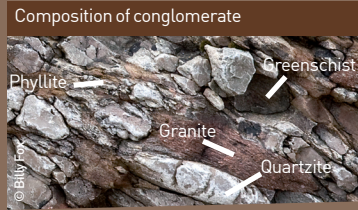


# Trail 6: Funzie to Staves Geo

This trail takes you to another point of contact; this time the base of the upper nappe - a second wave of the ophiolite. It illustrates the massive collision forces at work, which produced the striking Funzie conglomerate. You can see the area of the upper nappe on the geological map on the trails pack folder.

The geowall at the Loch of Funzie (1) represents a cross section of the geology of Fetlar and shows a second wave of ocean crust that was thrust on top of the first. Tens of thousands of years passed between the emplacement of these waves or 'nappes'. During this time, mountains thrust up during the initial collision had time to erode, creating fans of sand and water-rounded stones at their feet. Cemented together, these formed a rock called conglomerate, which you can discover more about (2) and see (3) at Funzie beach. This is no ordinary conglomerate though - it has been run over by the upper nappe!



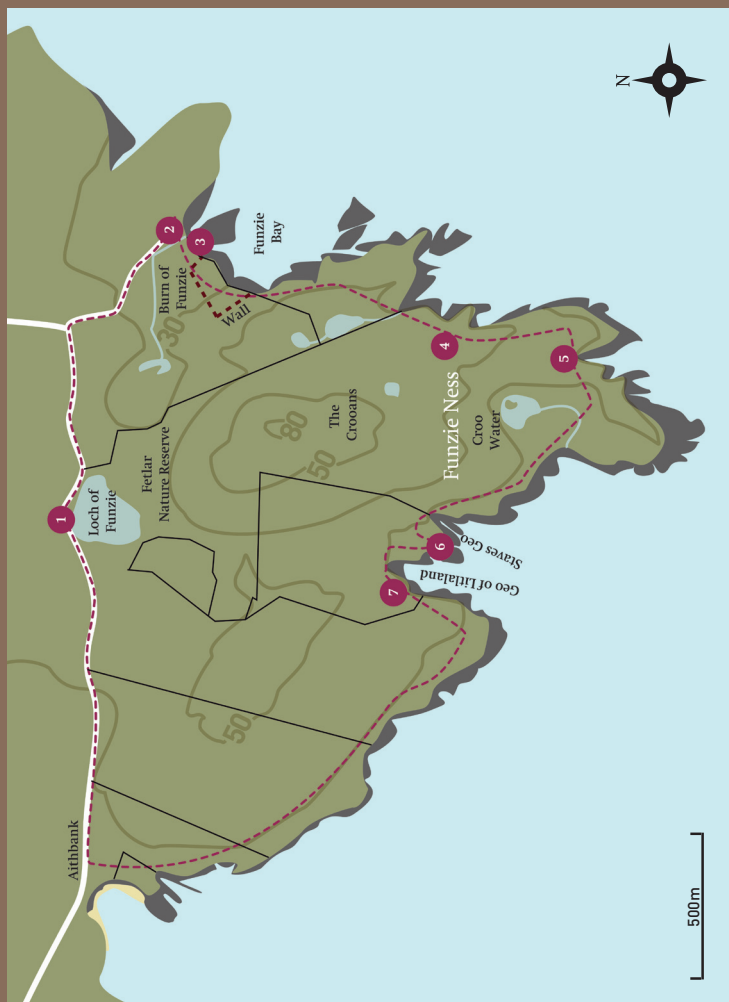
The heat and strain caused by the over-riding nappe deformed the conglomerate. Originally round, the cobbles were squashed into discs or stretched into rods, sometimes twenty times their original length, and the mud and sand between them was metamorphosed (changed) into phyllite. You can make out cobbles of quartzite, granite and greenschist (this last formed when the igneous rocks of the lower nappe were metamorphosed).

Following the coast to Staves Geo, the cobbles become more and more deformed (4), giving the rock a layered structure that is visible in cliff faces along the way (5).

The layering now dips to the west because of later earth movements. This has influenced the shape of the geos (inlets), with a sloping face that follows the layering and a vertical face that cuts across it. Close to Staves Geo, the conglomerate gives way to phyllite - a layer of muddy sand without cobbles that has been metamorphosed. The name 'phyllite' comes from the Greek for 'leaf' and describes the leaf like layers (foliation) along which the rock can easily be split.



The contact between the upper nappe and the conglomerate can be seen beyond Staves Geo, where gabbro lies on top of the phyllites (6). A marker post is placed just above this point to help you find it. This gabbro is a thin sliver from the top of the lower nappe that was caught up and dragged along beneath the upper nappe as it was emplaced. The serpentinite cliffs of the Geo of Litlaland (7), just a few metres to the west, are the base of the upper nappe proper. Millions of years of erosion have exposed these rocks which were once buried deep in the earth.



## Directions

Allow 3 hours

By car / bike: Take the ferry from Belmont to Hamars Ness and follow the road across Fetlar to park at the Loch of Funzie (1). Walk down to Funzie Bay and follow the waymarked route around the coast. When you reach the end point on the trail (7) you may wish to double back, or alternatively continue around the headland until you meet the road. Please do not cut across to the Loch of Funzie as you may disturb breeding birds.

## Interpretation

- Geowall at Loch of Funzie.
- Information panel at Funzie Beach.

## Access

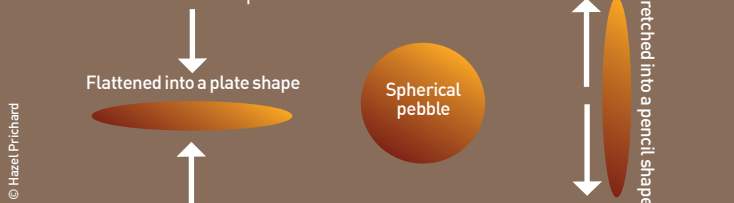


- Route includes a steep incline for c.200m from Funzie Bay.
- Cliffs are high and steep in places; there are no warning signs or barriers.
- Strong winds can make this walk dangerous so check the weather forecast before setting out.
- The route includes a number of two step and ladder stiles.

## Facilities



Available at Fetlar Interpretive centre in Houbie.



Types of deformation of conglomerate at Funzie