

Briefing Note: Kings Dyke – Movement of 70-degree embankment and temporary traffic management

Date Issued: 11 October 2024

1. Purpose

The purpose of this briefing note is to (1) provide an update regarding the movement of the 70-degree embankment at Kings Dyke and related traffic management. It should be noted that this issue is separate from the Star Pit Collapse Dispute with Jones Bros. (2) Provide an update on further Whittlesey closures and associated works.

2. Background

King's Dyke – Ralph Butcher Causeway

- 2.1 The 70-degree embankment at King's Dyke (Ralph Butcher Causeway) sitting between the new rail bridge and the new subway, is a steep slope built up of reinforced earth that supports the new carriageway.
- 2.2 A temporary lane closure at King's Dyke was implemented on 13 June 2024 as a precaution, after some cracks appeared on the edge of the road. This closure is in place while our contractor, Jones Bros, carry out some tests and further monitoring to identify the cause of the cracking.
- 2.3 Following the implementation of the lane closure, Jones Bros has been undertaking visual surveys, monitoring and intrusive surveys to help understand the cause of movement and cracking in the 70-degree embankment. The Vehicle Restraint System has been tested and found to be safe. More recently Jones Bros have installed three detectors within the embankment to be able to measure any ongoing movement.
- 2.4 Jones Bros designers are considering the results of the testing and monitoring to help inform the design of remedial works.
- 2.5 Until the necessary remedial works have been established, Jones Bros, their designers and CCC officers believe it is important to maintain road safety by maintaining the westbound lane closure. We understand that this is causing some disruption during peak hours for road users and continue to liaise with our contractors to monitor traffic flow in the area. There is an operative on site, from start of the morning peak to end of the afternoon peak to be able to manually adjust the signal times if necessary, in response to changes in traffic flow and this will continue to be monitored.
- 2.6 Additional measures to monitor traffic management (TM) were discussed with Jones' Brothers on 8 October, set out below:

- Jones Brothers will be sending 2No. Jones Bros operatives to site as of tomorrow morning (9 October). They will patrol both ends of the queuing traffic to communicate the length of the queues to the TM operative, who will then adjust the timings to try and balance out the queues as much as possible.
- Jones Bros is looking into the possibility of installing cameras along the approaches to the TM so that the queuing traffic can be monitored and the timing of the lights optimised. However; in the meantime 2 operatives will be on site each weekday to manage the traffic flows as mentioned above
- Core Highways' operative will now be on site from 6am – 7pm following concerns raised by Cllr Boden
- Jones Brothers will arrange for water filled barriers to be delivered to site to be installed along the length of the TM and across the Westbound carriageway to prevent unauthorised access along the closed lane (which must remain closed as safety concerns are fully investigated). These will be installed as an addition to the cones that close off the Westbound carriageway
- In reference to removal of traffic management equipment, CCC project manager has spoken to Cambridgeshire Constabulary's Road Policing Unit to ask for assistance from local traffic police with regards to dangerous behaviour, such as removal of traffic management from roads closed for safety reasons. He has updated the Road Policing Unit, the Response Policing Team and the Neighbourhood Policing Team asking that they pay attention to the location.
- Through ongoing analysis and patrolling queues the TM team have found that leaving the lights on green for 7 minutes for traffic leaving Whittlesey during morning peak times and then 2 minutes from Peterborough (vice versa during the afternoon) works well to reduce the backlog, however it does still leave an imbalance in the queues. The issue we have is that as we hold traffic on the 'quieter' side for a longer duration there is frustration from those road users that they are at a standstill for a long period of time. But we hope that those road users appreciate the reason behind this once they see the backlog on the opposite side.
- Note - There was a road traffic collision along the A605 close to Whittlesey on the afternoon of 11 October which closed the road for approx 2 hours. This obviously put additional strain on the local road network. The Operative located on the Peterborough side assisted with diverting traffic across the Pondersbridge to avoid the road closure due to this accident which succeeded in maintaining traffic flows.

2.7 We are unable to confirm the date for remedial works to be undertaken because of the complexities in design, which need to be carefully considered in determining the solution. We continue to work closely with the contractor to understand why the cracks have appeared, which is essential to inform the design.

B1040 East Delph

2.8 Alongside the emergency closure of the Ralph Butcher Causeway, a further closure is in place in Whittlesey at East Delph (B1040) due to erosion (Dog and Doublet), which together with the King's Dyke closure has contributed to heavy traffic at peak times. This closure has been in place since end March 2024. Following work on the design solution, discussions are in progress with the construction team to progress implementation. The programme for remedial work will be dependent on weather conditions allowing access to the site.

- 2.9 The was fully closed due to flooding until 10 October. Prior to the floods, the project manager worked with our contractor, Milestone, to review the phasing of lights. They confirmed that they would look at extending the 'green time' setting to provide longer for moving traffic to navigate past the traffic management. The lights were altered pre flood event and seemed to have shown improvement extending the green light phase.
- 2.10 Additional temporary lights were in place whilst the permanent traffic signals were refurbished on the B1040/ Bassenhally Rd crossroads, approximately 1 mile south of the 'Dog in Doublet' temporary lights. This work has now been completed.
- 2.11 At this time a start date for the works is still unknown, however will be disseminated as soon as formalised. Officers are working closely with Milestone to ensure works are programmed for asap.

B1093 Benwick Road

- 2.12 The County Council has been undertaking emergency work on a third route in Whittlesey, Benwick Road, which is closed to one lane for safety due to the condition of the carriageway. This is a soil affected road. The work to reconstruct and resurface the road is due to commence on 25 November 2024 (delivered through Eastern Highways Alliance contract). The road will fully re-open following safe completion of the works. The programme completion date is the 30 January 2024.
- 2.13 It should also be noted that closures are planned on A605 Eastrea Road in February 2025, again for resurfacing. These works and associated traffic management will be programmed upon completion of Benwick Road.

The three County Council closures are highlighted below on an extract from One Network:



Ralph Butcher Causeway – Complex Infrastructure
Lane Closure since June '24 – 2 Way Lights due to cracking in carriageway

B1040 – ‘Dog & Doublet’ – Structures Team
Lane closure due to erosion since March 24 – full emergency due to flooding now lifted

Benwick Rd – Highway Maintenance
Emergency permit is in place
Two-way signals

A47 – Guyhirn (National Highways)

Over three nights between Wednesday 9 October and Saturday 12 October – 8pm – 5am National Highways is carrying out urgent resurfacing work on the A47 between New Cut Roundabout to Guyhirn, including renewal of road markings and installing studs.

The works involve an evening closure of the A47 between New Cut Roundabout and Guyhirn, and divert traffic in both directions between the A47 at junction 20 and Guyhirn Roundabout, via Frank Perkins Parkway, Fletton Parkway, A605 and A141 (i.e. via Ralph Butcher Causeway). This diversion route was agreed some time ago with provisos that if there were any issues, then they would be mitigated immediately.

Council officers have been monitoring the traffic flows using Traffic Replay and there have been no delays so far. Duty officers remain in close contact to ensure smooth transition and coordination.

The Streetworks team (who have a dedicated single point of contact for all National Highways works) and Traffic Management centre continue to liaise with National Highways.

3. Summary from the 70-degree embankment movement monitoring -King's Dyke.

- 3.1 As noted in 2.2 above, the movement of the embankment is being closely monitored. The monitoring is currently showing that there is settlement of the embankment as well as horizontal movement at a level greater than predicted at the design phase.
- 3.2 Jones Brothers and their design team, including a specially appointed geotechnical expert, are closely reviewing the results and considering the best course of action to ensure the embankment is stabilised ready to be reopened.
- 3.3 The County Council has also sought independent engineering advice to review the monitoring and proposed solutions put forward by Jones Brothers.
- 3.4 Settlement and horizontal movements are continuing at a rate that is significantly greater than predicted and, in some cases, appears to be accelerating, confirming that there is currently no reason to assume that the rate of movement is reducing, and therefore supports the decision to maintain the current lane closure.

4. Communications

4.1 Following the emergency lane closure, there has been a number of communications issued, as outlined below:

- Briefing note issued on 13 June to local members and Chair and Vice Chair Highways & Transport Committee.
- A press release was issued on 13 June 2024. More information can be found here - [King's Dyke lane closure | Cambridgeshire County Council](#)
- Our media team received an enquiry from the CambsNews on 20 August, we responded with the below statement –

A Cambridgeshire County Council spokesperson said: “The westbound carriageway, heading to Peterborough, on the Ralph Butcher Causeway at King's Dyke continues to be temporarily closed. One lane was temporarily closed using two-way traffic lights, as a precaution, while our contractor Jones Bros carried out tests – these tests are ongoing and we're waiting for an update as to why the cracks have appeared and a way forward. Until then, the lane closure will remain in place.”

- Further update provided to members on 19 August 2024.
- The King's Dyke web page was updated on 19 September- [King's Dyke crossing | Cambridgeshire County Council](#)
- Additional signage to be placed at King's Dyke to provide further information (Black on yellow signs - Lane closure for safety reasons).
- Regular member updates will be provided.
- The attached statement was issued on 10 October – [Whittlesey traffic update | Cambridgeshire County Council](#)
- We continue to post on X about the issues on the A605 and B1040, why they are happening and possible timescales

- A congestion incident has been placed on Causeway One Network for the Ralph Butcher Causeway for the duration of the works – this will feed that information directly to Sat-Nav systems and Apps to divert moving traffic around the issues.
- We've expanded the use of the VMS on approach to the A605 to try and mitigate the traffic flowing that way and encourage road users to use alternative routes.
- We will also utilise the three VMS in Whittlesey to communicate these issues (now the flooding on the B1040 has alleviated)

5. Implications (Financial, Risk, Legal or Commercial)

5.1 Jones Bros and their designers have yet to determine the underlying cause of the movement in the embankment. Currently the trafficked lane is a full lane width away from the nearest crack. If there is a change to the current rate of movement and further increase in cracking, then CCC may need to consider a full closure of the Ralph Butcher Causeway. We will do all we can to avoid a closure of the road, but safety is our number one imperative.

6. Summary

6.1 In view of the recent discussions with Jones Bros and the previous view of the Technical Approval Authority (Milestone) that the single carriageway running is safe, and the likelihood of a catastrophic collapse is low, the current layout will be maintained together with ongoing monitoring. Officers will continue to work with Jones Bros and their designers to ensure that, following appropriate design of a solution which receives approval in principle from the Technical Approval Authority, it is implemented so that the westbound carriageway can be reopened.

6.2 If either any monitoring data indicates, or officers otherwise believe, that a catastrophic collapse of the 70-degree embankment is likely to occur then the only option will be to close the Ralph Butcher Causeway to all traffic until a satisfactory solution is to the issue is implemented.

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