

**West Dunbartonshire Council**

# 20mph Strategy

West Dunbartonshire

241000

**APRIL 2025**





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# 1 CONTEXT

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## Scotland's 20mph vision

- 1.1 The Scottish Government is committed to making streets safer by prioritising pedestrians and cyclists over motor vehicles, encouraging active travel such as walking, wheeling, and cycling for short journeys. A key focus is managing vehicle speeds to reduce road collisions and their severity. Research highlights that a person hit by a vehicle at 30mph is seven times more likely to die than at 20mph. To address this, Scotland aims to implement 20mph speed limits on appropriate roads by 2025, guided by the Scotland's Road Safety Framework to 2030<sup>1</sup>.
- 1.2 The RSF2030 adopts the "Safe System" approach, which recognises human vulnerability and the inevitability of errors but seeks to eliminate deaths or serious injuries. Lowering speed limits aligns with these principles by reducing collision risks, giving drivers more time to react, and minimising the severity of accidents. Traditional speed-setting methods emphasised traffic flow and accident response, while the new approach prioritises safety for vulnerable road users like pedestrians and cyclists.

## Road Assessment Criteria for 20mph Speed Limits

- 1.3 Since June 2022, road authorities in Scotland have been evaluating 30mph roads to determine suitability for a reduced speed limit of 20mph. A consistent set of criteria is applied, considering factors such as proximity to educational institutions, residential or retail density, public facilities, road user composition, and potential community benefits like improved quality of life or air quality. As part of this assessment a number of criteria were identified by Transport Scotland as part of the 20mph Bill as a basis for this assessment<sup>2</sup>.

### Key Assessment Factors:

1. Roads within 100m of educational facilities or public interest areas (e.g. community centres, hospitals, or playparks)
  2. Roads with 20+ residential or retail premises over 400-600m
  3. Publicly frequented buildings or areas that attract vulnerable road users
  4. Conditions that favour active and sustainable travel or enhance the environment and community wellbeing
  5. Local knowledge of community feedback to address anomalies where roads may not align strictly with the criteria but warrant exceptions
- 1.4 While most 30mph roads are presumed to be suitable for a 20mph limit, the legislation and accompanying guidance allows for some to remain at 30mph, especially A and B

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<sup>1</sup> Scotland's Road Safety Framework to 2030, Transport Scotland, 2021

<sup>2</sup> 20mph Speed Limits in Scotland – Implementation Guide, 2021

roads with minimal pedestrian activity or frontage<sup>3</sup>. A minimum length of 400-600m for any 20mph limit (and any gaps between limits) is recommended for consistent implementation.

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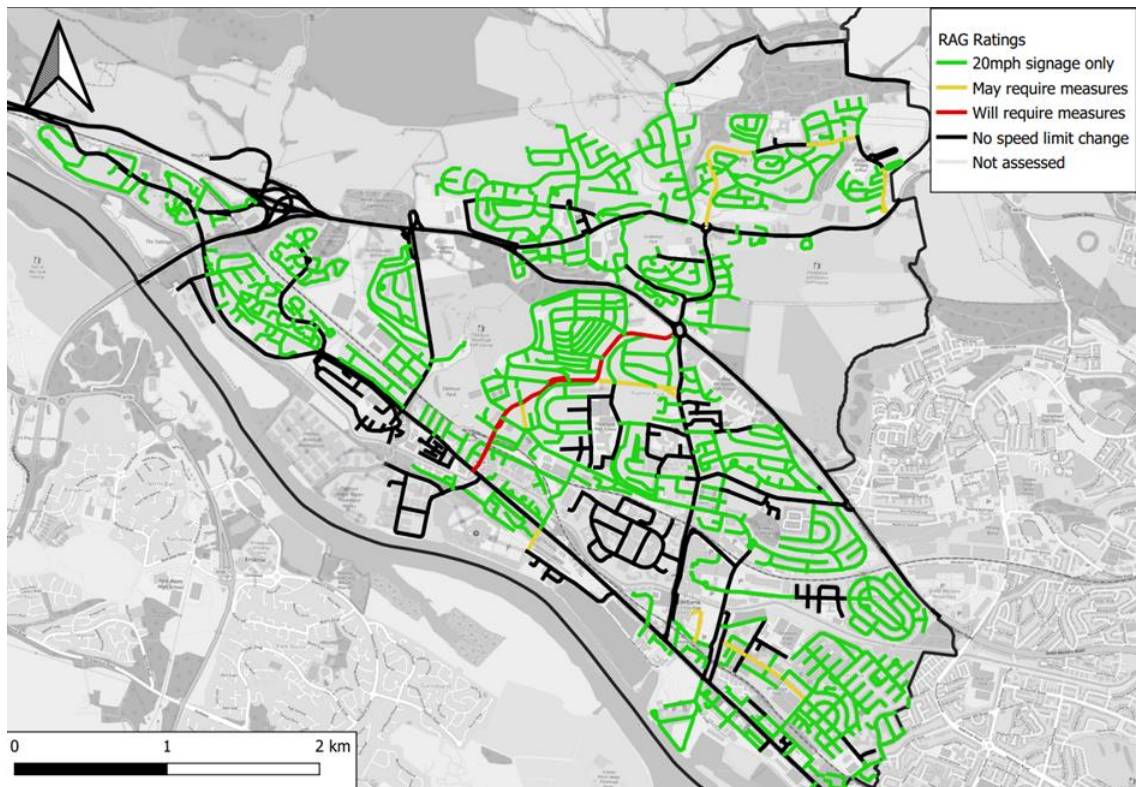
<sup>3</sup> 20mph Speed Limits in Scotland – Implementation Guide, 2021

## 2 ASSESSING AND DEFINING 20MPH ZONES

### Red, Amber, Green (RAG) Rating

- 2.1 The roads within West Dunbartonshire Council have previously been assessed using the above criteria using a red, amber, and green grading system, based on road geometry and the engineering required to transition from the current speed limit to a 20mph limit.
- 2.2 A red score indicates that the road should have a 20mph limit applied but that the road would require additional design intervention or traffic calming measures to make the limit effective. An amber rating indicates that additional measures may be required but that traffic speeds should be monitored after the implementation of any limit, and a green rating indicates that the road is suitable to be a 20mph road and only signage will be needed.
- 2.3 An example of the assessment outcome showing the Clydebank RAG ratings is provided in Figure 2-1. This grading system informed the development of the implementation strategy with green areas likely to be zones where the 20mph limit can be introduced more quickly and efficiently with no requirement for additional infrastructure works and those with Amber and Red routes being zones that may require additional time and consideration to implement.

Figure 2-1 Clydebank RAG Rating



2.4 Based on these RAG scores, a review was made of each major locality within the council area – Alexandria, Clydebank, and Dumbarton – to identify smaller implementation zones.

2.5 In addition to the RAG assessment, the zones were developed to take into account physical boundaries such as major roads, railways, natural boundaries and changes in character e.g. largely residential areas to define these zones which would form the basis of the 20mph rollout.

2.6 The initial proposed zones are as follows:

Alexandria:

- Alexandria Central
- Alexandria North
- Alexandria East
- Balloch
- Bonhill
- Redburn
- Renton

Clydebank:

- Clydebank Waterfront
- Drumry
- Duntocher
- Faifley
- Goldenhill
- Mountblow
- Old Kilpatrick
- Dalmuir
- Whitecrook
- Linnvale
- Kilbowie

Dumbarton:

- Castlehill
- Dumbarton Central
- Kirktonhill
- Bellsmyre


- Silverton
- Highmains
- Townend
- Milton

## 3 ZONE PRIORITISATION CRITERIA

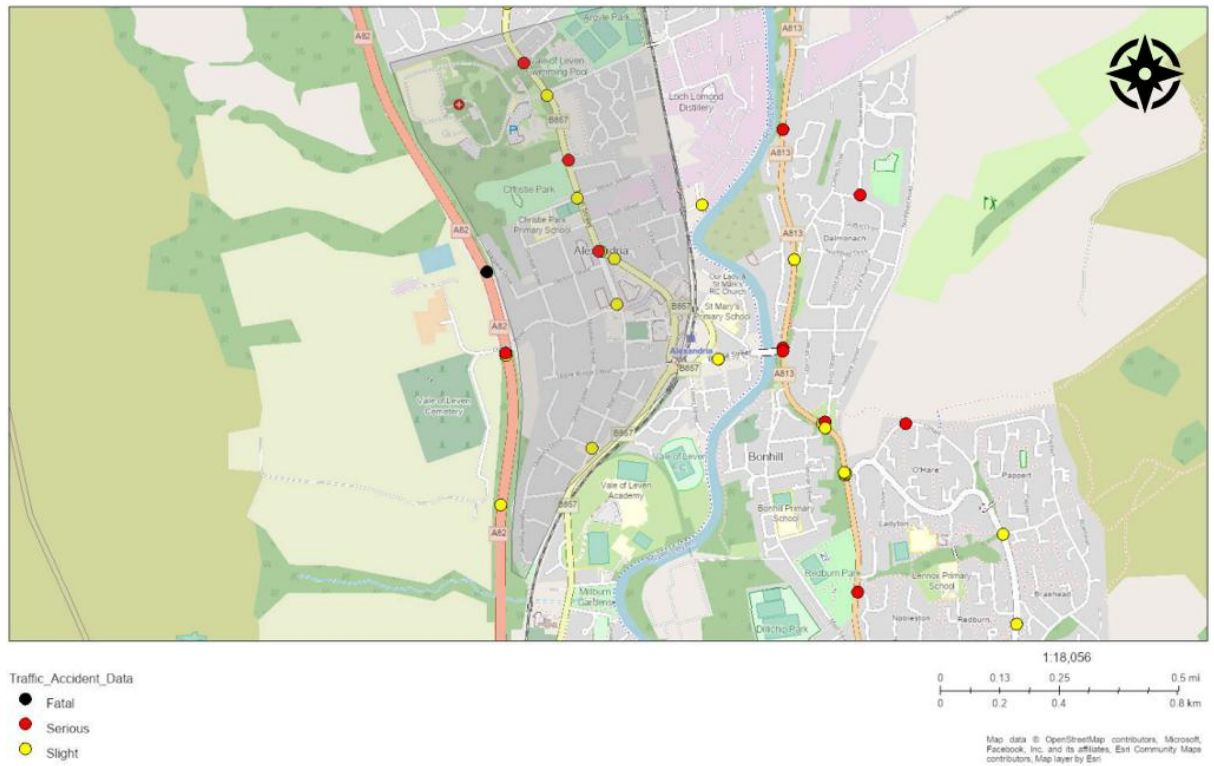
3.1 Having identified proposed zones to allow the phased implementation of 20mph limits across the Council area, it was necessary to consider an approach setting out how the zones would be prioritised. To do this, a multi criteria assessment framework (MCAF) has been developed which will allow a scoring system based on a range of criteria. A score of -3 indicates greater difficulty in implementing a 20mph zone, while a score of +3 signifies higher suitability for introducing a 20mph zone. The proposed criteria are outlined in the following section, drawing on guidance within the Safe System Approach which focusses on the safety for users.

### History of Collisions

**Personal Injury Collisions (PIC) data for the local highway network will be used to examine collision statistics from the most recent 5-year period covering the latest published data, 2018-2022, based on STAT19 data from the Department for Transport. Zones with a higher prevalence or severity of accidents would be assigned higher scores, as these areas would clearly benefit from reduced speeds. Typical examples of the collision statistics mapping is shown in Table 3-1 PIC Accident Data**

3.2  , where yellow locations are slight accidents with no or minor injuries, red are serious accidents with resulting serious injuries, usually requiring hospital treatment, and any black locations indicate those places where a fatality has occurred. The analysis of PIC will also provide details of contributory factors and road conditions. This will help in determining whether there are design issues inherent to the public highway leading to a higher rate of PICs.

**Table 3-1 PIC Accident Data**



## Road Geometry and Engineering

- 3.3 RAG scores, based on the road geometry and the engineering required to implement 20mph speed limits, would also be used as criterion for zone prioritisation. Zones with a higher prevalence of “green” roads were given higher scores as the roll out of 20mph limits is simpler and does not require significant infrastructure, while those with more amber and red roads were scored lower (e.g. all green = +3 score).

## Existing Traffic Speeds and/or Speed Limits

- 3.4 Existing traffic speeds and/or speed limits were assessed using the previous mapping conducted for the initial RAG assessment. Zones with a higher proportion of roads already either limited to 20mph or below, or already with advisory ‘twenty’s plenty’ would be assigned higher scores, as these areas would likely be easier to transition to a 20mph zone compared to roads with speed limits of 30mph or higher.

## Composition of Road Users

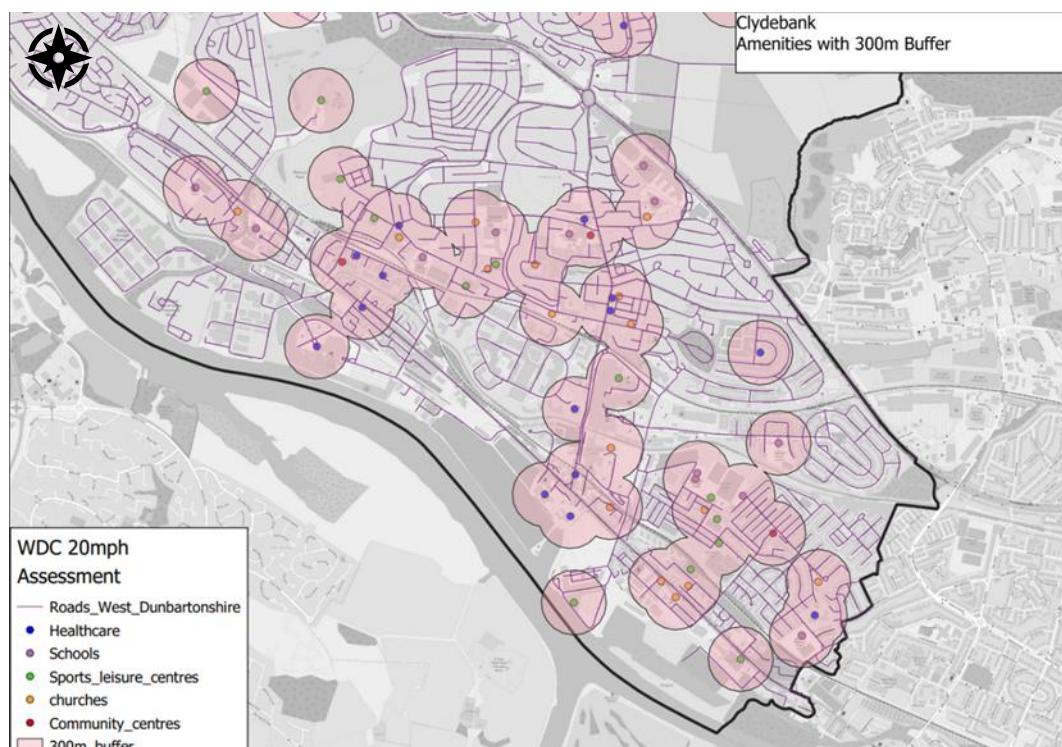
- 3.5 The composition of road users is an important consideration both in terms of the potential numbers of pedestrians likely to be present in an area as well as the type of pedestrians that will be present. The approach to assessing this will be to consider the amenities in each zone. For example, there are likely to be more pedestrians in areas around local

shops or services. Areas with schools, colleges, or health services, and care homes would likely have a greater prevalence of vulnerable road users and as a result would obtain a higher score. Areas which lack amenities and tend to be more vehicular based in terms of transport such as industrial estates were given lower scores. This criterion would be broken down further to examine the following:

*Road Environment, including level of road-side development and possible impacts on residents*

- 3.6 The road environment is linked to the assessment of local amenities and potential presence of pedestrians but also considers issues such as frontage onto roads. This was assessed as part of the buffer zone mapping, which identified key amenities such as healthcare facilities, schools, sports and leisure centres, churches and community centres within each area.
- 3.7 A 300m buffer was applied to highlight roads near these amenities, as shown in the Clydebank example in **Error! Reference source not found.** Zones with a higher concentration of amenities were assigned higher scores, as these areas are likely to have more pedestrians, slower existing vehicle speeds, particularly in zones containing schools.

**Figure 3-1 Clydebank 200M Buffer**



### *Primary and Secondary Schools*

- 3.8 To refine the assessment, amenities were further categorised to distinguish between primary and secondary schools. Zones with multiple primary schools were given higher scores compared to those containing only secondary schools, reflecting the typically greater volume of younger pedestrians in primary school areas.
- 3.9 The Safe Routes to School is an initiative aimed at improving the safety and accessibility of travel routes for children and young people travelling to and from school<sup>4</sup>. The programme seeks to encourage walking, cycling, and other active modes of transport by addressing barriers such as unsafe road conditions. One key approach to achieving this goal is the implementation of 20mph zones, particularly around primary schools and hence this is a further relevant consideration for the 20mph rollout.

### **Active Travel Routes**

- 3.10 Each area is also to be reviewed to map the existing and proposed path and cycling network as a further indicator for the prevalence of pedestrians and cyclists on the road network. Those areas with core paths and dedicated cycle routes will be ranked to have a higher priority for 20mph implementation than other areas.

### **Other Considerations**

- 3.11 There is a well-established link between socio-economic status and risk of being injured in road traffic accidents<sup>5,6,7</sup>, so any increase in risk due to higher traffic speeds disproportionately affects people in those areas with higher levels of deprivation.
- 3.12 The Scottish Index of Multiple Deprivation (SIMD) is a relative measure of deprivation across Scotland, capturing various factors beyond low income, such as limited resources or opportunities. It assesses deprivation across seven domains: income, employment, education, health, access to services, crime, and housing. Data zones are ranked from most to least deprived, with particular attention often given to the 5%, 10% 15% or 20% most deprived zones. The SIMD indices vary significantly across the Council area illustrated in Figure 3-2.

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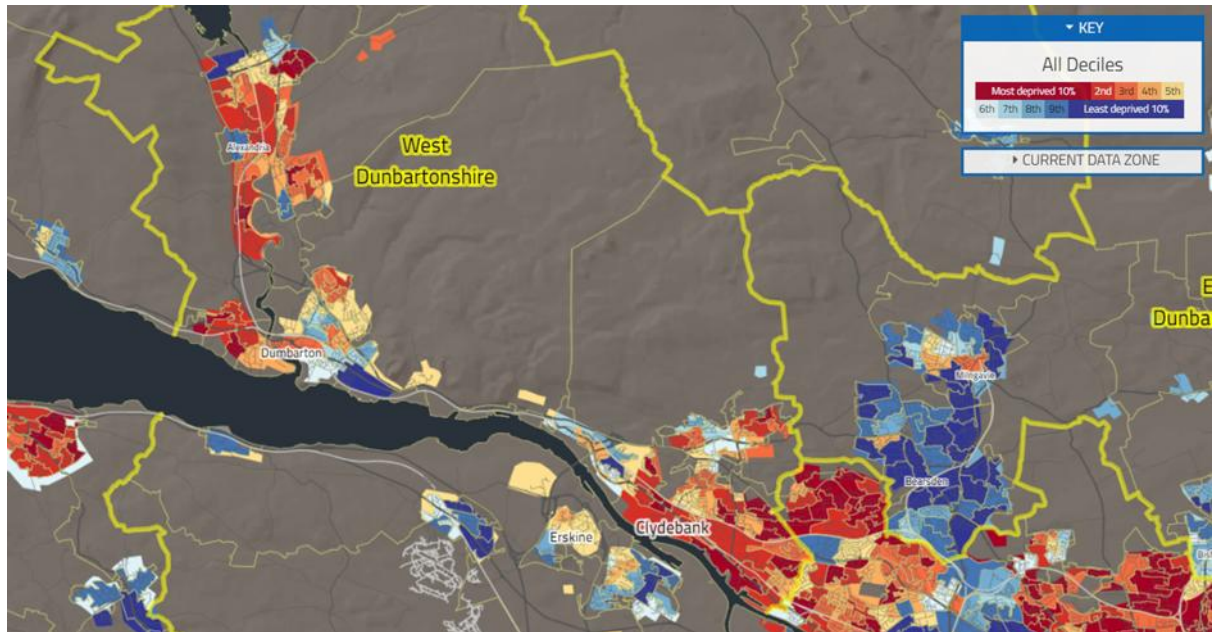
<sup>4</sup> Safe Routes, National Centre for Safe Routes to School, 2024

<sup>5</sup> The Marmot Review, Fair society, healthy lives, Marmot et al, 2010

<sup>6</sup> Developing Safe Systems Road Safety Indicators for the UK, PACTS, with Ageas, October 2018

<sup>7</sup> Circular Roads 4/90, Department for Transport, 1990

Figure 3-2 SIMD West Dunbartonshire



Source: SIMD (2020)

3.13 Whilst it is not proposed that the SIMD be directly incorporated into the official scoring system, it will be an important consideration that the rollout of the 20mph zones addresses this specific issue.

Table 3-2 Summary of Scoring Criteria

<p>History of Collisions</p>	<ul style="list-style-type: none"> <li>• Accident data within the zones was analysed and categorised into three types, slight, severe, and fatal collisions.</li> <li>• A severity weight was assigned to each category, with slight collisions weighted at 20, severe collisions at 30, and fatal collisions at 50</li> <li>• These weights were used to calculate a weighted average for each zone, where a higher score indicates areas with a greater need for traffic calming measures.</li> <li>• The weighted scores ranged from 0 to 3.7 and were divided into brackets of 0.6 to assign a numerical score between -3 and +3.</li> </ul>
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<p>Road Geometry and Engineering</p>	<ul style="list-style-type: none"> <li>• RAG scores, reflecting the road geometry and the engineering required to implement a 20mph speed limit on each road, were applied.</li> <li>• Based on these scores, the percentage coverage of 'Amber' roads in each zone was used to assign a score ranging from -3 to +3.</li> <li>• For example, zones with 0-10% Amber coverage received a score of +3, while zones with 50-60% Amber road coverage received a score of -3, as these zones are more challenging for implementing a 20mph speed limit.</li> </ul>
<p>Traffic Speed Limits</p>	<ul style="list-style-type: none"> <li>• Roads in each zone were assessed to identify speed limits of 15mph, 20mph, '20's plenty', 20 when lights flash', and 30mph.</li> <li>• As all zones included roads with 30mph speed limits, these were excluded from the criteria.</li> <li>• The remaining roads were weighted, with 15mph and 20mph speed limits assigned a higher weight of 40, while '20's plenty' and '20 when lights flash' roads were weighted at 10.</li> <li>• This weighting produced a weighted average with scores ranging from 0 to 0.6, which was divided into 0.15 segments to assign an overall score between -3 and +3.</li> </ul>
<p>Composition of Road Users</p>	<ul style="list-style-type: none"> <li>• Each zone was assessed for the presence of various types of amenities, including community centres, sports and leisure centres, hospitals, healthcare centres, care homes, churches, primary schools and secondary schools</li> <li>• All amenities were assigned a weight of 10, except for primary schools, which were weighted at 30 to account for the greater</li> </ul>

	<p>number of younger pedestrians in these areas</p> <ul style="list-style-type: none"> <li>• These weighted averages resulted in scores ranging from 0 to 2.1, which were then mapped to a scoring system where -3 indicated a lack of amenities, and +3 reflected a higher number of amenities and/or a greater proportion of primary schools</li> </ul>
<p>Active Travel Routes</p>	<ul style="list-style-type: none"> <li>• Since all zones had adequate pedestrian walkways, active travel routes were assessed based on the presence of cycle networks</li> <li>• Zones with a cycle network were assigned a score of +1, while those without one received a score of -1, as areas with more active travel routes are considered a higher priority for implementing 20mph traffic calming measures</li> </ul>

## 4 MONITORING STRATEGY

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- 4.1 As part of the implementation of the 20mph limits there is a requirement to monitor the impact of any changes to the speed limits, particularly on routes classified as 'Amber' within the original assessment. This will allow the impact of the schemes to be appropriately assessed through comparison of traffic speeds and any changes in accident statistics within the 20mph areas.
- 4.2 As outlined above, the monitoring strategy will involve conducting a "before and after" traffic speed survey at key locations within each area to evaluate the effectiveness of the reduced speed limits. This should include a minimum of one survey within each 20mph zone and any 'Amber' routes identified within the original appraisal.
- 4.3 It is recommended to ensure consistent monitoring at the same location and with the same equipment that the installation of permanent traffic counters should be considered.
- 4.4 There are a number of options for permanent traffic data collection. The most established approach would see metal induction loops set into the road carriageway – with data able to be downloaded by connecting up to the counter as required.
- 4.5 Another option would be to use cameras to provide traffic count and traffic speed data. This would require a minimum of 2 cameras to allow an average speed to be calculated on a route which may provide a more representative traffic speed. Cameras could be permanently located or rotated across different areas to provide monitoring at different locations.
- 4.6 The provision of permanent counters may have higher upfront installation costs but can provide a cost-effective solution for ongoing monitoring. Identifying optimal locations for the counters and securing cost estimates for their installation are essential steps in the implementation and monitoring of 20mph streets.