



## Report

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**To the Portfolio Holder for Highways, Street Scene and Trading Services.**

### **LED Lighting Upgrade**

<b>Relevant Cabinet Member(s)</b>	<b>Wards Affected</b>	<b>Key Decision</b>
Cllr Joe Blackham	None	Yes

#### **EXECUTIVE SUMMARY**

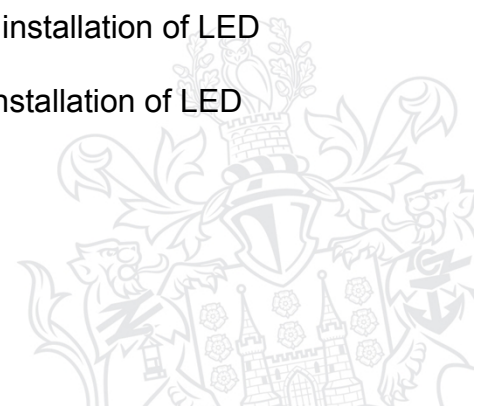
1. In 2012 the Council's Civic Office build was completed. The office was built to BREEAM Excellent standard (the world's leading sustainability assessment method for masterplanning projects, infrastructure and buildings) and has required little improvement since.
2. At the time of design and construction, LED lighting was deemed to be too expensive but has since reduced in price and the product range has improved considerably.
3. The existing lighting in the Civic Office has now started to fail and so this presents an opportunity for the Council to roll out the use of LED.
4. The new LED lights will consume less energy, they will produce better quality light; they will be more responsive to natural light gain and they will have a longer life, providing the Council with reduced energy and maintenance costs for around 12 years.

#### **EXEMPT REPORT**

5. n/a

#### **RECOMMENDATIONS**

6. Recommendations for the Portfolio Holder for Highways, Street Scene and Trading Services to approve are;
  - a. To invest £272,000 in the design, materials and installation of LED lighting in the Council's Civic Office.
  - b. To invest £13,000 in the design, materials and installation of LED lighting in the Mary Woollett Centre.



## WHAT DOES THIS MEAN FOR THE CITIZENS OF DONCASTER?

7. The Council will maintain and develop the management of its property assets to improve how those assets work for us and make them more efficient and provide good value for money; in line with the Council Asset Management Strategy.

## BACKGROUND

8. Electricity costs for the Civic Office were £217k in 2016-17. Around 30% of this cost is attributed to lighting.
9. This proposal aims to introduce a lighting upgrade programme which saves money via direct electricity reduction, a reduction in maintenance and protects the Council against the full exposure of rising energy prices.
10. In addition to the Civic Office, there is a need to replace failing light fittings in communal areas at the Mary Woollett Centre.
11. The cost of the works for both buildings are calculated as:
  - a. Works and materials – £259k
  - b. Design Fees – £26k
12. Please note the following methodology has been applied to calculate the electricity and maintenance savings:
  - a. Direct electricity savings are based on the reduction in kilowatt hours multiplied by the unit rate of £0.106.
  - b. The total amount of electricity to be saved each year is 333,775 kilowatt hours (kwh)
  - c. The value of the electricity saving per year is £35k (Civic Office £33k, Mary Woollett £2k) and £424k (Civic Office £394k, Mary Woollett £30k) over the life of the lights (12 years).
  - d. Cost avoidance has a value between £234k and £417k over the life of the lights.
    - i. If energy costs increase by 5% per year over the next 12 years, this could cost an extra £234k.
    - ii. If energy costs were to increase by 8%, this would cost the Council an extra £417k.
13. The proposed installations will therefore help the Council avoid the full impact of these likely increases.
14. Savings on maintenance is based on a saving of £13k in year one and a total of £160k over the life of the lights.
  - a. Maintenance costs are based on materials and installation costs
  - b. With the rate of annual inflation linked to maintenance deemed to be 10%, the proposed installation will help the Council avoid a further £125k of maintenance costs.
15. The total saving for the investment of £285k is up to £584k over 12 years, with up to £542k of cost avoidance.

## OPTIONS CONSIDERED

16. Options include:

- a. Do nothing –
  - i. The Council would be exposed to a continuing costly maintenance schedule, installing like for like replacement lights. This would present an ongoing increasing budget pressure.
- b. Upgrade the existing lighting in the Civic Office and Mary Woollett Centre to low energy LED.

## REASONS FOR RECOMMENDED OPTION

17. The recommended option is to upgrade the existing lighting in the Civic Office and Mary Woollett Centre to low energy LED, to achieve the following:
- a. The Council would benefit from reduced energy and maintenance costs.
  - b. Building users would benefit from better quality and more responsive lighting.
  - c. The Council would achieve the objectives set out in the Asset Management Strategy, providing good value for money.

## IMPACT ON THE COUNCIL'S KEY OUTCOMES

	Outcomes	Implications
	<p><b>Doncaster Working:</b> Our vision is for more people to be able to pursue their ambitions through work that gives them and Doncaster a brighter and prosperous future;</p> <ul style="list-style-type: none"> <li>• Better access to good fulfilling work</li> <li>• Doncaster businesses are supported to flourish</li> <li>• Inward Investment</li> </ul>	
	<p><b>Doncaster Living:</b> Our vision is for Doncaster's people to live in a borough that is vibrant and full of opportunity, where people enjoy spending time;</p> <ul style="list-style-type: none"> <li>• The town centres are the beating heart of Doncaster</li> <li>• More people can live in a good quality, affordable home</li> <li>• Healthy and Vibrant Communities through Physical Activity and Sport</li> <li>• Everyone takes responsibility for keeping Doncaster Clean</li> </ul>	

	<ul style="list-style-type: none"> <li>• Building on our cultural, artistic and sporting heritage</li> </ul>	
	<p><b>Doncaster Learning:</b> Our vision is for learning that prepares all children, young people and adults for a life that is fulfilling;</p> <ul style="list-style-type: none"> <li>• Every child has life-changing learning experiences within and beyond school</li> <li>• Many more great teachers work in Doncaster Schools that are good or better</li> <li>• Learning in Doncaster prepares young people for the world of work</li> </ul>	
	<p><b>Doncaster Caring:</b> Our vision is for a borough that cares together for its most vulnerable residents;</p> <ul style="list-style-type: none"> <li>• Children have the best start in life</li> <li>• Vulnerable families and individuals have support from someone they trust</li> <li>• Older people can live well and independently in their own homes</li> </ul>	
	<p><b>Connected Council:</b></p> <ul style="list-style-type: none"> <li>• A modern, efficient and flexible workforce</li> <li>• Modern, accessible customer interactions</li> <li>• Operating within our resources and delivering value for money</li> <li>• A co-ordinated, whole person, whole life focus on the needs and aspirations of residents</li> <li>• Building community resilience and self-reliance by connecting community assets and strengths</li> <li>• Working with our partners and residents to provide effective leadership and governance</li> </ul>	<p>Ensuring our buildings run efficiently and are low cost to maintain.</p>

## **RISKS AND ASSUMPTIONS**

The following risks and assumptions have been made:

18. The LED light fitting fails before their expected lifespan.
  - a. The fittings come with a 5 year product warranty, of which the first 12 months include labour.
  - b. Manufacturers fully expect the lights and fittings to last beyond 12 years and very few light failures are anticipated.
  
19. The expected savings are not realised.
  - a. The savings associated with a reduction in electricity use are due to a direct reduction in power output, which can be accurately calculated ie. a 100 watt light being replaced with a 30 watt light will save 70%.
  - b. A flat budget reduction will be made to the Civic Office and Mary Woollett Centre electricity budget.
  - c. Any increase in the operational hours would of course have an impact on the budget. For example, if the average hourly use of lights in meeting rooms increased from 8 hours to 10 hours, electricity costs would of course increase.
  - d. Although the introduction of LED's will save money for the Council, it should be noted that electricity consumption in the Civic Office has been increasing. An example of this is the introduction of additional teams and services, such as the registrars. This will not affect the lighting upgrade but it will place greater pressure on the electricity budget.
  
20. Replacement LED's are more expensive than the current bulbs.
  - a. With a low failure rate being experienced with LED fittings it is likely that most, if not all, fittings will only need to be replaced from year 12. The costs of replacements will either be borne by the Civic Office and Mary Woollett Centre building budget or a further 'invest to save' bid.

## **LEGAL IMPLICATIONS [ND – 23/3/2018]**

21. Section 1 of the Localism Act 2011 provides the Council with a general power of competence, allowing the Council to do anything that individuals generally may do. Section 111 of the Local Government Act 1972 gives an Authority power to purchase goods and services.
  
22. Legal Services should be consulted at the earliest opportunity to advise on the appropriate procurement procedure and to provide the contractual documentation.
  
23. The Council's Constitution must be adhered to including CPRs and FPRs.

## FINANCIAL IMPLICATIONS [LM – 26/3/2018]

24. The lighting improvement programme for the Civic Office and Mary Woollett Centre will need to be added as a new project to the Regeneration and Environment capital programme.
25. The cost of the capital scheme equates to £285k (£272k Civic Office, £13k Mary Woollett Centre) and will be funded through Prudential Borrowing through the Investment and Modernisation Fund allocation.
26. The use of Prudential Borrowing to deliver the scheme is within the Prudential Indicators as approved in the Council's Treasury Management policy. The Director of Finance and Corporate Services has delegated powers to make the most appropriate form of borrowing from approved sources.
27. This decision cannot be implemented until IMF approval has been received.
28. Interest costs associated with IMF are calculated based on the PWLB 12 year rate plus a 0.5% risk factor at the date of approval from the IMF board. The rate used for the purposes of this report is 2.97% and should be reviewed at the time of approval and updated profiles should be agreed as necessary.
29. The estimated savings generated from the lighting upgrade are detailed in the table below, year one being 2018/19:

Year	Savings from LED	Savings from Maintenance	Annual Saving
	£	£	£
1	8,850	3,340	12,190
2	35,380	13,349	48,729
3	35,380	13,349	48,729
4	35,380	13,349	48,729
5	35,380	13,349	48,729
6	35,380	13,349	48,729
7	35,380	13,349	48,729
8	35,380	13,349	48,729
9	35,380	13,349	48,729
10	35,380	13,349	48,729
11	35,380	13,349	48,729
12	35,380	13,349	48,729
<b>Total</b>	<b>398,030</b>	<b>150,179</b>	<b>548,209</b>

30. The energy savings from the LEDs and maintenance will be made from the electricity and building repairs and maintenance budgets within the Civic Office (EJ001) and Mary Woollett Centre (CK006). The saving of £548k will

be put towards achieving the Assets savings target over 12 years, savings are profiled in the table above.

31. To demonstrate the scheme meets the criteria of IMF, total borrowing costs are estimated to be £386k which leaves net saving of £161k generated over 12 years. Summary of the borrowing costs is included in the table below.

<b>Financial Year</b>	<b>MRP p.a.</b>	<b>Interest p.a.</b>	<b>Borrowing cost p.a.</b>	<b>Total borrowing cost</b>
2018-2019		4,232	4,232	4,232
2019-20 to 2029-2030	23,750	8,465	32,215	354,360
2030-2032	23,750	4,232	27,982	27,982
				<b>386,574</b>

#### **HUMAN RESOURCES IMPLICATIONS [JC – 14/3/2018]**

32. There are no HR implications.

#### **TECHNOLOGY IMPLICATIONS [PW – 8/3/2018]**

33. There are no technology implications in relation to this report.

#### **HEALTH IMPLICATIONS [KH – 9.5.18]**

34. It is important that lighting in the workplace is adequate and suitable and takes into account the needs of individual employees and the type of work being undertaken. Lighting that is failing, and is thus providing too much or too little luminance, uneven light or flickering, could impact upon employees' health.

Inadequate lighting can make the visual system work harder, and thus could lead to eyestrain in some employees. Poor light could also lead to unsuitable postures, such as having to lean closer to screens or documents to read them. It can also affect individuals, for example, flickering light can affect employees with epilepsy.

35. The energy efficiency gained by updating the lighting will have wider benefits for the environment.
36. We recommend that Doncaster Council provides well-designed lighting that is adequate and suitable, designed to control glare and avoid flicker. Efforts should be taken to provide adequate daylight and sunlight to interior spaces, and access to outdoor amenity areas. We should also take into account the different needs of individuals when planning and designing lighting.

## **EQUALITY IMPLICATIONS [RJS – 8/3/2018]**

37. There are no equality implications associated with this proposal.

## **CONSULTATION**

38. The following officers, members have been consulted regarding the proposals:

39. Officers:

- a. Director Regeneration & Environment – Peter Dale
- b. Assistant Director of Trading & Property Services – Dave Wilkinson
- c. Head of Transport and Production – Steve Lowther
- d. Chief Financial Officer & Assistant Director of Finance – Steve Mawson
- e. Assistant Director of Assets and Trading Services – Dave Wilkinson
- f. Mayors Political Assistant – Chris Stephenson

40. Members:

- a. Mayor – Ros Jones
- b. Cllr Joe Blackham – Portfolio Holder: Highways, Street Scene and Trading Services
  - i. The Mayor and member are both supportive of this proposal.

## **BACKGROUND PAPERS**

41. n/a

## **REPORT AUTHOR & CONTRIBUTORS**

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