

**Himley Village, NW Bicester  
Technical Note Response to OCC  
E Mail of 1<sup>st</sup> Dec 2016**

**Prepared for P3Eco  
December 2016**

## Himley Village

### Response to OCC E Mail dated 1<sup>st</sup> December 2016

#### 1.0 Introduction

A Transport Assessment Addendum was submitted to OCC in mid-October 2016 the focus of which was proposals for an interim improvement to the Bucknell Road/Howes Lane and Bucknell Road/Lords Lane junctions.

OCC have subsequently reviewed this and set out their response in a report dated 8<sup>th</sup> November 2016. ABA responded to this in a report dated the 25<sup>th</sup> November 2016.

OCC have responded to the report of the 25<sup>th</sup> November in an e mail of the 1<sup>st</sup> December 2016.

This Technical Note of the 2<sup>nd</sup> December 2-16 is a response to OCC's e mail of the 1<sup>st</sup> December 2016 and it sets out how each of the technical concerns raised can be satisfactorily addressed within a further iteration of the proposed junction design. We are still of the view that the proposed scheme is deliverable and will provide both road safety and operational improvements within the context of the expected significant increase in traffic flows at the critical Bucknell Road/Howes Lane junction. This significant increase in traffic flows is result of the likely development scenario of 900 homes north of the railway which will certainly result in major over capacity issues at the critical junction. The proposed interim junction improvement provides additional traffic capacity, enabling a number of sites to come forward and therefore has an important role to play in delivering both the housing and employment growth planned for Bicester.

#### 2.0 Layout of Junction

##### *Pedestrian Facilities*

OCC have raised a concern regarding the width of the proposed footway at one location on the south side of Howes Lane.

The width of the footway at this location as currently designed is 830mm but the overall layout of the junction can easily be revised so that a 900mm width is provided. The width of 900mm is in accordance with OCC's Residential Road Design Guide and Manual for Streets. We assume therefore that OCC are satisfied that this is sufficient for movement by disabled and elderly pedestrians.

Whilst the pinch point does occur on a bend and sight lines are limited by the close boarded fence, visibility of around 5m is still achievable through the pinch point location. This issue regarding the layout needs to be realistically assessed within the context of the onwards connections and the expected future usage of this footway i.e. what type of pedestrians are likely to use this footway, what is the likelihood of two pedestrians actually meeting at the pinch point and what would be the real safety issue that would arise should two pedestrians meet.

The existing footway that runs on the south west side of Bucknell Road and around the south side of Howes Lane continues to Shakespeare Drive. The level of current usage of this footway is not known although it is the only paved footway providing access to Avonbury Business Park. It should be noted that people walking to the Business Park currently have to cross Howes Lane at the vehicle entrance and there are no pedestrian facilities at the entrance itself, only a grass verge.

Given the role of the existing footway in providing a walking route to the Business Park, we have undertaken an analysis of the possible level of usage generation by this use. We estimate that the employment space at the Business Park as being around 3,000 sq m and assuming one employee per 15 sq m, this gives a working population of 200 people. The Census 2011 data for a mid super output area covering west Bicester (and incorporating Bicester Community College) indicates that 15% of people working in this area walk to work. Applying this to the Business Park gives 30 people who might be walking to and from the Park. Some of these could be coming from the Shakespeare Drive and some from the Bure Park area.

It would be expected that the movement of pedestrians to and from the Business Park would be tidal and therefore there would be few issues with people meeting head on at the pinch point. There may however be other people who are not going to the Business Park but nonetheless are walking east west along Howes Lane. These are expected to be few in number.

Given the issues raised by OCC in relation to the pinch point and the possible significance of this for people walking to the Business Park, as further mitigation we are now proposing that an footway be provided as part of the scheme on the north side of Howes Lane, from the junction with Bucknell Road to the entrance with the Business Park. Pedestrians coming from the south (from the town centre side) would have to cross to the north side of Howes Lane to use this additional footway using the walk with traffic facility at the signalised junction. Currently, they in any case have to cross Howes Lane near to the Business Park entrance using a completely uncontrolled facility. Crossing at the signalised junction via the central islands would certainly be an improvement compared to the current arrangement.

The footways at the junction are not for shared pedestrian cycle use and the potential future illegal use of the southern footway and the pinch point by cyclists simply cannot be a reason for rejecting the proposed interim junction improvement. Cyclists should be using the carriageways of the junction and overall, the environment for cyclists will be improved as a result of the interim improvement.

Reference is made to the loss of a short section of footway on the south west side of Bucknell Road adjacent to the bridge abutment. This footway is only 3m in length from the corner of the abutment/wing wall and does not have any onward connections to the north west as it becomes a grass verge. Its sole purpose is to provide access to an uncontrolled crossing of Bucknell Road beneath the bridge. The loss of this footway is not detrimental to pedestrian safety as a replacement crossing of Bucknell Road is proposed. The alignment of this crossing better aligns with the Howes Lane to Lords Lane desire line than the existing crossing.

The purpose of the junction intervisibility zone is to allow line of sight between drivers at stop lines and pedestrians using crossings. To quote from TD 50/04 *'The junction intervisibility zone is the area identified for the purpose of assessing visibility within the junction between drivers at each stop-line, or between drivers and pedestrians and facilitates identification of measures to mitigate the effect of obstructions'*. As previously stated in the report of 25<sup>th</sup> November a driver at the stop line has visibility to the full extent of all other stop lines and the full extent of all other pedestrian crossings. The objective of providing an intervisibility zone would therefore be achieved. There is no risk to pedestrians arising from visibility issues and in fact the interim junction layout would be an improvement in this regard compared to the existing layout. This therefore cannot be a reason for rejecting the proposed interim junction improvement.

Reference is made to the signals potentially causing confusion for pedestrians using the crossing below the bridge. In terms of the likely future baseline development scenario, we have undertaken some preliminary calculations which indicate that flows at the junction would increase by up to 30% in 2021 compared to 2016 surveyed flows. This will increase the level of severance for pedestrians on Bucknell Road (and Howes Lane) but the introduction of traffic

signals, that will stop south bound traffic (Stage 3) and create gaps in northbound traffic (between Stage 3 and 2), will improve the situation for pedestrians crossing at this location compared to the situation of the existing junction without any improvement.

We strongly disagree with the conclusion that the proposed improvement results in an overall deterioration in conditions for pedestrians. We accept that two pinch points are created but given the low footfall through the junction we do not believe that they would have any material impact on the safety of pedestrians. Even if these were accepted as having a dis-benefit, this effect would be more than offset by the proposed improvements to crossing Pedestrian crossings on Howes Lane and Bucknell Road north would be improved through the control of vehicles, increased inter-visibility and the use of central islands. In addition, a new crossing would be added to Bucknell Road south where one currently does not exist.

In any event the proposed interim junction improvement must be considered in the context of the existing junction layout which will not change but will be subject to increased traffic flows of up to 30% as a result of the most likely future development scenario. Up until this point the accident rate at the junction is low and this therefore does not give OCC reason to investigate issues at the junction or seek to make improvements. However, encouraging sustainable travel and supporting Bicester's Healthy New Town ambitions cannot be about road safety only – it has to consider the overall quality of the environment for pedestrians and the difficulties they experience in crossing busy roads. At this point OCC can reasonably foresee that the overall pedestrian environment at the junction and potentially highway safety will deteriorate in the near future. OCC have an obligation under common law duty of care to address this now. The proposed interim junction improvement will enable this obligation to be discharged.

#### *Signal Equipment and Traffic Signs*

Reference is made to signal posts creating pinch points and we acknowledge the OCC proposal that this could be dealt with by using posts with cranked arms. We would also suggest that the footway on the south east side of Bucknell Road could also be enlarged slightly to address this issue.

In terms of the signal post opposite Howes Lane, the concrete service margin has a width of 1.1m. Standard details for signal installations have been reviewed and this shows that this width is sufficient to provide 450mm clearance, even if 'hoods' are used on the signal heads.

It is assumed that the reference to signs relates to Bucknell Road south and Howes Lane. We are confident that given the size of signs and the available footway and verge width this can be resolved using single, double or cantilevered post arrangements.

#### *Vehicle Tracking*

In terms of the vehicle tracking presented, all manoeuvres are on the basis of a vehicle moving while turning its wheels. There are no manoeuvres where a vehicle is stopped and its wheels are turned before it then moves off.

Concerns are raised about vehicles crossing centres lines and being very close to kerb lines and it is assumed that these comments primarily relate to Howes Lane. Whilst what has been presented shows some residual tracking issues there is still scope and space within the limits of the public highway for further refinement of the layout to address these issues. Nonetheless, it must be noted that these situations would only arise with the very largest of vehicles and would only be an issue if an equally large vehicle were to be travelling in an adjacent or opposing traffic lane. In reality, because of the natural mix of vehicle types there would be sufficient clearance

to vehicles in adjacent and opposing traffic lanes. In terms of vehicle tracking it must be noted that the proposed interim scheme increases carriageway space and this improves the movement of large HGVs compared to the existing situation.

It must also be noted that to the south of the junction there is a 7.5 tonne weight restriction and the large vehicles that have been tracked for the right turn from Howes Lane to Bucknell Road south would exceed this limit. It is therefore questionable as to whether provision actually needs to be made for large vehicles to make this right turn. If not, this resolves some of the concerns raised.

In terms of damage to infrastructure, we assume that this primarily refers to Howes Lane. In response to this we would propose that additional protection could be provided through the use of vehicle containment kerbs at centre islands.

The tracking shows that large vehicles are able to negotiate the junction without overhanging kerb lines. It is of course possible that this may nevertheless occur on occasions but the risk to pedestrians must be viewed within the context of the low pedestrian footfall through the junction. In our view the risk of the bridge structure being hit by the overhang of a vehicle is mitigated by the use of vehicle containment kerbs which will ensure sufficient clearance to the structure.

We acknowledge the issue of reduced clearance to the bridge abutment but as set out in the report of the 25<sup>th</sup> November, we believe that the risk of a vehicle collision with the bridge from loss of control of a vehicle is actually lower than at present due to the proposed layout, use of traffic signals and use of a vehicle containment kerb. This, however, would need to be agreed with Network Rail.

As stated in the report of the 25<sup>th</sup> November, in terms of the safe and efficient movement of vehicles through the junction, the proposed interim scheme is an improvement compared to the existing layout. As acknowledged by OCC the existing layout is less than ideal in that large vehicles have to track into opposing traffic lanes in order to move through the junction. Whilst this may be a situation that is able to be accommodated by drivers currently, with the junction being subject to increased traffic flows of up to 30% as a result of the most likely future development scenario, this will become more difficult and could have implications for highway safety. At this point OCC can reasonably foresee that the overall safety and efficiency of the junction will deteriorate in the near future. OCC have an obligation under common law duty of care to address this now. The proposed interim junction improvement will enable this obligation to be discharged.

#### *Length of Approach Lanes*

We acknowledge that the right turning lanes on Howes Lane and Lords Lane as presented are shorter in length than shown in the previous iteration of the design and this may affect capacity.

We have reviewed the Howes Lane approach and are confident that a 50m length right turning lane can be provided as previously whilst at the same time an additional footway is provided on the northern side of the road. Alternatively, the capacity assessment could be re-run to assess whether a shorter lane length would have an impact on capacity.

In terms of Lords Lane, whilst a shorter lane length has been presented this has no material impact on capacity as the demand for right turning movements is extremely low – less than 10 vehicles per hour.

### *Howes Lane Properties*

We acknowledge that the proposed interim junction improvement would result in vehicles being closer to existing gardens and fences by up to 3m. However, this change would have no material impact on the properties in relation to issues such as noise, vibration and air quality.

A wider issue for properties in the area is the consequence for air quality of not improving the junction given the likely significant increase in flows at the junction. Without improvement there will be major queues and slow moving or stationary traffic on both Howes Lane and Lords Lane. The proposed interim junction improvement however will provide the much needed additional capacity and keep traffic moving through the area with a benefit for air quality.

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