



Shetland Space Centre

Environmental Impact Assessment Report

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Abbreviations & Glossary

Shetland Space Centre

Term	Expanded Term
'effect'	The term ' <i>effect</i> ' is defined as the consequences for the receptor of an impact. The use of the word ' <i>effect</i> ' rather than ' <i>impact</i> ' at the end of species and designated site accounts is based on the wording of the EIA Regulations which requires the determination of ' <i>likely significant effects</i> '.
'impact'	used commonly throughout the EIA process and is defined as a change experienced by a receptor (this can be beneficial, neutral or adverse)
'receptor'	used throughout the Environmental Impact Assessment (EIA) process and is defined as the element in the environment affected by a development (e.g. a bird in the case of ornithology)
AADF	Annual Average Daily Flow
AADT	Annual Average Daily Traffic
ABPmer	Global Marine Consultancy Services
ACH	Advanced Chain Home
AD	Alert Distance
AIS	Automatic Identification System
Al	Aluminium
ALARP	As Low as Reasonably Practical
AOB	Apparently Occupied Burrows
AOD	Above Ordnance Datum
AON	Apparently Occupied Nests
AQAL	Air Quality Assessment Level
AQAP	Air Quality Action Plan
AQIA	Air Quality Impact Assessment
AQMA	Air Quality Management Area
AQOs	Air Quality Objectives
AQS	Air Quality Strategy
BAP	UK Biodiversity Action Plan
BBPP	Breeding Birds Protection Plan
BGS	British Geological Survey
BRRC	Blue Ridge Research and Consulting LLP
BT	British Telecom
CAA	Civil Aviation Authority
CAFS	Cleaner Air for Scotland Strategy
CAR	Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended in 2018)

Term	Expanded Term
CCA	Coastal Character Areas
CCIA	Climate Change Impact Assessment
CCP	Climate Change Plan
CCS	Considerate Constructors Scheme
CCTs	Coastal Character Types
Cd	Cadmium
CEMP	Construction Environmental Management Plan
CEOI-ST	Centre for Earth Observation Instrumentation and Space Technology
CH	Chain Home
CIBSE	Chartered Institution of Building Services Engineers
CIEEM	Chartered Institute for Ecology and Environmental Management
CifA	Chartered Institute for Archaeologists
CIRIA	Construction Industry Research and Information Association
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COMAH	The Control of Major Accident Hazards Regulations (2015)
CoNaW Regs	The Control of Noise at Work Regulations
CoPA	The Control of Pollution Act
COSHH	The Control of Substances Hazardous to Health
CRTN	Calculation of Road Traffic Noise
CTMP	Construction Traffic Management Plan
Cu	Copper
Db	Decibel is a unit of measurement
DEFRA	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DIO	Defence Infrastructure Organisation
DMP	Dust Management Plan
DMRB	Design Manual for Roads and Bridges
DPOs	Draft Plan Options
DWQR	Drinking Water Quality Regulator
EAC	Environmental Assessment Criteria
EC	European Commission
EclA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
ECS	ECS Transport Planning Ltd
EEA	European Economic Area
EEZ	UK Exclusive Economic Zone

Term	Expanded Term
Eft	Emissions factor Toolkit (Defra)
EHO	Environmental Health Officer
EIA	Environmental Impact Assessment
ELV	Exposure Limit Value
EMODnet	European Marine Observation and Data Network
END	Assessment and Management of Environmental Noise
EPS	European Protected Species
EPUK	Environment Protection UK
ERL	Effects Range-Low
ESGOSS	Ecological Steering Group on the Oil Spill in Shetland (UK)
FCS	Favourable Conservation Status
FID	Flight Initiation Distance
GCR	Geological Conservation Review
GDL	Gardens and Designed Landscapes
GDP	Gross Domestic Product
GHG	Greenhouse Gas Emissions
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GNSS	Global Navigation Satellite System
GO	Ground Investigation
GPPs	Guidance for Pollution Prevention
GPS	Global Positioning System
GVA	Gross Value Added
GWDTE	Groundwater Dependent Terrestrial Ecosystems
H	Hydrogen
Ha	Hectares
He	Helium
Hepla	Hermitage Environmental Planning and Landscape Architecture Limited
HEPS	Historic Environment Policy for Scotland
HES	Historic Environment Policy for Scotland
Hg	Mercury
HGVs	Heavy Goods Vehicles
HMRC	Her Majesty's Revenues and Customs
HRAs	Habitat Regulations Assessments/Appraisals
HSL	The Health and Safety Laboratory
Hu	Human
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities

Term	Expanded Term
IAQM	Institute of Air Quality Management
ICAO	The International Civil Aviation Organisation
ICES	International Council for the Exploration of the Sea
IEA	Institute of Environmental Assessment
IEMA	Institute of Environmental Management and Assessment
IHT	Institution of Highways and Transportation
ITPE	ITPEnergised
JIT	Just In Time
kVA	A kVA is 1,000 volt-amps
LAm _{ax}	A-weighted, maximum sound level
LAQM	Local Air Quality Management
Las	Local Authorities
LBAP	Shetland Local Biodiversity Action Plan
LCA	Coastal Edge Landscape Character Areas
LDP	Local Development Plan
LCTs	Landscape Character Types
LEAV	Lower Exposure Action Value
LGVs	Light Goods Vehicles
Li	Lithium
LLAs	Local Landscape Areas
LLDR	Local Landscape Designation Reviews
LO _x	Liquid Oxygen
LRCC	Launch and Range Control Centre
LSPF	Launch Site Processing Facility
LSPs	Launch Service Providers
LSps	Launch Service Provider
LUPS-GU31	Land Use Planning System Guidance Note 31
LVIA	Landscape and Visual Impact Assessment
LVs	Launch Vehicles
m ³	Cubic meters
MCA	Marine Coastguard Agency
MCMS	Marine Case Management System
MERA	Marine Environmental Risk Assessment
MMO	Marine Management Organisation
MOD	Ministry of Defence
MPAs	Marine Protected Areas
m/s	Meters per second

Term	Expanded Term
N ₂ H ₄	Hydrazine
NAEL	National Atmospheric Emissions Inventory
NAFC	NAFC Marine Centre
NAMMCO	North Atlantic Marine Mammal Commission
NAQS	National Air Quality Strategy
NATO	North Atlantic Treaty Organisation
NBN	National Biodiversity Network
NCAP	National Collection of Aerial Photography
NCMPA	Nature Conservation MPAs
NCN	National Cycle Network Routes
NEAFC	North East Atlantic Fisheries Commission
NHZ	Natural Heritage Zone
NIEA	Northern Ireland Environment Agency
NIRs	Natura Impact Reports – information/Reports to inform an Appropriate Assessment, shadow habitats regulations assessment
NISs	Natura Impact Statements
NMF	National Modelling Framework
nmol/L	Nanomoles per litre
NMPi	Marine Scotland's National Marine Plan interactive
NMPs	Noise Monitoring Positions
NMS	National Museum of Scotland
NO ₂	Nitrogen Oxide
NOAA	National Oceanic and Atmospheric Administration
NO _x	Nitrogen oxides
NPF3	National Planning Framework 3
NRA	Navigational Risk Assessment
NRHE	National Record of Historic Environment
NRW	Natural Resources Wales
NSA	National Scenic Area – chapter 5
NSRs	Noise Sensitive Receptors
NTS	Non-Technical Summary
NVC	National Vegetation Classification
ONS	Office for National Statistics
OS	Ordnance Survey
OSA	Outer Space Act
PAC	Pre-Application Consultation Report
PAHs	Polycyclic Aromatic Hydrocarbons

Term	Expanded Term
PAN	Planning Advice Note
PBDEs	Polybrominated Diphenyl Ethers
PCA	Peatland Condition Assessment
PCBs	Polychlorinated Biphenyls
PET	polyethylene terephthalate
PM ₁₀	Particulate Matter with a diameter of 10 micrometers or less
PM _{2.5}	Particulate Matter with a diameter of 2.5 micrometers or less
PMP	Peat Management Plan
PPC	Pollution and Prevention Control
PPE	Personal Protective Equipment
PPGs	Pollution Prevention Guidance Documents
ppm	Parts per million
PTS	Permanent Threshold Shift
RAF	Royal Airforce
RBMP	River Basin Management Plans
RCAHMS	Royal Commission on the Ancient and Historical Monuments of Scotland
RCP	Representative Concentration Pathway
RIES	Reports on the Implications for European Sites
RIGS	Regionally Important Geological and Geomorphological Sites
RP-1	Highly refined form of kerosene similar to jet fuel
RRH	Remote Radio Head
RSPB	Royal Society for the Protection of Birds
RTPI	Royal Town Planning Institute
Sabs	Scottish Annual Business Statistics
SACs	Special Areas of Conservation
SAs	Sustainability Appraisals
SAT	Shetland Amenity Trust
SAT-SG-75	SEPA Supporting Guidance – sector specific guidance: construction sites (SEPA 2018)
SBL	The Scottish Biodiversity List
SCA	Seascape Character Area
SCMP	Scheduled Monument Consents Policy
SEAs	Strategic Environmental Assessments
SEL	Sound Exposure Level
SENEL	Single Noise Exposure Level
SEPA	Scottish Environment Protection Agency
SG	Scottish Government

Term	Expanded Term
Shetland Space Centre	The Proposed Development
SIA	Space Industry Act
SIC	Standard Industrial Classification
SLM	Sound Level Meter
SLQ	Special Landscape Qualities Assessment
SM	Scheduled Monument
SMC	Scheduled Monument Consent
SMR	Sites and Monuments Record
SNH	Scottish Natural Heritage
SO ₂	Oxides of Sulphur 11.4.36
SoNA	Survey of Noise Attitudes Study
SPA	Special Protection Area
SPP	Scottish Planning Policy
SSC	Shetland Space Centre
SSSI	Site of Special Scientific Interest
SST	Sea Surface Temperature
STMP	Spectator Traffic Management Plan
SuDS	Sustainable Drainage Systems
SWBSG	Scottish Windfarm Bird Steering Group
TA	Transport Assessment
TAN	Technical Advice Note
TBT	Tributyltin
TEL	Transporter / Erector / Launcher Vehicle
TGN	Technical Guidance Note
TS2020	Tourism Scotland Strategy
TTROs	Temporary Traffic Regulation Orders
TTS	Temporary Threshold Shift
UK BAP species and habitats	Action plans for the most threatened species and habitats (called 'UK BAP species and habitats') were set out to aid recovery – 6.2.4
UKEAV	Upper Exposure Action Value
UKSA	UK Space Agency
UXO	Unexploded Ordnance
VFR	Visiting Friends and Relatives
VHF	Very High Frequency radio
VMEs	Vulnerable Marine Ecosystems
VOCs	Volatile` Organic Compounds



Term	Expanded Term
VSRs	Vibration Sensitive Receptors
W	Wildlife
WEWSA	Water Environment and Water Services (Scotland) Act
WFD	Water Framework Directive
WFDAs	Water Framework Directive Assessments
WlaS	5.5.40
WHO	World Health Organisation
WHO ENG	World Health Organisation – Environmental Noise Guidelines for the European Region
WW2	World War 2
ZTV	Zone of Theoretical Visibility
µg	Microgram
µm	Micrometers

Glossary

AD	<p>Alert Distance</p> <p>Alert Distance is the distance between the bird and the approaching predator or human at which the bird first becomes aware or the approach.</p>
AOD	<p>Above Ordnance Datum</p> <p>In the British Isles, an ordnance datum or OD is a vertical datum used by an ordnance survey as the basis for deriving altitudes on maps. A spot height may be expressed as AOD for "above ordnance datum".</p>
AQMA	<p>Air Quality Management Area</p> <p>Since December 1997 each local authority in the UK has been carrying out a review and assessment of air quality in their area. This involves measuring air pollution and trying to predict how it will change in the next few years. The aim of the review is to make sure that the national air quality objectives will be achieved throughout the UK by the relevant deadlines. These objectives have been put in place to protect people's health and the environment.</p> <p>If a local authority finds any places where the objectives are not likely to be achieved, it must declare an Air Quality Management Area there. This area could be just one or two streets, or it could be much bigger. Then the local authority will put together a plan to improve the air quality - a Local Air Quality Action Plan.</p>
AQS	<p>Air Quality Strategy</p> <p>This strategy sets out the comprehensive actions required across all parts of government and society to improve air quality. The strategy sets out how we will protect the nation's health and protect the environment.</p>
BBPP	<p>Breeding Bird Protection Plan</p> <p>All birds, their nests and eggs are protected by the Wildlife & Countryside Act 1981 as amended by the Nature Conservation (Scotland) Act 2004</p>
CAR	<p>Water Environment (Controlled Activities Regulations)</p> <p>It details which activities are regulated by SEPA and what regulatory controls apply over activities which may affect Scotland's water environment.</p>
CEMP	<p>Construction Environmental Management Plan</p> <p>The purpose of a Construction Environmental Management Plan is to outline how a construction project will avoid, minimise or mitigate effects on the environment and surrounding area. A CEMP considers aspects of environmental protection within the context of compliance with legislation, government and industry standards, ensuring good practice standards are implemented and minimisation of the impacts on humans and the environment.</p> <p>CEMPs are 'live' documents that are reviewed and updated at regular intervals throughout the project life cycle. The document will encompass all environmental and ecological risk, covering everything from protected species mitigation to noise pollution. CEMPs can be varied in size to suit the project and may be implemented as a precautionary measure to ensure compliance with legislation. An onsite Ecological Clerk of Works (ECow) is advised for a site to ensure ongoing compliance with the methods outlined in the CEMP.</p>

COMAH	<p>The Control of Major Accident Hazards Regulations (2015) The Control of Major Accident Hazards (COMAH) Regulations ensuring that businesses: "Take all necessary measures to prevent major accidents involving dangerous substances. Limit the consequences to people and the environment of any major accidents which do occur"</p>
CoNaW Regs	<p>The Control of Noise at Work Regulations The Control of Noise at Work Regulations 2005 place a duty on employers within Great Britain to reduce the risk to their employees health by controlling the noise they are exposed to whilst at work. ... The regulations replaced the 'Noise at work regulations 1989' which previously covered noise in the workplace.</p>
DMRB	<p>Design Manual for Roads and Bridges Information about current standards relating to the design, assessment and operation of motorway and all-purpose trunk roads in the UK.</p>
ECoW	<p>Environmental Clerk of Works The ECoW role involves monitoring to ensure that site-based construction activities are delivered. Working with site personnel, so as to avoid contravention of relevant wildlife law, and so that the works comply with planning consent commitments and the ecology elements of principal contractor documentation. Such works may also aid the discharge of planning conditions. The ECoW also pro-actively identifies and resolves ecological issues, however minor, that could otherwise give rise to third party criticism of the scheme and ensures that the workforce is aware of their responsibilities. This helps ensure that work proceeds in accordance with the project plan.</p>
EHO	<p>Environmental Health Officer Responsible for carrying out measures for protecting public health, including administering and enforcing legislation related to environmental health and providing support to minimise health and safety</p>
EIA	<p>Environmental Impact Assessment Environmental Impact Assessment (EIA) is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse. The fundamental components of an EIA would be screening, scoping, assessment & evaluation of impacts and development of alternatives, reporting the Environmental Impact Statement or EIA report, Review of the Environmental Impact Statement (EIS), decision making, as well as monitoring, compliance, enforcement and environmental auditing.</p>
FCS	<p>Favourable Conservation Status Conservation Status will be taken as Favourable when population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and the natural range of the species is neither being reduced nor is likely to be reduced.</p>
FID	<p>Flight Initiation Distance The distance at which a bird flees from perceived danger is defined as the flight initiation distance and could be used to designate separation distances between birds and stimuli that might cause disturbances.</p>

GPPs	<p>Guidance for Pollution Prevention</p> <p>GPPs provide environmental good practice guidance for the whole UK, and environmental regulatory guidance directly to Northern Ireland, Scotland and Wales only.</p>
GVA	<p>Gross Value Added</p> <p>Defined as output at basic prices minus intermediate consumption (purchaser prices), it is the balancing item of the national accounts' production. GVA can be broken down by industry and institutional sector.</p>
GWDTE	<p>Groundwater Dependent Terrestrial Ecosystems</p> <p>Groundwater Dependent Terrestrial Ecosystems (GWDTE) are wetlands which critically depend on groundwater flows or chemistries. As part of the assessment of groundwater status you have to assess if it has been significantly damaged and if the pressure causing this damage has happened via a groundwater body.</p>
LBAP	<p>Local Biodiversity Action Plan</p> <p>Local Biodiversity Action Plan Partnerships operate at the local authority level. They were set up in the UK following the Rio Earth Summit in 1992 in response to the UK becoming a signatory to the Convention on Biological Diversity.</p> <p>Most local authorities work in partnership with both national environmental agencies and local biodiversity organisations to deliver local biodiversity action plans. Either the local authority employs a dedicated biodiversity officer or, as part of other posts in the local authority, an officer supports the partnership.</p>
NEAFC	<p>North East Atlantic Fisheries Commission</p> <p>The North East Atlantic Fisheries Commission is a regional fisheries management organisation that maintains controls over fishing and fishing related acts in the North East Atlantic Ocean.</p>
NMPI	<p>National Marine Plans Interactive</p> <p>Is an interactive tool which is part of the Marina Scotland Open Data Network, and has been designed to assist in the development of national and regional marine planning. Allows you to view different types of information and, where appropriate, links have been provided to the related parts of Scotland's Marina Atlas, the National Marine Plan as well as links to data sources to facilitate data download.</p>
PMP	<p>Peat Management Plan</p> <p>Peat is a body of sedimentary material, usually dark brown or black in colour, comprising the partially decomposed remains of plants and organic matter that is preserved in anaerobic conditions within an essentially waterlogged environment.</p> <p>Peatlands hold large stocks of poorly protected carbon and excavation of peat will result in large carbon losses from the excavated peat and also the areas affected by drainage.</p> <p>In the majority of cases excavated peat will be regarded as waste in law and regulatory controls will apply to its storage and/or disposal.</p>
PTS	<p>Permanent Threshold Shift</p> <p>The damage can become permanent (permanent threshold shift, PTS) if sufficient recovery time is not allowed before continued sound exposure. When the hearing loss is rooted from a traumatic occurrence, it may be classified as noise-induced hearing loss, or NIHL.</p>

RRH	<p>Remote Radio Head</p> <p>A remote radio head (RRH), also called a remote radio unit (RRU) in wireless networks, is a remote radio transceiver that connects to an operator radio control panel via electrical or wireless interface. When used to describe aircraft radio cockpit radio systems, the control panel is often called the radio head.</p>
RIGS	<p>Regionally Important Geological and Geomorphological Sites</p> <p>Regionally important sites are locally designated sites of local, national and regional importance for geodiversity in the United Kingdom.</p>
SLM	<p>Sound Level Meter</p> <p>Used for acoustic measurements, commonly handheld with a microphone. They provide readings on the noise level in an environment and usually return a measurement in decibels (dB).</p>
SMC	<p>Scheduled Monument Consent</p> <p>A monument which has been scheduled is protected against ground disturbances or unlicensed metal detecting. Written consent must always be obtained before any work on a scheduled monument can begin.</p>
SPA	<p>Special Protection Areas</p> <p>A Special Protection Area is a designation under the European Union Directive on the Conservation of wild birds. Under the Directive, Member States of the European Union (EU) have a duty to safeguard the habitats of migratory birds and certain particularly threatened birds.</p>
SPP	<p>Scottish Planning Policy</p> <p>A statement of Scottish Government Policy on how nationally important land use planning matters should be addressed across the country.</p>
SSSI	<p>Site of Special Scientific Interest</p> <p>A Site of Special Scientific Interest (SSSI) is a formal conservation designation. Usually, it describes an area that's of particular interest to science due to the rare species of fauna or flora it contains - or even important geological or physiological features that may lie in its boundaries.</p>
SST	<p>Sea Surface Temperature</p> <p>Sea surface temperature (SST) is the water temperature close to the ocean's surface. The exact meaning of surface varies according to the measurement method used, but it is between 1 millimetre (0.04 in) and 20 metres (70 ft) below the sea surface.</p>
SuDS	<p>Sustainable Drainage Systems</p> <p>Sustainable drainage systems (also known as SuDS, SUDS, or sustainable urban drainage systems) are a collection of water management practices that aim to align modern drainage systems with natural water processes.</p>
TAN	<p>Technical Advice Note</p> <p>The Technical Advice Note provides guidance which may assist in the technical evaluation of noise assessment.</p>
UXO	<p>Unexploded ordnance</p> <p>Unexploded bombs, and explosive remnants of war are explosive weapons that did not explode when they were employed and still pose a risk of detonation, sometimes many decades after they were used or discarded</p>

UKVEA	<p>Upper Exposure Action Value</p> <p>The upper exposure action value is set at a daily or weekly average noise exposure of 85 dB, above which the employer is required to take reasonably practicable measures to reduce noise exposure, such as engineering controls or other technical measures.</p>
VOCs	<p>Volatile` Organic Compounds</p> <p>Volatile organic compounds (VOCs) are compounds that easily become vapours or gases. VOCs are released from burning fuel such as gasoline, wood, coal, or natural gas. They are also released from many consumer products such as; cigarettes and solvents.</p>
WFD	<p>Water Framework Directive</p> <p>The Water Framework Directive (WFD) sets out objectives for the water environment. These include the protection, enhancement and restoration of surface water, groundwater and water dependent protected areas and prevention of deterioration. Environmental standards and conditions are needed to set the level of control to meet these objectives.</p>
WHO	<p>World Health Organisation</p> <p>WHO's primary role is to direct international health within the United Nations' system and to lead partners in global health responses.</p>
WHO ENG	<p>World Health Organisation Environmental Noise Guidelines</p> <p>The Environmental Noise Guidelines aim to support the legislation and policy making process on local, national and international level. The WHO guideline values are public health-oriented recommendations, based on scientific evidence of the health effects and on an assessment of achievable noise levels.</p>
ZTV	<p>Zone of Theoretical Visibility</p> <p>Also known as a Zone of Visual Influence, is a computer-generated tool to identify the likely (or theoretical) extent of visibility of a development. The elevation (or a set of elevations) of the development is tested against a 3D terrain model.</p>
µg	<p>µg</p> <p>In the metric system a microgram or microgramme is a unit of mass equal to one millionth of a gram. The unit system is µg according to the International System of Units.</p>



Volume I Non-Technical Summary

Non-Technical Summary



Volume II EIA Report



Volume III EIA Drawings



Volume IV EIA Technical Appendices



Volume 5 EIA Confidential Appendices

Supplied separately to SIC





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