

Statement of Need for improved Audio-Visual equipment for St Wilfrid's Church



Statement of Need for Improved Audio-Visual Equipment

St Wilfrid's Church

Grappenhall

Warrington

1 General Information

a) Population

At the 2011 census the Civil Parish of Grappenhall and Thelwall numbered 9,687 people¹. Grappenhall is a suburban Parish, with some rural areas, on the southern edge of the growing town of Warrington.

b) Normal Regular Service Pattern at St Wilfrid's prior to March 2020

Sundays: 8am Holy Communion, 8am- Morning Prayer (once a month)
10am Family Communion, 10am Family praise (one a month)
12pm twice monthly Baptism service (usually 3 children being baptised with an average attendance of 126 including 26 children)
5pm Monthly Evening Communion

Weekday services:

Mondays - Morning prayer, Wednesdays - Midweek Communion, Alternate Wednesdays - Pre-school Praise twice monthly (average 24 children with 20 parents/grandparents/carers); 71 families and 98 children on the preschool register in July 2017, an increase of 7% on 2016.

In partnership with local Nursing/Care Homes we have introduced regular services for people who are quite frail and find it difficult to attend the 10am services on Wednesdays. It is on 11.30 am (first Thursday in the month) Holy Communion followed by lunch.

12+ times a year school services (60+ children, 5 staff and 50+ parents/grandparents/carers) At Harvest, Christmas, Easter and the end of the School year - Key Stage School Worship which will see all 400 children + staff and parents in church over the course of a week.

Baptisms 61, Weddings 17, Funerals- 39

c) Current Constraints

The Covid Emergency and the restrictions on the number of people who can attend services has prompted St Wilfrid's to use portable camera and recording equipment to stream services from its website and Facebook to a wider congregation including Grappenhall residents in care/residential homes throughout the Parish. The number of regular services has been much reduced to just 1 service in Church on Sundays and a streamed morning prayer on Wednesdays. Hymnals and prayer books have been removed in order to reduce the risk of infection transmission.

d) Electoral Roll

265 in July 2021. During 2020/1 there have been significant numbers of deaths and movements out of the Parish to live nearer relatives. We have also welcomed new parishioners, some of whom made initial contact using our online presence. Overall there has been a net increase of 11 people on the electoral roll since March 2020.

e) Financial Situation

The reduction in services and the halt to fund raising activities involving large community gatherings has reduced our routine income, compared with 2019, by 25% although it is most encouraging to see that the income from planned giving has been sustained. Savings of 21% in running costs have been made, and the PCC have authorised a transfer from reserves to cover the predicted shortfall of £21,352 over the year. There have been no major maintenance issues and the Quinquennial Review

in January 2020 had no unexpected findings. Significant support has been provided by DCMS which has enabled St Wilfrid's to progress reinstatement of activities, notably baptisms, weddings and offering support to the community at large. The Parish Centre was used as a Covid testing centre and a new before/after school club will start this September to benefit the Church School and other families in the area and provide a regular income stream.

2. The Need

In addition to improvements to the audio quality, we have now installed 4 fixed screens on the stone pillars on both sides of the church to provide worshippers with the opportunity to read liturgy and sing hymns and so participate confidently in the service. The congregation can see the text of Bible readings, so they can reflect further on the Word. The screens are also being used to show pictures and short videos to illustrate the life of a person who is being commemorated at a funeral. For other expressions of Worship, pictures and short films are used to engage the interest and inspire worshippers. For national events, like the service from the Cenotaph on Remembrance Sunday, the screens will be used to enable the people of St Wilfrid's to join with people across the country so that their local service can be integrated into the national act of worship. The screens are linked to the screen in the newly completed Annexe so that for larger services worship can be linked between the two areas.

However, it has become clear that there are three major practical problems with the current arrangements.

1. Anyone sitting in the chancel is unable to see a screen. When leading the service, the Rector cannot see the images on the screens that are located within the nave from her location in the chancel when she is at the altar. At present, services are conducted from a nave altar placed at the chancel steps, near the screen which faces the south aisle.
2. The choir and anyone in the Lady Chapel or sitting in the north Transcept cannot see the nave screens. So, at present, the Choir is singing from the west end of the nave and the seats in the Lady Chapel and North Transcept are not used.

It is also important that the experience of worship is the same for everyone and that choir and people sitting on seats that are forward of the nave can participate fully in services. We would like to have our Choir back into the choir stalls.

3. Moving the AV controls out of the Baptistry and into the new console situated at the Northwest of the church has proved a great success. However, the receivers for the microphones are picking up interference from the other electrical equipment which is affecting sound quality both in church and on the livestream. We have been advised that moving them to a higher position would solve this problem. We experimented by re-siting the receivers on the top of the now defunct freestanding cupboard that used to house the equipment and the problem has been solved.

4. Proposal

a. Equipment

Our proposal are to install:

- 2 x 43 inch diagonal, 8cm thick screens that can be seen by both the priest and the choir, with carefully concealed electrical sockets and wiring as required.

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Our proposal is to attach these screens to the masonry behind the choirstalls, in the same manner as was done for the much larger screens in the nave. These screens would be aligned with the nave so that only the 8cm (3.14 inch) wide side of the screen would face the congregation.

- a small wooden shelf about 40cm long and about 20cm deep on the west wall of the north aisle, near the control cabinet. The existing radio microphone equipment will be moved onto this elevated shelf and the electrical and control wiring will be concealed using existing ducting. We have conducted a practical test to check that this separation will cure the electrical interference. The wooden shelf will be dark in colour and attached using screws into the mortar so no holes will be made in the stonework. The radio microphone equipment is quite small and in black cabinets.

b. Impact on the Church Fabric

Concealed wiring runs and the fitment of screen brackets onto the pillars in the nave have been very successfully planned and executed by our chosen installer in consultation with our church architect, Mark Pearce. The wiring diagram for electrical power and network connection to the control laptop is in the Appendix. (The presence of the solid sandstone pillars makes Wi-Fi not viable in this area.)

The Attachment describes the detail of how the brackets can be attached to the masonry without damaging the stonework, by using 2 steel bars that are fixed using the mortar between the stones.



5. Why we need this improvement and why now

We have found considerable enthusiasm for returning to attending services in the church building itself. However, we have found recent attendees have mainly been the older members of the congregation. Feedback from parents of young children has been that they have found the online services particularly helpful. They have been concerned that if their children felt restless, they could upset people who are understandably concerned to maintain social distancing.

Children respond very well to visual imagery, so the proposed screens could offer new possibilities for expressions of worship to encourage young people back into church again.

So, whilst we wish to continue with live streaming, we do also want to return to using the whole of the chancel for worship. We recently have installed a PTZ camera that has the magnification to offer close up pictures of worship at the altar, as well as providing long shots along the nave. This capability cannot be used in practise, unless the priest can easily check exactly what is being displayed at any time throughout the service.

6. What is the evidence for the need

The initial purpose of the displays was, in response to concerns about spreading infection, replace paper documents such as hymnals and service sheets with on-screen displays. As such, we did not think that the choir would require to see the screens. However, we are recognising that the screens provide an opportunity to inform and inspire our worship with visual imagery and short videos.

The response to the installation of the screens has been universally positive with all age groups finding a benefit. Recent comments have included, 'The hymns are so clear and easy to read, much easier than a hymn book', 'The pictures this morning really inspired me', 'I loved seeing scenes of the Holy Land as we sang, it reminded me of the pilgrimage I went on', 'My little boy was fascinated, he was taking part all the way through'.

Recent experience from our online worship has illustrated the value of these visual, and sometimes audio, prompts for reflection. We want to carry forward that learning into our Church services. We therefore need additional screens to enable people in our Choir stalls to experience the same visual sources of information and inspiration as the rest of the congregation.

The Minister must be able to see and influence what is on screen, as she observes how the congregation are responding to what they can see.

Some of our services have attracted over 1000 internet connected participants. Typically, our online services attract about 200 -400 participants and there is clearly a continuing opportunity to reach out to our wider community. Before 2020, our church seating could accommodate 270 people, although we have packed in 400-500 people for popular services such as the Christmas crib service. Our new annexe will allow us to expand the numbers who can attend in church, but we do recognise the value of being able to reach out to the wider community of online participants.

Additionally, as the PCC has recently voted to adopt a sustainability plan for the church with a view to becoming an eco-church, the screens have reduced the need to print service booklets. Prior to Covid service booklets were printed regularly and any change in liturgy required a re-print. Liturgy on screen enables us to refresh liturgy often with no significant environmental impact.

7. How is the Proposal contributing to the need for environmental sustainability

Using screens reduces the need for printing and distribution of paper particularly for orders of service, typically thousands of sheets per month, have been printed to support our regular pattern of services. The proposed equipment is energy efficient.

7. Alternatives Considered

(a) Return to using paper orders of service and printed hymnals

St Wilfrid's has resolved to work towards being an eco-church so we wish to continue minimising waste and cost from using paper and printing ink.

(b) Ask the priest and choir members to view screens using personal i-Pads or phones

The masonry tends to block Wi-Fi transmission, so wired connections would be needed to maintain an acceptable quality of transmission. The current wifi connectivity would not support multiple handheld devices if all of the choir needed to use them. We do not think it is practical to balance handheld devices like phones or i-Pads on the narrow ledges of the choir stalls or appropriate to clutter the altar with wires and technological equipment. The age of our choristers would also prove challenging as some do not use any technology at all. The cost of providing iPads or phones would be prohibitive and they could be easily damaged, misplaced or stolen. Visually, using phones to read liturgy in the chancel would not be desirable.

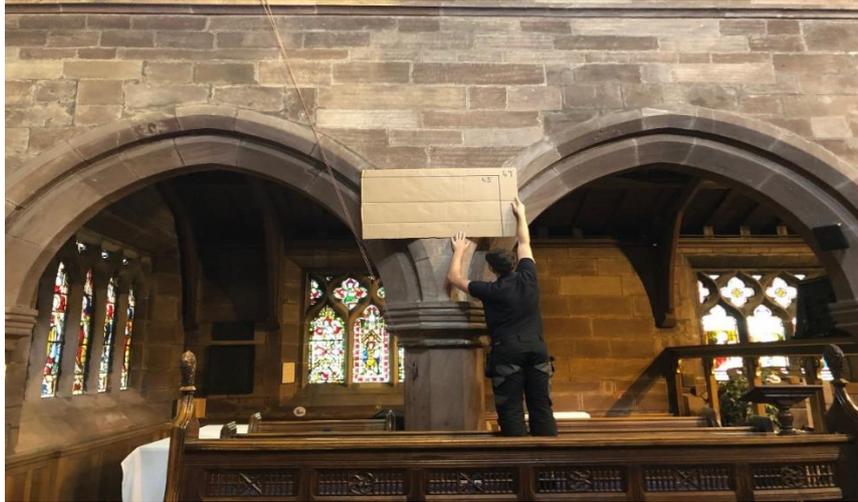
(c) Use one additional screen rather than 2

We looked carefully at the chancel layout, the positioning of the pillars and the different floor levels. There is no location where a single screen could be placed that could be visible to both the priest and all of the choir, other than right in the middle of the nave, where the back of the screen would block the view of the altar by most of the congregation. It could also obstruct positioning the coffin in front of the altar for funeral services.

d) Consider the size of screen that is required

The screen initially proposed for the choir is just 49 inches from corner to corner. However, we have experimented with the option of using a 43 inch screen and placing it slightly higher. The choir and possibly the congregation sitting behind them may not find the text quite so easy to read as they would on a 49 inch screen, but the smaller screen fits better into the shape of the masonry arches. In the picture on page 7 of the South side of the choir, the screen would be placed a little higher than the young man was able to reach without a ladder. Members of the congregation who are sitting in the Lady Chapel (which is through the arches and parallel with the choir) would be able to look through the arches to view the screen on the North side of the choir.

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The choir screens would be facing across the chancel, that is to say they will be at 90 degrees to the nave screens. The 43 inch screens are 8 cm (3.1 inches) thick, so the visual impact of the presence of the equipment when looking down the nave, will be minimal.

e) Consider future technological advances when selecting a method of fittings

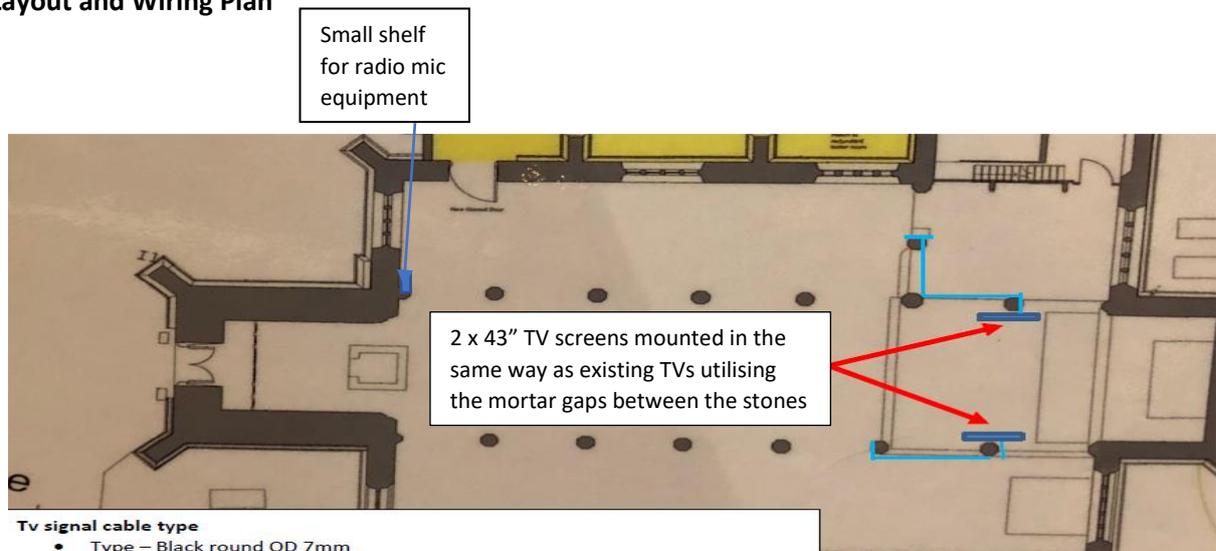
Screens have become considerably thinner, and the proposed screens are just 8cm thick. Even if technology were to advance so that screens could be perhaps 2cm thick, and much lighter, the fittings would be broadly similar. No drilling of the masonry is proposed, only mortar gaps which can be refilled if/when the screen supports are to be removed.

f) Position screen on a stand or trolley

We are concerned that, as we wish to make the church open to the community during daytime hours, we wish to reduce the risk of theft. A trolley would make it far too easy to roll a valuable TV set out of the building. A stand would be more difficult to shift, particularly if it can be attached to the wooden floor but the maximum height of a stand is just 6 foot, and that is insufficiently high to enable all choir members to see the screens when the choir is standing.

APPENDIX

Layout and Wiring Plan



Equipment specification

	<p>Specifications</p> <table border="1"> <tr><td>Screen Size</td><td>43"</td></tr> <tr><td>Backlight Type</td><td>LED (Direct)</td></tr> <tr><td>Resolution</td><td>3,840 x 2,160 (4K UHD)</td></tr> <tr><td>Brightness (cd/m²)</td><td>400</td></tr> <tr><td>Dynamic Contrast Ratio (Dynamic MCI (Hz))</td><td>1,000,000:1</td></tr> <tr><td>Static (Panel) Contrast Ratio</td><td>1,200:1</td></tr> <tr><td>Viewing Angle (H x V)</td><td>178 x 178</td></tr> <tr><td>Response Time (G to G, ms)</td><td>6</td></tr> <tr><td>BROADCASTING SYSTEM</td><td>• (PAL/SECAM)</td></tr> <tr><td> Analog</td><td></td></tr> <tr><td> Digital</td><td></td></tr> <tr><td> Vesa</td><td>ZUU x ZUU</td></tr> <tr><td>DIMENSION (UNIT : mm)</td><td>W x H x D / Weight (with stand)</td></tr> <tr><td></td><td>977 x 629 x 216 / 8.4 kg</td></tr> <tr><td></td><td>W x H x D / Weight (without stand)</td></tr> <tr><td></td><td>977 x 575 x 71.7 (SPIC: 80.8) / 8.3kg</td></tr> <tr><td></td><td>W x H x D / Weight (Packing)</td></tr> <tr><td></td><td>1,060 x 660 x 152 / 10.5 kg</td></tr> <tr><td>POWER (UNIT : WATTS)</td><td>Voltage, Hz</td></tr> <tr><td></td><td>100 - 240V, 50/60Hz</td></tr> <tr><td></td><td>Max</td></tr> <tr><td></td><td>117.7</td></tr> <tr><td></td><td>Typical</td></tr> <tr><td></td><td>92.2</td></tr> <tr><td></td><td>Energy saving (Min/Med/Max)</td></tr> <tr><td></td><td>68 / 52 / 33</td></tr> <tr><td></td><td>Stand-by</td></tr> <tr><td></td><td>0.3</td></tr> </table>	Screen Size	43"	Backlight Type	LED (Direct)	Resolution	3,840 x 2,160 (4K UHD)	Brightness (cd/m ²)	400	Dynamic Contrast Ratio (Dynamic MCI (Hz))	1,000,000:1	Static (Panel) Contrast Ratio	1,200:1	Viewing Angle (H x V)	178 x 178	Response Time (G to G, ms)	6	BROADCASTING SYSTEM	• (PAL/SECAM)	Analog		Digital		Vesa	ZUU x ZUU	DIMENSION (UNIT : mm)	W x H x D / Weight (with stand)		977 x 629 x 216 / 8.4 kg		W x H x D / Weight (without stand)		977 x 575 x 71.7 (SPIC: 80.8) / 8.3kg		W x H x D / Weight (Packing)		1,060 x 660 x 152 / 10.5 kg	POWER (UNIT : WATTS)	Voltage, Hz		100 - 240V, 50/60Hz		Max		117.7		Typical		92.2		Energy saving (Min/Med/Max)		68 / 52 / 33		Stand-by		0.3	<table border="1"> <tr><td>Screen Size</td><td>43"</td></tr> <tr><td>Backlight Type</td><td>LED (Direct)</td></tr> <tr><td>Resolution</td><td>3,840 x 2,160 (4K UHD)</td></tr> <tr><td>Brightness (cd/m²)</td><td>400</td></tr> <tr><td>Dynamic Contrast Ratio (Dynamic MCI (Hz))</td><td>1,000,000:1</td></tr> <tr><td>Static (Panel) Contrast Ratio</td><td>1,200:1</td></tr> <tr><td>Viewing Angle (H x V)</td><td>178 x 178</td></tr> <tr><td>Response Time (G to G, ms)</td><td>6</td></tr> <tr><td>BROADCASTING SYSTEM</td><td>• (PAL/SECAM)</td></tr> <tr><td> Analog</td><td></td></tr> <tr><td> Digital</td><td></td></tr> <tr><td> Vesa</td><td>ZUU x ZUU</td></tr> <tr><td>DIMENSION (UNIT : mm)</td><td>W x H x D / Weight (with stand)</td></tr> <tr><td></td><td>977 x 629 x 216 / 8.4 kg</td></tr> <tr><td></td><td>W x H x D / Weight (without stand)</td></tr> <tr><td></td><td>977 x 575 x 71.7 (SPIC: 80.8) / 8.3kg</td></tr> <tr><td></td><td>W x H x D / Weight (Packing)</td></tr> <tr><td></td><td>1,060 x 660 x 152 / 10.5 kg</td></tr> <tr><td>POWER (UNIT : WATTS)</td><td>Voltage, Hz</td></tr> <tr><td></td><td>100 - 240V, 50/60Hz</td></tr> <tr><td></td><td>Max</td></tr> <tr><td></td><td>117.7</td></tr> <tr><td></td><td>Typical</td></tr> <tr><td></td><td>92.2</td></tr> <tr><td></td><td>Energy saving (Min/Med/Max)</td></tr> <tr><td></td><td>68 / 52 / 33</td></tr> <tr><td></td><td>Stand-by</td></tr> <tr><td></td><td>0.3</td></tr> </table>	Screen Size	43"	Backlight Type	LED (Direct)	Resolution	3,840 x 2,160 (4K UHD)	Brightness (cd/m ²)	400	Dynamic Contrast Ratio (Dynamic MCI (Hz))	1,000,000:1	Static (Panel) Contrast Ratio	1,200:1	Viewing Angle (H x V)	178 x 178	Response Time (G to G, ms)	6	BROADCASTING SYSTEM	• (PAL/SECAM)	Analog		Digital		Vesa	ZUU x ZUU	DIMENSION (UNIT : mm)	W x H x D / Weight (with stand)		977 x 629 x 216 / 8.4 kg		W x H x D / Weight (without stand)		977 x 575 x 71.7 (SPIC: 80.8) / 8.3kg		W x H x D / Weight (Packing)		1,060 x 660 x 152 / 10.5 kg	POWER (UNIT : WATTS)	Voltage, Hz		100 - 240V, 50/60Hz		Max		117.7		Typical		92.2		Energy saving (Min/Med/Max)		68 / 52 / 33		Stand-by		0.3
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Sheet 2 - Q2184 St Wilfrid's Church, Grappenhall, Warrington – Fixing summaries

Cable summary

Purpose	Size - overall diameter	Colour	Fixing method*2	Route summary
TV signal cable	6mm	Black*1	Surface clip -with nail/screw head blacked out where normally visible.	Refer to plan A
TV mains electric	10mm	Black*1	Surface clip -with nail/screw head blacked out where normally visible.	Refer to plan B

*1 – fixed cables (LSZH) Low smoke zero halogen

*2 – all fixed cables will be supported in accordance with the requirements of BS 7671 for cables to be adequately supported against their premature collapse in the event of a fire. (Regulation 521.10.202)

Fixing summary for items other than cables

Item	Position details	Additional notes
Choir stalls tvs	Refer to:- • Plan A • Information sheet 1	Standard tilt bracket. Mortar gaps between the masonry will be used for mounting holes. 8mm hole
Tv electrical sockets	Refer to:- • Plan B	Mortar gaps between the masonry will be used for mounting holes. 6mm hole. Socket outlets to be standard 1 gang metal clad finish