

Let There Be Light¹

Proposed New Lighting
St Mary the Virgin
Saffron Walden

1. Courtesy of Saffron Walden
Reporter – 11 April 2024

What We'll Cover



Problems with the current lighting



Objectives of Re-design



Proposed Concept Design



Likely Costs



Funding and Fundraising



Future Process and Timings

Problems with current lighting



Failing lighting



Energy cost/carbon generated



Maintenance



Controls

Current lighting is very old and failing

- The problem with the lighting which has failed is with the electronics in the fittings which power the bulbs





Main Altar

Only partially lit due
to failed spotlights





Sanctuary and Chancel are dim

- Many failed lights
- Difficult to access safely



Failed Lighting in Sanctuary and Chancel



Rood Screen Cross

- Has not been spotlighted since 2019
- Especially noticeable during Easter and Christmas services



Uplighters in Nave – North Side

- One uplighter on north side
- There should be six



Uplighters in Nave – South Side

- Three uplighters on south side
- There should be six





North side



South side

Downlighters in the nave

- Only a few have failed to date
- When switched on, these hide that a large number of the uplighters have failed



Halogens in North West Corner

- Halogen lighting bulbs removed approx. 8 years ago due to “explosion” risk
- Halogens were the only lights to come on immediately



The background image shows the interior of a church, likely St Mary's Church in Saffron Walden. The architecture features high, vaulted ceilings with ribbed arches. A prominent stained glass window is visible on the left, with a cross symbol. The lighting is dim, with some light coming from the window and other sources, creating a dramatic atmosphere. The text is overlaid on the right side of the image.

Highlighting for font no longer works

- Halogen lighting bulbs removed for similar reasons
- Halogens were the only lights to come on immediately



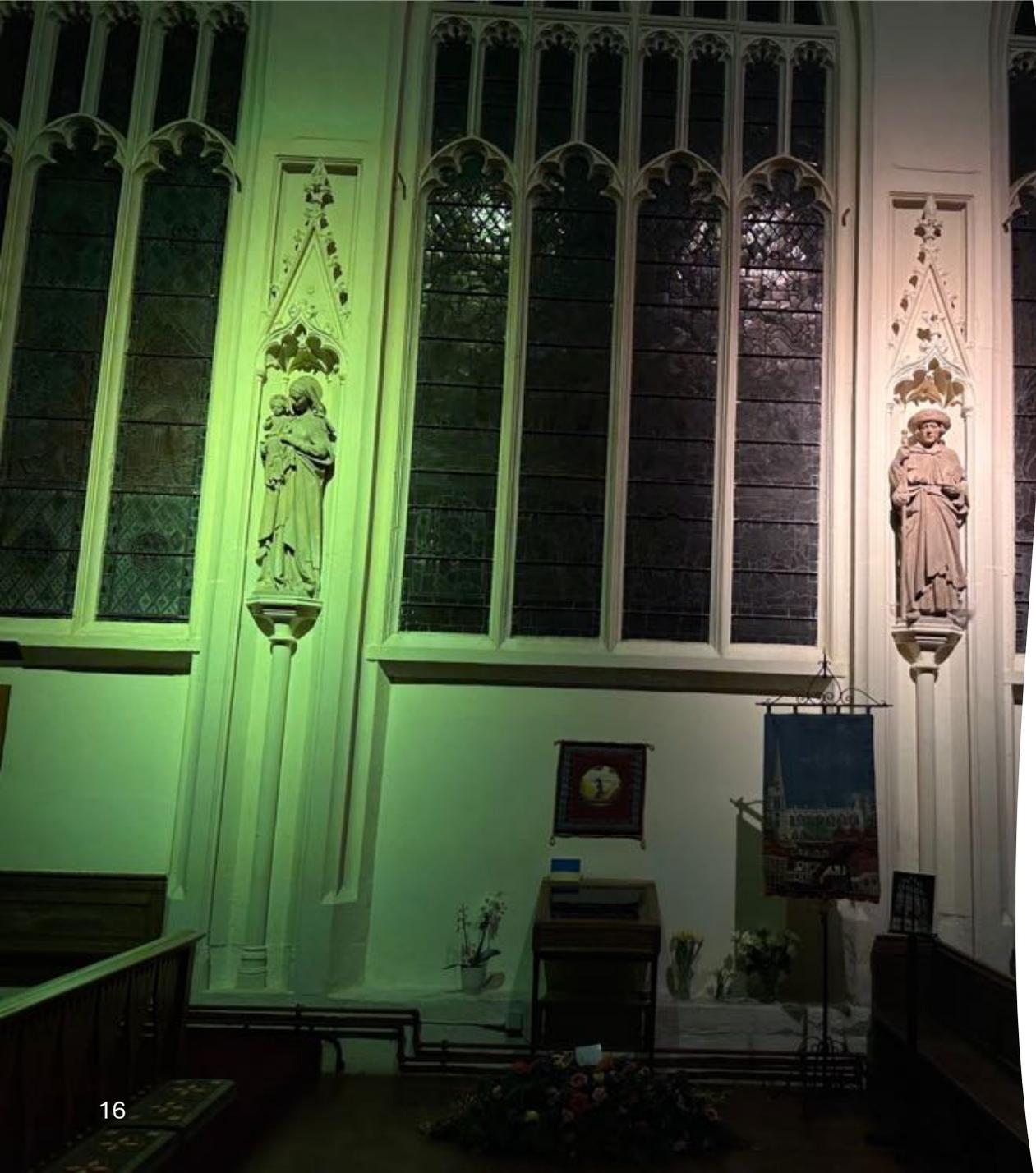
Choir Stall Lighting

- None in back rows

Concerts and Recitals

Lighting below chancel steps inadequate for performers: cannot read their music





Our Green Statue

- Failed electronics!

Summary

- Downlighters
 - Side Aisles – all working for now
 - Nave – some no longer working
 - Chancel – some no longer working: dim lighting in chancel
- Nave Uplighters
 - Most have failed
- Spotlights, following have failed:
 - Rood Screen Cross
 - At least half in Sanctuary: dim lighting in Sanctuary
 - Poorly lit Main Altar
 - Halogens in North-West and South-West corner
- Below chancel steps – lighting is inadequate
- Choir stalls – no reading lights for rear choir stalls
- Lighting will continue to deteriorate
- Doing nothing is not an option

Problems with current lighting



Failing lighting



Energy cost/carbon generated



Maintenance



Controls



Energy Cost/ Carbon Generated

- More than 75 bulbs in total
- Total wattage when all running: 12 kW
- Lighting - single largest consumer of electricity in the building
- Typical winter Sunday when all lights working:
 - lighting uses enough power to boil from cold **400 domestic kettles**
- Current annual cost of lighting – £1500 to £2000

Net Zero Carbon

- Net Zero by 2030 Church of England target
- St Mary's Saffron Walden for energy usage is
 - One of highest and worst 600 churches in the country
- St Mary's response to date
 - Contracted with renewable energy supplier
 - Replace lighting with LEDs
 - Will save up to 80% of energy usage and reduce CO2 generated by same amount
 - First step for St Mary's towards NZC



Problems with current lighting



Failing lighting



Energy cost/carbon generated



Maintenance



Controls

Maintenance – Not Sustainable

- All lighting is high level – at least 10m/33 feet above ground
- How many people to change a light bulb at St Mary's? – at least 5
 - 2 to pick up, manoeuvre and operate the cherry picker
 - 1 to go up to the lights
 - 2 more to move pews for cherry picker – if we can get one
- Change all bulbs every 5 years
- Access in chancel and sanctuary only by ladder – rarely done
 - Changing a bulb is very difficult
 - Even local fire brigade have considered to be unsafe

Problems with current lighting



Failing lighting



Energy cost/carbon generated

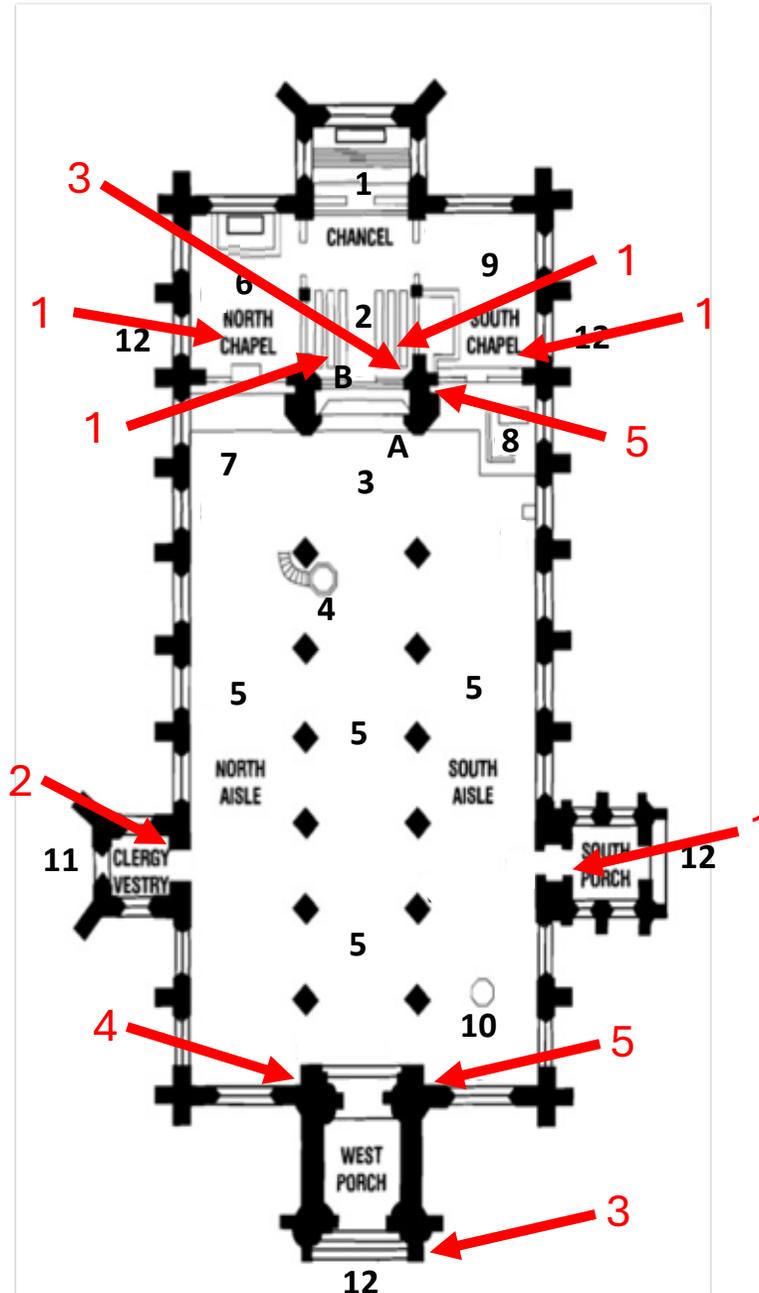


Maintenance



Controls

Controls



- 25 switches distributed throughout the church
- Difficult to manage and resource for special services
- No lighting for visitors
- This can be simplified!

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Future Process and Timings

Our Needs

Adequate and appropriate lighting supporting all of activities

Improve ambience and atmosphere

In keeping with and enhance the interior architecture

Replace failing lighting

Reduce the energy usage and carbon footprint

Easy maintenance

Easy to use and flexible controls

Future-proofed for future changes in the church

Safety – effective lighting for entrances, steps and stairs

Emergency Lighting incorporated in new scheme

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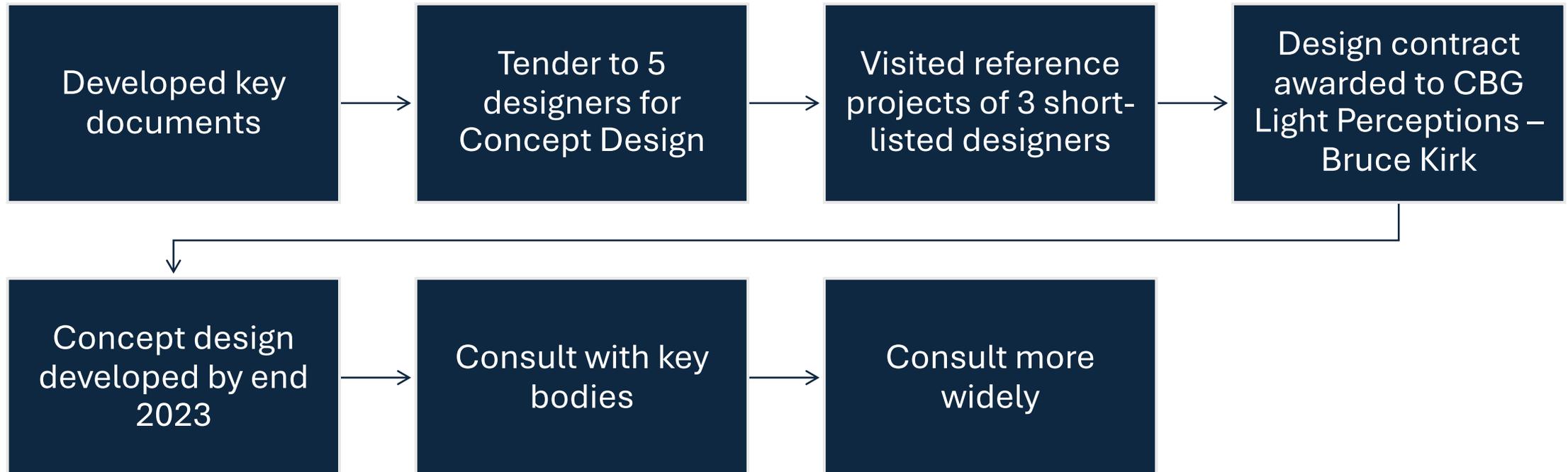


Funding and Fundraising



Future Process and Timings

Process followed



All with PCC input

Design Intent

- Remove visual clutter of existing lighting at clerestory level
- Reduce massing of existing large light fittings
- No precedence for pendant lighting
- Pendant lighting would distract from view up the nave
- New LED spotlighting scheme
- Spotlighting on service leader, concert conductor etc. without undue glare
- Spotlighting to allow easy reading of, e.g., sermon notes and music
- Monuments not to be spotlighted

7. Indicative Design Sketches

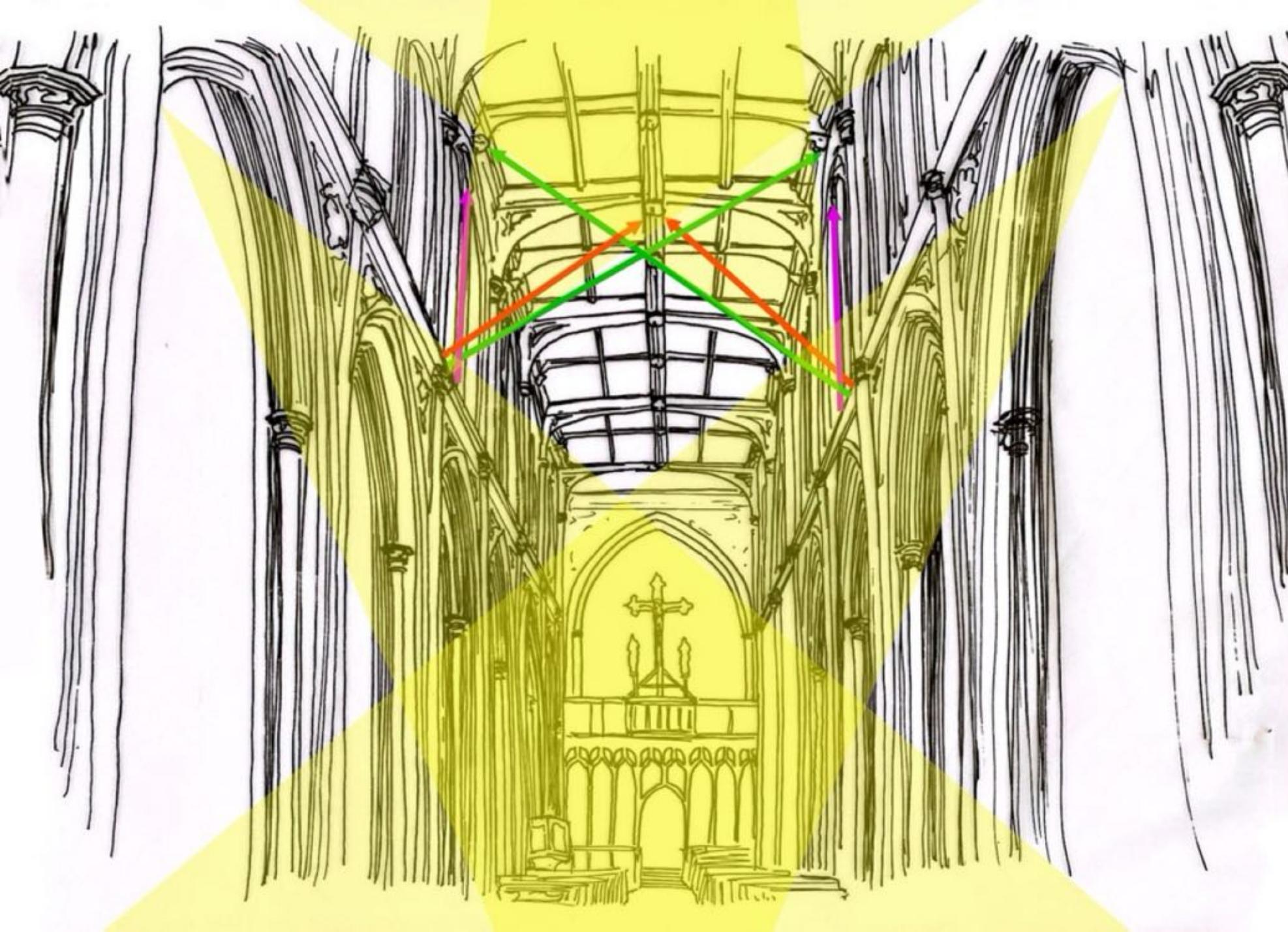
i. Sketch 1



The nave



Uplight to nave ceiling



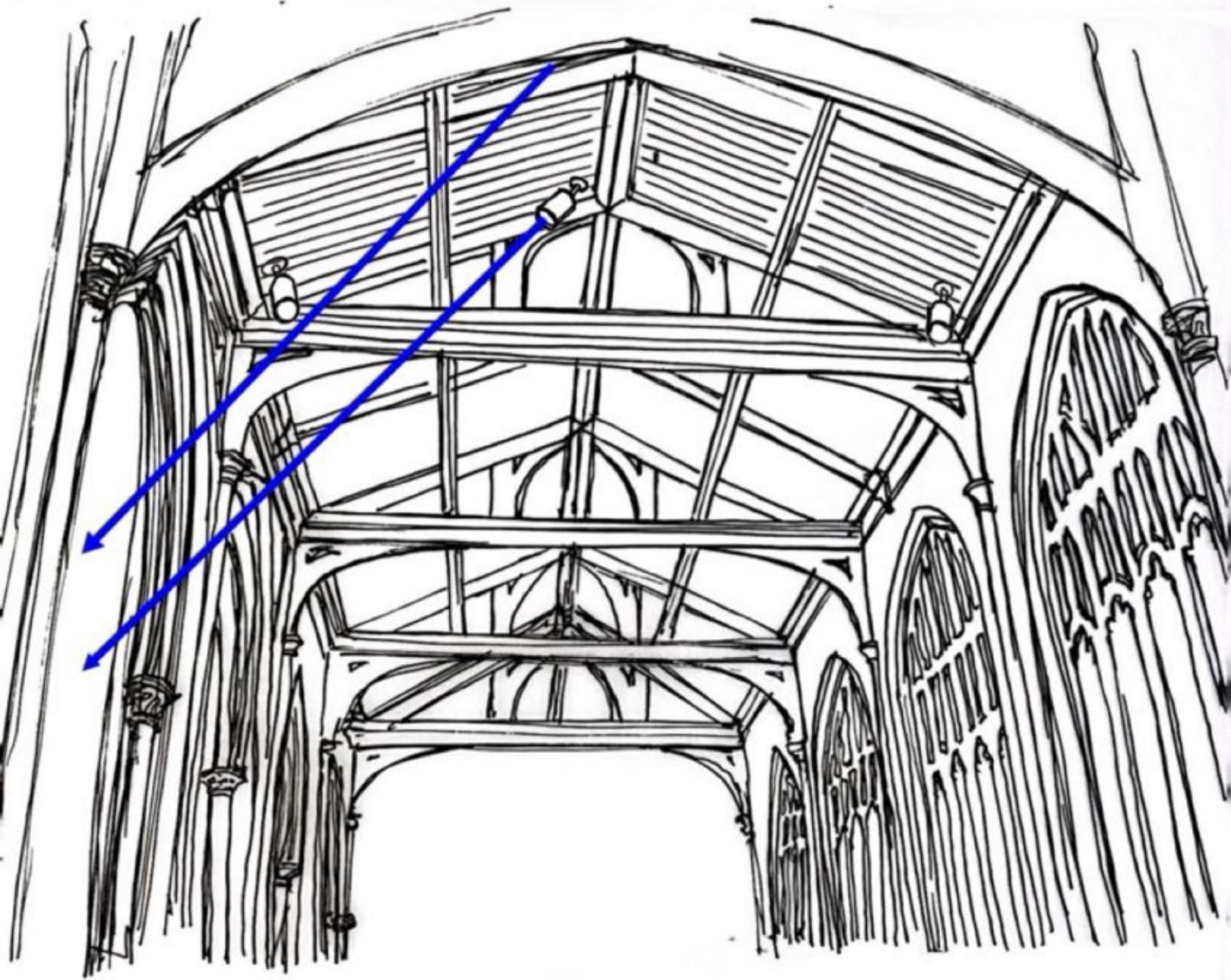
Downlight to nave from
the aisle

7. Indicative Design Sketches

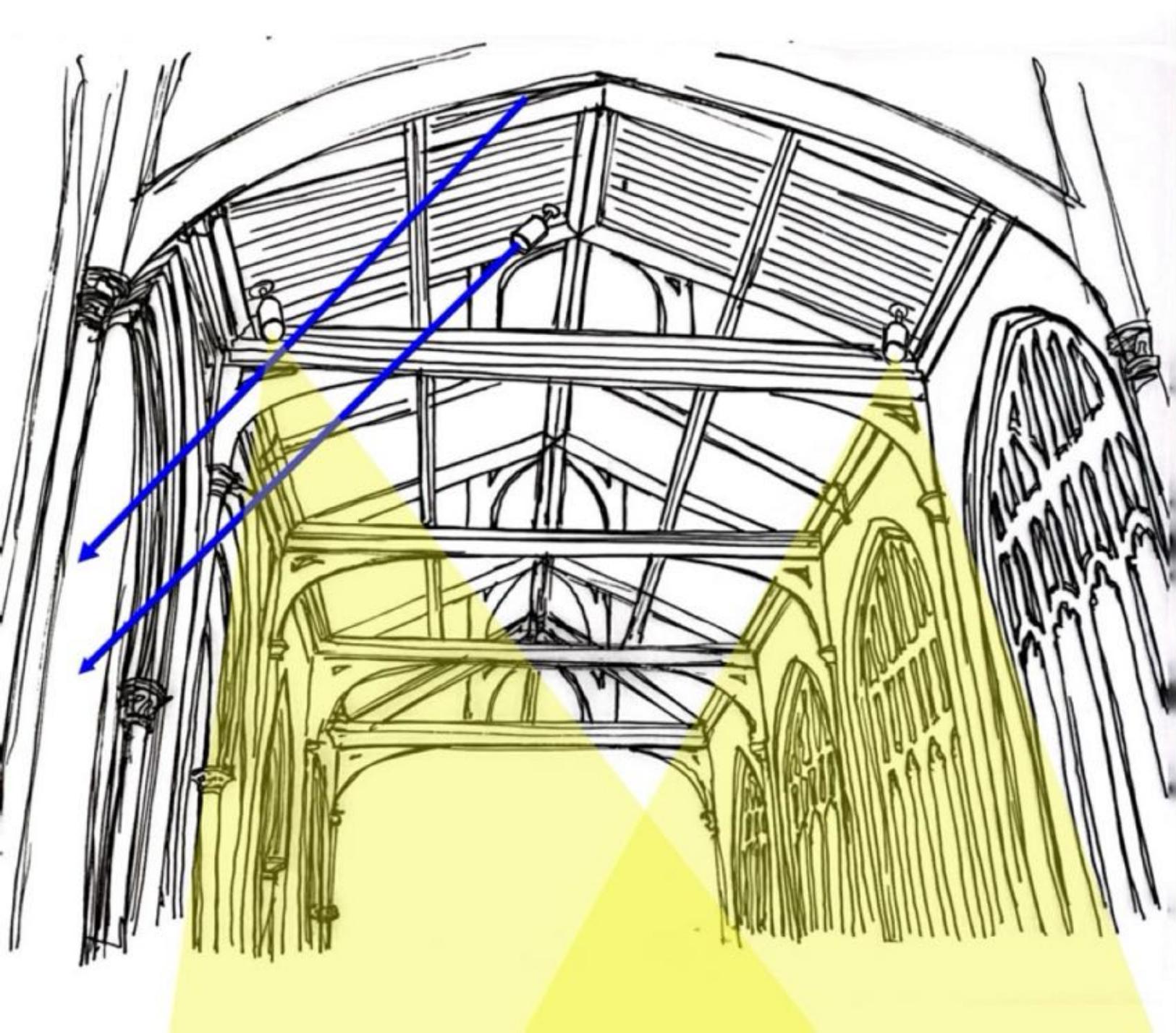
ii. Sketch 2



Sketch 2 showing
positions of spotlights in
the aisles



Downlights lighting into the nave from the aisle ceilings



Downlights lighting into the aisle

9. Lighting Design Visuals

i. The Nave Facing East (wide view)



Existing view



Normalised view





Accent to Altar and cross



Accent to reredos



Accent to lectern



Accent to pulpit



Accent for the reading
of the Gospel



Downlight to Sanctuary



Rood screen and
downlight to
performance area



Downlight to individual bays



Downlight to individual bays



Downlight to individual bays



Downlight to individual bays



Downlight to the welcome area



Uplight to clerestory windows



Uplight to ceiling



Downlight in aisles



Option for
Accents to angels and
ceiling bosses



Options highlighted

9. Lighting Design Visuals

ii. The Nave Facing East (Close View)



Downlight to aisles

9. Lighting Design Visuals

iii. Chancel



Uplight to ceiling

9. Lighting Design Visuals

iv. The Nave Facing West



Downlight to aisles

9. Lighting Design Visuals

v. The Remembrance Chapel



The chapel

9. Lighting Design Visuals

vi. North Chapel



Downlight to chapel

Examples of other areas of church

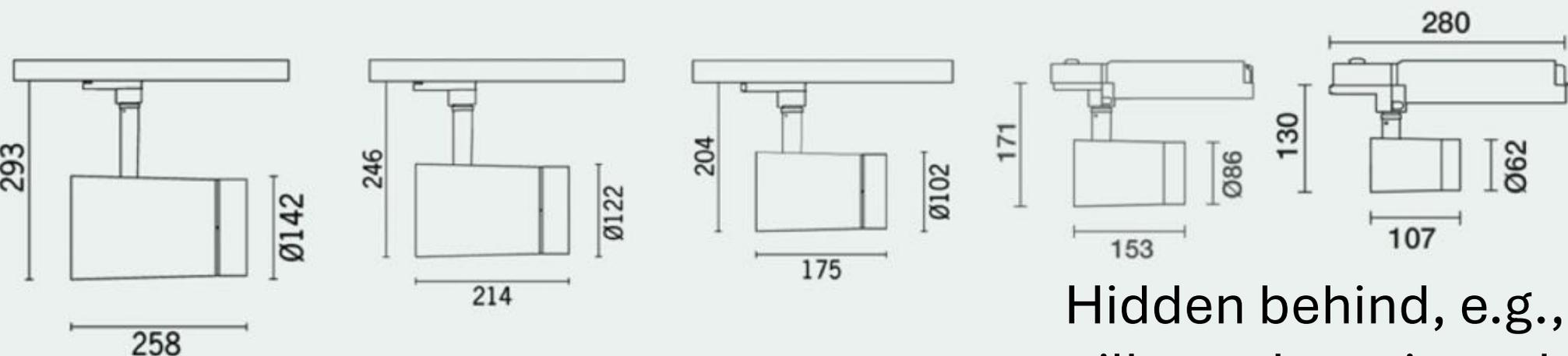
- On church website at <http://www.stmaryssaffronwalden.org/lighting>
- Gives links to videos which show
 - Nave Facing East - Wide View
 - Nave Facing East - Close View
 - Nave Facing West
 - Chancel
 - Remembrance Chapel
 - North Chapel

10. Typical Luminaires

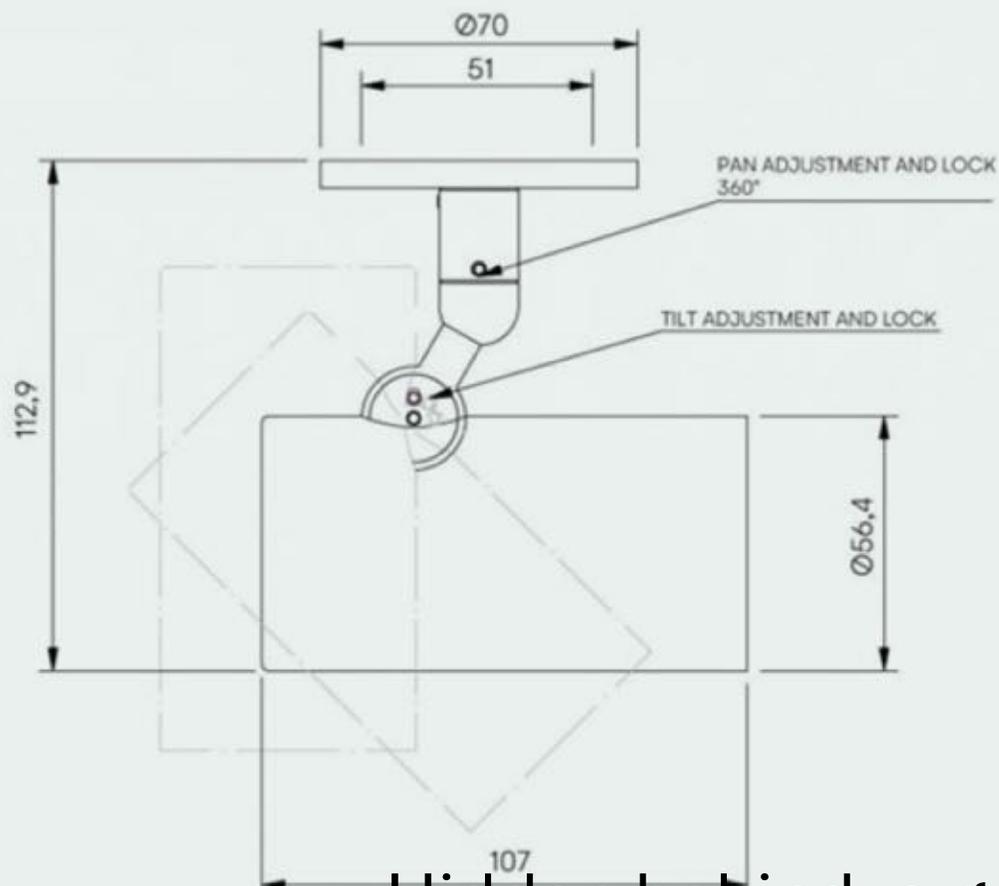


Fittings of different sizes but all of the same simple design

Can be provided in any colour to match surroundings



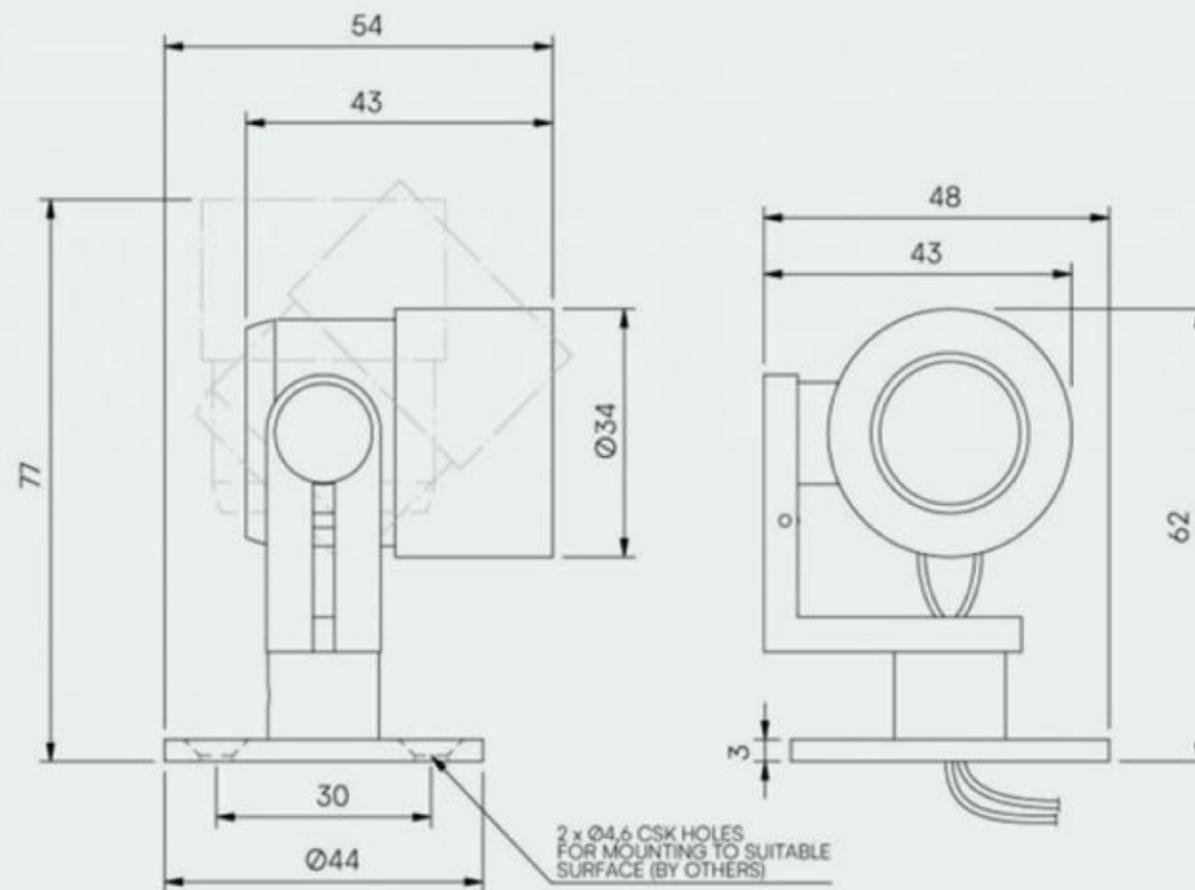
Hidden behind, e.g., pillars when viewed from west



Smaller fittings for more delicate applications

Can be provided in any colour to match surroundings

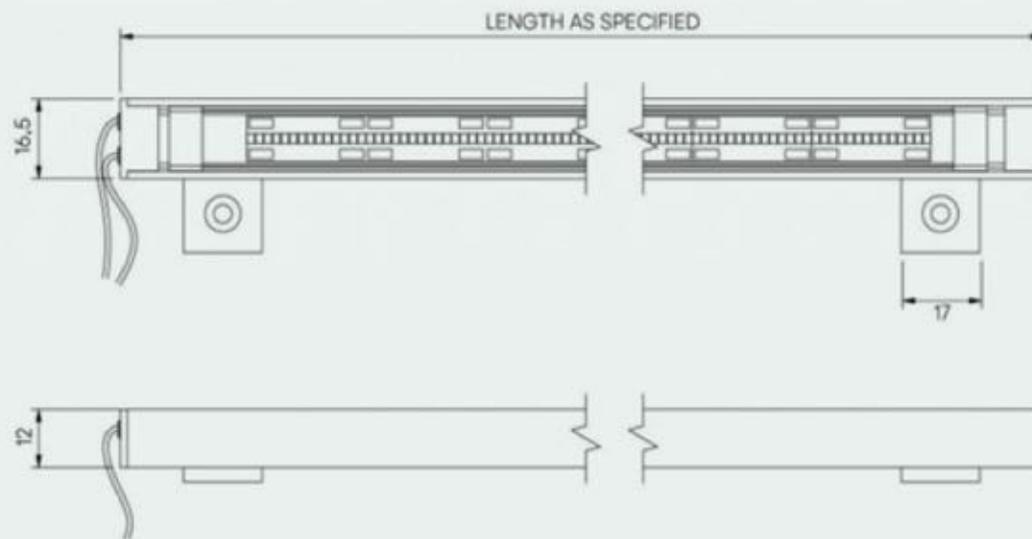
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Hidden behind, e.g., pillars when viewed from west



Smaller fittings for more delicate applications

Can be provided in any colour to match surroundings

Miniature sections will be used within the canopy details of the High Altar.

Fittings will be hidden on, e.g., ledges



Controls

- Pre-assigned button for each lighting scheme
- Re-programmable
- Auto switch on and off for visitors

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Future Process and Timings

Cost Projection

- In region of £200,000 plus design fees of £20,000
- Figures exclude VAT which is recoverable
- Large number of lamps - £73,000 for new lamps
- High quality LEDs lasting at least 50,000 hours
 - St Mary's usage, approx. 1,000 hours per year
- Long lengths of MICC cabling
- High labour cost – specialised in listed buildings
- Working at height

Item	Estimated Cost before VAT (£)
Light Fittings:	
West Entrance	3,500
North Aisle	5,100
South Aisle	7,500
Nave	27,650
North Chapel	5,150
South Chapel	2,800
Chancel	18,850
Clergy Vestry	1,800
South Porch	600
Installation Costs:	
Control System	15,000
Labour	90,000
Materials (cabling etc.)	15,000
Access Equipment	5,000
Builders Works in Connection	5,000
TOTAL	202,950

“We are responsible for this wonderful building and are fortunate to use it for our worship and for it to be used by the wider community, by local schools, for music concerts, and to welcome many visitors each year, both from nearby and from all over the world. With this responsibility comes the need to maintain it in good condition, and to ensure that its facilities continue to support and enhance our worship and welcome in keeping with its grade I, national status.”

Rev'd Jeremy Trew, Team Rector

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Future Process and Timings

Funding and Fundraising

- St Mary's has approx. 50% of funds required
 - Mainly restricted for church fabric
 - Will not use funds raised for general expenses from recent stewardship campaign
- The Friends
- Gift Day
- Crowdfunding, which might be match funded
- Trusts and Foundations - >20 being investigated, e.g.
 - Friends of Essex Churches Trust
 - Garfield Weston
 - Benefact Trust

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Future Process and Projected Timings



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Improve ambience and atmosphere ✓

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Replace failing lighting ✓

Reduce the energy usage and carbon footprint ✓

Easy maintenance ✓

Easy to use and flexible controls ✓

Future-proofed for future changes in the church ✓

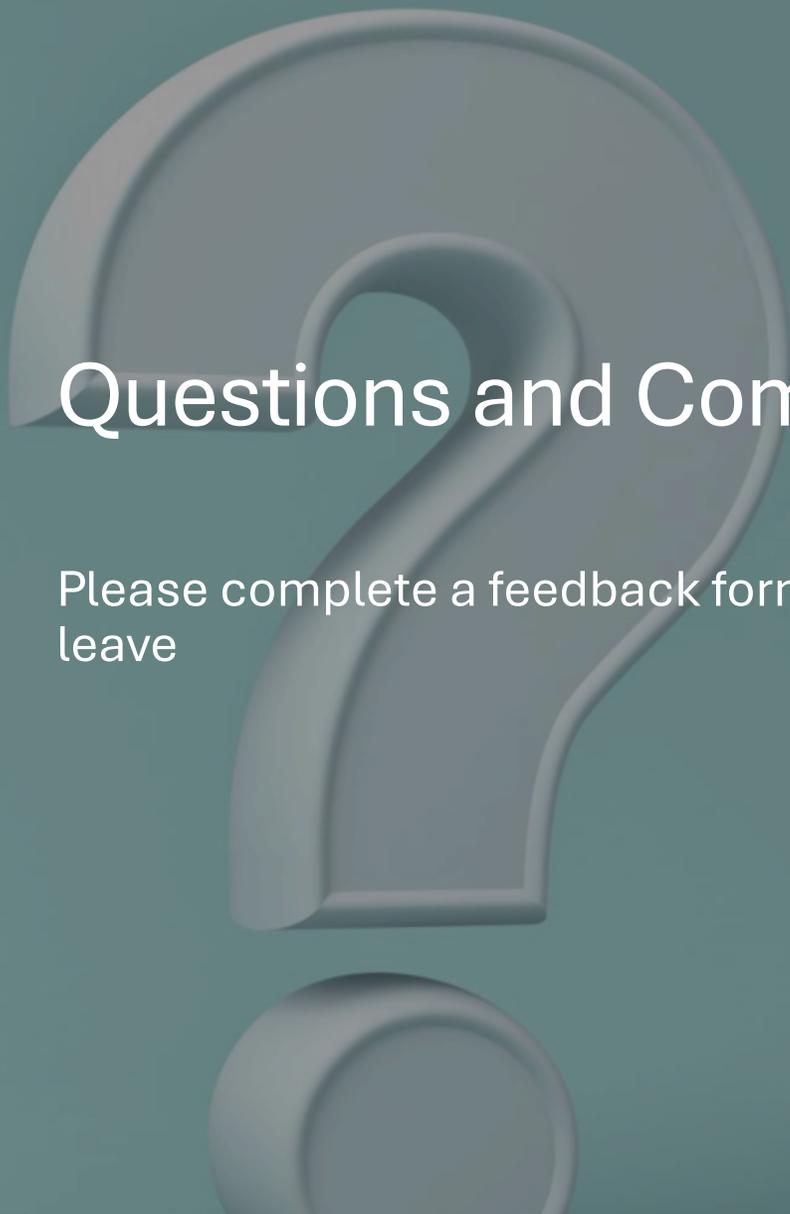
Safety – effective lighting for entrances, steps and stairs ✓

Emergency Lighting incorporated in new scheme ✓

Information also available at
[www.stmaryssaffronwalden.org/
lighting](http://www.stmaryssaffronwalden.org/lighting)

OR

What's On, Latest News on
church website



Questions and Comments

Please complete a feedback form before you
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