BANNERS GATE

Banners Gate Ltd

Engineers Response

Engineer's Response to Stage 1 Road Safety Audit

ENGINEERS GENERAL COMMENT

The following Engineers comments are in response to items raised within the document provided by Waterman Aspen on behalf of Hayfield Homes titled: Stage 1 Road Safety Audit – SA 3808 September 2022.

The report includes stage 1 review of both S38 and 278 general arrangements.

6.0 MATTERS ARISING FROM THIS STAGE 1 ROAD SAFETY AUDIT

SECTION 278 WORKS

6.1 Problem

Location Proposed footway from A4460 Oxford Road and Horn Hill Road Junction
Summary Risk of pedestrian/vehicle conflict

The drawings submitted for audit show a proposal for a 1.5m footway, with a 0.5m verge between, adjacent to Berry Hill Road. The suggested 1.5m footway width is not wide enough for two pedestrians with pushchairs or buggies to pass each other. In this scenario, one pedestrian with a buggy would have to walk in the carriageway to pass the other pedestrian, with the increased risk of a collision with a moving vehicle. This may result in injuries.

Additionally, it is proposed to include a 3m footway/cycleway link into the development from Berry Hill Road. However, there are no details of the tie-ins with both the footway and the carriageway or cycleway, if proposed. As a consequence of this issue there is a risk of vehicles colliding with either pedestrians or cyclists.

Recommendation:

It is recommended that the footway width is increased, in line with recommendation by the Design Manual for Roads and Bridges.

The designer should provide details of the tie-in from the 3m wide link from Berry Hill Road and the development.

Engineers Response

2m footway width as suggested will be investigated as part of detailed design however, proposals are in line with access drawings approved at planning.

Tie in and detail of 3m link will be agreed as part of S38 and S278 applications with highway authority.

6.2 Problem

Location Development access road off Berry Hill Road
Summary Risk of pedestrian/vehicle conflict

The drawings show a proposed uncontrolled pedestrian crossing with tactile paving at the junction of the development access road. However, at its shortest distance, the drawing shows a distance of 800mm, whereas it should be a distance of 1200mm. This is to ensure that partially and fully visually impaired pedestrians are able to find the edge of the footway and the start of the carriageway (junction), where it would be appropriate to cross. There is a risk, if the correct tactile is not installed, of a collision between pedestrians and vehicles taking place.

Recommendation:

It is recommended that the tactile paving is installed in accordance with the Department of Transport document “Guidance on the Use of Tactile Paving Surfaces”.

Engineers Response

Tactile paving (in line crossing) to be amended to min 1200mm deep as suggested.

6.3 Problem

Location **Outside Numbers**

Summary Risk of pedestrian/vehicle conflict

The drawings show a proposed inset uncontrolled pedestrian crossing point at the northern end of the proposed footway at the start of Horn Hill Road. Image number 1 above shows the approximate location of the crossing. However, as mentioned in Problem 6.1 above, the width of the proposed footway is inappropriate. It may be seen in the image above that the existing footway on the west side of Horn Hill Road also appears to be substandard as it is too narrow by current standards. This would become a particular issue when more that two pedestrians, especially those with buggies are crossing from east to west. This situation may result in collisions between vehicles and pedestrians, with injuries occurring.

Recommendation:

It is recommended either that the crossing point is relocated to a safer site, or that more landing width is provided for pedestrians when using this crossing

Engineers Response

Proposals are in line with access drawings approved at planning. A crossing provided at this location was considered a highway safety improvement as part of the planning submission. Widening the existing footway in this location cannot be achieved without 3rd party land.

6.4 Problem

Location Berry Hill Road between "Last House" and A4460 Oxford Road

Summary Risk of pedestrian/vehicle conflict

The Audit Team observed on their site visit that the trees and hedges were at their full growth, some of which were overhanging the carriageway. Currently pedestrians have to walk either on the verge or on the carriageway. There is an increased risk of collisions between vehicles and pedestrians, especially during the hours of darkness as pedestrians may not be seen resulting in injuries occurring.

Recommendation:

It is recommended that the trees and hedges adjacent to the Berry Hill Road carriageway and verge are cut back so that there is sufficient visibility for drivers using this route. This is particular important as there is no street lighting system in place.

Engineers Response

Vegetation will be cut back as suggested and detailed on the detailed design drawings.

6.5 Problem

Location Proposed Bus Stops north of Berry Hill Road / A4460 Oxford Road Junction
Summary Risk of head-on and side impact type of vehicle conflict

The drawings submitted for audit show a proposed pedestrian central refuge located approximately at the start of the ghosted right turn from Oxford Road into Berry Hill Road, as seen in image number 3 above. Also included are two bus stops and their 'cages', one for a northbound bus and one for the southbound bus. The Audit Team are concerned with the location and configuration of the proposal as it could lead to vehicle collisions, in the following circumstances; if a bus had stopped at the southbound bus stop it is likely that a queue of traffic may occur behind it, wishing to overtake. However, because of the vertical alignment of Oxford Road, it is highly probable that the southbound driver would not be able to see either any northbound vehicles or pedestrians on the crossing. This situation may result in head-on or side impact collisions, with injuries occurring.

Recommendation:

It is recommended that the designer ensures that there is adequate forward visibility when a bus has stopped in either of the bus cages and that southbound vehicles are able to see any pedestrians either waiting to cross or crossing Oxford Road.

Engineers Response

Proposals are in line with access drawings approved at planning. Vertical alignment will be checked as part of detailed design.

SECTION 38 WORKS

6.6 Problem

Location Southern End of Road 2 – 3m footway / cycleway link
Summary Risk of pedestrian/vehicle conflict

The drawings submitted for audit show a 3m wide footway/cycleway link between the southern end of Road 2 of the development and berry Hill Road. The Audit Team are concerned that there is a risk of vehicles using this link in order to gain access from Road 2 to Berry Hill Road. No information has been provided to show how vehicles will be prevented from taking this action. As a consequence of this issue there is a risk that vehicles on Berry Hill Road may collide with either other vehicles trying to take this route or pedestrians

Recommendation:

It is recommended that a barrier or appropriate street furniture is included as part of the link to prevent vehicles travelling from Road 2 to Berry Hill Road, together with proposed landscaping to prevent vehicles from travelling around the barrier.

Engineers Response

Suitable barrier will be provided as part of detailed design.

6.7 Problem

Location Infiltration Basin – northern end of Road 2

Summary Risk of pedestrian drowning

The drawings submitted for audit show an infiltration basin at the northern end of developments Road 2. No information has been submitted to show how to prevent access to this area, either for a vehicle or a pedestrian. Without any prevention there is a risk of an errant vehicle driving into basin or a child playing in this area being drowned. Given that the longitudinal gradient of road two falls from south to north, it is even more of a hazard. The result may be serious injuries may occur.

Recommendation:

It is recommended that a barrier and landscaping is installed to prevent access to errant vehicles or pedestrians

Engineers Response

Design speed of residential access road is 20mph and speeds envisaged to be lower at the end of Road 2.

Landscaping will be provided as part of detailed design. Will include knee rail fence.

6.8 Problem

Location Turning head at the southern end of Road 2

Summary Risk of collisions between pedestrians and vehicles

Drawings for vehicle swept paths for a 4-axle refuse vehicle and a fire appliance have been submitted for analysis. An extract of the swept path for a 4-axle refuse vehicle is shown in image number 4 above. The swept path shows how the vehicle will carry out a 180° manoeuvre to leave the turning head in a forward gear. Unfortunately, the swept path shows that the vehicle has to mount the eastern kerb in order to carry out this manoeuvre, with the risk of colliding with a pedestrian walking along the path. This situation may result in injuries.

Recommendation:

It is recommended that the design of the turning head is adjusted to ensure that the swept path for a 4 axle refuse vehicle does not mount any kerbs and therefore prevents potential conflicts with pedestrians.

Engineers Response

Only the vehicle body overhangs the vehicular crossover to the east. No overhang is proposed on the footway. This is usually considered acceptable foe a vehicle with a trip of 1 per week.

6.9 Problem

Location Junction of development access (Road 1) and Berry Hill Road
Summary Risk of side impact vehicle collisions

An extract of the swept path for a 4 axle refuse vehicle is shown in image number 5 above. The swept path shows how the vehicle will enter and leave the development Road 1. It also shows that when the vehicle leaves the site, it has to use the opposing lane in order to continue its journey eastwards. As Berry Hill Road is a very well used road, there is the risk of vehicle collisions between the refuse vehicles and other road users. This may result in injuries.

Recommendation:

It is recommended that the design of the radii at the junction is amended to ensure that the swept path for the vehicle does not enter the opposing lane.

Engineers Response

Proposals are in line with access drawings approved at planning. Sufficient visibility is provided to allow the vehicle to exit the development and also allow oncoming vehicles to see a large vehicle exiting the development, subsequently allowing them to reduce speed and allow the vehicle to existing the development for the 1 trip per week scenario.

6.10 Problem

Location Various

Summary Risk of pedestrian slip/trip on transition from adopted to unadopted footway

At numerous locations, the drawings show the adopted footway ending at the same location as the ramp in the carriageway at the transition from adopted to unadopted footway. A pedestrian walking from the adopted footway to the unadopted area would either have to drop down/up a full height kerb, or use the ramp, both risking a trip/slip. This would be particularly hazardous for non-ambulant pedestrians such as pushchair/wheelchair users.

Recommendation:

It is recommended that there is a smooth transition from the adopted area to the unadopted, or that a suitable facility is included such as dropped kerbs

Engineers Response

Transition from adoptable areas to private areas will be reviewed as part of the detailed design. An additional section of footway in privately maintained land can be provided to allow pedestrians and NMU's to negotiate between the areas as necessary.

THIS COMPLETES THE ENGINEERS RESPONSE TO THE TECHNICAL REVIEW.

Written by

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for and on behalf of
Banners Gate Ltd