Supporting Documentation
Birkenhead Christ the King – Insulation to roof space above St Anne's Room

Note to parish

This bundle includes all the supporting documentation to your faculty application as required under Rule 5.5 of the Faculty Jurisdiction (Amendment) Rules 2019.

List of documentation

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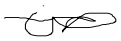
Caroline Hilton, DAC Secretary  6 June 2023

We petition the Court for a faculty to authorise the following-

Please describe the works or other proposals for which a faculty is sought in the way recommended by the Diocesan Advisory Committee in its Notification of Advice.

SCHEDULE OF WORKS OR PROPOSALS

Installation of insulation material in the roof space above our Community Room, St Anne's Room, in Christ the King Church building.

Copies of the Standard Information Form and any drawings, plans, specifications, photographs or other documents showing the proposals must be provided with this petition.

ROOM 4. COMMUNITY ROOM.

THIS ROOM IS NOW NAMED ST ANNE'S ROOM

The former chancel of the church is now screened off from the nave and forms further meeting room. This is lit by the original east window, which contains stained glass. The mezzanine spaces on either side of the church are linked by a balcony across this room. We noted a small area of flaking paintwork on the ceiling of this space but that was present at the last inspection and does not seem to have got significantly worse. There are also a number of areas of low-level penetrating damp that have recently been re-decorated but were already re-appearing. Our inspection of the area under the floor of this part of the building show that there is a significant damp / condensation issue that needs to be dealt with in this part of the church. It seems likely that the problems with damp in the walls are connected with the damp in the sub floor void. As with the previous space, it is difficult to change light bulbs in this room But the spot lights that were fitted along the front of the balcony after the last inspection have not been a great success as they cause excessive glare and are uncomfortable in use. Alternative arrangements with LED low-energy, long-life fittings are being considered.

Images of stepped cracks below east window

Balcony over St Anne's Room

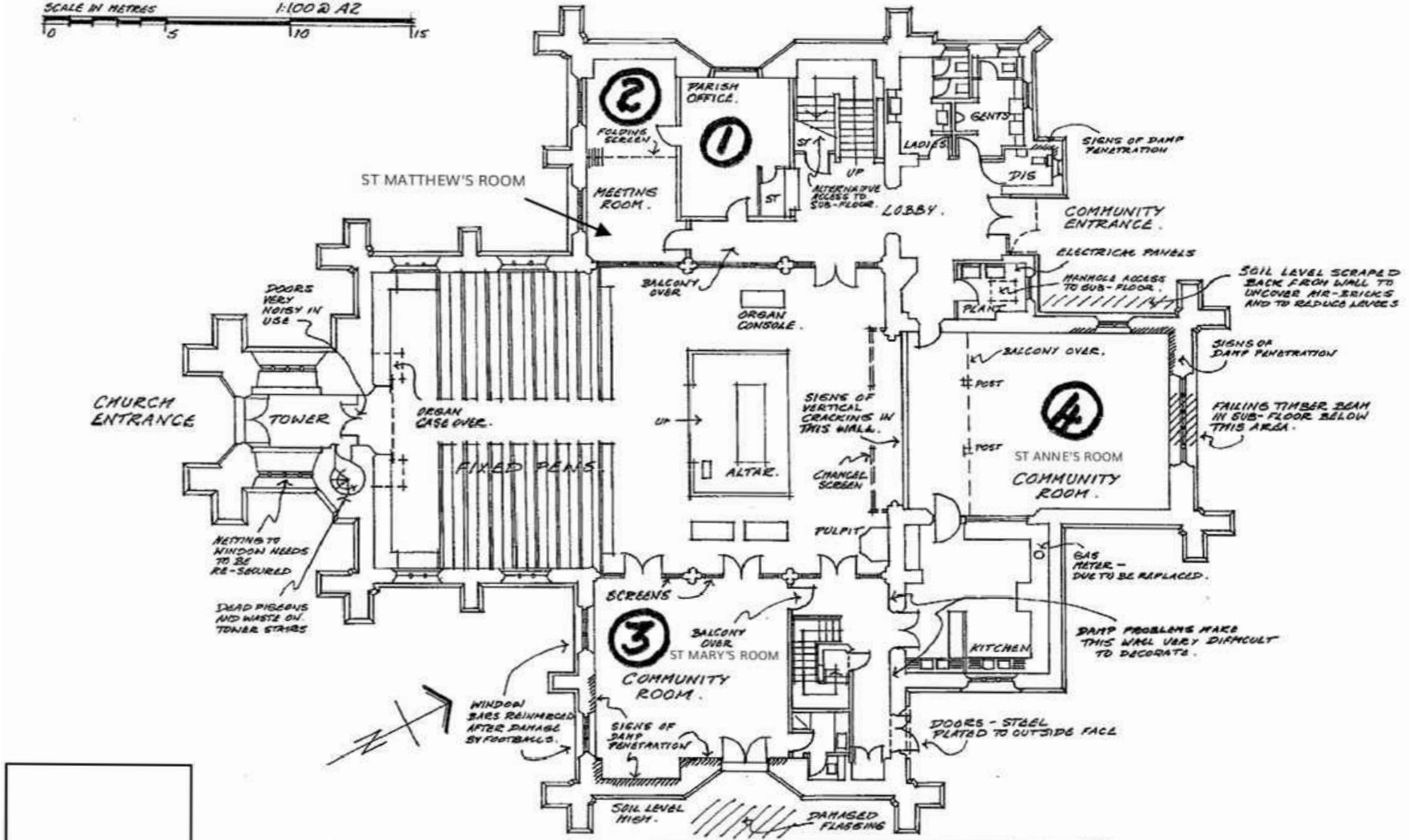
Only the original east window is provided with stained glass and this is now in St Anne's Room, formed out of the original chancel. The name of the stained glass artist is unknown. All other windows have lightly obscured clear glazing, which makes the interior of the church very light and airy.

Photograph of the east window

Photograph of roof void above nave ceiling.

KEY TO ROOMS.

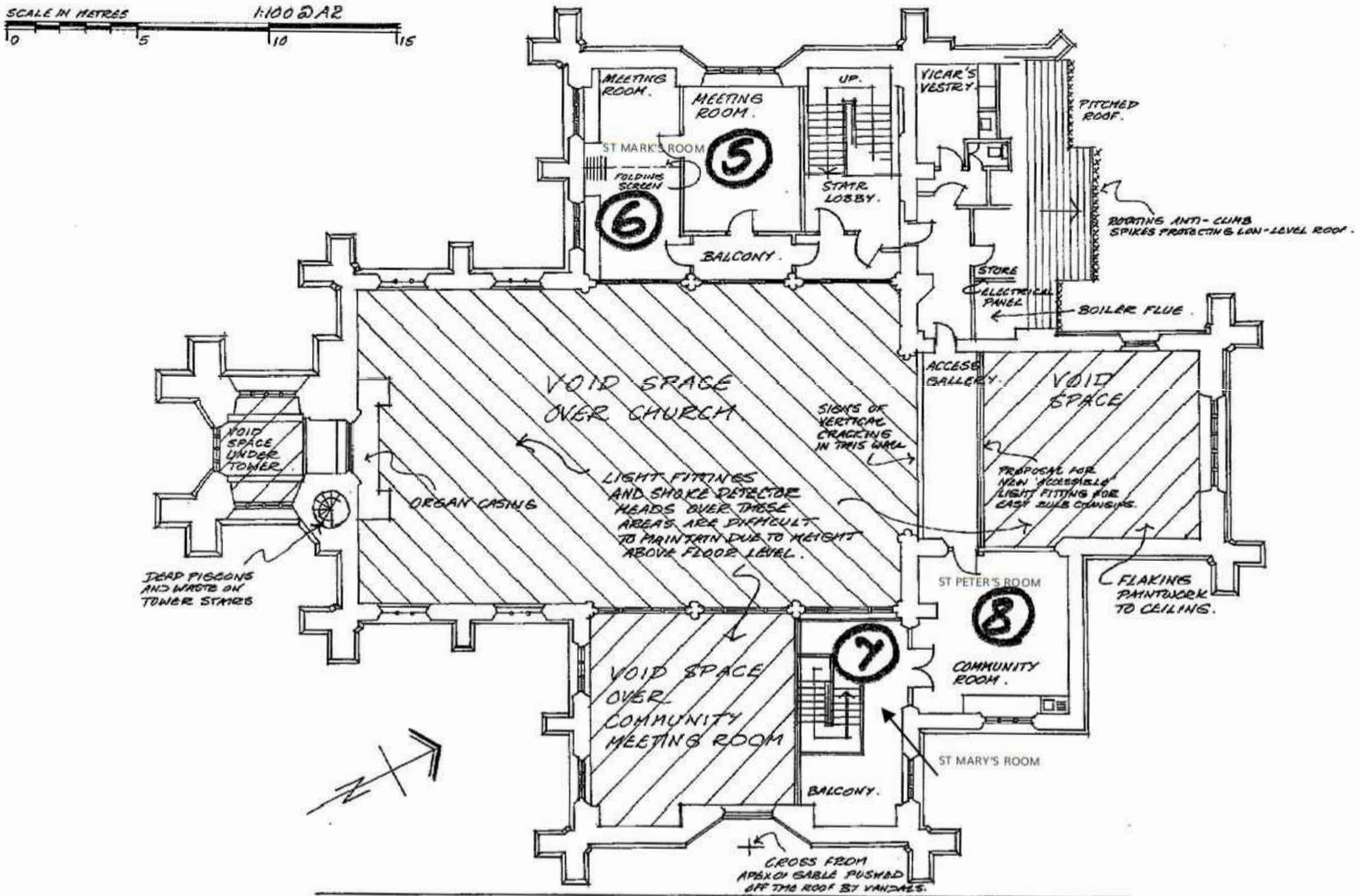
GROUND FLOOR PLAN.



CHRIST THE KING CHURCH, BIRKENHEAD.

KEY TO ROOMS.

FIRST FLOOR PLAN.



CHRIST THE KING CHURCH, BIRKENHEAD.

Regarding the installation of insulation in the roof space above St Anne's Room in Christ the King Church.

Consultation with Alf Plant, church architect, took place on Wednesday 22nd February 2023 via a site visit, including within the room considered, and to the roof space above it. His comments and advice are detailed below *in italics*.

The following advice / concerns (points a-d below in **bold**) were raised by the Diocesan Advisory Committee (DAC) after initial conversation:

a. **The DAC was unsure whether the improvement to heating levels at ground level would be achieved as noticeably or quickly as hoped for by the parish, with the ceiling being so high up**

Our architect commented:
Thanks for meeting with me this morning to review the works that you are proposing to carry out to insulate the ceiling over the former chancel area. I understand that you are using this room for worship at present while it is too cold to use the nave of the church and that it is serving as a "warm space". The proposed works should make a difference to your heating costs, even though it is a large space with a high ceiling.
Our actions:
The PCC is aware that the desired effect may not be as significant as hoped. However, for several months we have had a temperature gauge installed in the loft area which clearly demonstrate a significant spike in temperature during the periods when the room heating is on. This gives clear evidence of the quantity of heat being lost through the ceiling. Insulation would significantly reduce this heat loss and at least trap it in the room, albeit at high level.

Our architect commented:
We discussed the possibility of using a stratification fan to help move warm air around inside the room and this may be worth considering for the future although the cost may make this impossible. Initially, I think your proposal to monitor the temperature in the church will be worthwhile as this may help to optimize the on and off times for the heating when the building is in use.
Our actions:
The PCC are also considering a second phase to this project (subject to finance) and are actively investigating the use of a destratification fan in order to move heat from ceiling level back down to floor level. Once insulation is installed, we will use temperature gauges to measure temperature difference between ceiling and floor level to assess whether this would be a viable course of action.
The PCC are of the opinion that we have a duty to make our building as energy efficient as we can. This is a small step towards that, which as a parish with very limited financial resources in a deprived are, is as much as we are able to do at this stage. However, we work on the principal that if we do nothing, nothing changes. If we do whatever we are able, there is the chance that things will improve and we will be able to provide a more welcoming and comfortable environment for our church family and our community to enjoy. This particular room is used by church and community at least 5 days of the week and is an important part of our mission and ministry.

b. The risk of condensation would need to be considered, and the parish would need to demonstrate that the space is fully ventilated

Our architect commented:
it was clear that there is a lot of air movement through the void on a windy day like it was earlier
Our actions:
As per the photo below, is can be seen that the opening to this particular roof void from the main roof space is large enough to permit significant movement of air.

The main roof space (below) is directly connected to, and open to the tower, which has open louvres on four sides, ensuring constant and significant ventilation in the whole roof space.

Further to this, within the roof space in question there are also 8 ventilation points allowing the escape of air out through the tiled roof above (as per the photo below).

c. **Care would be needed when installing insulation on top of electrics as there was potential for fire risk**

Our architect commented:

The insulation can go over the existing cable runs above the ceiling

Our actions:

Type of insulation being considered:

(The specific final product used will depend on availability at time of purchase, together with any offers that may be available to reduce cost / increase quantity of insulation we can purchase)

Knauf Insulation Loft Roll

Knauf Insulation Loft Roll 44 is a Glass Mineral Wool roll, designed for use in cold lofts where pitched roofs are insulated at ceiling level, that offers good thermal performance in the range. **It is non-combustible with the best possible Euroclass A1 reaction to fire classification**, and is manufactured using Knauf Insulation's unique bio-based binder, ECOSE® Technology.

- Compression packed and lightweight for easy handling and moving around a site
- Combi-cut products are supplied partially perforated, providing the flexibility to be used between joists or used uncut as a full-width roll, maximising on-site efficiency
- Manufactured in long lengths to allow quick and simple installation maximising on-site efficiency
- Provides excellent thermal performance

Quality assurance of the insulation is given in the table below:

https://s1.thcdn.com/design-assets/product-pdf/homebase/en_GB/13815564/1666273799765-638993_Breeam.pdf

KNAUF INSULATION www.knaufinsulation.co.uk

BREEAM CREDITS USING KNAUF INSULATION GLASS MINERAL WOOL PRODUCTS

BREEAM (Building Research Establishment Environmental Assessment Methodology) is a voluntary standard that defines high performance green buildings which are healthier, more environmentally responsible and are more cost-effective across their full lives. Using independent assessors, BREEAM examines criteria covering a range of issues in sections that evaluate: management processes, health and wellbeing, energy, transport, water, materials, waste, land use and ecology, pollution and innovation.

KNAUF INSULATION **Glass Mineral Wool** products can put you on the right track for the highest result for BREEAM certification.

BREEAM 2018 Credit Category code	Assessment criteria and definition	Knauf Insulation Products contribution	Contributes towards
Hea 02 Indoor air quality	**Emissions from building products:** The insulation materials are one of the 5 product types that needs to meet the emission limits. The following requirements are of application for insulation products: • Formaldehyde ≤ 0.06 mg/m³; • Total VOC ≤1.0 mg/m³; • Carcinogens category 1A and B ≤ 0.001 mg/m³ **Post-construction indoor air quality measurement:** The total VOC and formaldehyde are measured and reported (thresholds for averaged formaldehyde concentration level ≤100µg/m³ over 30 minutes and for averaged TVOCs 300µg/m³ over 8 hours).	Glass Mineral Wool products manufactured using ECOSE® Technology meet the requirements as they have no added formaldehyde and are certified Eurofins Gold[1] for Indoor Air Comfort. Glass Mineral Wool products manufactured using ECOSE® Technology have no added formaldehyde and have the best possible Eurofins Gold Certificate for Indoor Air Comfort which help towards very low concentrations.	1 credit 1 credit
Hea 04 Thermal comfort	To ensure that appropriate thermal comfort levels are achieved through design, and that controls are selected to maintain a thermally comfortable environment for occupants.	Thermal modelling can be facilitated through products BIM files which are available online at www.knaufinsulation.co.uk	1 credit
Hea 05 Acoustic performance	To insure the building's acoustic performance, including sound insulation, meets the appropriate standards for its purpose.	Product performance aims to reduce indoor ambient noise level and reverberation times in order to comply with regulations or good practices standards.	1 – 2 credits
Ene 01 Reduction of energy use and carbon emissions	To recognise and encourage buildings designed to minimise operational energy demand, primary energy consumption and CO_2 emissions.	Glass Mineral Wool products manufactured using ECOSE® Technology help reducing all 3 parameters by reducing operational energy demand which feeds through to lower primary energy consumption and CO_2 emissions.	4 credits
Mat 01 Building life cycle assessment (LCA)	To reduce the burden on the environment from construction products by recognising and encouraging measures to optimise construction product use and the selection of products with a low environmental impact (including embodied carbon), over the life cycle of the building	Manufacturer EPD data in building LCA tools may be used in the building LCAs submitted for Mat 01. Environmental Product Declarations (EPD) containing these data are available for all Knauf Insulation products.	7 credits for the LCA
Mat 02 Environmental Product Declarations (EPD)	To encourage availability of robust and comparable data on the impact of construction products through the provision of EPD.	Product- and manufacturer-specific EN 15804 – compliant, 3rd party verified Environmental Product Declarations (EPD) are available for all Knauf Insulation products. This allows maximum points in the Mat 02 scoring for each Knauf Insulation EPD.	1 credit
Mat 03 Responsible sourcing of construction products	To recognise and encourage the specification and procurement of responsibly sourced construction (RSC) products.	All Knauf Insulation products are covered by our certification to BES 6001 (BRE Framework Standard for Responsible Sourcing), which is a BREEAM-recognised responsible sourcing certifications scheme.	3 credits
Wst 01 Construction waste management	To reduce construction waste by encouraging reuse, recovery and best practice waste management practices to minimise waste going to landfill.	Packaging is recyclable. Product offcuts can also be used as filling on working site. Both can help with achievement of the diversion from landfill benchmark.	1 credits
Pol 05 Noise attenuation	To reduce the likelihood of noise, arising from fixed installations on the new development, affecting nearby noise-sensitive buildings.	Attenuation of noise sources by use of acoustic insulation products, such as Earthwool Acoustic Roll.	1 credit

[1] www.product-testing.eurofins.com

challenge. create. care.

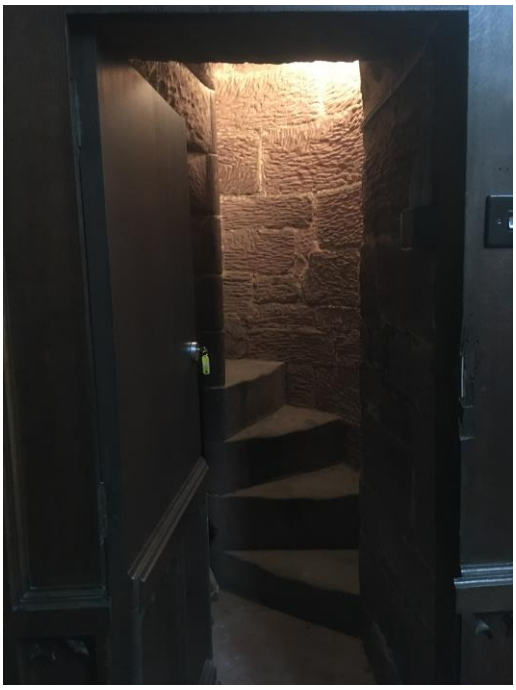
KINE3934DOC-V0718

Our architect commented:
The light fittings in the ceiling should be covered over with hoods before the insulation is laid. The hoods look like upturned buckets and hopefully they are readily available. They are to stop the insulation lying directly on hot surfaces (although LEDs run fairly cold anyway).

Our actions:
To comply with this we are anticipating using:
Loftleg Loft Lid Downlight Protector Hood @ £6.75 each
https://www.wickes.co.uk/Loftleg-Loft-Lid-Downlight-Protector-Hood/p/148851
(These are rated for light fittings of up to 50W, each of our LED light fittings for this room is rated 50W or below)

d. With the parish proposing to carry out this work at height themselves, the Committee was concerned regarding health and safety and insurances.

Our architect commented:
Access to the roof void over the chancel is fairly good although it does involve negotiating the spiral stair in the tower.
Our action:
This spiral stair comprises 49 steps. We propose having a 'chain gang' system passing the insulation up the stairs from stationary person to stationary person located every 6 steps, to reduce the chance of trips, slips and falls with people walking up and down the stairs multiple times, and to reduce fatigue.



Our architect commented:
The walkways through the nave roof are in good condition and have reasonable handrails however I did note that there are a few small steps in the boarding and it may be best to clearly mark these steps with high visibility warning tape to minimize the risks of tripping, Particularly when people are carrying big rolls of quilt.
Our action:
These small steps have all been clearly marked with yellow and black hazard tape, and are clearly visible from both directions. The lighting in the roof space clearly illuminates all walkways. An extensive handrail system assists in keeping to the designated walkways.

Our architect commented:
The access into the chancel area is quite restricted due to the small size of the archway although it should be adequate for present purposes although it may be a bit of a squeeze!
Our action:
A suitable, safely fixed 2 rung ladder is provided for moving between the small difference in levels. Only those easily able to move in and out of the space will be permitted to access that area

Our architect commented:
The existing walkways will need to be lifted so that the insulation can be laid under them and between the ceiling joists. The boards can then be put back in place.
Our action:
There is clear access to the walkway boards and as screws have been used to fix them in place they can be easily removed and replaced

Our architect commented:
There may only be depth for a single layer of insulation under the walkways but it would be beneficial to have two layers in other area. The two layers should be placed at right angles if possible.
Our action:
We are planning two layers of insulation placed at right angles to each other; the first layer in line with the joists sitting in between them, the second layer running across the joists

Our architect commented:
Care will be needed to tread on the ceiling joist lines when working away from the walkways.
Our action:
The actual installation of the insulation will be carried out by a small team of able bodied persons who are clearly briefed on how to properly install the insulation - following all manufacturer's instructions and architect advice received; how to move safely around the space, including where to tread safely, awareness of beams at head height etc. Extra lighting will be brought into the space to ensure good visibility.

Our architect commented:
GFQ and MFQ insulation materials are potentially hazardous materials to work with because of the fibres that can be released so the appropriate PPE should be used including face masks and goggles. Careful hand washing after works are complete is also important.
Our action:
Appropriate gloves, masks, goggles and disposable overalls will be provided for those handling the unpacked insulation. Appropriate gloves, masks and goggles will be provided for those handling the packed insulation. Advice will be given on wearing long sleeve clothing to cover up skin and handwashing facilities are immediately available in the church building.
First aid kits are also available in the church building.
A Church Warden with professional experience in Health and Safety will be present on site to oversee the process. A detailed risk assessment will be completed and communicated to all involved prior to the installation taking place.
A qualified first-aider will also be on site.

Insurance Cover:
In a phone call with our Insurers, Ecclesiastical Insurance, on 2nd March 2023, it was confirmed that all peoples involved in helping with the installation are covered for this activity under our existing policy as it stands. Defects in workmanship are not covered, however due to the simple nature of the work the PCC no not consider this a significant barrier to proceeding.

Birkenhead Christ the King – Loft insulation - Correspondence with parish and others

Attachments are listed according to the numbering on the supporting documents list

- Attachments in blue are included within the proposals section

Date	Message
09/12/2022 To: Katy Purvis From: Paul Bentley	thank you for your time on the phone earlier, I appreciate your help and advice as we look to install some loft insulation in Christ the King Church above St Anne's Room. I have been in conversation with Alf Plant, our church architect about our plans, and he is in support of what we are proposing, both in terms of its value for our ministry as a church, but also in terms of it being in keeping with maintaining the health of the building. We are looking to install loft insulation in the roof space above St Anne's Room, the old Chancel of the church. This is the room that we are now using for worship and the vast majority of our community activities. We have brought our activities together into this room as it is the space we can most efficiently heat and light, taking into account the significant increase in utility bills that we are experiencing. The ceiling in this room is full height - around 12m. The loft space has clear, safe access to it with suitable lighting for safe working. There are 8 downlights fitted through the ceiling into St Anne's Room below which are all LED fittings, and so emit low levels of heat. Alf Plant has advised us on suitable coverings for these fittings to ensure safety. We will also produce and store a printed 'map' of any other wiring etc in the roof space which might be covered up by insulation. We are looking to install 2 layers of a domestic style mineral wool insulation, each layer fitted at a right angle to the other to ensure best coverage and minimal gaps. Alf has suggested this would be a suitable material to use. I have placed a bluetooth thermometer in the roof space for several weeks, and can identify clear spikes in temperature of between 3 and 4 degrees in the roof space when the room heating is on. We are losing a huge amount of heat through the roof, and anything we can do to prevent this will be of great benefit to us financially but also will benefit our community members. We are a registered Warm Hub in the community, one of few around in our immediate location, and so are keen to try and get this installed as soon as possible. We are only looking seriously at it now as we have

	recently been able to find funding for this project. The increases in cost of gas and electricity mean we are unable to have our heating on for long periods of time. This means that it is more difficult for us to maintain a suitable temperature to provide a warm space for our community. We minister in an area if significant deprivation with over 50% of children living in poverty, and we are already receiving an increasing number of local residents coming to us who are unable to put on their own heating and so it is important that we can offer a suitable space for them at this extremely difficult time. As we are a listed building, I am aware of the need for a Faculty for this work. However, If there were any way of expediting the process so that we can gain most benefit from this work during the coldest months of the year, it would be much appreciated, for all the reasons above. Alf Plant has assured me he is happy to provide whatever might be required in writing to support our case. We would be looking to install this insulation ourselves to keep costs down, and will provide all necessary PPE, risk assessments and guidance to ensure the safety of our workers. We have funding in place and workers ready to go. While we are concentrating on St Anne's Room at this stage, if insulating this room gives clear benefit, we would intend to look at seeking out funding to insulate other areas of the roof space in the building. We would also be looking at investigating the effectiveness of destratification fans in order to bring the heat trapped under the ceiling back down to floor level. This is all part of our commitment to providing a building that is an efficient, welcoming, warm space for our church family and the community around us, more and more of whom are accessing our building and the wide range of support we offer at this time. Thank you for your time with this, any help you are able to give would be much appreciated.
10/01/2023 To: Katy Purvis From: Paul Bentley	in case it is useful in terms of deliberations, I am attaching some photos of the roof space in Christ the King. Apologies my camera phone and flash aren't great, but hopefully they give an idea of the accessibility of the area and the space we are looking at insulating. The first photos are of the roof space over St Anne's Room which we are looking to insulate, the final two photos are of the roof space over the main worship area, which I have included simply to give an idea of the accessibility of the whole area. 3) Photographs
19/01/2023 To: Paul Bentley From: Katy Purvis	**DAC Advice** I am writing to let you that at its meeting of 13 January 2023 the DAC considered the proposal to insulate the roof space in St Anne's room and wished to offer the following informal advice.

	a. The Committee commended the parish for their attention to reducing heat loss and energy use b. It was however, unsure whether the improvement to heating levels at ground level would be achieved as noticeably or quickly as hoped for by the parish, with the ceiling being so high up c. The risk of condensation would need to be considered, and the parish would need to demonstrate that the space is fully ventilated d. Care would be needed when installing insulation on top of electrics as there was potential for fire risk e. With the parish proposing to carry out this work at height themselves, the Committee was concerned regarding health and safety and insurances. f. It therefore asked that the parish address the point raised in b, c, d and e above. The parish will need to involve their architect in looking at these points. If you have any queries please do let me know
23/01/2023 To: Katy Purvis From: Paul Bentley	Can I just confirm the process here? Points b, c, d, e need to be addressed, and then submitted as a faculty application in full to the DAC? I appreciate point b, but if we do nothing, then nothing changes. We do something, there is a chance that there might be some improvement. We don't have much money to do these things, but if we can make our community and current worship space a little more hospitable then we will, and we appreciate the support of the wider Diocese in this.
31/01/2023 To: Paul Bentley From: Katy Purvis	Yes, please ask Alf to help you with points b-d, and start an online faculty application. I know that costs money that you'd rather spend on the insulation, but I do think the DAC will require it. Involving Alf also gives you a bit of protection in terms of liability
28/03/2023 To: Paul Bentley From: Caroline Hilton	I am writing to let you know that at its meeting of 17 March 2023 the DAC considered the response you provided to its previous advice and it resolved to recommend the scheme. This means I will be able to progress the application you have started and raise the Notification of Advice so that the public notices can be displayed. I will let you know when this has been carried out. The Committee also wished to offer the following informal advice: a. A risk assessment should be carried out before the parish commence with the work b. The Committee maintained its previous comment that care would be needed when installing insulation on top of electrics as there was potential for fire risk c. A further general point was that the parish should also consider the draught proofing of the building/heat spaces, although

	noting that if the warm space is densely occupied some adjustable ventilation (an opening window?) may be needed to avoid condensation on windows etc. If you have any queries please do let me know
28/03/2023 To: Caroline Hilton From: Paul Bentley	thank you very much for getting back to me on this, much appreciated, and that we are able in due course to go ahead with this. The points the committee have mentioned are clearly noted and we will include these in our planning for the project. I look forward to hearing from you as to when we are able to commence the works.