



<b>LONG List of Options - Assessment against OBJECTIVES</b>						
<b>Option Reference</b>	<b>Council</b>	<b>Improve transport network resilience and journey time reliability</b>	<b>Provide effective access to the new development area in North Keynsham (SDL)</b>	<b>Reduce traffic flows and relieve traffic pressures on routes through Keynsham.</b>	<b>Deliver improved facilities for pedestrians, cyclists and effective public transport in North Keynsham.</b>	<b>Enable the improvement and retention of traffic reduction measures in the Town Centre</b>
1A	B&NES	Yes. Potential to improve journey times and reliability for trips between East Keynsham/A4 East and the A4175 North. At present, drivers making these movements must use the B3116 Bath Road/Bath Hill/ Avon Mill Lane, where existing congestion /delay is highly variable in the weekday peak hours. This will only worsen with 'committed' development growth expected to 2029. However, benefit will depend on what is done at the	Partial. Current access via the Broadmead Lane under-bridge and Pixash Lane bridge is poor. However, the connection via Broadmead Lane would be some distance to the west of the SDL land.	Yes. Traffic relief can be expected on the B3116 Bath Road, Bath Hill and the part of Avon Mill Lane to the south of the railway bridge	Yes. The works to widen the structure through the railway embankment can incorporate footway/cyclist provision, which is currently absent at the narrow arch. Consideration could be given to closing Pixash Lane bridge to traffic, with vehicular access to Avon Valley Country Park and other properties north of the railway maintained via the improved Broadmead Lane	This will depend on how well the entire length of Avon Mill Lane can be relieved of traffic or operating conditions improved. The section of Avon Mill Lane north of the railway will remain part of the link, so future operation of the A4175/Avon Mill Lane junction will be the dictating factor.

		A4175/Avon Mill Lane junction			'cut-through'	
1B	B&NES/ SGC	Yes, as 1A, but not reliant on current operating conditions at the A4175/Avon Mill Lane junction and being able to achieve a 'step change' enhancement here to accommodate both 'committed; and SDL growth	Partial. As 1A	Yes. As with Option 1A, traffic relief can be expected on the B3116 Bath Road, Bath Hill and the part of Avon Mill Lane to the south of the railway bridge. However, this option offers potential relief to the north part of Avon Mill Lane and the A4175/Avon Mill Lane junction as well.	Yes. Broadly the same potential for delivering enhancements as Option 1A	Likely. Refer to comments for Option 1A. As this option is likely to reduce traffic using the whole of Avon Mill Lane the potential is higher. In other words, Avon Mill Lane will be better able to fulfil a local 'bypass' function to the High Street. It does so now to an extent, but has limited spare capacity at its terminal junctions with Bath Hill and the A4175. One-way working under the low railway bridge is also a constraint.
1C	B&NES/ SGC	As 1A, but not reliant on current operating conditions at the A4175/Avon Mill	As 1A - Partial	Yes. As with Option 1A, traffic relief can be expected on the	Yes. The ability to deliver improved linkages across the GWML is the same	Likely, as 1B

		Lane junction and being able to achieve a 'step change' enhancement here to accommodate both 'committed; and SDL growth		B3116 Bath Road, Bath Hill and the part of Avon Mill Lane to the south of the railway bridge. However, this option offers potential relief to the north part of Avon Mill Lane and the A4175/ Avon Mill Lane junction as well.	as Options 1A and 1B. However, at the western end of the route the junction with the A4175 is much further north, so potential for linking with the High Street, Somerdale and the potential future NMU route via Somerdale Bridge to Hanham Mills is less easy.	
2A	B&NES	Yes. As 1A, so the level of achievable benefit will depend on what is done at the A4175/Avon Mill Lane junction. However, with this option it will also depend on what capacity can be achieved on the Pixash Lane approach to the A4 Bath Road junction.	Yes. The link will be closer to the SDL land.	Yes. Traffic relief can be expected on the B3116 Bath Road, Bath Hill and the part of Avon Mill Lane to the south of the railway bridge	Yes. The stopping-up of the existing Pixash Lane bridge to traffic will enable this to be used as a dedicated route for NMUs. Signalisation of the A4/Pixash Lane junction could also include controlled crossing facilities linking with the shared use footway on the south side of the A4. However, pedestrians/cyclists would still have to	As 1A

					use the section of Pixash Lane between the A4 and the bridge, which can be expected to be more heavily trafficked.	
2B	B&NES/ SGC	Yes, as 1B. However, with this option it will also depend on what capacity can be achieved on the Pixash Lane approach to the A4 Bath Road junction.	Yes, the link will be closer to the SDL land.	Yes, a 1B	Yes, as 2A	Likely, as 1B
2C	B&NES/ SGC	As 1C. However, with this option it will also depend on what capacity can be achieved on the Pixash Lane approach to the A4 Bath Road junction.	As 1A, although the link will be closer to the SDL land.	As 1C	Yes, as 2A, but note the greater difficulty in achieving convenient and effective linkages with the High Street/Somerdale at the western end of the route. This is because the junction with the A4175 is much further north.	Likely. as 1B
3A	B&NES	Yes, as 1A, so the level of achievable benefit will depend	Yes. In this case the link will cut through and	Yes, as 1A. However, there is perhaps less	Yes. The stopping-up of the existing Pixash Lane bridge	As 1A

		on what is done at the A4175/Avon Mill Lane junction.	provide direct access to the SDL land.	potential to attract traffic movements between East Keynsham and the A4175 (North) due to the diversion to the east needed. However, the proposed interim junction connection to Broadmead lane will cater for the northbound component.	to traffic will enable this to be used as a dedicated route for NMUs. A controlled crossing over the A4 Bath Road near the Pixash Lane junction could be considered, although the need will depend on future access changes to the KE3A housing land.	
3B	B&NES/ SGC	Yes, as 1B	Yes, as 3A	Yes, Traffic relief can be expected on the B3116 Bath Road, Bath Hill and the whole of Avon Mill Lane including the A4175/ Avon Mill Lane junction as well. There is perhaps less potential to attract traffic movements between East Keynsham and the A4175 (North)	Yes, as 3A	Likely, as 1B

				due to the diversion to the east needed. However, the proposed interim junction connection to Broadmead lane will cater for the northbound component.		
3C	B&NES/ SGC	Yes, as 1C	Yes, as 3A	Yes, as 3B	Yes, as 3A, but note the greater difficulty in achieving convenient and effective linkages with the High Street/Somerdale at the western end of the route. This is because the junction with the A4175 is much further north.	Likely, as 1B

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Option Reference	Does the option meet the;				
	Strategic case	Economic case	Managerial case	Financial case	Commercial case
				<i>Options not being assessed against a budget so affordability cannot be determined</i>	

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1A	<p>Partial. This option has the potential to meet the objectives. However, it will depend on delivering a 'step-change' capacity uplift to the A4175/Avon Mill Lane junction. This will otherwise remain a 'bottleneck' constraint on development growth (SDL).</p> <p>Furthermore, as noted in the 'Objectives' assessment, the Broadmead Lane route is some distance to the west of the identified SDL land. So, it does not provide wholly effective highway access.</p>	<p>It supports economic growth. However, it has the potential to offer only low-moderate VfM, as the cost of the widening works through the GWML embankment can be expected to be considerable. Structural assessment of the works necessary indicates that a lowering of the existing carriageway level will be needed (0.9m). This could have significant drainage and services implications on the south side, which is locally affected by flooding events now (Flood Zone 3). The benefits case will also be significantly influenced by what improvements are possible to the A4175/Avon Mill Lane junction.</p>	<p>High level structural assessment and previous consideration of work done on examining options for widening the Broadmead Lane under-bridge (Tony Gee and Partners, 2002) suggest that a technical solution is possible. However, the necessary lowering of the existing carriageway level has a number of unknowns, whilst Network Rail requirements are not confirmed or known.</p> <p>Scheme is likely to command support from Stakeholders and residents in Keynsham, although it is likely to be the GWML crossing solution least favoured by Network Rail.</p>	<p>No. This option is expected to have a high capital cost associated with the under-bridge widening. On-going operating costs are likely to be necessary to pump and remove surface water from a location that floods now, and would need a reduced carriageway level to 'fit' with the replacement structure.</p>	<p>The project could be delivered through a range of procurement models. No significant commercial barriers have been identified. Details of construction method to create the widened structure would need to be agreed with Network Rail.</p>

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1B	As 1A, albeit it removes the potential constraint of the A4175/Avon Mill Lane junction.	Partial as likely low VfM. Whilst the link is likely to attract a high level of usage from East Keynsham and the A4 East, the considerable cost and risks associated with widening through the railway embankment will be added to by the need for a new bridge over the River Avon. It will also impact on Flood Zone 3 land to the north of the sewage works. There are also significant direct property impacts on the west side of the river, with potential demolition required.	No, initial highway alignment design (vertical) has shown that achieving bridge clearance over the river whilst achieving satisfactory connection in level terms with the A4175 is unlikely to be achievable without a realignment of Keynsham Road westwards. This is in addition to necessary property demolition. As noted for Option 1A, this is likely to be the GWML crossing solution least favoured by Network Rail. The Environment Agency are also likely to have concerns with the impact on Flood Zone 3 land.	No, this is expected to have very high capital costs, as well as on-going operating costs to keep the lowered carriageway through the widened Broadmead Lane under-bridge free of surface water.	As 1A
1C	As 1A, albeit it removes the potential constraint of the A4175/Avon Mill Lane junction	As 1B, plus there is greater length of link road needed to the north of the sewage works	Yes, although this likely to be the GWML crossing solution least favoured by Network Rail. The Environment Agency are also likely to have	No, this is expected to have very high capital costs, as well as on-going operating costs to keep the lowered carriageway through the widened	As 1A



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			concerns with the impact on Flood Zone 3 land. This land has seen regular flooding events, including partial inundation of the small trading estate adjacent to the river.	Broadmead Lane under-bridge free of surface water	
2A	<p>Yes, the option has the potential to meet the objectives. However, it will depend on delivering a 'step-change' capacity uplift to the A4175/Avon Mill Lane junction. This will otherwise remain a 'bottleneck' constraint on development growth (SDL). The capacity of the Pixash Lane approach to the A4 may be limiting as well.</p> <p>Pixash Lane remains some distance to the west of the identified SDL land, but relying on this existing route would not create an</p>	<p>Yes, supports economic growth and has potential to offer good VfM. This will, however, depend on delivering a 'step-change' capacity uplift to the A4175/Avon Mill Lane junction.</p>	<p>Yes, feasibility highway design work suggests that a new bridge over the GWML can be delivered close to the existing Grade 2 structure, whilst achieving 'tie-in' with the Ashmead Road junction. Network Rail are likely to be more receptive to an over-bridge solution.</p>	<p>Yes, potential costs associated with bridging over the railway are likely to be much lower than creating a widened structure through the embankment (Option 1 variants). The unforeseen risks and costs are also lower. It is accepted that the necessary length of highway works to the north of the railway will be increased.</p>	As 1A

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	excessive cul-de-sac development.			<i>Options not being assessed against a budget so affordability cannot be determined</i>	
2B	Yes, as 2A, whilst it removes the potential constraint of the A4175/Avon Mill Lane junction	Yes, supports economic growth and has potential to offer good VfM. It would, however, have an environmental impact on Flood Zone 3 land and direct adverse property impacts to the west of the river.	No, initial highway alignment design (vertical) has shown that achieving bridge clearance over the river whilst achieving satisfactory connection in level terms with the A4175 is unlikely to be achievable without a realignment of Keynsham Road westwards. This is in addition to necessary property demolition.	No, costs are highly to be substantive in additionally addressing the technical challenges on the western side of the river and the delivery of two bridges.	As 1A
2C	Yes, as 2B	Yes, this option would support economic growth and has potential to offer good VfM by removing reliance on the capacity achievable at the A4175/Avon Mill Lane junction. It would, however, have a key environmental impact on Flood Zone 3 land.	Yes, feasibility highway design work suggests that the new bridges over the GWML and the River Avon can be delivered. Network Rail are likely to be more receptive to an over-bridge solution. However, the Environment Agency are likely to object to any supporting highway	Yes, whilst capital costs are expected to be high this option avoids a need for property demolition, any need to significantly realign the A4175 and works to the A4175/Avon Mill Lane junction.	As 1A

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			structure on the south side of the new river bridge that blocks the 'flood path'.		
3A	<p>Yes, this option has the potential to meet the objectives. However, it will depend on delivering a 'step-change' capacity uplift to the A4175/Avon Mill Lane junction. This will otherwise remain a 'bottleneck' constraint on development growth (SDL).</p> <p>The new road link over the railway provides direct connection and effective access to the identified SDL land.</p>	<p>Yes, supports economic growth and has potential to offer good VfM. This will, however, depend on delivering a 'step-change' capacity uplift to the A4175/Avon Mill Lane junction.</p> <p>There is greater flexibility in providing an effective junction layout on the A4 Bath Road, with a roundabout proposed,</p>	<p>Yes, feasibility highway design work suggests that a new bridge over the GWML can be delivered whilst achieving satisfactory 'tie-in' on the north side with a revised access to Avon Valley Farm and Pixash Lane.</p> <p>Network Rail are likely to be more receptive to an over-bridge solution</p>	<p>Yes, potential costs associated with bridging over the railway are likely to be much lower than creating a widened structure through the embankment (Option 1 variants). The unforeseen risks and costs are also lower. It is accepted that the necessary length of highway works to the north and south of the railway will be increased, but some of this infrastructure could be delivered as part of the SDL site works.</p>	As 1A
3B	<p>Yes, as 3A, but it removes the potential constraint of the A4175/Avon Mill Lane junction.</p>	<p>Yes, supports economic growth and has potential to offer good VfM. It would, however, have an</p>	<p>No, initial highway alignment design (vertical) has shown that achieving bridge clearance over the</p>	<p>No, as 2B in respect of costs/risks at the western end, whilst substantially increased highway works</p>	As 1A

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		environmental impact on Flood Zone 3 land and direct adverse property impacts to the west of the river.	river whilst achieving satisfactory connection in level terms with the A4175 is unlikely to be achievable without a realignment of Keynsham Road westwards. This is in addition to necessary property demolition.	Options not being assessed against a budget so affordability cannot be determined to the east.	
3C	Yes, as 3B	Yes, supports economic growth and has potential to offer good VfM. It would, however, have an environmental impact on Flood Zone 3 land	Yes, feasibility highway design work suggests that the new bridges over the GWML and the River Avon can be delivered. Network Rail are likely to be more receptive to an over-bridge solution. However, the Environment Agency are likely to object to any supporting highway structure on the south side of the new river bridge that blocks the 'flood path'.	Yes, whilst capital costs are expected to be high this option avoids a need for property demolition, any need to significantly realign the A4175 and works to the A4175/Avon Mill Lane junction.	As 1A