KIRKLEES SAFETY AUDIT BRIEF – Internal Audits

Scheme Name	Rowley Lane S278	**Budget Code**	50/61868	**Lead Designer**	Haigh Huddleston & Associates (RSA request Zulqarnain Azam)
Location	Rowley Lane, Fenay Bridge				
Type of Scheme	S278 scheme including new access for housing estate, new uncontrolled crossings, bus stop relocation, revisions to Rowley Lane / A629 junction				

FOR INTERNAL PROCESS ONLY – AUTHORISATION TO PROCEED WITH SCHEME

Audit Requested (highlight as necessary)	**Audit completed**		**Completed audit Logged by Contracts**		**Designers Response completed**		**Exception report required Y/N**	**Exception Report decision made by Ops Manager (see record attached)**		**AUTHORISATION TO PROCEED WITH SCHEME Group Engineer – final decision**		**Logged by Contracts**	
	Print Name	**Date**	**Initial**	**Date**	**Initial**	**Date**	**Y/N**	**Initial**	**Date**	**Initial**	**Date/Sign**	**Initial**	**Date**
Stage 1	External RSA by LTP Ref. LTP/24/6133 – Final Issue 1A December 2024		External GG119 applies – RSA Response Report signed by Kirklees provided (ref. E23/8060/JM/003C, January 2025) Designers Haigh Huddleston Associates										
Stage 2	D Barker & R Hardcastle	01/08/25	AW	02/08/25	JM	17/09/25	N	N/A	N/A	KK	30/09/25 		

Stage 1/2 (combined)													
Stage 3													

General Comments/ Design Criteria/ Summary / Details of last audit (if required):
This also includes any departures from standards
Previous Stage 1 RSA under GG119, details as provided on previous page. This is a S278 scheme aims to improve existing highway condition and propose new junction for a new development and other highway works including, footway, resurfacing and road marking.

Do you perceive any safety problems? ~~YES~~/NO If YES, give details.
Please see RSA 1. Problems mentioned in RSA 1 need to be re-assessed with the latest proposed drawings.

List of drawings supplied for Audit purposes (including version number)

Signed Stage 1 RSA Response Report Ref: - E23/8060/JM/003C (January 2025)

General Arrangement	8060_023_01D
Kerbing Plans	8060_023_02D
Surfacing Plan	8060_023_03E
Road Marking	8060_023_04D
Junction Levels	8060_023_05A
Cross Sections	8060_023_06D
Vehicle Tracking Plans	8060_023_08B & 8060_034_01B
Site Clearance	8060_023_09

All audit briefs need to be submitted to the Audit team at the following email address **RoadSafetyAudit@Kirklees.gov.uk**

ROAD SAFETY AUDIT PROBLEMS

Problem 1 – Proposed access junction and new uncontrolled crossing of Rowley Lane combined with stationary buses could lead to conflicts and an increased likelihood of various injury collision types as detailed

Location 1 – (a) Eastbound bus-stop / proposed access, (b) Westbound bus-stop / proposed pedestrian crossing

At location (a), it is proposed to retain the existing eastbound bus-stop positioned between Woodsome Drive and the proposed development access. Bus drivers stopping here would be likely to try and clear the Woodsome Drive junction to avoid blocking it, coming to rest partially or wholly opposite the new junction mouth, which could create conflicts with vehicles turning there. Left turns out by larger vehicles would be difficult – the swept paths provided clearly evidence the need to swing out into this area – and collisions could occur. Drivers intending to turn right into the access pulling out to pass a bus in advance of the junction may remain to the offside, increasing their exposure to oncoming traffic. Subsequently, they may execute the turn from the wrong side of the road, potentially conflicting with any vehicle that may be waiting to turn out of the new access.

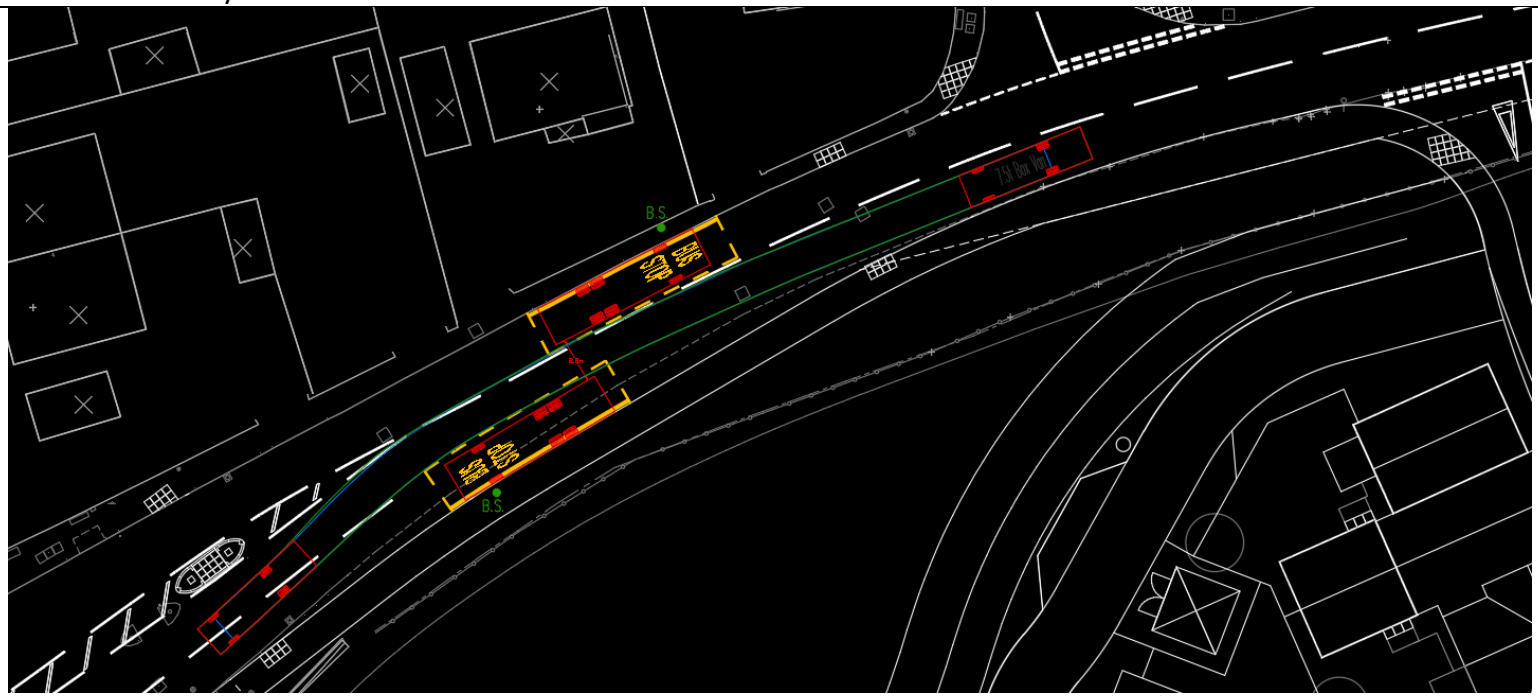
The westbound bus-stop is proposed to be relocated to location (b), where a new pedestrian crossing of Rowley Lane would also be positioned. Due to the proximity of these features to each other, when a bus stops, the crossing would be blocked. This is inappropriate and could place pedestrians at risk when buses were present, especially visually impaired pedestrians crossing from north to south, who would be directed into the side of the bus by the tactile paving.

Recommendation 1

It is recommended that both bus stops are relocated westwards to the section of Rowley Lane proposed to be widened, where there would be no conflicts with the proposed access, reduced conflict with the pedestrian crossing (also see related Recommendation 7), and more carriageway width for through traffic to overtake stationary buses – see sketch on following page. New conflicts with driveway visibility are acknowledged and unavoidable but would be far less concerning than the currently proposed situation. Relocation would also reduce the pre-existing conflicts between the eastbound stop and traffic using Woodsome Drive junction.

There would be enough space to safely overtake a stationary bus in either travel direction, with much less disruption of oncoming traffic flows. Westbound cars would be able to overtake a stationary bus with minimal encroachment outside their lane. An eastbound driver would achieve around 90m of forward visibility to oncoming vehicles past the bus, due to the new verge layout (and the right-hand bend would help).

The WYCA timetables indicate that service frequency is very low along here, so it seems highly unlikely that opposing buses would ever stop at the same time. That said, even if they did, a vehicle as large as a 7.5t Box Van could still pass between the buses.



Designers Response 1

Bus stop locations to be relocated to suit auditors' recommendation.

Auditors Comments 1

Problem closed.

Overseeing Organisation Position

Agree with Auditor and Design Response.

Agreed Action

None. The proposed design drawings are amended as per Auditor's recommendations.

Problem 2 – Larger vehicles manoeuvring at proposed access would encroach across oncoming lanes, resulting risk of collisions and injuries

Location 2 – Proposed access junction

The swept paths show encroachment across oncoming traffic lanes by the Refuse vehicle executing all manoeuvres, but especially left turns. This increases the likelihood of collisions and injuries when opposing traffic is present. Although refuse vehicles may only visit occasionally, there would be similar levels of encroachment by *any* large vehicle, and deliveries (for example) could be frequent.

Recommendation 2

It is recommended that junction geometry is eased. One option would be to provide 1m x 10m tapers for the trailing edges of left turning vehicles (which would also reduce lane overrun by larger vehicles turning right in).

Designers Response 2

We do not agree with the recommendations of the auditors. An increased junction width would increase the crossing distance for pedestrians resulting in a need for a refuge island. The presence of a central island would make HGV turning much more restricted and worsen the problem.

The existing bank along the southern side of Rowley Lane is to have all vegetation removed and be re-graded to provide an increased visibility at the junction. It is therefore reasonable to expect HGVs to wait until both lanes are clear before making a turn.

Auditors Comments 2

Width / crossing distance through the junction mouth arising from the addition of tapers would not increase to such a degree that the RSA Team would consider a refuge island necessary (and there would not be adequate room to provide one without significantly changing the layout). Regardless, the numbers of pedestrians crossing through the junction mouth would be extremely low and highly unlikely to carry significant risk, because pedestrians on wider east-west trips would be using the continuous footway along the northern side of Rowley Lane. Crossing movements would be unlikely here other than by residents of the estate.

The problem is unrelated to junction visibility; it concerns restricted space for turning in the junction mouth. It is not reasonable or necessary to expect vehicles turning left-in to the development (for example) to have to stop and wait in the major road whilst another vehicle turns out. With the tapers installed, refuse and delivery vehicles executing turns could do so without conflicting with other traffic within the junction mouth, or on the main road, covering off most traffic scenarios. Whilst issues with lack of space to pass larger vehicles would still occur further south within the estate itself, it is far more important that such issues are not encountered within or close to the junction mouth (where speed differentials are highest with main road traffic), and injury collisions could occur. The changes would also reduce the likelihood of damage to kerbs around the radii. See sketches on following page (based upon unchanged radii with 1m x 10m tapers).

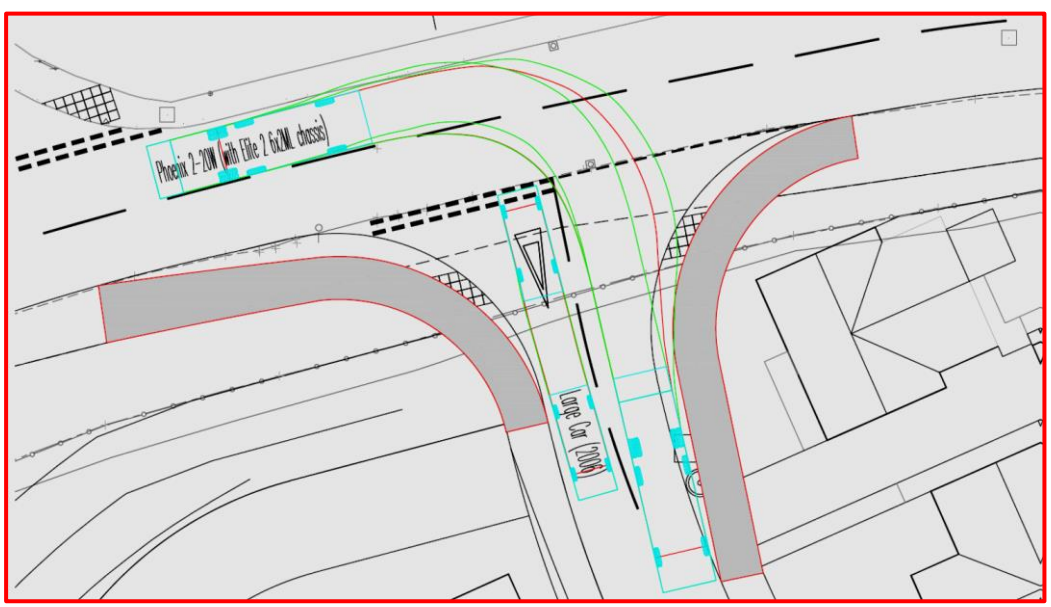
The tapers should be added, or an Exceptions Report provided.

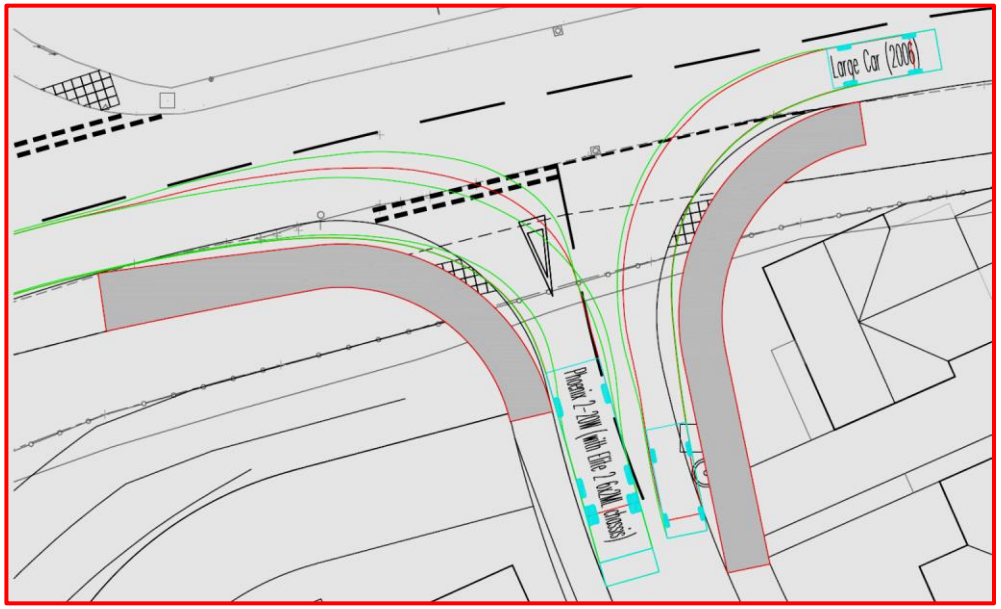
Overseeing Organisation Position

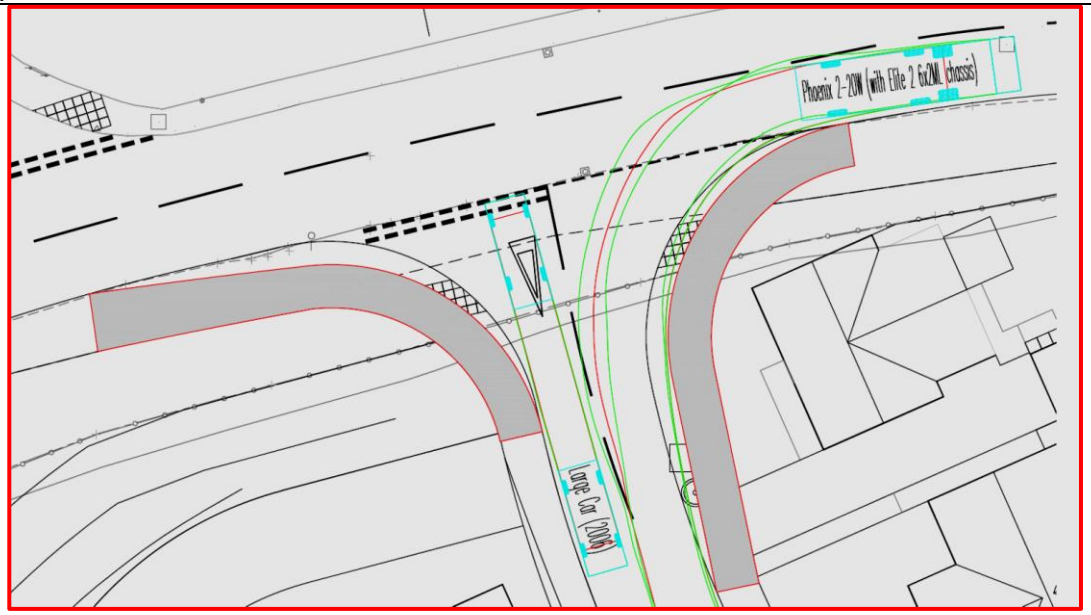
Agree with Auditor's Response.

Agreed Action

None. The proposed design drawings are amended as per Auditor's recommendations.







Problem 3 – Carriageway widening and formal two-lane layout along Rowley Lane approach to A629 may increase likelihood of emergence and other collisions and injuries, and increase risk for pedestrians crossing through refuge

Location 3 – Rowley Lane approach to A629

The proposals include widening of Rowley Lane along the approach to the A629 junction, to facilitate a formal two-lane layout with left/right directional arrows. Whilst it is accepted under the existing layout that informal two-lane queuing does occur, the proposal to formally promote two-lanes over a 34m section may have adverse consequences for user safety, which need due consideration.

Currently – based upon site observation – some smaller and most larger vehicles approaching the A629 occupy the centre of the lane past the refuge and up to the give-way line, using the full width of the lane to position themselves as close to perpendicular to the A629 give-way line as possible when turning right (despite the angle of the junction). This leads to a path that reduces overrun of opposing lanes or kerbs as they execute the turn. Under the proposed layout, if following their promoted lane, they would have to take an angled position at the give-way line (>22° off perpendicular or more, for some left turners), making views to the right more difficult, and right turn paths less forgiving when executed. There is a refuge immediately north of the junction already showing signs of kerb strikes, with adjacent lanes physically restricted to around 3.4m. Swept paths suggest for the FTA Design vehicle, that the relatively subtle differences in positioning and paths could be crucial in avoiding striking this island. Additionally, the rear trailers of a right-turning longer vehicles would swing out to the nearside as they turned from within the defined offside lane, into the area where an adjacent left-turning vehicle may be present.

If a large/high vehicle was at the give-way line turning one way, with an adjacent car turning in the opposite direction at the same time, views for the driver of the car through the HGV would be seriously restricted, increasing the likelihood of hazardous emergence. Such scenarios would be far more likely to materialise following physical widening, with two lanes formally marked over such a long distance.

It should be noted that the section of the A629 between Rowley Lane and North Road frequently suffers KSI collisions where high speeds are likely to have been contributory (over the past 5 years, approx. 1.5 KSIs / year including one Fatality). There are known issues with speed limit abuse in the vicinity of this junction. Over a 1-week period in 2008, an ATC site 100m north of Rowley Lane recorded 85th percentile speeds of over 43mph with over 26% of drivers exceeding the limit, around 1 in 65 drivers exceeding 60mph, and almost 200 drivers exceeded 70mph. Since that survey was undertaken, fundamentally nothing has changed here, so this data is still likely to be indicative of conditions now.

Finally, under the existing layout pedestrians crossing via the refuge will, for the most part, only need to judge one lane of westbound traffic approaching the A629 (accepting that at busier times, two lines of cars do pass the refuge, but at very low speeds). The widening would fundamentally change this, increasing NMU collision risk. It is also noted that the refuge is being provided at absolute minimum width of 1.5m (DMRB CD143 [and 'Inclusive Mobility']) rather than desirable width of 2m or more. Furthermore, the refuge is setback some distance from the north-south pedestrian desire line along the eastern side of the A629, and unlikely to be used by most pedestrians (accepting that this is a pre-existing road safety issue, it will be worsened by moving the refuge farer away from the A629).

The RSA Team appreciates that the two-lane proposal has arisen out of previous discussions and agreements during the planning process and is probably intended to increase junction capacity. However, the RSA considers safety, and there are genuine concerns that the two-lane layout could increase the likelihood of numerous conflicts and collisions, as detailed above.

Recommendation 3

It is recommended that a single lane approach is maintained, and furthermore, that the refuge is widened to 2m or more to aid NMUs, and to physically discourage the formation of two lanes. Under a single lane layout, the island could be moved much closer to the A629 pedestrian desire line, where it would also be more effective in discouraging two-lane queueing.

Designers Response 3

Junction designs to be altered to reflect a single lane approach as recommended by the auditors.

The Stage 1 RSA highlighted concerns with articulated HGVs mounting the pavement when turning Left into Rowley Lane. The pedestrian island and crossing point was therefore moved further North to allow HGVs additional turning space and alleviate the issue. The crossing point should therefore remain in its current position with an increased island width to suit the recommendations of the auditor.

Auditors Comments 3

The recommendation was for a single lane approach to be maintained, and for the refuge to be widened and moved closer to the crossing desire line. The Designers appear to have just removed the lane marking which achieves little, as there would still be adequate space for two-lane queuing past the refuge by cars, and the crossing would still be setback an excessive distance from the A629, so the hazards would remain. The westbound approach lane should be physically narrowed to [say] 4m by widening the refuge, and the refuge moved west. The sketch below shows a layout reflecting these outcomes, and all manoeuvres are achievable by a 2016 FTA Design Articulated vehicle, with the left turn in being no more restricted than the Designer's path (as infrequently as vehicles this large would be likely to execute the manoeuvre).

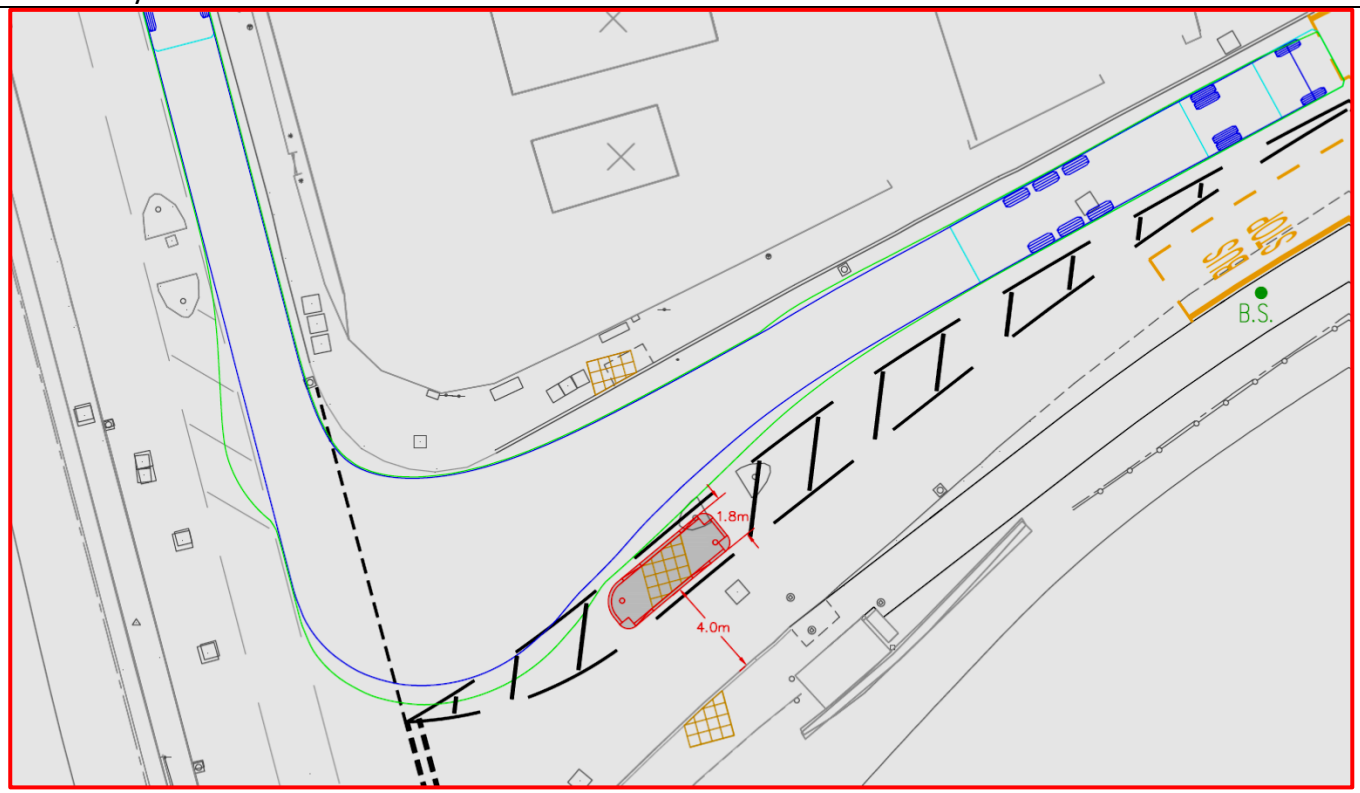
A similar layout should be adopted, or an Exceptions Report provided.

Overseeing Organisation Position

Agree with Auditor's Response.

Agreed Action

None. The proposed design drawings are amended as per Auditor's recommendations.



Problem 4 – Visually impaired pedestrians may unknowingly step over tactile paving areas into live carriageway at risk of being struck

Location 4 – Rowley Lane at junction with Woodsome Drive

The proposals include blister tactile paving areas for the east-west crossing paths along the northern side of Rowley Lane, through the Woodsome Drive junction mouth. At their narrowest (Rowley Lane sides) these paving areas are shown at two blocks deep. At this depth, the paving could be inadvertently stepped over by visually impaired pedestrians approaching them in-line with the crossing direction. This could lead to them unknowingly entering the live carriageway in the junction mouth and being struck by vehicles.

Recommendation 4

It is recommended that the minimum depth of the tactile paving areas be increased to three blocks (as per *Guidance on the Use of Tactile Paving Surfaces* advice – DfT).

Designers Response 4

The existing footpath width along Rowley Lane and Woodsome Drive restricts available space for tactile paving. Wherever possible tactile paving should be increase to 3 blocks deep.

Auditors Comments 4

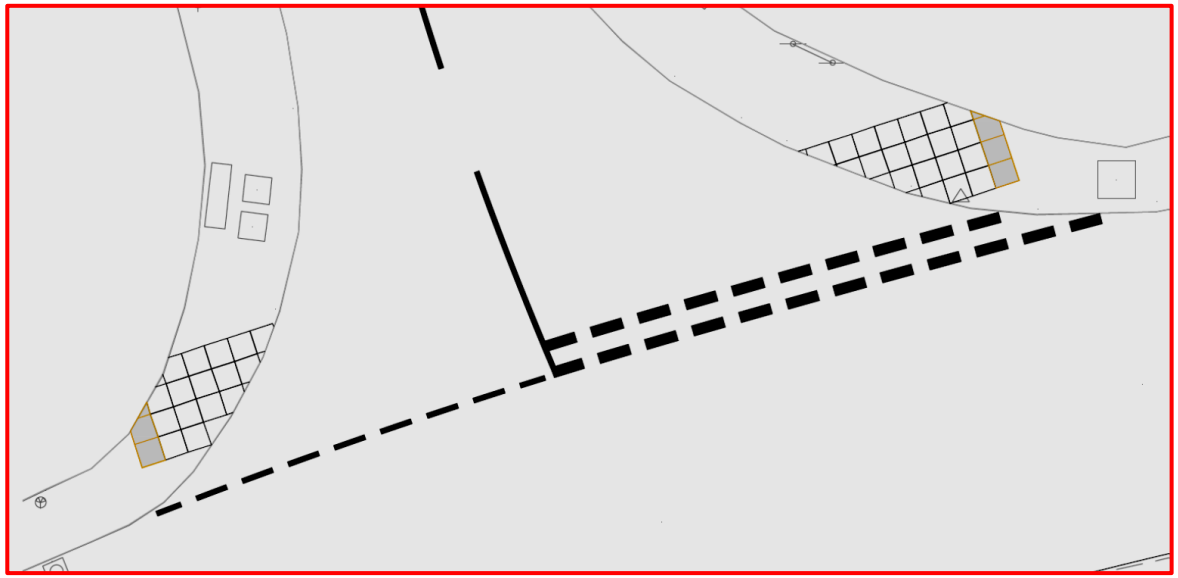
The Designers misunderstand the situation. As per *Guidance on the Use of Tactile Paving Surfaces*, an additional row of blister paving must be provided on each side of the Woodsome Drive junction as indicated below, or an Exceptions Report will be required.

Overseeing Organisation Position

Agree with Auditor's Response.

Agreed Action

None. The proposed design drawings are amended as per Auditor's recommendations.



Problem 5 – Pedestrians may attempt to cross Rowley Lane east of new access, at risk of being struck

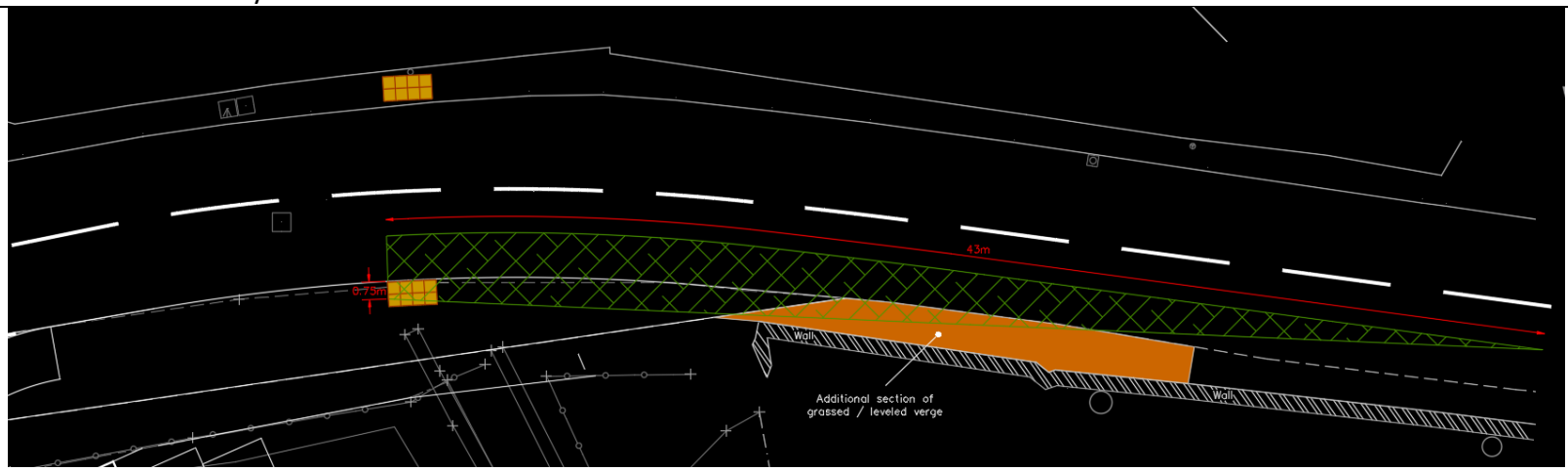
Location 5 – Proposed access junction mouth, eastern side

The proposals include tactile paving areas and flush kerbs at both sides of the development access, to facilitate east-west crossing movements. On the eastern side, however, the area of tarmac continues around the radius some distance beyond the crossing point, before changing to grass as it ties-in with Rowley Lane. Any pedestrian wishing to head east along Rowley Lane from the development would be highly likely to walk around this tarmacked section before crossing Rowley Lane at the boundary of the junction mouth (and vice versa), rather than using the promoted crossing point being proposed further west, which is way off-line. This would be hazardous.

It seems highly likely that pedestrians will want to walk towards central Lepton regardless of provision, and vice versa. Most of the closest walking trip generators are located east of the site within Lepton, such as shops, schools / nurseries and public houses. The only destinations to the west are bus stops on the A629, and rural walks.

Recommendation 5

It is recommended that the hardened footway section is extended to the east by some 15 to 20m to the apex of the curve on Rowley Lane, where another uncontrolled crossing should be promoted. Considering the risks that pedestrians would no doubt take crossing Rowley Lane close to the development junction when following desire lines (if the layout remained as Audited), on balance, it is highly likely to be safer to relax visibility requirements for a crossing point east of the access, by reducing setback of the splay from the carriageway edge ('X distance') from 1.5m DMRB recommended to 0.75m. It appears that 43m of visibility would then be achievable from the centre of the approach lane. An extension of the levelled grass verge should be provided (within the highway boundary) east of the Developer's boundary at the front of the natural stone wall, with all free growing plants permanently removed. Tree canopy trimming and removal of other growth should also be carried out above / behind the wall, see sketch. Note, the position shown below may not be the best in terms of visibility, and the Designer should identify the best option.



Designers Response 5

We do not agree with the recommendations of the auditors. The crossing point would be located on a downhill sweeping bend where vehicle speeds may be high. The highlighted section of ground for the visibility splay is narrow and unlikely to be maintained in the future which may worsen visibility at the crossing point. We would therefore recommend that the existing crossing locations are maintained.

The footpath on the East side of the site entrance should be reduced in length to discourage pedestrians from walking beyond the crossing point to cross Rowley Lane.

Auditors Comments 5

Experience shows that pedestrians will take the most direct possible route between their location and destination regardless of designers' intentions. This is especially true where the intended route is significantly longer, heads in a directly opposite direction to that desired, and includes nothing more than an uncontrolled crossing point to 'encourage' its use (a much stronger argument would be valid if it was a controlled crossing). Most journeys on foot will be between the estate and facilities in Fenay Bridge / Lepton, east of the site. It is inconceivable to the RSA Team that pedestrians leaving the estate (for example) would be prepared to divert in the opposite direction to walk up to 150m farer then they would otherwise have to, regardless of any 'discouragement' through providing non-hardened surfaces in the eastern verge of the access. Pedestrians will cross Rowley Lane here.

The recommendation stated that the Designer should identify the best option for a crossing. See sketch below. This crossing is positioned at the eastern limit of the area already being cleared for the junction visibility splay, with the eastern side of the crossing aligning with where verge width reduces to 1.5m. The visibility splay shown is based upon 59m SSD, corresponding to 85th percentile approach speeds of 35mph (MfS), which is

more than adequate for these conditions, including the downhill gradient (and the splay could extend farer – this section is straight). The splay is also setback over 1.1m from the edge of the carriageway, which is again more than adequate.

As for the reliability of future verge maintenance, this will be the responsibility of the Highway Authority and is not relevant to this RSA.

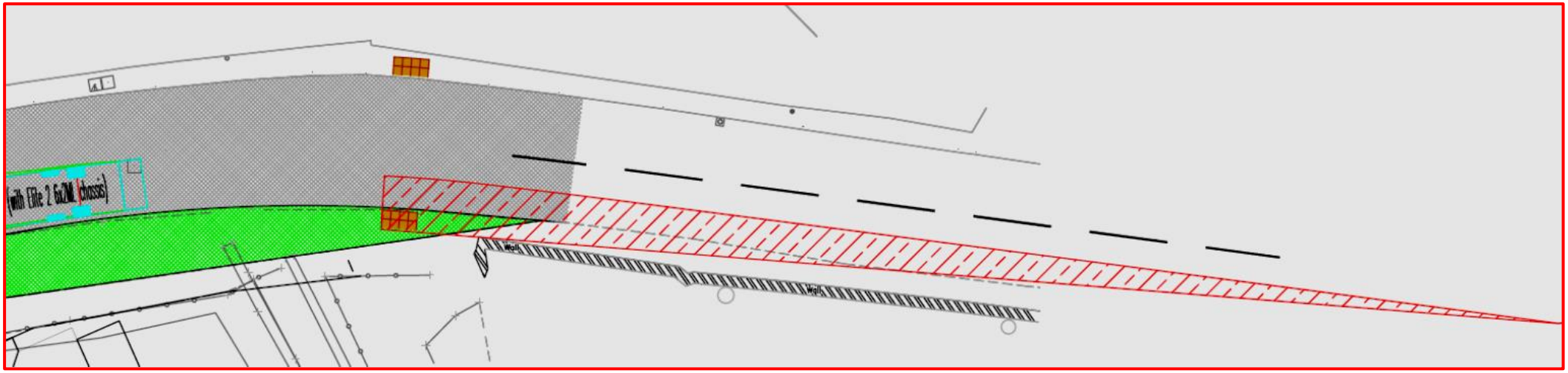
A crossing point should be incorporated, or an Exceptions Report provided.

Overseeing Organisation Position

Agree with Auditor's Response.

Agreed Action

None. The proposed design drawings are amended as per Auditor's recommendations.



Problem 6 – Low conspicuity of give-way location may increase likelihood of injudicious emergence (especially with two-lane layout)

Location 6 – Rowley Lane junction with A629

The give-way requirement and junction location are not very conspicuous to drivers approaching the A629 along Rowley Lane. There is no vertical give-way sign currently provided, despite the A629 being a busy major road. An existing flag-type direction sign is positioned away to the offside of drivers forward views along the junction approach and is faded in a poor state of repair. Considering the downhill vertical alignment this is a concern, and collision risk may be exacerbated by increased flows resulting form the development. The proposed widening could also increase speeds down the hill and so the likelihood of inadvertent junction overshoot, especially during quieter traffic periods and darkness, when the layout may not be obvious to strangers.

Recommendation 6

It is recommended that a give-way sign is provided in the nearside verge, and that the existing flag-type direction signs in the western verge of the A629 are replaced with a new assembly, located directly opposite the centre of the approach lane[s] (preferably including a yellow border and at a larger 'x' height). The sign should be mounted at 2.5m high, to be directly in the forward views of drivers approaching the junction down the hill. Additionally, the final 50m of the approach lane should be resurfaced with material that has a PSV value of at least 65.

Designers Response 6

Upgraded signage to be provided in accordance with the recommendation of the auditor.

Auditors Comments 6

The sign should be moved around 8m south of its currently proposed position to be in-line with drivers forward views along the final junction approach, as recommended.

The recommendation for 65 PSV surfacing along the junction approach does not appear to have been included on the surfacing plan.

These changes should be adopted, or an Exceptions Report will be required.

Overseeing Organisation Position

Agree with Auditor's Response.

Agreed Action

None. The proposed design drawings are amended as per Auditor's recommendations.

Problem 7 – Likelihood of slips, trips and falls whilst crossing

Location 7 – Rowley Lane crossing west of Woodsome Drive

The proposed crossing location would carry pedestrians close to two ironwork covers in the carriageway, one of which would be centrally located within the crossing route. See photograph: -

These covers can be slippery, especially when wet, and increase the likelihood of falls in the carriageway. Additionally, covers may sink and/or frames may suffer damage over time, leaving trip hazards.

Recommendation 7

It is recommended that the crossing is relocated east by around 2m.

Designers Response 7

Crossing point to be relocated in accordance with the recommendation of the auditor.

It is understood that as part of the outline planning permission for the works, the crossing location was to be positioned close to the bus stop, where the presence of a bus would prevent pedestrians crossing the road until it has moved off and visibility was improved. It is therefore recommended that this relationship is maintained, and the crossing point is moved to suit the new bus stop locations.

Auditors Comments 7

Problem closed.

Overseeing Organisation Position

Agree with Auditor and Design Response.

Agreed Action

None. The proposed design drawings are amended as per Auditor's recommendations.