

# Public Document Pack



#plymcabinet

## **Democratic Support**

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Published 24 April 2014

## **CABINET SUPPLEMENT 2**

Tuesday 29 April 2014

2.00 pm

Council House (Next to the Civic Centre), Plymouth

### **Members:**

Councillor Evans, Chair

Councillor Peter Smith, Vice Chair

Councillors Coker, Lowry, McDonald, Penberthy, Vincent and Williams.

I refer to the agenda for the above meeting and attach the public and private reports relating to the contract award for the provision of low energy street lighting luminaires.

**Tracey Lee**

Chief Executive

# CABINET

## AGENDA

### PART I (PUBLIC MEETING)

#### 9. LOW ENERGY STREET LIGHTING LUMINAIRES CONTRACT AWARD (Pages 1 - 20)

Anthony Payne (Strategic Director for Place) will submit a report on the Low Energy Street Lighting Contract award.

A background paper to this report can be accessed at the Council's website Council and Democracy/Councillors and Committees/Library/Cabinet background papers or using the following hyperlink –

<http://tinyurl.com/q3d6bmh>

A separate report, containing commercially sensitive information will also be submitted and is referred to in part 2 of this agenda.

#### 10. EXEMPT BUSINESS

No representations have been made that this part of the meeting of should be in public.

To consider passing a resolution under Section 100A(4) of the Local Government Act 1972 to exclude the press and public from the meeting for the following item(s) of business on the grounds that it (they) involve the likely disclosure of exempt information as defined in paragraph 3 of Part 1 of Schedule 12A of the Act, as amended by the Freedom of Information Act 2000. At the time this agenda is published no representations have been made that this part of the meeting should be in public.

(Members of the public to note that, if agreed, you will be asked to leave the meeting).

### PART II (PRIVATE MEETING)

## AGENDA

### MEMBERS OF THE PUBLIC TO NOTE

that under the law, members are entitled to consider certain items in private. Members of the public will be asked to leave the meeting when such items are discussed.

#### 12. LOW ENERGY STREET LIGHTING LUMINAIRES CONTRACT AWARD (E3) (Pages 21 - 34)

Further to the agenda item in part I above, Anthony Payne (Strategic Director for Place) will submit a report containing commercially sensitive details relating to the Low Energy Street Lighting Luminaires Contract award.

**PLYMOUTH CITY COUNCIL**

**Subject:** Award of Contract for the Provision of Low Energy Street Lighting  
Luminaires

**Committee:** Cabinet

**Date:** 29 April 2014

**Cabinet Member:** Councillor Coker

**CMT Member:** Anthony Payne (Strategic Director for Place)

**Author:** Ian Ellis, Network Policy Manager

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**Ref:** IRE/LESLP

**Key Decision:** Yes

**Part:** I

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**Purpose of the report:**

On 12<sup>th</sup> February 2013, the Directors for Place and Corporate Services submitted a written report to Cabinet seeking approval for a £13.25 million capital investment as part of an energy and carbon saving programme. Included within this programme was a proposal to replace the authority's existing high pressure sodium street lamps with the more energy efficient light emitting diode (LED) luminaires.

Cabinet approved the proposals, which included the procurement of the new streetlighting luminaires, and the capital investment for the energy and carbon saving programme. The scope of the project includes all street lights on the highway and council owned land including parks and open spaces, a total of 28,857 street lighting luminaires.

This report details the outcome of the procurement process for the supply of low energy street lighting luminaires, and recommends the appointment of the successful tenderer to supply the new street lighting luminaires.

A separate private report is also submitted to the meeting containing commercially sensitive information.

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**The Brilliant Co-operative Council Corporate Plan 2013/14 -2016/17:**Pioneering Plymouth

The replacement of the city's existing street lighting luminaires represents a significant step in reducing the city's carbon footprint and leading in environmental and social responsibility.

Growing Plymouth

Providing a well-maintained street lighting asset signifies community investment and pride in the area whilst also playing a part in regeneration, by helping to revitalise the city's streetscape.

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**Implications for Medium Term Financial Plan and Resource Implications:  
Including finance, human, IT and land:**

The cost of purchasing and installing the new luminaries is £7.99m, funded from borrowing. Repayments will be met from the savings achieved within the Street Lighting revenue budget.

Using the data from the procurement exercise, the new low energy luminaires will provide a significant energy saving equating to an estimated £1.089m per annum (based on 2013/14 energy rates and current budget levels). In addition, further savings of approximately £0.108m are anticipated from reduced street lighting maintenance.

These savings are offset by the borrowing repayments of £0.845m per annum, where repayments have been aligned to the guaranteed life of the luminaries (12 years).

The net total saving for the first full year of operation is therefore estimated to be £0.352m against current budgeted levels. These savings will be utilised as part of the Place budget action plan, offsetting identified pressures.

The projected savings arising from the project represent a combination of both “cashable” reductions against existing budgets (above) and avoidance of current and future cost pressures. Taking into account predicted price increases, the estimated Net Present Value of this project is £10.3m over 12 years.

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**Other Implications: e.g. Child Poverty, Community Safety, Health and Safety and Risk Management:**

Community Safety

The majority of Plymouth’s existing street lights use high pressure sodium lamps (SON/T). Such lamps have been the first choice in street lighting for many years as they provide high levels of light in relation to the energy used. SON/T lamps have a low colour rendering which accounts for the distinctive yellow glow they produce.

The whiter coloured light from LED lighting has been shown to improve visibility for drivers, who are better able to detect roadside movement faster and at a greater distance. Consequently, it is hoped that night time road safety will be improved. Additionally, it has been found to be easier to distinguish objects, colour and people (particularly facial recognition) thus helping to reduce anxiety levels at night. As a result, it is anticipated that many people will feel safer where white light is used.

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**Equality and Diversity:**

Has an Equality Impact Assessment been undertaken? Yes

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**Recommendations and Reasons for recommended action:**

It is recommended that the contract for the provision of low energy street lighting luminaires is awarded to the most economically advantageous tenderer for each lot:

- Lot 1 Residential Luminaires
- Lot 2 Residential Decorative Luminaires
- Lot 3 Main Road Luminaires
- Lot 4 Main Road decorative Luminaires
- Lot 5 Area and Zebra Crossing Floodlights

Reason:

By installing the new low energy street lighting, the Authority will realise an estimated net revenue saving of £0.352m per annum. Furthermore, it is hoped that additional social benefits will be realised in terms of road safety and reducing the fear of crime.

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**Alternative options considered and rejected:**

Three options were considered:

OPTION ONE – do nothing, i.e. continued reliance on existing lighting technology.

By continuing to rely on existing street lighting technology, the Authority would forego net revenue saving of £0.352m per annum. In addition there would be no reputational benefit, no carbon reduction and less protection against ever increasing energy costs.

OPTION TWO – take other energy savings measures on the streetlighting

This option allowed for the installation of energy saving equipment in to the existing street lighting luminaires. This included dimming equipment and photoelectric cells with rationalised switching ratios. Whilst this option provided for reasonable energy savings, they were significantly lower than those provided for with LED equipment. Furthermore, as this option called for existing luminaires to be used, there would be a continued reliance on aging equipment. Furthermore, this option would not have had the benefits that the Authority would otherwise expect to gain from white light.

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**Published work / information:**

**Background papers:**

Title	Part I	Part II	Exemption Paragraph Number							
			1	2	3	4	5	6	7	
Equality Impact Assessment	x									

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**Sign off:**

Fin	TC1415 003.24.04. 14	Leg	SC/20 087	Mon Off	20129/ DVS	HR		Assets		IT		Strat Proc	NA/SPU/357/ CP/0414
Originating SMT Member													
Has the Cabinet Member(s) agreed the content of the report? Yes / No													

## I Introduction

- 1.1 This report provides additional background and detail to the Low Energy Street Lighting project, which aims to replace nearly 29,000 of the city's existing street lights with the more energy efficient LED technology.

## 2 Background

- 2.1 On 12<sup>th</sup> February 2013, the Directors for Place and Corporate Services submitted a report to Cabinet seeking approval for a £13.25 million capital investment as part of an energy and carbon saving programme. This consisted of an £11.58m proposal to replace the authority's existing high pressure sodium street lamps with light emitting diode (LED) luminaires with the remainder allocated to Solar PV and Boiler replacement programmes.
- 2.2 Cabinet approved the proposals, which included both procurement of the new street lighting luminaires and the capital investment for the energy and carbon saving programme.
- 2.3 In addition to the energy and carbon savings, it is also anticipated that the low energy street lighting will provide the following social benefits arising from the 'white light' produced by the new luminaires:
- White light allows a wider spectrum of colours to be seen and facial features to be distinguished. As a result, it is anticipated that the new street lights will make people feel safer.
  - White light has been shown to improve visibility for drivers, who are better able to detect roadside movement faster and at a greater distance, thus improving road safety.
  - The street lights direct light downwards reducing light pollution into people's houses. It is hoped that light pollution can be reduced across the whole city.
- 2.4 Recognising the need to engage collaboratively with customers as 'community developers' in line with the Council's Framework for Co-operative Commissioning, a trial of approximately 100 LED street lights was undertaken across fourteen residential roads in West Park, Plymouth in February 2013. This helped to inform the proposed wider roll-out of the new technology.
- 2.5 Approximately three weeks after the installation of the new lights a feedback questionnaire was sent out to residents living in close proximity to the trial. Of the 702 properties surveyed, 233 provided feedback (33%), 230 by post, and 3 on-line. The responses are summarised in the following tables:

Response		Prefer new lights	Prefer new lamp colour	Feel safer (Crime)	Feel safer (Road Safety)	Further investment worthwhile
Strongly Agree	Positive	45%	44%	31%	30%	45%
Agree		24%	28%	27%	31%	28%
Not Sure	Neutral	11%	9%	17%	15%	9%
Disagree	Negative	6%	6%	12%	11%	6%
Strongly Disagree		13%	12%	12%	12%	12%

Response	Brightness level
Too Bright	8%
Just Right	66%
Not Bright Enough	26%

- 2.6 The average percentage for positive feedback across all statements (excluding brightness level) was 67%, whilst the average percentage for negative feedback across all statements (excluding brightness) was 20%. 66% of residents considered the level of brightness to be just right, whilst 8% felt the level was too bright.
- 2.7 With the above in mind, procurement of the luminaires began with the issue of the OJEU notice on 23<sup>rd</sup> October 2013. Thirty Pre-Qualification Questionnaires were received, of which five bidders were invited to tender. The outcome of the procurement is detailed in the Contract Award Report accompanying this paper.

### 3 Financial Model

- 3.1 The business case financial model for the project was predicated on an initial capital investment of £11.6m, funded by prudential borrowing, to deliver an estimated energy and maintenance cost saving/cost avoidance of £28m over 20 years. The financial model made numerous assumptions in respect of:
- energy unit rate increase over the 20 year period
  - energy savings (Kilowatt Hours or KWH) provided by the new luminaires
  - cost saving in maintenance
  - cost of the new luminaires
  - cost of the loan repayments over the 20 year period
- 3.2 The procurement has now given greater certainty in respect of the energy savings provided by the new luminaires, the potential cost saving in maintenance, and the cost of the new luminaires, thus enabling a more accurate assessment to be made of the overall cost of the project and the projected savings/cost avoidance over the life of the loan.
- 3.3 Based on the tendered prices, the estimated total cost of the project is £7.99m, which includes the costs of purchase, installation and project management. Also included is a 5% contingency for known risks, i.e. concrete street lighting columns which will need to be replaced prior to the installation of the new lighting, and a further 5% contingency to allow for the adaptation of certain designs of existing street lighting columns/provision of fittings to enable the new lighting units to be mounted.
- 3.4 The project costs also allow for the supply and installation of an iconic piece of illuminated public art, a 'solar tree', as a statement of the Council's intent in respect of its sustainable energy agenda and as a showpiece for the Low Energy Street Lighting Project. The location of the solar tree will need to be identified.

- 3.5 Using the data from the procurement exercise, the new low energy luminaires will provide a total estimated energy saving of 12,094 mega-watt hours per year. This equates to an energy saving of £1.089m based on current budgeted levels. The total avoided energy costs are estimated to be £1.263m per annum, the difference reflecting an estimated £0.174 pressure against future budgeted levels.
- 3.6 Given the level of prudential borrowing needed to fund the project is significantly lower than that estimated in the original business case, and that the energy differential is larger, the loan repayment period has been reduced to 12 years. This is in line with the guaranteed life of the Luminaires offered by the successful bidder.
- 3.7 Throughout the lifetime of the loan, it is estimated that the initial investment of £7.99m will deliver a net present value (NPV) of £10.3m. As the new luminaires are less prone to failures and will not require cyclical proactive lamp changing, this figure includes savings of £0.108m per annum projected from reduced street lighting maintenance over the same period.

#### **4 Additional Energy Saving Equipment**

- 4.1 In order to maximise energy savings, the tender specification required tenderers to provide for new photo electric cells (PECs) and automatic dimming equipment.
- 4.2 PECs are light operated switches. They switch street lights 'on' when the light level falls beneath a given value (usually at dusk), and switches them 'off' when it rises above another level (usually at dawn). The ratio between the two light levels is known as the switching ratio.
- 4.3 In Plymouth the switching ratio is typically set to 70:35. Guidance from the Institution of Lighting Engineers (ILE) estimates that if the switching levels were reduced to 35:18 a saving of 50 hours per lamp per annum could be achieved (approximately 1-2% energy saving). This reduction in operational hours of the lamp also reduces the chances of premature failure towards the end of a street light's life.
- 4.4 In simple terms, this means that the street lights will be on for less time each day, although the difference will be imperceptible. The reduction in energy through the use of the new PECs has been factored into the overall energy saving cited in section 3.5, above.
- 4.5 Dimming technology is available to reduce light output at different times of the night offering additional energy savings. The installation of automatic dimming equipment in the new luminaires will enable lighting levels to be gradually reduced to a pre-defined minimum at the dead of night and to increase towards dawn as streets become busier. Automatic dimming has been included only in the main road street lighting, as this provides for the greatest cost/benefit. Automatic dimming will not be used in residential street lights as it is not cost effective, i.e. the energy savings available are significantly reduced when the cost of the additional equipment is factored in.
- 4.6 The reduction in energy through the use of automatic dimming has not been factored into the overall energy saving cited in section 3.5, above, as the dimming profile, which dictates the additional energy saving, will need to be agreed with the successful tenderer after the award of contract.

#### **5 Project Implementation**

- 5.1 Subject to approval of the award of contract, and agreement with the successful supplier, the proposed starting date for the installation of the new luminaires is the 4<sup>th</sup> August 2014.



- 5.2 Installation will be undertaken by Plymouth City Council's street lighting contractor, Cartledge Ltd, over a period of eighteen months, a programme reflecting the agreed procured service approved by Cabinet on 10<sup>th</sup> December 2013. A detailed installation programme will be agreed between Plymouth City Council, Cartledge Ltd and the successful supplier following the award of contract, however, it is envisaged that the new luminaires will be installed on an area by area basis.

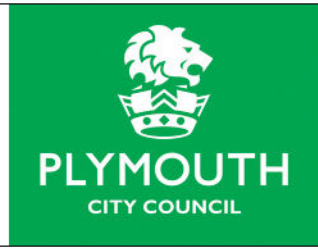
### **6 Equality Impact Assessment – Key Findings**

- 6.1 LED luminaires tend to give a more focussed cone of light than existing street lights. This may cause personal security concerns for some elderly residents as there may be darker areas between lighting columns, and less light overspill into private gardens. However, it is expected that, in general, greater security will be perceived by most people and that the whiter light should make it easier to recognise colours and objects, particularly for people with a visual impairment.
- 6.3 Officers will liaise with potentially affected groups, e.g. through NHS, Plymouth Guild, Thomas Pocklington Trust, throughout the rollout to monitor the effects of the new lighting. There will also be an ongoing liaison with the Devon and Cornwall Constabulary to monitor records of security incidents during hours of darkness.
- 6.4 It has been suggested that the higher content of blue in white LED lighting can have adverse effects on health, through the suppression of melatonin during hours of darkness.
- 6.5 However, studies have shown that this effect is produced by prolonged and intense exposure in an indoor environment. It has also been shown that melatonin suppression peaks at a colour temperature of 6500K and can also increase below 3000K; the specified colour temperature for the proposed lighting is 3500K-4500K, well outside the high-risk range.
- 6.6 No adverse impact on human rights has been identified.

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# **CONTRACT AWARD REPORT (PART I)**

Low Energy Street Lighting



## **I INTRODUCTION**

- 1.1 This report details the outcome of the procurement for low energy street lighting luminaires, and recommends the appointment of the successful tenderers.
- 1.2 The contract covers the replacement of the city's existing low pressure sodium street lights with more energy efficient lighting predominantly incorporating LED technology.

## **2 BACKGROUND**

- 2.1 On 12<sup>th</sup> February 2013, the Directors for Place and Corporate Services submitted a report to Cabinet seeking approval for a £13.25 million capital investment as part of an energy and carbon saving programme. This consisted of an £11.58m proposal to replace the authority's existing high pressure sodium street lamps with light emitting diode (LED) luminaires with the remainder allocated to Solar PV and Boiler replacement programmes.
- 2.2 Cabinet approved the proposals, which included the procurement of the new streetlighting luminaires, and the capital investment for the energy and carbon saving programme.
- 2.4 The procurement process was managed under the restricted procedure in accordance with the Public Contract Regulations 2006 (as amended), and a contract notice, published in the Official Journal of the European Union (OJEU) reference number 2013/S 206-356573, was dispatched on 23rd October 2013.

## **3 PRE TENDER SELECTION CRITERIA**

- 3.1 The Pre-Qualification criteria were as follows:

### 3.1.1 Information Only Questions:

- Organisation Identity
- Organisation Information

- 3.1.2 Mandatory questions, the responses to which were reviewed and treated as pass or fail criteria:

- Compliance with EU Legislation/ UK Procurement Legislation Financial
- Insurance
- Health & Safety Policy
- Data Protection
- Equalities and Diversity Policy
- Timescales

- 3.1.3 Further mandatory questions where some responses were evaluated in terms of risk. If the risk was deemed to be high, it would result in a fail for the question evaluated and the remainder of the PQQ would not be evaluated.

- 3.2 The following sections contain mandatory questions, the responses to which were evaluated and scored. For some questions the response given was evaluated in terms of risk. If the risk was deemed to be high, this would result in a fail for the question evaluated and the remainder of the PQQ would not be evaluated.

Section	Weighting(%)
Prime Contractor/Sub-Contracting	6%
Quality Management	17%
Environmental Management	3%
Equalities and Diversity	2%
Disputes	13%
Business Capability	45%
Recent Contracts/References	14%

3.3 Where sections were scored as being '**Outstanding**', '**Good**', '**Satisfactory**', '**Fair**', '**Poor**', '**Unacceptable**', the following definitions were applied:

- **5 Marks - Outstanding:** Full response given with exceptional detail/evidence.
- **4 Marks - Good:** Full response given with good detail/evidence.
- **3 Marks - Satisfactory:** Partial response, adequate detail/evidence.
- **2 Marks - Fair:** Partial response, basic detail/evidence.
- **1 Marks - Poor:** A limited response, little or no detail/evidence..
- **0 Marks - Unacceptable:** No information submitted.

3.4 30 companies submitted a PQQ response on the 27<sup>th</sup> November 2013. The results of the PQQ evaluation have been set out in the Part 2 report.

3.5 The maximum number of companies invited to tender were five for each of the five lots. These were the five companies with the highest scores from the evaluation of the PQQ submissions.

## 4 TENDER EVALUATION METHODOLOGY

4.1 The Invitation to Tender (ITT) document was published electronically via the e-tendering portal, Supplying the South West on the 18<sup>th</sup> February 2014 and tenders were submitted on the 1<sup>st</sup> April 2014. The submissions were evaluated by a number of Council officers with appropriate skills and experience, in order to ensure transparency and robustness in the process.

4.2 The tender was evaluated in two parts, Technical and Commercial, weighted 65% and 35% respectively. The Council will award any Contract based on the most economically advantageous offer.

## 5 TECHNICAL EVALUATION

5.1 The evaluation criteria for the Technical submissions were in two parts. Part 1 included Method Statements, requiring tenderers to provide a separate submission for each luminaire offered. Part 2 required tenderers to provide a single response.

5.2 The method statements, maximum marks available and their respective weightings are summarised in Appendix I.

See Part 2 report for full details of the results of the technical evaluation.

## **6 COMMERCIAL EVALUATION**

- 6.1 For each lot, Prices tendered for Luminaire Costs, Additional Equipment Costs and Delivery Costs were factored in to a 20-year whole life cost calculation.
- 6.2 The tenderer with the lowest price scored 100 marks. The remaining submissions were assessed with one mark deducted for each percentage point by which it exceeded the lowest. The final financial mark was reduced by 35% in line with the weighting for the financial part of the tender.

See Part 2 report for full details of the results of the commercial evaluation.

## **7 SUMMARY OF EVALUATION**

Of the five bidders Invited to Tender, only three bidders submitted an ITT response.

See Part 2 report for full details.

## **8 FINANCIAL IMPLICATIONS**

- 8.1 The ITT provided estimated quantities of existing street lighting units and required bidders to provide unit costs for each of the luminaires offered.
- 8.2 The total cost to deliver the Low Energy Street Lighting project as a whole is £7.99m. In line with the business case, the cost of the project will be met from prudential borrowing with repayments met from revenue savings arising from reduced energy and maintenance costs.

See Part 2 report for full details.

## **9 RECOMMENDATIONS**

- 9.1 It is recommended that a contract be awarded to the successful tenderer. The details of the successful tenderer have been set out in the Part 2 report.

## Appendix I – Technical Evaluation

<b>TECHNICAL REQUIREMENTS – PART 1</b> (Each question requires a separate submission for each luminaire offered)							
Method Statements		Weighting	Maximum Marks Available				
			Lot 1	Lot2	Lot 3	Lot 4	Lot 5
1	Compliance with Technical Specification	10%	5 marks	10 marks	5 marks	15 Marks	5 Marks
2	Luminaire Performance	10%	30 marks	60 marks	30 marks	90 marks	30 marks
3	Sample Luminaire – Ease of Installation	7.5%	5 marks	10 marks	5 marks	15 Marks	5 Marks
4	Sample Luminaire – Ability and Ease to Maintain	7.5%	5 marks	10 marks	5 marks	15 Marks	5 Marks
<b>TECHNICAL REQUIREMENTS – PART 2</b> (A single response to each question is required. The same mark will be used for each lot)							
Method Statements		Weighting	Maximum Marks Available				
			Lot 1	Lot2	Lot 3	Lot 4	Lot 5
5	Training	5%	5 marks	5 marks	5 marks	5 marks	5 marks
6	Details of Product Warranties	10%	5 marks	5 marks	5 marks	5 marks	5 marks
7	Ongoing Support	5%	5 marks	5 marks	5 marks	5 marks	5 marks
8	Proposals for Minimisation of Waste	2.5%	5 marks	5 marks	5 marks	5 marks	5 marks
9	Future Proofing the Solution	7.5%	5 marks	5 marks	5 marks	5 marks	5 marks
10	UMSUG Codes	Pass/Fail	N/A	N/A	N/A	N/A	N/A
<b>Total Weighting / Total Marks Available for Part 1 and Part 2</b>		<b>65%</b>	<b>70 marks</b>	<b>115 marks</b>	<b>70 marks</b>	<b>160 marks</b>	<b>70 marks</b>

Evaluation Criteria – the following scoring system was applied for each question respectively:

### I - Compliance with Technical Specification

The evaluation criteria are as follows:

Response	Score	Definition
Unacceptable	0	Unanswered or failed to adequately address the requirement
Poor	1	The information submitted is poor and does not provide sufficient information to demonstrate the organisation's ability to meet the requirements within the technical specification.

Fair	2	The information submitted is limited and does not provide sufficient detail to demonstrate the ability to meet all of the requirements within the technical specification
Satisfactory	3	Satisfactory response to the requirements which provides adequate evidence to demonstrate the ability to meet the requirements of the technical specification but contains some inconsistencies.
Good	4	Good response to the requirements which provides evidence which is clear, demonstrates the ability to meet the requirements of the technical specification in full but has minor inconsistencies
Excellent	5	Excellent response to the requirements which provides detailed evidence which demonstrates the ability to meet the requirements of the technical specification in full is clear, complete and consistent.

## 2 - Luminaire Performance

The evaluation criteria for LED Luminaires is as follows:

Requirement	Score	Definition
Initial Luminaire Lumen Output (L90)	Not Scored	For Information Only
Lumen Depreciation Rate based on the light output at 25 % of rated Life compare to the initial output.	0 Marks	Cat 3 > 70% of initial and/or no supporting test data provided
	3 Marks	Cat 2 > 80% of initial
	5 Marks	Cat 1 > 90% of initial
Luminaire Life L(x) – where x is the percentage of L90 at the declared life - the length of time it takes for the proposed Luminaire to reach 70% of its initial light output	0 Marks	Less than 50,000 hours and/or no supporting test data provided
	3 Marks	Between 50,000 and 59,999 hours
	5 Marks	Over 60,000 hours
Failure Fraction F(x) for the Led Luminaire where x is the percentage of failures at L(x)	0 Marks	Over 10% and/or no supporting test data provided
	3 Marks	6-10%
	5 Marks	0 - 5%
Colour Temperature	0 Marks	Over 5000K and/or no supporting test data provided
	3 Marks	Between 4501K and 4999K
	5 Marks	Between 3500K and 4500K
Colour Temperature tolerance at initial and 25% of rated Life.	0 Marks	Greater than 7-step ellipse and/or no supporting test data provided
	3 Marks	5-7 step ellipse
	5 Marks	4 step ellipse or less
Colour Rendering Index Value	Not Scored	For Information Only
Colour Rendering Index Value Shift after a total operation time of 25% of rated life	0 Marks	Decreased by more than 3 points on initial and



		maintained CRI value and/or no supporting test data provided
	3 Marks	Decreased by 3 points on initial CRI value and more than 5 points from the maintained CRI value and / or Decreased by more than 3 points on initial CRI value and 5 points from the maintained CRI value
	5 Marks	Decreased by 3 points on initial CRI value and 5 points from the maintained CRI value

The evaluation criteria for Luminaires using an Alternative Light Source are as follows:

Requirement	Score	Definition
Initial Luminaire Lumen Output (L90)	Not Scored	For Information Only
Dimmable Lamp Power	0 Marks	<60%
	3 Marks	60% - 70%
	5 Marks	>70%
Luminaire Life L(x) – where x is the percentage of L90 at the declared life - the length of time it takes for the proposed Luminaire to reach 70% of its initial light output	0 Marks	<16,000 hours
	3 Marks	16,000 – 19,999 hours
	5 Marks	20,000 – 24,000 hours
Colour Temperature	0 Marks	Over 5000K and/or no supporting test data provided
	3 Marks	Between 4001K and 4999K
	5 Marks	Between 2800K and 4000K
Colour Temperature Tolerance	0 Marks	> +/-200k
	3 Marks	+/-200k
	5 Marks	<+/-100k
Colour Rendering Index Value	0 Marks	≤ 50
	3 Marks	≤65.999
	5 Marks	≥66
Lamp Life	0 Marks	<16,000
	3 Marks	16,000 – 16,999 hours
	5 Marks	≥17,000 hours

### 3 - Sample Luminaire – Ease of Installation

The evaluation criteria are as follows:

Response	Score	Definition
Unacceptable	0	No sample supplied.

Poor	1	Poor sample which is not easy to lift and install by a single person unaided and the luminaire does not include all fittings to allow post top and side entry and there is a requirement to use additional spigot adaptors to post top mount to 40 to 76mm columns.
Fair	2	Fair sample which is not easy to lift and install by a single person unaided but the luminaire includes all fittings to allow post top and side entry and there is no requirement to use additional spigot adaptors to post top mount to 40 to 76mm columns.
Satisfactory	3	Satisfactory sample which is easy for a single person to lift and install unaided. The luminaire includes all fittings to allow post top and side entry and there is no requirement to use additional spigot adaptors to post top mount to 40 to 76mm columns. The sample provided will give the engineer a very restricted view of the column on installation with some issues connecting cables and/ or there are some technical/design issues.
Good	4	Good sample which is easy for a single person to lift and install unaided. The luminaire includes all fittings to allow post top and side entry and there is no requirement to use additional spigot adaptors to post top mount to 40 to 76mm columns. The sample provided will give the engineer a restricted view of the column on installation with easy access to connect cables and/ or there are some minor technical/design issues.
Excellent	5	Excellent sample which is easy for a single person to lift and install unaided. The luminaire includes all fittings to allow post top and side entry and there is no requirement to use additional spigot adaptors to post top mount to 40 to 76mm columns. The sample provided will give the engineer clear visibility of the column on installation with easy access to connect cables.

#### 4 - Sample Luminaire – Ability and Ease to Maintain

The evaluation criteria are as follows:

Response	Score	Definition
Unacceptable	0	No sample supplied.
Poor	1	Poor sample which demonstrates the Luminaire is not easy to maintain at height and has some technical / design issues with gaining easy access to the Driver and does not allow access for replacement LEDs/Alternative Light Source to be fitted by the maintenance engineer.
Fair	2	Fair sample which demonstrates a build and design which is easy to maintain at height but does not allow for the constraints of the working environment (overhead cables, trees and traffic flow) and doesn't include anti tamper fixings to prevent/deter vandalism or theft. Allows for accessibility to maintain the Driver but does not offer the flexibility for replacement LEDs/lamps to be fitted by the maintenance engineer

Satisfactory	3	Satisfactory sample which demonstrates a build and design which is easy to maintain at height but does not allow for the constraints of the working environment (overhead cables, trees and traffic flow) and doesn't include anti tamper fixings to prevent/deter vandalism or theft. Allows for accessibility to maintain the Driver and flexibility for replacement LEDs/lamps to be fitted by the maintenance engineer
Good	4	Good sample which demonstrates a quality build and design which is easy to maintain at height but does not allow for the constraints of the working environment (overhead cables, trees and traffic flow) and includes anti tamper fixings to prevent/deter vandalism or theft. Allows for accessibility to maintain the Driver and flexibility for replacement LEDs/lamps to be fitted by the maintenance engineer.
Excellent	5	Excellent sample which demonstrates a quality build and design which is easy to maintain at height and has been constructed to allow for the constraints of the working environment (overhead cables, trees and traffic flow) and includes anti tamper fixings to prevent/deter vandalism or theft. Allows for accessibility to maintain the Driver and flexibility for replacement LEDs/lamps to be fitted by the maintenance engineer.

## 5 - Training

The evaluation criteria are as follows:

Response	Score	Definition
Unacceptable	0	Unanswered or failed to adequately address the requirement
Poor	1	The information submitted is poor, providing no details of the training package provided and/or fails to
Fair	2	The information submitted is fair and provides very little information in relation to the training package provided and/or it does not meet the requirements within the specification and is off site.
Satisfactory	3	Satisfactory response to the requirements which provides adequate details of the training package which is on site with all relevant training documentation which meets the majority of requirements within the specification.
Good	4	Good response to the requirements which provides a detailed explanation of the training package offered on site with all relevant training documentation which fully meets the requirements of the specification.
Excellent	5	Excellent response to the requirements which provides a comprehensive explanation of the training package offered on site with all relevant training documentation which fully meets the requirements of the specification.

## 6 - Details of Product Warranties

The evaluation criteria are as follows:

Response	Score	Definition
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Unacceptable	0	Unanswered or failed to adequately address the requirement
Poor	1	The information submitted is poor and fails to meet the minimum requirements within the specification.
Fair	2	Fair response to the requirements which is limited and does not demonstrate that it can meet the minimum requirements. There are some exclusions and/or there is no provision for reimbursement to the Council for installation costs.
Satisfactory	3	Satisfactory response to the requirements which is clear, complete and consistent which meet the minimum requirements. There are no exclusions but there is no provision for reimbursement to the Council for installation costs.
Good	4	Good response to the requirements which is clear, complete and consistent which meet or exceed the minimum requirements, there are no exclusions and there is some provision for reimbursement to the Council for installation costs.
Excellent	5	Excellent response to the requirements which is clear, complete and consistent which provides extended guarantees which exceed the minimum requirements, there are no exclusions and includes commitment to fully reimburse the Council for installation costs.

### 7 - Ongoing Support

The evaluation criteria are as follows:

Response	Score	Definition
Unacceptable	0	Unanswered or failed to adequately address the requirement.
Poor	1	The information submitted is poor and fails to meet the minimum requirements within the specification. The organisation does not have suitable procedures in place and the proposals for ongoing support are inadequate.
Fair	2	Fair response to the requirements which is limited and does not demonstrate that it can meet the minimum requirements, there are some exclusions and/or there is no provision for reimbursement to the Council for installation costs. The proposals for ongoing support are minimal and/or there are very limited documented processes in place
Satisfactory	3	Satisfactory response to the requirements which is clear, complete and consistent which meet the minimum requirements, there are no exclusions but there is no provision for reimbursement to the Council for installation costs. The organisation has some documented procedures in place for ongoing support and helpdesk facilities but there are some inconsistencies.

Good	4	Good response to the requirements which is clear, complete and consistent which meet or exceed the minimum requirements, there are no exclusions and there is some provision for reimbursement to the Council for installation costs. The organisation has well documented procedures in place for ongoing support and helpdesk facilities but there are minor inconsistencies.
Excellent	5	Excellent response to the requirements which is clear, complete and consistent which provides extended guarantees which exceed the minimum requirements, there are no exclusions and includes commitment to fully reimburse the Council for installation costs. The organisation has well documented and robust procedures in place for ongoing support and helpdesk facilities.

### 8 - Proposals for Minimisation of Waste

The evaluation criteria are as follows:

Response	Score	Definition
Unacceptable	0	Unanswered or failed to adequately address the requirement
Poor	1	Poor response the proposal provides no information in relation to recycling and waste reduction.
Fair	2	Fair response the proposal provides some information in relation to recycling and waste reduction but this is of no benefit for this contract.
Satisfactory	3	Satisfactory responses the proposal demonstrates an interest in recycling and the organisation have some initiatives in place or are developing ideas which reduce waste.
Good	4	Good response the proposal demonstrates an active interest in recycling and the organisation have some well established procedures which reduce waste.
Excellent	5	Excellent response the proposal demonstrates a proactive interest in recycling and the organisation have maximised opportunities to reduce waste.

### 9 - Future Proofing the Solution

The evaluation criteria are as follows:

Response	Score	Definition
Unacceptable	0	Unanswered or failed to adequately address the requirement
Poor	1	Poor response the organisation has provided no evidence to demonstrate they are working on product development for this or any products within their range.
Fair	2	Fair response the organisation has provided limited evidence to demonstrate they are working on product development for the proposed Luminaire and does not mention interchangeability or advances in technology.

Satisfactory	3	Satisfactory response the organisation has provided some evidence to demonstrate they are working on product development for the proposed Luminaire but this is in the early stages but does not allow for interchangeability and technology advances.
Good	4	Good response the organisation has a structured approach to product development for the proposed Luminaire and the proposal allows for easy installation of upgrades and enhancements to benefit from advances in technology and to allow for interchangeability but the organisation is not committed to working within the requirements of the Zhaga standard.
Excellent	5	Excellent response the organisation has a structured approach to product development for the proposed Luminaire, the proposal allows for easy installation of upgrades or enhancements to benefit from advances in technology to allow for interchangeability and the organisation is committed to working within the requirements of the Zhaga standard.

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