

B5074

Safety and Speed Review

Nantwich to County Boundary



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Contents

1	Introduction	2
2	Existing Conditions	3
3	Assessment Criteria	5
4	Collision History	7
5	Traffic Data	9
6	Engagement Feedback	13
7	Objectives of the Speed Review	
8	Proposals	
9	Recommendations	
10	Summary	
Appendix A	Collision Data	
Appendix B	ATC Site Locations	

The cover photograph shows the B5074 in Worleston

1 Introduction

1.1 Introduction

In April 2016 Cheshire East Highways (CEH) undertook a route review of the B5074, between Nantwich and the County Boundary. The objectives behind this are to provide a consistent approach to understanding and assessing the performance of the route. The outputs aim to deliver solutions across key areas such as safety, congestion and public concerns.

Within a route review, each route will be reviewed against the latest five year collision history to assess whether there are any collision cluster sites or route-wide problems. Any identified collision clusters will be assessed to identify suitable remedial engineering measures.

Traffic data was examined to determine whether speed limits are in accordance with latest national guidance. Feedback was obtained through engagement with the appropriate Local Ward Members and Parish Councils to gain an understanding of the more localised perspective, which will be taken into consideration.

2 Existing Conditions

2.1 Summary of route

The B5074 is a 2-lane single carriageway road. This route runs between Nantwich and the county boundary with Cheshire West and Cheshire. It is classified as a 'B' road, which means it is intended to connect different areas, and to feed traffic between A roads and smaller roads on the network.

The route is largely a national speed limit road through a rural environment, with 30mph speed limits in force through the villages of Worleston and Church Minshull.

The rural sections include fairly frequent junctions with side roads and accesses to a mixture of residential, agricultural and commercial properties. There is no footway provision within the areas of national speed limit, and grass verges vary from being very wide to non-existent where hedgerows line the carriageway.

The B5074 originates at the Reaseheath Roundabout North of Nantwich with a national speed limit. This continues for approximately 1.75 miles before becoming a 30mph limit just South of Worleston. The national speed limit returns approximately 165m North of the railway bridge adjacent to Station Road North of Worleston village and continues for approximately 2.2 miles to just East of Church Minshull. This stretch of the B5074 is undulating with gently sweeping bends through open countryside. There are a number of private and field accesses.

The village of Church Minshull has a 30mph speed limit which originates just to the West. Recent traffic calming initiatives have seen the development of a priority working system comprising 'build outs' and a mini roundabout on the B5074 Cross Lane through the village centre, on Over Road and out of the village near the bridge over the river Weaver on Cross Lane. There is footway provision within Church Minshull, although in places the width is restricted.

The B5074 continues Northwards out of Church Minshull on Over Road, the national speed limit returning approximately 400 metres north of the mini roundabout on Cross Lane/Over Road, outside Weaver View terrace of houses. The route continues through agricultural and tree-lined surroundings with private and field accesses periodically located on the road side. Approximately 1.4 miles from the mini roundabout at Over Road/Cross Lane in Church Minshull the B5074 crosses the county boundary and enters Cheshire West and Chester jurisdiction.

2.2 Existing Signing and Lining

The existing signing along the B5074 is generally in good condition. There are some erroneous warning signs with supplementary plates adjacent to the Reaseheath college entrance on the B5074 that have been erected outside of the highway boundary and have not been specified by Cheshire East Highways. They appear to conform with specifications, however have not been authorised.

No SCRIM or ECODYN data for this route is available; however the condition of the existing carriageway markings is varied. In a number of locations the edge of carriageway marking is either worn away or is obliterated by debris from the verge. Centre line markings

adjacent to junctions and at some bends are worn. In some locations where patching and resurfacing work has been undertaken, carriageway markings have not been replaced and many junction and private access markings are worn and in poor condition.

It would appear that the existing carriageway markings are accurate for the route.

3 Assessment Criteria

5.1 Background

Cheshire East Highways has undertaken a safety review of the B5074 route between Nantwich and the Cheshire West boundary and as part of this a speed limit assessment for the route has been carried out. This assessment evaluated speed limits against the national framework used in determining speed limits on all roads. By adopting this approach it should allow Cheshire East Council to impose limits which are consistent, readily understood and appropriate for the road network across the authority.

This assessment has been based on the updated guidance proposed in the DfT Circular 01/2013, Setting Local Speed Limits and Cheshire East Councils own Speed Management Strategy.

The key objectives of the policy are detailed below.

The overall speed limit framework, including the setting of national limits for different road types, and which exceptions to these general limits can be applied, is the responsibility of the government. The three national speed limits are:

The 30 mph speed limit on roads with street lighting (sometimes referred to as Restricted Roads)

The national speed limit of 60 mph on single carriageway roads

The national speed limit of 70 mph on dual carriageways and motorways.

However, it was recognised that there may be occasions when in assessing a speed limit proposal, these national limits are not appropriate for a particular road. The speed limit regime enables traffic authorities to set local speed limits in situations where local needs and conditions suggest a speed limit which is different from the respective national speed limit. The default limit for an urban or rural environment may not be appropriate for the location.

Consequently, the updated guidance provides part of the framework for speed limits, where local authorities can set speed limits on their roads below the national limit, in response to local risk factors and conditions.

The underlying aim should be to achieve a 'safe' distribution of speeds. The **key factors that should be taken into account in any decisions** on local speed limits are:

- **history of collisions;**
- **road geometry and engineering;**
- **existing mean traffic speed;**
- **road function;**
- **composition of road users** (including existing and potential levels of vulnerable road users);
- **existing traffic speeds; and road environment.**

While these factors need to be considered for all road types, they may be weighted differently in urban or rural areas. The impact on community and environmental outcomes should also be considered.

Speed limits should not be used to attempt to solve the problem of isolated hazards, such as a single road junction or reduced forward visibility, e.g. at a bend.

5.2 Considerations in setting local speed limits

A study of types of collisions, their severity, causes and frequency, together with a survey of traffic speeds, should indicate whether an existing speed limit is appropriate for the type of road and mix of use by different groups of road users. This includes for the presence or potential presence of vulnerable road users (including people walking, cycling or riding horses, or on motorbikes), or whether it needs to be changed. Local residents may also express their concerns or desire for a lower speed limit and these comments should be considered.

5.3 The underlying principles and strategy

The aim of Cheshire East Highways Speed Management Policy should be to achieve a safe distribution of speeds, consistent with the speed limit that reflects the function of the road and the road environment. This should imply a mean speed appropriate to the prevailing road environment, and all vehicles moving at speeds below or at the posted speed limit, while having regard to the traffic conditions.

A principal aim in determining appropriate speed limits should, therefore, be to provide a consistent message between speed limit and what the road looks like, and for changes in speed limit to be reflective of changes in the road layout and characteristics.

Speed limits should not be used to attempt to solve the problem of isolated hazards, for example a single road junction or reduced forward visibility such as at a bend, since speed limits are difficult to enforce over such a short length. Other measures, such as warning signs including vehicle activated signs, carriageway markings, junction improvements, super elevation of bends and new or improved street lighting, are likely to be more effective in addressing such hazards. Similarly, crossings or, in rural areas, the provision of adequate footways can be a more effective means of improving pedestrian safety than lowering a speed limit over a short distance.

4 Collision History

3.1 Collision summary – B5074 Nantwich to County Boundary (Appendix A)

The 5-year collision history for the B5074 route between Nantwich and the County Boundary identifies eighteen reported personal injury collisions (PIC) between December 2010 and November 2015. Table 3-A shows a summary of PICs data provided by Cheshire Constabulary over the 5-year study period.

	2011	2012	2013	2014	2015	Total
Fatal	0	1	0	0	0	1
Serious	2	1	0	0	0	3
Slight	4	3	2	1	4	14
Total	6	5	2	1	4	18

Table 3-A: A54 history of personal injury collisions within the latest 5-year period

3.2 Collision analysis

The 5-year collision history equates to an average of 3.6 collisions per year along the B5074 between Nantwich and the County Boundary and an average rate of 0.36 per kilometre per year. The highest level of collisions occurred in 2011, with a steady decline observed to 2014, where only one collision was reported, although this increased to four reported in 2015.

The following is noted from the collision data:

14 of the 18 collisions (78%) resulted in minor injuries ('slight') as defined by the DfT;
 3 of the 18 collisions (16%) resulted in serious injuries as defined by the DfT;
 1 of the 18 collisions (6%) resulted in fatal injuries as defined by the DfT.

2 of the 18 collisions (12%) occurred within a 30mph limit
 16 of the 18 collisions (88%) occurred within a national speed limit (60mph)

5 out of 18 collisions (28%) occurred within the hours of darkness (4 unlit, 1 in street lit area)

8 out of 18 collisions (44%) occurred in damp, wet or icy road conditions

7 out of 18 (39%) were reported as involving speed inappropriate to the conditions
 Note that this does not mean exceeding the speed limit but refers to a vehicle travelling too fast for the prevailing conditions

11 out of 18 collisions (61%) included loss of control as a contributory factor
 7 out of these 11 collisions (64%) where loss of control was a contributory factor also included travelling too fast for the conditions as a contributory factor
 3 of these were in wet conditions
 1 of these was in icy conditions

7 out of 18 collisions (39%) occurred at bends

2 out of 18 collisions (12%) involved pedal cycles

0 out of 18 (0%) involved pedestrians

The 18 collisions resulted in 20 casualties (1.11 casualties per collision).

16 of the 20 casualties (80%) resulted in slight injuries.

3 of the 20 casualties (15%) resulted in serious injuries.

1 of the 20 casualties (5%) resulted in fatal injuries.

The fatal collision occurred in 2012 and included aggressive driving as a contributory factor, where the fatality resulted from a vehicle attempting a multiple car overtake manoeuvre and colliding with an oncoming vehicle.

5 Traffic Data

4.1 Traffic and speed data

Traffic data was collected using a seven day Automatic Traffic Count (ATC) at 3 sites located along the B5074, and the location plan for these site is shown in Appendix B.

Location 1 – Approximately two hundred metres north of the entrance for Reaseheath College on the B5074.

Location 2 – Approximately two hundred metres south of the junction with Station Road on the B5074.

Location 3 – Approximately five hundred and thirty metres east of the junction with Minshull Lane on the B5074.

Location 4 – Approximately fifty metres south of the Royal Oak pub in Worleston on the B5074.

ATC data at Location 1

The speed limit at this location is National Speed Limit.

Table 4-A below shows the average volume figures and also highlights AM and PM peak figures as well as average weekday and 7 day average figures.

Time	Day of Week							Ave W'day	7 Day Ave
	Mon 20- Jun	Tue 21- Jun	Wed 22- Jun	Thu 23- Jun	Fri 24- Jun	Sat 25-Jun	Sun 26-Jun		
AM Peak	154	191	176	185	146	81	65		
PM Peak	156	170	183	177	148	93	63		
Total	5267	5714	5659	5916	5734	3337	2627	5658	4893
07:00- 19:00	4591	4837	4867	5106	4921	2692	2148	4864	4166
06:00- 22:00	5071	5504	5459	5705	5485	3099	2459	5445	4683
06:00- 24:00	5185	5635	5561	5822	5634	3251	2510	5567	4800
00:00- 24:00	5267	5714	5659	5916	5734	3337	2627	5658	4893

Table 4-A Summary of 7 day traffic volume figures

The morning peak hour was recorded between 8am and 9am with the evening peak logged between 5pm and 6pm.

The average speed recorded at this point was 48.56mph

The 85%ile speed recorded at this point was 54.83mph.

6% of the traffic recorded was travelling above the speed limit at this location.

An average of 77 motorcycles and pedal cycles per day (1%) out of a total average 4893 daily vehicles were recorded travelling at this location.

An average of 4400 cars per day (90%) out of a total average of 4893 daily vehicles were recorded travelling at this location.

An average of 337 LGV/PSV 2 Axle vehicles per day (7%) out of a total average of 4893 daily vehicles were recorded travelling at this location.

An average of 32 OGV1/PSV 3 Axle vehicles (1%) out of a total average of 4893 daily vehicles were recorded travelling at this location.

48 OGV2 vehicles (1%) out of a total average of 4893 daily vehicles were recorded travelling at this location.

ATC data at Location 2

The speed limit at this location is 30mph, although the location of the ATC was approximately 900 metres North of the Royal Oak pub out of the village centre, away from the street lit area.

Table 4-B below shows the average volume figures and also highlights AM and PM peak figures as well as average weekday and 7 day average figures.

Time	Day of Week							Ave W'day	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	20- Jun	21- Jun	22- Jun	23- Jun	24- Jun	25- Jun	26- Jun		
AM Peak	134	157	138	144	130	54	56		
PM Peak	137	143	146	159	138	63	49		
Total	3929	4294	4288	4532	4402	2362	1869	4289	3668
07:00- 19:00	3472	3715	3749	3934	3855	1962	1545	3745	3176
06:00- 22:00	3807	4159	4169	4388	4230	2211	1765	4151	3533
06:00- 24:00	3875	4233	4225	4459	4332	2302	1801	4225	3604
00:00- 24:00	3929	4294	4288	4532	4402	2362	1869	4289	3668

Table 4-A Summary of 7 day traffic volume figures

The morning peak hour was recorded between 8am and 9am with the evening peak logged between 5pm and 6pm.

The average speed recorded at this point was 40.91mph

The 85%ile speed recorded at this point was 45.81mph.

95% of the traffic recorded was travelling above the speed limit at this location.
An average of 49 motorcycles and pedal cycles per day (1.3%) out of a total average 3668 daily vehicles were recorded travelling at this location.

An average of 3301 cars per day (90%) out of a total average of 3668 daily vehicles were recorded travelling at this location.

An average of 252 LGV/PSV 2 Axle vehicles per day (7%) out of a total average of 3668 daily vehicles were recorded travelling at this location.

An average of 39 OGV1/PSV 3 Axle vehicles (1%) out of a total average of 3668 daily vehicles were recorded travelling at this location.

27 OGV2 vehicles (0.7%) out of a total average of 3668 daily vehicles were recorded travelling at this location.

ATC data at Location 3

The speed limit at this location is 60mph.

Table 4-C below shows the average volume figures and also highlights AM and PM peak figures as well as average weekday and 7 day average figures.

Time	Day of Week							Ave W'day	7 Day Ave
	Mon 27- Jun	Tue 28- Jun	Wed 29- Jun	Thu 30- Jun	Fri 01- Jul	Sat 02-Jul	Sun 03-Jul		
AM Peak	186	182	182	182	148	78	68		
PM Peak	176	195	175	175	155	72	78		
Total	4815	4967	4974	5288	5332	3006	2782	5075	4452
07:00- 19:00	4226	4274	4306	4619	4642	2424	2181	4413	3810
06:00- 22:00	4684	4803	4795	5147	5131	2764	2482	4912	4258
06:00- 24:00	4752	4888	4871	5219	5243	2943	2542	4995	4351
00:00- 24:00	4815	4967	4974	5288	5332	3006	2782	5075	4452

Table 4-A Summary of 7 day traffic volume figures

The morning peak hour was recorded between 8am and 9am with the evening peak logged between 5pm and 6pm.

The average speed recorded at this point was 43.17mph

The 85%ile speed recorded at this point was 48.05mph.

2% of the traffic recorded was travelling above the speed limit at this location.

An average of 53 motorcycles and pedal cycles per day (1.2%) out of a total average 4452 daily vehicles were recorded travelling at this location.

An average of 3884 cars per day (87.2%) out of a total average of 4452 daily vehicles were recorded travelling at this location.

An average of 460 LGV/PSV 2 Axle vehicles per day (10.3%) out of a total average of 4452 daily vehicles were recorded travelling at this location.

An average of 22 OGV1/PSV 3 Axle vehicles (0.5%) out of a total average of 4452 daily vehicles were recorded travelling at this location.

33 OGV2 vehicles (0.8%) out of a total average of 4452 daily vehicles were recorded travelling at this location.

ATC data at Location 4

The speed limit at this location is 30mph.

Table 4-D below shows the average volume figures and also highlights AM and PM peak figures as well as average weekday and 7 day average figures.

Time	Day of Week							Ave W'day	7 Day Ave
	Mon 19 – Sept	Tue 13 – Sept	Wed 14 – Sept	Thu 15 – Sept	Fri 16 – Sept	Sat 17 – Sept	Sun 18 - Sept		
AM Peak	151	154	146	159	130	78	59		
PM Peak	148	152	173	162	144	76	66		
Total	4443	4629	4711	4624	4743	2974	2476	4630	4086
07:00- 19:00	3984	4046	4194	4074	4218	2533	2101	4103	3593
06:00- 22:00	4359	4504	4597	4507	4596	2816	2365	4513	3963
06:00- 24:00	4400	4578	4663	4581	4677	2923	2402	4580	4032
00:00- 24:00	4443	4629	4711	4624	4743	2974	2476	4630	4086

Table 4-A Summary of 7 day traffic volume figures

The morning peak hour was recorded between 8am and 9am with the evening peak logged between 5pm and 6pm.

The average speed recorded at this point was 31.94mph

The 85%ile speed recorded at this point was 34.51mph.

41% of the traffic recorded was travelling above the speed limit at this location.

An average of 77 motorcycles and pedal cycles per day (2%) out of a total average 4086 daily vehicles were recorded travelling at this location.

An average of 3708 cars per day (91%) out of a total average of 4086 daily vehicles were recorded travelling at this location.

An average of 244 LGV/PSV 2 Axle vehicles per day (6%) out of a total average of 4086 daily vehicles were recorded travelling at this location.

An average of 38 OGV1/PSV 3 Axle vehicles (less than 1%) out of a total average of 4086 daily vehicles were recorded travelling at this location.

33 OGV2 vehicles (less than 1%) out of a total average of 4086 daily vehicles were recorded travelling at this location.

6 Engagement Feedback

6.1 Local feedback

Consultation took place in the form of a workshop held on 28 July 2016 with Local Ward Members and Parish Council representatives. Cheshire Constabulary staff also attended.

Feedback forms were received identifying the following concerns for the B5074 between Nantwich and Cheshire West county boundary:

- Note made that the second entrance at Reaseheath College has recently seen a number of near miss and unreported damage only collisions due to an increase on traffic, construction traffic and the current national speed limit. This is also exacerbated by the increasing volume of HGV traffic at Spinningfields.
- B5074 through Worleston within 30mph, speed of traffic is high and similar traffic calming measures to those in Church Minshull are needed.
- B5074 through Worleston, HGV traffic using this as an alternative route to Middlewich Road has increased 'exponentially'.
- Concern has been expressed relating to the increasing vehicle movements due to the growing businesses at Rookery Hall and the Aqueduct Marina.
- Many local residents are concerned about the speed of traffic travelling along the B5074 – despite the relevant signage and traffic information indicating various hazards, the speed at which people drive within the National Speed limit is viewed as too fast. There are particular points which are a significant cause for concern, including the various routes in to and out of Church Minshull village and Nanney's Bridge.
- Residents who have to walk along the various roads in to Church Minshull – whether along the B5074 or along other routes have commented on the speed of passing traffic; several people have expressed their reticence to access services available in the village due to the dangers of walking along roads/paths with traffic which is entering the village at what can be high speeds. One resident who lives along the B5074 has commented on being 'clipped' by a car on two separate occasions as he walked from his house 600 metres north in to the village.
- If possible a restriction to 40mph along the whole of the B5074 would be desirable or at least 'buffer zones' put in places to limit the speed of vehicles at the key points identified above within Church Minshull. It appears that a precedent may have been set as along the A530 - there are several points along that road where a 30mph speed restrictions are in place, despite this being classified as a main A road.
- Several residents in the parish have commented on the volume of traffic and the number of heavy goods vehicles coming through Church Minshull. When put together with the current derestriction there have been incidents where residents have felt very unsafe whilst trying to exit the village from their drives or entry roads on to the B5704. It is highly desirable to limit the speed of all vehicles coming in to

the village and to introduce lengthy 'buffer zones' to drastically reduce the speed of all traffic on routes in to Church Minshull.

7 Objectives of the Speed Review

7.1 Objectives

The primary objective of the speed management strategy is to improve safety within Cheshire East Highways and ensures that all speed limits within the network are appropriate for both the route and the area.

A consistent approach to the speed management of the network should result in further compliance to the speed limits and be less confusing to road users where roads are assessed against the same Department for Transport criteria.

8 Recommendations

8.1 Speed limits

“Setting Local Speed Limits” (Department for Transport, 01/2013) and Cheshire East Councils Draft Speed Management Strategy recognises that the majority of drivers on many rural roads travel below – sometimes significantly below – the speed limit because of the characteristics of the roads. In other words, a road layout can govern the speed of vehicles as drivers slow to negotiate the various road features.

The existing route under review is classified a ‘B’ route under the DfT’s Guidance on Road Classification and the Primary Route Network – “roads intended to connect different areas, and to feed traffic between A roads and smaller roads on the network.”

Conforming to the DfT 01/2013 “Setting Local Speed Limits” and Cheshire Easts Draft Speed Management Strategy, the majority of the B5074 has an existing national speed limit and this is considered appropriate for the most part. Thirty mile per hour limits are in place within Church Minshull and Worleston. This is considered appropriate through Church Minshull and also through the centre of Worleston, however, given the nature of the road to the North of Worleston, where ATC 2 was located, the 30mph would appear inappropriate. The road layout at this location is open, with good forward visibility and away from any residential dwellings, there are two slight bends, a crest over the railway bridge and two junctions; Dairy Lane and Station Road.

Speed data was obtained from ATC’s that were located three locations along the B5074:
Location 1 – Approximately two hundred metres north of the entrance for Reaseheath College on the B5074. At this location the existing speed limit is 60mph. Mean speeds here were recorded at 48.56mph and 85th percentile speeds were 54.83mph. This indicated that drivers are generally driving within the speed limit and giving due consideration to road conditions.

Location 2 – Approximately two hundred metres north of the junction with Station Road on the B5074. At this location the existing speed limit is 30mph. Mean speeds here were recorded at 40.91mph and 85th percentile speeds were 45.81mph. This indicated that drivers are generally driving over the speed limit, possibly unaware of the limit, or given the layout and visibility along the carriageway, believe that the limit is inappropriate for the location.

Location 3 – Approximately five hundred and thirty metres east of the junction with Minshull Lane on the B5074. At this location the existing speed limit is 60mph. Mean speeds here were recorded at 43.17mph and 85th percentile speeds were 48.05mph. This indicated that drivers are generally driving within the speed limit and giving due consideration to road conditions.

Location 4 – Approximately fifty metres south of the Royal Oak pub in Worleston. At this location the speed limit is 30mph. Mean speeds here were recorded at 31.94mph and 85th percentile speeds were 31.51mph. This indicated that drivers are generally driving within the speed limit and are giving due consideration to the road conditions.

Whilst it would appear in general from the surveys undertaken that speeds comply with the existing limits in place, it is considered within this report that buffer zones, comprising of

40mph limits on the approaches to Worleston and Church Minshull should be introduced. This would bring driver speed down incrementally, assist in speed limit compliance and reduce sharp braking when drivers enter a 30mph limit from national speed limit.

Worleston village is bound by a 30mph speed limit, with terminal signing at either end and 30mph repeater signs throughout. A number of these repeater signs fall within a system of street lighting and as a result contravene regulations and require removal. There is however, a section of unlit carriageway within Worleston to the terminal signs to the North of the village where the 30mph repeater signs will need to be retained.

Bends

Travelling north on the B5074, approximately one mile north of Reaseheath roundabout the bend warning sign and chevron marker boards require refreshing to make them more conspicuous. Currently one chevron does not have a yellow backing board and two are mounted too low and are partially obscured by the grass in the verge. Care will need to be taken when locating the chevron boards here so as not to obscure visibility from the farm entrance on the bend.

Approximately four hundred metres south west of Church Minshull the existing chevron marker boards require upgrading with yellow backing board to improve conspicuity. Approximately five hundred metres north of the mini roundabout in Church Minshull, on Over Road, a double bend warning sign to diagram 513 and supplementary plate with "400yds" to diagram 572 should be erected to forewarn of the coming road alignment. Travelling in the opposite direction, towards Church Minshull, the existing double bend warning sign should be upgraded to include the supplementary plate mentioned above.

Junctions

Junction markings in many locations along the B5074 are generally in poor states of repair and in need of refreshing. Poor give way markings can lead to vehicles over-running the junction mouth and encroaching onto the main carriageway, which in turn could potentially lead to collisions. These junctions are listed below –

Barons Road
Station Road
Dairy Lane
Minshull Lane
Paradise Lane
Lee Green Lane

Junction warning signs in both directions in advance of these junctions named above should also be replaced and upgraded at this time, whilst at Minshull Lane, junction warning signs should be installed as there presently are none.

Centre Lines

For the majority, the centre line markings are in good condition, however, at locations adjacent to junctions and larger private accesses they do appear worn and in need of refreshing. Other locations, including the bends north of Mile End Bed and Breakfast, and west of Church Minshull, leading into the 30mph limit, the centre line is in very poor condition and requires refreshing. The centre line marking through Church Minshull is intermittent and inconsistent, particularly North of the mini roundabout in the village, where centre lining starts and stops partly due to resurfacing and partly because of traffic calming.

Reinstatement of centre line markings throughout to provide a consistent message to drivers should be considered, and where the centre line marking has been omitted due to traffic calming reasons road narrows signing to diagram 516 should be considered.

Edge of Carriageway Lining

From its junction with the Reaseheath roundabout, the edge of carriageway marking on the B5074 is inconsistent in condition and visibility. This is especially the case on the eastern side of the carriageway. In numerous locations the lining has been worn away or is obscured by detritus from the verge. A full condition survey should be undertaken and any areas identified as requiring re-lining should be completed.

Other Carriageway Markings

Numerous 'SLOW', 30mph roundel and 'dragons teeth' markings are worn or have been obscured, partially or completely, by patching and carriageway repairs. These should be reinstated and refreshed accordingly to ensure conspicuousness.

Footways

Footways are only provided within Worleston and Church Minshull. At these locations, due to carriageway and highway boundary constraints they are narrow. To ensure that the maximum width is available to pedestrians, maintenance work should be regularly carried out to reduce the impact of any vegetation growth on the space offered. Any works will need to avoid nesting season (March to August). Late winter, avoiding periods of very hard frost, is the best time for hedge trimming. Vegetation clearance is not a permanent solution and will require continued annual maintenance to maintain any increase in available width.

Repeater Signs

Within the village of Worleston there are 30mph repeater signs currently located within a street lit area, which contravenes The Road Traffic Regulation Act 1984 which states – Section 81(1) lays down a speed limit of 30 mph on a restricted road; section 81(2) allows a Minister to make an affirmative Order to increase or reduce the limit. Section 82 defines a road as a 'restricted road' in England and Wales if it has street lighting provided by lamps not more than 200 yards apart. To create consistency on all roads, not just within Cheshire East, but nationwide, it is recommended that these repeater signs are removed.

11 Proposals

9.1 Proposals

The following measures identified in Table 9-A are proposed to be implemented along the whole of the route. Upgrading and improving the carriageway markings and signing along the route is aimed at increasing driver perception of carriageway conditions and environment, helping the adoption of an appropriate speed for the route.

Type of measure	Proposal	Purpose of proposal	Indicative cost
Speed limit change	Introduce a 600m long 40mph buffer zone between the 30mph limits in Worleston and Church Minshull	Change speed limit to suit the change in road environment, gradually stepping vehicle speeds down.	£5,000
Lining	Refurbish Give way lines and triangles at all side roads	To provide definition of a side road to vehicles on the B5074 and to highlight the junction to vehicles approaching the junction	£8,000
Signing	Refurbish and replace all warning signs throughout the route where applicable	To provide confirmation of the road layout and hazards ahead	£5-10,000
Lining	Edge of carriageway lining	Provide a clear delineation between the carriageway and verge.	£7,500
Vegetation removal and cut back	Cut back of hedge line obscuring signing and encroaching onto footway, removal of vegetation in footway restricting footway width.	Increase forward visibility of signing and increase width available on footways.	£2,500
Verge stabilisation / clearance	Improve integrity of verge either through removal, cutting back or grading.	Prevent debris from obscuring edge of carriageway markings and blocking gullies.	£5,000
Lining	Refresh existing centre line markings where worn or obscured by carriageway patching	Improve quality of lane delineation and improve driver discipline	£5,000
Lining	Refresh 'SLOW', dragons teeth and 30mph roundel road markings	Improve clarity of message on the road and encourage appropriate driving speeds	£8,000
Signing	Removal of 30mph repeater signs from within street lit section of Worleston	Maintain consistent message to drivers throughout the country and to comply with The Road Traffic Regulation Act 1984	£500
		<u>TOTAL</u>	<u>£46,500 –</u> <u>51,500</u>

Table 9-A Proposed measures

It is recommended that routine maintenance is undertaken by Cheshire East Council to address the following measures along the route:

- Refurbishment of centre lines
- Refurbishment of Give way lines and triangles at junctions
- Regular and planned cut back of vegetation encroaching on the footways, obscuring street lighting and impeding visibility on any signs and at bends.

12 Summary

10.1 Summary

The accident records for the B5074 between Nantwich and the county boundary with Cheshire West and Cheshire identified eighteen collisions resulting in twenty one personal injuries. Of these injuries, fourteen resulted in slight injuries and three resulted in serious injuries and one resulted in a fatality. Of these collisions four occurred close to the junction with Dairy Lane, North of Worleston, all between the years 2011 and 2012. There are no other significant clusters of collisions.

It is suggested that this route is considered for remedial measures to be undertaken to the lining and signing along with regular vegetation removal, in line with Cheshire East Council's highway maintenance programme.

Regular dialogue between Maintenance, Delivery and Design teams is also required to ensure that all works programmed and undertaken are done so with whole team visibility enabling all disciplines to interact efficiently and maintain up to date records of work carried out and current conditions on the ground.

	Reference	Severity	Date	Time	Vehs	Casualties	Location
1	CC11147874	Slight	30/05/2011	19:00	1	1	MAIN ROAD (B5074) 47 METRES NORTH OF DAIRY LANE NANTWICH
2	CC11225885	Slight	11/08/2011	08:00	1	1	MAIN ROAD (B5074) 31 METRES NORTH OF DAIRY LANE NANTWICH
3	CC11240129	Serious	24/08/2011	17:48	2	1	MILLSTONE LANE ROUNDABOUT (A51) AT JUNCTION WITH B5074
4	CC11255977	Serious	09/09/2011	08:12	1	1	MAIN ROAD (B5074) AT JUNCTION WITH DAIRY LANE (U) WORLESTON
5	CC11273917	Slight	26/09/2011	16:25	2	1	MAIN ROAD (B5074) 1090 METRES NORTH OF DAIRY LANE WORLESTON NANTWICH
6	CC11341027	Slight	30/11/2011	18:11	2	1	MAIN ROAD (B5074) 192 METRES SOUTH OF BARONS ROAD NANTWICH
7	CC12015441	Slight	17/01/2012	10:47	1	1	MAIN ROAD (B5074) 454 METRES NORTH OF MILLSTONE LANE ROUNDABOUT NANTWICH
8	CC12076166	Serious	19/03/2012	14:42	2	2	OVER ROAD (B5074) AT JUNCTION WITH CROSS LANE CREWE
9	CC12122179	Fatal	04/05/2012	20:12	1	1	MAIN ROAD (B5074) 26 METRES SOUTH OF MILE HOUSE LANE CREWE
10	CC12146602	Slight	28/05/2012	16:27	4	2	NANTWICH ROAD (B5074) 310 METRES SOUTH OF MINSHULL LANE CHURCH MINSHULL
11	CC12194673	Slight	13/07/2012	15:55	1	1	MAIN ROAD (B5074) AT JUNCTION WITH DAIRY LANE (U) ASTON JUXTA MONDRUM
12	CC13011105	Slight	13/01/2013	07:02	1	1	OVER ROAD (B5074) 228 METRES NORTH OF PARADISE LANE NANTWICH
13	CC13332480	Slight	22/11/2013	17:45	2	1	Location description not available
14	CC14333768	Slight	09/11/2014	21:16	1	1	Location description not available
15	CC15063494	Slight	06/03/2015	13:40	2	1	Location description not available
16	CC15251967	Slight	25/08/2015	14:02	2	1	Location description not available
17	C15376052	Slight	07/12/2015	14:45	2	1	Location description not available
18	C15380015	Slight	20/12/2015	17:50	3	1	Location description not available

