
Meeting of Executive Members for City Strategy and Advisory Panel

8 September 2008

Report of the Director of City Strategy

STREET LIGHTING TRIALS

Summary

1. This report examines the results of the street lighting trials which took place earlier this year.
2. The results show that overall the vast majority of people taking part in the trials did not notice any perceived difference in the various levels of lighting. The report examines how this matter could be progressed, in line with the recommendations of the Executive.

Background

3. At the meeting of the Executive on 23 October 2007, Members approved the sustainable street lighting strategy. Part of the strategy, as stated in policy SSL4, is 'keeping energy use to a minimum'. Various measures were already in place to do this but there was an opportunity to see if alterations to lighting levels, resulting in energy savings, would influence customer perceptions about the ability to see properly and their feeling of well being and also whether these lighting alterations might lead to increases in criminal activity.
4. Members agreed to two lighting trials being carried out:
 - Museum Street – 5 lights were included in the section of the Museum Street trial; 1 was 50% below normal; 1 was 25% below normal and 3 were kept with their normal outputs
 - Rawcliffe Bar Park & Ride site – 8 lights in one of the car parks were included in the trial with 3 lights at 50% below normal, 3 lights 25% below normal and 2 lights at their normal output level
5. These trials began on 25 March 2008 and continued over a six-week period to 2 May 2008. They involved the use of new technology enabling the Council to remotely alter the level of light from the street lights. The aim of the trials was to help in assessing whether the cost and energy saving benefits associated with variations in lighting levels could be balanced against any concerns among residents over the impact of new lighting levels.

6. During the six week period, the Council undertook 100 on-street interviews with residents in Museum Street asking a series of questions about the 5 lights in the trial. A shorter self completion survey about the same lights was also available at the Central Library. A further trial was also in operation at the Rawcliffe Bar Park & Ride site at the same time and an interactive group interview with talkabout panellists was undertaken during an evening in April.
7. Information about the trials and the research being carried out was publicised in the local media. Overall, the following views were gathered:
 - 100 interviews with residents in Museum Street
 - 15 self completion questionnaires in the Central Library
 - 12 interviews at Rawcliffe Bar Park & Ride with talkabout panellists
8. The findings give an overview of public opinion, but further research would be needed if the new technology were to be rolled out on a wider scale basis across the city.

Trial Results

Museum Street

9. Having used the street before, interview respondents were asked whether they noticed a difference in the street lighting levels on Museum Street. Overall, 85% of respondents did not notice any differences, although 11% thought the lights looked different from usual: 6% thought they looked brighter and 5% thought they looked **dimmer**.
10. Only two of the fifteen respondents who filled out the self-completion survey noticed a difference in the street lights.

Rawcliffe Bar

11. Twelve talkabout panellists were invited to comment on the street lights at Rawcliffe Bar Park & Ride during an evening in April. The lamps at Rawcliffe Bar Park & Ride were all burning at different levels and some were burning at their usual 100% strength.
12. Overall, ten of the twelve talkabout respondents thought the lights at Rawcliffe Bar had different lighting levels from one another.
13. Although some panellists correctly identified some lamps as being brighter or dimmer, none of them were successful in identifying the lighting levels of all the lamps.
14. All twelve panellists thought being able to set lighting levels at different settings is a good idea: seven think it is a very good idea and five respondents think it is a fairly good idea.
15. More detailed results from both trials are shown in Annex 1.

Crime Analysis

16. Crime analysis reports for both trial areas were set up with the Safer York Partnership, prior to the start of the trials. The reports received are for the period 30 June 2007 to 30 July 2008 and therefore give a 12 month view of the different types of crime and the time when these crimes have taken place.

Museum Street

17. Over the 12 month period a total of 13 crimes were reported: 10 thefts: 2 burglaries and 1 other serious offence. The more detailed breakdown is shown in the table below.

Description	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Burglary in a dwelling									1		1		2
Other notifiable offence	1												1
Other theft of unauthorised taking									1	1			2
Shoplifting	1	2	1	1	2						1		8
Grand Total	2	2	1	1	2				2	1	2		13

18. A more detailed analysis of crimes within the exact time period of the lighting trial and the hours of darkness shows that the crimes listed in March and May were not within the trial period and that the crime in April occurred during daylight hours at 14.39. No crimes were, therefore, reported during the hours of darkness during the trial period.

Rawcliffe Bar

19. Over the same 12 month period the Rawcliffe Bar trial site had a total of 5 crimes reported, as shown in the table.

Description	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Criminal damage other											1		1
Other theft or unauthorised taking					1								1
Theft from vehicle							1						1
Threat of conspiracy to murder			1										1
Vehicle interference								1					1
Grand Total													5

20. Further investigation shows that one offence took place on the last day of the trial and this appears to be a case of graffiti. This incident is typical of the average low level of crime for this location. The trial did not, therefore, result in any identifiable increase in crime.

Consultation

21. Customer views on the street lighting levels of brightness were obtained as part of the two street lighting trials.

Options

22. This report contains outcomes from the two street lighting trials and does not have any options as such.

Analysis

23. The results from the trials indicate that customers have no significant perception of the changes in lighting introduced via the trials and that there was no increase in crime as a result of them.
24. The trials were only carried out on a small scale and these results cannot simply be extended to the larger scale situation but the positive outcome suggests that there is scope to consider some further use of variable lighting levels in line with the Executive recommendations in the sustainable street lighting strategy of 23 October 2007. These recommendations require officers to consult with Ward Councillors and community groups on the options for modernising the street lighting systems in the City and bring forward costed proposals for establishing an optimised system which both reduces the environmental impact, and running costs of the lighting, and improves public perceptions of safety standards.
25. The report to the Executive states that the costs of new technology to introduce variable lighting levels is expensive and this situation has not changed in the last year. What is affecting the financial viability is the current high cost of energy. New arrangements for the supply of energy, via YPO, will be established in October 2008, so the actual level of the increase in cost is not known and given the volatility of the energy market it is very difficult to predict. Increases in costs, above the level anticipated in February 2008, when the budget for street lighting energy was put together, are expected.
26. Based on the encouraging results from the trials it is proposed that officers investigate the possibility of suitable schemes. These will operate over a whole life period at no increase in costs, using less energy and with an improved environmental impact, whilst at the same time ensuring that public perceptions of safety standards are increased through the use of better quality lighting than is currently in place. Any potentially suitable schemes will be brought to Members for consideration.
27. Various lessons were learnt from the trials:
 - Fitting new electronic control gear into existing lights can cause problems and it is best to renew the lantern at the same time.
 - Of the two systems on the market, a GPRS based approach is a more straightforward "plug and play" unit to install and has less physical parts.

- The monitoring system required to operate the necessary level of control offers extra functionality and has the potential to make further carbon savings, be it from removing the need to scout for faults or from a "virtual metering" capacity.
- Generally the public that commented were supportive of energy saving.
- That the commonly held perception amongst the lighting industry that members of the public would not notice a difference between a dimmed light and a normal light is correct.
- Potential savings of 40% energy from a 50% dimming or 20% energy saving from a 25% dimming are potentially possible in the right location without effecting the public perception of lighting and that these energy savings will be more effective at higher wattages, such as 250 watts.

Corporate Priorities

28. Maintenance of the City's highway assets has a direct impact on one of the corporate priorities for improvement, namely:
- improvement of the actual and perceived condition and appearance of the city's streets, housing estates and publicly accessible spaces

Implications

Financial

29. The costs associated with the street lighting trials were allocated to budgets in 2007/08 and no costs are anticipated in 2008/09. The total cost for both trials was £5480.

Human Resources (HR)

30. There are no HR implications identified in this report.

Equalities

31. If any further work is carried out to alter lighting levels then the impact on customers will have to be carefully assessed on a site by site basis to ensure that the work carried out will benefit everyone in the community, including those who are blind or partially sighted. There are no equalities implications with this report.

Legal

32. The Council has a responsibility to carry out maintenance of its street lighting asset.

Crime and Disorder

33. There are no crime and disorder issues.

Information Technology (IT)

34. There are no IT implications.

Property

35. There are no property implications.

Other

36. There are no other implications.

Risk Management

37. In compliance with the Council's risk management strategy the main risks that have been identified and measured in terms of impact and likelihood the risk score have been assessed at less than 16. This means that at this point the risks need only to be monitored, as they do not provide a real threat to the achievement of the objectives of this report.

Recommendation

38. That the Advisory Panel advise the Executive Member to approve further reports in support of specific variable lighting schemes that meet the criteria set out by the Executive.

Reason: To deliver the appropriate levels of lighting to support communities using the least amount of energy.

Author:

Paul Thackray
Head of Highway Infrastructure
Highway Infrastructure
Tel (01904) 551574

Chief Officer Responsible for the report:

Damon Copperthwaite
Assistant Director
(City Development & Transport)

Report Approved



Date 18 August 2008

Specialist Implications Officer(s)

There are no specialist officer implications.

Wards Affected:

All

For further information please contact the author of the report.

Background Papers:

Executive on 23 October 2007 – Sustainable Street Lighting Strategy

Annex

Annex 1 - Street Lighting Trail Survey

PT/GE8 August 2008

L:\DOCUMENT\WORDDOC\COMM\EMAP-CityStrategy\08 09 08 Street Lighting Trials.doc