Sleat 7:

Tokavaig

The mature hummocky topography between Tokavaig and Tarskavaig on the west coast of Sleat is the product of Quaternary glaciation(s) and is composed of lithologies within the Moine Thrust Zone. Where the bedrock is sandstones of the Late Proterozoic ('Torridonian') Kinloch Formation (Sleat Group), there is scrubby heather- and bracken-dominated ground, contrasting with the 'quartzite' (sandstone) ridges of the Cambro-Ordovician Eriboll Sandstone Member, almost devoid of vegetation.

Aspects covered: Late Proterozoic ('Torridonian') strata of the Kinloch Formation (Sleat Group) forming a plunging synform within the Kishorn Thrust Sheet - Cambrian clastic strata of the Eriboll Sandstone Formation within the Ord Window - structural elements (folds, faults) of the Moine Thrust Zone.

Route: A traverse across part of the Moine Thrust Zone at Tokavaig.

Distance: 6 kilometres (4 miles).

Time: 4 hours.

General comments: An examination of (poorly exposed) Torridonian strata of the Kinloch Formation forming a plunging (towards the SW) synform within the Kinloch Thrust Sheet, illustrating the importance of combining aerial image and field observations, and an examination of the well exposed Cambrian Eriboll Sandstone Formation strata that display their stratification characteristics.

The first part of this excursion is a traverse across poorly exposed Torridonian strata, commonly wet underfoot, whereas the second part, on commonly fractured Cambrian Eriboll Sandstone Formation strata on Sgiath-bheinn Tògabhaig, is over well-drained ground.

Parking is available at the side of the road, adjacent to Òb Ghabhsgabhaig, SW of Tokavaig. Walk for *c.* 500m south along the road, uphill, to where a minor track trends east from the road. From here, access the ground occupied by the Torridonian strata. Sgiath-bheinn Tògabhaig is located < 2km towards ENE.

Figure Sleat 7.1: Annotated oblique Google Earth® image of the Tokavaig-Tarskavaig area. Approximate traverse route indicated.

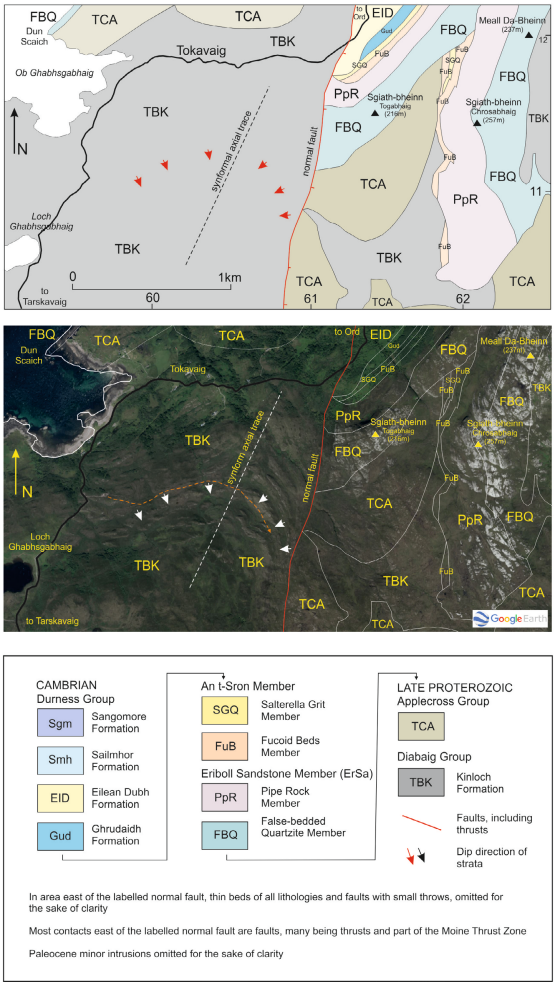

Figure Sleat 7.2: Geological map and annotated Google Earth® image of the Tokavaig area.

To understand the structural relationships of the Kinloch Formation strata within the Kinloch Thrust Sheet, it is necessary to visit a number of locations to observe the orientation and way-up (younging direction) of bedding, which define the recognised synformal structure, obvious on the Google Earth® image. On **Figures Sleat 7.3 & 7.4**, a suggested route is indicated.

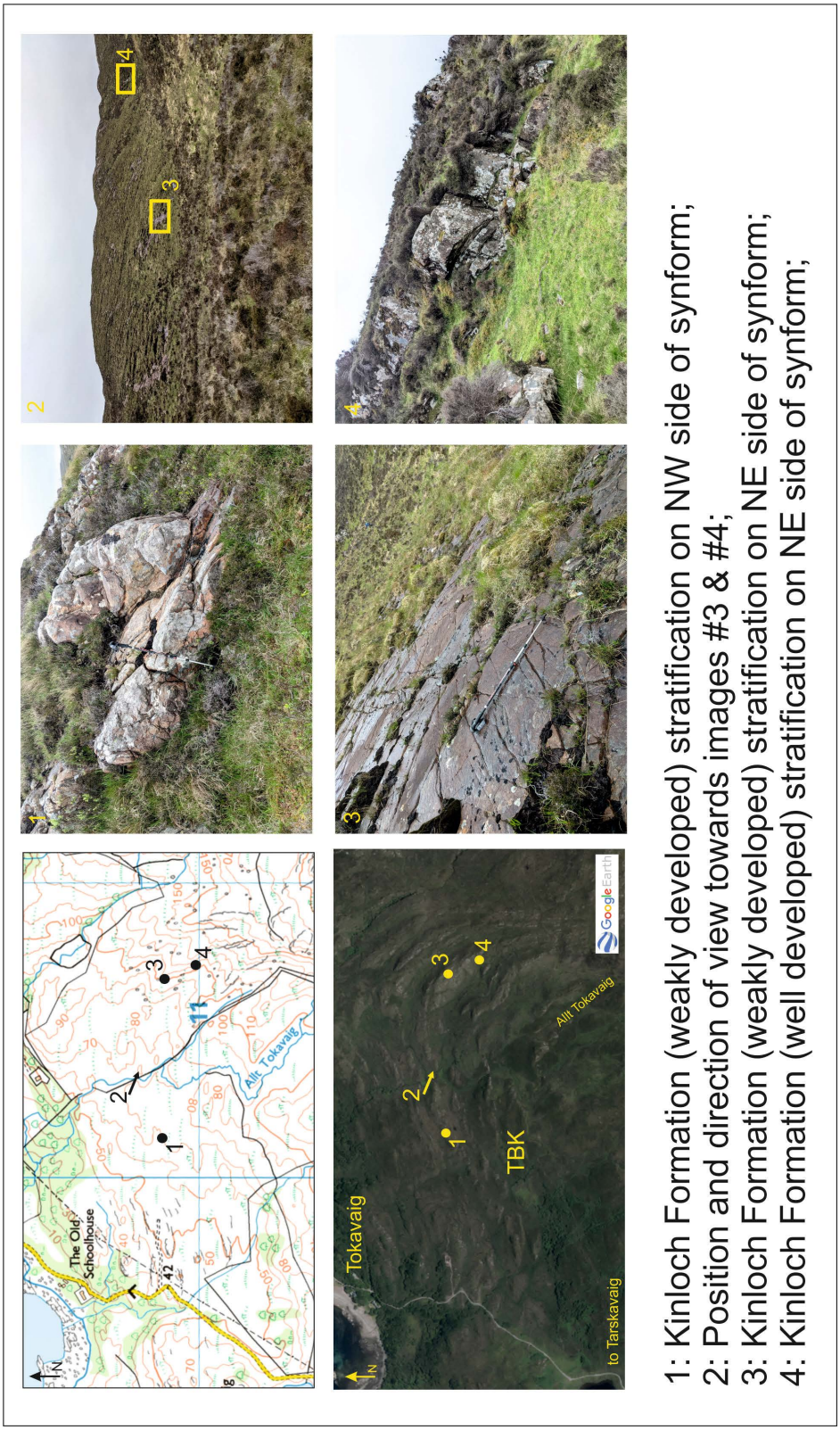

Figure Sleat 7.3: Location map, annotated Google Earth® image and field images of Late Proterozoic ('Torridonian') Kinloch Formation (Sleat Group) strata within the Kishorn Thrust Sheet in the area east of Tokavaig.

After examination of the Kinloch Formation strata that define the synform, two options are available, to end the excursion and return to Òb Ghabhsgabhaig, or to continue NE across an (unexposed) normal fault to Sgiath-bheinn Tògabhaig, to examine well exposed Cambrian Eriboll Sandstone Formation strata, which rarely display their stratification characteristics.

Within the Eriboll Sandstone Formation, two members are recognised: a lower False-bedded Quartzite Member, and an upper Pipe Rock Member.

Characteristics of the False-bedded Quartzite Member are: distinctly white sandstones (commonly referred to as a 'quartzite' due to the effects of pressure solution and the introduction of significant silica cement); a thin basal conglomerate; conspicuous current cross-bedding; uncommon wave ripples; interpreted as tidal channel and shoreface sandstones.

Features of the Pipe Rock Member are: distinctly white sandstones; characterised and easily recognised by the presence of the trace-fossils, *Skolithos,* comprising narrow (3-10mm diameter), vertical cylindrical burrows, and *Monocraterion,* funnel- or trumpet-shaped burrows (up to 3cm diameter) with internal curved laminae (spreite); both trace-fossils may be attributable to the same creature, with the spreite (internal banded pattern) developing as escape features during periods of sediment inundation; pipe lengths may be related to sediment deposition rates, typically several cm up to *c.* 1m; bioturbation has commonly destroyed any original stratification; interpreted as barrier-island to tidal-flat sandstones.

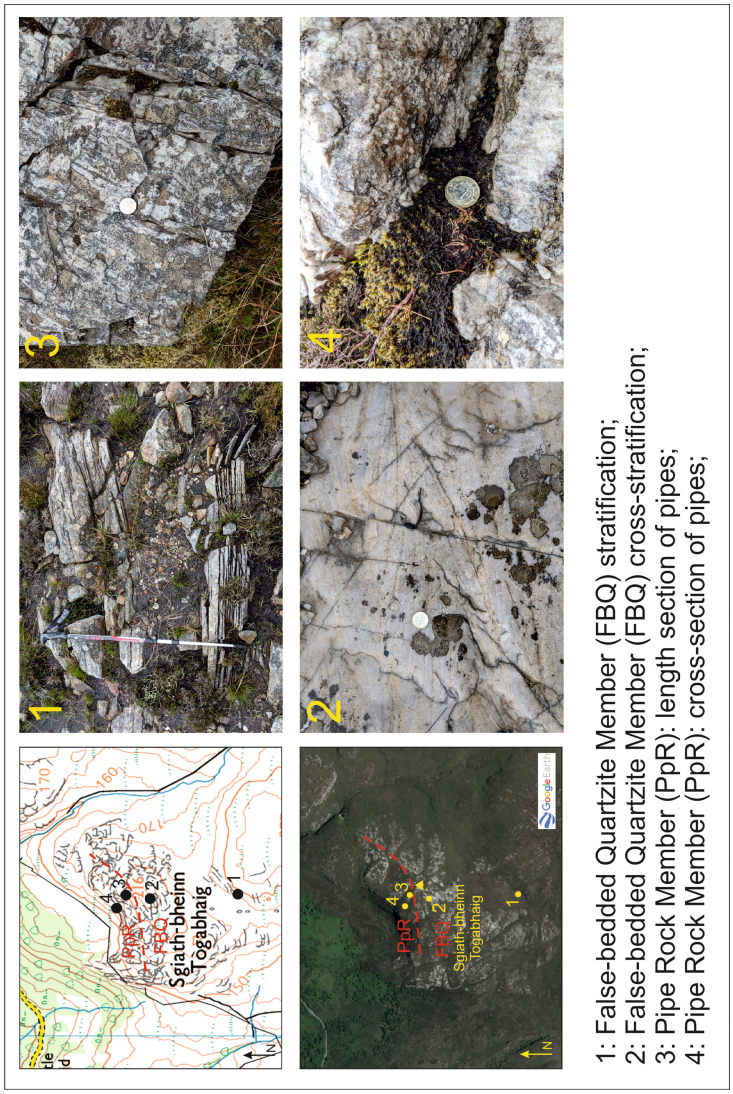

Figure Sleat 7.4: Location map, annotated Google Earth® image and field images of Cambrian Eriboll Sandstone Formation strata within the Ord Window, on Sgiath-bheinn Tògabhaig, east of Tokavaig.

Return to the road.

End of excursion.