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Project Title	HIF Banwell Bypass and Highways Improvements Project
Document Title	Wider Network Mitigation - Additional Speed Survey Data
Document Reference	BNWLBP-ARP-HGN-XXXX-TN-CH-000001
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1 Introduction

1.1.1 Wider mitigation measures proposed as part of the Scheme are set out in the Wider Network Mitigation – General Arrangement Drawings (BNWLBP-ARP-GEN-X_A368WCH_Z-DR-CH-000001 to 000013). These were included as part of the planning application.

1.1.2 One element of the wider mitigation measures is proposed speed limit reductions, principally in the neighbouring villages of Sandford, Churchill and Winscombe. An initial assessment of the proposed changes was documented in the Wider Network Mitigation Measures Speed Limits Assessment Report (BNWLBP-ARP-HGN-X_BB_Z-RP-TR-000001), which included analysis of existing speed survey data held by North Somerset Council, and summarised in the Transport Assessment Appendix H – Wider Mitigation Measures Summary Report (BNWLBP-ARP-HGN-XXXX-RP-CH-000003).

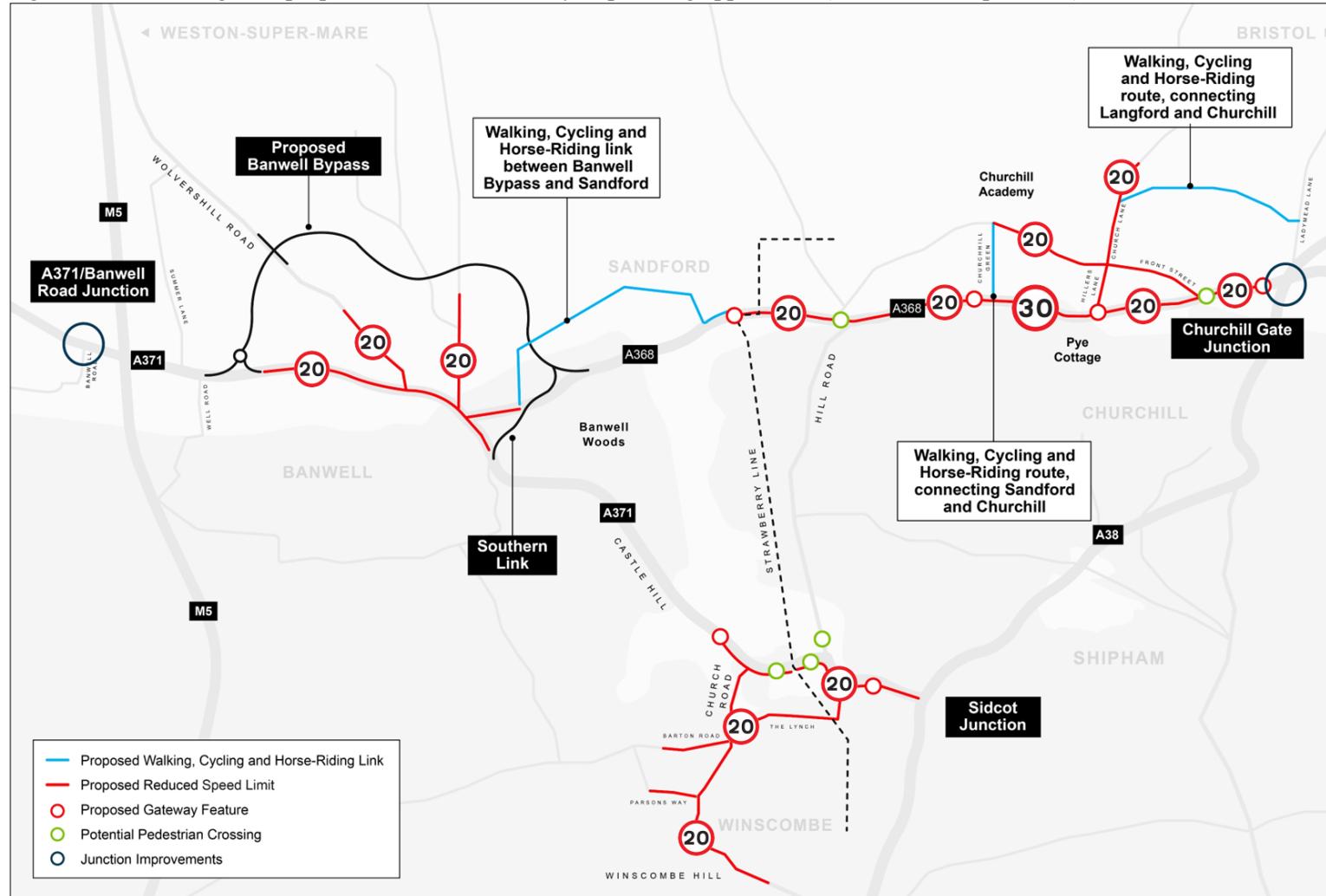
1.1.3 Subsequent to the submission of the planning application, discussions have been ongoing with officers at North Somerset Council around the extents of the proposed speed limit changes, and the need for further speed survey data to inform the need for additional traffic calming.

1.1.4 This Technical Note summarises the results of the additional speed surveys undertaken and sets out the amended extents to the speed limit proposals as shown on updated Wider Network Mitigation – General Arrangement Drawings.

1.1.5 A summary of the wider mitigation measures as submitted for planning initially and the updated proposals now put forward are shown in Figure 1 and Figure 2 respectively.

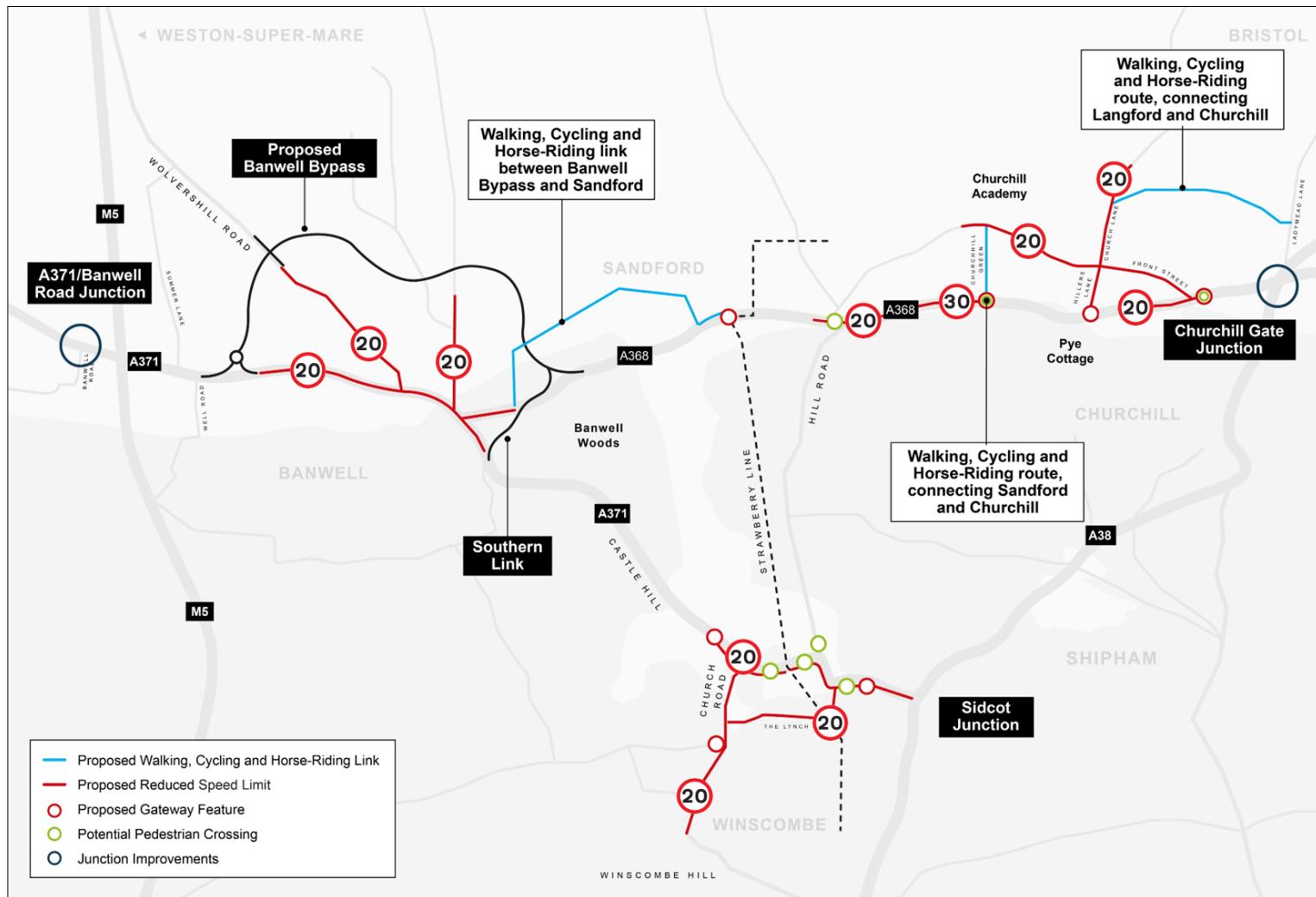
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Figure 1 Wider mitigation proposals submitted initially in planning application (June 2022 – superseded)



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Figure 2 Updated wider mitigation proposals (December 2022 – current)



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2 Speed Surveys

2.1.1 17 speed surveys in Sandford, Winscombe and Churchill¹ were undertaken over a 7-day period between 3 and 9 November 2022. Survey locations are provided in Table 1. The locations are shown in Figure 3.

Table 1 Speed survey locations

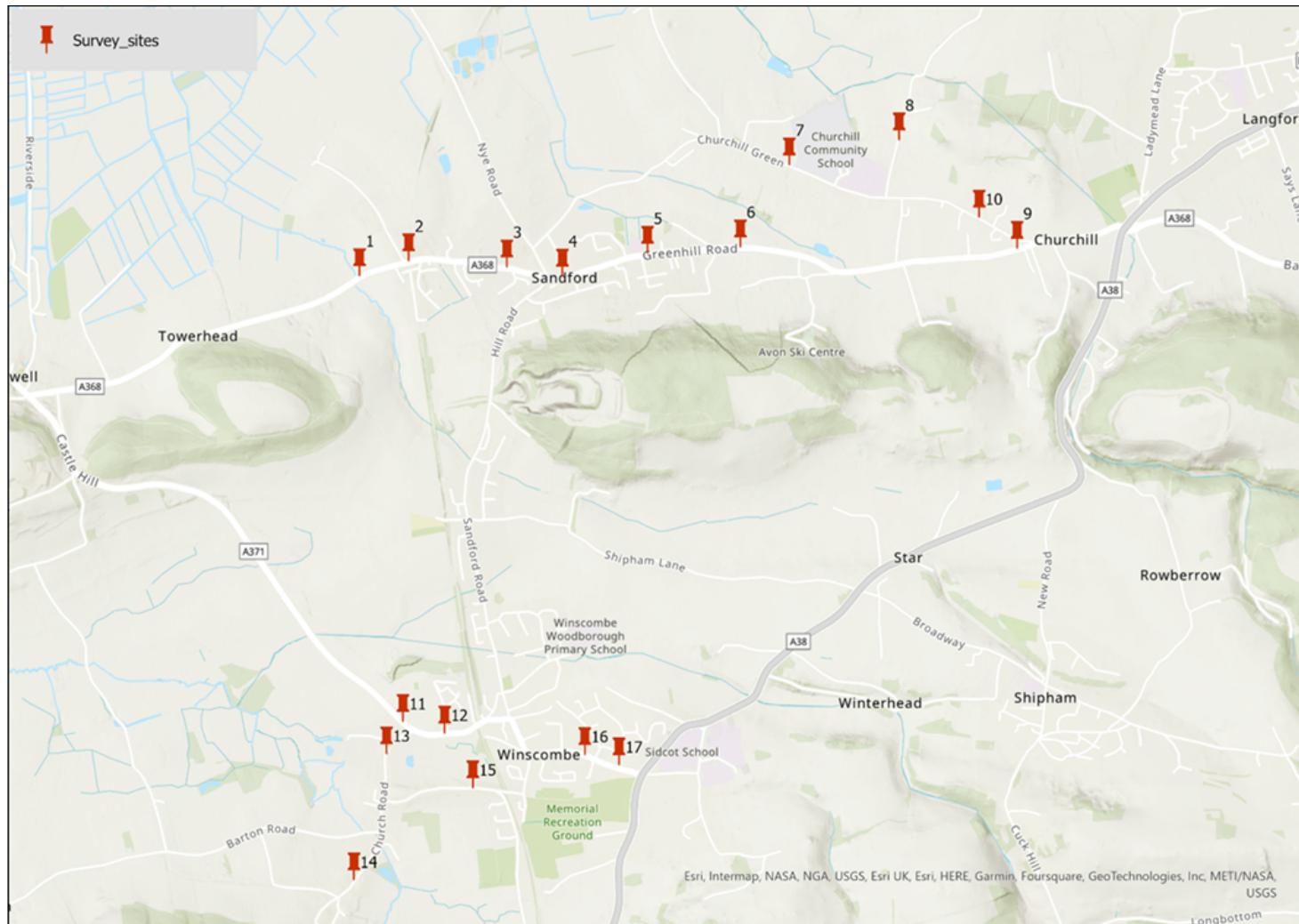
Survey Site	Location	Posted Speed Limit	Proposed Speed Limit
1	A369 Towerhead Road, at Towerhead Brook	30	30
2	A368 east of Mead Lane	30	30
3	A369 Station Road west of Orchard Drive	30	30
4	A368 Greenhill Road west of Somerville Road	30	20
5	A368 Greenhill Road in close proximity to Primary School	30	20
6	A368 east of Greenhill Lane	40	30
7	Churchill Green west of Sports centre	30	20
8	Church Lane nr St John Baptist Church	30	20
9	A368 Dinghurst Road at 30mph repeater	30	20
10	Front Street	30	20
11	A371 North of Church Road	30*	20*
12	A371 Woodborough Rd west of Knapps Drive	30	20
13	Church Road wide road north of new development access	30	20
14	Church Road, north of The Square	30	20
15	The Lynch, Winscombe	30	20
16	Sidcot Lane, east of Belmont Road	30	20
17	Sidcot Lane west of A38 junction	30	20

* Survey undertaken at transition point from national speed limit to 30mph. Proposed change to transition from 40mph to 20mph.

¹ Additional surveys were also undertaken during the same period in Banwell, where speed limit changes are also proposed. However, those locations do not form part of the wider mitigation measures and are therefore not reported here.

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Figure 3 Speed survey locations



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3 Sandford

3.1.1 This section details the additional speed survey results and revised speed limit proposals in Sandford. The survey results have informed and provided justification for the speed limit changes proposed for Sandford. The following roads are proposed for speed limit reductions from 30mph to 20mph:

1. A368 Station Road (east of Orchard Drive) to A368 Greenhill Road (west of Greenhill Croft)

3.1.2 The existing 30mph speed limit entering the village from Churchill is also proposed to be extended further east towards to the upgraded Public Right of Way (PRoW) connection between the A368 and Churchill Green. The existing 40mph speed limit between Sandford and Churchill is proposed to be retained.

3.1.3 The proposed speed limit changes along with speed survey results are displayed in Figure 4 and Figure 5.

A368 Towerhead Road and A368 Station Road

3.1.4 Traffic speed surveys along the A368 (Towerhead Road and Station Road) to the west of Sandford (survey sites 1, 2 and 3) indicate that mean vehicle speeds in both directions exceed the current speed limit of 30mph to varying degrees. This is most acute at survey site 1 where the mean speeds in both directions exceeds the speed limit by 23%. The following infrastructure changes are proposed to increase compliance with the current speed limit as well as increasing safety for all users:

1. Gateway feature when approaching the village from the west;
2. Narrowing of carriageway on Towerhead Road by creating the new shared use path towards Banwell;
3. Enhancement of existing Toucan crossing with raised crossing and increased signal priority for pedestrians and cyclists;
4. Continuous cross-over of shared use footway/cycleway on Mead Lane to provide priority to pedestrians and cyclists;

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5. Narrowing of carriageway on Station Road with raised bus boarders and widened footways;
6. New raised puffin crossing west of Hill Road; and
7. Enhancement of existing uncontrolled pedestrian crossing of Nye Road at its junction with Station Road.

3.1.5 For further details refer to
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000001 P09 and
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000002 P08.

A368 Greenhill Road

3.1.6 The speeds surveys along the A368 Greenhill Road) east of Hill Road (survey sites 4 and 5) indicate that mean vehicle speeds are lower than the current speed limit of 30 mph. Since most vehicles currently drive slower than the speed limit on this section of the A368 the proposal for a 20mph speed limit would require fewer infrastructural intervention as drivers already moderate their speed. Plans for a 20mph speed limit along this section of Greenhill Road are proposed with the following accompanying infrastructure:

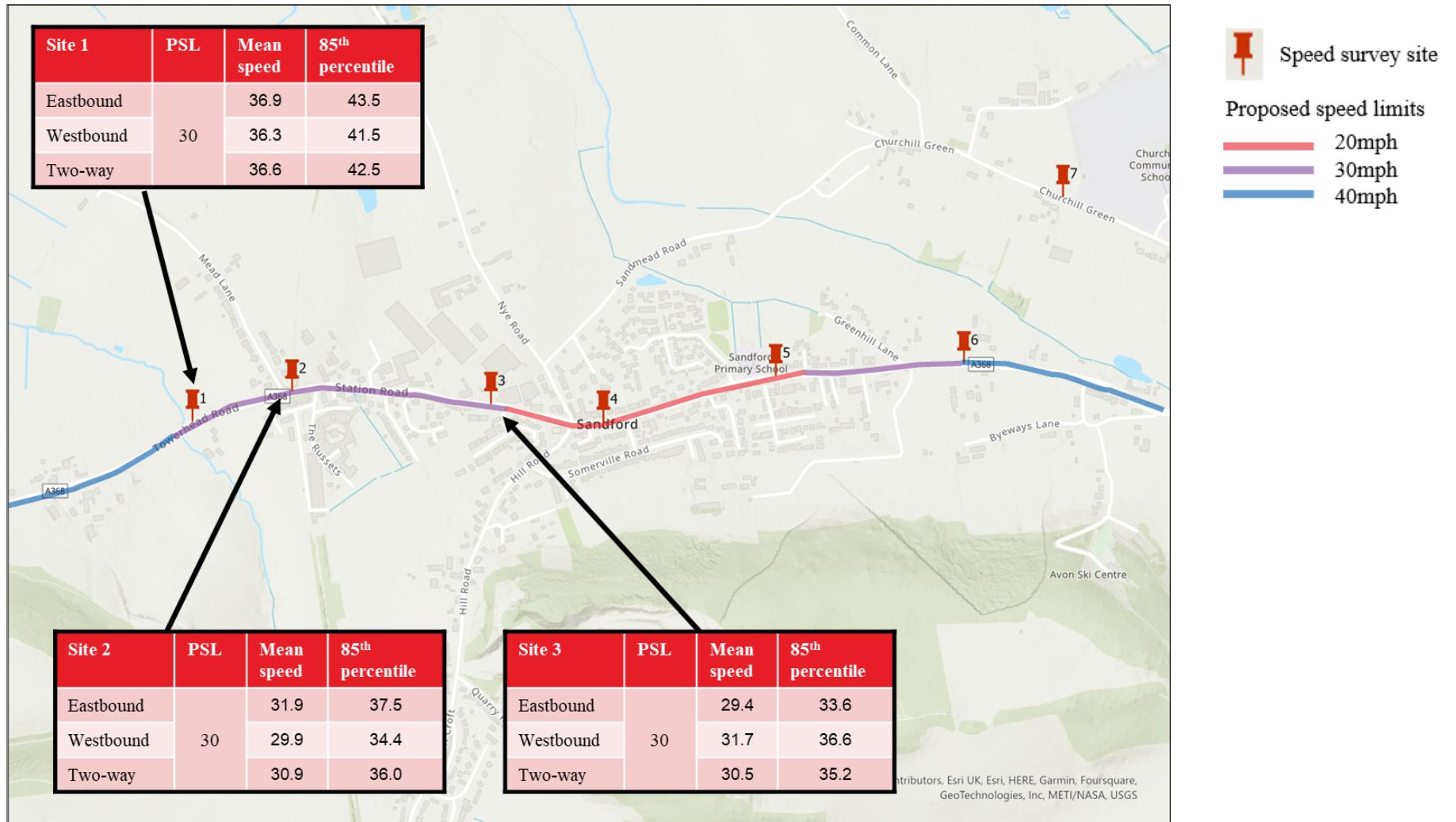
1. Hatched road markings to reduce effective carriageway width and encourage slower vehicle speeds;
2. Modification of existing pedestrian crossings outside the primary school and village hall, including raised crossings, carriageway narrowing and increased signal priority for pedestrians;
3. Gateway feature when approaching the village from the east; and
4. Removal of bus lay-bys, to increase priority to public transport services.

3.1.7 The existing 30mph to 40mph transition to the east of the village is proposed to be extended further east (survey site 6) to reduce speeds where the proposed upgraded PROW emerges onto the A368. A refuge island with narrowed lane widths is proposed in this location to reduce vehicle speeds and facilitate crossing movements.

3.1.8 For further details refer to
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000003 P08.

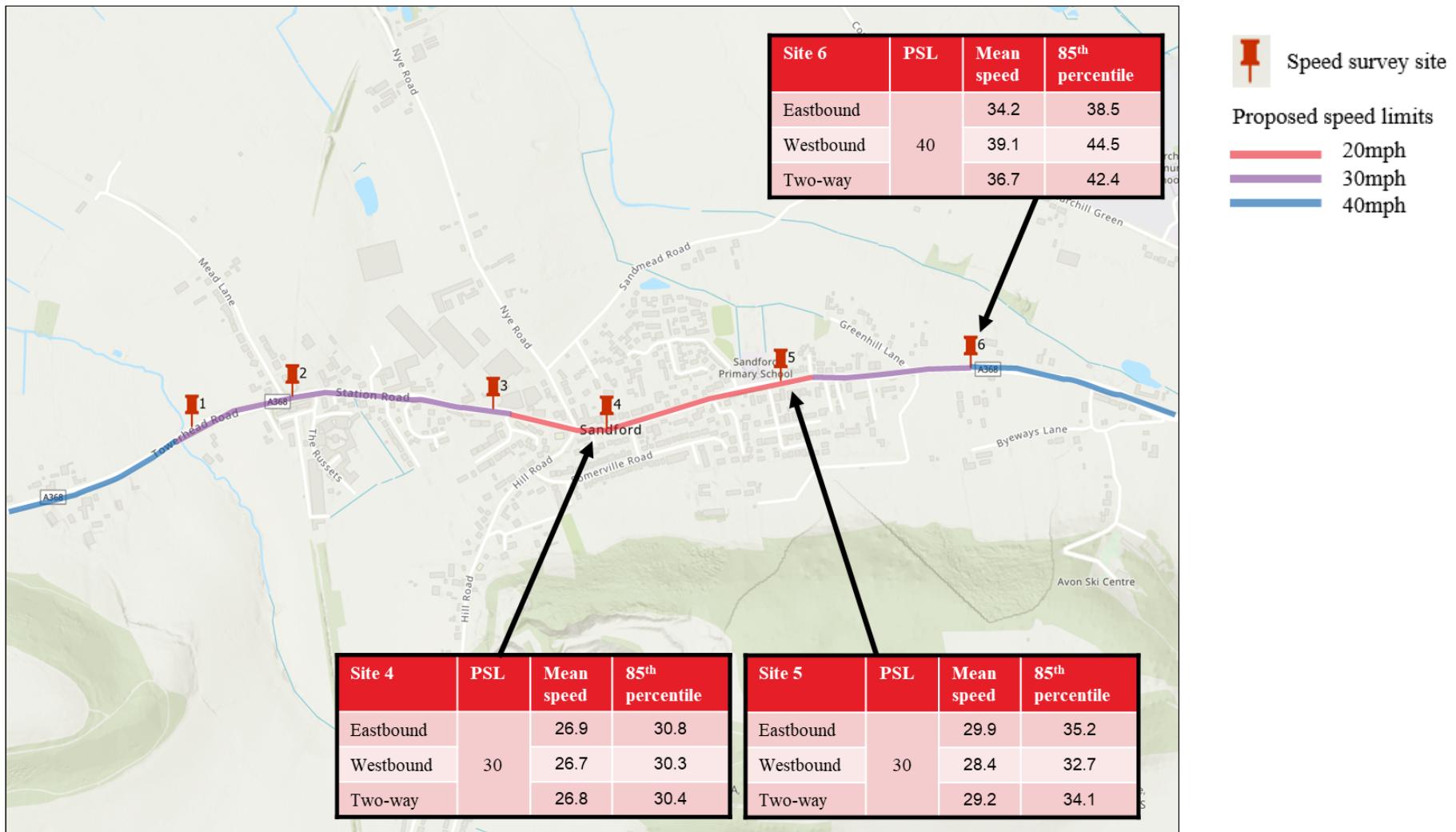
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Figure 4 Sandford speed survey results (west)



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Figure 5 Sandford speed survey results (east)



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4 Churchill

4.1.1 This section details the additional speed survey results and revised speed limit proposals in Churchill. The survey results have informed and provided justification for the proposed speed limit changes. The following roads in Churchill are proposed for speed limit reductions to 20mph:

1. Hillier's Lane;
2. Dinghurst Road (between The Drive and Skinners Lane);
3. Front Street; and
4. Church Lane.

4.1.2 40mph buffers are also proposed where the speed limits transition from national speed limit to 20mph on Churchill Green and Church Lane. East of the Skinners Lane, the existing 30mph speed limit to Churchill Gate junction is proposed to be retained.

4.1.3 The proposed speed limit changes along with speed survey results are displayed in Figure 6 .

A368 Dinghurst Road

4.1.4 The traffic speed survey along Dinghurst Road (survey site 9) indicates that mean vehicle speeds in both directions slightly exceed the current speed limit of 30mph. These survey results are consistent with plans to provide enhanced infrastructure along this section to encourage compliance with the proposed lower speed limit of 20mph. The proposed traffic calming measures along at this road section include:

1. Gateway treatments on Dinghurst Road, east of the junction with Hillier's Lane and by Skinners Lane; and
2. Raised Puffin crossing proposed outside the Beaches, including carriageway narrowing; and
3. Two raised table features between The Drive and Front Street.

4.1.5 For further details refer to
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000004 P08 and

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BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000005 P08.

Front Street

4.1.6 The speed surveys along Front Street (survey site 10) indicate that mean vehicle speeds in both directions are lower than the current speed limit of 30mph and lower than 24mph in both directions. Compliance with the proposed 20mph reduced speed limit is therefore expected with a lighter-touch approach, based on traffic signs and lining only.

4.1.7 For further details refer to
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000005 P08.

Churchill Green

4.1.8 The speed surveys along Churchill Green (survey site 7) indicate that mean vehicle speeds in both directions are lower than the current speed limit of 30mph. The following infrastructure is proposed to support compliance with proposed 20mph speed limit:

1. Build-outs requiring vehicles to give way through narrowings; and
2. Carriageway narrowing by provision of ghost footway linking extents of existing footway with upgraded PRoW connection.

4.1.9 For further details refer to
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000004 P08.

Church Lane

4.1.10 The traffic speed survey along Church Lane (survey site 8) indicates that mean vehicle speeds in both directions are lower than current speed limit of 30mph. The following infrastructure is proposed to support compliance with proposed 20mph speed limit:

1. Carriageway narrowing, through the construction of a new section of footway;
2. Build-outs requiring vehicles to give way through narrowings;
3. Cycle road markings at regular intervals to highlight presence of cyclists;

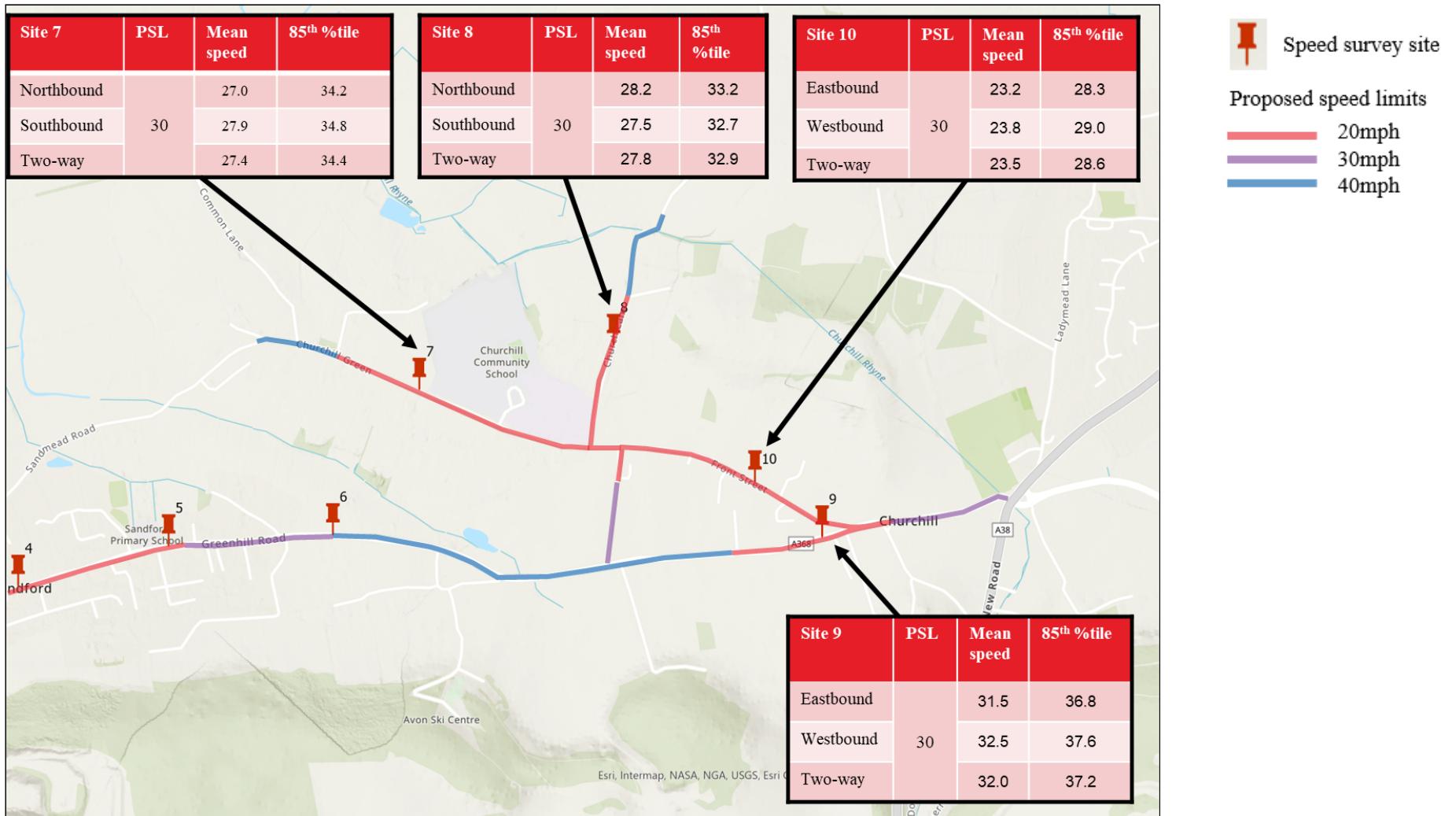
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4. “SLOW” road markings; and
5. Raised table crossing for access to the upgraded PRoW connection towards Sandford, with carriageway narrowed to one lane at crossing, with vehicles required to give-way in one direction.

4.1.11 For further details refer to
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000004 P08 and
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000011 P07.

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Figure 6 Speed survey results in Churchill



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5 Winscombe

5.1.1 This section details the traffic speed survey results and proposed speed limit changes in Winscombe. The survey results have informed and provided justification for the proposed speed limit changes. The following roads are proposed for speed limit reductions to 20mph:

1. Banwell Road (reduction from NSL to 40mph just outside Winscombe and 30mph to 20mph reduction at entrance to Winscombe);
2. The Lynch;
3. Church Road leading to Winscombe Hill;
4. Woodborough Road; and
5. Sidcot Lane.

5.1.2 A 40mph buffer is also proposed where the speed limit transitions from national speed limit to 20mph on the A371 Banwell Road.

5.1.3 The proposed speed limit changes along with speed survey results are displayed in Figure 7 and Figure 8.

A371 Banwell Road / Woodborough Road / Sidcot Lane

5.1.4 The speed survey on Banwell Road was undertaken at the transition point from 30mph to national speed limit, and the results indicate that northbound mean vehicle speeds exceed the current speed limit where vehicles are accelerating towards the higher speed limit. Southbound, mean vehicle speeds are very marginally in excess of the posted speed limit, as vehicles decelerate when entering the 30mph.

5.1.5 The speed survey along Woodborough Road (survey site 12) indicates speeds are lower in both direction towards the centre of the village. Westbound mean speeds are lower than the current speed limit of 30mph whereas in the eastbound direction the mean vehicle speeds are slightly higher than 30mph. Overall in both directions the mean speed of vehicles is at the speed limit.

5.1.6 The speed surveys on Sidcot Road (survey sites 16 and 17) indicate

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that mean vehicle speeds eastbound are lower than the current speed limit of 30mph whereas in the westbound direction the mean vehicle speeds either meet or slightly exceed the speed limit. Eastbound speeds approaching the A38 are much lower, presumably due to the proximity to the junction.

5.1.7 In order to encourage compliance and improve safety for all users, the proposals for a reduced 20mph speed limit on this section of the A371 are accompanied by the following infrastructure changes:

1. Gateways into Winscombe;
2. Carriageway narrowing with proposed dragon's teeth marking to give effect of lane narrowing to slow traffic;
3. Speed limit reduction north of Winscombe from NSL to 40mph to reduce speeds of vehicles approaching 20mph zone;
4. Upgrade to the existing uncontrolled crossing (west of Knapps Drive) to a zebra crossing with raised crossing;
5. New zebra crossing (west of the junction with the Chestnuts) with raised crossing;
6. New zebra crossing (east of the Strawberry Line) with raised crossing;
7. Hatched road markings to narrow road to 6m, reducing traffic speeds; and
8. Additional raised table traffic calming features between The Chestnuts and the A38.

5.1.8 For further details refer to
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000007 P08 and
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000008 P08.

The Lynch

5.1.9 The speed survey along The Lynch (survey site 15) indicates that mean vehicle speeds in both directions are lower than the current speed limit of 30mph and lower than 24mph in both directions. Compliance with the proposed 20mph reduced speed limit is therefore expected with a lighter-touch approach, based on traffic signs and lining only.

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5.1.10 For further details refer to
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000007 P08 and
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000009 P07.

Church Road / Winscombe Hill

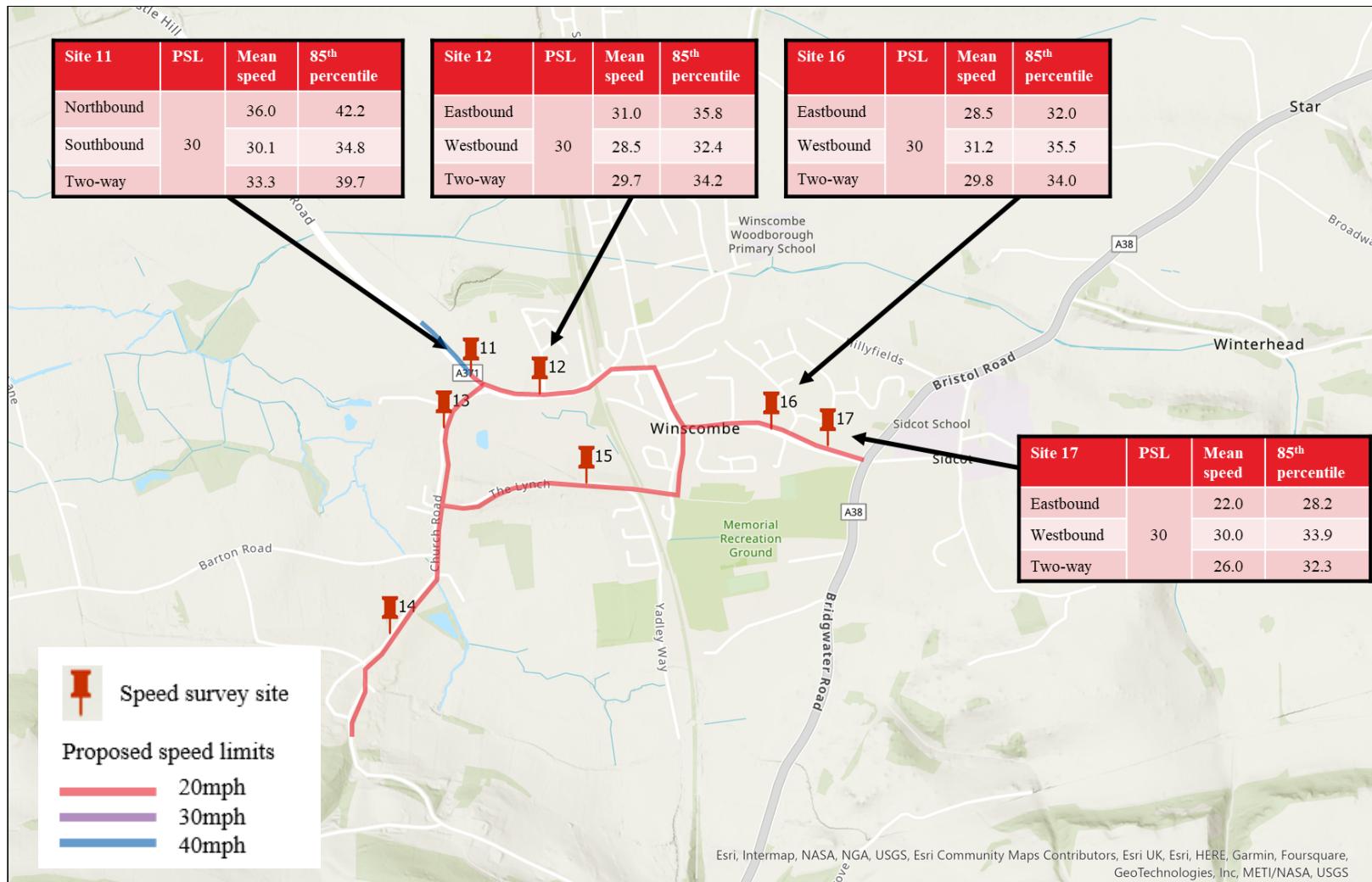
5.1.11 The speed surveys along Church Road (survey sites 13 and 14) indicates that mean vehicle speeds in both directions are lower than limit of 30mph. Since most drivers along this road are already moderating their speed to drive slower than 30 mph plans to change the speed limit to 20 mph should require fewer infrastructure interventions. To encourage compliance and improve safety for all users the proposals for a 20mph speed limit are accompanied by the following infrastructure:

1. Build-outs requiring vehicles to give way through narrowings;
2. Gateway feature on Barton Road; and
3. Updating of existing and new “SLOW” road markings.

5.1.12 For further details refer to
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000007 P08,
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000009 P07 and
BNWLBP_ARP_GEN_X_A368WCH_DR_CH_000010 P07.

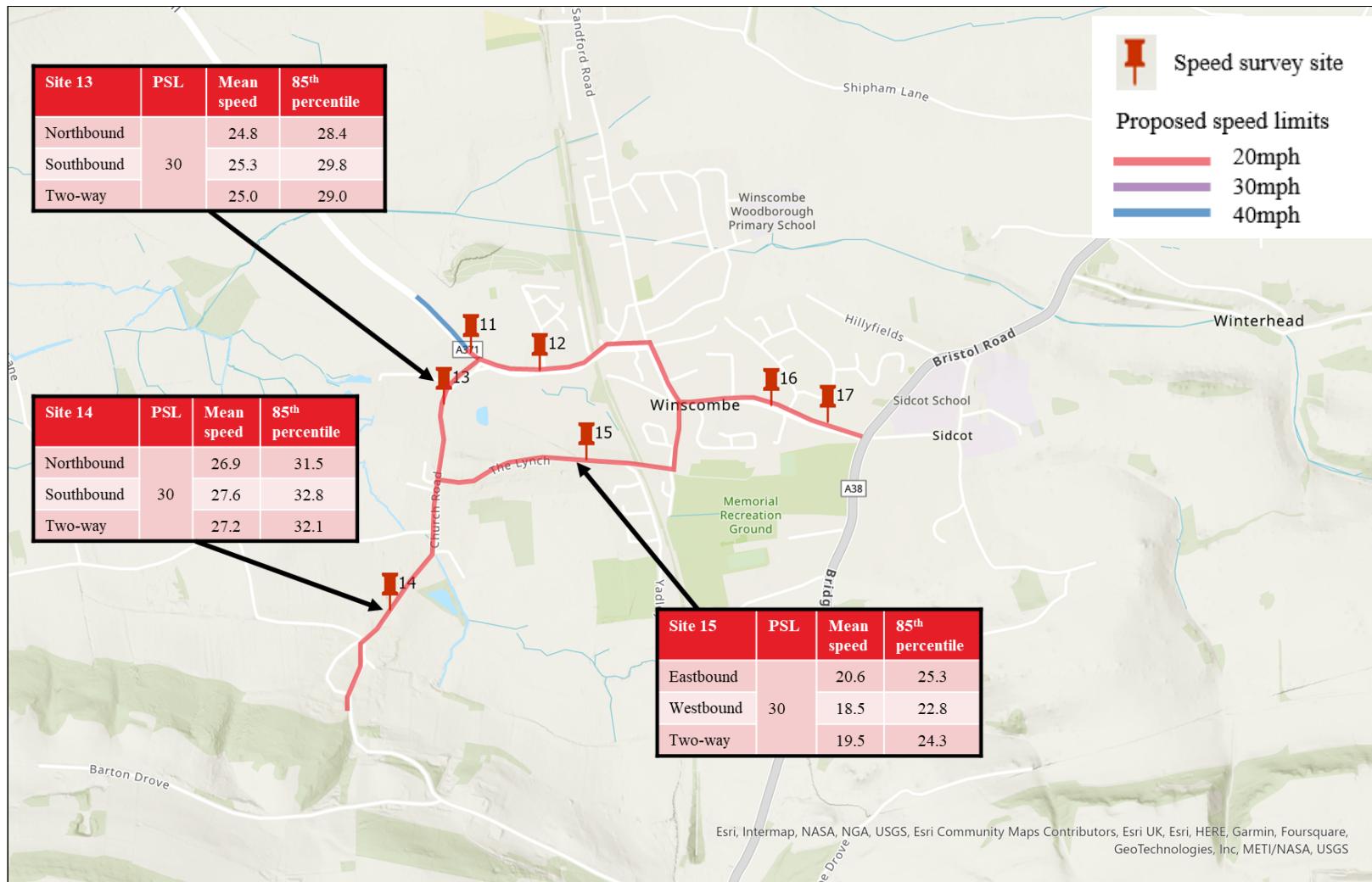
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Figure 7 Speed survey results in Winscombe



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Figure 8 Speed survey results in Winscombe



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6 Summary

6.1.1 Wider mitigation measures proposed as part of the Scheme, as set out in the Wider Network Mitigation – General Arrangement Drawings (BNWLBP-ARP-GEN-X_A368WCH_Z-DR-CH-000001 to 000013), were included as part of the planning application.

6.1.2 Subsequent to the submission of the planning application, discussions have been ongoing with officers at North Somerset Council around the extents of the proposed speed limit changes, and the need for further speed survey data.

6.1.3 This Technical Note has summarises the results of the additional speed surveys undertaken and sets out the amended extents to the speed limit proposals (as shown on updated Wider Network Mitigation – General Arrangement Drawings – General Arrangement Drawings). This Technical Note supersedes previous reporting.

6.1.4 The revised extents of reduced speed limits are considered to be compliant with local and national policy, and suitable traffic calming measures are proposed where speed survey data shows that compliance with the proposed reduced speed limits might not be achieved with signing and lining alone.

6.1.5 Confirmation of changes to speed limits will be subject to the required statutory processes for the making of Traffic Regulation Order(s) (TROs) following the determination of the planning application. The detailed design of all traffic calming features, signing and lining will be subject to technical approval by NSC as the highway authority.

Approvals

Revision	Status	Role	Name	Date
P02	S8	Author	Rob Henley	13/12/22
		Checker	Jason Prosser	13/12/22
		Approver	Tom Edwards	13/12/22
		Authoriser	Roger Walker	13/12/22