

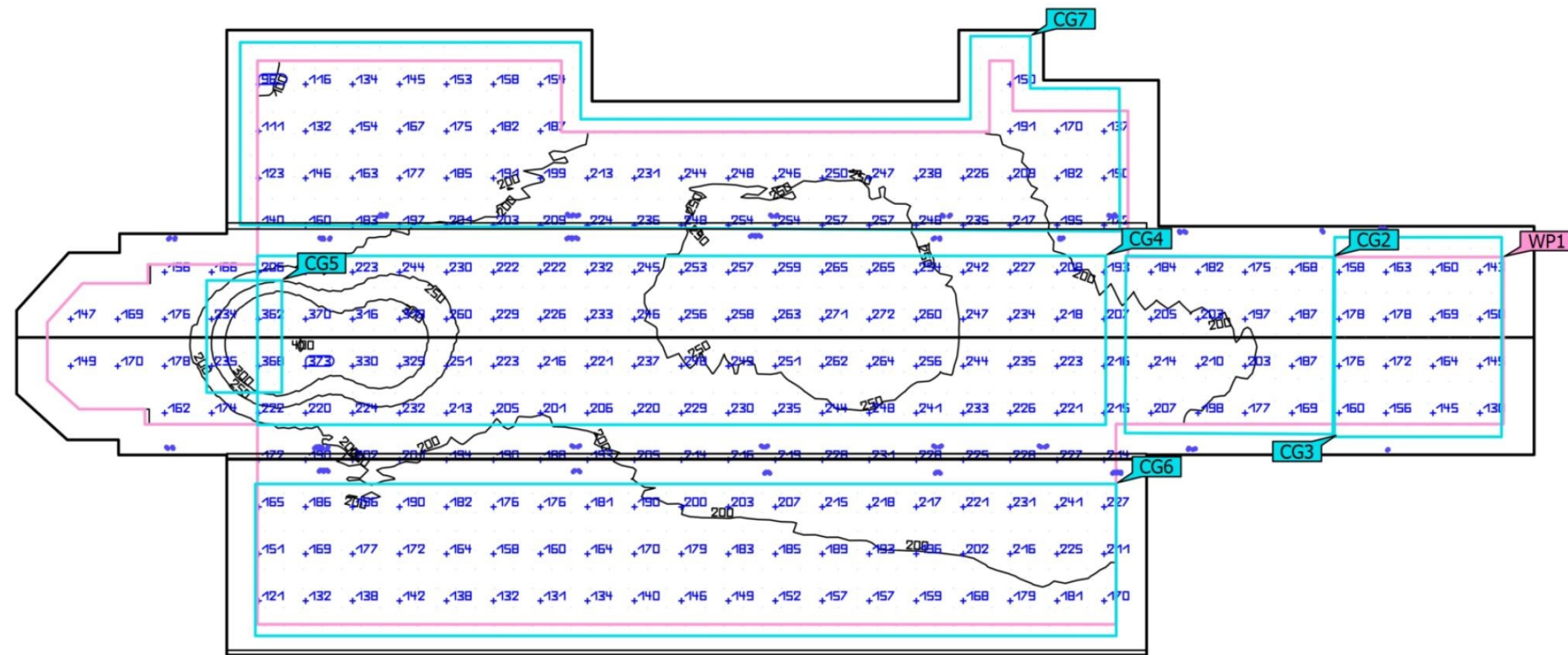
Notes:

1.
This lighting scheme reuses the existing wiring, which is Pyro wiring c30 years old (ie MICC double insulated). Existing switching is also reused
2.
All fittings are located in the same position as existing, at eaves level 9.5m above nave floor level, apart from 4No in the choir area which are moved slightly to the east
3.
There are a total of 62No fittings
4.
All fittings are Concord Sylvania Beacon ref BCON XXL MB 3K L3 BLK + SPUN SM & SSC LED fittings with fixed base and 3000k light source. Colour: black
5.
All fittings are 50degree medium beam except 3No in the sanctuary area (shown orange on the plan above) which are narrow beam
6.
All fittings have wireless dimming integral into the fitting. This allows initial adjustment of the lighting, and also scene setting if needs be. There are 5No wireless repeater units to ensure that the wireless system works well. The wireless system is designed to the same life as the LED source (50,000 hours)
7.
A recent electrical report (June 2021) indicates that the existing wiring is in almost perfect condition (being Pyro/MICC only 30 years old, with no breakdown of the earthing conductivity or the glands). The electrician points out that each of the existing fittings draws 300watts, whereas the new Beacon fittings only draw 48watts. This means that the loading is reduced by a factor of 6, which in turn means that the wiring and switching will last much longer than with the higher load for which the wiring was originally designed

A note on the general lighting design philosophy/principles

The design strategy of this lighting scheme includes the following principles:

- this is a discrete lighting scheme, which seems appropriate to the qualities of Fellowes Pryn's fine interior. The decision was made not to attempt to draw attention to any of the light fittings
- no attempt is made to highlight features of the building such as the roof timbers. The highlighting of such features of historic churches is not a lighting strategy which the designer/architect favours, and particularly not for an interior of this quality. The aim of the lighting scheme (as it was for the designer of the previous scheme, Derek Philips) is to effectively light the building in a general way and provide useful light to the users
- an even light level across the church is not to be favoured, and there should be some element of a-symetry to the lighting. Some parts of the building should be more brightly lit than others, with some sense of "pools" of lighting where appropriate. This is something that will be achieved with the integral dimming system at commissioning time
- the designer, as an RIBA, has a professional duty mandated by the RIBA to reduced the embodied CO2 output of any designs, as well as reducing CO2 output in use. This design reduces embodied CO2 output by reusing the existing resources (the wiring and switching). See also note on L003 for more on this issue

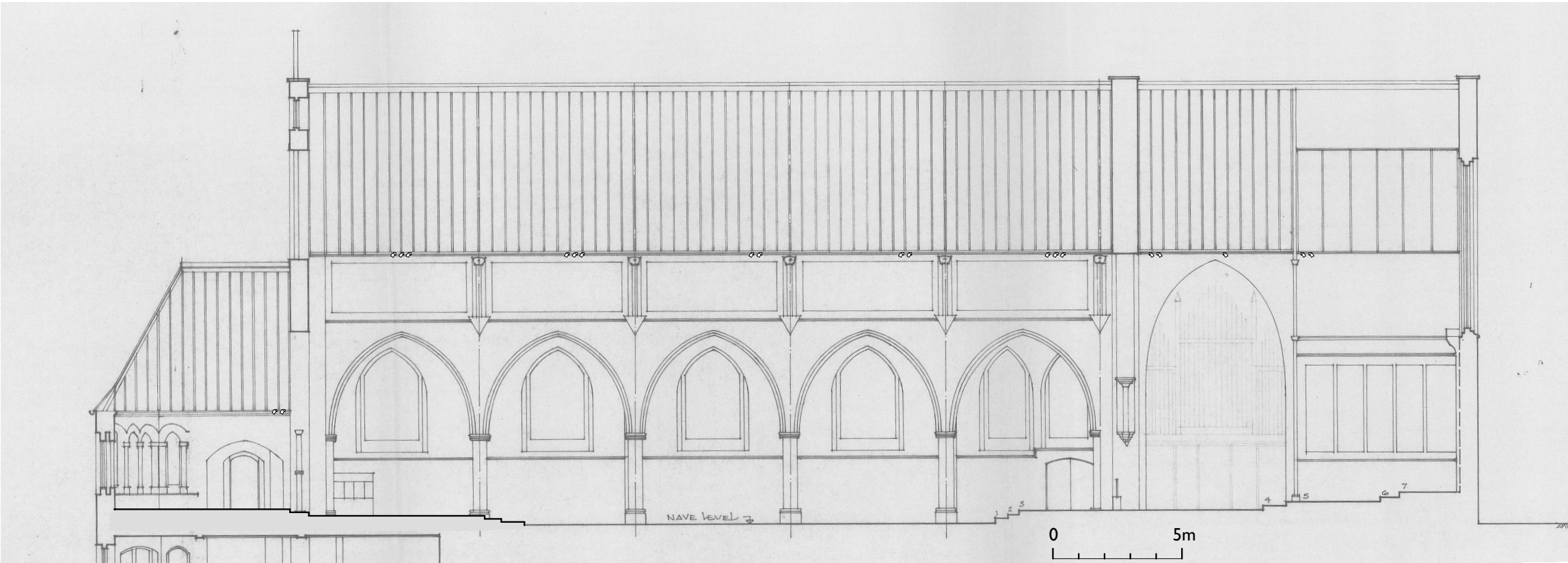


Notes:

1. This diagram is taken from the more comprehensive report provided by Sylvania Lighting
2. The lux levels, LED source temperature (3000k) have been tested on site with the client, the Architect and the representative from Sylvania lighting
3. Comparison was made with the existing lighting. The lighting levels implied by this diagram are relatively high, which is why the Architect has recommended that dimming integral with the fittings be supplied
4. It is noted that the above lux levels are levels which will occur after some time, once the LEDs have lost some of their efficiency. When first installed, the light output will be higher than this. This is another reason why the integral dimming system has been specified - to allow for suitable adjustment after a while

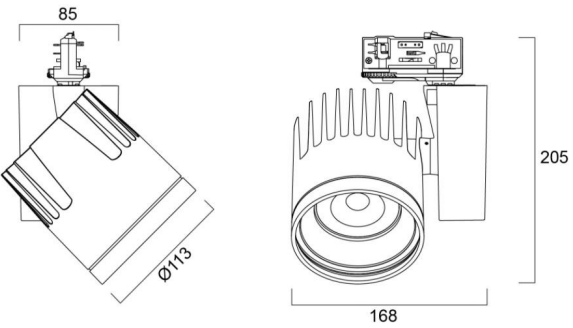


The existing fittings can be seen on this photo. The new fittings will be located similarly, but are much smaller (see drawing L003)



Notes:

1.
The Beacon fittings are shown on the above section at actual size (to scale). As can be seen, they are very discrete - much smaller than the existing fittings. This is an important design consideration
2.
Glare: the question of glare has been carefully considered. As can be seen, the fittings are located high in the church, ie 9.5m above floor level. Due to the angle of incidence, glare for both congregation and clergy (or others facing the congregation) will be minimised
3.
Fitting colour: for clarity, the fittings are shown on the above drawing in white, however in reality they will be black in order to blend more thoroughly into the background of the roof timbers
4.
Health and safety: the Principal Designer/Lighting Designer/Architect (Tim Gough, Austin Winkley & Associates) considered previously that the current existing position of the lighting was too high in relation to the issue of lamp replacement. A previous iteration of this design therefore proposed that the lighting be lowered, so that access to be had to re-lamp. That had the considerable disadvantage of additional wiring being required, disturbance of the existing wall finishes and fine brickwork etc. Now that suitable LED fittings with 50,000 hour life are available with appropriate light output, the fittings for this current scheme can be installed at high level, since relamping will not be needed
5.
Other conservation/architecture considerations: the re-use of the existing Pyro cables reduces cost, reuses an important resource, reduces the embodied CO2 output of the project, removes the risk of damage to the fabric of the building due to installation of new wiring, confines fixings to the timbers at high level and reduces waste



Beacon fitting dimensions



Beacon fitting appearance