

**HIGHWAYS & TRANSPORT
TRAFFIC & NETWORK MANAGEMENT**

**CHIPPENHAM
Redland Estate**

**20mph Speed
Restriction Assessment**

Document Control Sheet

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1.0 Introduction and background

Following the publication of Wiltshire Councils policy for 20mph speed limits, the authority committed to undertaking assessment across the 18 Community Areas. Each of the Community Areas were requested to nominate a defined area for assessment during 2014/15.

The Redland Estate in Chippenham has been locally identified and selected by the Community Area Transport Group as a possible location for a 20 mph speed restriction.

This report sets out the analysis of this location against “Wiltshire Policy on 20mph Speed Limits and Zones” and the Department of Transport (DfT) Circular 01/2013 “Setting Local Speed Limits”.

The above guidance will be used to determine if the Redland Estate is a suitable location for a 20mph speed restriction. Full extents of the area selected to be studied is set out in Appendix A.

2.0 Data Collection

Average speed and volume of traffic was recorded using a device called a Metro-count. This is a roadside unit with sensors placed across the road.

Metro-counters were installed at various locations throughout The Redland Estate and were in place from 12th November – 20th November 2014.

The location of each counter is shown in Appendix A.

Table 1 below sets out a summary of the results of each metro-count:

Metro Count Ref. Number	Total Traffic Volume (annual average daily traffic)	85th percentile Speed (mph)	Mean Speed (mph)
1	1111	26.2	21.5
2	1322	29.1	23.6
3	295	28	21.5
4	2032	26.4	22.1
5	1797	25.7	20.5
6	2122	26.6	21.1
7	365	25.7	20
8	596	27.5	21.8
9	755	27.7	21.8

Table 1 – Summary of metro-count results

3.0 Collision Data

An interrogation of the Police Collision database indicates there has been a total of '10' recorded Personal Injury Collisions (PIC's) in the last 6 years prior to the preparation of this report. Results show there were '2' collisions involving pedestrians (occurring in 2008 and 2011) and '4' involving pedal cycles (occurring in 2008, 2010, 2011 and 2012). '5' of these accidents involved children under the age of 12 years. Table 2 below provides summary information:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2 wheels)	0	1	1	2
2 wheeled motor vehicles	0	1	3	4
Pedal Cycles	0	1	3	4
Horses and Other	0	0	0	0
Total	0	3	7	10

'3' out of the '4' cycling accidents involved child cyclists which resulted in slight injuries. '2' serious injuries were recorded when a 9 year old child stepped from behind a parked car outside 18 Marshall Street (in 2008) and an adult cyclists handlebars were clipped by a passing car outside the Newsagents on Redland (in 2010).

4.0 Analysis against Wiltshire Council Policy

It is imperative that all speed restrictions are set at an appropriate level where overall compliance with the limit can be realistically achieved. Higher recorded vehicle speeds are unlikely to be sufficiently reduced with signing alone and can often require further traffic management / calming measures such as chicanes, road humps or changes to the physical road layout.

With the above in mind, there are two distinct types of 20mph speed restriction for consideration – a 20mph Zone or a 20mph Speed Limit.

Wiltshire Council policy has considered previous studies into 20mph speed limits and zones as well as the guidance originating from DfT Circular *01/2013 'Setting Local Limits'*. Wiltshire Council policy identifies the following options to consider when implementing 20mph zones and limits within Wiltshire:

20mph Zones:

20mph zones are defined as areas subject to a 20mph speed restriction which cover a number of roads within a defined area and are supported by the appropriate traffic regulation order and signs.

Typically there will be traffic calming measures at regular intervals throughout the zone to ensure speeds remain consistent throughout its length. This may include the addition of road humps and raised junctions as well as build outs, chicanes pinch points etc., but may also include lighter touch measures where appropriate, such as carriageway roundels.

20mph zones to be considered where:

- Roads are restricted to a 30mph speed limit
- A proven history of road user conflict with vulnerable users such as child pedestrians is apparent.
- New residential developments
- Where there is an alternative route existing, so drivers are able to avoid the zone.
- On major streets if there is a significant number of journeys on foot or bicycle and this outweighs the disadvantage of longer journeys for motorists.

20mph Speed Limits:

20mph limits are defined as streets where the speed restriction has been reduced to 20mph but do not include the types of physical calming measures typically associated with zones. Drivers are alerted to the presence of the restriction by the use of terminal and repeater signs only

20mph Speed limits to be considered where:

- Mean 'before' speeds are at or below 24mph (where they are marginally above this threshold, lighter touch engineering measures to reduce speed should be considered)
- On roads which do not have a strategic function or where motor vehicle movement is not the primary function.
- On major streets if there is a significant number of journeys on foot or bicycle and this outweighs the disadvantage of longer journeys for motorists.
- In rural areas where the location in addition to the above conditions, meets the definition of a village as set out in Traffic Advisory Leaflet "01/04 – Village Speed Limits".

5.0 Recommendation

The results following the data collection indicate the 'mean' traffic speeds within the Redland Estate in Chippenham are at or below the guidance threshold of 24mph.

Based on the analysis of the speed and collision data for the area of the Redland estate and applying the results against the Wiltshire Council Policy for 20mph speed limits and zones, it is therefore recommended that the Redland Estate in Chippenham is considered for the introduction of a 20mph speed limit.

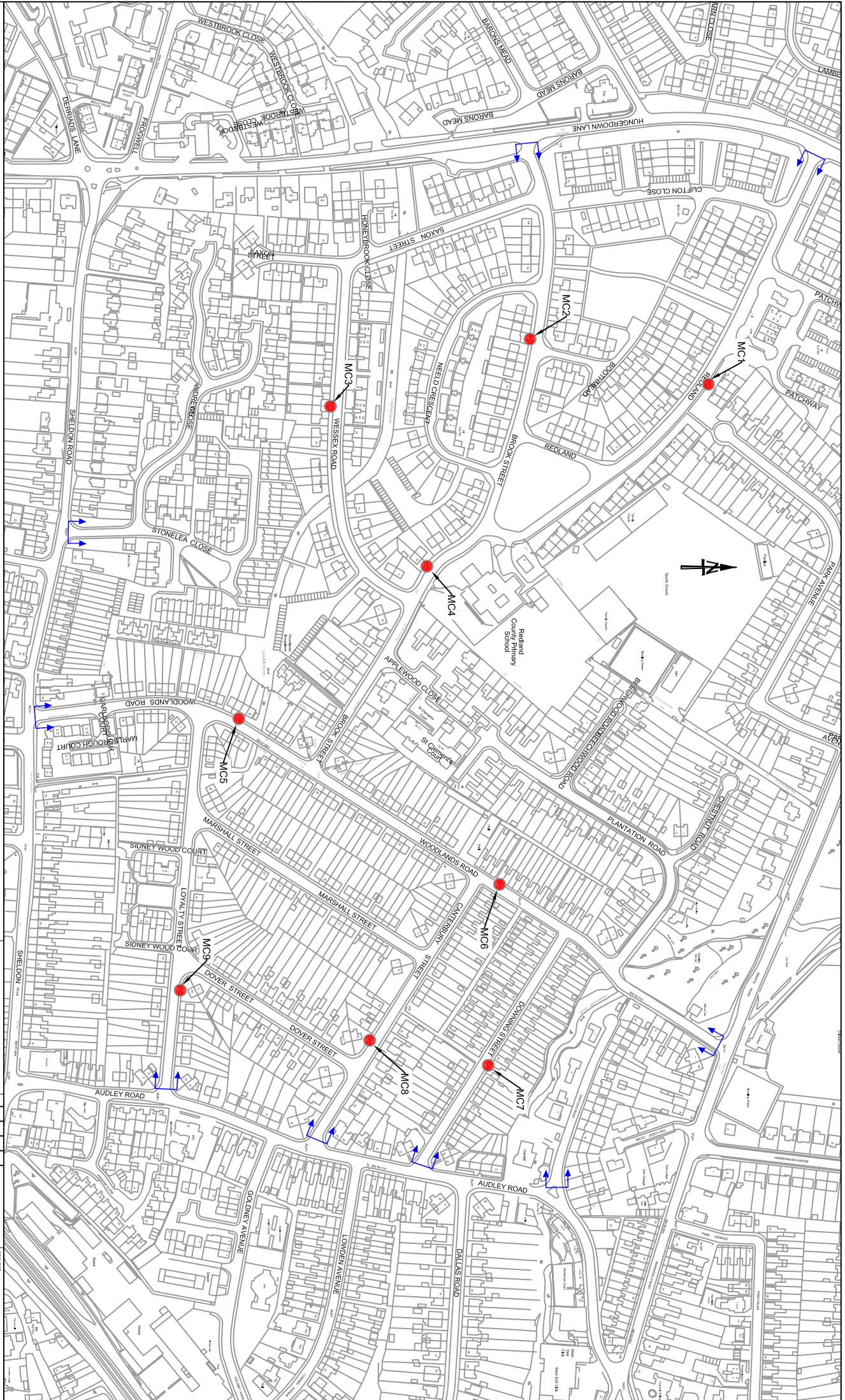
Collision data from the last six years would appear to indicate a possible conflict between pedestrians, cyclists and vehicles within the estate. This is due, in part, to the fact the Redland estate is predominantly a residential area with a primary school within its boundary, resulting in higher levels of vulnerable pedestrian movements and regular interaction with motor vehicles. It is envisaged the introduction of an area wide 20mph limit area will help to reduce overall levels of conflict and pedestrian casualties on the estate.

Appendix B shows the proposed extents of the 20mph Speed Limit.

Appendix C indicates the likely implementation costs for a 20mph limit on the Redland estate.

6.0 Appendix A

Requested area of assessment and locations of Metro-counts:



- Notes:**
- MC1 - A166 to Kemp Calder no. 25 Woodend
 - MC2 - A166 to Kemp Calder no. 11 Brook Street
 - MC3 - A166 to Kemp Calder no. 431 outside 33 Wessons Road
 - MC4 - A166 to Kemp Calder outside 27 Brook Street
 - MC5 - A166 to Kemp Calder no. 18 outside 46 Woodlands Road
 - MC6 - A166 to Kemp Calder no. 3 outside 47 Woodlands Road
 - MC7 - A166 to Kemp Calder no. 8 outside 30 Canterbury Street
 - MC8 - A166 to Kemp Calder no. 8 outside 30 Canterbury Street

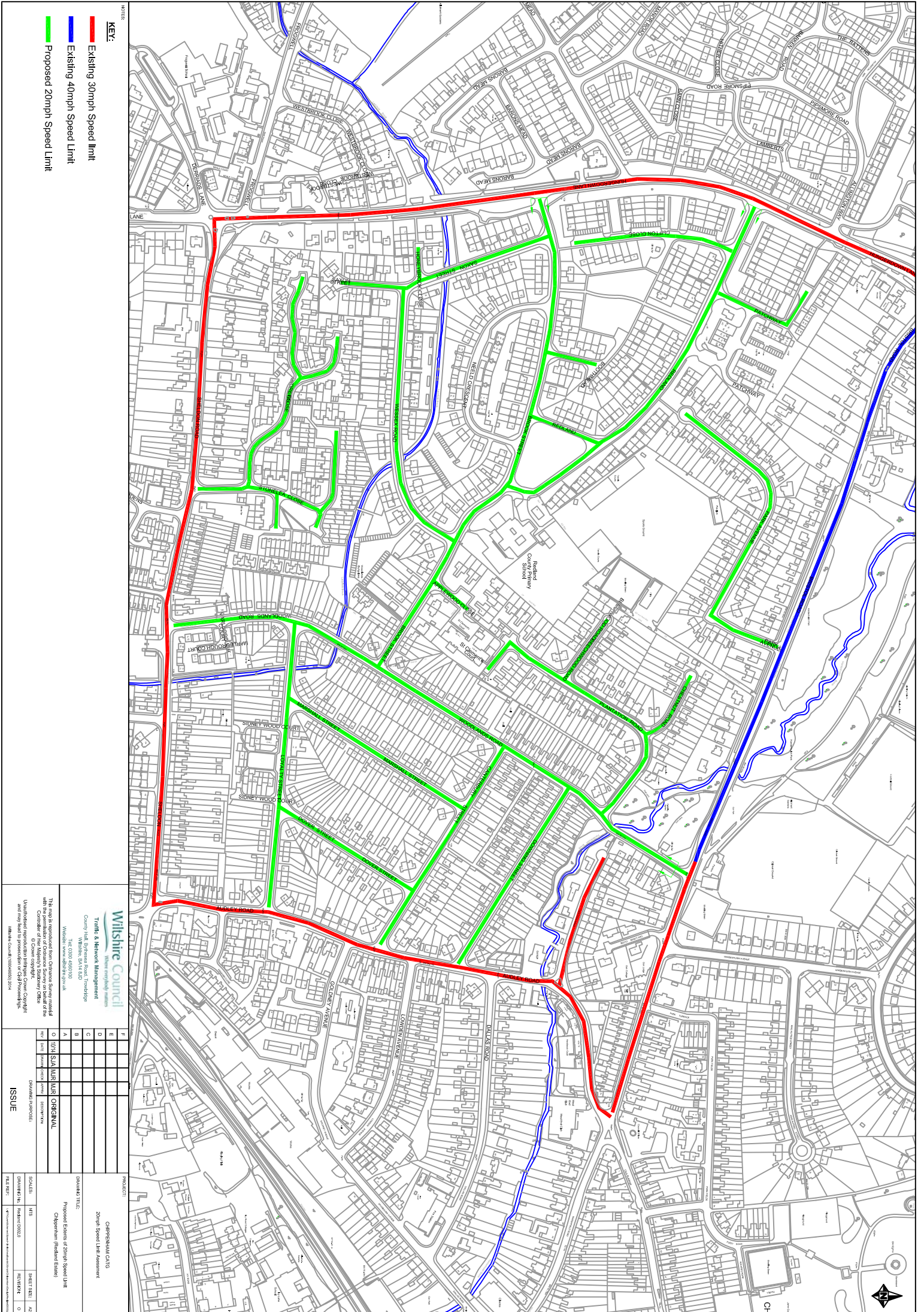
REQUESTED AREA FOR
20MPH LIMIT

X / Y Co-ordinates:
390768 173726
Postcode:
SN14 0JA

<p>Wiltshire Council Traffic & Network Management County Hill, Spina House, Trowbridge Wiltshire, BA14 8LD Wiltshire Tel: 01299 426700 Wiltshire Fax: 01299 426705 Wiltshire Email: transport@wiltshire.gov.uk</p>		<p>The map is reproduced from Ordnance Survey material with the permission of Ordnance Survey under license. All other rights reserved. Copyright © Crown Copyright and/or its licensors. All other rights reserved. Copyright © Wiltshire Council 2015/2016</p>	
PROJECT:	CHAFFINHAM CTS	DATE:	20th Speed Limit Assessment
ISSUE:	Proposed Location of 20mph Limits	SHEET NO.:	7
	Chaffinham (Redden Estate)	SHEET TITLE:	LOCATION 7
		DATE:	22/01/2015
		BY:	Neil Duggan
		FOR:	Wiltshire Council

7.0 Appendix B

Proposed 20mph Speed Limit location:



- KEY:**
- Existing 30mph Speed limit
 - Existing 40mph Speed Limit
 - Proposed 20mph Speed Limit

NOTES:

<p>Wiltshire Council <i>Wiltshire's only council</i></p> <p>Traffic & Network Management County Hall, Spinares Road, Trowbridge Wiltshire, BA14 8JD Wiltshire Tel: 0300 426370 Wiltshire Fax: 01299 250255</p>	F				
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<p>PROJ00121</p> <p>CHIPPENHAM C/TG 20mph Speed Limit Assessment</p> <p>DATAWKS TITLE: Proposed Extent of 20mph Speed Limit Chippenham (Roadwork Status)</p>					
<p>DATE/ISS: 06/01/2014</p> <p>DATAWKS MK: 06/01/2014</p> <p>ISSUE: 0</p> <p>DATE/ISS: 06/01/2014</p> <p>DATAWKS MK: 06/01/2014</p> <p>ISSUE: 0</p>					

8.0 Appendix C – Cost Estimate

Proposal: 20mph Speed Limit

Item:	No.	Cost: £:	Total £:
New Terminal points	7	170.00	1190.00
Repeater signs/posts (approx. every 150m)	30	110.00	3300.00
Carriageway Roundels	7	60.00	420.00
Traffic Management & Control	4 days	£30.00	120.00

Total Estimated Cost

£5030.00

It should be noted this is the expected cost allocation required from the Community Area Transport Group and does not include design and legal costs, which will be borne by Wiltshire Council