

Kennet & Avon Canal Trust

Pumphouse Cottage : Crofton Beam Engines

Application for Listed Building Consent for external render removal

Background

Pumphouse Cottage forms part of the Grade 1 listed group of buildings which includes Crofton Beam Engines. The beam engines were constructed to supply the Kennet & Avon Canal with water at its summit level, using Wilton Water as a reservoir, since the canal is a 'watershed' canal in which water flows west towards the River Avon which it joins in Bath, and eastward towards the River Kennet. The engine house was begun towards the end of the 18th century and two Boulton & Watt steam beam engines were installed, one of which was ready for use by 1807. The canal opened in 1810. They were replaced with newer models in 1812 and 1845, and now they are the oldest steam beam engines in the world still able to carry out their original function *in situ*. The canal's profitability declined after the construction of the Great Western Railway and eventual purchase in 1845 by the GWR, leading to reduced maintenance and a marked decline in traffic. The canal's closure in 1954 appeared to render the beam engines redundant, and at one point demolition was proposed, but purchase by the Kennet & Avon Canal Trust in 1968 ensured their restoration and survival. They are regularly steamed throughout the summer months and have become a nationally popular attraction.

Several buildings were constructed to provide ancillary functions needed for the smooth running of the beam engines, including two boiler houses, a smithy and two cottages for the full-time engineer and his assistant. The latter are known as Canal Cottage and Pumphouse Cottage respectively and both adjoin the Burbage to Bedwyn road. Canal Cottage was substantially restored, it would seem, in the 1930s and is let to tenants at present. Pumphouse Cottage (see right) is currently vacant, having been occupied by a resident site manager until recently. It would appear both would have been constructed simultaneously with the engine house in English bond red brick with simple timber joinery.



Recent history

Historic photographs of Pumphouse Cottage are incomplete but show that whereas the south and west elevations had been rendered by 1930, with simulated stone joint markings, the other elevations continued to display their original brickwork. The above photograph is believed to have been taken towards the end of the 1920s and shows Ethel Giles, wife of the engineman, in the doorway. It also shows the ground floor windows as having been side-

Kennet & Avon Canal Trust

hung casements, whereas the first floor windows appear to be tripartite sash windows. The doorway in the western elevation once gave access to the engineman's office via an external staircase. The east elevation is less clearly depicted, but in the late 1940s view (see right), from across the launder basin, it is clear the east gable of the cottage and its rear wing are both still displaying English bond brickwork. It is also clear the rear wing is roofed in either pantiles or double Roman clay tiles, whereas the main roof in the 1930 view appears to have been roofed in plain tiles (but they do not appear to be in very good order so may have been renewed by the late 1940s).



By the time of the purchase of the site by the Kennet & Avon Canal Trust, it would appear only the rear wing remained un-rendered, and as can be seen below, the brickwork was by now in poor condition with some spalling brickwork and also some unsympathetic pointing. During the 1970s various repairs were done as a 'holding operation' to allow use of the cottage, but a more substantial repair programme was taken on around 2000 which included the replacement of the rear wing with a new cavity wall structure which was finished in render to match the adjoining north wall of the cottage. The consequence of this sequence of repairs and alterations has been a building now finished in a number of different materials. However, the background to the current proposal is the deteriorating condition of the south and west wall external render.



Current situation

Since the Canal Trust's ownership, the west wall of the cottage, and to some extent also the south wall, have suffered from regular problems with penetrating damp. These elevations are on the prevailing side which often receives driving rain with considerable wind force. Whilst it seems likely this may be the reason they were rendered, the gradual replacement of the initial lime render with a higher proportion of cement-based render seems to have

Kennet & Avon Canal Trust

created new problems by trapping wind-driven moisture beneath this impervious layer and preventing effective drying-out. Since 2021 a number of trial areas of removal have been undertaken to establish the ease of removal of the render and the condition of the 18th century brickwork beneath. The first such trial, to right, was undertaken near the west end of the south elevation at the lower level, within what may be the initial lime render covering the ground floor part of the elevation and shows the brickwork in good order with more-or-less intact pointing.



Similar trials were undertaken in areas covered in cement-based render, and whilst the technique needed to remove it was different, the condition was found to be generally similar provided great care was taken in removal to avoid surface damage to the bricks. This suggests that if the render were to be removed, either to display the original brickwork or to allow re-rendering with a more sympathetic lime-based mix, it would be possible to achieve this with little or no damage to the underlying brickwork.

In the years since 2021, the condition of the render has continued to deteriorate and we now need to decide whether to attempt to re-render it to retain the post-1930 appearance or whether this offers an opportunity to return the cottage's appearance to that which it would have been in 1810. In view of the continuing deterioration of (in particular) the lower areas of render and public safety issues around falling areas of loose render, the Trust's volunteers have now carried out the removal of the lower part of the render to the south elevation, as can here be seen to the right. Broadly, the brickwork condition is



good, particularly on the upper part of the ground floor section, and, to our surprise, the door and window arches do seem to be intact. If this condition were to be replicated on the west elevation and the upper parts of the two elevations, it might be feasible to consider removing the render to return these two elevations to their 1810 appearance. Some doubt remains about the upper window-head treatment, since the eaves was altered in the 1970s, it is

Kennet & Avon Canal Trust

thought, but otherwise it may be reasonable to assume the elevations might be stylistically reunited with the engine house.

Request for Listed Building Consent

Since Pumphouse Cottage forms part of the curtilage of the site of Crofton Beam Engines, we assume that it should be treated as listed at Grade 1, even though many changes have occurred during the 20th century. The Trust is therefore applying for Listed Building Consent for the removal of the render to the south and west elevations, followed by any required pointing of the brickwork revealed and renewal of any frost-damaged bricks with matching salvaged bricks. The Trust has explored the feasibility and cost of re-applying the render in a more sympathetic lime-based mix in the event that Officers feel that the post-1930 appearance is now sufficiently established to be considered the accepted aesthetic and will not grant Listed Building Consent. However, we very much hope that a decision can be made promptly since both pointing or re-rendering using lime-based mortars needs to be done during the summer months for optimal curing.

We do believe this is an unique opportunity (since the current render is faulty) to return the appearance to that envisaged by John Rennie, the canal's engineer, when the cottages were conceived as part of the engine house group and therefore hope the Council will support the Trust's efforts to recreate a more authentic atmosphere around its historic estate.

Rob Dunton RIBA

Kennet & Avon Canal Trust Heritage Trustee