

Site: River Don south bank, 50m east of Bridge of Balgownie

Period: Late Autumn – low water.

Scope of Work:

To remove overgrown vegetation and to expose a short section of rock which illustrates an example of a “James Hutton” unconformity section in Aberdeen. The clean-up operation is envisaged as a special event to mark the tricentenary of James Hutton’s birth as well as giving AGS the opportunity to outreach to the general public.

Overview of the existing site:



The rock outcrop is some 50 – 100m east of the Bridge of Balgownie on the south bank of the River Don. It is reached by descending the stairs which are rather unkempt and slippery, presently.

At the foot of the stairs is a small beach area and just down-river, the rock outcrop is between the 2 trees on the bank. It is somewhat overgrown, covered in moss and algae. Note a high river at the time of the photo.



The vertical section slopes down from about 2m on the right to 1m on the left over its length of about 6m. Great woodrush and moss drape over it. Some grasses, moss, and liverwort are growing on the sandstone surface. Please see separate report. No plants of special interest were noted.

The horizontal section of Old Red Sandstone on top of folded Dalradian schist is somewhat covered in silt, small pebbles with also moss and liverwort. The section was close to the river during high water / flood conditions,

Overview of the clean-up plan:

The general intention is to remove draping vegetation and lightly clean the rock surfaces to expose the bare rock without damaging it or breaking the surface so that the features can be clearly seen and measured. We believe this rock to be of the order of 400 million years old.

Additionally, because the stairs to the area are somewhat unsafe, an initial part of the programme will be to remove the mud, rotten leaves, slime, weeds, etc from each of the risers and make them safe for ascending and descending.

The public path is above the site location so that walkers, runners, cyclists should not be close to our work.

The work will be carried out by members of Aberdeen Geological Society under the control of a site leader who will ensure a safe operation, without harm to either the volunteers, the environment or the general public.

Aberdeen City Council Countryside Ranger Service are to treat this work as a free contract.

Details of how the work is to be accomplished is specified in the following sections.

1. Stair clean-up operation



The sides of all risers are packed with composted leaves, silt, mud, etc. The vegetation encroaches on to the path. This debris to be removed using shovels and hard bristle brushes working from bottom step to the top level.

Waste material to be bagged and bags taken to recycling centre or to compost area, as advised by Aberdeen City Council Countryside Ranger Service.

Slime on steps to be washed with water from river and brushed clear. Washing operations will start at the top level and work to the bottom.

Cleaning group will pay attention to step positions, condition and surface to avoid slips or ankle sprains.

2. Removal of overhanging vegetation



The sandstone rock face will be cleared of overhanging vegetation using shears or secateurs, (as per the red line)

Care will be taken not to disturb roots of plants above the rock surface so as not to destabilise the slope.

The woodrush and moss are not deemed endangered plants and may be cleared. Such waste material to be bagged and bags taken to any City garden waste recycling centre.

The vertical face of the rock to be cleaned using a combination of scrapers, brushes and fairly low-pressure water sprayer (battery powered) using river water. Care will be taken not to cause damage to the rock face such as splitting, delamination. etc.



At the RH side of the vertical face, water is leaching from the slope above.

The tree roots to the right are covered in primarily a fern, liverwort and mosses (as being pointed out in the photo).

Only material to the left of the tree trunk will be removed and great care will be taken, not to damage or disturb any of the tree's roots or foundation.

Nor do we anticipate removing any low hanging branches of the tree; they appear to be well above the rock presently.

3. Cleaning of horizontal rock face



The horizontal rock face has some moss and liverwort which is to be removed using a combination of light scraping, brushing and low power water jetting using river water.

The component closest to the river edge is silted with loose pebbles etc. It also appears to contain sandstone conglomerate so it will be carefully cleared back to expose the bare rock surface without disturbing the small clasts.

We anticipate clearing back no more than 2m from the vertical face.

4. Check of Flora – species of special interest?

AGS will have a person familiar with wild flora to ensure that there are no endangered plants living at this area. We will report to the City Countryside Ranger Service in suitably far advance of starting the clearance work. (Please see attached reports)

5. Public Awareness Notice



After the clean-up work has been completed, we are willing to create a noticeboard similar to the existing one titled "Donmouth Local Nature Reserve". This new information board could be placed alongside the existing one which is relatively close to the top of the stairs. We envisage a detailed drawing with an explanation of this special geological feature.

However, Aberdeen City Countryside Ranger Service has indicated the original notice requires updating and that a new notice could be created incorporating the geological information. Their graphics expert could layout the new panel. AGS would provide a suitable photo / drawing and info.

Site Specific Rules and Environmental Requirements:

The City Countryside Ranger Service would be willing to sponsor the work with an overview. AGS would be considered as a free contractor, which is how other voluntary work on their parks etc are carried out.

We will only carry out the work when river levels are lowish. We will be cognisant of tidal variations so that personnel do not risk harm from risen water levels. Work will stop when river water is closer than 2m from the area where we are working.

We do not envisage creating loud noises which would scare birds or other wildlife. We are aware that seals are frequent visitors to this part of the river.

We will carry out the clearance in the late Autumn when there will be no risk of disturbing nesting bird. We will not commence work if we find nesting birds in the close vicinity (ducks, swans, etc).

We will not use any chemicals for killing vegetation or for cleaning the steps or rock surfaces.

We will not dispose of any vegetation into the river.

We will dispose of cleared muck and vegetation to a designated waste recycling centre. Discarded plastic or rubbish, which we encounter, will also be collected and disposed of, properly.

We will be respectful of passing members of the general public and ensure that people are not exposed to risk caused by our work activities. (We may block the steps temporarily during cleaning – they are quite muddy and slippery at present.)

Site Access:

The photo opposite shows the small beach area at the foot of the stairs. The stairway leads from the public footpath between Don Street on the south side of the old Brig of Balgownie to the Bridge of Don and runs alongside the river.

The work site lies just beyond the garden area of one of the domestic residences by the old brig. (This photo was taken from the envisage work site.)

Volunteers can park their cars (up to 4) and approach from Balgownie Road, Don Street or from the Beach Esplanade close to the Bridge of Don.



Protection to the Public or other Third Parties during the work:

The work area is below the footpath route so direct contact with the public should be minimal.

People wanting to access the small beach area will be made aware of the stair clean-up operations and will be encouraged to use the handrails to avoid slipping.

People will be kept at least 2m from where we are brushing or spraying to minimise risk of coming into contact with small debris or spray.

AGS Outreach and Countryside Ranger Service Community Engagement

In discussion with the City Countryside Ranger Service, it seems that this project would fit nicely with their aim to engage with local communities and suggested that local school children could be involved. This aspect needs to be explored further.

AGS would welcome the involvement of local community organisations sponsored by the City Countryside Ranger Service as it would contribute towards our aim of outreaching to a wider audience.

Site team: PPE and any special competency requirement:

Vegetation at the site comprises soft material like grasses, mosses, liverwort, ferns, etc. There did not appear to be any thorny or stinging material. Nevertheless, all personnel will be required to wear protective rubber gloves. There are some nettles by the side of the access steps.

The risk of infection from bacteria in the soil is possible. The soil will be wet so wearing of heavy-duty rubber gloves will minimise this.

Only personnel who are familiar with using the power sprayer will be authorised to use it. The operator must wear protective goggles and a face mask.

Rats may be present on the river bank and infection from Leptospirosis is therefore a possibility. Wearing of gloves is important and taking great care in disinfecting hands before eating or drinking is necessary.

The team will carry a basic First Aid kit. We anticipate probably 10 people but its unlikely to be more than 20.

Tools and Equipment Required:

- Small garden shear or secateurs
- Small spade, small shovel
- Trowel
- Hard bristle brush
- Battery powered water sprayer
- Eye goggles / Face mask for sprayer operator
- Heavy-Duty / rubberised gloves
- Sacks for waste vegetation disposal
- Sacks for plastic / rubbish disposal

Waste Disposal Arrangements:

Recycling Centre facilities for disposal of vegetation & muck waste may be treated as garden waste and disposed of in the appropriate facilities.

Ongoing Site Maintenance:

It is anticipated that vegetation will grow back and some minor tidying up will be needed on an annual basis. AGS volunteers would be pleased to carry this out and advise / agree nominal dates with the City Countryside Ranger Service prior to each occasion.

Additional notes or reference photographs, sketches, etc.

The site national grid reference is **NJ 941 096**

Presentation by S Archer on Donside Nature Reserve Unconformity at the Brig o'Balgownie

AGS report (Flora at Access Point Steps – Bridge of Balgownie)

AGS report (Flora at rock face – Bridge of Balgownie)

Pamphlet published by Lothian & Borders GeoConservation "James Hutton Founder of Modern Geology (1726 to 1797)

Note on Hutton's section – Salisbury Crags, Edinburgh