
To: ENVIRONMENT POLICY BOARD

On: 25 JANUARY 2017

Report by: DIRECTOR OF COMMUNITY RESOURCES

Heading: STREET LIGHTING – LED INVESTMENT PROGRAMME
AND MAINTENANCE & REPAIRS

1. Summary

- 1.1 This report is in response to the agreed motion to full Council on the 16th December 2016:-

‘Council instructs Community Resources to investigate why there continues to be ongoing complaints and concerns about inadequate street lighting in many areas of our communities’.

- 1.2 The report updates on the significant progress on the delivery of LED street light investment programme, as commenced in May 2016. More than 60% of the Council’s street lighting stock is now LED, with the investment programme on target to be completed by early summer 2017. In consequence, the Council will achieve more than 60% reduction in the amount in carbon consumption through street lighting. This will impact positively on electricity costs and reduced carbon penalties. The net annual saving is projected at £750k per year. As detailed in the previous report to Council of June 2015 and in subsequent operational updates to this Policy Board, it is recognised that the change to LED street lighting will result in customers taking time to adapt. However, the position at December 2016, reflecting there were only 125 specific complaints relating to LED installations of more than 15,000 installed (as at December 2016).
- 1.3 Operational performance with regard to street lighting fault repairs has improved continuously since the service was brought in house in February 2016. The in house

service is now achieving 98% of repairs within the target timescale (attended within 7 days of reporting) with complaints about street lighting repairs being at a lower level in 2016/17 in comparison with 2015/16.

2. Recommendations

It is recommended that the Environment Policy Board notes:

- (i) Progress on delivery of the Council's LED Street Lighting Investment Programme as approved by Council in June 2015 and as commenced in May 2016.
 - (ii) The significantly improved performance in delivering street lighting repairs, following the service being brought in house in February 2016.
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3. Background

- 3.1 This report follows the agreed motion to Council on the 16th December 2016 which stated:-

'Council instructs Community Resources to investigate why there continues to be ongoing complaints and concerns about inadequate street lighting in many areas of our communities'

- 3.2 The request to undertake an investigation into street lighting performance comes at a time of very significant changes to both the manner in which street lighting is repaired and also changes the nature of the infrastructure, namely the LED investment programme.
- 3.3 Street lighting across Renfrewshire is undergoing transformation through replacement of conventional orange street lighting with LEDs. At the Council meeting on the 25th June 2015, the £11million LED street lighting investment programme was approved. LED offers over 60% savings on energy / electricity costs. The approval involved conversion to LEDs of 28,613 street lights, with 1,356 columns also being replaced (at the time of the report 2,143 street lights had already been converted to LED technology through earlier pilot projects).
- 3.4 The report to Council in June 2015 detailed that LED lighting offered "high quality white light which improves colour rendition and reduces light spill into residential areas". The nature of LED street lighting is very different from traditional orange street lighting and does take a period of adjustment, especially during the transitional stage. The Council's investment programme reflects an ambitious implementation timescale of 12 to 15 months, to maximise investment opportunity and the delivery of the energy savings as set out earlier in paragraph 1.2.

- 3.5 With the use of modern reflectors, LED light is accurately focused on the road and footways surfaces. There is very little “wasted” light scatter into surrounding areas. As experienced during earlier pilots, this does mean that areas such as driveways and front doors are not illuminated through inefficient light direction in the manner of conventional orange street lighting.
- 3.6 It is also the case that from 2017 conventional orange street lamps will cease to be available and consequently all Councils will require to move to alternative LED lighting technology.

4. Council’s LED Investment Programme

- 4.1 Following approval of the Council’s LED investment strategy / programme for the replacement of 28,613 street lights the detailed designs were undertaken on a street by street basis across Renfrewshire (all other street lights were designed as part of the earlier pilot schemes). All LED replacement lighting has been designed to current lighting design standards BS5489 & BS EN 13201. The British Standards for street lighting were revised in 2013 and took into account the use of ‘white’ light which is now available using LED and modern lamp technologies. The standards take into account how the roads are being used and their traffic volumes. Such considerations also take into account instances where businesses are based in a residential area and as such the roads leading to this would be lit to a higher standard than a purely residential area.
- 4.2 Implementation of the Council’s LED investment programme commenced in May 2016 and is being delivered through three contractual tranches (LED1, LED2 and LED3). The first tranche / contract (LED1) which focused on Paisley (except the town centre) has delivered over 11,000 new LEDs and will be complete during February 2017.
- 4.3 LED2, which involves the villages, is now well underway and over 6,000 lamps have been replaced. The balance of lamp replacement across town centres, Bishopton and Langbank will be completed under the LED3 which will commence on site at the end of January 2017. Renfrewshire’s LED investment programme will be completed by summer 2017. At present, over 60% of Renfrewshire’s street lighting stock has been converted to LED technology.

4.5 Implementation Factors

- 4.5.1 Throughout implementation of LED street lights across Renfrewshire, a consistent and comprehensive information strategy has been delivered to householders. This includes notices posted ‘on street’ advising of the changes and timing, combined with information on the Council’s web site which provides specific street by street detail.
- 4.5.2 Every effort is made during the street lamp conversion to LED to complete all lamps in a street. However, on occasions this is not possible typically due to technical difficulties with existing street lights or a requirement to replace street lighting columns. In these circumstances there can be sporadic conventional orange lamps

remaining for a period of time. All of these remaining orange lights will be addressed in full by summer 2017.

- 4.5.3 On completion of the LED street lighting investment programme, in summer 2017, the Council has committed to review areas where the original design assessments may require some adjustments.

5. Street Lighting Repairs, Operational Performance

- 5.1 The Council's Street Lighting maintenance & repair service was brought in house in February 2016. As reported extensively in late 2015 & early 2016, the Council's street lighting service was brought in house in February 2016. Since then there has been significant improvement in performance in responding to dark lamps and effecting repairs. The table below reports on the percentage of repairs within target timescales from Quarter 3, 2015, to Quarter 3, 2016.

Oct - Dec 2015 (Q3 2015/16)	93.25%
Jan - Mar 2016 (Q4 2015/16)	31.04%*
Apr - Jun 2016 (Q1 2016/17)	78.10%*
Jul - Sept 2016 (Q2 2016/17)	95.20%
Sept – Dec 2016 (Q3 2016/17)	98.00%

** quarters affected by contractual dispute and backlog of repairs*

- 5.2 The table illustrates that the previous contractor, prior to termination of their contact in February 2016, was not performing. This resulted in a considerable backlog of street lighting repairs. The Council started to address the backlog following the service being brought in house from the end of February 2016. By mid-April 2016 a considerable amount of the backlog had been removed, although the Quarter 4 (2015/16) and Quarter 1 (2016/17) figures reported reflect the impact that the backlog had on the average response times. In Quarter 2 (2016/17) 95.2% of lamps being repaired within target times. This performance continues to improve as indicated by the (provisional) Quarter 3 figure of 98%.
- 5.3 It is also important to recognise that the number of dark lamps reported will significantly reduce as the LED replacement programme progresses. LEDs have a life expectancy of over 20 years, compared to a life expectancy of conventional orange street lamps of around 5 years. Following completion of the LED replacement programme by summer 2017, it is anticipated that public reports of dark lamps will substantially reduce. An ongoing programme to address remaining issues with ageing cabling and columns will continue.

- 5.4 The statistics for street lighting complaints for the period 2013/14 to date are summarised below, for both street lighting faults and as specific to LED installations:-

	2013/14	2014/15	2015/16	2016/17 – part year
Street lighting fault complaints	240	166	356	163
LED lighting installation.	n/a	n/a	n/a	125

The high number of street lighting complaints recorded in 2015/16 reflect the contractual issues towards the end of 2015 and early in 2016, as detailed earlier in paragraphs 5.1 & 5.2, prior to the street lighting maintenance service being brought in house. Significantly, the number of recorded complaints has reduced through 2016. It is anticipated that by the end of the financial year 2016/17 the total number of complaints will be below the figure for the preceding financial year of 2015/16. Significantly, only 125 specific complaints about LED conversions have been received since the implementation programme commenced in May 2016, with more than 15,000 LED conversions completed by December 2016.

- 5.5 Some street light repairs are related to power supplies, with the Council being reliant on Scottish Power to address power related repairs. On occasion, these type of repairs are more complex and take longer than the Council's target timescale for routine repairs. There are also instances where the Council has to undertake more complex cabling repairs, requiring excavation. Again these type of repairs fall outwith the Council's performance target for routine repairs.

Implications of the Report

1. **Financial** – None.
2. **HR & Organisational Development** – None.
3. **Community Planning** - Delivery of the LED street lighting conversion programme will contribute to community safety across Renfrewshire through white light delivering better colour rendition which assists CCTV images and allows identification of colours. Carbon consumption will be significantly reduced (over 60%) in consequence of the improved energy efficiency of LED lamps in comparison with conventional lamps.
4. **Legal** – None.
5. **Property/Assets** – None.

6. **Information Technology** – None.
7. **Equality & Human Rights** - The recommendations contained within this report have been assessed in relation to their impact on equalities and human rights. No negative impacts on equality groups or potential for infringement of individuals' human rights have been identified arising from the recommendations contained in the report because it is for noting only. If required following implementation, the actual impact of the recommendations and the mitigating actions will be reviewed and monitored, and the results of the assessment will be published on the Council's website.
8. **Health & Safety** – None.
9. **Procurement** – None.
10. **Risk** – None.
11. **Privacy Impact** – None.

List of Background Papers: None

Author: Diane Gillies, Head of Facilities Management
Tel: Tel 0141 618 4672