

## Design Narrative

### Project Information:

<b>Project:</b>	St Andrew's Church, Cheddar Re-ordering
<b>Client:</b>	The PCC of St Andrew's Church
<b>Job Number:</b>	A308
<b>Date:</b>	March 2024
<b>Ref:</b>	A308 / 03.05 / 08.03.24 / DN

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## Project Overview

St Andrew's Church, Cheddar is a Grade I listed building located at the south end of the village about a kilometre away from the Gorge and its cluster of visitor attractions. Access from these facilities and the church is not straightforward by foot as there are some stretches of road without a pavement.

St Andrew's was founded as a monastery, located near a Saxon royal palace, possibly as early as 766. Since its founding it has been serially remodelled and rebuilt. The existing structure is principally a fourteenth- and fifteenth-century building. The church was substantially restored in 1871-3 by the notable nineteenth-century architect William Butterfield, who dressed the chancel in polychromatic tiles and reordered the medieval furniture, including incorporating decorative fifteenth-century timber pew-ends into the Victorian replacements.

The church has worked collaboratively with Communion Architects to develop a scheme which responds to the needs of the building. These are:

- To improve the heating
- To improve the lighting
- To increase provision of flexible space within the church
- To introduce café and washing up facilities
- To introduce WCs
- To extend the stage
- To use technology to engage with families and younger generations
- To retain the children's area
- And to resolve the temporary situation in relation to St Nectan's Chapel

These needs are set out in greater detail in the *Statement of Needs* prepared by the church. This document will respond to each of these needs in turn and discuss how they have been resolved. Each item has also been subject to discussion with the Diocesan Advisory Committee (DAC) and The Society for the Protection of Ancient Buildings (SPAB). The proposed re-ordering scheme was revised in response to these discussions. The principal revisions have been:

- To only develop the south aisle
- To retain all the pew-ends in place as part of shortened pews
- To reduce the WC provision to a minimum
- To incorporate the lattice detailing into the proposed design, drawing inspiration from the window lattice detailing and the saltire of St Andrew

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- And to carry out a heating study to confirm that a combined heating system would be the best overall option to provide a low-carbon heating system with minimal intervention.

Whilst the impact of the proposed re-ordering is set out in the *Statement of Significance*, it is hoped that this document will provide an introductory overview to the re-ordering of St Andrew's and illustrate how the final design has been arrived at.



Interior of St Andrew's Church, Cheddar, looking east towards the chancel and altar

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## 1. Heating

The existing gas-fired boiler at St Andrew's is old and inadequate, the system regularly fails to start, and the church is often cold. In a recent consultation, over 90% of the congregation considered it in need of improvement. The PCC has explored the possibility of a direct replacement for the boiler but this cannot be done without providing a new safety compliant flue and, apart from the expense, this solution would not meet the low carbon goals of the government and Church of England.

Initial heating solutions looked at installing new 'traditional' radiators, using radiant panels, and installing underfloor heating. In response to these suggestions, SPAB advised the involvement of a heating consultant, which was echoed by the DAC. ESDP consulting engineers were therefore instructed to work alongside the architect to complete a detailed survey and report on possible heating solutions. This report is summarised below. The DAC also commented that the church contained several unusual cast iron radiators of historical interest, which should be retained.

### Heating system report

A *Heating System Report (2023)* was prepared by ESDP to provide a recommended approach to upgrade the existing heating system with a view to meet the Church of England's 2030 net-zero target. The report confirmed that the existing boiler and circulation pumps were at the end of their life expectancy and, as such, their efficiencies were greatly reduced. The report also found that the existing system was unable to provide enough heat output to meet the thermal comfort levels required for the space when occupied. The report compared different heating system options (see section 7.0 of the report). Option 1 was the least expensive and involved the direct replacement of the gas-fired boiler, however this option is not in keeping with the CoE's 2030 net-zero target. Option 2 was a combined approach, using both a gas-fired boiler and an Air Source Heat Pump (ASHP), a stepping stone towards net zero. Option 3 was to use only ASHPs and was lowest in terms of carbon outlay but had the highest installation cost.

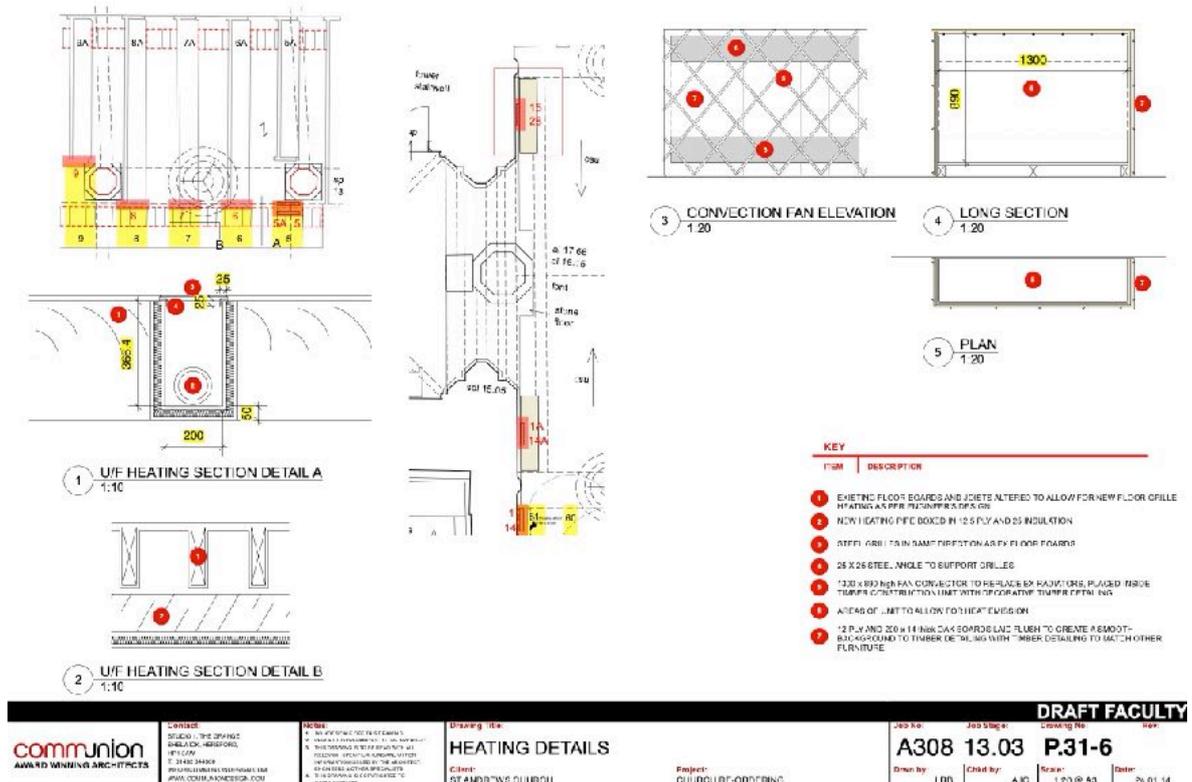
After careful consideration, the PCC have decided to proceed with option 2, the combined gas-fired boiler with an ASHP. This will increase the heat output compared to the existing system, has a lower capital cost, and will also be the least expensive to run over a life cycle of 20 years. An added benefit is that this proposed system can utilise the existing pipework and radiators already present in the church. In addition, the new gas boiler will be small enough to use the existing balanced flue, meaning the flue can be reused. This also means that a proposed new vertical flue which would rise above the roof level of the south aisle is not required. This approach, therefore protects the historic fabric of the Grade I Listed church and preserves views towards it. This option is also a good step towards the church's low carbon goals and, if finances permit, the ASHP system can be extended in the future to remove the need for a gas-fired boiler.

As such, the revised scheme prepared by Communion Architects proposes a new gas-fired boiler and a new ASHP in the existing plant room and compound, respectively. This approach allows the existing system, which includes pipes in the north aisle and decorative iron radiators at the base of the chancel arch, to remain in place whilst being supported by a low-carbon heating solution. The new gas-fired boiler is smaller and more efficient than the existing system and will be used for background fabric heating. Additional space heating will be provided by the ASHP. Fan convector heaters will be installed on the west and east walls of the nave and aisles, and over-door fans will be installed near the north, south and west external doors. The fan heaters will be contained in joinery cases, designed by Communion Architects. To facilitate the ASHP system, heat trenches will be installed in the southern half of the church. The trenches will use the existing voids under pew stands, removing the need for intrusive excavation works, and will be covered with timber grilles

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laid in the same direction as the floorboards, and as such the whole installation will be very discrete.

This proposed heating system is an informed solution which will provide comfortable thermal temperatures within St Andrew's Church whilst it is in use. It retains the significant cast radiators, noted by the DAC, and uses the existing pipework. It is an economical solution which enables the church to address it's net zero goals and, in the funds and technology allow, laying the groundwork for a full ASHP heating system in the future,



Details of heating elements

## 2. Lighting

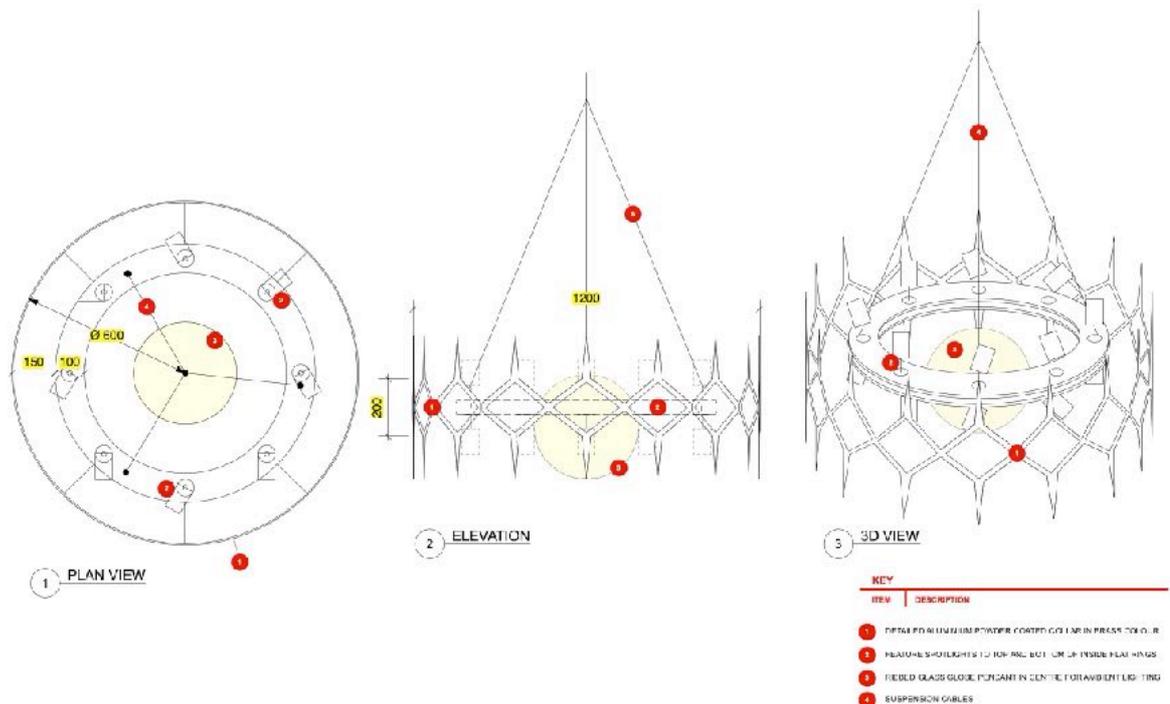
The existing lighting system uses incandescent 300W bulbs in simple, 1930s wrought-iron chandeliers, located between each of the nave arches. At present this system does not provide sufficient quality of light, is inadequate for reading hymns and service sheets in the nave and aisles, and there are dark spots in the church; in the north entrance, around the war memorial, and under the tower. The present lighting system exacerbates these issues. It is inefficient and has reached the end of its lifespan. The incandescent 300W bulbs which are used are no longer easily available for purchase.

Regarding consultation responses on the proposed lighting scheme, SPAB deferred to the DAC who offered no comment.

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To improve the lighting system, Communion Architects has designed subtle aluminium and glass chandeliers, inspired by motifs in the church's stained glass windows. The design will echo a Halo or Crown of Thorns. They will have a glass pendant and directional spotlighting to create both ambient and architectural lighting, improving the overall quantity and quality of light. The dual-design will also allow for improved lighting of the decorative nave ceiling, which is presently under-appreciated due to the low lighting levels. The proposed lighting system has the added benefit of utilising the existing wiring points without requiring the need for significant additional wiring. The lighting system will also be low-energy.

Therefore, the proposed lighting solution will improve the quantity and quality of light, using a low-energy solution, through an architecturally appropriate and symbolic design.



	CONTACT STUDIO - THE GRANGE WELLSICK, HERFORD, WYLLVA T: 01492 344608 EMAIL: COMMUNIONARCHITECTS.COM WWW.COMMUNIONARCHITECTS.COM	NOTES: 1. ALL DIMENSIONS UNLESS OTHERWISE STATED. 2. MATERIALS AND FINISHES TO BE APPROVED BY THE ARCHITECT. 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.	Drawing No: <b>PROPOSED PENDANTS</b> Client: ST ANDREWS CHURCH	Project: CHURCH RE-ORDERING	Job No: <b>A308</b>	Job Stage: <b>13.03</b>	Drawing No: <b>P.32</b>	DRAFT FACILITY
	Drawn by: LRD	Check by: AJC	Scale: 1:10 @ A3	Date: 26.01.14				

Proposed lighting pendants

## 3. Increased provision of flexible space

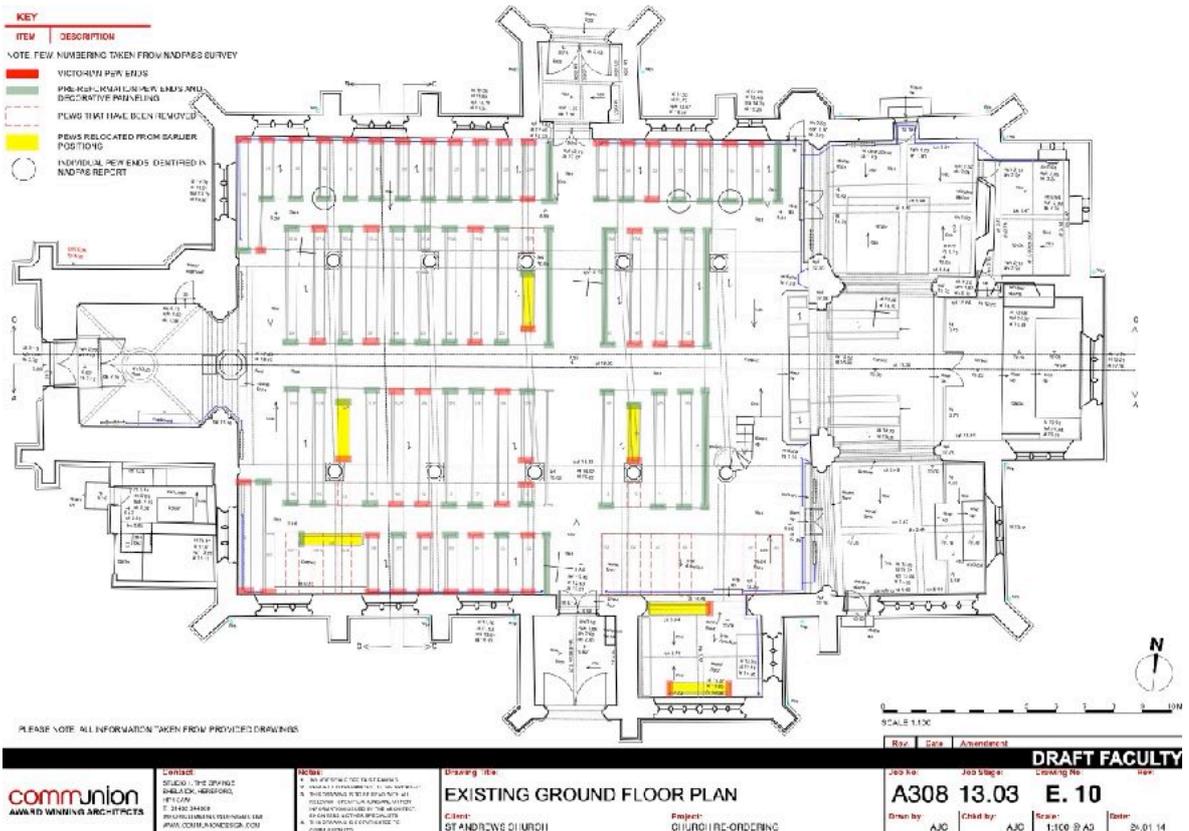
As articulated in the *Statement of Needs*, the fully-pewed nature of the church means there is little space for people to circulate. The successful recent experiment of removing some pews from the south aisle, near St Nectan's Chapel, has proved that even a little space increases people's ability to circulate and provide a greater degree of use. These pews are presently in storage and their removal is, at present, temporary. The freeing up of this area has created space for socialising and serving refreshments after services, and the church would like to further increase their flexible space to create more space for socialising, encourage families with buggies to join in the worship, improve the children's area, and ensure that wheelchair users can be included within the core of the church and not be assigned to the periphery.

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However, both the church and the architects are sensitive to the reality that to create more space would involve the loss of some of the pews. At St Andrew's the pews are particularly significant, as they date from the 1873 William Butterfield reordering and include decorative timber pew-ends from the fifteenth century. The original proposals prepared by the architects looked to remove all of the side pews from both the north and south aisles. Pews could be placed in storage and a strategy could be developed to retained and display the fifteenth-century pew-ends.



Examples of fifteenth century pew ends



Survey of fifteenth- and nineteenth-century pews

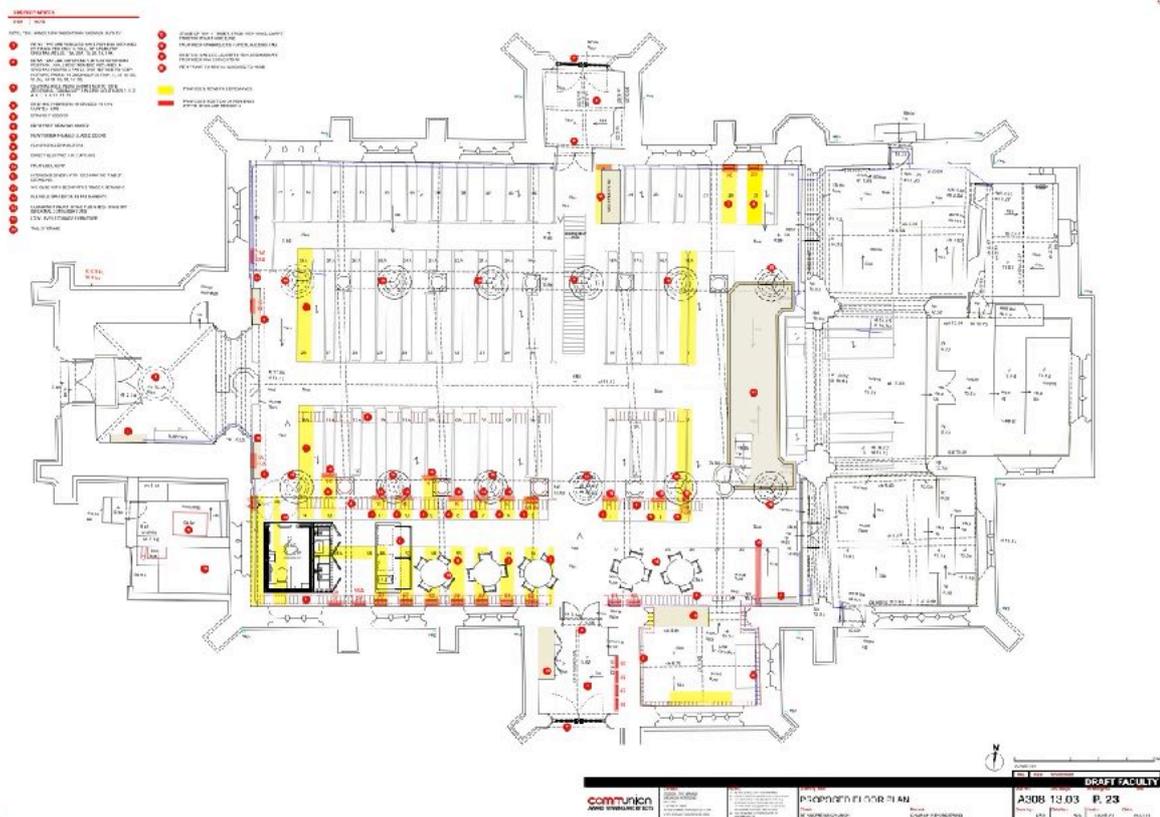
The significance of the pews was reflected in the DAC's and SPAB's responses, where it was advised that the quantity of pews proposed for removal would require careful justification, and that careful thought should be given to the re-use and display of the pews and not allow the importance

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of the Butterfield work to be lost. It was also advised that the temporary storage situation for the few pews currently off-site was resolved, and the DAC commented that increasing the number of pews stored off-site could lead to further issues, as had been the case in other projects.

The comments from the DAC and SPAB have been taken onboard and additional surveys of the pews have been undertaken to identify the location of all of the fifteenth-century decorative timber and the original location of the nineteenth-century pews (above). In addition the scale of the scheme has been reduced, and the revised scheme leaves the north aisle pews in place and concentrates proposed alterations to the south aisle, where pews have already been moved.

The revised scheme reduces the south aisle pews, the shortening of them in the southern half of the nave, and a few other select removals elsewhere in the church to improve circulation space. Two pews from the east end of the nave (in front of the chancel arch) are also proposed for removal. This will be discussed further in relation to the extended stage. The removal of these pews will create an agile, flexible space for use by the congregation and other church users. Additional space will also be created at entrances to create welcome areas for greeting visitors.



Proposed internal arrangement of the church

In order to reduce the impact from these proposals, a mitigation and display strategy has been developed which draws inspiration from Butterfield. In Butterfield's reordering, he retained the fifteenth-century pew-ends and amalgamated them into existing nineteenth-century pews. In the proposed 2024 reordering scheme, the Victorian pews will be shortened and placed against the south wall aligned with their original position, thus enabling the fifteenth-century decorative pew-ends to be displayed, whilst illustrating the nineteenth-century pew arrangement. Some pews in the southern half of nave will also be slightly shortened, to bring them in line with the columns in the nave. This approach will create the flexible space desired by this generation, illustrate Butterfield's

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layout, and retain the carved fifteenth-century pew-ends. It also means that where pews have recently been removed and are in storage, these can be returned to the church, thus removing the temporary situation and creating a more formalised, long-term solution.

### 4. Café and washing-up facilities

In conjunction with creating more flexible space, the church would like to introduce café and washing-up facilities. At present, volunteers bring in flasks of tea and coffee for services and events, which are taking place with increasing frequency. This approach is evidently unideal and means that disposable cups are used and food-based refreshments cannot easily be provided.



Example of a café and server unit at St Mary Magdalene Church, Tanworth-in-Arden, Communion Architects

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SPAB were supportive of the principal of a café and washing-up facilities. They recommended that consideration was given to service connections. As such, the proposed location of the café and washing-up facilities is the south-west corner of the church near to the boiler and proposed ASHP, meaning that existing services can be adapted and minimal intervention is required. SPAB also made the suggestion that the café facilities should have 'lids' to resemble furniture storage when not in use. In many similar church re-ordering projects, Communion Architects has worked with this idea as a central design tenet, and has created servery areas which can be opened up and closed as required.

The DAC encouraged the PCC to consider the present levels of community engagement and how these could be increased to attract visitors to the new proposed café facilities at St Andrew's.

To create the café and washing-up facilities desired by the church, a discrete servery has been designed. The design proposes a serving space and a cafe 'pod' (which will also contain a WC, discussed further below), which can be 'packed away' when not in use. The proposed location, in the west end of the south aisle, means that there will be minimal visual impact when visitors enter the church, and will be largely unseen by congregants looking east towards the chancel and altar. Thought has also been given to how the visual mass of the 'pod' can be minimised. It has therefore been designed with a glazed 'clerestory' to dissolve the volume of the box and reduce the visual impact at window level. The introduction of the café and WC will be further minimised through the lattice design on the exterior, which draws on the church's visual aesthetic, particularly the leaded windows, and ties it symbolically to the saltire of St Andrew.

Communion Architects has worked on a number of similar projects and they have been transformational in the use of church buildings. We have drawn inspiration from the traditional church altar as our starting point, creating an 'altar' - in this case a servery - with a 'reredos' behind the café unit. This twin design creates a useful set of units which support life-changing events and can be folded away when not in use, returning the space to a repose of sacred silence.

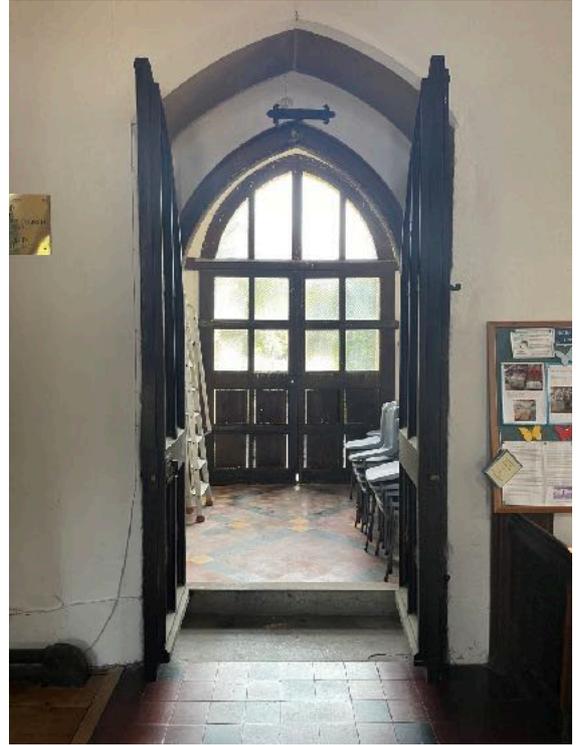
## **Glazed doors**

As part of creating a more accessible and welcoming space, it was initially proposed that glazed doors could be installed at the north and south entrances. It was suggested by the architects that the oak doors on the inside of the north and south porches could be retained with additional glazed doors introduced which would be attached to the frame of the oak door. This would then allow the modern existing timber and glass doors, which are on the exterior of the north and south porches, to be removed, thus removing the modern, degraded door and creating a more welcoming approach to the church. A heat curtain could also be incorporated into the design.

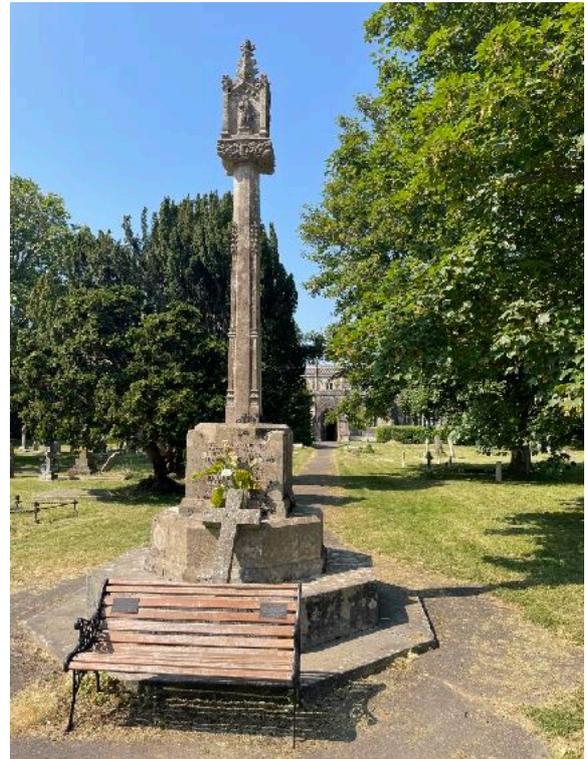
SPAB encouraged careful consideration of the design and detailing of the proposed glazed doors (which is provided in drawing P.31-5), while the DAC suggested a direct replacement of the degraded modern doors with the proposed fully-glazed doors. The DAC commented that experience had shown that anti-social behaviour had been a consequence where porches had been left open.

The revised design therefore takes on the DAC's advice, and the proposed scheme removes the existing external porch doors, which are modern and failing, and replaces them with high-quality, secure glazed alternatives. These will create a more welcoming entrance to the church, increase the thermal efficiency of the building, and allow for the introduction of a heat curtain at the entrances.

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Existing, degraded doors presently located in the north and south porches



View from south porch towards the war memorial

It is perhaps unusual to have glazed doors on the external facade of a church. However, the existing degraded doors are already partially glazed, and the proposals will be a visual enhancement whilst improving the thermal experience of the building. Furthermore, this alteration will improve the connection of the church with the churchyard to the south, dissolving the boundary

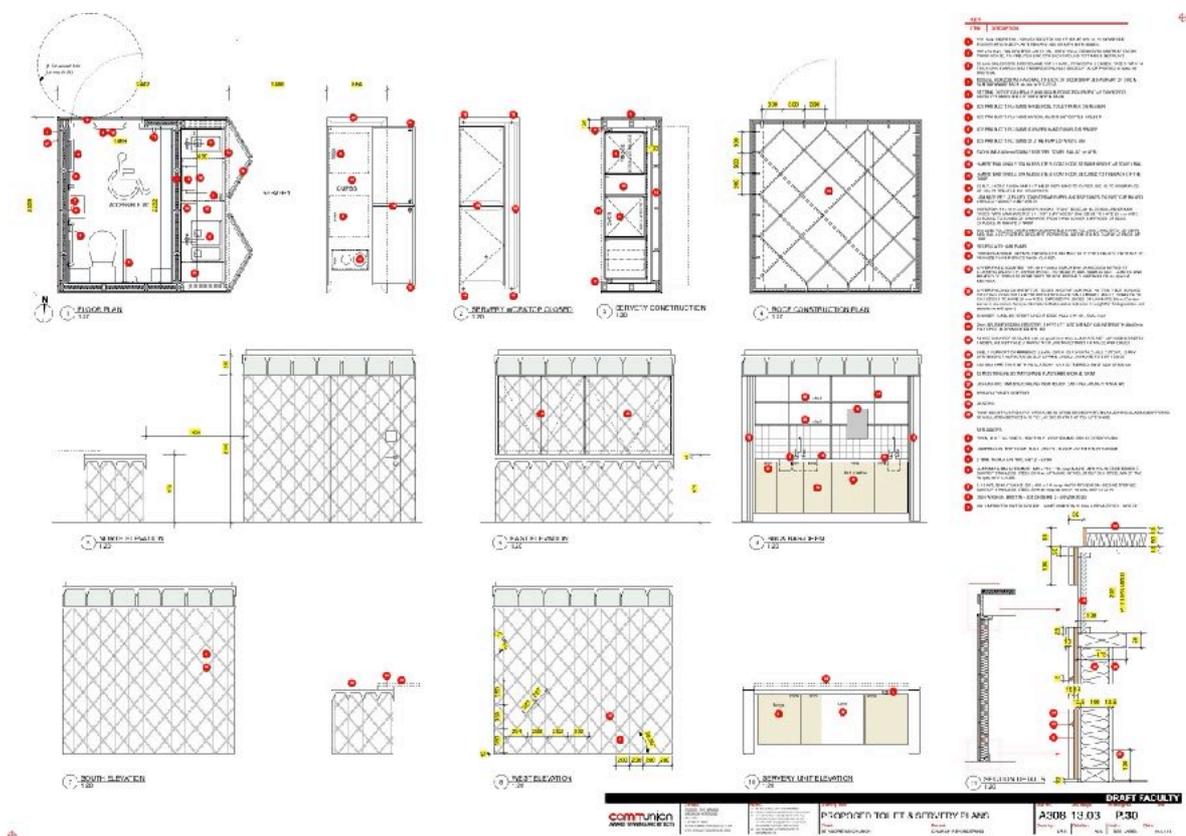


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## 5. WCs

There are currently no WCs within the church itself and careful consideration has been given to the location of the proposed WCs. The base of the tower was considered but this was thought to be too cramped. In order to have less visual impact on the church interior, outdoor facilities were considered but it was felt that this option, aside from being vastly more expensive to construct would not be fully accessible and not in keeping with the welcoming and hospitable atmosphere the church is aiming to create.

The initial scheme proposed by Communion Architects included two separate 'pods', one for the café facilities and one which would contain two accessible WCs. In their response, SPAB wondered whether a single WC would be sufficient based on the church's use rather than two. They also suggested reducing the number of proposed 'pods' in the church from two to one. Both SPAB and the DAC encouraged a consideration of the visual impact of the 'pods' on the church, such as blocking monuments or traceried windows, and whether this impact could be minimised or removed.



Details of proposed combined café and WC 'pod'

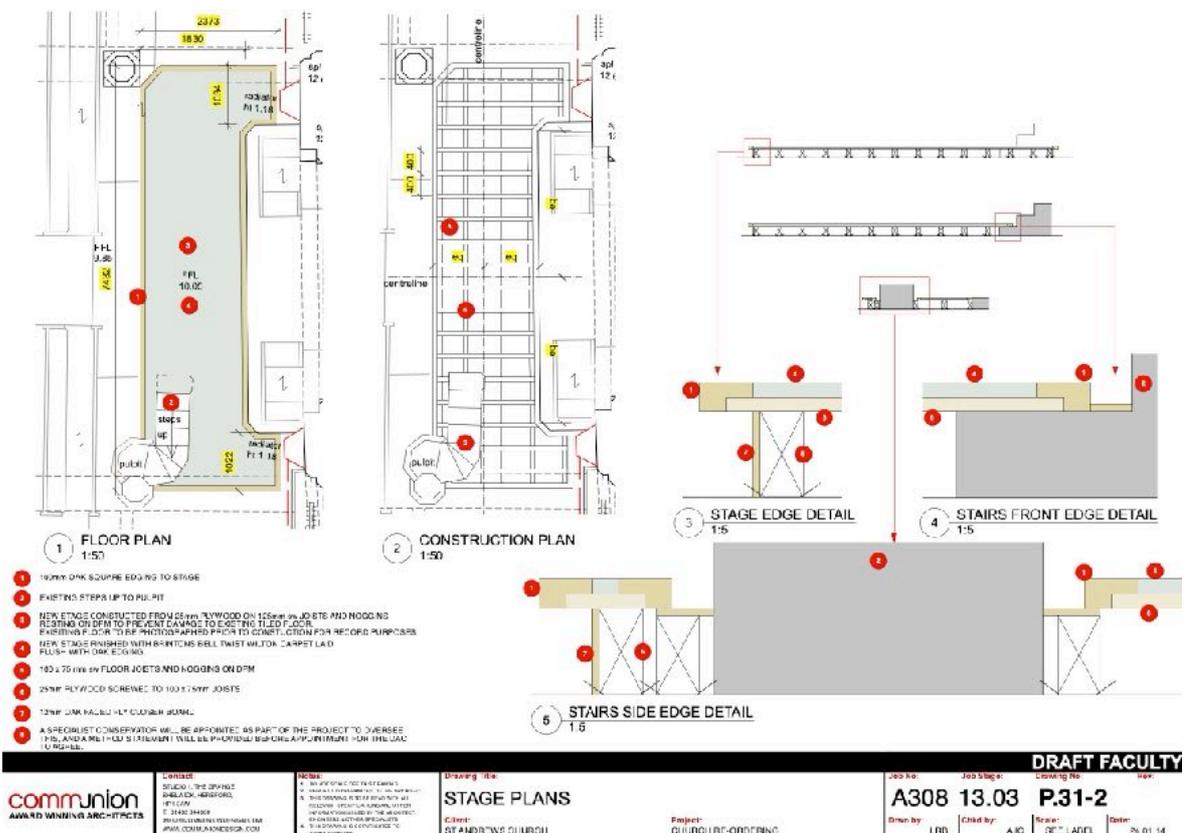
Communion Architects has taken onboard these comments and has reduced the number of proposed WCs from two to one, and reduced the number of proposed 'pods' from two to one, creating a single, combined café and WC unit which will be located in the south-west corner of the church (as discussed above). By having a single combined unit the visual impact on the church and pew removal is greatly reduced. Whilst the height of the 'pod' cannot feasibly be reduced, the visual impact is mitigated through its design, as discussed in the above section, introducing a 'lattice' design for the panelling and a glazed 'clerestory' to reduce the impact on the

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windows. Thus, WCs are provided for St Andrew's, greatly improving on its current situation, and doing so in a way that respects its sacred surroundings.

## 6. Extended stage

St Andrew's has a long, dramatic nave, and while this is ideal for processions, the congregation and those leading worship can sometimes feel distant. In addition, there is insufficient space at the front of the church for larger visiting choirs, brass bands or orchestras to perform. The church would therefore like to create a stage at the front of the church, in front of the chancel, in the hope that there can be a greater relationship between the church's worship and congregation, and that in the future St Andrew's can host a range of music-based performances. The church's acoustics, high ceiling, and theatrical setting make it an ideal venue for concerts, which the PCC would like to offer to the church family and the wider community.



Details of proposed stage

It was initially proposed by the architects that to create this stage, the existing pulpit could be relocated to its pre-Butterfield position, however following discussion with the DAC it has been agreed that the pulpit will remain in its current position and incorporated into the staging. However, in order to provide access and capacity for the stage, two pews at the front of the church will be removed and relocated. The proposed stage would also involve the removal of the existing pink carpet - a modern addition - which was supported by both the DAC and SPAB. The proposed stage will overlay the existing floor, and be an evident, subtle, and fully-reversible addition. The floor tiles will not be impacted by the introduction of the stage (a concern of the DAC and SPAB) and will be protected as there will be air circulation beneath the stage. The stage will be completed to a high quality, in deference to the high-quality work designed by Butterfield in the nineteenth-century.

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## 7. Use of technology to engage with families and younger generations

The church would like to introduce a projector and screen to enhance worship and to use when local schools visit the church, which St Andrew's has close connections with. The proposal is therefore to install a projector and a motorised screen, with the latter attached to the east side of the chancel arch. This will conceal the mechanism but allow the extended screen to be visible throughout the nave. The DAC agreed that this location was the most suitable and cautioned that care should be taken not to damage any Butterfield tiles in this area, which was echoed by SPAB. As seen in the image below, there is already wiring in this location. When the screen is installed, as recommended by the DAC, the opportunity will be taken to investigate the condition of the tiles in this area, which are currently covered by plaster, confirming their survival in case the church should decide to reveal them in the future.



Chancel arch with cables above at St Andrew's



St Nectan's Chapel at St Andrew's

## 8. Children's area

The church currently has a play area for children which can be used during services. The proposals will ensure the retention and enhancement of this facility, and enable the church to be more easily used outside of service hours.

## 9. St Nectan's Chapel

In 2014 the pews in St Nectan's Chapel, located off the south aisle, were removed and placed temporarily into storage. This minor change has create more circulation space, affords a greater degree of flexibility, and is currently used for socialising and serving refreshments.

As discussed in the 'Increased provision of flexible space' section above, the proposals will return the off-site pews to the church, thus resolving the temporary arrangement. St Nectan's Chapel will continue to be used as a social space and will be incorporated into the new café area in the south aisle, continuing the church's mission for greater community building and engagement.

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## Summary

Communion takes seriously the responsibility of working with nationally important buildings. To this end, we have received a good measure of success with projects receiving national recognition from many quarters.

Working with the Grade I listed St Andrew's Church is clearly a project which deserves careful attention and thought.

The revised design responds to the comments and feedback received from SPAB and the DAC, and seeks to conserve and sustain the architectural and historic significance of the building, while enhancing this important space for current and future generations. We have sought to understand the needs of the worshipping community so that the historic mission of the church can continue to be fulfilled.

The proposed design seeks to respond to the cultural heritage significance and needs of the site, looking to enhance its significance, remove elements which detract from this and provide a response that aspires to a quality of design and execution which will be valued now and in the future.

We trust that this narrative is useful in providing an understanding of the scheme as a whole, and some of the thinking that has been undertaken to date.

We look forward to working in partnership on this project.

Kind Regards,

Alex Coppock

**Director - Communion Architects**

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