



# Southam Road, Banbury

## Stage 1 Road Safety Audit

On behalf of **Barwood Development Securities Ltd**

Project Ref: 26004/2003 | Date: 19<sup>th</sup> January 2015




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## Document Control Sheet

**Project Name:** Southam Road, Banbury  
**Project Ref:** 26004/2003  
**Report Title:** Stage 1 Road Safety Audit  
**Doc Ref:** 001  
**Date:** 19<sup>th</sup> January 2015

	Name	Position	Signature	Date
<b>Prepared by:</b>	James Horne	Principal Engineer		19 <sup>th</sup> January 2015
<b>Reviewed by:</b>	Simon Owen	Principal Technician	pp 	19 <sup>th</sup> January 2015
<b>Approved by:</b>	Steve Hagreen	Associate		19 <sup>th</sup> January 2015
<b>For and on behalf of Peter Brett Associates LLP</b>				

Revision	Date	Description	Prepared	Reviewed	Approved

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# 1 Introduction

1.1 Peter Brett Associates LLP have been commissioned by Barwood Development Securities Ltd to undertake a Stage 1 Road Safety Audit on proposals to construct 2No. access roads and junctions associated with a supermarket development connecting onto Southam Road in Banbury, Oxfordshire.

1.2 Within the vicinity of the proposed junctions, Southam Road (A361) is a 10m wide urban single carriageway which is subject to a 40mph speed limit and illuminated by a system of street lighting. Non-Motorised User (NMU) facilities along Southam Road consist of:-

- A 1m wide on carriageway advisory cycle lane for southbound cyclists;
- A 2.3m (approx.) wide shared use off carriageway pedestrian / cycle track on the western side of the carriageway;
- A 1.9m wide footway on the eastern side;

Southam Road serves multiple commercial developments on the eastern side. Each junction and private access is provided with a right turning facility.

1.3 The scheme proposals comprise of the following:-

- A new 8m wide access road, serving the proposed supermarket's car park, connecting onto the western side of Southam Road via a priority T-junction with ghost island right turn facility. This proposed access will form a staggered junction with the existing Southam Road / Marley Way priority T-junction;
- A new 8m wide access, providing a service access for delivery vehicles associated with the supermarket development, connecting onto Southam Road via a priority T-junction;
- **NB** Audit does not cover the on site proposals;

1.4 The Audit Team Membership was as follows:-

Audit Team Leader:-

James Horne                                      Peter Brett Associates LLP, Northampton

Team member:-

Simon Owen                                      Peter Brett Associates LLP, Reading

The Audit Team are independent of the Design Team.

1.5 The Audit took place during December 2014. The Audit Team visited the site on 2<sup>nd</sup> December 2014 between 12:45 and 13:45 hrs. The weather during the site visit was cold with light rainfall prior to the site visit. The Audit comprises of an examination of the documents listed in Appendix A. The draft report was issued to Oxfordshire County Council (OCC) in December 2014 for comment. The Audit Team received instruction from OCC that a finalised report could be issued to the Design Team on 19<sup>th</sup> January 2015. OCC would provide comment once in receipt of the Designer's Response to the Stage 1 Road Safety Audit.

1.6 The Audit was carried out under the Terms and Conditions as described in HD 19/03. The Audit Team examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.

1.7 Problems identified in the report are indicated by location and are shown on the site reference plan in Appendix B.

1.8 The Audit Team have not been provided with the following:-

- Transport Assessment;
- **NB** the Audit Brief states that there are no Departures from Standard (from the Design Manual for Roads and Bridges) associated with the proposals. Please refer to Section 2 for potential departures from TD 42/95 –‘Geometric Design of Major / Minor Priority Junctions’;

The Audit has been prepared within the context of this missing information.

1.9 The Recorded Injury Collision (RIC) data supplied within Appendix A indicates that 1 RIC (serious) has been recorded within the vicinity of the proposed works from 1<sup>st</sup> January 2009 to 31<sup>st</sup> October 2014. A review of this RIC indicated that a single vehicle / loss of control type collision occurred late at night when it was raining and the road surface was wet. The collision appeared to have occurred due to excessive speed for the road conditions.

## 2 Items Raised from this Stage 1 Road Safety Audit

### 2.1 Problem

- Location - Proposed Southam Road / Car Park Access Junction
- Summary - Increase multiple collision types incidents due to junction types

The proposed stagger distance at the Southam Road / Marley Way / Car Park Access junction is approximately 19m (**NB** Mandatory Item 7.64 of TD 42/95 states 50m as the minimum stagger distance for a ghost island junction). This reduced stagger distance may make it difficult for motorist, turning right out of the minor roads, to judge appropriate gaps in traffic flows. The presence of stationary traffic within the turning lanes could further restrict opportunities to turn right out of the minor roads. This could lead to failed to Give Way and shunt type collisions. Furthermore, the presence of the advisory cycle lane on the southbound carriageway creates the potential for cyclist to be struck by motorist manoeuvring at this junction as a result of 'looked but did not see' type collisions could increase.

#### Recommendation

In the absence of a Transport Assessment, the Audit Team would recommend altering the proposed form of the Southam Road / Marley Way / Car Park Access junction from a staggered junction, to a roundabout or signalised junction.

### 2.2 Problem

- Location - Proposed Junctions connecting onto Southam Road
- Summary - Junction visibility restricted leading to failed to Give Way type collisions

The visibility splay provided to the south of the proposed Car Park junction extends across 3<sup>rd</sup> party land (Gas compound) and appears to be physically restricted by the palisade fencing surrounding the compound.

Furthermore, the junction visibility splay associated with the Service Access has not been indicated as per Fig 7.2 of TD42/95. Visibility appears to be restricted by surrounding overhanging branches.

Restricted visibility could result in failed to Give Way type collisions.

#### Recommendation

Full and unrestricted junction visibility splays should be provided within the extent of the adopted highway boundary for this 40mph road. These visibility splay should be safeguarded by undertaking any necessary vegetation reduction / removal of overhanging branches.



## 2.3 Problem

- Location - Proposed Southam Road / Car Park Access Junction
- Summary - Insufficient width of proposed turning lane leading to shunt and side swipe collisions

Drawing 26004/2001/001 indicates that the right turning facility associated with the above junction is to be formed within the extent of the existing central hatching along Southam Road. However, it appears that this proposed turning lane does not have sufficient width along its entire length to accommodate the width of all vehicles using this turning facility. This design may mislead some motorists into thinking that all right turning vehicles can manoeuvre into the turning lane and completely clear the through lane. This would not be the case for larger vehicles, potentially resulting in shunt type collisions. Furthermore, through traffic, obstructed by stationary / slowing turning vehicles, could be forced into making a late manoeuvre, swerve into the adjacent advisory cycle lane, potentially colliding with a cyclist.

### Recommendation

The width of the turning facility should be increased in order to comply with the requirements stated within Mandatory Item 7.35 of TD 42/05 for this new junction.

## 2.4 Problem

- Location - Existing Southbound Cycle Lane on Southam Road
- Summary - Increase in entry width resulting in multiple collision types at the junction

Further to Problem 2.3, the width of the existing advisory cycle lane is only 1m wide. The effective width of this narrow facility is further reduced by the gully grates adjacent to the kerbline. This reduced width may lead to collisions between cyclist and other road users. Item 7.4.2 of Local Transport Note 2/08 – 'Cycle Infrastructure Design' states "*Cycle lanes should be 2m wide on busy roads, or where traffic is travelling in excess of 40mph.*"

Also, the conspicuity of this facility across the bellmouth of the Southam Road / Marley Way junction is reduced by worn road markings and the lack of a coloured road surface.

### Recommendation

The Audit Team recommend that this facility is increased in width. Gully grates could be replaced with kerb outlets (associated gully pots relocated).

Road markings, including Diag 1057 (cycle symbol) should be reapplied. A coloured surface should be provided across the Southam Road / Marley Way junction to help increase the conspicuity of this facility and increase driver awareness of cyclist as per 7.3.2 of LTN 2/08.

2.5 Problem

- Location - Proposed Junctions connecting onto Southam Road
- Summary - Vulnerable pedestrians in danger of being struck by other road users

The layout of both junctions does not include tactile paving at the crossing points. Furthermore, these crossing points (including the existing crossing point across Marley Way) have been located on the direct desire line across the bellmouths of the minor arms. Due to the corner radii of these junctions, this requires visually and mobility impaired pedestrians to cross the widest section of the carriageway, increasing the risk of being hit by another road user.

Recommendation

Uncontrolled crossing points should be provided inset into the minor roads. If possible, the corner radii forming the junctions should be reduced in order to locate these crossing points closer to the direct NMU desire line.

Appropriate tactile paving should also be provided as part of the details of the pedestrian ramp and steps between Southam Road and the car park.

2.6 Problem

- Location - Proposed Junctions connecting onto Southam Road
- Summary - Lack of crossing facilities could result in NMUs being struck by other road users

The introduction of a supermarket on the western side of Southam Road creates a new trip generator for NMUs. However, the proposed scheme drawing does not provide any facilities to cater for the likely increase in pedestrians and cyclists wanting to cross Southam Road (it is noted that the Audit Brief makes reference to proposed crossing facilities). During the site visit, the Audit Team noted that it was difficult to crossing Southam Road due to a continuous flow of traffic. The lack of crossing facilities could result in an NMU being struck by other road users.

Recommendation

An assessment (such as LTN 1/95 – ‘The Assessment of Pedestrian Crossings’) should be undertaken to determine the need and appropriate form of crossing facilities required across Southam Road. Following this assessment, the proposed junctions should be amended to accommodate the outcome of this assessment if necessary. Any proposed crossing provisions should consider and accommodate the existing bus stops located to the north of the proposed Car Park junction, as well as the Public Right of Way on the south side of the proposed Service Access.

2.7 Problem

Location - Proposed Junctions

Summary - Incomplete swept path analysis

The Audit Team have the following concerns associated with the swept path analysis undertaken on the proposals:-

- Not all vehicular movements have been reviewed at either of the proposed junctions;
- The design vehicle used to analysis the Car Park access is not the more onerous vehicle type that could use this junction (refer to Problem 2.3);
- The analysis of the HGV turning left out of the Service Access has been undertaken with the starting point of the design vehicle on an unrealistic alignment;
- The speed at which these manoeuvres are being undertaken has not been stated;

Therefore, it is considered that the swept path analysis is incomplete.

Recommendation

The swept path analysis should be repeated in response to the above in order to confirm that the proposed layout is suitable with any subsequent alterations to the design undertaken as necessary to ensure vehicles do not strike kerbs, overhang potential off carriageway NMU provisions, etc.

2.8 Problem

Location - Car Park Access connecting onto Southam Road

Summary - Drafting error

The drawing submitted for Audit review indicates proposed levels for the new car park access road. However, these levels are approximately 2m above the existing road levels. It is assumed that this is a drafting error.

Recommendation

This assumed draft error should be corrected.

### 3 Audit Team Statement

I certify that this Audit has been undertaken in accordance with HD 19/03.

**Audit Team Leader:**

Name: James Horne

Signed



Position: Principal Engineer

Date: 19<sup>th</sup> January 2015

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# Appendix A

## Appendix A

### Information Utilised in this Stage 1 Road Safety Audit:-

- 26004/2001/TN01 – 'Stage 1 Road Safety Audit Brief';
- Drawing 26004/2001/001 – 'Proposed Access Junctions';
- Collision Data dated 1<sup>st</sup> January 2009 to 31<sup>st</sup> October 2014;
- Corstorphine + Wright Drawing 11619/0330 Rev A – 'Proposed Site Plan';

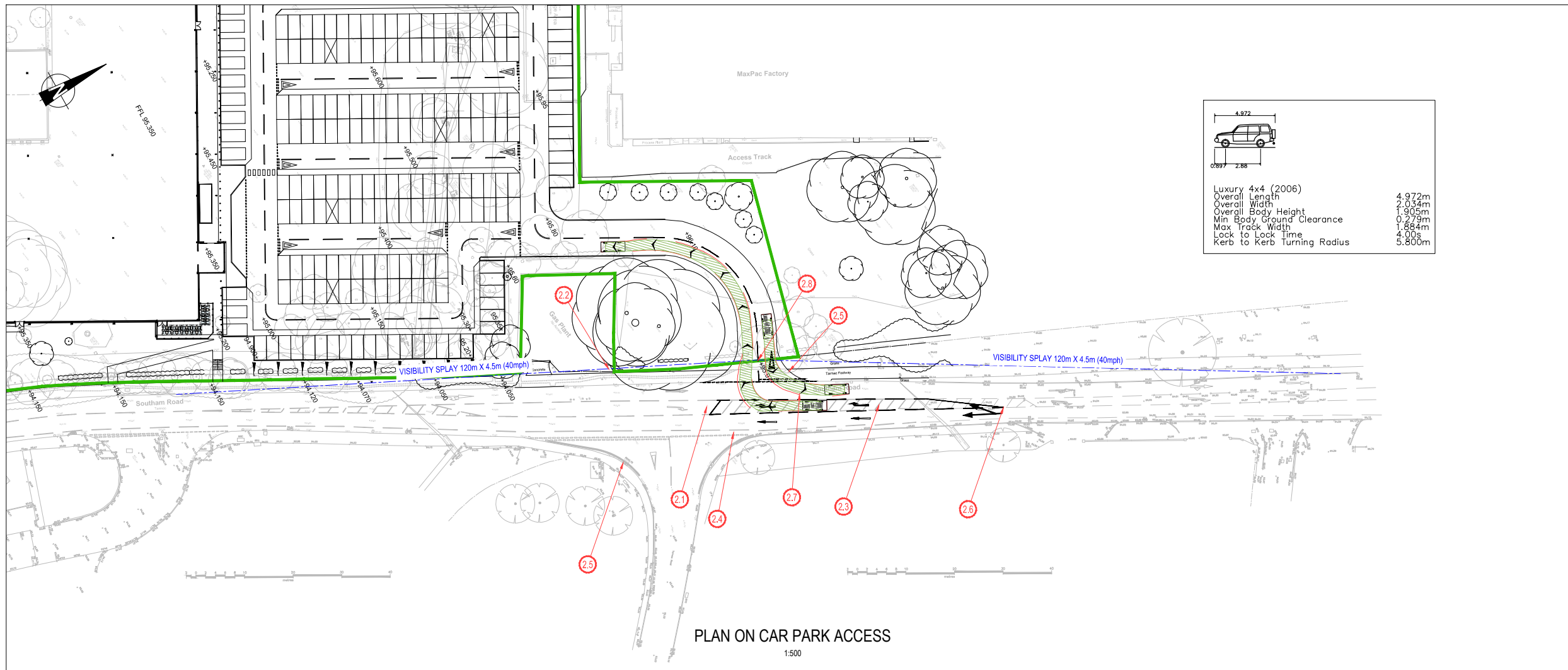
# Appendix B

Appendix B

Site Reference Plan

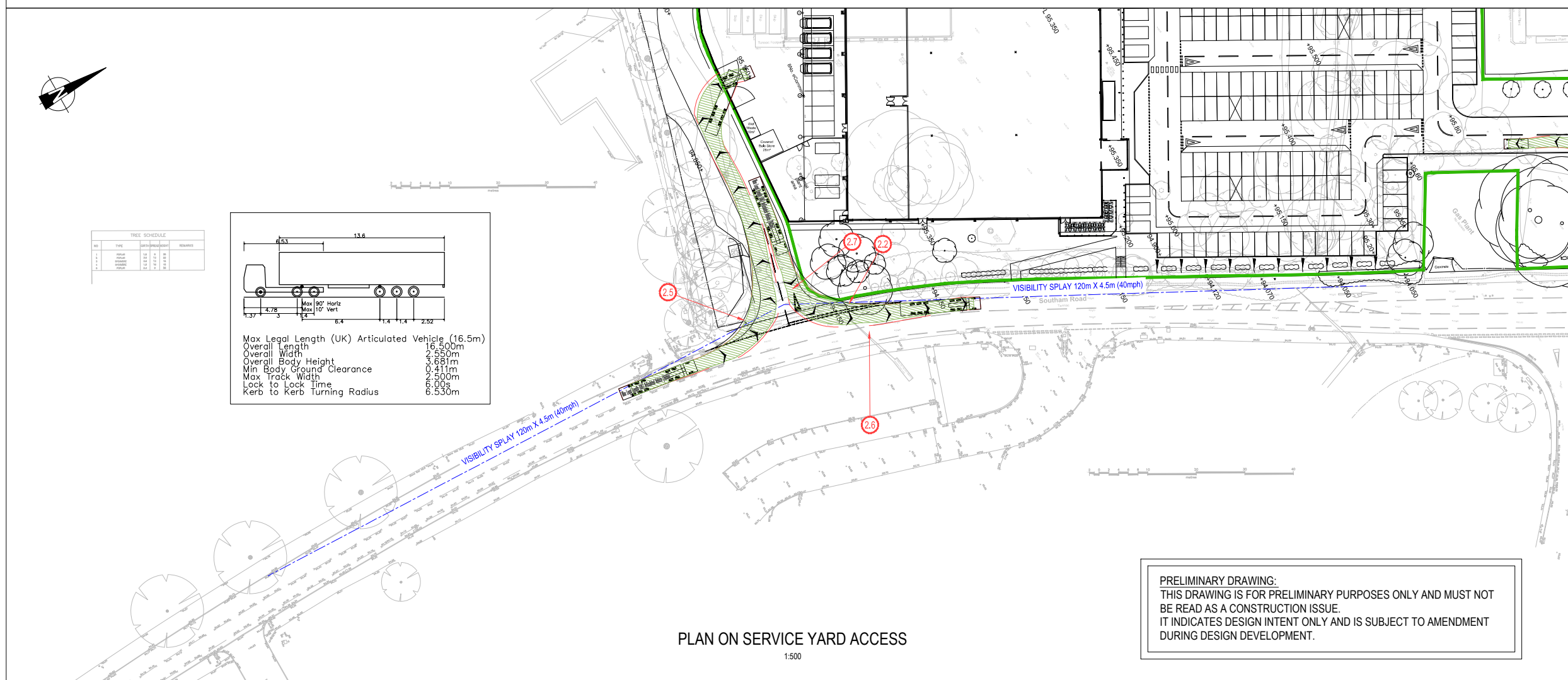
26004/S1RSA/001;





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Y DISTANCE 120m, X DISTANCE 4.5m.

--- VISIBILITY SPLAY  
 --- SITE BOUNDARY



0 25m 50m  
 1:500

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Drawing Issue Status  
**STAGE 1 ROAD SAFETY AUDIT**

**SOUTHAM ROAD, BANBURY  
 PROPOSED ACCESS JUNCTIONS**

**SITE REFERENCE PLAN**

Client  
**BARWOOD DEVELOPMENTS**

Date of 1st Issue: 19/01/2015  
 Drawn by: SB  
 A1 Scale: 1:500  
 Checked by: JSH

Drawing Number: **26004/S1RSA/001**  
 Revision: -

