Crossing Facilities Strategy

First Draft

September 2023

Working for a brighter future together

Cheshire East Council

Document history and status

Rev	Date	Description	By	Review	Approved
R1	Sept 2022	DRAFT Crossing Facilities Strategy	*F Price*		

Cheshire East Council
Highways

Contents

1.	**Strategy background**	**2**
1.1	Overview	2
2.	**Introduction**	**3**
2.1	Background	3
2.2	Scope	3
3.	**Policy Context**	**4**
3.1	National Guidance	4
3.2	Cheshire East Council context	4
3.3	Local Transport Plan	4
4.	**Crossing Types**	**5**
4.1	Introduction	5
4.2	Uncontrolled Crossings	5
4.2.1	Dropped Kerbs	5
4.2.2	Dropped Kerb with a pedestrian refuge	6
4.3	Controlled Crossings	6
4.3.1	Zebra Crossing	7
4.3.2	Parallel Crossing	8
4.3.3	Signalised control crossings	8
4.3.4	PUFFIN Crossings (Pedestrian User Friendly Intelligent Crossing)	9
4.3.5	TOUCAN Crossings (Two can cross)	10
4.3.6	Pegasus Crossings	10
4.3.7	Crossing facilities at signalised junctions	11
4.3.8	Advanced Cycle Signals	11
4.3.9	Other crossing types	11
5.	**Prioritisation of Crossing Requests**	**12**
5.1	Introduction	12
5.2	Prioritisation	12
6.	**Further Investigations for prioritised requests**	**13**
6.1	Introduction	13
7.	**Changes to crossing type**	**14**
7.1	Introduction	14
7.2	Review process	14
8.	**Development Sites**	**15**
Appendix A – Prioritisation Matrix		**16**

Cheshire East Council
Highways

1. Strategy background

1.1 Overview

The Council recognises that having a strategy for the provision of pedestrian crossings is important for the safe movement of those crossing the highway. It also lends support to realising the councils Local Transport Plan objectives of enabling greater active travel and promoting a healthier active lifestyle.

This Pedestrian Crossing Strategy governs the installation of both controlled and uncontrolled pedestrian crossings to aid the safe passage of pedestrians, cyclists and horse riders. The Council receives many requests for pedestrian crossings, and it is important that the most deserving locations are prioritised against the available budgets under the various programs of work the Council identify.

This document is termed a pedestrian crossing strategy, but this is an umbrella term and includes cyclists and horse riders whilst accommodating vulnerable road users.

Crossings are provided as amenities to give access and easier movement across our highways. Generally, the provision of crossings should be targeted to assist those who experience the most difficulty and potential danger whilst also providing higher quality facilities that encourage walking and cycling wherever possible.

The type of crossing installed depends on several factors and should be appropriate to the circumstances of the location. There are many advantages and disadvantages to each type of available crossing facility with the demands and behaviour of road users being a key consideration.

To protect crossing users and to help them cross the highway, we provide different types of crossings at road junctions and busy crossing points.

These include:

- uncontrolled crossings
- Pedestrian island
- Zebra
- Puffin
- Toucan
- Pegasus
- Parallel

To cross the highway safely, sufficient crossing opportunities in traffic flow are required, along with pedestrians being able to estimate vehicle speeds. Most people can cross without the provision of a controlled crossing if there are sufficient crossing opportunities. At locations with higher vehicular flows, particular groups of pedestrians, may require a crossing facility before they feel it is safe enough to cross.

2. Introduction

2.1 Background

Creating safer crossing points plays a crucial role in encouraging pedestrian activity, especially for vulnerable road users.

The right type of crossing in the right location is key as different types of crossing are appropriate at different locations. The factors such as road character, traffic speed, along with vehicle and pedestrian numbers should be taken into consideration.

It is necessary to evaluate and prioritise requests for new installations as the whole life costs of crossings needs to be considered. The Councils budget constraints can limit the number of crossing facilities being provided and maintained.

Propensity for active travel is greatly linked to local affluence of an area.

This Strategy aims to achieve consistency in the assessment and provision of pedestrian crossings across the Borough prioritising locations where they are most needed.

2.2 Scope

This Strategy shall apply to:

- Cheshire East's existing road network
- New roads constructed by or on behalf of Cheshire East Council; and
- New roads constructed by others for adoption by Cheshire East Council

3. Policy Context

3.1 National Guidance

For roads with a speed limit of 40mph or under, we adhere to the current government guidance on the assessment and design of crossings outlined in 'Traffic Signs Manual Chapter 6 Traffic Control'. This supersedes the previous guidance given in Local Transport Note (LTN) 1/95 The Assessment of Pedestrian Crossings and LTN 2/95 The Design of Pedestrian Crossings.

For roads with speed limits above 40mph, the Design Manual for Roads and Bridges (DMRB) may be more appropriate. The current standards for the design and assessment of crossings are; GG 142 - Walking, Cycling and Horse-riding Assessment and Review and CD 143 - Designing for Walking, Cycling and Horse-riding.

Where a crossing is desired to support a cycle route the requirements of the guidance set out in Cycle Infrastructure Design (LTN1/20) should be considered.

Additionally, where a crossing is desired, the Department for Transport (DfT) guide titled Inclusive Mobility, A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure, should be considered.

Traffic Signs Manual Chapter 6 Traffic Control, recommends that authorities develop their own policy to set out which types of crossing are to be provided in what circumstances, and why to ensure local policy is applied consistently and road users are clear of what is expected of them.

The choice of crossing type and their design is also complemented by further advice in Manual for Streets.

3.2 Cheshire East Council context

This policy recognises that the highway network is for use by all. Its strategic aims are promoting sustainable active travel, help create healthy communities and reduce carbon emissions through the introduction of crossing facilities to support our local communities.

3.3 Local Transport Plan

The Local Transport Plan sets out a framework for how transport will support wider policies to improve our economy, protect our environment, make attractive places to live, work and play and the role transport will play in supporting the long-term goals of the Council.

This strategy helps deliver the priorities of the Local Transport Plan by setting out how the Council manage requests for crossing facilities and the types of crossing facility that can be accommodated in the Borough. This is alongside the active travel aspirations of the Council when considering implementation of a crossing.

The Strategy also recognises that to support economic growth some locations should be prioritised for the consideration of crossing facilities. This is illustrated in the Prioritisation Matrix identified in Section 5.

4. Crossing Types

4.1 Introduction

There are two categories of formal pedestrian crossings: Uncontrolled and Controlled. The following sections outline the categories and illustrate the crossing types in each category.

4.2 Uncontrolled Crossings

An uncontrolled crossing can significantly benefit wheelchair or motorised scooter users as the kerb is lowered to be in line with the carriageway. They are usually used in areas of high footfall, low traffic and where a controlled crossing cannot be justified.

The two main types of uncontrolled pedestrian crossing points are:

- Dropped kerbs
- Dropped kerbs with a pedestrian refuge

Before implementing uncontrolled crossings, site assessments will be undertaken and considered alongside the engineering judgement of the assessing highway engineer.

4.2.1 Dropped Kerbs

Figure 1 Example of a dropped kerb

Dropped kerbs are used in low-traffic areas to support pedestrian routes.

A dropped kerb is mainly to be used when traffic volume and speed is low. Although they are subject to site constraints, they can be introduced without a formal consultation.

Dropped crossings support pedestrian routes for vulnerable road users. New dropped crossings will include tactile paving to assist visually impaired people to locate the dropped crossing point.

The tactile paving also provides a warning to help pedestrians differentiate between where the footway ends, and the carriageway begins.

Tactile paving should be installed in accordance with the latest revision of DfT guidance Document 'The use of Tactile Paving Surfaces' guidance, wherever possible, whilst ensuring the 'right solution' in the 'right location'.

Drivers should give way to those waiting to cross a road.

4.2.2 Dropped Kerb with a pedestrian refuge

Figure 2 Example of a dropped kerb with a pedestrian refuge

A dropped kerb with a pedestrian refuge is considered where the road width exceeds 10 metres. They provide a refuge for pedestrians and cyclists and narrow the carriageway which may also reduce speed of traffic.

This type of crossing may help pedestrians cross quicker as a gap in traffic is only required from one direction at a time. However, capacity can be an issue if a large number of pedestrians need to stand on the refuge.

4.3 Controlled Crossings

Controlled crossings use a combination of road markings and signals as the control mechanism for pedestrians and traffic.

For all new controlled crossings, the asset register should include notes on the reason for the installation of the crossing facility.

The introduction of a controlled crossing should be in line with the latest Department for Transport, DfT, guidance such as Traffic Signs Manual chapter 6 or Local Transport Note LTN 1/20.

All new or upgraded crossing facilities should include:

- adequate drainage,
- ducting for cabling with sufficient capacity for future upgrades,
- adequate lighting levels in line with national guidance or standards
- low energy consumption equipment
- Tactile paving

Signalised crossing facilities may include audible ‘bleepers’, if this has been assessed as necessary by a suitably qualified and experienced design engineer. They should also consider the use of assistive technology to support vulnerable road users.

The waiting time for pedestrians at signalised crossing facilities will be no more than 30 seconds at peak times unless the crossing facilities are linked to junction signals.

When considering the installation of controlled crossing facilities the Council will use the most appropriate type for the location in line with national guidance such as Local Transport Note, LTN, 1/20 and Design Manual for Roads and Bridges, DMRB.

The types of crossing outlined in sections 4.3.1 to 4.3.8 are the most commonly used types.

4.3.1 Zebra Crossing

Figure 3 Example of a zebra crossing

Zebra crossings are usually considered where pedestrian flows are relatively low and traffic flows are no more than moderate, as well as considering wider context and design factors.

The likely effect of a Zebra crossing can be tested by checking the availability of gaps in the traffic. Gaps of around five seconds are needed for an able person to cross a 7-metre carriageway.

Vehicle delays are typically five seconds for a single able person crossing but can be much more where irregular streams of people cross over extended periods.

Where gaps in traffic flows are few, and waiting times long because people feel it may be hazardous to establish precedence, a Zebra crossing is likely to be unsuitable. Where traffic speeds are higher than 30 m.p.h., people will require longer gaps in the traffic flow or be exposed to the risk of more serious injury if precedence is not conceded for any reason.

Zebra crossings should not be installed on roads with an 85th percentile speed of 35 m.p.h. or above.

Zebra crossings should not be considered where there are significant numbers of vulnerable road users.

Additional LED lighting in posts and around the flashing beacon may also be considered.

4.3.2 Parallel Crossing

Figure 4- Example of a parallel crossing

Parallel crossings operate similar to zebras. However, they also include the provision for cyclists to cross without having to dismount. The parallel crossing consists of a standard zebra crossing as above, however, an adjacent area to the zebra is marked with a broken white line for cyclists to cross to provide a continuous route for cyclists.

Those on the road must stop when they see a crossing user about to cross.

4.3.3 Signalised control crossings

Signalised Controlled Crossings are more suitable where:

- vehicle speeds are high, and other options are thought unsuitable;
- there is normally a greater than average proportion of vulnerable road users
- vehicle flows are very high and pedestrians have difficulty in asserting precedence
- there is a specific need for a crossing for cyclists or equestrians;
- the crossing could be confused by traffic management measures such as a contra-flow bus lane;
- there is a need to link with adjacent controlled junctions or crossings;
- The numbers of people crossing are high and delays to vehicular traffic would otherwise be excessive.

The Council does not install count down timers for crossing users at standalone controlled crossings.

4.3.4 PUFFIN Crossings (Pedestrian User Friendly Intelligent Crossing)

Figure 5- Example of a Puffin Crossing

Puffin crossings can take account of the overall crossing time, which is established each time by on crossing pedestrian detectors. The green man signal only represents an invitation to cross and is followed by an adjustable 'all red period'. This period is determined by the on-crossing pedestrian detectors and is extended sufficiently to allow a pedestrian to safely cross the carriageway.

The demand for the crossing is triggered by the push button unit but kerbside pedestrian detectors can be fitted to cancel demands that are no longer required (when a person crosses before the green man lights). At some crossings a demand can also be registered through use of a 'Smart app' or 'Smart Cross' device to support those with visual impairments.

Puffin crossings have the red man/green man signals above the push button unit on the approaching traffic side of the crossing. This layout encourages pedestrians waiting at the crossing to look at the approaching traffic at the same time as looking at the red man/green man signal.

4.3.5 TOUCAN Crossings (Two can cross)

Toucan crossings are designed for both pedestrians and cyclists and are typically used adjacent to a cycle-path (Cyclists should dismount to cross the road using Zebra, Pelican or Puffin crossings).

There is a green/red cycle symbol alongside the green/red man. At Toucan crossings the crossing time is established each time by on-crossing detectors in the same way as Puffins. The cost of a Toucan is similar to that of a Puffin however a Toucan crossing has four pushbuttons and the crossing point is wider in order to accommodate cyclists and pedestrians simultaneously.

A toucan crossing can only be sited where it links sections of a cycle route.

The installation of a Toucan crossing is determined following assessment against LTN1/20.

Figure 6 Example of Toucan crossing

4.3.6 Pegasus Crossings

Pegasus crossings are similar to Toucan crossings but have a separate corralled area with a higher mounted red/green horse symbol and push buttons to allow horse riders to cross.

This type of crossing is only used where many equestrian crossing movements are made across a busy main road.

A pegasus crossing can only be sited where it links sections of bridleway.

Figure 7 Example of a pegasus crossing

4.3.7 Crossing facilities at signalised junctions

Figure 8 Example of crossing facilities at signalised junction

Crossing facilities should be considered at all signalised junctions by default, supporting safe pedestrian movement.

4.3.8 Advanced Cycle Signals

Figure 9- Example of Advanced cycle signals

These are used to connect cycle routes across or through junctions. The distinguishing feature is the use of detectors which differentiate for cyclists at an advanced stop line.

These crossings are purely for use by cyclists and are only found at signal controlled junctions.

4.3.9 Other crossing types

The Council may consider the installation of alternative crossing types which support modal shift and active travel. The type of crossing will be informed following assessment and consideration against national design guidance.

5. Prioritisation of Crossing Requests

5.1 Introduction

The Council receives many requests for pedestrian crossings, both controlled and uncontrolled each year. It is often not possible to consider every location in detail within the available budgets. Therefore, a mechanism for prioritising locations for further consideration is important. This ensures all requests are considered against consistent criteria, allowing the impact of limited budgets to be maximised.

5.2 Prioritisation

A prioritisation matrix, Appendix A, will be used to determine a score for each location. The top percentile of locations will be investigated further for location assessment, possible crossing type and deliverability within the budgets available.

The top percentile of locations will be determined annually and taken forward for further investigation as the annual program the following financial year. Locations that are then progressed to detailed design and implementation will be informed by the budgets available.

A specific location request for crossing facilities will only be prioritised once every 3 years unless a material change to the local environment, such as development or highway infrastructure changes warrants the location to be reconsidered sooner.

Locations that remain on the prioritised list for more than 3 years will be reassessed to determine whether the location has changed in priority for further investigation.

The prioritisation matrix considers various elements and features across 8 key areas of:

- casualty reduction,
- sustainable travel,
- accessibility and capacity,
- amenity,
- neighbourhood engagement
- local concern,
- supporting growth and
- protects and improves the environment

6. Further Investigations for prioritised requests

6.1 Introduction

There are three criteria that should be used when assessing what type of crossing is most appropriate: safety, convenience and accessibility.

The decision whether or not to provide a crossing, and its type, should be a balanced judgement based on consideration of:

- the location
- national guidance
- the benefits of installing a crossing facility,
- the likely implementation and future maintenance costs
- latent demand
- proximity of alternative crossing points
- engineering judgement of a professional traffic or design engineer

Should it appear that the location does have a record of collisions resulting in injury to vulnerable road users then the location may be considered for inclusion in the Casualty Reduction programme.

7. Changes to crossing type

7.1 Introduction

Legislation changes to Traffic Signs, Regulations and General Directions (TSRGD) 2016 have resulted in pelican crossings no longer being best practice to support the Equality Act 2010. Therefore, once such assets reach end of life, they must be reviewed to determine the most suitable crossing type for the location.

Other instances where a review of crossing type could be undertaken are:

- where controller equipment at the roadside is obsolete
- Changes in the local environment which changes the nature and use of the highway

Despite signalised crossings being implemented, pedestrians often choose to cross the road when there are gaps in traffic rather than waiting for the signal. This can not only increase the risk of an accident happening at the crossing, but also question the general need for signalised crossings in certain locations where a zebra crossing would also suffice.

7.2 Review process

Regardless of the reason for reviewing the crossing provision at a location, the review should consider the following points alongside design guidance or requirements and the engineering judgement of a highway engineer undertaking the review:

- Visibility- the location needs to be clear of obstructions (trees, buildings, junctions, railings, etc.)
- Pedestrian activity levels
- Ratio between vehicles and pedestrians at peak hours
- Classification of pedestrians and proportion of vulnerable road users
- Collision data
- Type and proximity of other crossings in the area
- Gaps in traffic for crossing opportunities
- Crossing time
- Waiting time to cross
- Crossing desire lines
- Route linkage
- Active travel priorities for the location

The outcome of the review will be a reasoned conclusion on the actions to be taken converting it to a PUFFIN signalised crossing or a zebra crossing.

8. Development Sites

The need for controlled crossing facilities where development sites are planned or have taken place are identified following a Transport Assessment requested by the Local Highway Authority as part of the planning process.

However, all development sites will include at least one uncontrolled crossing, with tactile paving, on the adjacent adopted highway network to support pedestrian routes to destinations such as town centres, schools, health care facilities and other local amenities.

Where a crossing is implemented by, or on behalf of, a developer a commuted sum for future maintenance must also be provided.

Cheshire East Council
Highways

Appendix A – Prioritisation Matrix

Prioritisation Matrix for requests for crossing facilities to progress for further investigation

Please ensure all light grey cells are set to "Blank" and the final score is ZERO before starting a new location score.
Type only in the Light Grey Cells
Please create a COPY of this sheet for each location and all questions

Assessment by:						**Ref No:**
Date of assessment						
Location						
Has this location been assessed in the past 3 years?	Blank					
Road Classification:	Blank	**Speed Limit:**	Blank	**Environment:**	Blank	
CEC Political Ward	Blank	**Is the location within a Conservation area?**	Blank	**Is this for an aids to pedestrian movement program?**	Blank	

DO NOT LEAVE ANY BOX AS 'BLANK'

Pre 1	Will this location be considered through a current alternative programme of work? (E.g. Road Safety, S106, STEPS, Active Travel, S106 etc.) (If Yes all scores 0, No = 3)	Blank	0
		Blank	
	A - CASUALTY REDUCTION		
1	Have there been any colisions (Excluding DUI's) that have involved pedestrians or cyclists crossing the road? (Yes = 3, No = 0)	Blank	0
2	Have there been any claims at this location? (Yes = 10, No = 0)	Blank	0
	B – SUSTAINABLE TRAVEL		
3	On a cycle route in the Transport Development Plans? (Yes in the TDP = 2, Cycle route but not in the TDP = 1 , No cycle route = 0)	Blank	0
4	Propensity for cycling in the local area *https://www.pct.bike/* (Over 30% = 5, Between 20% and 30% = 3, Less than 20% = 1)	Blank	0
5	Is there a shared use path at this location (Yes = 1, No = 6)	Blank	0
	C - ACCESSIBILTY AND CAPACITY		
6	Footway Provision (No footways = 0, Footway on 1 side only = 1, Footway on both sides- 1 side wider than the other = 2, Footway on both sides- Equal width both sides = 3)	Blank	0
7	Are there any obstructions to the footways ? (e.g. street furniture) (Yes = 0, No = 4)	Blank	0
8	Are there any civil engineering constraints at this location? (Yes = 0, No = 6)	Blank	0
	D - AMENITY		
9	How many Retail facilities are in close proximity? (I.E. Shops, Supermarkets, Hair & Beauty establishments.) (Under 3 = 0, 4 to 12 = 1, 13 or More = 2)	Blank	0
10	How many Education facilities are in close proximity? (I.E. Nurseries, Schools, Colleges, Universities.) (0 = 0, 1 to 2 =5, 3 or More = 10)	Blank	0
11	How many Health Care Institutions are in close proximity? (I.E. Doctors, Hospitals, Care homes, Dentists) (0 = 0, 1 to 3 = 5, 4 or More = 10)	Blank	0
12	How many Hospitality facilities are in close proximity? (I.E. Cafes, Restaurants, Takeaways, Bars, Hotels) (0 = 0, 1 to 10 = 1, 11 or More = 2)	Blank	0
13	How many Places of Worship are in close proximity? (0 = 0, 1 to 2 = 1, 3 or More = 2)	Blank	0
14	How many Tourist Attractions or Leisure Facility are in close proximity? (E.g. Museums, Garden Centre, Gardens, Historic Houses, Gyms, Parks, ect.) (0 = 0, 1 to 3 = 1, 4 to 6 = 2, 7 or More = 3)	Blank	0
15	Would a crossing facility provide access to an educational establishment (Yes = 10, No = 0)	Blank	0

Cheshire East Council
Highways

	E – NEIGHBOURHOOD ENGAGEMENT		
16	Political Support - Ward Member (Yes = 5, No = 0)	Blank	0
17	Stakeholder Support - Town or Parish Council (Yes = 3, No = 0)	Blank	0
18	Political Support - Other (Yes = 2, No = 0)	Blank	0
19	Other organisations (E.g. Resident association, Disability groups) (Yes = 5, No = 0)	Blank	0
20	Is there a school travel plan to support a crossing facility? (Yes = 5, No = 0)	Blank	0
	F - LOCAL CONCERN		
21	Number of unique recorded resident and/or stakeholder concern for vulnerable road user safety on CONFIRM? (In Past 3 Years) (0 = 0, 1 to 2 = 5, 3 or More = 10)	Blank	0
22	Does this location directly link into existing or proposed active travel schemes? (Links to an existing scheme=10, Links to a proposed or scheme in design=7, Links to a 'scheme on a 'wish list'=4, Does not link to any active travel scheme=0)	Blank	0
23	Score for population in the ward 65 and over		0
24	Score for population in the ward 16 or under		0
	G - SUPPORTING GROWTH		
25	Will a crossing facility at this location help improve or provide a link to a town or village centre (Yes = 5 No = 0)	Blank	0
26	Will a crossing facility in this location help improve or provide a link to an employment site (Yes = 5 No = 0)	Blank	0
			0
	H - PROTECTS AND IMPROVES THE ENVIRONMENT		
27	No. of other active travel measures the location ties into or links to (No other active travel measure = 0,1 other active travel measure = 1, 2 other active travel measures = 2 , 3 or more active travel measures = 3)	Blank	0
28	Would a crossing facility provide access to a transport hub? i.e Railway or bus station, bus stop, cycle hub or taxi rank (Yes = 5, No = 0)	Blank	0
29	Is there a school crossing in operation at this location? (Yes = 10, No = 0)	Blank	0
30	Is location an AQMA site? (Yes = 0, No = 2)	Blank	0
		Assessment score total	0
		Overall Deprivation score	0

Ref no	Location		Assessed by	Date of assessment	Final Score
0	0		0	00/01/1900	0

*Copy and paste the above line as **VALUES** into the Summary sheet*