

DESIGN AND ACCESS STATEMENT

FOR

REPAIRS OF BEARING TO FIRST FLOOR BEAM AT GRADE II LISTED PUBLIC HOUSE:
THE PETERBOROUGH ARMS, DAUNTSEY LOCK, WILTSHIRE, SN15 4HD

D&A-4648



INTRODUCTION

The Wiltshire and Berkshire Canal Trust commissioned MLDE to review the details of the bearing of a first floor timber floor beam at the Peterborough Arms, Dauntsey Lock, Wiltshire.

Long term water ingress above the ground floor window, the lintel above which supports the floor beam in question, had maintained the end of the floor beam in a condition that allowed significant rot to take place, compromising the support of the end of the beam.

The Canal and River Trust Engaged local volunteers to effect a temporary repair (implemented after 2015), in which a steel bracket was installed from the first floor above.

MLDE were commissioned to review the temporary repair and advise if it represented a long-term solution. MLDE have concluded that the as installed bracket arrangement is not adequate, and a more robust solution is required.

MLDE have designed a robust bracket hanger to be installed to reinstate robust long-term support to the beam end. The details are illustrated in MLDE document 4648-SCHEME-01.

SIGNIFICANCE OF THE BUILDING, BACKGROUND AND EXISTING SITUATION

The Peterborough Arms Inn is a Grade II Listed Building, listed under Historic England List Entry Number 1300946.

Historic England's Listing Entry for this Historic Asset states:

'DAUNTSEY DAUNTSEY LOCK ST 98 SE (east side) 3/192 The Peterborough Arms Inn II Inn, early C19, roughcast over brick with slate low-pitched roof, stone slate front verge, and end stacks. Three storeys, three- window range. Upper floors have paired 16-pane sashes, small to second floor, ground floor has triple casement each side. Central two-storey porch bay with coped shouldered gable, first floor paired 12-pane sashes, sill-course and ground floor double door. Pump attached to front wall, to right. Painted brick end walls, lean-to rear and south end single-storey rubble stone range with three cambered-head casement pairs.'

The Grade II Listed Public House closed in 2015, and was bought by the Wiltshire and Berkshire Canal Trust, who restored the property over a four year period using volunteers.

The property functions as a Public House, community centre and base for the Canal Trust.

The first floor beam to which the application relates bears onto a timber lintel above the left hand ground floor window to the front south west elevation. It is understood that water was able to penetrate above the window for a prolonged period of time. The embedded

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bearing of the timber beam was maintained at a moisture content well in excess of 20%, which has allowed decay of the end of the timber to take place over a long period.

MLDE have locally probed from internally around the beam bearing. A small implement approximately 100mm long can be inserted under the beam where the beam should bear onto the lintel, and can be rotated around, demonstrating the presence of a large void where the end of the timber beam has effectively completely disintegrated. Without intervention, the beam would have collapsed, and the first floor would have dropped.

The existing timber lintel has been assessed, and whilst the top face of the lintel does feel like it has been very locally affected by the water ingress, it is believed that the lintel is in adequate condition to remain in place.

During refurbishment works, the Trust and their volunteers have recognised the precarious nature of the beam, and have implemented a repair. The existing arrangement is illustrated in MLDE document 4648-SCHEME-01. MLDE were asked to review the detail as installed by others, and MLDE have assessed the currently installed bracket, and found it to be deficient, as the beam hangs from a bracket applied to the top face, and relies on the bending capacity of an extended flat plate, which has inadequate strength and stiffness. The arrangement is also reliant on the effectiveness of the fixings between the bracket and the beam, which site investigation has revealed are poorly installed. A local inappropriate concrete infill has also been installed locally above the lintel.

A revised robust amendment to the bearing of the beam is required.

MLDE have discounted a traditional repair to the end of the timber beam, whereby the existing beam would be cut back a little, and a new section of appropriate timber be scarfed onto the end to reinstate sound timber at the bearing. This approach has been discounted due to the concrete that has been installed historically within the bearing zone. Removal of the concrete would likely result in further damage to the historic fabric.

MLDE therefore propose that a fabricated steel hanger bracket is installed, that can be connected to a steel channel laid over the lintel zone. The proposed hanger requires as little disturbance of the historic fabric as possible, and the proposed steel channel will spread the load from the beam over the lintel, relieving the bending capacity required of the existing lintel below. The proposed bracket arrangement is illustrated within MLDE document 4648-SCHEME-01.

HERITAGE STATEMENT AND CONCLUSION

It has been found that a past repair made to the bearing of a degraded timber first floor beam bearing is inadequate.

It is proposed to provide a robust support to the end of the timber beam with a fabricated steel hanger bracket, and steel spreader member over the existing supporting lintel. This approach is thought to be the least intrusive repair, resulting in the least impact on the Historic fabric.

It is considered that the proposed repairs would preserve and enhance the Grade II Listed structure in line with the guidance set in the National Planning Policy Framework (NPPF). It is hoped that the proposals will gain the Local Planning Authority's approval.