

## **Cullompton Town Centre Traffic Management Options**

Report of the Head of Planning, Transportation and Environment

***Please note that the following recommendations are subject to consideration and determination by the Committee before taking effect.***

**Recommendation: It is recommended that:**

- (a) the contents of this report are noted;**
- (b) the proposed improvement to the Station Road junction is approved for implementation at an estimated cost of £95k; and**
- (c) an Experimental Traffic Regulation Order for restrictions at Tiverton Road junction is advertised and trialled.**

### **1. Summary**

This report seeks approval for proposed schemes to improve traffic at the Station Road/High Street/Higher Street junction and the Tiverton Road/High Street junction in Cullompton town centre.

### **2. Background/Introduction**

#### Station Road Junction

The Committee received a presentation update on 18 June 2012 detailing study work being undertaken to explore options to improve the Station Road/High Street/Higher Street junction. This work has been completed taking into consideration the development and infrastructure expected to come forward as set out in the Mid Devon Local Development Framework Allocations and Infrastructure Development Plan Document. The options and recommendation are discussed in this report.

#### Tiverton Road Junction

Tiverton Road is very narrow with constraints on either side preventing widening at the junction with the High Street. Solutions for this junction have been explored on a number of occasions and the Committee received a report on 16 December 2009. Previous options have in the past been considered unsuitable for reasons that include unacceptable impacts on the Air Quality Management Area (AQMA), severe impacts on public transport provision or limited traffic flow benefits. There have been no fundamental changes to the highway network or traffic flows and the pressure from development within the town has led to the need to review some of these options. The options and recommendation are discussed in this report.

### 3. Proposal

#### Station Road Junction - MOVA signals

MOVA (Microprocessor Optimised Vehicle Actuation) provides a more efficient, responsive signal operation than traditional vehicle actuation (VA) operation. Similarly to VA it uses vehicles sensors in the carriageway and importantly also uses a computer to optimise signal timings. Transport Research Laboratory studies have indicated that use of the system can reduce delays by an average of 13% when compared to vehicle actuated operation. MOVA operates in two modes minimising delays during off peak periods and maximising capacity during the peak periods. This option would enable the benefits of signals to be retained whilst optimising the current operation of the junction.

Due to the nature of traffic flows through Cullompton it would provide only small improvements during the peaks; however, it should improve the flow of traffic for the majority of the day (during off peak periods) and limit the impact on the AQMA. Furthermore, due to the responsive nature of MOVA, it would optimise traffic movements during busy summer periods and rare traffic incidents such as closure of the M5. MOVA is also able to incorporate priority vehicle (bus priority) control parameters which are expected to be a feature in the future. It is therefore recommended that MOVA signalisation is installed at the junction.

#### Tiverton Road Junction – Ban right turn from Tiverton Road

Feedback from local members and residents suggests that there is concern that right turning vehicles from Station Road hold up traffic at the junction during peak periods. During the AM peak this equates to 18 vehicles or 8% of eastbound Tiverton Road traffic and during the PM peak this equates to 18 vehicles or 10% of eastbound Tiverton Road traffic. The banning of this turn has previously been rejected due the small number of vehicles making this movement, and therefore the minimal improvement it was expected to achieve. In the absence of alternatives this option has been explored further.

Modelling of the junction was undertaken to assess the benefits that may be achieved as a result of this intervention. The modelling of this type of intervention is not straight forward and in practice turbulence caused by right turning vehicles could be greater than predicted by the traffic model. It is expected therefore that the benefits may be greater than that set out in Table 1, which shows that small benefits would be achieved initially, and, as development occurs and the junction becomes busier greater benefits are realised.

	2012		2022		2026 (with ERR)	
	AM	PM	AM	PM	AM	PM
Left turn out of Tiverton Road	3%	2%	6%	5%	8%	8%
Right turn into Tiverton Road	2%	4%	4%	9%	3%	14%

**Table 1: RFC\* improvement achieved by banning right turn**

\* Ratio of Flow to Capacity (RFC) is the number of vehicles using a junction divided by the maximum capacity of the junction. 85% is generally considered the maximum acceptable RFC for an un-signalised junction.

It is therefore recommended that an experimental traffic order is implemented banning vehicles turning right out of Tiverton Road. The order is required to be advertised for one week prior to the ban being enforced and objections can be received up to six months

following this. The experimental order can only stay in force for a maximum of 18 months while the effects of the ban are monitored and assessed before the decision is made whether or not to continue the experimental order on a permanent basis. This decision would be made in consultation with local members and would consider objections received and the impact of the ban on traffic flow and the AQMA.

#### **4. Financial Considerations**

The estimated cost of implementing the experimental temporary traffic order to ban right turn movements from Tiverton Road into the High Street is approximately £5-7k.

The estimate to implement the conversion of the Station Road/High Street/Higher Street junction to MOVA control signals is £95k.

Funding is available through developer contributions:

- £68,400 from the Knowle Lane development S106 agreement 'towards costs to be incurred by the County Council in carrying out highway improvement in Cullompton and the making and implementing of any traffic regulation orders associated with those works'.
- £31,400 is available from the Tesco S106 agreement 'towards improvements at the Higher Street/Station Road/High Street junction'.

Any remaining balance will be funded from LTP.

#### **5. Legal Considerations**

There are no specific legal considerations arising from this report.

#### **6. Risk Management Considerations**

This proposal has been assessed and all necessary safeguards or action have been taken/included to safeguard the Council's position.

#### **7. Options/Alternatives**

##### **Station Road Junction**

##### **Roundabout/priority junction**

Modelling work has indicated that whilst a roundabout or priority junction could provide a good solution in the short term, in the longer term development to the North West of the town will increase the number of trips between Higher Street and Station Road. The additional trips would push the junction over capacity in either scenario and the removal of the traffic signals would create issues associated with pedestrian accessibility.

##### **Ban right turn from Station Road**

Removing a movement from the traffic signals would simplify the operation of the junction and may provide some small improvements to traffic. This would improve capacity in the morning peak but no benefits would be achieved during the PM peak. There are a number of concerns including the impact of the ban on unfamiliar drivers, inconvenience to residents living in the Higher Street area, suitability of alternative routes and the potential for encouraging rat running. This option would provide a good method of managing traffic at this junction however as it has been discussed previously and received a negative response it is understood that it is unlikely this option would be supported.

### Higher Street - one way

Similar issues to the option detailed above would apply.

### **Tiverton Road Junction**

#### Large vehicle detection in Tiverton Road

Feedback from local members suggests that large vehicles traveling eastbound along Tiverton Road cause problems for vehicles traveling southbound along the high street due to narrow widths preventing the right turn when large vehicles are present. The suggestion was to explore the possibility of large vehicle detection equipment that activates signals on the High Street, thereby allowing large vehicles to exit Tiverton Road more quickly. Whilst it is technically possible to demand traffic lights from vehicle detection, it is not recommended for a number of reasons including:

- impact of detection equipment on the setting of the listed buildings;
- significant safety issues;
- traffic signals causing queuing across the junction and preventing the large vehicle from exiting Tiverton Road;
- difficulty with installing a crossing south of the junction due to impacts on drainage.

### **8. Reason for Recommendation/Conclusion**

The scheme provides a method to deal with some air quality and traffic management issues in Cullompton town centre.

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### **Electoral Division: Cullompton Rural**

#### Local Government Act 1972: List of Background Papers

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Background Paper	Date	File Reference
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Nil

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