

## REPORT TO INFRASTRUCTURE SERVICES COMMITTEE – 15 MARCH 2018

### GARDENSTOWN LANDSLIP

#### 1 Recommendations

The Committee is recommended to:

- 1.1 Note the development of the landslip at Gardenstown and the approach going forward; and
- 1.2 Agree that the design and implementation of remediation measures to the Gardenstown landslip is funded from the Harbour, Coast Protection and Flooding capital budget.

#### 2 Background / Discussion

##### Development of the landslip

- 2.1 A landslip occurred overnight on 28 November 2017 in Gardenstown, which resulted in debris being deposited on B9123 Harbour Road. The landslip occurred on an oversteep slope located above Harbour Road and at the crest of the slope is Gardenstown New Church.
- 2.2 On 28 November 2017, officers arranged for the debris on the road to be cleared and a temporary barrier was constructed at the toe of the slope using a combination pre-cast concrete blocks and Heras fencing. On 4 December 2017, rope access contractors were mobilised to begin clearing fractured rock and debris from the slip area.
- 2.3 The slip continued to develop and consulting Geotechnical Engineers Atkins Ltd were employed to provide specialist advice. Measures were taken to temporarily re-open the road for the Christmas and New Year period including further removal of loose rock and debris from the slope and providing another layer to the temporary concrete blockwork wall at the toe of the slope.
- 2.4 The road was re-opened on 22 December 2017, but further failures were observed between 29 and 31 December following heavy rainfall and the road was closed again on 31 December 2017. On 8 January 2018, having assessed progression of the landslip and considering the safety of road users, it was decided to keep the road closed.

##### Road closures

- 2.5 B9123 Harbour Road is the only vehicular access to the lower part of the village. The landslip occurred on land that is not within ownership of Aberdeenshire Council, or indeed on land which the Council has responsibility for or control over. The sole reason that the Council has become involved is the impact that the slip has had on the public road.

- 2.6 Officers are acutely aware of the disruption and distress that the landslip above Harbour Road has caused, and continues to cause, residents and businesses that rely on this road as their only means of vehicular access.
- 2.7 Since the landslip progressed on 31 December 2017, road openings have taken place on Thursdays. Given the ongoing risk of further landslips and rock falls, these openings have been supervised by engineering staff who are able to make assessments of the risk and permit traffic and pedestrians to pass.
- 2.8 Temporary gates have been installed before the hazard (on the south side) and barriers on the north side. The installation of the gates allows easier access for emergency services in the event of an incident in the lower half of the village. To this end, keys have been provided to the Scottish Fire and Rescue Service (both Banff and Macduff stations), Scottish Ambulance Service, Police Scotland and the local Coastguard stations in both Banff and Fraserburgh. The gates will also ease the operation of the manned openings as there will be no need to employ the services of a JCB to move the blocks and will allow easier access for gritting, when required, of the lower half of the village.
- 2.9 To establish the most suitable times/days for supervised road openings a consultation exercise was carried out with the community. Consequently, subject to a site inspection it is proposed to open the road on a supervised basis, on a Monday, Thursday and Saturday between the hours of 9.00am and 4.00pm. Currently during the ground investigation further controlled openings are taking place (subject to slope assessment) on Fridays (1.00pm – 4.00pm), Saturdays (9.00am – 4.00pm) and Sundays (9.00am – 4.00pm).
- 2.10 At Banff and Buchan Area Committee on 13 February an Emergency Notice of Motion was put forward. It was agreed that Aberdeenshire Council puts in place, with immediate effect, the maximum, reasonable, safe opening of the road, to be assessed on a daily basis. The ground investigation will allow a better understanding of the level of risk to manage these road openings.
- 2.11 In order to manage the risks associated with the landslide development and understand how it may develop in the future, a more robust slope monitoring regime has been considered. This will assist in considering risk associated with future road openings. Several options have been considered including, automatic total station theodolite, 3D laser scanning and Satellite SAR Interferometry. Steps are currently underway to establish a system based on an automatic theodolite and targets installed on the slope. We hope to have this system in place mid-March, at an estimate cost of around £40,000.

#### Development of a permanent solution

- 2.12 Atkins Ltd have been appointed using the Scotland Excel Engineering and Technical Consultancy Services framework. The commission scope is to provide specialist advice to the Council and to develop a solution to enable permanent unrestricted use of Harbour Road by vehicles and non-motorised users.

- 2.13 Since Atkins were appointed in early January they have been developing a detailed specification for the ground investigation. BAM Ritchies were approved to undertake the ground investigation. Work commenced on 14 February with a programmed duration of 4 weeks.
- 2.14 Following completion of the ground investigation, a ground model will be developed and used to undertake slope stability modelling of the landslide area to ascertain the critical slip surface, estimate the volume of material that may still fail and develop a permanent solution. As well as informing the choice of permanent solution, the ground investigation works will also provide us with the information necessary to make further judgements on whether it is safe to open the road more fully, or if there are interim measures we can put in place to provide additional mitigation.
- 2.15 At this stage it is not possible to provide a definitive assessment of a potential permanent solution to the landslip, or the likely programme of how long this will take. Initial indications are that a full soil nailing (a construction remedial measure to treat unstable natural soil slopes) would cost around £1,500,000 to implement and would require further road closures during the works.
- 2.16 The Head of Finance and Monitoring Officer within Business Services have been consulted in the preparation of this report and their comments are incorporated within the report and are satisfied that the report complies with the Scheme of Governance and relevant legislation.

### **3 Scheme of Governance**

- 3.1 The Committee is able to consider [and take a decision on] this item in terms of Section F.1 of the List of Committee Powers in Part 2A of the Scheme of Governance as the as it relates to policy issues and resource matters (within agreed budgets) relating to those functions which have not been reserved to the Full Council or specifically delegated to any other Committee of the Council for Roads, Landscape Services and Waste Management.

### **4 Implications and Risk**

- 4.1 There are no staffing issues arising from this report.
- 4.2 An equality impact assessment has been carried out as part of the development of the proposals relating to the road closures set out above. It is included as Appendix 1 and the following impacts have been identified which cannot be fully mitigated as explained below.
- 4.3 Harbour Road is the only road down into the lower area of Gardenstown. When Harbour Road is closed the only alternative means of access is via various flights of private steps, these are not maintained by the Council. The requirement to use steps may have a negative impact on some protected groups and restrict their movements to and from the lower area of the village.
- 4.4 The following mitigating steps to these impacts are described below:

- Weekly controlled openings have taken place between 31 December 2017 and 15 February 2018. Harbour Road proposed openings to vehicles and pedestrians, under supervision, on Friday (1.00pm – 4.00pm), Saturday (9.00am – 4.00pm) and Sunday (9.00am – 4.00pm) while ground investigation works ongoing (subject to slope assessment).
  - Private steps providing access to the lower area of the village have been available since road closure commenced. Safety inspections in place and any safety issues being made safe. Improving steps to accommodate those with a disability (including wheelchair or mobility scooter users) is not considered practicable due to existing layout and gradients.
  - Winter maintenance to be carried out to private steps.
  - Access arrangements have been agreed with emergency services and contingency plans put in place.
  - Health & Social Care teams monitoring impact on clients.
- 4.5 The landowner was contacted as soon as possible after the slip was reported. At that time, they granted permission to enter the land to allow rope access team to remove some of the larger section of loose material. This also allowed Atkins team to do a roped access inspection of the slope.
- 4.6 Subsequently the landowner has also granted permission for the ongoing ground investigation works.
- 4.7 The landslide also sits at the edge of Gardenstown New Church and officers remain in dialogue with their representatives. They also granted permission for two ground investigation boreholes to be undertaken within their ground.
- 4.8 Advice has been sought from Legal & Governance in respect of the responsibilities and liabilities of the landowner. They advise that there is no strict liability on a landowner for damage caused to a neighbouring property. It is necessary for there to be fault on the part of the landowner or some other party for there to be a liability, and the fact that something has happened may give rise to a presumption that there has been fault on the part of the landowner, but this would require the landowner to do something to alter the land from its natural state. This does not appear to be the case in this instance. It would therefore seem to be the case that the landowner is not under any positive duty to take steps, though clearly, they can do.
- 4.9 The Service has therefore written to the landowner seeking to ascertain what, if any, steps they intend to take to remediate their slope. The offer has also been made to meet with them, or their Agent, to discuss how the aspirations of the Council, to secure and reopen the road, may support the work that they intend to undertake to secure their interest.
- 4.10 Under the Roads (Scotland) Act 1984 the Council has an overarching duty to “manage and maintain” public roads. In addition, the Act grants the powers to carry out works to protect the public road. Furthermore, under section 84 of the Local Government (Scotland) Act 1973 in respect of emergencies or

disasters to take steps calculated to alleviate, avert or eradicate the effects/potential effects of the event. The Council also has power under section 20 of the Local Government Scotland Act 2003 to do anything which it considers is likely to promote or improve the well-being of its area and persons within that area.

- 4.11 The current estimate for remedial measure are likely to be in the region of £1,500,000 to implement. The confidence level on this estimate is currently low and will be refined once the results of the ground investigation are known.
- 4.12 At present there is no budget line specifically retained for dealing with landslips. Historically these have been funded from a variety to of budgets, including the Road Maintenance (Revenue) budget and the Harbour, Coast Protection and Flooding (Capital) budget.
- 4.13 Colleagues in Finance have confirmed that funding the development and implementation of a permanent solution to the landslip can be funded from capital and it is proposed to bring forward capital funding from future years to deal with this unplanned expenditure requirement. The works will be funded from the Harbours, Coast & Flooding rolling programme within the Capital Plan 2016-2032.
- 4.14 In the past, the Council was successful in securing 80% Scottish Government funding support for the Pennan and Bervie Braes landslips and an initial approach has been made by officers to the Scottish Government. However, if a funding bid were successful, the Council would still need to meet the remaining balance.
- 4.15 The following Risks have been identified as relevant to this matter on a Corporate Level:
- ACORP001 Budget Pressures
  - ACORP006 Reputation Management

**Stephen Archer**  
**Director of Infrastructure Services**

Report prepared by Gavin Penman, Projects Manager  
Date 2 March 2018





## EQUALITY IMPACT ASSESSMENT

Stage 1: Title and aims of the activity (“activity” is an umbrella term covering policies, procedures, guidance and decisions).	
Service	Infrastructure Services
Section	Roads
Title of the activity etc.	Closure of Harbour Road, Gardenstown
Aims of the activity	In order to ensure public safety following a landslip in Gardenstown, an emergency road closure of Harbour Road has been put in place
Author(s) & Title(s)	Derek Murray, Roads and Landscape Manager (Banff & Buchan and Marr)

Stage 2: List the evidence that has been used in this assessment.	
Internal data (customer satisfaction surveys; equality monitoring data; customer complaints).	Site inspections, community engagement, customer requests and complaints.
Internal consultation with staff and other services affected.	Roads, Projects and Structures Teams were involved in initial assessment of slope and landslip and recommended road be closed.
External consultation (partner organisations, community groups, and councils).	Consultant Engineers appointed to provide specialist advice. Emergency Services consulted. Health and Social Care consulted. Community Council. Landowner. Public meeting.
External data (census, available statistics).	
Other (general information as appropriate).	

Stage 3: Evidence Gaps.	
Are there any gaps in the information you currently hold?	Findings of Geotechnical Investigations into underlying ground conditions.

Stage 4: Measures to fill the evidence gaps.		
What measures will be taken to fill the information gaps before the activity is implemented? These should be included in the action plan at the back of this form.	Measures:	Timescale:
	Geotechnical Engineers, BAM Ritchies, have been appointed by the Council and investigatory drilling is currently in progress in and around the area of the slip.	4 weeks.

Stage 5: Are there potential impacts on protected groups? Please complete for each protected group by inserting "yes" in the applicable box/boxes below.				
	Positive	Negative	Neutral	Unknown
Age – Younger		Yes		
Age – Older		Yes		
Disability		Yes		
Race – (includes Gypsy Travellers)			Yes	
Religion or Belief			Yes	
Gender – male/female			Yes	
Pregnancy and maternity		Yes		
Sexual orientation – (includes Lesbian/ Gay/Bisexual)			Yes	
Gender reassignment – (includes Transgender)			Yes	

Marriage and Civil Partnership			Yes	
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**Stage 6: What are the positive and negative impacts?**

Impacts.	Positive (describe the impact for each of the protected characteristics affected)	Negative (describe the impact for each of the protected characteristics affected)
Please detail the potential positive and/or negative impacts on those with protected characteristics you have highlighted above. Detail the impacts and describe those affected.		<p>Harbour Road is the only road down into the lower area of Gardenstown. When Harbour Road is closed the only alternative means of access is via various flights of private steps, these are not maintained by the Council.</p> <p>The requirement to use steps may have a negative impact on some protected groups and restrict their movements to and from the lower area of the village.</p>

**Stage 7: Have any of the affected groups been consulted?**

If yes, please give details of how this was done and what the results were. If no, how have you ensured that you can make an informed decision about mitigating steps?	Through community engagement.
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**Stage 8: What mitigating steps will be taken to remove or reduce negative impacts?**

These	Mitigating Steps	Timescale
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<p>should be included in any action plan at the back of this form.</p>	<p>Weekly controlled openings have taken place between 31/12/17 and 15/2/18. Harbour Road to now be opened to vehicles and pedestrians, under supervision, on Friday (1300-1600), Saturday (0900 – 1600) and Sunday (0900 – 1600) while GI works ongoing (subject to slope assessment).</p>	<p>With effect from 23/02/18.</p>
	<p>Private steps providing access to the lower area of the village have been available since road closure commenced. Safety inspections in place and any safety issues being made safe. Improving steps to accommodate those with a disability (including wheelchair or mobility scooter users) is not considered practicable due to existing layout and gradients.</p>	<p>Ongoing</p>
	<p>Winter maintenance to be carried out to private steps</p>	<p>When conditions dictate</p>
	<p>Access arrangements have been agreed with emergency services and contingency plans put in place.</p>	<p>Ongoing</p>
	<p>Health &amp; Social Care teams monitoring impact on clients.</p>	<p>Ongoing</p>

Stage 9: What steps can be taken to promote good relations between various groups?

<p>These should be included in the action plan.</p>	<p>Regular communications and updates provided to local community.</p>
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Stage 10: How does the policy/activity create opportunities for advancing equality of opportunity?

Stage 11: What equality monitoring arrangements will be put in place?

These should be included in any action plan (for example customer satisfaction questionnaires).

Community engagement and review of complaints/requests.

Stage 12: What is the outcome of the Assessment?

Please complete the appropriate box/boxes	1	No negative impacts have been identified –please explain.
	2	Negative Impacts have been identified, these can be mitigated - please explain. * Please fill in Stage 13 if this option is chosen.
	3	The activity will have negative impacts which cannot be mitigated fully – please explain. * Please fill in Stage 13 if this option is chosen
Negative impacts on younger, older, disabled, pregnancy/maternity regards having to take access/egress using flights of steps when Harbour Road is closed.		

\* Stage 13: Set out the justification that the activity can and should go ahead despite the negative impact.

Harbour Road was closed in the interests of public safety and at this point in time the closure still requires to remain in place. There are no alternative means of access to the lower area of the village apart from various flights of steps. At present it is proposed to open Harbour Road, under supervision, to traffic on Friday, Saturday and Sunday. When the geotechnical investigations are complete it is proposed to have supervised openings on Monday, Thursday and Saturday but consideration being given to additional temporary works that may allow full opening (subject to GI findings). Unfortunately due to the lack of alternative hazard free access routes it is not possible to fully mitigate the negative impacts of the road closure on all protected groups.

Stage 14: Sign off and authorisation.

Sign off and authorisation.	1) Service and Team	Roads	
	2) Title of Policy/Activity	Closure of Harbour Road, Gardenstown	
	3) <b>Authors:</b> I/We have completed the equality impact assessment for this policy/activity.	Name: J STRONACH Position: Principal Roads Engineer Date: 21/02/18 Signature:	Name: D MURRAY Position: Roads and Landscape Manager Date: 21/02/18 Signature:
		Name: Position: Date: Signature:	Name: Position: Date: Signature:
	4) Consultation with Service Manager	Name: D MURRAY Date: 21/02/18	
	5) Authorisation by Director or Head of Service	Name: P McKAY Position: Head of Service Date:	Name: Position: Date:
	6) If the EIA relates to a matter that has to go before a Committee, Committee report author sends the Committee Report and this form, and any supporting assessment documents, to the Officers responsible for monitoring and the Committee Officer of the relevant Committee. e.g. Social Work and Housing Committee.	Date:	
	7) EIA author sends a copy of the finalised form to: equalities@aberdeenshire.gov.uk	Date:	
(Equalities team to complete) Has the completed form been published on the website? YES/NO			Date:



