Ministry of Defence

Deep Space Advanced Radar Capability (DARC)

Environmental Statement Volume 3: Appendices

Draft for Pre-application Consultation
Planning Application: 22/1136/SO
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ES Appendix 1.1: Statement of Competency

Table 1: Statement of Competency Table

EIA COMPONENT	RELEVANT EXPERIENCE (SWECO TO APRIL 2025)	RELEVANT EXPERIENCE (JACOBS FROM JULY 2025 TO SUBMISSION)
EIA COORDINATION	Mark Murphy (BSc (Hons), MSc) is a Full Member of the Institution of Environmental Sciences and an Affiliate Member of IEMA and has over 12 years of EIA experience. Recent project experience as a topic expert and EIA lead includes: EIA lead for multiple DIO urban development masterplans; EIA lead for A47 major infrastructure projects; and EIA topic lead for Orkney Logistics Base.	Doug Dyche (BSc (Hons), MSc, CEnv, MIEnvSci), is an Associate Director with over 11 years' experience in Environmental Impact Assessments across the UK and heads the EIA team within Scotland. Doug specialises in coordinating multi-disciplinary environmental assessments of infrastructure projects including renewable energy, electricity transmission and highways. Doug has expertise in understanding and application of iterative design process to effectively assess environmental impacts. Relevant project experience includes Environmental and Consents Lead for Glen Lednock Wind Farm (Low Carbon), and Environmental Net Gain Lead for Bramford to Twinstead Grid Reinforcement (National Grid), and topic lead for multiple Accessibility assessments for Transport Scotland road schemes, including A9 Dualling southern sections.
TRANSPORT AND ACCESS	Mark Duckworth (BEng, MSc) is a Chartered Member of the Chartered Institute of Logistics and Transport and the Chartered Institution of Highways and Transport and has over 35 years' experience in the field of traffic engineering and management in a consultancy environment. Mark's recent EIA project experience as a topic expert/Transport and Access lead includes: large mixed employment development at Kingmoor Park, Carlisle; strategic residential site in Warrington; Energy Recovery Centre, St Helens; and five Development Consent Order (DCO) applications for highway improvement schemes on behalf of National Highways.	David Marshall is a Principal Transport Planner with over 12 years of experience working on a wide range of projects, including as technical lead for traffic and transport inputs in support of numerous development schemes. This experience includes Environmental Impact Assessments, transport assessments, transport statements, accessibility studies, route feasibility studies, and development management. Relevant project experience includes Strategic Pipeline Alliance (Anglian Water), A12 Chelmsford To A120 Widening Scheme (National Highways), Glen Lednock Wind Farm (Low Carbon), East Meath to North Dublin Grid Upgrade (EirGrid), Fort Augustus Substation (SSE Renewables), and Dogger Bank D Offshore Wind Farm (SSE Renewables).
AIR QUALITY	Jen Simpson (BSc) is a full member of the Institute of Air Quality Management and the Institution of Environmental Sciences and has over 30 years of consultancy experience. Jen's recent EIA project experience as a topic expert and Air Quality topic lead includes: five A47 DCO applications including an ES and Planning Inspectorate Public Examination; Etruria Valley Link Road; data centres across UK and Ireland; Orkney Harbour Extension; Colechurch House, London; and St Mary's Wharf, Guildford.	Sam Pollard (BEng MSc) is a full member of the Institute of Air Quality Management and the Institution of Environmental Sciences and a Chartered Environmentalist (CEnv) with over 23 years of consultancy experience. Sam's recent EIA project experience as a topic expert and Air Quality topic lead includes the Chelmsford North East Bypass, A120 to A133 Link Road and Army & Navy Sustainable Transport Package schemes for Essex County Council.
NOISE AND VIBRATION	Helen Makewell (BSc (Hons), DipPolCon (Open)) is a full member of both the Institute of Acoustics and Institution of Environmental Sciences and has over 16 years of consultancy experience. Helen's recent EIA project experience as a topic expert includes three Nationally Significant Infrastructure Project (NSIP) offshore windfarm applications and one A47 application, multiple construction EIAs for various utility and residential developments.	SWECO retained
BIODIVERSITY	Gemma Linacre (MRes, BSc (Hons)) is a Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and has over 13 years of experience in ecological consultancy. Gemma's recent EIA project experience includes: St George's	Laura Gore BSc MSc CEnv MCIEEM has 19 years of experience in consultancy specialising in Ecological Impact Assessment and Habitats Regulations Assessment. Laura has led biodiversity teams in the successful consenting process for a range of infrastructure projects. Laura's recent project experience includes Bramford to Twinstead Grid

EIA COMPONENT	RELEVANT EXPERIENCE (SWECO TO APRIL 2025)	RELEVANT EXPERIENCE (JACOBS FROM JULY 2025 TO SUBMISSION)
	Hospital, London; Great Billing Minerals Extraction, Northampton; and A47 Vauxhall Junction Improvements.	Reinforcement, Hinkley C Compensation Measures and new 400kV substations in South Wales.
LANDSCAPE AND VISUAL IMPACT	Phillip Black (BA (Hons)) is a Chartered Member of the Landscape Institute and has over 25 years' experience in landscape and visual impact assessment. He has carried out assessments over a wide range of development sectors, including large scale infrastructure and onshore wind farms, and he has presented evidence at Appeal Public Inquiries and NSIP Examinations.	SWECO retained
ARCHAEOLOGY AND BUILT HERITAGE	Andrew Reid (BSc in Archaeological Science, MA in Landscape Archaeology) is the Historic Environment Lead with over 13 years' experience within the sector. Andrew has undertaken consultancy work on a wide range of projects up to and including NSIPs. Andew's recent project experience as the historic environment lead includes several large projects including new road and rail schemes, on DCO and Energy Consents Unit level applications for renewables and for other major applications including mixed use and residential developments.	Simon Griffin is Senior Associate Director for Archaeology and Cultural Heritage with over 30 years professional experience in the sector. Simon is Head of discipline for Archaeology and Cultural Heritage at Jacobs since 2016 and specialises in the design, procurement and management of archaeological fieldwork, all aspects of Cultural Heritage Assessments and planning considerations across the UK
GROUND CONDITIONS AND CONTAMINATED LAND	Tony Vine (BSc Geology, MSc Environmental Science) is a Member of the Institution of Environmental Sciences and has over 30 years of consultancy experience extending across environmental protection, contaminated land, risk assessment and EIA. Recent EIA project experience as a topic expert includes: appointed topic authority for the delivery of Soils, Geology and Contamination chapters for several large-scale National Highways schemes including the A46 Coventry Junctions, A47 in Norfolk, M25 Junction 28 and the A63 in Hull.	Karen Young (BSc Marine Geography, MSc Environmental Monitoring) in a Chartered Environmentalist (CEnv) and Member of the Institution of Environmental Sciences with over 25 years experience in contaminated land risk assessment, EIA and excavated materials management. Recent EIA experience includes the delivery of Land Quality or Soils, Geology and Land Contamination chapters for several major highways schemes including the M5 Bridgwater and onshore cabling for an offshore wind farm in Scotland, EIA scoping and ES development for West Yorkshire Combined Authority Mass Transit Scheme and ES scoping for part of the United Utilities Northwest Transfer Scheme.
WATER ENVIRONMENT, FLOOD RISK AND DRAINAGE	Andy Smith (BSc, MSc, C.WEM, CEnv) has over 19 years of consultancy experience throughout which time he has prepared Water Environment ES chapters. Recent ES experience includes leading the water environment ES chapter for Drax Bioenergy with Carbon Capture and Storage from inception through DCO examination and the preparation of the Cory Carbon Capture Scheme water environment ES chapter. Other recent schemes include Protos Carbon Capture, A1 in the North and A1 Birtley to Coalhouse.	Mike Symons has over 25 years' experience of all aspects of the water cycle. He is highly experienced in the spatial planning process having developed, reviewed and led the water elements of Environmental Impact Assessment and Flood Risk Assessments for Nationally Significant Infrastructure Projects across a number of sectors including: rail, water, highways, aviation and energy, taking them through the application, DCO examination, hearings and planning inquiries. He is a highly experienced flood risk engineer having progressed fluvial and surface water mitigation schemes from identification and inception, through design and appraisal to delivery. He leads multi-disciplinary teams on large infrastructure projects including hydraulic modellers, hydrologists and engineers and other water disciplines. He has experience of the water industry having worked for a number of water companies on wastewater and water supply projects. He is UK Capability Manager for Flood Risk Management with responsibility for the technical capability, sales and resourcing for approximately 50 flood risk professionals across the UK.

EIA COMPONENT	RELEVANT EXPERIENCE (SWECO TO APRIL 2025)	RELEVANT EXPERIENCE (JACOBS FROM JULY 2025 TO SUBMISSION)
SOCIO-ECONOMICS	Undertaken by Montagu Evans LLP. . Morgan Reece (BA (Hons), MA) is a Chartered Planning and Development Surveyor (MRICS) with more than 12 years of consultancy experience in appraising the social and economic impacts of development. Morgan has delivered socio-economics assessments for a wide range of EIA projects, ranging from town centre regeneration schemes (such as New Woolwich Leisure Centre, RB Greenwich) to major infrastructure projects (such as Sizewell C, Suffolk – Morgan worked on the Employment and Skills strategy which formed a key component of the wider socio-economic mitigation strategy). Morgan is also an accredited HM Treasury Better Business Cases practitioner and is an expert in Green Book-compliant economic appraisal.	Morgan Reece retained
CLIMATE CHANGE AND CARBON	Kassim Caratella (BSc) has over 10 years' experience working in consultancy and academia within the climate change and carbon sectors. Kassim has recent experience as a carbon consultant in developing net zero roadmaps and strategies for sustainable substations for SP Energy Networks, carbon management for Heathrow Airport, reviewing net zero roadmaps and action plans for Welsh Local Government Association and environmental assessments of public buildings for the European Commission.	Sam Pollard (BEng MSc) is a full member of the Institution of Environmental Sciences and a Chartered Environmentalist (CEnv) with over 23 years of consultancy experience. Sam's recent EIA project experience as a topic expert and Climate topic lead includes the A12 Chelmsford to A120 widening scheme and M60 Junction 18 Simister Island Interchange for National Highways and the A9 Dualling Programme: Pass of Birnam to Tay Crossing for Transport Scotland.
HEAT AND RADIATION	Group Captain Graem Corfield MBE, DIC, PhD, MDA, MA, CEng, FIMechE, is the Programme Director for DARC and a Deputy Head at UK Space Command. Graem holds a PhD in Engineering from Imperial College of Science, and is a UK Engineering Council Chartered Engineer, a Fellow of the Institution of Mechanical Engineers and a former RAF Group Chief Engineer. He is the UK Space Command-National Technical Interchange Lead and has been a Programme Director for the past 5 years leading several air, space and cyber programmes regulated by GovS 002.	Graem Corfield retained
LIGHTING	Undertaken by Designs For Lighting (DFL) Limited. Ryan Carroll (BSc in Lighting Design and Technology) is an Engineering Council registered Incorporated Engineer and a Member of the Institution of Lighting Professionals. Ryan has 9 years' experience leading Lighting Impact Assessments for complex projects with challenging environmental sensitivities and now oversees the Lighting Impact and Planning department at Designs for Lighting. Ryan's experience ranges from transport and residential projects in the International Dark Sky Reserve of the South Downs National Park, to NSIPs requiring DCOs for highway and port projects, along with rail freight transport hubs.	Ryan Carroll retained

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ES Appendix 2.1: DARC EIA Scoping Opinion Response Table

Table 1: Scoping Opinion Response Table

NO.	PCC COMMENT	RESPONSE	WHERE ADDRESSED
INTRODUCTORY TEXT			
1	The Project for the purposes of this EIA Scoping Opinion is defined in the "EIA Scoping Report; Project DARC – Cawdor Barracks" dated 10th March 2023 (Sweco Project Reference: 65208061 Document Reference: 65208061-SWE-XX-XX-T-J-0002 - Cawdor Scoping Report Revision P02) (the Scoping Report). In summary the proposed development would form a Satellite Monitoring Station ("The Development") and would comprise: • Approximately 6 transmit radar antennas; • Approximately 21 receive radar antennas; • Radar antenna operations area (proposed to be within receiver array area) • Sub-station and grid connection • Associated external works with the above aspects	Acknowledged	ES Chapter 3: Proposed Development
2	Pembrokeshire County Council (PCC) hereby gives notice in pursuance of the provisions of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (as amended) that the scope of the proposed Environmental Impact Assessment (EIA) as described in the Scoping Report is agreed subject to the matters contained in this EIA Scoping Opinion.	Acknowledged	ES Chapter 1: Introduction, and ES Chapter 2: Methodology
3	In adopting the EIA Scoping Opinion, PCC has taken into account those matters prescribed in Regulation 14(6), specifically the information provided by the applicant about the proposed development, the specific characteristics of the particular and type of development, and the environmental features likely to be significantly affected by the development. Consultation was undertaken in accordance with Regulation 14(4).	Acknowledged	ES Chapter 2: Methodology, and ES Chapter 3: Proposed Development
4	This adopted EIA Scoping Opinion should be read in conjunction with correspondence dated 17th April 2023 from Natural Resources Wales and correspondence dated 17th March 2023 from CADW (in response to the statutory consultation required of Regulation 14(4)) as well as correspondence dated 4th May 2023 from Pembrokeshire Coast National Park Authority (PCNPA). A copy of this correspondence is appended.	Acknowledged and is reflected in the ES	ES Chapter 2: Methodology
5	A meeting at Cawdor Barracks took place on 25th April 2023. At that meeting, the possibility of a new dedicated grid connection to Haverfordwest was raised. Should this form part of this proposed project then a further EIA Scoping Opinion Request should be submitted.	Acknowledged	ES Chapter 3: Proposed Development
6	Refer to Regulation 17 (3)(d) in respect of the need for reasonable alternatives to be considered.	Acknowledged	ES Chapter 4: Alternatives and Design
8	At 3.7.2 - 3.7.5, it is concluded that a detailed assessment of Radar and Telecommunications would be scoped out of the EIA as this will be covered by other legislation and agreements. The local planning authority (LPA) would need comfort that this is indeed the case and thus a more detailed review to this effect would be needed.	Acknowledged	ES Appendix 2.2: DARC EIA Scoping Opinion Letter Follow Up March 2024

NO.	PCC COMMENT	RESPONSE	WHERE ADDRESSED
TRANSPORT & ACCESS			
9	Para 4.2.4 states that all construction traffic will be required to use a separate entrance to the primary vehicle access to minimise the impacts of construction HGVs. This access is proposed to be the existing Crash Gates (used for emergency service vehicles) with direct access onto the C3010 to the east of the site. The C3010 also forms part of the National Cycle Network Route 4. Further detailed study of C3010 would need to be undertaken to ensure that this route can adequately manage the proposed volume of HGV deliveries, turning into/out of the site and adequate visibility for a 60mph road in line with DMRB standards.	Further consultation with PCC LHO has continued since the EIA Scoping Opinion, as well as relevant design evolution. Consultation and assessment is reported in the ES.	ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, and ES Chapter 5: Transport and Access
9	While the LPA notes that this particular set of Crash Gates is overgrown, ecology consultations would need to be undertaken to ensure that the loss of hedgerow removed by opening up this access point is appropriately considered.	Further consultation with PCC Biodiversity Officer has continued since the EIA Scoping Opinion, as well as relevant design evolution. Consultation and assessment are reported in the ES.	ES Chapter 4: Alternatives and Design, and ES Chapter 5: Transport and Access, and ES Chapter 8: Biodiversity
10	Other junctions for consideration within the EIASR Part 1 have been identified within Para 4.2.5 as: - A487 (between U3017 and Haverfordwest); - A487/C3010 (construction access to Cawdor Barracks); - C3010 (Pen Y Cwm to Rhydygele); - A487/U3017 junction (main access to Cawdor Barracks) and - U3017(route length). The LPA does not dispute the inclusion of these junctions within the EIA, however would also request that routing for all HGVs is discussed and agreed at the appropriate time.	Further consultation with PCC LHO has continued since the EIA Scoping Opinion, as well as relevant design evolution. Consultation and assessment are reported in the ES.	ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, and ES Chapter 5: Transport and Access
11	Para 4.2.9 makes reference to the proposed Newgale Coastal Adaptation programme and provision of a by-pass route in order to accommodate the coastal erosion likely to impact the A487 through Newgale. While the EIASR recedes the outcome of the Roads Review announcement, PCC can confirm that this programme has received Ministerial approval and is likely to progress following on from environmental surveys.	Acknowledged	ES Chapter 5: Transport and Access, and ES Chapter 17: Cumulative Effects Assessment.
12	Consideration for all mitigation measures with regards to pedestrian and cycle safety will need to be considered; including potential measures which may require the modification of the highway in order to meet visibility and width requirements as necessary.	Visibility and safety have been a key consideration for design. Pedestrian and cycle infrastructure has been included as a receptor as part of the assessment.	ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, and ES Chapter 5: Transport and Access

NO.	PCC COMMENT	RESPONSE	WHERE ADDRESSED
13	In respect of a Construction Traffic Management Plan (CTMP), Para 4.4.5 indicates that a full CTMP will be supplied prior to construction, including a Green Travel Plan. Whilst Para 4.4.6 indicates that there will be a peak of 150 staff during construction; it is proposed that 50 staff vehicles and 80 HGVs will be accommodated, as well as 20 LGVS (two way trips). Routing of the HGVs will need to be discussed with the highways authority and agreement reached about any further CTMP measures required in the wider area.	Further consultation with PCC LHO has continued since the EIA Scoping Opinion and is reported in the ES. Outline CTMP included in ES Chapter 5: Transport and Access. The full CTMP will be agreed with PCC at the appropriate times and implemented as agreed, separately to the EIA process.	ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, and ES Chapter 5: Transport and Access
14	Staffing for the operational phase has been indicated at 60 personnel (Para 4.4.10, EIASR Part 1) with operations taking place on a 24 hour basis, seven days per week. Trip generation information for the operational phase will need to be supplied within the ES in order to assess the full impacts of transport upon the highway network. It is expected that a large number of these movements may fall outside the peak hours on the highway network; further discussion will be required once final figures have been achieved.	Included in assessment	ES Chapter 3: Proposed Development, and ES Chapter 5: Transport and Access
15	The operational phase is planned to be scoped out of the EIA (Para 4.4.14) but an assessment of the operational phase should be included in order to understand the number of delivery/service and staffing levels likely to support the development.	Included in assessment	ES Chapter 5: Transport and Access
15	There is likely to be a period of overlap between the operational phase and the withdrawal of the British Army's 14 Signals Regiment which needs to be understood. As such, Table 4.1 – Potential Transport and Access Impacts, Construction will need to be amended for Operational Traffic.	It is understood that the existing site operations will continue until at least 2028. The proposals will result in the new development being completed in early 2029. As a reasonable worst-case assessment scenario, it is assumed the operational traffic would overlap for the operational assessment.	ES Chapter 3: Proposed Development, and ES Chapter 5: Transport and Access
16	The approach for the methodology for Impact Assessment is adequate. Traffic surveys are proposed to be undertaken in order to establish baseline traffic data. Siting is proposed at the C3010/A487 junction, at the primary access to the site, and in several locations (to be agreed) along the A487. This is acceptable with the proviso that summer traffic in Pembrokeshire is known to considerably increase in the peak holiday periods; as such, traffic surveys in standard months, as well as a sensitivity test during the summer holiday period should also be undertaken. This will provide a comparison of the impacts of construction during the summer months; and provide evidence for any traffic management required.	Acknowledged and has been reflected in the baseline for assessment.	ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, and ES Chapter 5: Transport and Access

NO.	PCC COMMENT	RESPONSE	WHERE ADDRESSED
AIR QUALITY			
17	Proposed EIA scope satisfactory.	Acknowledged	ES Chapter 6: air Quality
NOISE AND VIBRATION			
18	Proposed EIA scope satisfactory.	Acknowledged	ES Chapter 7: Noise and Vibration
BIODIVERSITY			
20	There is currently little research investigating impacts of radar on bat movements. However, if the presence of any significant roosts are found to be nearby, consideration of operational impacts on their flight lines across the site should be considered and addressed.	Operational impacts on bat flight lines have been included as part of the EIA and reported in the ES.	ES Chapter 8: Biodiversity
21	Any application must also include a biodiversity enhancement and management scheme. Further guidance can be found in CC/PCNPA's Biodiversity Enhancement Supplementary Planning Guidance and CIEEMS guidance on the Welsh Government's approach to net benefits for biodiversity.	Included as part of the design and approach set out in the ES.	ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, ES Chapter 8: Biodiversity, and Green Infrastructure Statement
21	As the site sits between a core habitat for B-lines and a B-Line, opportunities to connect these areas through management for pollinators would be particularly welcomed.	Opportunities for habitat connectivity have been included as part of the design process and reported in the ES.	ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, ES Chapter 8: Biodiversity, and Green Infrastructure Statement
22	Lighting on site should also be kept to a minimum and a full lighting scheme to include a lux diagram and a demonstration of the extent of lighting and its impact on the surrounding landscape is needed.	Lighting on site has been kept to a minimum and is dark skies compliant.	ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, and ES Chapter 16: Lighting.
22	The lighting scheme must consider the results of any bat surveys and light spill on roosts, and commuting and foraging areas must be avoided.	Lighting impacts on biodiversity receptors have been included as part of the EIA and reported in the ES.	ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, ES Chapter 8 Biodiversity, and ES Chapter 16: Lighting.
22	Impacts of Manx Shearwater potentially being attracted to the lighting on site should also be considered and discussed with the Wildlife Trust and RSPB.	Further consultation was undertaken with PCC Biodiversity Officer on Manx Shearwater. Consultation and assessment reported in the ES.	ES Chapter 8: Biodiversity
22	The island SPA's may need to be considered as part of the (Habitats Regulations Assessment (HRA).	HRA has been completed and screened out.	ES Appendix 8.11: Habitat Regulations Assessment – Screening
LANDSCAPE AND VISUAL			
23	A series of viewpoints have been identified but seem to be unresolved. There is also some confusion within them between the pin points shown on the map, the written description and the grid references provided in Table 8.1. The map showing their location also includes other types of route and designated landscapes. There will be a need to separate out into more specific categories to avoid confusion, and it would be improved if the routes were shown in an alternative manner as the current version leads to some ambiguity	Further consultation with PCC and PCNPA has continued since the EIA Scoping Opinion, as well as design evolution. Consultation and	ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, ES Chapter 9: Landscape and Visual Impact, and ES Appendix 9.3 Representative Viewpoint Assessment

NO.	PCC COMMENT	RESPONSE	WHERE ADDRESSED
	with Ordnance Survey convention, most notably the National Cycle Network. Also, the method needs improving to allow the OS base map to show through better in relation to names and roads being obscured by the ZTV colouration, making it difficult to locate oneself.	assessment are reported in the ES.	
24	Although the height of the structures are only 20m, their extent laterally is likely to be extensive and yet to be determined. With this in mind, and with the significance of the receptor at Carn Llidi north of St Davids, it is recommended that this is included in the list of viewpoints' assessed for both day and night time impacts.	Included in assessment	ES Appendix 9.3 Representative Viewpoint Assessment
25	Lighting has the potential to have a significant impact on the night time landscape and this needs to be fully explored in the EIA.	Anticipated night time activities are described in the ES and have been assessed.	ES Appendix 2.2: DARC EIA Scoping Opinion Letter Follow Up March 2024, ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, ES Chapter 9: Landscape and Visual Impact, and ES Chapter 16: Lighting.
25	With regard to lighting, the Scoping Report includes the following paragraph at 8.5.1: With regard to lighting impacts, reference will be made to a Lighting Assessment which will be undertaken as a standalone technical assessment and will be appended to the ES. This approach should be undertaken with a view to the consideration of potential harmful effects on landscape character and visual impact on different receptors.	Included in the EIA. Further consultation with PCC has continued since the EIA Scoping Opinion. Lighting chapter now included in the ES.	ES Appendix 2.2: DARC EIA Scoping Opinion Letter Follow Up March 2024, ES Chapter 3: Proposed Development, ES Chapter 4: Alternatives and Design, ES Chapter 9: Landscape and Visual Impact, and ES Chapter 16: Lighting.
26	Refer to appended PCNPA correspondence in respect of visual and landscape effects as they potentially relate to the National Park.	Acknowledged and reflected in the ES.	ES Chapter 9: Landscape and Visual Impact
ARCHAEOLOGY & BUILT HERITAGE			
27	The Scoping Report allows an initial buffer area of 1km and an assessment area of 8km by 7km. Cadw have identified a 5km ZTV which it is assumed to be a 5km radius from the centre of the site. On that basis the assessment area should cover an area of 10km by 10km centred on the site.	Further consultation with PCC and CADW has continued since the EIA Scoping Opinion, as well as design evolution. Consultation and assessment are reported in the ES.	ES Chapter 10: Archaeology and Built Heritage
28	The following Listed Buildings are located within the ZTV as advised above: Listed Buildings within the Pembrokeshire County Council LPA area:	Further consultation with PCC and CADW has continued since the EIA Scoping Opinion, as well as design evolution. Assessment approach was agreed with	ES Appendix 2.2: DARC EIA Scoping Opinion Letter Follow Up March 2024, and ES Chapter 10: Archaeology and Built Heritage

NO.	PCC COMMENT	RESPONSE	WHERE ADDRESSED
	13077 Rickeston Hall II*	statutory consultees and is	
	13078 Three-Seater Privy to N of Rickeston Hall II	reflected in the ES.	
	13079 U-Plan Farmhouse Ranges at Rickeston Hall II		
	13080 Carriage-House at Rickeston Hall II		
	14396 Church of St David II*		
	14397 Church of Saint Teilo II		
	12471 Kingheriot II		
	12472 Lofted Cartshed & Stable at Kingheriot II		
	12411 Cerbyd Old Farmhouse II		
	12412 L-Plan Range of Outbuildings at Cerbyd Old Farmhouse II		
	12415 Y Lodge II		
	14405 Llethr II		
	12417 Trenewydd Fawr II		
	12418 Cartshed to E of Trenewydd Fawr II		
	12419 Granary Range to E of Trenewydd Fawr II		
	12420 Range of Outbuildings on S.Side of Farmyard at Trenewydd Fawr II		
	12421 Outbuilding on W.Side of Farmyard at Trenewydd Fawr II		
	12422 Range of Outbuildings on E.side of Farmyard at Trenewydd Fawr II		
	12417 Trenewydd Fawr II		
	12672 Outbuilding with attached Horse Engine House in Farmyard to NE of Crug-Glas II		
	14402 Linked Outbuildings NE of Tyllwyd II		
	14403 Linked Outbuilding NE of Tyllwyd II		
	12442 Treglemais Fawr II		
	12465 Ffynnonddewi (Brawdy) II		
	12423 Church of St Hywel II*		
	14396 Church of St David, Brawdy II*		
	12479 Lofted Stable to SW of Tremaenhir II		
	12591 Llandidgige Fach II		
	14404 Llanreithan II		
	25613 Trehale II		
	25607 Tre-howell II		
	14399 Coach-House at Abernant II		

NO.	PCC COMMENT	RESPONSE	WHERE ADDRESSED
	13051 Former Blacksmiths Shop II 12473 Paran Chapel II Listed Buildings within the Pembrokeshire Coast National Park LPA area: 11982 Roch Castle I 12474 Church of St David, Whitchurch II 12662 Caer Farchell Farmhouse, including rear court with seat II 12663 Outbuilding to rear of Caerfarchell Farmhouse II 12664 Capel Caerfarchell & Outbuilding to NE corner of Forecourt II* 12665 The Manse, including Pigsty attached at N.End II 12666 Outbuilding to rear of the Manse II 12667 Hamilton House II 12668 Outbuilding to E. of Hamilton House II 12669 Range of outbuildings to rear of Hamilton House II 12670 Y Post/The Old Post Office II 12671 Vaulted Chamber in Earth Bank to W. of Trewellwell II All of these listed buildings will need verified wireframe visualisations looking from within their setting towards the dishes in accordance with the latest Landscape Institute guidance. These visualisations will allow a full assessment of the visual impact the arrays may have on the setting of these listed buildings.		
29	One of the nearest listed buildings to the site, and most significant, is Rickeston Hall (Grade II*). This building is well screened by trees to the south-east but is vulnerable to the lack of tree cover to the north-east; the EIA should consider mitigation by additional tree planting if found to be required.	This impact and potential mitigation / enhancement has been considered as part of the EIA and reported in the ES.	ES Figure 3.4: Landscape and Ecology Proposals Plan, and ES Chapter 10: Archaeology and Built Heritage.
30	There are various scheduled monuments within the assessment area that will be for Cadw to consider. Refer to the appended PCNPA correspondence in respect of the historic environment within their jurisdiction. Consideration should be given to the proposed colour of the dishes and equipment and how this might mitigate visual impact.	Included as part of the ES.	ES Chapter 3: Proposed Development, ES Chapter 9: Landscape and Visual Impact, and ES Chapter 10: Archaeology and Built Heritage.
31	The resulting assessment and geophysics reports should be submitted to the regional HER in accordance with the Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)	Completed	ES Chapter 10: Archaeology and Built Heritage, and ES Appendix 10.3: Detailed Gradiometer Survey Report

NO.	PCC COMMENT	RESPONSE	WHERE ADDRESSED
GROUND CONDITIONS AND CONTAMINATED LAND			
32	Proposed EIA scope satisfactory.	Acknowledged	ES Chapter 11: Ground Conditions
WATER ENVIRONMENT, FLOOD RISK AND DRAINAGE			
33	The enclosed correspondence from Dwr Cwmru Welsh Water dated 3rd April 2023 (Appendix 4) has been received. To clarify, DCWW were advised that the submission is one for an EIA Scoping Opinion, and not one for a Screening Opinion. DCWW should be consulted further at the appropriate time.	No further comments from DCWW	ES Chapter 12: Water Environment, Flood Risk and Drainage
34	Ordinary watercourses, local or field boundary ditches, not shown on Ordnance Survey mapping, may exist around or across the site. If present, these should be highlighted within the EIA.	Acknowledged. Water features walkover undertaken after the EIA Scoping Opinion.	ES Chapter 12: Water Environment, Flood Risk and Drainage
34	For information, ordinary watercourses must not be filled in, culverted, or the flow impeded in any manner, and no structure should be built over ordinary watercourses or within 3 metres from the top of bank of any watercourse, or within 3 metres of a culverted watercourse, without the prior agreement of the local planning authority under Section 23 Land Drainage Act 1991 as amended by the Flood and Water Management Act 2010.	Acknowledged	ES Chapter 3: Proposed Development, and ES Chapter 12: Water Environment, Flood Risk and Drainage
34	Consent is also required to alter a culvert in a manner that would be likely to affect flow of an ordinary watercourse, and for temporary as well as permanent works. These matters should be considered as part of the EIA.	Acknowledged	ES Chapter 3: Proposed Development, and ES Chapter 12: Water Environment, Flood Risk and Drainage
35	The preferred method of surface water disposal from all additional impermeable areas created by the development would be to utilise some form of sustainable drainage system. These methods of surface water disposal would be in accordance with TAN15. If, however, ground conditions are not suitable for the use of soakaways/infiltration type SuDS, an alternative method of disposal will be required.	Acknowledged. The SAB have been engaged on the outline drainage design.	ES Chapter 3: Proposed Development, and ES Chapter 12: Water Environment, Flood Risk and Drainage
35	A surface water drainage strategy informed by appropriate assessments via the EIA should be undertaken.	Acknowledged. The SAB have been engaged on the outline drainage design.	ES Chapter 3: Proposed Development, and ES Chapter 12: Water Environment, Flood Risk and Drainage
HEALTH			
36	Proposed EIA scope satisfactory.	Acknowledged	ES Chapter 6: Air Quality, ES Chapter 7: Noise and Vibration, ES Chapter, ES Chapter 13: Socio-economics, and ES Chapter 15: Heat and Radiation.
SOCIO-ECONOMICS			
36	Proposed EIA scope satisfactory.	Acknowledged	ES Chapter 13: Socio-economics
CLIMATE CHANGE AND CARBON			
38	Proposed EIA scope satisfactory.	Acknowledged	ES Chapter 14: Climate Change and Carbon

NO.	PCC COMMENT	RESPONSE	WHERE ADDRESSED
HEAT AND RADIATION			
39	Proposed EIA scope satisfactory.	Acknowledged	ES Chapter 15: Heat and Radiation
CUMULATIVE EFFECTS ASSESSMENT (CEA)			
40	The proposed approach to the CEA is supported. As requested, Appendix 5 comprises a list of all major planning applications and EIA Screening & EIA Scoping Opinions within 7.5km of this site for the last 10 years. There have been no applications that required EIA. The PCNPA should be able to provide similar advice for land within their jurisdiction.	Acknowledged. PCC have been consulted further on the long list of 'other developments' to update the Appendix 5 list.	ES Chapter 17: Cumulative Effects Assessment

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ES Appendix 2.2: EIA Scoping Opinion Follow up

Furthermore, based on this operational / design life, environmental assessment of decommissioning would be difficult, as it is not known what the environmental baseline conditions will be at that time.

Works associated with decommissioning would be subject to requirements from the local planning authority prior to works being undertaken. Engagement with the local planning authority would be undertaken where relevant to inform phasing of decommission works, working hours requirements, and licencing requirements.

On this basis, it is not intended that separate assessment of the decommissioning phase be undertaken as part of this assessment.

2. Grid Connection

As per your email, dated 07 November 2023, we are grateful for the confirmation that you have consulted with Pembrokeshire County Council's own legal representative, and that your position concurs with legal advice obtained by the MoD (Appendix A) that the utilities upgrade does not form part of the 'project' for the purposes of a planning application or EIA.

3. Landscape and Seascape Viewpoints

The location, number and timings of viewpoint surveys have been agreed in consultation with PCC (Appendix B) and Pembrokeshire Coast National Park Authority (PCNPA).

In May 2023, our Landscape lead wrote to PCC to request a scoping opinion and clarify the proposed viewpoint locations. In the same month, Sweco held a meeting with PCNPA and received a subsequent follow-up consultation response agreeing landscape and seascape viewpoints in August 2023. The latter stages of these discussions were informed by draft wireframe and ZTV based on the understanding of the design at that time.

Following a change in position of the transmit array within the design Sweco updated the ZTV and approached PCNPA in January 2024 (Appendix C). PCNPA confirmed that the viewpoints agreed remain valid as confirmed by email February 2024 (Appendix D).

4. Lighting Chapter

Following the feedback and requests in the EIA Scoping Opinion, the scope of the ES will now include a standalone lighting chapter in the ES to identify likely significant effects.

The methodology of the ES chapter will follow the industry guidance by the Institution of Lighting Professionals (ILP) and British Standards for lighting will inform the lighting assessment.

A baseline survey was undertaken on 27 February 2024 to inform the assessment set out within the lighting chapter, which will address the potential future baseline light levels, the cumulative effect of the impact of lighting and the potential magnitude of change in relation to any of the potentially sensitive receptors.

The assessment methodology shall follow the ILP's guidance outlined within PLG04 (Professional Lighting Guide for Undertaking Environmental Lighting Impact Assessments) to assess the significance of the effects of lighting on Human, Ecological, Landscape and Visual Impact receptors.

Best practice set out within key guidance notes such as GN01/2021 (Guidance Notes for the Reduction of Obtrusive Light) and GN08/2023 (Bats and Artificial Lighting in the UK) will be used to evaluate the significance of any obtrusive light levels associated with the Proposed Development.

5. Additional Traffic Seasonal Surveys and Assessment of Operational Effects

In May 2023, the County Highways Authority (CHA) requested traffic surveys to be repeated during the peak summer period to enable a sensitivity test to be undertaken.

We can confirm that seasonal traffic counts were carried out over the period Saturday 26th August to Friday 1st September 2023 inclusive and will inform the conclusions of the ES.

The EIA Scoping Report proposed no operational traffic to be included. The Scoping Opinion response stated that "*an assessment of the operational phase should be included in order to understand the number of delivery/service and staffing levels likely to support the development.*"

As part of further consultation with the CHA on 17 May 2023 (Appendix E), it was agreed that "*in order for the CHA to fully understand the operational effects during this period, trip generation information will need to be provided and the assessment of the operational effects needed to be scoped into the EIA. CHA did however acknowledge that there was no need to undertake capacity testing/operational analyses of junctions and there was no requirement to prepare a separate Transport Assessment or Transport Statement to support the planning application.*"

6. Ground Conditions and Contaminated Land Baseline

Within the methodology section of the Ground Conditions and Contaminated Land, the EIA Scoping Report included the following: *"The methodology for EIA comprises… gather site specific information and inform baseline. This will include intrusive investigation to confirm site conditions and relationships, gather geotechnical / ground engineering data, establish land quality and materials data."*

The Cawdor Barracks site has been subject to a number of previous intrusive investigations.

As per paragraphs 2.4.16 to 2.4.18 within section 'Flexibility of design', the EIA Scoping Report sets out that further intrusive investigation will not be part of the process prior to detailed design:

"The Environmental Statement (ES) will provide an indicative site layout showing proposed locations of all new radar antennae and associated infrastructure.

It is anticipated that detailed ground investigation and geotechnical surveys will be undertaken as part of the design process following consent of the proposed development. The final siting of the proposed new radar antennae and associated infrastructure will be dependent on the particular geotechnical conditions found on-site.

In absence of this ground investigation information, the application will aim to provide an allowance for flexibility in the siting of the proposed radar antennae and associated infrastructure."

Since completion of the EIA Scoping Report, and as part of developing the baseline for this ES chapter, our technical team have been using available desk based and historical survey information to determine site conditions and relationships in the context of the evolving design of the development. This has allowed the initial risk assessment and conceptual site model to be refined to

align to the specific development proposals. The majority of the initial site wide potential risks have now been either removed completely or significantly revised downward to reflect the current position.

Based on the current concept design layout, there are no significant known sources within the proposed footprint, and the identified potential sources of contamination across the wider, existing airfield (Figure 1) are not in proximity to the areas of works.

The level of risk of encountering significant sources of contamination in proximity to the proposed footprint is considered low. Desk based assessment and use of historical survey information is therefore deemed proportionate and robust to inform the baseline and understand the likely significant effects. As such, we consider that the approach set out in section 2.4.17 of the EIA Scoping Report remains valid and ground investigation will be undertaken as part of the detailed design, including necessary land quality testing, so that identified sources can be managed safety and remediated as required as part of the works.

7. Heritage Wireframes

As part of the response to the Archaeology & Built Heritage in the EIA Scoping Opinion, it was requested that: "*listed buildings will need verified wireframe visualisations looking from within their setting towards the dishes in accordance with the latest Landscape Institute guidance."*

A meeting was held between Ministry of Defence (including the Historic Environment Team), Wessex, Sweco and Pembrokeshire County Council on 07 March 2024, where it was agreed that the setting assessment would follow the stage process as set out in the Setting of Historic Assets in Wales[1] (Appendix F).

This may include visualisations or site visit for receptors that are determined to be susceptible to significant effects through a change in their setting as a result of the proposed development. Approach to be confirmed with Cadw and Pembrokeshire County Council.

We trust that the above additional information provided sufficient detail to clarity the approach. We will engage further with PCC and relevant statutory consultees to further define the outstanding matters identified in this letter.

Should further discussion on matters set out in the letter we would be very pleased to arrange a meeting.

Best regards,

Mark Murphy

[1] https://cadw.gov.wales/sites/default/files/2019-05/Setting%20of%20Historic%20Assets%20in%20Wales%20EN.pdf (Cadw, 2017)

Appendices & Figures

Contents

Appendix A – Grid Connection

Date: 07 / 11 / 2023
From: PCC
To: Montagu-Evans

Further to your email below and having consulted with the LPA's own legal representative, I concur with your legal advice that the utilities upgrade does not form part of the "project" for the purposes of a planning application or EIA for the DARC development.

Date: 19 / 10 / 2023
From: Montagu-Evans
To: PCC

During the Scoping process comments were raised by yourself regarding the relationship between the EIA for potential DARC project and any infrastructure upgrade works outside of any application boundary undertaken by other using statutory powers. As we had previously mentioned and agreed, there is a separate consenting process for works being undertaken using statutory powers, but consideration of the EIA position was requested to avoid "salami slicing" the issues being considered.

Since we last spoke on this issue, we have been working with National Grid on this matter to understand their expected scope of works, as well as taking legal advice on the position. These discussions have concluded, and the legal advice received which we attach for transparency and without prejudice of any decision being taken to proceed with a planning application at Cawdor.

As you will see, the legal advice considers the question of what forms part of the "project" for EIA purposes within the context of case law and the Regulations, concluding the Cable Connection should not form part of the DARC "project". This is based, in part, upon the decision on made clear in Sizewell C, which concluded that it is not necessary for the provision of utilities infrastructure to be considered part of the development for which they are intended to serve. Furthermore, the uncertainties around the Cable Connection, both as a result of the limited design work which has so far been undertaken and the fact the delivery of the Cable Connection is entirely outside the MoD's control (in relation to delivery and ownership), support the conclusion that the Cable Connection is not part of the DARC "project".

As a result of the legal advice and the DARC team's professional experience it is concluded that the utilities upgrade does not form part of the "project" for the purposes of a planning application or EIA for the DARC scheme.

I trust that this provides sufficient clarity to you on this matter but, as always, we would be very happy to discuss this project and the attached with you in further detail if it would be of use.

Appendix B – Viewpoint Surveys

Date: 10 / 02 / 2023
From: PCC
To: Sweco

[*Following detailed comments on viewpoint locations between PCC and Sweco Landscape lead*] At the end of the day the decision lies with yourself. In getting the photos taken I'd hope you would direct them yourself, or for them to be a landscape architect on the project team who has a feel for the best viewpoints, because much rides on the impression that is generated in the views, visualisations and the analytical assessment text.

Appendix C – Updated ZTV

Date: 31 / 01 / 2024
From: Sweco
To: PCNPA

Thank you both for meeting with me back in May of last year and for subsequently responding to a follow-up consultation on SLVIA viewpoints in August of last year. Those discussions linked to the PCNPA's formal scoping consultation response included in PCC's scoping opinion, which I attach for ease of reference.

By way of update, we have since undertaken site surveys and secured viewpoint photography for all of the terrestrial viewpoints that you had requested. These include securing long-distance photographs in periods of good visibility from distant requested viewpoints on the coast path such as from St Brides and Nab Head approximately 15km to the south of the site.

However, a combination of contractual and weather constraints means that we have yet to secure photography from the five requested viewpoint positions at sea. This work was only instructed in the late Autumn, and we have been unable to identify an appropriate weather window over the subsequent winter months. We will secure this requested seascape viewpoint photography as soon as practicable.

In the meantime, further design work now suggests that the layout of the proposed antennae may change compared to early plans previously tabled. Although the layout remains in draft only, it now appears more likely that the transmit array of six antennae would be located towards the southern end of the Cawdor site, closer to the Brawdy Business Park (shown in yellow on the attached plan). As a consequence of this amended likely layout, we have produced a revised ZTV which I attach.

It is our opinion that the viewpoints already agreed for the SLVIA remain valid in the circumstance that the layout be adjusted in this way. Please confirm your agreement.

Appendix D – Agreed Viewpoints

Date: 01 / 02 / 2024
From: PCNPA
To: Sweco

…I have reviewed the amended ZTV regarding the change in position of the transmit array and can confirm that PCNPA agree that the original sea viewpoints previously requested remain valid.

Appendix E – Assessment of Operational Effects

Date: 23 / 05 / 2023
From: CHA
To: Sweco

Thanks for your email; I'm happy with what you have proposed.

Could we arrange for the August surveys to be undertaken on Tues/Thurs.

I've also checked with the StreetCare team and there are no known street works expected in the area (highlighted below) for either June or August. However, if you want to check closer to your exact dates – please do let me know and I will check in with Streetcare again.

Date: 23 / 05 / 2023
From: Sweco
To: CHA

It was good to meet you both and thanks for your time. Thanks also for sending through the County Highways Authority's (CHA) observations/comments on the EIA Scoping Report.
The key points from our discussion are set out below.

New Data collection

Classified turning counts to be undertaken at the following locations:

- A487 / U3017 (Cawdor Barracks) junction
- A487 / C3010 (Pen Y Cwm) junction

Counts to be conducted on a Tuesday and a Thursday in mid-June (6th/8th or 13th/15th). Proposed survey periods are 0630 to 0930 and 1600 to 1900 hours.

Automatic Traffic Counters (ATCs) to be installed on the following roads – precise locations to be agreed:

- A487 (between Cawdor Barracks and Solva)
- A487 (between Pen Y Cwm and Newgale)
- C3010 (in the vicinity of the proposed construction access)
- U3017 (between the Barracks entrance and the minor road leading to the camp site/holiday park)

ATCs to be installed for the 7-day period covering the classified turning counts. Counters to also collect traffic speeds.

Due to increased traffic volumes on the network during the summer holiday periods, CHA requires the surveys to be repeated during the August bank holiday week (Saturday 26th August to Friday 1st September inclusive) to enable a sensitivity test to be undertaken.

To assist us with survey planning, please can you confirm that CHA is content with the proposed data collection and that there are no events or planned roadworks for the network of interest during the proposed survey periods? Also, for the August surveys, please can you confirm if we only need to conduct the turning counts for a single day (i.e., Thursday) or for both days (Tuesday and Thursday) as per the June surveys. Thanks.

Construction Access

The principle of construction access from the C3010 was discussed. It was acknowledged by CHA that the junction of the C3010 with the A487 at Pen Y Cwm is suitable in respect of geometry and visibility splays, and it was agreed that appropriate visibility splays for the construction access can evidenced by the results of the speed survey information obtained from the proposed ATC survey. Potential ecological issues surrounding hedge removal were highlighted and CHA asked if consideration could be given to siting the construction access at the point of the gate serving the adjacent field, the location of which is shown in the extract below:

CHA highlighted that consideration needed to be given to pedestrian and cyclist safety on the section of C3010 between the A487 Penycwm junction and the construction access. Suggestion was made that the provision of short sections of informal footway in the verge may be appropriate.

Assessment of Operational Effects

CHA noted that there was likely to be an overlap period between when the proposed development becomes operational and when the 14th Signals Regiment leaves Cawdor Barracks. In order for the CHA to fully understand the operational effects during this period, trip generation information will need to be provided and the assessment of the operational effects needed to be scoped into the EIA. CHA did however acknowledge that there was no need to undertake capacity testing/operational analyses of junctions and there was no requirement to prepare a separate Transport Assessment or Transport Statement to support the planning application.

Construction Traffic Issues/Routeing

CHA indicated that there were no embargoes on the movement of general construction HGVs on the network of interest, but the developer should be mindful of traffic congestion in Haverfordwest during the peak hours and school start/finish times. CHA indicated that it just needed to know the proposed routes for construction traffic and there will be no requirement for a formal routeing agreement. However, CHA pointed out that the A487 at Newgale can be closed on occasion and the developer will need to be mindful of the agreed diversion route to the A487 for HGVs is via the B4331 (St David's Road) through Letterston to the north, which is a lengthy diversion.

I trust that the above accurately reflects our discussion and would welcome your agreement to the same. Feel free to add anything that I have missed or clarify any points which I may have mis-understood. If you could come back to be soonest on the traffic surveys points that would be great as I want to issue a request to our data collection suppliers this week.

Appendix F – Heritage Wireframes

Date: 22 / 03 / 2024
From: Sweco
To: PCC

Many thanks for taking the time to speak with us the other week, just wanted to follow up on the key points of agreement and send over the short slide deck that was shown.

We talked through the process by which we intend to undertake the settings assessment for the proposals at Cawdor Barracks which is guided by CADW's 'The Setting of Historic Assets in Wales' and the scoping responses provided by PCC and CADW.

We discussed viewpoints and visualisations and agreed that rather than produce blanket visualisations for all of the assets identified within the Study Area and ZTV, we would use the staged process as per the guidance to refine the assessment down to those assets where a potential significant effect is identified and establish whether a supporting visualisation would be useful in determining whether there is an effect or not. Determining whether a supporting visualisation is required is informed by the assessment and in consultation with both Cadw and PCC.

As discussed, a joint site visit (inc. Cadw, PCC, PCNPA, DIO and the ES heritage chapter lead) is proposed to understand the context and any potential impact. We will agree the timing and attendees as soon as we start to progress the final assessment.

We agreed that we would keep regular contact throughout the assessment process so the assets being taken forward for the most detailed assessment are known and understood between us.

Hopefully that sums everything up, but please do let me know if you have any comments or queries.

Legend

- Cawdor Barracks site*
- Technical area/barracks

SOURCE

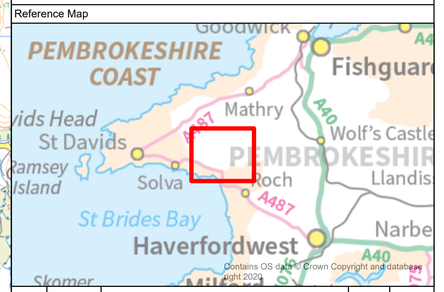
- SOURCE 1 - OLD BFI, BFI 1, BFI 2 AND NAVFAC BFI
- SOURCE 2 - FORMER FIRE TRAINING AREA
- SOURCE 3 - FORMER FUEL BOWSER PARKING
- SOURCE 4 - FORMER TIP / BURNING AREA
- SOURCE 5 - FORMER NAVFAC BFI PIPELINE
- SOURCE 6 - CURRENT BFI/ POL POINT
- SOURCE 7 - HISTORICAL POL POINTS AND FORMER ABOVE AND BELOW GROUND FUEL STORAGE TANKS, AND SMALL FORMER FIRE TRAINING AREA LOCATED WITHIN THE TECHNICAL AREA/BARRACKS AREA
- SOURCE 8 - KNOWN ASBESTOS CONTAMINATES AREA
- SOURCE 9 - FORMER ELECTRICITY DISTRIBUTION SUBSTATIONS
- SOURCE 10 - FORMER FIRE TRAINING AREA
- SOURCE 11 - AIRCRAFT PARKING, AIRFIELD USE AND CRASHES
- SOURCE 12 - INFILLED QUARRIES / GRAVEL PITS, LINEAR MOUND AT THE END OF THE RUNWAY TRENDING SSW TO NNE

SOURCES OFF SITE

- SOURCE 13 - FORMER BRAWDY FARM SAND PIT

**The Cawdor Barracks site extends over 300 hectares, however the potential developed footprint associated with the proposed development will encompass a smaller area within the wider Cawdor Barracks site (approximately 50 hectares to be determined as the design progresses). The design development will seek to avoid environmental sensitivities and constraints within the wider Cawdor Barracks site where possible*

Reference Map



Rev.	Rev.Date		Drawn	Appr'd
01	22/02/2023	FOR INFORMATION ONLY	RM	DF
		Drawing Suitability		

SWECO

Client

Ministry of Defence

Project Title

PROJECT DARC – CAWDOR

Drawing Title

FIGURE 1 - POTENTIAL SOURCES OF CONTAMINATION

Scale @ A1	1:10,000	DO NOT SCALE
Project No.	65201348-217	
Drawing No.	65208061-SWE-XX-XX-I-LQ-0002	

0 0.5 1 1.5 2 Km

Ministry of Defence

ES Appendix 3.1: Framework Construction Environmental Management Plan

Contents

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Annexes

Appendix 3.1: Framework Construction Environmental Management Plan

1. Introduction and background

1.1. The Ministry of Defence (MOD), hereafter referred to as "the applicant", are submitting an application under The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017[1] (hereafter 'EIA Regulations') to construct and operate the DARC facility and associated ancillary infrastructure, hereafter referred to as" the proposed development". The proposed development is located within the jurisdiction of Pembrokeshire County Council (PCC).

1.2. An Environmental Impact Assessment (EIA) has been undertaken for the proposed development and is reported in the Environmental Statement (ES) in accordance with the EIA Regulations. The ES contains the assessment of the potential impacts on the environment that may arise during construction and operation of the proposed development and describes the mitigation measures to be provided to avoid, prevent, reduce or, where practical and appropriate, offset the potential environmental effects associated with the construction and operation of the proposed development.

1.3. The Framework Construction Environmental Management Plan (CEMP) outlines how mitigation measures to reduce environmental impacts during the construction stage could be delivered.

1.4. As part of each technical impact assessment within this ES, a number of controls and mitigation measures have been identified to avoid or minimise construction potential effects. These measures have formed the basis of this Framework CEMP.

1.5. The Framework CEMP sets out the approach that should be used by the Principal Contractor (PC) to ensure that all potential environmental impacts identified in the technical assessments and at the detailed design stage are fully addressed and lists the measures to be implemented.

1.6. For the purposes of the Framework CEMP, the PC means any contractor appointed to deliver the construction works (and shall also include any subcontractors appointed by the PC to carry out any part of the main construction works).

1.7. The appointed PC will use this Framework CEMP to develop more detailed construction management plans and method statements, including a Detailed CEMP of which this Framework CEMP forms the basis of.

1.8. The contents of the Framework CEMP are as follows:

- Purpose of this Framework CEMP;
- Proposed development Information;
- Construction Programme;

[1] Welsh Government (2017) The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017. Available at: The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017

- Scheme team roles and responsibilities;
- Environmental Management Measures;
- Consents and permissions;
- Supporting Documents;
- Environmental Records and Monitoring; and
- Induction, training and briefing procedures for staff.

2. Purpose of this Framework CEMP

2.1. The purpose of the Framework CEMP is to outline how controls, mitigation and management measures will be implemented to manage the environmental effects of the proposed development as identified within the ES.

2.2. The Framework CEMP will:

- Identify roles and responsibilities;
- Identify risks, their associated control measures, compliance and corrective actions;
- Establish procedures for communication, monitoring, audit mechanisms and reporting of control measures;
- Be reviewed regularly to ensure it is achieving the environmental protection required;
- Provide a clear audit trail outlining the modifications from any previous version;
- Document environmental measures that are required to manage and minimise the environmental effects of the proposed development as identified in the ES;
- Form the basis for the Detailed CEMPs that might follow; and
- Enable the local planning authority to identify those measures proposed within the ES of the proposed development which are secured within the Framework CEMP.

Preparation of the Detailed CEMP

2.3. The Framework CEMP forms the basis of the Detailed CEMP. The Detailed CEMP will be developed ahead of construction by the PC for the construction phase of the proposed development once the detailed design and construction plans have been finalised. The Detailed CEMP will be based on the requirements of the Framework CEMP relevant to the construction works and the PC's contractual scope. This will include any further requirements identified during detailed design, the implementation of appropriate industry standard practices and control measures for environmental impacts arising during construction, in addition to more detailed management plans and methodologies on the design and construction of the proposed development.

2.4. Environmental constraints are shown on Figure 3.3 and are referenced throughout the Framework CEMP. Measures, such as the design interventions, are included in the proposed development design shown on the following figures:

- Figure 3.1 (Proposed Development Overview);

- Figure 3.2 (Proposed Construction Overview); and
- Figure 3.4 (Landscape and Ecology Proposals Plan).

2.5. Management plans and mitigation strategies are key documents which ensure that the construction related controls and mitigation measures are successfully implemented onsite. The relevant management plans and mitigation strategies inform the works and the development of associated task specific Risk Assessments and Method Statements (RAMS).

2.6. This Framework CEMP lists the management plans and mitigation strategies to be developed and also identifies method statements that will need to be developed by the PC prior to construction commencing to be incorporated into the Detailed CEMP.

2.7. The following management plans and mitigation strategies have been produced at this stage, for the proposed development:

- Chapter 3 (Proposed Development), Figure 3.4 (Landscape and Ecological Proposals Plan (LEPP));
- Outline Construction Traffic Management Plan (CTMP) in Chapter 5 (Transport and Access); and
- Chapter 10 (Archaeology), Appendix 10.5 (Archaeological Management Strategy (AMS).

2.8. In addition to the management plans and mitigation strategies listed above, the Detailed CEMP will include environmental method statements, which are to be prepared during the detailed design phase where required, agreed with statutory consultees, refined following final design agreement and in place prior to works commencing include (but not limited to) the following:

- Biosecurity Management Plan;
- Landscape and Ecology Management Plan (LEMP);
- Dewatering Management Plan;
- Construction Noise, Vibration and Dust Management Plan;
- Water Management and Monitoring Plan;
- Site Waste Management Plan (SWMP)/Materials Logistics Plan (MLP);
- Materials Management Plan (MMP);
- Carbon Management Plan;
- Construction Communication Strategy;
- Written Scheme of Investigation (WSI);
- Protected Species Precautionary Method Statements; and
- Fungi Mitigation Strategy.

2.9. Final Environmental Monitoring Reports are to include copies of or reference to the location of relevant survey reports (e.g. protected species) and environmental monitoring reports will also be required.

2.10. The Outline Traffic Management Plan is a separate document as part of the application submission. This will be developed as part of the Detailed CEMP in parallel with the documents listed above.

2.11. Early survey works and later stage construction works will be required to comply with applicable environmental legislation together with any additional environmental controls imposed prior to or included within the planning application, and the requirements of the Detailed CEMP.

2.12. The Detailed CEMP will be reviewed periodically to ensure that it is maintained and up to date, particularly to take account of the following:

- Changes in external factors such as regulations and standards;
- Any unforeseen circumstances as they arise such as new protected species or new archaeological finds;
- The results of inspections and audits; and
- Learning points from environmental near misses and incidents.

3. The Proposed Development

Location and description of the existing Cawdor Barracks

3.1. The location of the scheme is illustrated in Figure 3.1 (Proposed Development Overview).

3.2. The application site sits within Cawdor Barracks. Cawdor Barracks is the site of the former airfield Royal Air Force (RAF) Brawdy, located within the jurisdiction of PCC.

3.3. Cawdor Barracks is presently used as a working military base and currently occupied by 14 Signals Regiment. Cawdor Barracks measures approximately 300 ha and is centred at OS Grid Reference SM 85206 25339, with the nearest on-site post code being SA62 6AT. Cawdor Barracks is owned by the MOD and managed by Defence Infrastructure Organisation.

3.4. Cawdor Barracks is located within a rural area on St David's Peninsula in Pembrokeshire, South Wales. It is approximately 1.2 km northeast of the coast. Cawdor Barracks is to the north of the A487 between Haverfordwest and St David's. The nearest settlements are the hamlets of Penycwm to the immediate south of the application site, Llandeloy to the north and the villages of Solva (4.5 km to the southwest) and Newgale (2 km to the south).

The Proposed Development

3.5. The proposed development will include construction and operation of the DARC facility and associated ancillary infrastructure. Figures 3.1 (Proposed Development Overview) and Figure 3.2 (Proposed Construction Overview) show the proposed operational and construction site layouts respectively.

3.6. A detailed description of the proposed development is provided within Chapter 3 (Proposed Development). To summarise the proposed development consists of the following principal elements:

- Receiver (Rx) Array area;
- Transmit (Tx) Array area;
- Operations (Ops) area;

- Ancillary Infrastructure; and
- Temporary dish assembly building.

Existing baseline

3.7. Environmental designations are shown on Figure 3.3 (Environmental Constraints Plan). The immediate surrounding area is characterised predominantly by agricultural farmland with the Pembrokeshire coastline and Newgale Beach to the south. Some small, isolated settlements are situated sporadically in the surrounding area including the hamlets of Penycwm and Newgale to the south; Llandeloy to the north and Brawdy and Trefgarn Owen to the east. In addition, the Pembrokeshire Coast National Park is situated in proximity to the south of Cawdor Barracks extending around the coastline.

4. Construction programme

4.1. Construction is due to commence in April 2027 and is anticipated to take approximately 21 months, followed by demobilisation including removal of temporary buildings, equipment, and extra materials in Month 22. This excludes biodiversity are archaeological pre-construction mitigation requirements.

4.2. The precise approach to construction will be finalised as part of the design process following consent of the proposed development. Early contractor involvement has allowed for reasonable estimates to be made to inform the technical assessments within this ES on the likely approach to construction, type and sequencing of activities, and the construction workforce and traffic requirements.

4.3. Following environmental mitigation (including biodiversity offsetting and archaeological trial trenching), the general approach of the construction phasing will be to start with a small cluster of two or three antenna locations and progress the key activities in parallel across the total 27 antennas. This allows for efficient use of resources and time, reducing the total construction phase as well as lowering concentrations of activities and their associated magnitude of impact, including traffic and piling.

4.4. Section 3.6 of Chapter 3 (Proposed Development) details the phasing proposed upon which the assessments and the measures identified in the Framework CEMP have been based. Phasing may be restricted by weather and ground conditions and may not be consecutive.

5. Roles and responsibilities

5.1. This section provides a framework for the roles and responsibilities of those individuals and organisations involved with the development and delivery of the Detailed CEMP.

5.2. A clear management structure for construction and development is required. This will detail all staff responsible for any element of environmental work or mitigation measures. An organisational chart / register will define the responsibilities and accountability of specific project team members.

5.3. Once the construction programme is agreed, high risk operations in the construction programme will be identified and a method statement for carrying out these activities will be prepared by the PC's Project Manager or Environmental Manager.

5.4. Names and contact details for each role will be provided by the PC within this section as part of the Detailed CEMP along with relevant competent expert statements where necessary.

5.5. The PC is responsible for producing the Detailed CEMP once the design and construction plans have been finalised. The PC is responsible for ensuring that all site environmental permissions, including relevant licences and permits, are obtained, and site activities conform with the conditions defined within these permissions. The PC will identify the environmental requirements within method statements and ensure that they are produced, reviewed on time, and communicated to the necessary persons. The PC is responsible for ensuring that environmental risk assessments are effectively monitored, reviewed and communicated.

5.6. The applicant, PC and subcontractors are all responsible for complying with the proposed development's ES, planning permission and commitments, environmental policies, relevant environmental legislation and regulations. It is a requirement that all persons on site will be made aware of their duty of care to the environment and will be provided with sufficient training, supervision or instruction through site inductions, toolbox talks, watching briefs, audits and specific method statements as necessary.

5.7. Responsibilities for the site environmental management will be delegated to key personnel by the PC who will manage all reporting and monitoring of environmental mitigation during the contract period and construction period.

5.8. Where required, suitably qualified and experienced environmental specialists will be consulted to provide advice on specific issues or site activities, in consultation with the PC.

5.9. The key site-based roles and the organisation of responsibilities in relation to environmental management are shown in Table 1. This list is not exhaustive but provides an indication of the responsibilities of each role. The PC will be required to delegate responsibilities to onsite personnel within key areas of the site and compounds. The delegation of responsibility will be clearly identified within relevant documents and site files and will be allocated to a suitably qualified person. Key role personnel will be approved by the applicant.

Table 1: Roles and indicative responsibilities relating to the Detailed CEMP

Role	Organisation	Responsibilities
DARC Project Manager	Northrop Grumman	Oversee implementation of proposed development and the individuals undertaking specific roles and duties. Set the framework and policy for environmental requirements and objectives for the proposed development. To monitor the PCs' performance against the contract including any environmental measures and targets agreed for the proposed development.
Construction Project Manager	**PC**	Responsible for management of all construction activities. Overall responsibility for environmental management on site. Ensure appropriate resources are available to the project team so environmental measures can be met. Ensure the CEMP and all associated policies and procedures are implemented during the works. Responsible for environmental performance delivery and delivery of the contract requirements Must be aware of the environmental statutory requirements affecting site activities and seek further advice, if necessary. Ensure that all site environmental permissions are obtained, and site activities conform with the conditions defined within these permissions. Identify the environmental requirements within method statements and ensure that they are produced, reviewed on time, and communicated to the necessary persons. Ensure that environmental risk assessments are effectively monitored, reviewed and communicated.

Role	Organisation	Responsibilities
		Ensure adequate supplies of environmental control equipment (for example spill response equipment) are available and are appropriately used. Ensure all new employees, contractors and visitors, including delivery drivers, are instructed on site specific environmental requirements. Ensure site specific environmental training needs are identified and training programmes are undertaken for all levels of site staff and contractors and ensure that records are maintained by the environmental manager. Report any significant environmental incidents, disciplinary action or enforcing bodies' visits to the health and safety manager and the applicant at the earliest possible opportunity. Monitor the performance of personnel and activities under their control and ensure arrangements are in place so that all personnel can work in a manner which reduces risks to them and to the environment. Assist and support the environmental manager and statutory bodies in the investigation of any incidents. Undertake a programme of regular project environmental inspections in liaison with the environmental site representatives. Complete any corrective actions identified and provide status report to the PC's Project Manager. Any updates to the Detailed CEMP whether routine or triggered by events should be approved by the DARC Project Manager by way of sign off.
Environmental Manager	Appointed by the PC	Responsible for overseeing the environmental components of the proposed development including the production, development and implementation of the Detailed CEMP. Review all method statements for environmental considerations. Maintain and update site specific method statements. Log and maintain a register of any commitments or requirements that are removed, added or amended during construction from those that were put forward in the ES or in the planning permission. Coordination of specialists and site environmental management compliance for all staff. Monitor compliance of construction activities in line with the Detailed CEMP and the relevant environmental legislation, consents, and permissions throughout the construction period. Manage the delivery of the monitoring required under the Detailed CEMP alongside relevant specialists and reporting to relevant stakeholders at a frequency to be defined in the Detailed CEMP. Provide site induction on environmental issues and deal with queries and correspondence on environmental issues including liaison with relevant consultees/stakeholders. Organise specialist surveys and undertake day to day monitoring and compliance checks. Ensure any environmental consents, licenses and agreements are obtained in advance of works. Ensure that the environmental elements of the proposed development have been created and maintained in accordance with the Framework CEMP and Detailed CEMP to the appropriate standard. The EM should approve this by way of sign off. Investigate environmental incidents and implement follow-up corrective actions to ensure compliance with UK regulations and legislation.
Ecological Clerk of Works (ECoW). The ECoW must be suitably qualified and a suitably	Appointed by the PC	Responsible for ensuring that all ecological elements of the Detailed CEMP are complied with. Responsible for ensuring that the Scheme complies with all ecological legislation and consents, throughout the construction phase. Monitor ecological compliance of construction activities in line with the management plans and the relevant environmental legislation, consents, and permissions throughout the construction phase. Monitor and supervise construction activities (e.g. watching briefs during site clearance activities) to ensure that any unanticipated discoveries of notable flora and fauna, including

Role	Organisation	Responsibilities
qualified and experienced member of the Chartered institute of Ecologists and Environmental Managers (CIEEM).		invasive species, are appropriately dealt with. Identify any new ecological constraints on site and appropriate mitigation measures for them in accordance with the Detailed CEMP. Prepare of deliver toolbox talks, where required, to inform all site personnel of the ecological constraints on site. Provide appropriate professional and practical advice to contractors, consultants and project team members associated with ecological issues and where appropriate resolve issues in a practical and efficient way.
Suitability qualified and experienced Environmental Specialists[2]	Appointed by the PC	Such specialists could be required to input into the management plans and could relate to landscape, ecology, drainage, geo-environmental engineers and archaeologists. Responsible for ensuring that all relevant elements of the Detailed CEMP are complied with. Responsible for ensuring that the Scheme complies with all relevant legislation and consents. Provide technical input as defined by the PC Environmental Manager including but not limited to contamination and remediation, ecology and landscape works.

6. Environmental Management Measures

Introduction

6.1. The Environmental Management Measures table identifies the environmental measures (i.e. controls and mitigation) included within the ES to address the potential environmental effects of the proposed development. As part of this, specific actions and control measures which individual ES Chapters relied upon as part of their assessments have been defined and presented in the Environmental Management Measures table in Annex A. These measures must be implemented and complied with in full.

6.2. The measures outlined in the Environmental Management Measures table in Annex A have been determined to ensure compliance with different regulations such as the EIA Regulations, which require an ES to include '*a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment*'.

6.3. The Environmental Management Measures table will be updated by the PC as part of the Detailed CEMP where required, however any alterations must be in accordance with the principles and procedures defined in the EIA Regulations and this Framework CEMP. The Environmental Management Measures table will be updated as required, as the proposed development progresses to track progress of the measures and record outcomes and evidence of the actions taken, as well as recording and addressing any additional environmental issues that arise during construction. The table will also be updated with any commitments or requirements that are removed, added or amended during construction from those that were put forward in the ES or in the planning permission.

[2] Other environmental specialists not covered by the roles above but needed to provide the PC with necessary advice or expertise to fulfil the requirements of the Framework and Detailed CEMP. It will be for the PC Environmental Manager to coordinate and/or procure such inputs.

Guide to the Environmental Management Measures table

6.4. Table 2 provides a summary of the purpose of each column within the Environmental Management Measures table.

Table 2: Guide to the Environmental Management Measures table

Column	Explanation
Reference	A unique reference given for each action or measure relating to the discipline of relevance.
Objective	The objective of the action or measure
Action / measure (including specific location if applicable)	The necessary action or measure needed to avoid or minimise environmental effects, as required by the ES. This includes specific references to locations as and where necessary. Where no location is given, the measure is normally one which is relevant across the proposed development (e.g. working hours).

6.5. Unless otherwise stated, the Environmental Management Measures table does not typically define how the action is to be implemented or achieved, other than beyond a contractual obligation, and does not consider the risk management of individual items, unless these elements are implicit within the action.

6.6. The Environmental Management Measures table does not include a column to define the 'source of the action', since this is generally clear from the source reference. However, in preparing a Detailed CEMP, the PC will include within this column confirmation of measures agreed with stakeholders.

6.7. The references to guidance documents within the Environmental Management Measures table are not intended to be exhaustive and in preparing the Detailed CEMP, the PC will have due regard to any relevant technical guidance in individual subject areas and draw upon and reference these as appropriate.

Delivery of environmental management measures

6.8. The Environmental Management Measures table present the environmental actions and measures for the proposed development (i.e. the essential mitigation measures). The PC will deliver the actions and measures with the application of standard best practice or methods presented within this Framework CEMP and mitigation measures included in the proposed development design in Chapter 3 (Proposed Development).

6.9. In the event that the PC is able to:

- Define an alternative measure; or
- Refine measures included in the Environmental Management Measures table, which would achieve the same environmental outcome at the relevant location,

6.10. The PC will have to provide evidence to the applicant that any use of alternative measures will not lead to any materially new or materially different environmental effects compared to those as presented in the ES.

7. Consents and permissions

7.1. Construction activities will be in accordance with the required permits, consents and licences. All protected species will be protected in accordance with relevant regulation and best practice.

7.2. Additional consents to be obtained are dependent on finalisation of the detailed design, the detailed construction site set up and methodologies, and discussions with stakeholders, for example Natural Resources Wales (NRW) and local authorities.

8. Supporting Documents

8.1. The Framework CEMP has been informed by the following document submitted as part of a full planning application for the proposed development:

- Environmental Statement Cawdor Barracks (22/1136/SO).

Environmental surveys

8.2. The following surveys have been undertaken to inform the ES.

- Appendix 8.1 (UK Habitat Classification and National Vegetation Classification);
- Appendix 8.2 (Fungi eDNA Survey);
- Appendix 8.3 (Great Crested Newt eDNA survey);
- Appendix 8.4 (Reptile Survey);
- Appendix 8.5 (Wintering Bird Survey);
- Appendix 8.6 (Breeding Bird Survey);
- Appendix 8.7 (Chough Survey);
- Appendix 8.8 (Barn Owl Survey);
- Appendix 8.9 (Bat Activity Remote Monitoring Survey);
- Appendix 10.4 (Detailed Gradiometer Survey Report); and
- Appendix 16.3: (Lighting Site Survey Information).

8.3. Additional surveys to be undertaken prior to construction commencing include:

- Groundwater monitoring (ongoing); and
- Pre-construction species surveys.

8.4. Further additional surveys will be identified as detailed design progresses.

9. Environmental Records and Monitoring

Introduction

9.1. This section lists systems of recording and inspections that will be required so as to maintain an audit trail of the environmental obligations. This will be managed through the Quality and Safety Management Systems (QMS) and the Environmental Management System (EMS) of the PC, meeting the International Organisation for Standardisation (ISO) 14001 standards.

9.2. The system will include methods for monitoring, recording and implementing environmental management on site, and for responding to any noted areas of non-compliance. This will ensure that a high standard of environmental control is maintained for the proposed development through the corrective action system managed by the PC.

Environmental records inspections

9.3. The PC's Scheme Quality Administrator will ensure there is a central filing system in place for any checklists, reports and monitoring consistent with the project QMS and EMS. Records of compliance with the requirements of the Detailed CEMP, derived from audits and other inspections, will be held at the PC's site office. These will be available for inspection by representatives of any internal or external audit team.

Daily inspection check list

9.4. The PC as site owner will ensure environmental mitigation and staff responsibilities are made clear to site managers, sub-contracted staff and site supervisors. This will be managed through site inductions and specialist training as required. The PC shall make key staff aware of their responsibilities for undertaking routine checks of the site and equipment when necessary. It will be essential that the PC has processes and protocols in place for environmental aspects to be checked. The PC will insert their standard inspection forms and checklists that are associated with their internal EMS into the Detailed CEMP Appendices for information.

10. Induction, training and briefing procedures for staff

Environmental training

10.1. The PC will be responsible for site inductions and training of all personnel including visitors, full time staff and supply chain providers. The PC will ensure that all personnel conducting environmental tasks are suitably qualified and experienced for the roles and responsibilities that they are employed to undertake.

10.2. The PC will work in accordance with their business management system to ensure compliance with the ISO 14001 requirements.

10.3. The PC environment policy statement will be clearly displayed, and all personnel will be made aware of it, along with the relevant environmental legislation and the contents of the Environmental Management Measures table.

Site Induction

10.4. Prior to commencing work on site, all personnel will be required to attend a site induction where the PC will communicate the environmental objectives and requirements of the Scheme, as well as the responsibilities of the workforce.

10.5. The site induction will cover the topics relating to the environment to a level of sufficient detail for the workforce and appropriate to the work being undertaken. Topics would include but are not limited to:

- A summary of the environmental aspects of the Scheme;
- An introduction to the Detailed CEMP;
- Environmental site rules;
- Preventing nuisance (noise, dust, vibration and odours);
- Communication with affected local residents, members of the public and stakeholders;
- Earthworks and excavations;
- Site traffic protocols;
- Spill kit use and locations;
- Refuelling, mechanical repairs and site maintenance;
- Chemical handling and storage;
- Emergency spill procedures;
- Waste and energy management;
- Reporting of environmental observations and suggestions;
- Biodiversity protection and enhancement;
- Works in the vicinity of the watercourse; and
- Heritage and archaeology assets.

On-site training

10.6. Those undertaking any activities that could result in an adverse environmental impact will receive additional training which shall be led by the Environmental Manager or ECoW. This training will include reference to the importance of adhering to the contents of the Detailed CEMP and the potential consequences of departure from any specified method statements.

10.7. The PC will establish a regime of toolbox talks in agreement with the supply chain. There will be a target of a minimum of one toolbox talk on an environmental topic per month with records of the attendance kept.

10.8. An indicative and not exhaustive list of appropriate toolbox talks is provided below. More topics will be added to the list as necessary as for the Detailed CEMP.

- Archaeology;
- Invasive species;
- Protective species;
- Nesting birds;

- Spill control and water pollution;
- Fungi translocation;
- Dust and air quality; and
- Waste management.

11. Acronyms and glossary

Acronyms

Terms or abbreviation	Definition
ACMs	Asbestos Containing Materials
ALRA	Abnormal Load Route Assessment
AMS	Archaeological Management Strategy
BRE	Buildings Research Establishment
BPMs	Best Practicable Means
BS	Building Standard
CDW	Construction And Demolition Waste
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
ECoW	Ecological Clerk of Works
EHO	Environmental Health Officer
EMS	Environmental Management System
EPDs	Environmental Product Declarations
ES	Environmental Statement
EU	European Union
INNS	Invasive Non-Native Species
ISO 140001	International Organisation for Standardisation Standard for Environmental management systems
LEMP	Landscape and Ecological Management Plan
LEPP	Landscape and Ecology Proposals Plan
MLP	Material Logistics Plan
MMP	Materials Management Plan
NRW	Natural Resources Wales
PC	Principal Contractor
PMS	Precautionary Method Statement
PPE	Personal Protective Equipment

Terms or abbreviation	Definition
QMS	Quality and Safety Management Systems
RAMS	Risk Assessments and Method Statements
RPAs	Root Protection Areas
SuDS	Sustainable Drainage Systems
SWMP	Site Waste Management Plan
TBT	Toolbox talk – A short presentation to the workforce on any aspect pf the Scheme including health, safety, wellbeing or environment.
WRAP	Waste and Resources Action Programme

Glossary

Terms	Definition
Applicant	The organisation submitting the application for the proposed development.
EIA Regulations	The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017
ISO 14001 Environmental Management Systems (EMS)	An ISO 14001 environmental management system (or commonly referred to as an EMS) is a structured system designed to help organisations manage their environmental impacts and improve environmental performance caused by their products, services and activities.
Materials Management Plan	The Materials Management Plan (MMP) identifies materials to be generated and clarifies how they will be reused. The Materials Management Plan must be approved by an independent Qualified Person (registered with CL:AIRE).
Mitigation	Measures intended to avoid, reduce and, where possible, remedy significant adverse environmental effects.
Operation	The functioning of a project on completion of construction.
Red Line Boundary	The land needed to carry out the proposed development and defined as the application site.
Local Planning Authority	The planning authority deals with planning applications, appeals, production of local plans and other planning-related work in Wales.
Principle Contractor	Contractor appointed to coordinate the construction phase of a project where it involves more than one contractor.
Principle Designer	A principal designer is a designer who is an organisation or individual (on smaller projects) appointed by the client to take control of the pre-construction phase of any project involving more than one contractor.
Detailed Construction Environmental Management Plan	A Detailed CEMP includes the specific measures that will be taken to control and manage the environmental impacts whilst the project is under construction that may otherwise occur for each of the environmental topics, such as noise, air

Terms	Definition
	quality, water resources and ecology. In addition, a description of the planned works and the general site arrangements should be included in the Detailed CEMP. The Principal Contractor will be responsible for ensuring the measures specified within the Detailed CEMP are implemented.
Site Waste Management Plan	SWMPs encourage the effective management of materials and ensure waste is considered at all stages of a project - from design through to completion.
Soils Management Plan (SMP)	An SMP is an important part of ensuring soil sustainability during construction projects.

Annex A - Environmental Management Measures

Table 3: Environmental Management Measures table

Reference	Environmental Management Measure / Action	Objective	Responsible
General Measures			
G1	A Detailed CEMP will be prepared by the PC in advance of construction detailing necessary measures which must be complied with pre-construction and during construction of the proposed development. The Detailed CEMP will follow the principles and requirements detailed in the Framework CEMP to ensure necessary mitigation measures required in the ES and planning permission conditions are complied with and implemented.	To provide a framework for the implementation of environmental requirements on site.	Principal Contractor
G2	Construction works will take place mainly during the daytime. Construction works outside of normal construction hours of 07:00-19:00 weekdays and 07:00-14:00 on Saturdays shall be minimised as far as practicable. Night working may take place from 19:00- 07:00. The contractor shall assess noise throughout the construction works to ensure noise levels remain within acceptable levels and without potential to cause nuisance, particularly to surrounding communities. Unavoidably noisy works will take place within the core hours (e.g. 07:00 to 19:00 weekdays, and 07:00 to 13:00 Saturdays). Where works outside of these hours are unavoidable, the PC will consult with the local planning authorities and agree appropriate methods of mitigation that account for the location of works, hours of work and expected duration. In addition, any Section 61 of the Control of Pollution Act 1974 consents will be obtained where required.	To avoid receptor disruption in relation to noise, vibration, lighting and transport.	Principal Contractor
G3	The PC will prepare and implement appropriate measures to control the risk of pollution due to construction activities, materials and extreme weather events.	To avoid or otherwise minimise the risk of environmental effects due to unexpected pollution incidents.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
G4	During construction, lighting shall be at the minimum luminosity necessary and use low energy consumption fittings. Lighting shall comply with the Institute of Lighting Professionals Guidance Notes for the Reduction of Obtrusive Light GN016 where applicable. Lighting will be directional, and positioned sympathetically, to minimise light spill and disturbance for sensitive receptors. Where construction lighting is required, it will be limited in duration and where feasible directed away from retained habitats.	Reduce light disturbance for sensitive ecological receptors	Principal Contractor and Ecological Clerk of Works (ECoW)
G5	The PC will undertake liaison with relevant local stakeholders within the community prior to the commencement of construction works, to understand mitigation requirements to ensure their continued operation. Liaison will continue through the construction period to highlight potential periods of disruption through information channels.	Ensure positive community relations by keeping landowners, local interest groups and the general public informed of the construction information.	Principal Contractor
G6	Pre-works photography to be undertaken prior to any construction works to provide a detailed baseline record. Photography to be used to demonstrate any required site restoration and replanting has been successful.	To provide a baseline for evidencing site/habitat restoration	Principal Contractor
G7	Development of Construction Noise, Vibration and Dust Management Plan with measures to monitor effectiveness of mitigation and controls as part of the Detailed CEMP.	To limit and control emissions to air and noise during construction on sensitive receptors	Principal Contractor in consultation with the applicant
G8	Planting and seeding, proposed as a design intervention for landscape and visual effects and biodiversity effects, will be delivered in accordance with the LEPP (Figure 3.4) and maintained in accordance with the LEMP in order to achieve their full establishment throughout the construction contract. This will be detailed in the LEMP produced during detailed design and reported in the Detailed CEMP.	To ensure the establishment of the landscape planting, visual mitigation measures, and creation/enhancement of biodiversity habitats	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
Transport and Access (TA)			
TA1	Develop a Detailed CTMP to be implemented based on the measures and approaches outlined in the CTMP in Chapter 5 (Transport and Access). The CTMP will include but not be limited to information on: • Traffic management measures; • Carriageway restrictions; and • Carriageway closures and diversions.	To ensure consideration of the operation and management of all construction traffic to ensure safe and efficient transportation of materials to the application site during the construction phase, to protect safety for all travellers and minimise disruption to communities.	Principal Contractor in consultation with the applicant
TA2	Traffic management measures may need to be implemented while mitigation works are undertaken on the public highway. If works require temporary road closures, suitable diversion routes will be agreed with the relevant local highway authority and information will be provided to the public and emergency services to minimise any safety risk and potential delay.	Minimise any safety risk and potential delay.	Principal Contractor
TA3	The appointed Contractor will nominate a person to be responsible for the co-ordination of all elements of traffic and transport during the construction process (liaison officer). This person will liaise with the local community so that the community has a direct point of contact within the contractor organisation who they can contact for information purposes or to discuss matters pertaining to the traffic management.	To ensure positive community relations and ensure all vehicles arriving on-site travel in a courteous and respectful manner.	Principal Contractor
TA4	All vehicles arriving on site will be expected to travel in a courteous and respectful manner. The public will be able to report cases of dangerous driving or routeing infringements to the site operator by email or using 24-hour emergency contact details to be provided by the Principal Contractor.	To ensure positive community relations and ensure all vehicles arriving on-site travel in a courteous and respectful manner.	Principal Contractor
TA5	The following mitigation measures to reduce the potential for likely significant effects to occur as a result have been proposed for the construction stage of the proposed development:	To minimise the potential significant effects of the development generated	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	• Designated routeing for HGV traffic to avoid minor roads and minimise impacts at junctions; • Preparation of an CTMP to inform the operation, timing, routeing and scheduling of construction traffic; • Preparation of an Abnormal Load Route Assessment (ALRA) to inform the routeing and strategy for large loads; and • Temporary construction access via the C3010 to minimise impacts on the site operation and security.	traffic on the highway network of interest.	
Air Quality (AQ)			
AQ1	Undertake daily on-site and off-site inspection. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of application site boundary, with cleaning to be provided if necessary.	Monitoring of dust producing activities during construction.	Principal Contractor
AQ2	Carry out regular site inspections, record inspection results, and make an inspection log available to the local authority when asked.	Monitoring of dust producing activities during construction.	Principal Contractor
AQ3	Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.	Monitoring of dust producing activities during construction in periods where potential for significant environmental effects are higher.	Principal Contractor
AQ4	Agree dust deposition, dust flux, or real-time PM10 continuous monitoring locations (if required) with the Local Authority.	To control and monitor dust deposition, dust flux, real-time PM10 and other emissions.	Principal Contractor
AQ5	Further suggested good practice mitigation measures, which should be adopted for the proposed development are presented in Appendix 6.4 (Air Quality Technical Appendix – Air Quality Mitigation).	Monitoring of dust producing activities during construction in periods where potential for	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
		significant environmental effects are higher.	
Noise and Vibration (NV)			
NV1	The contractor shall assess noise throughout the construction works to ensure noise levels remain within acceptable levels and without potential to cause nuisance, particularly to surrounding communities.	To reduce risk of noise disruption on sensitive receptors.	Principal Contractor
NV2	Unavoidably noisy works will take place within the core hours (e.g. 07:00 to 19:00 weekdays, and 07:00 to 14:00 Saturdays). Work outside of these hours should not be undertaken unless subject to prior agreement with the relevant local authority.	To reduce risk of noise disruption on sensitive receptors.	Principal Contractor
NV3	The contractor will give prior notice to adjacent residents and communities of likelihood of nuisance, giving a description of the works and likely time periods of operation and duration of potential nuisance levels of noise.	To reduce risk of noise disruption on sensitive receptors.	Principal Contractor
NV4	In relation to noise and vibration, the following Best Practicable Means (BPMs) should be implemented in the construction of the proposed development: • Restrictions on working hours; • Scheduling of noisy works to the least sensitive working hours; • Adopting quiet working methods, using plant with lower noise emission levels; • Adopting working methods that minimise vibration generating activities; • Use of plant conforming with the relevant EU directives relating to noise and vibration; • Ensuring that all plant is properly maintained, (mechanisms properly lubricated, faulty silencers replaced, worn bearings replaced, cutting tools sharpened etc.); • Closing acoustic covers to engines when in use or idling; • Use of electrically powered equipment in preference to internal combustion powered equipment; • Hydraulic equipment in preference to pneumatic equipment; • Wheeled plant in preference to tracked plant;	To reduce risk of noise disruption on sensitive receptors.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	• Locating plant as far away from noise and vibration sensitive receptors as practicable; • Plant with highly directional sound emissions shall be angled so that the direction of highest sound emissions does not face towards receptors where possible; • Installation of site hoardings or perimeter noise barriers; • Use of temporary acoustic enclosures or screens around specific noisy static plant; • Use of large fully enclosed acoustic buildings to surround activities and/or worksites; • Avoiding the unnecessary revving of engines and switch off equipment when not in use; • Starting-up plant and vehicles sequentially rather than at the same time; • Keeping internal haul routes well maintained to minimise impulsive noise and vibration from vehicles running over discontinuities in the running surfaces; • Fitting rubber linings to chutes, hoppers and dumper vehicles to reduce impact noise from material transfer; • Avoiding impact piling methods in favour of vibratory, rotary or 'push in' methods where local ground conditions allow. Utilise acoustic shrouds and resilient pads to impact piling rigs where possible; • Minimising drop heights of materials; • Setting of noise and vibration limits at boundary or at other locations together with associated monitoring during the works; • Carrying out regular inspections of mitigation measures (or BPM audits) to ensure compliance with noise and vibration commitments; • Providing regular briefings for all site-based personnel so that noise and vibration issues (including the requirement to employ BPM at all locations at all times) are understood and that generic and site-specific mitigation measures are explained and adhered to;		

Reference	Environmental Management Measure / Action	Objective	Responsible
	• Ensuring that unloading is carried out within the worksite rather than on adjacent roads or laybys; • Phasing of materials deliveries to be controlled on a 'just in time' basis to minimise noise and congestion on roads around the site; and • Setting out the stakeholder engagement initiatives to be undertaken, including the provision of information to local residents about noisy works and/or works planned to take place outside of core working hours.		
NV5	Construction noise barriers should be installed in the following areas (as a minimum) for the periods of works where significant adverse effects are otherwise anticipated unless it can be otherwise demonstrated though on-site monitoring and investigations during construction works that in the absence of noise barriers impacts would not be significant: • Between Cawdor Barracks residential accommodation and any active works areas for Months 8 to 9 of the programme. Noise barriers are most effective when positioned close to the noise source or receptor locations. Therefore, temporary barriers should be installed around each works area or around receptor R23 (Cawdor Barracks) allowing for access requirements.	To reduce risk of noise disruption on sensitive receptors.	Principal Contractor
NV6	The following site-specific mitigation should also be implemented in accordance with BPM to minimise disturbance and adverse impacts: • No HGV movements should be permitted during night working. All vehicle movements will be controlled through the implementation of a Construction Traffic Management Plan / Construction Environmental Management Plan, which will be agreed with PCC prior to construction. • Piling works are not proposed at this time. However, should ground investigations determine that piling will be required, noise impacts can be minimised through the use of non-percussive methods, such as rotary bore, vibratory or press-in piling rigs. Where impact piling is necessary due	To reduce risk of noise disruption on sensitive receptors.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	to local ground conditions, mitigation methods such as proprietary acoustic shrouds and pile cushions/driving dollies should be used. • Ensure the proposed plant noise emissions are similar or below the preliminary construction plant noise levels used within this assessment; and that, where practicable, the plant is the quietest available for the proposed use. • Ensure that works areas (including lay-down and compounds) are as far from receptors as possible, and no closer than those indicated in the construction layout drawings provided by the project team. • Utilise as much of the existing hard standing as possible for works areas and compounds instead of forming new hard standings. • Where necessary, alternative reversing warning systems (such as white noise alarms) shall be employed in place of tonal 'squawkers'.		
NV7	Where possible, noisy works in close proximity to sensitive receptors should be programmed such that works do not take place for more than 10 days in any consecutive 15, or more than 40 days in any consecutive 6 months.	To reduce risk of noise disruption on sensitive receptors.	Principal Contractor
NV8	Letter drops explaining construction noise and vibration would typically aid communication with the local community. A dedicated site contact for the public and a complaints-handling procedure should also be put in place.	To reduce risk of noise disruption on sensitive receptors.	Principal Contractor
NV9	The detailed design of noise mitigation is beyond the scope of this Chapter and will be undertaken by the responsible Contractor (Northrop Gruman Corporation) post-consent and prior to operation. The following minimum noise reductions should be achieved; where practicable, guidance has been provided on possible engineering solutions that may be implemented. • Rx antenna should be designed and specified to not exceed a maximum operational Sound Power Level in 'normal' operational conditions of 75 dB LwA. This is equivalent to a 15 dB reduction to the equipment installed at DS1. Given the mechanical nature of the noise generated by this equipment, it is anticipated that any attenuation achieved for the 'Normal'	To reduce risk of noise disruption on sensitive receptors.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	condition will result in similar attenuation during all other operational conditions. • Tx antenna should be designed and specified to not exceed a maximum operational Sound Power Level in 'normal' operational conditions of 79 dB LwA. This is equivalent to a 11 dB reduction to the equipment installed at DS1. Given the mechanical nature of the noise generated by this equipment, it is anticipated that any attenuation achieved for the 'Normal' condition will result in similar attenuation during all other operational conditions. • All antenna pedestal condenser units (Tx and Rx) should be designed and specified to not exceed a maximum Sound Power Level of 68 dB LwA. This is equivalent to a 6 dB reduction to the equipment installed at DS1. This may be achieved through the selection of alternative equipment or the installation of localised acoustic enclosures. • All Tx fluid/coolant pumps should be designed and specified to not exceed 60 dB LpA at 1m (free-field). This is equivalent to a 10 dB reduction to the equipment currently proposed. This may be achieved through the selection of alternative equipment or the installation of localised acoustic enclosures. • All Tx adiabatic chiller units should be designed and specified to not exceed 55 dB LpA at 1m (free-field). This is equivalent to a 5 dB reduction to the equipment currently proposed. This may be achieved through the selection of alternative equipment or through the installation of localised acoustic screens. Acoustic screens, if implemented, shall be formed to a height sufficient to remove all direct line of sight between the equipment and nearby noise sensitive receptors; commonly, this requires the barrier to be formed to $\approx$ 0.5 – 1.0m taller than the equipment being screened. Acoustic screens shall be either solid and imperforate from ground level with a minimum 15 kg/m^2 superficial mass, or formed from proprietary acoustic louvre modules achieving a minimum 17 dB Rw.		

Reference	Environmental Management Measure / Action	Objective	Responsible
NV10	All proposed generators should be designed and specified to not exceed 75 dB LpA at 1m (free-field), inclusive of the flue ductwork and termination. This is equivalent to a 5 dB reduction to the equipment currently specified. This may be achieved through the appropriate specification of equipment and is considered readily achievable for 'packaged' generators installed within acoustic enclosures.	To reduce risk of noise disruption on sensitive receptors.	Principal Contractor
NV11	Targeted noise monitoring shall be undertaken by the appointed construction contractor.	To ensure that noise levels do not regularly exceed the thresholds for significant effects, and to provide a means by which construction noise levels will be reviewed and mitigated following complaints or exceedances.	Principal Contractor
Biodiversity (BD)			
BD1	Prior to construction, a suitably qualified and experienced Ecological Clerk of Works (ECoW), will be appointed by the Principal Contractor. The ECoW should be consulted on habitat clearance methods and equipment, approve final method statements and be consulted on the works throughout the construction process, to ensure that all avoidance and mitigation measures are being adopted appropriately, including deployment and maintenance of any necessary (temporary) exclusion zones. Further, the ECoW will: • Provide ecological advice to the construction contractor over the entire construction programme, at all times as required. • Undertake or oversee pre-construction surveys for protected species in the areas affected by the proposed development. • Monitor ecological conditions during the construction stage to identify additional constraints that may arise as a result of natural changes to ecological baseline over time. • Provide ecological toolbox talks to site personnel talks on protected species, habitats and invasive non-native species (INNS) prior to	To ensure correct implementation of mitigation measures, track compliance with measures and legal requirements.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	relevant construction activities, to make them aware of ecological constraints and information; highlight mitigation to minimise impacts; and make site personnel aware of their responsibility with regards to wildlife and sensitive habitats in the context of legislation and policy. Toolbox talks will include, as required, all ecological receptors considered within the ES as a minimum. • Monitor the implementation of mitigation measures during the construction stage to ensure compliance with protected species legislation, licensing, and measures within the ES. • Supervise site clearance through pre-works checks, supervision of sensitive felling techniques and supervision of vegetation clearance. The ECoW will have previous experience in similar ECoW roles and be approved by the Principal Contractor. The ECoW will be appointed in advance of the main construction programme commencing to ensure pre-construction surveys are undertaken and any advance mitigation measures required are implemented.		
BD2	A pre-commencement site walkover by a competent ecologist will be undertaken six months prior to the commencement of works and repeated immediately prior to the commencement of works to ensure that no new ecological constraints are present within the works area. This will include a search for badger setts and to map the location of any invasive species within the works boundary and within a 30m buffer.	To update baseline survey results to protect species and habitats.	Principal Contractor
BD3	Nighttime construction works (between 19.00 and 07.00) will be limited to: • Antenna assembly within the temporary assembly building. Lighting will only be required in and immediately around the building to luminate the work area for safe assembly conditions. • Nighttime works will be required for initial testing following complete assembly of antennas. This will comprise handheld torches / headlamps to visually inspect / troubleshoot if a problem occurs. • The ECoW will be consulted on to be used throughout construction, ensuring lighting levels are minimised and providing advice on any further	To reduce lighting impacts to ecological receptors	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	measures required as necessary (e.g. additional screening, changing of lighting type, angle location etc).		
BD4	Vegetation clearance and earthworks across the application site would be undertaken under the observation of the ECoW, following methodology detailed within a Precautionary Working Method Statement (PWMS) and/or the Grassland Fungi Mitigation Plan. This would be presented in a method statement, either within an independent document or included in the Detailed CEMP. The purpose of the PWMS will be to detail how the work will be undertaken to avoid breaches of wildlife law and minimise potential effects on legally protected species and habitats.	To detail how the work will be undertaken to avoid breaches of wildlife law and minimise potential effects on legally protected species and habitats, following the Chapter 8 (Biodiversity) assessment of the proposed development.	Principal Contractor
BD5	Clearance of any potential bird nesting habitat (i.e. scrub/ hedgerows/ grassland) will be ideally undertaken outside of the breeding bird season (i.e. undertaken from September to February, inclusive) where possible. Where this is not possible, these habitats must be checked for bird nests by a suitably qualified ecologist shortly prior to clearance. If an active nest is found, works must stop, and a works exclusion buffer zone will be put in place. The works exclusion zone will remain in place until an ecologist has confirmed that the nest is no longer in use. The size of the works exclusion zone will be dependent on the species recorded nesting.	To avoid adverse impacts to protected species and comply with conservation legislation.	Principal Contractor and ECoW / competent ecologist.
BD6	Below ground and ground level vegetation clearance within areas suitable for hibernating amphibians, reptiles and hedgehogs (areas of scrub) will avoid the hibernation period, generally considered to be November to February, inclusive, where possible. Vegetation can be cut to approximately 150mm in height during this period. If any additional clearance is required during this period, this will need to be restricted to small areas with careful hand searches undertaken by the ECoW.	To avoid adverse impacts to protected species.	Principal Contractor and ECoW.
BD7	It is recommended that construction activities begin within the key window of September to October, after the bird nesting season has concluded but while	To reduce the suitability of the grassland for nesting birds, reptiles and	Principal Contractor and ECoW

Reference	Environmental Management Measure / Action	Objective	Responsible
	temperatures remain suitable for reptile activity ensuring that there are no impacts to the initial breeding season for either reptiles or nesting birds. If this is not possible and works are to commence within grassland areas between March and July, all areas of grassland within construction areas to be directly impacted by the works would be cut and maintained short from mid-February to the start of the works. This is to reduce the suitability of the grassland for ground nesting birds, reptiles and amphibians prior to works starting to minimise the risk of injury and/or disturbance. However, if works are due to start within the breeding season (March to August inclusive) and clearance in February was not possible, an experienced ECoW will be required to undertake pre-commencement checks for both nesting birds and reptiles supervising the initial vegetation cut and subsequent soil stripping.	amphibians prior to works starting to minimise the risk of injury and/or disturbance.	
BD8	Any grassland to be cleared during the reptile active period (generally March to October, weather dependant) should be subject to a two-stage cut under the supervision of the ECoW to encourage reptiles to naturally move away from the area.	To avoid adverse impacts to protected species.	Principal Contractor
BD9	To reduce the impacts of noise and visual disturbance to ground-nesting birds during construction, suitable habitats present within the works area would be strimmed to ground-level to render them unsuitable for nesting, preferably in advance of the breeding bird season (i.e. before end-February, see BD7). Plant and site contractors would be constrained to working within prescribed working areas and access corridors. This would be implemented, where practicable, through the installation of temporary barriers to minimise damage to retained habitats and minimise the potential for disturbance to ground-nesting birds. Appropriate noise and visual disturbance screening barriers would be installed around works areas to ensure the surrounding environment remains undisturbed for ground-nesting birds, where necessary, to be confirmed by the ECoW.	To avoid adverse impacts to protected species.	Principal Contractor
BD10	Management and enhancement of habitats within the application site for grassland fungi would comprise (see Figure 3.4 Landscape and Ecology Proposals Plan):	To avoid adverse impacts to protected species.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	• Area A – Area of unmanaged, rank grassland to the north of the northwestern arm of the air strip to be managed for the benefit of grassland fungi. This would include the commencement of an annual mow-and-collect regime to improve the diversity of the grassland and prevent scrub encroachment. • Area B1 – Clearance of an area of transitional scrub and future management as per Area A. This would be the receptor site for grassland turves. • Area B2 – If Area B1 is already supports a good assemblage of grassland fungi Area B2 will undergo clearance of an area of transitional scrub with future management for the benefit of grassland fungi. If translocation is feasible this would be the backup receptor site. • Area E – The managed grassland areas surrounding the main barracks also contain assemblages of fungi, including waxcaps. These grassland areas would be appropriately managed to ensure the continued growth of waxcaps.		
BD11	An area of dense scrub to the north of the eastern arm of the air strip would be enhanced through management to improve the structure of the existing scrub, and to create clearings, glades, rides, and sheltered edges for the benefit of wildlife, including reptiles (see Area C Figure 3.4: Landscape and Ecology Proposals Plan). Hibernaculum would also be created within this area using materials such as brash and excavated uncontaminated soil excavated during construction and habitat clearance works.	To protect and preserve fungi habitat and enhance habitat for reptiles, amphibians and hedgehog.	Principal Contractor
BD12	The gappy hedgerow located to the far south of the application site, positioned along the western and southern boundary of the playing fields would be enhanced. The width of the hedgerow would not increase to ensure there is no further encroachment of vegetation into the playing fields. Enhancement would	To enhance vegetation and habitat for protected species.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	include the planting of new vegetation to fill the gaps and appropriate management to rejuvenate the existing plants. Where practicable vegetation planting will utilise native species of local origin.		
BD13	A Grassland Fungi Mitigation Plan will be developed to detail the actions required to protect, translocate and manage the fungi grassland throughout the construction process within the application site. The methodology provided within this document would be based on previous experience by the ecological consultant and lessons learned from previous experience of fungi grassland habitat relocation undertaken in Suffolk. This document would also include results of the monitoring undertaken at this relocation project to justify and demonstrate the viability of the approach. Detail in this document would be developed in discussion with Professor Gareth Griffith, Chair in Mycology at the University of Aberystwyth prior to submission to the LPA. A summary of actions to form part of the plan are detailed in Chapter 8 (Biodiversity). A monitoring programme will be an essential component of the Plan to establish success.	To protect and preserve fungi habitat.	Principal Contractor
BD14	Measures to prevent the spread of the Wildlife and Countryside Act 1981 Schedule 9 species will be detailed in a Biosecurity Management Plan within the Detailed CEMP.	To prevent the spread of Invasive Non-native Species (INNS)	Principal Contractor
BD15	Protected species licence applications will be sought where required. The ECoW will advise on and monitor compliance with any licence conditions. Best practice measures for ecology will be documented in Protected species method statements to be produced for the Detailed CEMP. The measures to be adhered to include (but not limited to): • Plant and personnel will be constrained to a prescribed working corridor through the use of temporary barriers, thereby minimising damage to habitats and potential direct mortality and disturbance to species. • Works compound, storage sites and access tracks will avoid, as far as practicable, areas identified as being of ecological value. • Any trenches dug during construction will be covered at the end of each day. Alternatively, mammal ramps will be provided and positioned in such a way that any accidentally trapped animals can escape.	To ensure protection of protected species	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	• Temporary open pipe systems will be capped when unattended to prevent animals accessing them and becoming trapped. • All exposed pipes and trenches will be checked each morning prior to starting construction activities. If trapped animals are found, the ECoW or specialist animal handler will be contacted to remove any distressed animals. • Site personnel will report any sightings of protected species and any potential site of shelter of a protected species encountered to the ECoW as soon as possible.		
BD16	Should a protected species be identified during construction (for example, bat roost, badger sett, skylark nest), all construction work will cease immediately. The ECoW will be consulted, and they will make an assessment on continued activity in that location. Any exclusion area stipulated by the ECoW will be demarcated by the Contractor and no construction personnel will enter this exclusion area except when accompanied by the ECoW. The exclusion area will remain in place for the duration of the construction period or as instructed by the ECoW.	To ensure protection of protected species	Principal Contractor
BD17	The ECoW will be consulted during micro-siting of infrastructure to ensure protection of the sensitive ecological features and to ensure implementation of the design principles.	To ensure the consideration of habitats and protected species during micro-siting	Principal Contractor
Landscape and Visual Impact (LV)			
LV1	The design interventions and measures proposed in the Landscape and Ecological Proposals Plan (LEPP) (Figure 3.4) must be implemented pre-construction.	To minimise landscape and visual impacts.	Principal Contractor
LV2	Update proposed LEPP (Figure 3.4) pre-construction once detailed design is finalised.	To minimise landscape and visual impacts.	Principal Contractor
LV3	To reduce visual effects of the Scheme during construction. The PC will employ considered approach to minimise visual impact, for example:	To reduce the visual impacts of the construction works for nearby sensitive receptors	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	• keeping a tidy and organised site; • temporary storage of soil mounds in linear bunds in locations where this would be beneficial to the visual screening of construction works if practical; • soil storage mounds managed in accordance with series 600 to assist visual integration of earthworks protection of retained vegetation in accordance with British Standard (BS) 5837:2012; and • protection of retained vegetation in accordance with British Standard (BS) 5837:2012.		
LV4	For operational requirements, there is a limit to tree height to avoid impacting the 'zone of regard'. This limits trees to approximately 6.4 m at the closest point to the antennas (50 m), rising to 10m when 115m from the antennas. Appropriate tree species will be selected and managed in the LEMP subsequent to the EIA submission to reflect these operational requirements.	To avoid impacting the 'zone of regard'.	Principal Contractor
Archaeological and Built Heritage (AB)			
AB1	Mitigation measures in relation to archaeology and built heritage stated within the Archaeological Management Strategy (AMS) (Appendix 10.5) and Written Scheme of Investigation must be implemented pre-construction.	To minimise impacts and adhere to relevant legislation on archaeology and built heritage.	Principal Contractor
AB2	Update the AMS pre-construction once detailed design is finalised.	To minimise impacts and adhere to relevant legislation on archaeology and built heritage.	Principal Contractor
AB3	Where avoidance of potential significant effects on below ground archaeological remains is not possible, mitigation should be applied through preservation of records, that is, the implementation of archaeological excavation and recording.	Offsets the loss of the evidential value of the archaeological remains.	Principal Contractor
Ground Conditions and Contaminated Land (GC)			
GC1	Construction and demolition best practice will be implemented. This includes (but is not limited to) pollution control, material and stockpile management, dust	To mitigate unacceptable contaminated land related risks to the environment and	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	suppression, wheel washing, road sweeping, windbreak netting, and isolation of drains (where necessary).	construction workers and ensure works are legally compliant.	
GC2	Construction workforce shall adopt health and safety procedures including use of personal protective equipment (PPE).	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant.	Principal Contractor
GC3	Appropriate stockpile segregation, stockpile siting and containment measures to prevent potentially contaminative runoff, windblown dusts and vapours.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant.	Principal Contractor
GC4	Construction workforce will remain vigilant for any unusual visual or odorous characteristics of soils and groundwater which could indicate the presence of contamination.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant.	Principal Contractor
GC5	Measures to mitigate risks associated with encountering potential UXO during demolition and construction works, including appropriate risk assessment and site inspection by specialist sub-contractors as required.	To mitigate risks associated with encountering potential UXO.	Principal Contractor
GC6	As construction works progress, the detailed CEMP will be updated as required.	To adapt to site conditions as they become known.	Principal Contractor
GC7	For demolition and construction activities, potential risks to human health will be reduced by undertaking the works in accordance with an approved health and safety plan with an appropriate method statement and risk assessments for all activities.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
		ensure works are legally compliant.	
GC8	In order to obtain relevant information regarding geotechnical and ground engineering properties to inform the design of structures and foundations, the appointed contractor is expected to undertake their own site investigation works for that purpose.	To further refine and identify potential areas of contamination and presents the chance to augment the Framework CEMP by incorporating findings of site-specific investigation, for instance environmental protection requirements where these are justified.	Principal Contractor
Waste (W)			
W1	Excavation works will be carried out to segregate clean materials for reuse where possible in line with the principles of the Waste Hierarchy. Where CDW and excavation arisings cannot be re-used within the proposed development, opportunities should be sought to find appropriate non-landfill disposal routes, such as re-use off-site. Green waste generated during construction should be re-used on site (where possible) or recycled offsite through composting.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant.	Principal Contractor
W2	The appointed contractor will apply the principles of the Waste Hierarchy to management of material assets and waste during the construction phase. Priority should be given to reusing suitable site-won arisings for engineering or backfill purposes wherever practicable over the import of earthworks materials.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant.	Principal Contractor
W3	Where CDW and excavation arisings generated during construction cannot be used in the proposed development, opportunities will be sought where possible to re-use the materials on other construction projects.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
		ensure works are legally compliant.	
W4	The appointed contractor will comply with all relevant legislation in relation to waste handling, storage, transport and disposal. They will consult with NRW for advice on waste practices, licences and exemptions where appropriate.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant.	Principal Contractor
W5	The appointed contractor will prioritise the use of secondary or recycled materials. This will include the use of suitable CDW and excavation arisings within the proposed development that meets the Waste and Resources Action Programme (WRAP) Quality Protocol for the production of aggregates from inert waste.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant.	Principal Contractor
W6	The principles of local and responsible sourcing of key material assets will be adopted by the appointed contractor. Where feasible, key materials such as aggregate, asphalt, steel and concrete will be responsibly sourced from suppliers who have a minimum ISO14001 certification (or equivalent) and, if available, Buildings Research Establishment (BRE) developed BES 6001 (Framework Standard for the Responsible Sourcing of Construction Products) certification for the material.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant.	Principal Contractor
W7	In accordance with WRAP Material Logistics Plan (MLP) Good Practice Guidance (WRAP MLP Guidance 2007), a MLP for material assets procurement and waste management will be developed and this will form part of the Detailed CEMP. It will detail how all construction phase material assets be managed and identify opportunities to substitute recycled or secondary materials and products for those using primary materials. It will be updated regularly during the construction of the proposed development.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
W8	A Site Waste Management Plan (SWMP) will be prepared to support the MLP. The SWMP will identify the types and likely quantities of wastes that may be generated, and set out, in an auditable manner, how waste will be reduced, re-used, managed and disposed of. An initial target of 80% diversion from landfill has been set for the construction stage.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant.	Principal Contractor
W9	Production of a Materials Management Plan (MMP) by the Principal Contractor, which will form part of the Detailed CEMP, will be developed to guide the re-use of excavated soils during construction.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant.	Principal Contractor
W10	Procedures for the management of unexpected contaminated during construction (including Asbestos Containing Materials (ACMs) will be included within the Detailed CEMP. This will include a 'stop works' requirement in the event of encountering unexpected contamination, prior to inspection of the contamination by a suitably qualified geoenvironmental practitioner.	To mitigate unacceptable contaminated land related risks to the environment and construction workers and ensure works are legally compliant. To ensure that contaminants do not enter the ground.	Principal Contractor
Water Environment, Flood Risk and Drainage (WE)			
WE1	Production of a Water Management and Monitoring Plan should be undertaken.	To limit contamination to groundwater and surface waterbodies. To assess the water quality of Controlled Waters Receptors and maintain they do not become impacted during the works.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
WE2	Measures to control the storage, handling, spillages and disposal of potentially polluting substances during construction. Where required, these will be undertaken in accordance with legislation and best practice guidance.	To limit contamination to groundwater and surface waterbodies.	Principal Contractor
WE3	Emergency procedures to handle any leakages or spillages of potentially contaminating substances.	To limit contamination to groundwater and surface waterbodies.	Principal Contractor
WE4	Best practice measures such as: • Spill kits located on sites near to watercourses and within the works compounds with staff should be trained in their use; and • Appropriate storage of construction materials on hardstanding, including the suitable bunding of storage vessels, implementation of silt fencing and coverage of material stockpiles.	To limit contamination to groundwater and surface waterbodies.	Principal Contractor
WE5	Where practicable, site layout will ensure material stockpiles and storage areas will not be located less than 10 m from adjacent watercourses, ponds, boreholes and site drainage, and not within Flood Zone 3 and overland flow paths. Where this cannot be achieved, stockpiles will be limited such that they can be moved upon receipt of any flood warning/adverse weather conditions, or on-site additional mitigation measures (such as bunds) will be implemented to provide an adequate barrier between the potential source of contaminated runoff and the receptor.	To limit contamination to groundwater and surface waterbodies.	Principal Contractor
WE6	Fuel, oil and chemicals that have the potential to cause significant damage to the environment will be stored in a safe and secure bund or other container from which they cannot leak, spill or be open to vandalism.	To limit contamination to groundwater and surface waterbodies.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
WE7	No pollution pathways should be created between the construction sites, including compounds and material storage areas, and surface water features to limit runoff into ordinary watercourses. The application site topography is very flat (it is a large aircraft runway) so sediment transport is not deemed likely. Measures will be implemented to prevent surface water runoff containing suspended sediment reaching watercourses through overland flow paths if necessary. This should include an appropriate treatment train to prevent accidental spillages reaching water features, remove sediment and other contaminants as well as attenuating runoff. This must be specified as part of a temporary surface water drainage strategy within the Detailed CEMP. In addition to this, water quality monitoring should be undertaken through construction.	To limit contamination to groundwater and surface waterbodies.	Principal Contractor
WE8	The production and implementation of a Water Management and Monitoring Plan which will include the temporary surface water drainage strategy which will outline the controls required. The temporary surface water drainage strategy should implement SuDS principles, where appropriate, to attenuate runoff to existing rates as well as provide water treatment.	To limit contamination to groundwater and surface waterbodies. To assess the water quality of Controlled Waters Receptors and maintain they do not become impacted during the works.	Principal Contractor
WE9	Dewatering assessments will be required to identify likely inflows into any excavation and to inform licensing and permitting requirements. This will be informed by further detailed ground investigation and geotechnical surveys following submission of the planning application. Whilst there are some exemptions to abstraction licensing relating to construction dewatering, these are complex and are dependent on the dewatering design and presence of other water users. Dewatering at rates of greater than 20 m^3/d may be subject to abstraction licensing, depending on whether exemption rules apply. An environmental permit for discharges to surface water or groundwater may also be required for the discharge of dewatering water. Abstraction licences and	To limit contamination to groundwater and surface waterbodies. To assess the water quality of Controlled Waters Receptors and maintain they do not become impacted during the works.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	environmental permits are likely to be subject to conditions designed to protect the water environment, such as groundwater and surface water level and quality monitoring and further risk assessments. Adherence to such licences and permits will therefore ensure no significant effect.		
WE10	Subsurface structures such as foundations, alongside excavations will be appropriately designed to minimise any disruption to groundwater flows and resultant alteration to hydraulic properties within the study area during construction. This might include, for example, the use of sub-surface drainage to alleviate up-gradient groundwater mounding. They should also aim to minimise the down drag of contaminants and generation of excessive suspended solids. This will be set out in construction method statements, risk assessments and the Detailed CEMP. Visual inspections of watercourses receiving spring water should be made on a regular basis during the construction period, to ensure no contamination by suspended solids.	To limit contamination to groundwater and surface waterbodies. To assess the water quality of Controlled Waters Receptors and maintain they do not become impacted during the works.	Principal Contractor
WE11	Construction materials should be appropriately selected to minimise any groundwater contamination via direct contact. This should include the use of appropriately selected fill materials for working within saturated ground, enabling the groundwater to dissipate effectively. This will be set out in construction method statements, risk assessments and the Detailed CEMP.	To limit contamination to groundwater and surface waterbodies. To assess the water quality of Controlled Waters Receptors and maintain they do not become impacted during the works.	Principal Contractor
WE12	Preparation of an incident response plan prior to construction. This will be present on site throughout construction, informing all site workers of required actions in the event of a flooding incident. Alteration of ground levels during the construction phase could increase flood risk and negative impacts upon surface water due to increases in peak flow rates, volumes, or changes in the direction of surface water runoff. This impact will be managed by the implementation of a temporary surface water drainage	To be prepared during a flood incident and decrease flood risk.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	strategy which will outline the controls required. The temporary surface water drainage strategy will implement SuDS principles, where appropriate, to attenuate runoff to existing rates as well as provide water treatment. This strategy will be incorporated into the Detailed CEMP. These controls will be utilised to reduce the potential effects of construction activities and spillages.		
Climate Change (CC)			
CC1	Controls during construction include: • Consideration of modular / off-site build, where practicable; • Use of locally available materials to reduce transport related carbon, where practicable; • Assessing the expected waste streams and setting out targets to reduce these; • Consideration given to material procurement and construction methodology that reduces deliveries required to site and minimizes the waste created during construction; • Use of materials with Environmental Product Declarations where possible; • Development and implementation of a sustainable travel plan to minimise emissions from transport of materials and labour to site; • Mandating that the contractor connects to the mains power grid as early as possible and procuring 100% renewable energy and to submeter renewable energy supply; • 100% electric plant should be procured wherever possible. Where it is not available in the size or module required for the specific construction, the contractor should provide robust justification. Hybrid modules should again be given priority over diesel plant. All contractors should target 100% diesel free construction; • All site welfare cabins and offices should implement energy efficient practices including LED lighting, daylight sensors or timers on external lighting, A++ rated appliances, low flow water fittings (taps, showers, toilets etc.); and	To ensure construction is compliant with relevant climate legislation, Ministry of Defence (MOD) policy and with consideration of national and local climate commitments.	Principal Contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
	• Natural ventilation should be implemented and due consideration to cabin heating requirements in winter. Space heaters are to be avoided.		
CC2	Where possible, apply the carbon reduction hierarchy. This includes: • Avoid: align the outcomes of the project and/or programme of work with the net zero transition at the system level and evaluate the basic need at the asset and/or network level. This may include exploring the necessity of constructing a new asset/network or reusing/retrofitting/repurposing existing ones. • Switch: assess alternative solutions and then adopt one that reduces whole life emissions through alternative scope, design approach, materials, technologies for operational carbon reduction, among others, while satisfying the whole life performance requirements. • Improve: identify and adopt solutions and techniques that improve the use of resources and design life of an asset/network, including applying circular economy principles to assess materials/products in terms of their potential for reuse or recycling after end of life.	To ensure construction is compliant with relevant climate legislation, Ministry of Defence (MOD) policy and with consideration of national and local climate commitments.	Principal Contractor and Construction Contractor
Heat and Radiation (HR)			
NR1	Modelling assumptions that have informed the ES have been validated through testing at the radar system installation in Western Australia. All necessary criteria and standards are to be met based on validated test results.	To limit heat and radiation impacts.	Principal Contractor
Lighting (LG)			
LG1	In relation to lighting, construction work must be compliant with the following British Standards (BS) regulations: • BS EN 12464-1:2021 – Light and Lighting – Lighting of workplaces Part 1 Indoor workplaces; and • BS EN 12464-2:2024 – Light and Lighting – Lighting of workplaces Part 2 Outdoor workplaces.	To ensure compliance with relevant legislation in relation to lighting.	Principal Contractor and construction contractor

Reference	Environmental Management Measure / Action	Objective	Responsible
LG2	The construction lighting used should be pointed inward to the proposed development and downwards. All lighting to have a 0% upward light output ratio.	To negate the potential for onlookers to be affected by sources of glare and comply with dark skies guidance.	Principal Contractor
LG3	Task lighting will be switched off when not in use during construction phase.	To avoid lighting impacts on sensitive receptors.	Principal Contractor
LG4	Lighting is to only be used for limited time during the hours of darkness for the purpose of task illumination.	To avoid lighting impacts on sensitive receptors.	Principal Contractor
LG5	To mitigate the identified likely significant effect from the obtrusive lighting as a result of the assembly night works at the temporary assembly building, the temporary building will be fully enclosed.	To mitigate the identified likely significant effect from the obtrusive lighting as a result of the assembly night works at the temporary assembly building.	Principal Contractor
LG6	Ongoing monitoring during the construction phase is proposed to ensure that, if temporary lighting is required in proximity to a Potentially Sensitive Ecological Receptor (PSER), appropriate responsive mitigation can be implemented as necessary.	To avoid lighting impacts on sensitive receptors.	Principal Contractor

Annex B - Emergency procedures and record of any environmental incidents

11.2. To be produced prior to construction by the Principal Contractor. This section will include:

- Confirmation of procedures in the event of an environmental emergency.

11.3. A record of environmental incidents (in table format) if occurred to include the following information:

- Date and location of the incident;
- Details of the reporting procedure followed;
- Description of the incident and relevant legislation;
- Remedial actions;
- Lessons learnt; and
- Details of any contact with enforcing bodies.