GROUND STABILITY REPORT

ON

PROPERTY KNOWN AS

HIGHWATER
SHUTTA ROAD, LOOE PL13 1HW

FOR

MR AND MRS L TANSLEY

MAY 2017

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1.0 INTRODUCTION

1.1	Property	Highwater, Shutta Road Looe , Cornwall PL13 1HW
1.2	Brief	To inspect and report on the stability of site at the above address
1.3	Inspection	The site was inspected M D Foulkes PhD, CEng, MICE on Monday, 24th July 2017.

2.0 RELEVANT INFORMATION

2.1 The property is built on a site cut into sloping ground elevated to the east of Looe River. It is bordered to the west by Shutta Road and to east by Elm Tree road. The entrance to the site is approximately 29 meters above Ordnance Datum (Mean sea level).

The property comprises a two storey individual bespoke residence completed about five years ago. The structural aspects of the project were design by Chartered Engineers Faraj Consulting.

2.2 The site was cut out over ten years ago although the existing property was built more recently.

The site is defended on its west boundary by the stone retaining walls bordering Shutta Road as shown in enclosed Photographs 3 and 4. These walls comprise mass stone structures which were built in the latter decade of the 19th century. Above the walls the ground slopes at its original natural repose as shown in Photograph 5.

The entrance to the site is grade up from Shutta Road as shown in Photograph 6. The ground is cut almost vertically to the left hand side of the

drive and restrained by stone filled gabion baskets.

The residential property is founded on conventional concrete footings cast on to the shale bedrock. The right hand side of the garage (as shown in Photograph 6) is founded on piles due to the depth of soil overburden to the front of the site.

The flank walls to the property are defended by the block retaining walls shown in Photograph 7.

The high ground to the rear of the property has been excavated to form a cutting which stands at approximately 20 degrees from the vertical as shown in Photograph 1. The cutting is approximately 4 meters in height and its toe is approximately 4 meters from the building.

The strata to the cut face, shown in Photograph 2, indicates that it comprises fractured shale laid in bedding planes generally inclined downwards to towards the south ie perpendicular to the direction of the cut face.

Above the cutting to the rear of the site the original ground extends up at its original angle of repose (approximately 1 vertical to 2 horizontal) to its eastern boundary with Elm Tree Road as shown in Photograph 8. This road is a private single lane graveled track which serves a number of residential properties. The road has no positive drainage and rain water drains naturally through the underlying strata.

3.0 OBSERVATIONS

3.1 As part of this survey the retaining structures and cuttings described above where inspected as the comments below :-

3.2 The stonework retaining walls to the west of the site, Photographs 3 and 4) are free of cracks and do not exhibit any indications of structural duress. The face of the stonework is reasonably pointed with a lime base mortar. They do not appear to suffer from excessive water seepage through or around the masonry .

3.3 The ground above the stone walls, Photograph 5 , is firm and has not under gone any slippage.

3.4 The alignment of the stone work restrained within the gabion cages to the driveway is uniform as shown in Photograph 6. No bulging or global movement was noted.

3.5 The property itself was inspected and found to be free of any indications of structural movement.

3.6 The retaining walls surrounding the property, Photograph 7, are straight and true.

3.7 The cutting to the rear of the site, Photograph 1, has remained stable since it was cut 10 years ago.

The rock face of the cutting has weathered over the years but its erosion has been limited to the fracture of localized splinters of rock. The face of the cutting has been restrained by the placing of mesh over the exposed strata which has encouraged the growth of vegetation.

There is no indications of slippage or global movement associated with the cutting

The face of the cutting was damp on the day of the inspection but there are no indications of the running water or springs emanating out of the rock .

3.8 The boundary formed between the site and Elm Tree Road is naturally buttressed by approximately 15 meters length of original ground between the top of the cutting and the boundary fence shown in Photograph 8. This buttressing provides a far greater stability to this site when compared to other sites were land owners have formed vertical un restrained cuttings to the lower side of the road.

Although Elm Tree Road is not paved and relies on natural drainage there is no evidence to suggest that ground water seepage is destabilizing the site.

3.9 The ground stability associated with this site have been inspected and it is concluded that it is deemed to be sound with no indications of duress in any of the elements described above.

Photograph 1

Cutting into the original ground
to the rear of the property

Photograph 2

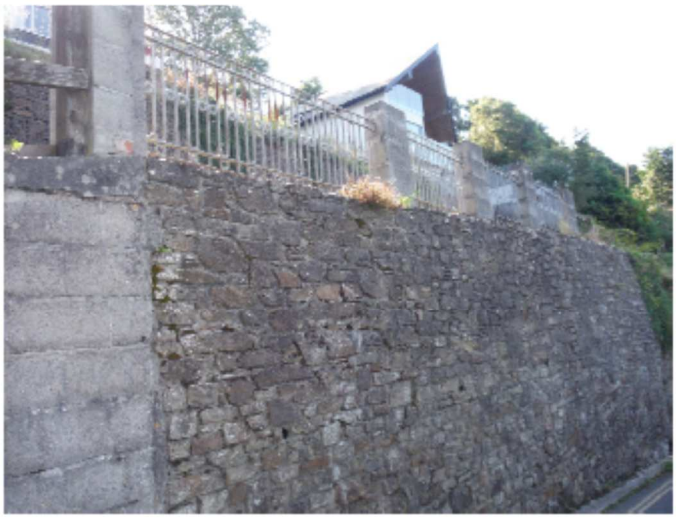
Underlying strata
comprising fractured shale

Mesh has been placed over
the cut face of the strata to
encourgage vegetation and
restrain small fragements
from the face .

Photograph 3

Shutta Road

Stone retaining wall restraining
the drive



Photograph 4

Shutta Road

Lower stone retaining wall restraining the site below the property

Photograph 5

Original ground to the front of the property above the retaining wall shown in Photograph 4 above

Photograph 6

Shutta Road

Drive way up from Shutta Road

Drive way and neighbouring site restrained by stone filled gabions

Photograph 7

Retaining wall to the flank wall of the property

Photograph 8

Elm Tree Road

Gravelled road forming the east boundary of the site