

## **St John's Church, Waterbeach: *Proposed Churchroom heating system***

### **Heritage statement**

This *Heritage Statement* explains the proposed installation of an air-source heat pump (ASHP) and solar panels at St John's Churchroom, within the context of its setting. The statement sets out: the church's broad location; the historic significance of the church; the wider site context; the immediate site context; and finally the rationale for the installation of the proposed equipment.

#### *Broad site location*

St John's Church, Waterbeach lies on the south side of Station Road on a sharp bend. The iconic view of the church and the listed barn as seen from the north west at the top of Station Road has barely changed since the end of the 19<sup>th</sup> Century.

#### *Historic significance of the church building*

The building is Grade II\* listed and dates back to the 12<sup>th</sup> Century. Over the succeeding centuries there were many changes and now the only remaining evidence of that very early building are the most eastern arcade pillars separating the nave from the aisles. The chancel, north aisle and porch were rebuilt in several phases during the 19<sup>th</sup> Century, and a porch was also added at the north-west end incorporating the double arched doorway, which was moved from the centre of the north aisle.

#### *Wider site context*

To the north of the Church, on the opposite side of Station Road lies The Hall, a Grade II listed 17<sup>th</sup> Century house with 19<sup>th</sup> Century additions. It is bounded on Station Road by a tall yew hedge and brick wall, which partly obscures it. A restored barn which belongs to the Hall and is also Grade II listed abuts the road just round the bend where the road veers from running N/S to N/NE. To the east of the Hall at the end of the garden wall is a boarded-up and near derelict traditional 19<sup>th</sup> Century house (central doorway and two windows on either side) which has recently been purchased and has been the subject of a recent planning application (21/03152/FUL) which was approved on 31<sup>st</sup> August 2021.

To the east of the church is St John's Close which is at right angles to Station Road and consists of of small row of houses (one pair semi-detached and a terrace of three) built in the period 1970-71.

On the south side of the church is a car park. This car park's level is slightly (about 0.5m) below that of the Churchyard. It was purchased by the Church 1982 when the land which had been the farmyard of Hall Farm became redundant. Beyond it is a large field under which lies the remains of Waterbeach Abbey; there is an interpretation board on the car park fence overlooking the field describing the site. That area is a Scheduled Ancient Monument.

To the west of the Church is a track which runs down to the car park. Opposite is a double-fronted house built in the 1980s, with a large discreetly converted barn to the south. Next door is a traditional small 19<sup>th</sup> Century house and then a house which was originally a pair of 19<sup>th</sup> Century cottages which have been converted to a single house with a late 20<sup>th</sup> Century extension. Station Road then continues to the north east with another late 20<sup>th</sup> Century house and two terraces of 19<sup>th</sup> Century houses on the church side and the wall of the Hall on the opposite side of the road.

#### *Immediate site context*

The Church building is surrounded by a small well-maintained Churchyard which is now closed for

burials. There is a small area where ashes are now buried. The Churchyard is bounded by a brick wall of which the section along Station Rd was rebuilt in 1998. The Church is entered through the north porch from a short path leading from the gate on Station Road slightly to the north-east of the Church. The path branches with the west branch running parallel to the west wall of the Churchyard. The Churchroom is a modern single storey structure located within the Churchyard and to the south of the church connected by means of an entrance lobby that gives access to the south door of the Church and the Churchroom itself.

### *Development history*

The first part of the Churchroom consisting of an entrance lobby, toilets, a kitchen and hall was opened in 1977. The roof consisted of a flat roof finished in “burnt-on” bitumen material and gravel and a pitch roof over the main hall with gables facing north and south respectively. The hall was lengthened in the mid-1980s to create an additional space, but keeping with the simple roof structure. Finally a new kitchen and office were constructed and opened in early 2001. The roof structure was modified to include east-west facing gables over the new rooms.

A natural gas fuelled “combi” boiler was installed in 2001 and supplied a wet radiator system for the Churchroom and its various spaces. That boiler is now life-expired and St John’s Parochial Church Council (PCC) wishes to replace it with a system that permits a substantial move to “zero carbon”. The preferred solution is an air-source heat pump (ASHP) located in the kitchen area. Solar panels located on the south facing gables of the roof will support in part the electrical power requirements.

Our reasoning for the new energy system:

The **purpose** is to provide heating for the Churchroom. St John’s PCC has considered the options. It is not feasible to continue with the current boiler. A failure in the coming winter could be particularly disruptive to community activity that is only just recovering from successive lock-downs. Installing a new boiler runs against the adopted church policy of reducing carbon emissions. ASHP allows use of renewable electricity generated on-site and purchased under a green tariff. The heat loss of the building at 12.5 kW (winter case). The ASHP required to compensate this loss (rated 14kW) is of a size that sits comfortably with the Churchroom design.

The choice of **location** is largely dictated by the structure of the Churchroom building. By locating the ASHP where the current boiler is installed eases connection to the existing pipework and minimises disruption to the other spaces. The external elements are placed outside and in a corner of the churchyard which can be readily screened off if necessary. The solar panels need to be located on the south facing roof areas. Our choice of panels, flush with the tiles minimises the visual impact. The closest public space that has sight of the Churchroom roof is Waterbeach station which we believe is too far distant for the changed roof pattern to be noticeable.

The impact on the **appearance** of the Church is limited to the external parts of the ASHP which may be concealed behind a screen or trellis. The solar panels simply give the appearance of a slight change in roof colour. None of the classic church views (from Station Road or the west path) are affected by the proposed changes. The current roof colour does vary substantially according to the age of the tiles. The proposed work would restore a uniform blue-black colour to all the south facing gables.

The **maintenance** requirements are limited to annual checks on the whole heating system.