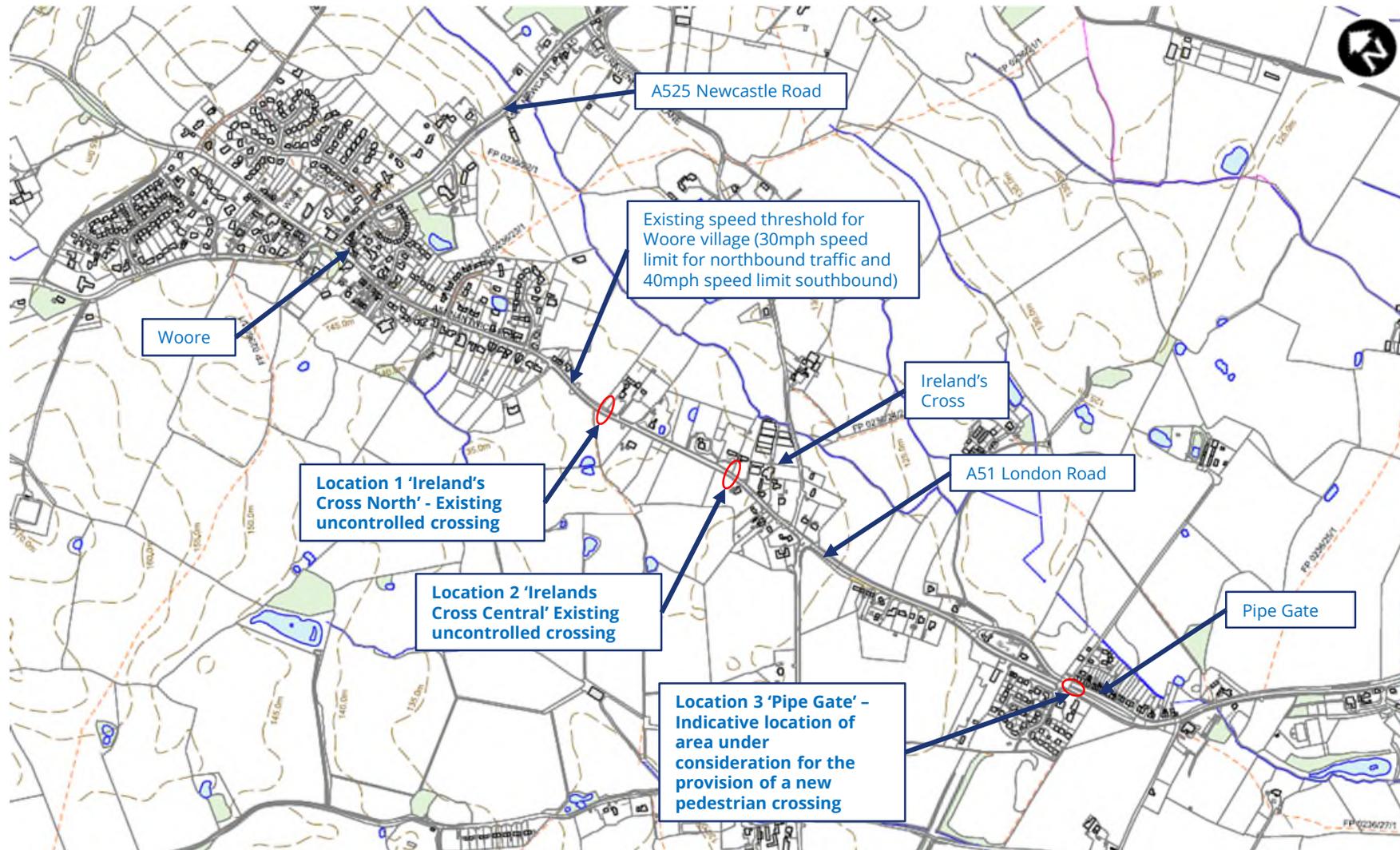


HS2

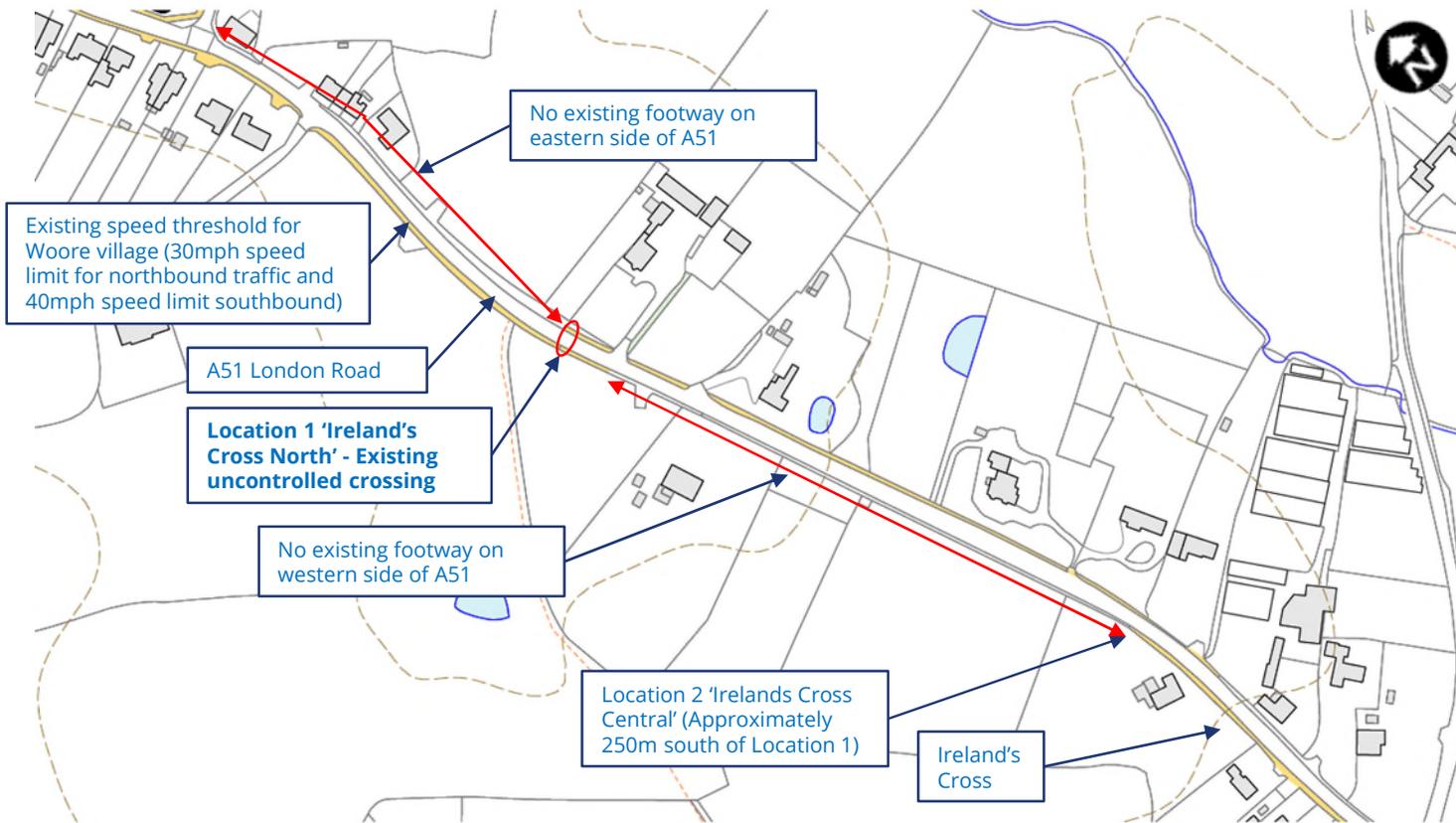
Woore Parish Council

Assessment of potential improvements to pedestrian crossing locations south of Woore

Overview of crossing locations under consideration



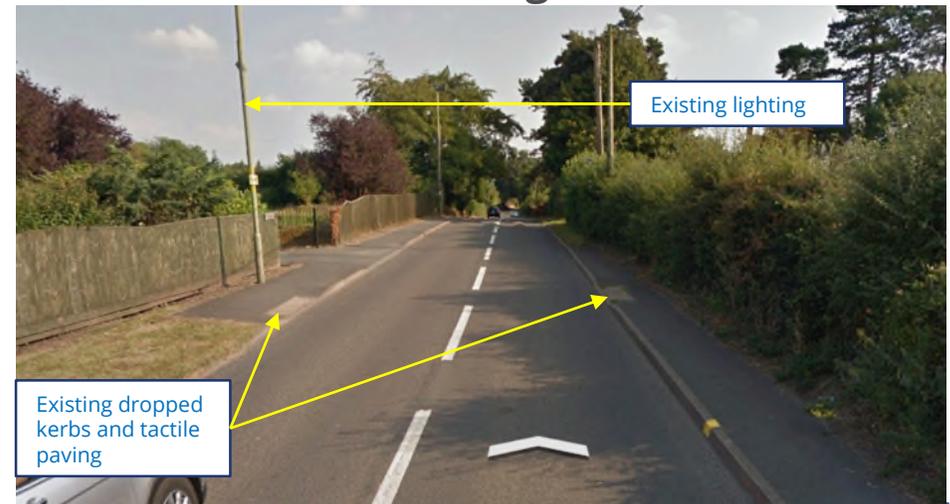
Location 1 Ireland's Cross North – Existing crossing



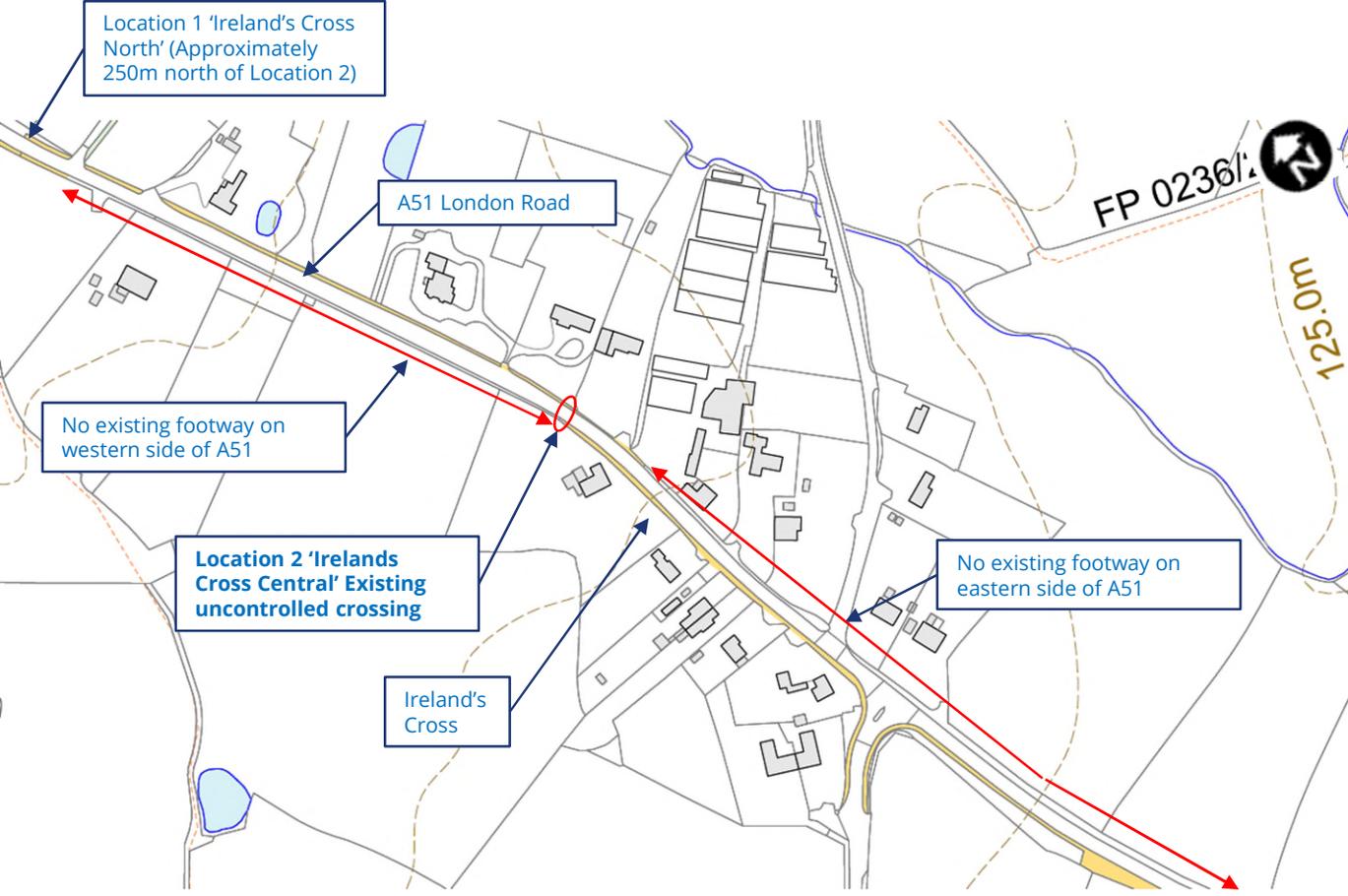
View looking North



View looking South



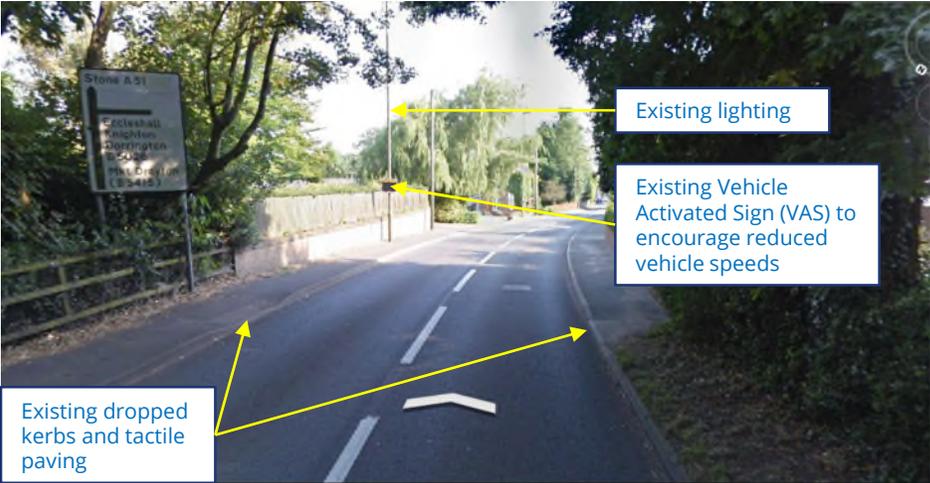
Location 2 Ireland's Cross Central – Existing crossing



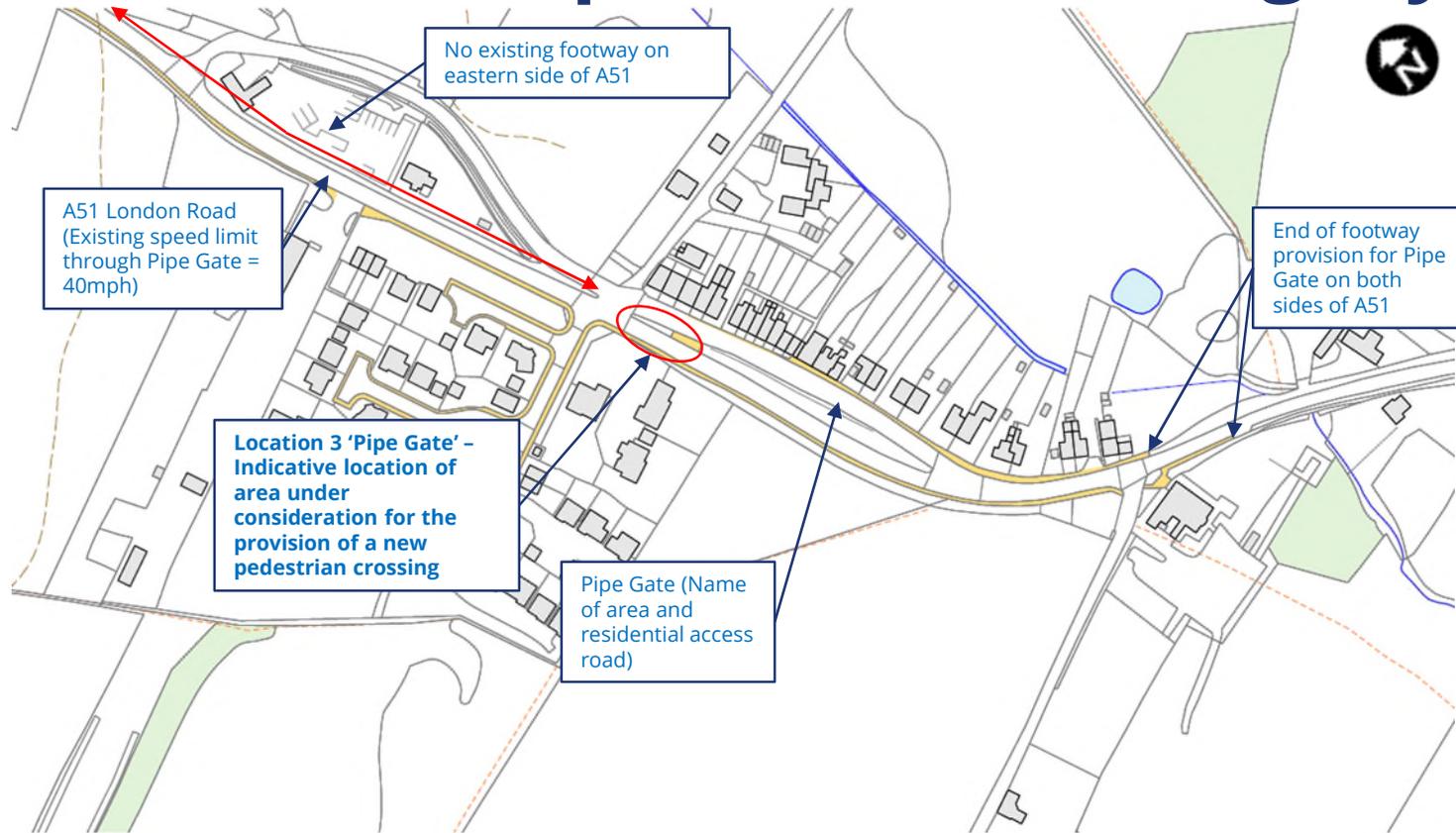
View looking North



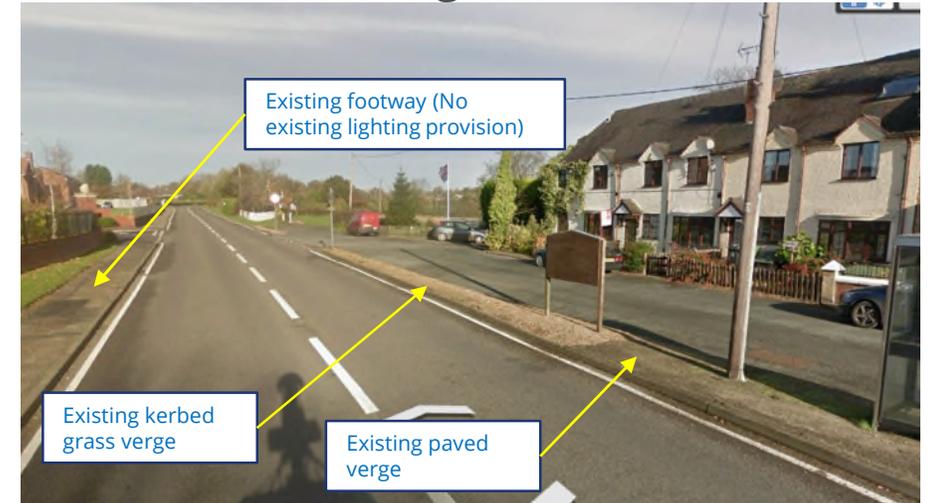
View looking South



Location 3 Pipe Gate - Existing layout



View looking North on A51



View looking South on A51



View looking South on Pipe Gate



Transport Surveys

Traffic Surveys

- Traffic surveys in the vicinity of all three crossings show:
 - 2016 AADT volume of approximately 6,500 vehicles per day
 - 2023 AADT baseline + (HS2 HGV construction traffic volume in peak month) of approximately 7400 vehicles per day
 - March 2016 traffic surveys show that during the day (07:00-19:00) the average gap between vehicles is approximately 8 seconds. During the peak hour the gap time reduces to approximately 5 seconds. Therefore, typically throughout the day there is sufficient gap time between vehicles to cross the A51 London Road.

Pedestrian surveys

- We have not surveyed pedestrian demand data for each crossing. Therefore the following table provides a summary of the proximity of potential pedestrian demand generators to each crossing location.

Other considerations

Potential generator of demand	Location1	Location 2	Location 3
Distance to Primary School	500 m	750 m	1.5 km
Walk time to primary school	6 minutes	9 minutes	18 minutes
Distance to centre of Woore village	650 m	900 m	1.7 km
Walk time to centre of Woore village	8 minutes	11 minutes	20 minutes
Nearest local convenience	Woore village	Woore Village	Chetwood Arms PH (250m/3mins)

The Table shows that:

- Location 1 and 2 are within a reasonable walking distance of Woore village and its primary school.
- Location 3 is not within a reasonable walking distance of Woore village and the school.
- The nearest local facility to Location 3 is the Chetwood Arms Public House which is well within walking distance.

Notes:

- All times are rounded to the nearest minute.
- All distances rounded to nearest 50 metres for < 1km and 100m for > 1km.
- Walk speed assumed to be 5kph

Traffic Incident Data

A UK-wide accident data source 'Crashmap' shows that for the last 5 years* there has been one recorded traffic incident along the section of the A51 between Pipe Gate and the southern entrance to Woore village. This comprised a serious two vehicle incident at Ireland's cross that took place in 2015.

The data indicates that there are no incident clusters on this section of the A51.

* Based on latest available data which covers the five year period 2015-19

Potential measures

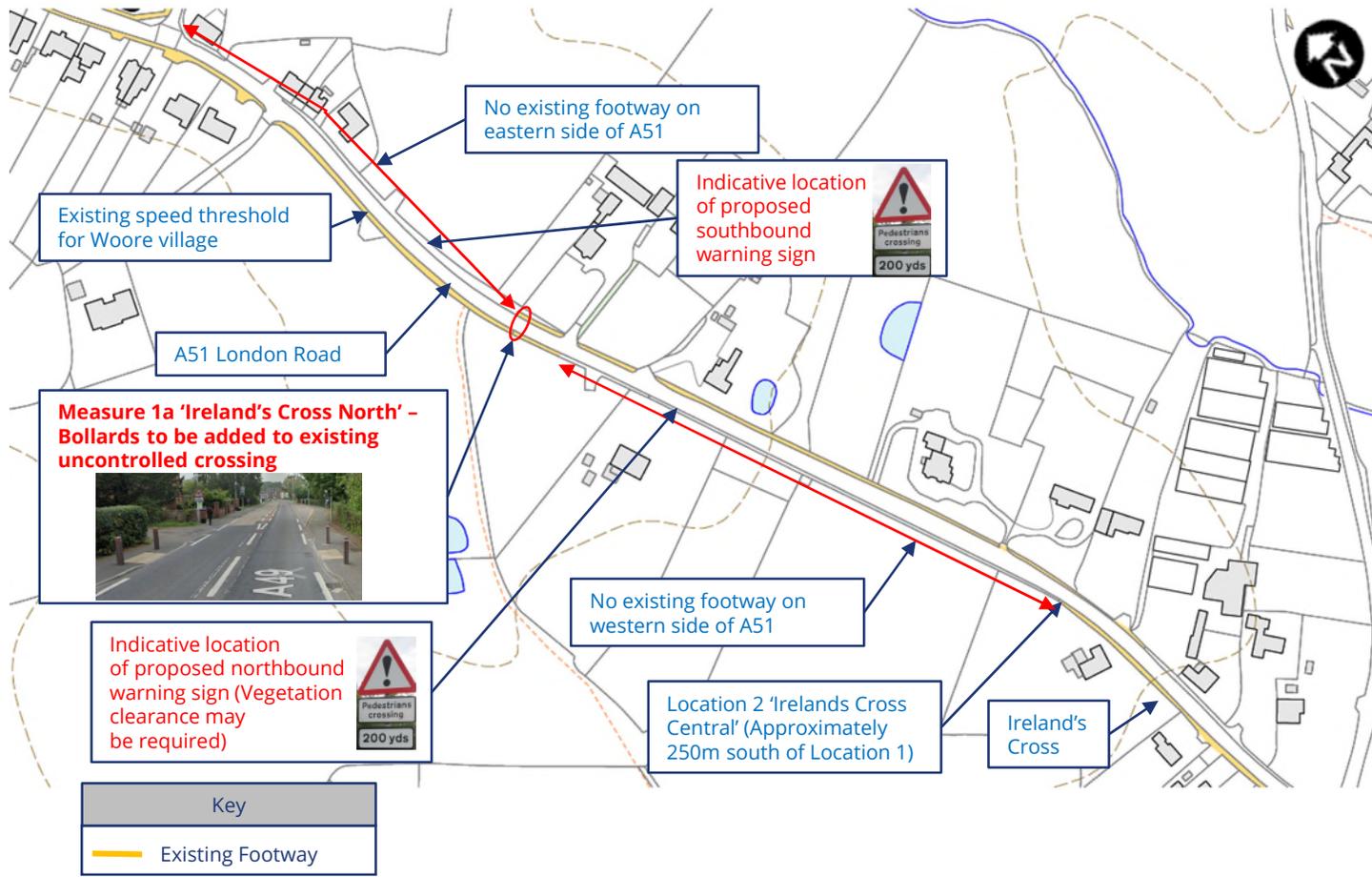
Uncontrolled crossings

- DMRB TA 91/05 states that informal at-grade crossings are normally appropriate on single carriageways with traffic flows below 8,000 AADT as is the case for A51 London Road.
- Improvements to existing uncontrolled crossings that could be considered include additional signage, reflective bollards, road marking and/or coloured surfacing to increase driver awareness of the crossings.
- Alternative measures such as kerb build outs and refuge islands are not considered appropriate due to existing site constraints and road character.

Controlled crossings

- Alternatively zebra crossings or signal controlled puffin crossings could also be considered. The potential benefits and dis-benefits of these options are outlined in the subsequent slides.

Measure 1a Ireland's Cross North Uncontrolled Crossing Improvements



Potential Features

- Advanced warning signage
- Reflective bollards

Note: Road traffic would continue to have priority at the crossing at all times

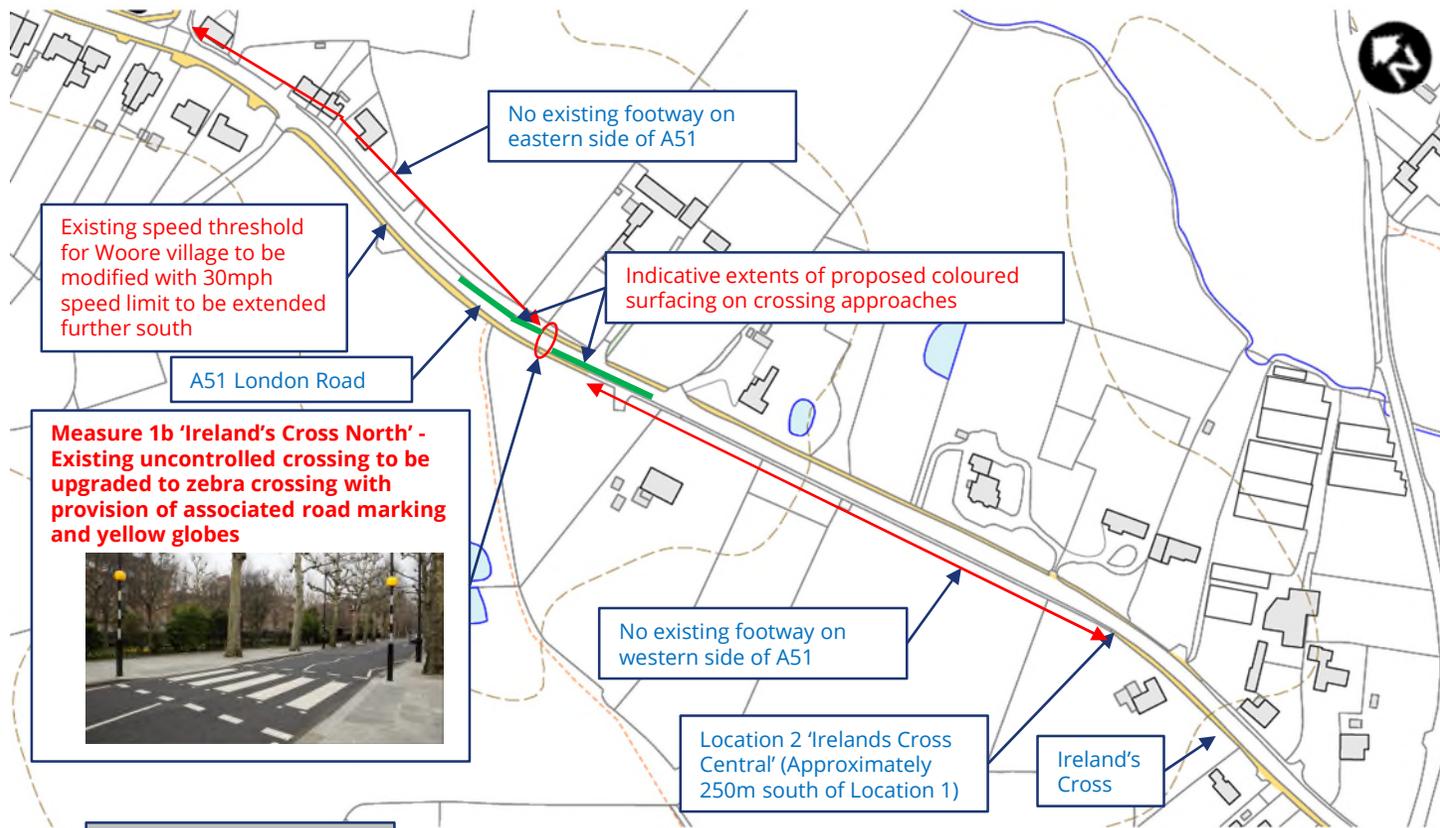
Key Potential Benefits

- Increased driver awareness of crossing location
- Minimised impact on the heritage characteristics of the area

Key Potential Dis-Benefits

- Reflective bollards introduce a new hazard for vehicles and reduce effective width of footway for pedestrians
- Additional signage if combined with other measures at nearby locations may be considered to lead to provision of too much information to drivers over a short distance

Measure 1b Ireland's Cross North Zebra Crossing



Potential Features

- Zebra crossing road markings and yellow globes (Pedestrians would have priority over road vehicles when crossing)
- Speed limit reduction to 30mph
- Coloured surfacing on crossing approaches

Key Potential Benefits

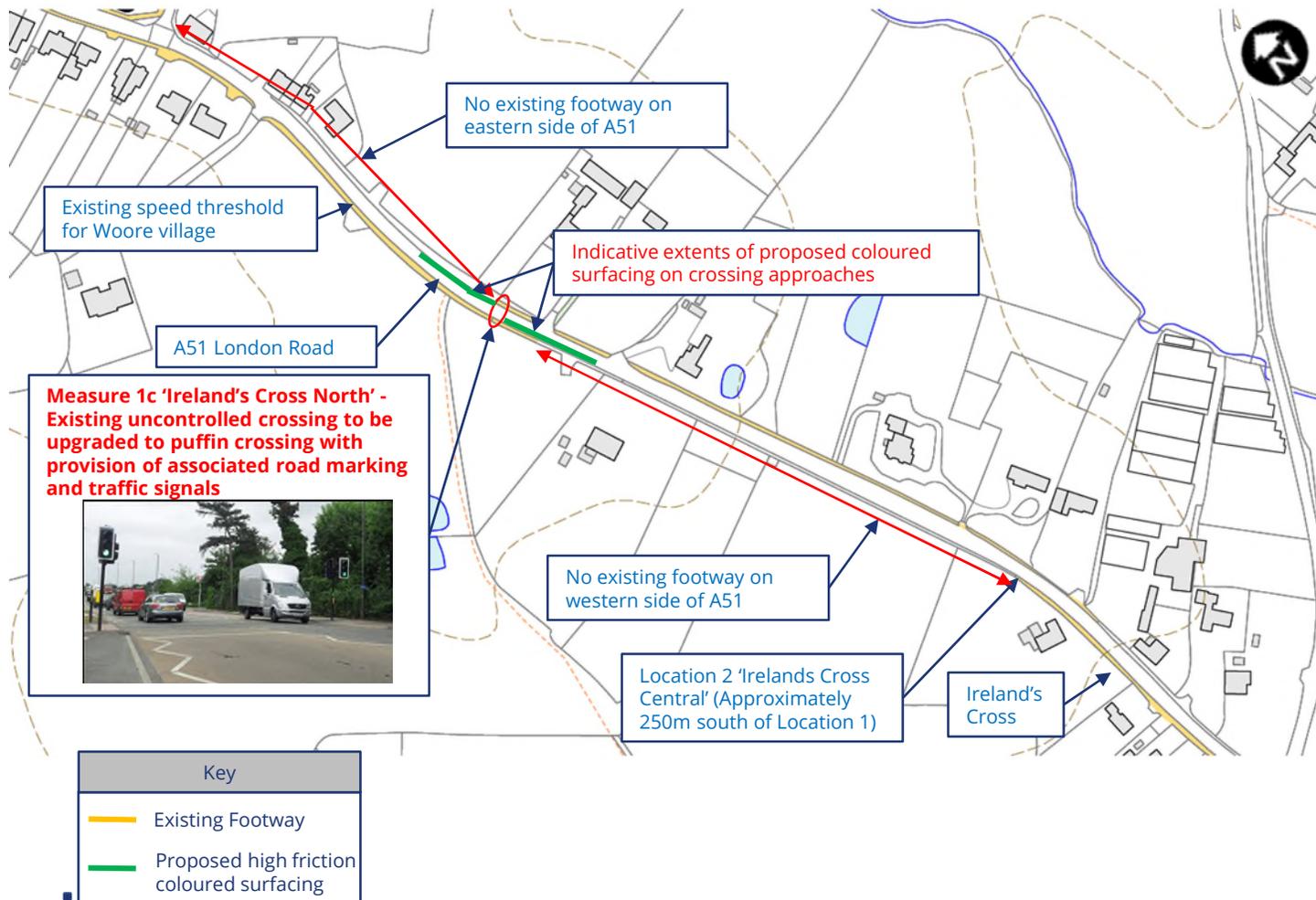
- Increased driver awareness of crossing location

Key Potential Dis-Benefits

- With assumed low pedestrian crossing volumes, drivers may become habituated to not needing to stop at the crossing which introduces safety issues.
- Enforcement of reduced speed limit may be challenging given rural character of the road.
- Provision of multiple additional controlled crossings along a short stretch of the A51 is unlikely to be supported by the local highway authority.
- Measure may have a negative impact on the heritage characteristics of the area.

Key	
	Existing Footway
	Proposed high friction coloured surfacing

Measure 1c Ireland's Cross North Puffin Crossing



Potential Features

- Puffin crossing road markings and traffic signals (Pedestrians would have priority over road vehicles when pedestrian phase of traffic signals is activated)
- Coloured surfacing on crossing approaches

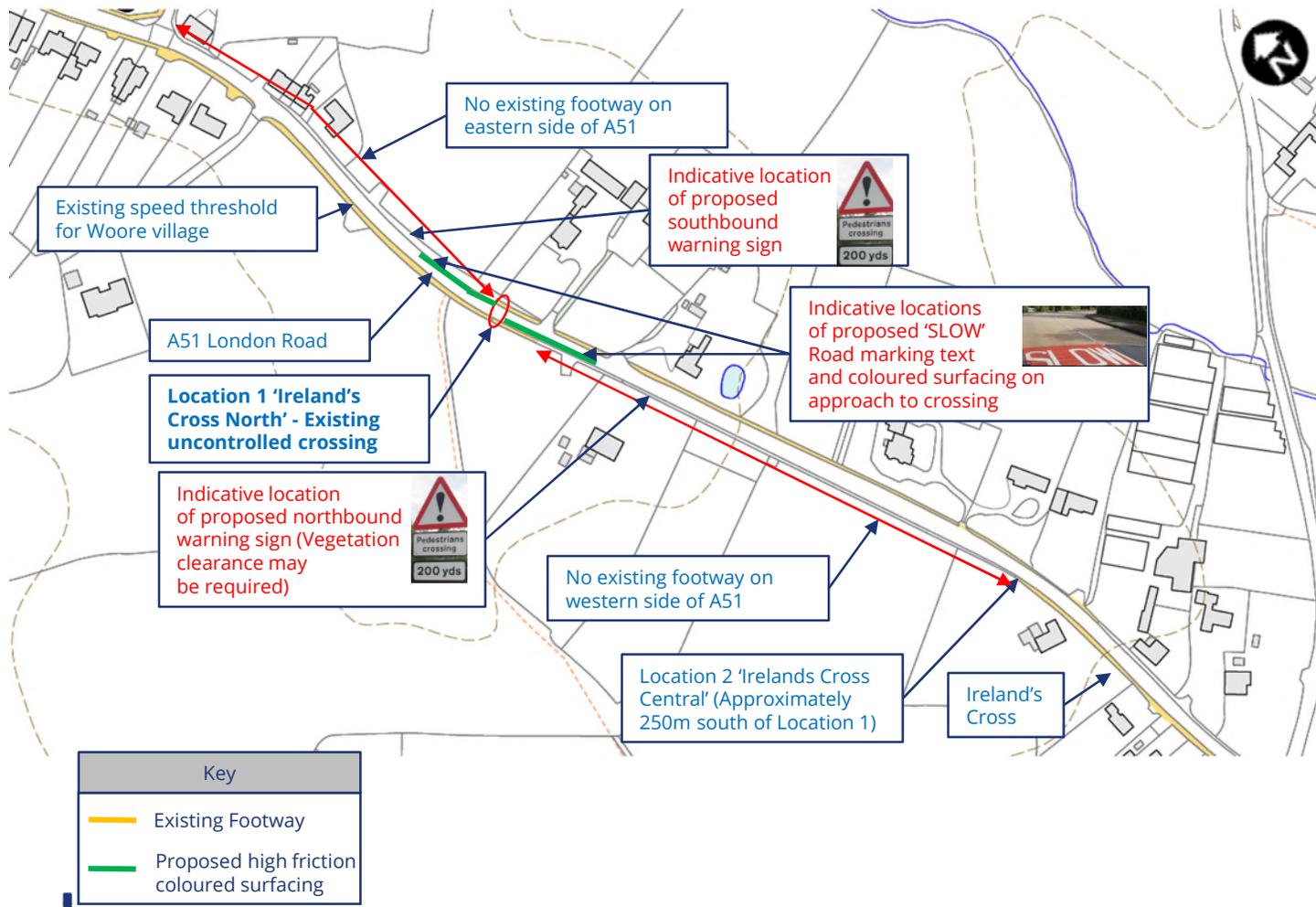
Key Potential Benefits

- Increased driver awareness of crossing location

Key Potential Dis-Benefits

- With assumed low pedestrian crossing volumes, drivers may become habituated to not needing to stop at the crossing which introduces safety issues.
- Provision of multiple additional controlled crossings along a short stretch of the A51 is unlikely to be supported by the local highway authority.
- Measure may have a negative impact on the heritage characteristics of the area.

Measure 1d Ireland's Cross North Alternative Uncontrolled Crossing Improvements



Potential Features

- Advanced warning signage
- Coloured surfacing on approach to crossing
- "SLOW" Road marking text

Note: Road traffic would continue to have priority at the crossing at all times

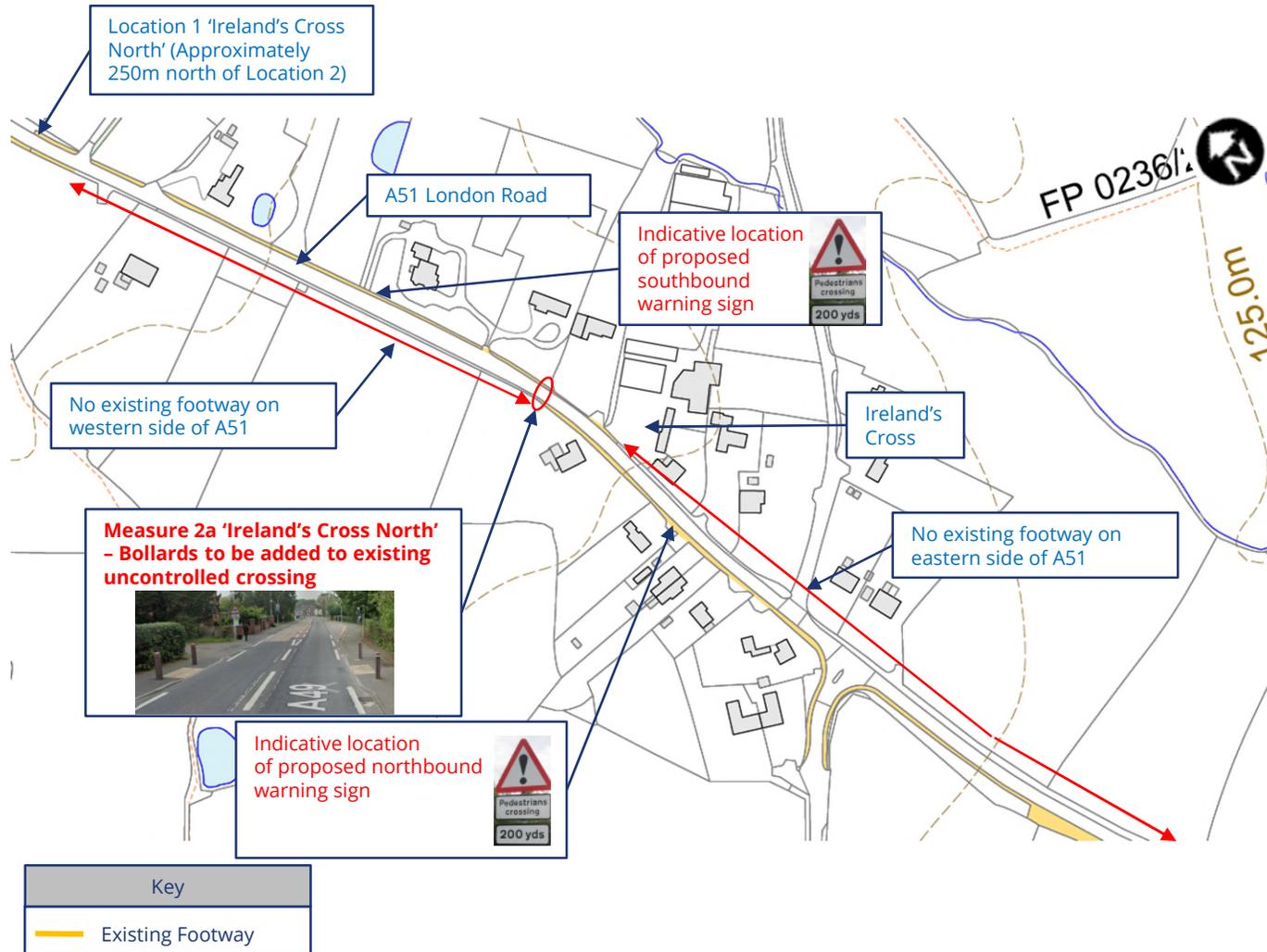
Key Potential Benefits

- Increased driver awareness of crossing location
- Minimised impact on the heritage characteristics of the area

Key Potential Dis-Benefits

- Additional signage and road markings if combined with other measures at nearby locations may be considered to lead to provision of too much information to drivers over a short distance

Measure 2a Ireland's Cross Central Uncontrolled Crossing Improvements



Potential Features

- Advanced warning signage
- Reflective bollards

Note: Road traffic would continue to have priority at the crossing at all times

Key Potential Benefits

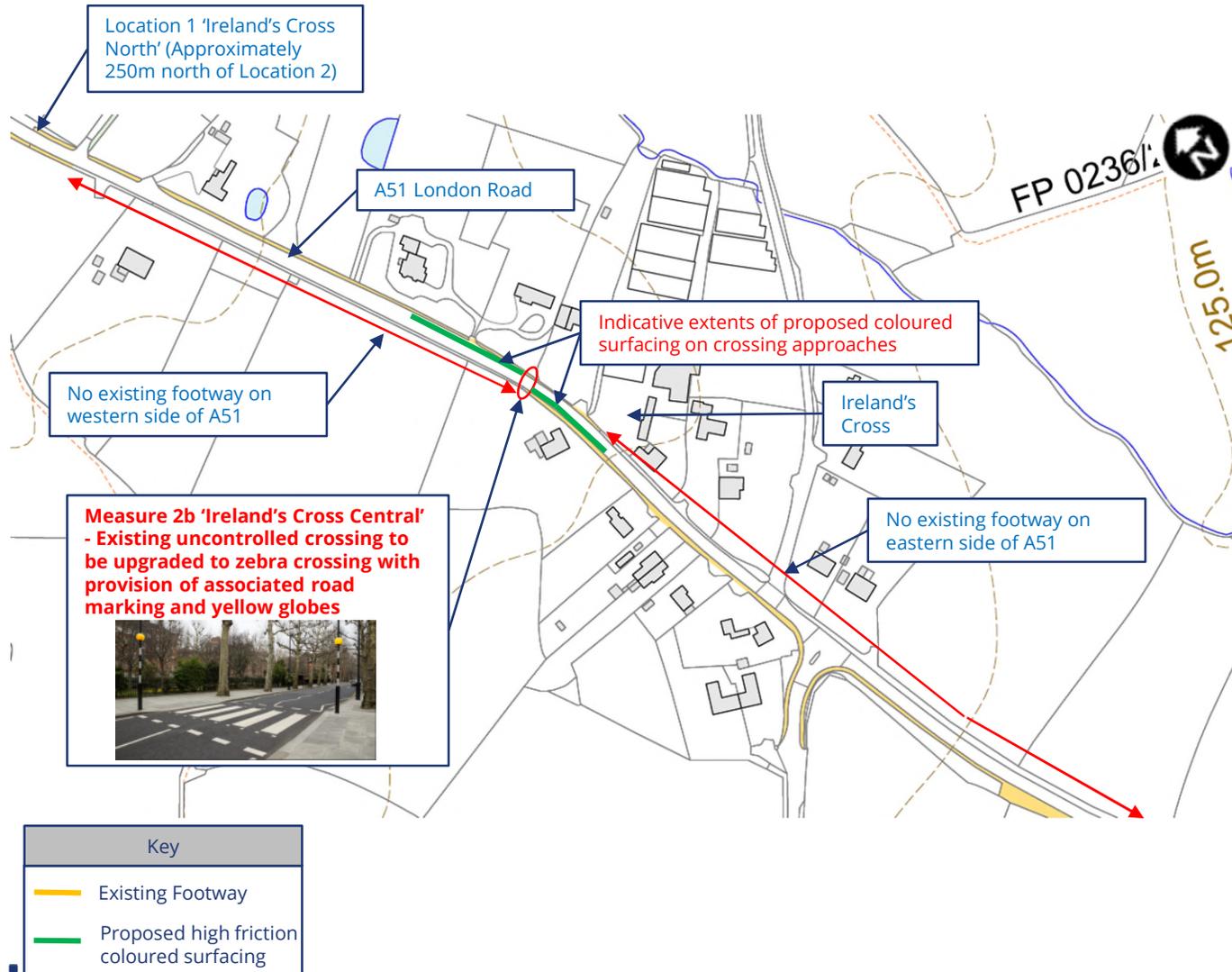
- Increased driver awareness of crossing location
- Minimised impact on the heritage characteristics of the area

Key Potential Dis-Benefits

- Reflective bollards introduce a new hazard for vehicles and reduce effective width of footway for pedestrians.
- A departure from standards may be required for the reduced effective footway width brought about by the bollard provision.
- Additional signage if combined with other measures at nearby locations may be considered to lead to provision of too much information to drivers over a short distance

Note: Ongoing routine maintenance by the Local Highway Authority of existing vegetation in the western verge of the A51 to the north of the existing crossing would be required to maximise visibility to/from the crossing.

Measure 2b Ireland's Cross Central Zebra Crossing



Potential Features

- Zebra crossing road markings and yellow globes (Pedestrians would have priority over road vehicles when crossing)
- Speed limit reduction to 30mph
- Coloured surfacing on crossing approaches

Key Potential Benefits

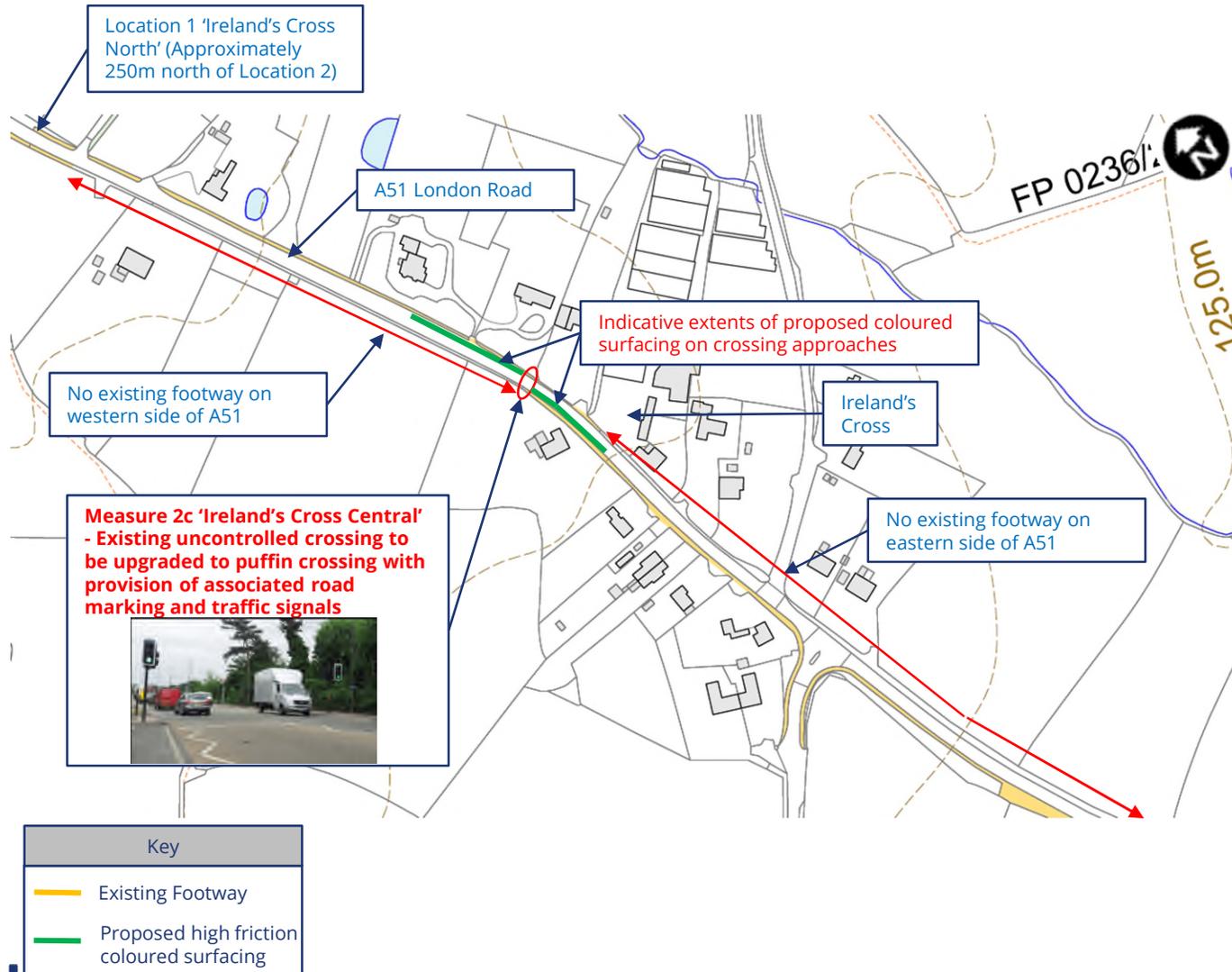
- Increased driver awareness of crossing location

Key Potential Dis-Benefits

- With assumed low pedestrian crossing volumes, drivers may become habituated to not needing to stop at the crossing which introduces safety issues.
- Enforcement of reduced speed limit may be challenging given rural character of the road.
- Provision of multiple additional controlled crossings along a short stretch of the A51 is unlikely to be supported by the local highway authority.
- A departure from standards may be required for the reduced effective footway width brought about by the yellow globe provision.
- Measure may have a negative impact on the heritage characteristics of the area.

Note: Ongoing routine maintenance by the Local Highway Authority of existing vegetation in the western verge of the A51 to the north of the existing crossing would be required to maximise visibility to/from the crossing.

Measure 2c Ireland's Cross Central Puffin Crossing



Potential Features

- Puffin crossing road markings and traffic signals (Pedestrians would have priority over road vehicles when pedestrian phase of traffic signals is activated)
- Coloured surfacing on crossing approaches

Key Potential Benefits

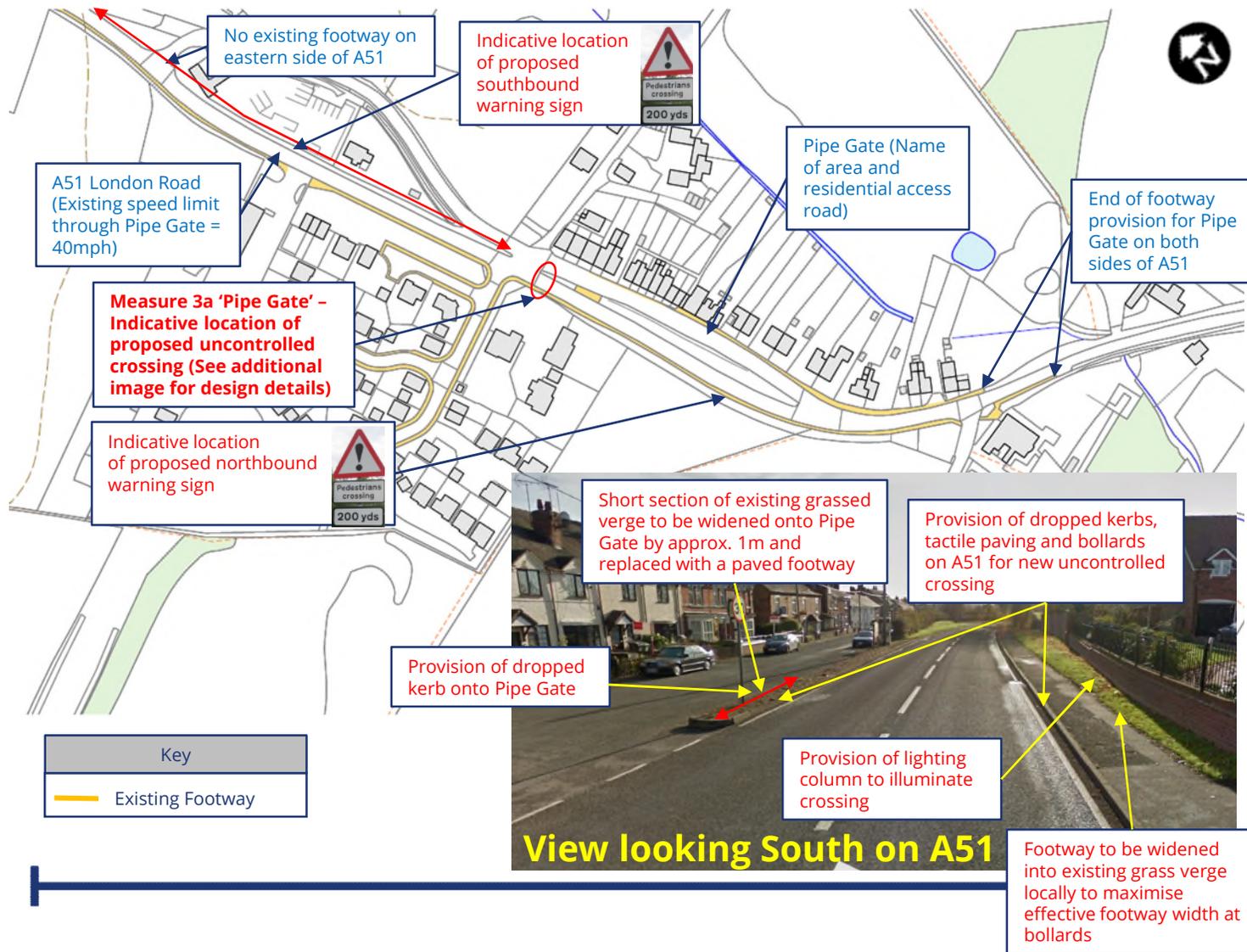
- Increased driver awareness of crossing location

Key Potential Dis-Benefits

- With assumed low pedestrian crossing volumes, drivers may become habituated to not needing to stop at the crossing which introduces safety issues.
- Provision of multiple additional controlled crossings along a short stretch of the A51 is unlikely to be supported by the local highway authority.
- A departure from standards may be required for the reduced effective footway width brought about by traffic signal provision.
- Measure may have a negative impact on the heritage characteristics of the area.

Note: Ongoing routine maintenance by the Local Highway Authority of existing vegetation in the western verge of the A51 to the north of the existing crossing would be required to maximise visibility to/from the crossing.

Measure 3a Pipe Gate Uncontrolled Crossing



Potential Features

- New uncontrolled crossing on A51. Crossing positioned to maximise visibility to/from northbound traffic coming from sharp bend to the south.
- Footway modifications including provision of short section of new footway on eastern side of A51 along with new dropped kerbs and tactile paving.
- Advanced warning signage
- Reflective bollards
- Lighting provision

Note: Road traffic would continue to have priority at the crossing at all times

Key Potential Benefits

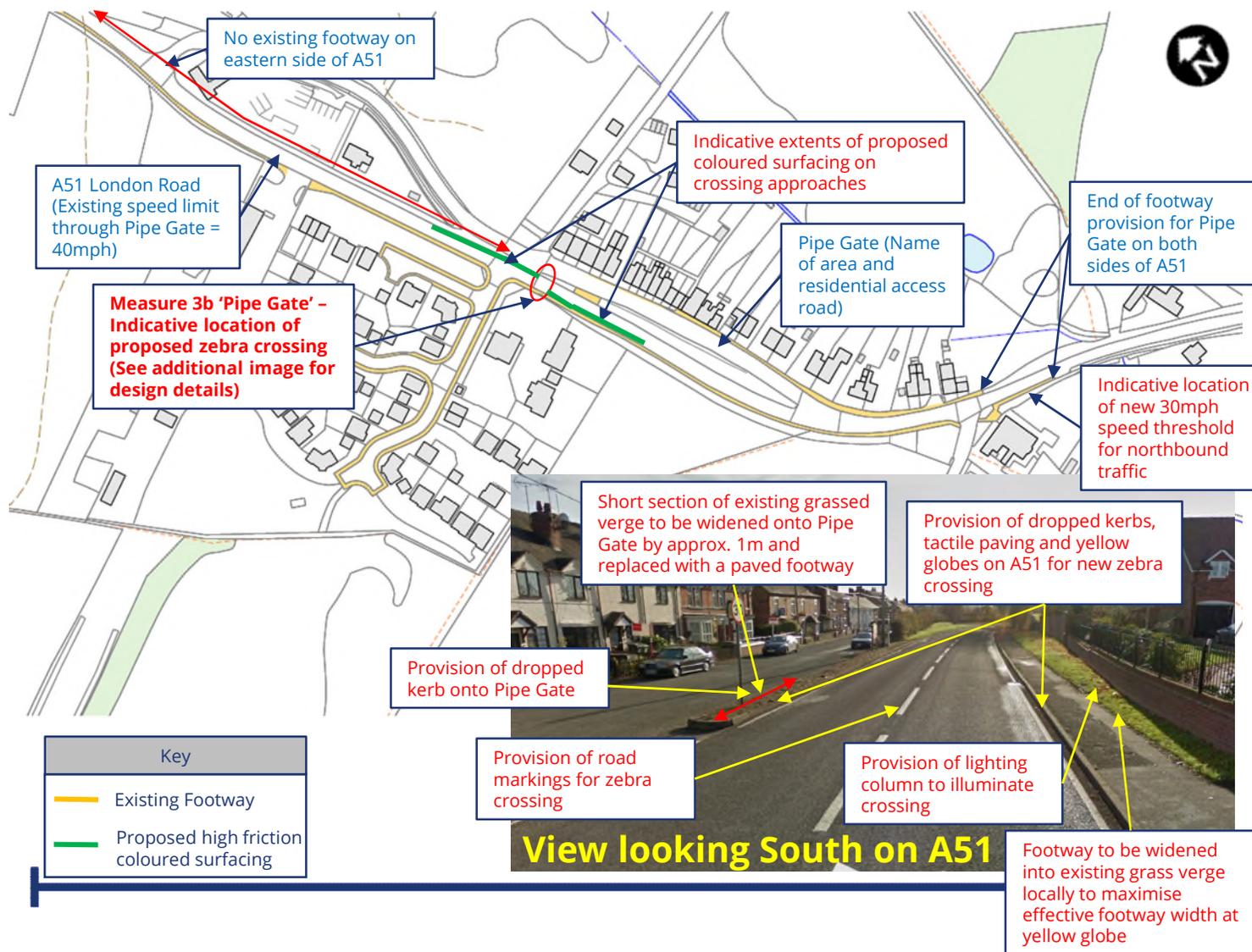
- Provision of a new dedicated crossing place to/from eastern side of Pipe Gate would provide safety benefits for pedestrians and improve footway accessibility for disabled users.
- Increased driver awareness of pedestrians crossing
- Minimised impact on the heritage characteristics of the area

Key Potential Dis-Benefits

- Reflective bollards introduce a new hazard for vehicles
- Additional signage if combined with other measures at nearby locations may be considered to lead to provision of too much information to drivers over a short distance

Note: No existing formal footway on eastern side of proposed crossing on Pipe Gate Residential Access Road.

Measure 3b Pipe Gate Zebra Crossing



Potential Features

- New zebra crossing with associated road markings and yellow globes. Crossing positioned to maximise visibility to/from northbound traffic coming from sharp bend to the south. (Pedestrians would have priority over road vehicles when crossing)
- Footway modifications including provision of short section of new footway on eastern side of A51 along with new dropped kerbs and tactile paving.
- Speed limit reduction to 30mph
- Coloured surfacing on crossing approaches

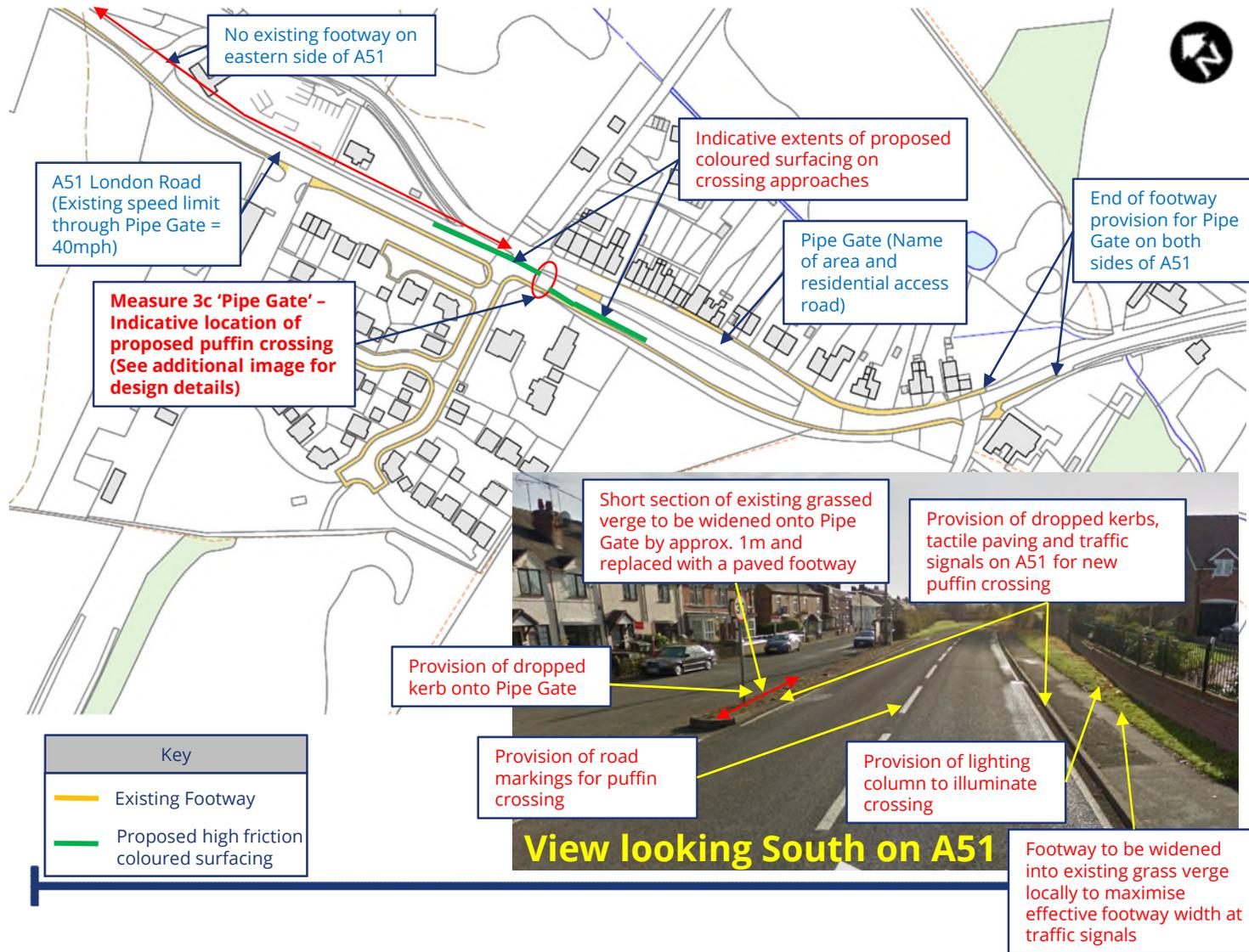
Key Potential Benefits

- Provision of a new dedicated crossing place to/from eastern side of Pipe Gate would provide safety benefits for pedestrians and improve footway accessibility for disabled users.
- Increased driver awareness of pedestrians crossing at this location.

Key Potential Dis-Benefits

- With assumed low pedestrian crossing volumes, drivers may become habituated to not needing to stop at the crossing which introduces safety issues.
- Enforcement of reduced speed limit may be challenging given rural character of the road.
- Provision of multiple additional controlled crossings along a short stretch of the A51 is unlikely to be supported by the local highway authority.
- Measure may have a negative impact on the heritage characteristics of the area.

Measure 3c Pipe Gate Puffin Crossing



Potential Features

- New puffin crossing road markings and traffic signals. Crossing positioned to maximise visibility to/from northbound traffic coming from sharp bend to the south. (Pedestrians would have priority over road vehicles when pedestrian phase of traffic signals is activated)
- Footway modifications including provision of short section of new footway on eastern side of A51 along with new dropped kerbs and tactile paving.
- Coloured surfacing on crossing approaches

Key Potential Benefits

- Provision of a new dedicated crossing place to/from eastern side of Pipe Gate would provide safety benefits for pedestrians and improve footway accessibility for disabled users.
- Increased driver awareness of pedestrians crossing at this location.

Key Potential Dis-Benefits

- With assumed low pedestrian crossing volumes, drivers may become habituated to not needing to stop at the crossing which introduces safety issues.
- Provision of multiple additional controlled crossings along a short stretch of the A51 is unlikely to be supported by the local highway authority.
- Measure may have a negative impact on the heritage characteristics of the area.

Summary of assessment of potential measures at Location 1

Measure 1a - Ireland's Cross North Uncontrolled Crossing Improvements (Preferred Measure)

- This measure would increase driver awareness of the existing uncontrolled crossing at this location with a minimised impact on the heritage characteristics of the area. If this option were taken forward the signage provision could potentially be reduced by having a single pair of signs cover locations 1 and 2. This measure is considered more likely to be supported by the Local Highway Authority than Measures 1b, 1c or 1d. It should be noted that DMRB TA 91/05 states that informal at-grade crossings such as this are considered normally appropriate on single carriageways with traffic flows below 8,000 AADT as is the case for A51 London Road.

Measure 1b - Ireland's Cross North Zebra Crossing

- Overall this option is not considered to be an appropriate measure at this location. Safety concerns include drivers becoming habituated to not needing to stop at this location due to low pedestrian numbers and challenges around the enforcement of a 30mph speed limit. A zebra crossing would also have an urbanising effect on the area. It is considered unlikely that this measure would be supported by the Local Highway Authority.
- The crossing is located on a rural road and not in the vicinity of local conveniences i.e. shops and or other generators of pedestrian demand. Therefore we would expect daily pedestrian crossing demand to be generally low. So whilst a zebra or controlled crossing might provide greater priority to pedestrians the measure is not considered proportionate to local needs.

Measure 1c - Ireland's Cross North Puffin Crossing

- This measure was not put forward as the preferred option for reasons including: (i) The potential safety risks associated with drivers becoming habituated to not needing to stop at the crossing; (ii) The urbanising effect of this measure; and (iii) The crossing is located on a rural road and not in the vicinity of local conveniences i.e. shops and or other generators of pedestrian demand. Therefore we would expect daily pedestrian crossing demand to be generally low. So whilst a signal controlled crossing might provide greater priority to pedestrians the measure is not considered proportionate to local needs.

Measure 1d - Ireland's Cross North Alternative Uncontrolled Crossing Improvements

- This measure would increase driver awareness of the existing uncontrolled crossing at this location with a minimised impact on the heritage characteristics of the area. If this option were taken forward the signage provision could potentially be reduced by having a single pair of signs cover locations 1 and 2. This measure was not put forward as the preferred option on the basis that coloured surfacing and "Slow" road marking text is not typically used to highlight the presence of an uncontrolled crossing. Measure 1a is considered more likely to be supported by the Local Highway Authority.

Summary of assessment of potential measures at Location 2

Measure 2a - Ireland's Cross Central Uncontrolled Crossing Improvements (Preferred Measure)

- This measure would increase driver awareness of the existing uncontrolled crossing at this location with a minimised impact on the heritage characteristics of the area. If this option were taken forward the signage provision could potentially be reduced by having a single pair of signs cover locations 1 and 2. This measure is considered more likely to be supported by the Local Highway Authority than Measures 1b, 1c or 1d. It should be noted that DMRB TA 91/05 states that informal at-grade crossings such as this are considered normally appropriate on single carriageways with traffic flows below 8,000 AADT as is the case for A51 London Road.

Measure 2b - Ireland's Cross Central Zebra Crossing

- Overall this option is not considered to be an appropriate measure at this location. Safety concerns include drivers becoming habituated to not needing to stop at this location due to low pedestrian numbers and challenges around the enforcement of a 30mph speed limit. A zebra crossing would also have an urbanising effect on the area. It is considered unlikely that this measure would be supported by the Local Highway Authority.
- The crossing is located on a rural road and not in the vicinity of local conveniences i.e. shops and or other generators of pedestrian demand. Therefore we would expect daily pedestrian crossing demand to be generally low. So whilst a zebra crossing might provide greater priority to pedestrians the measure is not considered proportionate to local needs.

Measure 2c - Ireland's Cross Central Puffin Crossing

- This measure was not put forward as the preferred option for reasons including: (i) The potential safety risks associated with drivers becoming habituated to not needing to stop at the crossing; (ii) The urbanising effect of this measure; and (iii) The crossing is located on a rural road and not in the vicinity of local conveniences i.e. shops and or other generators of pedestrian demand. Therefore we would expect daily pedestrian crossing demand to be generally low. So whilst a signal controlled crossing might provide greater priority to pedestrians the measure is not considered proportionate to local needs.

Summary of assessment of potential measures at Location 3

Measure 3a - Pipe Gate Uncontrolled Crossing (Preferred Measure)

- This measure would increase driver awareness of the existing uncontrolled crossing at this location with a minimised impact on the heritage characteristics of the area. The provision of dropped kerbs and tactile paving would also improve footway accessibility. This measure is considered more likely to be supported by the Local Highway Authority than Measures 3b or 3c. It should be noted that DMRB TA 91/05 states that informal at-grade crossings such as this are considered normally appropriate on single carriageways with traffic flows below 8,000 AADT as is the case for A51 London Road.

Measure 3b - Pipe Gate Zebra Crossing

- Overall this option is not considered to be an appropriate measure at this location. Safety concerns include drivers becoming habituated to not needing to stop at this location due to low pedestrian numbers and challenges around the enforcement of a 30mph speed limit. A zebra crossing would also have an urbanising effect on the area. It is considered unlikely that this measure would be supported by the Local Highway Authority.
- The crossing is located on a rural road and not in the vicinity of local conveniences i.e. shops and or other generators of pedestrian demand. Therefore we would expect daily pedestrian crossing demand to be generally low. So whilst a zebra or controlled crossing might provide greater priority to pedestrians the measure is not considered proportionate to local needs.
- The key improvements associated with this option could be achieved with the provision of Measure 3a instead.

Measure 3c - Pipe Gate Puffin Crossing

- This measure was not put forward as the preferred option for reasons including: (i) The potential safety risks associated with drivers becoming habituated to not needing to stop at the crossing; (ii) The urbanising effect of this measure; and (iii) The crossing is located on a rural road and not in the vicinity of local conveniences i.e. shops and or other generators of pedestrian demand. Therefore we would expect daily pedestrian crossing demand to be generally low. So whilst a signal controlled crossing might provide greater priority to pedestrians the measure is not considered proportionate to local needs.
- The key improvements associated with this option could be achieved with the provision of Measure 3a instead.