Decision Session – Executive Member for Transport and Planning **14 January 2016**

Report of the Director of City and Environment Services

Variable Message Sign Refurbishment Programme

Summary

1. This report presents a plan for the refurbishment of the 46 highway VMS (Variable Message Signs) currently installed around the City.

2. The VMS, which are installed around the inner and outer ring roads and on the main radial routes into the City are provided to give car park guidance, route planning and incident information and campaigning messages to drivers.

3. Due to their age, many of the VMS have fallen into disrepair and are not operational. Additionally the technology used is now largely obsolete making repair of the signs in their current form difficult and expensive.

4. Investigation has been underway during 2015/16 into options for refurbishment and future operation of the VMS and this report presents the outcome of this work.

Recommendations

5. The Executive Member is requested to :

   i. Subject to budget approval by Full Council, allocate £70,000 for each of the years 2016/17 and 2017/18 from LTP Funding to allow the refurbishment of the 20 car park guidance VMS.

ii. Undertake the 'mothballing' of the 20 Outer Ring Road VMS to allow their possible re-use as part of Outer Ring Road Development proposals to be considered.

Reason: To ensure the appropriate allocation of funding to the provision of transport technology.

Background

6. There are 46 VMS installed on the highway in York, which fall into three groups;

- 20 'Free Text' 4x15 character signs on the Outer Ring Road
- 6 'Free Text' 4x15 character signs on the approaches to the Inner Ring Road
- 21 'Insert' signs with 6 character panels inserted into sign faces, used for car park guidance

7. The signs were installed between 1998 and 2003, and therefore are now, in terms of their electrical components, beyond the end of their life. In most cases this has resulted in the signs being inoperative and only a small number of the VMS are currently working. Additionally, their age means that much of the componentry used in them is now obsolete. The physical hardware of the signs, (poles, foundations, enclosures etc), are generally in good condition and capable of many years more use.

8. Development work has been underway during 2014/15 to find a cost effective solution to allow the signs to be brought back into use. An initial project undertaken with Simulation Systems Ltd to undertake minimal repair work on three signs in-situ did not prove successful but a more recent project involving removing four signs to the factory of Swarco Ltd and installing a new 'technology package' into the enclosure has proved successful. This approach addresses both the problems of sign failure and obsolescence and effectively results in a new sign being inserted into the existing, sound, enclosure. It has also provided an opportunity to develop a standard specification for delivering the refurbishment of the remaining VMS.

Consultation

9. No specific consultation has been undertaken for this scheme, which is considered to be primarily a technical project to refurbish existing equipment.

   However, it is known from previous public research that the VMS, particularly those used for car park guidance are highly valued by drivers.

Options

10. The design and development Swarco have undertaken has involved taking four signs, representing the four technically distinct variants in use in York and developing a standard technology package that can be retro-fitted into each of them and potentially used more widely within the rest of the VMS estate. Rolling this out across the full estate would result in a much more homogeneous asset which could be maintained and operated cost effectively for many years to come.

11. The cost per sign of the Swarco approach is likely to be around £6000. This, with some allowance for contingencies would result in a total cost of around £275,000 to complete the full estate, (less the four signs treated as part of the development process). It is recognised therefore that a range of options needs to be considered in deciding how to move forward with this.

12. There is a budget of £90,000 available in the 2015/16 capital programme, and this has funded the development work to date and will also fund the first of the refurbishments in the delivery phase of this project. At present it is envisaged that this will allow for the repair of an additional six to eight VMS. It is proposed to use this funding to treat the six Inner Ring Road Free Text signs as these have a strong utility value both in directing traffic to available car parking spaces, (car park guidance) and in providing tactical and strategic messaging useful for traffic approaching the Inner Ring Road.

13. Beyond this investment, there is a clear option to either refurbish the other two groups of VMS or remove them. A proposal is presented below for each of these VMS groups;

Car park guidance Insert signs

14. These signs form a complete and encompassing network of guidance signs for the off street car parks in York city centre. When operational it was shown through user research that they were well received and well used. It is considered that even with the advances in in-car information (satellite navigation, etc), there will be a need for road side car park guidance in years to come and so these signs continue to have a useful role to play.

15. It is proposed that subject to budget approval by Full Council, £70,000 is allocated for each of the years 2016/17 and 2017/18 (£140,000 in total), to allow their refurbishment to take place. It is not considered that removal of these signs is advisable at this stage, given their ongoing usefulness.

Outer Ring Road Free Text Signs

16. These signs are placed at strategic locations around the Outer Ring Road and the radial routes approaching it. They are primarily designed for tactical and strategic messaging and inform drivers of delays, roadworks, incidents and accidents on the road network. They are also used for campaigning message as appropriate. Their use when operational was limited by the lack of dedicated staff within CYC to write messages to them and manage their operation.

17. It is considered that their usefulness is now reduced by the increasing reliance of drivers in sat-nav and in-car systems when on longer distance journeys. It is recognised that with the potential for major upgrading works on the Outer Ring Road, the need for a network of VMS will increase and on this basis removal of the signs now might be a false economy, even though the present utility is limited.

18. It is recommended therefore that these VMS are not refurbished at the moment, but minimal works are undertaken to ensure they suffer no further degradation. This will provide the opportunity, should funding for Outer Ring Road improvements come available to include their refurbishment as preparatory works in recognition of their specific value to this scheme. An amount of £10,000 should be allocated in the 2016/17 capital programme to facilitate this ‘mothballing’ activity.

Analysis

19. To date, two options have been investigated for the refurbishment of the VMS. Firstly the in-situ on site treatment of the signs by Simulation Systems Ltd was trialled. Although this did result in the four trial VMS being brought back into use, it did not establish a standard that could be easily applied to the remaining signs and at over £10,000 per sign, proved expensive.

20. The second option, offered by Swarco Ltd to remove the signs to their factory and insert a pre-assembled technology package in to the existing sign enclosure has proved successful. This approach offers a high quality standardised format for ongoing sign refurbishment and at a cost of around £6,000 per sign is considered to be cost effective.

21. By trialling two different approaches to VMS refurbishment from the only two companies in the UK qualified to undertake this type of work, we have identified the best approach for delivering this project. The successful trial undertaken by Swarco has allowed a design and specification to be developed that will be suitable for procuring the refurbishment of the remaining VMS.

22. Recently, changes to UK accreditation for highways equipment has lead to the formation of an organisation called TOPAS (Traffic Open Products and Specifications). This organisation holds the national specifications that must be adhered to when placing equipment on the highway and are also responsible for accrediting equipment suppliers. Currently, only two suppliers are accredited to provide equipment to TOPAS specification 2516B, the standard for LED based highway VMS.

23. It is proposed therefore to use the specification developed during the trial and invite the two TOPAS-2516B accredited suppliers to tender for the refurbishment of the remaining VMS.

Costs

24. For a three year refurbishment programme, the yearly costs and delivery requirements would break down as shown in Table 1 below;

Allocated Budget 2015 – 2016	Proposed budget 2016 - 2017	Proposed budget 2017 - 2018
£ 000's	£ 000's	£ 000's
90	80*	70
*(allocation includes £10k to mothball outer ring road VMS in addition to the £70k allocation for refurbishment works)		

Table 1 – Refurbishment costs and profile

25. This allocation of £80k in 2016/17 and £70k in 2017/18 will be funded from the Local Transport Plan Capital Programme.

Council Plan

26. This proposal will allow the Council to deliver a better service to residents and visitors by ensuring the availability of important car parking and incident information to drivers in the City.

27. This will in turn increase the efficiency of the road network within the City to the benefit of public transport, car drivers and pedestrians and cyclists.

28. It will bring back into use an important asset for traffic management in a manner that is sustainable and ensure this equipment is able to operate for many years to some in a cost effective and affordable manner.

Implications

Financial

29. The costs for this proposal will be around £240,000, over three years. Of this, £90,000 for VMS refurbishment trials is already allocated and being spent in the capital programme for 2015/16.

30. It is proposed that the remaining amount of £150k will be drawn from the Council's Local Transport Plan (LTP) Integrated Transport Block capital allocation for the years 2015/16 and 20-16/17. The LTP Integrated Transport Block allocation to the Council from the Department for Transport is £1.57m each year up until 2020/21 (2016/17 -2017/18 confirmed, 2018/19 – 2020/21 indicative).

31. Investing this capital in the VMS equipment will have a direct financial impact in reducing the Council's yearly revenue spend on traffic equipment maintenance by around £10,000 per annum, compared to the yearly maintenance costs previously paid. This will be possible by reducing the number of VMS in use (through the mothballing of the outer ring road signs) and because the new technology package will be significantly cheaper to maintain than the signs currently are.

Human Resources (HR)

32. No HR implications anticipated

Equalities

33. No equalities implications anticipated

Legal

34. There is a need to ensure that Contract Procurement Rules and relevant procurement laws are followed in letting the contracts necessary for the delivery of this work. The UK market is limited due to there currently being only two accredited UK providers. Therefore it is proposed to procure the refurbishment of the remaining VMS by inviting the two suppliers to provide tenders based on the specification developed as part of the successful Swarco trial.

Crime and Disorder

35. No Crime and Disorder implications anticipated

Information Technology (IT)

36. The implementation of refurbished VMS will facilitate the further roll out of communications based on the Council's private fibre and public Wi-Fi infrastructure. Continuing this work, which has been undertaken at numerous traffic signal sites already, will see more sites removed from costly BT provided mobile communications solutions and migrated to CYC controlled networks, saving additional revenue for the Council.

Property

37. No Property implications anticipated

Other

38. No other implications anticipated

Risk Management

Risks associated with not adopting this proposal;

Risk – Reputational impact to CYC of continuing to have inoperative VMS on the highway network.

Mitigation – Refurbishment will ensure the core network of VMS are operational and will establish a clear reason for the continued non-operation of the outer ring road VMS.

Risk – Inability to use the VMS seriously detriments our ability to manage the highway network effectively.

Mitigation – Refurbishment will ensure the core network of VMS is operational. Particularly in the case of the car park guidance system, this will ensure more effective use of the car parks and reduced levels of use of the inner ring road by traffic searching for parking spaces.

Risk – Inefficient use of the city centre car parking estate due to lack of effect guidance system.

Mitigation – Refurbishment will ensure the core network of VMS are operational and the car park guidance system can be brought back into use.

Risks associated with adopting this proposal

Risk – Costs of refurbishment may be hard to control, given the specialist nature of the works required.

Mitigation – Detailed investigation and concept trialling with the both suppliers operating in the UK has lead to the development of a standardised solution with regularised costs.

Risk – Ability of the chosen supplier to deliver the work required to agreed timescales and ensure that the capital funding is spent.

Mitigation – The work undertaken to date has developed a standardised technology package which can easily be replicated. This will limit the risks associated with delivery of this scheme. Additionally, the work undertaken to date on the trial refurbishment means the detailed delivery programme is already understood and an order for the work can be placed at the beginning of the new financial year. This will maximise the time available to the supplier to deliver the work within the timescale required.

Contact Details

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Specialist Implications Officer(s) *None*

Wards Affected: *List wards or tick box to indicate all* **All** ✓

For further information please contact the author of the report

Background Papers:

Annexes
Annex 1- Plan showing location of Inner Ring Road VMS
Annex 2- Plan showing location of Outer Ring Road VMS