

- 7.2.4 The proposed bus services will connect the site with Stevenage railway station. This will also be accessible via the Stevenage cycle network which will effectively be extended to the site by means of the new shared footway / cycleway and Toucan crossing on North Road.
- 7.2.5 The IDP notes that improvements are planned to rail services calling at Stevenage, including the new Thameslink services from 2018 to new destinations such as London Bridge, Gatwick Airport and Brighton. There will be a Thameslink interchange with Crossrail at Farringdon, significantly improving journey times and reliability to destinations such as Heathrow Airport and Canary Wharf. A new platform will be delivered at Stevenage station in 2020 / 2021 to provide the additional capacity required at Stevenage.
- 7.2.6 These improvements will be funded and delivered by a combination of Network Rail, the Department for Transport and the train operating companies. The IDP notes that it is not expected that new developments in Stevenage would contribute to schemes that increase the 'lineside' capacity of the railway network. However, aspirations to improve the façade of Stevenage station and its environs (including car parking) may require additional funding or contributions, possibly from developments in and around the town.
- 7.2.7 The development's impacts on public transport services and infrastructure is therefore considered to be acceptable. Travel by public transport will be encouraged as part of the development's Residential Travel Plan.

7.3 HIGHWAY IMPACTS

- 7.3.1 The development's highway impacts have been assessed using the WHaSH and Paramics models. As noted previously, these are based on background growth factors significantly in excess of those which form the basis of SBC's Mobility Strategy for the Local Plan. The modelling findings on the development's impacts are therefore robust, by underestimating the residual cumulative highway capacity available in 2031 weekday peak hours.
- 7.3.2 It has been agreed with HCC that the WHaSH and Paramics modelling approach and methodology is considered to be the most appropriate to assess the development's highway impacts. These are described below.

Proposed Site Access Junctions on North Road

- 7.3.3 Flow outputs from the Paramics modelling have been obtained to test the capacity of the proposed North Road site access junctions, shown on drawing 7810/GA/004B at Appendix D, for the 2031 weekday AM and PM peak hours. The capacity assessments have been undertaken using LINSIG and are summarised for the northern access in Table 11 below, and for the southern access in Table 12 below. These show queue lengths in Passenger Car Units (PCUs) and Degrees of Saturation (DoS), with a maximum DoS of 90% generally being considered acceptable for new junctions. The LINSIG printouts are attached at Appendix K.

Northern Site Access Junction Arm	2031 AM Peak Hour Flows with Development		2031 PM Peak Hour Flows with Development	
	DoS	Queue (PCUs)	DoS	Queue (PCUs)
North Road (South)	43.9%	5	22.3%	2
North Road (North)	57.7%	14	65.4%	16
Site Access	57.5%	4	28.2%	1

Table 11: LINSIG Summary – Northern Site Access / North Road Signalised Junction – 2031 Flows including North Stevenage Development

Southern Site Access Junction Arm	2031 AM Peak Hour Flows with Development		2031 PM Peak Hour Flows with Development	
	DoS	Queue (PCUs)	DoS	Queue (PCUs)
North Road (North)	59.4%	5	63.7%	5
Site Access	57.2%	5	59.7%	4
North Road (South)	47.7%	7	47.7%	3

Table 12: LINSIG Summary – Southern Site Access / North Road Signalised Junction – 2031 Flows including North Stevenage Development

- 7.3.4 The above assessments show that the proposed site access junctions on North Road will operate with appreciable reserve capacity on all arms during the 2031 weekday AM and PM peak hours. At a maximum, the North Road (North) arm of the northern access is predicted to operate with a DoS of 65.4% in the PM peak, i.e. a reserve capacity of about 35%, and a queue of 16 vehicles.
- 7.3.5 On the North Road (South) arm of the northern access, the maximum queue length (extending back towards the southern access) is 5 vehicles, which occurs during the AM peak hour. This is equivalent to a queue length of about 29m. On the North Road (North) arm of the southern access, the maximum queue length (extending back towards the northern access) is also 5 vehicles and during the AM peak, so a queue length of about 29m. There is about 100m between the two site accesses, and so queuing would not extend back from the southern junction to the northern junction, nor vice versa.

Off-Site Highway Impacts

- 7.3.6 The results of the Paramics modelling indicate that the development would have minimal off-site impacts on the highway network in the weekday AM peak. However, the development would have a significant off-site impact on the highway network in the PM peak.
- 7.3.7 Notwithstanding the background growth to 2031 as a result of SBC's Mobility Strategy to deliver the Local Plan developments, the 2031 Paramics 'Reference Case' model (the 2031 Baseline scenario without the development) indicates that the highway network would be congested in the PM peak hour for baseline flows excluding the development. The addition of development-related traffic flows would exacerbate this congestion. The principal effects of development would be significant traffic queues at the following locations:

- A1(M) northbound off-slip road at Junction 8;
- Graveley Road / A1(M) Junction 8 junction; and
- Graveley Road / North Road junction.

- 7.3.8** SBC's IDP focusses on a modal shift away from the use of the car, and not simply to supply extra road capacity for the benefit of car borne commuters in peak periods (paragraph 2.2 of the IDP). The IDP notes that HCC's Transport Vision 2050 identifies Stevenage as a sustainable travel town, which focusses on the need to reduce travel overall and increase the proportion of journeys made by sustainable modes. The Transport Vision expects a step-change in the uptake of these modes.
- 7.3.9** The Mobility Strategy contained within the IDP is based on the assumption that, as growth proceeds, the balance of mobility shifts away from driving cars and towards mobility using technology (virtual mobility), active travel (walking and cycling), public transport and car-pooling (sharing journeys). SBC's strategy for the Local Plan is to design for mobility as a whole, rather than supplying new highway capacity for car-borne commuters.
- 7.3.10** The North Stevenage development therefore proposes highway mitigation measures that maximise the use of the existing highway infrastructure, rather than providing new highway capacity in the form of enlarged junctions or widened roads. These improvements complement the proposed improvements outlined above to non-car modes of travel, so that there is an overall mobility strategy for the development. The following highway mitigation measures to address the above PM peak highway capacity impacts are therefore proposed:
- The re-timing of the traffic signals at A1(M) junction 8;
 - The re-timing of the traffic signals at the Sainsbury access junction on Hitchin Road;
 - The re-timing of the traffic signals at the Fairlands Way / Lytton Ways and Gunnel Woods Road/Martin Way roundabouts;
 - The provision of new signals at the Fairlands Way / St. Georges Way roundabout; and
 - The upgrade of the Graveley Road / North Road junction to a signalised T-junction, as shown on drawing 7810/GA/005B at Appendix L.
- 7.3.11** The modelling indicates that this mitigation will reduce queue lengths on the A1(M) northbound off-slip at Junction 8, and deliver significant savings in journey times across Stevenage for the 2031 PM peak scenario including development compared to the 2031 Reference Case. With the application of the lower background traffic growth rates to 2031 as predicated by SBC's Mobility Strategy, the highway network in Stevenage would operate with even fewer delays and queuing.
- 7.3.12** No other highway improvements are proposed to mitigate the development's impacts, as it is considered that such improvements would encourage increasing use of the car. This is contrary to SBC's Mobility Strategy.