
Spireslack Locality 1: Lawmuir Formation

NGR: [274486 630365]–[274487 630330] [NS 74486 30365]–[NS 74487 30330]

Key category of interest	Rarity	Quality
1. Stratigraphy	4	4
2. Palaeontology	3	4
3. Sedimentary rocks	1	2
4. Mineralisation	3	4
5. Structural geology	1	1

Access: Good access from roadway, but best viewed from a distance.

Current safety: Loose blocks and scree above locality, uneven surfaces underfoot.

Measures to enhance site: Flatten area in front of exposure.

Key categories in order of interest (1 = primary interest); Rarity, 5 = only example in Spireslack, 1 = many examples in Spireslack; Quality 5 = exceptional preservation in Spireslack, easy access/viewing potential 1 = average preservation in Spireslack, difficult access/viewing potential

Photograph overview with polygon boundary

(Overview of Locality 1). Site boundary includes key rock exposures, immediate access to site and potential viewing points to the site. Photo looking to the west, taken from above the scarp looking down on to site.

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Site description

Geology

The locality is important as it exposes a section through the complete Lawmuir Formation, marked by the Hurler Limestone at its base and by the McDonald Limestone at its top. The formation is composed of a sequence of mudstone, siltstone, ironstone, sandstone, and marine limestone. The limestones and mudstones contain abundant fossils; in particular, Giganto productids (simple large productids brachiopods) are common within the Hurler Limestone, whilst the mudstones contain well-preserved in-situ fragments of crinoids and brachiopods including Spirifer. Of lesser importance at this particular locality, there are also a number of brittle fault-related structures (fractures and slickenlines) cutting the mudstones and limestones. The faults are mineralised at this location, which is not often seen across the Spireslack void.

Access

The site affords good hands on access to study the sedimentary rocks, and would be suitable as a teaching locality with some cleaning of surfaces — however, there are a number of potential loose blocks above the face that would need securing before this became a teaching locality. The mudstones are fragile and eroding, making access to some faces difficult. The overall section is best viewed from a distance 3–4 m from the break in slope. A viewing platform here to appreciate the section is recommended.

Site photographs

(Spireslack_1 P1) Section showing McDonald Limestones to the left of the rucksack and the Hurlet Limestone to the right of the rucksack. © BGS, NERC.

(Spireslack_1 P2) 3 m thick section of the brown-yellow bedded Hurlet Limestone overlying dark-grey fossiliferous mudstone (Lawmuir Formation). © BGS, NERC.

(Spireslack_1 P3) Crinoid columns and brachiopods seen within mudstone below the Hurlet Limestone, (Lawmuir Formation). © BGS, NERC.

(Spireslack_1 P4) Ironstone bands within the mudstones (Lawmuir Formation). © BGS, NERC.

[References](#)



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(Spireslack_1 P1) Section showing McDonald Limestones to the left of the rucksack and the Hurlet Limestone to the right of the rucksack. © BGS, NERC.



(Spireslack_1 P2) 3 m thick section of the brown-yellow bedded Hurlet Limestone overlying dark-grey fossiliferous mudstone (Lawmuir Formation). © BGS, NERC.



(Spireslack_1 P3) Crinoid columns and brachiopods seen within mudstone below the Hurlet Limestone, (Lawmuir Formation). © BGS, NERC.



(Spireslack_1 P4) Ironstone bands within the mudstones (Lawmuir Formation). © BGS, NERC.