



HISTORIC
ENVIRONMENT
SCOTLAND

ÀRAINNEACHD
EACHDRAIDHEIL
ALBA

**Briefing to HESB on the Radical Road, Holyrood Park
9 November 2023**

Purpose

1. To update and provide background briefing on the Radical Road in Holyrood Park and set out next steps.

Key Points

2. The context and update are provided in the attached paper. It has been challenging to cover this previously given ongoing statutory investigations and consequences. We are now in a position to move forward to a renewed risk assessment and options appraisal. HESB are invited to note the briefing and ask any questions they might have.

Corporate Plan Outcomes

- 3.

Outcome	How?
The Historic Environment	
1) ... <i>makes a real difference to people's lives</i>	Access and safety
2) ... <i>is looked after, protected and managed for generations to come</i>	Strategy for care
3) ... <i>makes a broader contribution to the economy of Scotland and its people</i>	Access and safety
4) ... <i>inspires a creative & vibrant Scotland</i>	Access and safety
5) ... <i>is cared for and championed by a high-performing organisation</i>	Statutory compliance, minimise reputational risk and civil action

Key assumptions

4. HESB wish to maintain the relevant risk appetite position and follow professional advice.

Risks

5. Open communications have been hampered by ongoing investigations and consequences of this.
6. There has been press and stakeholder interest here which can conflate issues and misunderstand the position but our engagement has been limited due to the above.
7. This has taken longer than we would have liked due to other pressures requiring resource deployment and the pace of investigation and consequent work required.
8. The costs of intervention are likely to be significant, if that is the preferred option that evolves.

Dependencies

9. Resourcing (staff and budget), Holyrood Park Strategic Plan, PIC Strategy

Impact Assessments

10. Will be required in due course.

Climate Change Duties

11. Increased risk and adaptation measures directly relevant. Management of natural rock risk becoming an increasing issue for HES nationally and other public bodies as climate impacts on the natural process of decay.

Recommendation

12. HESB note the briefing and next steps.


Director of Cultural Assets

1.0 Introduction

The closure of a portion of the Radical Road has attracted much interest and discussion in relation to access restrictions, public access and the management of safety issues in what is a largely 'natural' environment.

This paper sets out the HES position in relation to this with the hope of providing some clarity on our position and actions in this regard. The Royal Park of Holyrood is our most visited PIC, a unique landscape with a backdrop of rugged crags and slopes - essentially a mountainous environment in an urban setting.



The footpath below the Salisbury Crags is known as the Radical Road, due to its historical connections with Sir Walter Scott and the politics of the unemployed weavers linked to its construction and previous use as an access roadway for quarrying. Climbing groups and the emergency and rescue services request access to make use of the southern abandoned quarry faces for rope access training. Hutton's Rock and Hutton's Section, also towards the southern end, are both historically and geologically important to students and academics.

Holyrood Park is managed and maintained by Historic Environment Scotland for Scottish Ministers as a Property in Care PIC 224. The scheduled area for the 650-acre Park includes two sites of Special Scientific Interest (SSSI's) Arthur's Seat Volcano SSSI 91 and Duddingston Loch SSSI 547 with legal protection under the remit of Scotland's Nature Agency, NatureScot.

Holyrood Park is an open Monument with over 17 access points. The high visitor numbers cannot be accurately quantified due to its open nature and city centre location but are estimated at more than two million visitors per year. Roads through the Park also managed by HES have over 6,000 vehicles passing through each day.

HES Ranger Services are located within the Park operating from the Holyrood Park Education Centre. HES Rangers provide the primary conduit for interaction with the public and provide education and outreach functions.

The Park includes many very elevated natural crags and rocky outcrops, some immediately adjacent to footpaths and roads. Arthur's Seat is an extinct volcano at 250 metres high and the Salisbury Crags at 50 metres high provide iconic visitor draws and backdrops to the City. The Radical Road footpath runs for 1.25 kilometres / 0.77 miles immediately below Salisbury Crags and this proximity represents one of the highest rockfall risk areas for visitors in Holyrood Park. The prevalent rock is Basalt, a very durable but often naturally fractured and fissured material. This composition can make it vulnerable to erosion. All rock surfaces and fissures are subjected continuously to the natural and unavoidable mechanisms of heavy rainfall and repeated freeze/thaw cycles and the damage caused by aggressive root systems of invasive plant species, such as Ivy and Valerian, which can collectively contribute to or cause rockfall.

Recent climate changes affecting Eastern Scotland such as increasing and more intense periods of rainfall with milder Winter temperatures are perhaps contributing to increasing rockfall activity. The Radical Road footpath in Holyrood Park runs for 1.25 kilometres / 0.77 miles immediately below the Salisbury Crags. This iconic location with its panoramic views over the city can attract hundreds of walkers and joggers on any day, often pausing below the Crags to gather in groups.

The height of the Crags at 50m /164 feet and its proximity to a very busy footpath mean that this area presents the highest risk to visitors of injury from rockfall.

2.0 Our Statutory Duties

HES owes various legal duties to staff and visitors, and anyone who may be affected by HES's activities, under the Health and Safety at Work Act 1974, the Occupiers Liability (Scotland) Act 1960, and at common law. This includes staff and visitors at properties in care, as a consequence of HES's delegated general function to manage the properties in care and provide public access. Under the 1974 Act, HES has duties to ensure the health, safety and welfare at work of its employees.

HES also must ensure that, so far as reasonably practicable, non-employees (including visitors, neighbouring proprietors etc) are not exposed to risks to their health & safety. Under the 1960 Act, the duty owed by the occupier is to show reasonable care towards persons entering the premises in respect of dangers which are due to the state of the premises or to anything done or omitted to be done on them and for which the occupier is legally responsible. The occupier must take reasonable care to ensure visitors will not suffer injury or damage as a result of any such dangers. An occupier of the premises in terms of the Act is anyone occupying or having control of land or premises. HES is an occupier of PICs for this purpose.

At common law, HES has a duty to take reasonable care for the safety of those who enter onto its premises. This duty is potentially broader than the 1960 Act duty.

HES Compliance Assessment Framework provides template to manage risk at properties in care; to review, assess, record and report, take appropriate action and propose further action.

HES see public access to our Properties in Care and their conservation as core objectives. We manage these assets on behalf of the people of Scotland and we have no desire to restrict access or enjoyment without good reason. We wish visitors to the park to have access to the Radical Road when the risk is adequately managed.

2.1 Our right to restrict access

As a property in state care we may only close a property under the 1979 Ancient Monument Act in order to protect the site from a conservation perspective, or for reasons of safety. This Act gives us the powers to implement full or partial closures in this scenario - Section 19(1) of the Ancient Monuments and Archaeological Areas Act 1979 gives the public a right of access to PICs. However it is not an absolute right. Indeed section 19(2) of the 1979 Act (which is delegated to HES under the Scheme of Delegation: Properties in Care) permits HES to exclude public access to all/ part of a property in care where HES thinks it is necessary or expedient to do so in the interests of public safety (or for the maintenance/ preservation of the PIC).

The Land Reform (Scotland) Act 2003 is the legal basis for the general right to roam. However that right is also not absolute. Section 6(1)(d) of the 2003 Act provides that the right to roam doesn't apply to any land to which public access is prohibited, excluded or restricted by any other Act. Because we are using our 1979 Act delegated powers to exclude access to Radical Road on safety grounds, section 6(1)(d) applies, which means the public don't have a right of access under right to roam.

2.2 Statutory obligations relevant to this circumstance

Under the 1974 Health and Safety at Work Act, our obligation requires us to ensure (so far as reasonably practicable) that non-employees are not exposed to risks to their health & safety. The path (and possibly other land below it) clearly needs to be closed as the known risk is too high to allow continued access. There are steps that can be taken to achieve this which are reasonably practicable given that this rock face is in central Edinburgh and very accessible, so relatively straightforward to actually carry out works.

The risk is higher in Holyrood Park than it would be in a remote highland setting as the site is in the centre of Edinburgh and receives an estimated 2.5 million visitors + per annum.

It is also a criminal offence under the Health and Safety at Work Act to be aware of a risk and not to act upon it to manage or mitigate the risk.

It should be borne in mind that under occupier's liability, for example, the duty is to take reasonable care, and liability may arise not only due to the state of the premises but also due to anything done or omitted to be done on it. In this case, the risk might be seen as not only coming from the natural hazard itself, but from the existence of a man-made footpath / road, located in close proximity to the natural hazard. Assuming it's within HES capability to close the path if the magnitude of the risk demands it, failure to do so might constitute a failure to take reasonable care / exercise reasonable practicability.

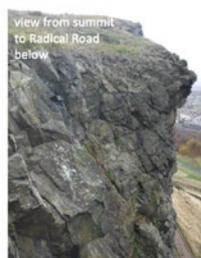
2.3 A mountain environment in an urban setting

Under the Occupier's Liability Act our duty is to take such care as is reasonable in all the circumstances of the case. Again, the central urban location, high number of visitors, relative accessibility of the site and availability of practical risk mitigation measures all suggest that in the circumstances of this case it is apt to take these steps. In the circumstances of a Munro in the highlands, the assessment of what would be reasonable may differ. In addition, there may be an argument that people who go walking in the highlands perhaps willingly take on risks of things like this, to a greater extent than visitors to Holyrood Park in central Edinburgh, which is likely to be perceived as less hazardous (even though in many ways it is not).

There is a distinction in the magnitude of the risk and therefore in what constitutes reasonable care, or reasonable practicability, in different locations. A city centre location with many pedestrians around with varying degrees of safety perception and awareness, may well require a different set of measures to those that would be considered reasonable at a remote natural beauty spot mostly frequented by climbers and walkers.

3.0 Rock risk management

The risk of rockfall at Holyrood Park is currently managed on a proactive annual programme of expert led inspection and intervention, with post-incident investigation for unforeseen rockfall occurrences. We have identified a risk, assessed this risk, the data we have is reasonable and the mitigation undertaken was previously deemed sufficient until recently. However the increased frequency and greater size of rockfall events, together with the increasing volume of visitors, is now assessed as presenting increased higher risk.

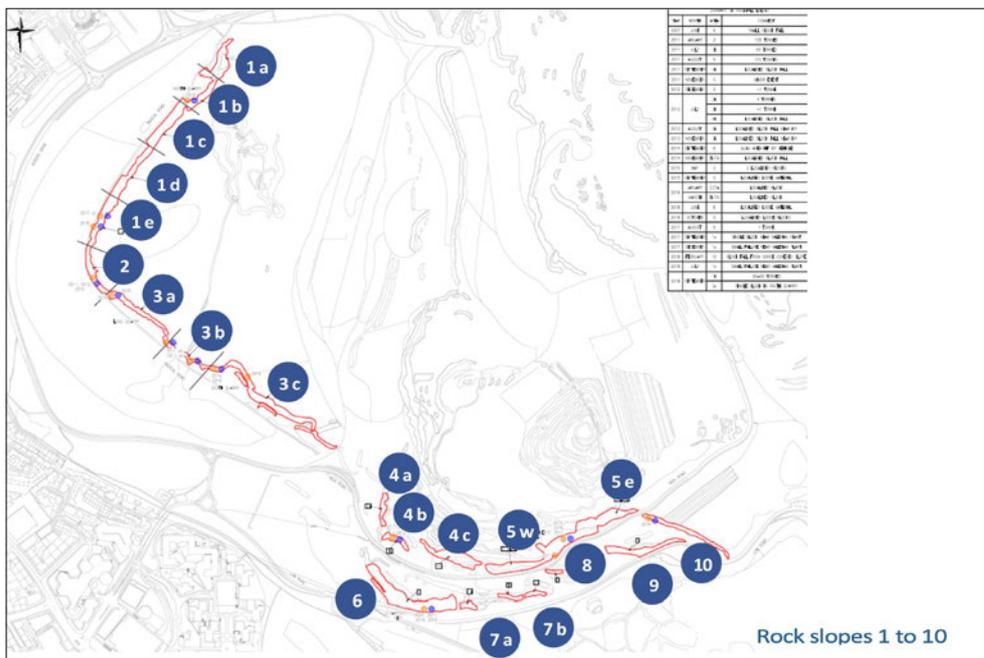


3.1 Rock Risk Mitigation

Since 2009, HES has worked with specialist Geo-technical Engineers Fairhurst to develop and implement a pro-active Holyrood Park Rock Risk Management Plan which delivers an annual programme of expert inspection and physical interventions to mitigate rock risk. The Park has been broken down into risk zones- each individually risk assessed by Fairhurst.

In Holyrood Park, areas with perceived rock risk have been broken down into 10 zones, each individually risk assessed by Fairhurst. The Radical Road footpath has been split into nine distinct sub-sections 1a - 3c to reflect its varying characteristics and structures. Inspection regularity reflects the level of risk identified by Fairhurst using an industry standard risk scoring matrix. Areas of potential higher risk are inspected more regularly.

HES Edinburgh team manages this programme using in-house professional and technical resources, including the HES rope team under the guidance and direction of external geo-technical engineering consultants Fairhurst. Fairhurst have been involved on a call- off contract basis since 2009. This continuous and on-going involvement has given Fairhurst an excellent understanding of rock risk within the Park and HES protocols. Fairhurst covers both programmed and reactive rockfall events.



Annual visual and tactile inspections have been carried out by Fairhurst, using rope access coupled with the removal of invasive vegetation and potential loose rock (known as scaling). Fairhurst have advised this is a reasonable and effective risk mitigation approach to rock risk management in the Park. This has maintained visitor access whilst retaining the natural appearance of the Crags. This approach reduces risk but is not risk avoidance. Residual risk remains.

Despite these measures, on the afternoon of the 11th September 2018 a significant rockfall event occurred in area 1b /1c above the Radical Road.

Around 50 tonnes of rock fell from Salisbury Crags directly onto and past the footpath. The largest individual rock weight was estimated at 5.5 tonnes.

Although visitors were observed in the vicinity at the time, fortunately no-one was injured. This was categorised in health and safety terms as a near miss. Steps were taken to immediately close the footpath pending specialist inspection.

The Radical Road was inspected by Fairhurst who advised that closure should remain in place pending review. It was considered that the rockfall risk at Salisbury Crags had increased compared with previous assessments, driven by an increase in rockfall frequency (more hazards) in conjunction with an apparent increase in visitor numbers (greater exposure to the hazards).

A key comparison across HES sites is the serious injury from rockfall incident to a member of public below the western rock slopes at Edinburgh Castle in 2018. That rockfall was in an area previously characterised as being lower risk than the Radical Road; the block which fell was of a much smaller size than those which can and do fall onto the Radical Road, and it was in an area where there is some separation of visitors from the rock slope (grass lower slopes with localised bushes and trees). By contrast, there have been a number of recorded rockfalls impacting the Radical Road over the last 10-15 years, as indicated by records kept by HES and Fairhurst. These rockfalls have varied in size from hand-sized blocks to multi-tonne failures.

The rock slopes above the Radical Road are often very high (>40m) and are, in places, located immediately adjacent to the path, meaning most if not all falling material can reach the path. Visitors can be observed lingering beneath the rock slopes to admire the view, further increasing their exposure. Together, the frequency and size of rockfall hazards and the potentially severe consequences of a rockfall occurring have led to the high to very high risk classification.

The geotechnical engineers' advice is that the risk posed by rockfall to visitors on the Radical Road, and by default the risk of injury to visitors and staff in the area, has clearly increased. We agree. The perception of an increasing number of visitors to Holyrood Park also continues. Fairhurst assessment includes standards for event tree calculation; rockfall trajectory for rock type and formation, slope angle and height alongside estimated visitor numbers; for detail method and outcomes refer Radical Road Rockfall Risk Assessment draft September 2019.

Risk to visitors is mitigated by the temporary full closure of the Radical Road footpath but given the topography it is not feasible to fully restrict access with temporary barriers; more robust fencing has been put in place since the initial closure.

4.0 Initial Options Appraisal

SMT considered an initial options appraisal in 2021. Strategic decisions on risk management process specifically the dynamic risk assessment approach used by Fairhurst have been impacted by the need to review this. This review was an outcome of the concluding report into the serious injury sustained by a member of the public from a rock fall at Edinburgh Castle the previous year. Whilst the decision was not to pursue prosecution of HES and number of specific actions were identified.

British Geological Survey were commissioned to undertake this review and is about to present a final report shortly. In general terms the dynamic approach is correct and also how it has been applied. A few alterations are likely to be suggested.

With Covid and other pressures this exercise has taken longer than we had planned but the highest risk areas have maintained access restrictions using heras fencing - then replaced with more robust Defender Fencing.

In summary Fairhurst have advised HES of an increase in risk of injury from incidence of rockfall at Salisbury Crags; additional mitigation is required, there is not an option for HES to do nothing. Mitigation options are categorised as avoidance, removal and containment.

Health and safety for HES staff and our visitors is a priority; the current mitigation measure with temporary barriers and advisory signage is not satisfactory in the park setting, and most importantly it is not proving to be effective, the increase in risk of injury is unchanged for those intent on access to this area.

HES should consider the risk appetite for the organisation to determine a response with intended action and outcomes. HES can decide to permanently prohibit all access around this area of

possible rockfall with additional and more robust measures, or HES can decide to provide some access and select between additional mitigation measures at the rock slopes. Some residual risk remains to be managed in each scenario.

Mitigation with rock slope management and remedial works can be categorised under Avoidance, Removal, Containment or Strengthening.

Avoidance is, as the word suggests, taking measures to prevent exposure to rockfall hazards. This would imply a permanent closure of the footpath with HES actions to ensure no staff or visitors are able to access below the Salisbury Crags by other less formal routes.

Removal of rockfall hazards by regular scaling is a feasible option, but this would have to be repeated on a regular timescale. Between these periods of scaling, a risk of rockfall would remain.

Containment techniques allow rockfalls to occur but prevent the failed debris from impacting visitors; this can comprise physical containment of the debris by mechanical means (such as mesh netting), and by creating visitor exclusion areas (such as fenced or bunded rock traps), adding permanent fixtures to separate visitors from the rockfall risk.

Strengthening techniques with dowel anchors and/or render cover have been discounted as technically inadequate options for the rock formation at these slopes. Risk reductions by mitigation interventions are explored in more detail in Section 8. Each option has separate implications.

Similar interventions to mitigate the risk of injury from rockfall were successfully implemented at Edinburgh Castle at the rock slopes with highest risk: partial mesh containment to the north face adjacent the railway line 2008/2009 and an exclusion area for 180m formed on Johnstone Terrace in 2017/18 at costs of over £1M.

4.1 Options for additional mitigation at the Salisbury Crags have been explored with Fairhurst and considered and assessed in terms of HES Risk Appetite for access to the Radical Road and rock risk management at the rock slopes above the Radical Road:

Considerations include visitor risk, visitor accessibility, physical/visual impact on monument, and cost estimate.

5.0 Edinburgh Castle Rock Safety incident and consequences.

Very serious injury to a member of the public from falling rock at Edinburgh Castle resulted in triggering action from the Health and Safety Executive and an investigation fronted by the City of Edinburgh Council. This comprehensive review covered all aspects of our activity including a detailed assessment of the geotechnical risk management and intervention approach developed by Fairhurst. While the investigation did not result in prosecution a number of actions were directed including reviewing aspects of our management system. We commissioned the Geotechnical Team at British Geological Survey to conduct a review of our / Fairhursts approach. This took time to deliver but is now complete. BGS have made technical suggestions for amending the current approach.

Given the nature of some of the observations and challenges made it was not appropriate to progress issues relating to the Radical Road in this period due to the potential impacts on geotechnical assessment impacting on possible interventions. Due to the ongoing legal case subsequent to the injury of a member of the public it was also not appropriate to change positions in our management regime.

This is a challenging situation for HES. Our natural drive and default is to provide access except where the asset is put at risk or people are. In this scenario we are clear on our statutory obligations but this is challenged by others who believe other access legislation takes priority or dont understand our powers under the Ancient Monuments Act. We also have stakeholders who challenge the sensibility and appropriateness of the law itself. As a public body and a charity we will seek to operate within the law as default position.

There is no corporate appetite to take risks with the welfare of staff and visitors or knowingly commit an offence. It is important to remain focused on our statutory obligations and that the risk of rockfall with serious or possibly fatal consequences is very real.

6.0 Current Position and next steps

We are currently confirming with Fairhurst they are content to adopt the changes identified by BGS (if they did not we would require to appoint new consultants). We are creating a Rock Risk Management Policy and Process in line with our compliance Framework currently for issue to Operations Directorate to deliver. Post re-structure Rock Risk had remained with Cultural Assets but will transition to Operations. Operations are recruiting a Geotechnical Engineer in order that we have the in-house expertise to manage consultants and contractors across the country. We hope to have this complete by late November / December.

The next step in looking at solutions for the Radical Road and other areas of the Park is to identify a suitable project manager and supporting resource to develop options for consideration and to undertake the significant statutory and engagement process here. The work involved is outlined below.

7.0 Live and pending issues

There is much local and national media interest in the subject. We have had, and continue to receive FOI's and EIR's on the issue and representation from interested parties. Some of it is fair in terms of pace but the reality is that the resource we have to do the work here has been tied up on more urgent issues like HLM.

A core part of this concern centres around 'views' on H&S legislation and the Occupiers and Liability Act, and its applicability here. We are very clear on our legal obligations here and this has guided our approach.

[REDACTED]

[REDACTED]

Director of Cultural Assets
3rd Nov 2023

