ANTHONY J SMITH(GLOS)LTD

LIGHTING ENGINEERS AND ELECTRICAL CONTRACTORS

34 Upper Mills Estate
Bristol Road
Stonehouse
Glos
GL10 2BJ
01453 825130
enquiries@anthonyjsmith.co.uk
www.anthonyjsmith.co.uk

Mr Michael French
C/o St John the Evangelist
Park Street
Taunton
TA1 4DG

26th February 2025
Faculty Rev 1

Dear Michael,

Re: Potential Lighting Upgrades for St Johns Church – Taunton

Following my return visit to St John's 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, the Churches inspecting architect and other 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 have voted formally to proceed to the faculty application stage.

I have made some minor alterations to the provisional specification as agreed and have added references to the attached data sheets, I will forward those along with some appropriate annotated photographs as per normal requirements of the Dac and the faculty application system.

Existing Installation –

The lighting within the Nave and the aisles is based around the use of sodium discharge wall mounted outlets which also allow a small amount of upward light to spread across the decorative ceiling surfaces.

Within the Chancel and Sanctuary there are two sodium uplighters together with four discharge spotlights. There are also a small number of other spotlights at various positions around the Church and these appear as though they may have been installed more recently than the main bulk of the lighting which I would suggest was installed at least 35 – 40 years ago.

Most of the lights appeared to be working although those responsible for the maintenance in the Church will know that the component parts of these floodlights were phased out of production several years ago and stocks of lamps, ignitors and other component parts are in very short supply.

These lamps offer nil ability for dimming and other negative characteristics include a warm up/cool down period and very poor rendering characteristics when compared against modern, best quality Led units.

There is no doubt that the existing lighting falls short in many aspects when compared against well designed and installed modern equivalents but that said it was installed very many years ago when expectations and requirements were considerably different.

The fixed wiring in the Church was tested and certified in 2020 and the certificate shows that the wiring was in satisfactory condition. I would suggest that the quality of the testing and certification is very poor for a number of reasons, with only half of the required information present.

The test certificate shows that the water and gas supply are suitably bonded and the photos I have on record indicate that this is correct although this will be checked at the time of the work and should this not be correct then there may be an additional cost.

NOTE – This proposal allows a PC sum of £850.00 plus vat to test and certify all of the circuits and distribution equipment which are not proposed to be replaced within this specification.

This would include, socket outlets in the Church, vestry and small side hall sockets and lights, the West end porch areas which are more recent additions, the organ circuits, the tower circuits and any other areas or items to be left as existing

General Requirements –

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 120 lux within the Nave and 160 lux within the Chancel and Sanctuary would provide an appropriate 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.

At our previous meetings, we discussed the current lack of control flexibility and it was agreed that any new lighting system should be controlled through an easy to operate and alter scene setting system. A modern scene setting system will precisely allow the desired amount of light to be created within the desired spaces and areas not only for varying liturgical services and events but also for concerts etc. and any other secular or community uses that the Church may be used for.

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 decorated surfaces, fabrics, vestments, frontals, banners and flowers etc. would be reproduced very accurately against being distorted should inferior units be installed.

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 –

As previously discussed, and agreed, it would be impossible to provide value for money over the longer term should the existing lighting cabling be further altered and adapted. On this basis it was agreed that the solution should be based around the installation of a new lighting wiring installation. All wiring would need to be of fireproof construction and in all similar projects, 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.

As noted above, there is currently a certain lack of control flexibility available and we discussed the need for control flexibility to be provided through an easy to use and alter scene setting system. A number of systems are available and the one we prefer to install is a Lutron Dali control 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 which could be positioned at any or multiple positions.

Each scene would be made up of sets of lights being either on or off at any pre-set 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 appropriately aligned.

The initial programming and ongoing scene changes are carried out by the use of an iPad or iPhone, the following cost does not allow for a new iPad to be provided by ourselves although should you wish for ourselves to supply an iPad then one can easily be added to the final set of proposals and costing.

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 always be available to provide assistance.

This proposal and costing allow for sixteen scenes (and off) to be available from two keypads positioned at the West end of the Church with the final desired positions discussed and agreed at the installation stage.

At the first point of entry at the South porch, it is proposed to install a two button keypad to provide two way lighting and all off for those unlocking and locking the Church.

The white plastic option keypads would be used **(Data Sheet 3)** although should you prefer metal antique bronze finished keypads mounted on hardwood frames or cut into the panelling at the West end then this would also be possible for an uplift in cost and we can show examples at the time of ordering. Should other control positions be required or preferred then this would also be possible.

The current Church lighting is supplied from the distribution board adjacent to the organ in the South aisle and this board has been rotated 90 degrees so it could fit the space and this contravenes wiring regulation and safety standards.

A new position will be required for the new lighting to be fed from and these proposals allow for a new 63 amp main supply to be taken from the current electrical incoming position in the external storage space at the South East corner of the Church to a new position towards the West end of the South aisle.

An ideal position would be to the East side of the small inner porch and it may be appropriate for a wooden cabinet to be built around this new distribution position once the installation works have been completed.

At this position it would be proposed to install a new metal clad **(Data Sheet 4)** distribution board which would be fitted with RCBO's to provide ultimate protection from all circuits fed from it and at electrical incoming position it would be required to install a new main switch to isolate this new supply.

This new distribution board would have sufficient electrical capacity should any new socket outlets be required in this general area either during the course of these works or at a later stage.

It appears as though the Church has a lightning protection system installed and as such; to comply with wiring regulation standards it will be required to electrically bond it to the electrical incoming position and also install surge protection devices to protect the new electrical wiring and electronic equipment.

These proposals and costing allow for a new bonding cable to be installed and connected to the lightning protection system with a Type 1+2 three phase device **(Data Sheet 5)** to be installed at the mains incoming position and a Type 2 device **(Data Sheet 6)** to be installed at the new distribution board position above.

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 interior of St John the Evangelist Church Taunton, 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 and ambient feel within the Church.

Proposals –

Nave –

To provide an even spread and adequate level of light for within the Nave from the entrance point to the space in front of the screen, it is proposed to install six (three per side) combined up and downlights **(Data Sheet 7)** They would be fitted above pillars between the arches, the optimum height would be found at the installation stage although I would anticipate that the top of the fitting should be approximately 150mm below a line between the tops of the arch stonework.

Within each combined up and downlight would be two x 5000Lm Dali dimmable chipsets for the downlighting and two x 3000Lm Dali dimmable chipsets for the uplighting each of which would be controlled independently through the scene setting system to produce the exact desired level of light.

The light produced by these Led chips and all others proposed would be warm white 3000°k which is the preferred choice of most Dac's and they would have a high rendering value to ensure an excellent quality of light is produced.

The six uplights would be controlled to the desired outputs collectively but independently from all other outlets and the downlight sections would be controlled in pairs across the Nave to the desired outputs.

To provide an additional or alternative level of light across the West end of the Nave in front of the entrance door where some pews have been removed, it is proposed to install two medium beam 33 watt Led floodlights **(Data Sheet 8)** which would be controlled together but independently from all other outlets.

As with all of the other spot and floodlights within the Nave, they would be black in colour and be mounted to the roof timber as shown on the enclosed plan.

To provide an additional level of light across the concert space at the front of the Nave in front of the screen, it is proposed to install four (two per side) 25 watt narrow beam width Dali dimmable spotlights **(Data Sheet 9)** which would be controlled in pairs across the Nave but independently from all other outlets.

To highlight the Pulpit, it is proposed to install two 18 watt variable beam spotlights **(Data Sheet 10)** as shown on the enclosed plan with one being fitted in the Nave and the other within the North aisle, they would be controlled together but independently from all other outlets.

To illuminate the Lectern and the person reading from it, it is proposed to install a single 18 watt variable beam spotlight **(Data Sheet 10)** which would be controlled independently to the desired output within each of the programmed scenes.

To highlight the central cross on the screen, it is proposed to install a single 25 watt variable beam spotlight **(Data Sheet 11)** which would be controlled independently from all other outlets.

Chancel and Sanctuary –

To illuminate the Choir stalls and the space between and up to the Communion rail, it is proposed to instal two (one per side) 33 watt medium beam floodlights **(Data Sheet 12)** which would be white in colour and would be mounted behind the Chancel arch at a height roughly in line with the top of the first wooden panel. They would be controlled together but independently from all other outlets to the precise desired outputs within each of the programmed scenes.

To provide an additional level of light just for the tops of the choir stalls, it is proposed to install two (one per side) 18 watt variable beam spotlights **(Data Sheet 13)** which would be positioned in an adjacent position to the above outlets. Again, they would be white in colour and be controlled together but independently from all other outlets.

To illuminate the Rectors pews on the West side of the chancel arch, it is proposed to install two (one per side) 18 watt variable beam spotlights **(Data Sheet 13)** which would be white in colour and be fixed to bespoke fabricated brackets which would be fixed into the top of the wall plate and not into the painted decorative moulding. They would be controlled together but independently from all other outlets and the optimum positions would be found following tests at the Installation stage.

To provide a wash of light across the ceiling in the Chancel, it is proposed to install two (one per side) 38 watt wide beam floodlights **(Data Sheet 14)** which would be white in colour and be mounted at a lower position behind the Chancel arch as shown on the enclosed plan.

To illuminate the Sanctuary, it is proposed to fix the following spot and floodlights which would be mounted to a Dali track **(Data Sheet 15)** positioned at high level as shown on the enclosed plan.

The tracks would be white in colour and they would be fixed to fabricated bespoke brackets which would be fixed into the top of the wall plate and not into the painted decorated moulding.

To illuminate the Altar, it is proposed to install three (two on the South side and one on the North side) 18 watt variable beam spotlights **(Data Sheet 16)** which would be controlled together but independently of other outlets.

To provide a general was of light for the entire Sanctuary including the full height of the East wall, it is proposed to install two (one per side) wide beam 33 watt floodlight **(Data Sheet 17)** which again for full control flexibility would be controlled together but independently from all other outlets.

To provide a slightly increased level of light for the floorspace beyond the Communion rail, up to the base of the widow reveals including the Altar and the candlesticks etc, it is proposed to install two (one per side) 33 watt medium beam floodlights **(Data Sheet 17)** which again would be controlled together but independently from other outlets.

The Tabernacle would be independently illuminated by a single narrow variable beam 18 watt spotlight **(Data Sheet 16)** positioned as shown and the central crucifix would be illuminated by a further independently controlled narrow beam spotlight **(Data Sheet 16)** as shown on the enclosed plan.

Should it be desired for the organ pipework to be illuminated in the South aisle then you may also wish for the pipework to be illuminated in the Chancel although this option hasn't been allowed for within the following costing.

Should the Pcc wish, it may be possible to additionally illuminate the insides of the window reveals in the East wall (white light or potentially with colour change Led's) or if some colour change is preferred just to wash the East wall completely then a couple of Colour change Led floodlights could be installed at the wall plate level.

South Aisle –

To illuminate along the length of the aisle, it is proposed to install four 33 watt medium beam floodlights **(Data Sheet 18)** which would be fitted as shown on the enclosed plan. As with the spot and floodlights within the Nave and the North aisle they would be black in colour and be mounted to the roof timers as shown on the enclosed plan.

The ones switched at either end would be controlled to the desired outputs independently from all other outlets and the two central ones would be controlled together although other control options would be possible.

To provide a wash of light across the roof timbers, it is proposed to install four 33 watt wide beam Led floodlights **(Data Sheet 19)** which would be positioned at the base of the roof trusses below the wall plate and they would be controlled together but independently from all other outlets.

To illuminate the Altar, it is proposed to install two 18 watt variable beam spotlights **(Data Sheet 10)** which would be controlled to the desired outputs together, but independently from all other outlets.

To illuminate the statue and the prayer station at the front of the aisle, it is proposed to install a single 18 watt variable beam spotlight **(Data sheet 10)** which for maximum flexibility would be controlled independently from all other outlets.

Should it be desired for the organ pipework, the central cross on the Altar or the statue adjacent to the south porch to be illuminated independently then this can be discussed at the next visit.

North Aisle –

To illuminate the pew spaces in the North aisle, it is proposed to install three 33 watt medium beam Led floodlights **(Data Sheet 18)** as within the Nave and South aisle and all of the other outlets in the North aisle, they would be black in colour and be mounted to the roof timberwork as shown on the enclosed plan. They would be controlled collectively but independently from the other outlets although other options would be possible.

To provide a wash of light across the roof timbers, it is proposed to install four 33 watt wide beam Led floodlights **(Data Sheet 19)** which would be positioned at the base of the roof trusses below the wall plate and they would be controlled together but independently from all other outlets.

To provide a wash of light for the entire Baptistry area, it is proposed to install two 19 watt Led floodlights **(Data Sheet 20)** 1 x medium and 1 x wide beam which would be controlled together but independently from all other outlets to the precise desired output within each of the scenes.

To highlight the Font, it is proposed to install two 18 watt variable beam spotlights **(Data Sheet 10)** which again for maximum, would be controlled together but independently from all other outlets.

To independently illuminate the statue of Our Lady at the entrance to the Lady Chapel, it is proposed to install a single, independently controlled 18 watt variable beam spotlight **(Data Sheet 10)** as shown on the enclosed plan.

Lady Chapel –

To provide a wash of light for the general area, it is proposed to install two 19 watt wide beam floodlights **(Data Sheet 20)** which as below, would be mounted at high level as shown and they would be black in colour, be mounted to the roof timberwork and would controlled together but independently from all other outlets.

To highlight the Altar top and front it is proposed to install two independently controlled 18 watt variable spotlights **(Data Sheet 10)** and to independently illuminate the Reredos, it is proposed to install two further 18 watt variable spotlights **(Data Sheet 10)** as shown on the enclosed plan.

To provide a wash of light for the roof structure it is proposed to install at a lower position behind the arch, two 19 watt wide beam floodlights **(Data Sheet 20)** which would be white in colour and again, controlled together but independently from all other outlets.

Emergency Lighting –

Whilst there are currently no legal obligations to install emergency lighting within Churches, what most of our Church clients prefer to do is to install strategically placed small Led spotlights **(Data Sheet 21**) with remote battery packs **(Data Sheet 22)** which if the mains fail, will take away any immediate panic and allow the congregation or visitors to safely exit the Church.

I believe that the designated exit routes are out through the West and South porches which is the way that the congregation and visitors enter.

It is proposed that five outlets would provide a suitable solution and they would be fitted as 1) behind the Chancel arch to illuminate the steps there, 2 + 3) at the front of the Nave to illuminate the steps down into the Nave and through into the opposite side aisle, 4) in the North aisle to illuminate along the North aisle generally, 5) at the West end of the Nave to illuminate the space in front of the inner West porch door and 6) in the South aisle to illuminate the space in front of the South porch.

All outlets would be installed with test facility key switches for routine maintenance and these would be fitted adjacent to the distribution board position.

It may also be required to fit compact bulkhead units inside the porches although should these be required then they would be fed locally and the cost would be circa £100.00 plus vat for each position.

The cost to supply wire and install the above proposals as set out using fireproof cable would amount to £72,673.75 plus vat.

Note - 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 would be held until the end of 2025 and then any increases in material or labour content would need to be considered.

The above cost includes for the removal of all of the redundant outlets and cabling which would be removed from the Church completely unless you wanted it all put to one side. All other outlets not mentioned above would be left as existing unless further instructions are given.

The above cost does **NOT** include for the hire of a scaffold although should the works go ahead, I am happy to guarantee that the costs would be no more than £850.00 plus vat. Should you wish for this amount to be added to the main cost then this would be possible.

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

As previously agreed, these proposals remain the copyright of Anthony J Smith(Glos)Ltd and as such it is requested and expected that these proposals and the information within will not be shared with other contractors or any of our competitors.

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