

PRIVATE & CONFIDENTIAL

Structural Condition Survey For Existing Rear Retaining Wall at Nos 85, 87 and 89 Roehampton Rise Barnsley

Prepared on behalf of
Barnsley Metropolitan Borough Council
Date of Survey –15th March 2017

Date of Inspection:

Wednesday 15th March 2017

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Report Issue and Date

Issued 28.03.2017

S1 Introduction

NPS Barnsley Ltd was instructed to carry out a Condition Survey, in order to advise on the condition of the existing boundary retaining wall to three properties at Nos 85, 87 and 89 Roehampton Rise, Barnsley, LS71 5BW.

The subject premises were inspected on 15th March 2017 when the weather was mild, relatively dry and slightly overcast.

Our inspection comprised a visual inspection only of the condition of the existing rear boundary wall. All accessible external parts of the retaining wall to the three properties were surveyed. No intrusive survey of the retaining wall was conducted on this day.

For NPS Barnsley Limited, Thomas Matapure (Structural Engineer) and Dan Goulding (Building Surveyor) were present on this occasion.

S2 Property Description

<u>Date of Construction:</u>	No record of exact date.
<u>Property type:</u>	Rear boundary retaining wall to 3No-Residential Properties.
<u>Size:</u>	Not measured
<u>External Fabric:</u>	The retaining wall is 400 wide at the top retaining at least 1.5m of ground on the woodland side of the retaining wall which stretches from the back of the properties. The wall is dry wall constructed using natural stone. There is no mortar bedding to the joints. The wall was constructed with a lean-to into the retained earth. At the top of the retaining wall is natural heavy stone coping.

S3 Inspection and Observations

There is a lot of vegetation growth at the top of the retaining wall as well as fully grown trees as close as 1.5m from the face of the wall. In some places the trees have been cut down.

The top of the wall is meandering in and out of horizontal and vertical alignment. There is significant bulging to the face of the wall. It was noted that the bulging is worse in the proximity of the trees. This is also evident in the locations where some trees have been cut down.

There is no movement to the ground in front of the wall. However there is a depression in the ground at the top of the wall on the retained side. Some of the joints to the wall have opened up with some stone blocks dislodging from the wall at some locations.

S4 Conclusions and Recommendations

The following conclusions were made:

- I. The bulging is worst in the locations of the existing large tress or former positions of the trees cut down. The close proximity of the trees to the retaining wall is causing significant thrust onto the walls most likely from roots pushing against the wall. This thrust will continue to increase as the trees and the roots continue to grow bigger. At some point this increasing force will eventually cause the wall to fail and collapse.
- II. There is also the influence of the overburden pressure (surcharge) caused by vegetation growth in the woodland. There is lack of maintenance and care.
- III. We recommend that the wall be taken down carefully and rebuilt to the original alignment using the existing stones. We also recommend that the joints to the exposed face should have mortar to increase the strength of the wall.

S5 Limitations

S5.1 CLOSE PROXIMITY OF EXISTING TRESS

The close proximity of existing trees to the wall will hinder the rebuilding of the retaining wall. Any remedial works may damage or kill the root system to these trees. All remedial works to be undertaken must be to the approval and advice of an arboriculturist.

S5.2 SCOPE OF INSPECTION

All comments relating to the condition of the retaining walls have been made following interpretation from a purely visual inspection and from photographs of the retaining wall taken on site.

No intrusive exploratory investigations were conducted.

The condition of concealed and inaccessible external elements and existing foundations where not surveyed at this instance and do not form part of this structural survey report.

S6 Appendix –Photographic Schedule



Photo 1 – Left Hand Side View towards No 85 from No 87 Showing Bulging and Misalignment to wall



Photo 2 – View from No 87 Showing Bulging, Misalignment to wall and Masonry Dislodging from Wall



Photo 3 – View from No 87 Showing Bulging, Misalignment to wall, and close Proximity of Trees to the Wall



Photo 4 – Right Hand Side View from No 87 towards No 89 Showing Bulging, Misalignment to wall, and close Proximity of Trees to the Wall