CES
LIGHTING & ELECTRICAL
SPECIALISTS

Specification Documentation
St Giles-in-the-Fields
London

Client Address:
St Giles-in-the-Fields Church
60 St Giles High Street
London
WC2H 8LG

CES LLP
Crusader Hall
25 Stanley Park Road
Wallington
Surrey SM6 1HL

Designer: Ryan Slessenger
Project Number: 6190
Date: 18 September 2017

Tel: 020 8835 2816
email: office@ces-engineers.co.uk
web site: www.churchlighting.co.uk

Index

Included Drawings

Drawing No.	Size	Title
6190-02	A1	Elevation Lighting Layout
6190-03	A1	Proposed Lantern and Lamppost Layout
6190-04	A1	Plan View of the Tower Lighting

1.0 *INTRODUCTION*

CES LLP have worked as electrical specialists in churches, heritage and historic buildings for over 25 years. As a passionate business, we strive to work alongside the Client & Architects to achieve the best desired outcome. We have extensive experience in working on specialist sites which need to remain both occupied and functioning.

Our design team are involved with their local churches and not only have an understanding of illuminating the architecture but also an understanding of the life of a church.

We design our systems so that they are flexible as the church building is used for a variety of services/events with simplistic controls so that all can operate the lighting without the requiring training.

We always strive to develop a good and close working relationship with the Architect, Consultant & Client with the focus of our company on every project being attention to detail and we have great pride in carrying out the work to the highest possible standard. Your complete satisfaction is important to us, not only for the duration of the work but the on-going maintenance and any electrical works needed in the future.

Please look at our website, www.church-lighting.co.uk where you will see further information and can view pictures, videos and client testimonials from some of our previous projects.

Please feel free to contact our other clients in your area for whom we have carried out similar electrical installations.

We specialise in designing lighting systems to work within listed and ancient buildings such that our work is unobtrusive and in keeping with the architecture.

Project Brief:

The Church: In one form or another a Christian building has stood on this plot since 1101 AD when the first incarnation of the building was constructed as a Hospital by Queen Matilda, wife of Henry I. The hospital specialised in the care of lepers as at this time this area stood outside of the City of London.

By the 1550's a small Village of 350 people began to grow around the Church, the 1600's saw the area develop as a wealthy suburb of London and the need for a new Church was apparent. In 1628, the church was rebuilt in the latest and most elaborate style, with contributions from the wealthy residents of the parish.

This Church stood in place through the Plague and the grounds were used to bury many Plague victims. By the 18th Century the Church stood in poor repair and as the population of the area was booming the Parish was Split into two, The Parish of St Giles and the Parish of St Georges Bloomsbury.

The present Church was built between 1730-34 and designed by the architect Henry Flitcroft who was responsible for many commissions in the early to mid-eighteenth century. The Church was built in the Palladian style, a European style of architecture derived from and inspired by the designs of the Venetian architect Andrea Palladio (1508–1580).

The Population of the area grew greatly as London expanded, the area around St Giles was renowned for being poor and features in many artworks and stories from the times. St Giles appears repeatedly in the writings of Charles Dickens, who spent time in the Rookeries and Seven Dials studying the criminal underworld of Victorian London.

In Modern times the Church sits at a physical junction between the great western road that is now Oxford Street and the north-south thoroughfare through Drury Lane. St Giles came through the war pretty-well unscathed with the old Victorian glass being the extent of the casualties. The church underwent a major restoration in 1952-3 described by John Betjeman as 'One of the most successful post-war church restorations,' ('The Spectator, 9th March 1956). After the 1950's the surrounding area went through major Changes with the loss of small shops and housing as London encroached, however the area is still busy as people are drawn to this area for work, leisure and education. Denmark Street became known as a centre of the British music industry while the north of the parish became part of the thriving educational community centred on the University of London.

Lighting Requirements: This edifice once stood out within its environment but has become overshadowed by the modern-day redevelopment and construction locally.
Along with the regular liturgical services the Church is also used for support groups, concerts, artistic events and various other regular activities and therefore retains its active and influential role within the local community.

The new lighting to the external tower of the Church is not only intended to highlight the historical and architectural standing within the City of London but also communicate its position and purpose to those in proximity.

Design Process: A final lighting scheme is designed taking into account a wide variety of different factors, many of which are addressed above. The areas of architectural significance must be identified along with this the purpose and aims of the events that take place within the Church grounds must be addressed. From this initial starting point, many discussions with the client take place to refine the design and ensure that the scheme is in keeping with the Clients initial brief; this will include various documentation, illustrations, demonstration evenings and CAD drawings throughout the design process.

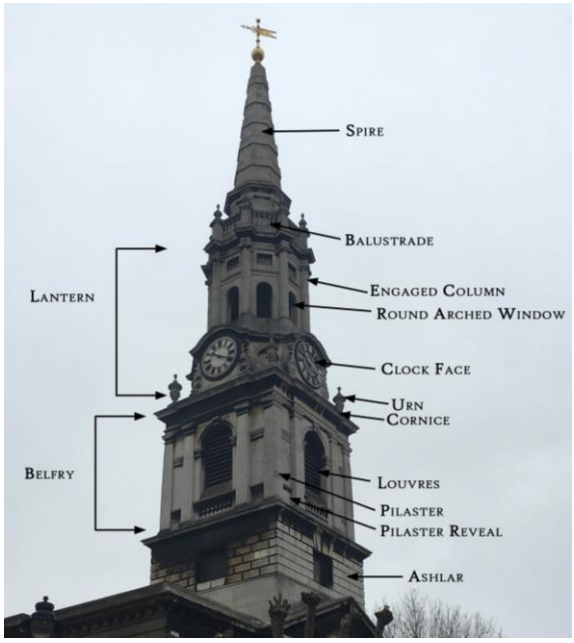
The initial scheme options presented to the clients at St Giles-in-the-fields were as follows:

An overall washing of the Tower

'OR'

An architectural lighting approach:

- A graze washing of the lower Ashlar.
- Architectural Grazing of the Pilasters at the Belfry level.
- Internal lighting to the Belfry to protrude illumination out from the wooden louvres.
- Internal lighting to the Clock faces to create an illuminated clock face.
- Lighting to climb the engaged columns at the lantern.
- A narrow beam wash of the Spire



The Architectural approach was chosen. Since the two demonstration evenings were carried out this design has been refined and will be described in full in the following documentation. Some of the concept areas above were not carried forward.

Design Considerations: The primary design considerations for this project are:

- How to illuminate this Poignant building respecting the architecture and history.
- How to illuminate the Church tower in an efficient way that will require minimal maintenance.
- How to maintain longevity of design, so that the lighting design stands well over the next decades and not become outdated as technology advances.

Scope of Work: After discussion with the client the project encompasses the following:

- Lighting to the Belfry
- Lighting to the Lantern
- Lighting to the Spire
- Grounds lighting
- Clock Face
- Lighting Control

Design Intent: The Lighting will be controlled from an astronomical time clock. The time clock is to have automatic adjustment for the changing seasons

- The whole lower Tower will receive a light wash to raise it above the background light levels.
- The Clock to be back-illuminated internally
- The Round arch windows and reveals will be illuminated from a fitting mounted to the ledge
- The upper-balustrade will be illuminated from a strip mounted behind it.
- The Spire will receive narrow beam spotlights with spreader lens'.
- Lighting to the Grounds, refurbishing the existing or replacing the current lanterns and lampposts.

Definitions: Throughout the Contract the following Definitions will apply:

- Client	- This shall be the person(s) or Contract Administrator nominated by the Church with authority to issue instructions and variations to the Contract.
- Lighting Consultant or Designer	- This shall be CES LLP in general and the designer allocated to this contract in particular.
- Tenderer	- This shall be the electrical company submitting a tender for the work specified herein.
- Contractor or Electrical Contractor	- This shall be the successful Tenderer to whom the contract is awarded
- Simple Contract	- A simple contract shall be a considered binding agreement in writing under a common-law tort whereby one party (the Contractor) agrees to provide an installation, goods and / or services (the Specification) to a second party (the Client) for an agreed sum within an agreed timeframe.

Environmental Considerations

It is essential to consider environmental factors with any eternal lighting scheme. The Lighting proposed for installation at St Giles-in-the-fields has taken into consideration the impact to the local area including; light pollution, usage hours, glare, and running costs.
As a member of the SLL (society of light and lighting) and CIBSE, CES follow the guidelines and good practices outlined in many documents, including the SLL Code for Lighting. The SLL guidelines P128 state:

"Where fixed external lighting is installed, provide light fittings with the following characteristics:

a. either:
i. the lamp capacity not greater than 100 lamp watts per light fitting; and
ii. all lamps automatically controlled so as to switch off after the area lit by the fitting becomes unoccupied; and
iii. all lamps automatically controlled so as to switch off when daylight is sufficient

b. or
i. lamp efficacy greater than 45 lumen per circuit watt; and
ii. all lamps automatically controlled so as to switch off when daylight is sufficient; and
iii. light fittings controllable manually by occupants"

The Proposed lighting fulfils these guidelines.

Energy Rating

All external fittings are rated at A++ for efficiency and the lamps for internal use within the lanterns are rated at A+.

This and further details can be found in the Data sheets located in appendix B.

Light Pollution & Glare

All the lighting is to be controlled automatically from the dimming system with a time clock facility built in. The time clock will provide a facility to automatically turn the lights on and off at the required time, it would be recommended unless otherwise desired that the external lighting be switched off at 11:30pm every day of the week.

All external lighting luminaires are carefully selected for beam angle and will be aimed to ensure to maximise the efficiency of light, thus, reducing the spill to neighbouring areas. All upward facing luminaries are targeted on the building and therefore illumination is not to escape into the sky creating unwanted glare and light pollution.

As mentioned above the careful selection of beam angle coupled with luminaire position will ensure those walking or driving past the Church building will not be negatively affected by the lighting.

In this busy area of London, the indirect lighting created by the Church will help those in the area to move safely by gently contributing to the ambient lighting levels.

Energy Consumption

The consumption of electricity for a full LED scheme is far lower than that of an equivalent traditional external lighting scheme. The total energy usage of the external lighting system at ST Giles-in-the-fields is estimated to be **721w** or **0.721kw**.

The external lighting will be controlled by an Astronomical time clock that automatically adjusts to the Changes of time for sunset and Daylight savings. For the calculation below we have taken an average of 5 hours use per night for 30 days leaving **150 hours**.

Estimated Cost to run the system.

Total Load:	**0.721Kw**
Monthly Load:	**0.721Kw x 150 hrs (estimate) = 108.15KWh**
Cost per Month:	**108.15KWh x 0.14p = £15.14 per month**

The system has been designed to be flexible with all the lighting able to be tuned so that upon focussing the lighting can be raised or lowered to ensure a consistence and effective scheme. This will potentially lower the month running costs further.

2.0 *PARTICULAR SPECIFICATION*

Tender item itemised

For Contractor reference when submitting prices for the tender. See Luminaire schedule for quantities & location

Tender Item Ref.	Detail
1.0	**Luminaires as described in 'Luminaires itemised'**
2.0	**Electrical Distribution Works** To retain all distribution equipment. To install the new lighting control system to the local fuse board within the ringing chamber. To install class 1 + 2 surge protection to the lighting control system as per quotation.
3.0	**Lighting Control System** **To Supply only.** **Tower lighting:** To install a DALI MODE dimmer panel within the ringing chamber following all manufacturer installation guidelines. This to be confirmed by Client, Architect and Lighting designer before installation. To install control wiring to a control plate within the mains intake cup. The contractor to ensure that commissioning of the dimmer system has been included with the manufacturers quotation and their tender return. **Grounds lighting:** Low level lighting, Lampposts & Lanterns to be controlled from Astronomic timeclock located at a low level. The Timeclock is to have an override facility.
4.0	**Ground Works** To arrange for all groundworks to be completed as to the layout drawings supplied. No trenching to take place without prior consultation of the lighting designer and architect. Groundworks to allow for finishing off all trenching to grass areas and pathways. Lamppost Restoration works should be carried out by a specialist, details of said specialist should be passed to the Client and Architect before work takes place. Grounds worker to lift slabs as indicated on the wiring presentation document to allow electrical contractor to bring cables to the stone archway and new lamppost position. Slabs to be re-laid and pointed to match the same finish as existing. Cable to be buried to 500mm minimum if possible and 'Caution cable buried below' tape as base level and at half fill. Lamppost cable will be taken from North East doorway under slabs across main forecourt. Tarmac section to be cut and repaired to match existing. Cable to be buried to 500mm minimum if possible and 'Caution cable buried below' tape as base level and at half fill. Trenching will need to be done by hand digging to a depth of 500mm, cables to be laid at base of trench with 'Caution cable buried below' tape as base level and at half fill.
5.0	**Small Power.** N/A
6.0	**Existing electrical Circuits.** The church has recently had an Electrical Conditioning Report and therefore only issue of Electrical Installation Work Certificate to be issued upon completion.

7.0 Containment, Wiring, Accessories and Cabling

***Contractor to follow the Guide to wiring installations by the Council of Care for Churches.**

As the lighting system is DALI – this will minimalise the amount of wiring taken within the tower.

All cable routes are to follow existing routes and all cable fixing positions are to be within the Mortar and not within the stone or brick work. Any deviations from this need to be discussed and approved by the lighting designer and architect.

The Tenderer shall include all containment and cable to complete the full installation, wiring method and type to be confirmed by the lighting designer. MICC sheathed cable is preferred throughout unless specified on layout drawing or by permission of the lighting designer. Wiring is to be carried out in a manner which is sympathetic to the historic nature of the building. Fixing to be secured in the mortar unless adequate reason for fixing into stonework and approved by lighting designer/Architect. All material such as: fixtures, distribution equipment, connection boxes, etc. to complete the installation as to the drawings and schedules. Tenderer must allow for all items unless there is a variation or extras to the contract. SWA and singles in containment can be used if unseen and the wiring is not susceptible to vermin damage.

All fixings are to be carried out with stainless steel screws fixed into Mortar.

Resin fixings are required as to the wiring presentation document.

8.0 Labour including access equipment

The Tenderer shall allow adequate time and costs to complete the entire installation. There will be no acceptance of increased costs during the contract unless expected due to variations or extras.

The Tenderer to state methods for access to all areas.

The Tenderer to clarify costs for internal works and external works separately.

9.0 Health and Safety / CDM Regulations

The Tenderer shall ensure that all works tendered are in accordance with the HSE Regulations and that all health and safety documentation required for this project are issued to the Lighting Designer and Client.

The contract shall take the form of a simple contract with a Sole Contractor.

As such CES LLP are not required to act as Principle Designer under the CDM Regulations.

The Tenderer shall include within his Tender everything necessary to comply with the CDM Regulations currently in force including the construction phase plan and all health and safety aspects on site.

10.0 Testing and Commissioning

Tenderer shall allow for testing of all the electrical installation and fixtures/controls. Testing should be carried out in accordance of BS7671 (2011) and electrical installation certification shall be issued on completion. The Tenderer shall allow for one extended evening of focussing (4 hours) and arranging for commissioning from the dimmer manufacturer.

11.0 Focussing

To allow costs for two outside of hours focussing sessions.

12.0 Operation and Maintenance

The Tenderer shall allow for the production and distribution of a comprehensive operation and maintenance manual, as detailed in the General Specification.

13.0 Builders works

The Following Builders works are deemed to be included within the tender sum.

- Minor making good works
- Any works that require repair that are caused by the contractors at this installation.
- Painting of cables to stone archway and by North East ground floor door.

Any additional builder's works are to be classed as an extra to the contract.

14.0 Provisional Sums

Builders works Provisional sum.

- Painting of cable where appropriate and when clipped direct to fabric and visible
- Repair of old drilled holes when cables and fixtures have been removed.
- Repair of any drilled holes for new cable routes.
- Powder coating of any containment or fixture where specified.

Luminaires within the upper tower section.

All Luminaires will require bespoke brackets – made to size and powder coated to hold the luminaire in the optimum location whilst allowing for easy maintenance and accessibility.
Brackets to be primed and powder coated black to an exterior grade.
Contractor to allow a provisional sum to cover the manufacturer of brackets required.
8 x 500mm x 30mm x 5mm for Spire
8 x 500mm x 30mm x 5mm for Lantern
3 x T brackets as shown on wiring presentation document
1 x 800mm x 30mm x 5mm for stone archway
Provision for spire balustrade strip lights
Provision for clock circular strip lights

Trench & Grounds work for External Lamppost (see section 4.0)

Allowance to bring cable from electrical intake to stone archway at West end.
Allowance to bring cable from North East door to lamppost location.

Tower internal access.

Contractor to allow for the installation and fixing of new metal ladders in the following locations.
Telescopic ladders may be required due to access restrictions travelling up the tower.

1. Clock chamber floor to top of clock cabinet. (2 Meter)
2. Top of clock cabinet to upper Lantern (2 Meter)
3. Lantern to Spire. (4 Meter)

Ladders to conform to British Standards and be fixed in these locations accordingly.

15.0 Contingency sum.

A Sum of £2,000.00 should be added as contingency to protect the Client.

Luminaires itemised

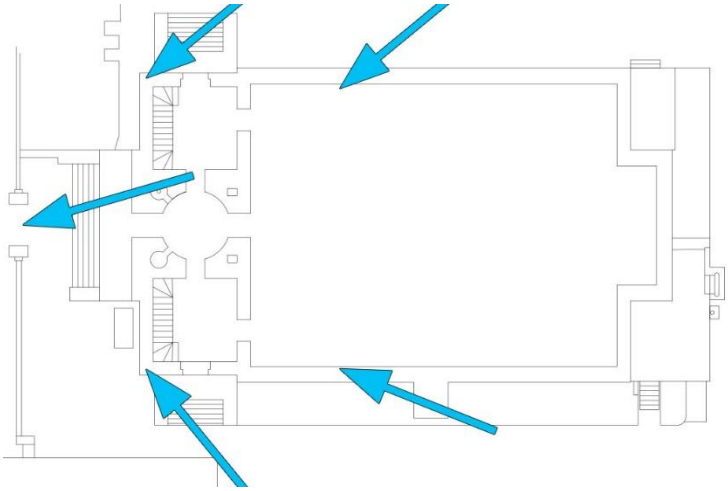
For reference when tendering item 1. Quantity and breakdown table can be found in the luminaire schedule.

Tender Return item: 1.1 **Lower Tower Illumination**

To Supply only. A general wash of lighting is to be provided from the Ashlar Bricks to the top of the Spire. Two medium beam architectural LED flood lights with Spreader Lens at each location illustrated below to provide said lighting. These luminaires are to be mounted Tower at the lower level on the Roof to allow for easy maintenance. The exception is the West Face, the mounting location for these luminaires is on top of the Entrance Gateway.

Luminaires to have 'Barn Door' accessories limiting light pollution.

Locations accessible from roof for any required maintenance.



Circuit Number(s): 01 & 02

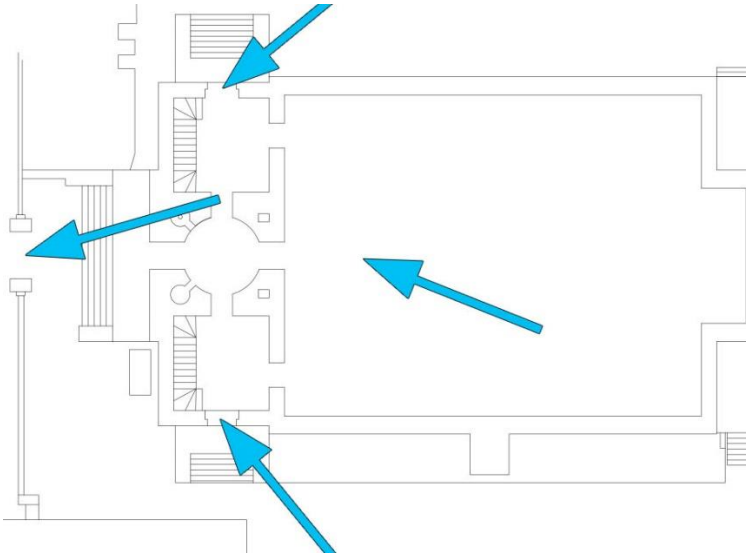
Luminaire Reference Number(s):

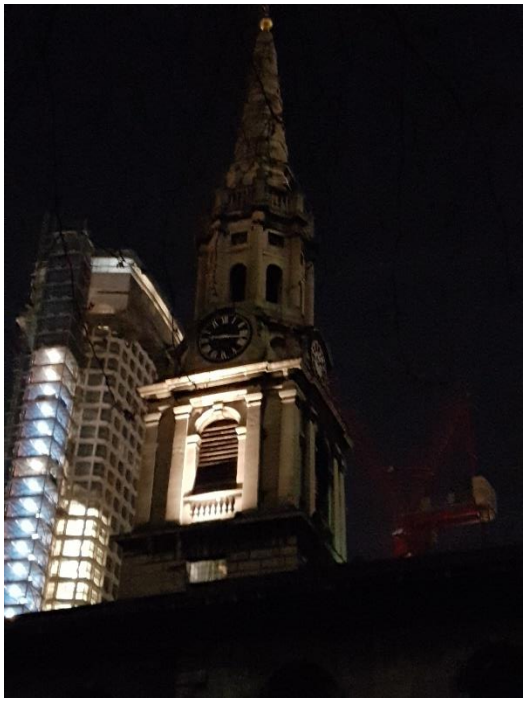
Ref: AA & AB

Tender Return item: 1.2 **Lower Balustrade**

To Supply only. Narrow beam external architectural LED spotlight to be mounted facing the tower and punching illumination into the Balustrade and central reveal. Barn doors should be used to reduce spill. The West side will be mounted alongside the tower wash unit on the Entrance Gateway.

Luminaires located on roof for maintenance purposes.





Circuit Number(s): 3

Luminaire Reference Number(s):

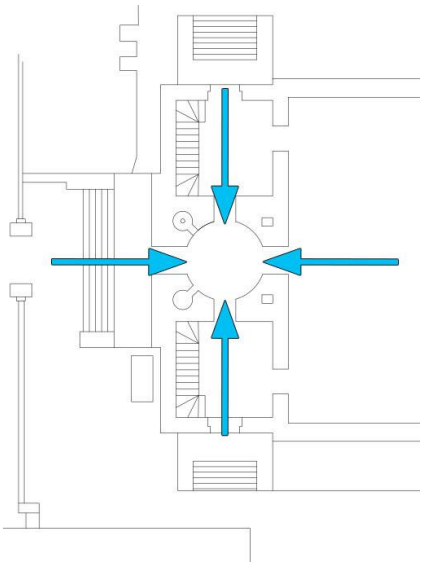
Ref: AD

Tender Return item: 1.3 **Clock Faces**

To Supply only. Illumination of the Clock faces will be attained from the use of Linear LED strip lighting mounted below the Clock face adjacent to the Glass. The Linear LED is mounted to an Aluminium heatsink will need to be formed into a circle to match the internal dimensions of the Clock face. This will evenly wash the rear of the Glass, preventing shadows. The drivers are to be remotely mounted within the Clock tower.

Fixings to be made to the mortar sections within the window reveal and the structure of the LED profile will holds its position throughout.

Access available from within tower.



Circuit Number(s): 4

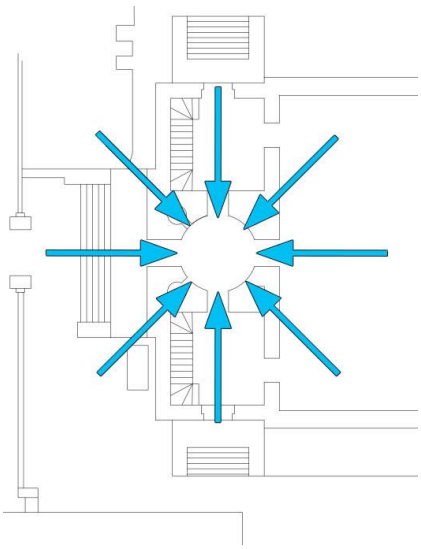
Luminaire Reference Number(s):

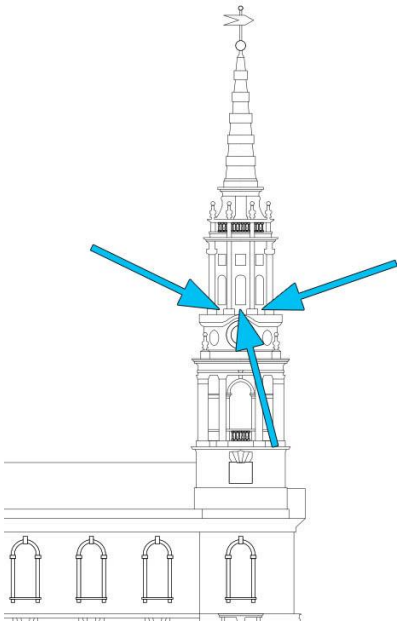
Ref: CA

Tender Return item: 1.4 **Lantern**

To Supply only. Linear Beam External Architectural LED spotlights mounted to the outer edge of the sill to illuminate the Round arched window recess and upper corbel. Careful attention must be paid the existing caging protecting the Lantern, these must be removed and replaced ensuring no damage is caused and the integrity and security is retained.
Flat brackets are to be installed to allow the luminaire to be extended out onto the ledge so that illumination of the columns and upper cobles are captured. The bracket is to be fixed within the tower so that the bracket can easily be removed and the luminaire brought into the tower for maintenance.

Access available from within tower.





Circuit Number(s): 5

Luminaire Reference Number(s):

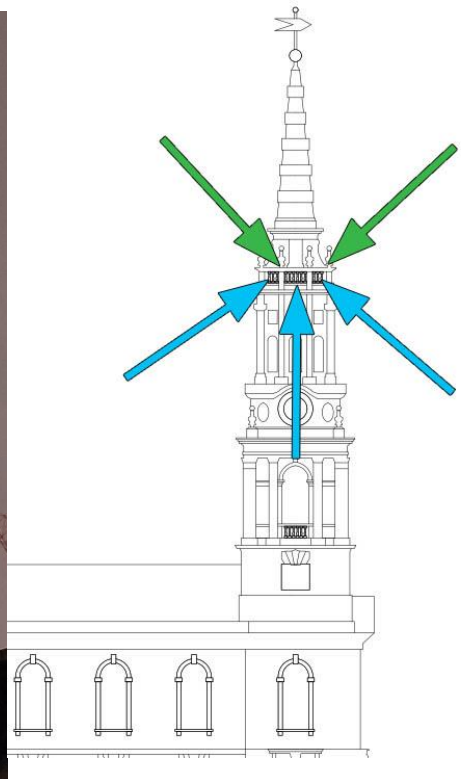
Ref: AC

Tender Return item: 1.5 **Spire**

To Supply only. The Balustrade below the Spire is receiving rear illumination mounted on the available ledge. The Linear Strip is to be suitable for external installation and mounted to adjustable brackets enabling the correct aiming post installation. The brackets will allow the luminaires to be extended to optimum position to effectively illuminate the spire. The bracket fixings are to in reachable distance from the walkway, to allow for easy maintenance.

Lighting to the Spire is to be mounted behind the columns at high level. Flat brackets will be required to allow for a fixing position near to the balustrade so that the spotlight can be extended away from the tower whilst the fixings are at an accessible position. Anti-glare technology will be included to ensure that the light is used efficiently and light pollution is kept to a minimum.

Access available from within tower.



Circuit Number(s): 6 & 7

Luminaire Reference Number(s):

Ref: CA

Ref: BA

Tender Return item: 1.6 **Grounds Lighting**

To Supply only. The refurbishment of the three existing Lanterns at the North and sound entrances. New E27 fittings for LED lamps.

Refurbishment of the North-east Lamppost with a new bespoke head to match the existing units. E27 lamps holder for LED lamps.

New lamppost to the North-west of the site (see layout) – To match exiting units and contain LED lamps.

Trenching will be required and should be included within the 'Provisional Sums' in the Tender Return.

Lampposts and Lanterns to be controlled by an astronomic time clock at low level.

Circuit Number(s): 8 - 11

Luminaire Reference Number(s):

Ref: DA

- All Luminaire locations and wiring methods are to be agreed by the lighting consultant before works commence.

- Contractor to be responsible for electrical cable design (BS7671)

- Wiring methods are to be in accordance with the 'Council of care for churches' & 'Principals of Conservation Practice' set out by English Heritage. Copies can be issued upon request.

- The Church is to supply the Asbestos report to all tendering parties prior to the commencement of works.

- This design is valid for 6 months, this design may be subject to revision as LED technology develops.

- This design is subject to copyright© and shall not be used by a third person in full or in part without the express permission of CES LLP in writing.

3.0 *SCHEDULES*

Schedule of Lighting Channels

Dimmer Channels		Load (W)
CCT 1	Lower Ashlar Bricks & Tower General	120
CCT 2	Upper Tower General	135
CCT 3	Lower Balustrade	108
CCT 4	Clock Faces	80
CCT 5	Round Arch windows	37.6
CCT 6	Balustrade	160
CCT 7	Spire	72
CCT 8	Existing Lantern over Doorways	24
CCT 9	Lantern North West of the site	12
CCT 10	Lantern North East of the site	12
CCT 11	Lantern on South Entrance Wall	12

4.0 *INSTRUCTIONS TO TENDERERS*

Note: Failure to comply with these instructions may render the Tender invalid.

1. The Tender shall be submitted on the Form of Tender with the completed Schedules. All words and figures shall be typed or legibly written in black ink. The item prices of the Price Schedules shall be summarised and taken to the Form of Tender.
2. Tenders shall be open for acceptance for a period of 90 days from the date of the tender and shall be a fixed price for the stated duration of the contract.
3. Each Tender submission shall be sent to the Client. The form of tender and schedules shall be scanned after signing for electronic transmission.
4. The quotations supplied (if any) are for guidance purposes only. The Tenderer is responsible for ensuring that all manufacturers' quotes fully comply with the Specification.
5. Should doubt arise in the interpretation of the Specification, the Tenderer shall set out his interpretation in the writings submitted in support of the Tender. In the event of a conflict between the Tender Drawings, Particular Specification and the General Specification then the Tender Drawings will usually take precedence followed by the Particular Specification. Any material discrepancy should be referred to the Lighting Consultant for resolution.
6. The Contract shall take the form of a simple contract. The terms and conditions of the contract will incorporate these 'Instructions to Tenderers'. Upon signing, the Client and the Contractor will enter into a binding agreement.
7. The Tenderer shall price the scheme as specified but is invited to indicate where, in his view, savings may be made without significantly affecting standards of the design and these shall be explained and described in the writings submitted in support and amplification of the Tender but shall not be binding on the Client unless and until they shall have been approved by the Lighting Consultant. Alternative tenders will not be considered unless they accompany a Tender conforming to the Specification.
8. The Tenderer should include the costing and a schedule for the builders works to take place within the Tender cost.
9. The Tenderer is to agree a programme with the Client prior to start date. The Contractor is then responsible for fulfilling the labour requirements and keeping within the agreed time schedule as part of the Contract Terms.
10. There may be a provision for liquidated and ascertained damages. If indicated the costs for this will be on a per week basis. The Client is to calculate and provide evidence of the reasonable pre-estimate of the costs of delay before the contract commences.
11. The Tenderer shall not charge additional costs except for authorised Variations. All Variations must be approved by the Client before work on them commences.
12. It is a specific contractual requirement that the Contractor shall have inspected the Site at the time of tendering and shall have fully informed himself as to all matters, difficulties etc., concerning the execution of the Works thereon and which may not be referred to in the Specification.
13. The tenderer shall include access equipment throughout the project within the tender cost.
14. The tenderer is to include making good and associated builders works within the tender cost.
15. Minor alterations, such as but not limited to; moving a fitting, moving cabling, shall be allowed for within initial tender costs. Rewiring or additional fittings to be counted as a Variation or Extra and shall be confirmed by the Client.
16. The Tenderer must include the removal of all waste and redundant existing units and wiring within the tender price, unless otherwise arranged with the Client. Disposal must conform to the current WEEE directive.

17. The Tenderer shall include within the tender price an allowance for luminaire focusing. This is to be arranged with the Lighting Consultant and will consist of at least one session. Said sessions are often out of hours.

18. The Client is not bound to accept the lowest or any tender, nor be responsible for, nor pay for expenses or losses which may be incurred by any Tenderer in the preparation of his tender.

19. The building is to be kept safe & secure at all times, the security of the building is the responsibility of the Contractor who is therefore liable for any theft of property during the contract. All live ends and other dangers relating to the project shall be left safe.

20. The Contractor is to investigate and obtain all required licences from relevant bodies. All related fees are to be reimbursed by the Client.

21. The Contractor's employees are to behave in a manner suitable and in keeping with a place of Christian Worship. This includes but is not limited to smoking anywhere on site, behaviour that could be considered lude or rude and the broadcast of music. Personal audio devices are also not permitted as these can pose a health and safety risk.

    The Client reserves the right to request the removal of any person(s) from site. This shall not be without due notice and reasonable cause.

22. The Contractor is to make provision for the occasional use of the building(s) during contract period; this can include but is not limited to meetings during working hours, temporary lighting requirements, clearing equipment into a designated area.

23. The Contractor is to ensure that no damage is caused to the property or fabric of the building whilst on site. The site must be left secure at all times. Special care is to be taken to minimise the risk of fire at all times.

24. The contract requires that the Contractor be insured to the sum of £5,000,000 until completion of works. Evidence of the correct cover should be submitted to the Client if requested.

25. Normal working hours are to lie within the hours of 07.00 to 19.00. Work that must be carried out outside of these hours is to be agreed and confirmed with the Client in advance.

26. All Parties are to strive for client satisfaction and the success of the project as of paramount importance. All materials and products used to be of high quality as expected and in-keeping with the latest British Standards.

27. The Contractor must respect the local area especially in regard to parking, deliveries, out of hours' noise, removal of rubbish and to be considerate under all circumstances.

28. The Contractor is to arrange safe delivery of all material and products associated with the project. The Client is to be given detail in advance of storage requirements and delivery dates.

29. The Contractor will appoint a proficient site manager at the beginning of the project who will be responsible for the day to day running of the site. The site manager should always be available. If it is the case they are not to be on site for an extended period, then a temporary site manager will be assigned. The site manager is to keep all relevant documentation and records throughout the duration of the project.

30. All luminaires, cables and junction boxes shall be installed in accordance with the specification and with common sense. For example, luminaires must be capable of being aimed at the target location. If any areas are unclear the Lighting Consultant or Client must be consulted prior to work commencing.

31. Multicore armoured cables shall comply with the requirements of BS 5467 XLPE insulated steel wire armoured with LSF sheath.

    Copper conductors shall be used made up from plain annealed high conductivity copper wires in accordance with BS 6360. Reduced size neutral conductors shall not be used.

    Unless otherwise specified, the wiring of small power circuits and luminaires shall be by means of single core LSF insulated cable to BS 7211 enclosed throughout its length in trunking or conduit or LSF sheathed MICC cable to BS 6207.

    Final flexible connections where required shall be ethylene propylene circular rubber insulated and sheathed cable, dimensions to BS 6500 Table 9 or single core cables in flexible conduit.

    Special consideration shall be given to the correct selection and protection of cables and equipment to suit the environment in which they will operate.

    In particular:

    Heat
    High humidity
    Mechanical damage
    Flexibility

32. CES LLP will act as the Lighting Consultant through the project

33. Payment Terms

    - Application for payment to be issued at the end of the second week.
    - Client has 7 days to approve the application for contractor to invoice.
    - Client has 14 days to pay the invoice.

    Up-front payments are to be avoided where possible. In cases where this is unavoidable prior notice must be given to the Client.

34. Design effectiveness is the responsibility of the lighting designer. Installation and ALL supplied products are the responsibility of the Contractor.

    It is the responsibility of the Contractor to rectify all faults and defects free of charge to the Client for a period of 12 months from the Practical Completion date other than defects occurring as a result of abuse or maltreatment by others.

35. A Certificate of Practical Completion will be issued at the end of the contract.

36. A retention amount of 2.5% will be held by the Client for a period of 12 months from Practical Completion.

37. The Contractor shall pass on all manufacturers' warranties in full to the Client. The contractor must keep an audit trail of all purchase orders and invoice payments for goods as supplied for the duration of the manufacturers' warranty periods.

5.0 *TENDER RETURN SUMMARY*

Luminaire Tender

Tender Item Ref.	Item		
1.1	**Supply of: Ashlar Lighting** – LED washing	£	
1.2	**Supply of: Lower Balustrade –** LED wash of centre	£	
1.3	**Supply of: Clock Face** – Rear illumination	£	
1.4	**Supply of: Lantern** – Architectural Lighting	£	
1.5	**Supply of: Spire** – Architectural Lighting of Spire and Balustrade.	£	
1.6	**Supply of: Grounds Lighting** – Refurbishment of old and supply of new Lanterns and lampposts	£	

Total Tender

Tender Item Ref.	Item		
1.0	**Supply of:** Luminaires as listed as listed above.	£	
2.0	**Supply & Install of:** Electrical Distribution Works	£	
3.0	**Supply & Install of:** Lighting Control System	£	
4.0	Ground Works	£	
5.0	Small Power.	£	
6.0	Existing electrical circuits.	£	
7.0	Containment, Wiring, Accessories and Cabling	£	
8.0	Labour for Installation	£	
9.0	Health and Safety File / CDM 2015 Requirements	£	
10.0	Testing and Commissioning	£	
11.0	Focussing	£	
12.0	Operating and Maintenance / Record Drawings	£	
13.0	Builders Works		
14.0	Provisional Sum – Others		
	Builders Works	£	
	Trench & Grounds works	£	
	Tower internal Access – Ladders installation	£	
	Manufacture and supply of Bespoke brackets	£	
	Others – Please Specify	£	
15.0	Contingency Sum	£	2000.00
	Total Net	£	
	Total VAT	£	
	Total Gross	£	

ACCESS METHOD STATEMENT:

Details of company to carry out restoration works to Lampposts and evidence of having worked on similar projects previously:

Tender Rates

Description	
Electrician (Approved) hourly rate	£
Electrician (Apprentice) hourly rate	£
Other	£

Programme

Description	Time
Estimated Contract Duration Normal Hours (man weeks)	
Estimated Contract Duration Outside Normal Hours (man days)	
Equipment with long lead in time (weeks)	

Form of tender

Project: 6190 – St Giles-in-the-Fields
To, the Client
We, the Tenderer
Business Address
Registered Address
Telephone

having examined the Conditions of Contract, the Specification and Drawings for the above Works, and having completed the schedules annexed with the Specification, hereby offer to execute the whole of the Works described therein in conformity with the said Conditions of Contract and Specification for the total Fixed Price Sum of: -

		£	
1	The Works		
2	Provisional Sums		
3	Contingency Sum	2,000	00
	TOTAL NET		
	VAT		
	TOTAL GROSS		

Amount in words:

In support and amplification of this our Tender, we submit the documents and writings set out in the Schedules and record that the Tender is subject to the deviations from the Specification which are noted in the Schedules.

We undertake to execute the Works according to the information which we have entered in the Schedules and pending the issue of your order, we would be prepared to proceed with the execution of the Works upon the instruction of the Lighting Consultant, on your behalf.

We undertake to enter into a formal Contract Agreement for the due performance of the Works and of the obligations laid down in the Conditions and Specification and until the said Contract Agreement is completed, would be prepared to consider the Tender and your written acceptance thereof as binding us contractually.

Our Tender will be held open for acceptance
during the period ending:

Signature (Partner or Director) Date

Witness Date

6.0 *Design Risk Assessment*

Please see Appendix Design Risk Assessment for detailed description.

Construction (Design and Management) Regulation 2015 will apply to this contract.
The Client will fulfil his duties as the Client.
The Lighting Consultant will fulfil his duties as Principal Designer (unless Contract is for a Sole Contractor).
The Tenderer will be required to fulfil his duties as Principal Contractor (unless Contract is for a Sole Contractor).
This document includes a Designer's Risk Assessment which forms the basis of the installation for the Tender Stage Health and Safety Plan.
The tenderer will be required to fulfil his duties under the Health and Safety legislation in force and the HSE Regulations and CDM 2015 Regulations.

7.0 *APPENDICES*

Appendix A

A - Luminaire Schedule

Appendix B

B - Data Sheets

Appendix C

C - Layout Drawings

Appendix D

D - General Specification

Appendix E

E - Design Risk Assessment

Appendix F

F – Concept Video | Digital media – .mp4 file