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**COMHAIRLE CONTAE ÁTHA CLIATH THEAS  
SOUTH DUBLIN COUNTY COUNCIL**



**MEETING OF LUCAN AREA COMMITTEE**

**Tuesday, October 24, 2017**

**HEADED ITEM NO. 12**

**HEADED ITEM: K. Reilly**

Traffic Modelling Report - Newcastle Road Interchange

**REPLY:**

Traffic Signal modelling of the Newcastle Interchange and Newcastle Rd/ Hillcrest Estate junctions was carried out by the Councils Traffic Section.

The traffic count data was obtained in March 2017 and the data for the AM peak (08:00 to 09:00) was used.

The signals were modelled using Network LinSig software developed by JCT Consultancy. This is an industry standard software.

The options modelled and the results are summarised below.

**Option 1) Existing arrangement**.

The existing signal arrangement was modelled as a reference base. The results show that the westbound off ramp had a degree of saturation of 84.3%, the right-turn from the bridge to the N4 city bound had a deg sat of 96.6% and the Hillcrest exit had a deg sat of 91.6%. It should be noted that a deg sat of over 90% is regarded as congested.

**Option 2) 2- right-turning lanes.**

An option allowing both northbound lanes on the interchange to turn right was modelled. As allow 2 lanes to turn right introduces a conflict with traffic exiting from Lucan Village an additional stage to accommodate this movement was required.

The model indicated that the deg sat of the right-turn increased to 121.9% and Hillcrest to 318.6 %. These are very highly congested levels.

**Option 3) one ahead and 2 right turning lanes**.

In this option the right-turn lane from Lucan village is partially removed and a short –right turn lane city bound introduced. This results in there being one ahead lane and two right turn lanes being available.

Modelling results indicate a deg sat on the right-turn of 116.2% and a deg sat at hillcrest of 213.8%. While these results are an improvement on Option 2 they are still considerably more congested that the existing arrangement.

Modelling indicates that the current signal arrangement is the best option currently available.

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