Burghfield Common Preferred Options Housing Sites:
Broad assessment of transport impact

Introduction

This note sets out the approach taken to considering the transport impacts of possible future housing development in Burghfield Common.

Background

Burghfield Common is one of two Rural Service Centres in the East Kennet Valley area of West Berkshire. As such it has a range of services and facilities for residents and will be a focus for development in this area.

The Preferred Options Housing Site Allocations Development Plan Document (HSA DPD) highlights two sites as being the preference for Burghfield Common. These sites are:

- Preferred Option 11 – Land to the rear of The Hollies Nursing Home and Land opposite 44 Lamden Way (a combination of SHLAA sites ref: BUR002, BUR002A and BUR004). This site would accommodate approximately 85 dwellings.
- Preferred Option 12 – Land adjoining Pondhouse Farm, Clayhill Road (SHLAA site ref: BUR15). This site would accommodate approximately 105 dwellings.

Further details relating to these sites can be found on pages 25 and 26 of the Preferred Options HSA DPD.

In addition to the sites outlined above, two planning applications for residential developments in Burghfield Common have been received by the Council. These applications are:

- Mans Hill: Planning ref: 14/00962/OUTMAJ (210 dwellings)
- Firlands Farm: Planning ref: 14/01730/OUTMAJ (129 dwellings)

The above planning applications were both refused (not on highways grounds) and the applicant in both cases lodged an appeal to the Planning Inspectorate.

Approach to transport assessment of Burghfield Common sites

Although the road network operates well in Burghfield Common, it is important to consider the transport impacts of the preferred sites. An initial view from the Council's Highways Development Control Service in relation to these sites was that the additional impact may be limited as traffic may disperse fairly equally east and west to and from the sites.

When considering the potential outcomes of the two appeals on the refused planning applications for Burghfield Common, the impact on the signal controlled Reading Road / Hollybush Lane junction was the main area of concern which needed greater investigation.

The Council does not have a transport model that covers this area of the District but as part of the Transport Assessments for the two refused planning applications, LINSIG models of the Reading Road / Hollybush Lane junction were submitted. A LINSIG model is the appropriate tool for modelling a signal controlled junction and determining how well it will operate under different modelled scenarios.

The LINSIG model was used to determine the combined impact of both residential developments (Mans Hill and Firlands Farm) for this junction. The AM and PM peak periods were modelled for a forecast year of 2020 which gave the following results:

- AM peak with Mans Hill and Firlands development flows: Practical Reserve Capacity is 6.2
- PM peak with Mans Hill and Firlands development flows: Practical Reserve Capacity is 7.5

In traffic engineering, the **practical reserve capacity (PRC)** of a traffic signal junction is a commonly used measure of its available spare capacity.

The practical reserve capacity is related to the degree of saturation of a traffic signal junction. A positive PRC indicates that a junction has spare capacity and may be able to accept more traffic. A negative PRC indicates that the junction is over capacity and is suffering from traffic congestion.

The results show a reduction in the PRC for the Reading Road / Hollybush Lane junction but even with flows from both developments (totalling 339 dwellings) the junction operates reasonably and with spare capacity.

Returning to the Preferred Options for Burghfield Common housing sites within the HSA DPD, it is considered that the impact on this traffic signal junction of both these preferred sites (totalling 190 dwellings) will not be as great as both the appeal sites. Therefore if both sites came forward as proposed this junction would continue to operate within capacity as it has been modelled to work with a higher number of dwellings.

Conclusion

The two preferred options for housing sites for Burghfield Common are not considered to have a significant impact on the highway network in the area. The modelling work that has taken place demonstrates that this growth can be accommodated without causing the junction of most concern to operate over capacity.

Each of the developments would, however, require a detailed Transport Assessment and Travel Plan to be submitted to demonstrate further how they can be accommodated without adversely affecting the local transport network.