



**FAREHAM BOROUGH COUNCIL
TECHNICAL SUPPORT FOR LOCAL
PLAN
DOWNEND SITES**

HIGHWAY REVIEW

JUNE 2021



the journey is the reward

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**Fareham Borough Council
Technical Support for Local Plan
Downend Sites
Highway Review**

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1 Introduction

- 1.1 Mayer Brown Limited has been appointed by Fareham Borough Council (FBC) to provide Highways Technical Support for the emerging Local Plan. The Draft Fareham Local Plan 2036 was published for consultation (Regulation 18) in Autumn 2017. In July 2018, the Government confirmed the implementation of a standard methodology to calculate housing need, in accordance with the updated National Planning Policy Framework (NPPF). This resulted in FBC having to revisit the Draft Local Plan to address the increased housing requirement.
- 1.2 FBC produced a Supplement to the Draft Local Plan. The Supplement, which included proposals for additional housing sites and Strategic Growth Areas (SGAs), was consulted on in Spring 2020. Two SGAs were identified in the Supplement which, at that time it was suggested that they could play a role in the new Local Plan in meeting the total housing requirement, particularly in relation to unmet need. In August 2020, the Government began a consultation on a new standard methodology which would result in lowering the annual housing need. This led to the Council preparing a Publication Plan (Regulation 19) without progressing some of the sites that had previously been consulted upon, including the two SGAs. The Publication Plan was issued for consultation from the 6th November - 18th December 2020. As the Government did not go through with the consultation proposals, the local housing requirement reverted to a higher figure as calculated through the current standard methodology. This has required the Council to prepare a Revised Publication Local Plan, which proposes an allocation for 550 homes on the site Land west of Downend Road. The term 'Strategic Growth Areas' is no longer used now that specific allocations are proposed.
- 1.3 This report considers the area previously known as Strategic Growth Area North of Downend, which was included in the Regulation 18 Draft Local Plan and was not included in the Publication Plan, now known as Downend Road East and Land west of Downend Road, the 'Downend sites' for the purposes of this report. The Revised Publication Local Plan includes development on land to the east and west of Downend Road which is proposed for 900 dwellings. Development on the land east of Downend Road is included as allocation HA4 Downend Road East in the Publication Plan and has capacity to provide 350 of the 900 dwellings. Mayer Brown have produced a separate Highway Review for allocation HA4 Downend Road East, dated November 2020.
- 1.4 The evidence produced in support of the Local Plan included the following transport assessment and modelling documents:

- Fareham Draft Local Plan – Development Site Allocations Interim Transport Assessment (ITA), dated 24th October 2017, which was produced by Atkins on behalf of FBC;
- Fareham Local Plan Strategic Transport Assessment (STA), dated August 2020, which was produced by Atkins on behalf of FBC;
- Fareham Local Plan – SRTM Modelling, dated 9th January 2020, this interim report was produced by Systra on behalf of FBC. The modelling applied Solent Transport’s Sub-Regional Transport Model (SRTM) to inform the update to FBC’s Local Plan;
- Fareham Local Plan – updated SRTM Modelling, dated 19th May 2020, which was produced by Systra on behalf of FBC; and
- Fareham Local Plan 2036 Local Junction Modelling Report, dated 11th August 2020, produced by Hampshire Services on behalf of FBC.

1.5 The STA, and SRTM modelling produced to inform the STA, was based on a projected increase of 12,169 dwellings (Table 7-4 STA) from the 2015 baseline figure to the end of the Plan period. Further to the change in the standard methodology in assessing the housing need, the Revised Publication Local Plan now proposes a total of 10,594 dwellings during the Plan period. The STA and SRTM therefore provide a robust assessment of the transport infrastructure’s ability to accommodate the increased demand and of the necessary mitigation. Based on the reduction in the proposed number of dwellings, it is considered that the impact of the Publication Plan development is likely to be less than that assessed in the STA.

1.6 It is also noted that the Publication Plan covers the 16 year period from 2021 to 2037. The STA and SRTM modelling were based on a Plan end date of 2036, consistent with other Draft Local Plan documents. The TEMPro v 7.2 datasets for the geographical area of Fareham show that background traffic flows are predicted to increase by 0.7% during the morning peak between 2036 and 2037. During the evening peak hour, background traffic flows are predicted to increase by 0.65% between 2036 and 2037. These predicted changes in traffic flows are unlikely to be perceptible and it is considered that the STA and SRTM modelling provide an appropriate assessment of the impact of the Publication Plan development.

1.7 Section 2 of this report provides details of the Downend Sites as presented in the Regulation 18 Draft Local Plan. Relevant statutory consultation responses are considered in section 3. The issues raised are discussed in section 4 and section 5 provides the conclusions.

2 Downend Sites

2.1 This report considers the highway and transport issues for the housing sites east and west of Downend Road. As shown at **Figure 2.1** below, the Downend sites would include:

- HA4 Downend Road East – SHELAA reference number 3030, which is proposed as an allocation in the Publication Local Plan
- Development on land to the west of Downend Road and east of the A27 slip road.



Figure 2.1: Location of Previously Proposed SGA North of Downend

(Ref: Extract from Fareham Local Plan 2036 Supplement)

2.2 The development principle consulted upon in the Supplement to the Draft Local Plan stated that primary highway access should be from Downend Road and the A27 slip road on the west side.

3 Consultation Responses

Local Highway Authority Hampshire County Council

- 3.1 The Local Highway Authority Hampshire County Council (LHA) provided a consultation response to the Local Plan on 29th February 2020, which re-confirmed their holding objection (which they had issued on the 8th December 2017) on the basis that the evidence base does not include a fully updated Transport Assessment (TA) to replace the Interim TA published in support of the 2017 Draft Local Plan consultation. The STA has now been finalised and should enable this objection to be removed. The LHA also requested further detail on the impact of the two proposed SGAs.
- 3.2 The Supplement to the Local Plan was supported by updated SRTM Modelling, dated 9th January 2020, which was produced by Systra on behalf of FBC. The modelling identified the transport impacts of the Local Plan (including the proposed Downend sites) by considering and comparing the following two scenarios:
- Scenario 1 – 2036 Baseline, no Fareham Local Plan development except committed development and resolution to grant sites and their mitigation.
 - Scenario 2 – 2036 Do Minimum, full Fareham Local Plan development without committed transport mitigation measures.
- 3.3 The Fareham Local Plan SRTM Modelling, dated May 2020, expanded the assessments to include the following Do-Something scenario:
- Scenario 3 – 2036 Do Something, full Fareham Local Plan development with potential mitigation measures.
- 3.4 The SRTM modelling predicts that, with the proposed Local Plan developments, other than at zone connectors, the majority of links within the borough are forecast to experience changes no greater than +/-100 PCUs in either direction. The exception to which being the M27 Junction 10 slip roads and Mill Lane.
- 3.5 The 2036 Do-Minimum scenario forecasts that 16 junctions will experience 'significant' impact and one junction (Parkway/Leafy Lane) a 'severe' impact, in comparison to the 2036 Baseline. Appropriate Mitigation and Infrastructure Measures are considered at Section 11 of the STA and summarised at table 11-2. Significant impacts are predicted to occur at one junction proximate to the Downend Sites, as summarised below:
- Delme Roundabout - the impacted approach is the A27 Cams Hill. Appropriate mitigation is considered at Section 12 of the STA and included in the 2036 Do-Something assessments. The mitigation includes signalisation of the A27 Cams Hill

and A32 Wallington Way approaches to the junction, optimisation of the signal timings, additional physical capacity and public transport measures. Following the mitigation measures at the junction, the Delme Roundabout is forecast to have an operational RFC below 85% on all arms. The STA demonstrates that the mitigation measures would successfully mitigate the impact of Local Plan growth (including the Downend sites), and lowered the RFC substantially so that it is no longer classified as meeting either the “significant” or “severe” criteria.

- 3.6 It is considered that the LHA’s holding objection in relation to the Local Plan TA has a direct relevance to the Downend sites. FBC have produced the STA to support the Local Plan which was issued for consultation alongside the Publication Plan. This should allow the LHA to withdraw their objection.
- 3.7 The LHA also recommend that the masterplanning of the two Downend sites should include extension of the South East Hampshire Rapid Transit (SEHRT – known as BRT – Bus Rapid Transit in Fareham). The site allocation in the Draft Local Plan Downend Road East required the development to provide links to the Rapid Transit Bus Services, and the Revised Publication Local Plan does for Land west of Downend Road, which should address this LHA recommendation.
- 3.8 The LHA also confirm that they welcome the Supplement’s proposed policy to retain existing Public Rights of Way, which was included in the site allocation in the Draft Local Plan, and would welcome further discussions on the impacts and opportunities.
- 3.9 FBC hosted a conference meeting with the LHA on the 26th March 2020 to address the issues raised in the LHA’s consultation response. Mayer Brown also joined the meeting. It was agreed at the meeting that a Statement of Common Ground would be drafted. The meeting discussion note confirmed that the Local Plan traffic modelling allowed for 650 dwellings on land west of Downend Road, which together with the 350 dwellings on HA4 would allow for a total of 1,000 dwellings across the two Downend sites. It was understood by the attendees of that meeting that the traffic model assumes that all dwellings will obtain access from Downend Road.

Highways England

- 3.10 Highways England (HE) provided a consultation response to Supplement to the Local Plan on 28th February 2020. Aecom reviewed the following documents on behalf of HE and summarised their findings in TN02:
- Fareham Local Plan 2036 Supplement (LP Supplement);
 - Interim Draft Infrastructure Delivery Plan (IDP), January 2020; and

- Fareham Local Plan Sub-Regional Transport Model Outputs Summary Report (SRT Report), January 2020.
- 3.11 The covering email stated that when considering the Spatial Options, HE would *“welcome further dialogue on potential growth in particular any site in around M27 Junction 11, this would include land close to J11 being promoted for commercial use.”* It is noted that this comment could be relevant to the site at Land west of Downend Road.
- 3.12 In the executive summary of TN02, Aecom list five recommendations which they regard as critical to the acceptability of the Local Plan. Recommendation 3 states that *“More detailed junction capacity models should be provided in respect of M27 Junctions 9 and 11 to gain a better understanding of the impact of the proposed Local Plan allocations on these junctions and the type of mitigation required. Mitigation may need to be considered at the M27 Junction 11 westbound off slip to minimise the risk of a queue of traffic tailing back to the main line carriageway of the M27 (AECOM TN01 paras 3.3, 5.15 and 5.19).”*
- 3.13 The request for a detailed junction capacity model at the M27 Junction 11 is discussed at paragraph 5.28 of TN02 which states that *“At M27 Junction 11, the eastbound off-slip is indicated to remain within capacity with a decrease in predicted queueing. A marginal reduction in the performance of the M27 westbound off-slip is indicated relative to the 2036 Baseline. However, in the 2036 Baseline, the M27 westbound off-slip is predicted to be significantly over-capacity with an RFC of 106-107% (increasing to 107-108% in the Do Minimum scenario) and the average queue is predicted queue to increase to 63 and 77 PCU in the Do Minimum scenario in the AM and PM peaks respectively. This slip road is approximately 300m long and, although it is marked as two lanes, the majority of traffic is expected to use the nearside lane to make the left turn into the A27 exit. A queue of either 63 or 77 PCUs in a single lane would occupy the whole of the slip road and tail back out on the main line of the M27. This would be regarded as a severe impact (albeit one that was already present in the 2036 Baseline)...”*
- 3.14 The STA confirms that the Local Plan development would not result in a significant or severe impact at the M27 Junction 11. The M27 J11 WB off-slip is predicted to be operating over capacity in the 2036 Baseline scenario, with the greatest congestion being in the PM peak. The SRTM modelling, dated May 2020, shows that implementation of the Local Plan development would not change the predicted average queue at the M27 J11 WB off-slip during the PM peak. An average queue of 82 pcus is predicted in both the 2036 Baseline and 2036 Do Minimum scenarios.

- 3.15 The 2036 Do Something scenario included in the SRTM modelling, dated May 2020, shows that implementation of mitigation proposed in the Local Plan would result in a 1% reduction in the AM peak predicted RFC at the M27J11 WB off-slip, from 106% in the 2036 Baseline scenario to 105% in the 2036 Do Something scenario. The predicted RFC during the PM peak would be the same for both the 2036 Do Minimum and 2036 Do Something scenarios.
- 3.16 Implementation of the Local Plan development (which included the Downend sites) would therefore result in a positive impact at the M27J11 WB off-slip during the AM peak, and the impact during the PM peak would not be severe.
- 3.17 HE state that *“The proposed SGA to the north of Downend is located to the south east of M27 Junction 11 and is therefore of primary interest to Highways England.”*
- 3.18 Throughout development of the Local Plan, FBC have continued to engage with HE. At a video meeting of 1st May 2020 between FBC, HE and MB, HE confirmed that the Local Plan developments included no showstoppers. In reference to the M27 J11, HE advised that they would not be encouraging measures to increase highway capacity and would be seeking to address capacity issues, through encouragement of measures to support sustainable travel. With regard to Land west of Downend Road, HE advised that they would be more concerned with any tailback from the Delme roundabout rather than the direct impact on the M27 J11. As the LHA are the highway authority for Delme roundabout, HE advised they would be content if the LHA are content.
- 3.19 As discussed earlier in this report, the STA demonstrates that the proposed mitigation measures at the Delme Roundabout, would successfully mitigate the impact of Local Plan growth (including the two Downend sites), which should address HE’s concern.
- 3.20 A detailed assessment of the impact of the Downend sites and a direct access onto the A27 is considered at section four of this report.
- 3.21 With reference to the Downend Sites, Aecom thought that the SRTM did not include the two proposed SGAs from the Local Plan Supplement consultation. FBC have subsequently confirmed to HE that the SRTM modelling, dated January 2020, which was available at the time the response was written, included both SGAs, which should address Aecom’s concern.

Gosport Borough Council

- 3.22 The neighbouring authority, Gosport Borough Council (GBC) provided a consultation response to the Supplement to the Local Plan on 28th February 2020. GBC object to

the Local Plan for a number of reasons, including the designation of SGAs, particularly the SGA then proposed as the South Fareham SGA.

- 3.23 GBC's key concerns relating to SGAs include "*Transport and Accessibility*", however the detail of their concern does not refer to the two Downend sites.

4 Issues

4.1 Land at Downend Road, Portchester has been promoted as a strategic scale residential led, mixed use development by Miller Homes. The development opportunity was presented by the site promoter as two phases:

- Phase 1 – Land East of Downend Road – Land East of Downend Road is allocated in the Publication Plan for delivery of up to 350 dwellings (Site allocation HA4);
- Phase 2 – Land West of Downend Road – A second phase of development was promoted to the Local Plan process which could provide some 650 dwellings, along with a local centre and other complimentary uses, including a potential primary school. Development on this site was included in the Supplement to the Local Plan (January 2020) but was not included in the Publication Plan, due to the Government’s proposed change in the standard methodology for assessing housing need. However, this site is now proposed as an allocation in the Revised Publication Local Plan.

HA4

4.2 A planning application for HA4 (application reference P/18/0005/OA), dated January 2018, was refused on the 26th April 2019. The application then went to appeal (appeal ref: APP/A1720/W/19/3230015) with the Inquiry held in September 2019 and was subsequently dismissed at appeal, with the decision being published on 5th November 2019. The appeal Inspector dismissed the appeal on the basis of insufficient provision for pedestrian access over the railway bridge but regarded the site to be acceptable on all other matters, including access, sustainability and off-site impacts.

4.3 Miller Homes submitted a new planning application for development on allocation HA4 in August 2020, application reference P/20/0912/OA, which proposed a new footway and signalised shuttle working arrangement at Downend Road bridge. The LHA provided a consultation response to the application, dated the 20th October 2020, raising no objection to the application, subject to conditions and obligations.

4.4 The planning applications for development on site HA4 are discussed in detail in the HA4 Downend Road East Highway Review report produced by Mayer Brown, dated November 2020. The Mayer Brown HA4 report also provides details of mitigation proposed as part of the development, including proposed improvements at the A27 Portchester Road/Shearwater Avenue/Downend Road signalised junction and Delme roundabout.

- 4.5 Application P/20/0912/OA was refused on 25th November 2020 by FBC on transport grounds as it was considered that the proposal would be contrary to relevant transport policy and would *“unacceptably affect the operation of the highway because of vehicle queuing and driver delay that would arise and would result in unacceptable harm to the safety and convenience of users of the highway. Furthermore the application does not make acceptable pedestrian crossing provision on Down End Road for future residents of the development.”* It is understood that an appeal of the refusal will be considered at inquiry in summer 2021.
- 4.6 The appeal Inspector’s decision on the first application (P/18/0005/OA) confirmed that the site is sustainable and acceptable on all other matters. It is thought that site HA4 is suitable for development, subject to appropriate improvements being provided to safely accommodate pedestrians and vehicular traffic at Downend Road bridge. Provision of a pedestrian bridge over the railway line could provide a suitable facility for pedestrians and would negate the need to introduce a shuttle working arrangement for vehicular traffic.

Land west of Downend Road

- 4.7 i-Transport produced a Technical Note dated 7th December 2018, entitled Phase 2 SRTM Assessment. This note looks at both Phase 1 (HA4) and Phase 2 (Land west of Downend Road). The note states that *“Through the application for the Phase 1 development, it is demonstrated that there are highway capacity constraints, primarily at the A27 / Downend Road / Shearwater Avenue junction and at A27 Delme Roundabout, which limit the amount of development that can be served from Downend Road.”*
- 4.8 On this basis, the i-Transport note states that *“an alternative highway strategy will be required to deliver the Phase 2 development and this note outlines the initial assessment work carried out so far to develop strategy options.”*
- 4.9 It is noted that the Local Plan STA did not identify a “significant” or “severe” impact at the A27 Portchester Road/Shearwater Avenue/Downend Road signalised junction. The junction currently experiences congestion, and this is confirmed in the transport analysis submitted in support of development on allocation HA4. The strategic model produced to support the Local Plan allows traffic to change route and will reassign traffic away from congested routes/junctions to optimise traffic conditions over the wider area. The impacts reported in the STA compare the impact of the Local Plan growth with the baseline situation at the end of the Plan period. As the STA identifies neither a “significant” or “severe” impact at the junction, this indicates that changes in route choices will result in no significant worsening of traffic conditions at this junction.

- 4.10 By comparison, the analysis produced in support of the planning applications on allocation HA4, simply adds the development traffic to the observed traffic and assesses the capacity as an isolated junction, without consideration of wider changes in route choice that may occur when traffic demands exceed the available capacity. The assessment methodology supporting the planning applications is the industry standard and complies with both Department of Transport and LHA guidance.
- 4.11 The i-Transport note describes the site access strategy for both Phase 1 and Phase 2 of the development. Through the planning and appeal process the access strategy for Phase 1 (on site allocation HA4) of the development is agreed with the only outstanding issue being the requirement to improve pedestrian facilities at the Downend Road bridge.
- 4.12 For Phase 2, Land west of Downend Road, two access options have been put forward by i-Transport, which comprise:
- Option 1 – New access junction to the A27; and
 - Option 2 – Northern Link Road to M27 Junction 11.
- 4.13 i-Transport state that initial engagement with both the LHA and HE was carried out and that *“whilst they couldn’t provide a definitive view until further work had been carried out they agreed that both options offered potential access options to serve the wider land interests.”*
- 4.14 The further information required included consideration of the deliverability of both options and the implications of traffic reassignment. The minutes of a meeting between i-Transport, the LHA and HE, on 6th June 2017, are included as Appendix B of the i-Transport Technical Note dated 7th December 2018. The minutes state that a three stage approach was suggested which would consider potential traffic reassignment at Stage 1, followed by detailed junction impact assessment at Stage 2, with the wider network impacts considered at Stage 3.
- 4.15 The SRTM was used to assess the impact on local traffic and reassignment and considered the following scenarios:
- Scenario 1a – Link Road through Phase 2 and new junction to A27 – Link road at 30mph
 - Scenario 1b – Link Road through Phase 2 and new junction to A27 – Link road at 40mph
 - Scenario 2 – New Link Road to the north of the M27
- 4.16 The SRTM analysis showed very little difference in the outputs between scenarios 1a and 1b and the i-Transport note therefore only discusses the Scenario 1a (30mph Link

Road to the A27) outputs. The note states that Scenario 1a would in total decrease the number of vehicles using the key junctions across the network by around 750 vehicles in the morning peak and 675 during the evening peak period.

4.17 The key junctions which would experience a reduction in vehicle flows due to the Scenario 1a infrastructure are:

- Downend Road / A27 Portchester Road / Shearwater Avenue – a reduction of 128 vehicles in the morning peak hour and a reduction of 334 vehicles in the evening peak hour;
- M27 Junction 11 – a reduction of 149 vehicles in the morning peak hour and a reduction of 82 vehicles in the evening peak hour; and
- Delme Roundabout – a reduction of 486 vehicles in the morning peak hour and a reduction of 252 vehicles in the evening peak hour.

4.18 i-Transport state that the impact for Scenario 2 is like that for Scenario 1, but the traffic flow reductions are overall smaller in the morning peak hour, with some 450 less vehicles using the critical junctions. In the evening peak, impacts are similar across both scenarios, with around 650 less vehicles.

4.19 The key junctions which would be impacted by the infrastructure from Scenario 2 are:

- Downend Road / A27 Portchester Road / Shearwater Avenue – an additional 17 vehicles in the morning peak hour and a reduction of 168 vehicles in the evening peak hour;
- M27 Junction 11 – a reduction of 110 vehicles in the morning peak hour and a reduction of 242 vehicles in the evening peak hour; and
- Delme Roundabout – a reduction of 363 vehicles in the morning peak hour and a reduction of 236 vehicles in the evening peak hour.

4.20 i-Transport concluded that “*Both Scenarios 1a and 2 therefore demonstrate that they are capable of generating significant reductions in peak hour traffic on critical parts of the network, whilst also accommodating the additional travel demand generated by the proposed development sites.*”

4.21 Junction capacity assessments are included in Section 4 of the i-Transport Technical Note and i-Transport state that “*Overall, Scenario 1 (which provides a connection to the A27 through the site) would offer a greater wider benefit particularly in relation to reducing traffic on the A27 corridor through Portchester and reducing impacts at M27 Junction 11 and other key junctions.*”

4.22 On the 17th January 2019, i-Transport met with the LHA, HE and FBC to discuss the results of the earlier assessments, focussing on Option 1 as the preferred option. A number of comments were made by the parties seeking further information and development of the scheme, related to the design of any junction and the assessment of its future operation. In a further report, entitled A27/Site Access Assessment, dated 26th March 2019, i-Transport summarise the comments as follows:

- *Existing Traffic Speeds – Existing speed measurement to be obtained along the A27 to determine if a traffic signal controlled junction is suitable;*
- *Visibility Requirements - Visibility requirements would need to be shown to the back of the predicted queue and to the nearside signal heads using the existing (85th percentile) speeds. Any third party land requirements should be identified.*
- *A27 Southbound Lay-by - The proposed junction would remove the southbound A27 layby and information is needed on current use and role of the lay-by;*
- *Layout Design – A number of more detailed comments were raised relating to island separation, signal heads, road markings, confirmation of lane widths and signage.:*
- *A TRO is needed to restrict traffic movements and reduce speeds;*
- *A Road Safety Audit (RSA) of the proposed junction and a review of accidents will need to be carried out;*
- *Width and weight restrictions of the link road to prevent usage of 7.5T vehicles should be considered; and*
- *A number of amendments to the Linsig model are required.*

4.23 i-Transport sought to address the above comments in the A27/Site Access Assessment report, dated 26th March 2019. This report reproduces the LHA's pre-app response at Appendix A. No formal comments are provided by HE.

4.24 In addition to the LHA comments included in i-Transport's summary, Appendix B shows that the LHA also noted the following:

- *“It would be an overriding requirement that the predicted queues did not interact with the M27 Junction 11 roundabout. From the layout plan there is a distance of around 250 metres between the proposed junction and Junction 11 roundabout. The predicted queues should not be any greater than 2/3rds of this distance (around 28 PCU's in any lane).”*

4.25 A further meeting was held between the LHA, FBC and HE on 26th April 2019, to discuss the additional information provided in the March 2019 report prepared by i-Transport (referenced in i-Transport Further Technical Note, dated 2nd July 2019). Following this

meeting further information was sought by the LHA, FBC and HE, summarised in the i-Transport Further Technical Note as follows:

- LHA requested that 160m forward visibility to the proposed junction and expected queuing is demonstrated;
- LHA / FBC / HE requested that it would be helpful at this stage to understand a broad signage strategy;
- A Traffic Regulation Order (TRO) plan was requested to demonstrate restrictions on U-turns, northbound right-turns and a 50mph speed limit;
- Options to mitigate the loss of the A27 southbound parking lay-by to be considered;
- Further consideration of the impact of existing queuing on southbound exit capacity at the traffic signal junction should be undertaken, including carrying out of sensitivity testing of the LINSIG model and site survey;
- LHA requested that additional accident analysis is carried out between A27 Delme Roundabout and M27 Junction 11 to consider any weaving issues in greater detail; and
- Technical queries were raised by HE relating to M27 J11 LINSIG modelling.

4.26 The i-Transport Further Technical Note on the A27 Signal Junction, dated 2nd July 2019, sought to address the above comments with the exception of the last point (M27 J11 Linsig modelling) which i-Transport advised would be addressed in a separate response to HE.

4.27 Of the issues documented above, it is considered that the following two issues are fundamental to delivery of the Land west of Downend Road site and the proposed access strategy:

- Queuing from the Delme Roundabout blocking back through the access junction reducing the capacity of the site access junction; and
- The impact of the new junction and additional traffic on the southbound exit slip from the M27.

4.28 i-Transport sought to address these issues at Section 6 of their note (dated 2nd July 2019) by observing existing queues and by undertaking sensitivity tests which consider reductions in the saturation flows (theoretical capacity of a lane). Two sensitivity tests were undertaken from which i-Transport conclude that the saturation flows could be reduced by 15-25% without impacting on the M27 exit slip (utilising 75% of the available stacking space).

4.29 A further meeting between i-Transport, the LHA and FBC was held in July 2019 and the LHA's note of this meeting is included as Appendix B of a further Technical Note entitled

Phase 2 – A27 Site Access Appraisal, dated 15th June 2020, produced by i-Transport.
The main points raised in the LHA note are summarised below:

- An RSA is required;
- 160m southbound visibility to be provided continuously from Junction 11 to predicted back of queue;
- Clarification on how predicted queuing will affect the on-slip from Delme roundabout;
- Southbound congestion - Further clarification of the modelling and quantification of the reduced saturation flows used in the sensitivity assessments for the PM peak.

4.30 The i-Transport further Technical Note entitled Phase 2 – A27 Site Access Appraisal, dated 15th June 2020, sought to address the above issues. This Technical Note concluded that:

- i) Adequate visibility can be delivered;
- ii) The signing and lining strategy has been revised to address earlier comments raised by the LHA;
- iii) Initial engagement with Hampshire Constabulary has been initiated on the required TROs and there are not considered to be any reasons why the TROs will not be supported;
- iv) Alternative options for the re-provision of the A27 southbound layby are available;
- v) The proposed signalised junction onto the A27 would have sufficient capacity to operate in isolation. However, downstream queuing on the A27 southbound which occurs during some PM peak periods would limit capacity at the junction, resulting in queues extending towards the M27 J11.
- vi) A VISSIM microsimulation model has been developed to present a comparative assessment between the 2036 'Reference Case', i.e. what would happen if no SGA (without Downend sites) is delivered, compared to a 'with SGA (Downend sites)' scenario which includes the development alongside the access junction and link road to the Portsdown Hill Road. The assessment demonstrates that the introduction of the signal junction and link road reduces projected southbound queueing, and
- vii) A Stage 1 Road Safety Audit has been carried out and the safety issues raised have all been addressed in the revised scheme.

4.31 The LHA responded to the Technical Note on 15th July 2020 and stated the following main issues:

- LHA requested additional speed surveys to ascertain the required visibility;
- Further work is required on the details of the signing and lining design, however, the LHA consider that an acceptable design is achievable;

- The proposed southbound layby provision is unlikely to be supported;
- LHA requested that the VISSIM micro-simulation modelling period be extended to cover the full extent of the observed congestion during the PM and also requested full modelling outputs and video files be provided;
- As the June 2020 Technical Note does not include any additional Linsig modelling, the LHA reiterated the comments they made previously on the Linsig modelling, which included requesting that the southbound saturation flow of lanes 2 and 3 be reduced to reflect existing queuing, modelling results for the 2036 design year and queries regarding induced traffic on the new link road;
- Comments on the issues raised in the Stage 1 RSA, which will be dependent on the outcome of the additional speed surveys and the further details of the VISSIM modelling.

Summary

- 4.32 Whilst the above additional information and analysis provided by the site promoter does not resolve all of the LHA's queries, based on all of the analysis undertaken to date, the following conclusions can be drawn with regard to the proposed Land west of Downend Road site:
- The proposed link road would improve traffic conditions on the A27 corridor, through the Delme roundabout and on the southern section of Downend Road, through provision of an additional route;
 - The proposed Land west of Downend Road site and associated link road would result in a reduction in southbound queuing on the A27 from the M27 J11 to the Delme roundabout in 2036 when compared to the "without development" scenario;
 - The existing congestion on Eastern Way and on the southbound exit to the Delme roundabout would not be exacerbated by the introduction of the new link and signalised access onto the A27.
- 4.33 The Local Plan SRTM modelling, dated May 2020, predicted significant impacts to occur at the Delme Roundabout. The STA identifies appropriate mitigation and demonstrates that the mitigation measures would successfully mitigate the impact of Local Plan growth. This mitigation should further improve congestion on the southbound approach to the roundabout. A contribution towards improvements at this junction was agreed with the LHA for the planning applications on site HA4.
- 4.34 It is considered that additional analysis would be required to support a planning application, to satisfy the LHA and HE, however, the information provided by the site

promoter shows that the Land west of Downend Road site is deliverable in highway and transport terms. Whilst the PM peak is predicted to be the most congested peak and it is during the PM peak that the most significant queuing occurs, it is considered that the microsimulation model should be expanded to also consider the impacts during the AM peak in due course.

5 Conclusion

- 5.1 The transport issues arising from residential development at the Downend sites have been considered in the evidence base prepared in support of the Local Plan from which it can be concluded that:
- The potential impacts of the Downend sites on the transport network can be addressed;
 - The Downend sites can realise opportunities from existing transport infrastructure;
 - The Downend sites can provide opportunities to promote walking, cycling and use of public transport;
 - The environmental impacts of traffic and transport infrastructure associated with the Downend sites can be identified, assessed and mitigated as necessary.
- 5.2 As new development, the Downend sites can deliver a high quality place with patterns of movement, streets, parking and other transport integral to the design. In addition to this, the need to travel and journey length can be reduced. The development can also be integrated with adjacent developments, allowing existing and future residents to benefit from facilities that will be provided as part of the development.
- 5.3 The Downend sites are in a sustainable location for development, where opportunities for sustainable travel can be taken up and high quality walking, cycling and public transport facilities can be provided.
- 5.4 The Local Plan evidence base and the information produced by the site promoter demonstrates that safe and suitable access can be provided to the Downend sites for all users.
- 5.5 The strategic traffic modelling undertaken by Systra on behalf of FBC demonstrates that the cumulative impacts of the Local Plan developments, which includes the Downend sites, will not result in any severe traffic impacts at junctions south of the M27. The SRTM modelling, dated May 2020 predicted significant impacts to occur at only one junction proximate to the Downend sites – the Delme Roundabout. The STA identifies appropriate mitigation and demonstrates that the mitigation measures would successfully mitigate the impact of Local Plan growth, so that the impact is no longer classified as meeting either the “significant” or “severe” criteria.
- 5.6 Planning applications and an appeal for up to 350 homes, on land east of Downend Road, have been refused/dismissed. The appeal Inspector dismissed the appeal on the

basis of insufficient provision for pedestrian access over the railway bridge but regarded the site to be in a sustainable location and acceptable on all other matters.

- 5.7 The most recent planning application on land east of Downend Road, site allocation HA4 in the Publication Plan, sought to introduce a signalised shuttle working arrangement at Downend Road bridge. The application was refused on 25th November 2020 by FBC on the grounds that it would unacceptably affect the operation of the highway and adversely affect highway safety. It is understood that the application will be considered at appeal in summer 2021. Site HA4 is suitable for development, subject to appropriate improvements being provided to safely accommodate pedestrians and vehicular traffic at Downend Road bridge.
- 5.8 FBC have consulted the Local Highway Authority Hampshire County Council, Highways England and the neighbouring authority Gosport Borough Council on their Publication Local Plan.
- 5.9 The LHA objected to the Draft Local Plan and Supplement in advance of the Local Plan Transport Assessment being finalised. The finalised Strategic Transport Assessment should allow the LHA to withdraw this objection.
- 5.10 The site promoter proposes a masterplan which would provide a new east-west link road between the A27 and Downend Road, with a new signalised access junction direct onto the A27. Analysis provided by the site promoter shows that the new link road would improve traffic conditions on the A27 corridor, through the Delme roundabout and on the southern section of Downend Road through provision of an additional route.
- 5.11 The analysis provided by the site promoter shows that the proposed Land west of Downend Road site and associated link road would result in a reduction in southbound queuing on the A27 from the M27 J11 to the Delme roundabout in 2036, when compared to the “without development” scenario.
- 5.12 Mitigation at the Delme roundabout, included in the Strategic Transport Assessment, would further improve congestion on the southbound approach to the roundabout.
- 5.13 A Stage 1 Road Safety Audit has been provided by the site promoter to support a new access onto the A27 to serve the Land west of Downend Road site and the site promoter has revised their proposal to incorporate the Auditor’s recommendations.
- 5.14 The LHA have been consulted on the access proposals, and whilst additional information and analysis would be required to support a planning application, the LHA have raised no in principle objections to the proposal.

- 5.15 HE has also confirmed that the proposals include no showstoppers and that they would be satisfied if the LHA are satisfied with the impact on the Delme roundabout.
- 5.16 In summary, the Downend sites should not result in any unacceptable highway safety impacts or severe residual cumulative traffic impacts and is compliant with the NPPF and could be brought forward as proposed in the Revised Publication Local Plan.

