River North Esk:
Loanhead to Roslin

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At the end of the last ice age, torrential meltwater from a decaying ice-sheet between the Moorfoot and the Pentland hills cut deep gorges through glacial deposits and into the underlying rocks as it flowed to the sea. The gorge of the River North Esk between Polton and Roslin cuts into the Passage Formation rocks known locally as the Roslin Sandstone. The gorge is worth a visit in its own right.

It should be noted that the excursion uses paths that are, in places, rather 'adventurous', with occasional long drops, rough surfaces and fallen trees to negotiate. A potential leader of an excursion would do well to have a reconnaissance visit, and to plan for the ability of the party. There is probably no mobile phone signal where it might be needed the most. The branching paths can be confusing, and GPS gives only a guide to location – readings taken in the field do not always agree with published topography maps.

Logistics

Both ends of the excursion can be reached by Lothian Buses number 37, making a one-way excursion practical. Although the excursion is described as end-to-end from the north, possible access points are as follows:

From Loanhead, do not walk down the road to Polton Bridge, which is narrow and lacks a pavement. Instead, follow the old railway path that runs towards Roslin. About 50m after the Bilston viaduct which crosses the impressive incised valley of the Bilston Burn (NT 281 647) take the wider of 2 paths down to the left (east). Emerging from the wooded area, turn left along a tarmac road to join the route as described between locations 2 and 3.

By car, park at Polton Bridge (NT 288 648) in limited road-side parking or the car park for the Springfield Mill site. The road from Loanhead (Polton Road) is steep, narrow and enclosed by high stone walls – some may choose to avoid driving down this by arriving from the east.

There are 2 access routes from Roslin, from the bus stop at the main cross roads in the village (Original Rosslyn Inn).

1) Go NW along Manse Road which is closed to vehicles after c. 250m. Continue to a 5-way junction at Dryden Farm (NT 2791 6392) and go right (east). Follow the track into a field, continue to the far corner (NT 2835 6366) to join the main cliff-top path along the Roslin gorge between locations 3 and 4.

2) Go SE towards Rosslyn Chapel, then right immediately after the carpark. Follow the track to the south for c. 100m, then left (south again) to Roslin Castle. The river can be accessed by descending a path on the right just before the castle access bridge, then passing under the same bridge. Head left to gain the excursion.

W	Coal Measures	Upper Coal Measures	
		Middle Coal Measures	
		Lower Coal Measures	
N	Clackmannan Gp	Passage Fm	
		Upper Limestone Fm	
		Limestone Coal Fm	
		Lower Limestone Fm	
V	Strathclyde Gp	West Lothian Oil-Shale Formation	H
			C
		Gullane Fm	
T	Inverclyde Gp	Clyde Sandstone Fm	
		Ballagan Fm	
		Kinneswood Fm	

Table 1: Carboniferous stratigraphy of East Lothian; Gp = Group; Fm = Formation. The red bar indicates the approximate age of the exposures. From Browne et al. (1999). W = Westphalian; N =

Namurian; V = Visean and T = Tournasian; C = Calders Member; H = Hopetoun Member.

1. Springfield Mill Park

Starting from the north, the site of the former Springfield Mill is now a park managed by MidLothian Council, entrance at [NT 2887 6478]. The Hewan Bank SSSI lies on the opposite (west) bank of the river, and can be viewed from here. The exposures of glacial material at river level are in poor condition, and not worth a special visit. The SSSI citation claims that there are exposures at the top of the landslip, but these have not been located while surveying for this guide.

2. The Hewan Bank Landslide

Cross the road bridge and walk west up the road for about 100m to a sign-posted path on the left, with care due to the lack of a pavement. The path climbs to cross a surprisingly narrow ridge known as Fir Knowes (only named on the 1:5000 OS map) – this is sufficiently narrow that it may be uncrossable by anyone who dislikes heights.

The SSE side of the ridge at its narrowest section [NT 2850 6480] is formed of the headwall of a huge landslide of 1979 which is covered by the Hewan Bank SSSI. Baird and Smellie (1980) give a fascinating account of events. The slope is close to vertical and has been extensively shored up. A contemporary view of the landslip can be viewed in Browne et al. (2025, their Plate 16).

Join a dirt track climbing SW at NT 2848 6478 At NT 2837 6473 an information board about Hewan Wood marks a path running to the SSE, **where the path from the Loanhead railway path joins**. Pass another information board on the right but continue straight (SSE) and after c. 100m follow the path to the right. Zigzag downhill to leave the trees by made steps. At the next information board (NT 2853 6448) go left along the meander that defines the Maiden Castle.

3. Maiden Castle meander

A cliff on the outside of the meander (Figure 1) exposes very gently dipping, thickening-upwards sandstones of the Passage Formation, with underlying dark grey mudstone [NT 2857 6427]. A typical Passage Formation cycle is dominated by sandstone, with only a thin (possibly marine) mudstone below and a thin coal above (Francis, 1983, p.253) which is consistent with this exposure. Where one cycle cuts erosively into the lower one then the sequence becomes very much sandstone dominated, and is locally known as the Roslin Sandstone.

The reddening of the sands is attributed to weathering below the overlying Coal Measures and apparently penetrates for c. 100m (Francis, 1983). An accessible lower cliff c. 100m to the NE exposes the base of the same sequence at river level.



Fig. 1: The Roslyn Sandstone at Maiden Castle

Either walk back to the information board or continue around Maiden Castle to rejoin the route, via some unimpressive archaeological remains. Back at the information board head SW, with an exposure of till in the bank of the river. This can be accessed with difficulty, but is perhaps best viewed from a distance.

Continue along the river path until the path starts to climb as the river exits a gorge roughly 1.5 km long. Baird (1996) suggests wading the river (at low water) to view the highest cliffs in the area at c. 30m. This was not tested by the present author!

Otherwise, climb with the path to the top of the gorge, and a junction in the path at NT 2839 6368, **where the access from Roslin (option 1 above) joins**.

4. Roslin gorge viewpoint

Descend into the gorge from the junction, taking the left (lower) options when the path branches. With luck, arrive at a view point overlooking the 30m high cliff of the Roslin Sandstone [NT 2846 6366], which should be treated with due respect (Figure 2).



Fig. 2: Roslin gorge from above.

The path continues and drops to stream level.

5. In the gorge

A clean and accessible exposure of course sandstone with occasional granules and small pebbles (Figure 3) is located at [NT 2821 6344]. Trough cross bedding is developed.



Fig. 3: Trough cross-bedding in the Roslin sandstone

Beyond here the path deteriorates and involves clambering over fallen trees (some with steps cut in and even a rope hand-hold) and rough ground. One section on a narrow ledge is probably under water at times of flood. Either return to the path at the gorge top and continue towards Roslin, or for those who enjoy such things, there are sporadic exposures of more sandstone underlain by dark shale on the east bank of the gorge, with a high cave developed along a vertical joint in one of them. At around NT 2775 6301 the river-level path splits. The lower branch leads to an impressive narrowing of the gorge (Figure 4), but is impassible due to a slime-covered holdless slab. The upper branch leads to the top of the gorge, and the way on to Roslin.



Fig 4: The 'narrows'

Continuing towards the southwest, the path drops back to river level and eventually to Roslyn castle. This is built on a spectacular spur surrounded by the river on three sides. The fourth side has a bridge crossing a partly quarried gorge, with well-developed cross-bedding in the Roslyn Sandstone (Figure 5).

To gain Roslin village, go under the bridge, then right, up to the entrance to the castle (worth a quick visit) and turn left towards Rosslyn Chapel and the minor road to the village centre (the reverse of access 2, above).



Fig. 5: Cross-bedding to the west below Roslin castle.

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