Essex County Council

Detailed paper: Balkerne Hill subway, Colchester

SAFER GREENER HEALTHIER

Essex County Council (ECC) wants to make Colchester Safer, Greener and Healthier for residents of all abilities to walk, wheel and cycle, improving air quality and reducing congestion. To support this, ECC is proposing a new east-west route into Colchester town centre. To comply with best practice in safe design, we are proposing to replace the subway under Balkerne Hill with a new safer crossing for both cyclists and pedestrians.

This paper seeks to provide important facts, and answer questions around the history of the Balkerne Hill subway and crossing.

If you have additional questions, please email sgh.routes@essex.gov.uk
If you want to make a comment, visit https://tinyurl.com/Balkerne-Hill.

How we consulted
The public consultation for our active travel schemes took place between 27th May and 11th July 2021.

How was the public consultation advertised?
A local marketing campaign supported promotion of the consultation. This included:

- Two press releases were sent to the Colchester Gazette and achieved editorial coverage: The first article launched the consultation and the second to remind residents to give us their feedback.
- An online article was commissioned setting out details of the consultation and how to take part. The article appeared in the online Colchester Gazette.
- A full page advertisement appeared in print in the Colchester Gazette.
- A Facebook survey was advertised resulting in 157,945 impressions. 695 responses were received to the survey questions, 64 from the CO1, CO2 and CO3 postcode areas.
- A promoted post targeting Colchester was posted on a Major Projects Facebook page.
- A promoted post featured on the Essex Live Partners Facebook targeting Colchester - 18,230 Colchester residents were potentially reached.
- A 30 second ad ran for two weeks on Radio Essex and a second ad ran for two weeks on Heart Essex.
- The sustainable transport team had a stand in Culver Square shopping centre on Friday 11th June.
- 35 tweets were posted during the consultation period on the @SGH_Essex channel.

What other consultations were undertaken and when?
The public consultation took place between 27th May and 11th July 2021.
This was followed by a Crouch Street West Traffic Regulation Order (TRO) published in the Colchester Gazette in May 2022.
The revised TRO for Crouch Street West is currently out for consultation until 3rd March. Details can be found here: https://www.essexhighways.org/highway-schemes-and-developments/traffic-regulation-orders

When did the Colchester Active Travel Steering Group meet to discuss the proposed plans?
The Colchester steering group, made up of local representatives including representatives from mobility and visual impairment access groups, took place on the following dates:
8th, 22nd October 2020
5th, 19th November 2020
10th December 2020
14th, 21st, 29th January 2021
4th, 11th, 17th, 25th February 2021
19th March 2021
29th April 2021
25th May 2021
5th, 19th August 2021
13th September 2021
16th March 2023

Were Essex Police consulted?
Essex Police are a statutory consultee and would therefore have been consulted as part of the TRO consultations in May 2022 and the current TRO.

What was the feedback for the Colchester public consultation?
Full details of the responses can be found here:
https://www.essexhighways.org/uploads/downloads/safer-greener-healthier/active-travel-fund-consultation-report-2021.pdf

- 787 online responses were received for Colchester with a further 33 comments received either via email or letter.
- Responses were received from the Colchester Cycling Campaign, Colchester Civic Society, Colchester Bus Users Group, Myland Community Council, Stanway Parish Council, Lexden Residents Group and other borough ward councillors.

- For the North-South the majority of respondents, 56%, responded positively, agreeing that the proposals would support more cycling and walking, while 26% disagreed.
- For the East-West route there was also majority support with 57% agreeing that the proposals would encourage additional cycling compared with 28% in disagreement.
- 45 people responded on Balkerne Hill specifically.

Which schools were consulted on the Balkerne Hill subway closure and when?
A 2-page A4 leaflet containing details on the proposed healthy school street zones in Colchester was posted to 1515 addresses in the Lexden Road area on 28th June 2021.

St Mary's School, Colchester High School, Royal Grammar School, County High School for Girls, St Benedicts College and Kingswode Hoe School were sent the leaflet which included a URL link to the full details of the consultation, including the proposals for the Balkerne Hill subway.

Safety

How many accidents have occurred with the signal-controlled road crossing compared with in the subway, including details of cars, pedestrians and antisocial behavior in the subway?
Accident data for the crossing over a 40-year period shows 21 accidents have occurred, one of which was classified as ‘fatal’, four as ‘serious’ and the remaining 16 as ‘slight’. The accident classified as ‘fatal’ occurred in November 2000. The first recorded accident in this location was 1981 with the last recorded accident in this location being March 2018.

No corresponding records are held for the subway which means that accidents or incidents in this location cannot be compared to the signal-controlled crossing. However, we know that fear of perceived and actual crime and anti-social behavior does impact the choice of route taken by pedestrians. Those who consider themselves vulnerable in this type of space will travel a significant distance off their line of travel to avoid these areas. The presence of the signal-controlled crossing provides a point of access that maintains the directness of the route and offers a more visible, socially safer space that addresses these concerns.

A report by Edinburgh University shows that the accident figures for light controlled crossings are significantly higher than for subways/footbridges?
The paper from Napier University* looked at the safety of pedestrians at pelican crossings and is based upon data collected between 1993 and 2006. The research does not include puffin crossing data, which is the current, safer crossing and the type which will be used for Balkerne Hill. Puffin crossings started to be rolled out from 2016 onwards in Essex.

The proposed Balkerne Hill crossing will use a toucan crossing arrangement (puffin, which allows for cycles to cross). It will have segregated crossing facilities for pedestrians and cyclists and will operate in the same manner as a puffin crossing.

There are no recorded accidents in the last five years involving pedestrians on the crossing, and as a result no supporting evidence that the change in configuration of the crossing will lead to any increase.

* https://itf-oecd.org/sites/default/files/docs/p01_alnaqbi.pdf

What is the difference between pelican and puffin crossings?
Pelican crossing - this is a type of crossing that derives its name from pedestrian light-controlled crossing. The pedestrian presses the button on the box of a pelican crossing to cross the road, and the traffic lights turn red, virtually stopping traffic. The pedestrians must cross the road only when the man on the box turns steady green and not when it is still flashing, and ensure all traffic has come to a standstill.

Puffin crossing - puffin comes from pedestrian user-friendly intelligence and is one step ahead of the pelican crossing, as it consists of infra-red cameras that detect the presence of pedestrians with their body heat. This makes the crossing intelligent as it can increase or reduce the time for which traffic light remains red. This helps pedestrians as they are not required to walk faster and the crossing detects their body heat to keep the signal red.

Where the speed limit within 100 meters of a Give Way line is greater than 40mph on any approach, and the traffic flow on each of the approaches is greater than 8,000 two-way annual average daily traffic at given location (AADT), any pedestrian crossing should be either signal-controlled or grade-separated (e.g. bridge or subway).

Non-staggered (i.e. you can cross the road in a single phase, and not need to stop at a middle island and wait for another green light) signal-controlled crossings should be sited either at 20 meters or more than 60 meters from the roundabout entry Give Way line. Where the crossing is staggered (what is currently in place), the part of the crossing on the entry arm can be within the 20 to 60 meters zone.

The proposed new Balkerne Hill crossing will be sited 65 metres from the nearest Give Way line, and complies with national requirements. The proposals have also been reviewed and approved by Essex Highways Road Safety Audit team.

Reference document: CD116 Geometric Design of Roundabouts section 8.

Why was this route chosen?
In England, counties and districts are encouraged by the Department of Transport, to develop Local Cycling and Walking Infrastructure Plans (LCWIPs).

Colchester created theirs in 2018 and the east-west route ECC are exploring was a key route within the LCWIP. In March / April 2021, a public consultation on all our LCWIPs was launched. This consultation preceded the Active Travel public consultation in May 2021. The results of the LCWIP consultation are available on request from SGH.routes@essex.gov.uk

In Summer 2020, Active Travel England / Department of Transport announced ring-fenced funding for Active Travel schemes. ECC reviewed all the LCWIP routes and created a shortlist based on various criteria such as how frequently they might be used, how important they were for building a coherent network and whether they could be built according to Department of Transport guidance. This shortlist process identified the East-West route as one of the key routes in Colchester. It was submitted to the DfT for funding in September 2020. Steering Group conversations with representative groups began in October 2020 and funding was received in November 2020.

Will the removal of the subway increase the risk to pedestrians in crossing this location?
Current best practice safety design recommends at-grade, single-phase crossings.
The existing subway is no longer fit for purpose and cannot easily be used by those with restricted mobility.

Why is the subway deemed to be sub-standard and can't be used for the current cycling and walking improvements?
The existing subway is no longer fit for purpose and cannot easily be used by those with restricted mobility or cyclists.

Pedestrian-only subway requirements:

- The minimum headroom should be 2.3 metres - the current headroom is 2.36 metres. **Requirement met.**

- The minimum width requirement should be 3.0 metres - the current subway width is 2.3 metres. **Requirement not met.**
- The maximum gradient of a ramp should be 5% - the current ramps are 10%. **Requirement not met**.
- Both ramps and stairs should be provided for access - the current subway only provides ramps. **Requirement not met.**

Due to associated land issues, it is not possible to widen the subway, or introduce the required ramps or stairs.

Shared-use subway requirements:

- The minimum headroom should be 2.4 metres - the current headroom is 2.36 metres. **Requirement not met.**
- The width requirement should be 4.0 metres - the current width is 2.3 metres. **Requirement not met.**

History of the subway

When was the subway built and why?
The subway was constructed in 1976 as part of the Colchester inner relief road and part of the original Balkerne Hill Road construction.

What crossing upgrades have taken place?
The crossing was constructed later than the subway due to safety issues with the subway as people were jumping the barrier and crossing the road. Accident data shows the crossing has been in use since at least 1981.

Usage

How many people (split between pedestrians, cyclists, wheelchair users and others) use the subway versus the crossing?
Due to the need to upgrade the subway to ensure that it meets current design standards for walking, wheeling and cycling, counts were not considered necessary.

We are undertaking a count to supplement existing data and the report will be available in March.

Modelling results on Balkerne Hill (A134)

The impact on the A134 traffic has been considered between the existing and proposed crossing arrangements and has been shown to be negligible. The impact of implementing the single stage crossing is deemed to be relatively small with queues increasing by only one to two vehicles on the approaches to the crossing. Drivers travelling southbound are unlikely to experience this impact during peak hours as they are already in the queue generated from the entry to the roundabout.

	Degree of Saturation (%)					
	AM Peak			PM Peak		
	Existing Staggered Crossing	Proposed Straight Crossing	Proposed Straight Crossing with Signals at Roundabout	Existing Staggered Crossing	Proposed Straight Crossing	Proposed Straight Crossing with Signals at Roundabout
Balkerne Hill SB @ Crossing	65%	71%	71%	63%	69%	69%
Balkerne Hill NB @ Crossing	67%	76%	77%	68%	77%	77%
Balkerne Hill SB Entry @ Roundabout	83%	83%	64%	81%	81%	71%
	Mean Max Queue (PCU)					
	AM Peak			PM Peak		
	Existing Staggered Crossing	Proposed Straight Crossing	Proposed Straight Crossing with Signals at Roundabout	Existing Staggered Crossing	Proposed Straight Crossing	Proposed Straight Crossing with Signals at Roundabout
Balkerne Hill SB	10	11	11	9	11	11
Balkerne Hill NB	11	12	12	9	12	12
Balkerne Hill SB Entry @ Roundabout	14	14	12	13	13	11