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REPORT ON

INSPECTION OF LANDSLIP
AT
HAZELWOOD

DECEMBER 2013

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1.0 BACKGROUND

- 1.1 At the request of Mr I Bowden of Belfast City Council our Mr Brian Laverty visited the above site with Mr Bowden on 13 November 2013. The purpose of the visit was to inspect an area of path which had been the subject of a recent landslip.
- 1.2 The area inspected lies to the north of the Belfast Zoo car park and consists of a pathway which has been constructed along the escarpment of the Cavehill which lies to the west of the Belfast Zoo. See Figure 1
- 1.3 The section of path in question is approximately 2m wide and winds its way through a heavily wooded slope to the west of zoo above the lion enclosures. It has been constructed part way up the slope.
- 1.4 At the site in question there is an existing steep rock face which is generally covered with a thin mantle of overburden material. This overburden is approximately 0.5 to 0.75 m deep and is heavily overgrown with trees and undergrowth.
- 1.5 The area where the recent slip occurred has been cleared of debris and the path is clear and the rock face is exposed, see attached photographs nos 1-5.
- 1.6 Discussions with Mr Bowden indicated that similar slippages have occurred along the length of the car park and evidence of these previous slips is clear on the ground. The Council having constructed gabion walls at the bottom of the slope at these previous slips in order to prevent slip debris from covering the roads and car park.

2.0 DISCUSSION

- 2.1 The slip is not a true slip in the sense of the word rather, as described above; it is the slippage of the overburden material off the very steep rock face. The slips are occurring at various locations and at infrequent intervals and are due to the instability of the overburden material on the steep rock face of the escarpment. The rock face itself appears to be stable so the problem is with the overburden. Due to the extent of the overburden material and the heavy undergrowth it would be impractical to remove it in order to stabilise the slope above the path. The slips will, in our view, continue to occur and are more likely to occur during or after very wet periods or snowfall. These events increasing the weight of the overburden and triggering the slippage of the overburden down the rock face.

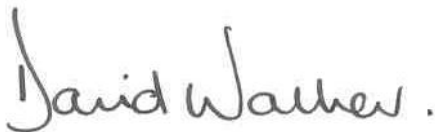
3.0 RECOMMENDATIONS

3.1 As noted above it is practically impossible to remove the overburden and in our view the slips will continue to occur at infrequent intervals. There is therefore a risk that path users could be on the area of the path subject to a slippage at the time of a slip and could suffer injury or, in an extreme event, death during such a slip. The likelihood of this happening is small but such a risk exists and we therefore must bring it to your attention.

3.2 There are a number of options for dealing with the problem and these are:

- 1 This section of path could be closed and the users rerouted. A rerouting of the path would need to be thoroughly investigated and assessed for safety.
- 2 A section of suitable fence could be constructed on the upper side of the path to retain slip debris. The fence would need to be sufficiently robust to retain the debris.
- 3 The minimum option would be to erect warning signs along this section of path to warn users of the potential risks associated with using this section of path.

3.3 We would also recommend that the Council take legal advice as to the risks associated with allowing this section of path to continue to be used.

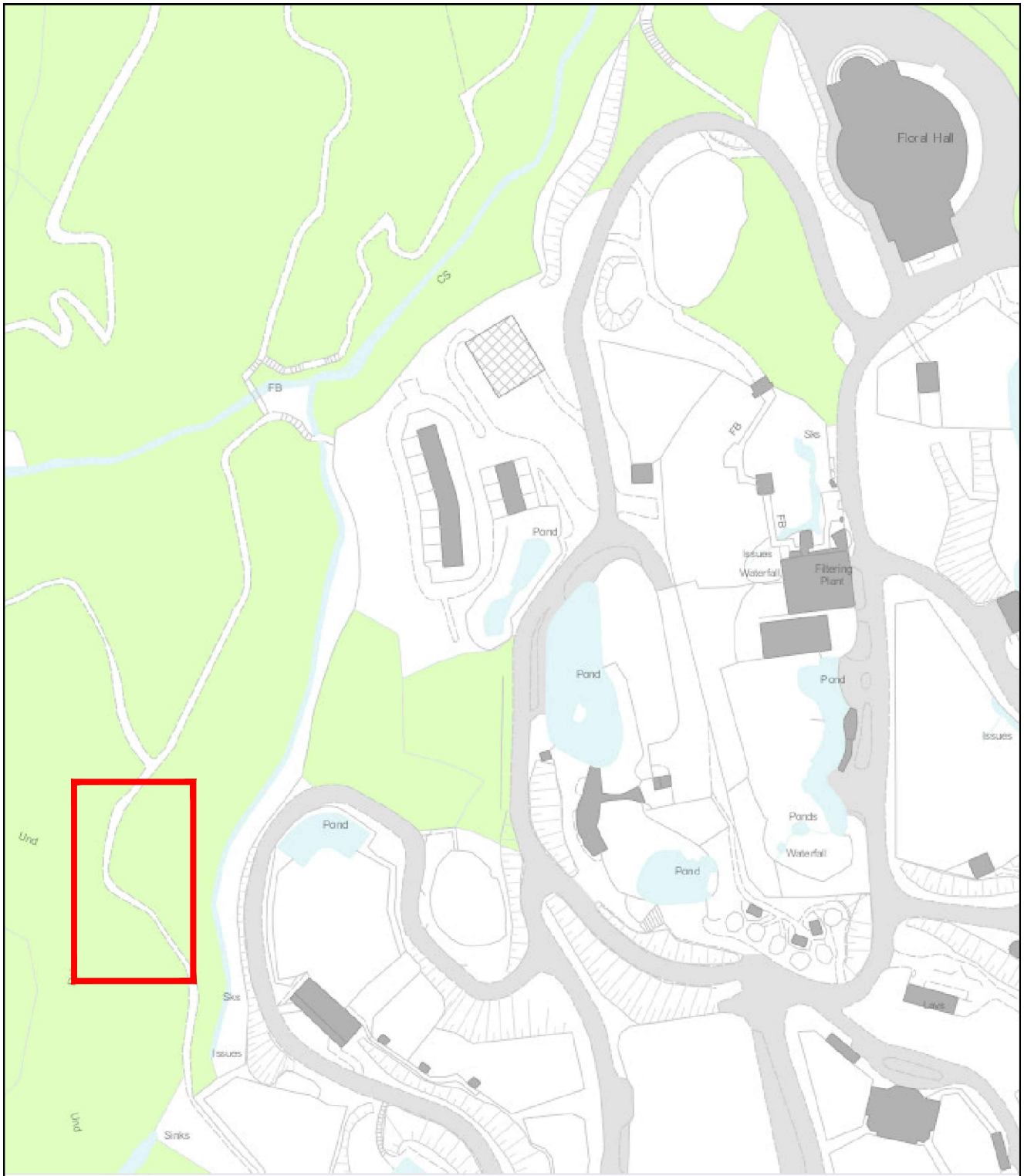


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Brian Laverty
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Appendix 1
Location Plan



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Land Slip at Hazelwood

Location Plan

Scale: NTS.	Drawn: HJD Date: Feb 2014	Checked: RBL Date:	Approved: Date:	Drawing Number: 131163/Figure 1	Revision:
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Appendix 2
Photographs



Photograph 1



Photograph 2



Photograph 3



Photograph 4



Photograph 5