



# ROAD SAFETY AUDIT RESPONSE REPORT FOR SANDPITS ROAD, LUDLOW – STAGE 3


---

## Project Details

TABLE F.1. PROJECT DETAILS

<b>Report title:</b>	<i>Road Safety Audit Response for Sandpits Road, Ludlow – Stage 3</i>
<b>Date:</b>	<i>28/10/2021</i>
<b>Document reference and revision</b>	
<b>Prepared by:</b>	<i>WSP and Shropshire Council</i>

TABLE F.2. AUTHORISATION SHEET

<b>Project:</b>	Sandpits Road, Ludlow
<b>Report title:</b>	Road Safety Audit Response for Sandpits Road, Ludlow – Stage 3
<b>Prepared by:</b>	D. Davies (WSP) and N. Newton (SC)
<b>Name:</b>	Dave Davies
<b>Position:</b>	Principal Engineer
<b>Signed:</b>	
<b>Organisation:</b>	WSP
<b>Date:</b>	28/10/21
<b>Approved by:</b>	
<b>Name:</b>	Nick Newton
<b>Position:</b>	Traffic Engineer
<b>Signed:</b>	
<b>Organisation</b>	Shropshire Council
<b>Date:</b>	28/10/21



## Introduction

This report has been produced to provide a response to the recommendations identified as part of the Stage 3 Road Safety Audit undertaken for the Sandpits Road, Ludlow scheme.

The scheme included the provision of a new flat top road hump with an uncontrolled pedestrian crossing facility on Sandpits Road at the location of the pedestrian access for Ludlow Primary School, including amendments to drainage gullies in this location; New “School Keep Clear” road markings on Sandpits Road at the location of the pedestrian access for Ludlow Primary School; Various new traffic signs (warning signs, parking restriction signs and “New Road Layout Ahead” signs) on Sandpits Road between Livesay Avenue and Whitefriars.

The Road Safety Audit Team undertook a site visit together on Thursday 7th October 2021 during daylight conditions (between 2:30pm and 3:15pm, and between 6:15pm and 6:45pm) when the weather was fine, the road surface was dry, and the traffic on Sandpits Road was free-flowing with light traffic volumes (high pedestrian volumes were observed in the vicinity of Ludlow Primary School during the site visit in the afternoon between 2:30pm and 3:15pm). An inspection of the constructed highway works was also carried out during the hours of darkness on the same day (between 7:00pm and 7:30pm).

## Key personnel

<b>Overseeing organisation:</b>	Kevin Aitken – (Shropshire Council)
<b>RSA Team:</b>	Neil Nicholson – Senior Engineer (WSP) James Perkins – Senior Technician (WSP) (independent of the WSP scheme design team)
<b>Design Organisation</b>	Dave Davies – Principal Engineer (WSP)



## Road safety audit decision log

### ROAD SAFETY AUDIT DECISION LOG

Ref	RSA Problem	RSA Recommendation	Design organisation response	Overseeing Organisation response	Agreed RSA Action
1	<p><b>Location:</b> New flat top road hump on Sandpits Road at the pedestrian access for Ludlow Primary School.</p> <p><b>Summary:</b> Provision of a road hump that provides only a modest change in vertical profile may not be an adequate traffic calming feature to reduce vehicle speeds.</p>	<p>It is recommended that the vertical profile of the new road hump is amended to ensure that it will provide a suitable speed reducing feature in this location.</p>	<p>Due to site limitations and constraints, it is not possible to alter the profile of the hump. It is also a bus route and steepening the ramps will be uncomfortable for bus users.</p> <p>However, we recommend a package of alternative measures to support the raised table including 2no speed cushions on each approach and coloured surfacing on the hump to highlight its presence.</p>	<p>As design organisation response.</p>	
2	<p><b>Location:</b> New raised pedestrian crossing facility on Sandpits Road.</p> <p><b>Summary:</b> Visibility to the west from the northern crossing point is restricted by parked vehicles.</p>	<p>It is recommended that the double yellow line road markings on the north side of Sandpits Road to the west of the new raised pedestrian crossing facility are extended westwards to the start of the adjacent bus stop cage road markings at the junction with Whitefriars.</p>	<p>Double yellow lines <u>are in place</u> in this location but are very faded such that they do not appear present. Divisional maintenance will be informed and instructed to refresh these markings. Shropshire Council's Parking enforcement manager has been made aware and will increase enforcement once the lines are refreshed.</p>	<p>As design organisation response.</p>	

Ref	RSA Problem	RSA Recommendation	Design organisation response	Overseeing Organisation response	Agreed RSA Action
3	<p><b>Location:</b> New raised pedestrian crossing facility on Sandpits Road.</p> <p><b>Summary:</b> Dark area at the southern pedestrian crossing point.</p>	It is recommended that the street lighting provision in the vicinity of the new crossing facility is improved (such as installing a new street lighting column adjacent to the new crossing facility).	Shropshire Council's street lighting officer will be informed with a view to including on the next lighting upgrading programme.	As design organisation response.	
4	<p><b>Location:</b> Sandpits Road to the west of the junction with Julian Road.</p> <p><b>Summary:</b> Traffic sign located too close to the adjacent carriageway.</p>	It is recommended that the set-back distance of this traffic sign is amended to reduce the possibility of the sign face being struck by a passing vehicle (i.e. at least 450mm from the edge of the carriageway to the edge of the sign face).	The TSC Kier have accepted this defect due to incorrect installation and have agreed to rectify the problem.	As design organisation response.	
5	<p><b>Location:</b> Sandpits Road westbound and eastbound approaches the new pedestrian crossing facility.</p> <p><b>Summary:</b> 'New Road Layout Ahead' traffic sign has not been amended to face westbound traffic, and this sign type has not been installed in the eastbound direction.</p>	It is recommended that the westbound 'New Road Layout Ahead' traffic sign is amended so that it is facing westbound traffic, and that the eastbound 'New Road Layout Ahead' traffic sign is installed. However, if this highway scheme has been in place for 3 months, then these signs will not be required.	The TSC Kier have accepted this defect due to incorrect installation and have agreed to rectify the problem.	As design organisation response.	

Ref	RSA Problem	RSA Recommendation	Design organisation response	Overseeing Organisation response	Agreed RSA Action
6	<p><b>Location:</b> Sandpits Road to the west of the junction with Whitefriars.</p> <p><b>Summary:</b> New traffic sign installed on the footway with an inadequate mounting height.</p>	<p>It is recommended that the mounting height of this traffic sign is increased, with a minimum clearance of 2100mm under the sign face.</p>	<p>The TSC Kier have accepted this defect due to incorrect installation and have agreed to rectify the problem.</p>	<p>As design organisation response.</p>	
7	<p><b>Location:</b> Sandpits Road to the west of the junction with Julian Road.</p> <p><b>Summary:</b> 'Road Hump Ahead' advance warning traffic sign has not been reinstalled on the eastbound approach to the Livesey Road junction.</p>	<p>It is recommended that traffic sign reference EX03 is installed on the rear of traffic sign reference TS02, as proposed.</p>	<p>The TSC Kier have accepted this defect due to incorrect installation and have agreed to rectify the problem.</p>	<p>As design organisation response.</p>	
8	<p><b>Location:</b> Sandpits Road at the junction with Julian Road.</p> <p><b>Summary:</b> Worn and partially removed "SLOW" road markings could increase the possibility of vehicles approaching the school access and the new pedestrian crossing facility at inappropriate speeds.</p>	<p>It is recommended that the "SLOW" road markings in this location are refreshed.</p>	<p>Divisional maintenance will be informed and instructed to refresh these markings.</p>	<p>As design organisation response.</p>	



## Design organisation and Overseeing Organisation statements

*Include the following statements to be signed by the design team and the Overseeing Organisation.*

### DESIGN ORGANISATION STATEMENT

On behalf of the design organisation, I certify that:	
1) the RSA actions identified in the response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.	
<b>Name:</b>	<b>Dave Davies</b>
<b>Signed:</b>	
<b>Position:</b>	<b>Principal Engineer</b>
<b>Organisation:</b>	<b>WSP</b>
<b>Date:</b>	<b>28/10/2021</b>

### OVERSEEING ORGANISATION STATEMENT

On behalf of Overseeing Organisation, I certify that:	
1) the RSA actions identified in the response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and 2) the agreed RSA action will be progressed.	
<b>Name:</b>	<b>Kevin Aitken</b>
<b>Signed:</b>	
<b>Position:</b>	
<b>Organisation:</b>	<b>Shropshire Council</b>
<b>Date:</b>	<b>October 2021</b>

Following on from the initial works undertaken on Sandpits Ludlow a Road Safety Audit was undertaken which highlighted a number of issues. These proposals have now been drafted by WSP.

The additional speed cushions will require being advertised before being installed. As we would like to get this done this financial year I will be advertising these shortly. This email is to keep you informed prior to them being advertised. If you have any comments could you let me know ASAP










Regards

Nick Newton C Eng, FIHE, FCIHT, FSoRSA  
Traffic Engineer (South)



**DO NOT SCALE**

© Crown copyright and database rights 2022 OS 100049049. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.

- KEY:**
-  Proposed preformed 'bolt-down' speed cushions maximum height 75mm, minimum length 3000mm, maximum width 1650mm such as 'rosehill highways two piece speed cushions', 'redweld trafipoc speed cushions' or other similar approved products. Type and location of speed cushion to be agreed with a WSP traffic engineer before installation on site.
  -  Existing road markings.
  -  Proposed double yellow marking to diagram 1018.1 100mm wide continuous line, 75mm gap between lines.
  -  Proposed speed hump marking to diagram 1062 to extend the full length of the ramps.
  -  Proposed sign and post refer to drawing 70059810-WSP-HSN-PK3\_025-DR-CH-1201 for details.
  -  Existing sign face and post to be taken down and removed to tip off site and replaced with sign and post as shown refer to drawing 70059810-WSP-HSN-PK3\_025-DR-CH-1201 for details.
  -  Existing traffic sign face to be taken down and set aside for reuse. Refer to drawing 70059810-WSP-HSN-PK3\_025-DR-CH-1201 for details.
  -  Proposed Buff coloured cold applied MMA high friction surfacing minimum PSV 70.
  -  Conservation area (for information only).

PO1	29/03/2022	SK	FIRST ISSUE	CT	DD
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: **S2 - FOR INFORMATION**



2nd Floor Shirehall, Abbey Foregate, Shrewsbury, SY2 6ND, UK  
T+ 44 (0) 1743 501060  
wsp.com

CLIENT:



SITE/PROJECT: **Sandpits Road, Ludlow Phase 2 Traffic Calming**

TITLE: **Construction Plan**

SCALE @ A1:	CHECKED:	APPROVED:
1:500	C. Thomas	D. Davies
PROJECT NO:	DESIGNED:	DATE:
70053422	C. Thomas	April 22

DRAWING NO:	REV:
70059810-WSP-HPV-PK3_025-DR-CH-0701	P01

© WSP UK Ltd

File name: \\UK.WSPGROUP.COM\CENTRAL\DATA\PROJECTS\70059810 - LTP DESIGN & MANAGEMENT\19-20\PACKAGE 2\025 SANDPITS ROAD RSA 3 UPGRADES\WIP\70059810-WSP-HPV-PK3\_025-DR-CH-0701.DWG, printed on: 13 April 2022 13:17:38, by: Thomas, Craig



DO NOT SCALE

© Crown copyright and database rights 2022 OS 100049049. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.

Refer to drawing number: 70059810-WSP-HPV-PK3\_025-DR-CH-0701 for sign locations

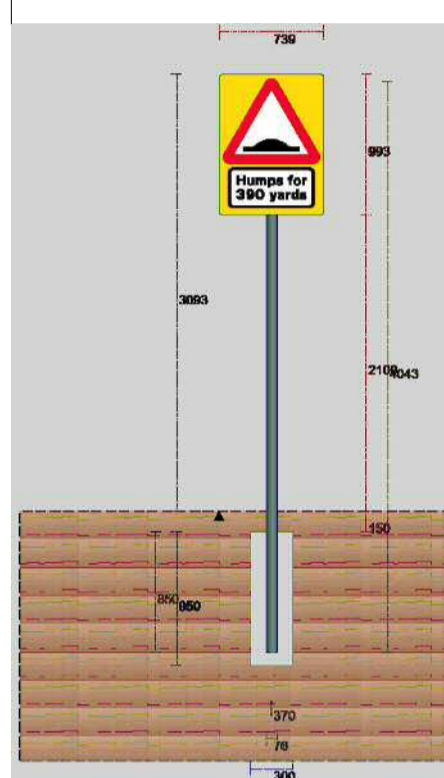
TS01/TS05



Sign Reference	557-1
Height	600 mm
Width	680 mm
Area	0.24 m <sup>2</sup>
Material	Class RA2 (12899-1:2007)
Mount Height	
* Area reduced for rounded corners.	

Scheme Ref. Sandpits Road Ludlow	
Sign Ref. 'Humps' Supplementary Plate	x-height 50.0
Letter colour	BLACK
Background	WHITE
Border	BLACK
Material	Class RA2 (12899-1:2007)
Area	0.17 m <sup>2</sup>

Scheme Ref. Sandpits Road Ludlow	
Sign Ref. P01/P05	x-height 50.0
Letter colour	N/A
Background	YELLOW
Border	N/A
Material	Class RA2 (12899-1:2007)
Area	0.73m <sup>2</sup>



POST(S) & FOUNDATIONS	
Scheme Reference	
Proposal Name	Sandpits Road Ludlow
Proposal Reference	P01/P05
Author	SK
Description	
Illumination	No
Mounting Height	2100mm
Wind Class	BSEN12899UK
Wind Load	1200 N/m <sup>2</sup>
Environ Name	England inland
Validated	Yes
Number	1
Post Shape	Circle
Post Manufacturer	(Unspecified)
Post Model	Steel Round Post/GenericS355CHS
Post Type	Steel/S355;S355J2H;A573;SN490B
Further post info	
Post Size	76.1mm diam x 3.2mm thickness.
Centres	-
Length	Total = 4042.5mm, above ground = 3043mm
No. of Foundations	1
Foundation Volume	0.067m <sup>3</sup>
Foundation Width	300.0mm diameter
Foundation Length	Circular
Foundation Depth	950.0mm
Earth Cover	150.0mm
Foundation Material	Reinforcement

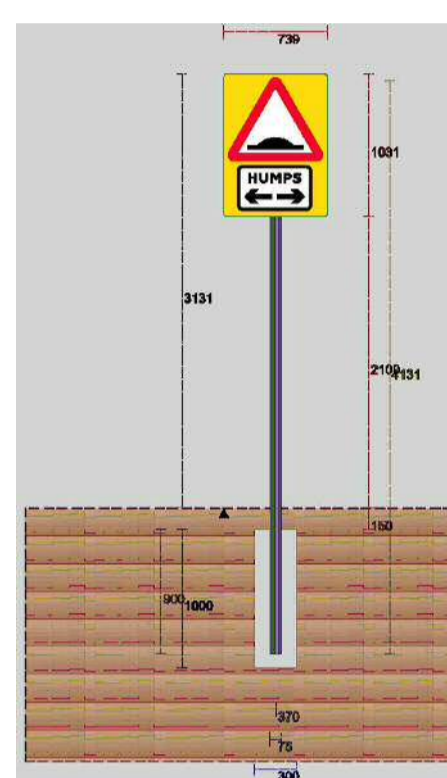
TS02



Sign Reference	557-1
Height	600 mm
Width	680 mm
Area	0.24 m <sup>2</sup>
Material	Class RA2 (12899-1:2007)
Mount Height	2100
* Area reduced for rounded corners.	

Scheme Ref. Sandpits Road Ludlow	
Sign Ref. 'Humps' Supplementary Plate	x-height 50.0
Letter colour	BLACK
Background	WHITE
Border	BLACK
Material	Class RA2 (12899-1:2007)
Area	0.14 m <sup>2</sup>

Scheme Ref. Sandpits Road Ludlow	
Sign Ref. P02	x-height 50.0
Letter colour	N/A
Background	YELLOW
Border	N/A
Material	Class RA2 (12899-1:2007)
Area	0.76m <sup>2</sup>



POST(S) & FOUNDATIONS	
Scheme Reference	
Proposal Name	Sandpits Road Ludlow
Proposal Reference	P02
Author	SK
Description	Finished in a black powder coating or equivalent system in accordance with BS EN 1461
Illumination	No
Mounting Height	2100mm
Wind Class	BSEN12899UK
Wind Load	1200 N/m <sup>2</sup>
Environ Name	England inland
Validated	Yes
Number	1
Post Shape	Circle
Post Manufacturer	(Unspecified)
Post Model	Steel Round Post/GenericS355CHS
Post Type	Steel/S355;S355J2H;A573;SN490B
Further post info	
Post Size	76.1mm diam x 3.2mm thickness.
Centres	-
Length	Total = 4131.1mm, above ground = 3081mm
No. of Foundations	1
Foundation Volume	0.071m <sup>3</sup>
Foundation Width	300.0mm diameter
Foundation Length	Circular
Foundation Depth	1000.0mm
Earth Cover	150.0mm
Foundation Material	Reinforcement

Proposed traffic sign to have black backing.

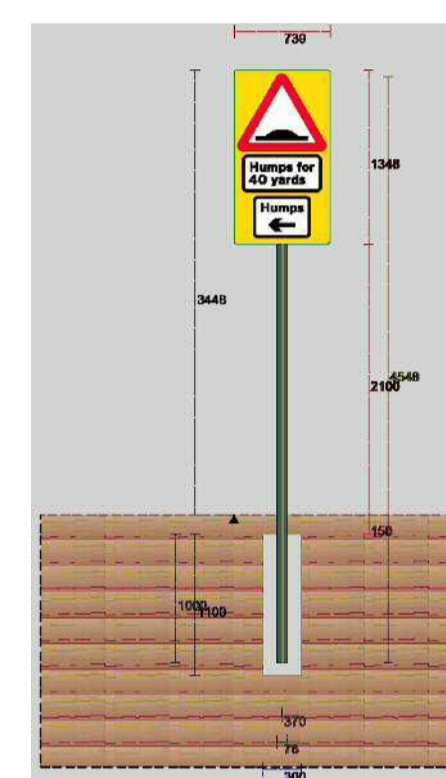
TS03



Sign Reference	557-1
Height	600 mm
Width	680 mm
Area	0.24 m <sup>2</sup>
Material	Class RA2 (12899-1:2007)
Mount Height	
* Area reduced for rounded corners.	

Scheme Ref. Sandpits Road Ludlow	
Sign Ref. 'Humps' Supplementary Plate	x-height 50.0
Letter colour	BLACK
Background	WHITE
Border	BLACK
Material	Class RA2 (12899-1:2007)
Area	0.14 m <sup>2</sup>

Scheme Ref. Sandpits Road Ludlow	
Sign Ref. P03	x-height 50.0
Letter colour	N/A
Background	YELLOW
Border	N/A
Material	Class RA2 (12899-1:2007)
Area	1.00m <sup>2</sup>



POST(S) & FOUNDATIONS	
Scheme Reference	
Proposal Name	Sandpits Road Ludlow
Proposal Reference	P03
Author	SK
Description	
Illumination	No
Mounting Height	2100mm
Wind Class	BSEN12899UK
Wind Load	1200 N/m <sup>2</sup>
Environ Name	England inland
Validated	Yes
Number	1
Post Shape	Circle
Post Manufacturer	(Unspecified)
Post Model	Steel Round Post/GenericS355CHS
Post Type	Steel/S355;S355J2H;A573;SN490B
Further post info	
Post Size	76.1mm diam x 4.0mm thickness.
Centres	-
Length	Total = 4547.5mm, above ground = 3398mm
No. of Foundations	1
Foundation Volume	0.078m <sup>3</sup>
Foundation Width	300.0mm diameter
Foundation Length	Circular
Foundation Depth	1100.0mm
Earth Cover	150.0mm
Foundation Material	Reinforcement

TS04

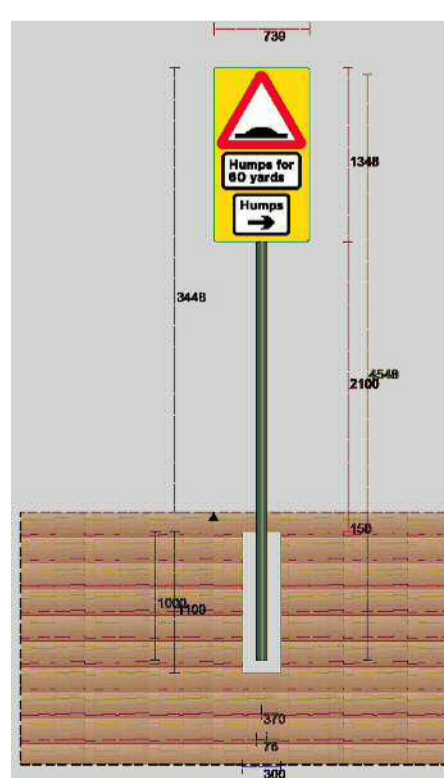


Sign Reference	557-1
Height	600 mm
Width	680 mm
Area	0.24 m <sup>2</sup>
Material	Class RA2 (12899-1:2007)
Mount Height	2100
* Area reduced for rounded corners.	

Scheme Ref. Sandpits Road Ludlow	
Sign Ref. 'Humps' Supplementary Plate	x-height 50.0
Letter colour	BLACK
Background	WHITE
Border	BLACK
Material	Class RA2 (12899-1:2007)
Area	0.14 m <sup>2</sup>

Scheme Ref. Sandpits Road Ludlow	
Sign Ref. 'Humps' Supplementary Plate	x-height 50.0
Letter colour	BLACK
Background	WHITE
Border	BLACK
Material	Class RA2 (12899-1:2007)
Area	0.11 m <sup>2</sup>

Scheme Ref. Sandpits Road Ludlow	
Sign Ref. P04	x-height 50.0
Letter colour	N/A
Background	YELLOW
Border	N/A
Material	Class RA2 (12899-1:2007)
Area	1.00m <sup>2</sup>



POST(S) & FOUNDATIONS	
Scheme Reference	
Proposal Name	Sandpits Road Ludlow
Proposal Reference	P04
Author	SK
Description	
Illumination	No
Mounting Height	2100mm
Wind Class	BSEN12899UK
Wind Load	1200 N/m <sup>2</sup>
Environ Name	England inland
Validated	Yes
Number	1
Post Shape	Circle
Post Manufacturer	(Unspecified)
Post Model	Steel Round Post/GenericS355CHS
Post Type	Steel/S355;S355J2H;A573;SN490B
Further post info	
Post Size	76.1mm diam x 4.0mm thickness.
Centres	-
Length	Total = 4547.5mm, above ground = 3398mm
No. of Foundations	1
Foundation Volume	0.078m <sup>3</sup>
Foundation Width	300.0mm diameter
Foundation Length	Circular
Foundation Depth	1100.0mm
Earth Cover	150.0mm
Foundation Material	Reinforcement

EX01/EX02



Scheme Ref. Sandpits Road Ludlow	
Sign Ref. EX01/EX02	x-height 50.0
Letter colour	N/A
Background	RED
Border	WHITE
Material	Class RA2 (12899-1:2007)
Area	0.24 m <sup>2</sup>

Existing traffic signs to be erected on existing street furniture as directed.

PO1	29/03/2022	SK	FIRST ISSUE	AP	DD
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: S2 - FOR INFORMATION

**wsp**

2nd Floor Shirehall, Abbey Foregate, Shrewsbury, SY2 6ND, UK  
T+ 44 (0) 1743 501060  
wsp.com



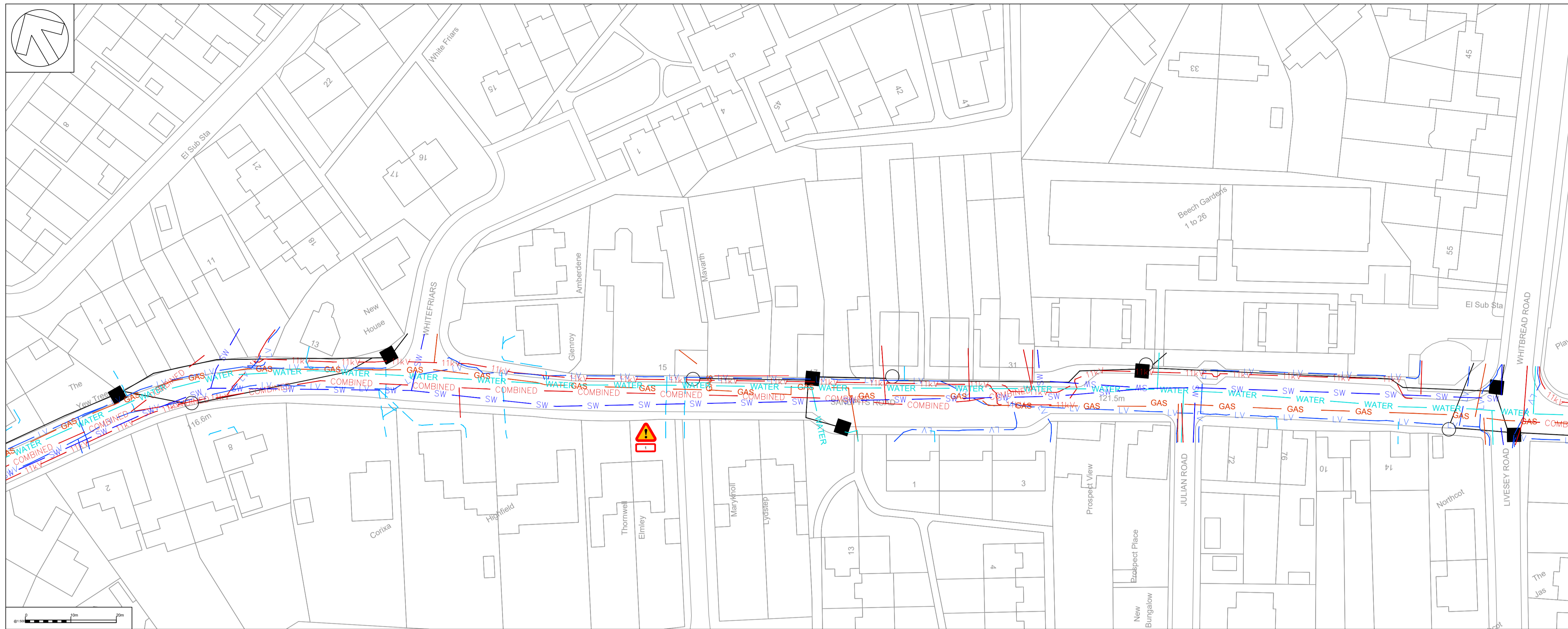
SITE PROJECT: Sandpits Road, Ludlow  
Phase 2 Traffic Calming

TITLE: Sign Schedule

SCALE @ A1:	1:500	CHECKED:	C. Thomas	APPROVED:	D. Davies
PROJECT NO:	70053422	DESIGNED:	C. Thomas	DRAWN:	S. Kumar
		DATE:	April 22		

DRAWING NO:	70059810-WSP-HSN-PK3_025-DR-CH-1201	REV:	P01
-------------	-------------------------------------	------	-----

© WSP UK Ltd



DO NOT SCALE

© Crown copyright and database rights 2022 OS 100049049. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.

- Key**
- Open Reach Built
  - Open Reach Box
  - Open Reach Pole
  - COMBINED Combined Sewer
  - WATER Mains Water
  - SW Surface Water Sewer
  - HV HV electric
  - LV LV electric
  - Service electric
  - GAS Gas

- Notes:**
- Utilities information obtained on 01/03/2022. This will need updating for construction period.
  - Information on this Constraints Plan is only as accurate as the source material.
  - A copy of the source material is supplied to those using the Constraints Plan or undertaking construction (Contractors). The representation of services information on this drawing does not warrant the accuracy of the source material.
  - Site grid reference: 351767, 275290. Approximate site postcode is SY8 1HH

**RESIDUAL DESIGN HAZARDS**

1. Underground utilities present throughout site.

P01	25/03/2022	SK	FIRST ISSUE	AP	DD
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: **S2 - FOR INFORMATION**



2nd Floor Shirehall, Abbey Foregate, Shrewsbury, SY2 6ND, UK  
T+ 44 (0) 1743 501060  
wsp.com

CLIENT:



SITE/PROJECT: Sandpits Road, Ludlow Phase 2 Traffic Calming

TITLE: Constraints Plan

SCALE @ A1: 1:500	CHECKED: C. Thomas	APPROVED: D. Davies
PROJECT NO: 70053422	DESIGNED: C. Thomas	DRAWN: S. Kumar
	DATE: March 22	

DRAWING NO: 70059810-WSP-VUT-PK3_025-DR-CH-2901	REV: P01
---	----------

© WSP UK Ltd

File name: \\UK.VSPGROUP.COM\CENTRAL\_DATA\PROJECTS\70059810\025-DR-CH-2901-DWG.dwg, issued on 13 April 2022, 12:38:25, by Thomas, Craig