



**District:** Vale of White Horse

**Application no:** P15/V2933/O

**Proposal:** Outline planning application (with all matters except access reserved) for the erection of up to 93 dwellings including associated car parking, public open space and landscaping

**Location:** Land north of Appleford Road Sutton Courtenay Abingdon OX14 4NG

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## **Transport Development Control**

### **Recommendation:**

Oxfordshire County Council, as Local Highway Authority recommends the application for planning permission is refused in the interests of highway safety, convenience and sustainability and in accordance with Paragraph 32 of the National Planning Policy Framework, Policy 02 of the Oxfordshire Local Transport Plan, and Development Policy 15 of the Vale of White Horse Local Plan Part 2.

### **Summary of reason for refusal**

The proposed development would generate new vehicular trips through a sensitive part of the highway network, over Culham Bridges and adjacent Abingdon Road, Tollgate Road and Appleford Road. At peak times queuing at the signalised Culham Bridges may result in the blocking of the bridge and adjacent junctions, to the North the signalised junction of the A415 and to the South the priority junction of Abingdon Road and Appleford Road. The blocking back results in a situation akin to gridlock, with queues slow to disperse and highway users performing 'unorthodox' manoeuvres and blocking straight ahead travel. Any new trips will add to the delay experienced at these junctions, increase queueing and the periods and instances of blocking of junctions and carriageways. Due to the gridlock the impact of additional trips is disproportionate and very few trips may add to delay significantly. Frustrated drivers merging and manoeuvring indiscriminately will have an adverse impact on road safety as will the and increased likelihood of rear end shunt collisions resulting from queuing, especially where forward visibility may be limited, for example at the sharp bend of Appleford Road in Sutton Courtenay. In addition, idling vehicles would add to particulate and carbon dioxide emissions. The Local Highway Authority considers the traffic impact of this development would be unacceptable and would meet the NPPF criteria of 'severe harm' so as to justify the refusal of planning permission.

The Local Highway Authority has surveyed and modelled this part of the network and investigated potential improvements, including optimising and biasing signal times and introducing signals at the junction of Appleford Road and Abingdon Road. Unfortunately there is little to be gained from such alterations; altering signal times on the bridge only transfers the 'blocking back' from one junction to another, ie. favouring northbound traffic might prevent blocking of the Appleford Road Abingdon Road junction but would intensify 'blocking back' at the signalised junction of Abingdon Road (A415) and Tollgate Road and vice-versa; similarly any benefit

gained from introducing signals at the Appleford Road Abingdon Road junction would be countered by 'blocking back' elsewhere or increased queuing on Appleford Road. In the longer term the Oxfordshire Local Transport Plan includes a new Thames river crossing which will relieve pressure on this part of the network; however until such improvement is realised the Local Highway Authority recommends against any development in Sutton Courtenay or Culham that would add new trips to this part of the network.

**Detailed comments:**

The County Council was consulted previously on these and did not raise any objections; however following further investigations the County Council commissioned modelling work on three junctions in Culham and Sutton Courtenay adjacent to the Culham Crossing, to determine the impact a number of proposed development sites will have on the operation of the local highway network (detailed within the submitted technical note No.1, produced by Origin Transport Consultants, dated 3<sup>rd</sup> July 2017).

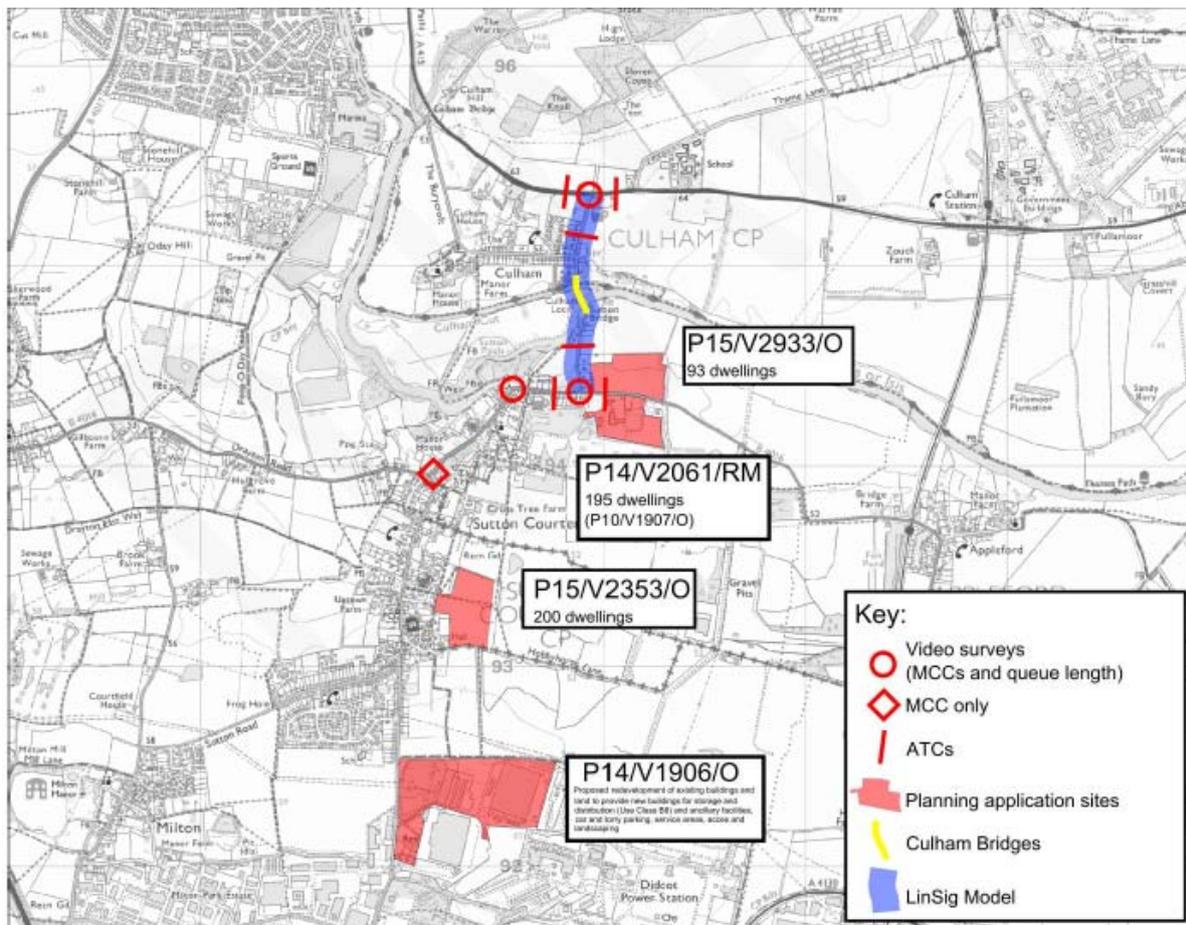


Figure 1: Culham Bridges Modelling Map

The three junctions which were considered in this assessment were:

- a) the northern signalised junction of the A415 Abingdon Road with Tollgate Road

- b) the signalised single way working system over Culham Crossing
- c) the priority junction of Abingdon Road with B4016 Appleford Road to the south

Furthermore, the modelling work includes the impact of 4 development sites as detailed below and in figure 1 above:

- P14/V2061/RM, Appleford Road, 195 dwellings
- P15/V2933/O, Land north of Appleford Road, 93 dwellings
- P15/V2353/O, Land at Hobbyhorse Lane, 200 dwellings
- P14/V1906/O, Land East of Sutton Courtenay – redevelopment of buildings to provide B8 land uses, car and lorry parking and ancillary facilities.

In addition to the above, to be fully robust, TEMPRO growth factors for the horizon year of 2022, with and without development, have been analysed.

The submitted Technical Note indicates that the junctions in the vicinity of Culham Crossing are currently subject to queueing. The Culham Crossing signals currently operate with longer queues northbound than southbound in the morning peak hour, resulting in vehicles blocking back to the Appleford Road junction. The signals are currently phased to ensure the traffic queues do not block back on to the bridge and the A415 junction. If exit blocking occurs at these points in the network, it can have a severe and detrimental impact on the wider highway network.

If the existing signals were optimised to provide a more even split of the queues, then the junction could operate within capacity in the base situation in 2017 but would operate over capacity with the introduction of the Hobbyhorse Lane development. If all four developments are included, then the queues would block back to the Appleford Road junction. By 2022, the junction will operate over capacity in the base situation, with vehicles blocking back to the Appleford Road junction and beyond with the Hobbyhorse Lane development in isolation, with the situation deteriorating with all four developments included.

The same can be described also for the Tollgate Road/A415 Abingdon Road junction to the north. If all four developments proceed, the queue on Tollgate Road could extend back to the Culham Crossing junction in the morning peak hour in 2022.

The Abingdon Road/Appleford Road B4016 junction currently operates as a simple priority junction. It can operate within capacity in the morning peak hour, when modelled in isolation, but over capacity on the Abingdon Road arm in the evening peak hour. When additional traffic associated with the developments is included, the queue on Abingdon Road increases and will block the Culham Crossing signals.

On the basis of the above, it can be seen that there is potential merit in the signalisation of the Appleford Road B4016/Abingdon Road junction in terms of managing queuing and delay. Whilst there is likely to be some queueing at the junction, the signalisation will reduce the queue on the Abingdon Road arm so that it will not block back to the Culham Bridges signals in the evening peak hour, even in 2022 with all four developments. However, this will only be effective if the queuing on

Tollgate Road associated with the single way working system is better managed and the signals there optimised.

Whilst an optimised scenario would be beneficial to the Abingdon Road/Appleford Road B4016 proposed signalised junction, it has become apparent that this would be to the detriment of the A415 Abingdon Road. The base year of 2017 with optimisation, indicates the worst scenario to be the A415 Abingdon Road east, with an AM peak on Wednesday to be 141 cars/811m queue length and 152% degree of saturation (**Table 4** of the submitted Origin Transport Consultants Technical Note). With Hobbyhorse Lane in the horizon year of 2022, this increases markedly to 180 cars/1,035m queue length and 169.6% degree of saturation, (**Table 14** of the submitted Origin Transport Consultants Technical Note). Furthermore, with all 4 developments considered in the horizon year 2022, this increases even further to 191 cars/1,099m queue length/172.9% degree saturation, (**Table 15** of the submitted Origin Transport Consultants Technical Note).

The County Council has investigated how this additional traffic might be accommodated on the highway network by optimising and maximising the signal timings. However, the A415 is an important corridor in the local highway network. It is of paramount importance that appropriate priority is given to this A-road to maintain operational capacity. For this reason, it is not acceptable to provide additional capacity at Appleford Road B4016/Abingdon Road at the expense of capacity at Abingdon Road A415/Tollgate Road. Due to the nature of the Culham Bridges and the requirements for a lengthy 'inter-green' time, the sensitivity of optimising the signals needs careful consideration. Any slight amendment in signal timings can result in worsening queues in the vicinity. This is unacceptable to the highway authority.

With regard to all other matters the previous recommendations and commentary remain appropriate. Should the Local Planning Authority be minded to grant planning permission then the following obligations and conditions are sought.

#### Obligations

The following planning obligations must be secured through Section 106 Town and Country Planning Act and Section 278 of the Highways Act.

Extension of 30mph speed limit further to the East, associated Traffic Order Amendment and provision of appropriate signage. NB development to the South of Appleford Road is similarly obliged.

Provision of a pedestrian crossing of Appleford Road.

Contribution of £854 per dwelling towards the cost of procuring an improved bus service for the benefit of new residents.

Bus stop infrastructure on the Abindgon Road, to include hard-standings, connecting footways and road markings.

Travel plan monitoring fees of £1240

### Conditions

Prior to first occupation, the proposed access shall be formed, laid out and constructed, details of which shall be submitted to and approved by the Local Planning Authority and shall include visibility splays that shall not be obstructed above a height of 0.6m above the carriageway.

NB Submitted plan 31670-2007-001 demonstrates an acceptable layout.

Prior to the commencement of works a construction traffic management plan shall be submitted to and approved by the Local Planning Authority.

NB. This should include detailed plans of any construction access, temporary or otherwise.

Prior to first occupation a Travel Information Pack shall be submitted to and approved by the Local Planning Authority. The first residents of each dwelling shall be provided with a copy of the approved Travel Information Pack.

Prior to the commencement of the development, a fully detailed sustainable surface water drainage scheme of the development shall be developed in accordance with the Flood Risk Assessment ref:31670 Rev: A dated December 2015 prepared by

### Informatives

It is an offence under S151 of the Highways Act 1980 for vehicles leaving the development site to carry mud onto the public highway. Facilities should therefore be provided and used on the development site for cleaning the wheels of vehicles before they leave the site.

No vehicles associated with the building operations on the development site shall be parked on the public highway so as to cause an obstruction. Any such wilful obstruction is an offence under S137 of the Highways Act 1980.

The Advance Payments Code (APC), Sections 219 -225 of the Highways Act, is in force in the county to ensure financial security from the developer to off-set the frontage owners' liability for private street works, typically in the form of a cash deposit or bond. Should a developer wish for a street or estate to remain private then to secure exemption from the APC procedure a 'Private Road Agreement' must be entered into with the County Council to protect the interests of prospective frontage owners.

**Officer's Name:** Geoffrey Arnold  
**Officer's Title:** Principal Engineer  
**Date:** 30 August 2017

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