

Item	RSA Problem	RSA Recommendation	Design Organisation Response
B1.1	<p>(Locations A, B &amp; C Appendix B – Dunsfold Road &amp; Dunsfold Common Road)</p> <p>Summary: risk of shunt conflicts.</p> <p>The proposed traffic signal installation will result in vehicles queues on all approaches, due to the proposed intergreen periods as well as expected red light periods. Due to the existing Dunsfold Road and Dunsfold Common Road speed limits, combined with the expected queue lengths, there is a risk of shunt conflicts on all approaches, especially Dunsfold Road, where vehicle speeds are expected to be at / near the posted speed limit.</p>	<p>Provide a reduced speed limit on the approaches to the proposed signal installation for the duration of the proposed works.</p> <p>Provide high friction surfacing on the Dunsfold Road approaches to the proposed signal installation.</p>	<p>Accepted. We propose to introduce a temporary 30mph speed limit on the approaches to the temporary traffic signals. (See drawing ref. LTP/3134/03/06/01).</p> <p>Accepted. We propose a high friction surface is provided on the Dunsfold Road and Dunsfold Common Road approaches to the temporary signals in accordance with CD236. (See drawing ref. LTP/3134/03/03/01/B).</p>
B1.2	<p>(Location D Appendix B)</p> <p>Summary: risk of conflict with culvert.</p> <p>An existing culvert is present on the southern side of Dunsfold Road, between Dunsfold Common Road and High Loxley Lane. The proposals indicate that the carriageway at this location is to be widened. The proposed carriageway widening will affect the existing culvert and may result in vehicles passing close to the culvert and / or conflicting with the existing barrier (especially as drivers are guided to use the southern side of the Dunsfold Road carriageway due to the proposed traffic management). Also the proposed carriageway widening may result in an existing telegraph pole to be at risk of conflict due to large vehicles entering / exiting High Loxley Road passing close to the telegraph pole.</p>	<p>Confirm clearance between culvert / barrier and proposed widened carriageway.</p> <p>Ensure at least 450mm lateral clearance between culvert barrier and running lane.</p> <p>Relocate telegraph pole if within the alignment of turning vehicles at the High Loxley Lane junction.</p>	<p>Accepted: The design has been modified to ensure a minimum 450mm clearance between the highway widening and the culvert/barrier. (See drawing ref. LTP/3134/03/03/01/B).</p> <p>Not accepted: The existing telegraph pole is a minimum of 1.0m from the proposed carriageway edge and a minimum of 1.5m from the vehicle body of turning vehicles. It is therefore considered that the pole is of a sufficient distance from the edge of carriageway to minimise the risk of collision with a turning vehicle.</p>
B2.1	<p>(Location E Appendix B &amp; Locations I &amp; J Appendix C – High Loxley Road / proposed access)</p> <p>Summary: Restricted sightlines from proposed access.</p> <p>The proposals indicate sightlines from the proposed development access which could not be determined on site due to the presence of boundary hedges, preventing sightlines to be confirmed. It is therefore not clear if the proposed sightlines can be achieved. However, the proposed turning circles at the proposed development access indicate that drivers of large</p>	<p>Confirm proposed sightlines can be achieved as indicated.</p>	<p>Accepted: We confirm that the visibility sight lines indicated can be achieved with the reduction/removal of parts of the existing hedgerow on the east and west side of High Loxley Road.</p> <p>However, it should be noted that the visibility sightlines indicated are reflective of a design speed in the order of 50mph and that it is unlikely that vehicles would be approaching the site access at this speed particularly</p>

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	vehicles waiting to enter High Loxley Road from the proposed access may not be able to view the traffic signal on the western side of the carriageway when positioned parallel to the access road (to allow an opposing large vehicle to enter the proposed access). Side swipe conflicts may result, especially as drivers wishing to exit the development proceed to a position where drivers have appropriate visibility of the signal head.	Confirm turning circles of opposing large vehicles can pass each other within the proposed bellmouth when drivers exiting the proposed access are aligned to face the traffic signal installation / are more advanced towards the signal installation.	<p>once the site access and temporary traffic management arrangements are introduced.</p> <p>In addition, as part of the RSA recommendations it is proposed to introduce a 30mph temporary speed limit on all approaches to the traffic signal installation. (See drawing ref. LTP/3134/03/06/01).</p> <p>Further, it is understood that Surrey CC tend to apply the visibility standards provided in Manual for Streets for locations where traffic speeds are less than 30mph. Therefore, once introduced it may be reasonable to assume that the visibility sightlines for a 30mph speed limit of 43.0m (MfS) may be more appropriate and, again, these could be readily accommodated at the site access with some removal/reduction of adjacent hedgerows. (See drawing ref. LTP/3134/03/05/01/B).</p> <p>Accepted: the SPA of HCVs manoeuvring in the proposed site access together with the access width/geometry and location of traffic signal equipment has been reviewed and modified to reduce the risk of potential side swipe collisions. (See drawing ref. LTP/3134/03/02/01/B).</p>
B2.2	(Location F Appendix B & Location I & J Appendix C) Summary: Risk of conflict within High Loxley Road. The proposed traffic signal installation within High Loxley Road indicates two signal heads. One facing northbound High Loxley Road traffic and one facing traffic exiting the proposed development access. However, the proposed staging / phasing diagram indicates only one Phase for High Loxley Road traffic, Phase D. This would give both High Loxley Road traffic and traffic within the proposed development access a green signal at the same time. This could lead	Provide an additional stage / phase for northbound High Loxley Road traffic to run before (or after) the development access.	<p>Accepted: as the traffic flows on High Loxley Road are negligible (1-2 vph) the introduction of a further traffic stage at this location will have a minimal impact on capacity/delay of the proposed temporary traffic signal facility.</p> <p>(See drawing refs. LTP/3134/03/01/01/B and LTP/3134/03/02/01/B).</p>

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	to conflict on occasions when both sets of traffic proceed as they both would assume to have priority. Conflict between traffic is likely to result. This is of particular concern on occasions when development access traffic have waited for a period of time to receive a green signal and then a northbound High Loxley Road vehicle approaches and sees a green signal ahead. Northbound High Loxley Road drivers are likely to continue without reducing speeds, potentially in conflict with a vehicle emerging from the proposed development site.		
B2.3	(Location B Appendix B) Summary: risk of red light violation. Dunsfold Common Road drivers waiting adjacent to a red signal who wish to enter Dunsfold Road by turning left may attempt left turn manoeuvres after Stage 2 / during Stage 3 of the proposed staging / phasing of the signal installation. Such manoeuvres may occur due to the short distance to travel and drivers ability to view approaching / opposing traffic. This could result in conflict as well as following vehicles from Dunsfold Common Road also entering Dunsfold Road.	Retain existing priority junctions without temporary signal installation. Widen the High Loxley Road bellmouth to accommodate large vehicles entering and exiting the side road junction, without over-running the Dunsfold Road centre line.  Provide passing places within High Loxley Road to allow northbound drivers to pass opposing vehicles (whether traffic signals are installed or not).	Not accepted: the signals, signing and temporary traffic management on the Dunsfold Common Road are consistent with the standards and guidance for the use of portable traffic signals and, in the absence of any unusual features at the Dunsfold Road/Dunsfold Common Road junction, are considered to be suitable for the purpose proposed.  Notwithstanding the above it is recognised that additional warning/information signing, duplicate primary and secondary signals and the relocation of the signal stopping point on Dunsfold Common Road to a point that obscures forward visibility of oncoming traffic from Dunsfold Road (East) would further emphasise the presence/operation of the signals and the need to comply with the regulatory signals indicated. This has been included within the revised design proposals. (See drawing refs. LTP/3134/03/01/01/B)  In terms of the RSA recommendation we provide the following additional information that has informed the design of the proposed access arrangements:  <ul style="list-style-type: none"> <li>• <b>Use of High Loxley Road “in principle”:</b> Consistent with the principles of sustainable development and the efficient use of resources the</li> </ul>

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			<p>proposed design adopts a presumption in favour of utilising existing highway infrastructure as opposed to the introduction of a new junction along Dunsfold Common Road/Dunsfold Road. In developing proposals alternative ways to access site have been investigated but have been found to be constrained by a mix of environmental impact constraints (most notably the need to remove mature trees and impacts upon residential amenity), the routing of services and/or ownership constraints imposed by the designation of Common Land. Therefore, given the lack of a sustainable and/or feasible alternative access solution, it is considered the use of High Loxley Road to be acceptable <i>"in principle"</i>.</p> <ul style="list-style-type: none"> <li>• <b>Use of High Loxley Road <i>"in detailed design and operation"</i>:</b> Utilising High Loxley Road is still constrained by the need to minimise environmental impacts (most notably on mature trees and hedgerows) and by the ownership constraints imposed by the designation of Common Land. In addition, it must also be demonstrated that its use would not unacceptably compromise highway safety.</li> </ul> <p>With the traffic management measures proposed, the sensitive design of the proposed highway works and the overall temporary duration of the proposed development it is considered that the proposed access arrangements have been designed to address network performance, local amenity, operational and road safety issues.</p>
B2.4	(Location C Appendix B) Summary: risk of head-on conflict. Drivers of large vehicles turning left to enter High Loxley Road at the very end of signal Stage 3 are likely to make a slow left turn manoeuvre and then proceed south	Confirm appropriate intergreen periods have been proposed.  or	Accepted: the intergreen period has been determined using the guidance and principles in TAL 01/06 'General Principles of Traffic Control by Light Signals'.

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	within High Loxley Road. Drivers of large vehicles may not have reached the proposed development access before the development access signal installation changes to green (i.e. Stage 4). Due to the lack of carriageway width within High Loxley Road, head-on / side swipe conflicts may result. NB. Such occurrence may occur when two or more left turning large vehicles attempt to enter High Loxley Road directly after each other.	<p>Retain existing priority junctions without temporary signal installation.</p> <p>Widen the High Loxley Road bellmouth to accommodate large vehicles entering and exiting the side road junction, without over-running the Dunsfold Road centre line.</p> <p>Provide passing places within High Loxley Road to allow northbound drivers to pass opposing vehicles (whether traffic signals are installed or not).</p>	The 'collision point' distance between the Phase C signal on Dunsfold Road (East) and Phase D signal on High Loxley Road is 215m that, through interpolation with the values provided in TAL 01/06 Intergreen Table, equates to an intergreen time of 28 seconds. (See drawing refs. LTP/3134/03/01/01/B)
B2.5	<p>(Location G Appendix B – High Loxley Road stop line)</p> <p>Summary: risk of head-on conflict.</p> <p>During stages 1, 2 or 3 drivers may enter High Loxley Road. When proceeding south, drivers may encounter stationary northbound High Loxley Road vehicles held at a red signal within the main running lane. Due to the proposed double-cycle of the signal installation, northbound High Loxley Road drivers may be held at a red signal for prolonged periods. On occasions when southbound traffic is unable to continue due to the presence of stationary vehicles, conflict with opposing vehicles may result or drivers may attempt to proceed within the verge and risk becoming stuck / force opposing vehicles to also enter the verge.</p>	<p>Retain existing priority junctions without temporary signal installation.</p> <p>Widen the High Loxley Road bellmouth to accommodate large vehicles entering and exiting the side road junction, without over-running the Dunsfold Road centre line.</p> <p>Provide passing places within High Loxley Road to allow northbound drivers to pass opposing vehicles (whether traffic signals are installed or not).</p>	<p>Not accepted: In terms of the RSA recommendation we provide the following additional information that has informed the design of the proposed access arrangements:</p> <ul style="list-style-type: none"> <li>• <b>Use of High Loxley Road “in principle”:</b>                      Consistent with the principles of sustainable development and the efficient use of resources the proposed design adopts a presumption in favour of utilising existing highway infrastructure as opposed to the introduction of a new junction along Dunsfold Common Road/Dunsfold Road. In developing proposals alternative ways to access site have been investigated but have been found to be constrained by a mix of environmental impact constraints (most notably the need to remove mature trees and impacts upon residential amenity), the routing of services and/or ownership constraints imposed by the designation of Common Land. Therefore, given the lack of a sustainable and/or feasible alternative access solution, it is considered the use of High Loxley Road to be acceptable “in principle”.</li> <li>• <b>Use of High Loxley Road “in detailed design and operation”:</b></li> </ul>

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			<p>Utilising High Loxley Road is still constrained by the need to minimise environmental impacts (most notably on mature trees and hedgerows) and by the ownership constraints imposed by the designation of Common Land. In addition, it must also be demonstrated that its use would not unacceptably compromise highway safety.</p> <p>With the traffic management measures proposed, the sensitive design of the proposed highway works and the overall temporary duration of the proposed development it is considered that the proposed access arrangements have been designed to address network performance, local amenity, operational and road safety issues.</p>
		NB. This should include a passing place to allow two-way traffic directly to the south of the proposed signal installation within High Loxley Road.	<p>Accepted: The development access proposals have been amended to widen High Loxley Road immediately south of the proposed development access to allow local traffic to pass when northbound traffic is being held by the traffic signals.</p> <p>(See drawing refs. LTP/3134/03/01/01/B and LTP/3134/03/02/01/B).</p>
B2.6	<p>(Location H Appendix B)</p> <p>Summary: risk of conflict with existing statutory undertakers equipment. Observations indicate vehicles turning left into High Loxley Road are currently over-running the nearside verge. It is not clear if the proposed carriageway widening will accommodate the increase in large vehicles entering and exiting High Loxley Lane without further over-running of the verge (i.e. if left turning drivers do not align correctly, there is a risk that drivers will over-run the verge beyond the extent of the proposed carriageway widening). Such over-running places existing statutory undertakers</p>	<p>Relocate markers clear of expected turning circles and any expected over-running of the verge by large vehicles.</p> <p>Ensure chamber covers are durable for highway use (or relocate chambers clear of expected vehicle over-running).</p>	<p>Accepted: The Swept Path Analysis indicates that HCVs turning into/from High Loxley Road are unlikely to conflict with the adjacent marker posts and chamber covers at this location appear to be suitable for in-carriageway use (i.e. Group 3/4). These will be further reviewed as part of Statutory Undertaker engagement process as part of detailed design development.</p>

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	equipment (chamber covers and markers) at risk of conflict.		
B3.1	<p>(Location G Appendix B, High Loxley Road) Summary: risk of red light violation. Northbound High Loxley Road drivers waiting at a red traffic signal will be required to wait for extended periods of time (i.e. the proposed intergreen period between stages 1 to 4 will be almost 2 minutes). Therefore there is a risk of northbound High Loxley Road drivers may believe that there is a fault with the signals and attempt to proceed northbound against a red signal. Conflict with opposing southbound High Loxley Road traffic may result. Also northbound High Loxley Road drivers passing a red signal, when reaching the junction with Dunsfold Road will not be aware of the status of the signal staging / phasing and hence may enter Dunsfold Road simultaneously as Dunsfold Road or Dunsfold Common Road traffic receive a green signal. Conflict within the centre of the proposed signal installation may result.</p>	<p>Retain existing priority junctions without temporary signal installation.</p> <p>Widen the High Loxley Road bellmouth to accommodate large vehicles entering and exiting the side road junction, without over-running the Dunsfold Road centre line.</p> <p>Provide passing places within High Loxley Road to allow northbound drivers to pass opposing vehicles (whether traffic signals are installed or not).</p>	<p>Not accepted: In terms of the RSA recommendation we provide the following additional information that has informed the design of the proposed access arrangements:</p> <ul style="list-style-type: none"> <li>• <b>Use of High Loxley Road “in principle”:</b> Consistent with the principles of sustainable development and the efficient use of resources the proposed design adopts a presumption in favour of utilising existing highway infrastructure as opposed to the introduction of a new junction along Dunsfold Common Road/Dunsfold Road. In developing proposals alternative ways to access site have been investigated but have been found to be constrained by a mix of environmental impact constraints (most notably the need to remove mature trees and impacts upon residential amenity), the routing of services and/or ownership constraints imposed by the designation of Common Land. Therefore, given the lack of a sustainable and/or feasible alternative access solution, it is considered the use of High Loxley Road to be acceptable “in principle”.</li> <li>• <b>Use of High Loxley Road “in detailed design and operation”:</b> Utilising High Loxley Road is still constrained by the need to minimise environmental impacts (most notably on mature trees and hedgerows) and by the ownership constraints imposed by the designation of Common Land. In addition, it must also be demonstrated that its use would not unacceptably compromise highway safety.</li> </ul> <p>With the traffic management measures proposed, the sensitive design of the proposed highway works</p>

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			<p>and the overall temporary duration of the proposed development it is considered that the proposed access arrangements have been designed to address network performance, local amenity, operational and road safety issues.</p> <p>In addition, vehicular access to the development site will be controlled and managed in accordance with a Construction Traffic Management Plan (CTMP) that will include information, instructions and training for all drivers visiting the site. Drivers will therefore be aware of the long duration between the appearance of Phase D and will be provided, as part of the CTMP, instructions to not proceed unless there is a green signal shown. This would be reinforced with additional traffic signing at the access to further advise drivers of how they should use the traffic signals. Additionally, the entrance to the site will be manned 24/7 by site security personnel who will further instruct drivers and provide a point of contact in the event of issues with the traffic control system.</p> <p>In terms of vehicles entering Dunsfold Road it is proposed to remove the secondary signal for High Loxley Road shown within the design so not to provide drivers potentially confusing messages/signals whilst using the traffic control facilities. (See drawing refs. LTP/3134/03/01/01/B). The proposed green time and intergreen time together with the low volumes of traffic using the site are considered to be sufficient to provide clear passage for HCVs and other vehicles between the proposed site access and Dunsfold Road. It should be also noted that the traffic signal operation has been specifically designed so that High Loxley Road movement (Phase D) is preceded by Dunsfold Road (West). The reason for this is that HCV vehicles will always turn right out of High Loxley Road and there is</p>

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			good indivisibility between High Loxley Road and Dunsfold Road (West) to allow drivers to see each other and react in the unlikely event of vehicle conflicts.
B3.2	<p>(Location A, B &amp; C Appendix B)</p> <p>Summary: risk of temporary signs not being seen / being struck by passing vehicles.</p> <p>The proposals indicate temporary traffic signs are to be located on the approaches to the proposed traffic signal installation. There is concern that there is insufficient verge width to mount the proposed signs and hence the signs will have minimal lateral clearance from the adjacent carriageway. Passing vehicles are at risk of conflict with the signs (especially due to the proposed size of signs) which could lead to loss of control / damage to vehicles. Also following drivers / riders will have reduced awareness of the signal installation ahead if the signs become dislodged / damaged. This is of particular concern within Dunsfold Road on the south-eastbound approach due to the available verge width (Location A).</p>	<p>Confirm proposed lateral clearance of each proposed temporary sign.</p> <p>Ensure signs are appropriately placed and maintained, in accordance with current advice for temporary works.</p> <p>Provide appropriate running lane widths at each proposed sign installation to allow two-way traffic.</p>	<p>Accepted: Additional details of sign location and lateral clearance has been included in the traffic signing proposals. (See drawing ref. LTP/3134/03/01/02/B). This will take account of the proposed temporary speed limit on the approach to the proposed temporary traffic signals that may assist in the overall reduction of sign face sizes proposed.</p> <p>Signs will be installed and managed by a competent Traffic Management Contractor in accordance with the site CTMP and current advice/guidance on Temporary Traffic Management.</p> <p>Signs have been located to provide appropriate running lanes and these will be reviewed by the Traffic Management Contractor in accordance with the site CTMP.</p>
B3.3	<p>Summary: risk of increase in collisions on parallel routes. The proposed temporary signal installation as well as associated traffic management will take a period of time to install / dismantle outside the proposed periods of operation each day for a period of approximately 52 weeks. NB. This is in addition to the proposed periods of operation of the signals between 0830 – 1700hrs Monday to Friday and 0900-1300 Saturday. Due to the expected daily duration of the operation as well as set-up and dismantling of the proposed temporary traffic signal installation, drivers who use this route frequently may choose alternative / less appropriate routes to proceed (i.e. Hook House Lane). Such use of alternative routes could result in additional collisions on alternative routes.</p>	<p>Retain existing priority junctions without temporary signal installation.</p> <p>Widen the High Loxley Road bellmouth to accommodate large vehicles entering and exiting the side road junction, without over-running the Dunsfold Road centre line.</p> <p>Provide passing places within High Loxley Road to allow northbound drivers to pass opposing vehicles (whether traffic signals are installed or not).</p>	<p>Not accepted: In terms of the RSA recommendation we provide the following additional information that has informed the design of the proposed access arrangements:</p> <ul style="list-style-type: none"> <li>• <b>Use of High Loxley Road “in principle”:</b>  Consistent with the principles of sustainable development and the efficient use of resources the proposed design adopts a presumption in favour of utilising existing highway infrastructure as opposed to the introduction of a new junction along Dunsfold Common Road/Dunsfold Road. In developing proposals alternative ways to access site have been investigated but have been found to be constrained by a mix of environmental impact constraints (most notably the need to remove mature trees and impacts upon residential amenity), the routing of</li> </ul>

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			<p>services and/or ownership constraints imposed by the designation of Common Land. Therefore, given the lack of a sustainable and/or feasible alternative access solution, it is considered the use of High Loxley Road to be acceptable <i>"in principle"</i>.</p> <ul style="list-style-type: none"> <li>• <b>Use of High Loxley Road <i>"in detailed design and operation"</i>:</b> Utilising High Loxley Road is still constrained by the need to minimise environmental impacts (most notably on mature trees and hedgerows) and by the ownership constraints imposed by the designation of Common Land. In addition, it must also be demonstrated that its use would not unacceptably compromise highway safety.</li> </ul> <p>With the traffic management measures proposed, the sensitive design of the proposed highway works and the overall temporary duration of the proposed development it is considered that the proposed access arrangements have been designed to address network performance, local amenity, operational and road safety issues.</p> <p>Whilst there is potential for traffic to divert to avoid the temporary traffic signal installation it is considered that this will be minimised due to the following:</p> <ul style="list-style-type: none"> <li>• The maximum delays at the temporary signals will be largely confined to the AM and PM assessment periods;</li> <li>• The modelling results indicate that delays will be uniform (i.e. traffic will pass through the signals on the first green). This means that although journey times will be increased the reliability of journeys will remain the same;</li> </ul>

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