

# **NEW MARKET INN, LEWES**

TECHNICAL NOTE – RRRAP (FOR TOTEM)

15 February 2024



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## TECHNICAL NOTE - RRRAP (FOR TOTEM)

PROJECT DETAILS	PROJECT DETAILS				
Project Name:	New Market Inn, Lewes				
Client:	Southern Co-op Ltd				
Document Type:	Technical Note – RRRAP (for Totem)				
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APPROVAL									
Number:	Name:		Position:	Date:	Modifications:				
	Author:	Robert Spriggs	Senior Engineer	18/04/2023	Version 02A				
03A	Updated and	Paul Kelly	Associate Director	15/02/2024	updated 2024 to				
USA	Checked:				reflect revised				
	Approved:	Paul Kelly	Associate Director	15/02/2024	totem details				

### Evoke Transport

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#### 1. Introduction

### 1.1. Background

- 1.1.1. Evoke Transport Planning Consultants Ltd (Evoke) has been commissioned by the Southern Co-op to produce a Technical Note to support an application for the following:
  - "Erection of 1no internally illuminated totem sign."
- 1.1.2. Advertisement Consent (SDNP/23/01647/ADV) has previously been provided by the Local Planning Authority South Downs National Park (SDNP) for the same. As part of the application, it was necessary to prepare and submit to the Local Planning Authority (with National Highways as consultee) a Road Restraint Risk Assessment for the totem to identify if the proposed totem presented a hazard to the A27 and therefore required mitigation in the form of a vehicle restraint system (VRS). The findings of the assessment demonstrated that no VRS was required at the proposed point of setback of 11.2m for the totem.
- 1.1.3. The totem is now installed; however, it has been determined that the installed Totem (at 4m tall) is of insufficient height to be clearly seen by passing trade, with the view of the totem blocked by existing site features. It is therefore proposed that the existing 4m totem is replaced by a 7.5m totem.
- 1.1.4. A new application is therefore submitted for the consideration of SDNP and consultees (including National Highways) for the revised totem location, including an updated Road Restraint Risk Assessment for the revised totem details.

#### 1.2. Purpose

- 1.2.1. This Technical Note presents the Road Restrain Risk Assessment Process (RRRAP) results for the revised totem.
- 1.2.2. The assessment has been carried out using the RRRAP (version 3.3) online risk assessment tool of National Highways. The tool enables an objective risk assessment to be undertaken to determine the need for a vehicle restraint system (VRS) for different hazards.
- 1.2.3. The tool assesses speeds limits from 50mph and above, and a minimum traffic flow of 5,000 AADT both of which are appropriate to this location.



#### 2. Method

- 2.1.1. The RRRAP tool requires that as a minimum kerbs, earthworks and hardstrips / verges along a stretch of road are considered as potential hazards. Specific hazards, in this case the totem, are then added to the assessment.
- 2.1.2. The section of the A27 westbound from a point approximately 1.2km west of its junction with Ashcombe Hollow/ Brighton Road (taken as chainage 0m) to the exit slip from Newmarket Service Station (taken as chainage 4700m) has been divided up into three sections with each being described separately. The carriageways are separated and with a barrier and clear separation, the road is therefore described as dual 2. The three sections are:
  - A27 westbound approach to offslip
  - A27 adjacent to offslip (which includes the totem location)
  - A27 from offslip to onslip
- 2.1.3. The hazards taken into account in the assessment are:
  - Existing earthworks (for the full length of the road but divided into three sections)
  - Existing kerbs (as above)
  - Existing hardstrip and verges (as above)
  - Totem a specific hazard at chainage 195. In the assessment, the totem is considered as a traffic sign with a mounting height and sign face in accordance with the design drawing 003-LEWES-K2P554682-PP02 Rev C.
- 2.1.4. The chainages of the sections of road considered and the location of the totem are shown in Appendix A, drawing no. 010.
- 2.1.5. The A27 speed limit is taken as 70mph. The road is considered to be of a good alignment with a sweeping right hand bend. The traffic flows are as follows with the future year estimate based on an opening year of 2023 plus 5 years:

Table 1.727 Traine news (Westbound)											
Туре	Year	West of Offslip			Offslip			East of Offslip			
		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
AADT	2022	24023	1105	25128	889	91	980	24912	1196	26108	
	2028 DM	25311	1164	26475	937	96	1033	26248	1260	27508	
	2028 DS	25311	1164	26475	1077	117	1194	26261	1262	27523	

Table 1: A27 Traffic flows (westbound)

2.1.6. Full details of input to the RRRAP can be found at Appendix B.



### 3. Results

- 3.1.1. The results of the assessment are contained in Appendix B, RRRAP Full Report.
- 3.1.2. The results indicate the following in terms of the acceptability without a Vehicle Restraint System:

Table 2: Summary of RRRAP results

Chainage	Hazard	Is risk without VRS acceptable?	Is risk with VRS acceptable?		
	Existing earthworks, kerbs, hardstrips & verges (all sections)	Yes	N/A		
195	Totem	Yes	Yes		

3.1.3. The table shows that the totem is considered to be an acceptable risk without a VRS. This is based on the proposed position of the totem being 11.2m back from the psb, and includes for the amended sign face width of 1.8m and the updated totem height.



#### 4. Conclusion

This Technical Note has been prepared to report on the Roads Restraints Risk Assessment Process (RRRAP). The RRRAP supports the application for the replacement of the totem pole, and comprises the "Erection of 1no internally illuminated totem sign."

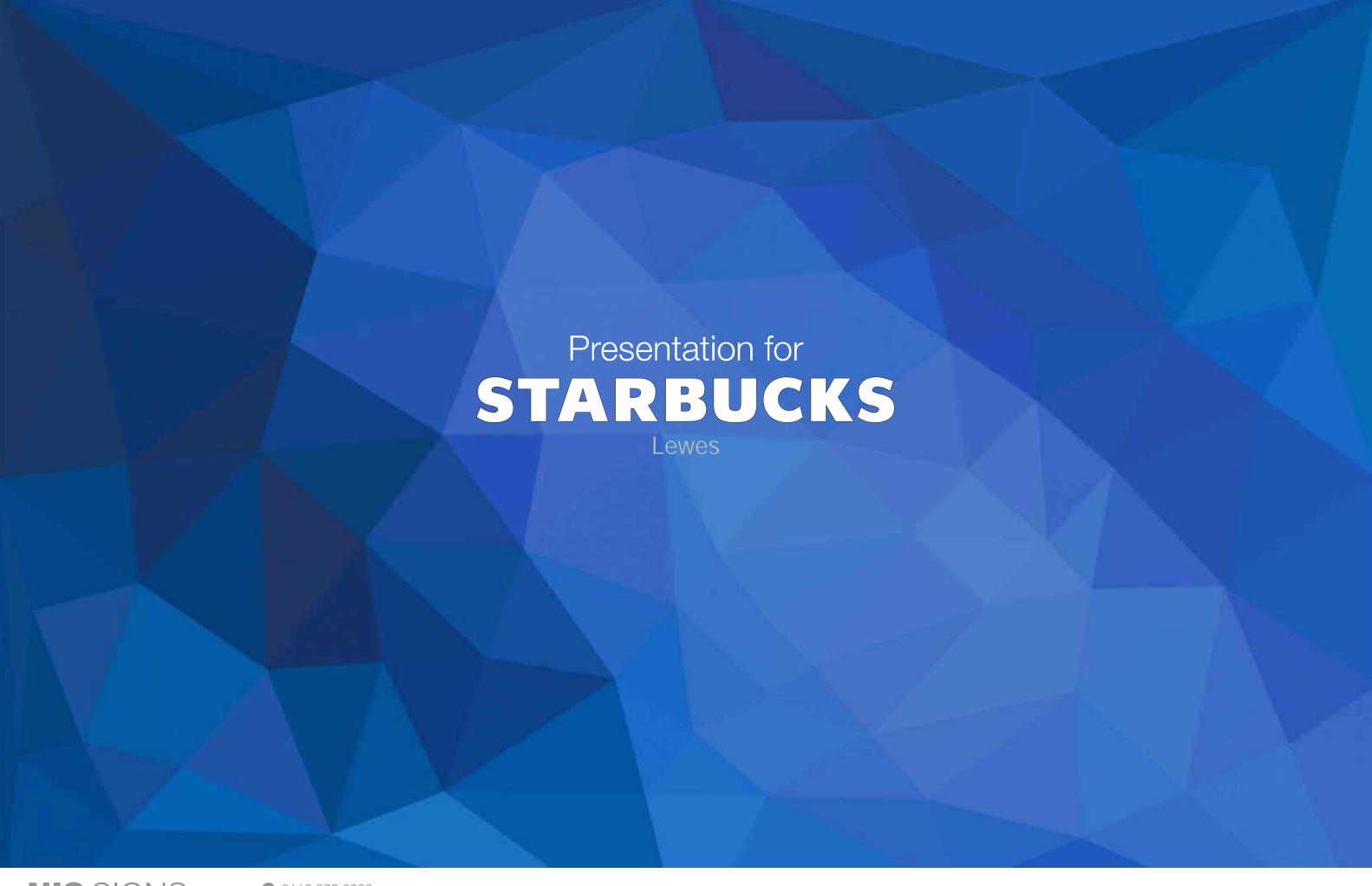
- 4.1.1. Advertisement Consent (SDNP/23/01647/ADV) was previously provided by South Downs National Park for a 4m totem, with the totem now installed. A RRRAP was completed to support the application.
- 4.1.2. The proposals comprise the replacement of the existing 4m tall totem with a 7.5m tall totem adjacent to the New Market Inn, Lewes. The changes include an increased sign face width of 1.8m relative to the existing 1.5m. The location of the totem is unchanged at 11.2m from the psb relative to its existing consented position. The RRRAP has therefore been updated to reflect the changes to the totem, with the output presented at Appendix B.
- 4.1.3. The results of the RRRAP indicate that there is no requirement for a VRS between the proposed totem and the A27 based on its proposed position, and is in accordance with the current totem requirements on site.



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Appendix A – Drawings





NIS SIGNS

NIS Signs (Leicester) Ltd

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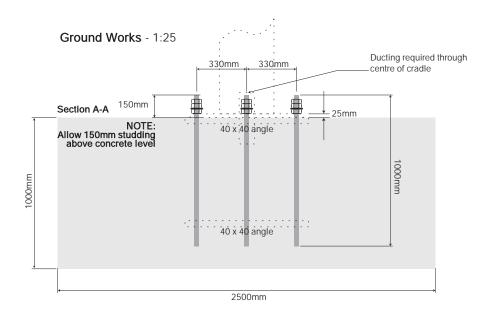
NIS SIGNS

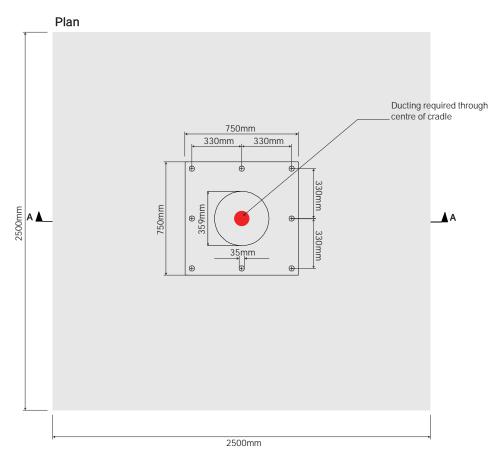
### 1 Off, 7500mm Internally Illuminated Totem Pole Sign - 1:50 @ A3

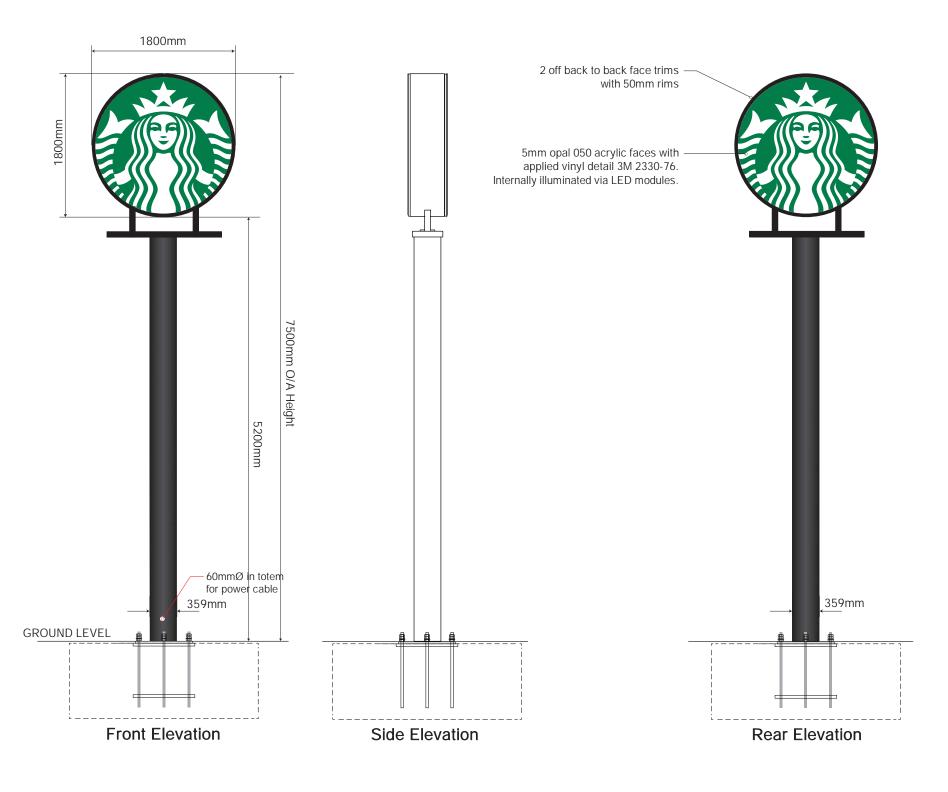
Double sided internally illuminated post mounted sign boxes.

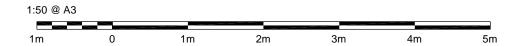
#### Siren Logo:

2x 1800mm DIA x 50mm Rim and return rings having Starbucks Green translucent Siren logo to face. Sign illuminated by LED's positioned on clear acrylic divider suspended from within. Carc painted Satin Black.











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📵 www.signs-nis.co.uk

 Client: Starbucks
 Drawing no: 23-107

 Address: Lewes
 Job location: Jobs\Starbucks\Lewes

 Drawn by: AH
 Rev: 4
 Date: 28/02/23

Revision notes: 0) Initial issue

1) Change to 4M totem - 28/02/23 AH

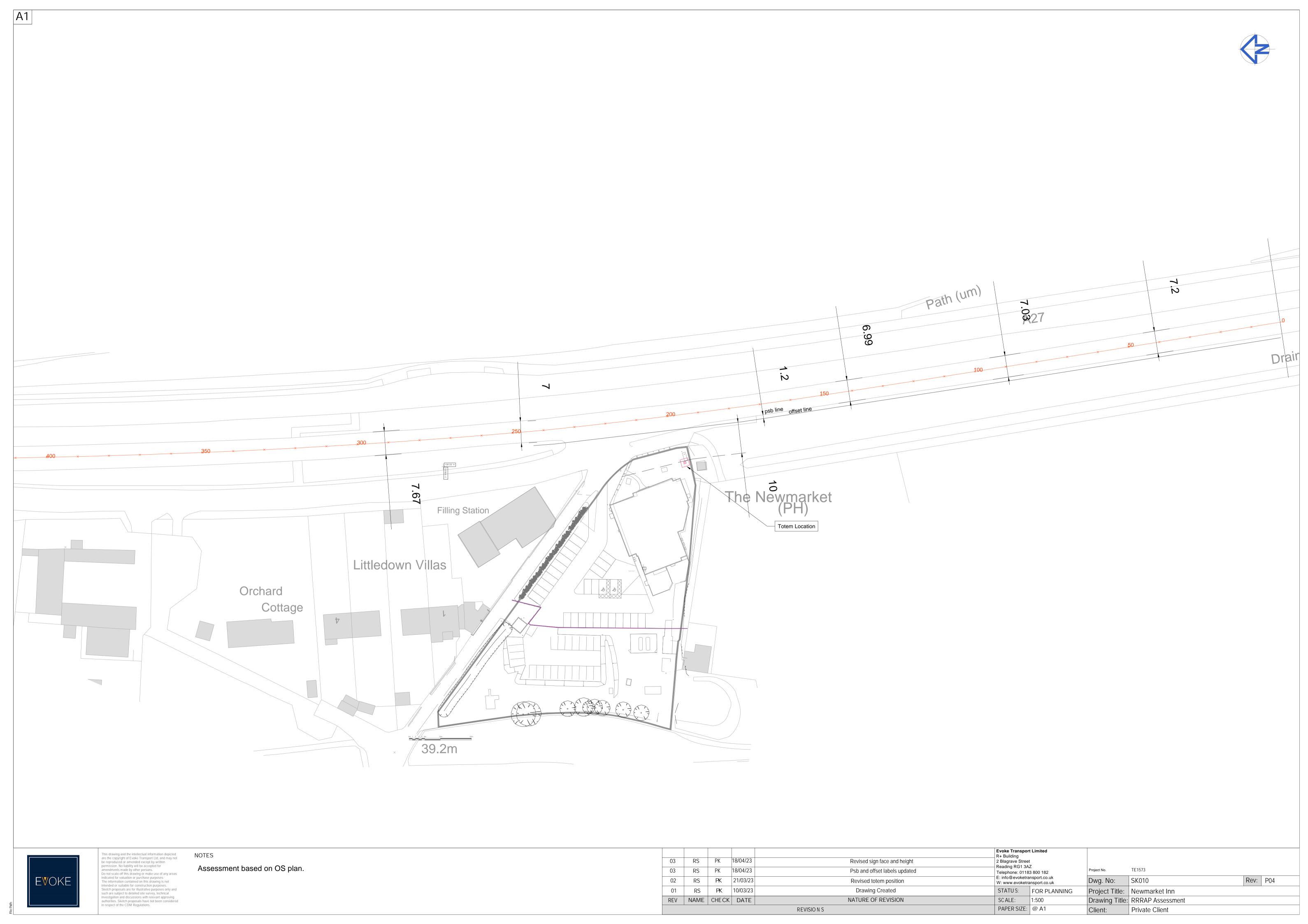
2) Change to 9M totem - 07/12/23 AH

3) Change to 7M totem - 02/01/24 SR

4) Change to 7500mm totem - 29/01/24 AH

All site dimensions to be verified prior to manufacture.

Do not scale from this drawing Copyright 2023. This document is the property of NIS Signs and must not be used, reproduced or disclosed to any persons without the written consent of NIS Signs.



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Appendix B – RRRAP Full Report



Report 13-Feb-2024 17:09:14

#### IMPORTANT NOTICE

The Road Restraint design is the responsibility of the Designer; the RRRAP tool is an integral part of the design process which assists the Designer in determining at each specific site the need for VRS and its performance requirements.

Users of this program take full responsibility for verifying the data entered into this program and only using

#### **Record Information**

Record Name: Newmarket Inn RRRAP
Project Name: 1573 Newmarket Inn

Record Description:

Totem Sign RRRAP

Record Status: Live

Record Last Updated: 13-Feb-2024 17:09:00

RRRAP Version Number: 3.3

RRRAP Issue Date: 15-Sep-2009

#### **Record Declarations**

Declaration	Name (Organisation)	Job Title	Date
Commencement of Design			Start Date:
Read TD19 & Guidance			Sign off date:
Site Visit			Visit date:
Design Checked			Sign off date:
Design Completed			Sign off date:

### **Common Details**

### **Basic Details**

Project Id or Pin 1573

Highway Authority East Sussex

Designer Reference RS

Contract Type other

Contract Sub Type N/A

Region East Sussex

Country England

### Reason for Design

New Section of Road	No
Widening existing carriageway	No
Upgrade/improvement to existing carriageway	No
Downgrade existing carriageway	No
Replacement of existing restraint	No
New restraint on existing road	No
Temporary Works	No
Road furniture/ equipment improvement	Yes
Assess existing parapet	No
Other	

### Section Details

Road Classification	Other Classified Road
Road Number	1
Road Name	A27
Road Sub Type	D2
Road Location	Rural
To Current Geometric Standards	Yes

From Junction Name	1.2km W of A27/Ashcombe Hollow	To Junction Name	Lewis Service Station		
From Junction No	1	To Junction No	2		
From Marker Post	1	To Marker Post	1		
From Section Label	1	To Section Label	1		
From Chainage of section(m)	0.0	To Chainage of section(m)	470.0		
Section/Direction being assessed	Westbound				
Nearside or Offside Verge being assessed?		N/S Verge			
Does road have full-width (i.e. to standard) n	Hard strip < 0.6m				
Are Environmental considerations likely to in	fluence provision?	No			

## Traffic Info

Permanent Speed Limit (mph)	70
Temporary Mandatory Speed Limit (HSR)	N/A
AADT (2-way unless motorway link or slip)	27523
Large Vehicles (%)	5.9
Medium Vehicles (%)	16.7
Model accident frequency (Nearside)	0.153
Model accident frequency (Offside)	

### Scheme Duration and Barrier Costs

Start Year	2028
Use Default VRS Lifetime (20 years)?	Yes
Use the default Discount (i.e. inflation) Rate of 7.0% over the VRS lifetime?	Yes
Use default safety barrier and parapet costs?	Yes

600 Earthworks									
ID	Earthworks Profile		Start C	Chainage	Offset from	PSb	Ove	erall Width	
0600.0001	Nominally at Grade	Nominally at Grade		.0 6.0				5.0	
Overall Height	Ave slope gradient	Local Alignment	Spe	ed		Sleep Other F		er Features	
0.0	0.0 Good alignment		Mean speed approximately equal to speed limit		В	W			
Typical surface of	Typical location of Highway			Length			Aggressiveness		
Long grass / scrub	At back of ver	ge		180.0		(		5	
Topography Factor	MF for runoff rate	e Is risk without V acceptable		Level of risk with optimum length VRS		Min Leng Advance		Min Length Beyond	
1.0	0.91	Yes							
Barrier Containment	er Containment VRS Class VRS WW		Setback VRS C		Cost Option R		Relaxation / Departure		
					0.0	I	None		
Comment									

Full Report	Report	13-Feb-2024 17:09:14
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ID	Earthworks Profile		Start Chainage	Offset from	PSb	Overall Width
0600.0002	Nominally at Grade		180.0	6.7		1.0
Overall Height	Ave slope gradient	Local Alignment	Speed		Sleep	Other Features
0.0	0.0	Good alignment	Mean speed appro equal to speed limi		С	Υ
Typical surface of	Typical location	on of Highway	Lengt	h		Aggressiveness
Hardened	Within width o	of slope	50.0			0.25
Topography Factor	MF for runoff rate	e Is risk without VI acceptable	RS Level of risk with length VRS	optimum	Min Lengt Advance	h Min Length Beyond
1.0	0.96	Yes				
Barrier Containment	VRS Class	VRS WW	Setback VRS	Cost Optio	n R	elaxation / Departure
				0.0	N	one
Comment						

ID	Earthworks Profile		Start Chainage	Offset from	PSb	Overall Width
0600.0003	Nominally at Grade		230.0	5.0		5.0
Overall Height	Ave slope gradient	Local Alignment	Speed		Sleep	Other Features
0.0	0.0	Good alignment	Mean speed appro equal to speed limi		С	W
Typical surface of	Typical locatio	n of Highway	Lengt	h		Aggressiveness
Short grass	Within width o	of slope	240.0			0.25
Topography Factor	MF for runoff rate	e Is risk without V acceptable	RS Level of risk with length VRS	optimum	Min Leng Advance	th Min Length Beyond
1.0	0.93	Yes				
Barrier Containment	VRS Class	VRS WW	Setback VRS	Cost Optio	n R	elaxation / Departure
				0.0	N	lone
Comment						

ID	Earthworks Profile		Start Chainage	Offset from	PSb	Overall Width
0600.0004	Nominally at Grade		470.0	6.0		5.0
Overall Height	Ave slope gradient	Local Alignment	Speed		Sleep	Other Features
0.0	0.0	Good alignment	Mean speed apprequal to speed lin		С	W
Typical surface of	Typical loca	ation of Highway	Lenç	gth		Aggressiveness
Short grass	Within widt	h of slope	End	Earthwork for	Section.	0.25

ID	Nature	Start Chainage
1100.0001	Kerb >100mm up to 250mm	0.0
Comment		

ID	Nature	Start Chainage
1100.0002	No kerb or channel	180.0
Comment		

ID	Nature	Start Chainage
1100.0003	Kerb 100mm high or less	230.0
Comment		

ID	Nature	Start Chainage
1100.0004	Kerb >100mm up to 250mm	470.0
Comment		

### 1200 Traffic Signs or Signals

ID	Nature			Start Chaina	age	Length	Width	Offset from PSb
1200.0001	Sign on pos	st(s)		195.0		2.5	2.5	11.2
Cluster of hazards	Height / Depth	Mounting height	Designed for loading?	collision	Width of sig	ın Aggres	siveness	Local Alignment
Individual hazard	>3m	>1.5m mounting ht	No		1.8	1.8		Good alignment
Speed		Slee	other F		pography ctor	MF for rur		s risk without VRS acceptable
Mean speed ap	oproximately equa	I to speed C	Х	1.0	)	0.94	,	Yes
Level of risk wit length VRS	h optimum Min Le Advar	•	_	r	VRS Class WW	Setback VRS	Cost Optior	Relaxation / Departure required?
							0.0	None

Is calculated risk level accepted for hazard that could give rise to a significant secondary

No

#### Comment

Updated sign face from 1.5m to 1.8m.

#### Hazard Issue(s) [1200.0001]

This hazard could give rise to a secondary incident should it be impacted. The calculated risk level does not cover the secondary risk. If you consider the risk level of a secondary incident to be significant, you may wish to consider moving the hazard, or use a higher level of containment, or both.

# Hardshoulder / hardstrip width & Verge width details

Chainage	Width of Verge	Width of adjacent		Carriageway width from Psb	Total nearside runoff distance	Total offside runoff distance
0.0	6.0	0.2 0.0		8.5	0.2	8.5
Comment						

Chainage	Width of Verge			Carriageway width from Psb	Total nearside runoff distance	Total offside runoff distance
180.0	1.0	4.5 0.0		8.5	4.5	8.5
Comment						

Chainage	Width of Verge	Width of adjacent  Hardstrip A		Carriageway width from Psb	Total nearside runoff distance	Total offside runoff distance
230.0	5.0	0.2	0.0	8.5	0.2	8.5
Comment						

Chainage	Width of Verge	Width of adjacent  Hardstrip A		Carriageway width from Psb	Total nearside runoff distance	Total offside runoff distance
470.0	3.0	0.2	0.0	8.5	0.2	8.5
Comment						

End