

From: Michael Eastham
Sent: 21 November 2017 15:10
To: Planning.Responses
Subject: BE/102/17/OUT Salt Box - Traffic Note

Please upload on Ocella.

Thanks,

Michael

From: A [REDACTED]
Sent: 21 November 2017 15:07
To: Michael Eastham; Ian Gledhill
Cc: Tony Chapman
Subject: Salt Box - Traffic Note

Dear Michael

Please see attached the Traffic Note which provides the information in relation to the difference in flows associated with the Salt Box development between Systra's Transport Review report and current application. The traffic note also includes a Note as an Appendix A which was submitted to Ian last week which contains the sensitivity analysis.

It also includes the information related to the mitigation measures, and the proposed revision to the site access to safeguards any proposals to improve the A29/A259 Felpham Relief Road Roundabout should WSCC/ADC wish to do so in future.

I look forward to your response. Please let me know if you have any queries. Thanks.

Kind regards

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TRAFFIC NOTE
SALT BOX DEVELOPMENT
BOGNOR REGIS
PLANNING APPLICATION: BE/102/17/OUT
(ADL REF: 3503 NOVEMBER 2017)

1.0 System Transport Review

- 1.1 ADL Traffic and Highways Engineering Ltd have reviewed the Transport Review 2017 report prepared by Systra in detail in context of the currently proposed development at Salt Box, Bognor Regis.
- 1.2 The development flow assumptions within Systra's Transport Review Report are significantly different to what we are currently proposing as part of the planning application BE/102/17/OUT. This is shown in Table A below.

Table A Systra Salt Box Flows and Approved Salt Box Flows (Two-Way)

	Systra's Flows	Salt Box Proposed Flows Approved by WSCC	Difference
AM Peak Hour	339	188	-151
PM Peak Hour	263	204	-59

- 1.3 Table A shows that our approved Salt Box flows which are specific to the proposed development are lower than Systra's assessed flows by 151 vehicle trips in the morning peak hour and 59 vehicle trips in the evening peak hour.
- 1.4 This will reduce the predicted impact on the capacity on the Felpham Relief Road Roundabout.

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2.0 Sensitivity Test

- 2.1 ADL volunteered to undertake a sensitivity test using ARCADY for the A259/A29 Felpham Relief Road Roundabout whereby our development specific flows (i.e. those approved by WSCC) were assigned to the Systra's 2031 Reference Flows. The 2031 Reference flows were provided to us by WSCC. A sensitivity note with the results was submitted to Mr I Gledhill of WSCC on 14th November 2017. This note is provided in Appendix A.
- 2.2 The results of the sensitivity test showed that the maximum increase in the queue length on the A29 (south) approach was 13 vehicles, as a result of the proposed development. This increase in queue is not considered to be significantly severe in traffic engineering terms as it would spread over two lanes on this approach to the roundabout. Therefore, our proposed development is in line with the NPPF guidance in that the impact is not severe. The RFC values on the roundabout were still below 100%.

3.0 Mitigation Measures as part of our scheme

- 3.1 The Salt Box scheme proposes mitigation measures which have been agreed with WSCC and these measures are set out in the S106 Agreement.
- 3.2 Nevertheless, the site access (see drawing H1194-130, as attached in Appendix B) has been revised in order to safeguard any future proposals to improve the A29/A259 Felpham Relief Road Roundabout. The highway revisions to the roundabout to provide a safe and satisfactory access to the Salt Box site would be included in the S278 Agreement.
- 3.3 The proposed S278 works are shown on drawing number H1194-101 (Rev C) which is included as Appendix C.

4.0 Mitigation Measures Proposed by Systra

- 4.1 We have reviewed the range of mitigation measures proposed by Systra within the Transport Review; one of which is removal of Salt Box site access from the Felpham Relief Road Roundabout and relocating it further north on the A29.

4.2 Our review of the Systra's recommendation to relocate the Salt Box site access to the north of the A29 was as follows:

- a) Systra has not has not provided details of the relocated Salt Box site access. A clear understanding of the type of the site access would be very important to give any credence to Systra's modelling results in Table 26 of their Transport Review.
- b) A new junction on the A29 would inevitably have a severe impact on the Salt Box development proposal.
- c) The traffic model would need to be updated to determine whether or not a new junction on the A29 would result in further delays on the Local Highway network.
- d) The relocation of the Salt Box site access to the north could erode the vital landscaping buffer between our scheme and the Shripney Village which is a key requirement of the scheme.

5.0 Concluding Comments

5.1 The mitigation measures proposed by Systra in the 2017 Transport Review are not relevant to our schemes due to a significant difference in the assumptions regarding the Salt Box development flows. The Salt Box development is less traffic intensive than the assumptions made in the Systra report.

5.2 The mitigation proposals for the A29/A259 Felpham Relief Road Roundabout are not relevant to our scheme, neither are they commensurate to the scale of the proposed development as Salt Box.

5.3 Notwithstanding this, the site access arrangements from the roundabout have been amended to ensure that it safeguards any proposals to improve the A29/A259 Felpham Relief Road Roundabout should WSCC/ADC wish to do so in future.

5.4 No details have been provided in the Systra report for a relocated site access to the north of Felpham Relief Road roundabout and any access from the A29 is likely to have a severe impact on the Salt Box development proposal.

- 5.5 A sensitivity test has been undertaken using the Systra 2031 reference flows on the A29/A259 Felpham Relief Road roundabout using realistic assumption. The results demonstrate that the increase in queues as a result of the proposed development is not significantly severe and hence our scheme is in line with the NPPF.
- 5.6 The current planning application for the Salt Box development has highways support from WSCC from a traffic generation and traffic impact point of view. Mitigation measures have been agreed with WSCC which can be brought to fruition by way of transport contributions to be included in a S106 Agreement.
- 5.7 The agreed transport contributions are commensurate to the scale and type of the proposed development on the Salt Box site.
- 5.8 Insofar as the predicted flows are lower than those utilised in the Systra report, this proposal does not prejudice the findings of that report with regard to its use for infrastructure planning for a district as a whole.

APPENDIX A - SALT BOX NOTE SUBMITTED TO WSCC

APPENDIX B – DRAWING H1194-130

APPENDIX C – DRAWING H1194-101 (Rev C)

Salt Box – Note

ADL Ref: 3503/14A – November 2017

Executive Summary

Having looked at the flows provided by Systra and tested the A259 Felpham Relief Road roundabout using the 2031 Systra Flows along with the proposed development flows, it is concluded that the increase in queues at the roundabout resulting from the development are not considered to be significantly severe. This is shown in the assessment below.

Capacity Assessment of A259 Felpham Relief Road Roundabout

1. Increase in traffic on A259 Felpham Relief Road roundabout as a result of Salt Box development is shown in Table A.

Table A Increase in Vehicular Traffic in 2031 (Two-Way)

			2031 Reference	Plus Traffic	Dev % Increase
AM	A29/A259 Felpham Relief Rd Rdbt	A29(N)	2320	+37	+1.59%
		A259	1284	+25	+1.95%
		A29(S)	3155	+94	+2.98%
PM	A29/A259 Felpham Relief Rd Rdbt	A29(N)	2107	+40	+1.90%
		A259	2055	+27	+1.31%
		A29(S)	4079	+105	+2.57%

2. Table A shows that the increase in traffic on the A359 Felpham Relief Road roundabout is less than 5% of the daily variation in traffic and hence in normal circumstance it would not be deemed necessary to assess the roundabout for capacity.
3. The ARCADY results for the Felpham Relief Road roundabout for the 2031 Reference Flows is shown in Table B.

Table B ARCADY Results for A259 Felpham Relief Road roundabout for 2031 Reference

	2031 Reference (AM)		2031 Reference (PM)	
	RFC	Queue	RFC	Queue
1 – A29 (N)	0.62	1.6	0.78	3.5
2 – A259 Felpham Relief Road	0.66	1.9	0.88	6.7
3 – Oldlands Farm Access	0.14	0.2	0.75	2.7
4 – A29 (S)	1.02	42.6	1.05	66.5
5 – Site Access	0.00	0.0	0.00	0.0

4. Table B shows that the roundabout is congested in the morning and evening peak hours at A29(South) arm. In a congested situation, the traffic flowing through a junction would attain a flat profile due to peak spreading and therefore the queuing will be more uniformly dispersed.
5. However, the traffic profile resulting from the modelling of the A259 Felpham Relief Road roundabout for 2031 Reference flows exhibit more or less a 'peak within peak' condition. This is a more stringent capacity test than using a flat profile.
6. Therefore, the capacity assessment represents a worst-case scenario whereby the modelled queues as a result of the development should be considered to be an over-estimate.
7. For the purposes of sensitivity test, the 2031 Reference flow scenario and 2031 Reference + Salt Box flows have been analysed using a flat profile. This is shown in Tables C and D for AM and PM peak hour periods respectively.

Table C 2031 Reference Flows and 2031 Reference + Salt Box – ARCADY AM PEAK HOUR

	2031 Reference		2031 Reference + Salt Box		Diff in Queues
	RFC	Queue	RFC	Queue	
1 – A29 (N)	0.55	1.2	0.57	1.3	+0.1
2 – A259 Felpham Relief Road	0.56	1.3	0.60	1.5	+0.2
3 – Oldlands Farm Access	0.11	0.1	0.12	0.1	0
4 – A29 (S)	0.92	10.8	0.97	24.0	+13.2
5 – Site Access	0.00	0.0	0.21	0.3	+0.3

Table D 2031 Reference Flows and 2031 Reference + Salt Box – ARCADY PM PEAK HOUR

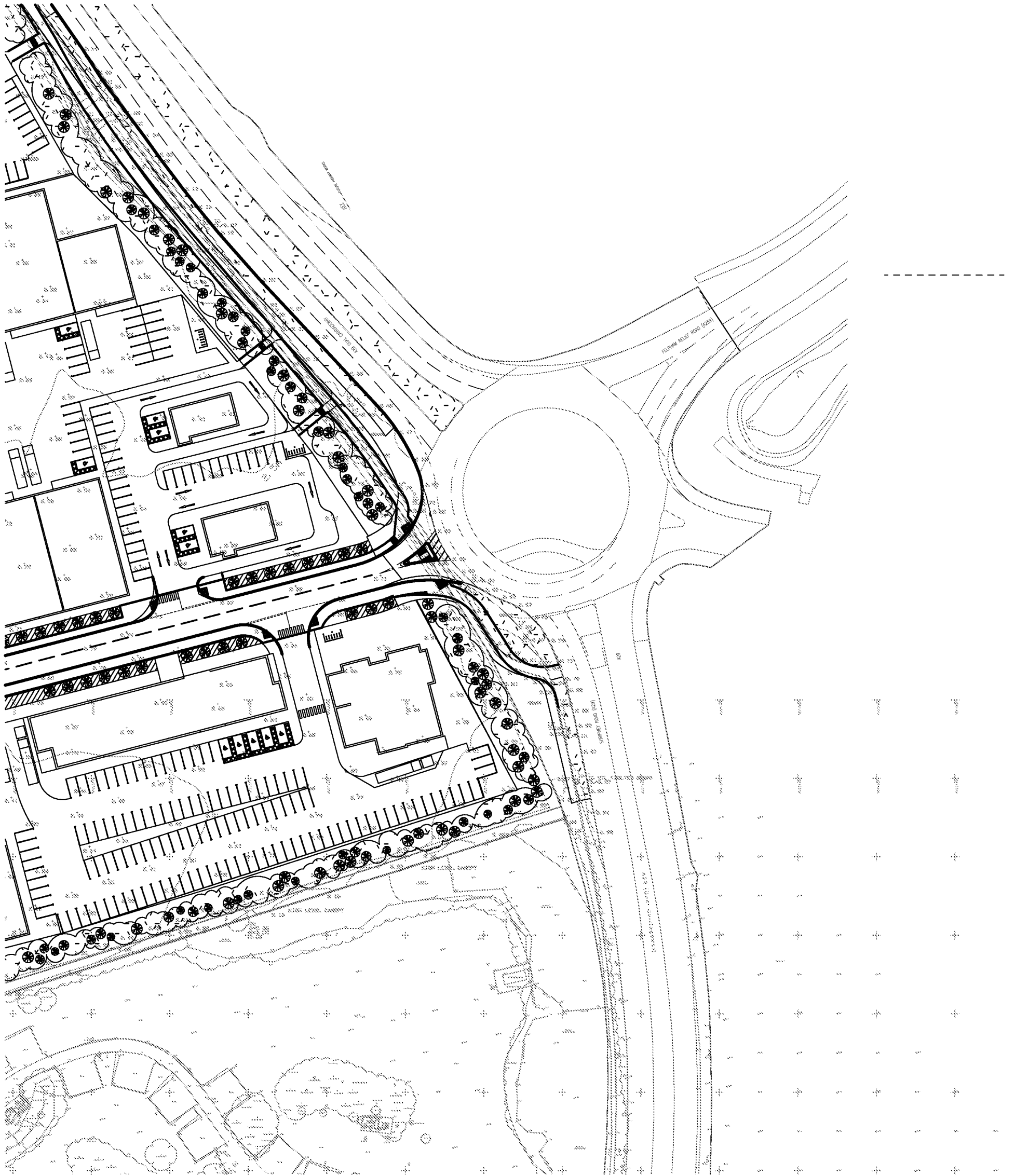
	2031 Reference (AM)		2031 Reference + Salt Box		Diff in Queues
	RFC	Queue	RFC	Queue	
1 – A29 (N)	0.69	2.2	0.73	2.7	+0.5
2 – A259 Felpham Relief Road	0.75	3.0	0.80	3.9	+0.9
3 – Oldlands Farm Access	0.54	1.2	0.60	1.5	+0.3
4 – A29 (S)	0.95	16.8	0.98	29.7	+12.9
5 – Site Access	0.00	0.0	0.44	0.8	+0.8

8. The results show that the maximum increase in queue of 13 vehicles occur on A29 (South) as a result of the proposed development. The RFC values of the A25 (S) is still below 100%.

9. This increase in queue is not considered to be significantly severe in traffic engineering terms and therefore the proposed development is in line with the NPPF guidance.

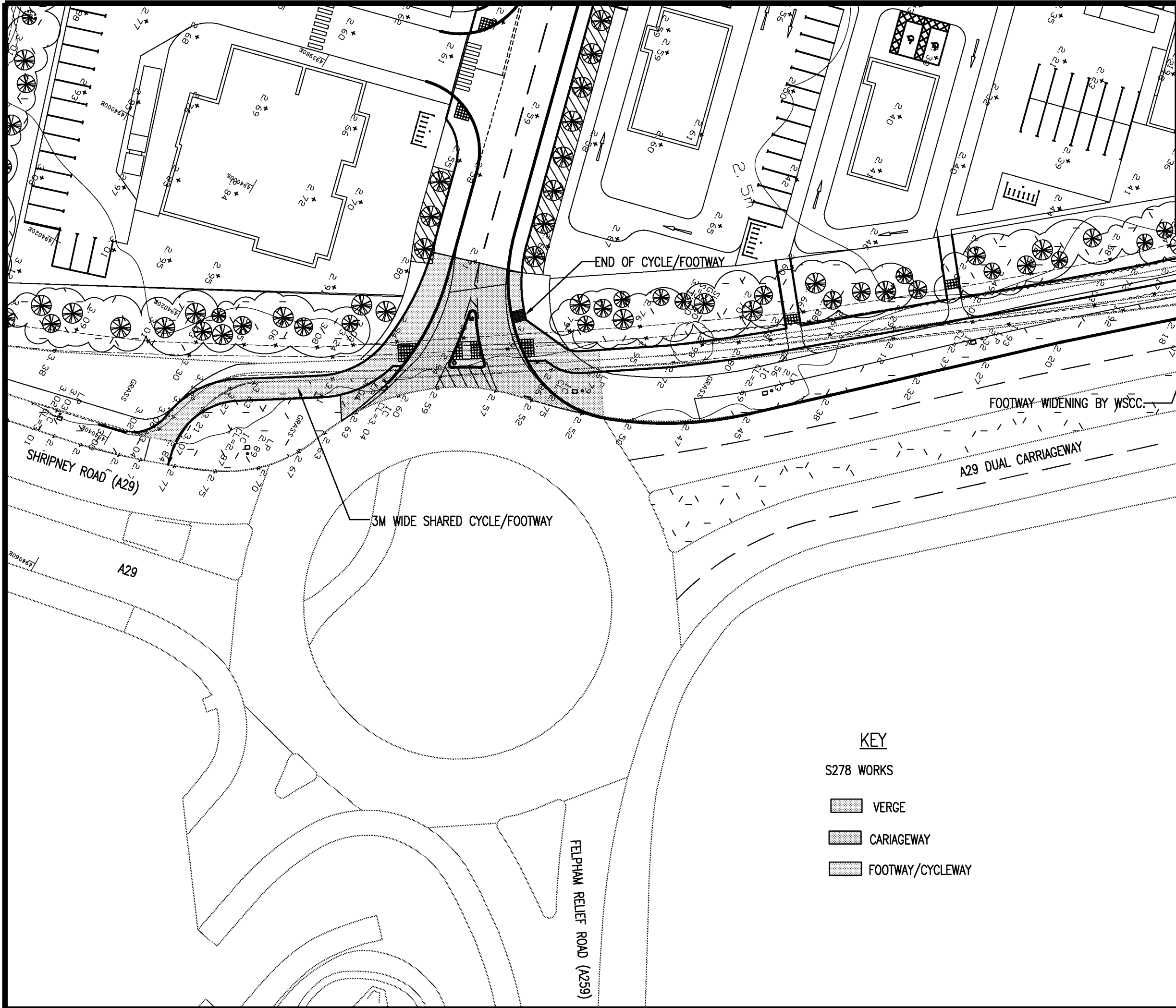
Mitigation works

1. The site access has been further revised (see Drawing H1194-130) to safeguard any proposal to improve the A259 Felpham Relief Road roundabout put forward by Systra which are incumbent to the previously agreed Section 278 works.



H1194-130
1:1000@A3

APPENDIX B



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NOTES

1. Do not scale from this drawing.
2. All details to be confirmed on site.
3. Background plan is based upon composite survey provided by Shaw Colegate Land and Building Surveyors, and architects site plan supplied by Mountford Pigott drawing no:- 1744_F26_D.
4. Mechanical handling equipment to be used with materials in excess of 20 kg.

FOR APPROVAL

C	Drawing reduced to A3. S278 Works amended.	10.10.17	JW	AMC
B	Cycle/footway shading removed.	10.10.17	JW	AMC
A	Island amended. Key added.	29.9.17	JW	AMC
Rev	Description	Date	By	Chk

AMENDMENTS

ADL.
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ADL Job No.

H1194

Project

Saltbox
Bognor Regis

Title

Off-site Highway Works
General Arrangement

Date

20.09.17

Drawn

JW

Checked

AMC

Date

20.09.17

Approved

Date

Scale

1:500
@ A3

Dwg No.

H1194-101

Rev.

C

KEY

S278 WORKS

VERGE

CARRIAGEWAY

FOOTWAY/CYCLEWAY

FELPHAM RELIEF ROAD (A259)

A29

3M WIDE SHARED CYCLE/FOOTWAY

FOOTWAY WIDENING BY WSCC.

A29 DUAL CARRIAGEWAY

END OF CYCLE/FOOTWAY

SHRIPNEY ROAD (A29)