

Our ref: CRS 711,213
Your ref:

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Woodlands
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Direct Line: 01234

Via email

7 October 2014

Dear

A12 HATFIELD PEVEREL STATION ROAD AND BURY LANE BRIDGES

Thank you for your two emails of 11 September. Your first email requests information about various equipment attached to the Bury Lane and Station Road Bridges which span the A12 at Hatfield Peverel. Your second email requests information about the purpose of installing CCTV cameras in Hatfield Peverel.

I am writing to confirm that we have now completed our search for information and provide the following response in line with your questions:

From your first email, you request:

1. The reasons for attaching the equipment.

Bury Lane Bridge is a three span steel and concrete structure. The centre span is a 'drop in' span with 'half joints' at its ends. Its construction allows for expansion at a half joint at its western end which lies over the A12 northbound carriageway.

Expansion occurs when the temperature rises and contraction occurs when the temperature falls. We have observed that the expansion half joint becomes locked in the horizontal direction during summer months and the reasons for this need to be identified. It is for this reason that monitoring equipment has been installed enabling us to better understand the nature and effects of the joint locking.

The equipment will help us to try and establish whether any movement has stabilised and whether stresses applied due to thermal expansion are having a significant effect on the bridge. Similar equipment has been installed on the Station Road Bridge. This bridge is similar to the Bury Lane Bridge in construction but does not suffer expansion joint locking. It will be used as a 'control' so that the behaviour of the bridge expansion joints can be compared.

2. What is being monitored on each bridge?

In answering this, the term "strain" is used. "Strain" is defined as a normalised measure of deformation representing the displacement between particles in the body relative to a reference length.

We are monitoring:

- Abutment longitudinal inclination.
- Abutment transverse inclination.
- Half joint displacement
- Half joint strain.
- West abutment longitudinal inclination.
- West abutment transverse inclination.
- East abutment longitudinal inclination.
- East abutment transverse inclination.
- Half joint north beam longitudinal displacement.
- Half joint north beam longitudinal strain.
- Half joint south beam longitudinal displacement.
- Steel, concrete, air and strain gauge temperatures.

3. The information that has been obtained to date from the monitoring.

The data obtained to date is attached in the form of graphs and an excel spreadsheet covering the period August 2014.

4. The implications of the information that has been obtained to date from the monitoring.

We need to establish how the bridge behaves throughout a full range of annual temperatures. For this reason, we need a minimum of one year's monitoring measurements, preferably more. The data will then be analysed by specialists. Following the monitoring period, structural analyses of the bridges will be carried out. Only then will we be able to determine the effects of joint movement on the bridges. We will not understand the full implications of the monitoring for at least eighteen months. For the moment, the only useful information we have is that the monitoring equipment is working.

5. How long is the monitoring planned to continue?

We plan to carry out monitoring for a minimum of one year but it could take longer depending on the data we receive corresponding to varying weather extremes.

6. Minutes, emails and other papers relating to the monitoring of these bridges.

Attached are the relevant papers, which have been redacted in accordance with Section 40(1) of the Freedom of Information Act, Personal Information.

In your second email you ask the purpose of installing CCTV cameras in Hatfield Peverel, how long they are planned to operate and whether there are plans to install any further CCTV cameras or to move the existing CCTV cameras to other sites in or around Hatfield Peverel.

I confirm we are not responsible for any CCTV cameras installed in Hatfield Peverel. We, as an Agency, are responsible for the maintenance and operation of the strategic road network in England, which includes the A12 trunk road. Other roads in the vicinity are maintained and operated by Essex County Council as local highway authority.

We do not hold any minutes, email or other papers relating to CCTV camera presence in Hatfield Peverel.

In keeping with the spirit and effect of the legislation, all information is assumed to be releasable to the public unless exempt. We may therefore be publishing the information you requested, together with any related information that will provide a key to its wider context, via our website: <http://www.highways.gov.uk/>

If you are unhappy with the way we have handled your request you may ask for an internal review. Our internal review process is available at: <http://www.highways.gov.uk/foicomplaints>

If you require a print copy, please phone the Highways Agency Information Line on 0300 123 5000; or e-mail ha_info@highways.gsi.gov.uk . You should contact me if you wish to complain.

If you are not content with the outcome of the internal review, you have the right to apply directly to the Information Commissioner for a decision. The Information Commissioner can be contacted at:

Information Commissioner's Office
Wycliffe House
Water Lane
Wilmslow
Cheshire
SK9 5AF

If you have any queries about this letter, please contact me. Please remember to quote the reference number above in any future communications.

Yours sincerely

Business Management Team Leader
Network Delivery and Development (East)
Email: