

# FINCHINGFIELD PARISH COUNCIL



## REPRESENTING FINCHINGFIELD AND CORNISH HALL END.

### PLANNING APPLICATION

CC/BTE/129/22

The proposal is for the replacement of the existing Finchingfield Bridge (including demolition) and the construction of a temporary pond crossing at Finchingfield to ensure the social and economic impact associated with the existing bridge's closure are minimised.

As a planning consultee Finchingfield Parish Council would like to oppose the granting of planning application CC/BTE/129/22 for the following reasons.

#### INTRODUCTION.

1. The parish council has always been against any rebuilding work on the bridge – a position held by the people of Finchingfield.
  2. A weight restriction placed on the bridge.
  3. Work to strengthen the bridge with a temporary pond crossing.
  4. Work to strengthen the bridge without a temporary pond crossing.
- These have always been the options of the parish council, and parishioners in their order of preference.

The first two have never been an option for Essex Highways( although nothing has happened in the last 27 years, one might assume option 1 had been considered as a possibility.)

FPC has fought for years to reach the stage when a temporary crossing was written into the planning application. A survey of the parishioners had a 43% response and 96% Yes vote for a temporary bridge. It then seems odd to oppose the application.

The reason for opposing the application are all within the documentation supplied in the planning application and and previous correspondence that FPC has had with Essex CC / Essex Highways. The first survey in 1994/95 using a modified MEXE method showed that the brick arch barrel was capable of bearing vehicles with a gross weight of 7.5 tonnes. The concrete arch barrel was rated at 40 tonnes. It went on to say that the visual inspection did not reveal any serious defects, despite being

regularly used by 4 and 5 axle C&U vehicles.( These vehicles have a gross weight well over 7.5 tonnes).

One of the recommendations suggested that the bridge be reassessed using an alternative method of analysis (Pipperd-MEXE method), and the compressive strength of the brick arch determined by testing. If the reassessment confirms that the structure is below 40 tonnes, the bridge should be strengthened/weight restriction applied. This was 27 years ago.

The second survey done by LimitState in 2010 found the bridge unable to bear vehicles of 40 tonnes gross weight. (Only the brick arch was tested).

If the fill to the brick arch was composite then a maximum 10 tonnes gross vehicle weight was possible. If the fill was not composite then only 3 tonnes gross vehicle weight was possible. Subsequent investigations have shown the fill to be a mixture of randomly size stones, gravel, and clay, and not composite with the brick arch. Therefore the 3 tonnes gross vehicle weight should apply. This information has been shared with the council, but does not appear to be on the website, and is not on the latest inspection document from BridgeStation. It states the Bridge Capacity to be 10 tonnes. Why is the bridge unrestricted and open to traffic of all types? As an email from an Essex Council member stated in 2020. Why are Essex Highways disregarding the data that has been produced.

The General Inspection Report finds very little wrong with the bridge visually. The foundations were not visible for inspection, but there were no signs of distress that signify fault to the foundations. The amount of remedial work suggested is minimal and mainly cosmetic.

The BCI (Bridge Condition Index) of:

Average 85.78

Critical 58.00.

Can be used to calculate the State Of Good Repair for a bridge. " A structure can be considered to be in A State Of Good Repair if the weighted BCI Score calculated as follows ( 0.6xBCI AVERAGE+0.4xBCI CRITICAL) is greater than 65.

$$0.6 \times 85.78 + 0.4 \times 58.00 = 52.47 + 23.20 = 75.67$$

Therefore the visual inspection classes the bridge to be  
in A State of Good Repair.

The other important factor mentioned in the LimitState survey is the steel plate that is embedded in the road surface near the middle of the bridge. There are no measurements given for its length or width, but it is 40mm thick. Perhaps this is what accounts for the bridge's unexpected strength. Essex Highways say the bridge is "weak" and cannot support the heaviest modern vehicles, but the brick built part was erected 240 years ago. Not for

juggernauts but horse and carts. It has been widened and strengthened with the concrete arch in 1912, but it appears no other recorded work has been done on it

The bridge has stood up well to the overweigh usage and frequent damage for the last 27 years. A picture as part of the Option Study Report shows an HGV on the bridge. Whether this was to show how difficult it is to drive an HGV over the bridge or just how well the bridge stood up to a 33tonnes vehicle. Only 11 times greater than the maximum the bridge is deemed capable of bearing.

Summarising the data, which is in the public domain, about the bridge

1. The first survey in 1994/95 showed that the brick arch barrel was only capable of bearing vehicles with a GVW of 7.5 tonnes.
2. The second survey done by LimitState in 2010 found the bridge unable to bear vehicles of 40 tonnes gross weight. ( Only the brick arch was tested).
3. If the fill to the brick arch is composite then a maximum 10 tonnes GVW is possible.
4. Item 3 was found not to be the case and a maximum 3 tonnes GVW was possible.
5. The last survey states the Bridge Capacity is 10 tonnes, yet there is no restriction placed on it

#### SUMMING UP


Although the most recent survey shows that the bridge can only support 3 tonnes, Essex Highways have made no intervention on its usage. Essex Highways have known the bridge is "weak" since 1994, but have placed no weight restriction, nor attempted to strengthen it. During the past 27 years the bridge has carried everything that has been driven over it.

Essex Highways have chosen to disregard the surveys that they have had commissioned for the past 27 years. The surveys indicate that the bridge is weak, but the evidence for the past 27 years does not support it.

**Finchingfield Parish Council oppose Planning Application CC/BTE/129/22 on the grounds of lack of evidence that it needs rebuilding  
It recommends that an Environmental Weight Restriction of 7.5 tonnes be placed on the bridge and the surrounding area. Similar to the restriction in Shalford.**

Signed for and behalf of Finchingfield Parish Council.

Jonathan Martin Smith.



Chairman Finchingfield Parish Council.