WEST OF IFIELD PHASE 1 INFRASTRUCTURE

Stage 1 Road Safety Audit

Designers Responses Report

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Version	Date	Author	Checker	Reviewer	Approver	Changes
P01	09/04/2025	S Panesar	T Chaudhry	A Pegler	S Davies	First Issue

Introduction

1. The Stage 1 Road Safety Audit for the West of Ifield Phase 1 Infrastructure was undertaken by an independent Arcadis team in November and December 2024. The team consisted of Charles Hutchinson and Jonathan Lewis.

2. Refer to the following documents for the Stage 1 Road Safety Audit Reports.

    - 10051123-ARC-XXX-1A-TR-HE-00001 – Phase 1A
    - 10051123-ARC-XXX-1B-TR-HE-00002 – Phase 1B

3. Overall, the Designer has either accepted the Road Safety Audit problem and recommendations identified by the Audit Team or an alternative solution provided, and the design updated to reflect these. However, the following are where the Designer has disagreed with the Road Safety Audit problem and recommendation and have provided justification in the table below.

    - Reference 1A 3.1.1
    - Reference 1A 3.2.2
    - Reference 1A 3.3.1
    - Reference 1A 3.3.2
    - Reference 1A 3.3.7
    - Reference 1A 3.3.10
    - Reference 1B 3.2.3
    - Reference 1B 3.2.4
    - Reference 1B 3.2.5
    - Reference 1B 3.4.2
    - Reference 1B 3.5.1

Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
1A 3.1.1	**Location**: General – West of Ifield Phase 1A (Drg. 10051123_ARC-050-1A-DR-CE-00001 Rev P04). **Summary**: Poor drainage of surface water may lead to skidding / loss of control collisions. Although proposed Sustainable Urban Drainage Systems (SuDS) zones within the street corridor have been proposed, it is not clear whether the proposed entry treatments incorporate suitable drainage, or whether kerbing in general incorporates a combined drainage and kerb system. If surface water cannot be drained from the carriageway or at junction entry treatments this may lead to ponding of surface water and wet road collisions, particularly during icy or wet weather conditions. Carriageway low points have been identified along RD_1A_P01, RD_1A_P02 and RD_1A_S04, so these areas may be particularly prone to ponding during wet weather conditions. The Audit Team notes that the Drainage Layout Overview drawing refers to the site-wide proposed drainage strategy report 10051123-ARC-050-ZZ-TR-CE-00001 for further details, however, this was not available at the time of the audit.	Ensure surface water is suitably drained from the carriageway and areas designated for walking and cycling.	Disagree with the RSA problem and recommendation. The highway drainage design is an 'over the edge' system draining into a filter drain, discharging to carrier and outfalling to ditches. The proposed SuDS provides adequate drainage for the low points highlighted, the surface water will be able to flow directly into the SuDS.		
1A 3.1.2	**Location**: A – Northern bus stops along RD_1A_P02, West of Ifield Phase 1A (Drg. 10051123_ARC-070-1A-DR-CE-00008 Rev P06). **Summary**: Position of bus stop may hinder motorists exiting the residential plot. The in-carriageway bus stop is proposed close to the access / egress associated with the northern residential plot. The presence of a stationary bus may restrict sight lines for those exiting the plot, particularly those seeking to turn right along RD_1A_P02. This may lead to collisions between those exiting the plot and eastbound motorists attempting to overtake the stationary bus.	Ensure those exiting the residential plot have suitable sightlines. This may be achieved by instead providing an inset bus layby.	RSA problem and recommendation accepted. An inset layby is not possible to adhere to with the urban design code, however adequate sight lines have been provided. It should be noted that the frequency of buses stopping here will be infrequent.		
1A 3.1.3	**Location**: General – Bus Gate along RD_1A_P02, West of Ifield Phase 1A (Drg. 10051123_ARC-070-1A-DR-CE-00008 Rev P06 &10051123_ARC-070-1A-DR-CE-00009 Rev P06). **Summary**: Proposed bus gate may lead to indecision and /or shunt collisions. The bus gate proposals (yet to be fully developed) consist of two physical islands creating a chicane layout over a distance of approximately 50m. This arrangement may lead to indecision or tempt motorists to accelerate through the bus gate to	Ensure that the operation of the bus gate does not tempt motorist to take risks or result in any undue queueing back onto Rusper Road.	RSA problem and recommendation accepted. The detailed design will ensure that the operation of the bus gate does not lead to any undue queuing on to Rusper Road. It should be noted that the bus route is only one way.		

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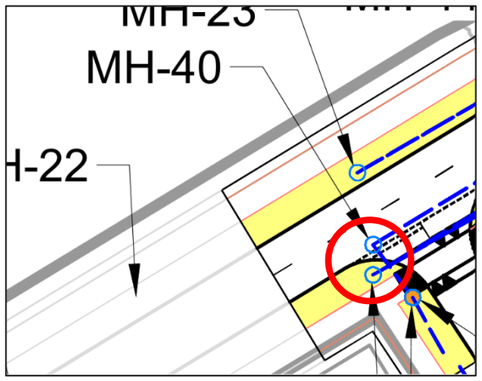
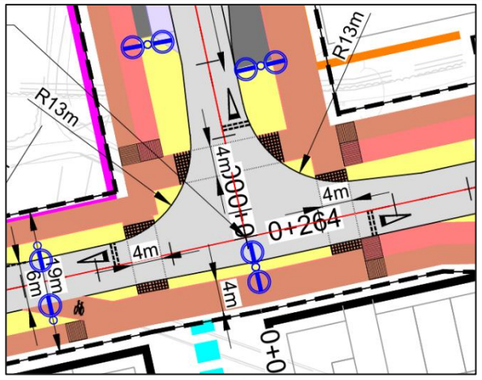
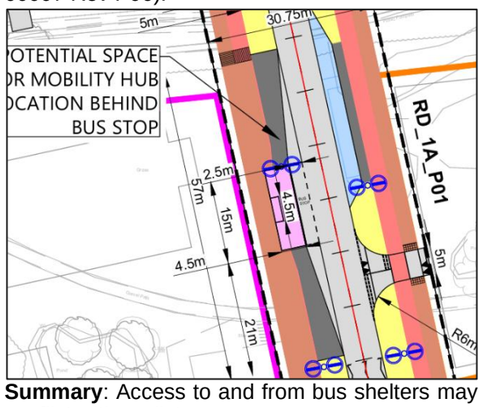
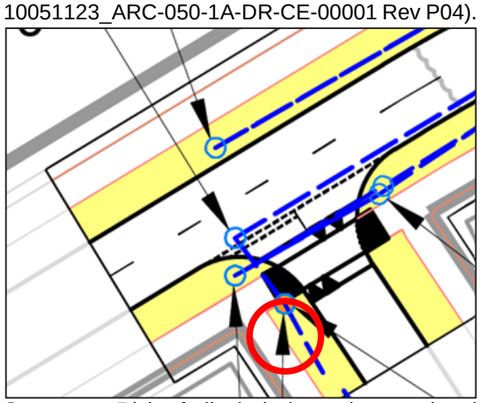
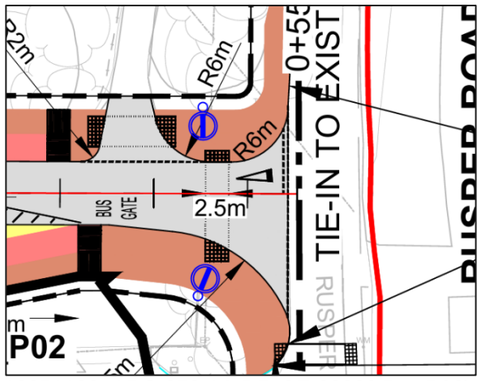
	beat the approaching vehicle, leading to side-swipe and late braking collisions. Furthermore, the eastern end of the bus gate is positioned close to the junction with Rusper Road and there is a risk that motorists waiting at the build-out may extend back into Rusper Road and conflict with oncoming traffic leading to collisions.				
1A 3.1.4	**Location**: B – RD_1A_S01 near Entry treatment JC_1A_S01, West of Ifield Phase 1A (Drg. 10051123_ARC-050-1A-DR-CE-00001 Rev P04).  **Summary**: Risk of slip hazards for exiting motorists. There is a risk that cyclists and powered-two-wheelers exiting the RD_1A_S02 side road may ride across the path of manhole cover MH-40 whilst turning and become unseated (see insert). This may lead to leading to secondary collisions see insert). A similar situation occurs at the following locations (ref. Drg. 10051123_ARC-070-1A-DR-CE-00004 Rev P06): • MH-10 near the foul pumping station • MH-4 (opposite above pumping station)	Ensure the manhole cover does not pose a slip / skid risk to riders.	RSA problem and recommendation accepted. Suitable skid resistance for the manhole cover will be proposed at detailed design. Or alternatively the manhole could be relocated.		
1A 3.2.1	**Location**: C – JC_1A_P01, West of Ifield Phase 1A (Drg. 10051123_ARC-070-1A-DR-CE-00007 Rev P06).	Establish clear and suitable junction priority.	RSA problem and recommendation accepted. This is now a signalised controlled junction.		

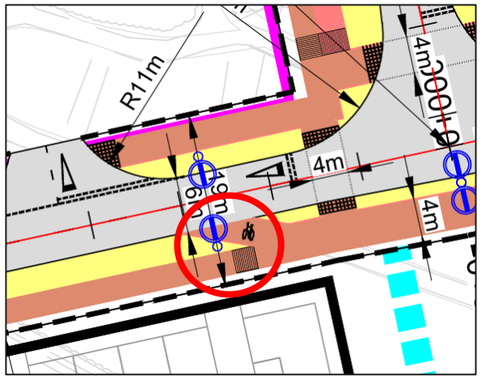
Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	 **Summary**: Unclear junction priority may put road users at risk. There is a risk that unclear junction priority may lead to confusion, indecision and conflicts leading to collisions between road users at the junction. For example, motorists approaching the junction are presented with give way carriageway markings and as such are required to give way to walkers crossing at the junction. However, beyond the give way give way markings motorists exiting the junction are permitted to travel through the crossing facility headless of crossing walkers. This may lead to injuries to those attempting to cross at the junction. In addition, in the absence of walkers present at the junction, all motorised traffic streams are required to give way on all approaches to the junction. This may also lead to confusion, indecision or motorists taking risks when travelling though the junction. There may also be a risk of collisions if the give way markings at the junction are not visible or conspicuous. This may be due to traffic volumes affecting headways or wet weather conditions making the markings less conspicuous.				
1A 3.2.2	**Location**: Generally, route-wide – RD_1AQ_P01, RD_1A_S01 & RD_1A_P02 Entry treatment junctions, West of Ifield Phase 1A (Drg. 10051123_ARC-070-1A-DR-CE-00004 Rev P06, Drg. 10051123_ARC-070-1A-DR-CE-00007 Rev P06, Drg. 10051123_ARC-070-1A-DR-CE-00008 Rev P06). **Summary**: Unclear shared space junction priority may put road users at risk.	It is not preferable to prioritise cyclists at junctions, unless it is possible to establish clear and suitable junction priority. Consultation of the measures should be discussed with local walking, cycling and mobility / sensory impaired groups. It is also preferable in safety terms that cycle tracks crossing side roads are one way in the direction of traffic on the main carriageway.	Disagree with the RSA problem and recommendation. Where junctions are shared use the priority is to the vehicle user, this is delineated by the tactiles and corduroy paving. At locations where there is a segregated cycleway at junction, the priority is cyclists, surface colour or other treatment will be provided to ensure the priority is visible to all users.		

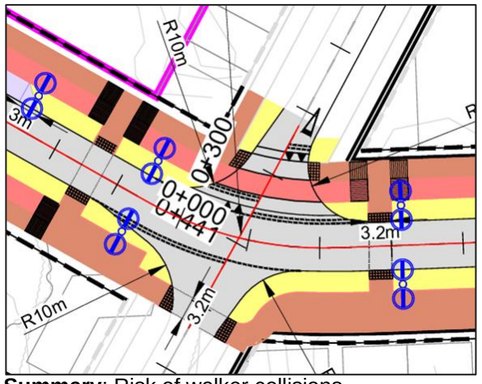
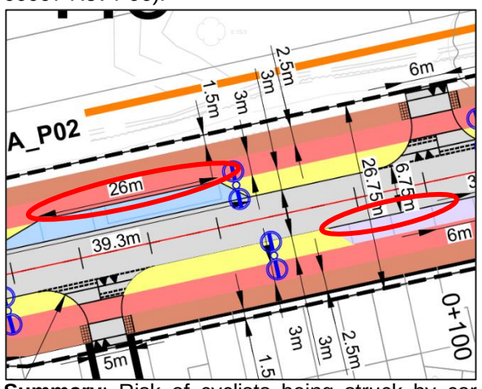
Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	Phase 1 Highway works include north-south & east-west pedestrian and cycle facilities including crossing routes to support and prioritise walkers and cyclists through the proposed highway development. This is facilitated through a series of junction / access entry treatments that predominantly prioritises cycle movement. However, not all entry treatments along the route prioritise cyclists, and this omission of consistency may likely lead to confusion and potential conflicts between cyclists and turning traffic. There is a risk that where cyclists have priority at side roads / accesses, this arrangement may not be patently clear to motorists who may assume they have 'right of way' (i.e. a legal requirement) entering the junction / access and may therefor enter the junction / access heedless of cyclists. This could lead to collisions involving cyclists. This situation may be worse particularly if cyclists, knowing they have priority, travel faster given them less time to react to turning traffic. This may also become a problem if used by e-bikes or e-scooters. Similarly, there is a risk that if motorists do yield to cyclists at the 'partial setback road markings,' (i.e. set back 'less' than a full car length relative to the major road kerbline), the rear of their vehicle may still overhang back into the carriageway and cause late braking collisions. Furthermore, there may also be a risk of collisions if the give way markings at the junction are not visible or conspicuous. This may be due to traffic volumes affecting headways or wet weather conditions making the markings less conspicuous.	Drivers are less likely to be aware of cyclists travelling in the other direction when turning into and out of the side road.	Drivers should be looking for pedestrians in both directions, so should be aware of cyclists too.		
1A 3.3.1	**Location**: General – Inset bus stops, West of Ifield Phase 1A (Drg. 10051123_ARC-050-1A-DR-CE-00001 Rev P04). **Summary**: Provision of bus stops may lead to boarding / alighting hazards The inset layby bus stop facilities require bus drivers to access the layby and park parallel and close to the kerbline. If bus drivers are unable to stop close or parallel to the kerbline they may be at risk of leaving sizeable gaps creating problems with boarding and alighting activities. These gaps could become hazardous to passengers especially those mobility or sight impaired, who	Ensure the geometry of the bus stops promote parking close to and parallel with the kerbline. Furthermore, ensure that boarding and alighting zones can be accommodated for all bus types using the bus stop.	Disagree with the RSA problem and recommendation. The size of the layby provided conforms to current design standards and therefore the problem identified is not an issue. These layby facilities are provided across the country with the same dimensions.		

Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	could misjudge, slip or lose their footing, leading to injury.				
1A 3.3.2	**Location**: General – Inset bus stops, West of Ifield Phase 1A (Drg. 10051123_ARC-050-1A-DR-CE-00001 Rev P04). **Summary**: Provision of bus stops may result in buses partially blocking the carriageway The width of the inset layby bus stop facilities appears to be narrower than those on-carriageway bus stops. If bus drivers are unable to accommodate their bus within the layby and inadvertently extend back onto the carriageway, this may lead to late braking collisions with motorists along the carriageway.	Ensure that buses can be accommodated within the layby.	Disagree with the RSA problem and recommendation. The size of the layby provided is designed to standards and therefore the problem identified is not an issue. These layby facilities are provided across the country with the same dimensions.		
1A 3.3.3	**Location**: General – Rear of bus stops along RD_1A_P01 & RD_1A_P02 West of Ifield Phase 1A (Drg. 10051123_ARC-050-1A-DR-CE-00004 Rev P06 & 10051123_ARC-050-1A-DR-CE-00007 Rev P06).  **Summary**: Access to and from bus shelters may conflict with cyclists There does not appear to be any designated or prioritised route generally for users walking to or from the proposed bus shelters (see insert). Given that passenger numbers alighting can notably be high, with some uses distracted, looking the wrong way, impaired, or unaware of approaching cyclists, there is a risk that pedestrians may proceed towards the footpath heedless of approaching cyclists.	Establish a safe route to the bus stop shelters and encourage courtesy from approaching cyclists. This may consist of additional formal or informal measures to calm approach speeds and manage the shared space more effectively.	RSA problem and recommendation accepted. Measures will be assessed at detailed design to reduce cyclist approach speeds at these locations. This is a common issue with combined cycle/pedestrian schemes when interacting with bus stops.		

Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	In addition, the space behind some bus shelters becomes narrow and creates a potential pinch point for pedestrians and cyclists alike, and this is likely to exacerbate conflicts further.				
1A 3.3.4	**Location**: D –Bus stop along south side of RD_1A_P02, West of Ifield Phase 1A (Drg. 10051123_ARC-050-1A-DR-CE-00004 Rev P06). **Summary**: Position of bus stop may hinder northbound walkers crossing RD_1A_P02. The in-carriageway bus stop is proposed just east of and close to the uncontrolled crossing facility. The presence of a stationary westbound bus may restrict sight lines for those attempting to cross RD_1A_P02 northbound. This may lead to collisions between walkers and motorists.	Ensure those crossing have suitable sightlines of approaching traffic. This may be achieved by instead providing an inset bus layby.	RSA problem and recommendation accepted. An inset layby cannot be implemented due to restrictions imposed by the urban design code; however, adequate sight lines have been ensured. Additionally, it is important to note that buses will stop at this location only infrequently.		
1A 3.3.5	**Location**: General – Phase 1A Highway, West of Ifield Phase 1A (Drg. 10051123_ARC-050-1A-DR-CE-00009 Rev P06). **Summary**: Risk of walkers (and cyclists??) being struck by motorists during wet weather conditions. There is a risk that during wet weather periods motorist may take longer to come to a stop at formal and informal crossing facilities. This may lead to crossing collisions with walkers.	Provide suitable lengths of high skid resistant surfacing in advance and through all crossing facilities.	RSA problem and recommendation accepted. Surface course with 70+ PSV will be provided at the crossing facilities and will be developed at detailed design.		
1A 3.3.6	**Location**: B – RD_1A_S02 Entry treatment crossing facility, West of Ifield Phase 1A (Drg. 10051123_ARC-050-1A-DR-CE-00001 Rev P04).  **Summary**: Risk of slip / trip hazards associated with manhole cover.	Ensure manhole covers does not pose a risk to walkers or cyclists.	RSA problem and recommendation accepted. Suitable skid resistance for the manhole cover will be proposed at detailed design or manhole relocated.		

Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	The position of manhole cover MH-39 appears to be located at or near the southern side road uncontrolled crossing RD_1A_S02 tactile paving (see insert). This may present a slip / trip hazard to those using the uncontrolled crossing facility particularly if the manhole cover is uneven, incorporates an upstand or is slippery underfoot. A similar situation occurs at the following locations: • MH-73 RD_1A_P01 • MH-30 RD_1A_P01 • MH-53 RD_1A_P02 • MH-87 RD_1A_P02 • MH-143 RD_1A_P02				
1A 3.3.7	**Location**: E – RD_1A_P02 / Rusper Road crossing facility, West of Ifield Phase 1A (Drg.  10051123_ARC-050-1A-DR-CE-00009 Rev P06). **Summary**: Risk of crossing collisions. Walkers crossing at the junction are expected to cross the carriageway in one go or risk being stranded in the middle of the road where they may be struck by turning traffic. This may be a particular problem for those frail, mobility / sensory impaired crossing the wide carriageway, looking in multiple directions and avoiding large turning vehicles such as buses.	The use of a refuge island at the junction bellmouth may allow crossing walkers to cross safely in two halves, whilst providing a safe space to wait and observe oncoming traffic.	Disagree with the RSA problem and recommendation. This junction is intended solely for infrequent bus use and private access, with no through route. As a result, incorporating a refuge island would be excessive given the limited vehicle activity at the junction. Additionally, the area is constrained by the available land, and the crossing length is less than 10 meters.		

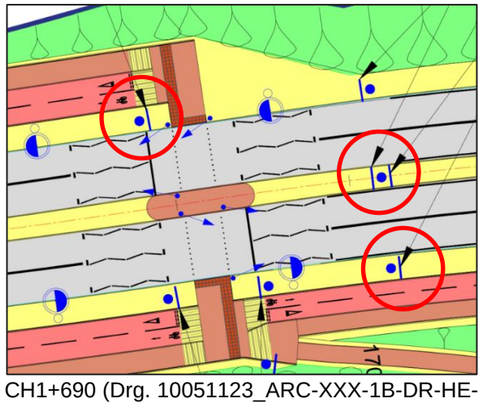
Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
1A 3.3.8	**Location**: General – RD_1A_P01 & RD_1A_P02 Entry treatment junctions, West of Ifield Phase 1A (Drg. 10051123_ARC-050-1A-DR-CE-00001 Rev P04). **Summary**: Risk of cycle collisions with walkers and motorists. There is a risk of cycle collisions with walkers and motorists as cyclists attempt to access the cycleway or shared use space. There does not appear to be any clear or defined access routes for cyclists to access the cycle facilities. Furthermore, as junction entry treatments in general provide a flush surface across the highway this appears to tempt cyclists to access / leave the cycle facilities at multiple locations rather than at designated locations. This may put fellow walkers at risk of being struck as they may not expect to be joined by cyclists anywhere from the junction, or for cyclists to cross into their path, particularly when there is little space to do so.	Provide suitable clearly signed designated cycle access facilities. Furthermore, the use of pedestrian priority signs (or similar) may help remind cyclists to be mindful / respectful of pedestrian safety by not obstructing or endangering them. It is incumbent for cyclists to recognise that pedestrians can walk anywhere, and that cyclists are required adjust cycling accordingly to avoid unduly harming pedestrians.	RSA problem and recommendation accepted. Signage for the NMU routes will be developed at detailed design.		
1A 3.3.9	**Location:** F – RD_1A_S01 opposite RD_1A_P01 Southern shared use facility, West of Ifield Phase 1A (Drg. 10051123_ARC-050-1A-DR-CE-00007 Rev P06).  **Summary:** Risk of cycle collisions. Cyclists are required to exit the share use facility and rejoin the carriageway with their backs to oncoming westbound traffic (see insert). If cyclists continue to enter the road heedless of oncoming traffic, this may lead to side-swipe collisions.	Ensure cyclists entering the carriageway to join traffic have a clear sight of oncoming traffic, or be expected to yield accordingly.	RSA problem and recommendation accepted. This junction is now signalised and therefore the cyclists will be able to join the carriageway accordingly. In addition the entry to the highway could be widened so cyclists could join and stop at 90 degrees to the road.		

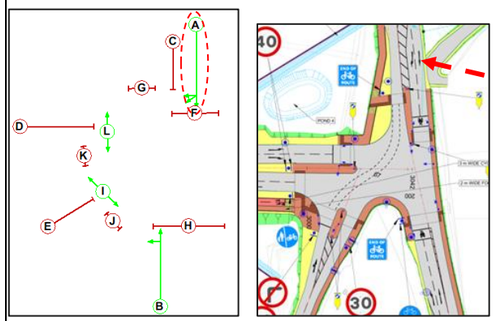
Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
1A 3.3.10	**Location**: G – JC_1A_S06 Junction crossing facilities, West of Ifield Phase 1A (Drg. 10051123_ARC-070-1A-DR-CE-00007 Rev P06).  **Summary**: Risk of walker collisions. Poorly located crossing facilities either side of the junction may lead to collisions with walkers (see insert). There is a risk that motorists approaching the junction may be preoccupied by turning manoeuvres or focus on emerging traffic, rather than concentrating on crossing activities.	Provide suitable refuge islands at the junction to enable walkers to cross one stream of traffic at a time.	Disagree with the RSA problem and recommendation. Crossing facilities have been positioned furtherback at the junctions to minimise crossing width, allowing pedestrians to cross in a single movement without difficulty. These are minor junctions anticipated to experience low traffic volumes, , thereby reducing the likelihood of potential conflicts.		
1A 3.3.11	**Location**: H & I – RD_1A_P02, West of Ifield Phase 1A (Drg. 10051123_ARC-070-1A-DR-CE-00007 Rev P06).  **Summary**: Risk of cyclists being struck by car doors. Parking and loading bays positioned immediately adjacent to cycleways may put cyclists at risk of collisions when vehicle doors are opened directly into the path of approaching cyclists.	Provide a suitable 'buffer zone' between cyclists and parked vehicles to mitigate the risk of vehicle doors opening onto oncoming cyclists.	RSA problem and recommendation accepted. A buffer zone will be included.		

Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	A similar situations occurs along multiple locations eastwards along RD_1A_P02.				
1B 3.1.1	**Location**: General – Crawley Western Link Road (CWL) CH0+980 – CH1+250 (Drg. 10051123_ARC-010-1B-DR-HE-00002 Rev P04). **Summary**: Poor drainage of surface water may lead to skidding / loss of control collisions. Traffic median islands appear proposed along CWL, segregating the nearside bus lane from the offside traffic lane. These islands appear to coincide with drainage low points in the carriageway. Although proposed carriageway crossfall supports suitable carriageway drainage, the median islands may contribute to retaining surface water. This could lead to skidding collisions during wet weather or icy conditions.	Ensure surface water is suitably drained from the carriageway.	RSA problem and recommendation accepted. Gullies, combined kerb drain or other suitable drainage provision in the median will be proposed at the low spots to avoid any localised surface water. This will be developed at detailed design stage.		
1B 3.1.2	**Location**: A – Rusper Road, just south of scheme extent CH1+090 (Drg. 10051123_ARC-010-1B-DR-HE-00002 Rev P04). **Summary**: Risk of collisions with bollards. The placement of cast iron bollards across the carriageway of Rusper Road may pose a hazard to oncoming motorists and cyclists, who may strike the substantial obstructions. This situation may be made worse during the hours of darkness.	Ensure that motorists are provided with advance warning of the road closure / no through route. Furthermore, ensure that any physical obstructions are made conspicuous.	RSA problem and recommendation accepted. Advance warning signage will be provided at detailed design stage.		
1B 3.1.3	**Location**: B – Rusper Road, just north of scheme extent CH1+090 (Drg. 10051123_ARC-010-1B-DR-HE-00002 Rev P04). **Summary**: Risk of collisions with bollards. The placement of cast iron bollards across the carriageway of Rusper Road may pose a hazard to oncoming motorists and cyclists, who may strike the substantial obstructions. This situation may be made worse during the hours of darkness.	Ensure that motorists are provided with advance warning of the road closure / no through route. Furthermore, ensure that any physical obstructions are made conspicuous.	RSA problem and recommendation accepted. Advance warning signage will be provided at detailed design stage.		
1B 3.1.4	**Location**: General – Phase 1B Highway crossing facilities (Drg. 10051123_ARC-XXX-1B-DR-HE-00001 Rev P04). **Summary:** Risk of collisions between motorist and walkers/cyclists. There is a risk of collisions between motorists and walkers/cyclists crossing at the controlled crossing facilities particularly on high-speed roads	It is recommended that a suitable length of high skid resistance surfacing is provided on the approach to all signalised crossings.	RSA problem and recommendation accepted. Surfacing with a PSV of 70+ will be provided on the approach to signalised crossings, this will be developed at detailed design stage		

Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	where wet weather conditions could compromise the skidding resistance of the surfacing.				
1B 3.2.1	**Location**: C – Phase 1B alignment, northern and southern section of scheme (Drg.  10051123_ARC-010-1B-DR-HE-00001 Rev P04 and Drg. 10051123_ARC-010-1B-DR-HE-00007 Rev P04) **Summary**: Risk of head-on collisions between cyclists and motorists. Whilst shared use facilities are provided generally along the scheme, there is a risk that some shared use terminal points may force walkers and cyclists to exit the facilities onto the verge, into opposing traffic lanes unaided or onto a narrower section of footpath (see insert showing southern section of scheme), putting themselves at risk of head-on collisions, being struck when crossing or continuing along unsuitably narrow sections of footpath. A similar situation occurs at the northern tie-in of the scheme. The Audit Team notes that design measures particularly at the tie-in points, may take account of adjacent developments that fall outside the scope of this audit.	It is recommended that shared use provision at terminal points is safe, clear, appropriately signed and supplemented with tactile paving. Furthermore, ensure that if permitted, cyclists are able to safely access / leave the shared use facilities at all access and terminal points.	RSA problem and recommendation accepted. Signage has been provided to clarify the end of cycle / shared routes where cyclists would be required to dismount. Tactiles and corduroys will be provided in the specific location highlighted as defined in DfT guidance on the use of tactile paving surfaces.		
1B 3.2.2	**Location**: D – Phase 1B / Phase 1A / Crawley Western Link Road (CWL), (Drg. 10051123_ARC-010-1B-DR-HE-00001 Rev P04) **Summary**: Risk of head-on collisions between turning motorists.	Provide ‘no entry’ prohibition markings / signage at the junction.	RSA problem and recommendation accepted. No entry road markings and signage will be provided and be further developed as part of the detailed design stage.		

Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	Northbound motorists may inadvertently turn right south of the staggered crossing island into walkers and cyclists crossing the staggered crossing facility or continue into oncoming westbound traffic travelling along CWL. This may lead to striking those crossing or head-on collisions with oncoming traffic.				
1B 3.2.3	**Location**: E – Phase 1B Highway crossing facilities CH2+330 (Drg. 10051123_ARC-XXX-1B-DR-HE-00001 Rev P04). **Summary**: Risk of crossing collisions. Walkers crossing the carriageway at uncontrolled crossing facilities are expected to cross multiple lanes and may be at risk of being struck by oncoming traffic. This may be a particular problem for those frail, mobility / sensory impaired crossing the wide carriageway as they may be required to look in multiple directions, judge approaching traffic speeds or be masked by large oncoming vehicles.	Ensure that any proposed crossing facilities are derived from undertaking a suitable on-site assessment (recording all relevant local and traffic factors) and crossing assessment framework.	Disagree with the RSA problem and recommendation. An on-site assessment is not possible as this will be new within a green field site. The existing PRoW which the uncontrolled crossings will be used for to allow continuity of the route is infrequently used. However at detailed design stage advance warning signage of the crossing will be assessed and provided if required.		
1B 3.2.4	**Location**: F – Phase 1B Highway crossing facilities CH2+830 (Drg. 10051123_ARC-XXX-1B-DR-HE-00001 Rev P04). **Summary**: Risk of crossing collisions. Walkers crossing the carriageway at the uncontrolled crossing facility are expected to cross multiple lanes and be at risk of being struck by oncoming traffic. This may be a particular problem for those frail, mobility / sensory impaired crossing the wide carriageway as they may be required to look in multiple directions, judge approaching traffic speeds of or be masked by large oncoming vehicles.	Ensure that any proposed crossing facilities are derived from undertaking a suitable on-site assessment (recording all relevant local and traffic factors) and crossing assessment framework.	Disagree with the RSA problem and recommendation. An on-site assessment is not feasible as this development will be located on a green field site. The existing PRoW which the uncontrolled crossings aim to support for route continuity, is currently infrequently used. However at detailed design stage, advance warning signage of the crossing will be assessed and provided if required. The proposed highway at this crossing point consists of dedicated bus lanes in both directions. Although there are two lanes in each direction the dedicated bus lanes will have limited traffic, thereby further minimising the risk		
1B 3.2.5	**Location**: F – Phase 1B Highway crossing facilities CH2+800 (Drg. 10051123_ARC-010-1B-DR-HE-00006 Rev P04). **Summary**: Risk of slip, trip or fall hazards may lead to injury. Vulnerable road users seeking access or egress to the southern public right of way may be required to navigate the proposed embankment. This may lead to slip trips and falls leading to injury.	Ensure the transition between the highway and the PRoW is flush.	Disagree with the RSA problem and recommendation. The transition currently shown has been designed to allow a longitudinal gradient which will be suitable for vulnerable road users.		

Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
1B 3.3.1	**Location**: G – Phase 1B alignment / Tie-into existing Rusper Road, (Drg. 10051123_ARC-010-1B-DR-HE-00001 Rev P04) **Summary**: Introduction of bend may result in eastbound motorists over-shooting into Rusper Road leading to late braking collisions. The new Phase 1B profile ties-into Rusper Road via a 90° right hand bend in the road. There is a risk that eastbound motorists approaching the tie-in may not be aware of the bend in the road and may instead inadvertently overshoot into the existing eastern arm of Rusper Road leading to late braking collisions. This situation may be worse during the hours of darkness, during poor weather conditions, or if the proposed lighting through Rusper Road contributes to see-through as this may also mislead approaching motorists into assuming the carriageway follows a straight-ahead alignment. This issue was raised in the previous Stage 1 Road Safety Audit (Problem 10).	Ensure motorists approaching the tie-in from the west are aware of the junction arrangement as well as the carriageway alignment. In addition, the use of a map-type sign similar to that at the northern end of the scheme incorporating the bend as well as introducing the new Crawley Western Link road may also benefit motorists.	RSA problem and recommendation accepted. Advance warning signage along with a map type sign will be developed as part of the detailed design.		
1B 3.4.1	**Location**: General Scheme-wide (Drg. 10051123_ARC-XXX-1B-DR-HE-00001 Rev P04). **Summary**: Risk of motorists striking traffic signs. Some signs are proposed close to the edge of carriageway and may be susceptible to being struck by passing motorists. This may lead to secondary collisions.	Ensure all proposed traffic signs are located a suitable distance from the carriageway and do not interfere with road users.	RSA problem and recommendation accepted. Signage locations providing minimum set backs will be reviewed at detailed design.		
1B 3.4.2	**Location**: H - Crawley Western Link Road  CH1+690 (Drg. 10051123_ARC-XXX-1B-DR-HE-00001 Rev P04).	Ensure speed limit signs do not obscure the operation of the crossing traffic signals.	Disagree with the RSA problem and recommendation. The speed limit signs are positioned sufficient distance away from the signals to not interfere with visibility. Visibility will be confirmed at detailed design, any clashes and signs will be relocated.		

Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
	Summary: Risk of overshooting / late braking / crossing collisions. There is a risk that the speed limit and shared use signs located in advance of the controlled pedestrian crossing facility may obscure the traffic signal operation (see insert). This may lead to overshooting / late braking / crossing collisions.				
1B 3.5.1	**Location**: I – Charlwood Road / Ifield Avenue, West of Ifield Phase 1B (Drg. 10051123_ARC-010-1B-DR-HE-00007 Rev P04)  Image 2 **Summary**: Risk of turning traffic collisions. Southbound 'nearside' traffic from Charlwood Road (Phase A - all movements) appears permitted to run 'opposed' with northbound nearside and offside traffic from Ifield Avenue (Phase B - all movements), whilst Phase C (Charlwood Road southbound left turn) is 'held' for traffic. This arrangement may result in confusion and may lead to late braking or lane changing collisions, as northbound motorists travelling from Ifield Avenue are presented with right turning motorists not emerging from the opposing 'offside' lane of Charlwood Road (as this is phase currently held in Stage 1) but the 'nearside' lane. The Audit Team notes that the 'nearside lane of Charlwood Road is proposed as ahead-only, and very little has been provided to manage or guide opposing traffic through the junction (see image 2). This issue was raised in the previous Stage 1 Road Safety Audit report (Problem 1).	Ensure that the operation of the junction promotes safe turning traffic manoeuvres with good vehicle positioning, and that carriageway markings are not confusing.	Disagree with RSA problem and recommendation. This is a common occurrence at many junctions across the UK, with no conflicting movements present. The road markings clearly show that vehicles travelling from Charlwood Road in the nearside lane are designated ahead movements only, while the offside lane is restricted to right turns only. The alignment from Ifield Avenue has been realigned following the previous RSA problem 1, ensuring that the straight ahead movement no longer conflicts with any of the opposing traffic.		

Reference	RSA1 Problem	RSA1 Recommendation	RSA1 Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
1B 3.5.2	**Location**: I – Ifield Green / Ifield Avenue / Charlwood Road (Drg. 10051123_ARC-010-1B-DR-HE-00007 Rev P04)  **Summary**: Risk of loss of control collisions. northbound motorists approaching the Ifield Green / Ifield Avenue / Charlwood Road junction will emerge from Ifield Green and immediately be presented with an offset junction alignment (see insert). This alignment, which may or may not be clear to approaching motorists travelling along the 40mph road, may result in loss of control collisions. This situation could be worse particularly during the hours of darkness, poor weather conditions or because of excessive speed. Although guidance markings appear to be provided to highlight the alignment, they are likely to be ineffective during wet weather periods, or quickly eroded through junction turning traffic manoeuvres.	Provide advance warning of the traffic signal junction ahead. In addition, there may also be benefit in providing a map-type sign on the approach to the junction, similar to those provided on all other approaches. The use of speed management measures may also benefit safety.	RSA problem and recommendation accepted. Advance warning signage and map style sign will be developed at detailed design stage.		