

1061 Farthinghoe Bridge

Farthinghoe Bridge is located on the A422, Farthinghoe Road between the villages of Middleton Cheney and Farthinghoe in South Northamptonshire.

The structure carries the A422 over Farthinghoe stream and consists of 2 types of construction; the original brick arch bridge with a steel corrugated arch extension.

The brick arch supports the carriageway whilst the corrugated steel arch, added to the north of the structure in 1971, supports the north verge.

The bridge is inspected every two years, and the capacity is checked every 12 years.

The last inspection in October 2016 identified defects in the brick arch that were of concern, including cracks and bricks dropping from the crown of the arch barrel. These defects had deteriorated gradually over years, but had worsened considerably in recent years.

Previous repairs appeared to be failing as well.

Following the October 2016 inspection, Farthinghoe Bridge was added to the Bridge Maintenance programme. The bridge was also re-assessed and due to the condition of the bridge, a monitoring programme was commenced.

Immediate Action

At the last monitoring inspection in August 2018, there was a noticeable increase in the measurement of the drop of the bricks in the arch crown. If these bricks do drop out, then the structural integrity of the arch is compromised, with the potential for it to collapse without warning.



Due to the volume of traffic and number of heavy vehicles using the route, Northamptonshire Highways took the operational decision to close the A422, to allow temporary propping to be installed before the arch collapses, and allow the road to be reopened, probably under signal control. This will be carried out as quickly as possible, once the temporary props are designed.

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Traffic Management / diversion

The main diversion route via the A43 and M40. This is very clearly signed and we are committed to encouraging vehicles not to use local roads as they are not suitable due to proximity to local communities and weight limits.

Strengthening Scheme

Northamptonshire Highways are already looking at the various options to strengthen the bridge. There are many constraints that we will have to work with:

Running alongside the bridge to the north is a foul pressure main, and to the south of the bridge is a medium pressure gas main, in addition to BT and Western Power cables within the verges. The strengthening works are likely to require temporary diversion of some of these utilities, which means working with third parties.

Farthinghoe Stream is a tributary of the River Cherwell, so Environment Agency consent is required. An ecology survey is required, and we already know that there is a protected wildflower area in the north verge. The ecology survey outcomes are very dependent on the time of year and the results may require further studies or mitigation works.

The strengthening options include both from below the arch and over the arch. All options will require a road closure to allow the strengthening works to be carried out. The duration and cost will influence the final design.

General

Northamptonshire Highways have an ongoing bridge maintenance programme to help to prevent the bridges deteriorating further. In addition we are also preparing schemes to repair 9 major vehicular impacts to our bridges. All of which is being undertaken with very limited resources.

We are aware that Farthinghoe Bridge provides an important access between Brackley, Banbury and the M40, and we are expediting the works as much as is possible.

We will keep all affected parties informed as the scheme progresses.

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