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Mr Phil Kitcher - By Email
St Cuthberts's Church
Wells
Somerset

10th September 2025
Faculty

Dear Phil

Re: Potential Lighting and Electrical Requirements at St Cuthbert's Church - Wells

Following Che's and my revisit to St Cuthberts to carry out a demonstration and presentation of the provisional proposals please find further information as discussed. The demonstration was attended by members of the Pcc and I believe it had been opened up to any members of the congregation who may have held an interest in the project,

I believe that the demonstration was deemed a success and the Pcc are hoping to formally vote on whether to proceed to the faculty application stage at the next Pcc meeting.

I have altered the provisional specification to include the small number of alterations and additions as agreed during the demonstration and I will highlight these and other items which have contributed to the differences in the cost of the proposals in an independent email.

I have added references to the relevant data sheets and will forward these as a separate pdf document; I will also send a revised plan and a set of annotated photographs to show the specific positions of the outlets.

Hopefully the Pcc will vote to forward the set of proposals to the Dac for the consideration of a faculty and should any further information be required from ourselves or should we need to attend the Church to run through the proposals with the Dac or any of the other permission granting bodies, then we would be happy to do so.

Existing Installation

The existing lighting for within the Nave and aisles is provided through pendants which are hung centrally within the arches from brackets fitted just below the clerestory windows. The pendants are spindly in design and each pendant is fitted with 5 retrofit Led lamps. In my opinion for what it is worth is that the pendants are not unattractive and they are very much in keeping with the architecturally fine interior.

At the front of the Nave, some relatively recent additions have been installed and these include a couple of lighting bars with some theatrical lights fitted to them together with some utility type tungsten halogen floodlights which appear to have been installed with temporary wiring which had probably been installed without a faculty.

The lighting in the Chancel is a real mixture of outlets including what appears to be some original tungsten glass reflector floodlights, some more modern track mounted metal halide floodlights and some more randomly installed tungsten halogen floodlights.

The aisles, St Martins Chapel and transepts are illuminated by a variety of types of outlets and the majority of these are the original halogen glass reflector types.

The lighting in the Trinity Chapel was replaced circa 10 years ago and this space would not form part of any new lighting or rewiring project.

I didn't record any achievable lighting levels during my visit as the Church is quite naturally bright during daylight hours although I have little doubt that if no daylight had been available then the achievable levels would have been below the recommended levels.

There is currently next to nil control flexibility available to alter neither the achievable levels of light nor the visual aesthetics although the worst characteristic of the existing system is that it totally fails to visually enhance the fine interior and features. That said, the current generation of lighting was installed quite a long time ago when expectations and requirements were markedly different to modern expectations.

The fixed wiring was tested and certified in August 2024 (Certificate No 0062118) and has been deemed to be in an unsatisfactory condition, since that time, some of the lighting circuits have been disconnected and some temporary lights have been installed.

There were a number of C2 and C3 observations and recommendations noted on the above certificate and I am unsure whether they were remedied, tested and recertified or whether they were just disconnected.

The distribution board supplying the majority of the Church lighting is in the North transept area and it was installed roughly 18 years ago. I believe that it would be able to be reused with any new lighting and wiring system and the below budget cost allows for this option.

The current lights are switched from an adjacent position and I am unsure whether there are any 2 way entry and exit switches positioned at the first point of entry in the Lady Chapel.

There are a variety of cable types used on the current generation of lighting ranging from cables in both metal and plastic conduit together with some more recently added domestic twin and earth and flexible cabling.

General Requirements

As noted above, I have not previously recorded the current achievable levels of light although I suspect that if all of the outlets had been working then the achievable levels would have mostly been below the recommended levels.

Any new lighting would need to be capable of providing levels of light within the parameters of those set out in the Lighting and Wiring of Churches guide produced for the Church Buildings Council ‘’The following lighting levels are likely to be found satisfactory in most circumstances within Churches – with lighting levels taken at approximately seat level or Altar top level.

Body of the Church - 100 – 200 lux
Pulpit, Lectern - 150 – 300 lux
Choir - 150 – 250 lux
Chancel, Altar - 150 – 300 lux

Where a range of figures are given, the lower figure represents the minimum that that should be measured, while the higher figure is the most likely to be necessary’’

The above recommendations should be interpreted with discretion and I believe that the figures may be a little on the high side and that approximately 130 lux within the Nave and 160 lux within the Chancel and Sanctuary would provide the right effect.

There would be no problem with slightly under achieving or exceeding the above figures provided that that the appearance of the interior of the Church remains balanced and as discussed, the scene setting system would give the ability to only produce the desired amount of light, in the desired spaces for the varying services or concerts etc.

All new lighting outlets should be latest generation Led units and as is widely known; the characteristics of all Led lighting outlets are not the same. Best quality units with high rendering values will ensure that all colours within the Church such as fabrics, vestments, frontals, banners and flowers etc would be reproduced very accurately against being distorted should inferior units be installed.

All outlets would provide a warm white output (3000°k) which would visually warm up and enhance the interior of the Church.

Also important is the worthiness of any guarantees given which is why we always specify good quality manufacturers with a worthy reputation to protect should there be any early failures. All outlets would be warranted for a period of five years although obviously in reality they would last many years longer than this.

Whilst designing a new lighting scheme glare is a major factor that must be taken into consideration. Firstly, it is important that the congregation are not faced with an unwisely placed wall of light and secondly a lighting scheme can be ruined should the celebrant not be able to have facial interaction with the congregation.

Any new form of lighting must be aesthetically correct and also complement the existing fabric of the Church and be in complete sympathy with what the original Architect was trying to achieve when he designed the Church.

Another important point being that any new lighting must not take over the Church and turn it into a theatre since the original and present use of the Church is for worship and prayer in a dignified manner.

Wiring, Lighting Control and Distribution Requirements

The majority of the wiring in the main body of the Church has been identified as being at or beyond end of life and much of it has new been disconnected. These proposals for new lighting within the main body of the Church are based on a completely new wiring system. All wiring would need to be of fireproof construction and we recommend installing Pirelli FP200 cable **(Data Sheet 1)** which is the best quality soft skinned cable of this type available.

The new fireproof cabling would be neatly clipped and it would be painted to match the surface (timber beams) to which it was clipped. All cable routes would need to be discussed and agreed with the Churches inspecting architect at the beginning of the project and great care would be taken when running the new cabling within the Church so that the proposed scheme would not be spoiled by an ugly installation of cables haphazardly installed.

All of the existing lighting wiring which is to be replaced would be removed as would the conduits and trunking etc. The stage lighting, and bars would be removed as would the dimming racks and plug/sockets from the mains position. We could either leave them in the Church should anyone want them or we could remove them and recycle them at this end.

Note – The other electrical circuits in the Church such as the socket outlets in the Church, all of the circuits in the tower etc, do not currently form part of these works and would remain as existing unless they are added at a later stage.

As established during our previous visits, one of the main shortcomings of the existing lighting is the lack of control flexibility and it has been agreed that the new lighting should be based around the use of an easy to operate and alter scene setting system. A number of systems are available and the one we prefer to install is a Lutron Dali system **(Data Sheet 2)** which is able to be programmed by ourselves without the need to bring in external engineers.

The scene setting system would allow programmed levels and effects of light (scenes) to be instantly recalled at the touch of a button from the keypads **(Data Sheet 3)** which could be positioned at any or multiple positions.

Each scene would be made up of sets of lights being either on, off or on at any desired level, and the requirements for each scene would need to be discussed and agreed at the commissioning stage which would happen once the project was finished and the spotlights were all aligned.

The initial programming and ongoing scene changes are carried out by the use of an iPad or iPhone and the following cost does not allow for a new iPad to be provided as part of the contract. Should it be required for a new iPad to be included then one can be added to the proposals with the cost adjusted to suit.

Full training and ongoing assistance would be provided by us at no additional cost and the benefit of the system we prefer to use is that it is simple for the end user to make and set adjustments themselves although we would be available to provide assistance.

This initial proposal and cost below incudes for a 10 and 7 button keypad (16 scenes and off) to be installed at the current lighting control position adjacent to the organ and for a 2 button (entry scene and off) to be positioned adjacent to the first point of entry in St Martins Chapel. This specification allows for white option keypads to be installed although should you prefer antique brass/bronze keypads mounted on hardwood framed boxes then they can be substituted for a relatively small additional cost.

It is proposed to take a new supply from the existing distribution board adjacent to the organ and to supply and fit a new smaller unit just to supply the new lighting, this would provide a clear demarcation line between the existing circuits and the new circuits. The new distribution board **(Data Sheet 4)** would be fitted with appropriate RCBO's to provide ultimate protection for the new circuits and the electrical outlets; it would also be fitted with a Type 2 surge protection device.

The test certificate issued earlier this year suggests that the main external lightning protection system isn't appropriately bonded and that appropriate surge protection devices should be considered for installation. I am unsure whether you took further advice from Hussey Electrical (who carried out the testing) or not but at our last visit we established that this work has not been carried out.

Our recommendation would be to install a Type 1 + 2 surge protection device at the electricity incoming position at the North East corner of the Church whilst also running a new 16mm earth cable to bond to the lightning conductor at the West end of the Church.

The above has been included within the cost below although should you want us not to do this then we could remove this from the proposals, adjust the costs to suit and you would need to sign a declaration to state that you required us not to include this.

All of the works would be carried out to normal DAC guidelines together with being strictly in line with Wiring Regulation Standards and Codes of Practise with the appropriate NICEIC certification issued upon completion.

Here follows our recommended method and costing for the illumination of the Nave, aisles, Chancel, and Chapels at St Cuthberts Church Wells. The proposals take into account the existing problems and future needs of the congregation and the wider community, this would change what is an inadequately lit interior into a warm and welcoming building providing the ability to easily alter the levels of light and ambient feel within the Church.

Note – The proposed colours of the fittings and exact positions of them would be confirmed and added to these proposals following a further site visit and should the Architect need to be involved in those discussions then we can meet at a mutually convenient time to discuss the options. All outlets specified would be Dali dimmable which would provide the ability for them to be smoothly dimmed down from 100% to 1% in increments of 1%, they would also have high rendering characteristics of 90+ and produce a warm white output of 3000°k.

Proposals

Nave –

It is proposed to remove the twelve existing pendants completely and to have them altered so that each pendant would have five cans **(Data Sheet 5)** and they would be finished in a matt black paint to match the rings. Each can would be fitted with a recessed Led unit with a maximum output of 1500Lm. The actual light unit would be fitted within a gimbal so they could all be angled outwards up to 10 degrees to provide an even spread of light although, I estimate that they would only need to be angled by a few degrees if at all.

To ensure an even spread of light across the full width of the Nave, it would be necessary to lift the pendants about 1000mm, and the optimum height for them would be established before they were refitted. The pendants would be controlled and dimmed in pairs across the Nave to the exact outputs within each of the scenes. The fittings would obviously be cleaned and rewired whilst they were down, the paintwork looks in good condition but they would be checked once removed to see if they need to be repainted at all. It is proposed that the most Easterly pair should be repositioned and wired to the most Westerly arch at the rear of the Nave although should you prefer for them to be retained at the existing positions then this could be done.

Note – Should new suspension brackets need to be fabricated then there may be an additional cost up to £50 plus vat per bracket. The existing pendants have already been disconnected and there is very low levels of achievable light in the Nave so it may be worth considering that these be removed, reworked and reinstalled over the shorter period so that the shorter days do not cause major problems, even if they have to be connected to temporary wiring.

To illuminate within the Nave window reveals and to create a wash of light across the decorative ceiling, it is proposed to install 28 Lengths (two per window) high output Led strip which would be made to the appropriate length. The Led strip **(Data Sheet 6)** would provide a warm white output and it would be fitted within a small aluminium extrusion **(Data Sheet 7)** which would not be seen from ground level. All of the uplighting would be dimmable collectively to the exact desired outputs within each of the programmed scenes.

To illuminate within the space and items of liturgical furniture at the front of the Nave, it is proposed to install four vertically mounted sets of lights which would be positioned just above the stone string running along the length of the Nave as shown on the enclosed plan, all shown as positions **A**, **B**, **C** and **D**, all of the fittings would be surface mounted and be finished in white.

To provide a general level of light over the entire space Dais area, it is proposed to install four (one to each position) 38 watt medium floodlights **(Data Sheet 8)** which would be controlled collectively but independently from all other outlets.

To provide a more focussed level of light for concerts and other performances, it is proposed to install six (one each at positions **A** and **B** together with two each at positions **C** and **D**) 33 watt narrow/medium beam spotlights **(Data Sheet 9)** which would be controlled in pairs across the Nave.

To independently illuminate the Altar, it is proposed to install three (two at position **B** and one at position **A**) 18 watt very narrow adjustable beam width spotlights **(Data Sheet 10)** which would be controlled collectively to the desired outputs but independently from all other outlets.

To highlight the Pulpit independently, it is proposed to install two (one at position **C** and one at position **D**) 18 watt narrow adjustable beam spotlights **(Data Sheet 10)** which again for maximum control flexibility would be controlled together but independently from other outlets.

Note – It has been requested for the below additional spotlights to be added at the above four positions, they are included in the costing but are not shown on the enclosed plan as the final desired positions need to be discussed and agreed at the installation stage. All outlets would be controlled on their own and independently from all other outlets.

3 x 18 watt variable beam spotlights **(Data Sheet 10)** for the three Lectern positions.
1 x 18 watt variable beam spotlight **(Data Sheet 10)** for the conductor's position.
1 x 18 watt variable beam spotlight **(Data Sheet 10)** for the regular flower position.

Chancel and Sanctuary –

All of the below lighting outlets would be white in colour and unless otherwise agreed, they would be mounted just below the wall plate adjacent to the roof trusses.

To provide a general level of light for the front part of the Chancel covering the Choir stalls and the space between and up to the Communion rail, it is proposed to install two (one per side) 37 watt wide beam floodlights **(Data Sheet 11)** as shown on the enclosed plan. They would be fitted with honeycomb louvres and as throughout, they would be controlled to the desired outputs together but independently from all other outlets.

At adjacent positions to the above, it is proposed to install four (two per side) 18 watt variable narrow beam spotlights **(Data Sheet 10)** which would highlight the choir stall tops independently to a higher level, as throughout they would be controlled together but independently from the other outlets.

To illuminate the East end of the Chancel including the full height of the East wall, it is proposed to install two 33 watt wide beam floodlights **(Data Sheet 12)** as shown on the enclosed plan and again they would be controlled independently from all other outlets.

To highlight the top and frontal of the Altar, it is proposed to install three (two on the South side and one on the North side)) 18 watt variable narrow beam spotlights **(Data Sheet 10)** again they would be controlled to the precise output within each of the programmed scenes.

The Reredos would be independently illuminated by two (one each side) 18 watt variable beam spotlights **(Data Sheet 10)** as shown on the enclosed plan. Currently the central cross is silhouetted successfully from behind, this could be left as existing, potentially upgraded with an Led replacement of be illuminated form the front from a high level and the options can be discussed and agreed at a future meeting.

To provide a wash of light across the ceiling in the Chancel it is proposed to install six (three per side) collectively controlled 18 watt wide beam floodlights **(Data Sheet 13)** which would be positioned at a lower level just above the stone bosses as shown on the enclosed plan.

To illuminate and make a feature of the East window reveal and stone mullions, it is proposed to install two lengths of IP rated high output narrow beam **(Data Sheet 14)** Led linear outlets which would be fitted at the cill level behind the Reredos as shown on the enclosed plan. As throughout they would be controlled together but independently from other outlets to the desired outputs within each of the individual set scenes.

South Aisle –

To provide a general wash of light along the entire South aisle, it is proposed to install five 33 watt wide beam floodlights **(Data Sheet 12)** as shown on the enclosed plan. They would be mounted just below the wall plate and could be controlled either collectively or as a two and three.

The font would be independently illuminated by two 18 watt narrow variable beam spotlights **(Data Sheet 10)** which would be appropriately positioned following tests at the installation, again, they would be controlled together but independently from all other outlets.

The main welcome desk would be illuminated by a further 18 watt narrow variable beam spotlight **(Data Sheet 10)** as shown and should additional welcome desks or notice boards need illuminating also then this can be discussed and agreed at a future meeting.

South Porch –

The wiring to or within the South porch was found to in poor condition when the fixed wiring was tested last year and it has since been disconnected. No investigations were taken as to whether the wiring in the porch was to blame for the low reading or whether it was another part of this circuit.

These proposals allow a pc sum of £1,200.00 plus vat to break down and test the individual parts of this circuit and repair and replace as necessary. It is envisaged that the current lighting outlets would be reused.

The three gang switch inside the Church controlling the porch and outside lights would be replaced with a new two gang switch which would be fitted with integral neon indicators to show when the lights are on. The supply to the porch lights would be controlled through a Dali switch as requested so that the lights in and on the exterior of the porch would not be left on when the all off button is pressed by the last person leaving through the exit door in St Martins Chapel.

Children's Area –

To provide a general wash of light for the space that is currently used as the children's area, it is proposed to install two 33 watt medium wide beam floodlights **(Data Sheet 15)** as shown on the enclosed plan, again they would be controlled together to the desired outputs and be mounted just below the wall plate.

To provide a wash of light across the highly decorative wooden ceiling, it is proposed to install two 33 watt wide beam floodlights **(Data Sheet 12)** which would be mounted to lower level as shown on the enclosed plan.

South Transept –

To provide a general level of light for this space it is proposed to install one 33 watt medium wide beam floodlight **(Data Sheet 15)** and one wide beam floodlight **(Data Sheet 12)** positioned as shown on the enclosed plan, they would be controlled together but independently from other outlets.

The Jesse Reredos is obviously an important architectural part of the Church and to highlight it for the many visitors, it is proposed to install a variable very narrow beam 18 watt spotlight **(Data Sheet 10)** to illuminate the central figure and a 25 watt medium variable beam floodlight **(Data Sheet 16)** to illuminate the entire feature, they would be controlled independently from each other and other outlets.

St Martins Chapel –

All outlets in the side Chapel would be black in colour and be mounted to the roof timberwork.

To provide a general level of light for the front part of this Chapel, it is proposed to install two (one per side) 33 watt medium wide beam floodlights **(Data Sheet 15)** which would be controlled together but independently from all other outlets.

To provide a general wash of light for the East end of the Chapel, it is proposed to install a single wide beam 33 watt floodlight **(Data Sheet 12)** which again would be independently controlled to the desired output within each of the programmed scenes.

To highlight the Altar to a higher level it is proposed to install two 18 watt variable narrow beam spotlights **(Data Sheet 10)** which would be controlled together but independently from other outlets.

A single independently controlled 18 watt narrow variable beam spotlight **(Data Sheet 10)** would be installed for the illumination of the memorial book although if this is not desired then it can be removed with the costs adjusted to suit.

North Aisle –

To provide a general level of light along the entire length of the North aisle, it is proposed to install five 33 watt wide beam floodlights **(Data Sheet 12)** as shown on the enclosed plan. They could be controlled collectively or as set of three and two.

To independently illuminate the coat of arms, it is proposed to install a single independently controlled 18 watt narrow variable beam spotlight **(Data Sheet 10)** as shown on the enclosed plan.

North Transept –

To provide and general level of illumination for this space it is proposed to install two 33 watt wide beam floodlights **(Data Sheet 12)** as shown on the enclosed plan.

To highlight the decorative Reredos, it is proposed to install a 25 watt variable beam spotlight **(Data Sheet 16)** positioned as shown and again for maximum flexibility it would be controlled independently from all other outlets.

Organ Area –

To illuminate the corner where the controls and distribution board are positioned together with the space in front of the main organ pipework, it is proposed to install two 18 watt wide beam floodlights **(Data Sheet 13)** which would be controlled together through the scene setting system.

The space to the sides of the organ appear to be used for storage and as such I would recommend that two 18 watt wide beam floodlights **(Data Sheet 13)** be suitably positioned although they should be controlled manually from the current control position.

Socket Outlets –

It is proposed to wire two new 20 amp radial circuits from the new distribution board and they would be protected by the appropriate RCBO's.

One circuit would supply two new metal clad double sockets which would be fitted at the sound desk position in St Martins Chapel and the other would supply a new position behind the organ console which would be an antique bronze metal socket which would be fitted with a hardwood frame to match the timber to which it was to be fixed.

The exact final desired positions for all sockets would be discussed and agreed during the course of the works.

This now concludes the initial proposals for St Cuthberts Church Wells, which are based around the discussions during our previous visits. I believe they will allow the liturgy to be carried out in a dignified manner whilst allowing the architecture to be seen in an aesthetically pleasing way.

All of the proposed lighting outlets may not be required for all services and the implementation of the Dali dimming system will allow fine tuning so that the right visual effect and levels of light can be achieved for each individual use of the Church.

The cost to supply wire and install the above proposals as set out using fireproof cable would amount to £88,785.44 plus vat.

The above cost would be held until the end of 2025 and then any further increase in materials would need to be taken into consideration.

The vat content would need to be paid by the Church and then it could be claimed back through the Listed Places of Worship Grant Scheme.

The above cost does not include for any access equipment requirements and I would be happy to state that this would cost no more than £1000.00 plus vat. Should you prefer this cost to be added to any future specification cost then it can easily be done.

The above cost includes for the removal of all of the redundant lighting cabling and fittings which could either be handed back to you for safe keeping or removed from site by ourselves.

All of the works would be carried out strictly to the latest 18th edition of the wiring regulations and codes of practice and upon completion, a standard NICEIC certificate would be issued.

Note - All other outlets not mentioned within this specification or shown on the enclosed plan would be left as existing unless further instructions are given.

I hope that I have interpreted your initial requirements correctly and should you require any further information or clarification on any of the above points then please do not hesitate to contact me at the office in Stonehouse.

Yours Sincerely

Neil Blake

Neil Blake