

## 6.0 MATTERS ARISING FROM THIS STAGE 1/2 ROAD SAFETY AUDIT

### 6.1 Problem

**Location:** Turning heads throughout development

**Summary:** Risk of vehicle and pedestrian collisions

There are several locations throughout the proposals submitted for audit where large vehicles, such as refuse lorries, are overrunning areas and footway. If a refuse lorry is overrunning a footway, then there will be a risk of collisions with pedestrians.

#### Recommendation

It is recommended that all the carriageways are tracked with computer aided design software to ensure vehicles which will travel through the development regularly can do so without overrunning areas.

#### Designer's Response:

The site layout has been designed to OCC design guide standards and has been tracked with an OCC standard refuse vehicle. To track the layout successfully, minor chassis overhang is required on the footway. These movements will also be made quite infrequently.

### 6.2 Problem

**Location:** Speed control measures throughout the development

**Summary:** Risk of loss of control collisions

The drawings submitted for audit show very little in the way of traffic calming or speed control measures throughout the site. It is noted that there are areas of block paving, but these have flush kerbs either side and no change in level to slow down vehicles. There are long straight carriageways within the development on which vehicles could travel at excessive speed along, which will increase the risk of collisions through the site.

#### Recommendation

It is recommended that speed control measures be installed throughout the development.

#### Designer's Response

Roads across the site have been designed with bends to help control the speed of vehicles. No straight lengths across the development are longer than 60m in accordance with DoT guidance. This paired with the change in road surfacing across the development will provide sufficient traffic calming.

### 6.3 Problem

**Location:** Transitions from shared spaces to bituminous footways

**Summary:** Risk of vehicle and pedestrian collisions

There do not appear to be any facilities proposed to inform pedestrians that they are transitioning from a traditional footway to a shared space carriageway where they may encounter vehicles. This is of particular concern to partially sighted users who may not be aware of the change of environment and could lead to an increased risk of pedestrians colliding with vehicles.

#### Recommendation

It is recommended that clear guidance, such as tactile paving etc, be provided at the entrances to shared space areas to inform pedestrians of the change of environment.

#### Designer's Response:

Tactiles to be moved to / placed at entrances to shared space areas.

### 6.4 Problem

**Location:** Visibility splay opposite plot 131

**Summary:** Risk of side impact collisions

The visibility splay for the junction opposite plot 131 is shown through visitor parking bays and outside of the area being offered for adoption. If a vehicle were parked in these bays, then there will be a risk of a side impact collision due to the reduced visibility at the junction. If the boundary treatment of the private areas adjacent to the highway changed, then there will also be a risk of a side impact collision due to the reduced visibility at the junction

#### Recommendation

It is recommended that all visibility splays are adequate for the speed of the road, are free of obstructions and are within land being offered for adoption so they can be maintained in perpetuity.

#### Designer's Response:

Visitor Spaces to be removed in this location to allow increased visibility of the junction.

## 6.5 Problem

**Location:** Grasscrete turning head by plot 29

**Summary:** Risk of rear end collisions

The turning head by plot 29 is noted as being constructed as grasscrete. The majority of drivers will not realise that this area which appears to be grass is for them to turn in and may opt to reverse back down the road to the nearest junction. This will lead to a risk of other vehicles colliding with the rear of the reversing vehicles.

### Recommendation

It is recommended that a traditional turning head is installed which is of adequate size to allow regular highway users, such as refuse lorries, to turn in without overrunning the adjacent footways.

### Designer's Response:

Grasscrete turning head to be tarmac. No parking signs to be installed to mitigate any users parking in this area.

## 6.6 Problem

**Location:** Attenuation basins throughout the development

**Summary:** Risk of vehicle occupant drowning

The drainage drawings submitted for audit show several attenuation features throughout the development adjacent to the carriageways. It is noted that some of these ponds are over 2.0m deep. If an errant vehicle were to enter the pond it may overturn as travelling down the side slopes (gradients unknown) and the occupants could drown if the ponds were holding water at that time.

### Recommendation

It is recommended that some form of fencing is included in the design alongside the ponds.

### Designer's Response:

450mm Knee rail has been specified around all attenuation basins. ROSPA report to be completed and larger fencing to be erected if deemed necessary.

## 6.7 Problem

**Location:** Block paved areas throughout the development

**Summary:** **Risk of pedestrian slips, trips and falls**

The block paved shared space areas have 25mm kerb faces along the channel lines. These kerbs are above the recommended guidance of a 0-6mm kerb face for a crossing point, meaning pedestrians could potentially trip on them. This creates the further issues of whether these areas actually likely to operate as shared spaces as there is a clear channel line along the edges denoting a carriageway area for drivers of vehicles. If they are not treated as shared spaces by users, then the margins along either side of carriageways are, in most cases, not of adequate width to be a footway. In summary, the block paved areas are not shared spaces and are not wide enough to operate as traditional carriageway and footways. This could lead to pedestrians tripping on the 25mm kerbs or collisions with vehicle who think that they're on a carriageway rather than a shared space.

### Recommendation

It is recommended that either that the block paved areas are designed as true shared spaces without the 25mm kerb face or that the design reverts to a traditional arrangement of footways and carriageways, both of which would need to be of sufficient width to fulfil the roles.

### Designer's Response:

All Kerb lines to be amended in shared surface areas to allow for 6m width shared surface. This 6m width shared surface is in line with OCC design guide.

## 6.8 Problem

**Location:** Footway running alongside the attenuation basins through the development

**Summary:** **Risk of pedestrian slips, trips and falls or pedestrian and vehicle collisions**

The footway running alongside the attenuation basins does not link into the wider footway network through the site. There are locations with links through to the adjacent carriageway but no uncontrolled pedestrian crossing points with tactile paving have been provided at these locations. These could lead to pedestrians tripping on full height kerbs or pedestrian collisions with vehicles whilst they are walking in the carriageways.

### **Recommendation**

It is recommended that this section of footway be integrated into the wider highway network with suitable pedestrian facilities at the access points.

#### **Designer's Response:**

Footpaths across the development have been designed to allow for pedestrian permeability. This includes the footpaths adjacent to swale areas which link adoptable footways within parcels to the wider infrastructure. Appropriate kerbing has also been allowed for to allow for crossing points. Corduroy or tactile paving to be provided.

## **6.9 Problem**

**Location:** Footway running alongside the attenuation basins through the development

**Summary:** Risk of pedestrian drowning

The footway running alongside the attenuation basins does not appear to have any fencing to prevent pedestrians falling into them. As the basins are over 2m deep in places there could be a risk of drowning. It is noted that the side slopes are between 1:3 and 1:4 but the gradient alongside the footway it is not clear.

### **Recommendation**

It is recommended that the basins either be guarded or of a suitable gradient so that, if a pedestrian were to enter, they could climb out again unaided.

#### **Designer's Response:**

Basins will be guarded and will have a maximum gradient of 1 in 3 which is deemed safe and maintainable.