



**THE HIGHWAYS ACT 1980, THE ACQUISITION OF LAND ACT 1981, THE
HIGHWAYS (INQUIRIES PROCEDURE) RULES 1994 AND THE
COMPULSORY PURCHASE (INQUIRIES PROCEDURE) RULES 2007**

PUBLIC INQUIRY INTO

**THE WEST SUSSEX COUNTY COUNCIL (A284 LYMINSTER BYPASS
(NORTH))**

COMPULSORY PURCHASE ORDER 2020

and

**THE WEST SUSSEX COUNTY COUNCIL (A284 LYMINSTER BYPASS
(NORTH) CLASSIFIED ROAD)**

(SIDE ROADS) ORDER 2020

PROOF OF EVIDENCE

OF

GUY PERFECT

FOR

WEST SUSSEX COUNTY COUNCIL

ON TRANSPORT PLANNING MATTERS

DFT REFERENCE: NATTRAN/SE/HAO/229

July 2021

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1. INTRODUCTION

- 1.1. My name is Guy Parfect and I currently hold the position of Senior Planner at West Sussex County Council ("the Council"), working within Planning Services in the Transport Planning and Policy team.
- 1.2. I have been a member of the Chartered Institution of Logistics and Transport since 2006 and I hold a BSc (Hons) Degree in Transport Management and Planning obtained in 1989 along with a Diploma in Industrial Studies (DIS). The DIS relates to a Sandwich Year placement at British Rail in the Waterloo Area Office investigating train-crew related reasons for operating delays in 1987-88.
- 1.3. I have worked for the Council as a permanent employee since November 1990 within the field of transport planning and traffic modelling. In later years I have concentrated on strategic transport and development planning, although I also have experience of cycle route planning and delivery. In all I have over 30 years of experience in the field of transport planning.
- 1.4. I have been the client lead for transport modelling and economics on this A284 Lyminster Bypass Scheme ("**the Scheme**") and the neighbouring A259 scheme, notably through the development of the East Arun Transport Model which was purpose built to assess both schemes, retaining this role through the Transport Business Case. I was also the Council's technical advisor on the Arun Local Plan transport evidence base study, which included the scheme as part of a package of transport improvements to support planned housing and employment development in Arun District.
- 1.5. I have also had some previous involvement in the scheme in the early 1990's when the Lyminster Bypass and the Worthing Road and Roundstone Bypass dualling schemes were approved for the Council's then forward programme, undertaking modelling and Cost Benefit analysis for those forerunners to this scheme, also for the nearby A280 Angmering Bypass, which was subsequently constructed.
- 1.6. I am familiar with the Statement of Reasons¹ and Statement of Case submitted by the Council in connection with the promotion of The West Sussex County Council (A284 Lyminster Bypass (North)) Compulsory Purchase Order 2020² and The West Sussex County Council (A284 Lyminster Bypass (North) Classified Road) (Side Roads) Order 2020³ ("the Orders") and I produce this evidence to explain and describe the Scheme to which the Order relates.
- 1.7. I can confirm that the contents of my proof of evidence are my professional opinion and are true to the best of my knowledge and belief and are gained from either my own direct involvement or my colleagues' direct knowledge.

¹ Statement of Case Supporting document [Nos.5 & 6](#)

² Statement of Case Supporting document [No.1](#)

³ Statement of Case Supporting document [No.2](#)

2. SCOPE OF EVIDENCE

- 2.1. My evidence complements that provided by other members of the project team. My evidence will cover:
- Background to the Scheme (section 3)
 - Need for the Scheme (section 4)
 - Traffic modelling (section 5)
 - Planning policy position (section 6)
- 2.2. This proof of evidence should be read alongside the Council's Statement of Case dated February 2021. It does not seek to repeat all the information in that Statement of Case but cross-refers to and relies on the Statement of Case where appropriate.

3. BACKGROUND TO THE SCHEME

3.1. Context

- 3.1.1. Arun District lies on a strategic coastal transport corridor: the A27 trunk road and A259 coastal road pass through the district, while the A284, the A280 and the A29 are important links between the A259 and the A27 and onward towards Surrey and London. The A27 carries medium to longer distance traffic between Brighton, Worthing, Arundel, Chichester and South Hampshire, whilst the A259 carries movements between Bognor Regis, Littlehampton and Worthing, as well as traffic which joins the A280 to Findon for the A24 towards Horsham. The A284 serves traffic to and from Littlehampton and the surrounding areas including Rustington. The A284 links to the A27 at Crossbush to the south of Arundel and it also continues northwest to meet the A29 in the South Downs for traffic towards Pulborough, Petworth and Guildford.

3.2. History

- 3.2.1. The need for improvements on the A284, complementing improvements on the A259 corridor, has been identified in policy for at least 30 years. The original approved alignment plan for the Scheme currently held by the County Council dates from the early 1990's. This plan can be seen as Appendix C: Archive Plans in supporting document 19 to the Statement of Case. This is the same era as that when nearby sections of the A259 were approved for major highways improvements, with the Rustington Bypass and the Littlehampton Bypass both opening in 1993. The A259 Worthing Road, Littlehampton and Rustington to Hangleton schemes were also approved at this time, although implementation - combined as the A259 Littlehampton Corridor Improvements scheme - did not follow until recently,

with that scheme now under construction, due to complete by January 2023. Further information about that Scheme is provided at section 3.3 below.

- 3.2.2. The proposed A284 Lyminster Bypass and Fitzalan Link (known at the time as the Fitzalan Road Extension), which cross the A259 Worthing Road north to south at a new roundabout, were approved at the Council's Highways Committee meeting dated 11th September 1992 (minutes item 98).⁴ This approval covers the Scheme together with the continuing alignment to the south; the Lyminster Bypass (South) which connects to the A259, bridging over the West Coastway railway line and the Fitzalan Link which further connects to Littlehampton town centre at the junction of East Street and Fitzalan Road. For a map-based overview of these schemes please see figure 3.1 in the Statement of Case.
- 3.2.3. The proposed route of the A284 Lyminster Bypass was first safeguarded in the Arun District Local Plan 2003 and the route continues to be safeguarded in the current Arun Local Plan 2011-2031 (July 2018)⁵ under Policy T SP3 (Safeguarding the Main Road Network). Further details of the history of the scheme and its safeguarding are provided in the Statement of Case at paragraphs 3.4 to 3.6.
- 3.2.4. The scheme is also closely associated with the North Littlehampton strategic housing and mixed use development which was consented in 2011 and is providing the complementary Lyminster Bypass (South) and Fitzalan Link schemes which will complete the link from the A27 to Littlehampton town centre. Details of this are set out in the Statement of Case paragraphs 3.7 to 3.10.
- 3.2.5. The Lyminster Bypass (South) began construction in January 2020 and is due to be completed in September 2021: see Statement of Case paragraph 3.11. Persimmon, who are delivering that scheme, have commented that achievement of this date is subject to the timely delivery of the acoustic fence.
- 3.2.6. The Scheme has been considered and assessed in numerous studies over the years. For ease of reference, the relevant studies since 2005 are here listed:
- West Sussex County Transport Model, Arun District Local Development Framework: Core Strategy Revised Options, Final Report, MVA for Arun District Council, April 2009⁶

⁴ Statement of Case Supporting [Document 14](#)

⁵ Statement of Case Supporting [Document 16](#)

⁶ Statement of Case Supporting [Document 18](#)

- Arun Transport Study for Strategic Development: Options and Sustainable Transport Measures, WSP for Arun District Council, March 2013⁷
- Lyminster Bypass Transport Business Case: Deliverable D7 Forecasting Report, WSP for West Sussex County Council, September 2014 (updated in 2017 as below)
- Lyminster Bypass Transport Business Case: Transport Business Case, WSP for West Sussex County Council, November 2015⁸
- Arun Transport Study 2016 Stage 3: Final Report, Systra for Arun District Council, January 2016⁹
- Lyminster Bypass Forecasting Report Version 2 – 2017 Update, WSP for West Sussex County Council, August 2017¹⁰
- A284 Lyminster Bypass Transport Assessment, WSP for West Sussex County Council, January 2019¹¹

3.3. Strategic importance

- 3.3.1. The A284 forms a principal access to Littlehampton, and also connects to the A259 for Rustington, East Preston and Climping. As well as providing local access from these areas to Arundel it provides access to the national Strategic Road Network at the A27 for traffic westward towards Chichester, Portsmouth and Southampton or eastward towards Brighton and East Sussex. The A284 at Arundel also continues north to the A29, serving the South Downs, Pulborough and Billingshurst with further connections towards Surrey towns such as Guildford.
- 3.3.2. The Scheme connects to the Lyminster Bypass (South) scheme as previously referenced in paragraph 3.2 of this proof. This route then connects into the A259 coastal road at Worthing Road in Littlehampton. The A259 distributes traffic onwards towards Climping, Felpham and Bognor Regis to the west and towards Rustington, East Preston, Ferring and Worthing to the east. The A259 is currently being widened at Worthing Road in Littlehampton and at Roundstone Bypass Road near East Preston and Angmering under the scope of the A259 Littlehampton Corridor Improvements.
- 3.3.3. The Lyminster and Littlehampton Corridor schemes have been planned in parallel as they complement each other,

⁷ [Appendix Document H](#)

⁸ Statement of Case Supporting [Document 27](#) (extracts)

⁹ Statement of Case Supporting [Document 22](#)

¹⁰ Statement of Case Supporting [Document 26](#)

¹¹ [Appendix Document I](#)

especially in regard of the Worthing Road section. The increased capacity at A259 Worthing Road will assist in handling the additional traffic which the A284 schemes will attract to that corridor from parallel minor routes at Ford Road and Arundel Road plus Station Road in Angmering and to distribute it towards destinations in and nearby to Rustington.

- 3.3.4. The A259 Corridor Improvements were the subject of a Compulsory Purchase Order which was considered at an Inquiry in 2019. These Orders were confirmed by the Secretary of State in March 2020¹², following the Inspector's report of February 2020¹³. The transport evidence base for the Lyminster Bypass (North) includes common elements and methodology with that for the A259 Littlehampton Corridor Improvements, notably including the use of the same strategic transport model. The Inspector's report and the Decision Letter for the A259 Scheme are appended to this proof at Appendix Documents E and F respectively.
- 3.3.5. The existing infrastructure deficit along the coast is widely considered by local businesses to contribute to poor economic performance in Arun. The Arun Local Plan Business Survey report 2014¹⁴ shows at Table 2 that 76% of businesses in Arun support improvements to road junctions. It also shows at Table 4 and paragraph 3.17 that 56% of businesses across Arun District score replacing the Lyminster Road level crossing with a bridge in the highest three categories out of five for economic benefit. Although the bridge itself is part of the Lyminster Bypass (South) scheme, it is this scheme which will connect from the north and enable A284 traffic to readily use it. Table 5 of the same document shows that 51% of businesses in Arun used the A284 Lyminster Road crossing at least weekly. This indicates that the businesses which regularly use the crossing rate the A284 schemes including the bridge as a significant economic benefit, whilst those which did not are likely to be those located elsewhere in the District who do not need to use the A284 regularly.
- 3.3.6. Paragraph 3.23 of the Arun Local Plan (2011-2031)¹⁵ states that "most of Bognor Regis and Littlehampton suffer from above average levels of deprivation, including concentrated pockets which rank within the worst 10% of areas. Parts of Ham Ward, Littlehampton, fall in the worst 10% in England in terms of income deprivation, with very high numbers of residents receiving income support and other types of state

¹² [Appendix Document K](#)

¹³ [Appendix Document J](#)

¹⁴ [Appendix Document L](#)

¹⁵ Statement of Case Supporting [Document 16](#)

benefits. Other parts of Littlehampton, Bognor Regis and Bersted fall within the worst 20%."

3.4. Key development sites

3.4.1. New housing and commercial development is planned north of Littlehampton. The Arun Local Plan¹⁶ recognises that expected development will worsen the existing transport issues. In particular, Chapter 15 Transport, paragraph 15.1.1 sets out key transport issues from the West Sussex Transport Plan 2011¹⁷, including delay on the A284. Paragraph 15.1.2 states *"These issues have far reaching impacts on the District's economy, environment, health and wellbeing ... and are likely to become more significant over the Plan period as a result of development"*.

3.4.2. The Arun Local Plan Map 1¹⁸ shows the strategic housing allocations in the area along with the proposed road improvement schemes, including the proposed A284 Lyminster Bypass. An extract is provided at Figure 2 following paragraph 3.4.9 of this proof.

3.4.3. Policy H SP1 of the Arun Local Plan states the following:

"Within the plan period 2011 – 2031 at least 20,000 new homes will be accommodated in the District.

Delivery will be phased over the Plan period as follows:

<i>Requirements for net additional homes</i>	<i>2011/12-2015/16</i>	<i>2016/17-2020/21</i>	<i>2021/22-2025/26</i>	<i>2026/27-2030/31</i>	<i>2011/12-2030/31</i>
<i>Dwellings per annum</i>	<i>610</i>	<i>1120</i>	<i>1310</i>	<i>960</i>	
<i>Total</i>	<i>3050</i>	<i>5600</i>	<i>6550</i>	<i>4800</i>	<i>20000</i>

¹⁶ Statement of Case Supporting [Document 16](#)

¹⁷ Statement of Case Supporting [Document 20](#)

¹⁸ Statement of Case Supporting [Document 17](#)

Table 12.2 [numbering from Local Plan document]

The following strategic housing sites are allocated as shown on the Policies Maps:

<i>Reference</i>	<i>Location</i>	<i>Number of Units</i>
<i>Greater Bognor Regis Urban Area</i>		
<i>SD1</i>	<i>Pagham South</i>	<i>400</i>
<i>SD2</i>	<i>Pagham North</i>	<i>800</i>
<i>SD3</i>	<i>West of Bersted</i>	<i>2500</i>
<i>Great Littlehampton Urban Area</i>		
<i>SD4</i>	<i>Littlehampton – West Bank</i>	<i>1000</i>
<i>Inland Arun</i>		
<i>SD5</i>	<i>Barnham/Eastergate/Westergate</i>	<i>2300</i>
<i>SD6</i>	<i>Fontwell</i>	<i>400</i>
<i>SD7</i>	<i>Yapton</i>	<i>500</i>
<i>SD8</i>	<i>Ford</i>	<i>1500</i>
<i>SD9</i>	<i>Angmering North</i>	<i>800</i>
<i>SD10</i>	<i>Climping</i>	<i>300</i>
<i>SD11</i>	<i>Angmering South and East</i>	<i>250</i>

Table 12.3 [numbering from Local Plan document]

Additional non-strategic allocations will be made across the District through emerging Neighbourhood Plans or reviews of made Neighbourhood Plans ..."

- 3.4.4. At Littlehampton there are a number of residential consents, which will result in or already generate additional traffic demands for the A284 corridor, including two strategic sites from the previous Arun Local Plan at Courtwick Lane and North Littlehampton, which are being or have been built out. These are tabulated in Table 1 and their locations shown in Figure 1 below:

Table 1**Consented development relevant to the A284 Lyminster Bypass scheme**

Reference	Location	Dwellings	Completed to 31/03/2020: validated data	Further completions to 31/03/2021: provisional data
LU/355/10	Courtwick Lane – Strategic Allocation Site	600	600 (+8 additional units approved under LU/24/17/PL)	n/a (built out)
LU/47/11	Toddington Lane - North Littlehampton – Strategic Allocation Site	1260	347	15
LU/229/10	Windroos Nursery, Worthing Road, Littlehampton	91 (reduced to 84 at reserved matters stage)	8	76 (site built out)
LU/116/13	Hollyacre Toddington Lane Littlehampton	63	53	0

Figure 1: Locations of Consented Development Sites Relevant to the A284 Lyminster Bypass Scheme



3.4.5. The Local Plan Policy EMP SP1 will ensure the provision of new high quality employment sites. The policy identifies the following measures:

- "a. Promoting regeneration of the District's main town centres as the focus for retail, office and leisure development, especially in the Bognor Regis and Littlehampton Economic Growth Areas in accordance with the sequential test;*
- b. The provision of new high-quality employment sites: strategic employment land allocations in Bognor Regis, Littlehampton and Angmering;*
- c. The provision of land to accommodate employment needs including the expansion of existing employment areas;*
- d. The provision of on-site employment within strategic housing developments ..."*

3.4.6. Policy EMP SP2 identifies two Economic Growth Areas which will be the focus of its regeneration efforts:

- a) Littlehampton Economic Growth Area
- b) Bognor Regis Economic Growth Area

The boundaries of the Littlehampton Economic Growth Area are shown on the Arun Local Plan Policies Map; see extract

below paragraph 3.4.9 of this proof. The Plan policy does not specify the quantum of development to be brought forward in these areas.

- 3.4.7. Policy EMP SP3 sets out the Strategic Employment Land Allocations in terms of Gross site Area (ha) at Table 8.1. The site boundaries are shown on the Arun Local Plan Policies Map. Details of the Littlehampton sites from Table 8.1 are as follows:

Table 2: -

Extract from Table 8.1 of the Arun Local Plan 2011-31

Site No.	Location	Gross site area (ha)
Location – Greater Littlehampton		
5	Courtwick	1.5
6	North Littlehampton	2.0

- 3.4.8. The allocations tabulated in Table 2 are additional to the previous consents at these strategic sites for employment and mixed non-residential development, which are set out in Table 3 below. This table includes non-residential development within consents at Courtwick and North Littlehampton which also include residential development allocated within the previous Arun Local Plan.

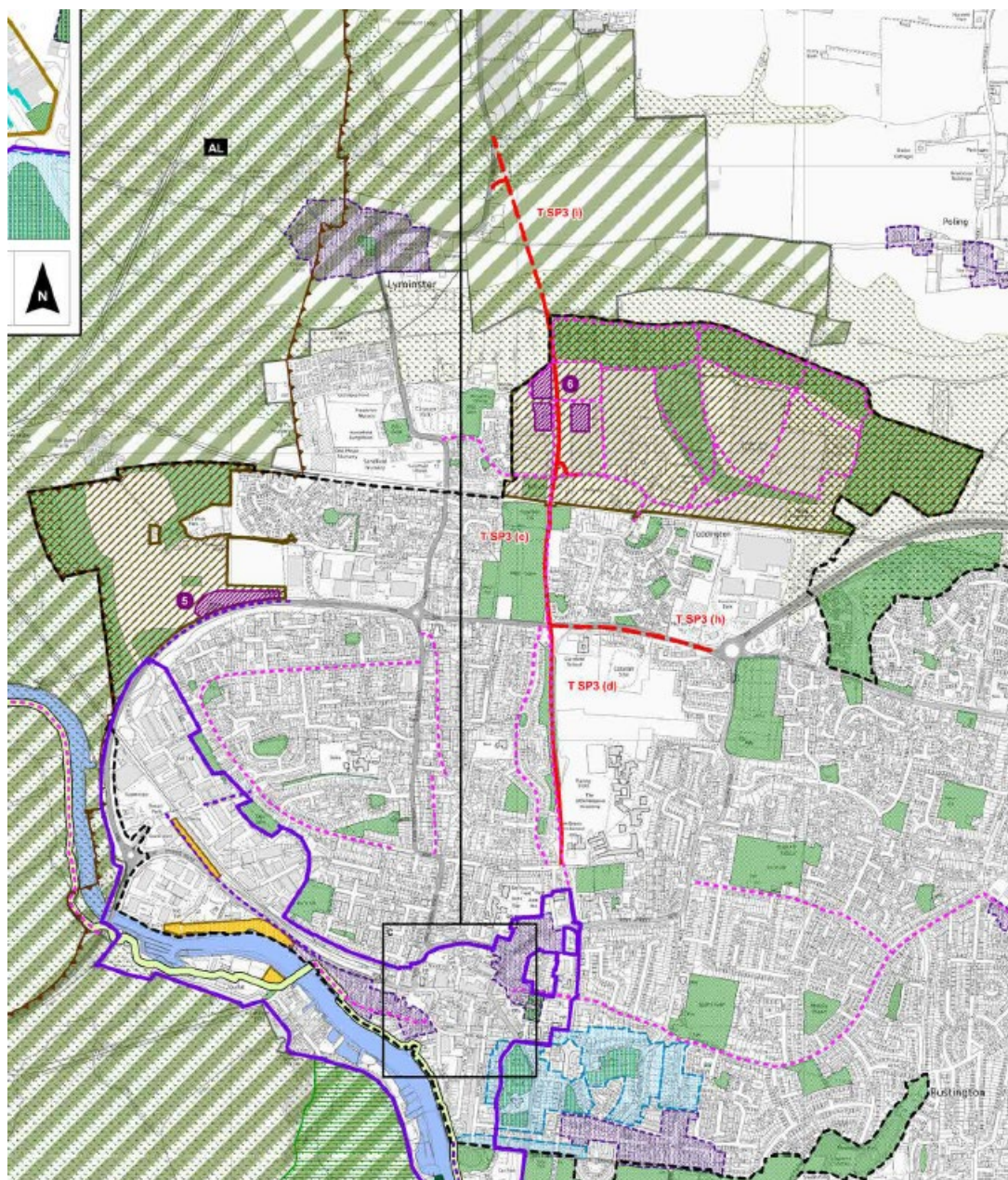
Table 3

Commercial Uses Consented at Strategic Sites in Littlehampton

Reference	Location	Land Use Class	Gross Internal Area (sqm)	Built as at 31/01/2020
LU/355/10	Courtwick	A1	235	235
		B1(b)	4000	1365
LU/47/11	North Littlehampton	A1	3000	0
		A3/A4/A5	500	Not monitored
		B1	13000	0
		C1	3000	0
		C2	3000	0
		D2	1500	0

- 3.4.9. These sites are shown as commitments on the Arun Local Plan Policies Map. An extract of the Littlehampton area, followed by the relevant section of the key showing employment and housing allocations and commitments, is provided below.

Figure 2: Extract from Arun Local Plan Policies Map



<p>Chapter 8 - Employment & Enterprise</p> <p> Economic Growth Area</p> <p> Strategic Employment Site</p> <p> Courtwick</p> <p> North Littlehampton</p> <p> Angmering</p>	<p>Chapter 9 - Retail</p> <p> Town Centre Boundary</p> <p> Retail - Primary</p> <p> Retail - Secondary</p> <p>Town Centre Inset Maps:</p> <p>C Littlehampton</p> <p>D Rustington</p>	<p>Chapter 12 - Housing Delivery</p> <p>Strategic Housing Allocations:</p> <p> Committed</p> <p> Site Specific:</p> <p> Angmering</p>
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3.5. Proposed improvements

- 3.5.1. The proposed scheme is described in section 4 of the proof of evidence of my colleague Mark Martin, whilst further detailed information regarding the scheme design is contained in Mr Burrows' proof of evidence at section 3.2.

3.6. Scheme objectives

- 3.6.1. The scheme objectives are set out in Mr Martin's proof at section 5.3. They can be summarised here as relating to:

- Improve environment and safety along the existing A284 corridor in Lyminster village and Wick, including at the railway crossing, by removing through traffic
- Improve journey times and reliability to access Littlehampton and the adjacent areas on the A284
- Provide adequate traffic capacity to allow for planned and recently delivered new housing and employment development in the Littlehampton area
- Increase the attractiveness of Littlehampton for employers and residents by an improved link to the national Strategic Road Network at the A27 to realise the benefits of the planned development and to support existing economic activity
- Improve links for pedestrians and cyclists

3.7. Feasibility and Option Selection

- 3.7.1. As set out at paragraph 3.2.1 of this proof, the Lyminster Bypass has been a long-established scheme for both the County and District Councils, supported by policy and an approved alignment. The continuation of this policy to bring forward the scheme was supported by the Arun District Local Development Framework transport study by MVA¹⁹ using the West Sussex County Strategic Transport Model undertaken in 2008/09 for the Arun District Local Development Framework Core Strategy which was then being taken forward by the District Council, as set out in the Statement of Case at paragraph 4.4.5. The southern section of the alignment was established to be delivered by developers, following the transport assessment for the north Littlehampton strategic development area in February 2011²⁰.
- 3.7.2. Within the design work for the Lyminster (North) Bypass alternative options were considered. The transport assessment (by WSP and dated January 2019) for the

¹⁹ Statement of Case Supporting [Document 18](#)

²⁰ Statement of Case Supporting [Document 19](#)

Lyminster Bypass planning application²¹ states at paragraph 4.1.2 that:

"This Proposed Scheme has been devised following a conceptual design and safety audit process in which a number of alternative alignments and junction layouts have been considered and consequently dismissed. In addition, feedback from the September 2014 public consultation has informed the design.

The design stage confirmed that the route would be offline with the new road linking into the existing straighter section of the A284 road to the north. An offline scheme would minimise disruption to existing routes during construction in comparison to an online scheme which would have a considerable impact on journey times and traffic conditions."

3.8. Strategic Economic Plan

- 3.8.1. In early 2013 the Coast to Capital LEP (the LEP) established the Coast to Capital Local Transport Body. In July 2013 the transport body submitted five schemes for Local Growth Funding allocation, including the A259 Corridor Improvements in East Arun. In March 2014 the LEP published their first Strategic Economic Plan²². The LEP covers the whole of West Sussex, Brighton and Hove, four Districts in Surrey, Lewes District in East Sussex and the London Borough of Croydon. In the same year, the LEP secured £202.4m from the Government's Local Growth Fund to support economic growth across their area over the period from 2015 to 2021. This was announced as the Coast to Capital Growth Deal. The funding for the transport schemes, including the A284 Lyminster Bypass scheme, was subject to confirmation of the scheme value through the Transport Business Case process.
- 3.8.2. The Scheme has been included in Coast to Capital Local Enterprise Partnership's Strategic Economic Plan 2014 and will contribute to the identified priority area for east Arun in the Strategic Economic Plan 2018-2030 as set out in the Statement of Case at paragraphs 4.5.3 and 4.5.4.

3.9. Strategic Transport Modelling

- 3.9.1. Strategic transport modelling, undertaken in 2009 for a then-proposed Arun Local Development Framework, and then for the Arun Local Plan between 2012 and 2016, included the Scheme as mitigation for the North Littlehampton Development Area and the Courtwick strategic development in Littlehampton. This was both in respect of the committed

²¹ [Appendix Document I](#)

²² Statement of Case Supporting [Document 14](#)

strategic housing and mixed-use developments and the additional employment allocations in the Arun Local Plan. These studies are described in the Statement of Case at paragraphs 4.4.5 to 4.4.8. They are:

- West Sussex County Transport Model, Arun District Local Development Framework: Core Strategy Revised Options, Final Report, MVA for Arun District Council, April 2009²³
- Arun Transport Study for Strategic Development: Options and Sustainable Transport Measures, WSP for Arun District Council, March 2013²⁴
- Arun Transport Study 2016 Stage 3: Final Report, Systra for Arun District Council, January 2016²⁵

3.9.2. The transport forecasting to support the transport business case for this Scheme, along with the adjacent A259 Littlehampton Corridor scheme now under construction, was provided for through the development of a purpose-built transport model - the East Arun Transport Model (EATM) - using the industry-standard SATURN software platform. Further information on the Scheme specific modelling is provided in section 5 of this proof and at section 4.4 of the Statement of Case from 4.4.9 to 4.4.13. The reports for the modelling to appraise the Scheme are:

- Lyminster Bypass Transport Business Case: Deliverable D7 Forecasting Report, WSP for West Sussex County Council, September 2014²⁶
- Lyminster Bypass Transport Business Case: Transport Business Case, WSP for West Sussex County Council, November 2015²⁷
- Lyminster Bypass Forecasting Report Version 2 – 2017 Update, WSP for West Sussex County Council, August 2017²⁸
- A284 Lyminster Bypass Transport Assessment, WSP for West Sussex County Council, January 2019²⁹

²³ Statement of Case Supporting [Document 18](#)

²⁴ [Appendix Document H](#)

²⁵ Statement of Case Supporting [Document 22](#)

²⁶ Updated version at Statement of Case Supporting [Document 26](#)

²⁷ Statement of Case Supporting [Document 27](#)

²⁸ Statement of Case Supporting [Document 26](#)

²⁹ [Appendix Document I](#)

4. NEED FOR THE SCHEME

4.1. Overview of nature of the Arun area

- 4.1.1. The Arun District is located on the South Coast, one of seven Districts in West Sussex. The northern half of the District falls within the South Downs National Park. Arun District has strong transport, economic and housing market links with neighbouring and other coastal authorities in West Sussex, Brighton and Hove and South Hampshire and this is reflected in patterns of movement for work, shopping, entertainment and education.
- 4.1.2. Over 77% of Arun's population (nearly 113,000 of 147,000 total) live in the coastal urban areas centred in the two main towns of Bognor Regis and Littlehampton. The river Arun divides the District approximately in half on the western side of Littlehampton and the eastern side of Arundel. North of the coast, Arundel and a number of expanded villages are surrounded by countryside. Much of the coastal plain is intensively farmed with areas of large-scale horticultural development and glasshouses.
- 4.1.3. The coastal towns are the main service, employment, retail and social centres for the District, whilst Arundel is an important visitor destination with facilities, services and employment in large part reflecting this attribute. Littlehampton and Bognor Regis, although separated from each other by countryside, have both merged with their neighbouring settlements to form larger built up areas, within which distinct village and parish identities remain. Littlehampton, Rustington, East Preston and Kingston form a built-up area with a population in excess of 48,200.

4.2. Summary of existing network problems

- 4.2.1. The A284 provides a north-south route linking Littlehampton to the national Strategic Road Network at the A27 which passes to the north of the town and offers access to Chichester and South Hampshire (to the west) and Worthing and Brighton (to the east). The road also provides access to the A29, via the A27 at Arundel, for journeys to the inland part of West Sussex and to Surrey.
- 4.2.2. The A284 corridor is of critical importance to Littlehampton and Rustington. The section proposed to be bypassed, to the north of Littlehampton, is a single carriageway which is narrow with sharp bends and passes through a busy railway level crossing. As a result, the road suffers from congestion and delay, which in turn makes Littlehampton a less attractive location for homes and jobs.
- 4.2.3. Because of the frequent delays on the route, there is a large amount of short-cutting along unsuitable local roads, notably Toddington Lane and Mill Road, as drivers look for ways to avoid lengthy queuing to cross the railway. This rat-running

causes congestion, noise and air pollution on local roads and reduces the quality of the public realm.

- 4.2.4. The road passes through residential areas at Lyminster village, including a conservation area and past listed assets, and at Wick. The conservation area and listed assets are mapped showing their position relative to the existing A284 and the proposed scheme at Figure 4-1 of the A284 Lyminster Bypass (Northern Section) Design and Access Statement³⁰. Pedestrian and cycling facilities along the route are poor, creating severance.
- 4.2.5. Strategic modelling indicates that if these improvements are not made (as part of a wider area improvement package), road network performance will be significantly impaired by high traffic levels as well as the village continuing to suffer in environmental and safety terms from the forecasted traffic levels. This is shown by the forecasted 2019 flows in PCU/hr in Table 7.1 and the 2034 flows in Table 7.2 both of the Lyminster Bypass Forecasting Report Version 2 – 2017 Update, WSP for West Sussex County Council, August 2017³¹. These are reproduced below as Table 4 and Table 5. The do-minimum flows are those without the proposed Scheme. The do-something flows are those with the Scheme open to traffic. AM refers to the morning peak hour starting at 08:00, IP refers to an average hour between 10:00 and 16:00, PM refers to the evening peak hour starting at 17:00.

Table 4 - 2019 Traffic Forecasts from Lyminster Bypass Forecasting Report

LINK	DIRECTION	2019 - Do MINIMUM			2019 - Do SOMETHING			DIFFERENCE		
		AM	IP	PM	AM	IP	PM	AM	IP	PM
A284 (North of Bypass)	Northbound	512	541	507	725	726	599	213	185	92
	Southbound	534	539	709	749	669	901	215	130	192
A284 (Lyminster)	Northbound	499	555	481	119	98	121	-380	-457	-360
	Southbound	524	531	688	70	92	230	-454	-439	-458
Lyminster Bypass (Northern Section)	Northbound	0	0	0	602	642	655	602	642	655
	Southbound	0	0	0	678	601	457	678	601	457
Lyminster Bypass (Southern Section)	Northbound	151	134	132	691	724	504	540	590	372
	Southbound	183	137	199	736	615	665	553	478	466
A284 (Wick)	Northbound	497	591	652	172	181	361	-325	-410	-291
	Southbound	628	560	651	291	216	365	-337	-344	-286
A259 (Between A284 and Lyminster Bypass)	Eastbound	1,139	962	1,228	1,130	928	1,199	-9	-34	-29
	Westbound	1,180	1,042	1,244	1,116	933	1,163	-64	-109	-81

³⁰ [Appendix Document M](#)

³¹ Statement of Case Supporting [Document 26](#)

Table 5 - 2034 Traffic Forecasts from Lyminster Bypass Forecasting Report

LINK	DIRECTION	2034 - Do MINIMUM			2034 - Do SOMETHING			DIFFERENCE		
		AM	IP	PM	AM	IP	PM	AM	IP	PM
A284 (North of Bypass)	Northbound	742	682	517	830	843	614	88	161	97
	Southbound	693	682	817	815	830	911	122	148	94
A284 (Lyminster)	Northbound	724	699	540	148	115	274	-576	-584	-266
	Southbound	681	674	796	170	88	312	-511	-586	-484
Lyminster Bypass (Northern Section)	Northbound	0	0	0	670	746	313	670	746	313
	Southbound	0	0	0	638	736	582	638	736	582
Lyminster Bypass (Southern Section)	Northbound	402	321	429	897	931	580	495	610	151
	Southbound	576	314	504	1,005	875	713	429	561	209
A284 (Wick)	Northbound	675	710	676	230	240	533	-445	-470	-143
	Southbound	751	674	693	407	237	534	-344	-437	-159
A259 (Between A284 and Lyminster Bypass)	Eastbound	1,317	1,105	1,486	1,307	1,070	1,339	-10	-35	-147
	Westbound	1,415	1,163	1,404	1,261	1,079	1,236	-154	-84	-168

4.2.6. These flows can be compared to the typical value defined at Table 5/1 of the COBA Manual (chapter 5)³² of 700 vehicles per hour per lane as the breakpoint where speed more rapidly drops with added flow for a road through a small town or village, assuming a standard lane width of 3.65m. The minimum lane width in Lyminster village is 3.15m and the average width in the centre of the village around 3.5m so this breakpoint will be lower at this location than the COBA value quoted here. The flows forecasted per hour in Lyminster village without the Scheme reach 724 PCU/hr in AM peak northbound and 796 PCU/hr in PM peak southbound. Converting these values to vehicles per hour would reduce them by approximately 50 per hour using observed percentages of heavy vehicles. A similar comparison was also made at paragraph 4.6.3 of the Statement of Case, using the observed flows from 2018.

4.2.7. Further information relating to these issues was provided in paragraphs 3.3 to 3.4 of the Statement of Case.

4.3. Strategic objectives

4.3.1. The scheme contributes to strategic objectives for the Arun Local Plan as detailed at paragraph 12.4.3 of the Statement of Case.

4.3.2. The scheme meets a series of objectives that align with the strategic aims of West Sussex County Council and Coast to Capital LEP. These are:

- Provide motorists with a less congested route with reduced journey times;
- Reduce queue lengths at key junctions and railway level crossings bypassed by the scheme;

³² [Appendix Document N](#)

- Support delivery of the North Littlehampton and Courtwick consented housing and employment developments and the further Local Plan allocations of 3.5 ha employment space;
- Fulfil the above criteria while providing good value for money for the taxpayer.

4.4. Transport Business Case

4.4.1. The overall benefits of the schemes are detailed in the Lyminster Bypass Transport Business Case (November 2015) ("LBTBC")³³ with the outcomes summarised in section 8.2 of that document.

4.4.2. Paragraph 8.2.1 of the LBTBC states that:

"The Strategic case outlines the need for the bypass. The primary need is to provide a high quality route between the A27 and the A259 that avoids the sharp bends on the existing route and avoids the delays caused by the level crossing at Wick. This would make the Littlehampton area more attractive to developers, leading to local economic growth. The key stakeholders are set out, and the interactions with other schemes are discussed, particularly the southern bypass delivered as part of the North Littlehampton development."

4.4.3. Paragraph 8.2.2 of the TBC states that:

"Over 60 years, the scheme is expected to generate benefits worth £118m, including £3m of safety benefits."

4.4.4. This forecast of benefits undertaken in 2015 with a present day value of £118,598,543 when compared to the current scheme cost of £21.364m - not discounted - shows that the scheme would provide a very high level of value for money, although these financial values are not directly comparable to provide a fully updated Benefit Cost Ratio.

4.4.5. The forecasting did not include the effects of the A27 Arundel Bypass which is expected to concentrate demand on this corridor and so could be expected to raise benefits further. The forecasting did assume a minor improvement at the A27/A284 Crossbush junction, which Highways England (then the Highways Agency) had proposed in the event that the Arundel Bypass was not taken forward in the Roads Investment Strategy. The Arundel Bypass is further discussed at section 5.11 of this proof.

4.4.6. Although it is now six years since the Transport Business Case was concluded, this was due to delays in progressing the planning application to respond to changes in flood risk. The

³³ Statement of Case Supporting [Document 27](#)

design of the Scheme in terms of its traffic capacity and speed and the local road network has not changed significantly in that time. During the period from the base model validation to 2019 annual average daily flows on the A284 at Lyminster rose slightly from 12065 to 12677 vehicles. The A259 Littlehampton Corridor Improvement, which connects to the Scheme, is also progressing as was assumed in the LBTBC. The development of an A27 Arundel Bypass scheme is the main change, but only adds to the need for the A284 Scheme, so the continued use of the 2015 LBTBC can be seen as an appropriate and conservative approach, while avoiding incurring the cost for the public of re-running the LBTBC.

4.5. Strategic Case for the Scheme

4.5.1. The network operational problems on the route are set out at section 4.2 of this proof of evidence.

4.5.2. The LBTBC states at paragraphs 3.3.2 to 3.3.4:

- “The key problem which the Lyminster Bypass scheme seeks to address is one of inadequate access to Littlehampton from the national Strategic Road Network (SRN). The existing A284 is characterised by a tortuous, narrow and slow route into the town centre, employment areas and the A259 from the A27 at Crossbush, with a railway level crossing at Lyminster Road, Wick. This leads to delays and congestion causing unreliable journey times, notably at the level crossing and at the junction with the A259.”
- “A new bridge over the railway will be provided by the developer for the North Littlehampton Strategic Development Location (SDL). Access to the bridge from the north without the Lyminster Bypass (north) would be inadequate for the strategic traffic, as it would be required to use the existing A284 and Mill Lane before joining the southern bypass. Mill Lane is a very narrow, D class road with discontinuous footways. This is also a longer route with a series of 90 degree turns, and is inadequate for strategic traffic.”
- “The residential development at North Littlehampton provides infrastructure in the town and across the rail line but leaves increased traffic pressure on the gap which is left through the village of Lyminster and north to the A27 at Crossbush.”

4.6. Solutions delivered by scheme

4.6.1. The LBTBC states at paragraph 3.3.5:

“The proposed Lyminster Bypass (north) scheme would bypass and relieve the village of Lyminster and join with the developer funded alignment enabling relief of the remainder of the A284 south into Littlehampton, notably including the railway level crossing and the congested A259 Wick roundabout.”

4.6.2. The sections of the A284 relieved through Wick and Littlehampton, consisting of Lyminster Road in Wick and Wick Street and Arundel Road in Littlehampton all have residential frontage, with local shops, restaurants, post office, social clubs and halls and primary school at or just off Wick Street. This increases the reduction in severance provided by the scheme to fully realise the potential benefit of the southern bypass route provided by the developer.

4.7. Outcomes – with scheme

4.7.1. The Lyminster Bypass (North) scheme is forecasted to lead to journey time reductions along the A284 corridor between the A27 at Crossbush and the B2187 at East Street in Littlehampton town centre of between 20% and 30% compared to the existing route without the scheme in the opening and design year forecasts for the scheme. This applies to the AM, inter-peak and PM peak periods with the exception of the PM peak southbound in the design year when the reduction is 4%. This information is further described and tabulated in the Statement of Case at paragraph 4.4.13 and in table 4.3.

4.7.2. The strategic and economic benefits of the scheme to the Littlehampton area are set out in paragraphs 4.5.2 and 4.4.4 of this proof.

4.8. Outcomes – without scheme

4.8.1. Despite current uncertainty over the medium to long term impacts of the current Covid-19 Pandemic on overall patterns of traffic demand, traffic can be expected to grow on this corridor, partly due to the consented development in the District, alongside background growth related to regional changes in demand to travel and population.

4.8.2. Comparison of observed traffic flows on the A284 at Lyminster from the County Council’s permanent traffic monitoring site³⁴ shows that average daily flows from 1 April to 22 June – the latest available for current year - have risen from 13009 vehicles per day in 2019 to 14301 in 2021 despite

³⁴ This database can be accessed at <https://www.westsussex.gov.uk/roads-and-travel/traffic-management/traffic-counts/> Registration is required and is normally approved within two working days. See site A284 Lyminster, Lyminster Road North of Bends; Site Number: 00000446

Covid-19 restrictions having not yet been fully relaxed, although it should be noted that current traffic routings may be influenced by the current long-term roadworks on the A259 in Littlehampton and Angmering to the east of the A284. Nonetheless, this shows a strong signal that overall demand for movement remains high, despite changes in commuting patterns for those who are able to work from home.

- 4.8.3. The limitations in capacity at the unimproved sections of road will lead to worsening congestion. Any future increase in average frequencies of rail services on the Coastway West route over the Lyminster Road level crossing could also be expected to have an adverse effect on traffic congestion on the A284. Although such an increase is not currently planned it should not be ruled out over the lifetime and appraisal period for the scheme. Increased delay is in turn likely to lead to retiming of those peak period trips where the traveller has some flexibility, meaning an extension of peak congestion conditions into the 'shoulder peak' periods before and after the existing peak hours. Shoulder peak traffic flow conditions may in turn extend into the inter-peak period.
- 4.8.4. Continued or increased congestion on this corridor is likely have a negative effect on employment in the local area through slower job creation and poorer staff retention as the area becomes less attractive for employers to locate and for staff to work in. The retail and tourism sectors could also be negatively affected by difficult local travel conditions.
- 4.8.5. The non-provision of the pedestrian and cycle route alongside the new road and the lack of relief to the existing road will also continue to inhibit making local journeys by these modes and reduce the connectivity and utility of the sections of cycle track on the Southern Bypass provided by the North Littlehampton developer below their potential.
- 4.8.6. Increased congestion on the route will be likely to lead to a steady worsening of the accident rate on the road. It is not presently known what the rate of uptake of self-driving vehicles may be over the appraisal period and what influence the presence of these may have on the forecasted accident rates. This potential influencing factor is necessarily excluded from the analysis undertaken, as there is currently no relevant guidance to permit its inclusion.

4.9. **Summary**

- 4.9.1. The scheme is essential to:
 - Protect the village of Lyminster and the existing A284 corridor into Littlehampton from the negative environmental and safety impacts of intensive through traffic.

- Accommodate and enable planned growth in housing and jobs in the Littlehampton area.
- Realise the full benefits of the Lyminster Bypass (South) scheme currently being built by the North Littlehampton site promoter team and to protect Mill Lane from rat-running traffic that can be expected from opening the South scheme without provision of this scheme.

4.9.2. The conclusion to the LBTBC at paragraph 8.3.1 states:

“The proposed Lyminster Bypass will generate substantial net benefits to the local economy, helping fulfil Coast to Capital’s remit.”

5. TRAFFIC MODELLING

5.1. Overview of transport assessment and traffic modelling work

- 5.1.1. The Scheme had been included in strategic modelling to support the development of the Arun District Local Plan and prior to that the proposed Core Strategy, as referenced in section 3.8 of this proof and described in the Statement of Case at paragraphs 4.4.5 to 4.4.13. Following this, the Scheme was included in the Coast to Capital Local Growth Deal. This required that more detailed modelling was to be carried out to inform a Transport Business Case to confirm the release of the provisional funding allocation.
- 5.1.2. It was determined that the West Sussex County Strategic model was not suitable to meet the Department for Transport (DfT) Transport Analysis Guidance (TAG) for the scheme appraisal work for this Scheme or the A259 Littlehampton Corridor Improvement Rather than updating the Countywide model, a dedicated strategic transport model, the East Arun Transport Model (EATM), was built for the testing and appraisal of both the Scheme and the nearby A259 Littlehampton Corridor Improvement scheme.

5.2. Modelling Specification and Compliance

- 5.2.1. It was determined to use a SATURN traffic simulation model covering the area, from Yapton across to Worthing, extending north to Findon and Arundel.
- 5.2.2. The model was developed in accordance with the Department for Transport TAG. The Highways Agency’s Design Manual for Roads and Bridges (DMRB) Volume 12 is also utilised where required. These provide detailed guidance on the appraisal of transport projects and wider advice on scoping and carrying out transport studies.

5.3. Data Collection

- 5.3.1. A range of traffic surveys was commissioned to inform the model. These included road site interviews, manual classified counts, queue counts, automatic traffic counts and journey time surveys.
- 5.3.2. Traffic data was collected between 25th September 2013 and 25th October 2013. This period was deemed to be a neutral period, avoiding school half-term in the local area and therefore regarded as a typical representation of traffic throughout the day.

5.4. Model Development and Forecasting

- 5.4.1. Following development of a validated base year model for 2013, forecasting for scheme opening and design years was undertaken. The forecasting for the Scheme, including the reference case and with-scheme model scenarios, is detailed in the Lyminster Bypass Forecasting Report Version 2 2017 Update³⁵, referenced here as “the Forecasting Report”.
- 5.4.2. This was used firstly to inform the Transport Business Case and later updated to support the planning application for the Scheme. The original forecasting report for the Transport Business Case was issued in September 2014 and the forecasted years used in the business case were 2017 and 2032. The most recent version of the forecasting report was issued in August 2017³⁶. This report updated the forecasted years to 2019 and 2034 to inform the Transport Assessment for the planning application.
- 5.4.3. The forecasting assumed that the Lyminster Bypass Southern scheme and the Fitzalan Link would be in place, completing the new A284 alignment into Littlehampton. The A259 Littlehampton Corridor Improvements were assumed to not be completed in the 2019 forecast year but would be open in the 2034 forecast. It also included Network Rail’s intention to close the Toddington Lane level crossing as this was considered to be a more robust test of the junction capacity on the Lyminster Southern Bypass, which outweighed any uncertainty about the timing of the closure. The core forecasting did not include closure of the Lyminster Road level crossing, as Network Rail do not have firm plans for this at present, but a sensitivity test was done for this scenario for the business case.
- 5.4.4. The forecasting did not assume the A27 Arundel Bypass, as this was not a committed scheme at the time of forecasting, when it had still to pass through options consultation and preferred route selection stage and it is still not fully committed now. The relationship of the proposed A27 Arundel

³⁵ Statement of Case Supporting [Document 26](#)

³⁶ Statement of Case Supporting [Document 26](#)

Bypass to this scheme is discussed further at paragraph 5.10 of this proof.

5.5. Scheme Design as Modelled

- 5.5.1. For both the business case and the planning application forecasts the modelled scheme design was as currently proposed in all respects which are significant to traffic capacity and assignment. The Scheme design is shown in section 3.2 of Mr Burrows' proof.

5.6. Principles

- 5.6.1. The Scheme is intended to relieve existing and forecasted congestion on the A284 route between Littlehampton and Arundel, leading to quicker and more reliable journey times through the day and notably at peak times. It is also intended to remove any incentive for traffic to use minor roads such as Toddington Lane and Mill Road north of Littlehampton or Station Road and Arundel road in Angmering to avoid congestion on the A284. The extent of additional capacity to be provided is intended and designed to be proportional to the achievement of these needs.
- 5.6.2. The Scheme is not intended to abstract traffic from public transport operating in this corridor, such as the West Coastway or Arun Valley rail lines or the Route 9 bus service. It is not intended to encourage unnecessary journeys by car, such as through provision of more capacity than is needed or a higher speed route than is appropriate for its function and location.
- 5.6.3. The Scheme connects to the Lyminster Bypass (South) scheme and onward to the A259 Littlehampton Corridor Improvement scheme, which are both currently under construction. The schemes have been planned to complement each other to address the transport issues in the East Arun area including Littlehampton and Lyminster, as described at paragraph 3.3 of this proof.

5.7. Overview of Scheme Benefits

- 5.7.1. The Scheme is expected to have significant benefits in the areas of journey time reductions, greater reliability of expected journey times aiding journey planning including for bus services, savings in numbers of injury accidents and casualties, reduced transport costs for businesses, enhanced local economic growth, allowing provision of planned housing to meet needs, providing connectivity for pedestrians and cyclists. The journey time benefits are set out in the following section of this document.
- 5.7.2. As described at paragraph 4.6.5 of the Statement of Case between 2015 and 2019, there was one fatal, three serious and 12 slight personal injury collisions on the A284 between the A27 and the A259. These could be expected to increase proportionally to the forecasted increases in traffic flows to

2034 set out at Tables 4 and 5 of this proof, although changes in congestion patterns could lead to some variation in the patterns of accident locations and severity.

- 5.7.3. The economic growth effects of the Scheme are discussed at paragraphs 3.3, 4.5 and 4.8 of this proof, whilst the key development sites related to the Scheme are set out at section 3.4 of this proof.
- 5.7.4. The connectivity for pedestrians and cyclists will be improved by provision of a footway/cycleway alongside the Scheme, connecting to the similar provision on the Lyminster Bypass (South) scheme as well as by the removal of through traffic flows from the A284 Lyminster Road improving conditions for walking and cycling to and within Lyminster. The scheme will also include a Pegasus crossing to maintain continued safe and convenient access to public rights of way east of the village.

5.8. Specific Benefits by Location

- 5.8.1. Forecasted average journey times between the A27/A285 Crossbush junction and Littlehampton town centre at East Street without the Scheme in 2019 and 2034 are shown in table 4-2 of the Statement of Case, along with the increases from a 2016 base forecast. The forecasted average journey times with the Scheme in place using the bypass route between Crossbush and East Street in Littlehampton are shown in Table 4-3 of the Statement of Case. These Tables are reproduced here as Tables 6 and 7. In these Tables AM peak hour refers to 8-9am whilst PM peak hour refers to 5-6pm. Inter Peak refers to an average hour of the period from 10am to 4pm. In Table 7 the "do-minimum" scenario is without the proposed Scheme, whilst "do-something" is with the Scheme.

Table 6 - Modelled Journey Times on the A284 Without the Scheme

Time	Direction	2016	2019		2034	
		Time (s)	Time (s)	% Change	Time (s)	% Change
AM Peak Hour	NB	380	383	1%	406	7%
	SB	386	391	1%	407	5%
Inter Peak Average Hour	NB	372	375	1%	385	3%
	SB	375	380	1%	389	4%
PM Peak Hour	NB	339	342	1%	349	3%
	SB	349	357	2%	400	5%

Table 7 - Modelled Journey Times on the A284 Compared to Bypass

Time	Direction	A284 2019 Do Minimum	Bypass 2019 Do Something		A284 2034 DM	Bypass 2034 DS	
		Time (s)	Time (s)	% Change	Time (s)	Time (s)	% Change
AM	NB	383	269	-30%	406	296	-27%
	SB	391	273	-30%	407	314	-23%
Inter Peak	NB	375	266	-29%	385	284	-26%
	SB	380	264	-30%	389	278	-29%
PM	NB	342	265	-23%	349	284	-19%
	SB	357	282	-21%	400	386	-4%

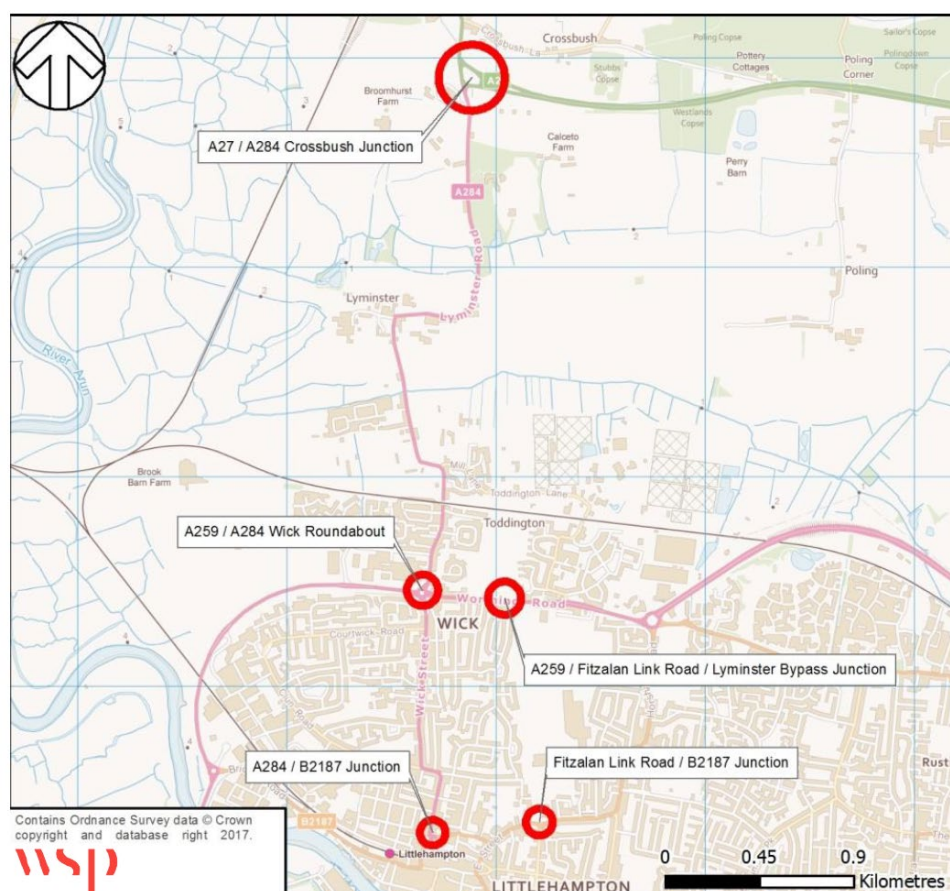
- 5.8.2. In the AM peak hour (8am to 9am) reductions of journey time between 23% and 30% are shown. In the inter-peak period (10am to 4pm) reductions of between 26% and 30% are shown. In the PM peak period (5pm to 6pm) reductions of

19% to 23% are shown with the exception of the 2034 PM peak southbound where a reduction of 4% is shown due to delays on the Lyminster Bypass South approaching the A284/A259 interchange junction. That junction was designed to have as high a capacity as could reasonably be accommodated within available land without purchase and demolition of neighbouring residential property, whilst meeting design standards and making full provision for non-motorised users.

- 5.8.3. The proposed Scheme has a more direct alignment than the existing A284 route, saving approximately 0.6km from a journey between the A27 at Crossbush and Littlehampton town centre at East Street. This contributes towards the journey time reductions and can also be expected to contribute to reductions in vehicle operating costs and fuel consumption, alongside the benefits from reduced congestion. Table 4.18 of the LBTBC report shows vehicle operating cost savings of £11.083M resulting from the Scheme over the assessment period.
- 5.8.4. The forecasted levels of congestion, as indicated by the volume to capacity ratio (V/C) of traffic flows, at five key junctions are shown in Table 7.3 of the Forecasting Report. These junctions are:
- A27/A284 Crossbush Junction
 - A259/A284 Wick Junction
 - A259/Lyminster Bypass (south)
 - A284/B2187 East Street
 - Fitzalan Link/ B2187 East Street

The location of these key junctions is shown in Figure 3 below, reproduced from Figure 7.7 of the Forecasting Report.

Figure 3: Key Junctions



- 5.8.5. At the A27/A284 Crossbush junction, modest reductions in congestion are shown in 2034 on some approach arms of generally between 2% and 4% although for others congestion is unchanged. There is an increase in V/C in inter-peak on the A27 Arundel arm. In 2019 the pattern is broadly similar although the junction does not operate so close to capacity, which allows for more increase in V/C taking up residual capacity to figures of 85% to 90% on the A27 Arundel arm.
- 5.8.6. At the A259/A284 Wick junction reductions in V/C of between 8% and 17% occur in all forecasted scenarios such that the highest V/C in 2034 PM peak reduces to under 83%. At the A259/Lyminster Bypass (South) junction there are increases in V/C of between 1.5% and 14% as the traffic relieved from the Wick junction is rerouted through this junction. The maximum V/C is 94% is in 2034 AM peak.
- 5.8.7. The junctions of the B2187 (East Street) with the A284 and with the Fitzalan Link both operate well within capacity without congestion both with and without the Scheme. Within this, the Scheme results in a modest reduction in V/C at A284/B2187 and a modest increase at Fitzalan Link/B2187.
- 5.8.8. It should be noted, however that the main reductions in delay from the Scheme which contribute to the journey time

savings are from bypassing the extensive queuing for the Lyminster Road level crossing, rather than the changes in congestion at these junctions. This is reflected in the variability of observed peak hour journey times on the A284 corridor of between 20% to 28% in comparison with values under 15% for other observed routes in the study area. Details of the variability of journey times and the extent of the observed routes were provided in the Statement of Case at paragraphs 4.4.9 to 4.4.10 including Table 4-1 Observed Journey Time Summary Results and Figure 4.1 Journey Time routes.

5.9. Traffic Flow Changes With Scheme

- 5.9.1. Tables 7.1 and 7.2 in the Forecasting Report shows the forecasted flows on key links on the A284 Crossbush to Littlehampton Corridor in the 2019 and 2034 forecast years respectively for both the without scheme (do-minimum) and with-scheme (do something).
- 5.9.2. These tables show that two-way traffic flows through Lyminster reduce by between -818 and -896 PCUs (passenger car units) per hour in all modelled time periods for the 2019 forecast year. In the 2034 forecasts these flows reduce by between -750 and -1170 PCU/hr.
- 5.9.3. At the A284 in Wick traffic flows reduce by between -577 and -754 PCU/hr in the 2019 forecast and by between -302 and -907 PCU/hr in 2034.
- 5.9.4. Figures 7.1 to 7.6 of the Forecasting Report show plots of the comparison of changes in traffic flow from do-minimum i.e. without the Scheme to with the Scheme for the AM inter peak and PM periods respectively. These show that as well as the major flow reductions on the existing A284 detailed above, there are also modest reductions in flow of generally between 25 and 120 PCU/hr on minor roads through Angmering, mostly in the northbound direction, including Station Road, Arundel Road and Roundstone Lane.
- 5.9.5. These forecasted flow reductions are expected to benefit pedestrians, cyclists and residents on the routes described.

5.10. A27 Arundel Bypass Forecasting

- 5.10.1. During the period in which the Lyminster Bypass has been developed, Highways England has also been progressing a scheme for an A27 Arundel Bypass. The Arundel Bypass now has a preferred route and has been through scoping for a Development Consent Order (DCO) process. However, the DCO application and consultation are yet to take place at the time of finalising this proof of evidence. This means that the Arundel Bypass is not yet a committed scheme in transport planning terms, whilst the Lyminster Bypass (North) scheme already has a planning consent in place.

- 5.10.2. On this basis Highways England's forecasting for the A27 Arundel scheme has taken the Lyminster Bypass (North) scheme into account as a committed scheme, alongside the Lyminster Bypass (South) with Fitzalan Link and A259 Corridor improvements which are currently under construction.
- 5.10.3. The Highways England A27 Arundel Bypass Scheme Assessment Report 2020³⁷ (ABSAR) shows that for their preferred route scheme, known as Option 5BV1 or the Grey Route, a large reassignment of traffic flows takes place resulting in high forecasted increases on the new A284 route between Crossbush and Littlehampton. From Figures 9-12 and 9-13 of that report, in 2041 AM peak they forecast increases of 144% northbound and 63% southbound, while in PM peak the forecasted increases are 153% southbound and 15% southbound. It should be noted however that the forecasted V/C on the A284 remains below 1.0 in both peaks and directions of travel, indicating that the Lyminster Bypass (North) scheme can cope with these 2041 forecasted flows, although reserve (unused) capacity is reduced.
- 5.10.4. Set against this the A259 would see some reduction in traffic flows due to transfer to the improved A27 route. Paragraph 9.4.5.3 of the ABSAR states that "The A259 is predicted to see traffic flow reductions of 10 – 15% which is consistent with levels seen for the other options." This transfer is likely to be a large part of the reason for the increases on the A284 as traffic for Littlehampton and neighbouring settlements remains on the A27 until reaching the A284 before turning south, instead of approaching Littlehampton on the A259 from east or west. Flow reduction on the A259 may limit the likely increase in congestion at the Lyminster Bypass (South)/A259 junction.
- 5.10.5. It will be for Highways England to consult and set out through their DCO application how they will mitigate any adverse impacts of their scheme on the operation and safety of the local road network, notably including the A284 and its junctions. It can be certain that the A284 would be in a much poorer position to accommodate flow increases from the A27 if the Lyminster Bypass (North) scheme was not completed and open to traffic prior to the construction of the A27 Arundel Bypass. Without the Lyminster scheme in place the environmental conditions in Lyminster and Wick could become intolerable along with adverse impacts to the safety of cyclists and pedestrians and of the Lyminster Road level crossing, from increased flows from the A27 of this scale.
- 5.10.6. These forecasts are not a reason however to amend and widen the Lyminster Bypass (North) scheme as this would

³⁷ [Appendix Document O](#)

raise its capacity to a greater level than the A284 to the north or south could accommodate, which would not achieve any practical benefit. On this basis, the prospect of an A27 Arundel Bypass should not result in any modification and consequent delay or risk to implementation of the A284 scheme but should instead emphasise the urgency of the need to deliver the Scheme.

6. THE PLANNING POLICY POSITION

6.1. National Planning Policy Framework (NPPF)

6.1.1. The NPPF 2019 provides a framework within which locally prepared plans for housing and other development can be produced. It sets out a number of principles of which the following are particularly relevant to the Scheme:

- Section 5 - Delivering a sufficient supply of homes
- Section 6 - Promoting a strong, competitive economy
- Section 7 - Ensuring vitality of town centres
- Section 8 - Promoting healthy and safe communities
- Section 9 - Promoting Sustainable Transport
- Section 14 – Meeting the challenge of climate change, flooding and coastal change
- Section 15 - Conserving and enhancing the natural environment

6.1.2. The NPPF recognises that transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health.

6.2. National transport objectives met and key improvements delivered by scheme

6.2.1. The Scheme is linked to the provision of 1260 houses and 700 new jobs. It will contribute to the local economy generating economic benefits worth £118m over the next 60 years. It will improve access to the Littlehampton town centre and hence will help to ensure its vitality. It also creates improvements to the existing road network, reducing congestion and improving safety together with enhancing non-motorised user facilities.

6.3. Local Transport Plan - Policies supported

6.3.1. The West Sussex Transport Plan 2011 – 2026³⁸ (the LTP) guides the development of highways and transport infrastructure in the county. The Foreword (Page ii of the LTP)

³⁸ Statement of Case Supporting [Document 20](#)

states that the LTP aims to improve the quality of life for West Sussex residents by: promoting economic growth; tackling climate change; providing access to services, employment and housing; improving safety, security and health. The Scheme would contribute to all four of these objectives.

- 6.3.2. The relevant detailed sections of the West Sussex Transport Plan for the A284 Lyminster Bypass scheme are set out at section 12.3 of the Statement of Case and are reproduced here:
- 6.3.3. The 'Part 1 Long Term Strategy' (Section 1.3.1 of the Transport Plan) sets out key issues for the Coastal Area of West Sussex. Those which are relevant to the Scheme are as follows:
 - poor economic performance relative to the rest of West Sussex
 - an infrastructure deficit which causes poor connectivity within Coastal West Sussex, and to the wider region, which inhibits economic growth
 - pockets of deprivation particularly in the towns
 - travel patterns which are dominated by the private car and low usage of sustainable modes of transport
 - specific locations with poor local air quality and emissions which contribute to climate change
 - a need to maintain a high quality urban and rural environment
- 6.3.4. The 'Part 1 Long Term Strategy' (Section 1.4.1 of the Transport Plan) identifies issues on the A284 as follows:
 - 'The A284 is an important link road which provides access to Littlehampton and to a lesser extent Bognor Regis. The Wick level crossing causes delays for traffic in both directions, which can affect the operation of the junction with the A259.'
- 6.3.5. The Implementation Plan for Arun District (Section 2.2.1 of the Transport Plan) sets out the following principles that new schemes are required to support and contribute towards:
 - increasing use of sustainable modes of transport
 - improving network efficiency in order to improve journey times and air quality
 - improving safety for all road users
 - discouraging HGVs from using unsuitable roads
 - improving accessibility between communities within the District

6.3.6. The Implementation Plan for Arun (Section 2.2.2 of the Transport Plan) sets out a number of the key issues for Arun District. The issues which are particularly relevant to the Scheme are as follows:

- Access by road deters visitors and businesses from Littlehampton and Bognor Regis, inhibiting aims for regeneration of the District.
- Traffic travelling between the A27 and A259 via the A284 and A29 to access Littlehampton, Bognor Regis and the coastal area is often delayed due to the level crossings at Wick.
- The level crossings at Wick create congestion and poor air quality.
- In order to avoid congestion and maintain journey times HGVs are diverting onto unsuitable residential and rural roads, causing concerns over safety.
- The current provision of pedestrian and cycling facilities throughout the District, and in particular within Bognor Regis and Littlehampton, are unable to support and maintain sustainable travel, as much of the network is disjointed and suffers from inadequate signing, safe crossing points and poor surfacing.

6.3.7. The Implementation Plan for Arun (Section 2.2.2 of the Transport Plan) goes on to set out the aims for Arun district. The aims towards which the Scheme will contribute are as follows:

- Maintaining roads to a good standard.
- Ensuring that all new development contributes to the regeneration aspirations and the transport issues in Littlehampton.
- Safeguarding against traffic generated by new development resulting in the capacity of the highway network being exceeded, by including measures to encourage sustainable travel behaviour.
- Discouraging HGVs from less suitable local routes while maintaining access to areas which businesses need access to.
- Encouraging sustainable travel by improving the existing cycle and pedestrian network through improved signing, connecting routes where appropriate and repairing and maintaining surfaces.
- Supporting opportunities which will improve and protect the rights of way network throughout the District.
- Developing and implementing schemes which contribute to the completion of the Littlehampton cycle networks

- Improving pedestrian accessibility throughout the District by enhancing existing pedestrian crossings.

6.3.8. The County Council is currently developing an updated West Sussex Transport Plan. This is now due out to public consultation, as of summer 2021. The new Plan will set out how the County Council intends to address challenges including:

- a growing and ageing population
- transport emissions
- rural isolation
- public health and wellbeing
- congestion
- road safety.

6.4. Local Policy Documents – policies supported

6.4.1. Arun District Council Local Plan

- The Arun District Council Local Plan³⁹ was adopted in July 2018.
- The Local Plan contains objectives towards which the A284 scheme contributes and it also provides several direct references to the scheme as being planned for provision during the Plan period. The relevant sections of the Plan are set out and discussed at section 12.4 of the Statement of Case. These are also reproduced here:
- The strategic objectives for transport can be found in Section 15.1 of the Arun Local Plan. The objectives that are relevant to the Scheme are as follows:
 - To reduce the need to travel and promote sustainable transport
 - To plan for climate change and work in harmony with the environment to conserve natural resources and increase biodiversity
 - To strengthen Arun's economic base and provide local job opportunities by increasing, diversifying and improving the quality of employment within the district through the provision of appropriate employment sites, better infrastructure, including road and rail access, quality affordable accommodation and the development of business support and partnerships.
 - Improvements to cycle and pedestrian routes and to journey times will reduce congestion and contribute to achieving these objectives. The design is based on Climate Change modelling data and mitigations and where possible enhancements for local biodiversity are planned.
- The Arun Local plan refers to the A284 Lyminster Bypass at Paragraph 15.3.4 and the bypass is safeguarded in Policy T SP3 (Safeguarding the Main Road Network) subsection e. This policy seeks to ensure that improvements necessary to enhance the strategic and supporting road network within the district can be carried out, by protecting them from development.
- The Arun Local plan refers to the A284 Lyminster Road at paragraph 21.2.5 as a first priority location where the noise index is at least 76dB and the road is also referred to in

³⁹ Statement of Case Supporting [Document 16](#)

Policy QE DM1. Noise will be ameliorated by the A284 Lyminster Bypass and the decrease in traffic.

6.4.2. The Arun District Council Infrastructure Delivery Plan 2015

- The Arun District Council Infrastructure Delivery Plan 2015⁴⁰ (IDP 2015) is the iteration of the Infrastructure Delivery Plan which supported the Local Plan Examination in Public.
- The IDP refers to the delivery of the A284 Lyminster Bypass, supported by the Local Growth Fund, as set out at section 12.5 of the Statement of Case. It is published in two parts; Phase 1 – Infrastructure Implications for Spatial Strategy Options dated August 2016 and Phase 2 – Infrastructure Delivery Schedule and Phasing Plan dated February 2017.
- The Phase 1 report refers to the Lyminster Bypass at paragraph 5.8, stating “There are also a number of planned improvements to the local road network benefitting from Local Growth Fund allocations;” ... “the A284 Lyminster Bypass scheme (northern section) to link the northern end of Lyminster village and Toddington Nurseries to the south.”

6.5. Planning Permission

- 6.5.1. The Council resolved to grant planning permission for the Scheme on 26 March 2019 (reference WSCC/049/18/LY) and the decision notice granting permission was issued on 9 May 2019 following the Secretary of State’s decision on 8 May 2019 not to call-in the scheme.⁴¹
- 6.5.2. The application for planning permission was supported by a Transport Assessment as previously referenced at paragraphs 3.2 and 3.9 of this proof. The transport assessment work used the same East Arun Transport Model as the LBTBC, with forecasting extended to provide two further years of traffic growth through the use of the version 2 forecasting report previously referenced at paragraphs 3.3, 3.9, 4.2 and 5.4 of this proof.
- 6.5.3. Section 7.2 of the transport assessment for the planning application stated that:
- “This report concludes that the construction of the Proposed Scheme would be beneficial to the highway

⁴⁰ Statement of Case Supporting [Document 88](#)

⁴¹ Statement of Case Supporting [Document 33](#)

network in both Lyminster and the wider Littlehampton area. Modelling for both 2019 and 2034 future year assessments show that the Proposed Scheme would have a minimal or beneficial impact on the assessed junctions. However some residual issues would remain at the Body Shop roundabout as a result of re-routed traffic.

- The TA sets out that the Proposed Scheme is consistent with policy and aligns with local, regional and national objectives to support sustainable development and economic growth through improved transport provision. The scheme would provide a new primary route which would limit the effects of a significant constraint at the Wick Level Crossing and overcome issues relating to the alignment of the existing route.”

- 6.5.4. Highways England did not object to the scheme, subject to a condition requiring the submission and approval of a Construction Management Plan to control and manage construction traffic and prevent dust being blown onto the A27⁴².
- 6.5.5. Arun District Council confirmed that they have no objection to the Scheme subject to conditions to secure tree protection measures, noise mitigation measures and dust mitigation measures⁴³.
- 6.5.6. Littlehampton Town Council and Lyminster and Crossbush Parish Council both stated that they support the Scheme⁴⁴. They both also sought further improvements to the A284 between the northern tie-in of the scheme and the A27 Crossbush junction. Littlehampton Town Council noted that completion of the bypass was an important strategic policy objective for the Town Council. Further details of the planning permission and conditions are set out at paragraph 18.1 of the Statement of Case.
- 6.5.7. As part of the planning permission (reference WSCC/049/18/LY) specific pre-commencement conditions are required to be discharged before development shall be carried out. These include:
- Condition 4. Construction Environmental Management Plan (CEMP) to be approved by Council Planning Authority. CEMP to include mitigation/enhancement measures set out in the Ecological Impact Assessment (Section 8, and Section 6 of Appendix J) and Arboricultural Method Statement (Appendix A to the

⁴² Statement of Case Supporting [Document 34](#)

⁴³ Statement of Case Supporting [Document 34](#)

⁴⁴ Statement of Case Supporting [Document 34](#)

Detailed Arboricultural Report). This is due to be submitted for approval prior to Public Inquiry.

- Condition 5. Construction Management Plan (CMP) to be approved by Council Planning Authority. Council to consult with Highways England. This is due to be submitted for approval prior to the Public Inquiry.
- Condition 6. Archaeological Written Scheme of Investigation (WSI) to be approved by Council Planning Authority. This is due to be submitted for approval prior to the Public Inquiry.

6.5.8. Following the discharge of these conditions certain consents and licences will be required. These include the following:

- Environmental Permits are required from the Environment Agency for flood risk activity works near Black Ditch. Dialogue with the Environment Agency has been ongoing since the updated flood modelling. The application for a bespoke Environmental Permit for the main works has been submitted. Following review it is anticipated this will be in place prior to the Public Inquiry. Permits for survey work on Black Ditch flood plain will be organised as required, such as the Flood Risk Activity Standard Permit received in August 2020.
- Natural England Licences for works affecting protected species. This will be dictated by timescales and surveys closer to the construction period.
- Ordinary watercourse consent from West Sussex County Council and Arun District Council in relation to works impacting on Brookfield Stream (works impacting an ordinary watercourse). This has been obtained.
- Section 61 of the Control of Pollution Act 1974 consent if requested by the local authority (to be confirmed following discharge of CEMP).

6.5.9. The Scheme will require traffic regulation orders. The permanent orders will be a speed limit order, prohibition of driving order and possibly a clearway order. The temporary orders will be for weekend closures during the installation of the culvert. Statutory consultations will also be required for the traffic regulation orders and the installation of the Pegasus Crossing. The Council is well aware of these and confident that no technical issues will arise that would impede delivery of the Scheme.

7. CONCLUSION

7.1.1. The Scheme conforms to key national and local planning and policy objectives.

- 7.1.2. The Scheme has been designed to complete provision of a new route connecting Littlehampton to the Strategic Road Network at the A27 outside Arundel, removing intrusive through traffic from the village of Lyminster including the Conservation Area and from the streets of Lyminster Road, Wick Street and Arundel road in Wick and Littlehampton. This new route also bypasses the busy railway level crossing at Lyminster Road, avoiding the extensive queues which form at the crossing and achieving safety benefits.
- 7.1.3. The forecast modelling for the Scheme shows that significant benefits are achieved for reduced journey times, queuing and delays. The analysis also shows significant accident reduction savings.
- 7.1.4. The Transport Business Case shows that, despite increases in the scheme cost since 2015, the Scheme continues to demonstrate a very high level of value for money.
- 7.1.5. Whilst there have been some changes to planned development in the local area since the TBC was completed in 2015, including main modifications and adoption of the Arun Local Plan and the progression of the A27 Arundel Bypass to a Preferred Route Announcement and scoping for an upcoming Development Consent order application, none of this materially changes the overall outcome and conclusion of the Transport Business Case.
- 7.1.6. On the basis of the evidence provided in my proof of evidence and the proofs of evidence of Mr Martin, Mr Burrows, Mr Symonds and Mr Godden, I contend that it has been demonstrated that the public interest case for the scheme is compelling from a transport planning point of view.

8. APPENDIX DOCUMENTS

- 8.1. The following documents are appended in the composite appendices for the Council, as referred to in this Proof (in addition to those appended to the Statement of Case):

- H. [Arun Transport Study for Strategic Development: Options and Sustainable Transport Measures, WSP for Arun District Council, March 2013](#)
- I. [A284 Lyminster Bypass Transport Assessment, WSP for West Sussex County Council, January 2019 \(includes Appendices A-C\)](#)
- J. [Report to the Secretary of State for Transport by D J Board BSc \(Hons\) MA MRTPI Date: 10 February 2020. The West Sussex County Council \(A259 Littlehampton Corridor Improvement\) Compulsory Purchase Order 2019](#)

- K. [Letter dated 04 March 2020, The West Sussex County Council \(A259 Littlehampton Corridor Improvement\) Compulsory Purchase Order 2019, Secretary of State's Decision – Order to be Confirmed with Modifications](#)
- L. [Arun Local Plan Business Survey Report 2014](#)
- M. [A284 Lyminster Bypass \(Northern Section\) Design and Access Statement](#)
- N. [The COBA Manual Part 5 Speeds on Links, May 2002](#)
- O. [Extracts from Highways England A27 Arundel Bypass Scheme Assessment Report \(includes chapters 1, 9 and 18\) and Summary Leaflet](#)