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# CROYDON & LEWISHAM STREET LIGHTING JOINT COMMITTEE

**Date:** THURSDAY, 15 OCTOBER 2020 at 6.30 pm

**Location:** Microsoft Teams Remote Meeting

**Enquiries to:** Anoushka Clayton-Walsh:  
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## **MEMBERS**

Councillor Amanda De Ryk  
Councillor Sophie McGeevor

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**Members are summoned to attend this meeting**

**Kim Wright**  
**Chief Executive**  
**Lewisham Town Hall**  
**Catford**  
**London SE6 4RU**  
**Date: Date Not Specified**



INVESTOR IN PEOPLE

## ORDER OF BUSINESS – PART 1 AGENDA

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**Lewisham**



INVESTOR IN PEOPLE

The public are welcome to attend our committee meetings, however occasionally committees may have to consider some business in private. Copies of reports can be made available in additional formats on request.

## **Croydon & Lewisham Street Lighting Joint Committee**

Meeting of held on Monday, 4 November 2019 at 6.30 pm in F11 - Town Hall, Katharine Street,  
Croydon, CR10 INX

### **MINUTES**

**Present:** Councillor Kevin Bonavia (Chair);  
Councillor Stuart King (Vice-Chair);  
Councillors Sophie McGeevor and Paul Scott

### **PART A**

#### **1/19 Appointment of Chair and Vice-Chair**

The Committee Clerk requested nominations for the positions of Chair and Vice-Chair for the municipal year 2019/20.

Councillor Stuart King nominated and Councillor Paul Scott seconded the nomination to appoint Councillor Kevin Bonavia as Chair for the remainder of the 2019/20 municipal year.

Councillor Kevin Bonavia nominated and Councillor Paul Scott seconded the nomination to appoint Councillor Stuart King as Vice-Chair for the remainder of the 2019/20 municipal year.

The Committee unanimously agreed both appointments.

#### **2/19 Minutes of the previous meeting**

**RESOLVED** that the minutes of the meeting held on 11 October 2018 be signed as a correct record.

#### **3/19 Disclosure of Interest**

There were no disclosures of a pecuniary interest not already registered.

#### **4/19 Urgent Business (if any)**

There were no items of urgent business.

#### **5/19 Joint Street Lighting PFI Update**

The Director of Public Realm (Croydon Council) noted that the report outlined in detail the performance of the Service Provider for the PFI contract and gave an overview of key areas.

Members noted that the Core Investment Programme (Performance Standard 1) had been completed in 2016 with all street lights having been changed and, as such, the contract had moved into maintenance. In terms of planned maintenance, inspection and testing (Performance Standard 2) details were provided at paragraph 3.4 of the report and concentrated on cleaning, electrical testing and visual inspections. As the contractor had achieved the performance level of 99% no financial adjustments had occurred.

Performance Standard 3 (Operational responsiveness and reactive maintenance) was discussed and Members noted that there had been a low level of faults being reported and that emergency faults were being rectified within the required timeframe. However, it was recognised that not all non-emergency faults were being attended in time and that a financial adjustment had been applied.

The Director of Public Realm stated that Performance Standard 4 (Contract management and customer interface) required 95% of all phone calls to be answered within 25 seconds by a person had been met. Whilst difficulties had been experienced, Skanksa had not gone below the contract threshold and the contract managers at the councils had worked with the provider to identify difficulties.

In terms of working practices (Performance Standard 6), the Director of Public Realm noted that no penalties had been levied as it had been found that the provider was performing well in terms of health and safety issues for its own staff and that site conditions were being monitored and being kept in a safe condition for residents.

The Director of Public Realm highlighted section five of the report, financial implications, which stated that under the Co-Operation Agreement the Committee was required to submit final estimates for the contract to each council no later than 30 November and that the final budget was to be submitted annually by 15 March. It was noted that the budget for the contract and committee was split 64% (Croydon) and 36% (Lewisham) as per a formula.

*Councillor Sophie McGeevor arrived at 6.51pm.*

In response to Member questions the Director of Public Realm stated that if there were concerns regarding light levels then this could be raised with the contractor and if levels were below the required standard the contractor would be responsible and changes could be made to ensure the lighting level was sufficient.

Members were informed that financial forecasts were based on inflation and the PFI agreement. Officers stated that when the PFI was reviewed in 2020 they would ensure it delivered for both councils. Officers further confirmed that

a financial forecast would be taken to the next meeting of the Committee for Members to consider.

Members noted that the Service Provider was efficient and was effectively meeting the KPIs. A good relationship with UK PowerNetworks was credited for enabling the contractor to undertake repairs quickly.

Members queried whether there was an opportunity for the lighting stock to be greener as both councils had declared Climate Emergencies and energy efficient lighting was one way to tackle climate change. It was noted that there was the ability to reduce light levels on roads and that LED lighting could be implemented. The challenges in relation to LED lighting was that it would cost in the region of £10m to change the lighting on the network and that money would not be realised through savings. If lighting was to be changed to LED as the lighting was required to be replaced a variation in the contract with Skanska would be required. The Director of Public Realm confirmed a briefing paper on the differences of LED versus the current lighting would be circulated to Members which would help with discussions on how the council could be more sustainable in future.

The Director of Public Realm stated that energy procurement was not part of the contract and that it could be reviewed. There was a pan-London review of energy which was looking at getting the right tariff for energy. It was suggested that this would be the most efficient way of getting energy for street lighting in future.

Members requested that there be a discussion ahead of the committee meeting in October 2020 on additional items to be discussed at the meeting.

The Committee **RESOLVED** to:

1. Note the performance of the Service Provider in respect of the street lighting PFI for September 2018 to August 2019; and
2. Approve the proposed unitary charges for 2019/20 of £2.567m for Croydon and £1.44m for Lewisham (based on 64% to 36% split).

6/19 **Exclusion of the Press & Public**

The item was not required.

The meeting ended at 7.04 pm

**Signed:**

**Date:**

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# Agenda Item 6

<b>REPORT TO:</b>	<b>Croydon &amp; Lewisham Joint Street Lighting Committee 15 October 2020</b>
<b>SUBJECT:</b>	<b>The Joint Street Lighting PFI Update</b>
<b>LEAD OFFICER:</b>	<b>Croydon: Executive Director of Place Lewisham: Executive Director for Resources and Regeneration</b>
<b>CABINET MEMBER:</b>	<b>Croydon: Councillors Stuart King and Paul Scott Lewisham: Councillors Amanda De Ryk and Sophie McGeevor</b>
<b>WARDS:</b>	<b>All</b>
<b>CORPORATE PRIORITY/POLICY CONTEXT/AMBITIOUS FOR CROYDON:</b> Improving street lighting supports Croydon Council's corporate priorities of improving the environment and reducing crime and Lewisham Council's corporate priorities of making Lewisham greener and building safer communities.	
<b>FINANCIAL IMPACT:</b> Noting the recommendations in this report will reflect the agreement made by Croydon and Lewisham Council to the sums set out in the P.F.I contract agreement. Each authority has made plans as it considers appropriate for the financial implications of the project. No additional expenditure is proposed as a result of this report.	
<b>KEY DECISION REFERENCE NO.: N/A</b>	
<b>1. RECOMMENDATIONS</b>  The Committee is asked to: <ul style="list-style-type: none"><li>• Note the performance of Service Provider in respect of the street lighting PFI for September 2019 - August 2020</li><li>• Approve the proposed unitary charges for 2020/21 of £2.817m for Croydon and £1.584m for Lewisham (based on a 64% to 36% split)</li></ul>	

### **Actions from last meeting : 4 November 2019**

- Members queried whether there was an opportunity for the lighting stock to be greener as both councils had declared Climate Emergencies and energy efficient lighting was one way to tackle climate change. It was noted that there was the ability to reduce light levels on roads and that LED lighting could be implemented. The challenges in relation to LED lighting was that it would cost in the region of £10m to change the lighting on the network and that money would not be realised through savings. If lighting was to be changed to LED as the lighting was required to be replaced a variation in the contract with Skanska would be required. The Director of Public Realm confirmed a briefing paper on the differences of LED versus the current lighting would be circulated to Members which would help with discussions on how the council could be more sustainable in future.

Ongoing discussions with Service Provider with regards to payback period to both Authorities. Service Provider initially provided a LED lantern option with energy consumptions compared to current Cosmopolis lamps. The Authority disagreed with their proposals / options and carried out its own energy review and financial calculations. Authority not accepting current 9 year proposed payback period with Service Provider, especially as no maintenance savings to be passed back to Authority. Service Provider now seeking to reduce costs to implement LED conversion programme, however unless a 5-6 year payback period is achieved then the Authority will not look to proceed with this request.

Business Case Paper provided in Background papers.

## **2. EXECUTIVE SUMMARY**

- 2.1 This report advises the Committee of the overall performance of the Service Provider during September 2019 – August 2020.

## **3. DETAIL**

### **Operational Performance Standards Overview**

- 3.1 The Output Specification for this contract defines both Councils' requirements for the Service that the Service Provider shall provide pursuant to this Contract. The Performance Standards within the Output Specification specify the required outcome, service delivery, performance requirements and measurement criteria in respect of each part of the Service. The performance is reviewed on a monthly basis as part of the "Monthly Monitoring Report" and this is linked directly to any financial adjustments for failing to meet the minimum requirements set out each performance standard.
- 3.2 The Service Provider shall perform the service in accordance with the following Performance Standards:

#### **PS1 – Core Investment Programme;**

- 3.3 The Service Provider designed and installed new apparatus during the five year Core Investment Programme (CIP) across both councils to the current British Standards and contract specification. The Core Investment Programme was completed 31 October 2016. The Croydon Public Lighting Network Cable has been de-energised and abandoned by UKPN. The old stumps that were previously keeping the Public Lighting Network Cable functioning have been removed. Any remaining stumps found being left in situ are added to the Service Providers snagging list and removed within 20 business days.

#### **PS2 - Planned Maintenance, Inspection and Testing;**

- 3.4 This Performance Standard covers planned maintenance, inspection and testing of street lighting equipment. Routine scouting of street lights is undertaken and the performance is measured over a four-month period.

During the period September 2019 – August 2020 the following wards were completed as part of the Annual Programme:

### **Bulk Clean and Change & Electrical Testing (Columns Y1)**

Lewisham: Whitefoot, Catford South, Perry Vale, Bellingham.

Croydon: Coulsdon East & West, Kenley, Sanderstead, Ashburton, Fieldway, New Addington, Shirley

**Total Assets: 11,472**

### **Electrical Testing Signs (Signs Y2)**

Lewisham: Whitefoot, Catford South, Perry Vale, Bellingham.

Croydon: Coulsdon East & West, Kenley, Sanderstead, Ashburton, Fieldway, New Addington, Shirley

**Total Assets: 1081**

### **Signs Clean only (Y2)**

All wards across both boroughs

**Total Assets: 5,556**

### **Visual Inspections (Y1)**

Lewisham: Lewisham Central, Brockley, Rushey Green, Lee Green, Ladywell, Evelyn.

Croydon: Addiscombe, Bensham Manor, Fairfield, Selhurst, Woodside, Croham, Purley.

**Total Assets: 12,702**

Service Provider continues to scout for illuminated signs out of light, with maintenance issues such as doors off, twisted sign lights or lantern realignments being identified. However the Service Provider are continuing to night scout at their own discretion. All Car Parks and Subways where fittings do not have the capacity for nodes to be connected to the CMS are being scouted in the day time as these are operational 24 hours.

The Client Monitoring team continue to carry out night and day site checks to verify that all Car Park, Subway and Housing assets have been replaced for new and functioning correctly.

All column outages are reported via City Touch on the Central Management System.

3.5 The table below illustrates the overall performance over the last 12 months for lights in light. The Service Provider has achieved the required level of 99% lights throughout this period, and therefore no financial adjustment has occurred.

	August 2020	July 2020	June 2020	May 2020
# occasions not In Light	168	124	130	136
# Lighting Points	46,850	46,850	46,850	46,850
In Light **	99.641%	99.735%	99.723%	99.710%
In Light:	99.702%			

  

	April 2020	March 2020	February 2020	January 2020
# occasions not In Light	138	181	228	313
# Lighting Points	46,850	93,700	93,700	93,700
In Light **	99.705%	99.807%	99.757%	99.666%
In Light:	99.734%			

  

	December 2019	November 2019	October 2019	September 2019
# occasions not In Light	206	206	236	208
# Lighting Points	93,700	93,700	46,850	46,850
In Light **	99.780%	99.780%	99.496%	99.556%
In Light:	99.653%			

3.6 The Client Monitoring Team continue to carry out its own shadow night scouts to verify the quality of the Service Providers night scouts and to review all vehicle tracker reports. The accuracy of the Central Management System is also validated.

**PS3 - Operational Responsiveness and Reactive Maintenance;**

3.7 This Performance Standard covers the operational responsiveness of the Service Provider to attend to faults within the relevant rectification period.

3.8 The tables below illustrate the performance for emergency and non – emergency faults in and out of time for the period of September 2019 – August 2020. Over this period all Emergency Call Outs have been attended within the 1 hour time frame.

Table 1 - Faults completed within contractual timescale:

Fault Type	Number of occasions: In Time						
	Sept 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020
Emergency faults	14	19	15	15	27	26	13
Non-Emergency Faults	374	417	355	336	500	371	361

Fault Type	Number of occasions: In Time						
	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020		
Emergency faults	14	16	13	17	15		
Non-Emergency Faults	229	284	276	379	295		

Table 2 - Faults completed outside contractual timescale

Fault Type	Number of occasions: Out of Time						
	Sept 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020
Emergency faults	0	0	0	0	0	0	0
Non-Emergency Faults	0	1	0	1	0	1	1

Fault Type	Number of occasions: Out of Time						
	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020		
Emergency faults	0	0	0	0	0		
Non-Emergency Faults	3	0	1	2	0		

- 3.9 During this reporting period as detailed in table 2 above not all non-emergency faults were attended in time and therefore a financial adjustment has been applied in line with the payment mechanism of the contract.

**PS4 - Contract Management and Customer Interface;**

3.10 For the Service Period, the Service Provider shall provide a customer care and contract management service in accordance with this Performance Standard that includes the development, operation and maintenance of a Management Information System (MIS) and Customer Care System (CCS).

3.11 The table below shows telephone calls received by the call centre and emergency phone line during the period September 2019 to August 2020. The target is 95% of all calls being answered within 25 seconds of which this target has been achieved over this period, except for February 2020 where financial adjustments were applied in line with the payment mechanism of the contract.

Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	<b>Prescribed response period</b>
153	208	221	147	186	201	206	= # calls received by call centre/ emergency phone line
148	202	213	142	181	175	202	= # answered by a trained call agent within 25 seconds
96.73%	97.12%	96.38%	96.60%	97.31%	87.06%	98.06%	= % answered by a trained call agent within 25 seconds

Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020			<b>Prescribed response period</b>
97	137	206	284	223			= # calls received by call centre / emergency phone line
96	137	203	283	221			= # answered by a trained call agent within 25 seconds
98.97%	100%	98.54%	99.65%	99.10%			= % answered by a trained call agent within 25 seconds

## **PS5 - Strategic Assistance and Reporting;**

- 3.12 The Service Provider shall provide relevant, accurate and timely information to the Councils on its performance in relation to the services in Monthly Service Reports and Annual Service Reports to ensure that the strategic assistance and reporting procedures adopted for delivery of the Service:
- (i) enable the Councils to properly monitor the Service and have sufficient data and information to assess accurately what Adjustments, (if any) to the Unitary Charge should be made;
  - (ii) allow the Councils to demonstrate that it is achieving its Best Value Duty and continuous improvement in the delivery of the Service; and
  - (iii) allow the Councils to regularly review the Service to determine whether it meets current and future needs; consult with users and other stakeholders and benchmark performance against other Service Providers.

Monthly monitoring and Monthly Payment Reports are combined to reduce the administration burden for the councils and are provided by the fifth business day of the month following the month for which the report relates.

For this period all reports were received on time.

## **PS6 - Working Practices;**

- 3.13 Performance Standard 6 requires the Service Provider to ensure it operates the day-to-day working practices correctly and safely.

During September 2019 – August 2020 there have been no urgent service failures and no serious service failure, therefore no financial adjustments.

However Routine service failures were identified during this period and financial adjustments were applied for February 2020 (30 points) for any points over 25 points which follow the guidelines in the Appendix 21 table.

Overall the Service Provider continue to perform very well with regards to staff Health & Safety issues for its own staff and ensuring site conditions are monitored and kept in a safe condition.

Frequent joint permitting meetings are carried out by the Service Provider, Monitoring team, UKPN and both boroughs permitting teams to resolve any potential issues and collaborate works to minimize and disruption.

Below is the table of any service failures under PS6 Working Practices

Categories of the faults relating to these practices are detailed below:

<b>Fault Type</b>	<b>Definition</b>	<b>September 2019</b>	<b>October 2019</b>	<b>November 2019</b>	<b>December 2019</b>	<b>January 2020</b>	<b>February 2020</b>	<b>March 2020</b>
Urgent service faults	Any Service Failure that: (a) poses a material risk to life; or (b) poses a material risk of damage to person and/or property; or (c) poses a material risk of significant financial loss and/or disruption to the Authority.	0	0	0	0	0	0	0
Serious service faults	Any Service Failure that is such that it may develop into an Urgent Service Failure if not rectified or attended to in accordance with Good Industry Practice.	0	0	0	0	0	0	0
Routine service faults	Any Service Failure that is not immediately detrimental or likely to lead to a Serious Service Failure or an Urgent Service Failure, but that, if not rectified or attended to in accordance with Good Industry Practice, may adversely impact on the Service and / or the Authority's reputation and / or the Service Provider's reputation.	30	0	0	5	5	10	0

Fault Type	Definition	April 2020	May 2020	June 2020	July 2020	August 2020
Urgent service faults	Any Service Failure that: (a) poses a material risk to life; or (b) poses a material risk of damage to person and/or property; or (c) poses a material risk of significant financial loss and/or disruption to the Authority.	0	0	0	0	0
Serious service faults	Any Service Failure that is such that it may develop into an Urgent Service Failure if not rectified or attended to in accordance with Good Industry Practice.	0	0	0	0	0
Routine service faults	Any Service Failure that is not immediately detrimental or likely to lead to a Serious Service Failure or an Urgent Service Failure, but that, if not rectified or attended to in accordance with Good Industry Practice, may adversely impact on the Service and / or the Authority's reputation and / or the Service Provider's reputation.	0	0	0	0	0

## PS7 - Reporting to the Authority;

- 3.14 In order for the Councils to monitor the performance of the Service Provider and to ensure appropriate Monthly Payments are made under the Contract, the Service Provider shall provide accurate and complete reporting to the Councils on how the Service Provider is complying with the requirements of the Output Specification.

Over this period the committee are asked to note all reports were submitted on time.

## PS9 - Central Management System;

- 3.15 When this contract was awarded both councils opted for a Central Management System (CMS) to be installed to all street lights as part of a “mandatory variant solution”. In technical terms the key difference between the mandatory variant solutions and standard Solutions is that the mandatory variant solution enables lights to be dimmed, or brightened, flexibly, whereas in the standard solution lights will only come on and off at fixed ambient light levels. The advantage of the mandatory variant solutions is its flexibility, and the opportunity that it affords to cut energy consumption and therefore costs or otherwise to respond to policy considerations. This is something both boroughs have explored under a Variable Lighting Policy.
- 3.16 Once the Independent Certifier issued the Certificate of Compliance for the new street lighting on a street by street basis the Service Provider ensured that all Replacement CIP Apparatus is connected to and operating on the Central Management System.

The client team are continuing to monitor the current operation of the CMS which has resulted in a reduction of failures within the system. Client team officers review the information provided by City Touch so that checks can be carried out to ensure any outages are raised within the M.I.S within the 4 day rectification period.

- 3.17 After the completion of the Core Investment Programme across both boroughs as of August 2020 there are 41,007 street lighting columns connected to the Central Management System (see below). The remaining assets are in Subways and Car Parks that are not connected to the CMS and are scouted separately.

	<b>Croydon</b>	<b>Lewisham</b>	<b>Months Total</b>
Previous Total	24,775	16,230	41,005
Aug-20	1	1	2
<b>Current Total</b>	<b>24,776</b>	<b>16,231</b>	<b>41,007</b>

Total Number of Certified assets connected to CMS	41,007
Days in Month	31
Unit/days Comms	1,271,217
Number of Unreachable units in month	96
CMS Communicating	99.99%

3.18 Lewisham introduced their Variant Lighting Level Policy in November 2016 which received Mayor and Cabinet approval. To date the Service Provider and the Client Monitoring Team have still not received any specific complaints in relation to the introduction of this policy in Lewisham.

3.19 Croydon are still reviewing their Variant Lighting Level Policy.

#### **4. CONSULTATION**

4.1 During the mobilisation phase and throughout the CIP, the Service Provider was required to liaise and consult with all relevant bodies, which includes the Councils, its officers, and all other stakeholders.

4.2 There is a mechanism built within the Output Specification to ensure that this consultation process takes place.

4.3 As the CIP programme has finished both Authorities have agreed not to consult with residents about any customer satisfaction surveys as they feel the information will not be beneficial.

#### **5 FINANCIAL AND RISK ASSESSMENT CONSIDERATIONS**

5.1 As per the Co-Operation Agreement the Joint Committee is required to submit final estimates for approval to the Constituent Authorities no later than November 30th. The Joint Committee is then to set its budget no later than March 15th each year. The structure of the Payment Mechanism includes a payment in arrears for the service. Any under performance in a period will be reflected in a payment adjustment in the following period. A draft Monthly Payment Report is provided to the Councils within five business days of the month for which it is reporting no later than the end of the month a final monthly payment report is issued to the authority and the authority has 20 business days to settle the account.

5.2 The budget for running the Joint Committee itself is minimal and can be contained within the overall project budget or other existing budgets. The contract budget for the year is as set out in the PFI financial model. This budget includes provision for expenditure on the PFI contract itself, the contract monitoring costs and contributions into the sinking fund to even out PFI liabilities over the life of contract, with LBC acting as the lead authority on payments. The anticipated cost for 2020/21 is expected to be £10.981m. The proposed unitary charge in 2020/21 for Croydon and Lewisham works out at £2.817m and £1.584m respectively (based on agreed 64% to 36% split), with the remaining contribution derived from PFI credits provided by the Department for Transport. Energy costs are paid directly to the respective energy suppliers by the individual authorities and are not part of the sinking fund payment process.

5.3 The financial model sinking fund is periodically reviewed to ensure that adequate resources are set aside for future liabilities. The contributions for 20/21 have been adjusted accordingly. These are offset in part by contract performance deductions.

(Approved by: Felicia Wright, Head of Finance )

## **6. LEGAL CONSIDERATIONS**

- 6.1 To align the constituent authorities, the legal teams created two agreements, the Governance Agreement and the Co-operation Agreement.
- 6.2 The Governance Agreement was put in place to set out the joint arrangements for the management of the joint street lighting PFI Project. It details the functions of the Joint Committee, its constitution and decision making powers.
- 6.3 The Co-operation Agreement sets out the detailed arrangements relating to operation matters including how any disputes between the constituent authorities are to be settled and budget provisions to cover the management costs of the Project.
- 6.4 It is the function of the Joint Committee to monitor the operational performance of the Service Provider and to receive reports from the Management Board consisting of two representatives of each constituent authority as to the Service Provider's performance over the last quarter.

Approved by: Sonia Likhari, Corporate Solicitor, on behalf of Sean Murphy, Director of Law & Governance and Deputy Monitoring Officer ( Croydon)

Approved by : Stephanie Fleck, Principal Solicitor Commercial, Education and Employment For the Head of Law. ( Lewisham )

## **7. HUMAN RESOURCES IMPACT**

- 7.1 There are no Human Resources considerations arising from this report.

(Approved by Sue Moorman, Director of Human Resources)

## **8. EQUALITIES IMPACT**

- 8.1 An updated Equalities Impact Assessment (EIA) has been undertaken, and there are no specific disadvantages associated with replacing the street lighting in the boroughs. Indeed, the enhanced lighting will be of benefits to all residents and businesses.

Lewisham have introduced their Variable Lighting Policy across the borough which included an updated EIA.

A further updated EIA will be carried out by Croydon if decided to go ahead with any Variant Lighting Policy.

Both Authorities have their own separated policies which do not need to be linked.

## 9. ENVIRONMENTAL IMPACT

- 9.1 Carbon emissions from Croydon’s street lighting are shown in the table below. While annual consumption has varied up and down around 10GWh, total annual CO<sub>2</sub> emissions have been steadily decreasing. This is due to the rapid decarbonisation of the UK electricity grid that has been achieved by significant growth of renewable energy generation (primarily offshore wind and large scale solar farms).

Year	Consumption kWh	CO <sub>2</sub> tonne	Grid carbon emission factor (kg CO <sub>2</sub> kWh)
2019/20	10,450,119	2,875	0.27511
2018/19	11,320,710	3,451	0.30482
2017/18	10,014,298	3,820	0.38146
2016/17	9,860,865	4,404	0.44662
2015/16	10,126,987	5,027	0.49636
2014/15	10,185,810	5,430	0.5331
2013/14	9,647,256	5,219	0.541

- 9.2 The CMS functionality can help manage the total annual consumption through implementation of a Variant Lighting Level Policy. Reductions achieved through this will both minimise electricity costs and the associated CO<sub>2</sub> emissions.
- 9.3 Croydon’s current electricity supply contract is certified as 100% renewable energy generation, backed by Renewable Energy Guarantee of Origin (REGO) certificates. However, it should be highlighted that this does not mean that any additional CO<sub>2</sub> savings have been achieved if the council had agreed a contract for standard “brown” electricity. This is because the cost of the market subsidy support for new renewable generation is passed on to all electricity customers through the fixed charges on their bills.
- 9.4 Other contract models (such as Power Purchase Agreements) are being explored as part of the council’s wider energy procurement strategy. Such contracts can drive additional renewable development and carbon savings beyond that achieved by the regulated market mechanisms.

(Approved by Bob Fiddik, Team Leader – Sustainable Development & Energy)

## 10. CRIME AND DISORDER REDUCTION IMPACT

- 10.1 The general improvement of the street lighting is expected to have a positive impact in the levels of crime and disorder.

## **11. CUSTOMER IMPACT**

- 11.1 The core objective of the street lighting replacement programme, the replacement of the existing aged equipment with a new and well-maintained service, had a positive impact on the residents.
- 11.2 Croydon continue to review their Variant Lighting Level Policy to ensure there is no impact on residents and stakeholders.

## **12. DATA PROTECTION IMPLICATIONS**

- 12.1 Will the subject of the report involve the processing of “personal data”?

NO.

Has a Data Protection impact assessment (DPIA) been completed?

Not Required.

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### **CONTACT OFFICER:**

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**APPENDICES TO THIS REPORT:** None

### **BACKGROUND PAPERS:**

LED Business Case.



# **Croydon & Lewisham Street Lighting PFI**

## **LED Lighting Replacement Business Case Model (Input Requirements)**

**Prepared by: John Algar**

**October 2019**

### Quality Management / Revision Updates

<b>Version</b>		Draft						
<b>Date</b>								
<b>Author</b>		J.A.						
<b>Checker</b>		S.I.						
<b>Approver</b>		S.I.						

File Ref: 0122k\_lbc\_led\_technical\_req

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## **INTRODUCTION**

### **Background Information**

In **October 2018** the Authority (London Boroughs of Croydon & Lewisham) prepared an LED business case for internal distribution that investigated the viability LED street lighting.

When preparing the business case the Authority made its own technical and financial assumptions based on the information available. The values included within the business case model demonstrated that the payback period for an LED investment wholly funded by the Authority is approximately nineteen (19) years. The Authority consider that for the installation of LED lighting to be considered viable the payback / breakeven period would need to be five (5) years, it was therefore concluded that, based on the information available, an LED investment scheme was not considered viable.

In July 2019 the Authority met with Service Provider (one of several meetings) and presented the findings of its business case. At the meeting the Service Provider agreed to work with the Authority to see if the financial model could be improved to achieve an improved payback / breakeven period.

Note; The business case model was shared in electronic format with the Service Provider in July 2019.

### **Aims and Objectives**

The key aims and objectives that should result from this paper for the Authority are:

- > Confirm the Authority's requirement for an LED specification.
- > Provide the opportunity for the Service Provider to input into the LED investment business case.
- > Finalised the Authority's LED investment business case and make a decision on viability of the investment (ie, can the business case show a 5 year pay back).

This paper reviews the technical and financial considerations that effect the business case model outcome and confirms the Authority's requirements specific to each variable embedded within the model. It then gives the Service Provider the opportunity to review the input value included within the model and suggest updated / revised values (with justification).

It should be noted that this paper is not a comprehensive addendum to the output specification, it does not assess the effect that the introduction of LED lighting may have on the Service Provider's service delivery obligation. This would need to be considered in detail by both parties if the payback / breakeven period was considered acceptable to the Authority.

## FINANCIAL & TECHNICAL INPUT VARIABLES

The variables included within this section need to be reviewed / updated and confirmed by Service Provider (Input table provided in Appendix A). If values are changed from the benchmark set by the Authority the Service Provider will need to provide information that supports the proposal.

Note; if the Authority considers that the value for any given variable is fixed then this has been indicated in the unit / comment column.

### Pre-start Works

The Authority's business case model has included an estimate of the pre-start works costs.

The pre-start costs included by the Authority include:

Item	Description	Unit / Comment
1	Senior Lender Due Diligence	£
2	Service Provider HV change cost	£
3	External Expert Advice	£
4	Service Provider Profit	% (where applicable to the above)

Note; no allowance has been made for the Authority internal costs.

### Capital Investment Works

The Authority's business case model has included an estimated cost for the capital investment element of the works.

The capital costs included by the Authority include:

Item	Description	Unit / Comment
1	LED Luminaire (including supply cable)	£
2	CMS Cell / Node	£ (the Authority would like to retain a CMS capability if LED is installed)
3	Design	£
4	Installation	£
5	Service Provider Profit	% (where applicable to the above)
6	Inflation / Indexation during investment works	%
7	Authority Investment share	%
8	Investment programme	% per annum over 3 years max
9	Authority Investment share	%

## Maintenance Savings

The Authority's business case model has included an estimated of the maintenance savings that would be realised by introduction of LED street lighting.

The Maintenance Savings (per unit) included by the Authority include:

Item	Description	Unit / Comment
1	Bulk lamp change saving	£
2	Faults Per Annum Per Unit	£
3	One off (£200k saving offered by SP)	£
4	Revenue Inflation	£
5	Authority share	% (items 1 to 4 establish the savings achieved on the project – this item confirms the share realised by the Authority)

The figures included within this table at present are based on information garnered from discussions with the Service Provider.

## Energy Savings

The Authority's business case model has included an estimated of the energy savings that would be realised by introduction of LED street lighting.

Item	Description	Unit / Comment
1	Energy Cost Pence Per kWh	£ - fixed by the Authority based on current costs
2	Energy Inflation Per Annum (typical)	% - Fixed at 2.5% by the Authority
3	Authority Savings Share	%

## LED Equivalent Watts

The Authority communicated the design solution and product specification issues to the Service Provider in July 2019 and the Service Provider confirmed that these issues had not been considered when providing an 'LED equivalent' within their LED proposal.

The 'LED equivalent' provided in the Service Providers proposal is as listed below.

<b>Lamp Type</b>	<b>Existing Lamp (CCT Watts)</b>	<b>LED Equivalent (CCT Watts)</b>
SGS451 45w CPO	50	20.9
SGS451 60w CPO	66	22.8
SGS451 90w CPO	98	41.8
SGS253 140w CPO	153	60.8
SGS253 210w CPO	225	129.2
SGS253 150w CDO	164	80.75
SGS253 50w SON	57	20.9
SGS253 70w SON	77	22.8
SGS253 100w SON	105	61.75
SGS253 150w SON	159	80.75
SGS254 250w SON	267	129.2

It was agreed that the Authority should develop an outline street lighting specification / policy specific to the design and product requirements for the introduction of LED. This would then allow the Service Provider to give a more accurate 'LED Equivalent (CCT Watts)'.

The Authoritys outline requirements are summarised below.

The technical considerations identified within the business case included a number of design solution and product specification issues. The design and product considerations identified were:

1) Compliance with lighting design standards, - the Service Provider is currently contracted to provide light levels defined within the PFI contract that are consistent with BS5489-1, 2003. The light level requirements within the Output Specification are defined as "Specific Lighting Design Standards".

The latest version of the BS - BS5489-1, 2013 allows for the light level requirement in residential areas to be lowered based on application of an S/P ratio - The SP ratio is a factor applied to the light level requirement based on the colour rendering properties of the lamp. The Authority can confirm that for the purposes of developing an LED business case it would accept the application of the S/P ratio in BS5489-1, 2013 for residential areas.

2) Product specification, - the existing conventional gas discharge light source introduced during the PFIs initial 5-year core investment period has a colour temperature of approximately 2800 or lower, producing a 'warm white' design solution.

**Authority Requirement,** - The colour temperature requirement for LED will be 3000k in all areas other than district and town centres where the limit will be 4000k.

**Action Required,** - Service Provider to provide an updated table that shows the equivalent LED Equivalent (CCT Watts) for each lamp type based on the light level and colour temperature requirement specified above. (table included in Appendix A).

### **Capital Investment Costs**

There Authority have identified two capital investment costs that will directly affect the business case model outcome.

1) Central Management System (CMS) requirement, - the existing lighting introduced during the PFIs initial 5-year core investment period incorporates a CMS as a core requirement.

**Authority Requirement,** - The Authority can confirm that the capital investment (unit rate) included within the model should include for continued CMS capability in each lantern.

**Action required,** - Service Provider to confirm capital investment (unit rate) for continued CMS capability in each lantern.

Heritage & Feature Lighting requirement, - the existing lighting replaced during the PFIs initial 5-year core investment period was replaced with lanterns that provide a product guarantee for the full contract term with a 5-year hand-back provision.

**Authority Requirement,** - The Authority can confirm that it would require an LED solution that ensures the existing product warranties and hand-back liabilities remain intact. At this stage the Authority's understanding would be that the ALL lantern units would need to be replaced without any retrofits. This includes architectural and heritage lanterns. The per unit capital investment cost within the model should therefore reflect this requirement.

**Action required,** - Service Provider to provide typical cost for replacement of architectural and heritage lanterns with new lantern unit and confirm how many architectural and heritage lanterns exist on the network.

## Appendix A (Business Case Model Input Variables)

### Pre-start costs

Item	Description	Authority Input		Service Provider Input	
		Input Value	SP Profit Applied	Input Value	SP Profit Applied
1	Senior Lender Due Diligence	180000	y		
2	Service Provider HV Change Cost	120000	y		
3	External Expert Advice	180000	n		
4	[other]	blank			
5	[other]	blank			
6	Service Provider Profit (%)	0.15			

### Capital Investment Works

Item	Description	Authority Input		Service Provider Input	
		Input Value	SP Profit Applied	Input Value	SP Profit Applied
1	LED Luminaire (including supply cable)		y		
2	CMS Cell / Node		y		
3	Design		y		
4	Installation		y		
5	[other]	blank			
6	[other]	blank			
7	Service Provider Profit (%)	0.15			
8	Inflation / Indexation per annum (%)				
9	Authority Investment (%)				

### Investment Profile

Item	Description	Authority Input		Service Provider Input	
		Input Value		Input Value	
1	Year 1 (%)	50			
2	Year 2 (%)	50			
3	Year 3 (%)	0			

### Luminaires Replaced

Item	Description	Authority Inputs		Service Provider Input	
		Input Value		Input Value	
1	Luminaires Replaced	39307			

**Maintenance Savings (per unit/per annum)\***

Item	Description	Authority Inputs		Service Provider Input	
		Input Value		Input Value	
1	Bulk lamp change saving	3.33			
2	Faults Per Annum Per Unit	2.45			
3	One off (£200k saving offered by SP)	0.45			
4	[other]	blank			
5	[other]	blank			
6	Revenue Inflation	0.025			
7	Authority Savings (share)	0.043			

**Energy Savings**

Item	Description	Authority Inputs		Service Provider Input	
		Input Value		Input Value	
1	Energy Cost Pence Per kWh	0.12		Fixed	
2	Energy Inflation Per Annum (typical)	0.025		Fixed	
3	Authority Savings Share	0.5			

\* Note; Authority estimated savings it considers exist and then applied an "Authority Savings (share)" based on the value offered by the Service Provider.

Equivalent LED

<b>Lamp Type</b>	<b>Existing Lamp (CCT Watts)</b>	<b>Assumed lighting class existing</b>	<b>Proposed lighting class*</b>	<b>New LED Equivalent (CCT Watts)*</b>
SGS451 45w CPO	50	S4		
SGS451 60w CPO	66	S4		
SGS451 90w CPO	98	S3		
SGS253 140w CPO	153	S2		
SGS253 210w CPO	225	ME2		
SGS253 150w CDO	164	ME3b		
SGS253 50w SON	57	S4		
SGS253 70w SON	77	S4		
SGS253 100w SON	105	ME4b		
SGS253 150w SON	159	ME3b		
SGS254 250w SON	267	ME2		