

# Tullychurry Forest

## Information Sheet



**Location:** TULLYCHURRY FOREST

**Conservation designations:** N/A

**Grid reference:** H 04637 63873

**Parking available:** Yes

**Personnel to be contacted prior to visit:** None

**Useful equipment:**

- Camera
- Metre stick
- Hand lens

**Relevance to national curriculum:**

- Junior Cert Geography (The Earth's Surface)
- GCSE Geography (The Restless Earth)
- Leaving Cert Geography (Rock Cycle, Tectonic Cycle, Landform Development)
- AS/A2 Geography (Plate Tectonics, Climate Change – Past and Present)

**Rock types and geological processes observed:** psammite

**Geological structures:** foliation, joints

**Site specific hazards and risks:**

- Uneven ground
- Forestry working
- Slip hazard on trails
- Loose boulders
- Quarry faces

**Mitigation measures:**

- Consult weather forecast
- Outdoor learning qualification
- First aid kit
- Appropriate teacher / student ratio
- Clear instructions to be given to students
- Ensure students have appropriate clothing / footwear / PPE

**Did you know:** When the rocks at Tullychurry Forest formed, the island of Ireland was attached to Scotland, North America, Greenland and Norway so evidence of similar rocks can be found in all of these areas today.

**Topics to cover before visit:** metamorphic rocks and processes, igneous rocks and processes, plate tectonics, sedimentary rocks and processes

**Keywords:** psammite, metamorphism, foliation, joints



Psammite



Sandstone



Pegmatite

#### Description of psammite:

- Medium-grained
- Dark grey to white
- Crystalline
- No reaction with HCl
- No fossils
- Banded appearance

#### Description of sandstone:

- Clastic rock
- Medium grained / fine grained
- Pale grey
- No fossils, except for carbonized fragments
- No reaction with HCl
- Layers (bedding)

#### Description of pegmatite:

- Coarse to very coarse-grained
- Interlocking crystals
- Grey, dark grey and white
- No fossils
- No reaction with HCl
- No layers
- Occurs in veins

#### Geological history:

The rocks exposed at the quarry in Tullychurry Forest are a type of metamorphic rock called psammite but they would have originated as sandstones, with rare and thin shale and mudstone horizons. These were deposited around 895Ma when the island of Ireland was in the far south of the southern hemisphere and was covered by ice. This is known from indicative minerals and glacial features found in similar rocks nearby. Since then, the original rocks have undergone high grade regional metamorphism (meaning that they reached very high temperatures under high pressures, almost approaching the molten state). The resultant pressure caused many of the crystals within the country rock to realign giving a banded appearance known as foliation.