TIONSCADAL GEOPHÁIRC
Dhúiche Sheoigheach & Lochanna an Iarthair
JOYCE COUNTRY & WESTERN LAKES GEOPARK PROJECT

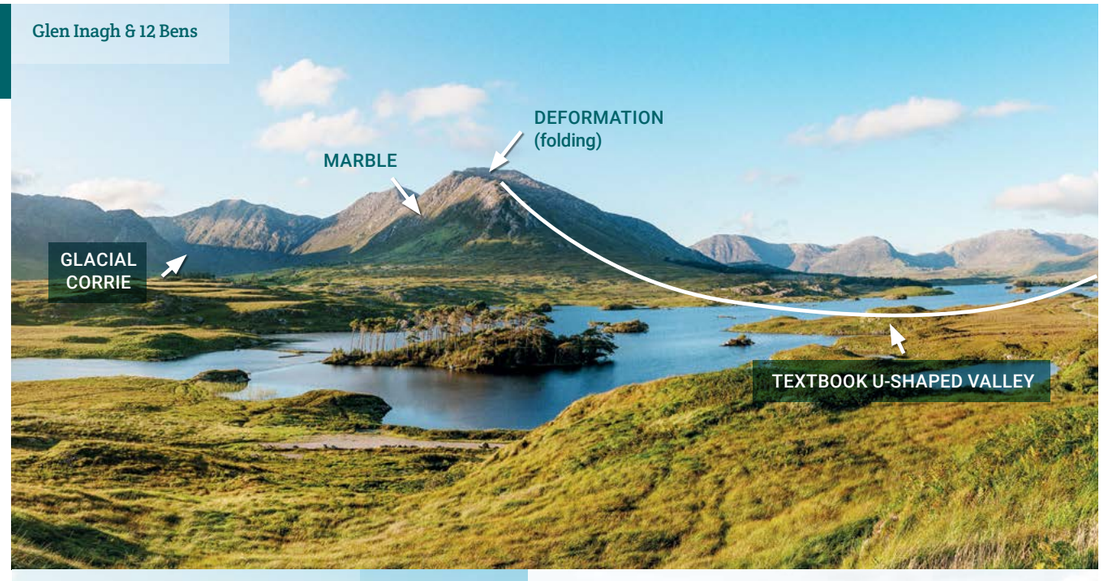
JCWL Geopark Project Fact Sheet

A UNESCO Global Geopark is an area with sites and landscapes of international geological significance and its status adds no further planning regulations to those already in place

Highlights

- A geological story of over 700 Ma told through the rocks and landscape with the best complete record of opening and closing of the Iapetus Ocean.
- Great geodiversity of each rock type (igneous, sedimentary and metamorphic), a rich fossil record and evidence of multiple folding and faulting events in the uplands.
- A vast and diverse glaciological landscape throughout the region that includes many U-shaped valleys, corries and drumlins and Killary Harbour - Ireland's only fjord.
- Important karst and epikarst landscapes (around Loughs Carra, Mask and Corrib) linked to limestone bedrock; Cong isthmus is one of the world's fastest flowing spring complex and has multiple cave systems.
- Lough Carra – a unique marl lake and biodiversity hotspot boasting rare flora and fauna.

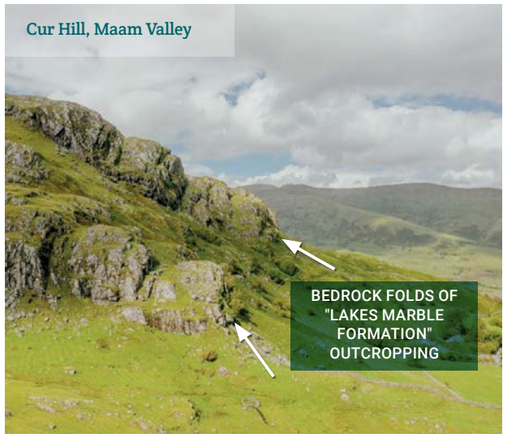
Glen Inagh & 12 Bens



Killary Harbour – Ireland's only fjord

Epikarst on limestone pavement at Clonbur

Cur Hill, Maam Valley



Beyond Geology

- Diverse habitats; blanket bog, fertile grasslands, vast woodlands, limestone pavements, and many lakes and rivers.
- These habitats are home to a range of mammals, birds and plant life.
- Managed lakes and rivers for salmon and World-Cup trout.
- Evidence of human presence 10,000 years ago.
- Neolithic ritual landscapes: stone tombs, stone circles, and rock art.
- Strong associations with many Irish Saints (St Patrick, St Brendan, etc).
- Stone castles and settlements from the Middle Ages.
- Development of large estates such as Ashford Castle.
- Strong tradition of music, storytelling, crafts and food production.

Ma – MILLION YEARS AGO
DATING IS BASED ON CURRENT KNOWLEDGE

The Geological Story in 10 Steps

Where to explore

SITES OF INTERESTS*

1 — 700 Ma — PRECAMBRIAN

Supercontinent of Rodinia, starts to rift (split apart); NW Ireland becomes part of Laurentia, and SE Ireland part of Gondwana. Deposition of sediments on the floor of the new Iapetus Ocean separating the two. **Both are located in the Southern Hemisphere.**

- Corr na Móna*
- Glen Inagh & 12 Bens*
- Maam Valley
- Maam Cross

2 — 485 Ma — ORDOVICIAN

Arc volcanism and deposition of sediments associated with subduction during early closure of the Iapetus Ocean.

- Finny*
- Aill Dubh*
- The Deircs*

3 — 475 - 463 Ma — ORDOVICIAN

Collision of continents with metamorphism (transformation of existing rocks; e.g. limestone into marble), magmatic arc, regional deformation (folding) and relocation of Connemara. Formation of a major mountain range.

- Corr na Móna*
- Glen Inagh & 12 Bens*
- Maam Valley
- Maam Cross

4 — 425 Ma — SILURIAN

Further sediments deposited flat on top of older, deformed (folded) rocks. NW and SE Ireland came together with the closing of the Iapetus Ocean; **The island of Ireland is now whole.**

- Killary Fjord*
- Finny*
- Aill Dubh*
- Cong*
- Maam Valley

5 — 400 Ma — DEVONIAN

Intrusion of Galway granite and occurrence of strike-slip faulting. Major mountain range is being eroded.

- Maam Valley
- Galway Bay

6 — 350 Ma — CARBONIFEROUS

Deposition of limestone in warm, tropical, shallow seas. **Ireland is at the Equator.**

- Lough Carra*
- Ballinrobe*
- Clonbur*
- Cong*

7 — 65 Ma — PALAEOGENE

Opening of Atlantic Ocean and uplift of mountains we see today. **Ireland is at its current latitude.**

- Glen Inagh & 12 Bens*
- The Deircs*
- Killary Fjord*

8 — 35 Ma — PALAEOGENE

Karst landscapes start to develop where limestone outcrops.

- Cong*
- Clonbur*
- Lough Carra*
- Killawalla

9 — 1 Ma — QUATERNARY

Multiple ice ages shape our modern landscape.

- Everywhere (Killary Fjord*, The Deircs*, etc)

10 — 0.01 Ma — HOLOCENE

Arrival of humans in the area.

- Everywhere

Rialtas na hÉireann Government of Ireland | Tionscadal Éireann Project Ireland 2040 | Geological Survey Suirbhéireacht Gheolaíochta Ireland | Éireann

Geological Map of Joyce Country and Western Lakes aspiring geopark region
Mapa Geolaíochta den réigiún den gheopháirc (roimh aitheantas)
Dhúiche Sheoigeach agus Lochanna an Iarthair

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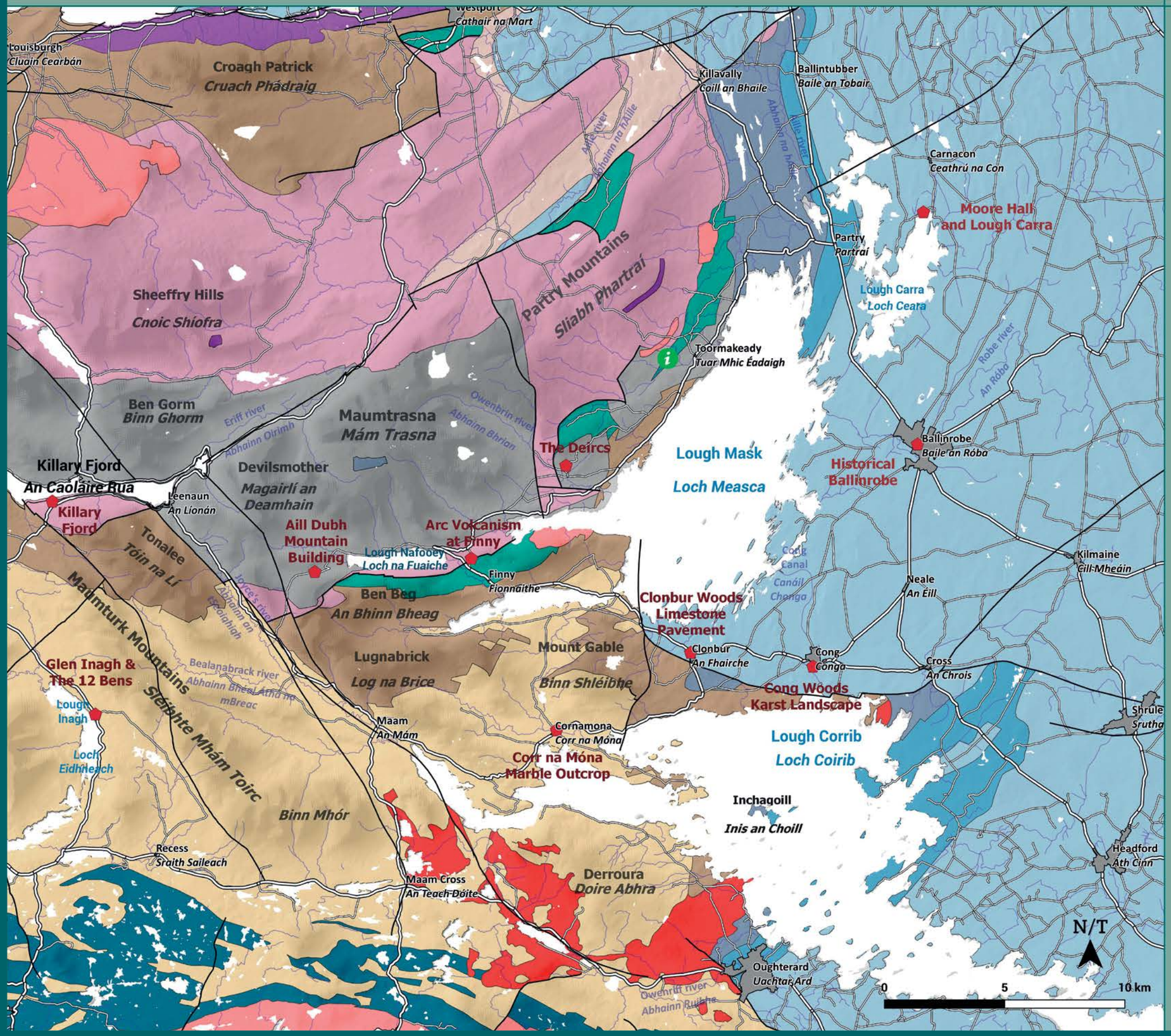

Legend/Eochair Eolais

- Lower Carboniferous (Viséan) sandstone, mudstone & evaporite
  Gaineamhchloch, láibchloch agus gailít ón Treimhse Charbónmhar Íochtarach (Viséach)
- Lower Carboniferous (Viséan) limestone & calcareous mudstone
  Aolchloch agus láibchloch chailcreach ón Treimshe Charbónmhar Íochtarach (Viséach)
- Lower Carboniferous (Tournaisian) limestone
  Aolchloch ón Treimhse Charbónmhar Íochtarach (Thúrnaeiseach)
- Lower Carboniferous (Tournaisian) sandstone, mudstone, limestone
  Gaineamhchloch, láibchloch, aolchloch ón Treimhse Charbónmhar Íochtarach (Thúrnaeiseach)
- Silurian sandstone, siltstone, conglomerate
  Gaineamhchloch, siltít, comhcheirtleán Siolúrach
- Middle to Upper Ordovician slate, sandstone, greywacke, conglomerate
  Slinn, gaineamhchloch, gréabhaca, comhcheirtleán ón Treimhse Ordaivíseach Láir go hUachtarach
- Lower to Middle Ordovician slate, sandstone, greywacke, conglomerate
  Slinn, gaineamhchloch, gréabhaca, comhcheirtleán ón Treimhse Ordaivíseach Íochtarach go Láir
- Ordovician volcanic rocks
  Carraigeacha bolcánacha Ordaivíseacha
- Precambrian metamorphic rocks - Dalradian quartzite, marble, schist
  Carraigeacha meiteamorfach ón Réamhchaimbriach - Dálriadach grianchloichít, marmar, siosta

Igneous Intrusions/Bruth-Ionsánna

- Palaeogene gabbro, dolerite
  Gabró, dolairít Pailéigéineacha
- Siluro-Devonian granite
  Eibhear Shiolúrach-Deavónach
- Lower Palaeozoic gabbro, diorite
  Gabró, dióirít ón Tréimhse Phailéasóchíochtarach
- Ordovician granitic rocks
  Caraigeacha eibhreacha Ordaivíseacha

Other/Eile

- Fault
  Éasc
- Rivers
  Abhainn
- Sites of interest
  Suíomhanna speise
- Information centre
  Ioanad eolais

Scale/Scála 1:115000
Projection/Teilgean: Irish Transverse Mercator

Geological data from Geological Survey Ireland
Sonraí geolaíochta as Suirbhéireacht Gheolaíochta Éireann

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Tionscadal maoinithe mar chuid de Thionscadal Éireann 2040