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FAO Lia Jackson

Rochdale Borough Council
Floor 2
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Smith Street
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28th September 2022

Dear Lia,

RE: 2215.52 Edgar Wood Trough

1. Instructions

The following letter report has been prepared following a survey instructed by Lia Jackson on behalf of Rochdale Borough Council to assess the stability of a disused fountain water trough feature/landmark that has recently suffered from displaced stone units. Instructions were received during September 2022 and a site visit was undertaken by Brendan Howarth (Chartered Engineer) of Bradshaw Gass and Hope on the 6th September 2022. The structure is located at the Junction of Langley Road and Heywood Old Road in Middleton, OL10 2QL, adjacent to the White Hart Public House.

This report has been prepared for the sole benefit, use, and information of the client. The liability of Bradshaw, Gass and Hope LLP with respect to the information contained in the report will not extend to any third party.

The structural inspection undertaken by BGH was purely visual, and not intrusive, with no stones or fittings removed, and no design calculations or appraisal of the load bearing capacity of any of the structure being undertaken.

All parts of the structure that were covered, unexposed or inaccessible were not inspected, and therefore we are unable to report that such parts are free from any defects.

The inspection is purely concerned with the observable external aspect of the Trough structure and no other property or part of the structure was inspected as part of the works.

We confirm we found the following:

2. Background

The structure is located at OS Grid Reference SD 85137 07742



Location Plan

A check on the historic England website notes the structure is Grade II listed, however it is understood the structure has been relocated from its original position within the last 50 years and as such this status is currently under review.

A check on the coal Authority website suggests that the structure is on the coal field.

The British Geological survey maps indicates the surface strata comprises stiff clay - over Pennine Lower Coal Measures formation, mudstone, siltstone and sandstone.

The inspection was undertaken on afternoon of the 6th September 2022. The weather conditions were clear, cool and dry.

This report has been commissioned following the observation of damaged and displaced stone units, it is also understood the structure has been struck by a large vehicle recently.

There were no reports of maintenance being carried out on the structure recently.

3. Observations



Elevation on Fountain from Heywood Old Road

The structure is understood to be a former fountain and horse water trough. It was designed by the Architect Edgar Wood who was an Architect of note and practised at the turn of the 20th century. A stone carving to the front elevation indicates a date of construction of 1889.

The structure is formed from a central stone masonry pillar, with 2 number half arches which frame in to either side. (Please see elevation photo above).

The central pillar especially displays heavy damage and displacement to the stone units. The stone base plinth has lost a portion of its section at the corners in addition to a number of severe cracks (See Photographs Below).





The fillet stone above the plinth shows a significant displacement of approximately 50mm. (Refer to Photographs below)



The stone shaft above does not display significant displacement of the stone units. However the pillar displays a lean of approximately 2° towards Heywood old road (Refer to Photograph below).



The stone half arches to either side of the pillar display chips to their edges, displacement of units and also a similar lean to the main pillar (see photograph below).





4. Discussion and Recommendations.

The fountain structure is in a very poor condition.

The current position of the structure being in close proximity to a roadway and main junction presents a high risk of impacts from vehicles. From the condition of the existing structure it is our opinion the fountain has been struck by vehicles a number of times.

The lean of the structure towards Heywood Road is concerning as this is beyond what would be considered acceptable or safe.

The most likely cause of this lean is the damage to the base plinth, however it may be a symptom of an issue with the foundation.

The most severe damage is shown to the plinth of the stone pillar and we believe this has failed. By its heavily loaded nature this is the most critical element of the structure. We would suggest it is only the tying nature of the 2 stone arches which has prevented collapse of the pillar.

A typical form of construction of a stone pillar of this type would have a number of internal iron tie bars concealed within the bed joints of the units. Although no intrusive investigation has been carried out. The severe displacement of the fillet stone above the plinth would suggest these tie bars have sheared, possibly due to vehicle impact.

We would also note that stone structures with internal iron work are typically vulnerable to expansion of the iron work causing further damage through rusting. Cracks and opening up of bed joints allow water ingress into to the internal ties and thereby allow deterioration to continue. Rust typically expands 7 to 10 times the size of the parent metal, this can be a significant issue to historic structures.

It is our opinion a severe winter or further vehicle impact will likely cause the structure to collapse. We would recommend remedial works are carried out to the fountain as soon as possible. With a specialist stone mason carrying out the repairs to the base plinth.

Due to listed status of the building, it is recommended that Historic England and the local conservation officer are consulted before any works go ahead.

We would recommend railings or bollards be put in place to protect the structure from traffic impact. Alternatively the fountain be relocated to lower risk position.

I trust you find the above satisfactory, please do not hesitate to contact Bradshaw Gass and Hope LLP should you require any further information.

Report prepared by

Brendan Howarth BEng (Hons) CEng MIStructE
On behalf of Bradshaw Gass & Hope LLP