

## TECHNICAL NOTE

**Project Title:** Workhouse Lane, Burbage

**Report Reference:** JNY10215-04

**Date:** 26<sup>th</sup> January 2021

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### App Ref: 20/01012/OUT – Response to LCC Highways Comments

#### Introduction

- 1.1 This Technical Note has been prepared to address comments provided by Leicestershire County Council (LCC) Highways dated 18th December 2020 in respect of the above planning application. Below are the responses provided by LCC in *Blue italics* and RPS response below in black Text.

#### Site Access

- 1.2 *Access to the site is proposed off Workhouse Lane, which is an unclassified road with a 30mph speed limit. RPS drawing number JNY10215-01 Rev B provides details of the access arrangements.*
- 1.3 *The vehicular access will be provided with a 5.5m carriageway width into the development site and a 2.0 metre wide footway on the northern side. A 6.0 metre junction radii is also proposed. Based on the submitted drawing, the proposed access measures six metres wide. Part 3, Table DG1 of the Leicestershire Highway Design Guide details that for a road with up to 50 dwellings, the carriageway width should be 4.8 metres wide. Clarification would therefore be required with regards to this discrepancy and the access arrangements would require amending, along with revised vehicle tracking being submitted.*
- 1.4 Table DG1 refers to the internal design layout, the carriageway width within the development will be 4.8m wide. The width at the access is wider to allow more room for larger vehicles to access the site but will be reduced to 4.8m as it continues into the site.
- 1.5 *The Applicant has detailed 2.4 x 43 metre visibility splays on the drawing in each direction from the access. A speed survey in the vicinity of the site access was also undertaken by the Applicant on Thursday 27 June 2019. This was in the form of a hand radar survey between 0700 -1900 hours and picked up a total of 46 vehicles. The survey indicated 85%ile speeds of 22.9mph northbound and 23 mph southbound. The LHA advise handheld radar surveys can be less reliable as drivers could change their speeds when they see somebody holding a radar gun, therefore tubes would be the preferred method of measuring traffic speeds.*
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- 1.6 The use of a hand held radar gun is an acceptable method of obtaining vehicle speeds as quoted in DMRB CA 185 – Vehicle Speed Measurements which identifies the following as acceptable methods of recording vehicle speeds;
- 1) handheld radar speedometers (manual)
  - 2) radar traffic classifiers (automated)
  - 3) pneumatic tubes (automated)
  - 4) inductive loops (automated)
- 1.7 Whilst it is appreciated that vehicles on a wide free flowing highway may slow down when seeing a handheld device in this location the vehicle movements were very low as this is a 'no through road' and is also a narrow country lane, therefore in this situation it is considered that the method used is acceptable.
- 1.8 *The Applicant has submitted an independent Stage 1 Road Safety Audit (RSA) of the site access, along with a Designer's response.*
- 1.9 *The RSA identified two problems. The first problem states It is unclear from the drawing how the proposed kerb will tie into the residential access to the south of the Development Site access. If the end of the kerb protrudes into the carriageway there may be a risk of vehicle strikes and possible single vehicle loss of control type collisions and advises that for the detailed design, a smooth kerb transition is provided at the residential access.*
- 1.10 *The second problem states carriageway narrowing to the south of the Development Site Access may increase the risk of vehicle to vehicle head on type collisions and suggests that appropriate warning signage is safely provided to highlight the road narrowing in the vicinity of the Development Site Access.*
- 1.11 *The Applicant has responded to both points advising that road markings would be amended to guide vehicles away from the kerb with regards to point 1 and that appropriate signage would be provided in respect of point 2 at detailed design. The LHA would require points 1 and 2 to be addressed at the application stage, with all details relating to kerb tie-ins, lining and signing provided on a revised plan.*
- 1.12 The points raised in the RSA have been addressed on drawing No. JNY10215/01 Rev B which was included as part of Appendix G in the Transport Assessment. A slight amendment to this plan has been made and a revised copy is included in **Appendix A** of this Technical Note. The amendments included a smoother tie-in to the existing kerb line to the south of the site and advance warning signs advising of road narrowing (sign diag.516).

### Highway Safety

- 1.13 *The Applicant has obtained Personal Injury Collision (PIC) data from Leicestershire County Council for between 01 January 2014 to 17 June 2019. Based on available records to the LHA, no additional PICs have occurred within the study area since June 2019.*
- 1.14 *The Applicant has identified a total of four PIC's occurred during this time, all were recorded as slight. Three of the PIC's occurred on Windsor Street, of which two occurred at the Freemans Lane junction. Both of these PICs involved vehicles crossing between Freemans Lane and*

- Windsor Street (a cul de sac) and vehicles travelling along Coventry Road. The third PIC involved a collision between a vehicle and a pedestrian at the junction of the church car park.*
- 1.15 *The fourth PIC occurred at the junction of Britannia Road with the Millennium Hall car park. This involved a vehicle and a pedestrian.*
- 1.16 *The LHA accepts that there appears to be no common patterns or causes with regards to the PIC's and that the proposals are unlikely to exacerbate an existing situation.*
- 1.17 Comment Noted.

## Trip Generation

- 1.18 *The Applicant has ascertained the level of traffic the proposed development could generate using TRICS. The proposed trip rates are shown in Table 1.*

	AM Peak 08:00-09:00			PM Peak 17:00-18:00		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
Trip Rate	0.170	0.443	0.613	0.416	0.232	0.648
Vehicle Movements	7	17	24	16	9	25

Source: TRICS

**Table 1: Proposed trip rates.**

- 1.19 *The LHA consider the proposed trip rates to be acceptable.*
- 1.20 Comment Noted.
- 1.21 *The Applicant has then considered the distribution of the developments traffic on to the surrounding highway network using 2011 Census data for the Hinckley and Bosworth Middle Super Output Area 14, this is also considered to be acceptable.*
- 1.22 Comment Noted.

## Junction Capacity Assessments

- 1.23 *The Applicant has undertaken a capacity assessment of the Britannia Road/ B578 Lutterworth Road junction. This has included committed development reference 15/01292/OUT (80 dwellings on land to the south west of Lutterworth Road).*
- 1.24 *The capacity assessment was based on 2019 baseline data collected on Wednesday 26 June 2019. This was then factored up to a future year of 2024 and included committed development reference 15/01292/OUT (80 dwellings on land to the south west of Lutterworth Road). The result of the assessment indicated that the junction would operate within capacity in 2024.*
- 1.25 *It is unclear to the LHA why a future year of 2024 was considered, when the future year should be 5 years following the year of submission of the application, i.e. 2025. The LHA is also aware of application reference 19/01405/OUT (135 dwellings, Land North Of Deepdale Farm Lutterworth Road Burbage Leicestershire,) which while the application has been refused by the LPA, should be considered as a sensitivity test in the event of an appeal. Nevertheless, given*

*the volume of traffic forecast to use the junction (16 two way trips in the AM peak and 17 two way trips in the PM peak) the LHA could not insist of a revised capacity assessment.*

- 1.26 Comment Noted. However just for clarification, the assessment years was previously undertaken on the assumption that the application would be submitted in 2019, however due to the delay in submitting the application the future assessment years were one year out.

### Off-Site Implications

- 1.27 *The Applicant has advised that they would undertake widening to Workhouse Lane in the vicinity of the proposed access. Based on RPS drawing number JNY10215-01 Rev B, while a kerbline is detailed to the western side of Workhouse Lane, there is no such detail to the east. The Applicant would be required to fully upgrade Workhouse Lane between Frezenberg Close and the site access to provide safe and appropriate access for all users. While it appears the Applicant is proposing a 5.5 metre wide carriageway at the site access, this would narrow down to 5.0 metres to tie in to the Frezenberg Close junction.*
- 1.28 *Between the Frezenberg Close junction and the existing priority build-out on Workhouse Lane, the carriageway width measures approximately 5.0 metres wide. Beyond the build-out up to the Britannia Road junction, the carriageway measures approximately 4.2 metres wide, before widening beyond the junction. Britannia Road also measures a similar width at its junction with Workhouse Lane. This creates a pinch point at the junction of Workhouse Lane and Britannia Road, where vehicles exiting Britannia Road could come in to conflict with vehicles turning right towards Britannia Road or continuing northbound along Workhouse Lane. The LHA consider the additional development traffic could exacerbate the situation which would be of detriment to highway safety and free flowing traffic. Drivers could also be tempted to pull up half on to the footway and continue to drive half on the footway/ carriageway in order to allow other vehicles to pass which would be to the detriment of pedestrian safety.*
- 1.29 *Based on guidance within Part 3, Table DG1 of the LHDG, carriageway widths of 5.50 metres should be provided for developments with 50 or more dwellings. With the addition of the Frezenberg Close development alone, this figure is exceeded for Workhouse Lane, south of Britannia Road. The Applicant has failed to give consideration to the impact the additional development traffic could have on the junction of Workhouse Lane and Britannia Road. In addition, a traffic survey has not been undertaken at this junction to demonstrate the existing baseline level of traffic which could already pass through the junction. Given the existing residential frontages, the LHA consider it is unlikely that the Applicant would be able to undertake any further improvements to Workhouse Lane or Britannia Road in the form of widening to alleviate these concerns.*
- 1.30 As part of the development off Frezenberg Close it is assumed that it was agreed with LCC that a section of Priority working could be provided south of Britannia Close with vehicles travelling northbound giving way to those travelling southbound. There are currently only road markings and no signage provided, although this may have been agreed on the basis of the low number of vehicles using this section of Workhouse Lane. The traffic associated with the proposed development will not affect this existing arrangement.
- 1.31 Whilst reference is made to Table DG1 in the LCC Design Guide, this is a guidance for internal residential roads and para 3.11 states in part 'Internal development roads – these are roads that serve only the development.' Therefore the use of Table DG1 is not applicable to the

existing road network. Para 3.8 of the design guide advises that for External roads and other off site highway works unless they fall outside the definition of a road (street) these should be designed in line with the appropriate parts of the Manual for Streets 1 and 2.

- 1.32 Based on topographical data, the width of Workhouse Lane at its junction with Britannia Road is between 5.3 and 5.8m. MfS 1 advises that two vehicles can pass with a road width of 4.8m and two large HGV's can pass with a road width of 5.5m. There is unlikely to be frequent HGV's needing to travel along this section of road and therefore the road width available is considered sufficient based on the level of movements and vehicle speeds. A plan showing the road dimensions is included in **Appendix B**.
- 1.33 With regard to the width of Britannia Road, it is considered that the width available which is measured as 4.8m at the junction widening to 6.3m and is considered sufficient to accommodate the level of movements along this route which based on the survey at the Britannia Road/ Lutterworth Road junction is less than 40 two-way movements in the peak hour.
- 1.34 The increase in vehicle movements associated with the proposed development will equate to 1 vehicle every 2.5mins (worse peak case) along this section of Workhouse Lane and it is predicted that half of these movements will turn in/ out of Britannia Road which equates to 1 vehicle every 5mins (worse case). This level of increase at the Workhouse Lane/ Britannia Road junction is not considered to have a material impact and vehicles will be able to manoeuvre safely at this junction.
- 1.35 To further demonstrate that vehicles can manoeuvre safely at the Britannia Road/ Workhouse Lane junction the AutoTrack computer programme has been used and the output is included in **Appendix B**.
- 1.36 Overall it is considered that the existing arrangement will operate safely with the proposed development.

### Internal Layout

- 1.37 *The internal layout of the development is not for consideration at this stage and therefore has not been considered in detail by the LHA.*
- 1.38 Comment Noted.

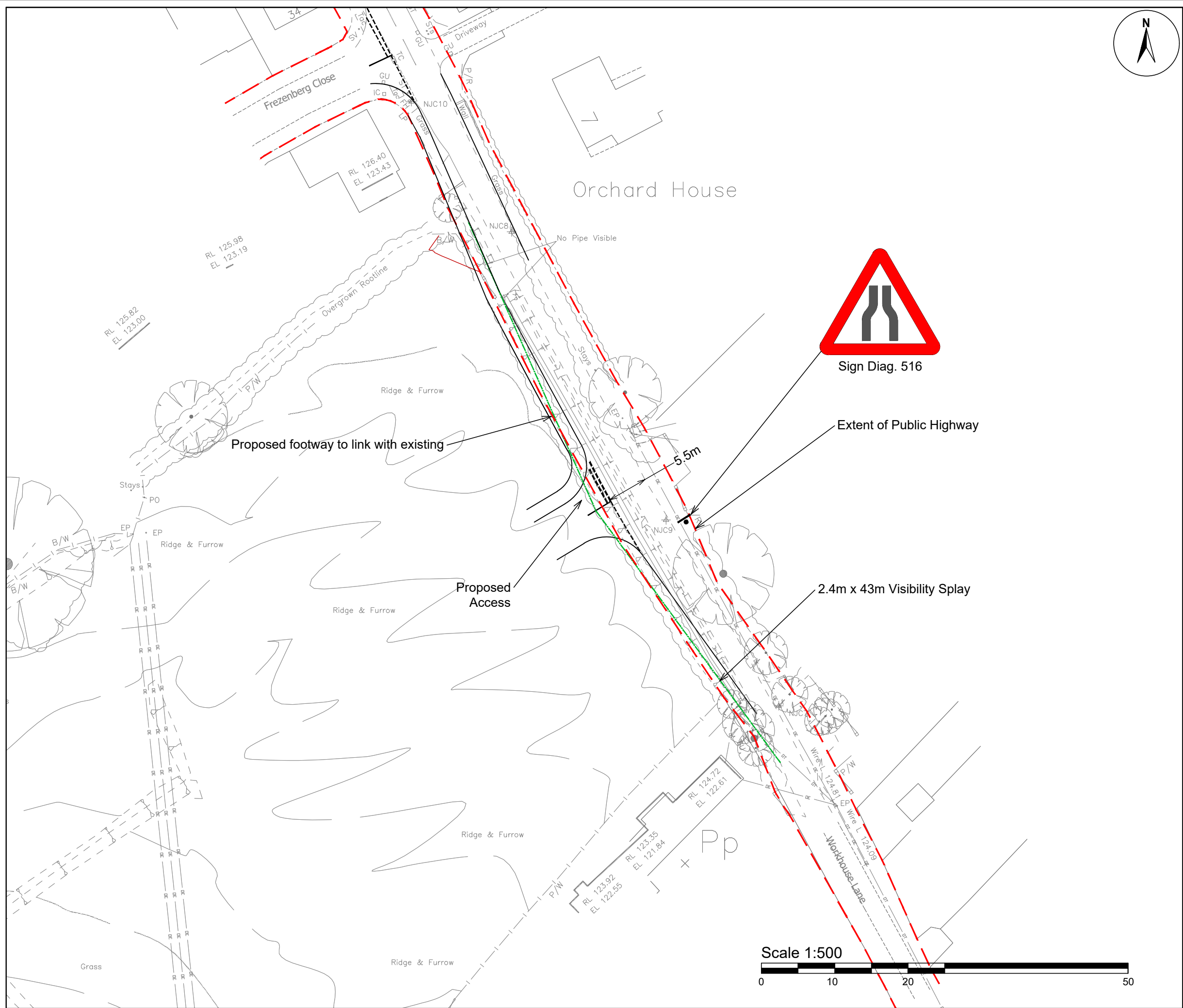
### Transport Sustainability

- 1.39 *Bus stops with an hourly service between Hinckley and Lutterworth are within an approximate 400 metre walk from the centre of the site and amenities such as a shop and public house are within an approximate 600 metre walk. Burbage Infant and Junior Schools are within a 1Km walk of the site.*
- 1.40 Comment Noted. The site is in a sustainable location.

## Appendices

## **Appendix A – Proposed Access Arrangement**





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C	Slight Kerb adjustment near to Frezenburg Close	MA	MA	28.01.21
B	Road Markings and Signage added in respect to RSA.	HN	MA	12/11/19
A	Layout amended, Highway Boundary added & additional notes	HN	MA	18/09/19
Rev	Description	By	CB	Date



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Client Central England Co-Operative

Project Workhouse Lane, Burbage

Title Proposed Access Arrangement

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	MSB
Project Number	Scale @ A3	Date Created
JNY10215	1:500	05.08.19
RPS Drawing/Figure Number		Rev
JNY10215-01		C

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## Appendix B – Road Dimensions & Swept Path analysis



NOTES

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Existing priority working arrangement

Orchard House

Proposed Access

Scale 1:500



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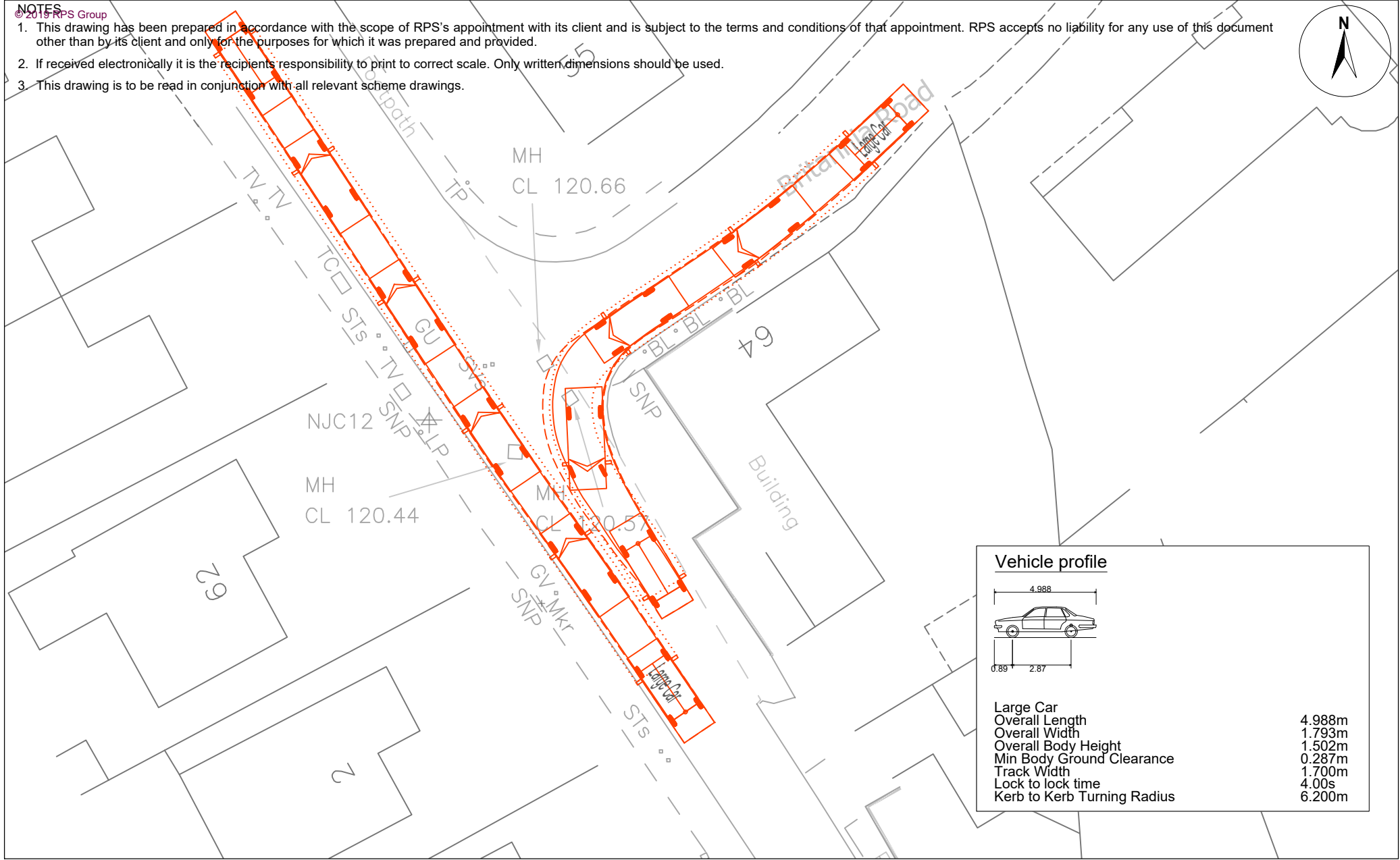
Title Workhosue Lane Dimensions and Proposed Access

Rev	Description	By	CB	Date
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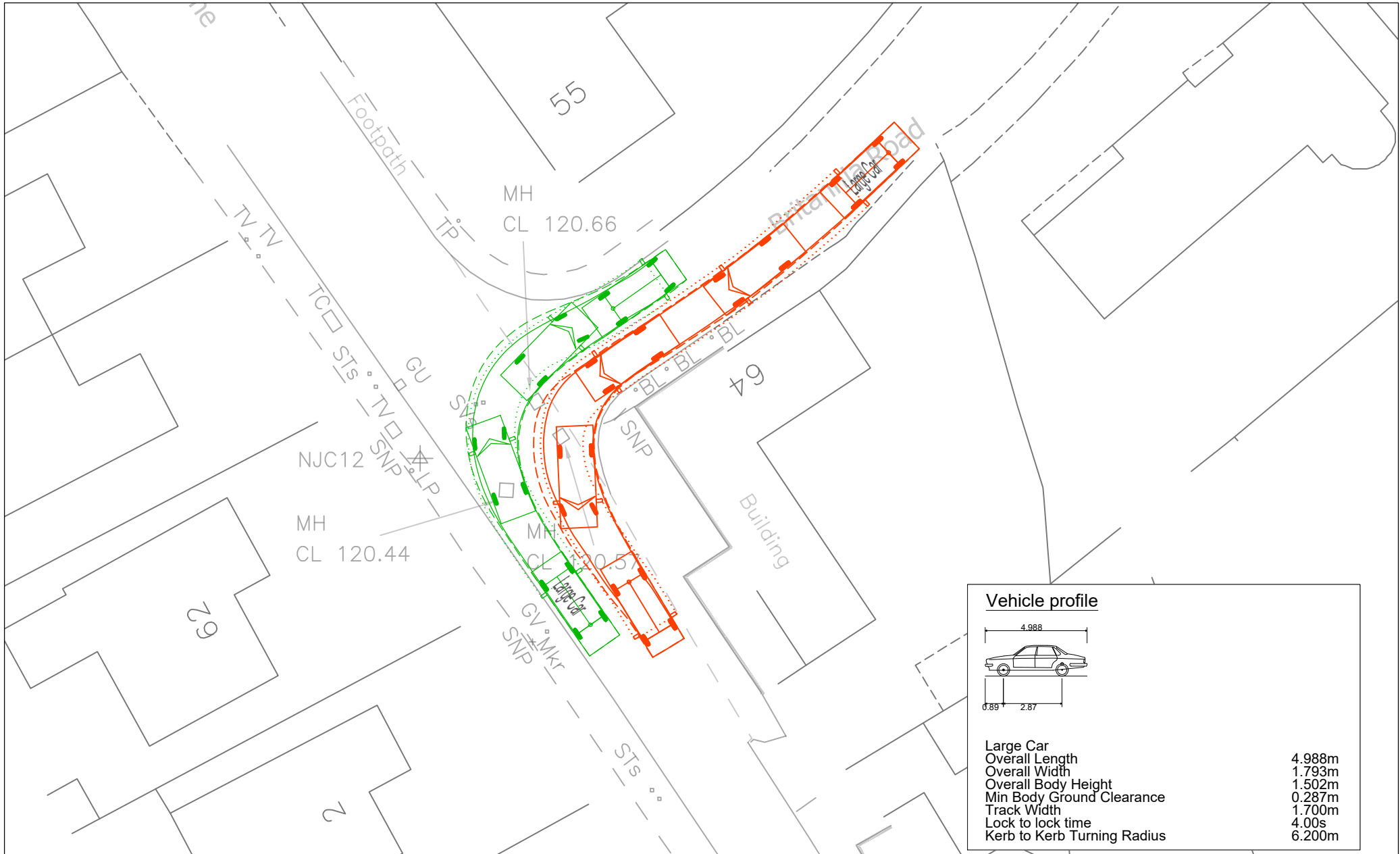
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RPS Drawing/Figure Number	Rev	
JNY10215-03	-	

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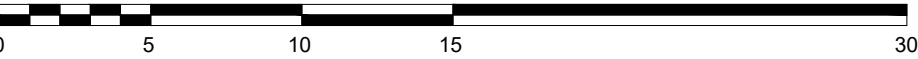


Vehicle profile	
Large Car	
Overall Length	4.988m
Overall Width	1.793m
Overall Body Height	1.502m
Min Body Ground Clearance	0.287m
Track Width	1.700m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.200m



Vehicle profile	
Large Car	
Overall Length	4.988m
Overall Width	1.793m
Overall Body Height	1.502m
Min Body Ground Clearance	0.287m
Track Width	1.700m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.200m

Scale 1:250



Rev	Description	By	CB	Date
	Status	Drawn By	PM/Checked by	
	PRELIMINARY	AJ	MRA	
	Project Number	Scale @ A3	Date Created	
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	RPS Drawing/Figure Number		Rev	
	JNY10215-05		-	
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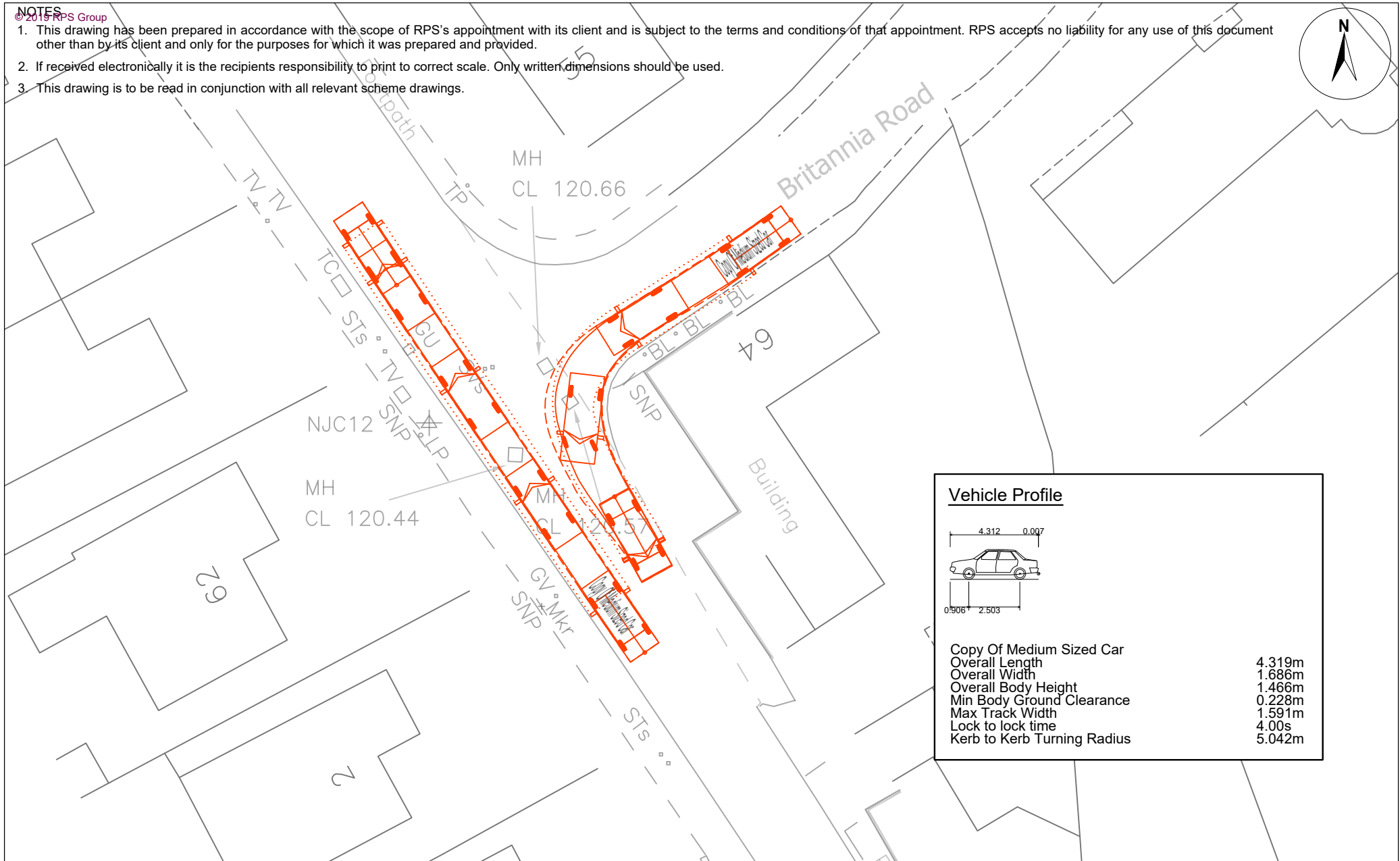
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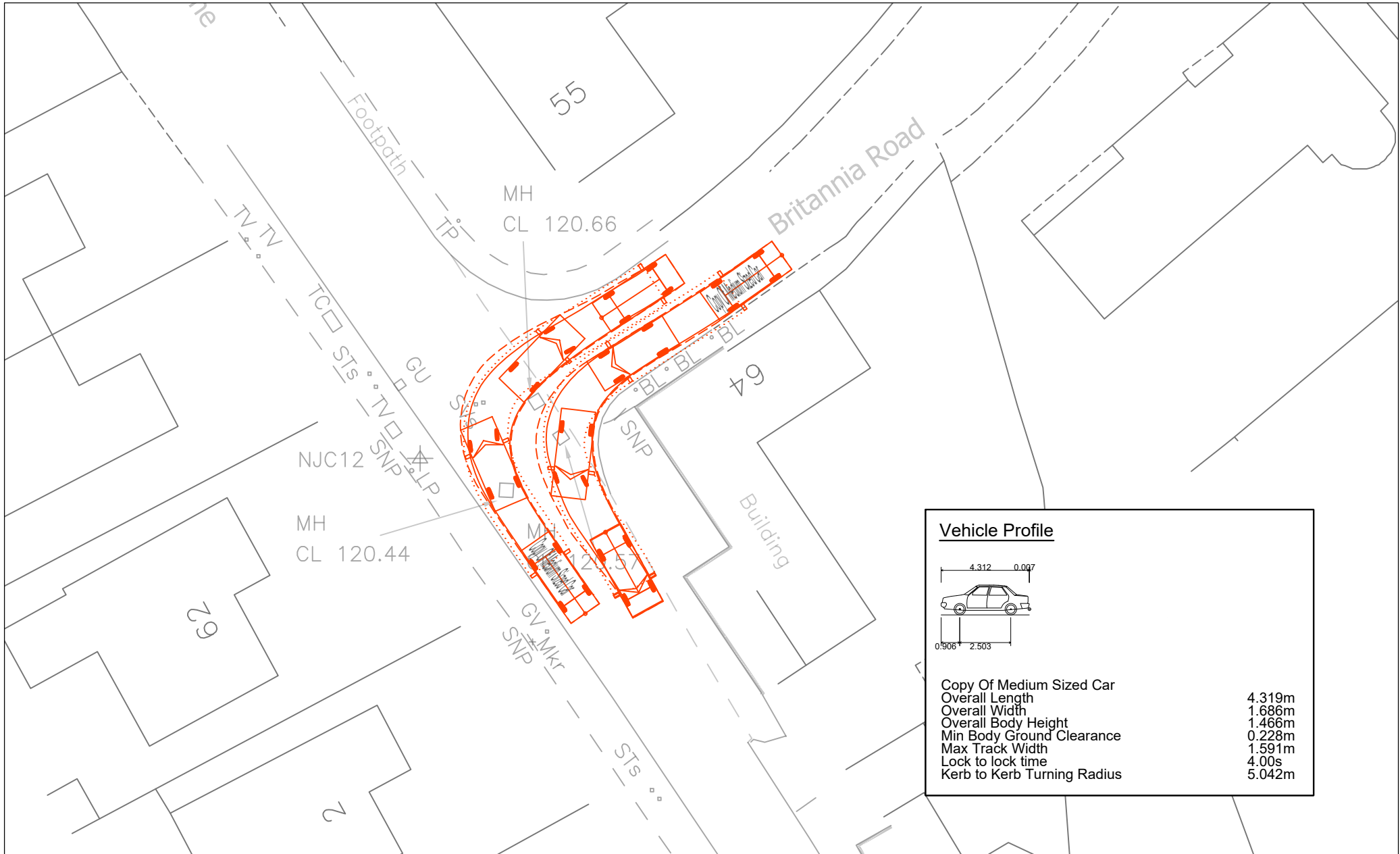
Project Workhouse Lane, Burbage

Title Workhosue Lane / Britannia Road  
Large Car Swept Path Analysis

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Vehicle Profile	
Copy Of Medium Sized Car	
Overall Length	4.319m
Overall Width	1.686m
Overall Body Height	1.466m
Min Body Ground Clearance	0.228m
Max Track Width	1.591m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.042m



Vehicle Profile	
Copy Of Medium Sized Car	
Overall Length	4.319m
Overall Width	1.686m
Overall Body Height	1.466m
Min Body Ground Clearance	0.228m
Max Track Width	1.591m
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Scale 1:250



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Title Workhosue Lane / Britannia Road  
Medium Car Swept Path Analysis

Rev	Description	By	CB	Date
	Status	Drawn By	PM/Checked by	
	PRELIMINARY	AJ	MRA	
	Project Number	Scale @ A3	Date Created	
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	RPS Drawing/Figure Number		Rev	
	JNY10215-04		-	
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