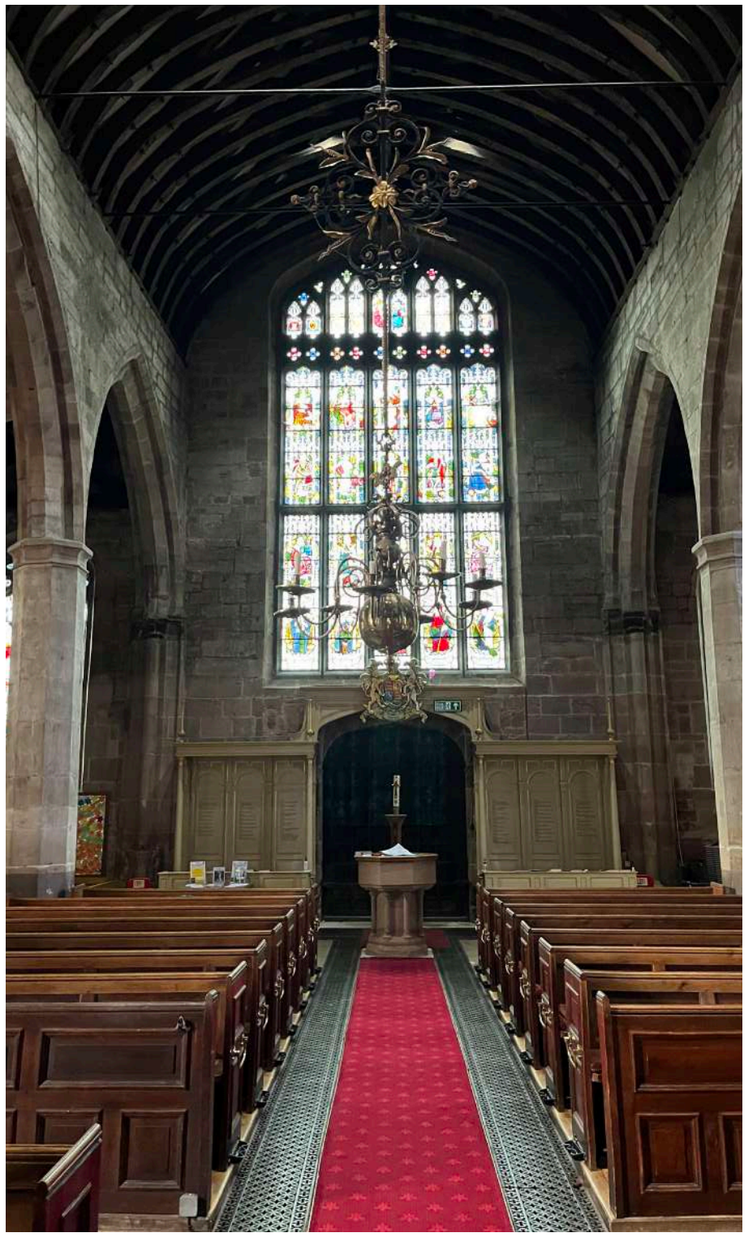
St Alphege
Solihull

Faculty Application

PROJECT TURNAROUND:
Further addendum to the DESIGN NARRATIVE

November 2025



CONTENTS

1.0 INTRODUCTION

1.1 PURPOSE OF DOCUMENT

This is a further addendum to the Design Narrative document originally submitted for consideration by the DAC in September 2024, and subsequent addendum submitted in February 2025.

As a result of the formal consultation process that ensued, the PCC have revisited certain of their proposals, and hereby present a revised direction for the future development of the church building, taking on board the previous feedback.

1.2 LIST OF CONSULTEES AND DATES OF COMMENTS RECEIVED

Comments on the original application were received from the following bodies:

- Society for Protection of Ancient Buildings (comments dated 20/11/24 and 10/04/25)
- Solihull Metropolitan Borough Council (comments dated 21/11/24)
- 20th Century Society (comments dated 18/10/24 and 12/11/24)
- Georgian Group (comments dated 11/11/24 and 01/04/25)
- Historic Buildings & Places (comments dated 14/09/23, 14/11/24 and 28/03/25)
- The Victorian Society (comments dated 26/11/24 and 31/03/25)
- Historic England (comments dated 08/08/23, 13/10/23 and 31/03/25)
- Church Buildings Council (comments dated 03/10/23)

Subsequently a formal response from the DAC was received on 11/8/25. It summarised that:

Various consultees have provided feedback supporting the reordering of the building, provided that certain details are carefully considered. However, the extension is regarded as the main objection, with internal reordering generally being more acceptable.

The considered repsonse to the remaining outstanding comments arising from the previous consultations is summarised in section 5.0.

1.3 ARCHAEOLOGICAL ASSESSMENT

A Historic Environment desk-based assessment (HEDA) of the site has been undertaken by Benchmark Archaeology. The archaeologist has also provided support in archaeological monitoring and recording during the digging of trial pits both within the nave and outside in the churchyard. The results of both these studies were shared with the DAC in July 2025.

Following DAC advice, the works will be subject to an archaeological watching brief.

1.4 SCOPE OF NEW PROPOSALS

The key amendment to the proposals for St Alphege is the relocation of the new toilet provision, taking on board the objections raised to constructing a new external narthex at the west end of the building.

Numerous locations for these facilities have been considered over the course of the design process, each with different advantages and disadvantages. As the driving force behind these proposed works is the provision of a nave space that can be used flexibly for many different purposes, the toilets must be discreet to access, available without impeding other activities, and easily visible to visitors.

The new location now proposed engenders less significant amendments to other parts of the original proposals: for instance the relocation of chair storage and the children's area. Proposals for the west entrance now focus on a new glazed door, and works to the landscape beyond will be less extensive.

The proposals for all other internal elements of the scheme remain unchanged, including the new servery and welcome desk, and the adaptations to the north entrance, north transept, choir stalls and pulpit. The drawings for these elements are included in the accompanying Drawing Pack but these proposals are not described again in this report.

New toilet provision and chair storage to NW corner

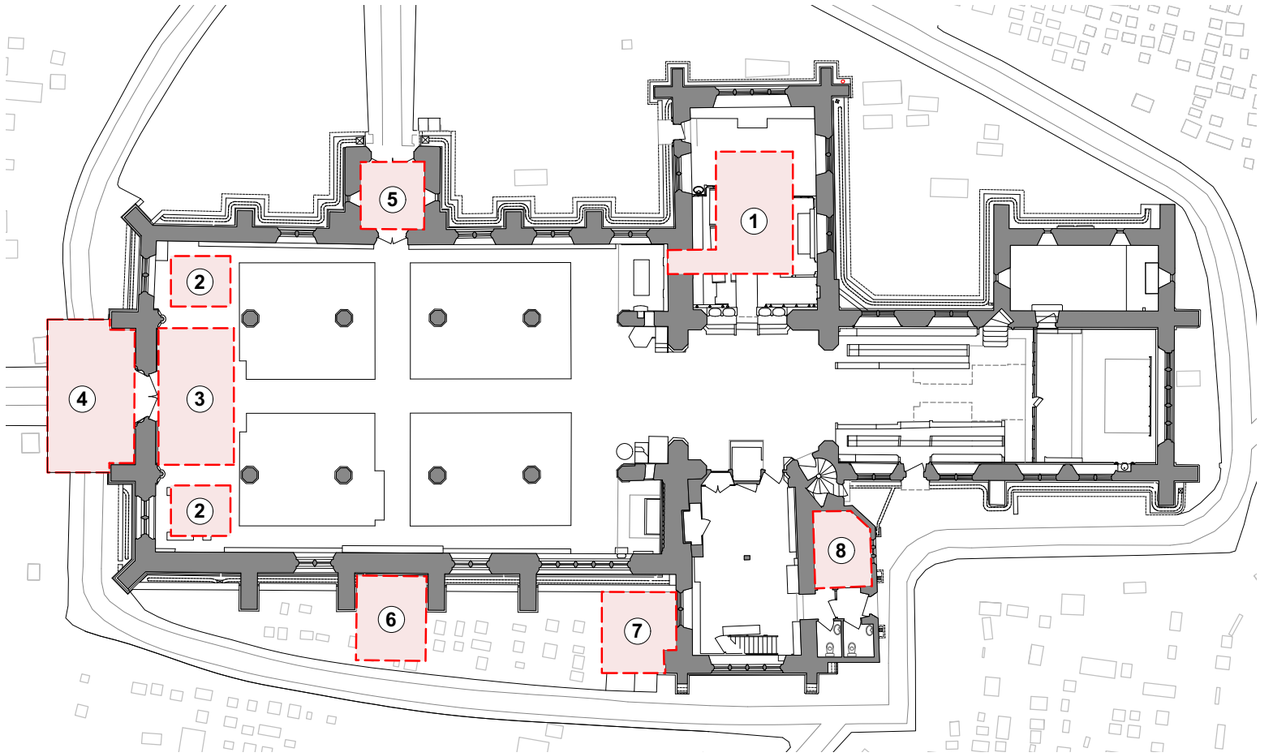
New external glazed doors fitted within existing doorway

Children's area relocated

Minor updates to landscape beyond west door (no requirement to move graves)

GROUND FLOOR PLAN - UPDATED PROPOSALS

2.0 WEST ENTRANCE PROPOSALS



POSSIBLE LOCATIONS CONSIDERED DURING DESIGN DEVELOPMENT

Following the feedback received from the DAC, St Alphege PCC have once again reviewed the possible options for locating new toilet provision. Many possibilities have already been considered in detail through the course of design development, however all the external options have now been discounted because of either practical or aesthetic concerns.

The new proposal from the PCC is to provide toilet facilities within a timber 'pod' at the north-west corner of the church (location 2 on the above plan).

This avoids significant impact on the existing walls, and can be considered to mirror the servery on the opposite side of the doors.

While access to the toilets during services and events becomes somewhat less discreet, this location has the advantage of being both convenient and easily visible to those who do not know the building well.

The new 'pod' will be carefully detailed to complement the other new fittings at the west end of the church (the servery, welcome desk and wall panelling) and like these fittings, will be wrapped with vertical cherry-veneered panelling. All these new interventions will be slightly set away from the ancient walls, thereby minimising fixings, allowing the walls to breathe and providing scope for concealed uplighting.

The volume will contain one male, one female and one accessible toilet, each arranged as a self-contained cubicle with its own hand basin. To the west, the enclosure serve as storage space for stacks of chairs and folding tables. On the south face of the new volume a recessed space is proposed to house a digital screen allowing information to be displayed to visitors in a prominent location. The higher ceiling heights required over the cubicles will be expressed as a set-back volume above the timber-clad walls, which will sit below the western window sills,

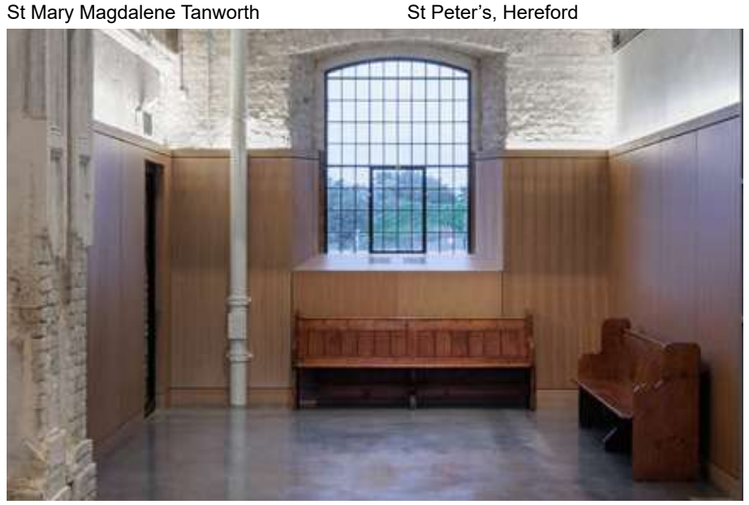
The walls of the toilet cubicles will be constructed from timber studwork and lined internally with moisture-resistant plasterboard, with acoustic insulation incorporated within the build-up to reduce noise transfer. Ventilation will be provided through a flexible duct linking the cubicles at high level, which will require a small penetration through the north wall.

PRECEDENTS: FINELY CRAFTED TIMBER VOLUMES
SITTING WITHIN HISTORIC SPACES

Hull Minster

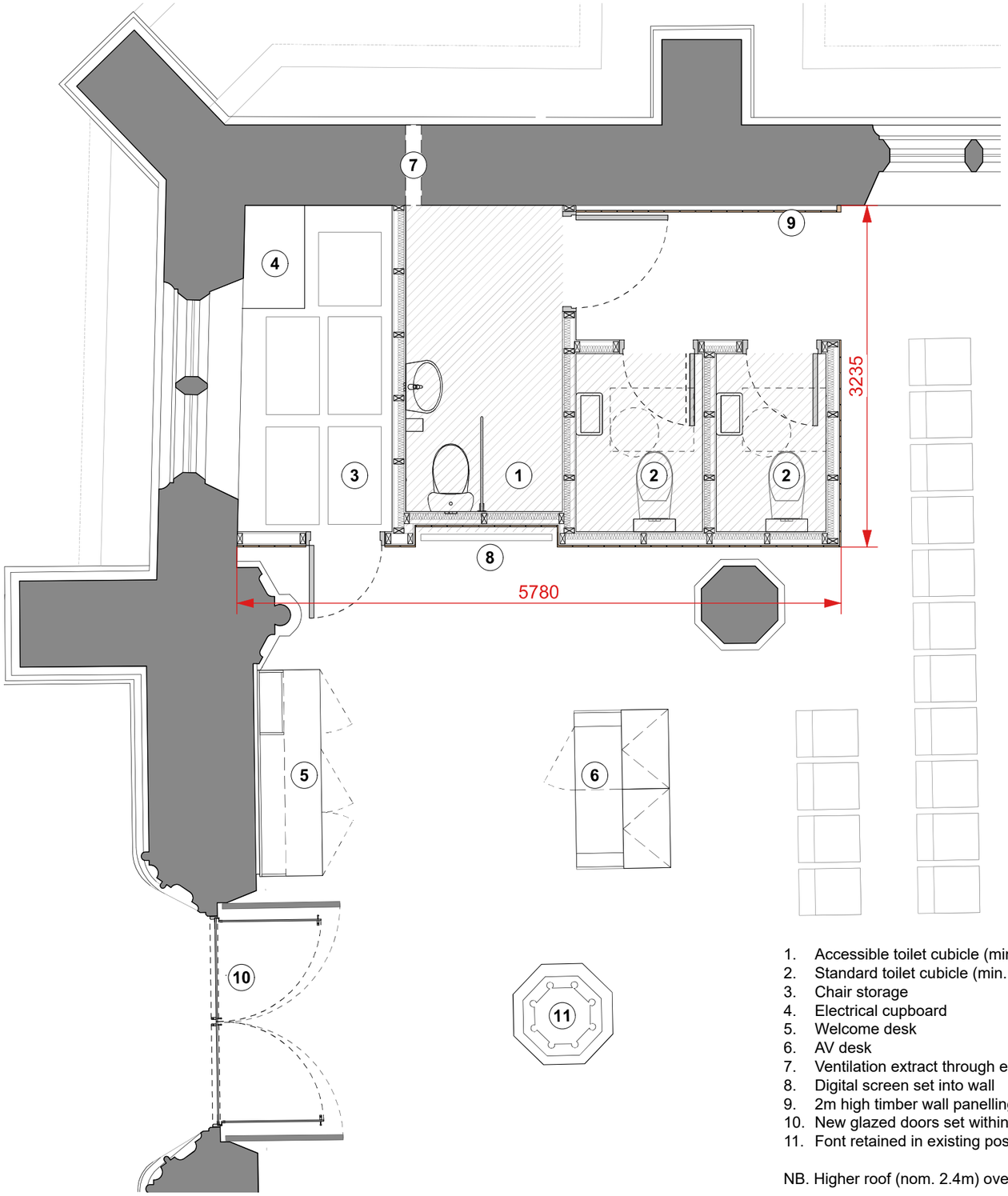
St Mary Magdalene Tanworth

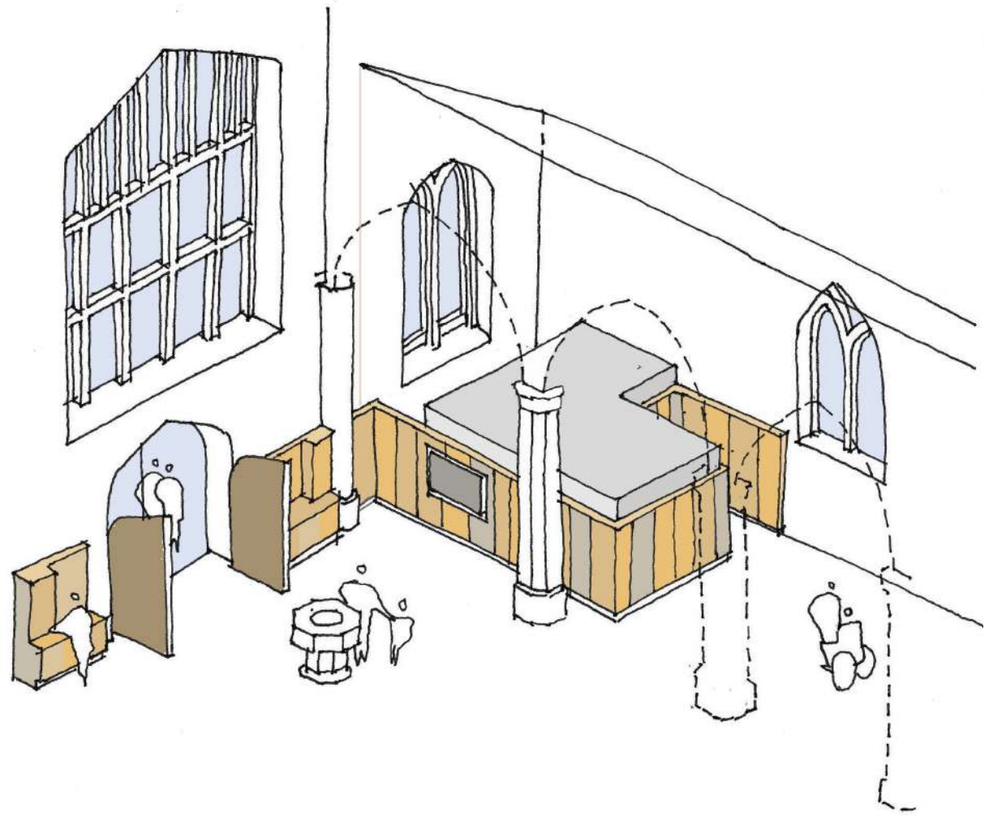
St Peter's, Hereford



Sheerness Dockyard Church

2.0 WEST ENTRANCE PROPOSALS

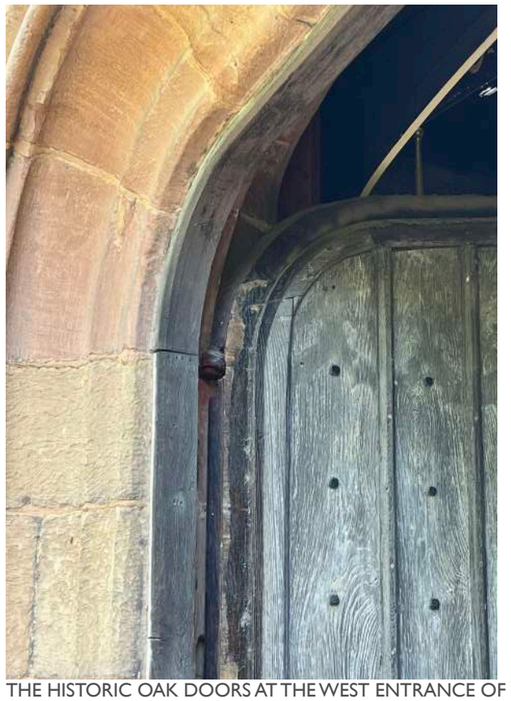


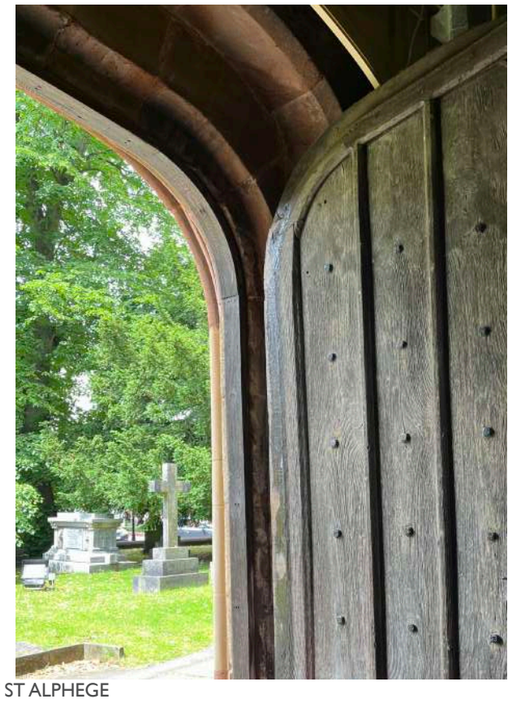


1. Accessible toilet cubicle (min. 2200 x 1500mm)
2. Standard toilet cubicle (min. 1685 x 1050mm)
3. Chair storage
4. Electrical cupboard
5. Welcome desk
6. AV desk
7. Ventilation extract through external wall
8. Digital screen set into wall
9. 2m high timber wall panelling
10. New glazed doors set within historic oak doors
11. Font retained in existing position

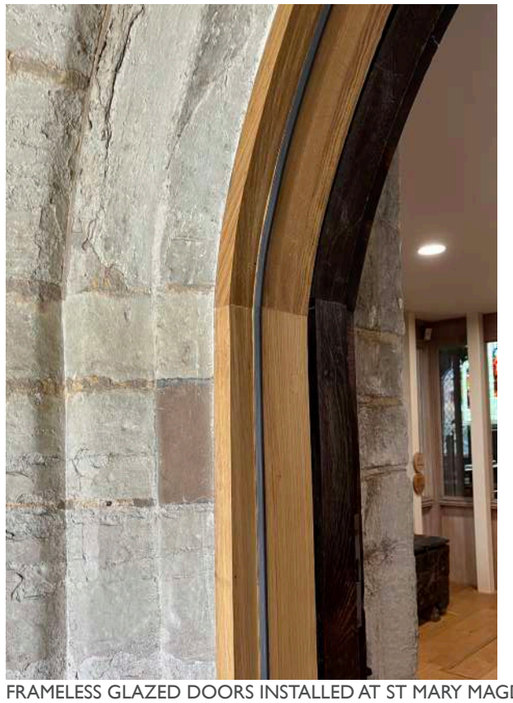
NB. Higher roof (nom. 2.4m) over WCs extends over hatched area

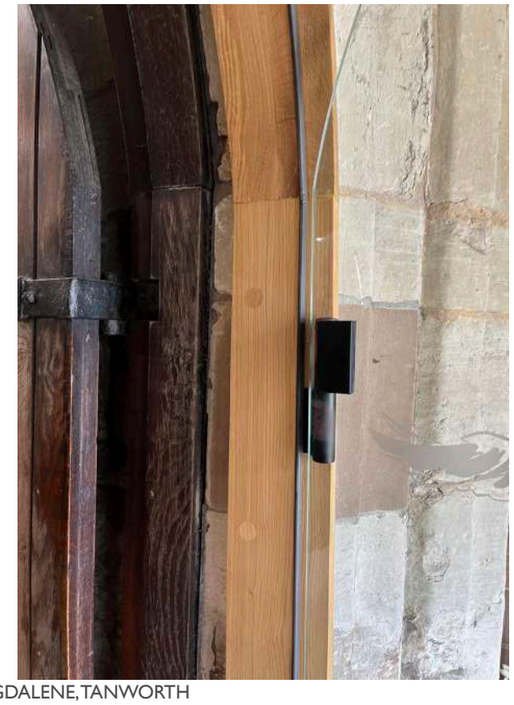
MAPLE VENEERED PANELLING USED TO UNIFY THE NEW ELEMENTS





THE HISTORIC OAK DOORS AT THE WEST ENTRANCE OF ST ALPHEGE





FRAMELESS GLAZED DOORS INSTALLED AT ST MARY MAGDALENE, TANWORTH

While a lobbied space at the west entrance is no longer possible without an external narthex (and without moving the font), new glazed doors are proposed to be fitted within the frames of the historic oak doors. The timber doors can then be fixed open during Church opening hours (and potentially beyond) to provide transparency and views into the church from the west while retaining thermal comfort.

The new doors will be frameless and formed from toughened glass, with a weatherseal fitted to the timber surround. Locking pull handles in anodised bronze will secure the doors into a floor socket.

As a result of the replanning to the western end of the nave, it is proposed that the Children's Area moves to the middle of the south aisle, in the location of the current bookstall. This brings the youngest members of the church into the heart of the congregation, and as the furniture is moveable, this will not preclude the flexibility of other arrangements.

The proposals for the landscape (refer to drawing 0200 in the drawing pack) are now more modest in nature, though the aspiration for a future route towards the Parish Centre to the south remains as and when the redevelopment of the Oliver Bird Hall takes shape. To enhance the setting of the west entrance and reinforce its use as the primary route into the church, a simple semi-circular paved surface is proposed. Linking to this, a new resin-bound gravel surface will be reinstated along the existing pathway to the west over a new drainage route from the building to the road.

The PCC has also commissioned the civil engineers Ridge & Partners LLP to develop the below-ground drainage design. This study is included here as Appendix 2, and shows the three potential routes considered. While these relate in detail to the previous scheme with the external narthex, the principle of the preferred route (along the path to the west) remains relevant to the current scheme.

WEST ENTRANCE AS EXISTING

3.0 FLOORING PROPOSALS

As has been described in previous iterations of this document, a level floor is needed for accessibility: to avoid negotiating threshold steps, floor heating grilles, carpet edging trims and raised pew platforms. The heating feasibility technical note described later in this report recommends installing underfloor heating in the nave, which leads to the preference for consistent flooring material. This avoids the problems of variation in conductivity between different materials and thus variation of heating effectiveness.

While the exact type of stone to be used for the new flooring is yet to be chosen, the intention is to use a pale, warm-toned neutral colour for the main flooring with diagonal strips picked out in a darker tone. This proposed patterning reflects the move to multi-directional layouts for services, with the focus sometimes centrally or to the side rather than to a fixed altar table at the east.

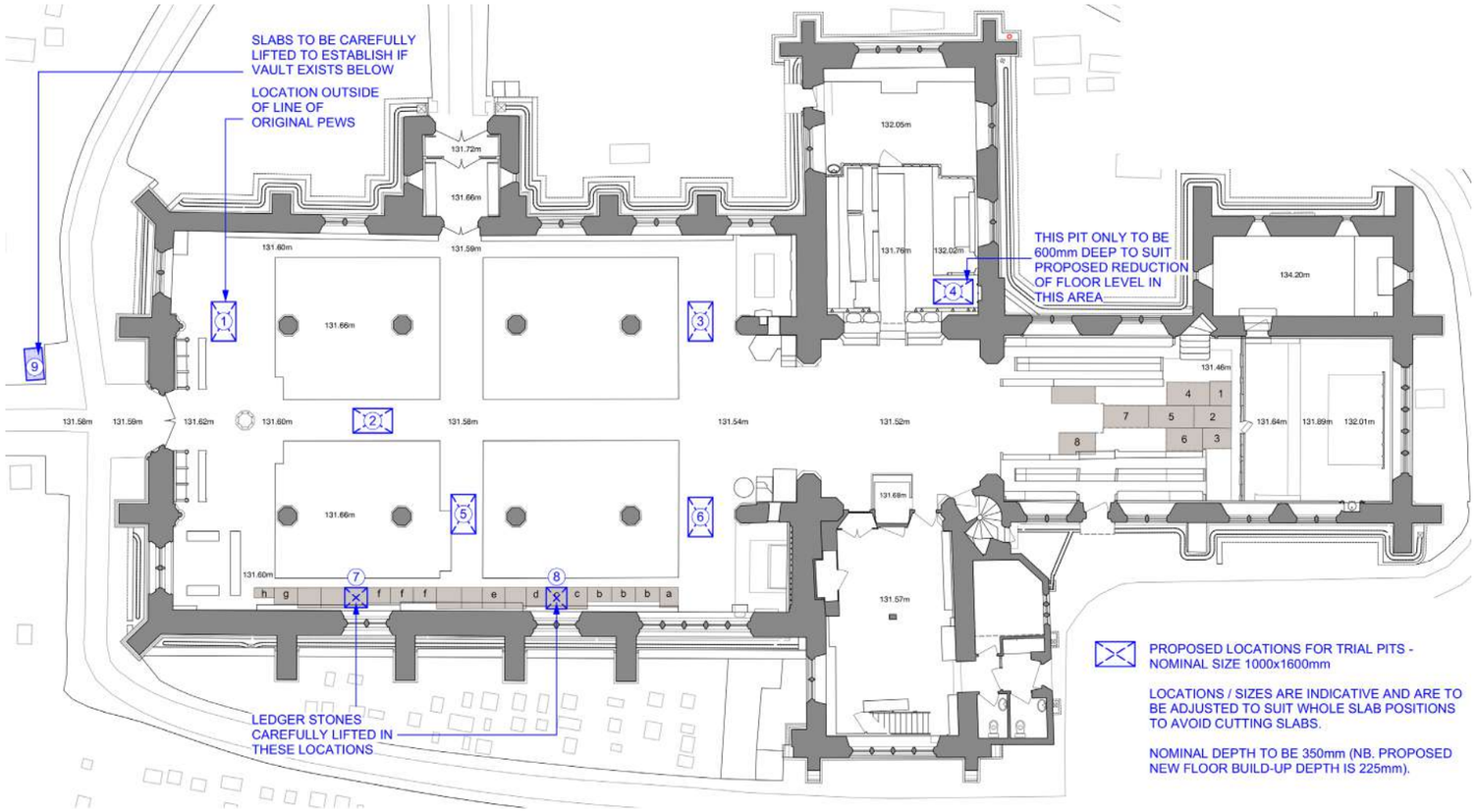
Further interest will be provided through the use of subtly different textures: a honed surface for the main sections with the patterning picked out in a riven finish. The western corners, where the new toilets and servery are located, will use a honed stone in a darker colour.

As the new stone flooring proposed for the church will require excavation of the existing floor, a series of trial pit investigations has now been carried out to bring greater certainty to the existing build-up and explore the potential for archaeological deposits.

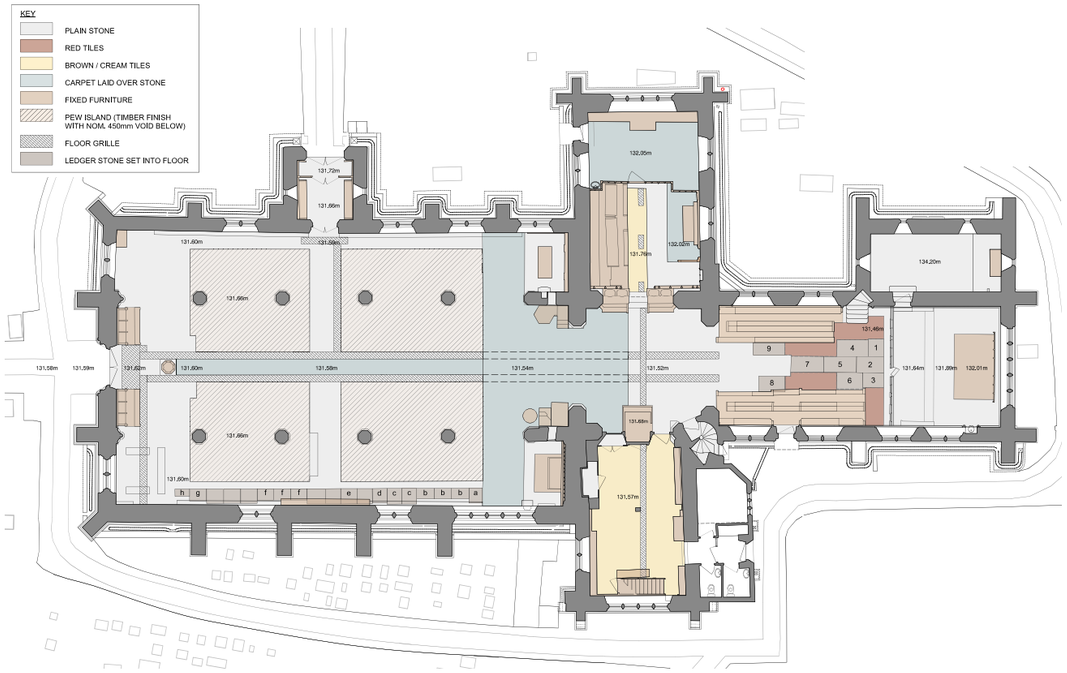
These studies demonstated a low potential for significant archaeological impact from the proposals, although it is noted that the test pits only represent a limited portion of the church interior. An archaeological watching brief has therefore been recommended during the proposed works.

The proposed floor finishes drawing (0211) indicates that those ledger stones in the chancel will be carefully lifted and relaid in the same locations, with the new stone running around them. In the south aisle, the ledger stones have clearly been moved previously, with several split into multiple pieces. The proposal here is to relay these stones along the south aisle with the broken sections reunited, centred on the Chapel of St Anthony, thus improving the legibility of the monuments in situ. No ledger stones will be moved outside.

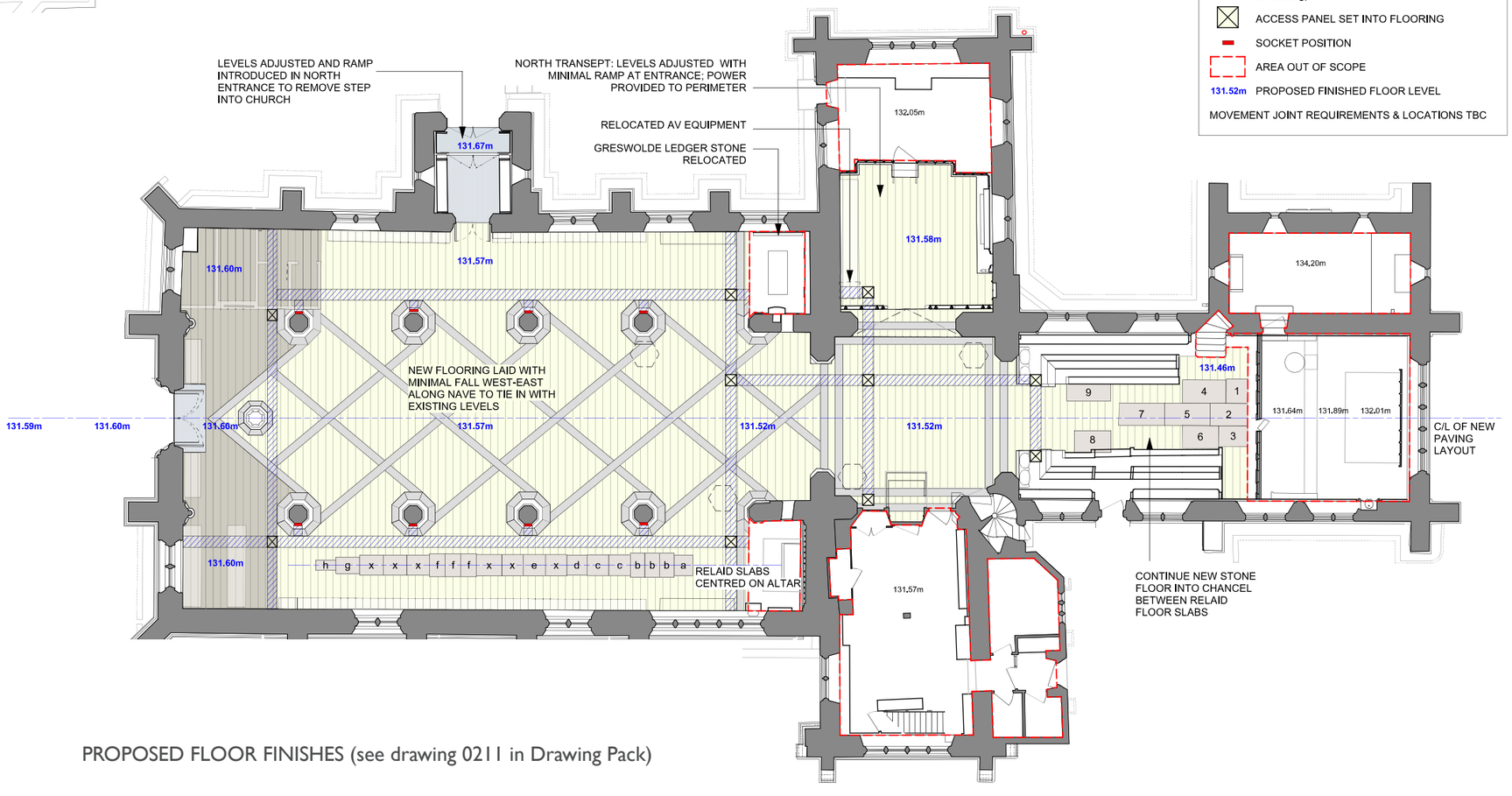
PHOTOS FROM THE TRIAL PIT INVESTIGATIONS



PLAN OF TRIAL PITS - INVESTIGATIONS CARRIED OUT IN JUNE 2025



EXISTING FLOOR FINISHES (see drawing 0011 in Drawing Pack)



KEY TO FLOOR FINISHES

- WARM NEUTRAL HONED STONE FLOORING 600x300x30mm
- CONTRAST RIVEN STONE CUT TO SUIT PATTERN
- DARK-TONED HONED STONE
- BARRIER MATTING
- SERVICE TRENCH - INDICATIVE POSITION (to be coordinated with u/f heating)
- ACCESS PANEL SET INTO FLOORING
- SOCKET POSITION
- AREA OUT OF SCOPE
- 131.52m PROPOSED FINISHED FLOOR LEVEL

MOVEMENT JOINT REQUIREMENTS & LOCATIONS TBC

PROPOSED FLOOR FINISHES (see drawing 0211 in Drawing Pack)

4.0 HEATING PROPOSALS

In the addendum to the Statement of Needs submitted as an appendix of the Design Narrative Addendum V2_Feb25, the Church described more fully how the removal of the fixed pews would enable them to fulfil their vision for future use, aiming to present *"a strong and convincing case for this change on theological, visual and practical grounds to allow liturgical freedom, to increase the opportunities for mission and to support our financial well-being."*

To bring more substance to their proposals, St Alphege PCC have commissioned Method Consulting to prepare a feasibility study looking at the heating requirements of the church and assessing the options for how this could best be achieved. Their report is included here as Appendix 1.

The initial focus of this report was to determine the feasibility of underfloor heating to provide heating to the church, taking into account the heat loss through the different building elements. While the options for upgrading much of this fabric are limited given its architectural and historical significance, upgrading the floor does provide a real opportunity to improve the thermal performance of this element.

The study concludes that underfloor heating can provide a significant proportion of the heating requirements of the building, however it will need to be supplemented with an additional source or sources of heat. Pairing the underfloor heating with fan assisted convectors integrated into new perimeter bench seating will supplement the underfloor heating while increasing seating capacity. A small number of new cast iron radiators are also proposed in discreet locations to reach the full extent of the heating requirements.

As well as allowing more flexible use, a key driver for this element of the works is to future-proof the church for moving to air-source heat pumps in the years ahead, in line with the Church of England's target of Net Zero carbon by 2030. Even though it does not make financial sense to replace the releatively new gas-fired boilers at St Alphege, the lower temperature at which underfloor heating operates will make this eminently suitable for use with an ASHP in future. If new radiators and convectors are installed, these can be sized to suit the lower temperature heat pump system. Consideration of any alternative heating options should therefore take this into account.

Alternative heating type	Comments on feasibility
Fan convectors	Fan convectors use fans to assist with emitting heat and typically can emit more heat than a standard radiator, however, they require a power connection. This option is feasible where located within concealed boxing.
Cast Iron radiators	There are several large cast iron radiators which can be retained. The radiators are very deep and therefore would be well sized for a lower temperature system, however the output would still likely be lower than fan convectors. These would be best suited where exposed.
Steel panel radiators	Steel panel radiators are less suited to the aesthetic of the church building and would only be beneficial where concealed in locations where fan convectors could not go.
Electric radiators	Electric radiators typically have high outputs for their size. However, these radiators would not match the aesthetic of the church and would also require significant electrical infrastructure upgrades to the incoming supply. Electricity is also considerably more expensive than gas.
Electric underfloor heating	Electric underfloor heating has a very low output per square metre and therefore is not suited to St Alphege Church which has high heat losses throughout.
Radiant panels	Radiant panels are typically large white panels which mount to ceilings to provide radiant heat to users within a space. These are efficient heat emitters, however, would not suit the aesthetic of St Alphege Church.
Unit heaters	Unit heaters are typically used in industrial applications to provide heat over large areas. However, these are typically noisy and difficult to conceal due to their size.

5.0 OUTSTANDING ISSUES FROM CONSULTEES

In developing the Project Turnaround proposals to date, the Design Team have carefully reviewed and addressed the comments received from consultees. This has led to a series of amendments to proposals as advice has been taken on board, or other changes in brief or design constraints recognised, all of which have contributed to this revised Design Narrative document.

There remain four comments raised by consultees which require a specific narrative to explain how they have been assessed and how this has informed the current proposals

5.1 RETAIN MORE NAVE PEWS - *VicSoc, supported by Georgian Group, SPAB*

Removing the pews is an integral part of the vision for the flexible functionality of the Nave and the North Transept: therefore, their removal is an essential part of the project. In terms of whether they can be partially retained, this would compromise the functionality of the space and has therefore been rejected as an option, particularly in the light of the loss of space to accommodate the WC pod inside the church. The case for the removal of the nave and north transept pews was amplified at length in section 4 of the Design Narrative Addendum V2_Feb25.

A clear business case for the pew removal has been made in the Addendum to the Statement of Needs, which is an appendix of the Design Narrative Addendum V2_Feb25, addressing the Duffield questions as requested by SPAB. In summary, advice received is as follows:

- Rachel Sycamore, the ecclesiastical furniture expert commissioned to assess the interior furnishings of St Alphege Church has confirmed that the nave and north transept pews are of low significance.
- Historic England have also confirmed that the pews have been fully understood, are of low significance and their removal does not raise great concern.
- The Georgian Society have confirmed that they do not believe that the few earlier panels reused within the Victorian pews are individually of great intrinsic significance.
- HB&P have raised no objections to the removal of the pews and recommend that they are sold rather than destroyed.

Within the proposals, the Mayoral Pew is to be retained along with the three pew memorial inscriptions. In addition, two of the pews will be incorporated in the nave perimeter seating as representative examples of the church's Victorian nave pew providing an important historical marker, as recommended by HB&P.

The expert analysis of the pews has defined their significance as low and given that their removal is integral to delivering on the greater vision for the project, the question of whether the existing timber of the pews could be adapted and reused within the new proposals arises.

On balance the decision has been taken not to pursue this option. This has been primarily because of two key factors which would limit their practical reuse:

Firstly, the timber from which the pews are made is straight and quarter sawn oak planks with different characteristics. They are also stained, with much variation to colour and finish rendering them too inconsistent for practical integration into the newly proposed joinery.

Secondly, any reused timbers would require substantial machining as part of their repurposing, in particular to accommodate the new perimeter fan-assisted convectors without compromising their effectiveness. Timberwork of this age is particularly difficult to machine due to the historic fixings used. Iron nails and screws if not detected and removed prior to machining can cause serious damage to the equipment being used. This renders practical reuse difficult, highly labour intensive and financially prohibitive, and has again been rejected as offering poor value.

Given this, the proposal is to remove the existing pews and dispose of them appropriately, offering them for sale within the community in the first instance to raise funds for the project, or offered to one of the local social enterprises that specialise in their reuse, such as Men in Sheds or Take-A-Pew.

5.2 RETAIN VARIATION IN FLOORING: MIXTURE OF STONE, TILE AND WOOD - *VicSoc, SPAB*

The current proposals include retaining a mixture of materials in the more historic parts of the floors (chancel and south aisle); however where the pew islands and carpets are being replaced, the priority is a unified surface for optimum flexibility and access.

The case for a level-access, patterned, limestone floor with mix of colours, containing both riven and smooth finishes, was made at length in section 3 of the Design Narrative Addendum V2_Feb25.

A level floor is needed for accessibility to avoid negotiating threshold steps, floor heating grilles, carpet edging trims and raised pew platforms. The technical note on the feasibility of the heating strategy recommends installing underfloor heating in the nave, which implies a requirement for a consistent flooring material to optimise performance, avoiding the problems of variation in conductivity between different materials and thus variation of heating effectiveness.

Within the design of the floor we have integrated a pattern to break up the larger areas using contrasting stone finishes and textures to ensure a variation in finish is maintained.

5.3 LESS CLADDING AT WEST END - *SPAB*

The integration of the new toilet / storage pod within the west end of the south Aisle is beginning to change the frame of reference for this point. New timber panelling has been utilised to define public areas around the WC access and to work as a unifying element across all of the new interventions at the West End. Some of the cladding in the previous iterations of the scheme has been removed (such as in the storage area) where it is not openly visible. It should be noted that any new cladding will be spaced away from the historic masonry to allow the historic fabric to breathe properly.

5.4 RETAIN WARDEN'S STALLS AND NORTH TRANSEPT PEWS AND ALTAR - *20th Century Society*

The argument for the removal of the 1963 Laurence King Wardens' stalls is centred on the fact that they are deeply theologically unhelpful and problematic; indeed the Rector strongly objects to the focus on church officers' seating and the roll of past Rectors in such a large, ostentatious, bright and prominent construction. In this part of the church the focus should be on the 14th Century font, the place of holy baptism and welcome, in the same way that the altar is the main focus for holy communion.

A further problem is that the large royal crest obscures the bottom of the glorious Jesse Window by Kempe, one of the treasures of the church. The crest itself could, if necessary, be relocated high in the middle of south aisle wall, above the new position for the children's area where other more graphic features of the church's history are displayed.

The roll of rectors will be recreated in the North Transept.

The PCC agree with HB&P, who recommend the Laurence King pews and crest are offered onto the architectural salvage market and not destroyed. They will be offered in the first instance to other civic spaces within the borough in an effort to keep them in the locality.

APPENDIX 1: HEATING FEASIBILITY TECHNICAL NOTE

Technical Note

Project Title	St Alphege Church		
Subject	Heating Feasibility Study	**Date**	29.09.25
Author	MGW	**Our Ref**	2619PSA-MET-XX-XX-T-M-9101

1 Introduction

Method Consulting have been appointed to carry out a heating feasibility study for St Alphege Church in Solihull. The scope of this feasibility study is to determine the heat loss throughout the church areas to be renovated, the boiler capacity requirements from this heat loss value, and comment on heating options focusing primarily on underfloor heating.

The building is currently heated by a gas fired wet radiator system and a piped system. This system comprises of two 180kW Hamworthy boilers within a dedicated boiler house adjacent to the main church building. According to a recent energy audit, heating demand is estimated to account for approximately 90% of the total energy consumption at St Alphege Church.

2 Heat Losses in the Church

To calculate the heat losses across each area of the church, a heat loss calculation was carried out in accordance with *BS EN 12831*. This British Standard calculation methodology breaks down the heat loss of a space by how much heat is lost through different elements of the space, such as walls, windows, roof, etc. As St Alphege Church is an existing construction, assumptions have made regarding the heat transfer coefficient (the u-value) of the church construction materials in accordance with the *BRE Group's Standard Assessment Procedure Document Table S7*.

Of the heated spaces on the ground floor level, it is estimated that the maximum heat loss is approximately 110kW. This is the total heat input required to maintain an internal temperature of 18°C in peak winter conditions in the nave and stalls areas, and 16°C in the transepts. This calculation has assumed that there is an air change rate of one air change per hour.

A summary of the breakdown of heat losses through the church by areas being renovated and by heat loss type is summarised in Table 1 below:

Area	Heat Loss Type	Heat Loss
Nave	External Walls	10kW
	Windows	9kW
	External Doors	0.6kW
	External Floor	0.5kW
	External Roof	15kW
	Infiltration	23kW
	TOTAL	**58kW**
North Transept	External Walls	3kW
	Windows	4kW
	External Doors	none
	External Floor	negligible
	External Roof	2kW
	Infiltration	3kW
	TOTAL	**12kW**
Transept Crossing	External Walls	none
	Windows	1kW
	External Doors	0.6kW
	External Floor	negligible
	Internal Ceiling	2kW
	Infiltration	2kW
	TOTAL	**6kW**
Stalls	External Walls	5kW
	Windows	4kW
	External Doors	negligible
	External Floor	negligible
	External Roof	2kW
	Infiltration	4kW
	TOTAL	**15kW**
TOTAL		91kW
TOTAL with 20% warm up margin		**109kW**

Table 1: Breakdown of heating loads per space and per heat loss type

As illustrated in Table 1, much of the heat loss occurs due to infiltration, which is where you have interfaces between different building materials that can cause leakage of air due to the age and construction of the church.

It must also be noted that whilst the calculation has been carried out in accordance with standard design principles, there are many uncertainties and assumptions made to the total heat loss figure. To accurately assess a total heating demand, the church could also look to install an orifice plate near to the boilers. By installing this, they could measure the flow rate of the heating system in winter and use this figure to determine the peak heat demand of the church. Alternatively, the church may be able to request a peak gas volume consumption from their utility provider.

Typically, where measures are possible to be undertaken to improve fabric efficiencies, this can significantly reduce the heating requirements, however given the architectural and historical significance of elements such as the stained windows or the ceiling, this would not be practical.

3 Heating Options Feasibility

3.1 Underfloor Heating

The initial focus of the feasibility study was to determine whether underfloor heating is a feasible option to provide heating to the church, and whether this alone would provide sufficient heat output. The benefits of installing underfloor heating are that it provides even, comfortable heat distribution across a space. An underfloor heating system also typically operates at lower heating temperatures than a conventional heating system Therefore, this would be suitable to use with an air source heat pump without any remedial works, should the church look to install one in future. This could take the form of a bivalent system, whereby two heat sources (ie a boiler and a heat pump) provide heat to the building, with the underfloor heating using the heat pump system, and the radiators using the boiler system.

To determine the suitability of underfloor heating, an underfloor heating installer, Roth, were contacted to discuss the floor build up and heating output. Following information of floor build ups provided by BFF Architects, Roth confirmed that the floor build up would be suitable for an underfloor heating array, and that this should be compatible with the differing depths of floor insulation proposed across the building. This would comprise of a piped underfloor heating array sat on a geotextile bed beneath the screed and stone flag flooring.

Method Consulting
St Alphege Church
Heating Feasibility Study

Underfloor heating systems are designed to a lifespan of typically 20 years for the manifold and pumpset. The screeded pipework is designed to a minimum lifespan of 50 years, and therefore should not require the floors to be replaced within this timeframe.

Due to the size of the area being served, the heating pipework would be grouped into zones which are served from manifolds located in discreet positions in the building (*Refer to Appendix A*). These zones would be controlled via means of wall mounted thermostats, which can be time scheduled and set to a desired temperature in the space it is serving.

However, due to the high heat losses within the building, the underfloor heating array would not provide sufficient heat into the space to a suitable temperature for occupants. It is estimated this underfloor heating array could provide enough heat to heat the space to 6degC in winter months, or 40% of the total heat demand, and therefore this would need to be supplemented by additional heating from other heat emitters.

3.2 Supplementary Heating

3.2.1 Additional Heating Options

As supplementary heating is required to achieve the remaining 60% of the estimated heat demand, different options have been investigated to determine the most practical. Table 2 below shows a summary of different heat emitter types that could be used, as well as their feasibility.

Heat Emitter Type	Comments on feasibility
Fan convectors	Fan convectors use fans to assist with emitting heat and typically can emit more heat than a standard radiator, however, they require a power connection. This option is feasible where located within concealed boxing.
Cast Iron radiators	There are many large cast iron radiators which can be retained. The radiators are very deep and therefore would be well sized for a lower temperature system, however the output would still likely be lower than fan convectors. These would be best suited where exposed.

Steel panel radiators	Steel panel radiators are less suited to the aesthetic of the church building and would only be beneficial where concealed in locations where fan convectors could not go.
Electric radiators	Electric radiators typically have high outputs for their size. However, these radiators would not match the aesthetic of the church and would also require significant electrical infrastructure upgrades to the incoming supply. Electricity is also considerably more expensive than gas.
Electric underfloor heating	Electric underfloor heating has a very low output per square meter and therefore is not suited to St Alphege Church which has high heat losses throughout.
Radiant panels	Radiant panels are typically large white panels which mount to ceilings to provide radiant heat to users within a space. These are efficient heat emitters, however, would not suit the aesthetic of St Alphege Church.
Unit heaters	Unit heaters are typically used in industrial applications to provide heat over large areas. However, these are typically noisy and difficult to conceal due to their size.

3.2.2 Heating in the Nave

In the nave, this supplementary heating could take the form of fan assisted radiators located within the perimeter benching, as well as cast iron radiators in agreed wall positions.

These fan assisted radiators use fans built into the radiator housing to provide a higher heat output than standard radiators, and would be able to provide approximately 40% of the heat demand of the space. To supplement the remaining 20% heating demand to achieve an 18°C internal temperature, cast iron style radiators could be located along east or west walls within the nave (*Refer to Appendix A – Proposed Heating Layout Sketch*).

Figure 1: Jaga Briza concealed fan assisted radiator

3.2.3 Heating in the North Transept

Likewise in the transept area, fan assisted radiators or existing cast-iron radiators could supplement the underfloor heating. If using fan assisted radiators, these would be shorter in length than an equivalent cast iron radiator, however would need concealing to not intrude on the architectural appearance of the space.

3.2.4 Heating in the Stalls

Within the stalls area, as there is less wall space available, further coordination for additional heating is required. Currently, there are large cast iron radiators serving this area, as well as small radiators located beneath the stalls.

3.2.5 Proposed Heat Emitter Design Considerations

With the proposed heat emitters above, these could be sized based on the existing gas boiler system, which would reduce the size and quantity of units required, however, additional or new larger heat emitters would need installing in the future if a heat pump was installed at the church. Alternatively, the heat emitters could be sized to a lower temperature heat pump system which would allow for the equipment to be retained in future if a heat pump was installed. Existing pipework routes may also need replacing, subject to the specification of the heat pump and existing pipe sizes in the church.

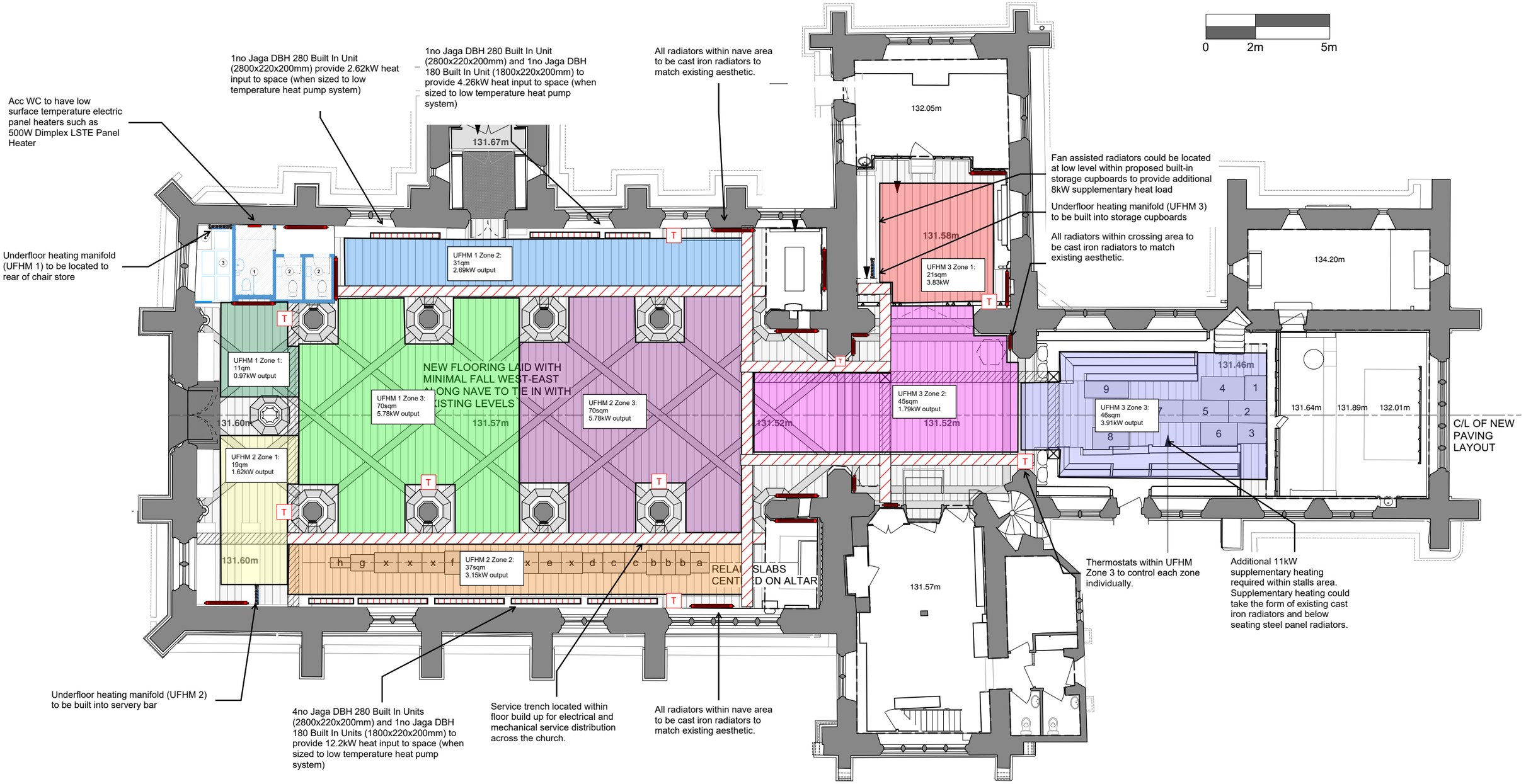
Method Consulting take the stance that where reasonably practical, low carbon heat sources are used, such as air source heat pumps. This is because gas boilers emit 0.21kg of carbon dioxide for every kWh of gas consumed, which is typically in the thousands of kWh's for church buildings like St Alphege Church. An air source heat pump on the other hand uses electricity to produce heat with an efficiency (or coefficient of performance) of 300%, and therefore can be carbon neutral if paired with a net-zero carbon electricity tariff.

Therefore, an approach to size heat emitters based on a higher temperature propane heat pump may be the most pragmatic heating design strategy, as this provides a middle ground between high gas boiler temperatures, and more traditional low temperature heat pumps.

3.3 Conclusion

An underfloor heating system could provide heat to St Alphege Church, as the proposed floor build ups are suitable for this system. However, as the output from the underfloor heating is not sufficient to heat the space to comfortable internal temperatures, supplementary heating through fan assisted radiators or cast iron radiators would be required.

In the short term, all of these heat emitters could be heated through the existing gas boilers, however, should the church look to install a heat pump in the future, the underfloor heating system could be heated through this heat pump system. Supplementary heating provided by radiators could also be heated through a new heat pump system if sized based on a lower temperature system, or alternatively through the existing gas boilers as a bivalent system.



THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION. INSTALLATION DRAWINGS SHOULD BE PRODUCED BY THE CONTRACTOR AND AGREED WITH THE CLIENT TEAM PRIOR TO ANY INSTALLATION WORK

LEGEND:

- CAST IRON RADIATOR WITH MININIMUM 1.5kW OUTPUT
- FAN CONVECTORS CONCEALED WITHIN PERIMETER SEATING.
- UNDERFLOOR HEATING MANIFOLD
- T — THERMOSTAT - LOCATION AND QUANTITY TBC. CURRENTLY POSITIONED AS ONE PER ZONE.
- LOW SURFACE TEMPERATURE ELECTRIC PANEL HEATER

ALL HEAT EMITTERS AND UNDERFLOOR HEATING ZONES ARE SHOWN INDICATIVELY FOR QUANTITIES, AND ARE TO BE DEVELOPED AND COORDINATED THROUGHOUT RIBA STAGE 3 AND STAGE 4 DESIGN.

FAN CONVECTORS AND RADIATORS HAVE BEEN INDICATIVELY SIZED TO A LOW TEMPERATURE HEAT PUMP (45F/40R) SYSTEM AND MAY BE REDUCED IN SIZE/QUANTITY FOLLOWING DETAILED DESIGN AND SELECTION OF HEAT SOURCE.

Method Consulting
Method Consulting
22-24 Queen Square
Bristol
BS1 4ND

Project:	St Alphege Church
Sketch Title:	Indicative Heating Layout Sketch
Reference:	2619PSA-MET-XX-XX-T-M-9101
By:	MGW
Date:	15.09.25

APPENDIX 2: DRAINAGE STRATEGY TECHNICAL NOTE

[NB. Please note this refers to the detail of the previous proposal for toilet provision in an external narthex, although the principles established for a new route to the road remain the same.]

TECHNICAL NOTE

RIDGE

Project	**Project Turnaround, St Alphege Church, Solihull**		
Title	Drainage Strategy		
Date	18.07.25	**Issue**	P01
By	John Hayden	**Approver**	
Document ref:	502-RDG-XX-XX-T-C-0001		

This note has been produced in support of the planning application for the proposed changes to St Alphege church, Solihull, including a small extension containing toilets.

This note should be read in conjunction with drawings

5029285-RDG-XX-XX-D-C-00500 - Drainage Strategy
5029285-RDG-XX-XX-D-C-00510 – Drainage Standard Details

Surface Water Strategy

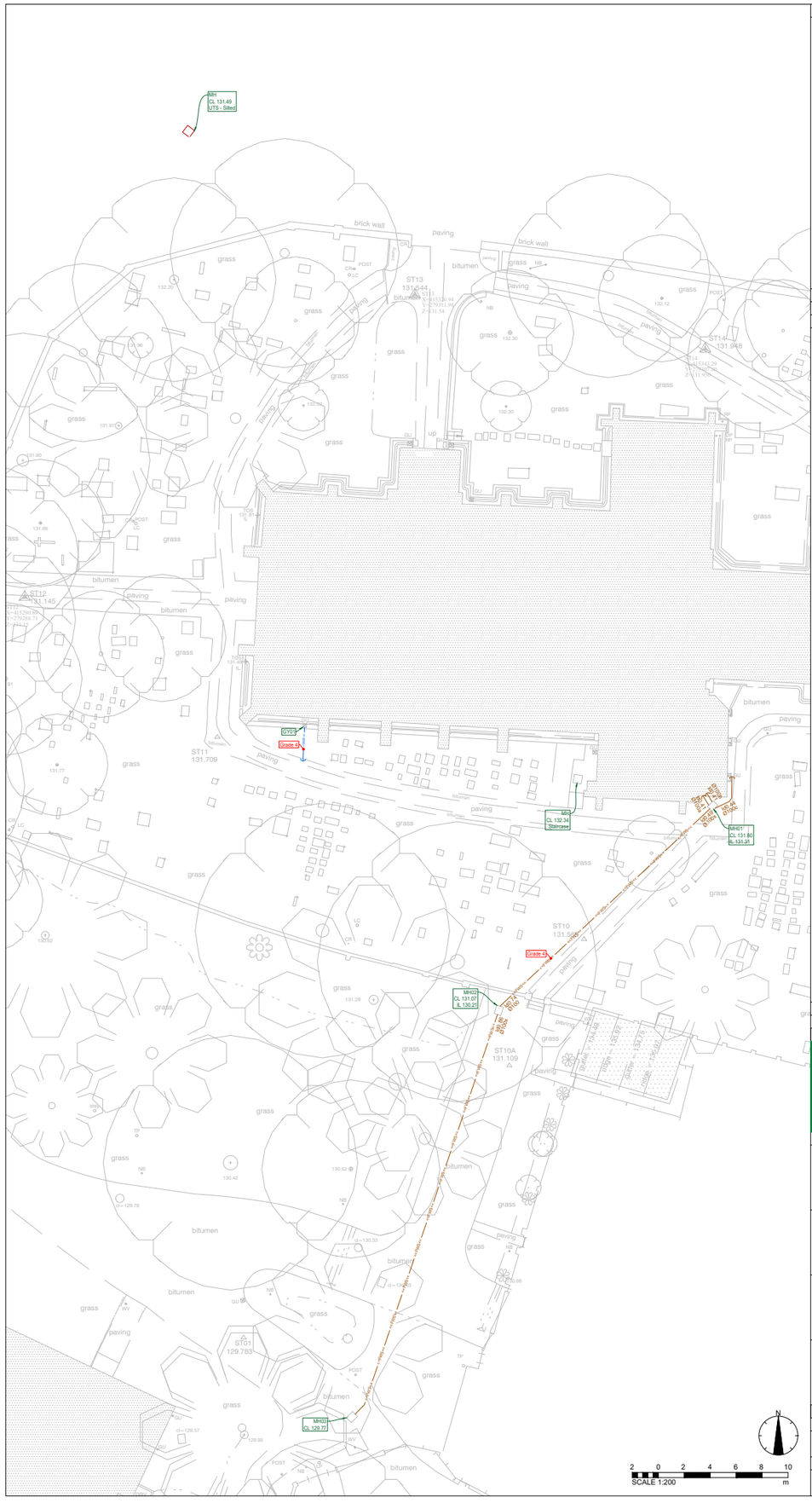
It is proposed to drain the roof run off water via downpipes to the existing channel which runs around much of the perimeter of the church. A CCTV survey has shown the perimeter channel to drain via gullies into a soakaway structure. The roof water catchment shall be split in two, draining to 2 separate channels. The catchment going to each shall be 18m^2. Although no details relating to size and permeability rates are known, it is not anticipated that a 18m^2 catchment shall be significant enough to cause an issue.

The proposed footway catchment shall drain via two yard gullies to a perforated pipe surrounded by gravel. The catchment to each gully is 14m^2 and 24m^2. The perforated pipe and gravel surround structure has been sized based on a rainfall intensity of 35mm/hr. No infiltration testing has been carried out, however it is anticipated water shall soakaway into the subsoils. The storage provided within the perforated pipe structures have been sized to store the runoff from a 35mm/ hr, 1 hour duration storm event.

If the capacity of the structures are exceed this shall drain to the landscaping.

Foul Water Strategy

The modifications to the church shall introduce 3 WCs, 3 wash hand Basins and a kitchen type sink. The foul flows are proposed to drain by gravity to the existing Severn Trent Water manhole 2306 in Church Hill Road. A demarcation chamber shall be located on the church grounds boundary. Proposed drainage within the public highway shall need section 104 approval and would be proposed for adoption.



DISCLAIMER NOTES:

Electromagnetic and Ground Penetrating Radar techniques combined with visual inspection have been used to locate and map the underground services shown on this plan. Ridge uses all reasonable efforts expected of experienced and qualified staff combined with calibrated equipment to perform our surveys and all reasonable effort has been made in searching available record drawings, however, the completeness of any underground survey cannot be guaranteed. The user or recipient of the survey data understands and acknowledges that the data provided may contain errors or omissions and the user or recipient assumes full responsibility for any risks or damages resulting from, arising from, or in connection with any use of the captured information.

Depths are provided as guidance only. A single line indicating a utility may indicate the presence of multiple services within proximity. Services shown as OL(G), OL(D) or TPR (taken from records) and GL(R4) or AR (assumed route) have not been proven on site and are not guaranteed. Drainage designation and pipe sizes are recorded on site from the surface via visual inspection or taken from record drawings. Any new connections or design works must obtain the correct permissions from the local Water Authority before continuing work. Indicated services and GPR anomalies located on site or from past processed data must be deemed as a live asset until proven otherwise. GPR data is not able to identify an asset, it will solely indicate that there is an anomaly.

Please note that not all buried pipes, utilities and features can be detected and mapped due to conditions outside of our control, such as depth, location, material type, geology and proximity to other services. It is recommended that trial holes are undertaken to confirm identification, location and depth of services at critical locations to confirm survey results.

Ridge cannot be held responsible for any inaccuracies beyond those that could be reasonably expected of a competent company. No utility mapping survey can be considered a 100% accurate depiction of the sub-surface environment, and the use of these drawings does not remove the requirement for the use of safe digging techniques at all times in line with HSE document – 'HSG47 – Avoiding danger from underground services'.

DRAWING NOTES:

SURVEYED BY: MW SURVEY DATE: 20/05/2025

COORDINATES: UNKNOWN DATUM: UNKNOWN

Utility Mapping Abbreviations

(A)	Approximate	G	Grated Drain	PS	Poor Signal
AC	Asbestos Cement	GR	Gas Riser	RE	Rodding Eye
ACU	Air Conditioning Unit	GV	Gas Valve	RWP	Rain Water Pipe
AR	Assumed Route	GY	Gully	SA	Survey Abandoned
BD(d)	Back Drop depth (in metres)	HB(d)	Hatch Box depth (in metres)	Sd	Sump depth (in metres)
BT	BT Inspection Cover	HV	High Voltage	SW	Soffit depth (in metres)
CATV	Cable TV Cover	IC	Inspection Chamber	SV	Stop Cock/Valve
CB	Control Box	Id	Invert depth (in metres)	SVP	Soil Vent Pipe
Cd	Cable depth (in metres)	IL	Invert Level	T	Tank
CI	Cast Iron	INT	Interceptor	TPR	Taken From Records
CL	Cover Level	KO	Kerb Outlet	TL	Traffic Light
CO	Concrete	LP	Lamp Post	TP	Telegraph Pole
CP	Catch Pit	LV	Low Voltage	UR	Unable to Rod
CR	Cable Riser	MH	Manhole	UTA	Unable to Access
CVR	Underlifted Cover	MK	Marker Post	UTF	Unable to Find
d	Depth to service (in metres)	MT	Meter	UTL	Unable to Lift
Dd	Duct depth (in metres)	NVC	No Visible Cables	UTS	Unable to Survey
DI	Ductile Iron	NVD	No Visible Ducts	UTT	Unable to Trace
ED	Empty	NVO	No Visible Outlet	VC	Vitrified Clay
EOT	End of Trace	NVP	No Visible Pipes	VCP	Vehicle Charge Point
EB	Electricity Control Box	NS	No Signal	VP	Vent Pipe
EP	Electricity Pole	OFP	Offset Fill Point	VR	Vapour Recovery
ER	Earth Rod	OSA	Outside Survey Area	Wd	Water depth (in metres)
FH	Fire Hydrant	Pd	Pipe Depth (in metres)	WL	Water Level
FOS	Full of Silt	PR	Pipe Riser		

Utility Mapping Legend

Drainage - Combined
Drainage - Foul
Drainage - Surface
Drainage - Unidentified
Arrows indicate direction of drainage flow (where known)
Dashed line denotes width of service (where known and ≥300mm)
Chamber Extents
Chamber Extents - Unknown
Radar Area Anomaly
End of Trace

P01	FIRST ISSUE	23/05/25	MW MW
REV	DESCRIPTION	DATE	BY CHKD

ORIGINATOR: www.ridge.co.uk

RIDGE

RIDGE PROJECT NO: 5029285

CLIENT:
GREENWOOD PROJECTS LTD

IN ASSOCIATION WITH:

PROJECT:
ST ALPHEGE CHURCH
SOLIHULL
B91 3RQ

TITLE:
CCTV DRAINAGE SURVEY

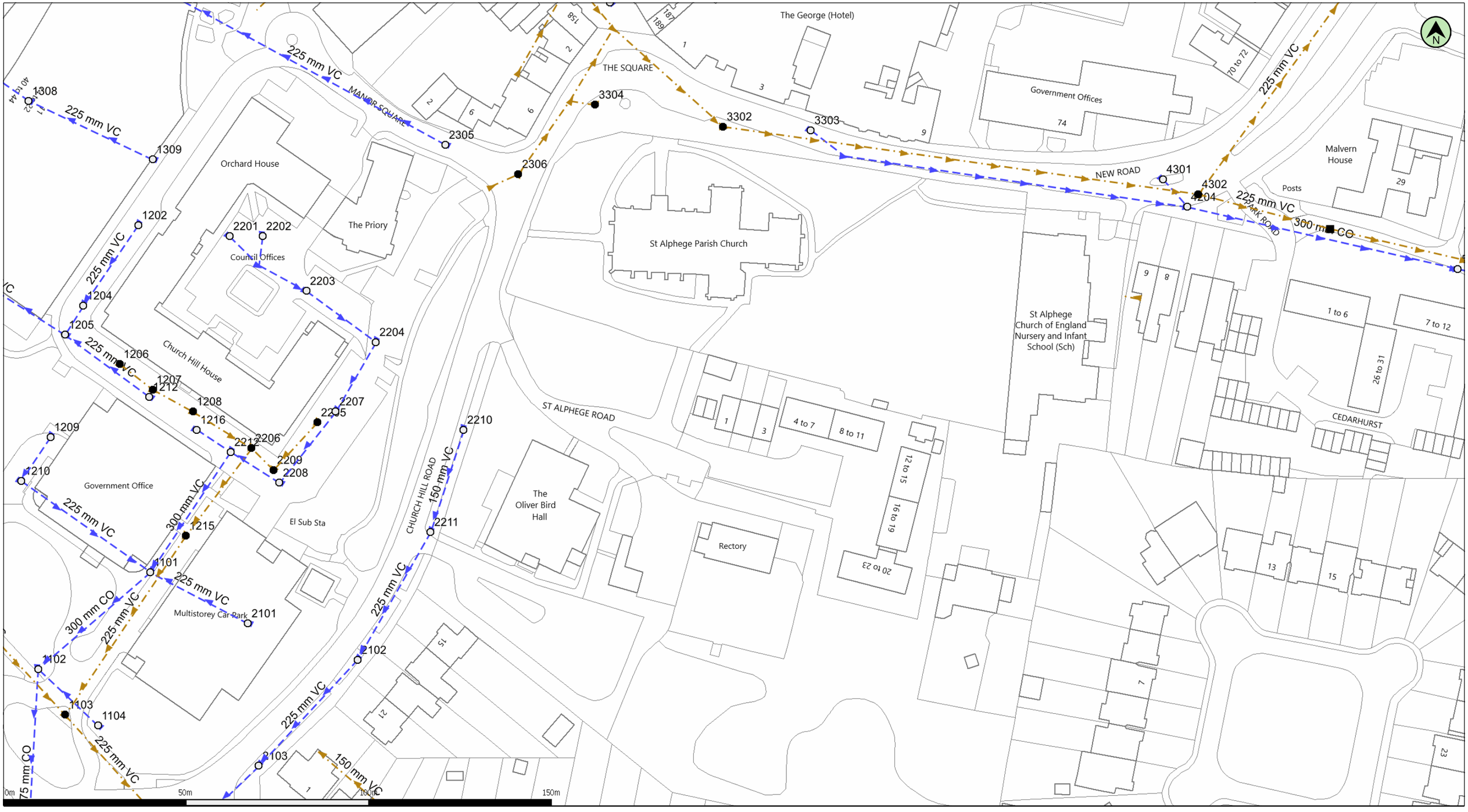
DRAWN BY: MW CHECKED BY: MW APPROVED BY: MW

SCALE: 1:200 @A2 DATE: 22/05/2025

STATUS: DESCRIPTION:
S2 SUITABLE FOR INFORMATION

FILE NAME: 5029285-RDG-XX-ST-D-GS-000000-P01.DWG

PROJECT:	ORG:	FUNCTION:	SPATIAL:	FORM:	DISC:	NUMBER:	REV:
5029285	RDG	XX	ST	D	GS	000000	P01



 Date: 14/05/25 Scale: 1:1000 Map Centre: 415342,279243 Data updated: 14/04/25 Our Ref: 1769021 - 1

Wastewater Plan A3
Powered by digdat

- Public Foul Gravity/Lateral Drain
- Public Combined Gravity/Lateral Drain
- Public Surface Water Gravity/Lateral Drain
- Pressure Foul
- Pressure Combined
- Pressure Surface Water
- Highway Drain
- Overflow Pipe
- Disposal Pipe
- Culverted Water Course
- Pumping Station
- Fitting
- Manhole Foul
- Manhole Surface
- Abandoned Pipe
- Chamber

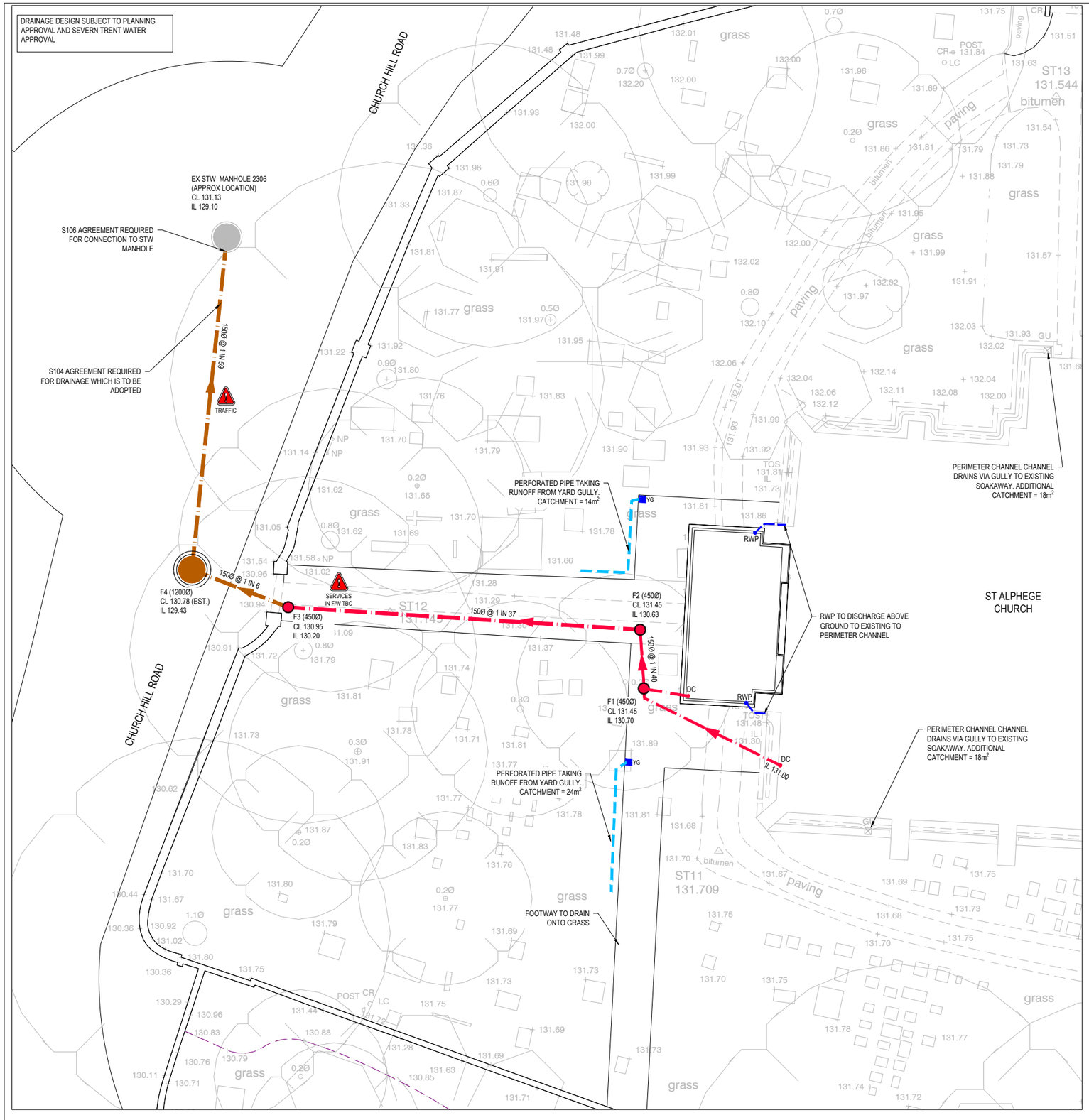
Section 104 sewers are shown in green

Private sewers are shown in magenta

johnhayden@ridge.co.uk

St Alphege

SEVERN TRENT



FOUL WATER MANHOLE SCHEDULE							
MANHOLE REFERENCE	COVER LEVEL	INVERT LEVEL	TYPE	CHAMBER DIA (min)	COVER GRADE (min)	EASTING	NORTHING
F1	131.45*	130.70	D1	450	C250		
F2	131.45*	130.63	D1	450	C250		
F3	130.95*	130.20	D1	450	C250		
F4	130.78*	129.43	B2	1200	D400		

* - DENOTES ESTIMATED COVER LEVEL, COVER LEVEL TBC ON SITE

NOTES:

1. THIS DRAWING IS NOT TO BE SCALED.
2. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.
3. 'MARKED UP' DRAWINGS ARE TO BE PROVIDED TO THE ENGINEER UPON COMPLETION TO ENABLE PRODUCTION OF 'AS BUILT' DRAWING IN ACCORDANCE WITH CONSTRUCTION (DESIGN & MANAGEMENT): 2015 REGULATIONS 22(j).
4. THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT AND DIVERSION WORKS AS NECESSARY, TO ALL EXISTING SERVICES TO THE SATISFACTION OF THE PUBLIC UTILITIES.
5. THE CONTRACTOR SHALL ALLOW FOR DEALING WITH SURFACE WATER RUN-OFF INTO EXCAVATION AND FROM GROUNDWATER BY MEANS OF SUMPS, PUMPING AND DE-WATERING AS APPROPRIATE, IN ORDER TO KEEP THE EXCAVATION AS REASONABLY DRY AS POSSIBLE DURING THE CONSTRUCTION OF THE WORKS,
6. ALL EXTERNAL DRAINAGE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH 'DESIGN AND CONSTRUCTION GUIDANCE FOR FOUL AND SURFACE WATER SEWERS "THE CODE" APPROVED VERSION 2.3 FOR ADOPTABLE DRAINAGE, AND TO THE RELEVANT LOCAL AUTHORITY, BUILDING CONTROL AND PROJECT SPECIFICATION AS DIRECTED BY THE ENGINEER FOR PRIVATE DRAINAGE.
7. ALL DRAINAGE SHALL COMPLY WITH THE REQUIREMENTS OF BS EN 752:2008 AND TYPICAL DRAINAGE CONSTRUCTION DETAILS
8. ADOPTABLE AND PRIVATE PIPEWORK MAY BE EITHER VITRIFIED CLAY TO BS65:1991 AND BS EN 295:2013 OR THERMOPLASTIC STRUCTURED WALL AND SHALL COMPLY WITH WIS 4-35-01 AND BE BSI KITEMARKED OR EQUIVALENT CERTIFIED
9. ALL FOUL PIPES AND RAINWATER OUTLET PIPES (RWP) ARE TO BE MINIMUM Ø100 UNLESS STATED OTHERWISE OR TO SUIT ABOVE GROUND PIPEWORK. ALL PIPE OUTLETS FROM INSPECTION CHAMBERS AND MANHOLES TO BE MINIMUM Ø150 UNLESS STATED OTHERWISE. FOUL PIPES TO BE LAID AT 1 IN 40 UNLESS STATED OTHERWISE.
10. UNLESS NOTED OTHERWISE, INVERT LEVEL AT REST BEND OF SVP OR RWP OUTLET TO BE A MINIMUM 450mm BELOW FFL AND MAXIMUM 1300mm BELOW FFL.
11. CLAY AND CONCRETE PIPES SHALL BE BEDDED ON CLASS S BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS Z BEDDING.
12. THERMOPLASTIC PIPES SHALL BE BEDDED ON CLASS P BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS Q OR Z BEDDING.
13. BACKFILL TO TRENCHES TO BE TYPE 1 GRANULAR MATERIAL TO BE USED UNDER HARDSTANDINGS AND ROADS.
14. ROAD GULLIES SHALL BE TRAPPED 450mm DIAMETER x 900mm DEEP WITH CLASS D400 FRAME AND GRATING TO BS EN 124.
15. ALL MANHOLE AND DRAINAGE CHANNEL COVERS SHALL COMPLY WITH BS EN 124. FOR DETAILS OF COVER TYPE & LOCATION, PLEASE REFER TO THE MANHOLE SCHEDULE.MANHOLE COVERS WITHIN BLOCK PAVED AREAS & BUILDINGS SHALL BE RECESSED, DOUBLE SEALED WITHIN BUILDING.
16. VENTILATION SHALL BE PROVIDED AT THE HEAD OF FOUL DRAINAGE RUNS.
17. FOR SETTING OUT OF SOIL AND RAINWATER PIPES, SEE ARCHITECT'S LAYOUT.
18. ACCESS FOR RODDING/ JETTING SHALL BE PROVIDED TO ALL SOIL AND RAINWATER DOWNPIPES ABOVE FINISHED FLOOR LEVEL.
19. FOR DETAILS OF MANHOLE TYPES AND PIPE BEDDING ETC, SEE STANDARD DETAIL DRAWING(S).
20. COVER LEVELS SHOWN ARE APPROXIMATE.
COVER LEVELS FOR MANHOLES WITHIN LANDSCAPED AREAS SHOULD BE CHECKED WITH THE LANDSCAPE ARCHITECTS.
COVERS SHOULD BE ADJUSTED TO MATCH SURROUNDING FINISH LEVELS.
21. THE CONTRACTOR IS TO PROTECT EXISTING BURIED PIPES (PARTICULARLY SHALLOW PIPES) AND TREE ROOTS FROM DAMAGE CAUSED BY LOADS IMPOSED BY CONSTRUCTION.
22. WHERE FOUL OR SURFACE WATER PIPES CROSS WITHIN 300mm OF EACH OTHER THE JUNCTION IS TO BE CONCRETE ENCASED AS PER THE TYPICAL CROSS OVER DETAIL.
23. ALL SEWERS TO BE LAID SOFFIT TO SOFFIT UNLESS OTHERWISE SHOWN.
24. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE EXISTING SERVICES ON SITE ACCURATELY.
25. THE CONTRACTOR SHOULD COMPLY WITH HS(G) 47 "AVOIDING DANGER FROM UNDERGROUND SERVICES" WHEN EXCAVATING AROUND EXISTING SERVICES.
26. THE CONTRACTOR IS TO VERIFY THE LINE, LEVEL AND DIAMETER OF EXISTING SEWERS BEFORE COMMENCING DRAINAGE WORKS.
27. ALL LEVELS ARE TO OS DATUM.

CDM REGULATIONS 2015
Significant or non-obvious risks and risks which are difficult to manage are identified on this drawing using the following symbol identified to the right with brief accompanying text. For further details of the risks identified by designers, reference should be made to CDM hazard register.

KEY

- F — PROPOSED PRIVATE FOUL WATER DRAIN / SEWER AND MANHOLE
- PROPOSED ADOPTABLE FOUL WATER DRAIN / SEWER AND MANHOLE (S104 AGREEMENT REQUIRED
- PROPOSED SURFACE WATER DRAIN
- 100Ø PERFORATED PIPE WITH GRAVEL SURROUND
- DC — PROPOSED FOUL DRAINAGE CONNECTION (REFER TO ARCHITECTS DRG. FOR SETTING OUT)
- RWP — PROPOSED RAIN WATER PIPE (REFER TO ARCHITECTS DRG FOR SETTING OUT)
- YG — YARD GULLY

REV	DESCRIPTION	DATE	BY	CHKD
P01	PLANNING ISSUE	21.07.25	JH	RG

ORIGINATOR: www.ridge.co.uk

RIDGE

PROJECT NUMBER: 5029285

CLIENT:
ST ALPHEGE CHURCH

IN ASSOCIATION WITH:

PROJECT:
PROJECT TURNAROUND

TITLE:
PROPOSED DRAINAGE LAYOUT

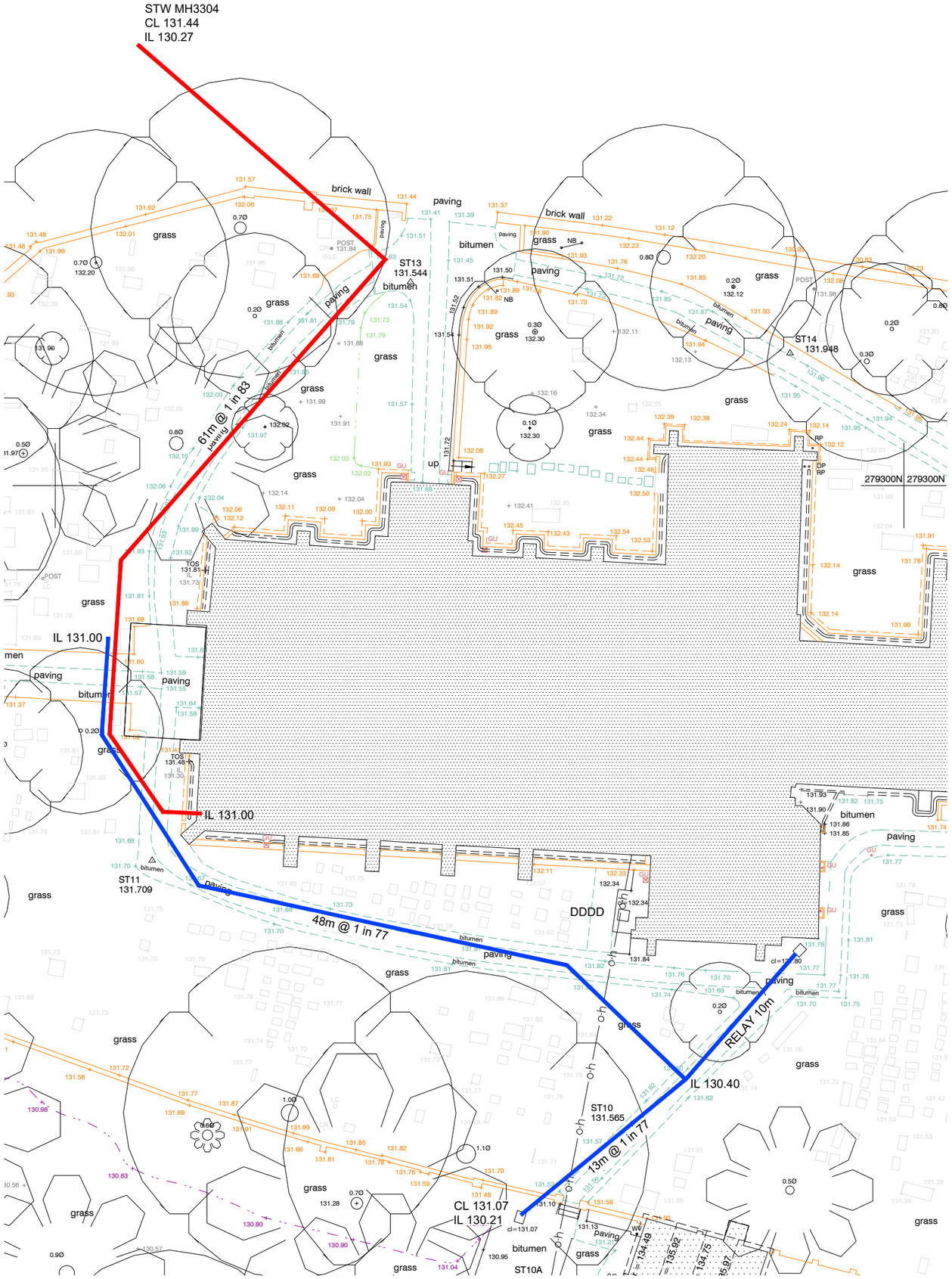
DRAWN BY: JH CHECKED BY: JH APPROVED BY: RG

SCALE @ A1: 1:100 DATE OF REVIEW: 21.07.2025

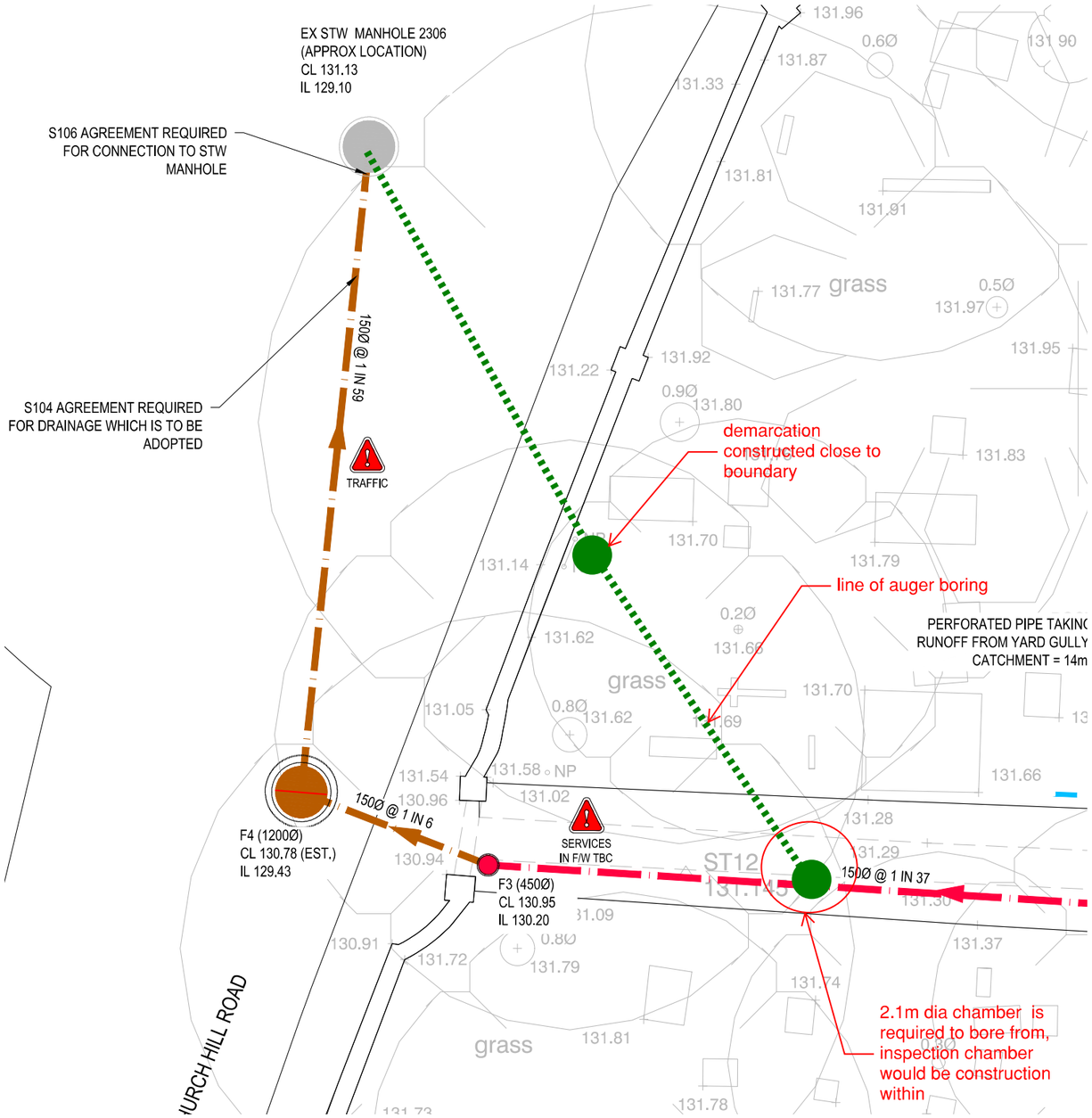
ISO 19650 STATUS:
S2 - Suitable for Information

DRAWING No: 5029285-RDG-XX-XX-D-C-000500 - Proposed Drainage layout.dwg

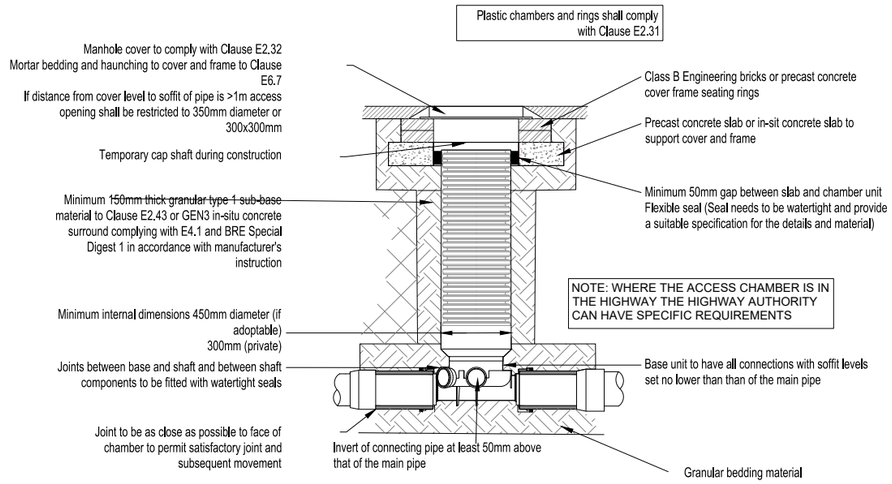
PROJECT:	ORG:	FUNCTION:	SPATIAL:	FORM:	DISCIPLINE:	NUMBER:	REV:
5029285	RDG	XX	XX	D	C	000500	P1



ALTERNATIVE DRAINAGE ROUTES CONSIDERED

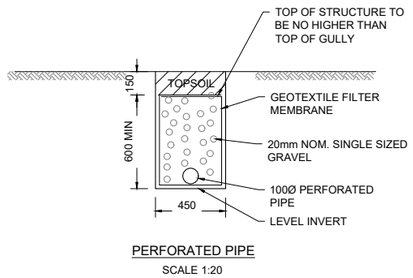


POTENTIAL TO SHORTEN ROUTE THROUGH AUGER BORING



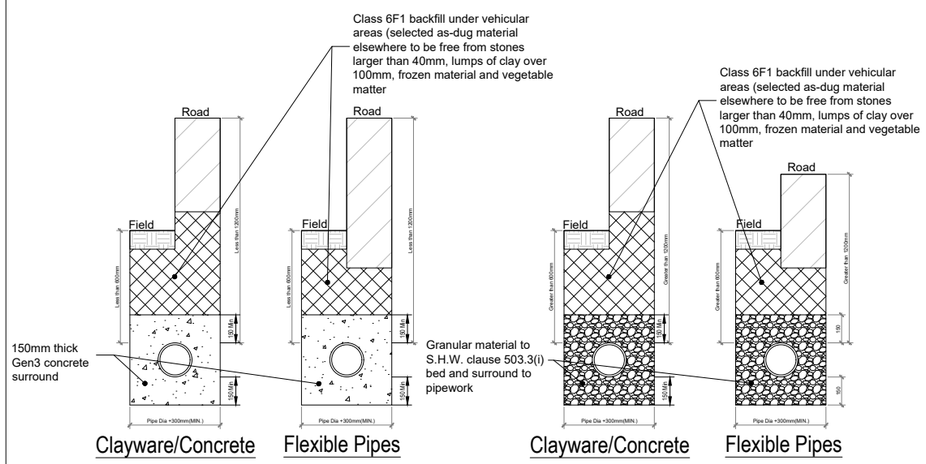
TYPICAL MANHOLE DETAIL - TYPE D1

(Depth from cover to soffit of pipe upto 3 m)



PERFORATED PIPE

SCALE 1:20

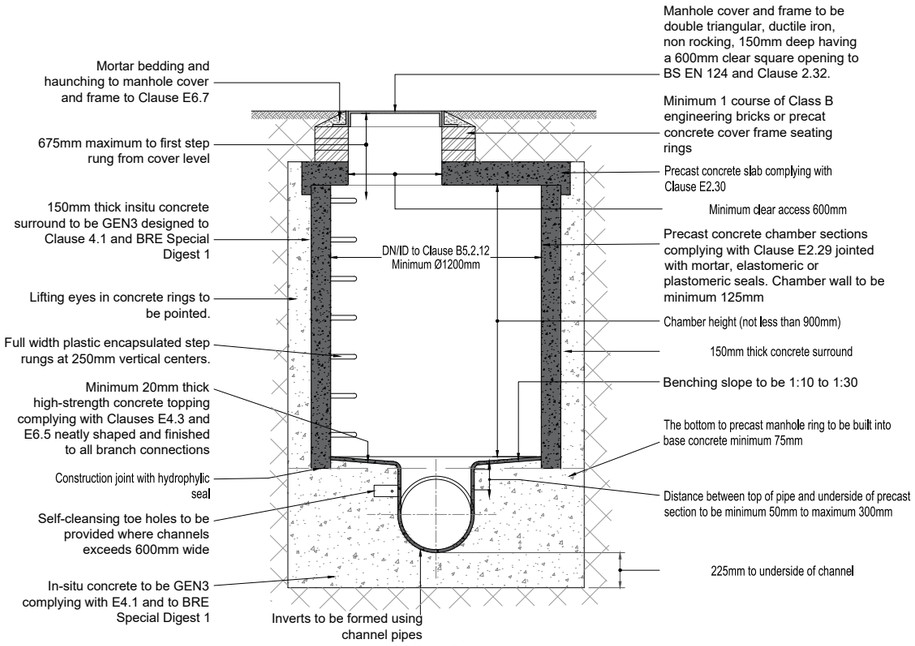


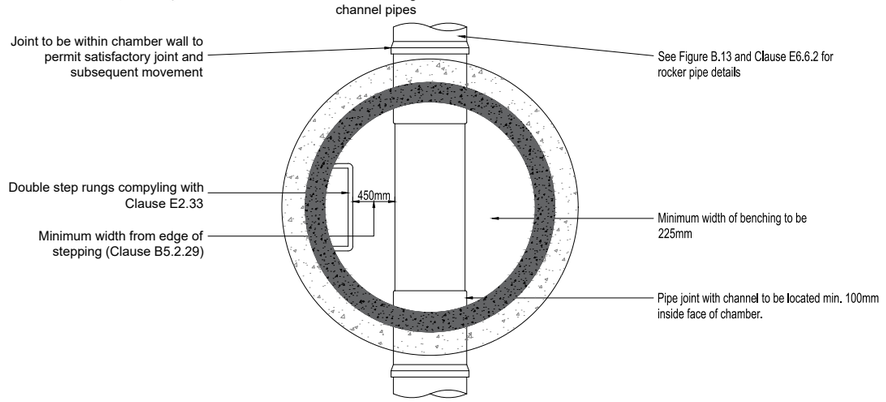
Type Z Pipe Bedding Detail

Type S Pipe Bedding Detail

Nominal Pipe Ø Thickness	Compressible Filler
Less than 450mm	18
450-1200mm	36
Exceeding 1200mm	54

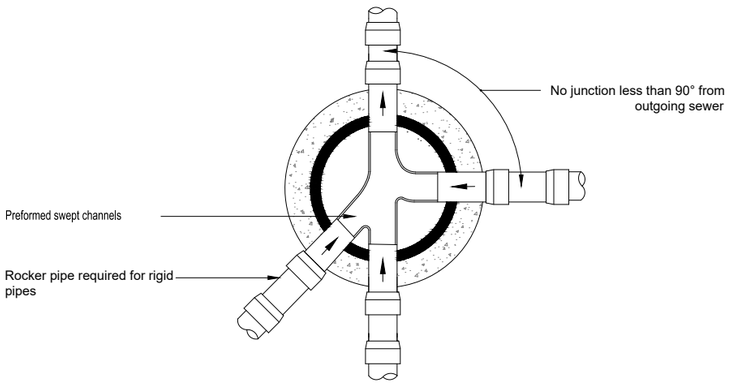
Compressible material at face of pipe joint to be bitumen impregnated insulating board complying with BS1142, BS EN 120 and BS EN 317 or other equally compressible filler material such as expanded polystyrene





TYPICAL MANHOLE DETAIL - TYPE B2

(Depth from cover to soffit of pipe 1.5 m to 3.0 m)



Rigid pipes built into manhole should have a flexible joint as close as feasible to the external face of the structure and the length of the next rocker pipe should be as shown:

Nominal diameter (mm)	Maximum effective length (m)
150 - 600	0.6
601 - 750	1.00
over 750	1.25

All pipes entering the bottom of the manhole to have soffits level.

TYPICAL ARRANGEMENT OF PIPE JUNCTIONS WITHIN MANHOLES

(Figure B.13, DCG)

REV	DESCRIPTION	DATE	BY	CHKD
P01	PLANNING ISSUE	21.07.25	JH	RG

ORIGINATOR: www.ridge.co.uk

RIDGE

PROJECT NUMBER: 5029285

CLIENT:
ST ALPHEGE CHURCH

IN ASSOCIATION WITH:

PROJECT:
PROJECT TURNAROUND

TITLE:
DRAINAGE STANDARD DETAILS

DRAWN BY: JH CHECKED BY: JH APPROVED BY: RG

SCALE @ A1: 1:100 DATE OF REVIEW: 21.07.2025

ISO 19650 STATUS:
S2 - Suitable for Information

DRAWING No: 5029285-RDG-XX-XX-D-C-000510 - Drainage Standard Details.dwg

PROJECT:	ORG:	FUNCTION:	SPATIAL:	FORM:	DISCIPLINE:	NUMBER:	REV:
5029285	RDG	XX	XX	D	C	000510	P1