

**Heron Land Developments  
Taylor Wimpey  
Persimmon Homes**

**West Durrington,  
A2700 Titnore Lane/  
Titnore Way Junction  
Improvements**

**Designers' Responses and  
Exceptions Report to the Stage 1  
Safety Audit (March 2007) including  
the Addendum Report (August 2007)**

**Project Ref: 05969/105**

**January 2008**

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## DOCUMENT CONTROL SHEET

**Project Name:** West Durrington, A2700 Titnore Lane/Titnore Way Junction Improvements  
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*Issue	Revision	Description	Date	Signed

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## 1. Designers' Response to Items Raised from the Stage 1 Safety Audit

This report refers to the West Durrington, A2700 Titnore Lane/Titnore Way Junction Improvements Stage 1 Safety Audit Report, Project Ref 5969/NTN/MP/PE, March 2007.

The following item numbers refer to the numbering in the Safety Audit report.

- (1.7) PICADY tests have been carried out as part of the Transport Assessment and results can be provided - see also response to (2.1) below.
- (1.8) It is understood that the accident rate comparison is based 'A' class roads. Whilst Titnore Lane is nominally designated as an 'A' class road that status is in question. The road does not accord with the desirable geometric highway standards for an 'A' class road. A more reasonable comparison would be a 'C' class road.
- (1.9) This was stated in some detail in the brief. It is important to understand that the scheme is an improvement to the existing situation, not a new scheme. WSCC officers, who have been closely consulted on the design of the improvements regarding what can be practically achieved without significant adverse environmental impact and within the constraints of control over the adjoining land, have indicated these proposals would be acceptable in view of the considerable improvement that would be achieved. It is noted that the safety audit does not expressly indicate that the proposed improvements will adversely affect safety at this (existing) junction.

**The highway authority, West Sussex CC, is requested to confirm that in the particular circumstances of this scheme the departures from standards are acceptable.**

- (2.1) The proposed Titnore Lane / Titnore Way junction is forecast to operate well within capacity with acceptable Ratios of Flow to Capacity (RFC) and queue lengths, as summarised below. The turning length as shown should therefore be adequate.

Year 2007 Full Development				
	AM		PM	
	RFC	Queue	RFC	Queue
Titnore Way	0.45	1	0.45	1
Titnore Lane (S)	0.07	0	0.1	0

Year 2012 Full Development				
	AM		PM	
	RFC	Queue	RFC	Queue
Titnore Way	0.51	1	0.52	1
Titnore Lane (S)	0.08	0	0.11	0

## West Durrington, A2700 Titnore Lane/Titnore Way Junction Improvements

### Designers Response to Stage 1 Safety Audit including the Addendum Report

- (2.2)** The achievable Sight Stopping Distance, Forward Visibility and Junction Visibility for both the 70kph and 85kph design speeds are indicated on drawing no 5969/105/027 and subsequent revisions.

As the general layout of both the north and southbound approaches will remain as existing we do not anticipate these speeds will change significantly. However, the 70kph design for the proposed improvements, incorporating a separate right turn lane from the major road should still provide a significant improvement compared with the existing junction layout regarding safety.

Notwithstanding the desirable junction visibility criteria for an 85kph design speed cannot be fully achieved, the accident assessment of this junction suggests that in the existing situation it performs no worse than expected for similar junctions of this type. The proposed hi-visibility ghost island markings and signage should significantly improve the conspicuity of the junction over the existing situation and we do not anticipate an increase in approach speeds. The geometric layout and visibility requirements associated with an 85kph design speed would have a significant detrimental impact on the environmentally sensitive adjacent woodland. To that end, we suggest that on balance our studies indicate that the proposed 70 kph scheme should not increase the risk of accidents over the existing situation. However, additional advanced warning signs will be considered at detail design stage. In addition we anticipate the proposed Speed Management and Hazard Awareness Scheme, if implemented together with this scheme, will lead to a reduction in general traffic speed.

- (2.3)** Recommendation relating to a double white line system is noted and implementation will be considered at detail design stage in consultation with WSCC. The concerns regarding ghost islands and overtaking are understood. However, the introduction of kerbed traffic islands with hi-visibility and high profile signage and contrasting hi-visibility surfacing in the hatched areas, should increase the conspicuity of the junction, help restrict overtaking and help to describe the road layout ahead. On balance the provision of the ghost island will be a positive benefit.

- (2.4)** Refer to 2.3 above for benefits of traffic island inclusion. The HA report (ref YY86759) states in the executive summary; "...the inclusion of refuge and/or traffic islands within a ghost island does not appear to generally adversely affect the safety record of a major/minor junction". Notwithstanding this, the inclusion of traffic islands within the ghost islands has been carefully considered taking into account the specifics of the location and traffic, and also the junction proposals context within the proposed Speed Management and hazard Awareness Scheme for the whole of Titnore Lane. Traffic islands will have appropriate illumination and / or hi-visibility reflective materials will be specified to ensure they are highly conspicuous in all light conditions.

- (2.5)** The existing highway corridor is typically an unkerbed carriageway edge flanked by privately owned dense woodland with no defined highway verge. The existing signage is generally located approximately 0.6-1.0m away from the carriageway edge. It is accepted that, during the summer months especially, there is the risk of foliage restricting the visibility to the existing signage. We investigated providing a verge of greater width to accommodate the proposed signage further from the carriageway edge. However, the provision of a wider verge would require the removal of significant trees resulting in a detrimental impact on the immediate environment / ecology. As part of the wider proposals for Titnore Lane, WSCC has requested a licence to maintain the foliage adjacent to the carriageway. The landowners (Messrs Somerset) are amenable to granting

## West Durrington, A2700 Titnore Lane/Titnore Way Junction Improvements

### Designers Response to Stage 1 Safety Audit including the Addendum Report

a licence. Greater control of maintenance by WSCC of the tree foliage etc should improve the year round visibility to these signs and therefore maximise their effectiveness. With regard to the risk of collision with new signage; the current proposals are for 2 additional warning signs which should be able to be accommodated 0-6m-1.0m outside the edge of the carriageway, (similar to existing). These signs will be located adjacent to fairly straight lengths of carriageway, (not on the outside of a bend), and are therefore no more prominent than the existing surrounding trees. We therefore consider that they will not create a high risk of collision. The precise detail of their location will be investigated further at detail design stage and we will ensure that the maximum clearance within the site constraints is available to locate the signs safely.

**(2.6)** The accident data available to us, (dating back approx 13 years), does not indicate that the proximity of these telegraph poles has been a particular hazard in the past. The nature of the highway corridor throughout Titnore Lane is such that the majority of its length has minimal verge width and is lined by large trees at the road edge and, where possible, the existing alignment has been retained to minimise the environmental impact. The approach geometry on the eastern side of the junction is not being changed and therefore the risk of collision with the telegraph poles, due to road alignment, is not increased over the existing situation. The horizontal realignment required to increase lateral clearance to roadside features is likely to require loss of existing trees.

**(2.7)** Relocation of gate to provide adequate clearance of carriageway will be specified at detail design stage.

**(2.8)** Refer to the following PBA document for the detailed response and exception statement on this issue:

**'West Durrington - Titnore Lane proposed development access junction and highway improvement scheme to the existing Titnore Way junction – Report on the appraisal of the need for road lighting', January 2008.**

In considering all the issues the design team does not find that there is any reason to revise the decision not to provide road lighting in these schemes.

## 2. Designers' Response to Items Raised in the Stage 1 Safety Audit Addendum Report

This report refers to the West Durrington, A2700 Titnore Lane/Titnore Way Junction Improvements Stage 1 Safety Audit Addendum Report, Project Ref 5969/NTN/MP/PE, August 2007.

The Safety Audit Addendum report considered only the single issue of road lighting.

West Durrington, A2700 Titnore Lane/Titnore Way Junction Improvements  
Designers Response to Stage 1 Safety Audit including the Addendum Report

Refer to the following PBA document for the detailed response and exception statement on this issue:

**'West Durrington - Titnore Lane proposed development access junction and highway improvement scheme to the existing Titnore Way junction – Report on the appraisal of the need for road lighting', January 2008.**

In considering all the issues the design team does not find that there is any reason to revise the decision not to provide road lighting in these schemes.