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Executive Summary

Project Background
The Croydon & Lewisham Street Lighting PFI is a joint procurement project that has been developed to replace the aging street lighting stock of both London Boroughs. This document discusses the following aims, objectives, and core goals of the project:

- Improving efficiency, including energy savings and reduced carbon emissions;
- Improving overall safety;
- Providing a better living and working environment;
- Providing value for money;
- Improved street lighting standards;
- Reduction in crime and the fear of crime; and
- Supporting the night-time economy.

The Authorities consider that the Selected Tenderer, Skanska-Laing, is able to support the Authorities in delivering the aims and objectives.

Project Scope
The project scope includes for the replacement of approximately 46,000 street light and traffic signs over an initial 5-year Core Investment Programme, with an on-going 25-year maintenance and repair liability for a total of 50,000, the residual 4,000 Street Lighting points being Deemed to Comply at Service Commencement.

Technical Solution
The final technical solution agreed during competitive dialogue incorporates the following technical features:

- A street lighting solution that complies fully with the latest UK lighting standards, but at the same time fully exploits the potential for energy savings by using the opportunity within the standards to consider local crime, traffic flows and environmental conditions;
- The latest in street lighting technology that includes future-proof (LED retrofit) lantern units, electronic control gear, LED traffic signs and bollards, photovoltaic bollards, ELV belisha beacons and painted galvanised steel lighting columns;
- A white-light based solution within all residential areas incorporating a Cosmopolis or LED light source dependent on road dimensions; and,
- A Central Management System (“CMS”) based solution that will be operated and measured against a project specific CMS Performance Standard developed by the Authorities in consultation with the bidders and its external advisors.

Legal Position
The Authorities’ derogations have been kept to a minimum with no substantial changes in relation to SoPC4, and are included within this Final Business Case document in Appendix 3 (Authorities’ Derogations from SoPC4 and SLPP). The Selected Tenderer’s derogations have been included within Appendix 4 (Selected Tenderer Derogations from SoPC4 and SLPP).
The Authorities do not expect there to be any further substantive alterations to the final form derogations table agreed with the Selected Tenderer.

**Financial Position**

The Authorities can confirm that the Selected Tenderer has submitted a tender that is in line with the Authorities’ affordability target and available funding.

The Benefits to Costs Ratio ("BCR") at the Outline Business Case stage ("OBC") was calculated as 9.13. This figure has been re-run against the latest Selected Tenderer calculation and it has achieved a higher BCR figure of 10.43.

The Authorities understand from the Selected Tenderer that Funders are at an advanced stage of their due diligence and internal approvals processes, providing further comfort to the deliverability of the funding arrangements within the target timescale.

A summary Project Plan up to and exceeding Financial Close showing key milestone dates has been included in Appendix 1 (Project Plan). This is being continually updated; the Selected Tenderer is, and will remain, fully informed, and has confirmed commitment to the delivery of timescales and key milestones.

**Conclusion**

This Final Business Case is submitted on the basis that the Project remains affordable, represents Value for Money, and that the amount of PFI credits required will not exceed the OBC allocation provisionally awarded in the approval letter from the Department for Transport (the “DfT”).

DfT approval is sought for this Final Business Case as soon as possible, in order that the Authorities are able to achieve the Financial Close (Legally Committed) deadline of March 31\textsuperscript{st}, 2011, as set out in the letter from Steve Berry dated October 20\textsuperscript{th}, 2010, outlining the further terms and conditions regarding the PFI credits. The Project Plan sets out that if all deadlines are met, Financial Close can be achieved by March 23\textsuperscript{rd}, 2011.
1 Introduction

1.1 Background

1.1.1 Description of the Councils
The London Boroughs of Croydon and Lewisham (the “Authorities”) are near neighbour South London Boroughs, and as such, share many of the attributes (both positive and negative) that are common to this urban context. The Authorities realise the importance of providing adequate and reliable street lighting, and anticipate the benefits that such a service delivers in support of the night-time economy, in reducing residents’ fear of crime, and by improving road safety. The Authorities appreciate that their current lighting service needs significant improvement and welcome the opportunity that PFI funding presents to address this shortcoming.

The Croydon and Lewisham Street Lighting PFI Project (the “Project”) is founded on the strong working relationship that has been established between the two organisations. The Authorities came together before the Expression of Interest (“EOI”) and the spirit and ease of co-operation has been marked. The joint working governance and member supervision arrangements established for the Project have already been identified as a suitable basis for extending co-operation to other highways and environmental management functions.

1.1.2 Introduction to Project
The proposed project will replace the existing street lighting and illuminated signs, replace out-dated yellow/orange lighting with the greater rendition of white lighting, and generally improve street lighting levels. More significantly, it will move away from the single ‘brighter-is-better’ objective of the current lighting practice to an installation that improves illumination in the boroughs, but that also provides a more flexible and sustainable solution. It will do this by introducing a central management capability that will provide the ability to control illumination levels and optimise energy consumption.

The comprehensive scope of the Project covers the management, operation, and maintenance of the street lighting asset for a 25-year period. The Project encompasses all of the public roads in the boroughs, barring only those principal routes managed by Transport for London.

The external lighting on council housing estates and in parks and open spaces is also included within the Project. The Authorities both have large housing portfolios and several parks, many of which have public footpaths and cycle routes running through them. Good quality lighting in parks support the Authorities’ clean, green and liveable agendas, encourages healthy activity (increased walking and cycling, which are central to the Mayor of London’ transport strategy), and reduces crime and the fear of crime.

1.1.3 Overall Objectives
The Authorities will replace all of the out-dated and ageing street lighting in a single project delivered by an external Service Provider (Skanska-Laing (“SKL”)), and monitored by a single joint council client function. The Project will provide an improved lighting service to residents, business, and visitors. Improved lighting will deliver a number of benefits aligned to the common objectives of the Authorities including:-
### Objective

<table>
<thead>
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<th>Contribution of an improved street lighting service</th>
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<tr>
<td>Regeneration benefits</td>
</tr>
<tr>
<td>Impact on crime</td>
</tr>
<tr>
<td>Improved road safety</td>
</tr>
<tr>
<td>Improved efficiency</td>
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<tr>
<td>Greater sustainability</td>
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</table>

The inclusion of a central management capability is an important element of the Project. The benefits of such a system are significant and diverse (improved service delivery, improved client monitoring, reduced night-time scouting etc.) but the main driver is undoubtedly the ability to control the service to ensure optimum energy efficiency.

The Central Management System ("CMS") will allow lighting to be controlled in a way that is not possible with the current infrastructure. It will allow for lighting levels to be varied and/or lighting to turned off if and when such steps are required. It will support energy management as an objective and will deliver a more sustainable, less carbon-polluting service. The CMS will also identify lights that are near to failure (from energy consumption profiles), which will facilitate change in advance of actual failure and, again, optimise energy use.

#### 1.1.4 The Authorities’ Vision

The Authorities’ aims are to develop boroughs that are safer, healthier, more prosperous, and sustainable, and thereby foster locations in which people choose to live, work, visit, and socialise.

Croydon’s Best Value Performance Plan objectives are:-

- Safer Streets;
- Providing a Better Environment;
- Retaining Croydon’s Character;
- Providing a Sense of Community; and,
- Value for Money.

Renewing street lighting clearly contributes to all of Croydon’s priorities. The 2007/08 Best Value Performance Plan illustrates Croydon’s commitment to the renewal of street lighting, and specifically identifies the replacement programme as a key contributor in the priority areas of reducing crime and disorder and improving the environment. The Sustainable Community Strategy 2005-2008 also identifies improving the environment as one of the priority areas for the borough. It targets attaining European Lighting Standards within the next ten years as a key success measure for Croydon.
Lewisham has developed a clear vision: to make Lewisham the best place in London to live, work and learn. The Project seeks to achieve a sustained level of investment to improve the standards of street lighting and illuminated signs throughout the borough.

Allied to the vision, key objectives set out by the Mayor of Lewisham that are relevant to this project:

- Making Lewisham clean, green and liveable;
- Improving safety, security and a visible presence by partnership working to reduce crime;
- Strengthening the local economy by gaining resources to regenerate key localities, promoting public transport;
- Encouraging active healthy citizens – leisure sporting, learning and creative activities for everyone; and,
- Inspiring efficiency, effectiveness, and equity in the delivery of excellent services to the community.

Achievement of these crosscutting objectives is dependent on the concerted action of many agencies. Lewisham has an effective record of public-public and public-private partnership working to deliver across a spectrum of objectives. One of the main themes of the Lewisham Community Strategy relates to improving the well-being of the people of Lewisham by reducing crime and the fear of crime. Another aims at improving the public sector performance and delivery in terms of effectiveness, efficiency and sustainability of local public services and optimising investment in infrastructure. The Project aims to achieve reductions in crime and fear of crime as well as contributing to overall efficiency and effectiveness through investment targeted at improving street lighting.

1.1.5 Asset Management Plans and Capital Strategy

The Authorities are currently working in partnership with the boroughs of Bexley, Bromley, Greenwich, Sutton, Merton, and Kingston to develop a Highways Asset Management Plan. The exercise, which will be concluded later this year, will result in a common framework document to be tailored and populated by each borough. The initiative may result in a broadly accepted pan-London format, and the work in progress on the plan recognises investment in street lighting as a key investment priority to deliver the objectives of reducing crime and fear of crime. Carrying out this partnership exercise may also yield VfM by optimising asset management and use.

1.1.6 Local Implementation Plan

The Mayor of London’s Transport Strategy recognises the impact improved street lighting can have on pedestrians, cyclists, and those using public transport. By using street lighting to reduce fear of crime, the Mayor anticipates increased use of public transport and increased willingness to walk and travel by means other than motor vehicle. The Authorities’ Local Implementation Plans ("LIPs") (which have been approved by the Major of London) address these requirements and include emphasis on the boroughs’ intentions to upgrade street lighting, particularly around local train stations and schools. Lewisham’s ‘Walking Strategy’, for example, is intended to improve pedestrian safety and security, to improve pedestrian facilities and the general pedestrian environment, particularly making crossing the road easier and safer. This requires safer streets, and improved lighting will contribute to an increased sense of public security.
1.1.7 Benefits Realisation Plan
In recognition of the benefits that could be realised by the introduction of a Street Lighting PFI, the Authorities considered at an early stage in the procurement process that there was a need to develop a benefits capture protocol that would allow all benefits to be considered, monitored and developed.

The Benefits Realisation Plan identifies the benefits tabled by the Project Team during procurement, provides a realisation status report, and sets out how the identified project benefits will be managed, monitored, and maintained throughout the life of the Project.

A copy of the Project’s Benefits Realisation Plan attached at Appendix 9 (Benefits Realisation Plan).

1.1.8 Joint London-wide Transport Initiatives
Areas around public transport nodes are often crime hotspots and, especially in the hours of darkness, people can be deterred from using good transport services by their fear of crime and antisocial behaviour. Working with other London boroughs, both jointly and separately, Croydon and Lewisham receive funding to support the improvement and integration of transport options. Both participate in South East London Transport Strategy, London Cycle Network, London Bus Priority Network, and other schemes. Summaries of these funds are contained in the LIPs and LIP funding requests. Improved lighting will contribute to the objectives of the Mayor of London, Transport for London (“TfL”) and support these transport initiatives. Good quality street lighting is a critical contributor to greater usage of public transport, cycling, and walking, all of which are alternative transport options favoured by the Mayor of London.

1.1.9 Road Safety and Crime
TfL accident analysis reports show that approximately 30% of all Croydon and Lewisham’s Road Traffic Accidents are ‘dark accidents’ occurring in the hours of darkness.

From 2003 to 2004 the Police recorded a 12% increase in reports of criminal damage in Croydon. The north of the borough experiences higher rates of crime than the south but residents in the south express a higher fear of crime.

Whilst Lewisham remains the safest inner London borough, half of its wards have crime-related deprivation and it remains in the worst 20% nationally. Most street robbery in Lewisham is before 0600 and after 1600 with a peak between 2200 and midnight.

Trains and train stations are the places where people feel least safe: a recent Greater London Authorities (“GLA”) report on crime around railway stations highlighted both Lewisham and East Croydon stations as two of London’s worst stations. In a 2003 survey, 43% of respondents felt unsafe at night compared with fewer than 10% who felt unsafe during the day.

The table below provides a summary of the annually recorded road safety and crime figures for Croydon and Lewisham.
Continuing the rollout of the street lighting programme is one of the measures highlighted in both boroughs’ Crime Reduction Strategies, and is strongly supported by the Safer Neighbourhood Teams. The rollout of renewed lighting will also help to reduce road accidents in the evenings and at night.

The Authorities run extensive CCTVs systems with the Metropolitan Police. The systems are designed to increase the resident and visitor safety and to assist traffic management. The improved illumination provided by good quality street lighting is key to the success of the CCTV programme.

During procurement of the Project, there has been consultation with the local Police Crime Prevention Officers. Crime statistics have been used by the Authorities to work with the bidders in development and prioritisation of the initial 5-year investment programme. Further consultation and discussion with the Police will continue during the investment works.

The benefits of improved street lighting are not limited to improved road safety, and reduced crime and the fear of crime. It will also have a positive regeneration impact and improve the public realm. It will increase people’s propensity to walk, cycle and be generally more active after dark, which may lead to health benefits. It clearly supports the Mayor of London’s safety and accessibility objectives.

### 1.1.10 Best Value Reviews and Capital Strategy

Croydon completed a Best Value Review of Street Lighting in 2000 that fed into the Audit Commission assessment of Croydon’s Street Scene in 2003. Lewisham completed a Best Value Review of its highways management, traffic management, road safety, parking, and transport policy functions in 2004 and this was the subject of an Audit Commission inspection in 2005. The assessment for both was ‘fair’, with excellent prospects for improvement. One of the Audit Commission’s recommendations for Lewisham was that the council continues the focus on infrastructure improvement over the next ten years to improve the condition of roads for residents. In recent years, there has been some investment in street lighting but it has not been possible to commit to a multi-year forward programme due to uncertainty in the level of future income.

Whilst performance of the existing street lighting service in the Authorities has been good so far, there is potential for improvement, and significant capital investment is now required for long term sustainability.

### 1.1.11 Current Capital Programme

Over the last 5 years, Croydon has installed/replaced over one thousand street lights in five areas across the borough. The areas were selected based on higher crime/fear of crime, poorer road safety, and the limitations of the lighting infrastructure. Lighting in these areas has generally changed from “orange” lighting to “white light” energy efficient lights that deliver greatly improved colour rendition and lighting uniformity levels.
Over the last 5 years, Lewisham has installed/replaced over one thousand street lights in areas where lighting columns have been found to be structurally unsafe. Lighting in these areas has generally changed from “orange” lighting to a “whiter” high-pressure sodium (Son) light source that delivers greatly improved colour rendition and lighting uniformity levels. Lewisham have also carried out some lantern replacement works using energy efficient LED lighting on a trial basis.

**1.1.12 Stakeholder Consultation**

Residents’ surveys in both boroughs have shown that over a third of the respondents were not satisfied with their street lighting. The proposal to relight the boroughs has been welcomed when presented at Neighbourhood Partnership meetings and meetings with residents.

Consultation with staff providing the existing street lighting service and their union representatives is on-going and on programme.

Other key stakeholders have been engaged, and will be consulted at the right time, before and during service delivery. These include neighbourhood forums, and crime and safety partnerships. Discussion with the Police has taken place and they are inputting to the lighting plan. In general, both councils have established processes and protocols for dealing with stakeholder interest in major projects and these will be utilised fully as the Project progresses.
2 Project Scope and Delivery

2.1 Current Infrastructure and Service Delivery

2.1.1 Current Stock Inventory

The Authorities’ existing street lighting asset is made up of the following apparatus:

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<th>Item</th>
<th>Description</th>
<th>@ Service Commencement</th>
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<tr>
<td>1</td>
<td>Lighting Columns - Deemed to Comply</td>
<td>4,252</td>
</tr>
<tr>
<td>2</td>
<td>Lighting Columns – Non Deemed to Comply</td>
<td>38,039</td>
</tr>
<tr>
<td>3</td>
<td>Illuminated Traffic Signs</td>
<td>6,471</td>
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<tr>
<td>4</td>
<td>Illuminated Bollards</td>
<td>1,933</td>
</tr>
<tr>
<td>5</td>
<td>Subway Lighting Points</td>
<td>19</td>
</tr>
<tr>
<td>6</td>
<td>Feeder Pillars</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
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<td>50,814</td>
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2.1.2 Current Street Lighting Age Profile

The existing age profile of the lighting columns is made up as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
<th>% age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lighting Columns - 0 to 20 years</td>
<td>8,145</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td>Lighting Columns - 20 to 30 years</td>
<td>10,038</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>Lighting Columns - 30+ years</td>
<td>23,358</td>
<td>55</td>
</tr>
<tr>
<td>4</td>
<td>Lighting Columns - Age Unknown</td>
<td>750</td>
<td>2</td>
</tr>
<tr>
<td>Totals</td>
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<td>42,291</td>
<td>100</td>
</tr>
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</table>

In dialogue with bidders, it was agreed that all existing lighting columns with an age profile of 10 years or less would be classed as Deemed to Comply. It was established that 4,252 of the 8,145 fall into the 0 to 10 year bracket at the planned service commencement date.

2.1.3 Current Electricity Supply Network

Approximately 70% of Croydon’s street lighting infrastructure is connected to a dedicated street lighting power supply. This arrangement, known locally as the Croydon Central Network (“CCN”), was originally developed by the local authority in the early 1900’s. The CCN is switched by the Distribution Network Operator (“DNO”) (UK Power Networks, formally EDF). It has poor network records and is vulnerable to regular breakdowns that make it difficult and expensive to maintain. The on-going maintenance problem has resulted in the DNO placing an embargo on re-use of the network, all new or replacement lighting columns installed are therefore removed from the CCN and connected onto the DNO network.

On-going improvement of Croydon’s lighting service is now severely restricted by the capital implications of abandoning this dedicated cable network. The investment required to deliver a ‘step improvement’ in the infrastructure has restricted maintenance work to above ground improvements with little column replacement. The focus has been limited to urgent health and safety repairs and lantern or knockdown replacements. Although lighting has been improved in many districts, connections to the old street lighting network have remained.

All lighting columns within Lewisham are connected to the DNO network.
2.1.4 Current Stock Condition

2.1.4.1 Structural
In Croydon, financial constraints mean that structural inspection and testing has been limited to concrete lighting columns and/or lighting columns considered high risk because they accommodate attachments (last test date circa, 2009).

In Lewisham, financial constraints mean that structural inspection and testing has been confined to the oldest lighting columns (last test date circa, 2009).

2.1.4.2 Electrical
The Authorities’ financial constraints mean that electrical test and inspections are only carried out when lamps are replaced on an ad-hoc basis.

2.1.4.3 Design Standards
Across both boroughs, the existing street lighting infrastructure is inconsistent. There is a poorly defined hierarchy of lighting levels and there is little conformance to current lighting standards.

2.2 Project Procurement

2.2.1 Procurement Timeline
The Authorities have followed the guidance in the Local Partnerships Street Lighting Procurement Pack (the “SLPP”) in relation to the procurement process and competition. During procurement, the Authorities entered into a comprehensive series of technical and non-technical dialogue sessions (“Dialogue”) with each bidder. The Authorities worked hard with bidders throughout the procurement process to ensure their solutions met with the requirements of the contract documentation.

At the Local Partnerships Pre-Qualification Questionnaire (“PQQ”) stage, five experienced bidders declared an interest in the Project.

In January 2008, an Invitation to Submit Outline Solutions (“ISOS”) was issued to the five PQQ bidders, all of whom returned solutions. These bidders were:-

- Skanska-Laing (“SKL”);
- Tay Valley Lighting (“TVL”);
- David Webster Lighting (“DWL”);
- Amey UK; and,
- Balfour Beatty Infrastructure Services.

After bidder presentations, clarifications and evaluation of the ISOS submissions, a decision was made by the Authorities to take forward the following bidders to the next stage (Invitation to Submit Detailed Solutions (“ISDS”)):-

- SKL;
- TVL; and,
- DWL.
ISDS documents were issued to the three remaining bidders in June 2008. The Project proceeded through the procurement stage by utilising the Dialogue procedure. Following comprehensive bidder Dialogue, ISDS submissions were submitted by all three bidders in October 2008.

After ISDS evaluation, it was considered that all bidders were presenting commercially strong bids, and should therefore be invited to continue Dialogue in the form of further refined solutions. In October 2009, the bidders were invited to submit refined solutions as part of the Invitation to Continue Dialogue (“ITCD”) process. At the start of the ITCD process, the bidders received feedback from the ISDS stage evaluation. The Authorities intended to use evaluation of the ITCD submissions to reduce the number of bidders by one. However, before the submission due date in December 2009, DWL took the commercial decision to withdraw from the procurement process.

After further evaluation and Dialogue with the remaining two bidders (the final “Bidders”), the Interim Final Business Case was submitted to the Department for Transport (the “DfT”) on June 29th, 2010, and approved on October 20th, 2010. DfT approval, and the subsequent Central Government spending review announcement, allowed the Authorities to Call for Final Tenders (entering the “CFT” stage). Final Tender submissions were received from both Bidders on November 5th, 2010. Evaluation of the Final Tender submissions was undertaken by the Authorities’ Project Team during November and December 2010. A report was submitted to the Authorities’ Joint Street Lighting Committee on December 20th, 2010, recommending to the Executives of Croydon and Lewisham that they approve the appointment of SKL as the Selected Tenderer. The appointment was subsequently ratified by both Executives by December 23rd, 2010 (See Appendix 8 (Committee Minutes)).

Throughout each procurement stage, the Authorities ensured that competitive tension between the Bidders was maintained, which led to high quality competitive solutions being submitted from each Bidder. At each stage, both remaining Bidders submitted credible and deliverable bid solutions that were considered carefully by the Authorities. The Authorities’ Project Team engaged in Dialogue with both Bidders regarding outstanding technical, financial, and legal issues right up to the CFT stage, which proved to be very beneficial in developing and finalising the solutions.

A summary of the Project Plan showing key milestone dates has been included in Appendix 1 (Project Plan) that provides the latest version of the timeframe from the current position through to contract start and beyond. This is being continually updated; SKL is, and will remain, fully informed, and has confirmed commitment to the delivery of timescales and key milestones.

In accordance with regulations and procurement best practice, the Authorities allowed a 10-day standstill period prior to Contract Award, so as to allow for legitimate legal challenges to be raised against the award. The Authorities’ issued the formal unsuccessful (“Alcatel”) letters to all unsuccessful bidders who had been involved in this procurement process immediately prior to Contract Award, and now the standstill period has expired, the Authorities are free to conclude contractual arrangements, once all outstanding issues are closed out.

2.2.2 Procurement Strategy

2.2.2.1 Procurement Team Organisation
The PFI Working Group chaired by the Project Manager and including internal representation from key support services, including technical, financial, legal, and procurement, has undertaken all
aspects of the procurement phase of the Project. The Authorities’ external advisors have also been integral members of the group.

The Authorities have followed the Project Management Plan as set out in the OBC, and in line with guidance in the SLPP. There have been some minor alterations to the indicative timetable experienced as expected during the course of a protracted and complex procurement process to accommodate market conditions and pressures on both the Authorities and Bidders. The Project Plan working up to and exceeding Financial Close is in Appendix 1 (Project Plan).

2.2.2.2 Communication
A Communications Plan (included in Appendix 10 (Communications Plan)) has been in place and updated on a regular basis as the Project has developed. Extensive consultation with a wide range of stakeholders, including Elected Members, Authorities’ Services, and the Authorities’ Partner Organisations, has been undertaken and will continue beyond the end of the procurement process.

Communication with stakeholders has been undertaken during the procurement process, with attendance at ward neighbourhood partnership meetings across Croydon. Briefings to Ward Assemblies and presentations to assembly members have taken place in Lewisham.

With the introduction of the PFI contract and changes to the way in which the Authorities deliver the service, it is required for the Authorities to consult with staff who will be affected by any TUPE.

The Authorities have carried out various consultation sessions with the Staff, the Trade Unions, and Human Resources to both inform and consult on the progress of the Project. PFI credits have been approved by HM Treasury’s Programme Review Group. Following from this, a report was taken to the PFI Project Board detailing the Authorities’ recommendations for the staff currently delivering the street lighting service. It was agreed that several posts would transfer to the Selected Tenderer and the relevant post holders were informed of this, in the presence of their Trade Union representative.

2.2.2.3 Project Risks
The management of on-going project risks has been central to the Authorities’ procurement strategy. A Project Risk Register was introduced at OBC stage and this has been continuously updated during procurement of the Project. The opportunities, issues, and risk register included within Appendix 2 (Register of Opportunities, Issues, and Risks) has been, and will continue to be, monitored by the PFI Project Board and Joint Street Lighting Committee (“JSLC”). Any residual risks will be monitored by the Authorities during mobilisation and this will continue post service commencement.

2.2.2.4 Procurement Documentation

2.2.2.4.1 Legal
The Authorities have developed the contract based on H. M. Treasury’s Standardisation of PFI Contracts (“SoPC”) guidance and drafting (version 4 dated April 2009). Principles from the previous version of this guidance are included in a model form contract drawn from the revised Local Partnerships Street Lighting Procurement Pack dated December 2008 (“SLPP”). The contract has been developed on the basis that the SLPP model contract is mandatory drafting and that all material changes to the model form would need to be formally approved by the DfT as derogations.
The key contractual and commercial issues addressed are supported by an Output Specification with Performance Standards and a Payment Mechanism that have embodied and implemented the project risk matrix ensuring an efficient service is delivered.

In addition to the main PFI contract, depending on the Selected Tenderer’s financing solution, there will be a separate contract, the Senior Lender’s direct agreement, between the Authorities and any external debt funder providing for the funder’s step in rights in the event of default of the PFI contractor.

The contract will be certified for the purposes of the Local Government (Contracts) Act 1997. The Senior Lender’s direct agreement shall also be a certified contract.

2.2.2.4.2 Financial

The Authorities have followed the standard Payment Mechanism in line with the SLPP with some minor modification to take into account specific needs of the Project. The risk of cost and time overruns during the contract term will be borne by the Service Provider within the Payment Mechanism, structured to incentivise good performance and punish poor performance.

The Payment Mechanism is based on Annuity Payments for the delivery of the key elements of the service. Payments to the Contractor will vary according to agreed standards, measured in accordance with pre-set rules. The "no service, no fee" principle prevails.

The Authorities’ objectives in developing the Payment Mechanism for the Project have been to:-

- incentivise the Contractor to deliver to required service standards, timetable and objectives;
- be bankable, whilst at the same time only requiring the councils to pay for the level of performance actually delivered; and,
- reflect sound commercial principles, i.e. the performance should be objective, clear, simple, cost effective, and capable of measurement.

The approach the Authorities have adopted builds on the experience of other local authorities and key guidance from Local Partnerships, DfT and H. M. Treasury.

2.2.2.4.3 Technical

In developing the Output Specification, the Authorities have followed the guidance provided in the SLPP, with some minor modification to take into account the project specific needs of both of the Authorities. A common standard for all aspects of technical performance was considered important when developing the required performance levels and targets within the Output Specification. This approach has resulted in one Output Specification for the Project, despite it being a joint procurement, with common performance targets throughout.

The Selected Tenderer demonstrated a positive outlook and response to the project deliverables and throughout Dialogue, and as such, the Authorities have been able to realise their technical objectives with minimal change to the Output Specification.

Throughout the procurement process, the Authorities have considered and developed variant proposals both formally and informally to ensure that a Best Value solution is achieved.
2.3 The Final Project Scope

The scope of services of the Project, as defined in the project Output Specification, includes for the provision of street lighting services including the design, installation, operation (including the provision of energy), maintenance, and financing of new and existing apparatus.

The apparatus included within the service includes street lighting, illuminated traffic signs, illuminated bollards, subways lighting, under bridge and wall mounted lighting, authority attachments and any associated private cable networks or Distribution Network Operator (“DNO”) power supplies.

The table below represents the estimated apparatus quantity within the scope at service commencement and the expected quantity upon completion of the initial 5-year Core Investment Programme (“CIP”).

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>@ Service Commencement</th>
<th>@ Completion of CIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lighting Columns - Deemed to Comply **</td>
<td>4,252</td>
<td>4,252</td>
</tr>
<tr>
<td>2</td>
<td>Lighting Columns – Non Deemed to Comply</td>
<td>38,039</td>
<td>37,208</td>
</tr>
<tr>
<td>3</td>
<td>Illuminated Traffic Signs</td>
<td>6,471</td>
<td>5,176</td>
</tr>
<tr>
<td>4</td>
<td>Non - Illuminated Traffic Signs*</td>
<td>0</td>
<td>1,295</td>
</tr>
<tr>
<td>5</td>
<td>Illuminated Bollards</td>
<td>1,933</td>
<td>1,022</td>
</tr>
<tr>
<td>6</td>
<td>Non - Illuminated Bollards*</td>
<td>0</td>
<td>911</td>
</tr>
<tr>
<td>7</td>
<td>Subway Lighting Points</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>8</td>
<td>Feeder Pillars</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>50,814</td>
<td>49,983</td>
</tr>
</tbody>
</table>

* Both Authorities have undertaken to de-illuminate their stock of illuminated traffic signs and bollards.

** It should be noted that although the Deemed to Comply (“DTC”) lighting columns are within Project scope this apparatus that will not be replaced during the CIP.

2.4 The Final Legal Solution

2.4.1 Derogations

The derogation tables show the derogations in relation to the updated CFT Project Agreement (“PA”) and Schedules as updated via clarifications and fine-tuning with the Selected Tenderer. The following derogations tables are attached:-

- The Authorities’ derogations from SLPP against the CFT PA and Schedules are shown in Appendix 3 (Authorities’ Derogations from SoPC4 and SLPP). The Authorities have not made any substantive changes in relation to SOPC4 drafting.
- SKL derogations from SoPC4 and SLPP against the CFT PA and Schedules are shown in Appendix 4 (Selected Tenderer Derogations from SoPC4 and SLPP).

A copy of the following are also attached for ease of reference:-

- A redline comparison between CFT PA and Schedules as issued by the Authorities and the Final Tender submission including drafting arising from clarifications is shown in Appendix 3 (Authorities’ Derogations from SoPC4 and SLPP).
- A redline comparison between the informal consolidated document provided to DfT by SkL in August 2010 and the final tender submission (including clarifications arising) is shown in Appendix 4 (Selected Tenderer Derogations from SoPC4 and SLPP). This shows the additional derogations between those documents.

The Authorities continue to undertake fine-tuning discussions with the Selected Tenderer, and in this respect, some minor alterations to the final form derogation table may be agreed. However, the Authorities do not expect there to be further substantive alterations to the final form derogation table agreed with the Selected Tenderer.

### 2.4.2 Other Legal Matters

The Funders Direct Agreement included in the CFT PA and Schedules is in compliance with the standard form. Selected Tenderer Derogations from this are shown in the derogation tables.

The "Contingency Funding Liabilities" definition included in the CFT PA and Schedules is in compliance with the standard form as stated in the DfT guidance note dated March 29th, 2010, issued to the Authorities. Selected Tenderer Derogations from this (if any) are shown in the derogation tables.

The updated SoPC4 Change of Ownership wording included in the CFT PA and Schedules is in compliance with the standard form is as stated in the DfT guidance note dated March 29th, 2010. Selected Tenderer Derogations from this (if any) are shown in the derogation tables.

The latest refinancing drafting (issued by H. M. Treasury in April 2009) has been included in the CFT PA and Schedules. Selected Tenderer Derogations from this (if any) are shown in the derogation tables.

### 2.5 The Final Technical Solution

Throughout Dialogue, the Authorities have worked with the different bidding parties to develop a street lighting solution that adopts the latest innovations in technology with respect to the control and management of the street lighting asset. The communication in Dialogue combined with a well-developed Output Specification has allowed Bidders to fully explore the saving opportunities and offer a solution aligned with the Authorities’ aspirations.

At CFT, the Authorities requested that the Bidders submit two technical solutions, these solutions were a:-

1. Standard Solution ("SS") that complied fully with the standard Output Specification but excluded a CMS; and,
2. Mandatory Variant Solution ("MVS") that complied fully with a variant Output Specification incorporating a CMS.

#### 2.5.1 Key Technical Features

At the CFT evaluation stage, the Authorities assessed the costs and benefits of the SS and MVS and concluded that the best solution for both Authorities was the MVS solution. The MVS solution tender proffered by the Selected Tenderer incorporates the following technical features:-
• A street lighting solution that complies fully with the latest European lighting standards but at the same time fully exploits the potential for energy savings by using the opportunity within the standards to consider local crime, traffic flows and environmental conditions;
• The latest in street lighting technology that includes future-proof (LED retrofit) lantern units, electronic control gear, LED traffic signs and bollards, photovoltaic bollards, ELV belisha beacons and painted galvanised steel lighting columns;
• A white light based solution within all residential areas incorporating a Cosmopolis or LED light source dependent on road dimensions; and,
• A CMS solution that will be operated and measured against a project specific CMS Performance Standard developed by the Authorities in consultation with the Bidders and its external advisors.

In making a decision for CMS as the preferred solution, the Authorities, with assistance from the external advisors, prepared a separate evaluation paper. The paper assessed the quantifiable benefits in terms of reduced financial impact and carbon emissions together with an assessment of the non-quantifiable benefits gained from a CMS.

The Selected Tenderer’s final solution currently adopts the use of an LED light source in selected residential streets (mainly cul-de-sacs). The projected number of LED lights at this stage amounts to approximately 1,000 lighting points, but we have agreed through drafting in the Method Statements that any improvement in LED technology will be adopted by the Selected Tenderer.

2.5.2 CMS Quantifiable Benefits
The quantifiable benefits of a CMS were identified as being the potential for savings in energy consumption and carbon emissions, reduced monitoring team costs over the life of the Project, and more efficient service delivery. The energy consumption saving was calculated as being approximately 50mWh equating to a reduction of approximately 30t in carbon emissions. The Authorities have calculated that monitoring costs over the project life would be reduced by approximately £2.5 - 3.0m.

The carbon emission contributory reduction equates to an annual reduction of approximately 4% for Croydon out of a 2015 target reduction of 25% and to 2% for Lewisham out of a 2015 target reduction of 50%.

In order to ensure that the energy savings are maximised, a variable light level policy has been developed by the Authorities’ Technical Advisor for implementation on the Project at Service Commencement. This approach will allow the Authorities to fully utilise the benefits of a CMS from the outset by making a weighted saving of approximately 15-20% in energy consumption across all road types (i.e., residential, traffic routes, town centres, etc.).

2.5.3 CMS Non-Quantifiable Benefits
The fast-track replacement model offered by PFI allows the Authorities to realise benefits that would not normally be gained if using more traditional procurement routes. These benefits include a unique investment opportunity, because a significant proportion of the street lighting and traffic signs will be replaced with new apparatus during the initial 5-year CIP, and also the opportunity to pass functionality risk back to the Service Provider.
The Service Provider has been contracted to provide access to the CMS facility for both Authorities. This facility will allow both Authorities to manage the asset separately and make Authority specific policy changes at any stage during the contract term.
3 The Economic Case

3.1 Project Appraisal Background and History

The Local Government (Contracts) Act 1997 provides clarification of local authority powers and confirms that an authority may discharge its functions using assets or services provided under the terms of a contract. The Act provides a procedure whereby an authority can certify particular kinds of contract and the parties to it cannot then contest the validity of the contract in a legal action. The Act preserves the taxpayers’ and auditors’ right to challenge.

London Borough of Croydon and London Borough of Lewisham are the highway authorities for all roads in their respective boroughs, except for the TfL managed major traffic routes. Both local authorities are responsible for the housing and open space land within their boundaries and have similar responsibilities for the street lighting positioned within these areas.

Section 97 of the Highways Act 1980 specifically enables a local highway authority to provide lighting for any highway, or proposed highway, for which they are, or will be, highway authority. This section also includes the power to contract with energy suppliers, construct, and maintain such lamp posts and other works as the borough considers necessary, and to alter or remove such works as appropriate.

At OBC stage, the Authorities undertook a detailed and comprehensive analysis of a range of service delivery and procurement options. The analysis was based on best practice options appraisal guidance from Local Partnerships and DfT including the New Approach to Appraisal. The Authorities assessed the costs and benefits of each procurement option using the DfT five evaluation criteria of Environment, Safety, Economy, Accessibility, and Integration.

3.1.1 Aims

In developing the Authorities approach to appraisal of different project options, the Authorities identified the following purposes of good street lighting:

- to provide safe pedestrian and vehicular traffic movements. Academic studies have shown that good street lighting can save up to 30% of night-time accidents;
- to reduce the risk of vehicular accident with attendant risk of personal injury and property damage;
- to promote public safety, including the deterrence of offences against the person, burglary and car crime;
- to reduce the fear of crime and promote a feeling of well-being in the use of the street at night; and,
- to reverse urban decay and perceptions of environmental neglect.

Academic studies suggest a positive link between modern, standard-conformant lighting and reductions in road traffic accidents and incidents of crime. Good public lighting will work in achieving these effects by:

- clearly lighting the environment;
permitting recognition of others in the vicinity, including facial recognition and identification of colours, e.g. of cars and clothing; and,

- to encourage a feeling of safety and well-being, and to minimise fear of the night-time environment.

People will feel more confident and be active on the streets at night. This will reinforce the confidence of others and increase the general feeling of safety in public areas at night.

Appendix 11 (Assessment Summary Tables) contains Assessment Summary Tables which show how and to what degree these aims can be met by the various options under consideration.

3.1.2 The Service Delivery Options Considered

The Authorities have examined a number of options as part of a Best Value service review to seek to improve the contribution the street lighting and traffic signage service makes to key corporate strategies and objectives. The review was based on best practice options appraisal guidance from the 4ps.

Meetings were held as part of the evaluation process with the leading members, senior officers and other internal stakeholders. These meetings were held to identify objectives for the service, and to define options for appraisal and to undertake initial appraisal evaluations. Each of the options was developed in the context of:-

- the Authorities’ corporate strategies, service objectives and likely wider benefits associated with improved lighting and signing to the appropriate European Standards;
- the need to deliver value for money and provide best value in service delivery;
- the results of non-destructive testing surveys used to help to evaluate the future capital needs of the street lighting service and the likely levels of investment required;
- the likely service costs and risks associated with different investment approaches; and,
- DfT, 4ps, and H. M. Treasury guidance on option appraisal for the purpose of business case appraisal.

Five options were initially identified and appraised as set out in the section below:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do Nothing</td>
<td>No renewal programme and only reactive maintenance of existing stock</td>
</tr>
<tr>
<td>Do Minimum</td>
<td>Introduce additional investment to seek to sustain delivery of the current service in the medium term</td>
</tr>
<tr>
<td>Partial Replacement</td>
<td>Introduce investment to replace a significant proportion of the out-dated and worst performing lighting infrastructure</td>
</tr>
<tr>
<td>Fast Track Replacement</td>
<td>A fast track investment to bring the whole of the lighting infrastructure up to appropriate modern lighting design standards</td>
</tr>
<tr>
<td>Full Replacement</td>
<td>Replacement of the entire stock within a five year period</td>
</tr>
</tbody>
</table>
3.1.3 Assessment of the Options

3.1.3.1 Do Nothing

The Do Nothing approach has not been considered further as it fails to address any of the key weaknesses identified in existing service provision, nor will it achieve any of the service improvements being sought in the proposed scheme. It will therefore prevent the Authorities from meeting their statutory and strategic obligations.

3.1.3.2 Do Minimum

In this option, existing levels of service expenditure are maintained with additional capital investment over budget levels at £100,000 per annum at current prices for the next 25 years. There will be no uplift in column numbers. Whilst this option has been thoroughly evaluated, it is unlikely to be feasible because:

- it fails to meet the Authorities’ objectives in providing street lighting services as large numbers of columns will in time be removed as they became structurally unsound and it is unlikely that sufficient funds will be available to replace all those removed;
- it leads to increased risks to road users and the Authorities;
- it would not always be possible to predict when structural or electrical failures would occur; and,
- it would increase service costs and lower service standards as lighting levels drop and columns and traffic signs deteriorate. Maintenance and repair activity would become increasingly reactive and more inefficient.

However, this option does provide a benchmark from which to compare other options and judge affordability.

3.1.3.3 Partial Replacement

In this option, 50% of the columns requiring replacement will be replaced and modernised to the appropriate European standards within five years. The remaining stock will be replaced as part of a lifecycle replacement programme over the following 20 years.

Based on evidence collected through extensive lighting surveys within the Authorities, an uplift ratio of around 18% is estimated for those units replaced in the first five years. This option would require the removal of 18,839 columns and the installation of 22,185 new columns during a five-year capital programme. In addition, 2,822 of the council’s signs, 1,095 bollards, and 334 beacons are to be replaced.

3.1.3.4 Fast Track Replacement

In this option, all lighting infrastructure currently at the end of its useful life is replaced and modernised to the relevant European standards within five years. Other lighting infrastructure is replaced during the 25-year period as and when it reaches the end of its life.

Based on an uplift ratio of around 18% for those units replaced, this option would require the replacement of 35,811 existing columns and the installation of 6,446 additional columns during a five-year capital programme. In addition, 8,668 signs and bollards are to be replaced.
It is anticipated that efficiencies would be available as the programme introduces modern lighting equipment with lower whole life costs and reduced inefficiency. However, maintenance cost reductions are offset by an increase in column numbers. Efficiencies have been based on the Authorities confident knowledge of their inventory, supplemented by guidance from their advisors through market actual experience in relation to other public lighting procurement processes and accounted for in the capital costs. The Authorities have also taken into account local circumstances and are confident that such savings can be achieved through the installation of a modern, appropriate level of lighting.

3.1.3.5 Full Replacement
In this option, all lighting infrastructure is replaced and modernised to the appropriate European standards within five years. This option would require the removal of 48,230 existing columns and installation of 6,692 new/additional columns. In addition, all of the councils’ existing illuminated and non-illuminated traffic signs requiring replacement would be replaced. Other costs are estimated as described for Fast Track Replacement option above.

3.1.4 Non-Financial Evaluation
The non-financial evaluation was carried out based on a subjective analysis of the contribution that each of the options would make to the minimum service delivery criteria outlined above. The higher the score, the better the performance of that option against the minimum service delivery criteria. Each option was appraised against the following project objectives:

- the provision of relevant lighting levels and signage standards throughout the boroughs;
- the provision of a safe, sustainable and high quality public lighting infrastructure;
- the achievement of better value for money / compliance with Best Value;
- improving the contribution the service makes to the Authorities’ corporate aims, strategic and operational service objectives; and,
- the achievement of the above objectives in a short time-scale.

These criteria are consistent with the Authorities’ aims in delivering the Project. Examples of the non-financial benefits that are taken into account include:

- improvements in the perception of safety and security in the streets at night by reducing the fear of crime;
- increased leisure and commercial activity after dark which can improve the vitality of the borough;
- encouragement for walking, cycling, and the use of public transport as alternatives to the private car;
- development of safer routes to school;
- creation of a quality environment for the local people, business and tourism; and,
- fostering community regeneration.
The results of the non-financial appraisal are summarised in the table below:

<table>
<thead>
<tr>
<th>Option</th>
<th>Non-Financial (Maximum 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do Minimum</td>
<td>10</td>
</tr>
<tr>
<td>Partial Replacement</td>
<td>21</td>
</tr>
<tr>
<td>Fast Track Replacement</td>
<td>45</td>
</tr>
<tr>
<td>Full Replacement</td>
<td>43</td>
</tr>
</tbody>
</table>

### 3.1.5 Financial Evaluation

Financial models were prepared for four of the investment options based upon the likely indicative costs. The models covered service expenditure at current costs excluding inflation over 25 years and these are discounted to a net present value using a 3.5% discount rate to facilitate a straightforward comparison of the different options available. These models distinguish between the costs of lighting improvements, maintenance and energy costs.

Detailed evaluation of the financial and non-financial consequences was undertaken for each of these options. The financial appraisals in each case were based on a 25 year concession period, and were prepared in accordance with guidance from the Treasury, DfT and the Local Partnerships. The table below summarises the results of the financial analysis:

<table>
<thead>
<tr>
<th>(All NPVs at 3.5% real)</th>
<th>Unit</th>
<th>Do Minimum</th>
<th>Partial Replacement</th>
<th>Fast Track</th>
<th>Full Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Costs (excluding risk) – NPV *</td>
<td>£’000</td>
<td>69,343</td>
<td>110,155</td>
<td>134,231</td>
<td>154,707</td>
</tr>
<tr>
<td>Current Columns Replaced in first five years</td>
<td>Nos.</td>
<td>260</td>
<td>19,719</td>
<td>39,437</td>
<td>50,108</td>
</tr>
<tr>
<td>New columns installed in first five years (Uplift)</td>
<td>Nos.</td>
<td>260</td>
<td>23,065</td>
<td>46,129</td>
<td>56,800</td>
</tr>
<tr>
<td>Capital cost (NPV) *</td>
<td>£’000</td>
<td>1,576</td>
<td>46,542</td>
<td>70,520</td>
<td>84,888</td>
</tr>
<tr>
<td>Road Traffic Accident Benefits (NPV)</td>
<td>£’000</td>
<td>542</td>
<td>31,925</td>
<td>63,851</td>
<td>63,851</td>
</tr>
<tr>
<td>Crime Benefits (NPV)</td>
<td>£’000</td>
<td>3,983</td>
<td>234,502</td>
<td>469,005</td>
<td>469,005</td>
</tr>
</tbody>
</table>
### 3.1.6 Preferred Investment Solution

From this analysis, the ‘fast track’ investment option was considered the most attractive solution as it achieves the highest BCR and also the highest non-financial benefits in comparison with other options. The NPV of the economic benefits from reductions in crime and road traffic accidents for the preferred option is £533m. The BCR achieved is 9.13. When only the difference between the Preferred Option and Do Minimum benefits and costs are considered, a BCR of 9.30 applies for the Preferred Option.

**Addendum:** It should be noted that the revised BCR figure at Selected Tenderer stage has been calculated as 10.43.

In addition to this options appraisal, at OBC the Authorities completed Assessment Summary Tables ("ASTs"). Guidance on completing AST analysis is contained in the Guidance on the Methodology for Multi Modal Studies ("GOMMS").

### 3.1.7 Choice of Service Delivery Route

Having identified a preferred investment option, the Authorities evaluated the following service delivery models to seek to identify the optimum procurement route to achieve its delivery:

- traditional procurement (the public sector comparator);
- joint venture;
- outsourcing; and,
- PFI Design, Build, Finance, and Operate ("DBFO").

The service delivery options were evaluated using a consistent evaluation framework including:

- ability to attract investment in the lighting and traffic sign infrastructure;
- affordability;
- time-scale to delivery;
- legal issues;
- anticipated procurement costs;
- bankability;
- practicality; and,
- service risks.
To assist this process, the Authorities, in conjunction with their advisors, have developed models based on market intelligence gained from similar private finance projects to simulate the approach likely to be adopted by private sector providers. Following appraisal, the councils identified that the DBFO PFI approach appeared to show the potential to deliver Best Value and was considered the preferred procurement route.

3.2 Value for Money

At the OBC stage, the Authorities identified that a Fast Track Replacement option demonstrates the potential to deliver the best Value for Money (“VfM”), calculated at 16.62%. The Authorities have assessed the likelihood of the Project to deliver VfM in accordance with the guidance issued by HM Treasury throughout the formal procurement stage. Throughout procurement, the Project has undergone a series of on-going checks in the form of a qualitative evaluation including the quality of competition, risk sharing, stability of costs, and financial flexibility. At the Final Business Case stage (“FBC”), The Authorities are still confident that the Project would offer value for money in comparison with the traditional procurement route.

At FBC, the financial model was re-run based on the latest H. M. Treasury format (appended at Appendix 11 (Assessment Summary Tables)), resulting in a VfM of 29.01%. This represents a marked improvement on OBC.

The Stage 3 VfM Qualitative Assessment is included in Appendix 5 (HM Treasury Value for Money Assessment – Stage 3 Value for Money Qualitative Assessment).

3.2.1 Qualitative Assessment

The qualitative element of the VfM appraisal seeks to answer a series of questions, which address whether the proposed project is Viable, Desirable and Achievable.

Viability – investment objectives and desired outcomes need to be translatable into outputs that can be contracted for, measured, and agreed. Viability considers the ability to achieve a flexible contract with the private sector to overcome strategic and regulatory issues.

Desirability – high quality services can be achieved through appropriate risk management arrangements, reflected in performance and payment mechanisms. Desirability considers whether sufficient benefits can be achieved to outweigh a higher cost of capital.

Achievability – the procurement process can be complex and involve significant resources. E.g., Is a PFI procurement programme achievable given the clients capability and ability to deliver and the attractiveness of the project to the market?

Having undertaken this exercise, the councils are confident that the proposed scheme is viable, desirable, and achievable.

3.2.2 Quantitative Assessment

The Authorities’ limited capital resources are unlikely to be sufficient to enable the scheme to be funded through a traditional procurement process. To demonstrate the VfM achieved through the PFI, the council has compared the PFI option with a PSC using guidance from H. M. Treasury, DfT, and
Local Partnerships. The PSC has been constructed using information supplied by the council’s internal technical team and technical advisors. This has included data regarding:

- inventory of the scheme by category;
- cost per unit for each category;
- inflation assumptions;
- capital and lifecycle replacement profiles; and,
- assessment of optimism bias.

In using the H. M. Treasury VfM, model a pre-optimism bias adjustment of 2.28% has been included. This was calculated in conjunction with the Authorities’ technical and financial advisors, and captured the difference that may be experienced in prices between the start of a project and Financial Close.

In November 2006, the Authorities held a risk workshop to quantify the value of risk that will transfer to the private sector. This analysis has enabled the Authorities to identify the optimum allocation of project risks and to reflect the cost of managing these risks within the financial analysis of different options. A comprehensive analysis of the risks inherent in the Project has been undertaken. This has drawn on guidance from the Local Partnerships and identifies some 239 risks, grouped into the following areas:

- development;
- authorisation;
- design;
- installation;
- finance;
- commissioning; and,
- operations.

Having identified the risks to the Project, an analysis detailing the impact cost, probability of occurrence, and time discounting factor was arrived at for each risk.

The workshop was attended by the Authorities’ technical team and facilitated by the Authorities’ financial and technical advisors. The results of the workshop were used to generate the post FBC optimism bias values for the H. M. Treasury VfM model. This resulted in an overall risk adjustment of 28.9%. This value was inserted as appropriate into the Treasury model.

The base case (which assumed an Internal Rate of Return (“IRR”) of 15%) demonstrated that the DBFO PFI would offer value for money of 16.62% that supports the Authorities’ overall view that the proposed project represents good value for money in qualitative terms and quantitative terms.

3.2.3 Approach Taken to Risk Allocation
In order to fully assess the VfM of different service delivery options, the Authorities have developed an understanding of the cost of managing each of the ‘risks’ associated with the Project. This analysis has enabled the Authorities to identify the optimum allocation of project risks and to reflect the cost of managing these risks within the financial analysis of different options.
The actual transfer under the preferred DBFO PFI arrangement of those risks allocated to the private supplier has been embodied in the contract though a Payment Mechanism that is subject to deductions for:-

- availability of lighting to a standard that equals or better the prescribed intervention level;
- service delivery performance, proportion of lights working as planned at night, quality of lighting and service responsiveness; and,
- target performance levels will be demanding to ensure that the risks identified as being borne by the private sector are actually transferred to them.

The risk of cost and time over-run during the Core Investment Period (“CIP”) is borne by the private sector partner. The payment stream will incorporate deductions for failure to comply with the agreed construction programme.

The Payment Mechanism will provide for Annuity Payments to the PFI supplier to increase by pre-agreed amounts over the CIP as the standards of lighting improve in response to the investment thus affecting the transfer of time and cost overruns during the CIP to the contractor. It will also allow for increases in the area covered by the contract (as new roads are constructed, for example) through a change mechanism in the contract.

A number of Performance Standards will be identified and deductions made from Annuity Charge payments for failures to achieve the specified standard in each category, thus giving effect to the allocation of operational risks incorporated in the Risk Register and ensuring overall a significant risk transfer to the private sector.

The Authorities are confident, from knowledge of other schemes and of the private sector market, that the proposed risk transfer is practical and provides a sound basis for the initial bids.

At OBC, the Authorities acknowledged that there might be risks relevant to the procurement itself. The key risks identified are summarised below, together with the mitigation actions that were considered necessary.

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separation of the Authorities</td>
<td>Joint governance arrangements to minimise the risk of separation. Two project sponsors in accord &amp; united project team.</td>
</tr>
<tr>
<td>OBC fails to gain approval</td>
<td>The OBC, and the data that underpins it, are robust. External advisors are in place. Local Partnerships guidance and project training is being followed.</td>
</tr>
<tr>
<td>Insufficient commercial interest</td>
<td>Continue to engage potential bidders and promote positive aspects of the Project.</td>
</tr>
<tr>
<td>Slippage in timetable</td>
<td>Undertake gateway reviews and re-programme where necessary – continue to plan and monitor through-out the Project.</td>
</tr>
<tr>
<td>Inadequate management information</td>
<td>Detailed due diligence.</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Fluctuations in energy prices</td>
<td>Include a CMS to allow for control of energy consumption.</td>
</tr>
<tr>
<td>Impact of competitive dialogue</td>
<td>Use local partnerships and external advisors expertise.</td>
</tr>
</tbody>
</table>

Throughout procurement, the Authorities have ensured that risk transfer has been managed in a manner that has allowed an appropriately balanced transfer of risk to the private sector. In doing this, the Authorities have relied upon past experience and standard guidance wherever possible. The Authorities have followed the commercial and contractual positions provided by standard guidance.

An assessment of project risks and possible risk transfer was undertaken by the Authorities and their advisors. This assessment allowed the Authorities to constantly monitor and review risk transfer during the procurement process, and therefore realise the aim to transfer any risks that can be best served by the private sector to the Service Provider.

The Final Tender solution submitted by the Selected Tenderer clearly demonstrates that marginal cost benefits can only be achieved with significant risk transfer back to the Authorities.

### 3.3 Stability of Costs

The procurement process has successfully managed to maintain the competitive pressure on both Bidders at Final Tender stage. The Authorities’ Project Team and their external financial and technical advisors developed a suite of financial proformae, issued to Bidders, to ensure that the Solution proposed by Bidders was sufficiently transparent to enable the Authorities to have an understanding of the detailed costs underpinning the price, and that Solutions could be evaluated against suitable cost benchmarks. It was a mandatory condition in the procurement process, including the Final Tender stage, that Bidders had to complete these financial proformae.

The robustness of the underlying costs, as submitted by Bidders in the financial proformae, was reviewed and evaluated by the Authorities’ technical evaluation team by assessing credibility and reasonableness, based on their knowledge and market intelligence of the street lighting sector, as well as consistency with the respective Technical Solution proposed by each bidder. This exercise formed a key part of the evaluation process and informed a significant part of the technical and financial discussions that took place with Bidders during Dialogue. The Authorities successfully utilised competitive tension throughout the procurement process to maintain pressure on the Bidders to further reduce their costs without the Authorities taking back transferred risk. However, the Authorities are aware that although the banking sector is beginning to show signs of stabilisation, further increases to funding rates and terms prior to financial close remains a key risk to the project. The Authorities will continue to explore opportunities through fine tuning to further decrease the price of the Solution without the Authorities taking back transferred risk e.g. through reduction in debtor days.
3.4 Financial Flexibility

The Selected Tenderer is financing its funding requirement for the Project through fixed rate bank debt. This provides the Authorities with more certainty in relation to Annuity Charge payments as the Annuity Charge will not change with movements in interest rates over the life of the Contract. Bank debt is also considered to be a more flexible means of accommodating changes to the Project than other forms of finance such as bond finance.

Based on the evaluation undertaken on behalf of Local Partnerships at the PQQ stage of the Project, the lead organisations from the Selected Tenderer were assessed as having a strong credit rating which would help support the robustness of the Solution. A parent company guarantee is being provided by Skanska and Laing in respect of the Selected Tenderer’s Service Provider obligations under the Contract as well as the injection of subordinated debt used to repay the equity bridge loan.

The Selected Tenderer confirmed in its Final Tender submission that it has secured commitment from three lenders, Barclays Bank, Lloyds TSB and NIBC. Since Final Tender, Barclays have withdrawn from the club in the interests of best value. Both remaining lenders have confirmed their support for the project and to the funding terms (see Appendix 7 (Reference Term Sheet) check for details of the funding terms). The Selected Tenderer intends to secure the senior debt required through both banks based on a 50/50 investment though has commitment from Lloyds TSB to provide 100% of the senior debt requirement.

The Selected Tenderer’s Senior Lenders require that the SPV maintain certain cover ratios (a safety measure that ensures the Project can pay the interest and principal on the senior debt requirement) and have the right to step in and manage the contract if specified ratios are broken. The cover ratios required by the Selected Tenderer’s Senior Lenders are considered to be consistent with other project-financed deals in the Street Lighting PFI sector though at the lower end of the range of values seen in recently financed deals.

Whilst the PFI brings the Authorities long-term (25-year) certainty over the street lighting service provision, the Project still retains sufficient flexibility to meet variations to the Authorities’ requirements throughout the life of the Contract. To facilitate efficient management of the Contract, reduce costs, and ensure continued delivery of services, the Contract provides a robust and flexible mechanism for dealing with Authorities requests for (low, medium, and high value) variations to the Service through Schedule 16 (Change Protocol). The mechanism clearly defines the responsibilities of the Senior Lenders, imposes fixed timescales for different levels of variation, and penalises the Service Provider for not adhering to these timescales (through abatement to the Annuity Charge). The Authorities have agreed with the Selected Tenderer the values/rates applied in respect of variations to Service e.g. accruals and de-accruals, Schedule of Rates.
4 The Financial Case

4.1 Project Affordability and Funding

To address the two-authority nature of the Project, the Authorities have created a joint member committee. Whilst this grouping met in a shadow capacity in earlier months, the first formal meeting of the Member Committee occurred on June 19th, 2007. The first action of the committee has been the approval of the OBC and its financial implications. Under its delegated authority, from both parent councils, the Members have explicitly committed to the affordability of the Project, subject to the award of PFI credits and as described in the OBC. Both councils separately approved the affordability of the project prior to the EOI stage; at the same time, both agreed to a joint Project and the establishment of a joint committee.

When the Project submitted the EOI in early 2006, it requested a credit total of £58.3m. In March 2006, and again in March 2007, EDF (the DNO for both boroughs) announced significant increases in service connection charges: on both occasions, prices were inflated by 30% per annum.

Following engagement with EDF, the Authorities are confident that future price increases will not be as significant and will not have such a marked impact on the capital cost of works in these urban districts. However, wider discussion – which has included DFT – has indicated that it is prudent to revise the total credit figure sought to meet the increased costs.

The Authorities are seeking a notional credit approval (PFI credits) of £79.5 million. This is based on the £80.6 million (NPV) capital cost of the ‘Fast Track’ option (delivered through the PFI) for the first five years and reduced by the £1.1 million (NPV) of capital costs of a prudent Do Minimum. Capital costs consist of both the capital cost of columns to be installed together with development costs. This has been calculated using relevant Local Partnerships guidance. Financial models have been produced that allow each of the Authorities to see their own required commitment to the Project and Members from both of the Authorities have acknowledged that there is a need to provide for any shortfall through revenue budgets. The Authorities undertake to continue the real level of revenue funding implicit in the affordability calculations.

4.2 Selected Tenderer Affordability and Funding

The Authorities can confirm that the Selected Tenderer has submitted a tender that is in line with the Authorities affordability target and available funding.

The Authorities have sought to obtain as much certainty as possible with respect to the Funders Terms and Conditions. As a result of this desire, face-to-face meetings were held with the Funders from the Bidders at a number of key stages in the Dialogue process. As a consequence of this, these meetings allowed the Funders to be aware of the Authorities’ concerns at various stages and discuss the key issues from both sides.

The Final Tender position is based on consolidated market term sheets, highlighting the efforts the Selected Tenderer has taken to achieve competitive terms. A swap rate of 5% has been used.
The Selected Tenderer is procuring adequate and acceptable parent company guarantees, and is using a standard 90:10 funding structure. The letters of support from the Funders for both senior- and sub-debt are all acceptable.

The Selected Tenderer has carried out an internal Debt Funding Competition with its Funders Club. The Authorities, with assistance from its advisors, continue to monitor the PFI loan market and have reserved the right to run a Selected Tenderer Debt Funding Competition, if this appears likely to yield more favourable terms than those offered by the Selected Tenderer’s funders. Funding terms committed by the Selected Tenderer’s funders received in the Final Tender remain in line with terms of projects with a similar level of risk. As a consequence, the Authorities do not envisage that a Selected Tenderer Debt Funding Competition would be required. The Authorities understand from the Selected Tenderer that Funders are at an advanced stage of their due diligence and internal approvals processes, providing further comfort to the deliverability of the funding arrangements within the target timetable.

The Authorities’ external financial advisors have monitored terms from similar projects with the sector and across other sectors in which they have been involved and consider the terms offered by the Selected Tenderer to be on market.

The Authorities have reviewed the draft H. M. Treasury “Making savings in operational PFI contracts” (2011) document (the “H. M. Treasury Draft Savings Document”), and fully endorse the potential of delivering further benefit and VfM to the Authorities, by maintaining a dialogue with the Service Provider to secure continuing project savings throughout the contract period. The Authorities believe they have achieved significant savings in procurement costs and will continue to achieve savings when the project is operational. These savings include:-

- Increased buying power of the combined asset replacement function;
- A combined monitoring team function;
- Combined depot costs for the Service Provider; and,
- Single livery plant and vehicles.

The Authorities have estimated that the savings made by entering into a joint procurement arrangement have been circa £850,000. We would estimate that the savings made when the project is operational would amount to circa £550,000 per annum, or circa £14 million over the contract period.

The Annual Contribution and Affordability levels are shown in Appendix 6 (Spending Review Table - SR10, “Table 7”), including the Annuity Payments and PFI credits.

The Reference Term Sheet is included in Appendix 7 (Reference Term Sheet).
5 Contract Management

5.1 Contract Governance Arrangements

The Authorities have put in place and agreed governance and joint working arrangements for the Project. These are summarised in the diagram below. The arrangements will be contained in two agreements, a Governance Agreement and a Co-operation Agreement. Both documents follow recognised best practice in terms of the drafting and approach for joint projects.

![Diagram of Contract Governance Arrangements]
5.1.1 Governance Agreement
This is the agreement that governs and sets out the overall framework for the constitutional arrangements between the parties.

The Authorities have agreed to establish and to participate in a Joint Committee to facilitate the co-ordination of their functions with a view to the efficient and economical discharge of their functions with effect from the date that they enter into the PA.

Each council empower the Joint Committee to discharge on their behalf the functions set out in the governance agreement and empower the Joint Committee to arrange for the discharge of the functions by the appropriate council officers. Decisions or actions which are not set out or referred to in the agreement as having been delegated to the Joint Committee are reserved for the Authorities themselves (Reserved Decisions).

The Joint Committee shall in turn delegate to the Management Board and the Authorities Project Representative respectively those matters for which each are identified as responsible within the Agreement and the services PA. The Management may refer decisions to the Joint Committee for decision. The day-to-day operations in relation to monitoring the delivery of the PA will be undertaken by a joint co-located Client Monitoring Team consisting of officers from each of the Authorities. In addition to this, each council may appoint a Client Officer to feed into the work by of the Client Monitoring Team and Management Board on behalf of the retained client function of the Authorities.

5.1.2 Co-operation Agreement
The Co-Operation Agreement governs the detail as to how the Authorities deal with the commercial and operational terms of the services PA. Each of the Authorities is under an obligation to co-operate with the other and act in good faith and in a timely manner in order to facilitate the performance of their respective obligations under the services PA.

The Agreement covers the following matters:-

- Commencement and duration of agreement;
- Principles and key objectives;
- Joint committee matters – such as budget, staff, property and assets and audit;
- Services agreement matters - such as arrangements for decisions on operational matters and payment of services provider invoices and accounting and monitoring; and,
- General matters - such as insurance, taxation, internal dispute resolution.

5.2 Management Board
The Authorities have incorporated the provisions of the model form SLPP contract set out in Schedule 18 (The Network Board and Partnering Facilitator).

A partnering framework will be established with the Selected Tenderer to manage and monitor performance from contract start date. The Authorities’ Project Representative will establish operational links with other key service managers in the Authorities to ensure that communication lines are in place and that appropriate synergies and relationships are developed to ensure the successful delivery of the Project. Monthly monitoring meetings will be arranged with the Service
Provider to ensure that key Project Milestones are met, and that issues and concerns can be addressed before they become problematic.

At a strategic level, the Network Board will enable Directors and Members to consider all policy, management, operational and strategic issues.

5.3 Client Monitoring Team

The Authorities are keen to facilitate a smooth and orderly transition to the PFI contract, and are already in the process of appointing an Authority Project Representative. The Authority Project Representative will report to both Authorities via the Management Board, who are members of the Management Board, and will be supported by two dedicated technical officers. The monitoring team will also be able call upon support from the Authorities within the highways engineering sections, energy management teams, and from central support services and internal experts who have been integrally involved with this procurement process.

The Client Monitoring Team structure (detailed below) was developed by the Authorities during the procurement process by talking to other Local Authorities currently operating street lighting PFI projects. The introduction of a combined Client Monitoring Team function will allow the Authorities to maximise performance, and at the same time make savings and deliver VfM with the Project by optimising the management of the contract throughout the contract term. This will be done by ensuring that staff are trained appropriately and encouraged to use best practice principles, and additionally by sharing the contract management responsibilities between each of the Authorities. The H. M. Treasury Draft Savings Document forms a cornerstone of delivering VfM on this contract. By using its principles, the Authorities can continue to explore potential operational savings during the life of the Project.

A copy of the Monitoring Team decision paper has been included within Appendix 12 (Client Monitoring Team Decision Paper).
It is expected that the structure of the Monitoring Team will be updated post-CIP to reflect the changing demands on the team and its role.

5.4 Independent Certification

The contract provides a requirement for an Independent Certifier ("IC") to certify and commission new apparatus installed during the initial 5-year CIP. The Authorities consider that the IC will play a major role in ensuring that all new apparatus achieves the requirements detailed in the Output Specification. The IC will act independently, providing all certification, documents, and reports to the Authorities and Funders to evidence that the new apparatus meets the required standards.