



WOKING JOINT COMMITTEE

DATE: 24 JUNE 2015

LEAD OFFICER: ANDREW MILNE, AREA HIGHWAYS MANAGER

SUBJECT: UPDATE ON PROPOSED TRAFFIC SIGNALS UPGRADE AT ANCHOR HILL , WOKING TO REMEDY AIR QUALITY MANAGEMENT AREA (AQMA)

AREA: KNAPHILL & GOLDSWORTH WEST

SUMMARY OF ISSUE:

There is a previously identified Air Quality issue at the junction of Anchor Hill / High Street / Highclere Road / Lower Guildford Road, Knaphill. It is thought to be caused by motor vehicles queuing at the traffic signals. Improvements to the operation of the traffic signals are proposed, to minimise congestion and waiting times, and hence improve the air quality.

RECOMMENDATIONS:

Woking Joint Committee is asked to note:

The update on the proposal to upgrade the Traffic Signals operation at the junction of Anchor Hill and High Street, Knaphill to 'MOVA' (Microprocessor Optimised Vehicle Actuation) to mitigate Air Quality issues.

REASONS FOR RECOMMENDATIONS:

MOVA operation of the Traffic Signals at this junction will better alleviate vehicle congestion and waiting times, hence also improving the air quality at this location.

1. INTRODUCTION AND BACKGROUND:

1.1 This item is for information.

1.2 In 2013 Woking Borough Council declared an AQMA (Air Quality Management Area) at this junction – see annexes 1 and 2. Their Environmental Officers approached the Traffic Systems Team at Surrey County Council to discuss possible solutions.

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- 1.3 The poor air quality has been detected mainly on Anchor Hill at the traffic signal junction. Three possible options were considered, which were:
- i. Split the pedestrian phases to run with separate non-opposing traffic phases
 - ii. Upgrade existing mode of operation to MOVA, or
 - iii. Make Highclere Road one-way so reduce number of stages in the traffic signals operation and reduce overall cycle time.
- 1.4 It was originally decided that option 1- pedestrian phasing changes, would be the first and cheapest option to try and this recommendation was made to Woking Joint Committee on 25 June 2014 – see annex 3.
- 1.5 Subsequent reviews undertaken by SCC's Traffic Systems Team indicated that this proposal – whilst the cheapest - would most likely not actually give any real improvement or benefit.
- 1.6 Given complexities and likely timeline for Option 3, SCC's Traffic Systems Team considered the merits of bringing forward traffic signals refurbishments for this junction under their planned Capital Refurbishment and Improvement programme for 2015/16, to include the upgrade of the junction to MOVA operation. Whilst more expensive, this cost is borne by SCC's Annual Capital Replacement budget.
- 1.7 Woking Joint Committee was advised of this update to the proposals by way of an email update provided by SCC's Traffic Manager on 4 March 2015.
- 1.8 To further maximise improvements to signals operation in the area, the adjacent signalised junction at Garibaldi Crossroads will also be refurbished and converted to MOVA and the feasibility of linking the pedestrian crossing in the High Street near Barclays Bank, with the operation of the Anchor Hill junction will also be reviewed as part of the scheme.
- 1.9 MOVA operation at traffic signals uses specific detectors in the carriageway and a set of data and measurements (dataset) based on vehicle speeds and behaviour. It constantly monitors the volume of traffic on each approach and apportions the Signals' Green time around the junction according to demand. It can also incorporate pedestrian demands via the pedestrian push buttons.
- 1.10 The current mode of operation at these junctions is VA (Vehicle Actuated) which uses detectors to apportion the green time up to a maximum preset time. Once the maximum has been reached the signals will change if there is a demand for an opposing phase, regardless of whether there are any more vehicles on the same approach. MOVA would allow the signal phase that is currently running green to continue running until the last vehicle in a platoon of vehicles has passed the Stop Line. The green time will end if a gap in the traffic is detected. At that point the signals will change to the opposing phase, if demanded.
- 1.11 There are a number of HGVs and LGVs approaching via Anchor Hill, which is sloped up to the junction. HGVs take longer to start moving so will take more of the green time. Therefore a weighting factor can be added to that phase of the signals to compensate for this, to reduce the likelihood of these vehicles being made to stop unnecessarily and adversely affect air quality.

2. ANALYSIS:

- 2.1 To try to alleviate vehicle congestion and waiting time at the traffic signals, and hence improve the air quality, as the location has been declared an AQMA (Air Quality Management Area).

3. OPTIONS:

- 3.1 Three options were set out in the report to Committee of 25 June 2014 – see Annex 3 and are also referenced above.

4. CONSULTATIONS:

- 4.1. No formal public consultations have been undertaken as they are not required for such Signalised Junction upgrades as part of SCC's Capital Refurbishment and Improvement programme. These improvement works are however being carried out in agreement with Woking Borough Council Environment Team and Surrey County Council's Transport Planning Team.

5. FINANCIAL AND VALUE FOR MONEY IMPLICATIONS:

- 5.1 These works are wholly funded by SCC's Traffic Operations Team Capital Refurbishment budget for 2015/16. The estimated cost of these works is £75,000 for both locations; Anchor Hill and Garibaldi Crossroads.

6. RISK MANAGEMENT:

- 6.1 There is a reputational risk for Woking Borough Council and Surrey County Council if measures cannot be completed to alleviate air quality issues at this location.
- 6.2 Now disregarded Option 1 may have resulted in reputational and financial risks if these lesser measures had been undertaken but had failed to deliver the required benefits to mitigate air quality problems.
- 6.3 There are no reputational, financial nor service delivery risks for the proposed action as adequate budgets are in place, and experienced Traffic Signals Contractors able to undertake the work, either through SCC's incumbent Traffic Systems Contractor MOTUS Signals Ltd or alternatively through a mini-tender process ring-fenced to similar specialist Contractors, undertaken for the scheme.
- 6.4 When works are planned and executed on site, Risk Assessments will be carried out and Method Statements will be produced by Traffic Systems' specialist and works undertaken in line with all appropriate legislation and best practice, as business as usual for such operations. Works will be scheduled and executed so as to minimise disruption to pedestrians, motorists and local businesses and residents.

7. LOCALISM:

7.1 Any motorists passing through the junction will benefit from improved traffic flows and the local community within Knaphill directly affected by the AQMA will be positively impacted when the levels of NO₂ have been reduced to such a level that will enable the revocation of the AQMA order.

8. EQUALITIES AND DIVERSITY IMPLICATIONS:

8.1 The scheme could potentially improve safety for vulnerable road users such as visually impaired pedestrians, with reduced likelihood of motorists running through red signals, due to better traffic flows. No other impact on Equalities and Diversity.

9. OTHER IMPLICATIONS:

Area assessed:	Direct Implications:
Crime and Disorder	No significant implications arising from this report
Sustainability (including Climate Change and Carbon Emissions)	See below.
Corporate Parenting/Looked After Children	No significant implications arising from this report
Safeguarding responsibilities for vulnerable children and adults	No significant implications arising from this report
Public Health	See below.
Human Resource/Training and Development	No significant implications arising from this report

9.1 Sustainability implications

Air Quality should be improved, resulting in improved carbon emissions.

9.2 Public Health implications

Air Quality should be improved, resulting in improved public health.

10. CONCLUSION AND RECOMMENDATIONS:

10.1 To upgrade the Traffic Signals operation at the junction of Anchor Hill and High Street, Knaphill to 'MOVA' (Microprocessor Optimised Vehicle Actuation) to mitigate Air Quality issues and to also complete a similar upgrade to the adjacent Garibaldi Crossroads. Works to be undertaken by SCC commissioned Specialist Contractors as part of SCC's Capital Refurbishment and Improvement programme 2015/16 and wholly funded accordingly from this capital budget. Garibaldi Crossroads is currently scheduled to be refurbished late Summer 2015, with Anchor Hill refurbishment in Autumn 2015.

11. WHAT HAPPENS NEXT:

11.1 Proposed junction upgrades will be incorporated into the Traffic Operations Team 2015/16 Capital Refurbishment Programme – likely to be Summer/Autumn 2015. Permits will be applied for to confirm occupation of the highway and avoid clashes with other works and advanced warning signs will be placed on site at the junction to advise road users of the works. Once junction upgrades are completed and fully operational, the Woking Borough Council Environment Team will be invited to take new readings of air quality to assess whether the desired improvements in air quality have been achieved.

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Consulted:

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Annexes:

1. AQMA Order,
2. Map for AQMA,
3. Woking Joint Committee Report 25 June 2014

Sources/background papers:

1. Woking Detailed Assessment Final,
2. FAQ AQMA.

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