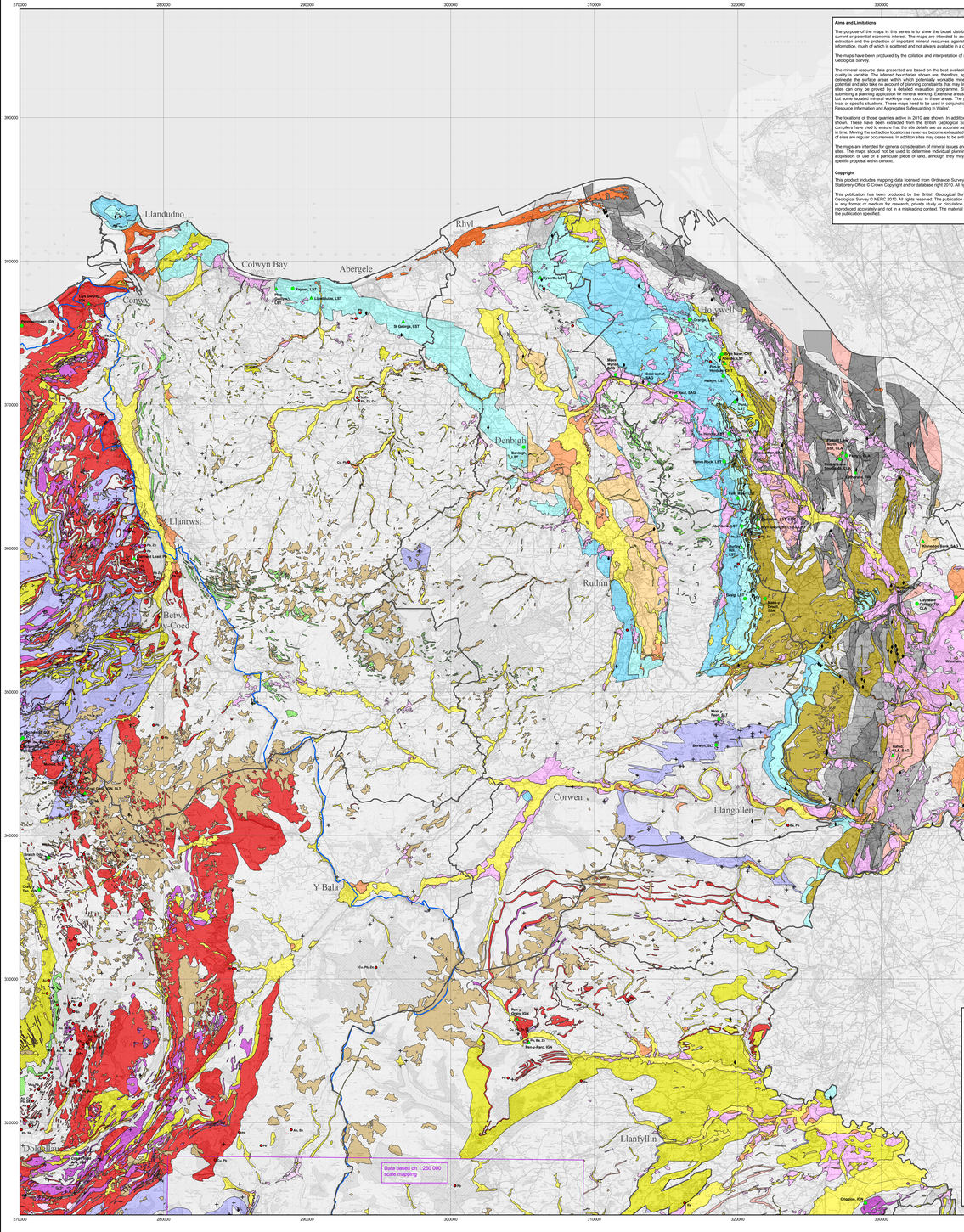

Aims and Limitations

The purpose of the maps in this series is to show the broad distribution of those mineral resources which may be of economic importance in the foreseeable future, to assist the planning authorities in their decision making in respect of mineral extraction and the protection of important mineral resources against sterilisation. They bring together a wide range of information, much of which is scattered and not always available in a convenient form.

The maps have been produced by the collation and interpretation of mineral resource data principally held by the British Geological Survey.

The mineral resource data presented are based on the best available information, but are not comprehensive and their quality is variable. The inferred boundaries shown are, therefore, approximate. Mineral resources defined on the map delineate the surface areas within which potentially workable minerals may occur. These areas are not of uniform quality and may include areas of non-mineral bearing ground. Further, the quality of the mineral resources within these sites can only be proved by a detailed evaluation programme. Such an investigation is an essential precursor to submitting a planning application for mineral working. Extensive areas are shown as having no mineral resource potential, but some isolated mineral workings may occur in these areas. The presence of these operations generally reflect very local or specific situations. These maps need to be used in conjunction with the accompanying guide 'A Guide to Mineral Resource Information and Aggregates Safeguarding in Wales'.

The locations of those quarries active in 2012 are shown. In addition former important building stone quarries are also shown. These have been extracted from the British Geological Survey's Britpits database in April 2010. While the compilers have tried to ensure that the site details are as accurate as possible, any map of active quarries is a snapshot in time. Moving the extraction location as reserves become exhausted or a new extension starts production, and renaming of sites are regular occurrences. In addition sites may cease to be active at any time.

The maps are intended for general consideration of mineral issues and not as a source of detailed information on specific sites. The maps should not be used to determine individual planning applications or in taking other decisions on the acquisition or use of a particular piece of land, although they may give useful background information which sets a specific proposal within context.

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Amcanion a Cheyfyngiadau

Pwrpas y mapiau yn y gyfres hon yw dangos dosbarthiad cyffredinol yr adnoddau mwynol hynny a allai fod o ddiddordeb economaidd yn y dyfodol agos. Maent yn dwyn ynghyd ystod eang o wybodaeth, rhywfaint ohono'n wasgaredig ac nad yw bob amser ar gael mewn ffurf gyfleus.

Cynhyrchwyd y mapiau drwy gryniol a dehongli'r data am adnoddau mwynol yn meddiant Arolwg Daearegol Prydain yn bennaf.

Mae'r data a gyflwynir am adnoddau mwynol yn seiliedig ar yr wybodaeth orau sydd ar gael, ond nid yw'n data'n gynhwysfawr ac mae ei hansoddi yn amrywiol. Fiddy, fodiywn yw'r ffiniau a dangosir. Mae'r arwynebau mwynol a ddiffinir ar y mapi yn ardiledu arwynebedduoc'r ardaloedd y gall fod mwynau gwerthfoddwy r'w cael ynddynt. Nid yw'r ardaloedd yn unffurf yn yr ansoddeb hyn ac ni rodder ystyriaeth i gyfryngedau cynhuno a ale gyfrugu ar waith cloddio. Dim ond drwy ymgymryd ā thragien werthuso manwl y gellir profi dichoniceldeb economaidd safleoedd penodol. Mae'r fath archwiliad yn waith rhagflaenol ac mae'n hanfodol os bydd cais cynllunio ar gyfer gweithio mwynau yn cael ei gyflwyno. Ardaloedd eang sydd ddim yn ardaloedd sarig, nid gall fod fod gwerthfoyd mwynol ynggyl'n w cael yn yr ardaloedd hyn. Fel rheol, mae presenoldeb y gweithleydd hyn yn adlewyrchu amgylchiadau llenodol neu lecl iawn. Dylid defnyddio'r mapiau hyn mewn perthynas ā'r arweiniā sy'n cyd-fynd ā hwy, sef 'Arweiniad i Wybodaeth am Adnoddau Mwynol a Diogelu Agregau yng Nghymru'.

Nodir lleoliad y chwarelr hynny a oedd ar waith yn 2010. Ā hynny, nodir hefyd hen chwarelr cerrig adeiladau o bwys. Daw'r wybodaeth yma, a gafwyd yn Ebrill 2010, o gronfa data Britpits Arolwg Daearegol Prydain. Er bod ymdrechwyr y map wedi ceisio sicrhau bod manylion y safleoedd mor gywir ā phosibl, mae unrhyw fap o chwarelr gweithredol yn gyllun ar adeg benodol. Mae symud safle'r cloddio pan gaiff adnoddau eu disbyddu neu ehn i estynad newydd ddechrau cynhyrchu, yn ogystal ag ailenwi safleoedd, yn ddigwyddiadau cyson.

Bwriadir y mapiau ar gyfer ystyried materion cyffredinol yn ymwneud ā mwynau ac nid fel ffynhonnell gwybodaeth fanwl am safleoedd penodol. Ni dylyid defnyddio'r mapiau wrth ddod i benderfyniad ynghylch ceisiadau cynllunio unigol neu benderfyniadau eraill perthnyd cael gafael ar ddarn penodol o dir neu o ran ei ddefnydd, er y gallent dolarpay gwybodaeth gefndir ddefnyddiol sy'n gosod cyfrieg penodol yn ei gyd-destun.

Hawlfraint

Mae'r cynnyrch hwn yn cynnwys data mapio ar drwydded gan yr Arolwg Ordnans gyda chaniatād Rheolwr Llyfrfa Ei Mawrhydi ō Hawlfraint y Goron arheu hawl crontīa dalata 2010. Cedwir pob hawl. 100037272.

Cynhyrchwyd y cyhoeddiad hwn gan Arolwg Daearegol Prydain ar gyfer Llywodraeth Cynulliad Cymru. Arolwg Daearegol Prydain © NERC 2010. Cedwir pob hawl. Gellir atgynhyrchu'r cyhoeddiad (ac eithrio'r logos) yn ddi-dāl mewn unrhyw fforiad neu gyfrwng ar gyfer ymchwil, astudiaeth bersonol neu gychylchad o fewn mudiad. Mae hyn yn amodol ar gael ei atgynhyrchu'n gywir ac nid mewn cyd-destun camarweiniol. Mae'n rhaid cydnabod y deunydd fel a ganlyn: © NERC, gan roddi teitl y cyhoeddiad.

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Llywodraeth Cynulliad Cymru
Welsh Assembly Government

NORTH EAST WALES
GOGLEDD-DDWYRAIN CYMRU

Mineral Resource Map of Wales
Map o Adnoddau Mwynol Cymru

Mineral Resources
Adnoddau Mwynol

Scale 1:100 000
Graddfa 1:100 000

Compiled by: C. Morley, R.A. Shaw, T.P. Bide, A.J. Humpage, J.R. Davies and G.K. Lott.
Project Leaders: A.J. Humpage, J.M. Mankelow and A. Benham.
Digital Cartography: N.A. Spencer, British Geological Survey.
Published 2010.

Cryntwyryd gan: C. Morley, R.A. Shaw, T.P. Bide, A.J. Humpage, J.R. Davies a G.K. Lott.
Arweinwyr y prosiect: A.J. Humpage, J.M. Mankelow ac A. Benham.
Cartrografīaeg ddigidol: N.A. Spencer, Arolwg Daearegol Prydain (ADP).
Cyhoeddwyd 2010.

This map is one of a series of six maps commissioned by the Welsh Assembly Government and co-funded by the BGS Sustainable Mineral Solutions Project and the Aggregates Levy Sustainability Fund for Wales (Contract 252/2009/09).
This map is to be used in conjunction with the accompanying guide 'A Guide to Mineral Resource Information and Aggregates Safeguarding in Wales'.

Mae'r map hwn yn un o gyfres o chwe map a gomisiynwyd gan Lywodraeth Cynulliad Cymru ac a ariannwyd gan Brosiect Sustainable Mineral Solutions BGS a Chronfa Cynaliadwyedd o Arbed Agregau ar gyfer Cymru (Cytundeb 252/2009/09).
Dylid defnyddio'r mapiau hyn mewn perthynas ā'r arweiniyā sy'n cyd-fynd ā hwy, sef 'Arweiniad i Wybodaeth am Adnoddau Mwynol a Diogelu Agregau yng Nghymru'.

BGS map reference:

Mineral Resource Map of North East Wales
Morley, C., Shaw, R.A., Bide, T.P., Humpage, A.J., Davies, J.R. and Lott, G.K. OR/10/022.

Cyfeirnod map ADP:

Map Adnoddau Mwynol Gogledd-ddwyrain Cymru
Morley, C., Shaw, R.A., Bide, T.P., Humpage, A.J., Davies, J.R. a Lott, G.K. OR/10/022.

MINERAL WORKINGS COMMODITY
NWYDD MWYNOL

CO	Coal, Deep	Glo Dwfn
CHT	Chert	Siert
CLA	Clay & Shale	Clai a Sālā
CO	Coal, Surface Mine	Glo Brig
FIR	Fireclay	Call tān
IGN	Igneous & Metamorphic	Igneaidd a Metamorffig
LST	Limestone	Calchfaen
PEA	Peat	Mawn
SAG	Sand & Gravel	Tywod a Graean
SAN	Sand	Tywod
SLA	Slag	Sorod
SLT	Slate	Llechfaen
SLW	Slate Waste	Gwastraff Llechfaen
SSA	Silica Sand	Tywod Silica
SSR	Silica Rock	Craig Silica
SST	Sandstone	Tywodfaen

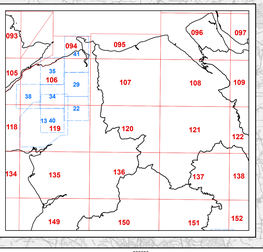
METALLIFEROUS MINERALS
MWYNAU METELOG

Symbol / Symbol	Element / Elfen
Ag	Silver Arian
As	Arsenic Arsenig
Au	Gold Aur
Ba	Barium Bariwm
Bi	Bismuth Bismwth
Co	Cobalt Cobalt
Cu	Copper Copr
Fe	Iron Haearn
Mn	Manganese Manganīs
Pb	Lead Plwm
Sb	Antimony Antimoni
Zn	Zinc Sinc

BGS MAPS COVERING NORTH EAST WALES
MAPIAU ADP AR GYFER GOGLEDD-DDWYRAIN CYMRU

1:25 000 Classic Geology maps
Mapiau Daearēg Glasurol 1:25 000

1:50 000 Geological maps
Mapiau Daeareg 1:50 000



SAND AND GRAVEL
TYWOD A GRAEAN

Superficial deposits
Dyddodion arwynebol

- Sub-alluvial — Tarnifwaddodol
- River terrace — Cartan
- Glaciofluvial — Ffrwdrwewlifol
- Glacigenic (as in poorly sorted and locally clayey) — Rhewlifol (fel ddodoledig a chleiog yn lleol)
- Blown sand — Tywod chwyth

Bedrock
Creigwely

- Sandstone and conglomerate beneath overburden less than five metres — Tywodfaen ac amofaen, lle rad yw'r gorhwyth yn llai na pum metr o drwch

PEAT
MAWN

- Peat, generally more then one metre thick — Mawn, yn fwy nag un metr o drwch fel arfer

IGNEOUS ROCKS
CREIGIAU IGNEAIDD

- Dolerite intrusions with potential for high specification aggregate — Mewnwthiadau dolerit ā photensial am agreg ac idda raglānylion uchel
- Other igneous rocks including basalts, felsites, gabbros, tuffs and granites — Creigiau igneaidd eraill yn cynnwys, basaltau, felsitau, gabrau a gwenithfeini

SANDSTONE
TYWODFAEN

- Sandstone with potential for high specification aggregate — Tywodfaen ā photensial am agreg ac idda raglānylion uchel
- Quartzitic sandstone with potential for silica sand and silica rock — Tywodfaen cwarsitig ā photensial am dywod silica a chraig silica
- Other sandstone — Tywodfaen eraill

LIMESTONE
CALCHFAEN

- High purity limestone (>97% $CaCO_3$); Carboniferous — Calchfaen Carboniferaidd pur iwan (>97% $CaCO_3$)
- Limestone; Other Carboniferous — Calchfaen Carboniferaidd arall
- Other limestone — Calchfaen eraill

SLATE
LLECHFAEN

- Slate — Llechfaen
- Slate waste — Gwastraff llechfaen

BRICK CLAY
CLAI BRICIAU

- Brick clay — Clai briciau

COAL
GLO

- Primary shallow coal resource — Adnodd glo bas cynradd
- Secondary shallow coal resource — Adnodd glo bas eilradd
- Tertiary shallow coal resource — Adnodd glo bas trydyddol

SALT
HALEN

- Salt (wet-rockhead) — Halen (creigiaw gwlyb)

METALLIC MINERAL OCCURRENCES
PRESENOLDEB MWYNAU METELOG

- Pb — Symbol indicates elemental occurrence — Y testun yn dynodi'r elfennau cofnodedig

HISTORIC SLATE QUARRIES
CHWARELI LLECHI HANESYDDOL

SIGNIFICANT HISTORIC BUILDING STONE QUARRIES
CHWARELI CERRIG ADEILADU O BWYS HANESYDDOL

MINERAL WORKINGS
GWEITHFEYDD MWYNOL

- Wrexham, SAG — Active (name, commodity worked) — Gweithredol (enw, natur y mwydd a gloddir)
- Grange, LST — Dormant, as defined by the Environment Act 1995 (name, commodity worked) — Segur, yn unol ā diffiniad Deddf yr Amgylchedd 1995 (enw, natur y mwydd a gloddiwyd)
- Roby, CLA — Inactive, worked out and/or restored (name, commodity worked) — Anweithredol, wedi'i ddisbyddu a/neu ei adfer (enw, natur y mwydd a gloddiwyd)

ADMINISTRATIVE AREAS
ARDALOEDD GWEINYDDOL

- Mineral Planning Authority; Unitary Authority — Awdurdod Cynllunio Mwynol: Awdurdod Unedol
- Mineral Planning Authority; National Park — Awdurdod Cynllunio Mwynol: Parc Cenedlaethol

Uncoloured areas on the map indicate undivided bedrock and surface superficial deposits not considered mineral resources.
Unspecified mineral resources may be present locally at surface or at depth.
Mae'r rhannau o'r map sydd heb eu lliwio yn dynodi creigiau a dyddodion arwynebol anrhanedig na chānt eu hystyried yn adnoddau mwynol.
Gall fod adnoddau mwynol amhenodol yn bresennol yn lleol neu ar ddyfnder.

WARNING: Please by aware that the printed colours may differ due to the settings of the plotter used