

Design and access statement

Context

The lime kiln and flint furnaces date from the late 18th century and are grade 2 listed. They are adjacent to the Caldon Canal. The canal forms part of the SMDC conservation area (Ref 130). The canal was built in 1773 to improve links between the flint and colour grinding mills concentrated along the Churnet Valley and the burgeoning North Staffordshire Pottery industry that the mills served.

The lime kiln was originally built to take advantage of the drop of several metres from the level of the canal to the mill yard and was probably built for agricultural purposes shortly after the canal was cut. The two flint calcining kilns must post date the lime kilns by a few years. They served the water mills from the time of their conversion to flint and colour grinding, up until the early 20th century.

Design Principals and Concept

We plan to construct three buttresses on the east side of the kilns. The two calcining kilns were built up against the lime kiln with their draught holes facing north. Steps ascend the kilns on the east side and it is here, where the kilns join together, that bulging has occurred in the stonework. To protect and conserve the kilns, Couch Engineering propose that three buttresses are built against the bulging walls. These would be built of dressed stone to match the existing stonework. Two buttresses of canted stone already support the north face of the kilns.

Use

The kilns are an integral part of the site and enable the history of flint milling to be told. At present, due to their unstable condition, the area is currently fenced off for safety.

Layout and Scale

See drawing A and B. The buttresses will be approximately 2600mm high with a base of 640mm in width. They will sit on a 250mm reinforced concrete raft slab, which in turn will be sitting on 250mm thick well compacted 8F2 hardcore.

Appearance and materials

The buttresses will be built of dressed sandstone bonded with M4 mortar. The design is consistent with the surrounding buildings and kilns. They will match the existing two canted stone buttresses on the north side of the kilns. The solution to protect and conserve the kilns may well of been one that former millers came up with to prevent them from falling down. Matching the buttresses to the ones on the north side will enhance the appearance of the kilns, making them more symmetrical, but all other earlier elements of their development – the lime kiln and the steps will still be visible.

Landscaping

There will be no changes to the landscape as such. The site will benefit from no longer being fenced off by Harris fencing and shored up by Acrow props.

Access

The buttresses will not impede the site's access. They will enable the public to safely examine the kilns and better appreciate their history. No new access points will be created, the buttresses serve only to preserve and enhance the flint kilns.