Diocese of London
Environmental Challenge

Generic Building Solutions

Needs, Significance, Impacts and Mitigation

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2 Introduction

Generic Building Solutions is a project of the Diocese of London with the Carbon Trust, and Arup as Consulting Engineers. Arup's report surveys a range of building interventions and technologies to reduce the carbon footprint of London churches by at least 80% by 2050. This is supported by guidance on the options examined, and others which a church might consider as part of any scheme. See 'Options, Challenges, Solutions, Solutions, Limitations'.

Works to alter a building may affect its significance and special character, especially if it is a listed building or in a conservation area. Faculty applications for works to a church require Statements of Significance and Needs, where the character and special interest of a listed building will be affected materially. The effect may be an enhancement or it may be detrimental – any adverse impact should be limited or mitigated where possible.

This applies to any works for environmental purposes, to improve energy efficiency and reduce carbon emissions, just as any other project. The environmental benefits, the significance of parts affected, the impact on them to the extent they are of value, and how to limit or mitigate that impact, all need to be identified, described and weighed against each other. See also guidance on Statements of Significance and Needs by the Council for Church Buildings – ask the Care of Churches Team: Geoffrey.Hunter@london.anglican.org, (020) 7932 1230.

The benefit to be gained, especially in reducing emissions, may be considerable. It may be necessary as part of the church's contribution to tackling climate change. But there may be alternative strategies which could be examined with a view to equal benefits, which might have less impact. This guidance document tabulates options and their implications in broad terms, using a generic approach in common with that of the *Generic Building Solutions* project as a whole. It does not provide ready-made solutions in any individual project, but is intended to support the thought process – by the proponents of a scheme, and by the DAC for example when appraising it. It points to the kinds of considerations to be thought about, depending on circumstances. Each individual project still needs to be examined in its own terms.

Technologies and systems examined by this paper are not as exhaustive or detailed as in its companion paper 'Options, Challenges, Solutions, Solutions, Limitations'. Many are already familiar; the faculty system is accustomed to examining their needs, significance, and ways to mitigate any impact; therefore abbreviated comment only is given. This paper concentrates mainly on technologies likely to be encountered more than hitherto, and therefore need a fresh eye regarding their effect on the heritage and how we might limit it.

Table: **Technologies; Description; Needs; Significance; Impacts; Mitigation**

(next page and following: **NOTE** – red amber and green colours are a guide to how recommendable an option is from the environmental point of view)

Technologies	Description	Needs	Significance	Impacts	Mitigation
Building fabric					
Carbon neutral/negative 'cement'	Low-carbon or carbon negative non-Portland cement substitutes.	Emissions reductions, compared to Portland cement which is very productive of carbon emissions.	Applications of new cement products are potentially of significance in themselves.	No impact on a building is envisaged which would differ from that of traditional cement products – from an historic buildings point of view, but any constructional risks need to be evaluated.	Mitigation not likely to be needed from an historic buildings point of view.
Plastics	Synthetic polymers, frequently petroleum by-products, used eg for windows and doors as well as many finishes, sheets and coatings.	Very versatile, achieving desired performance in a range of applications for limited cost.	Consideration of significance and appearance needed where plastics are being used to replace natural or traditional materials and components.	Eg as replacement for wood windows, they may have a detrimental effect on appearance. Polycarbonate window protection is another example, where a material may become discoloured with age.	The appearance of uPVC windows has much improved but may not be acceptable in all situations. May be possible to limit visibility by applying eg to windows on one elevation only. Alternative polymers eg acrylic may be alternative which are acceptable in some cases.
Insulation –	Boards, quilts or fill to roofs, walls, floors etc.	To reduce heat loss. For buildings other than church buildings, U value limits are set by Part L of the Building Regulations. Although churches remain exempt from Part L, as a matter of policy churches are encouraged to aim for at least equal performance.	The parts of the building to be insulated being part of the main structure are likely to be of architectural significance.	The impact is likely to be greatest when there is no void such as a roof void that can be filled with insulation. Applying insulation under a ceiling may affect its appearance, or its relationship to structural timbers each side. Roof insulation above the structure will raise the level of the roof covering in relation to eaves and parapets. There may be a risk of condensation, as well as creating a path for damp, eg where cavity walls are infilled with insulation. Solid wall insulation would hide any existing finishes, and change the dimensions of a space internally or the building externally. Floor insulation will raise the level of an existing floor and may require disturbance of historic wood boarding or tiles.	Contrariwise, if there is a roof void, the opportunity may be taken to insulate to the maximum extent possible. A high ceiling may be relatively dark and invisible, and/or it may be possible to reproduce existing decorations on the face of new insulation, or to move existing boarding downwards. Technical building solutions may be available – a church should consult its architect. The whole building element – wall, roof etc – and indeed the whole building, should be taken together in predicting and mitigating any effect on its thermal behaviour. Insulation may be inserted as part of a new raised floor, possibly also including under floor heating – thereby gaining a double benefit which for example avoids unsightly wall-mounted heaters.
insulating render and plaster	A range of products based on combinations of lime, glass, sand, clay and straw, for internal and external walls.	Where other options eg roof void insulation are not available.	Rendering or plaster may in some cases have significance in their own right, eg if unaltered since original construction and employing horsehair, and/or applied to historic lathing, or with decorative finishes.	Removing existing render or plaster inevitably destroys it irreversibly.	On the other hand, the new thickness of about 40mm may enable the new finish to be accommodated without visual detriment to an internal space.
lambswool insulation	A natural and organic, renewable insulating material.	As an alternative eg to synthetic polymers.	Sympathetic to historic materials in a traditional buildings.	But unfortunately lambswool attracts moths, which no known treatment seems able to remedy.	Not recommendable.

Technologies	**Description**	**Needs**	**Significance**	**Impacts**	**Mitigation**
Green roofs	Planting eg sedum on topsoil laid on a flat or low-pitched roof construction, mainly for new buildings and extensions.	Aesthetic benefits, reduced rainwater run-off and flooding, thermal and sound insulation, encouragement to bird and insect life therefore local biodiversity.	Significant to the extent that the appearance and setting of any existing building may be affected.	Likely to be very limited, and indeed positively beneficial – eg in hiding a new extension when viewed from above. On an existing roof, structural and waterproofing considerations need to be adequately covered.	Hardly needs mitigating – if feasible at all, likely to be desirable in itself. Benefits should be maximised eg by planting a more diverse polyculture.
Draught proofing –	Rubber or metal strips with brush seals for opening elements.	Draughts are a major cause of heat loss. In principle, gaps should be sealed wherever possible – but see partial caveats to the right.	Draughts are prone to occur around traditional building elements which have become worn or distorted by age.	Therefore any draught sealing is likely to be contiguous with traditional building elements, and may affect their integrity or appearance. It is not advisable to hermetically seal 'natural' or 'traditional' building materials which need to be able to 'breathe'.	Is it really necessary? Draughts may not always be caused by air gaps at all, but by convective air movement, down-draughts, eg inside windows. If the building is insulated, internal air temperatures will rise for the same heat input, accelerating heat loss through perforations; an alternative may be to turn down the heating so the temperature remains the same, but reducing heat loss.
'Quattroseal'	A proprietary gap-filling draught-proofing sealer – www.quattroseal.com/	Allows better adaptation around irregular profiles.	Particularly designed for 'heritage buildings', approved by English Heritage.	Much reduced – non-invasive.	
Improved glazing –	Replacement double-glazed windows, internal or external secondary glazing – in each case in aluminium, plastic or hardwood.	uPVC or aluminium frames with built in thermal breaks may provide considerable improvement in energy terms.	Any windows to be replaced may be historic to the building.	They may affect the appearance and historic character of the building, especially if uPVC is used. The appearance of uPVC frames becomes less acceptable as the energy efficiency improves and frames are therefore wider when seen in elevation. Fitting the windows also disturbs the surrounding structure and finishes. Recently objections have been encountered merely to the reflective effect of double glazing *per se*, irrespective of the design of frames.	It may be possible to limit new windows to ancillary areas and out of sight. As a compromise, especially for a domestic property, it may be possible to install double glazing on the rear elevation and secondary glazing at the front, so as to preserve the appearance of the street elevation. New windows may be in timber not plastic (though much more expensive). Film coatings might mitigate this effect, but in most cases it is suggested that the need ought to prevail over what is a marginal change in appearance.
Acrylic sheet	Acrylic as an exterior secondary glazing material.	May serve a dual purpose, for security as well as reducing heat loss and improving air tightness.	External fabric and architectural appearance.	Potentially high effect on appearance.	Maybe acceptable in some cases (unlisted buildings, or out of sight).
Curtains	Curtains or hangings inside doors and windows, or eg adjoining a stairway, may contribute to energy-saving.	Significant contribution to energy saving, especially next to stair wells or open areas.	Appropriate eg in church halls and domestic buildings. Sometimes in a church, eg as part of a draught lobby (see below).	Very limited impact.	Appropriate selection of materials and fixings.
Volume reduction	Reducing the volume to be heated within a large internal space such as a church or hall.	May be part of reordering and subdivision for additional uses, to improve viability, extend mission and pastoral provision. Inserting new floors may reduce heat loss and/or improve energy intensity.	The internal space and its appearance, significant internal elements, all need to be evaluated.	Architectural appearance and any effect on existing or historic fittings and furnishings.	Careful layout and positioning may limit to what can be seen – rather than direct impact by altering or displacing historic items. Combined benefits of use and energy performance limit the relative impact from either one of these by itself.

Technologies	Description	Needs	Significance	Impacts	Mitigation
Electrical services					
Energy monitoring	Mainly smart metering.	Elementary energy conservation.	If concealed in a meter cupboard, none.	None.	None needed.
Voltage power optimisation	Unit installed at the mains electricity intake to modulate the voltage to electrical services.	To maximise electrical efficiency without wasting excess heat.	Ditto.	None.	Ditto.
Lighting					
Lay lights and light pipes	To an enclosed inner room with a void above the ceiling. Or if the roof is flat, a light pipe can conduct light down through the ceiling.	Used to bring in borrowed light from any clerestorey or roof light.	May entail alterations to a roof structure or covering.	To any historic materials – new rooflights will also affect the external appearance, depending on visibility from streets and other buildings. Lay lights tend to collect dirt, which damages their appearance inside the room.	Limiting size and careful architectural detailing. Panels or light pipe covers be removable for cleaning.
Window blinds	Roller or slatted blinds (vertical or horizontal).	For sunscreening.	Internal blinds will affect the appearance of any room.	Visual, minor effects from any fixings.	Limited to small ancillary rooms and may not need to affect historic features.
New lighting	Low energy eg CFLs, LEDs or fibre-optics, reduced energy such as metal halides or other discharge lamps.	Improved illumination at the same time as energy performance and ease of maintenance.	Affects the appearance and appreciation of interior spaces.	Light fittings may affect the appearance of architectural features on or in front of which they are mounted. Fixings to historic elements also need careful handling.	The issues surrounding lighting design are already familiar. Optimise daylight use at the same time, and not over-light the interior or over-rely on artificial light to provide illuminance or special effects. See also also Arup's report. The more modern fittings may also tend to be smaller and less obtrusive.
Lighting controls	Zoning, switchboards and dimmers, sensors etc.	Energy efficiency.	There should be no need materially to affect the significance or appearance of a church.	None if appropriately placed.	A simple cupboard of appropriate design may be needed to enclose.
External floodlighting	Light fittings whether conventional or, eg fibre-optics, mounted in the ground or at high level around a church, or on the building itself.	Aesthetic enhancement and/or security.	The appearance of the church at night time will obviously be affected, the building itself and setting per se may also be affected.	Ground emplacements and protection for low level fittings, any pylons, fixings to building.	Concealment where possible, eg in shrubbery, behind architectural embellishments. The purpose is not environmental, and needs mitigation from an energy-saving as well as historic buildings point of view.

Technologies	**Description**	**Needs**	**Significance**	**Impacts**	**Mitigation**
Small power					
Portable heating, computer equipment, motors and drives, catering etc.	Depending on uses and needs.	Various – but subject to energy efficiency.	Depending on space where placed.	Potential clutter.	Careful placing and good management – no different when energy efficient models are chosen.
Micro-generation					
Combined heat and power (CHP)	A generating engine to generate electricity, with heat created as a by-product used to supply heat and hot water.	Energy economy from electricity and heat being generate together and the heat recovered. Bear in mind a supplementary gas boiler is needed for heat when there is no call for electricity.	A CHP engine and gas boiler may take up more space than either by itself.	Feasibility is likely to be constrained by available plant-room space, therefore there should be no net additional impact.	Should any additional space be set aside for plant, consideration is needed to placing of partitions so as not to impact fittings or architectural features.
Photovoltaic solar panels St Silas Pentonville solar tiles	Panels comprising a glass substrate with multiple silicon cells. Panels are mounted at an angle to the horizontal. An inverter to manage the connection to the AC mains grid is also required. 	Microgeneration of electricity, to reduce demand for fossil fuel consumption.	PV panels should be applied to roofs that are orientated south, or nearly so – as is common for churches. They should be mounted either on flat areas behind a parapet (raised at an angle) or on pitched roof slopes – mounted on the roof or integrated with it.	May cause visual intrusion and incongruent architectural appearance. The inverter should not be visible if in the meter cupboard – but a visual display is desirable in any case for public education and information. Fixings through historic roof coverings.	There is no overriding prohibition on solar panels being visible; whether this is acceptable or not depends on siting and design in individual cases. Churches with roof parapets behind which solar panels can be hidden may be preferable, though this limits the useable area. Sites where the south side of the roof faces way from the street may reduce visibility. Trees may protect views, as at St Alkmund Shrewsbury – www.thegreenelectrician.co.uk/cs1. Architecturally appropriate solutions are always to be encouraged. Variations to the typical solar panel may be feasible in individual cases such as the solar tiles integrated with the slate roof of St Silas Pentonville – www.saint-silas.org.uk/accommodation.asp. This may depend on whether the whole roof slope is to be replaced – the fixings for solar tiles may be incompatible with slate fixings unless remaining slates are re-laid at the same time. Practical solutions have been found as at St Denys's Sleaford in Lincolnshire – http://lincoln.ourchurchweb.org.uk/sleafordstdenys/docstore/18.pdf. See also separate strategy and guidance papers about solar panels.

Technologies	Description	Needs	Significance	Impacts	Mitigation
Wind turbine(s)	Free-standing or integrated within and existing building.	Microgeneration, to reduce demand for fossil fuel consumption.	The appearance of the historic building and its setting	If free-standing, the setting of the church may well be affected. If integrated, the fittings in the church tower may be affected, and probably any louvres.	Careful placing in concealed locations, like-for-like replacement of any disturbed elements where feasible.
Heating, ventilation and cooling					
New boiler	Replacement of a traditional gas or oil boiler with a new condensing or atmospheric boiler, in either case usually a modular design – together with boiler controls, new pump etc.	Replacement of a failed boiler, together with improved energy efficiency.	A new boiler is usually more compact than the old boiler which it replaced, though a modular design may increase space requirements. Selection will usually be constrained by available space in any event.	None.	None needed.
Heating controls	Room thermostats, modular heating & zoning, thermostatic radiator valves (TRVs).	Energy efficiency.	Should be discreet and inconspicuous.	Very limited.	Selection of the most elegant and compact models.
Insulate heating components	Usually limited to pipe lagging.	To reduce heat losses.	Internal appearance.	Can be bulky and clumsy in appearance.	Conceal pipework and lagging where feasible without undue cutting into historic fabric.
Foil backing to radiators	A low cost domestic measure.	Energy-saving.	Unlikely to be applicable to churches except ancillary rooms.	Limited.	Should be concealed by de-mounting radiators before fitting to the (often undecorated) area behind.
Radiant heating –	Panels or strips with steel or copper pipework attached to a radiant surface. Low, medium, high temperature, water and steam. Wall mounted, free hanging, surface mounted or recessed.	Improved efficiency by heating occupants directly at lower air temperature.	The character and appearance of architectural elements to which or in front of which appliances are mounted.	Visual and to some extent physical due to fixings.	Careful positioning and detailing.
low temperature hot water	Panel or column 'radiators' (primarily convective actually), the latter of the kind often seen in Victorian schools and hospitals, as well as churches, fed by hot water pumped through circulating pipework.	Traditional low temperature hot water heating has hitherto been a preferred method for heating of church buildings.	As above.	It may be that we find these most acceptable because of their familiarity. Some newer types may seem discordant but many are very elegant and simple in design.	Careful selection of types and their positioning.
high level radiant heaters	Eg at cornice level, on column capitals etc. Usually electric, sometimes gas.	These may be cheap and efficient (even those that use electricity – because the heat is delivered so directly to the occupant).	As above, but usually more obtrusive.	When mounted at high level on significant architectural features, tends to be visually obtrusive and unlikely to be recommended by most DACs.	Not generally to be recommended anyway, for other reasons.

Technologies	Description	Needs	Significance	Impacts	Mitigation
Pew heating	Electric or hot water, under pews, in seat backs, under floor, in pew platforms.	High efficiency and comfort levels. Facilitates greater flexibility in floor layout (of the heating, not the seating).	May affect the fabric of pews.	Fixings, possible thermal stress to woodwork. Since this type of heating requires fixed pewing, it actually reduces the chance that pews will be removed then or later.	May need to limit to woodwork of low to medium historic significance and/or vulnerability.
Under-floor heating –	Hot water or electrical.	Comfort and efficiency of heat distribution. Typically most cost-effective and often included in major internal reordering.	The floor and floor finishes are likely to be of significance in many historic churches.	The floor may require to be taken up all or in part.	Can be limited to new trenching eg to reduce area of existing tiles to be taken up.
ducted	Finned tube radiators or convectors in existing or new floor ducts.	As above.	Existing iron grilles may cover floor ducts.	Limited – raised and re-set. If new ducts are formed, new grilles in sympathy with the surrounding floor finish may be manufactured.	Existing vacant floor ducts can frequently be re-used for a new installation.
buried hot water pipes	Concealed network or usually plastic pipes under screed or floor boards.	As above.	Again, affects the whole or parts of the floor.	To existing floor finishes, lost or damaged.	Can be limited to discrete strips of floor. In each of the above cases, care is needed at edges not to spread the damage more widely.
electric coils	Resembling an electric blanket.	As above.	As above.	As above.	As above.
Convective heating/cooling –	Blown air forced by concealed fans via ducted distribution and/or a central plenum.	Rapid heat distribution, layout constraints requiring plant area in a gallery or upper room, limited wall space for radiators due to fittings.	Fittings and furnishings of historic interest.	The direct impact may be less due to the remote heat source, but there may be an indirect impact due to air movement and drying.	Humidification eg of an organ. Attention to direction air is projected. Note that text is coloured red because this option is not recommended for environmental reasons.
'punkah' fans	Eyeball-shaped nozzles.	Directional heat or cooling.	Openings needed in partitions or bulkheads. Likely to be part of a fitting out for other reasons.	Unlikely to impact historic fittings directly. Possible visual effect.	Limited mitigation needed other than care with direction of air flow.
destratification fans or 'heat harvesters'	Ceiling-mounted destratification fans or active heat recovery units.	Improved heat distribution.	Ceiling mounted – is the ceiling of interest in its structure or decorations?	Consider visual effect.	Limit the number used, easier to 'lose' in high dark roof spaces.
Local balance flue units	Wall mounted independent units eg the popular 'Drugasar' heaters, with balance flue straight trough the wall.	Where space is unavailable for central boiler and/or distribution pipework; or other feasibility constraints requiring discrete standalone units.	Affects the walls and floor locally.	Floor mountings and wall openings, external appearance of guards.	Careful positioning, concealment and detailing.
Fan coil or air conditioning units, gas or electrical	Discrete wall or floor mounted units.	Need for local heating or cooling eg in windowless spaces.	As above.	Damage to finishes locally and/or disruption elsewhere due to pipe and wire runs.	To be avoided if at all possible, on environmental grounds. If essential, extreme care needed in location and planning of installation.
Active or passive ventilation or cooling.	Discrete units, louvres or fans.	Comfort cooling.	Alterations to ceilings, windows or walls.	Openings and electrical connections. Visual effect eg of ducting in major systems.	Limit size and number, careful positioning and detailing. Limit structural openings. Any ground boring may require archaeological input.

Technologies	Description	Needs	Significance	Impacts	Mitigation
Hot water services					
Centralised	Familiar piped systems using indirect heating to storage vessel and high level header tank.	Hot water for washing.	Likely to be largely limited to hidden spaces of low significance.	Openings and fixings to pipes, wire runs and accessories, bearers for vessels.	Careful placing, supervision of plumbers and electricians.
De-centralised	Gas or electrical heater sproviding instantaneous hot water on demand.	When the balance between heat and hot water of the demand and distribution prevents optimal efficiency from a single system.	Local to ancillary areas such as kitchen and toilets.	Very local and limited.	Care and supervision.
Renewable heat					
Solar thermal	Roof-mounted tubes or flat plate collectors, transmitting solar heat to a hot water cylinder below.	Energy saving.	External appearance of the building.	Likely to be detrimental to any historic building if placed in a visible location. Also requires pipework to penetrate the external envelope.	Care in positioning and detailing.
Biomass boilers	A wood burning heating stove, with fuel storage area, access for delivery and loading, mechanical handling apparatus.	Very low carbon heat.	Ancillary plant space and adjacent external envelope and curtilage.	High space demand, openings needed in external walls or floors (as well as through boiler room roof for flue) access through church curtilage for delivery vehicles.	Limited space or access may rule out this option. If feasible, great care is needed in planning and design.
Heat pumps –	Uses electricity to transfer heat from the external environment into (and/or out of) an internal space.	Heat energy saving (at the cost of some increase in electricity consumption).	Alterations to external envelope for pipework and coils.	Visual and/or physical impacts to fabric and/or archaeology, depending on type.	Careful siting, planning and control, supplemented if applicable by archaeological assessment and mitigation strategy.
air source heat pump	Wall-mounted external coil with pipe connection to interior and associated electrical equipment.	As above.	External envelope only.	Visually obtrusive on any exposed elevation.	May be acceptable eg at the rear or when hidden by shrubbery.
ground source heat pump –					
horizontal coil	Laid at shallow depth under garden or forecourt.	As above. Limited cost but for less return.	More appropriate where below-ground archaeology is expected.	Should be limited to the external envelope and hard standing or topsoil.	Limited mitigation needed, beyond physical layout, siting and detailing.
vertical coil	Requires deep boreholes typically at least 80 metres.	Higher cost but for greater return.	Potential burials or archaeological.	Potential damage and disturbance.	Desk-top archaeological assessment needed then mitigation strategy, in accordance with advice from DAC Archaeological Advisor.

Technologies	Description	Needs	Significance	Impacts	Mitigation
Energy storage					
Battery storage	In conjunction with solar panels.	To provide electricity during hours of darkness.	Likely to limit to ancillary plant areas.	Limited to cable runs and openings.	Careful planning and supervision.
Thermal energy storage	When there is a surplus of renewably generated heat, eg from CHP.	A large thermal mass eg a water pool with rocks or stones.	Major space requirement, in curtilage or perhaps crypt.	Space demand, potential excavation, openings for pipe and wire runs Unlikely to be viable in churches.	This is an exotic solution, not likely to be encountered in many churches, though examples may be seen eg at Renewable Energy Systems' Egg Farm in Kings Langley – and a Rock Store at the Saint James Centre in Gerrards Cross.  Old Egg Farm, Kings Langley

3 Notes

1. Commentary on 'generic solutions' given in this tabulation include the outputs of, among other sources, the following (but it supplements and does not replace them):
   - The *Generic Building Solutions* project, by Arup working with the Diocese of London and the Carbon Trust, as part of the Diocese's *Climate Action Programme*: see www.london.anglican.org/Shrinking-the-Footprint-Generic-Building-Solutions
   - *Greening the Spires,* a study by AECOM (formerly Faber Maunsell) working with the national Church of England Shrinking the Footprint team and the Carbon Trust: for Summary see www.shrinkingthefootprint.cofe.anglican.org/misc_lib/20.pdf
   - *Environmental Audits* (www.london.anglican.org/Shrinking-the-Footprint-Environmental-Audits), by Aardvark EM with the Diocese of London; being the second of three projects in *Climate Action Programme* (www.london.anglican.org/Shrinking-the-Footprint-Climate-Action-Programme).
2. Information and opinion here is not necessarily that of the authors of the studies referred to above, which should be consulted. It is non-specific and not to be applied on its own to any project or premises. It is intended to assist in guiding decisions on options to explore, or which may be discarded as unfeasible. It should be read in conjunction with engineers' reports, and feasibility studies for the PCC of the church concerned.
3. For more information or to discuss, contact Brian Cuthbertson, Head of Environmental Challenge, Diocese of London, brian.cuthbertson@london.anglican.org, (020) 7932 1229.

Cover thumbnails (L to R):
All Saints Harrow Weald
St Mary Abbots, Kensington
Holy Cross Greenford
All Saints Isleworth