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## Bryniau Clwyd – disgrifiad cyryno

Y bryniau helaeth hyn yw'r grib lydan rhwng Dyffryn Clwyd a Bro Llangollen, a rhan orllewinol (Glannau Dyfrdwy) gwastatir Sir Gaer. Gan ymestyn o Ronant yn y gogledd i Acerfair a Gwyddelwern yn y de, mae'n cynnwys nifer o ardaloedd penodol o dir uchel sy'n cwmpasu craidd y gadwyn o fynyddoedd a elwir yn Fryniau Clwyd (Moel Famau, Moel Llys y Coed a Moel Arthur), Mynydd Llandysilio (Moel y Gamelin, Moel Morfydd, Moel y Faen a Moel y Gaer), Mynydd Rhiwabon a Chyrn y Brain, a Mynydd Helygain / Moel y Gaer). Mae'r ardal yn nodedig am y creigiau calchfaen godidog yng Nghreigiau Eglwyseg, uwchlaw Dyffryn Dyfrdwy rhwng Trefor a Chraig y Cythraul, ac am y gyfres wych o gaerau Oes yr Haearn ar gopaon Bryniau Clwyd, sydd ei hun yn Ardal o Harddwch Naturiol Eithriadol. Mae cyfoeth mwynau'r ardal wedi'i ecsbloetio ers canrifoedd, yn enwedig plwm a sinc yng Nghomin Treffynnon a Mynydd Helygain, a glo yn y dwyrain, lle mae'r ardal yn cynnwys rhannau uchaf y tirweddau diwydiannol uwchben Brymbo a Wrecsam. Mae'r ardal yn gymysgedd o gysylltiadau diwylliannol Cymraeg a Saesneg sy'n adlewyrchu'r cysylltiad hanesyddol rhwng y dylanwadau Cymreig yn bennaf i'r gorllewin a'r rhai Seisnig i'r dwyrain.

### Summary description

This extensive upland area forms the broad ridge between the Vales of Clwyd and Llangollen, and the western (Deeside) part of the Cheshire plain. Extending from Gronant in the north to Acerfair and Gwyddelwern in the south, it includes a number of distinct areas of high ground that encompasses the Clwydian Range core (Moel Famau, Moel Llys y Coed and Moel Arthur), Llantysilio Mountain (Moel y Gamelin, Moel Morfydd, Moel y Faen and Moel y Gaer), Ruabon Mountain and Cyrn y Brain, and Halkyn Mountain / Moel y Gaer).

This area is remarkable for the spectacular limestone outcrops at Creigiau Eglwyseg, above the Dee valley between Trevor and Craig y Cythraul, and for the great string of Iron Age hillforts topping the summits of the Clwydian Range, itself an AONB. The mineral wealth of the area has been exploited since early times; notably lead and zinc at Holywell Common and Halkyn Mountain, and coal in the east, where the area includes the upper parts of the industrial landscapes above Brymbo and Wrexham. The area is culturally distinguished by its mix of English and Welsh cultural associations, reflecting the historical interface between predominantly Welsh influences to the west and English to the east.

Key Characteristics
<b>Rounded, heather clad open hills in two main groups</b> , a northern chain rising to Moel Famau (554m), a southern chain rising to Moel y Gamelin (577m). Formed by sandstones and argillaceous rocks and shales.
<b>Narrow, minor river valleys dissect the hills</b> - draining into the Vales of Clwyd or Llangollen
<b>A gentle intervening vale</b> - the River Alyn flows north, at times incised, then east.
<b>Well defined western and southern edges</b> – with adjacent deep valleys.
<b>Carboniferous Limestone to the east</b> - with classic scenery of clints, grykes, crags and scarp slopes, use of stone in field boundaries and buildings, large quarries, and in places an exposed appearance. Gentler slopes towards Deeside.
<b>A series of minor rivers</b> - have their sources in the hills, draining west into the Clwyd in the Vale of Clwyd.
<b>Heaths</b> - in the Halkyn Mountain area.
<b>Hedgerows and numerous hedgerow trees</b> - improved hill sheep grazing and lowland



pasture.
<b>Quarries and mining heritage</b> – a number of large limestone quarries in the east and slate quarries in the south near Horseshoe Pass. Extensive evidence of old mineral workings on Halkyn Mountain.
<b>Archaeology</b> - a relatively high density of prehistoric ritual and funerary monuments, including round barrows, and later, Iron Age hill forts indicate the area’s past strategic importance.
<b>Historic parks</b> - A number of historic parks and gardens occur within the area, notably Bryngwyn and Penbedw.
<b>Culturally a divide</b> - the area reflects the historical divide between English influences to the east and Welsh influences to the west. Parts of the area are designated as an AONB.
<b>Sparse level of settlement</b> - confined to compact, nucleated hamlets and isolated farmsteads. Crossed by a number of arterial ‘A’ roads, the presence of the A55 Expressway across the northern part of the area is the most apparent.

## Visual and Sensory Profile

The most extensive upland areas in the Clwydian Range are centred on Moel Famau at 554m altitude and Moel y Gamelin at 577m altitude. These are areas of smooth, open, rounded, and distinctively shaped heather-clad hills. Their undulating ridge lines and skylines, together with rolling profiles, create a distinctive landscape of sinuous, organic form. High valleys and passes provide their only breaks, with the exception of occasional large-scale elements such as coniferous plantations. This creates a simple landscape, very much marked with seasonal colour contrast, with a variety of vegetation types, including heather, gorse, bracken and bilberry. The Jubilee Tower on the summit of Moel Famau, and the Moel y Parc radio transmission mast above the Vale of Clwyd are very distinctive hilltop landmarks. The northern half of the area has been designated as an AONB.



The main chain of the Clwydian Range comprises a series of smooth heather-clad hills. View towards Moel Gyw, Llanarmon-yn-iâl. © John Briggs





A secondary, but no less distinctive limestone landscape, as at Y Graig SSSI, seen from the west © John Briggs

These uplands are also noteworthy when viewed from England: Moel Famau and Mynydd Halkyn from Merseyside and the Wirral, and Ruabon Mountain and Esclusham Mountain from Shropshire and Cheshire. These two groups of hills also form strong boundaries respectively with the Vale of Clwyd to the west and the Vale of Llangollen to the south.

By contrast, some peripheral hills to the north (Graig Fawr), east (Halkyn Mountain, Eyrys) and south (Eglwyseg Mountain), exhibit distinctive limestone characteristics, with cliffs and rock exposures in places. The area between the two main groups of heather-clad hills, the vale of Alyn between Mold and Llandegla, also exhibits land form and land cover that has been shaped by limestone exposures. The results are remarkably distinctive landscapes. Elevated parts feel more remote and upland in character than their altitude or extent alone would suggest. Nevertheless, Bryn Alyn at 408m altitude, for example, is sufficiently elevated to provide prospects of the Wirral peninsula and Merseyside beyond. In the upper vale of Alyn, lines of trees and field boundaries follow the complex lines of rock exposure, producing a very small-scale, intimate, enclosed farmed landscape with small pastures and woodland.



Settlement, and open heath, pock-marked with relict mining features on Halkyn Mountain.

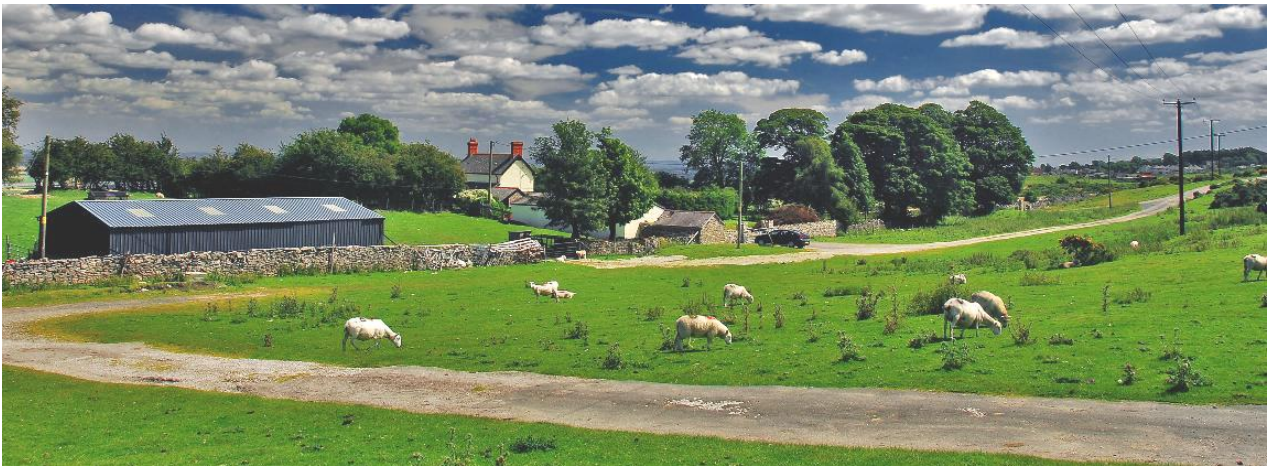
© John Briggs



To the north of this, at Loggerheads, the River Alyn cuts into the limestone, revealing rock exposures and in places here, the river disappears at times of drought, reappearing further down-stream.

The areas to the north and east of Caerwys exhibit an extensive, rural, neat, planned character of some distinction and contrast to the adjacent line of low hills that forms Halkyn Mountain. These low hills are partly unenclosed, covered in heath land, and riddled with old mineral workings, quarries and scattered cottages.

The area is rural and is largely upland, quiet and undeveloped, despite a number of quarries. With its relatively low population density, it contributes to a sense of quietness and tranquillity that contrasts with the busier, industrial and urbanised character of Deeside and Wrexham to the east. The Clwydian Range provides the nearest upland countryside recreation haven in Wales, for the populations of the greater Deeside, Wrexham, Chester and Merseyside areas.

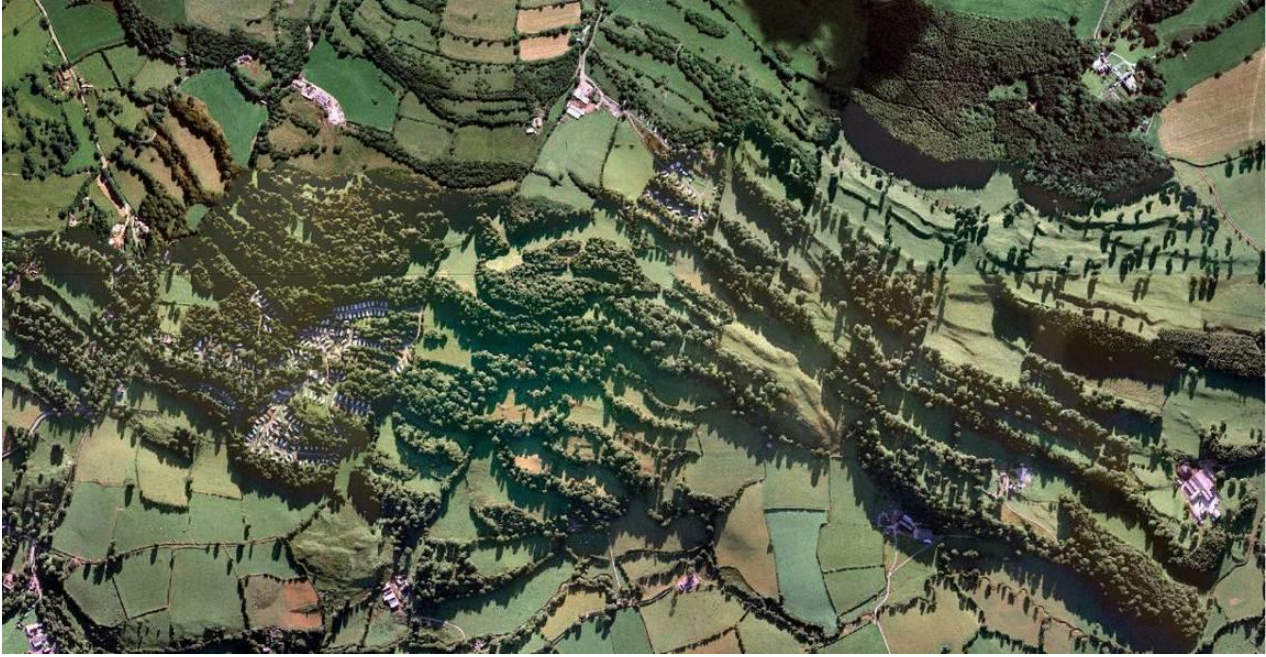


Agriculture at Halkyn Mountain, in the north-east of the area. © John Briggs



Intervening lowland between hills, with woodland and agriculture, as seen within the area near Mold. Looking towards the foothills of Moel Famau. © John Briggs





Limestone geology-influenced woodland and field pattern near Llanarmon-yn-ial. © Getmapping 2006



Looking from the limestone clints on Bryn Alyn (near Llanferres), south-west towards the heather-clad moors of Llantysilio Mountain, beyond which are seen the rolling plateau moors of Y Berwyn. © John Briggs

## Geological Landscape influences

The physical landscape of Clwydian Range area can be divided into distinct parts influenced by the underlying rocks, and by geomorphological processes. The core of the Clwydian Range and Llantysilio Mountain comprise Silurian mudstones, which are



relatively soft and lead to rounded hills with an undulating topography, often with heather-clad summits. The western side of this part of the Clwydian Range is marked by the Vale of Clwyd Fault, whereas much of the eastern side is defined by the glacial meltwater features (sands, gravels, kettle holes etc.) of the Wheeler Valley. Another part where Carboniferous Limestone has also created a distinctive landscape exists to the east of the Clwydian Range, where there is a broad ridge composed of several successive, west-facing escarpments, which rise up to around 350m in height on Halkyn Mountain. Further areas of limestone are prominent around the Eryrys / Maeshafn area and Minera (GCR site), but the most dramatic part of the limestone landscape is Creigiau Eglwyseg (GCR site). This escarpment, towering above Llangollen, is nearly 8km long and rises over 450m in a series of steps which reflect the different rocks units that record changes in way in which these rocks were originally deposited around 350 million years ago. Another part where the bedrock geology has strongly influenced the physical landscape is Ruabon Mountain. Here, the Millstone Grit overlies the Carboniferous Limestone and supports a large upland area of heather moorland. There are extensive underground cave systems, while localised mineralisation of the limestone is present, with the lead deposits at Halkyn Mountain (GCR site) having been worked since Roman times. More latterly, the coal measures above Wrexham were extensively mined.

The main river, the Alyn, rises east of Bryneglwys and flows in a northerly direction past Llanarmon-yn-iâl, and through the limestone scenery at Loggerheads to Rhydymwyn, where it changes to a south-easterly direction, before its confluence with the Dee in the Maelor Saesneg area to the east.

## Landscape Habitats influences

The underlying geology gives rise to well-drained loamy and fine loamy or silty soils, supporting a range of land cover elements and land-uses including hill sheep farmland, unenclosed moorland, lowland sheep-grazed pasture and occasional areas of arable cultivation. Habitats range from a large expanse of dry heather moorland on Ruabon Mountain and Esclusham Mountain (extensive SSSI and SAC), extending along the southern parts of the ridge, through areas of bilberry moor and acid grassland to limestone grasslands on the exposed limestone peak of Y Graig (SSSI) in the north. The main ridge top is open and exposed, followed closely by Offa's Dyke Path. Along the flanks of the main ridge on both east and west facing slopes, the enclosed land consists of improved grassland with extensive bracken on the steeper slopes where improvements are more difficult to maintain.

At the extreme north of the Clwydian Range, at its narrowest, rocky limestone outcrops predominate. Graig Fawr (SSSI) is an important area of calcareous grassland just south of Prestatyn, with a range of interesting plant species, including the nationally scarce hoary rockrose, and butterflies in summer including the silver-studded blue and the northern brown argus.

The core part of the area defined here as the Clwydian Range is dominated by the peaks of Moel Llys y Coed and Moel Famau. The vegetation ranges from heather moorland to acid grassland, with agricultural improvements in places close to the ridge top. To the east the extensively mined and quarried area of Halkyn Common (extensive mosaic of SSSI and SAC) and the Holywell Grasslands support open calcareous metal-tolerant grassland, dry heath and fen meadow, with important populations of spring sandwort, stemless thistle and great crested newt.

In the south of the area, Ruabon Mountain and Llandegla Moors form extensive tracts of heather moorland, essentially an extension northwards of the Berwyn range. The area is actively managed for grouse-shooting. Carboniferous Limestone outcrops over parts of the area, leading to a variety of limestone and neutral grasslands, where nationally rare species such as the rigid buckler fern occur at their southern limit in Britain. Llandegla Moors (SSSI and SAC) is a similar gently undulating area of plateau, where rotational burning and light grazing pressure has maintained the heather-dominated heathland. It now supports a large and varied breeding bird community, including curlew.

On the flanks of the hills are small valleys draining east or west, sometimes deep and narrow with fringing oak woodlands. The Alyn Valley woodlands on the east of the main ridge occupy a narrow limestone gorge (SSSI and SAC) with a rich assemblage of woodland and calcareous grassland species, including an important population of wayfaring tree and grizzled skipper butterfly. Former lead and zinc mines spoil tips nearby provide a habitat for many open ground species such as spring sandwort. There are areas of conifer plantations, the largest of which clothes the eastern slopes of Moel Famau.

## Historic Landscape influences

A pattern of very early human activity and habitation extending back to the Palaeolithic period is evident in preserved deposits found within the limestone caves at Cae Gwyn and Ffynnon Beuno, near Tremeirchion and at the Gop Cave near Trelawnyd in the north of the area. Excavations have yielded human bones and implements as well as the bones of lion, spotted hyaena, wolf, bear, woolly rhino and mammoth, reflecting the great climatic oscillations that occurred during the last Ice Age.

The area has a significant number of Bronze Age ritual and burial monuments, usually prominently placed on summits, but the heart of the Clwydian Range is most notable for the chain of Iron Age hillforts occupying the summits along the crest of the west-facing ridge line overlooking the Vale of Clwyd. These include Moel y Gaer, Moel Arthur and Penycloddiau.

In the late Medieval period, early open field systems were lost to enclosure in the lower slopes and foothills, in addition to the increasing influence of landed estates with historic, designed parkland such as at Bryngwyn and Penbedw. An older landscape of settlement survives to the west, marked by a series of nucleated villages, including the shrunken Medieval borough of Caerwys.

Holywell Common and Halkyn Mountain are notable for their historic lead and zinc mining from the Roman and Medieval periods, one of the richest veins of lead and zinc ores in this part of the Carboniferous Limestone belt, which continued to be worked until the 19th century. An extensive network of craters and tips is the legacy of these workings on the common lands and rough pasture.

Other industries have shaped the area, including lead-mining, iron-production and working for coal on the slopes that overlook Wrexham, at Minera, Brymbo, Coedpoeth and Pen y Cae. These industries supported a range of settlement types, including many areas of informal, piecemeal growth, sometimes with its origins in encroachment on common or waste land. An entirely different industry is the Rhyd y Mwyn site, on the periphery of this area, built on part of the former lead-mining field, an important centre for Cold War technology, now disused.



The building traditions of this area reflect the availability of good stones across the area, but the manufacture of brick in adjacent areas – Wrexham, Ruabon and Buckley – was also very influential.

## Cultural Landscape influences

This upland area has seen a considerable cultural mix. A marked feature is place-name elements which combine English and Welsh, such as Gwernaffield and Rhosesmor ('rhos' + 'moor'), reflecting its historical changes from one lordship to another. Its great string of hillforts reflect a time when settlement was in defensive sites in the uplands rather than as later in open towns, villages and farms in the fertile valleys, yet the industrialisation which touched this area, particularly at Halkyn, at Brymbo and Bwlchgwyn and in the old lead mines of Esclusham, once again made the higher areas a focus of human activity, and also brought new ways of life into the area. John Taylor (1779-1863), agent of the Grosvenor mines on Halkyn from 1821, was one of the outstanding figures of mining world-wide in the 19th century, instrumental in establishing the Cambourne School of Mines and in sustaining University College, London in its early days.

The poetic associations of the area reflect both its Welsh and English dimensions. The first documented eisteddfod in Wales, in the reign of Gruffydd ap Cynan, was held within the area at Caerwys. Later, Caerwys, and its association with St Winifred (Gwenfrewi) fascinated the priest-poet Gerard Manley Hopkins (1844–1889), who learnt Welsh and tried his hand at cynghanedd. W.H. Auden, in 'Perhaps', the prologue to 'Musée des Beaux Arts', speaks in a characteristically elliptical way of how:

".. children in Chester look to Moel Famau to decide  
On picnics by the clearness or withdrawal of her treeless crown".

- a reminder of how tourism and recreation for people from the Dee and Mersey basin are part of the area's culture. The best-known leisure place is Loggerheads, a 'beauty-spot' bought by the Crosville bus company in the late 1920s. In more recent years, the area's natural and human heritage have been recognised as in the Clwydian Range AONB, and by their project initiatives such as 'Heather and Hillforts'.