



**Cabinet**  
14 April 2015

**Report from the  
Chief Operating Officer**

For Action

Wards Affected:  
[ALL]

**Street Lighting Energy and Carbon Saving Proposals,  
and Authority to Tender**

**Appendices 2 & 3 are not for publication, in accordance with Schedule 12(A) (3) of the Local Government Act 1972, as they contain: Information relating to the financial or business affairs of any particular person (including the authority holding that information).**

**1.0 SUMMARY**

- 1.1 This report sets out the business case for further investment in the Council's street lighting assets, aiming to: deliver long-term savings in energy costs; provide significant reductions in the Council's carbon emissions; and lay the foundations for a flexible and adaptive lighting strategy to meet the long-term needs of the borough.
- 1.2 Specifically the report focusses on the potential replacement of existing high pressure sodium street lamps with modern Light Emitting Diode (LED) luminaires. The report also considers the potential benefits of investment in a Central Management System (CMS), seeking to 'future proof' the LED investment and enabling the introduction of a dynamic lighting strategy across the borough.
- 1.3 This report also seeks authority to invite tenders, in partnership with PFI Lighting Ltd., for the supply and installation of lighting technologies, as required by Contract Standing Orders 85, 88 and 89.

## **2.0 RECOMMENDATIONS**

### **That Cabinet:**

- 2.1 Endorses the business case for investment in LED (Light Emitting Diode) luminaires, for the reasons outlined in section 3 of this report, and authorises officers to commence the procurement of LED luminaires with reference to the pre-tender considerations outlined in paragraph 6 of this report.
- 2.2 Endorses the business case for investment in Central Management System (CMS), for the reasons outlined in section 3 of this report, and authorises officers to commence the procurement of CMS with reference to the pre-tender considerations outlined in Part 6 of this report.
- 2.3 Authorises the invitation of tenders for the supply of LED and CMS on the basis of the pre-tender considerations set out in paragraph 6.1 of the report, and authorises tendering in partnership with PFI Lighting Ltd., noting the issues set out in sections 4 and 5 of this report.
- 2.4 Gives approval to officers and their PFI partners to evaluate the tenders referred to in 2.3 above on the basis of the evaluation criteria set out in paragraph 6.1 of the report, with a further report to Cabinet following the tender exercise which will make recommendations on the award of Contract.
- 2.5 Gives approval to officers to develop a new lighting strategy, specifically facilitated by the deployment of CMS technology, which seeks further energy and carbon savings whilst meeting the long-term lighting needs of the borough.

### 3.0 THE BUSINESS CASE

- 3.1 This business case supports immediate investment in a programme to replace existing street lighting lanterns with LED luminaires at the earliest opportunity, in order to bring forward savings of £750,000 p.a. from electricity expenditure and reduce carbon emissions.
- 3.2 The business case supports the installation of CMS technology, in tandem with the luminaire replacement programme, in order to realise additional savings and provide the Council with long-term flexible control over street lighting output at a highly localised level.
- 3.3 The business case also demonstrates that the proposed investment is financially viable, with payback estimated to be between 10.1 and 12 years depending on the level of investment, the funding route and the prevailing rate of interest on borrowing. Any funding, whether borrowed from external sources or funded from Council balances and reserves, would be repaid over time by the savings from energy and carbon costs.
- 3.4 There is clearly scope for substantial reductions in electricity costs through a switch to LED technology for the Council's street lighting. This reduction in electricity use would also provide significant reductions in carbon emissions but would first require investment.
- 3.5 Work has therefore been undertaken to examine the feasibility of making an investment in the Council's street lighting inventory to achieve these aims, examining: the range of technologies currently available to the Council; the estimated cost of investment; and the estimated savings.
- 3.6 It is considered that the outline business case, based on prudent assumptions, is sufficiently promising to support proceeding to the next stage: a formal approach to the market to obtain definitive and accurate costs, and long-term savings commitments. Only a formal market test will give the required clarity and definition to support a final decision
- 3.7 Aside from the reduction in electricity expenditure, carbon savings also form a key part of this business case, both financially (savings of approx. £60k p.a., assuming costs of £16 per tonne of CO<sub>2</sub>), and environmentally. The project would make a one third contribution of at least 5% towards the Council's overall target of a 15% reduction in carbon emissions before March 2018.

## Financial

### Expenditure

- 3.8 The budget (2014/2015) for street lighting expenditure on electricity stands at £1.3m. Whilst energy prices are currently low, this is not expected to continue in the long term and it is likely that future years budgets will require growth in order to meet increasing energy costs as well as inflation.
- 3.9 The business case is based on existing baseline energy costs (£0.097 per kWh), although this base is expected to move (via Laser procurement) to £0.1077 per kWh in the near future. This assumption has been used to calculate potential financing arrangements. Officers now estimate the payback period to be 10 years and 1 month, with a base assumption of the current PWLB rate plus 0.5% as a prudent level of interest on borrowing.
- 3.10 The estimated capital costs of replacing existing high pressure sodium luminaires with LED is £6.563m. This estimate is based on costs cited by reputable LED manufacturers in a soft market testing exercise. It is assumed that these costs will remain static throughout the period covered by the business case. As the unit costs were quoted outside of a competitive tender process they should be considered as a prudent pre-tender baseline estimate.
- 3.11 The estimated capital cost of replacing existing high pressure sodium luminaires with LED, and deploying a Central Management System, is £7.752m. This estimate is based on costs provided by reputable LED manufacturers in a soft market testing exercise. Again, as the unit costs were quoted outside of a competitive tender process they should be considered as a prudent pre-tender baseline estimate.

### Cost of Financing

- 3.12 Officers have examined a number of ways to finance the project, focussing on three lead options: borrowing from the Council's own balances and reserves; sourcing low interest public finance through SALIX; and prudential borrowing. A small contribution has been secured towards the project from available Section 106 funding (£53k).
- 3.13 Of the three options, the business case currently assumes that prudential borrowing will be the source of capital. Borrowing from Council reserves for all or part of the investment cost, if an available option, could be attractive dependent upon prevailing interest rates and investment returns. A return of more than 10% per annum far exceeds returns currently available through private investment. However, there are other demands on the Council's reserves which may take priority.

- 3.14 There is an option to borrow interest free capital from SALIX, although there are strict limits on payback periods (5 years). In order to achieve this, officers have remodelled the business case to separate the higher consuming assets (those with payback within five years) from lower consuming assets. This analysis suggests that only 8.31% of the total asset could be funded via SALIX; the remainder would require alternative financing. This would also increase the payback period for the remainder of the asset replacement to more than 10 years. It is therefore not considered appropriate to pursue this method of funding for such a small element of the investment.
- 3.15 **Prudential Borrowing.** There are a number of scenarios for the Council to consider in relation to the borrowing needed for the project. Broadly speaking, the variables comprise: the term of the loan; the prevailing interest rates with a prudent allowance for future increases; and the estimated energy savings. The potential scenarios are included in Appendix A to this report. In broad terms, borrowing over a 10 year term would result in a break-even position (i.e. energy savings would equal the cost of loan repayments plus interest) over the same period. In contrast, borrowing over a longer term would produce an immediate saving for the Council and support the savings proposal included in the Medium Term Financial Strategy. The projected asset life is 20 years and it is therefore suggested that, subject to further consideration of the variables of interest rates and inflation, prudential borrowing over the 20 year term would be the most beneficial option
- 3.16 The business case presents two viable investment options for the Council:
- 3.17 **Option 1 - LED and Adaptive Lighting:** This is the cheaper option for the Council, but would not deliver all the potential savings. The Council would be required to specify its desired lighting output from the outset of procurement, i.e. the lighting output of the luminaire would be factory-set at a fixed specified level. This would commit the Council in advance to the same lighting strategy over the 20 year asset life. Although this factory pre-set could facilitate an element of dimming, it would necessarily be conservative in its approach to setting lighting levels; the acceptability of altering lighting levels whilst meeting the needs and expectations of residents and travellers is not yet sufficiently understood. Any remedial alterations, should changes prove inappropriate or unacceptable, would be expensive. It would preclude any further changes in response to local conditions, future development of the borough, changing perceptions of acceptability, or future budget pressures, without significant further investment.
- 3.18 **Option 2 - LED, Adaptive Lighting and a Central Management System (CMS):** Investing additional capital in CMS would provide the Council with a number of additional long-term benefits:
- 3.18.1 **Additional Savings:** The Business Case assumes that CMS would provide a base level of energy efficiency and maintenance savings at £45k p.a., through automatic reporting of faults and a reduction in night patrolling.

- 3.18.2 **Lighting Output:** CMS would provide the Council with the ability to adjust lighting output to meet required standards at a micro-level. Early-adopting local authorities estimated that an additional 10-15% of energy costs could be saved by managing lighting output at a highly localised level and at different time periods at night (Appendix A, detailing finance options, demonstrates how this would improve the payback period). A lighting plan could be introduced, based on lighting levels tailored to the traffic management and road safety requirements which lie at the heart of the British Lighting Standard BS 5489-1:2013 and European Lighting Standard BS EN 13201-2:2003. LED luminaires can have their output reduced by up to 50% of their maximum potential without adversely impacting on their lifespan.
- 3.18.3 As part of its long-term financial strategy, and given the context of the expected financial challenges from 2017 onwards, the Council would have the flexibility to consider additional lighting savings by further reducing both energy costs and carbon emissions. A number of local authorities have safely adjusted lighting levels between midnight to 6 am, in appropriate areas, when traffic and pedestrian levels are at their lowest. Other authorities have gone further, with reductions in lighting levels of up to 50% over longer periods.
- 3.18.4 In order to secure energy savings of an additional £75k to £80k p.a., and hold the repayment period at no more than 11.5 years (see appendix 1), an additional 10% saving from energy costs would be needed. The paragraphs below illustrate options illustrating how the Council would be able to achieve this saving, and optimise potential energy savings, through the introduction of flexible lighting controls. The consultant's analysis of the potential savings has been included as appendix 3 to this report.
- 3.18.5 **Constant Light Output:** Lighting output decreases over time as lamps age, and therefore most lighting designs are based upon the estimated lighting output of the lamp at the end of its usable life. This means that when new lamps are installed, they have a higher output than is required to meet the minimum lighting standard. The Constant Light Output function of CMS compensates for this light loss, meaning that drivers can be pre-programmed to start at a lower power level when the luminaire is new, and then gradually increase power over time. This functionality could reduce wasted energy consumption by approximately 7.5%, weighted towards the early years of the luminaire replacement programme.
- 3.18.6 **Fine tuning of light levels on a street-by-street basis:** Many lighting columns in Brent are spaced closer together than strictly necessary, resulting in some streets being over-lit by as much as 20%; CMS could be used at these locations to reduce lighting output in order to compensate, whilst still meeting required lighting standards. It is estimated that this could reduce energy consumption by as much as 5%.

- 3.18.7 **Obtain the optimum lighting class for each street:** The age of the Council's PFI Contract means that current lighting designs are based upon achieving a lighting output determined by the old British Standard (BS5489). The new British Standard (BS5489:1 2013) encourages the Council to adjust levels of lighting according to the usage of the road. Savings may be achieved by adjusting lighting in low density housing areas, little-used traffic routes and industrial/business areas (such as Park Royal). It is estimated that a further 5% energy saving could be made by adopting this approach.
- 3.18.8 CMS would also provide the Council with the ability to increase lighting levels in the event of a major incident in the borough, or in response to specific circumstances in a local area. For example, lighting could be increased in town centre locations to support the night-time economy at weekends, or in the Wembley area on major event days.
- 3.18.9 The Council would be able to improve the service it delivers as CMS would allow immediate identification of a malfunctioning light for repair within 48 hours, reducing night scouting costs. The existing method of identifying lighting faults is to manually scout the streets on a fortnightly basis, and repair within 48 hours; potentially this also means that a lighting fault can take up to 16 days to identify and fix.
- 3.18.10 In introducing dimming, some authorities have sought environmental benefits from reduced levels of light pollution during the core night hours.
- 3.19 In order to support the additional investment in a CMS there would need to be a commitment to pursue a lighting strategy which will consider adopting the above energy reduction options, to achieve further energy savings beyond those achievable without a CMS. It is therefore recommended that Cabinet endorse the additional investment in CMS, subject to the outcome of the procurement exercise.

#### **4.0 PFI CONTRACT**

- 4.1 The Council has a 20 year (21 fiscal years) PFI Contract with PFI Lighting Limited, which is set to expire on 30<sup>th</sup> November 2018. Delivery is in turn sub-contracted to Bouygues Energies and Services (formerly known as David Webster Ltd). The service is worth £2.9m per annum, and is made up of capital repayment (for infrastructure investment) and maintenance, providing a monthly unitary payment. The unitary payment is based upon the volume of columns and lighting furniture in the Council asset inventory; each item of furniture is assigned a WUD (Weighted Unit Day) value. At the commencement of the Contract the annual price was £2.311m. Following inventory review and subsequent changes, along with the application of indexation to the contract price, the unitary payment is now based upon £2.947m p.a., offset by £790k p.a. PFI Grant.
- 4.2 The contract included a core investment programme which brought about substantial investment in the Council's street lighting stock, focussed on renewal of lamp columns. Given that this programme has now finished, PFI

Lighting Ltd have confirmed that they would be happy to accommodate any changes proposed by the Council to bring about energy savings and are able to adjust maintenance cycles to facilitate change.

- 4.3 Of all the cyclical routines performed by the current contractor, potentially the most relevant to this project is the bulk change and clean cycle, which involves cleaning the lanterns and replacing existing lamps. This contractual cycle is 3 years, and the financial model uses this as its basis.

#### 5.0 **TIMING OF INVESTMENT & VALUE FOR MONEY**

- 5.1 There are several factors to be taken into account in deciding the optimum time to invest in new lighting technologies. The Council has completed the capital programmes within the existing PFI; however the agreement has a further 4 years to run. Key considerations are set out below.

- 5.2 **Cost of Finance:** It is anticipated that the cost of borrowing will increase between now and the investment period, should the project proceed. It is not possible to accurately estimate the cost of borrowing in 2018, although the trend would seem to be toward higher interest rates. In a prudent approach, therefore, the payback models have been based on the prevailing PWLB rates plus 0.5%.

- 5.3 **Continued Energy Expenditure:** Following consultation with the incumbent maintenance provider, the Business Case assumes that the LED/CMS replacement programme would take approximately 24 months to complete. An early decision to invest, within the existing PFI, could result in the replacement programme being completed in 2017. Delaying the commencement of a replacement programme until 2018 would mean that the programme would not be completed until 2020. The cost of this delay is estimated to be in the region of £2m additional energy costs.

- 5.4 **Competition:** Investing in new lighting technologies at the end of the PFI may generate some savings and reduced rates through a competitive tendering exercise. However, it is considered unlikely that potential savings would match the £2m energy saving from early implementation, as identified in 5.3 above. Soft market testing has already been carried out by the service which indicates that the rate of LED product development has slowed, and that minor technological improvements only now emerge on a six month cycle. A saving of £2m would require a further 30% reduction in the costs predicted by the soft market testing exercise. Given that 80% of the investment will be spent on the manufacture & supply of lanterns, which *will* be subject to competition (see 5.7 below), it is considered very unlikely that a competition saving of this magnitude could be achievable from competition savings on installation alone.

- 5.5 **Carbon Savings:** The Council is seeking a 15% reduction in carbon emissions by March 2018. In order to realise this reduction, the Council have established a programme board to oversee a number of projects aimed at



reducing carbon emissions. The proposal to switch to LED luminaires would make a significant contribution (5% of the 15% required, i.e. one third) to meeting the Council's target. A CMS would provide the potential to increase the carbon saving. If the investment is delayed until 2018 street lighting would not be able to contribute to meeting this target.

## Procurement

- 5.6 If the option to procure within the PFI is taken up, the Council would be required to demonstrate that value for money will be achieved and thereby satisfy Contract Standing Orders. The bulk of the project cost (85%) relates to the cost of the luminaires and hardware, rather than their installation.
- 5.7 To demonstrate value for money, officers are working with a specialist lighting consultant (Designs for Lighting) who have been commissioned to work on the Council's lighting strategy, to draft a technical specification to secure the desired product quality and associated warranties. Officers have agreed with PFI Lighting Limited (the PFI Special Purpose Vehicle) that the Council will run a competitive tender process in partnership with PFI Lighting Ltd in order that both parties can satisfy due diligence commitments.
- 5.8 Manufacturers, and the incumbent maintenance provider Bouygues, have already indicated a willingness to work with the SPV on an open book basis, which will provide transparency over the cost of installing the new equipment.
- 5.9 The combination of an open competition, and procuring on an open book basis, should offer assurance that the Council will achieve value for money. Details on the Council's approach to market are outlined in part 6 of this report (see below).
- 5.10 Two other options have been considered but are not recommended.
- 5.10.1 LB Brent could separately procure the supply and installation of LED units outside of the PFI contract, but before its expiry. This would have a number of operational implications for service delivery, and would also present a number of commercial questions for the Council to address in its relationship with the incumbent supplier. Guarantees offered by PFI Ltd in respect of asset maintenance and residual life which have been subsequently sub-contracted to Bouygues, may be prejudiced by client insistence on using independently sourced consumables.
- 5.10.2 PFI Ltd, and their chosen sub-contractors, could supply, install and maintain the new assets through a variation to the Contract. In this scenario the full risks of delivery would sit with Bouygues and the start date could potentially be advanced, thereby speeding up the benefits of energy savings. There could be a mechanism whereby if Bouygues generate additional energy savings above those predicted, then an agreed risk/reward sharing mechanism could act as an incentive to maximise savings through speed of installation or technology changes during roll out. It is understood that

Bouygues would be prepared to offer certainty of delivery, with liquidated damages linked to lost energy savings for late delivery. It would be difficult for the Council to clearly demonstrate that it was achieving value for money through this method of procurement.

## 6.0 Pre-tender Considerations

6.1 In accordance with Contract Standing Orders 88 and 89, pre-tender considerations have been set out below for the approval of the Cabinet.

Ref.	Requirement	Response	
(i)	The nature of the service.	The Supply of Light Emitting Diode (LED) luminaires and a Central Management System (CMS)	
(ii)	The estimated value.	£8m	
(iii)	The contract term.	24 Months	
(iv)	The tender procedure to be adopted.	The Competitive Procedure with Negotiation	
v)	The procurement timetable.	<b>Indicative dates are:</b>	
		Adverts placed	1 <sup>st</sup> June 2015
		Expressions of interest returned	1st July (Midday)
		Shortlist drawn up in accordance with the Council's approved criteria	8 <sup>th</sup> July
		Invite to tender	W/C 13 <sup>th</sup> July
		Deadline for tender submissions	14 <sup>th</sup> August
		Panel evaluation and shortlist for BAFO	W/C 17 <sup>th</sup> August
		Negotiation with leading bidders, and invitation to submit BAFO	W/C 31 <sup>st</sup> August
		Deadline for BAFO submissions	Friday 11th September (Midday)

Ref.	Requirement	Response	
		Panel Evaluation and Decision	W/C 14 <sup>th</sup> September
		Report recommending Contract award circulated internally for comment	October 2015
		Cabinet approval	November 2015
		[Cabinet call in period of 5 days (mandatory unless excluded by the Exec) OR minimum 10 calendar day standstill period – notification issued to all tenderers and additional debriefing of unsuccessful tenderers (contracts covered by the full EU Regulations only)]	November 2015
		Contract Mobilisation	1 <sup>st</sup> December
		Contract start date	5 <sup>th</sup> January 2016
		1. At selection (pre-qualification stage) shortlists are to be drawn up in accordance with the Council's Contract Procurement and Management Guidelines by the use of a pre qualification questionnaire to identify organisations meeting the Council's financial standing	1. Pre-qualification stage will address fundamental considerations:  A) Experience within the UK marketplace including experience of supplying a similar product to another local authority; B) Company Financial Standing. C) Company Capacity. D) Relevant Accreditations E) Relevant Company Policies

Ref.	Requirement	Response	
		<p>requirements, technical capacity and technical expertise.</p> <p>2. At tender evaluation stage, the panel will evaluate the tenders against the following criteria: 60% Price / 40% Quality</p>	<p>2. Tenders will be evaluated to determine the Most Economically Advantageous Tender (MEAT). Further detail on this is outlined in paragraph 6.2 55% Price 45% Quality</p>
(vi)	The evaluation criteria and process.	With reference to paragraph 6.3, tender will be divided into three lots, recognising the different markets for CMS and LED. An optional third lot will be available to those who may identify further economies from bidding with a consolidated product or through forming an alliance.	
(vii)	Any business risks associated with entering the contract.	<p>Officers request authority to tender in partnership with its PFI Contractor in order to mitigate against commercial risks to current relationships. The proposed supply chain arising from this procurement exercise is rather complex; the Council will be required to vary its current PFI contract to ensure that the subsequent supply chain is completely outsourced, and that the Council are not left with operational dependencies.</p> <p>The business case is reliant upon the LED product having a projected lifespan of 20 years; as part of the quality evaluation, the panel will consider the value of warranties submitted as well as their transferability.</p>	
(viii)	The Council's Best Value duties.	The technical specification will stipulate minimum thresholds for manufacturers to achieve; this will form part of the qualitative assessment undertaken by the evaluation panel and will ensure that the Council continue to achieve the British Standard for street lighting. The contract will be awarded to the most economically advantageous tender. The Council's Best Value Duties are being addressed through the competitive process.	
(ix)	Consideration of Public Services	Tenderers will be asked how their bid may involve the use of local suppliers, apprenticeships, local	

<b>Ref.</b>	<b>Requirement</b>	<b>Response</b>
	(Social Value) Act 2012	sponsorships and charitable donations.
(x)	Any staffing implications, including TUPE and pensions.	This tender is for the supply of consumable goods, and there are therefore no TUPE implications arising.
(xi)	The relevant financial, legal and other considerations.	The business case has been carefully considered. Should the competitive tender exercise not meet soft market testing projected savings (as established throughout this report), the Council may decide not to award a contract.

### Evaluation

6.2 The contract will be awarded to the Most Economically Advantageous Tender, with weightings assigned to the bidders' ability to price competitively whilst offering a quality product. The value of this project places a strong emphasis on price, although a number of variable quality considerations were established in soft market testing which will impact on the efficiency savings identified in the business case.

6.3 Tender Evaluation Weighting.

<b>Lot</b>	<b>Product</b>	<b>Price %</b>	<b>Quality %</b>
Lot 1	Supply of LED	55	45
Lot 2	Supply of CMS	55	45
Lot 3	Supply of LED and CMS	55	45

6.4 Price. Bidders will be required to price for supplying the entire borough's lighting asset with LED luminaires, and supplying a CMS. In the case of LED, the Council will ask tenderers to bid using a schedule of rates (depending on the category of road), against a volume of units determined within the Council's inventory.

6.5 Quality. In the case of quality there are a variety of considerations for each lot.

6.5.1 **Lot 1**. LED quality will be measured against the ability of the product to meet the demands of the Technical Specification. However, the quality of the warranties underpinning the asset life will also be a consideration for the Council, as will the ability to transfer warranties from one supplier to another. The reliability of the manufacturer's supply chain will also be a consideration for the Council; there will need to be a degree of confidence that manufacturing output can meet our implementation demands.

#### LED Quality

<b>Quality 45%</b>	
Technical Merits	Against Technical Specification 35%
Warranties (length and transferability)	5%
Supply Chain (output to 18 month roll out)	5%

6.5.2 The Technical Specification will require suppliers to bid with products which meet standards in: photometry; certification; environmental performance; mechanical performance; and electrical performance. The overall performance of the product will determine the energy efficiencies that the Council can expect to achieve; the ability of the product to deliver these efficiencies will form a large part of the Council's assessment of Technical Merits, and will also be addressed during the negotiation phase of the procurement exercise.

6.5.3 Consideration will also be given to how suppliers may be able to support job creation, and their potential use of local sub-contractors.

6.5.4 **Lot 2**. CMS quality will be evaluated against the product's ability to meet the technical specification. Unlike LED, there will also be a user interface to consider; reliability of controls and responsiveness will be a consideration, as well as accuracy of reporting information.

#### CMS Quality

<b>Quality 45%</b>	
Technical Merits	Against Technical Specification 25%
User Merits	Against Technical Specification 20%

6.5.5 The Technical Specification will require suppliers to bid with products which meet demands for performance standards in: Functionality; User Interface; Inventory Interface; Connectivity; Reliability; and replacement within the context of a Service Level Agreement if faulty.

6.5.6 Consideration will also be given to how suppliers may be able to support job creation, and their potential use of local sub-contractors.

- 6.6 **BAFO.** It is recommended that the Council use the Competitive Procedure with Negotiation to undertake this procurement exercise. The initial tender returns will be used to shortlist leading bidders for further discussions. Officers wish to use the opportunity to identify further available savings through making minor adjustments to the Specification; however adjustments cannot be made to the council's minimum requirements from those originally advertised. Items for discussion which may have an influence on the price include the length of the warranties offered, and the implementation timeframes.
- 6.7 **Evaluation Panel.** In order to ensure that the Council can accurately evaluate the quality of products, it is proposed that the panel consist of our existing consultant (who will provide assurance on technical diligence), a representative from PFI Lighting Ltd (whose diligence role will focus on the subsequent management of the purchased products under the PFI Contract), and client representatives responsible for service delivery, financial appraisal, contract management, mobilisation, and key performance indicators.

## 7.0 FINANCIAL IMPLICATIONS

- 7.1 As established in the body of this report, the estimated value of these supplies contracts would be approximately £6.6m for investment in the LED + Adaptive Light proposal, and £7.82m with the addition of a Central Management System (CMS) (see Appendix A).
- 7.1 The financial implications for the service are significant, whether an investment is made now, postponed to a later date, or a 'do nothing' option is adopted. It is clear that:
- 7.1.1 The 'Do Nothing' option outlined in the Business Case would require the Council to source unsustainable levels of growth as energy prices are expected to rise over the long-term
- 7.1.2 There would be a cost implication for delaying investment, estimated to be in the region of £2m allowing for current levels of energy consumption and inflationary pressures.
- 7.1.3 If the investment is made, through the prudential borrowing model over a 20 year period with a prudent interest rate of 3.8% (see Appendix A), payback on the loan and interest can be achieved within approximately 10 years should the investment be made for luminaires alone.
- 7.1.4 Implementing CMS, and using the technology to its greatest potential, could reduce energy consumption by an additional 10-15%, thereby making greater annual savings whilst retaining the level of the payback period to approximately 11 years (also shown in Appendix A).

## 8.0 LEGAL IMPLICATIONS

- 8.1 The Highways Act 1980 empowers the Council as Highway Authority to provide street lighting. The Council has a duty of care to the highway users and must ensure it can demonstrate it has systems and programmes in place to ensure the safety of all highway lighting equipment.
- 8.2 It is proposed that the Council should undertake the procurement of the LED luminaires and the Central Management System (CMS) the procurement of which is subject to the new Public Contract Regulations 2015 (“the Regulations”). In addition to the Regulations, the proposed procurement will also be required to adhere to the Council’s own Contract Standing Orders and Financial Regulations. Furthermore the subsequent supply contract is likely to represent a High Value Contract and would therefore need to be advertised in the OJEU in compliance with the Regulations.
- 8.3 Officers have elected to use the Competitive Procedure with Negotiation, a relatively new process under the Regulations. With the use of this procedure officers will be permitted to use negotiation in successive stages in order to reduce the number of tenders to be negotiated by applying the award criteria specified in the Contract Notice (OJEU advert). However, there is no negotiation permitted in relation to the Council’s minimum requirements and award criteria identified at the outset.
- 8.4 For High Value Contracts, the Cabinet must approve the pre-tender considerations set out in paragraph 6.1 above (in accordance with Standing Order 89) and the inviting of tenders (Standing Order 88).
- 8.5 Should Members agree with the recommended option identified in Section 5 of this report, for the LED replacement programme to be undertaken during the existing contract period of the PFI Contract, the PFI Contractor would be required to maintain such lighting under the PFI Contract for the duration.
- 8.6 Under the existing terms of the PFI Street Lighting Contract there are provisions which allow the Council to instruct “Service Adjustments” to the Contractor as and when required. Such Service Adjustments may include, in particular: *‘the implementing of new street lighting or illuminated signs (including new or revised highways schemes or the adoption by the Council of new standards of lighting or the lighting of previously unlit places)’*. Therefore, once a successful contractor has been identified following tender for the proposed manufacture and supply of the LED Luminaires and CMS, officers are entitled to instruct the PFI Contractor under the existing Street Lighting PFI contract to install and maintain the consumables. This would be considered additional work, as pre-empted at the start of the contract.
- 8.7 Should Members be minded to approve the recommendations in this report, officers propose to draw up and agree heads of agreement with the PFI contractor, PFI Lighting Limited (“PFIL”) prior to commencing the proposed procurement of LED Luminaires and CMS in order to agree the subsequent variation to contract.



- 8.8 Once the tendering process is undertaken officers will report back to the Cabinet in accordance with Contract Standing Orders, explaining the process undertaken in tendering the contract and recommending award of the supply contractor.
- 8.9 As this procurement is subject to the full application of the Regulations, the Council must observe the requirements of the mandatory minimum 10 calendar year standstill period, imposed under the EU Regulations, before the contract can be awarded. The requirements include notifying all tenderers in writing of the Council's decision to award and providing additional debrief information to unsuccessful tenderers on receipt of a written request. The standstill period provides unsuccessful tenderers with an opportunity to challenge the Council's award decision if such challenge is justifiable. However if no challenge or successful challenge is brought during the period, at the end of the standstill period the Council can issue a letter of acceptance to the successful tenderer and the contract may commence thereafter.

## **9.0 EQUALITY ANALYSIS**

- 9.1 An overview of anticipated diversity implications has been included in section 18 of the technical business case (Appendix 2, pp 41-43). This concluded that there would be positive impacts for all groups in a move to LED white light, which would improve visual performance, colour rendering and facial recognition across the outdoor environment. The underlying assumption is that light levels and quality would continue to fully meet the standards set out in BS 5489-1: 2013, whether or not dimming at certain hours is introduced.
- 9.2 There are some diversity implications for proceeding with CMS investment, should consideration be given to adjusting lighting levels. Officers would examine these closely as part of a specific Equality Analysis; applying Brent's demographic to the assumptions in the business case. In particular, young adults are more likely to be active outside the home between the hours of midnight and 6 am; and adults working or travelling to work during these hours might also be impacted. Street lighting contributes to road safety, and reducing the fear of crime, and lighting levels need to be set with these objectives in mind.
- 9.3 As set out, CMS allows for adjustment of lighting levels with the main objective of reducing energy costs and carbon emissions. The objective would be to continue to set "the correct lighting class to meet specific road parameters at a particular time". CMS enables lighting to be set at a highly localised level, so it would improve the capability to provide a higher standard of lighting at specific times and locations to meet the needs of the night-time economy, or those travelling to work at night. It would also provide for higher standards of lighting, for example, to ensure safer travelling conditions near to Wembley Stadium on event days.
- 9.4 The capacity provided by CMS to adjust lighting levels at a micro-level would support the Council's localisation objectives.

## **10.0 STAFFING / ACCOMMODATION IMPLICATIONS**

10.1 None

## **11.0 PUBLIC SERVICES (SOCIAL VALUE) ACT 2012**

11.1 Officers consider that the tender exercise is a good method for assessing how this procurement may contribute to the local economy as well as support jobs. The tenderers' method statements will be partially assessed against their ability to support job creation and the local economy through their bid.

11.2 The procurement of a Central Management System will provide micro-management controls over the Council's lighting stock, and specifically allow adjustment to lighting output in specific streets. This would make a substantial contribution to the collective benefit of the community:

- The Council would be able to make lighting adjustments according to local conditions; and provide the facility for a highly sensitive response to potential changes in the local environment.
- Lighting output may be increased or decreased in order to support events or community initiatives, for example local festivals.

## **CONTACT OFFICERS**

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Chief Operating Officer

## Appendix 1 – Financial Appraisal

	<b>Option H (LED &amp; Adaptive light)</b>	<b>Option K (LED &amp; CMS)</b>	<b>Option K (LED &amp; CMS) 10% add energy saving</b>	<b>Option K (LED &amp; CMS) 15% add energy saving</b>
<b>Capital Cost</b>	£6,563,670	£7,752,286	£7,752,286	£7,752,286
<b>Interest Charges</b>	£2,941,560	£3,476,389	£3,476,389	£3,476,389
<b>Total % Carbon &amp; Energy Saving</b>	57.35%	59.31%	63.05%	64.91%
<b>Carbon &amp; Energy per annum saving</b>	£753,334	£779,143	£857,057	£896,014
<b>Expected % maintenance saving</b>	15.37%	19.15%	19.15%	19.15%
<b>Maintenance saving per annum</b>	£76,867	£95,769	£95,769	£95,769
<b>Pay Back (years/months)</b>	10 years 1 month	12 years	11 years 6 months	10 years 10 months

**Note the above figures assume 3.8% cost of borrowing; 0% RPI increase for maintenance and 0% annual increase in energy prices.**