Cyfoeth Naturiol Cymru
Natural Resources Wales

National Landscape Character

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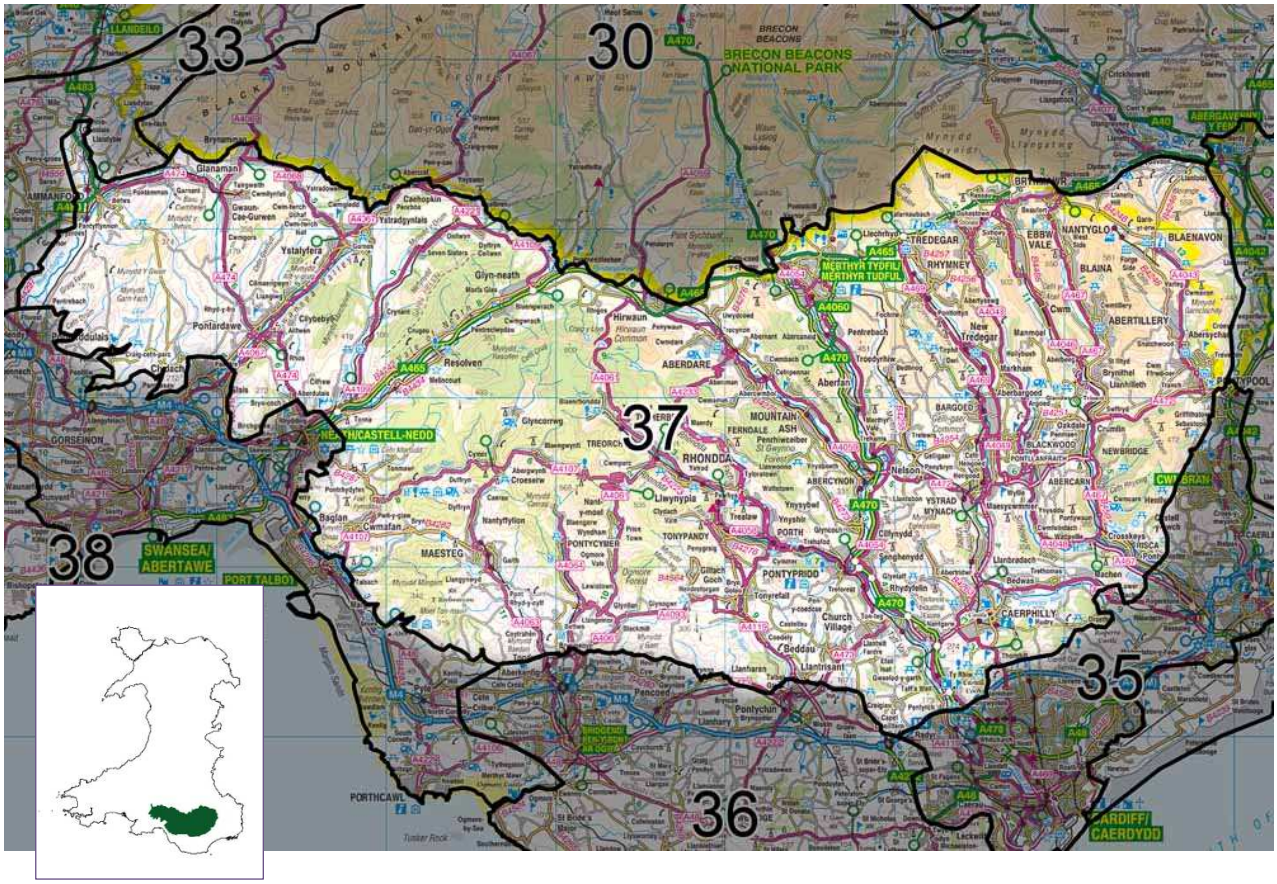
NLCA37

SOUTH WALES VALLEYS



Cymoedd y De – disgrifiad cryno

Mae llawer o gymoedd dwfn, trefoledig yn brathu i fynydd-dir eang. Ynghyd â'r etifeddiaeth ddiwydiannol, a hunaniaeth bendant ei phobl, mae ardal Cymoedd y De wedi esgor ar rai o ddelweddau cenedlaethol mwyaf adnabyddus ac eiconig Cymru.

Mae datblygiad strimynnog yn llenwi llawer o waelodion a llethrau isaf y cymoedd. Ochr yn ochr â'u cymeriad trefol a diwydiannol, ceir dir bryniog dramatig, gyda llethrau serth, gweunydd agored neu goedwigoedd. Mae rhwydweithiau o reilffyrdd a ffyrdd yn cydgysylltu pentrefi'r cymoedd. Mae natur y tir yn cyfyngu ar dramwyo rhwng y naill gwm a'r llall, ac nid oes ond ychydig fylchau uchel rhyngddynt. Mae twrw a phrysurdeb llawer o gymoedd yn gwrthgyferbynnu â chymeriad cymharol anghysbell a gwyllt y llwyfandiroedd uchel cyfagos.

Darparodd daeareg a dyddodion mwynol yr ardal yr adnoddau a sbardunodd ymlediad cyflym datblygu diwydiannol yn y 19eg ganrif. O fedru cludo ar reilffyrdd, creodd y diwydiannau glo, dur a haearn newydd seilwaith eang o adeiladau mawrion, ffwrneisiau, tyrau, simneiau, traphontydd, tomennydd gwastraff a lefelydd. Canlyniad cartrefu'r gweithwyr yw'r rhesi hirion ac eiconig o dai teras sy'n canlyn ochrau'r bryniau: ac yn sgîl y gweithwyr, daeth capeli, siopau, ysgolion a chyfleusterau eraill, gan greu cymunedau newydd, trefol eu natur. Canlyniad arall bywyd yno, a'r amgylchedd garw, fu delwedd cymdeithas wydn, radicalaidd ei gwleidyddiaeth, a hoffai chwarae rygbi.

Canlyniad dirywiad diwydiannol ddiwedd yr 20fed ganrif fu cau, symud ymaith, gadael neu ailddatblygu llawer o safleoedd diwydiannol blaenorol. Mae'r newidiadau hyn yn parhau heddiw, fel y mae'r newidiadau cymdeithasol canlyniadol ym mywyd a hunaniaeth y cymunedau. Gwelir yr ardal, bellach, yn rhan o "ranbarth dinas" ehangach a chynyddol ôl-ddiwydiannol, y fwyaf yng Nghymru. Mae delwedd eiconig newydd yn aneglur, ar brydiau, ond y mae gweithgareddau wedi'u seilio ar yr etifeddiaeth, mewn amgylchedd tynerach a gwyrddach, yn dechrau dod i'r amlwg fel rhan o hyn.

Summary Description

Many deep, urbanised valleys dissect an extensive upland area. Combined with industrial heritage and the distinct identity of its people, the South Wales Valleys provide some of Wales' most widely known and iconic national images.

Extensive ribbon development fills many valley bottoms and lower slopes. Their urban and industrial character is juxtaposed with dramatic upland settings with steep hillsides, open moors or forests. Networks of railways and roads connect valley settlements. Topography constrains passage between valleys, and there are only a limited number of high passes between valleys. The noise and business of many valleys contrast with the relatively remote and wild qualities of adjacent hill plateaux.

Underlying geology and mineral deposits provided the resources that fuelled a rapid spread of industrial development in the C19th. Once rail transport became possible, new coal, steel and iron industries created an extensive infrastructure of large buildings, furnaces, towers, chimneys, viaducts, spoil heaps and levels. Housing for workers resulted in the extensive and iconic rows of terraced houses that run along hillsides. Their needs in turn brought chapels, shops, schools and other facilities to create new settlements with an urban character. The way of life and harsh environment resulted in the image of a tough, rugby playing and radically minded society. But the decline of industries in the late C20th resulted in the closure, removal, abandonment or redevelopment of many former industrial sites. These changes continue today, as do the consequential social changes to the way of life and community identity. The area is now seen as part of a wider, increasingly post-industrial, 'city region', the largest in Wales. A new iconic image is at times unclear, but heritage-based activities set within a softer, greener environment are emerging as part of this.

While greenness is returning to some former industrial landscapes many of the new woodlands are coniferous. Waterways are slowly welcoming back fish, and mammals such as otters. The importance of wildlife conservation being undertaken hand-in-hand with economic regeneration is being recognised as one of the keys to the sustained revitalisation of this most iconic Welsh 'bro', in the Heads of the Valleys and Valleys Regional Park initiatives.

Key Characteristics
Extensive Upland plateaux – typically wild and windswept, often with unenclosed tracts, running roughly north-south as 'fingers' parallel between intervening deep valleys.
Numerous steep-sided valleys - typically aligned in parallel, flowing in southerly directions, shaped by southward flowing glaciers, leaving behind distinctive corrie ('cwm') and crag features. Major rivers include the Tawe, Taff and Rhymney.
Ribbon urban and industrial areas in valleys – in places extending up valley sides and to valley heads. The area is sometimes regarded as being part of a 'city region'. Middle and eastern valleys tend to be the most heavily and continuously developed, e.g Rhondda Valley. The uplands by comparison have little or no settlement.
Extensive remains of heavy industry – with a mix of derelict, preserved and largely redeveloped areas, notably for coal mining. Preserved as heritage (World heritage Site) at Blaenafon this typically includes old railway alignments, buildings and former tips.
Contrast of urban valley activity next to quiet uplands – e.g. busy roads, new developments, traffic noise, night lighting, verses the adjacent wilder, remoter, quieter uplands.
Large blocks of coniferous plantation and deciduous woodland fringes – covering many steep hillsides and hilltops, most notably in the middle to western portion of the area, providing a softer contemporary landscape where there was once industry.
Heather, rough grassland and steep bracken slopes – dominate many plateaux and are grazed mainly by sheep. Much is common land.
Improved pastures on some lower valley sides - grazed by sheep and some dairy cattle.
Field boundaries - dry stone walls mark the boundary of common land while fields on lower slopes are bounded by dense hawthorn hedges, interspersed with swathes of broadleaved woodland.
Transport routes restricted to valleys – the intervening topography makes valley to valley travel difficult, except at heads and bottoms of valleys. Occasionally there are roads that climb steeply over passes with dramatic views and 'hair pin' bends.
Iconic cultural identify – many popular images of a tough, rugby-playing, religious, radically-minded society still remain associated with the South Wales Valleys, however today's post-industrial, internet-connected reality is somewhat different.

Visual and Sensory profile

The South Wales Valleys is one of Wales' more widely known iconic images, combining the wilder and often inclement upland setting with the heavily industrialised and busy valleys. Active mines and industry are now generally an image of the past, however the legacy remains extensively apparent today and together with the steep topography of the valley sides, has a defining influence on landscape character. Levels and old railway alignments, the generally reclaimed but sometimes still perceptible physical footprints of mine spoil heaps, the often intensively urbanised valley floors with old industrial buildings, and lower valley sides with their distinctive long rows of workers terraces, retain the traditional image.

Yet today a new image is gradually but fundamentally changing the old one. Modern road improvements and bypasses bristle with street lighting, spreading the urban influence beyond the old settlement envelopes and altering the character experienced when travelling. In many valleys the legacy of slow travel through the ribbon development continues today, but in some places and notably along the A470 north-south corridor and along the A465 "Heads of the Valleys" east-west corridor road, travel is now much quicker.

For those with cars, the area has become far more easily accessed and the once very separate valleys are now just a few minutes drive apart. The orientation of valleys and the remaining legacy of railways and roads focus travel towards Wales's two largest cities, Cardiff and Swansea, which lie in neighbouring areas to the south, offering the combination of upland valley living and city working. The noise of industry and railways has typically changed to that of road traffic. Many former brownfield sites have been redesigned and redeveloped for new housing, industry and retail. These modern features of the mid and late C20th provide an entirely contemporary character, tending not to style their architecture or pattern of urban design using the traditions established in the C19th. The results tend to lack local distinctiveness, however a 'Valleys' sense of place still remains strong because of the enduring historic and dramatic upland landscape setting.

It is a landscape of contrasts. The valleys contain the extensive ribbon development, which snakes along the valley floors and lower valley sides, and sometimes with settlements precariously extending over intervening slopes and spurs. The windswept upland plateaux that separate the valleys could not be more different. Devoid of settlement, the uplands engender a strong sense of openness and remoteness, although in places compromised by proximity to industry and people, for example reclaimed spoil heaps, fly tipping, abandoned cars, 'horsiculture' and associated ramshackle sheds or allotments, pressure of people accessing the area for recreation in an unmanaged way, and occasional pylon lines, telecommunications masts and occasional wind turbine developments. But the open plateaux afford extensive views across the valleys, southwards to the Severn Estuary and northwards to the Brecon Beacons. At times, views from plateau to plateau conceal the intervening valleys and thus visually connect more with the wider uplands of Wales.

The middle to western valleys are dominated by the extensive coniferous plantations whereas the eastern valleys, although generally smaller, are more intimate. On many valley sides, there are distinctive 'ffridd' and 'rhos pasture' mosaics of small fields, hedgerows, boundary walls, wet flushes and marshland, interspersed with small stands of trees, copses and woodlands. It is the vestige of the former agricultural landscape that once dominated before the expansion of coal mining and the iron industries. The far western valleys, (those west of the Neath Valley) have slightly gentler intervening hills and long, unfenced lanes use the ridges as convenient routes. This affects experience of the area too, as ridgeline routes are uncommon elsewhere.

Many formar spoil tips have been reclaimed, with varying degrees of integration into the intrinsic natural topography and upland setting. In some areas much new tree planting results in a landscape today that is much softer and more enclosed than that depicted in historic images. Individual valleys differ markedly in appearance: Neath and Dulais are green and broad by comparison with the crammed settlements of the Swansea and the two Rhonddas; Afan is steep and mountainous, covered in conifers, while the Taff and Ebbw Vales are convoluted in both terrain and settlement.

The new landscape: Trefforest Industrial Estate, occupying the flat land in the valley bottom, and anchored into its setting by maturing woodlands and thick hedgerows. © Luke Maggs

Blaengwynfi, with traditional hillside terraces and new forestry on mountain sides. © Luke Maggs

Urban terraced settlement along valleys and valley sides, with many houses having been individually modified with render, new windows or roofs, extensions and colour. © LUC

Ebbw Vale from the western side of the valley. Contrast of urban, ex-industrial valleys undergoing transition, with the enduring open moors on the adjacent hills. © LUC

From Mynydd Machen, looking towards a prominent hilltop spoil tip. Most spoil tips have been removed, regraded or planted over with trees. © LUC

Heavy industries that once dominated the South Wales Valleys are largely gone, however their iconic remains are now the cultural heritage that informs today's character. Here we see the remains of Ynyscedwyn Ironworks at Ystradgynlais. © Luke Maggs

Pen Pych table top. There may be industrial remains and urban settlement about, but the dramatic topography, open moors and steep wooded valley sides provide many of the kinds of appealing scenic qualities that are more widely known in upland landscapes elsewhere in Wales. © Luke Maggs

Gelli Gaer Common, one of the long, open roads that run along the gentler plateaux tops of the area west of the Neath Valley. © Richard Kelly

Terraced houses and old spoil heaps amidst the upland landscape: the traditional image as now preserved at Blaenavon (World Heritage Site). © John Briggs

From near the adjacent Brecon Beacons, looking down one of the upland plateaux that separate the industrialised valleys. Nantyglo is in the valley to the left, Ebbw Vale is in the valley to the right.

Brynmawr, one of the 'heads of the Valleys' settlements, with much C20th housing estate expansion.

Geological Landscape influences

The South Wales Valleys incorporates a large part of the southern-most uplands in Wales and is framed by the Brecon Beacons and Black Mountains to the north and the lowland vale landscapes to the south, east and west. The deeply incised valleys are a distinctive feature of the landscape. In the eastern sector the area is drained by a series of south and south-eastward flowing rivers including the Ebbw, Sirhowy, Rhymney and Taff, whilst the central region about the Rhondda is drained by the Rhondda Fawr and Rhondda Fach which are confluent with the Taff at Pontypridd. In contrast, drainage in the west is dominated by south-westward flowing rivers, including the Tawe, Neath and Afan. Ground elevations in the upland areas are highly variable, but in the north-east reach up to 581m on Coity Mountain and 574m on Cefn Coch. Farther west the ground reaches a maximum altitude of 600m on Garn Fach and 568m on Werfa at the head of the Ogmore Valley.

The bedrock geology is dominated by a thick sequence of Carboniferous sedimentary rocks. They are preserved in and around the South Wales Coalfield Basin, a structurally complex, WNW-trending trough-shaped structure that extends westwards into Pembrokeshire. The Lower Carboniferous sequence is dominated by a variety of marine,

limestone-dominated formations, together with some mudstones and ironstones, which form a narrow belt around the basin between Thornhill, Rudry, Risca and Pontypool, and north of Merthyr Tydfil, where the strata dip gently towards the south. There is a succeeding Upper Carboniferous sequence including sandstones, and marine mudstones and a succeeding 'Westphalian' sequence dominated by sandstones including the Pennant sandstones. The lower part of the succession forms the South Wales Coal Measures Group, and is dominated by mudstones, siltstones and coals arranged in repeating units.

The gently southward-dipping Pennant sandstones form an erosion-resistant cap to the upland plateaux of the South Wales Valleys, as well as a spectacular escarpment along their northern limit. Within the syncline are numerous minor folds, including the Pontypridd and Maesteg anticlines. Two of the most distinctive structures of the coalfield are the Neath and Swansea Valley disturbances which comprise NE-striking zones of folded and faulted strata that trend into the area from Devonian outcrops to the north and east. Both structures have a strong topographical expression, controlling the course of both the Neath and Swansea valleys, and are believed to root into major fractures in the underlying basement. The coalfield is also transected by a dense network of steep, dominantly NNW-striking cross-faults that frequently caused major problems during the extraction of coal. Some of these faults have a strong topographical influence as, for example, in the case of the Merthyr Church Fault, which controls the orientation of the Afon Taf Fawr in the vicinity of Merthyr Tydfil.

The area has been shaped by glaciation, where ice that accumulated in the Brecon Beacons and adjacent high ground spread southwards through the Pennant Sandstone escarpment and entered the coalfield, where glaciers incised deep U-shaped valleys. This southward advance was locally impeded by topography. For example, when the ice-sheet met the escarpment at Craig-y-Llyn (SN 910 039) it broke into two major lobes, one advancing south into the coalfield through the Cynon and Taff valleys, and the other west-south-west down the Neath Valley. Recessional halt moraines were formed on the valley floors as the ice melted. For example, in the Neath Valley at Tonnan and Cline, an impounded glacial lake stretched up the valley to Cwmgwrach. Throughout the area the principal glacial deposit is till (boulder clay) and most till occurs in the northern parts of the valleys, where it can reach a thickness of up to 30m. It passes down valley into outwash sands and gravels, which formed through the action of melt waters and created important landscape components of some valleys. A good example of a kame terrace is developed in the Afan Valley at Pontrhydyfen. Between about 13,000 and 11,500 years ago, small glaciers re-occupied the upland cirques along the north-facing Pennant Sandstone escarpment. These glaciers formed concentric ridges of moraine, often backed by marshy hollows and small lakes, as in the case of Llyn Fawr and Llyn Fach beneath Craig y Llyn.

Glacial deposits left on the valley floors have been progressively re-worked and re-deposited as alluvial silts and sands. River terraces occur intermittently, for example along the Taf Fawr, Mellte, Neath and Tawe, whilst alluvial fans have formed where steeply graded tributaries enter the more gently graded main valleys. Landslips form an important component of the landscape throughout the coalfield and occur on the glacially over-steepened flanks of the valleys where thick Pennant sandstones overlie weak and impermeable mudstones and rock masses were subject to failure and collapse. Whilst most mass movement took place during deglaciation, when the support of glacier ice was removed, some major landslips are recent, for example that at Bournville (SO 207 068) was initiated in 1893 and at East Pentwyn (SO 206 075) in 1954.

Landscape Habitats influences

The Valleys are characterised by upland areas incised by a number of valleys, with contrasting habitat to match. The bedrock geology has given rise to a variety of soil types. Basinal and blanket peats developed throughout the South Wales Valleys and provide an important record of post-glacial vegetation and climatic conditions. Loamy soils with a wet peaty surface characterise the sandstone uplands; well drained loamy soils are found on valley sides; while coarse loams subject to seasonal waterlogging are located on lower slopes and on valley floors.

Each valley has both unique and common features, such as broadly southerly flowing rivers fed by a myriad of smaller, faster flowing tributaries from the surrounding uplands. On the lower slopes of the valleys livestock-grazed, improved grassland bounded by hawthorn rich hedgerows is prevalent, together with linear stands of deciduous woodland – some of considerable ecological value, for example, Cwm Du Woods in the Llynfi Valley and Merddog Woods in the Ebbw Valley, which are SSSIs.

Further up the valley slopes, “fridd” habitat occurs, in which there is a distinctive mosaic of rough grazed fields, bracken, rhos pasture, scattered scrub and small pockets of woodland characterising the transition between the lower slopes and upland areas and important for a considerable number of species. At the tops of the valley slopes there is a gradation to more upland habitats, such as moorland with acid grassland and heath. There is also some contrast along the length of the valleys with their more southerly ends being more lowland in character and the heads of the valleys to the north displaying glacial features such as cirques (cymoedd) and crags, which support valuable communities. Particularly important examples are found in the Rhondda, for example, the rare arctic-alpine habitats at Craig-y-Llyn SSSI.

In between the valleys, areas of extensive plateaux are dominated by moorland vegetation of heather, blanket bog and acidic grassland formed on the wet peaty surface that overlies the generally loamy soils in the area. These moorland areas are largely grassy in nature and are generally grazed by sheep. Large areas of heath-dominated moorland are relatively scarce, but one such area of particular ecological value is The Blorenge, a mountain near Blaenafon.

Also present within the open moorland and hillsides are considerable blocks of coniferous plantation, particularly noticeable and extensive in the uplands to the north of Bridgend and Port Talbot, often of lower ecological importance and much has been planted in the C20th, some over reclaimed industrial workings.

Along the southern edge of the area, the land is lower lying with less steep and deep valleys, with the areas between the valleys being largely dominated by improved grassland. Deciduous woodland areas scattered throughout the area provide some ecological interest, as do the hedgerows that bound the fields. The two most notable woodland areas are associated with the more lowland valley slopes, being the oak woodlands at Park Mill and the beech woodlands just north of Cardiff, both of which are SAC and SSSIs. Some areas of semi-improved and marshy grassland are also present between the valleys, some of which are of considerable ecological value, most notably Llantrisant Common and Aberbargoed Grasslands

Historic Landscape influences

The Valleys reflect their coal mining and iron extraction and smelting heritage. The iron industry provided the spur for the rapid industrialisation of the whole area from c.1800. The foundation for all of this is the particular geology and land-form that provided all the materials needed for iron making in relatively accessible form. The linked exploitation of these materials and the transport systems leading to and from major works structures shaped the industrial landscape.

Long rows of former 19th century miners' terraces of stone, brick and coloured render are particularly distinctive, extending in some areas up very steep slopes and seen against a backdrop of bracken or conifers higher up the valley sides. Although the terraced house is identified as the most distinctive ingredient of settlement, in practice there is considerable variety in settlement type, including informal 'squatter' developments, planned company settlements, expanded early nuclei (Pontypool) and the developed industrial town built by many agencies but acquiring a coherent social landscape nonetheless (Blaenavon). Settlements developed either directly associated with particular industrial enterprises, or as service towns for a wider hinterland (Pontypridd). These varied histories contribute to considerable variety in present character both between and within valleys.

An often overlooked feature of the enormous manpower and economic energy of 200 years of toil are the canals dug to carry iron ore and coal from inland workings. The most prominent in terms of survival and landscape influence in this area are the Glamorgan from Merthyr to Cardiff, the Neath and Tennant Canals and that in the Swansea Valley.

Blaenavon is designated as a World Heritage Site as being one of the best surviving examples in the region of a valley head industrial community, with features from the C18th iron industry as well as the extensive coal mining activity that took place in the 19th century.

The upland plateaux are largely free from modern development aside from minor roads which cross the open commons. As a result, archaeological evidence of ancient human occupation and activity is often well preserved. Notable examples are Gelli-gaer Common near Ystrad Mynach, and Margam Mountain. The former area contains a rich diversity of archaeological sites, including Bronze Age burial and ritual monuments, a Roman road and military installations, and Capel Gwladys – an early church site. Later features include Mediaeval deserted settlements, an earthwork castle (Twyn Castle), field systems and platform houses. Margam Mountain stands above the east-west Roman road, and is distinguished by not only possessing extensive prehistoric and Mediaeval archaeological remains over a very large area of high hillside and moorland, but also as having been grazing land for the livestock of Margam Abbey.

Cultural Landscape influences

The Valleys, are internationally recognised for the rich industrial heritage of the C19th. Massive development followed the discovery of steam coal in 1855. This stimulated a so-called 'coal rush' which, for example, turned the Rhondda into the most productive coal mining area in Britain. The population exploded from a sparse agrarian society into a teeming mass of immigrant workers from rural areas, from Ireland, West Wales, Somerset, Gwynedd and the Midlands. From under 1000 in 1851, the population rose to nearly

163,000 by 1921, occupying an almost continuous conurbation for miles – albeit with jealously guarded identities in individually named settlements.

Elsewhere, every valley from the eastern Lwyd and Ebbw Vale to the far west Gwendraeth there sprang up the characteristic images of rows of terraced company houses. The iconic headframes and coal mine winding gear, public buildings, chapels and Working Men's Institutes and other infrastructure, all squeezed into the previously rural landscape of the valleys to house the massive in-migration of workers. This continued through the C20th with extensive post-war council housing estates, and latterly private estates. The Valleys and their Working Men's Institutes produced many radical, self-educated politicians, for example Aneurin Bevan, visionary founder of the National Health Service, and Neil Kinnock of Islwyn. Their radicalism was largely founded on the appalling conditions they had to work and live in.

But the industrial decline of the 1980s, the loss of 'macho' employment, and the psychological devastation of the failure of the year-long Miners' Strike in 1984 have, for many, led to cultural changes that previously would have been hard to imagine by their once-proud communities. The Strike was followed by wholesale unemployment, and although regenerative efforts continue to abound, not all are successful, and not all touch all the people. The iconic coal tips have been systematically flattened following the tragedy of Aberfan, and the once ever-present pithead winding gears have mostly gone. Those that survive best tend to form features of tourist sites, notably with Blaenavon regenerating itself as a World Heritage Site. Despite efforts to find new uses for old buildings, some of which are architecturally magnificent, the majority continue to decay. The same applies to the proliferation of multi-denominational chapels, and the Institutes, originally the social and educational as well as spiritual heart of Valleys communities.

Regeneration and more recent estates, along with new small and large-scale commercial and industrial development tend to be linked to the modern road network. Although there is still an extensive passenger railway branch line network, with plans to improve, regeneration tends to be based around car use and opportunities for much longer distance travel than traditionally. The employment opportunities elsewhere, notably in Cardiff, result in crowded trains and commuting residents clogging up M4 interchanges twice each day.

In recent years, telecommunication masts, pylons and wind turbines have appeared across the plateaux in an upland landscape otherwise devoid of development. A remarkable feature in what are recognized as deprived communities, is the incidence of satellite dishes on the roof tops and gable ends of individual dwellings in workers' terraced housing. A prominent but temporary regeneration event was the Ebbw Vale National Garden Festival in 1992, one of a series across Britain. The site has now become a popular retail centre and in recent times. The derelict Ebbw Vale Steelworks was demolished in late 2005 for the development of socially and economically mixed housing and infrastructure. The Cynon Valley is notable for the plan to create a long, linear riverside park, while much of the historic heart of Merthyr Tydfil has been lost to residential estates of non-vernacular design and materials. Similarly, vacant lots in the linear conurbations of the Ogwr and Rhondda valleys have now been transformed into low-cost housing estates for those who descend the valley roads to the ribbon-development of business and light industrial parks situated close to junctions on the M4. In the mid-west, the dead-end, and once economically and administratively important, valley of Glyncorrwg is enjoying an economic renaissance as a leisure destination for mountain biking and fishing, with a newly built visitor centre and 'extreme' trails.

The linking of these new ventures with the rich synthesis of history and culture that permeates the area's landscapes and the promotion of much that remains untouched and attractive, is an important aspect in the regeneration this large and remarkable area.

Blaenavon, traditional terraces.