As noted, any detailed changes, which do not affect the overall design can be addressed by a Stage 2 Road Safety Audit once the scheme is submitted for detailed approval, as part of the Section 278 Works Agreement.

### 5. Conclusion

- 5.1 As noted in the previous additional comments, *'highway and planning authorities may exercise considerable discretion in development and applying their own local policies and*

*standards. Designers are expected to use their professional judgement when designing schemes and should not be over-reliant on guidance. Available guidance is just that, guidance, and cannot be expected to cover the precise conditions and circumstances applying at the site under examination’.* The Local Highway Authority has requested additional information that can be simply derived from the existing submitted plans. Accordingly, it appears that limited professional judgement was employed when assessing the proposed access and the information provided.

- 5.2 Appropriate information has been submitted to demonstrate that the proposed access can be designed, and constructed, to meet the required standards. Furthermore, details can be updated, if necessary, as part of a detailed design process that can be secured by planning condition.
- 5.3 The proposal includes widening the line of the A29 and significantly enhancing forward visibility for vehicles, which provides an important betterment of highway safety. The proposed access is a highway improvement, which will not create an impact that can be defined as severe.

## APPENDIX: 1

### West Sussex County Council Additional Response (AL/20/18/OUT)

## WEST SUSSEX COUNTY COUNCIL CONSULTATION

|                                 |                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>TO:</b>                      | Arun District Council<br>FAO: Michael Eastham                                                                                                                                                                                                                                                                                            |
| <b>FROM:</b>                    | Highways, WSCC: Tim Townsend                                                                                                                                                                                                                                                                                                             |
| <b>DATE:</b>                    | 20th August 2018                                                                                                                                                                                                                                                                                                                         |
| <b>LOCATION:</b>                | Land at, Bridge Cottage & The Old Cottage, Lidsey Road, Bognor Regis, PO22 9PH                                                                                                                                                                                                                                                           |
| <b>SUBJECT:</b>                 | AL/20/18/OUT<br>Outline application with all matters reserved for the demolition of 2 No. dwellings & associated outbuildings & the erection of up to 27 No. dwellings, of which 30% will be affordable, with associated open space & access. This application is a Departure from the Development Plan.<br><br><u>More information.</u> |
| <b>DATE OF SITE VISIT:</b>      |                                                                                                                                                                                                                                                                                                                                          |
| <b>RECOMMENDATION:</b>          | <input type="checkbox"/> Advice <input checked="" type="checkbox"/> Objection<br><input type="checkbox"/> Modification <input type="checkbox"/> No Objection<br><input checked="" type="checkbox"/> More Information <input type="checkbox"/> Refusal                                                                                    |
| <b>S106 CONTRIBUTION TOTAL:</b> | £<br>See below for details.                                                                                                                                                                                                                                                                                                              |

This is the second WSCC highways and transport response to the above outline planning application with all matters reserved for the demolition of 2 No. dwellings & associated outbuildings & the erection of up to 27 No. dwellings, of which 30% will be affordable, with associated open space & access. This report responds to additional information provided by the applicant and their agents – namely Technical Note produced by Reeves Transport Planning Consultants, reference: TN\_SGR\_TOC\_101117-3\_V2 (July 2018).

### Summary position of County Highway Authority (CHA).

Based on the information submitted, the CHA continues to object to the proposal on grounds of substandard access design and associated road safety implications **and** lack of suitable sustainable access (i.e. non-motorised access by those on foot, bicycle etc.) to local bus services, employment, schools and goods/services.

### Site location.

The site is located adjacent to the A29 Lidsey Road north of Bognor Regis. The applicant seeks to demolish two properties and outbuildings, replacing them with up to 27 dwellings, internal access roads and parking. Access to the site is shown directly off the A29 Lidsey Road on the northern side (outside apex) of a bend in the road. Alongside the first section of the access road (on the southern side), a footway is shown for part of the road's length.

Further comments about access and suitability thereof are made elsewhere in this report.

## Access.

As mentioned above, vehicular access is shown directly off the A29 on the apex of a bend in the road. The Applicant's Transport Consultant has confirmed that the proposed access road would measure 4.8m wide with 5.0m bellmouth radii. Visibility splays are taken from a 2.4m 'x' distance with major road ('y') distances of 81m in both directions as shown on 'New Access Design' drawing OCL/SR/701 Rev C. Forward visibility stopping sight distance (SSD) (i.e. that required for drivers of vehicles turning right and left into the site and corresponding visibility for drivers already on Lidsey Road coming-across them – from both north and south) is now shown at 45m. The first 15m of the access road should be constructed as a flat plateau in order to minimise 'rolling-forward' of vehicles towards the A29 when waiting to emerge to it. Alongside this, the A29 itself where it meets the access would need to be carefully designed to minimise chance of grounding of vehicles when entering or leaving the development site. Additionally, comments about surface water drainage are made elsewhere in this report and separately by the County Council's Surface Water Engineer.

In its previous response of 12<sup>th</sup> June 2018, the CHA requested the following additional information related to the access (other requirements are summarised elsewhere in this report under relevant sections). Comments in black text are the original comments made by the CHA with those in red text being the latest CHA replies to the new information provided by the applicant's Transport Consultant:

- The dimensions of bellmouth radii of new junction. Now shown at 5.0m. Given the classification of the road (A29) and amount of traffic using it and the need to attempt to contain turning movements for vehicles to avoid over-sailing of the centreline when emerging to Lidsey Road (particularly commercial and refuse vehicles), the Highway Authority recommends that a minimum of 9.0m bellmouth radii be implemented on both sides.
- The achievable visibility splays taken from 2.4m 'x' distance with dimensions marked-on. These are now shown and concur with the recorded traffic speeds.
- The forward visibility both for vehicles travelling north AND south encountering a vehicle waiting to turn into the site with dimensions. These are now shown at 45m Stopping Sight Distance (SSD). However, in order to establish the correct SSD dimension, the 85<sup>th</sup> %tile speed recordings should be used as advised in MfS2. Looking at the Transport Statement, speed recordings have only been taken in a single location found south of the proposed access point. As-per guidance, a second location is recommended to be used on the western side of the access (on the approach thereto). However from observation, looking at the characteristics of the road (i.e. curvature, alignment, gradient etc.) and the current readings, on this occasion the single location appears to be representative of the on-site situation for both approaches.

*Northbound approach (south of the proposed point of access) - Based on the recorded AM peak 85<sup>th</sup> %tile speed of 37mph with a generally level approach on the road (i.e. no gradient), the SSD should be 67m.*

*Eastbound approach (west of the proposed point of access) - Based on the recorded AM peak 85<sup>th</sup> %tile speed of 38mph with a slight gradient down towards the access, the SSD should be 68m.*

Given the above, the applicants should provide a further plan to demonstrate that these SSD splays can be achieved using land within their control or land within the public highway.

It is not clear from the current plan (OCL/SR/701 Rev. C) what the red colouring is supposed to show. As such, a plan showing what the County Council currently consider to be the extent of public highway is attached to this reply in order to assist the applicant when plotting the visibility and SSD splays.

- Dimensions of carriageway at and on the approach to the site entrance (and site entrance itself). Now shown on Drawing No. OCL/SR/701.

With regard to design documentation used to inform the road and access design, the applicant's Transport Consultant has used advice in Manual for Streets 2 (MfS2) to inform parameters (visibility, access widths etc.), whereas Design Manual for Roads and Bridges (DMRB) is generally used where the speed limit exceeds MfS2 criteria of 37mph. The A29 at this location is 50mph. However, in support of using MfS2, the applicant's Transport Consultant has provided speed and traffic count data recorded over the period 15<sup>th</sup> March – 26<sup>th</sup> March 2016. The data is just over 2 years old but with regard to solely the speed data, no material changes have taken place since this time to suggest speeds might have increased or decreased. However (and as documented above), only a single location was used to record traffic speeds (south of the proposed point of access). However, for the reasons given above, the single location is considered representative on this occasion.

In its previous response of 12<sup>th</sup> June 2018, the CHA requested the following additional information in order to be able to consider this part of the proposal further. Comments in black text are the original comments made by the CHA with those in red text being the latest CHA replies to the new information provided by the applicant's Transport Consultant:

- Plan showing precise locations of where the speed surveys were taken/recorded. Now shown.
- Details of weather conditions during entire extent of surveys. Now provided.
- The position of the right-turning vehicle (car) could – in practice – vary and as such, should also be shown further north and with SSD visibility splays plotted. This hasn't been shown in the original or revised drawings. As such, the applicant should provide two plots of the right-turning vehicle – one where it is at present and the other with it slightly further forward with the SSD splays plotted with dimensions (see comments about distances made earlier in this report).

The data provided so far shows the following (85<sup>th</sup>tile speeds are quoted):

**Northbound.**

AM peak – 37mph

PM peak – 35mph

**Southbound.**

AM peak – 38mph

PM peak – 36mph

Although detailed surface water drainage (SWD) comments will be made separately by the SWD team, at any detailed design/S278 stage careful attention should be given by the applicant to SWD on the bend in the road adjacent to the access, particularly as water occasionally ponds at this location. As the applicant is proposing road widening here, the amount of hard area (i.e. road surface) will be increasing, thereby increasing surface water run-off. As such, any highway works here should include appropriate mitigation to address this.

Previously, the applicant was asked to provide detail of the proposed road markings at the new access and on the road itself, documenting how these comply with the Traffic Signs Manual. Double white lines are shown as existing – the only difference now being that the carriageway at the bend is widened.

- Also previously, a design commentary was requested. Drawing OCL/SR/701 Rev. C attempts to show design parameters taken from MfS2. Although please note that it will need updating in-light of the SSD comments made earlier.

In its previous response of 12<sup>th</sup> June 2018, the CHA requested the following additional information in order to be able to consider this part of the proposal further. Comments in black text are the original comments made by the CHA with those in red text being the latest CHA replies to the new information provided by the applicant's Transport Consultant:

- Visibility information and SSD to right turning vehicles as required as above. Amended plan to be provided showing extended splays as referred to previously in this report.
- Vegetation areas required for visibility purposes shown more clearly. A plan has been provided by the applicant but it is not clear whether it is correctly showing that requested. The applicant should re-visit this alongside the attached highway boundary plan and provide an accurate drawing with suitable annotation.
- Road markings that are proposed at and on the approaches to the new access point and how these comply with the Traffic Signs Manual. Road markings shown as double white lines (no overtaking etc.).
- A Design Commentary setting-out how the design complies with guidance and/or design standards. Drawing OCL/SR/701 Rev. C attempts to show design parameters taken from MfS2. Although please note that it will need updating in-light of the SSD comments made earlier.

A revised plan should be prepared and submitted to the LPA and CHA to consider further. However, based on that provided so far, a highway objection continues to be raised.

### **Road Safety.**

A Stage 1 Road Safety Audit (RSA) has been provided within the Transport Statement (TS) that accompanies the application. A Designer's Response (DR) is also provided.

The audit team makes three recommendations based on correspondence from Reeves Transport Planning and specifically Drawing No. LID/SR/101 - all to do with the access position and visibility available to and from it. The designer accepts these although in the absence of revised plans showing adequate Stopping Sight Distance (SSD) (see comments above), it is not possible to comment further at this stage. It is also relevant that the RSA was based on a previous proposal for 6-7 units – not the 27 now proposed.

The footpath towards the south-bound bus stop on Lidsey Road previously shown on an earlier version of the site layout, has now been deleted from the application.

In its previous response of 12<sup>th</sup> June 2018, the CHA requested the following additional information in order to be able to consider this part of the proposal further. Comments in black text are the original comments made by the CHA with those in red text being the latest CHA replies to the new information provided by the applicant's Transport Consultant:

- Any revised plan/s (when produced) - including description of development as submitted under AL/20/18/OUT - to be submitted to the audit team for further comments. Following that, both the plan and any further comments from the Audit Team to be provided to the CHA to consider. This has not been done. As well as that requested above, the audit team should also be asked for comments in response to the suitability of the footway access shown provided on the southern side of the bellmouth.
- The footpath leading towards the bus stop should be safety audited. Path now deleted.
- Any additional highways mitigation - if proposed and/or identified to be safety audited. None offered at this moment in time.

Personal Injury Accident (PIA) reports have been provided for the period 01/03/2011 – 29/02/2016. Plan dated 08/04/2016 provided by the Sussex Safer Roads Partnership shows that during this time 6 PIAs were recorded. 4 of these resulted in slight injury; 1 in serious injury and 1 fatal. Of these, 1 slight and 1 serious were recorded close to the location of the proposed site access. However, further records up-to the current date (or as records permit) were requested in the previous report. These have now been provided.

In its previous response of 12<sup>th</sup> June 2018, the CHA requested the following additional information in order to be able to consider this part of the proposal further. Comments in black text are the original comments made by the CHA with those in red text being the latest CHA replies to the new information provided by the applicant's Transport Consultant:

- Up-to-date PIA records for the most-recent 5 years. The records provided by the applicant's Transport Consultant only provide data up-to 2016. All the information will be reviewed by the CHA when that information is made available. Now provided.

### **Traffic generation.**

The site, as existing, has two residential properties on it (including outbuildings). The proposal seeks to demolish these and construct up to 27 homes. The TS includes TRICS data provided by the applicant's Transport Consultant suggesting that the site – in redeveloped guise - would generate the following trips, showing AM and PM\* peak periods and daily traffic:

| Time Range                  | TRICS Data |            | Development Trip Generation |            |
|-----------------------------|------------|------------|-----------------------------|------------|
|                             | Arrivals   | Departures | Arrivals                    | Departures |
| AM Peak Hr (08:00 to 09:00) | 0.126      | 0.411      | 3.4                         | 11.1       |
| PM Peak Hr (08:00 to 09:00) | 0.398      | 0.254      | 10.7                        | 6.9        |
| 12Hour (07:00 to 19:00)     | 2.809      | 2.881      | 75.8                        | 77.8       |

(\*Note that the table erroneously mis-quotes the AM hours for the PM peak period – these should read 17:00-18:00).

### **Sustainable access.**

Walking – The proposed indicative layout shows a combination of footways and shared-surface arrangements. A single footway is shown emerging on the southern side of the vehicular access, terminating just beyond the cessation of the bellmouth onto the A29. However, the applicant does not demonstrate how safe pedestrian access is provided to-and-from the site – particularly as this path does not connect to any other paths/footways close-by. No other footways are close-by (the nearest appearing to be opposite the Robin Hood Public House found 500-600m south of the site). There are Public Rights of Way nearby, in the form of Public Footpath's No. 200\_1 running E-W and utilising the course of the disused canal; 296\_1 that runs N-S from 200\_1 to Sack Lane (found south of the site); 151 found south of Sack Lane and 152 that can be found at the eastern end of Sack Lane. However, these paths are generally indirect and predominantly serve as leisure routes given their location, construction, width and lack of lighting, thereby giving only very limited potential for commuter/access to employment, shopping and school-based trips.

Cycling – No bespoke off-road routes are available for cyclists, requiring them to use the A29 providing access for those likely to be confident and/or experienced riders only.

Buses – The current bus service is documented in the TS. Bus stops are located within verges approximately at and opposite the entrance to Lidsey Caravan Park. However, there are currently no footways or footpaths providing access to them (nor hardstandings by them

either) requiring users to either walk in the carriageway of the A29 or be dropped-off adjacent to them.

Train – The nearest railway stations are Bognor Regis and Barnham. Public Footpath 200\_1 does provide an indirect link to the latter on-foot only. However, given the suitability of the route and distance of both stations from the site and lack of other walking and cycling routes, access to both would likely be by car.

### **Internal layout.**

The internal layout is shown indicatively on drawing 1749-02G. As submitted, it is not clear whether it would be suitable for adoption under S38. This would be a matter to be looked-at at any Discharge Of Condition (DOC) or Reserved Matters (REM) staged. Also, it is not known what form of surface water drainage is proposed for the site which might itself dictate whether the layout can or can't be adopted.

With regard to access by refuse and fire appliances, the access drive shown to plots 22-27 might need widening as in places it looks slightly restrictive (particularly adjacent to plots 25-27). As such, this would have to be considered further at any RES/DOC stage.

As part of any permission, a suitable S106 Agreement would be required to secure any off-site highways works (if required) and additionally, must also include a non-adoption clause to safeguard the County Council if the internal layout is not offered for adoption and similarly, a management plan clause to secure an appropriate management company for the long-term maintenance of any highways infrastructure remaining private.

### **Parking.**

Parking should follow WSCC parking guidance. The TS does provide a copy of the WSCC Parking Calculator suggesting that 61 spaces are required for the 27 homes proposed. This and the layout of car parking (including visitor car parking) will be looked at in detail at any reserved matters/discharge of conditions stage. Parking space dimensions shall follow advice in MfS – so car parking spaces to be 2.4m wide x 4.8m long (3.0m wide if located alongside walls/barriers etc. and 6.0m long if located in front of garages). Garage dimensions (internal) to be 3.0m wide x 6.0m long.

### **Street lighting.**

Street lighting should be considered for the layout. However, this is a matter to be considered at any discharge of condition (DOC) and/or reserved matters (RES) application stage. Careful consideration should also be given to the junction with the A29 (and its approaches) given that the location is unlit. Also and depending on any off-site mitigation offered, this too should be considered for lighting.

### **Strategic Location (Emerging Arun Local Plan).**

Reference is made within the TS about the Barnham-Eastergate-Westergate (BEW) Strategic Allocation site for housing found north and east of the application site. However, the application site itself does not appear to be included within the allocation. Based on the current indicative alignment of the proposed southern connection of the new A29, the site does not appear to prejudice this. However, in advance of appropriate highways infrastructure which might include that which the new road might bring such as new roads, footways and cycle-ways to local services, employment, schools etc., the submission of the site now for development might be considered premature at this stage. While the subject of prematurity is a matter for the LPA to consider, the aforementioned lack of suitable vehicular access and sustainable non-motorised access is still relevant at this stage given the shortcomings as documented above and does still contribute to the prematurity statement.

### **S106 (non-highways).**

A detailed S106 consultation response is provided at the foot of this report. Comments refer to local County Council services in order to ensure any proposed development would be

appropriately mitigated in terms of infrastructure provision and/or contributions. These services include highways, education (Early Years, Primary, Secondary, Sixth Form and Special Education Needs), libraries, waste and Fire Service and delivery solutions for these projects need to be agreed. Also, the installation of and connection to mains water fire hydrants are required at the developer's expense - these will be conditioned as necessary. Additionally, a contribution towards transport infrastructure to assist with delivery of the BEW Strategic Allocation would also be required.

**Conclusion.**

As submitted, both the design of the access and provision of access by non-car modes are not adequately demonstrated. As such, the CHA continues to object to the proposal for the following reasons:

1. Adequate information has not been submitted to satisfy the Highway Authority that the proposal is acceptable in terms of road/junction layout and visibility splays (including forward visibility/stopping sight distance splays) and would therefore give rise to increased hazards to highway users.
2. The proposal does not provide safe and convenient access to goods, services, schools and employment by a choice of means of travel nor does it encourage and enable an increase in environmentally sustainable means of travel such as walking, cycling and public transport.

**Tim Townsend**  
**West Sussex County Council – Planning Services**

## APPENDIX: 2

### Updated Highway Design Plan (OCL/SR/701 Rev. No. D)



## APPENDIX: 3

### Additional Safety Audit Team Comment

**Proposed Residential Development,  
Land to the east of A29, Lidsey, Bognor Regis**

**Comments on Proposed Access revised in accordance with  
Recommendations of earlier Road Safety Audit**

**Background**

1. The highway works associated with an earlier proposal for the development of some 5 housing units on this land were subjected to a road safety audit carried out by January Consulting in April 2016. The recommendations of that audit were that the proposed access should be relocated from the southern end of the site to a position at the crown of the bend in the A29 road where an access was already in place to The Old Cottage. The Designer's Response accepted these recommendations.
2. In the meantime further land has become available and new proposals have been put forward comprising a larger development extending to some 27 units. The recommended position of the access at the crown of the bend has been retained but the layout of the larger site has enabled some additional land to be available on which the carriageway of the A29 can be widened.
3. Whilst a repeated road safety audit was felt to be unnecessary the highway authority sought reassurance regarding the safety of the local widening proposals. The comments below form the developer's provision of that assurance.

**The Highway past the Access**

- 4 The road past the site access, the A29 London to Bognor Regis road, is a significant inter – urban road within the county and the principal access to Bognor from the north and the A27 trunk road at Fontwell. To the south the A29 continues through the village of Shripney and thence to Bognor Regis across the newly opened northern bypass of the town.
- 5 In the vicinity of the site the A29 crosses the former canal and meanders through the hamlet of Lidsey around a pair of sharp bends with signs advising drivers to adopt maximum speeds of 30 mph for the northern and then 25 mph for the southern bend
- 6 The carriageway varies in width between some 5 – 5½ metres to the south of the bend and some 5½ – 6 metres to the north but the grass verges between the edge of the carriageway and the property boundaries are very narrow. There are no cycle lanes around the bends and there are no footways along either side of the road at this point. It is clear that the road has in the past been recognised as a safety problem because a comprehensive remedial scheme has been installed including pairs of chevron boards for each direction of traffic, numerous edge marking cylinders on the eastern verge, central double white lines and single white lines along both edges of the carriageway as well as skid resistant surfacing and 'SLOW' markings reinforced by red surfacing.
- 7 Observations during the site visit showed that around the southern bend the trees overhanging the highway boundary and the shrubbery and undergrowth throughout the western verge were forcing the drivers of long articulated vehicles and double

decker buses travelling northwards to overrun the centreline markings and this would increase the risk of collisions with traffic in the southbound lane.

- 8 Around the crown of the southern bend the road has a crossfall to a short section of low wall on the western side of the carriageway but the drainage is either inadequate or malfunctioning because significant water pooling was observed along that edge.

#### **Proposed Access and Carriageway Widening**

- 9 The existing property has a crossover type entrance directly off the highway on the crown of the bend and the development will be accessed by a simple priority-controlled T – junction at the same location. The proposals provide for a limited widening along the eastern edge of the carriageway around the bend of up to a maximum of some 1 metre.

#### **Road Safety Issues**

- 10 The limited widening of the carriageway will facilitate the simultaneous passage of two large goods vehicles in opposite directions but does not seem to be sufficient to encourage a significant increase in overall vehicle speeds. The wider carriageway would also help to reduce the incidence of large northbound vehicles overrunning the centreline.
- 11 The increased width will also mean that the eastern edge of the carriageway will be at a slightly higher level and thus the level of the access road into the site will also need to be higher in order to ensure that vehicles emerging from the access will be able to do so on the level.
- 12 The Audit Team has reviewed these proposals and does not believe they will have any adverse effect on the safety of the highway.
- 13 There also appears to be some potential safety benefit to be gained from a review of the footway network within the site but this is an issue which could be readily accommodated as part of the detailed design process and subjected to a Stage 2 road safety audit at that time.

**John F Harbidge**  
*Director*

**January Consulting**  
14 September 2018

