ARGYLL & BUTE COUNCIL

DEVELOPMENT & INFRASTRUCTURE SERVICES

OBAN LORN AND THE ISLES AREA COMMITTEE

WEDNESDAY 12 DECEMBER 2012

BOUNDARY WALL, DUNGALLAN PARK, OBAN.

1. SUMMARY

1.1 Following a structural survey report submitted in March 2004, a further report was to be submitted to include advice taken from the Planning Service and Historic Scotland in regard to fully-costed options for upgrade or removal of the wall, within the context of future options for the development of Dungallan Park and including risk assessment information on the balustrades.

2. RECOMMENDATIONS

2.1 That Members agree that option 4 in 4.2 below should be followed up and that Roads and Amenity Services should follow corporate processes to secure funding.

2.2 That Members agree that officers should meet with Historic Scotland and Planning to establish that approval can be obtained.

3. DETAILS

3.1 The retaining walls were inspected by Roads and Amenity Services on 25th May 2012.

3.2 General Description

Random rubble masonry retaining walls up to 2m retained height topped with decorative pedestrian parapets. The parapets comprise sections of solid concrete blockwork alternating with sections of concrete balustrade. The parapet appears to be of a newer construction than the random rubble retaining wall. The structure has a Category C listing.

3.3 General Observations

3.3.1 The random rubble retaining wall has a significant tilt in some areas, particularly at the southern end of the south wall. The concrete parapet and balustrades are can potentially be pushed over requiring an area of the park to be fenced off in the interest of safety.

3.3.2 The north random rubble retaining wall is in significantly better condition than the south wall.

3.3.1 Apart from cutting-back the vegetation, none of the remedial work recommended in the original report of March 2004 appears to have been undertaken.

3.3.2 More scrub clearance and some re-pointing is required.

3.3.3 The tilt of the retaining structures appears to be no worse than observed at the March 2004 inspection.

3.4 Specific Observations

3.4.1 Measurements of the tilt on the random rubble retaining wall were taken at the worst areas. Although the wall was inspected along its full length, vegetation growth restricted the observations at some locations.

3.4.2 As in the March 2004 report, the former public convenience was adopted as the datum but the exact locations of the original measurements could not be ascertained. On the Oban side, chainages increase towards Oban town centre. On the Kilbowie side, chainages increase towards Kilbowie.

3.4.3 Relevant photographs can be found in Appendix A

3.4.4 Observations: South Wall (Kilbowie side)

Chainage (metres)	**Retained Height (metres)**	**Comments**	**Risk**
0	0	Parapet Displaced (25mm max.)	Low
0 - 18		Some distortion in parapet (slight).	Low
18	0.9	Settlement. Pilaster moved slightly.	Medium
18 - 20		Some distortion in parapet, possibly due to settlement (slight).	Low
20 - 30		Some distortion in parapet, possibly due to settlement (slight).	Low
30 - 33	1.3	Some distortion in parapet, possibly due to settlement (slight).	Low
33	1.3	Tree growing from footpath level on seaward face.	Medium
33 - 60	1.3 – 1.8	Some distortion in parapet, possibly due to settlement (slight).	Low
60 - 83	1.8 – 2.0	No notable defects in parapets. Scrub / tree clearance required.	Low

83 – 90	2.0	Parapet tilted seawards. Scrub / tree clearance required.	Medium

Chainage (metres)	Retained Height (metres)	Comments	Risk
90	2.0	Parapet tilted seawards (100mm / metre height).	Medium
90 - 95		Parapet tilted seawards. Scrub / tree clearance required.	Medium
95		Pointing required (as previous report).	Medium
95 - 103		Parapet tilted seawards. Scrub / tree clearance required.	Medium
103		Parapet tilted seawards. (110mm / metre height).	Medium
103 - 105		Parapet tilted seawards. Scrub / tree clearance required.	Medium
105		Retaining wall tilted seawards (87mm / metre height).	Medium
105 – 120		Parapet tilted seawards.	medium
120		Retaining wall tilted seawards (87mm / metre height). Tree growing from footpath level on seaward face. Displacement of parapet blockwork, probably due to growth.	Medium
120 - 123		Retaining wall and parapet tilted seawards.	Low
123 - 145	1.8	Retaining wall tilted seawards. Minor distortions in parapet.	Low
145 - 150	1.8	Retaining wall tilted seawards. Minor distortions in parapet. Settlement in Gallanach Road footpath, possibly consolidation due to wall movement (this section of wall has the greatest tilt), or settlement of the service trench	Medium
150	1.8	Retaining wall tilted seawards (120mm / metre height). Thick ivy growth. Pointing required. Minor distortions in parapet.	Medium
150 - 155	1.8	Minor distortions in parapet.	Low

Chainage (metres)	Retained Height (metres)	Comments	Risk
158	1.8	Parapet blocks displaced upwards and cracked. Probably heave due to tree growth (previously cut but re-growing).	Medium
163	1.7	Impact damage to parapet. Blocks displaced seawards 30mm max.	Low
163 - 185		Cracked / loose pilasters (8 loose from a total of 23)	Medium

3.4.5 Observations: North Wall (Oban side)

Chainage (metres)	Retained Height (metres)	Comments	Risk
0	1.0	No significant defects	Low
5 - 20		Dense ivy growth	Medium
60	1.5	Retaining wall tilted seawards (50mm / metre height). Parapet also tilted.	Low

3.5 Historic Scotland

The wall forms part of a Category C listed building. Historic Scotland have said that a site meeting should be arranged to consider options. At this stage they have not said that they will either prevent demolition or permit it.

4. CONCLUSIONS

4.1 Summary

4.1.1 Until remedial works can be carried out, the post and wire fence should remain in place.

4.1.2 As a minimum, vegetation should be removed from the walls and the masonry picked and pointed. The estimated cost for this is £16,000. This will be difficult to fund but will be prioritised by Roads and Amenity Services.

4.1.3 A system should be put in place to monitor any further movements in the random rubble retaining wall. The estimated cost for monitoring is £1,500 to set-up and £2,500 per year.

4.1.4 If further movement in the retaining wall is detected, remedial action may be required in the longer term.

4.1.5 With reference to Section 4.2, estimated costs for repair range from £60,000 to £550,000. The wall is a Category C listed building and permission for any works would be required from Historic Scotland and Planning.

4.2 Remedial Options

Option 1
Do nothing. It is recommended that the fence remains in place to safeguard members of the public using the park. Allow £1,000 for annual maintenance costs (minor repairs, pointing and vegetation clearance):

Annual maintenance	£1,000 per year

Option 2
Install monitoring system to detect further movement in the random rubble retaining wall. It is recommended that the temporary fence remains in place to safeguard members of the public using the park. Measurements at 3 month intervals

Set up monitoring system	£1,500
Measurements at 3 month intervals	£2,500 per year
Annual maintenance	£1,000 per year

Option 3
Repair parapets / balustrades only. This will make the structure safe, at least in the short term and the temporary fence could be removed. Monitor retaining wall for further movement. The retaining wall would have to be repaired or the wall fenced off again, if movement reached a pre-determined threshold.

Set up monitoring system	£1,500
Measurements at 3 month intervals	£2,500 per year
Parapet / balustrade repairs	£250,000

Annual maintenance	£1,000

Option 4

Install support embankment over the whole length of the wall. This would stabilise the retaining wall and significantly reduce the risk to members of the public from falling masonry, therefore allowing the temporary fence to be removed.

Embankment + soiling and seeding	£60,000
Annual maintenance	£1,000

Option 5

Install support embankment over the whole length of the wall and repair parapets / balustrades. This would stabilise the retaining structure, minimise the risk to members of the public from falling masonry and allow the fence to be removed.

Embankments + soiling and seeding	£60,000
Repair parapets / balustrades	£250,000
Annual maintenance	£1,000

Option 6

Install ground anchors or other system to stabilise the retaining structure, for example, provide a masonry-faced retaining wall. Repair the parapets / balustrades, which would allow the temporary fence to be removed.

Works to retaining wall	£300,000
Repair parapets / balustrades	£250,000
Annual maintenance	£1,000

Option 7

Remove parapets / balusters and replace with a masonry parapet. This may not be acceptable to Historic Scotland. Monitor retaining structure for further movement. Wall would have to be repaired or structure fenced off again, if movement reached a pre-determined threshold.

Set up monitoring system	£1,500
Measurements at 3 month intervals	£2,500 per year
Take down existing parapet and provide masonry parapet	£100,000
Annual maintenance	£1,000

Option 8

Remove parapets / balusters and replace with a masonry parapet. As for Option 7, this may not to be acceptable to Historic Scotland. Install a support embankment over the whole length of the wall.

Embankments + soiling and seeding	£60,000
Take down existing parapet and provide masonry parapet	£100,000
Annual maintenance	£1,000

5. IMPLICATIONS

5.1 Policy - None

5.2 Financial

5.2.1 No budget has been identified for works at this location, other than a limited amount of revenue that could be used to allow monitoring. A Business Case will be taken to the Development and Infrastructure project board, Strategic Asset Management Board and then through the Council Budget process.

5.3 Legal - None

5.4 HR - None

5.5 Equalities - None

5.6 Risk

5.6.1 Failure to take timeous action may have further financial implications.

5.7 Customer Services - None

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Date 20 November 2012

For further information contact:

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APPENDICES

Appendix A: Photographs

Appendix A

South wall, Chainage 0: Displaced parapet blocks

South wall, Chainage 18: Distortion of balustrade, loose baluster

Appendix A

South wall, Chainage 60: Stairway closed

General view of South wall

Appendix A

South wall, Chainage 150: Settlement in footpath

South wall, Chainage 158: Distortion of parapet, probably due to tree growth

Appendix A

South wall, Chainage 158: Distortion of parapet, displaced cope

Appendix A

South wall, Chainage 163: Impact damage

Appendix A

South wall: Loose pilaster (typical)

Appendix A

South wall: Tree growth at Chainage 158

Appendix A

South wall: Ivy growth at Chainage 150

South wall, Chainage 120: Tree growth

Appendix A

North wall, Town centre end: Dense ivy growth

General view of north wall