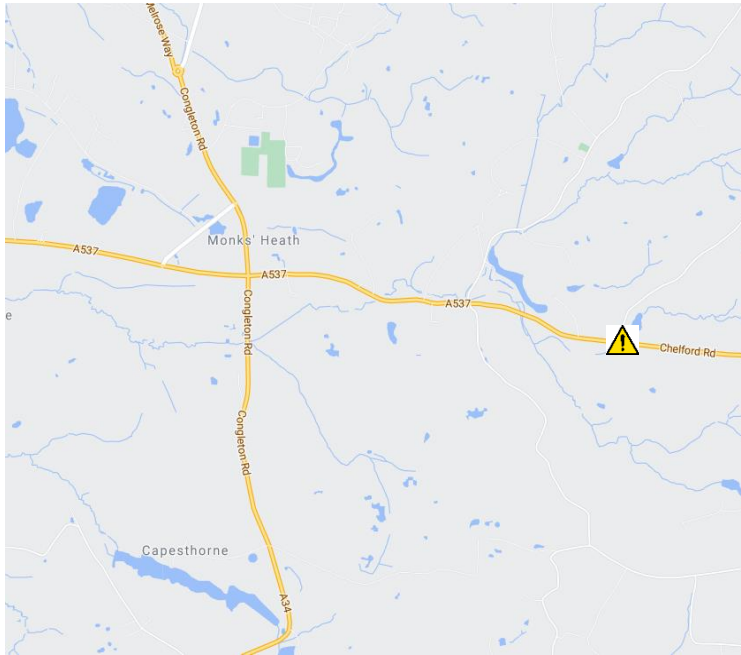


Briefing Note – Henbury Embankment

History

The A537 connects Macclesfield to Monks Heath as part of the resilient network. Approximately 1.0km east of the Monks Heath junction (shown below), a small river is culverted under the A537 some 4.5m below highway level. This culvert was added to our Highways Inventory in 2019 following concern regarding the embankment supporting the highway. Parts of the end of the small brick



culvert had collapsed together with a small retaining wall which offered some support to the embankment above.



Following these findings in June 2019, we instigated quarterly inspections of the embankment and culvert to monitor potential movement. This was increased to monthly inspections in April 2020 following a review of the risk and increase in rainfall.

Issue

During the monthly inspection for January, the inspector has noted that part of the embankment providing support to the A537 carriageway has slipped. This is more than likely due to a combination of the persistent heavy rainfall and that the embankment consists predominantly of sand.



From the previous pictures, it is evident that a substantial part of the embankment has failed resulting in the exposure of the edge of the carriageway, services, and the face of the embankment.

Risk

Because of highway loadings, there is an ongoing risk of further embankment failure. This risk will be managed through the immediate installation of traffic lights and an increase in the frequency of inspections to weekly. The traffic lights will be manned during peak hours to minimise queuing. This will be reviewed frequently to ensure effectiveness and requirement.

Moving forward

Following the identification of the issue in 2019, funding was secured for 2020/21 to undertake some investigations and surveys to better understand the problem and its extent. This work has been completed and an options study has been completed with funds bid for to design and construct a solution in 2021/22.

We will recommend the ground investigations are brought forward from 2021/22 and start these now to expedite the design solution. This will make best use of the temporary traffic lights in place to mitigate the edge loading.

We will identify any short-term measures such as sheet piling with a view to re-opening the A-Road whilst the design is undertaken. These short-term solutions will be balanced against the cost of installation against the disruption caused by the traffic lights. Hopefully, the disruption will be minimised by the unfortunate consequences of the current pandemic.