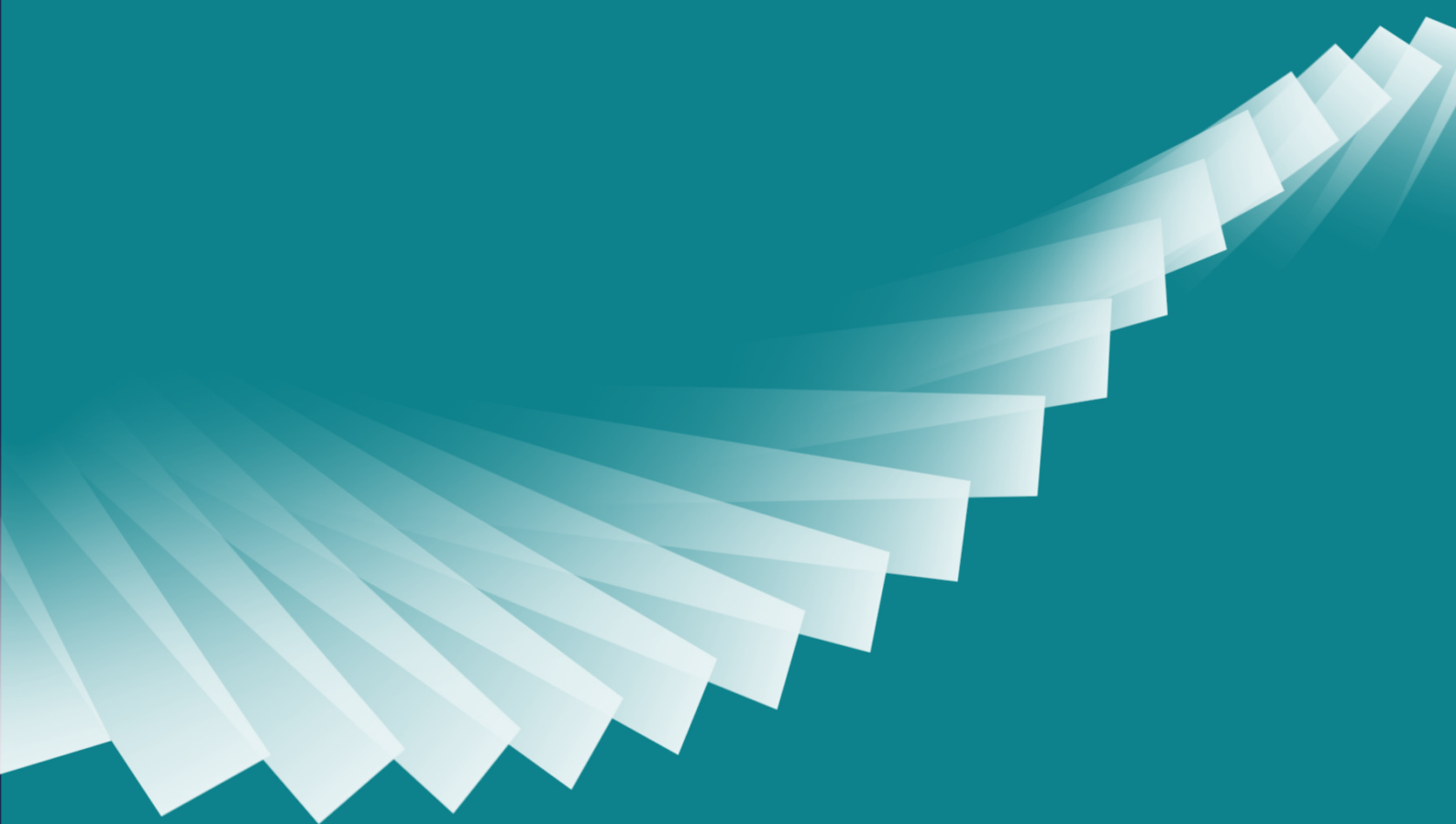




Bute Energy
Aberedw Energy Park

Appendix 1.2:

Glossary and Abbreviations



Aberedw Energy Park Limited

Aberedw Energy Park Environmental Statement
Appendix 1.2: Glossary and Abbreviations

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 Landscape Management
 Ecology
 Historic Environment
 GIS & Visualisation
 Transport & Movement Planning
 Arboriculture



Appendix 1.2: Glossary and Abbreviations

Abbreviations

Abbreviation	Term
ADSB	Automatic Dependent Surveillance Broadcast
AGL	Above Ground Level (Height)
AIAA	Area of Intense Air Activity (MOD)
AIL	Abnormal Indivisible Loads
AIS	Air Insulated Switchgear
AMSL	Above Mean Sea Level (Elevation)
ANO	Air Navigation Order
ANSP	Air Navigation Service Provider
AOD	Above Ordnance Datum
ASG	Aviation Steering Group
ASIDOHL2	Assessment of the Significance of the Impact of Development On Historic Landscape
ATC	Automatic Traffic Counts
BAI	Bat Activity Index
BBS	Breeding Bird Survey
BCE	Before Common Era
BGL	Below Ground Level
BGS	British Geological Survey
BNG	Biodiversity Net Gain
BOAT	Byway Open to All Traffic
BoCC	Birds of Conservation Concern
BPRP	Borrow Pit Restoration Plan
BSI	British Standards Institute
C	Century
c.	circa
CA	Conservation Area
CAA	Civil Aviation Authority
CAP	Civil Aviation Publication (Refers to Specific Documents)

Abbreviation	Term
CCC	Climate Change Committee
Cd	Candela, a measure of light intensity
CE	Common Era
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CIfA	Chartered Institute for Archaeologists
CIRIA	Construction Industry Research and Information Association
CMS	Construction Method Statement
CNS	Communications, Navigation and Surveillance Systems
CO ₂	Carbon Dioxide
CPAT	Clwyd Powys Archaeological Trust
CRTN	Calculation of Road Traffic Noise
CTA	Cardiff Airport Control Area
CTMP	Construction Traffic Management Plan
dB	Decibel
DfT	Department for Transport
DIO	Defence Infrastructure Organisation
DMP	Dust Management Plan
DMRB	Design Manual for Roads and Bridges
DNS	Development of National Significance
EclA	Ecological Impact Assessment
ECoW	Environmental and/or Ecological Clerk of Works
EHO	Environmental Health Officer
EIA	Environmental Impact Assessment
ELC	European Landscape Convention
ES	Environmental Statement
ETSU-R-97	The Assessment and Rating of Noise from Wind Farms
EU	European Union
FCA	Flood Consequence Assessment

Abbreviation	Term
FEH	Flood Estimation Handbook
FI	Financial Involvement
GCN	Great Crested Newt
GGC	Green GEN Cymru
GHG	Greenhouse Gas Emissions
GPP	Guidance for Pollution Prevention
GW	Gigawatts
GWDTE	Groundwater Dependent Terrestrial Ecosystem
GWP	Global Warming Potential
HEA	Historic Environment Assessment
HER	Historic Environment Record
HGV	Heavy Goods Vehicle
HLCA	Historic Landscape Character Area
HMP	Habitat Management Plan
HNTA	Helicopter Night Training Area
HPCA	Heneb Clwyd-Powys Archaeology
HSE	Health and Safety Executive
IC	Infrastructure Consent
IEF	Important Ecological Feature
IEMA	Institute of Environmental Management and Assessment
IFP	Instrument Flight Procedure
INNS	Invasive and Non-Native Species
IOA GPG	Institute of Acoustics Good Practice Guide
IOF	Important Ornithological Feature
IR	Infra-Red
ISA	Inner Study Area
IWA	Institute for Welsh Affairs
Kts	Knots: a measure of airspeed (10 kts = 12mph = 19 kph)
kV	Kilovolts

Abbreviation	Term
L _{A90}	90 th percentile noise level.
L _{Aeq}	Equivalent continuous noise level.
L _{Ar}	Rated noise level
LB	Listed Building
LBAP	Local Biodiversity Action Plan
LBS	Local Biodiversity Site
LDP	Local Development Plan
LED	Light Emitting Diode
LFOS	Low Flying Operations Squadron RAF
LiDAR	Light Detection and Ranging
LLFA	Lead Local Flood Authority
LNR	Local Nature Reserve
LPA	Local Planning Authority
LQAS	Land Quality Advice Service
LUC	Land Use Consultants Ltd
LVIA	Landscape and Visual Impact Assessment
m ³	Cubic metres
MOD	Ministry of Defence
MW	Megawatts
mW/sr	milliWatts per steradian
NATS	National Air Traffic Services
NBB	Net Benefit for Biodiversity
NBN	National Biodiversity Network
NCR	National Cycle Route
NDC	Nationally Determined Contributions
NDF	National Development Framework
NDP	National Development Plan
NECP	National Energy and Climate Plan
NERL	National Air Traffic Services (NATS) (En Route) Limited

Abbreviation	Term
Nm	Nautical Mile
NNR	National Nature Reserve
NRHE	National Record of the Historic Environment
NRW	Natural Resources Wales
NVC	National Vegetation Classification
NVD	Night Vision Devices - Aircraft Mounted
NVG	Night Vision Goggles - Operator Worn
OAMP	Outdoor Access Management Plan
OEM	Original Equipment Manufacturer
OS	Ordnance Survey
OSA	Outer Study Area
PAA	Pre-Assessed Area
PAC	Pre-application Consultation
PaMP	Path Management Plan
PCC	Powys County Council
PEDW	Planning and Environment Decisions Wales
PIRP	Pollution Incident and Response Plan
PLHRA	Peat Landslide Hazard and Risk Assessment
PMP	Path Management Plan
PoE	Port of Entry
PPP	Pollution Prevention Plan
PPW	Planning Policy Wales
PRoW	Public Rights of Way
pSPA	Potential Special Protection Areas
PWS	Private Water Supply
PWSRA	Private Water Supply Risk Assessment
RCAHWW	Royal Commission on the Ancient and Historic Monuments in Wales
ReUK	Renewables UK
RHPG	Registered Historic Park and Garden

Abbreviation	Term
RIGS	Regionally Important Geological/Geomorphological Site
RoAR	Rules of the Air Regulations
RVAA	Residential Visual Amenity Assessment
SAB	SuDS Approval Body
SAC	Special Area of Conservation
SCADA	Supervisory Control and Data Acquisition
SINC	Site of Interest for Nature Conservation
SIPs	Significant Infrastructure Projects
SM	Scheduled Monument
SP	Strategic Policy
SPA	Special Protection Areas
SPG	Supplementary Planning Guidance
SQE	Suitably Qualified Ecologist
SRP	Site Restoration Plan
SRTM	Shuttle Radar Topography Mission
SSA	Sector Safety Altitude
SSR	Secondary Surveillance Radar
SSSI	Site of Special Scientific Interest
STE	Serrated Trailing Edge
SUDS	Sustainable Urban Drainage System
SuDS	Sustainable Drainage Systems
SWMP	Site Waste Management Plan
SWMS	Surface Water Management Strategy
T	Turbine
TAN	Technical Advice Note
tCO ₂ e	Tonnes of carbon dioxide equivalents
TMP	Transport Management Plan
TTA	Tactical Training Area (MOD Low Flying)
TTRO	Temporary Traffic Regulation Order

Abbreviation	Term
UKAB	United Kingdom Air Prox Board
UKAS	United Kingdom Accreditation Services
UKCP18	UK Climate Change Projections 2018
UNFCCC	United Nations Framework Convention on Climate Change
VFR	Visual Flight Rules
VMC	Visual Meteorological Conditions
WBS	Wintering Bird Survey
WCA	Wildlife and Countryside Act
WFD	Water Framework Directive
WG	Welsh Government
WPAC	Wind Power Aviation Consultants
WPL	Welsh Priority List
WQMP	Water Quality Management Plan
WSI	Written Scheme of Investigation (project design or method statement)
ZoI	Zone of Influence
ZTV	Zone of Theoretical Visibility

Glossary

Term	Meaning/Definition
The Applicant	Aberedw Energy Park Ltd
Above Ground Level	Altitude using the ground as a reference.
Above Mean Sea Level	Altitude using the sea level as a reference.
Above Ordnance Datum	The standard measure of sea level in the UK, from which all heights are measured for mapping purposes.
Air Navigation Service Provider	A provider of ATC services such as NERL.
Air Traffic Control	The ground-based personnel and equipment concerned with controlling and monitoring air traffic within a particular area.
Anemometer Mast	Mast for measuring wind speed and other weather conditions on site.

Term	Meaning/Definition
Archaeological Site (also 'Monuments')	Historic assets which may consist of surface and/or sub-surface remains, features, deposits and/or material relating to past human activity with a degree of significance meriting consideration in planning decisions.
Artefact	An item of archaeological interest.
ASIDOHL2	'Assessment of the Significance of the Impact of Development On Historic Landscape' – a formal methodology for assessing the impact of development on historic landscapes included in the Register of Landscapes of Historic Interest in Wales ¹ .
Assessment of the Significance of the Impact of Development On Historic Landscape	A formal methodology for assessing the impact of development on historic landscapes included in the Register of Landscapes of Historic Interest in Wales ² .
Baseline	'Baseline conditions' are the environmental conditions in existence just before the occurrence of an impact – i.e. they are the conditions that will be affected.
Before Common Era	A year notation for the Gregorian calendar, an alternative and equivalent to the Before Christ notation used by Dionysius Exiguus.
Bronze Age	The period of human activity between 2,500 Before Common Era (BCE) and 700 BCE.
Century	A period of 100 years.
Chartered Institute for Archaeologists	A professional organisation for archaeologists working in the United Kingdom and overseas.
Circa	At approximately, in approximately, or of approximately.
Civil Aviation Authority	UK Civil Aviation Regulatory Authority
Civil Aviation Publication	A document published by the UK Civil Aviation Regulatory Authority.
Class D Regulated Airspace	Class D airspace is for IFR and VFR flying. An ATC clearance is needed and compliance with ATC instructions is mandatory. Control areas around aerodromes are typically class D and a speed limit of 250 knots applies if the aircraft is below FL 100 (10,000 feet).
Common Era	A year notation for the Gregorian calendar, an alternative and equivalent to the Anno Domini notation used by Dionysius Exiguus.
Communications, Navigation and Surveillance	The three technical elements required for ATC services.

¹ Cadw & CCW (2007) Guide to Good Practice on using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process

² Cadw & CCW (2007) Guide to Good Practice on using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process

Term	Meaning/Definition
Conservation Area	Conservation areas exist to manage and protect the special architectural and historic interest of a place, they are normally designated by the local planning authority.
Construction activity	Vegetation removal, topsoil stripping, temporary storage of materials, ground excavation and remodelling, bare earth, movement of construction vehicles and tall features such as cranes and other construction plant.
Construction Environmental Management Plan (CEMP)	A plan prepared by a contractor before the start of construction work, detailing 'environmental aspects' that may be affected by the construction work and management methods to prevent any such effects. The CEMP would include methods and site management practices to be applied to prevent generation of nuisance dust, accidental pollution events and a range of other potential sources of accidental damage to the environment, and response and reporting procedures to minimise the damage in the event of a pollution incident.
Construction phase	The process of building the development alongside other associated activities such as site clearance, landscaping, demolition or connection to the power grid.
Construction Traffic Management Plan (CTMP)	A document summarising the construction impact of the proposed development on the surrounding highway network, with a specific action plan to avoid, reduce or mitigate issues.
Control Area	Regulated airspace from a specified level to another specified level.
Cumulative effects	The likely effects that the Proposed Development may have in combination with other relevant developments in the vicinity of the Site.
Decibel (dB/dBA)	A measure of sound level using a logarithmic scale. The 'A' suffix denotes a filtering or 'weighting' of frequencies such that the defined decibel level provides a represent a level relating to the sensitivity of human hearing.
Decommissioning phase	Last phase in the project life which includes the shutting down, demolition, removal from site and recycling of materials.
Defence Infrastructure Organisation	MOD Safeguarding Organisation
Designated Historic Asset	Assets registered on the National Historic Assets of Wales, Cadw. These may be protected by primary legislation (e.g. listed buildings, conservation areas, scheduled monuments) or have a non-statutory designation (e.g. World Heritage Sites, registered battlefields, registered parks and gardens, designated wrecks).
Desk Study	A collation and review of relevant existing information available from published, archival or online sources, including for instance geological and hydrogeological mapping, historical maps, environmental records etc., allowing an assessment of risks to the human and environmental receptors to be undertaken.
Earthworks	The moving of soil or rock to reconfigure the topography of a site; OR Upstanding remains of archaeological features.

Term	Meaning/Definition
EIA Regulations	The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017
Environmental and/or Ecological Clerk of Works (EcoW)	A specialist responsible for working with site contractors and management, monitoring and advising on the construction process to ensure environmental commitments and mitigation measures are satisfactorily implemented.
Environmental Impact Assessment (EIA)	An assessment of the likely significant environmental effects as a result of a proposed development. The applicant is required to carry out the assessment by law, in this case under the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017.
Environmental Statement (ES)	A statutory document which reports the EIA process and results, produced in accordance with the EIA Regulations.
Equivalent continuous sound level (L_{eq}/L_{Aeq})	The energy average of the sound level over a specified time period.
Fieldwalking survey	Method of systematic non-intrusive survey involving walking across a field, usually ploughed, along transects to collect archaeological artefacts.
Flood Consequence Assessment (FCA)	Assessment of risk of flooding and potential consequences.
Geology	Geology is the study of solid earth, the material of which it is composed (principally rocks) and the processes by which they evolve.
Geophysical survey	Method of non-intrusive investigation involving the use of magnetometers to identify fluctuations in the earth's magnetic field which might indicate the presence of archaeological remains. Burnt remains and metals are best identified through this method of survey.
Groundwater Dependent Terrestrial Ecosystem	Vegetation/habitat which is sustained by groundwater.
Heneb Clwyd-Powys Archaeology	Welsh Archaeological Trust
Historic Asset	An item of heritage interest, for example an historic building or an archaeological find.
Historic Asset Conservation Principles (Cadw, 2011)	<i>'An identifiable component of the historic environment. It may consist or be a combination of an archaeological site, an historic building, or a parcel of historic landscape. Nationally important historic assets will normally be designated.'</i>³ Some historic assets are designated as scheduled monuments, listed buildings, World Heritage Sites, conservation areas, Registered Parks and Gardens, Registered Battlefields, or locally designated through policies in the Local Development Plan (LDP). Undesignated assets may be recorded in Historic Environment Records (HER), while many other assets are currently unrecorded. Information contained in HERs is not definitive, since they may include features which, for instance, have been entirely removed, or are of uncertain location, dubious identification, or negligible

³ Cadw (2011) Conservation Principles

Term	Meaning/Definition
	importance. The identification of undesignated historic assets is therefore to some extent a matter of professional judgement. Both discrete features, and extensive landscapes defined by a specific historic event, process or theme, can be defined as historic assets; and assets may overlap or be nested within one another.
Historic Environment	All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and deliberately planted or managed.
Historic Environment Assessment	Heritage assessment in support of the ES heritage chapter
Historic Environment Records (HER)	A database maintained by the Welsh Archaeological Trusts, containing records of archaeological sites, historic buildings and other aspects.
Historic Landscape Character Area	Historic landscape character types are distinctive and repeated combinations of components defining generic historic landscapes such as 'ancient woodland' or 'parliamentary enclosure'. The types used in this study were defined based on evidence from historic maps and other sources.
In Flight Visibility	The distance a pilot can see ahead to fly & navigate the aircraft
Infra-red	IR lights are not visible to the naked eye.
Inner Study Area	The area used to determine the historic background and archaeological potential for a DBA or other assessment.
Instrument Flight Procedure	Published and safeguarded procedures for airports.
Instrument Flight Rules	Published and safeguarded rules to govern flight for aircraft.
Instrument Landing System	Radio navigation facility for precision approaches.
Iron Age	The period of human activity between 700 BCE and 43 Common Era (CE).
Kts	A measure of airspeed (10 kts = 12mph = 19 kph)
Light Detection and Ranging	A method for determining ranges (variable distance) by targeting an object or a surface with a laser and measuring the time for the reflected light to return to the receiver. It can also be used to make digital 3-D representations of areas on the Earth's surface and ocean bottom of the intertidal and near coastal zone by varying the wavelength of light. It is commonly used to make high-resolution maps.
Light Detection and Ranging	Remote sensing method used to measure distances and create detailed 3D representations of physical environments
Listed Building	A building or structure which is considered to be of ' <i>special architectural or historic interest</i> ' ⁴ .

⁴ Cadw (2018) Understanding Listing in Wales

Term	Meaning/Definition
Local Planning Authority (LPA)	The local authority or council that is empowered by law to exercise planning functions.
Low Flying Area	A specific area in which the UK Military deviates from the civilian Rules of the Air.
Made Ground	Ground created by infilling an area with material taken from elsewhere; typically, reworked soils, rubble, gravel, sand or former waste material e.g. ash.
Medieval	The period of human activity between 1066 CE and 1550 CE.
Mesolithic	Middle Stone Age. The period of human activity between 10,000 BCE and 4,500 BCE.
Metal detector survey	Method of intrusive investigation involving the use of metal detectors to locate buried metal objects.
Ministry of Defence	A government department led by the Secretary of State for Defence.
Mitigation	Measures which have the purpose of avoiding, reducing or compensating for adverse environmental impacts. It may also include measures to create environmental benefits.
Modern	The period of human activity from 1900 CE to the present day.
National Air Traffic Services	Provides en-route air traffic control services to flights within the UK flight information regions.
National Vegetation Classification	Detailed botanical classification (based on suitable survey), which assesses the full suite of vascular plant, bryophyte and macro-lichen species.
NATS En Route Ltd	The company providing National Air Traffic Services.
Natural Resources Wales	A Welsh Government sponsored body which manages the natural resources of Wales.
Neolithic	New Stone Age. The period of human activity between 4,500 BCE and 2,500 BCE.
Night Allocated Region	MOD Night Low Flying Area
Non Auto Initiation Zone	A technical mitigation method of removing wind farm generated clutter.
Non-Designated Historic Asset	Assets identified by the local planning authority or national registers for the historic environment which have no formal designation but are considered to have a degree of significance meriting consideration in planning decisions. These can include locally listed buildings, information on sites held by the relevant HER and National Record of the Historic Environment.
Non-Technical Summary (NTS)	A document that provides a description of the EIA process and its findings in a way that is easy to read by the general public.
Operational phase	This includes the running, monitoring and maintenance of the Proposed Development in order to deliver the projected energy output.

Term	Meaning/Definition
Ordnance Datum	The standard measure of sea level in the UK, from which all heights are measured for mapping purposes.
Ordnance Survey	The official survey organisation preparing large-scale detailed maps of the whole country.
Overhead line	A structure made up of electric cables suspended by wooden poles or steel lattice towers, used for electricity transmission and distribution.
Palaeolithic	Old Stone Age. The period of human and pre-human activity before around 10,000 BCE.
Photomontage	A photorealistic image of the scheme, based on a 3D computer model of the layout, overlaid onto a base photograph to create a visual representation. Features that would be removed as part of the scheme are removed from the base photograph.
Planning Environment Decisions Wales (PEDW)	The agency responsible for operating the planning process for DNSs on behalf of the Welsh Government.
Post-medieval	The period of human activity between 1550 CE and 1900 CE.
Prehistoric	The period before the year 43 CE.
Private Water Supply	Supply of water which does not come from a licensed water supplier.
Proposed Development	The Aberedw Energy Park, as described in Chapter 4 of the ES.
Public Rights of Way (PRoW)	A way over which the public have a right to pass and repass. The route may be used on foot, on (or leading) a horse, on a pedal cycle or with a motor vehicle, depending on its status. Although the land may be owned by a private individual, the public may still gain access across that land along a specific route.
QFE	Setting on Altimeter that gives Height above Airfield
Radar Altimeter	An altimeter that uses radar to accurately measure height above ground
Registered Historic Park and Garden	Green areas of national importance for historic interest and character.
ReUK	The UK Wind Industry Body
Royal Commission on the Ancient and Historical Monument of Wales	National organisation responsible for surveying, recording, and archiving Wales's built heritage and archaeological sites
Rule 28	VFR Rules Outside Controlled Airspace – part of the RoAR
Rule 5	The Low Flying Rule – part of RoAR
SAR Box	Night Training Area for Search and Rescue Helicopter Units

Term	Meaning/Definition
Scheduled Monument	Archaeological site of national importance.
Site	Shown as the area delineated by the 'red line' application boundary on figures within the ES.
Site of Special Scientific Interest	Nationally designated site (Great Britain) afforded statutory protection due to its biological and/or geological interest.
Special Area of Conservation	Protected areas in the UK which are designated under the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales or equivalent in other parts of the UK.
Statutory consultation	Community and stakeholder consultation carried out in line with the statutory requirements set out in Developments of National Significance (Procedure) (Wales) Order 2016.
Statutory consultees	Organisations that the Client is required to consult under The Developments of National Significance (Procedure) (Wales) Order 2016 (as amended).
Statutory consultees	Organisations that the Client is required to consult under The Developments of National Significance (Procedure) (Wales) Order 2016 (as amended).
Study Area	The area(s) included in desk or field studies for individual topic area assessments. The Study Area varies depending on the geographical extent of receptors considered and the nature of potential effects within each discipline, as informed by professional guidance and EIA best practice. The study areas are therefore explained within the approach and methods section of the relevant technical chapters (5-11) of this ES.
Sustainable Urban Drainage Systems (SuDS)	SuDS encompass a range of techniques for holistically managing water runoff on Site to reduce the quantity, and increase the quality, of surface water that drains into from the proposed development. SuDS should mimic natural systems, and differs from traditional drainage in aiming to manage rain close to where it falls.
The Applicant	Aberedw Energy Park Ltd
UKAB	Investigates Aircraft Near Misses
VFR	Flight without ATC on a see-and-be-seen basis
VMC	Weather suitable for VFR flight
W/sr	Electromagnetic energy output related to solid angle
Water Framework Directive	A European Union directive which was adopted in 2000 and commits European Union member states to achieve good qualitative and quantitative status of all water bodies by 2015; the WFD is retained in UK law following the UK's exit from the European Union.
Water Quality Monitoring Plan	A plan which sets out how water quality will be monitored at a site, typically prior to and during a construction project; including monitoring locations, frequency, duration, and parameters to be tested.
Written Scheme of Investigation	Documents that sets out the methodology, approach and aims to carry out archaeological investigations
Zone of Influence	The zone within which the Proposed Development may have an impact on hydrological conditions such as water quality, flow rate, or water table level.

Term	Meaning/Definition
Zone of Theoretical Visibility (ZTV)	The zone from which the scheme is theoretically visible over 'bare earth', meaning the earth surface, including bodies of water and permanent ice and snow but excluding vegetation and manmade objects.